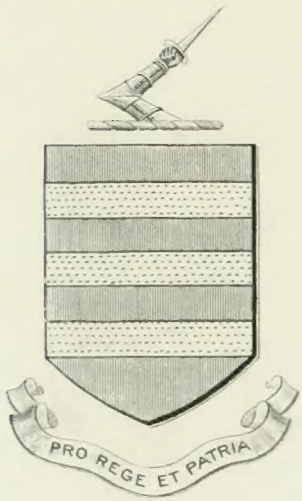
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LONDON: SATURDAY, JANUARY 3, 1891.

REMARKS
ON
SNAKE VENOM AND ITS ANTIDOTES.

By T. LAUDER BRUNTON, M.D., F.R.S.,
Lecturer on Materia Medica and Therapeutics, and Assistant Physician, St. Bartholomew's Hospital.

THE mode of action of snake venom, and the possibility of finding an antidote which will prevent it from producing its ordinary lethal effect, are subjects of great importance at all times, but at present they have acquired an added interest from the curious relationship which the serpent virus appears to have with those products of disease germs which either destroy or preserve life, according to the mode in which they are applied. The active principle of the poison of the viper was said by Prince L. Bonaparte to be a substance which he called echidnine or viperine, and Professor Busk suggested that the poison may be due to a substance analogous to ptyaline, though differing from it.

In 1860 Dr. Weir Mitchell made a most elaborate and admirable study, both physiological and chemical, of the venom of the rattlesnake, and drew attention to "the singular likeness between the symptoms and lesions of crotalus poisoning and those of certain maladies, such as yellow fever." This analogy, he tells us, had been observed by S. L. Mitchell, by Magendie, and by Gaspard, who also called attention to the resemblance between poisoning by putrefying substances and by serpent venom. In this research Weir Mitchell found that rattlesnake venom contained two albuminoid substances, one of which was coagulated by boiling and the other not. The coagulum formed by boiling was innocuous, but the portion which remained fluid was poisonous. Admixture with alcohol caused coagulation, but did not destroy the power of the venom, and the coagulum, when redissolved in water, was found to behave like diluted fresh venom. The next experiments of this kind were, I believe, some of my own, which I have not hitherto published. These were made in 1870 in Professor Burdon Sanderson's laboratory with the poison glands of the fer-de-lance from Santa Lucia in the West Indies. Dr. Burdon Sanderson kindly placed a whole kegful of these heads at my disposal, and some of them were very large, measuring about 3 inches in length by 2 or 2½ across the broadest part; they had been preserved in spirit, which had coagulated the albuminous constituents of the poison glands themselves and of the contents of the ducts. I dissected out the poison glands with their ducts, and tried to extract a poison from them by various solvents, but none of the extracts thus obtained, nor the residue which remained after evaporating the spirit in which the heads had been preserved, proved sufficiently poisonous to kill even a guinea-pig. The utmost result that I could obtain was a slight increase of excitability in the nervous system, with a tendency to spontaneous twitching, which never, however, amounted to convulsions. These experiments seemed to show that the poison of this snake was either albuminous or so closely connected with albuminous substances as to be destroyed by coagulation by spirit. My failure to obtain any lethal action from the extracts led me to discontinue the research. In 1873 Sir Joseph Fayrer and I made some experiments on the venom of the cobra, which gave different results, and seemed to show that the venom of the cobra differed from that of the rattlesnake and fer-de-lance in its active constituent being soluble in alcohol. Thus we found that the precipitate thrown down from cobra poison by alcohol caused tremor in a guinea-pig but did not kill it, and a similar result was obtained by the injection of cobra poison which arrived from India in a coagulated cheese-like condition, and had probably been coagulated by alcohol, although we had no note to this effect. An alcoholic extract of the poison, when injected into an animal, produced symptoms like those produced by the fresh poison. Cobra venom, when coagulated by boiling, still remained active, though when heated for half an hour under pressure corresponding with 102 C., its activity was destroyed.

In his experiments published in 1883 Wall[1] found that an aqueous solution of cobra venom retained its lethal power after exposure to a temperature of 107° C. (224.6° F.) for half an hour, was somewhat weakened by exposure for an hour, and was rendered inert by an exposure of two hours. Weir Mitchell[2] made the interesting observation that boiling altered the action of rattlesnake poison to a certain extent, inasmuch as the boiled venom produced almost no local action, although it caused death, and Wall[3] found that daboia poison heated to 80° or 100° C. lost its convulsant, though it still retained its paralysing, action.

Weir Mitchell again took up the subject of the composition of rattlesnake venom, and, along with Reichert, arrived at the conclusion that it contained three proteid substances, namely, an albumin which was inert, and a globulin and peptone which were poisonous. In cobra venom Wolfenden found serum albumin, globulin, and syntonin, with occasionally traces of peptone. He considers the substance which Weir Mitchell and Richert call a peptone to be an albumose; and, indeed, according to the newer nomenclature, it is so, for it gave a precipitate with acetic acid and ferrocyanide of potassium, which true peptones do not. In speaking of it we may therefore use the term albumose instead of peptone. According to Weir Mitchell and Reichert the globulins have a greater action on the blood, circulation, and respiration than the albumoses, and tend to destroy the blood corpuscles, prevent coagulation, produce ecchymoses, lower the blood pressure, and paralyse the respiration. The albumoses act more on the tissues, and tend to cause œdema, putrefaction, and sloughing. The venom of the crotalidæ contains a comparatively large amount of globulins, and produces local swelling and blackening of the parts, while that of the cobra contains comparatively little globulin, and has little local action. The globulins and albumoses in different venoms are probably not altogether identical, for the albumose of the cobra seems to have a greater power to produce convulsions than that of the rattlesnake.

Both cobra and crotalus venoms kill by paralysing the respiration, although they also weaken the circulation; and, when much has been injected, the patient becomes weak and collapsed, vomits, and dies with or without convulsions. If the poison has been less in quantity, the local symptoms in the case of poisoning by the crotalidæ increase, the swelling extends, symptoms of blood poisoning appear, and the face becomes swollen and puffy, the pulse very feeble, and the respiration laboured.

In still slighter cases the symptoms may disappear very suddenly and the patient recover. Hæmoptysis and hæmaturia have been noticed even in cases of recovery. In order to prevent death from snake venom, besides using the common methods of ligature and excision of the bitten part, we may try to find antidotes which will render the poison innocuous, or we may endeavour to maintain life until the

[1] Wall, *Indian Snake Poisons*, London, W. H. Allen, 1883, p. 121.
[2] Weir Mitchell, *op. cit.*
[3] Wall, *op. cit.*, p. 125.

venom has either been excreted from the body or undergone destruction within it. Of the chemical antidotes, the most efficient appears to be permanganate of potash, first recommended by Winter Blyth.[4] This was tested by Sir Joseph Fayrer and myself.[5] This substance completely destroys the poisonous power of cobra venom when mixed directly with it, but we were not successful in preventing death by applying it to the wounded spot after the injection of cobra poison. Lacerda,[6] in 1881, stated that he had succeeded in saving the lives of animals by injecting a 1 per cent. solution of the permanganate into the cellular tissue in from one to two minutes after injection of the poison, and Vincent Richards[7] also succeeded in destroying the effect of cobra poison by permanganate injected as long as four minutes after the venom.

Weir Mitchell found that the beats of the heart in cases of crotalus poisoning could be maintained for some time by artificial respiration, and the resemblance which Fayrer and I found between the action of cobra venom and of curare or of conine led us to try whether an animal might not be kept alive until the cobra venom had been excreted and recovery ensured, as it can readily be in the case of curare. We succeeded in keeping an animal's heart beating for ten hours by artificial respiration, and a commission appointed in India to repeat our experiments almost succeeded in bringing an animal round after apparent death by snake bite; but, after recovering sensation and motion to some extent, it died a second time in reality twenty-four hours after its first apparent death. I believe—though, as I cannot find the record, I cannot be certain—that there has been a case since in Ceylon, where a man was brought round from apparent death by snake bite by artificial respiration continued for many hours, but only to die a few days afterwards from pneumonia.

Artificial respiration is very troublesome to maintain for a long time, and even if it were successful one would gladly welcome any easier way of saving life. According to the Allahabad *Pioneer*, strychnine has lately been proposed by Dr. Mueller, of Victoria, for the purpose of stimulating the nerve centres, which serpent venom paralyses, and thus preventing its deadly action. He applies it "by subcutaneous injections of 10 to 20 minims of the liquor strychninæ, and continued every fifteen minutes until the paralysing effect of the snake venom on the motor and vasomotor nerve cell are removed and slight strychnine symptoms supervene. The quantity of the drug required for this purpose depends on the amount of venom imparted by the snake, and may, after the bite of a vigorous cobra, amount to a grain or more, since more than half a grain has been found necessary to neutralise the effects of the bite of the tiger snake, a reptile much resembling the cobra in appearance, but not imparting nearly as much venom."

The researches of P. Rokitansky have shown that strychnine is a most extraordinary stimulant of the respiratory centre, and Cash and I found it to have a no less remarkable power to stimulate the heart[8]. Nor is it only in the laboratory that strychnine manifests these extraordinary powers, for clinical experience shows its utility and by its free use in one very extraordinary case I restored a man whose respiratory centre had so far failed that his breathing ceased when he fell asleep, and he could only keep himself alive by voluntary gasps. Strychnine is thus very likely to prove a physiological antidote to the depressing action of snake venom on the circulation and respiration, and we may very reasonably hope for benefit from its use in snake bite. But Dr. Mueller's directions seem rather dangerous and, if followed exactly, might lead rather to the death than the recovery of the patient. A whole grain of strychnine is a very large dose, and in two experiments by Sir Joseph Fayrer, two pariah dogs which had been bitten by cobras died in tetanic spasms after the injection of one-third and one-fourth of a grain of strychnine respectively. With care to give the strychnine in divided doses, and to watch the result it might be very useful and is well worthy of a trial, for it might perhaps maintain the respiration and circulation until the patient recovered.

But the depression of the respiration and heart are not the only effects of the poison, and violent vomiting is sometimes a very marked symptom, to say nothing of the hæmoptysis, hæmaturia, and discharge of blood by the motions which occasionally occur. Strychnine will not counteract these effects of the poison, and in order to prevent their occurrence we must try to aid its elimination. In thinking over what channels were most likely to serve this purpose it has seemed to me that the salivary glands and the mucous membrane of the stomach and intestines are the most likely. Fayrer[9] found that venomous snakes appear to resist the action of large doses of venom injected into them, while non-venomous succumb, and this might be explained by supposing that the poison glands of the former excrete the injected venom just as the liver will excrete foreign bile injected into the duodenum. The non-venomous snakes, having no poison glands, would be unable to excrete the poison, and would therefore die. My friend Dr. Abeles presented me with two fine specimens of the cerastes, in order that I might test this hypothesis by excising the poison gland in one and seeing whether its resistant power to venom disappeared with the gland, but unfortunately they both died before the experiment could be performed.

Fayrer and I found that the cobra venom had an extraordinary irritant action on mucous membranes, and when it was introduced into the stomach of a frog it caused most violent vomiting, very unusual in that animal. This experiment suggests that the vomiting which forms such a prominent symptom in many cases may be due to the poison being excreted by the mucous membrane of the stomach in much the same way as tartar emetic or apomorphine would be. If this hypothesis is correct we can readily understand why recovery may occur to a great extent as in the case of the animal treated with artificial respiration by the Indian Commission, and yet may ultimately die. For if the poison were eliminated into the stomach and intestines by the mucous membrane, recovery would occur; but if the venom, instead of being removed from the stomach as quickly as it was excreted, were to remain there and undergo absorption, the condition would get worse, and death would ensue. It therefore seemed to me that one should try, if possible, to remove any poison that might have been eliminated, and this one might do by washing out the stomach with alcohol in some shape, for example, whisky or brandy. The want of means has prevented me from trying this method, but the hypothesis seems to me to explain the good results obtained by the free use of whisky or brandy internally. It is not the action of these substances on the nerve centres that prevents death from the venom, for men bitten while drunk have died from the bite, although it is usually stated that if a man can be made drunk after he has been bitten his life will be saved. This would seem to indicate that the whisky or brandy acts locally in the stomach, coagulating any venom which may have been excreted, and preventing reabsorption. The plan I therefore wished to test, had circumstances allowed, was to keep up artificial respiration, and wash out the stomach with whisky or brandy. It is obvious that this plan might be combined with the subcutaneous injection of strychnine, and that, while the circulation and respiration were maintained by strychnine, alcohol might be freely given, and after it had been removed by vomiting or the stomach tube, it could be given again and again, so as to wash the stomach out with it. This plan is itself not without danger; it should be tried in a laboratory, for large quantities of brandy or whisky might, by their strongly irritant action in the stomach, lead to reflex depression of the circulation and fatal shock, to say nothing of gastritis in case of recovery.

In some most interesting experiments, Sewall[10] has shown that the system may gradually become resistant to the action of snake venom, just as it may to that of infective diseases such as anthrax, and by injecting small quantities of venom he has rendered animals immune from the effects of larger doses, which rapidly killed other animals not protected by previously inoculation.

Several points of resemblance appears to exist between snake venom and the albuminoid products of anthrax. Thus Martin[11] has found that when the anthrax bacillus is grown in

[4] Winter Blyth, *The Analyst*, February 28th, 1877, p. 204.
[5] Brunton and Fayrer, *Roy. Soc. Proc.*, 1878, vol. xxvii, p. 465.
[6] Lacerda.
[7] Vincent Richards, *Landmarks of Snake Poison Literature*, p. 149.
[8] Brunton and Cash, *St. Bartholomew's Hospital Reports*, vol. xvi, p. 229.
[9] Fayrer, *Thanatophidia of India*, p. 75.
[10] Sewall, *Journ of Physiol.*, 1887, vol. viii, p. 223.
[11] Martin, *Roy. Soc. Proc.*, vol xlviii, p. 78.

alkali albumen, and the bacilli themselves afterwards separated by filtration through porcelain, the filtrate contains a mixture of proto- and deutero-albumose, and a trace of peptone formed by the action of the bacilli on the albumen. The albumoses produce, like those of snake poison, much local œdema, sluggishness, coma, and death. Like the venom-albumose, its activity is lessened, but not destroyed, by boiling. But, in addition to these substances, he has obtained an alkaloid which has the same action as the albumose, but much more powerful, and this alkaloid, he thinks, is present in a nascent condition in the albumose, and is separated from it by the tissues of the living animal into which it has been introduced. Whether something of the same sort exists in serpent venom or not one cannot say, but the analogies between it and the products of disease germs are becoming every day more apparent, and it seems highly probable that while studies of serpent venom may throw light on the products of disease, a study of the latter may lead to the discovery of an efficient antidote to the former.

AN ADDRESS

ON SOME OF THE APPLICATIONS OF THE SPECTROSCOPE TO MEDICINE.

Given in the Section of Pathology at the Annual Meeting of the British Medical Association, held in Birmingham, July, 1890.

By C. A. MacMUNN, M.A., M.D.Dub., F.C.S.,

Vice-President of the Pathological Section; and Honorary Pathologist to the Wolverhampton and Staffordshire General Hospital.

I MUST ask your forgiveness for the incomplete manner in which I have to deal with my subject; and if what I have to say may appear somewhat dry, I hope that I, and not my subject, may be blamed. It is difficult to compress an account of the applications of the spectroscope to medicine into the small space at my disposal. In fact, it is impossible to give even an epitome of all the work that has been done, so that I shall merely refer to what appear to me to be some of the most important points.

It is hardly necessary to insist upon the importance of the spectroscopic study of animal pigments to-day as one felt called upon to do some years ago, because already very important facts have been discovered by means of this mode of investigation.

By means of the spectroscope we can detect substances which by no other chemical or physical method can be discovered, and just as in chemistry and in astronomy by its means we are able to detect substances present in mere traces, and without isolating them, so in morbid fluids we can do the same. The merest trace of a blood stain, long after all traces of the blood corpuscles have disappeared, and after attempts to procure hæmin crystals must fail, can still be made by appropriate treatment to yield characteristic absorption spectra. So in the case of urine containing blood which within the body has been changed into the decomposition products of hæmoglobin, when the microscopic and other tests fail, the spectroscope applied properly comes to our aid, and also tells us exactly in what condition the pigment is present. Besides, by carefully following in the laboratory the downward metabolism of hæmoglobin, we can tell exactly when we meet with products of its downward metabolism in the urine, in the bile, and elsewhere, how much change the pigments have undergone in the body, provided we have produced each stage of decomposition by artificial means in the laboratory, isolated the pigments corresponding to these stages, and mapped their spectra carefully.

The reactions required for proof of chemical identity are few and simple, and lead to absolute certainty. Of course great accuracy is required, and mere identity of spectrum does not prove chemical identity in every case, but the application of certain reagents settles the matter. The spectroscope, therefore, not only enables us to detect certain colouring matters, but it also gives us a clue as to how and where they are produced in the organism, and it enables us to form an opinion as to the energy of metabolism, not only as regards the pigments themselves, but as regards the substances with which they are associated.

Instruments.—As regards the instrument itself, it is hardly necessary to say much about its construction. It will suffice to mention that every spectroscope consists essentially of a slit to admit a pencil of light-rays and a prism in which these rays undergo refraction. Of course, this statement does not hold good for a diffraction spectroscope in which the rays are broken up by a grating, but from a medical point of view a grating is of little use—at least, at present. Besides the slit and the prism, other optical adjuncts are necessary according to the kind of spectroscope. For instance, in the chemical spectroscope the slit is set in a long tube in the focus of a lens, which makes the rays parallel before entering the prism, and after their emergence from the prism the now coloured but still diminutive image of the slit is magnified before reaching the eye, by having to pass through a small astronomical telescope. It would not be easy, however, to apply such a large and such a peculiarly shaped apparatus as the chemical spectroscope is to the microscope, so that another arrangement is necessary for this purpose. The problem is to have slit, and prism, and lenses so placed that the light-rays can pass through them in a more or less straight line, while the spectrum is sufficiently long to enable parts of it to be measured. By using a compound prism composed of flint and crown glass by which enough dispersion (or the spreading out of the spectrum) is retained, while the deviation is got rid of, this is accomplished, the necessary enlargement of the spectrum being provided for by the use of a lens similar to that used in a microscopic eye piece, placed under the compound prism.

For comparing spectra this spectrum eye piece has a right-angled prism covering half the slit, to which the rays from a second light source are admitted through a window in the stage fastened to the side of the instrument.

Besides these instruments—the microspectroscope and the chemical spectroscope, small, handy, direct vision spectroscopes, amply sufficient for the rapid detection of blood, bile, and so on, are supplied at a trifling cost by most of the opticians.

Kinds of Spectra.—The appearances seen on analysing spectroscopically the rays proceeding from all sources of light may be grouped under three heads: (1) Bright line spectra. (2) Continuous spectra. (3) Continuous spectra interrupted by dark lines or bands, or shadings.

(1) Bright Line Spectra consist of bright narrow lines occurring singly or in groups, either placed in the same or in different parts of the spectrum. They are yielded by glowing gases, or by the glowing vapours of the metals, and as each element gives its own lines it is easily detected by its spectrum. In using a spectroscope for such spectra it is obvious that the larger the spectrum is the more accurately one can measure the position of, and the distance between, such lines. But with the exception of the detection of the lines of sodium, potassium, and calcium, in the ash of calculi, the study of bright line spectra is of little use in medicine, except one wishes to study the "chemical circulation," as the late Dr. Bence Jones[1] did when he determined the time that salts of lithium occupied in reaching different parts of the body. The use of the purest reagents and great accuracy is required in such work, which perhaps is best left to the pure chemist.

(2) Continuous Spectra are yielded by almost all solids and fluids at a white heat. The continuous spectrum is a band of coloured light beginning at one end as red and passing through orange, yellow, green, blue, and violet. Such a spectrum is seen when the slit of the spectroscope is illuminated by gas or candle light, by the electric, magnesium, or lime light, by white hot platinum, and so on.

(3) Absorption Spectra are those in which spaces of darkness in the form of fine lines, or broader spaces of darkness, known as absorption bands, interrupt the continuity of this rainbow band—the continuous spectrum. If we illuminate the slit of the spectroscope by means of sunlight, and if the instrument

[1] Bence Jones: Lectures on some of the Applications of Chemistry and Mechanics to Pathology and Therapeutics. London, 1867. *Proc. Roy. Soc.*, vol. xiv., p. 400; *Proc. Roy. Inst.*, May 26th, 1865.

is sufficient for the purpose, thousands of fine lines are seen to cross the spectrum at right angles to its length. These are the lines of Frauenhofer, a German optician who first mapped them. He called the principal ones A, a, B, C, D, E, b, F, G, and H, and the first thing anyone should do when he comes to possess a spectroscope is to find out these more prominent lines and determine their position on the scale of his spectroscope. I may merely state here that these lines are the lines of elements present in the sun. The reason why they are black and not bright is because the light emitted by the elements burning in the sun has to traverse the vapours of the same elements in the sun's atmosphere. The vapour of each has the property of arresting the rays which that element emits while in the incandescent state. Accordingly these lines in the spectrum are caused by the absence of certain rays belonging to various elements. Many stars possess similar spectra, but anyone who wants to follow this subject in its applications to astronomy can do so by consulting such books as Roscoe's [2] or Schellen's [3] on spectrum analysis.

But the absorption spectra with which the physician or the physiologist has to deal are different. In these the spaces of darkness in the spectrum, known as absorption bands, are produced by causing the light from an Argand burner or other source furnishing a continuous spectrum, to traverse a fluid which has the property of arresting certain of the rays passing through it. Corresponding to the parts of the spectrum where these rays are deficient are spaces of darkness, more or less completely dark, and these spaces of darkness are the absorption bands. Coloured fluids, more especially, possess this property, although lately it has been shown that colourless fluids give absorption bands in the invisible parts of the spectrum—parts, however, which can be printed on the photographic plate. The latter method of investigation, although useful to the pure chemist in showing the intimate connection between the physical and chemical properties of organic bodies, has yet done very little for physiology.

Many coloured fluids, such as solutions of the aniline dyes and many vegetable colouring matters, block out one end or the other of, or it may be a large space in, the middle of the spectrum, thus giving what is known as "general" absorption, but, in the case of many of the animal-colouring matters, both normal and pathological, these solutions give a special or particulate absorption, showing in some cases a very complicated spectrum, by means of which their presence is readily recognised. Among plant colouring matters, chlorophyll, or leaf-green, gives a most complicated spectrum, by means of which it can be readily recognised, and others belonging to the red groups of algæ give equally characteristic spectra, but it is the animal pigments which, luckily for physiology, give the most characteristic absorption spectra.

Apparatus Required for the Study of Physiological and Pathological Spectra.—In studying these absorption spectra the source of illumination should be either an Argand gas-burner or an incandescent light, the fluid under examination being placed in a test tube, a small beaker, or in a Preyer's hæmatinometer,[4] a vessel which has parallel plane glass sides, one centimètre apart from each other (that is, when working with a chemical spectroscope). A bull's-eye condenser between the light source and the slit is a useful help, as by its means the light can be condensed on the fluid and the illumination thus increased. Sunlight is not suitable as an illuminant, owing to the presence of Frauenhofer's lines. Sometimes we may require "spectroscope bottles," which enable a considerable depth of fluid to be examined.

In working with the microspectroscope the fluid should be placed in a small glass tube let into a piece of wood, or, if a very deep layer is required, a test tube filled with the fluid may be let into the tube of the microscope above the objective, and over this the microspectroscope placed. For examining undiluted blood Hénocque's hæmatoscope[5] is useful. It consists of two glass plates, one placed above the other; they touch at one end, the space between them at that end being nothing, while at the other they are separated by an interval of 0.3 millimètre. A graduated millimètre scale engraved on the lower plate, reading from 0 to 60, and reading from left to right, enables the depth of fluid to be calculated at each division of the scale, for by multiplying the figure on the scale at any point by 5 the depth is given in thousandths of a millimètre. By means of this simple piece of apparatus one can calculate the amount of hæmoglobin in a specimen of blood, and judge of its spectrum without the addition of a reagent and undiluted.

Watch glasses, small beakers, short bottles, and so on, can also be used with the microspectroscope. For examining fresh slices of organs or bits of fresh tissue a "compressorium" may be used, the cover glass being screwed down until the spectrum is seen distinctly. Other vessels may be used, but each individual worker will soon learn for himself what he requires. Anyone who has once learnt how to use the spectroscope will find it an indispensable help in examining blood, bile, urine, and other fluids.

The first thing he should do is to map the spectrum of sunlight; after illuminating the slit of the apparatus by means of good diffused daylight, he should observe and map the principal Frauenhofer lines, carefully comparing his results with such maps of the solar spectrum as he can find in the textbooks. The mapping is most easily done by having a photographed scale adapted both to the microspectroscope and the chemical spectroscope. This scale should be divided into at least 100 parts for the microspectroscope and 120 for the chemical spectroscope. The adjustment of the scale can be learnt from the optician, who, as a rule, sets it for distinct vision. Sometimes the buyer of a chemical spectroscope is assured by the seller that it is much more accurate to measure and map by means of a graduated circle and vernier; but such is not true. Such angular measurements are required for the calculation of refraction indices, or if one happens to possess a diffraction grating, he can amuse himself by endeavouring to work out the wave-lengths of the bright lines of the elements, and so on; but for ordinary work I advise the student to use a photographed scale.

Before mapping an absorption spectrum, the scale must be set. By making a certain number on the scale exactly to correspond with the D line when mapping the solar spectrum, the observer always has his zero point to start from: and to find out at night where his D line should be, it is only necessary to illuminate the slit with the flame of a spirit lamp or Bunsen's burner into which a salt of sodium has been introduced, when the sodium line will be seen, which is coincident with the D line. In order to set the scale, suppose one has set the D line at 50 of the scale when he mapped the solar spectrum, then before beginning an observation on the spectrum of a fluid the scale should be set until the yellow sodium line again stands at 50 on the scale.

Both Hilger and Browning supply chemical and microspectroscopes provided with such photographed scales, and Zeiss, of Jena, supplies a microspectroscope provided with a photographed scale giving the readings in wave-lengths. With regard to wave-lengths: Although a busy practitioner will be perhaps satisfied in detecting blood or bile or other pigment in a fluid without troubling to map its spectrum, yet he will perhaps sooner or later find that he is coming upon new facts which he may wish to record for publication. If so, it will not do to say that he found a band in the red from 40 to 42 of his scale, because the band on another scale might read from 42 to 46, as it is impossible to make the scales—that is, the arbitrary scales—of two different spectroscopes to agree. Hence he must make use of numbers which are universally true for that part of the spectrum. Now the wave-lengths of the different parts of the spectrum never vary, so that all readings should be expressed in wave-lengths. It is quite easy to reduce readings to wave-lengths. All that is required is to draw a curve on logarithm paper supplied by Letts and Co., of London; and I have shown elsewhere how this can be made.[6] On running the eye down from the number representing that on the scale of the spectroscope, along the perpendicular line until it comes upon the point when the curve cuts this line, and then along the horizontal line from that point to the side of the paper where the wave-lengths are given, the required wave-length is found.

[2] Roscoe: *Lectures on Spectrum Analysis*, 4th ed., 1885.

[3] *Die Spectralanalyse, etc.*, 3rd ed., 1883, and English translation of the same, edited by Abney.

[4] Hermann's hæmatoscope is also a useful adjunct.

[5] Hénocque, "Note sur l'Hématoscope," Paris, 1886; *Comptes Rendus de la Société de Biologie*, 8e. Série, t. II, p. 12, No. 1, 11 Janvier, 1885.

[6] MacMunn: *Spectroscope in Medicine*, 1889.

The reagents required for the detection of blood, bile pigments, and so on are few in number: sulphide of ammonium, acids and caustic alkalies, solvents, such as ether, alcohol, chloroform, benzol, and a few others complete the list.

The beginner should first of all study the different kinds of spectra, and compare them together; and perhaps one of the most useful examples of an absorption spectrum, to begin work with, is that of a solution of permanganate of potassium. By diluting this gradually, he sees the whole series of bands become visible, and then grow feebler until the most deeply shaded is the last to disappear.

Spectra of Hæmoglobin and its Compounds.—The spectrum of oxy-hæmoglobin is so familiar to readers of physiological text-books, that it is mere waste of time describing it again. It is merely necessary to say that before concluding that it is present from its spectrum alone, a little sulphide of ammonium ought to be added, when the single broad band of reduced hæmoglobin appears, especially after applying a gentle heat, and again on shaking with air the bands of oxyhæmoglobin return, to again disappear on standing. If this test were not applied, then possibly some other pigment might be mistaken for that of blood, such as carminate of ammonia, or purpuric sulphuric acid, which later shows a band like that of reduced hæmoglobin.

Suppose the blood was obtained from a case where death had taken place from coal gas poisoning, or from inhaling the fumes from smouldering charcoal, or other source in which carbonic oxide[7] is the lethal agent, then reduction would not take place; the two bands—which are, however, nearer the violet than those of oxyhæmoglobin—would remain. In that case other tests might be tried, such as adding to a solution of the blood in water a 10 per cent. solution of caustic soda; on warming a cinnabar-red colour appears, whereas, in the case of normal blood, the colour would be brownish green (Hoppe-Seyler,[8] Otto[9]); or Salkowski's modification,[10] in which the blood is diluted to twenty times its bulk, and an equal quantity of caustic soda solution (specific gravity 1.34) added. If CO is present the fluid first turns white and cloudy, then bright red, and on standing red flakes form. In the case of normal blood the colour is dirty brown. Or Kuniyosi-Katayma's[11] test may be tried; a little yellow sulphide of ammonium and dilute acetic acid are added to the blood, which then turns a beautiful red colour, whereas normal blood becomes grey or greenish grey.

In poisoning with sulphuretted hydrogen a spectrum, belonging, according to Hoppe-Seyler, to sulphide o methæmoglobin, may be seen.[12] It is only necessary to pass a stream of this gas through a solution of blood to see the spectrum. The blood becomes dark, sometimes a dull green, and the distinction between venous and arterial blood disappears (Lewin).[13]

In poisoning with chlorate of potassium, Marchand[14] has shown that the blood is much changed; a sepia-coloured decomposition product being formed, which Hoppe-Seyler found to be methæmoglobin. In children, especially, poisonous doses change the hæmoglobin into methæmoglobin.

Methæmoglobin is distinguished by a spectrum, which differs totally from that of oxyhæmoglobin; thus in acid or neutral solutions it shows four bands, these bear some resemblance to those of acid hæmatin, but sulphide of ammonium distinguishes between them, as on its addition the two bands of oxyhæmoglobin appear first, then that of reduced hæmoglobin, whereas if hæmatin in solution is thus treated we get the spectrum of reduced hæmatin. Moreover, methæmoglobin has been crystallised by Halliburton,[15] Hüfner and Otto,[16] and Copeman, proving that the reagents required to produce it are not sufficient to split up the molecule of hæmoglobin into a coloured and a proteid constituent. Again, as Jaderholm[17] has shown, the spectrum of alkaline methæmoglobin is peculiar; a narrow band occurring between C and D, close to the latter, and two broader ones between D and E. Sometimes mixtures of oxyhæmoglobin and methæmoglobin are mistaken for the latter, but as H. Bertin-Sans[18] has shown—and I have repeatedly confirmed this statement—the bands of methæmoglobin placed between D and E are distinguished from those of oxyhæmoglobin in this, that the one nearest E is far more intense and about twice as broad as that nearest D. Methæmoglobin was at one time supposed to be an oxidation product of oxyhæmoglobin, but since it can be produced by the action on hæmoglobin of sodium hypochlorite, ferrous sulphate, and ferricyanide of potassium, which exert rather a reducing than an oxidising action, such cannot be the case. Other reagents produce methæmoglobin, such as dilute acids, nitrite of amyl, and other nitrites, also kairin, thallin, hydrochinon, pyrocatechin, iodin, bromine, terebenthine, ether, perosmic acid, permanganate of potassium (Hayem)[19], and antifebrin (Muller).[20] According to J. G. Otto,[21] the change of oxy- into methæmoglobin is a change from a loose molecular into a chemical combination.

Methæmoglobin is very frequently present in the urine in cases of intermittent hæmoglobinuria, although sometimes the change to methæmoglobin, as Copeman[22] has shown, may take place in the urine itself. However, even if this be so, it still proves that in that condition the hæmoglobin is more unstable than it ought to be. It is very often also present in different pathological fluids, and sometimes pigments intermediate between this and hæmatin are present in them.

In hæmoglobinæmia the hæmoglobin is found dissolved in the plasma, and this is followed by hæmoglobinuria, when the spleen and liver are unable to convert the free pigment into others. Von Jaksch[23] directs the experiment for its detection to be performed thus: The blood is drawn from the patient by means of a cupping glass, placed immediately in a refrigerator, and allowed to remain there twenty-four hours. A ruby-red stratum is seen over the blood, whereas in normal blood it should be yellow; on examination with the spectroscope the bands of oxy-hæmoglobin are seen.

In poisoning—in the case of dogs at least—with nitro-benzol it is said that hæmatin is produced (Filehne).[24]

As is now well known, Hénocque[25] who has done so much to make the spectroscope useful in medicine has applied this instrument in a novel manner. He observed that the oxy-hæmoglobin bands could be observed in transparent parts such as the lobe of the ear, and the ungual phalanges, if they were illuminated by diffuse sunlight. In the case of the ungual phalanx, when the finger was ligatured he found that these bands sooner or later disappeared, to be replaced by that of reduced hæmoglobin. He then found that the rapidity of reduction varied according to the amount of hæmoglobin in the blood, thus with a normal proportion of hæmoglobin reduction took place in 70 seconds, while with anæmic blood the time might be only from 30 to 40 seconds. Finally he has given a formula by means of which the energy of reduction may easily be calculated. It is as follows:

$$E = \frac{M}{D} \times 5$$

In which E = energy of reduction; M = mean proportion of hæmoglobin, obtained by the hæmatinometer of Hénocque; and D = the time in seconds in which reduction is accomplished. Hénocque calculates that the amount of oxyhæmoglobin reduced in one second under quite normal conditions is 0.2 per cent.

Hæmatin and Hæmatoporphyrin.—Before going any further I must make some remarks on the decomposition products of hæmoglobin as briefly as possible. These are hæmatin and

[7] Hoppe-Seyler: *Virchow's Archiv.*, xi, 238, 1857; Lewin: *Lehrbuch der Toxikologie*, p. 23, Wien, 1885; Böhm: *Ziemssen's Handbuch*, xv, 158, 2nd edition, 1880.

[8] Hoppe-Seyler: *Virchow's Archiv*, xiii, 1858.

[9] Otto: *Anleitung zur Ausmittlung der Gifte*, p. 246, 6th edition, 1884.

[10] Salkowski: *Zeitschrift f. physiol. Chem.*, xii, 227, 1888.

[11] Kuniyosi-Katayma: *Virchow's Archiv*, cxiv, 53, 1888.

[12] Hoppe-Seyler: *Physiol. Chemie*, p. 386.

[13] Lewin: *Virchow's Archiv*, lxxiv, 220, 1878; and *Lehrbuch der Toxikologie*, p. 48.

[14] Marchand: *Virchow's Archiv*, lxxvii, 488, 1879.

[15] Halliburton: *Quart. Journ. Micros. Sc.*, vol. xxviii.

[16] Hüfner and Otto: *Zeits. f. physiol. Chemie*, Bd. vii, 1883, p. 65, and Bd. viii, p. 366.

[17] Jäderholm: *Zeits. f. Biologie*, xiii, 193, 1877.

[18] Bertin-Sans: *Compt. Rend.*, cvi, pp. 1243 1245.

[19] Hayem: *Compt. Rend.*, cii, pp. 698, 700.

[20] Müller: *Deutsche med. Wochenschr.*, xiii, 27, 1887.

[21] Otto: *Biol. Centralbl.*, 1884, 212.

[22] Bristowe and Copeman: *Lancet*, July, 1889.

[23] Von Jaksch: *Clinical Diagnosis*, by Stirling and Cagney, p. 43.

[24] Filehne: *Archiv f. experiment Pathol.*, ix. 329, 1878.

[25] Hénocque: Etude Spectroscopique du Sang à la Surface Sous-unguéale du ponce, *Compt. Rend. de la Société de Biologie*, 8th serie, t. i, p. 671, No 41, 6 Décembre, 1884; also, *Ibid.*, p. 700, 13 Décembre; and t. ii, pp. 760 and 762, No. 44, 1884.

hæmatoporphyrin, speaking broadly. When hæmoglobin is treated with certain reagents, such as acids and caustic alkalies in the presence of oxygen, it is split up into one or more proteids, and a coloured body, hæmatin, which contains all the iron of the hæmoglobin. If, however, as Hoppe-Seyler[26] has shown, these reagents are made to act upon the hæmoglobin in the absence of oxygen, another substance which that observer named hæmochromogen, is formed. On admitting air to the apparatus in which this is produced the bands of hæmochromogen disappear, and, according as an alkali or an acid has been used to act on the hæmoglobin, alkaline or acid hæmatin, respectively, is produced.

To study the spectra all one has to do is to act upon defibrinated blood with alcohol containing caustic soda or potash and acids, when the band of alkaline hæmatin in the first and then of acid hæmatin in the second case are produced. As is well known, the band of alkaline hæmatin occurs at the D line, while those of acid hæmatin closely resemble those of methæmoglobin, being, like them, four in number, but differing in the second band from the red, which is very difficult to see as a rule. The beginner can generally make out the first and third bands easily, but the second and fourth require more careful observation.

Hæmatin may be obtained in various ways. Thus, if blood is agitated with ether, to which some acetic acid has been added, the hæmatin produced is taken up by the ether and can be obtained by evaporating it and washing the residue with ether, alcohol, and water, as a reddish-brown amorphous powder, having a metallic lustre, and insoluble in water, alcohol, and chloroform, but soluble in acidulated alcohol and alkalin. Or it may be obtained by Hoppe-Seyler's method[27] from hydrochlorate of hæmatin or hæmin ($C_{68}H_{70}N_8Fe_2O_{10}$, 2 HCl Hoppe-Seyler). This is the crystalline substance which one gets in treating a dried blood spot with a trace of chloride of sodium and acetic acid, and when crystals are of so much importance in the medico-legal detection of blood. This method of procuring hæmatin is fully described by Hoppe-Seyler, and need not detain us now. It will suffice to say that the substance so obtained is an amorphous powder, insoluble in water, alcohol, and ether, soluble in dilute solution of caustic alkalin, insoluble in dilute acids, soluble with difficulty in hot alcohol containing sulphuric acid, in acetic acid, and in fuming hydrochloric acid.

Lately Nencki and Sieber[28] have been reinvestigating these decomposition products of hæmoglobin. At first they prepared hydrochlorate of hæmatin by a special method, which need not be mentioned here. They isolated it by means of amyl alcohol, but Hoppe-Seyler has since shown that the amyl alcohol is decomposed by the process adopted, and the product must have been contaminated by the presence of its decomposition products. While Hoppe-Seyler assigns to hæmatin the formula $C_{68}H_{70}N_8Fe_2O_{10}$, these observers make it $C_{32}H_{32}N_4FeO_4$, and they found that it agreed with the hæmatin of Hoppe-Seyler in its character.

The method which I found out some years ago[29] enables one to procure hæmatin very easily: The defibrinated blood of the sheep is treated with rectified spirit acidulated with sulphuric acid (1 in 17), the solution filtered, diluted with water, and agitated in a separating funnel with chloroform, the latter separated, filtered, returned into the funnel, and again washed with water until free from acid. If evaporated after this treatment it leaves an amorphous impure hæmatin, but by allowing the chloroform to stand in a corked bottle in a dark place, very soon minute rhombic crystals form, making the chloroform turbid, which can be separated by filtering, and purified by washing with water, alcohol, and ether. The hæmatin thus prepared agrees in its characters, except for the occurrence of crystals, with that described by other observers.

To see the spectrum of hæmochromogen (the reduced hæmatin of Stokes) and its spectrum is one of the most important of all physiological spectra; it is not necessary to prepare it by Hoppe-Seyler's method. All that is required is to act upon some defibrinated blood with alcohol containing caustic soda or, better, ammonia, filter, and add to the filtrate some yellow ammonium sulphide; when this is done the bands of hæmochromogen are seen. They bear a resemblance to those of oxyhæmoglobin, but are much nearer the violet end of the spectrum and differ in the remarkable sharpness and darkness of the first band, and other particulars which need no mention.

It may appear superfluous to go into this detail, but otherwise I could not make the subject clear to those who have not studied it.

I stated that the bands of hæmochromogen are of great importance, and I will now give my reasons for saying so. It has happened to me more than once to have to give an opinion upon blood-stains on the blade of a penknife and on cloth. Now in some of these cases I could neither obtain hæmin crystals nor blood corpuscles; the stain was also insoluble in water. On putting the knife-blade to stand in a narrow tube just wide enough to admit the blade, and covering the latter with rectified spirit containing ammonia, the stain was dissolved out; although the fluid was barely coloured to the naked eye, and failed to show the absorption band of alkaline hæmatin, yet on adding one drop of ammonium sulphide the two bands of hæmochromogen stood out with extraordinary distinctness. Again, in the case of a blood-stain on cloth, the same very simple method was found to apply, the piece of cloth being cut up into small pieces and digested in the same solution, and then treated with ammonium sulphide. So in the case of urine containing blood;[30] sometimes the blood clings to the sediment and then fails to reveal its presence by the ordinary tests. I find, however, that by filtering off the sediment, and treating it and the filtering paper through which it has been filtered, with alcohol and ammonia, and then adding ammonium sulphur, the presence of blood is put beyond all doubt. Further on I shall have to return to hæmochromogen.

There is another very interesting decomposition product of hæmoglobin, namely, hæmatoporphyrin; this was described by Dr. Thudichum[31] under the name of "cruentine." It is produced by the action of strong sulphuric acid on hæmoglobin or hæmatin, and to the substance obtained by his own method Hoppe-Seyler[32] assigns the formula $C_{34}H_{34}N_4O_{12}$. It contains, therefore, noiron, which is said to be separated and to be present in the solution as a ferrous salt. Nencki and Sieber[33] have lately obtained it by other methods—in the first by the action of concentrated sulphuric acid on hæmin, and in the second and (according to them) easier method by the action of acetic acid saturated with bromin water on hæmatin. So obtained it is soluble in alkaline and alkaline carbonates, dilute mineral acids, and alcohol. It agrees, when thus prepared, with the hæmatoporphyrin of Hoppe-Seyler, but Nencki and Sieber assign to it a different formula, namely, $C_{16}H_{18}N_2O_3$, and they find this agrees with the formula given by Maly for bilirubin, the red colouring matter of bile, to which Maly assigned the formula $C_{32}H_{36}N_4O_6$. I would call special attention to this fact here, because it gains additional significance from what I shall have to say further on about the occurrence of hæmatoporphyrin in urine. These observers also prepared its hydrochloride $C_{16}H_{18}N_2O_3$ Hcc, and its sodium salt $C_{16}H_{17}NaN_2O_3+H_2O$, and other salts.

Further—and this is of great importance—they found that when the sodium compound was given to animals the greater part was retained in the body, possibly being there again utilised in the formation of hæmoglobin. It can also be produced by the action of energetic reducing agents on hæmoglobin or hæmatin, such, for instance, as that of sulphuric acid and zinc, hydrochloric acid and tin, and sodium amalgam; but in these cases, as Hoppe-Seyler[34] has shown, the pigment is apt to pass on to a lower stage of transformation. The spectrum of hæmatoporphyrin in a solution treated by a mineral acid, or acid hæmatoporphyrin, consists of two remarkable bands, one at D, and another between D and E; while when present in an alkaline solution it shows four or five bands. In fact, these two spectra serve well for the recognition of hæmatoporphyrin.

[26] Hoppe-Seyler: *Med. chem. Untersuch.*, Heft iv, 1871, p. 523; *Ibid.*, pp. 377-335; *Zeit. f. physiol. Chem.*, Bd. 1, p. 138.

[27] Hoppe-Seyler, *loc. cit.*

[28] Nencki u. Sieber: *Ber. d. deutsch. chem. Gesell.*, xvii, pp. 2287-2276; *Ibid*, xviii, pp. 392-399; *Monats. f. Chem.*, ix, pp. 115-132; *Archiv. f. exper. Path. u. Pharm.*, xviii, xx, xxiv.

[29] MacMunn; *Journ. Physiol.*, vol. vi., Nos. 1 and 2.

[30] MacMunn: BRITISH MEDICAL JOURNAL, July 19th, 1879.

[31] Thudichum: Tenth Rep. Med. Off. Privy Council, 1867.

[32] Hoppe-Seyler: *Physiol. Chemic.*, p. 387.

[33] Nencki and Sieber: *loc. cit.* (see Note 28).

[34] Hoppe-Seyler: *loc. cit.*

It is a very strange fact, and one upon which I came in working at the pigments of the lower animals, that hæmatoporphyrin may be present in the integument of an animal, and yet no hæmoglobin can be found in that animal.[35] At first this fact staggered me completely. I found the pigment present in star fishes, slugs, and in a mollusk allied to the razor fish, namely, *Solecurtus strigillatus*; and a comparison of my maps with those of Professor Moseley, and an examination of the pigment named by him polyperythin,[36] have led me to conclude that this pigment occurs in many invertebrate animals. I found, however, that in many, probably in all, these instances it is derived from pigments closely allied to hæmoglobin and hæmatin, and which I have named histohæmatin. It would appear, therefore, that in such animals hæmatoporphyrin is a waste product; and here permit me to give a quotation from Geddes and Thomson.[37] In their interesting book on the *Evolution of Sex*, they say: "In spite of the researches of Krukenberg, Sorby, MacMunn and others, our knowledge of the physiology of many of the pigments is still very scanty. Yet in many cases, alike among plants and animals, pigments are expressions of disruption processes, and are of the nature of waste products."

But anyone may well ask what has that to do with pathology? Allow me to reply that it has everything to do with it. In the urine of Addison's disease[38] a kind of hæmatoporphyrin occurs; and how do we explain its presence? Here it is a waste product too; and to explain why it occurs there, let me for a moment say what the spectroscope tells us about that disease.

In the adrenals of several mammals I found that hæmochromogen[39] is present in the quite fresh organ. Now previous observations had taught me to conclude that wherever that pigment occurs in the human body it is an excretory product; for instance, it was found in the liver, and in the bile, and elsewhere. Putting this fact together with the results of the analysis of the adrenals made by many competent observers, I could not help concluding that the adrenals are concerned in the downward metabolism of hæmoglobin and of its decomposition products. If they are diseased, then these decomposition products circulate in the blood, producing pigmentation of skin and mucous membrane, and appearing in the urine as urohæmatoporphyrin.

I feel bound to add, however, that I found this latter pigment—urohæmatoporphyrin—in the urine of other diseases, such as acute rheumatism, cirrhosis of the liver, croupous pneumonia, Hodgkin's disease attended by pigmentation of skin, so-called idiopathic pericarditis, peritonitis, meningitis, measles, and typhoid fever; and lately I have found a kind of hæmatophorphyrin present, to an extraordinary degree, in the urine of a case of Graves's disease, to which I shall have to refer again. However, their observations do not weaken my theory, but really support it.

Thinking over the matter, I conclude that this pigment may appear in the urine under two conditions: (1) when an excess of effete blood-colouring matter, or perhaps effete histohæmatin, is present in the blood, the glands whose function it is to change this to a simpler substance being incapable of dealing with the excess of the pigment, although they may be quite healthy; or (2) when these glands are diseased, and therefore incapable of metabolising the normal amount of effete pigment. In either of these conditions we should have urohæmatoporphyrin present in the urine.

Lately, Mr. Cant, of Lincoln, sent me a most extraordinary specimen of urine. It had a deep Burgundy-red colour,[40] which at first sight might lead one to suppose that it contained blood; but on testing for blood chemically, microscopically, and spectroscopically, none could be found, nor could any proteid be detected; it contained, in fact, no serum-albumen, globulin, or peptone, no excess of indican; but it did contain, and owed all its colour to, a kind of hæmatoporphyrin, easily demonstrated by the spectroscope. Now I need hardly say that, if the spectroscope were not available, I could have made nothing out of this urine. Without any treatment whatever, it showed a splendid hæmatoporphyrin spectrum, which, with a little sulphuric acid and a little ammonia, changed into that of acid and of alkaline hæmatoporphyrin respectively.

What was the meaning of this? Of course, in the first place, a large amount of blood pigment was being destroyed somewhere in the body; and in the second, some poison of a hæmolytic nature must have been present. Mr. Cant has sent me this urine several times, and each time the same pigment was found. It has been excreted for some years—at least three—by a woman now aged 40, who has exophthalmic goitre, this disease having begun three years ago. Mr. Cant tells me that the red blood corpuscles, counted with the hæmocytometer, amount to 2,250,000 per cubic millimètre—about half the normal—and the hæmoglobin is only 40 per cent of the normal, pointing, of course, to destruction of blood, and confirming the spectroscopic appearances.

The idea suggests itself, is the blood broken up in the thyroid? If so, does that gland in health pick out effete blood pigment from the blood circulating in it, and metabolise it into something else? That events of a catabolic nature take place, then, seems likely, from the results arrived at by Horsley and others, that its extirpation is followed by myxœdema.

Another curious fact noticed by Mr. Cant was that, on drawing a little blood from the patient's finger, and putting it under the microscope, many of the red corpuscles extruded their hæmoglobin, just as they are known to do under the influence of certain weak acids. My observations teach me that in all probability blood pigment is broken up in the tissues, and by an energetic reduction process. I may recall the beautiful experiments of Ehrlich[41] in this connection; he found that certain blue colouring matters, such as alizarin blue and indophenol blue, lose their colour in the tissues of living animals, and regain it on contact with the air, proving the existence of energetic reductive processes in the tissues; but, as most people know now, it is not the nascent hydrogen, but the nascent oxygen, which brings about the final change; just as it does in the case of palladium-hydrogen.[42] The product of this is hæmatoporphyrin, which is readily changed into bile pigment when brought to the liver, or perhaps it is changed into other metabolites in other organs, such as the adrenals. I mentioned above that Nencki and Sieber[43] find that bilirubin and hæmatoporphyrin have the same formula; therefore the change from one into the other is easily accomplished. But I shall have a few more remarks to make bearing on this interesting subject directly.

The Histohæmatins.—In 1883 I found a peculiar pigment in the muscle of insects, and from a shred of its bands I came to the conclusion that it was nearly allied to hæmatin. These bands are different from any known decomposition product of hæmoglobin; they are very sharp and narrow, and the pigment is easily changeable into another which gives bands like those of hæmochromogen, only narrower and much nearer the violet end of the spectrum. I named this pigment "myohæmatin,"[44] and traced it among different groups of invertebrate, and then among vertebrate, animals up to man. I found that other organs and tissues of invertebrates and vertebrates contain a similar class of pigments, which I named "histohæmatins." Now, these pigments occur among animals which contain no hæmoglobin whatever, therefore they cannot be derived from it in such animals. Levy,[45] a pupil of Hoppe-Seyler, has tried to prove that the myohæmatin of pigeon muscle is nothing but hæmochromogen, and Hoppe-Seyler has supported him.[46] Of course I feel like David before Goliath in daring to indulge in polemics with such a great investigator; but David in this case feels that he is right. I have found evidence of the presence of a histohæmatin in sponges;[47] indeed, it would seem to have a greater right to priority in

[35] MacMunn, *Journ. Physiol.*, vol. vii, No. 3; vol. viii, No. 6.
[36] Moseley: *Quart. Jl. Micros. Sc.*, vol. xvii. 1877. pp. 1-23.
[37] Geddes and Thomson, *The Evolution of Sex*, 1889, p. 23.
[38] MacMunn, BRITISH MEDICAL JOURNAL, February 4th, 1888.
[39] MacMunn, *Philos. Trans.*, Pt. I, 1886.
[40] Dr. S. Monckton Copeman brought me two specimens of urine about a year ago, which had the same colour as the above, and both owed their colour to the above pigment. This was the first time I had met with it. Dr. Noel Paton recently sent over a specimen of urine containing an allied substance.
[41] Ehrlich: *Das Sauerstoffbedürfniss des Organismen*, 1885.
[42] Hoppe-Seyler: *Zeits. f. physiol. Chem.*, vol. ii, p. 22, 1878; vol. x, p. 35, 1886; *Ber. d. deutsch. chem. Ger.*, xii, p. 1551; xvi, pp. 117, 1917, 1883.
[43] Nencki u. Sieber: *loc. cit.* see (27).
[44] MacMunn: *Philos. Trans.*, Pt. I, 1886.
[45] Levy: *Zeits. f. physiol. Chemie.*, xiii, Heft 4.
[46] Hoppe-Seyler: *Zeits. f. physiol. Chemie.*, xiv, Heft 1. My reply is given in the same Bd. xiv. Heft 4, and xiii. Heft 6.
[47] MacMunn: *Journ. Physiol.*, vol. ix, No. 1.

time than has hæmoglobin. Like the hæmatin which Sorby[48] found in the bile of snails and slugs, and which I found in the limpet, the crayfish, and elsewhere,[49] it seems to be a pigment on its way, as it were, to become hæmoglobin. Neither Hoppe-Seyler nor anyone else can for one moment maintain that in a butterfly, a beetle, a snail, or a crayfish the histohæmatin is derived from hæmoglobin, because they possess none. It may be that if, as is likely, it has become in time replaced by hæmoglobin, owing to greater respiratory needs—that is, it may have furnished, as it were, the nucleus around which the large hæmoglobin molecule has been built in time—then possibly in the downward metabolism of hæmoglobin in the vertebrate body it may reappear as one of the intermediate products of such downward metabolism. Or how do we know that it may not precede the formation of hæmoglobin in the vertebrate body, just as it has preceded it in time?

If anyone will take the trouble to catch a bluebottle fly (*Musca vomitoria*), open its thorax, place the large alar muscle in a compressorium, and examine it under his microspectroscope, he will see the spectrum of myohæmatin. A faint band will be seen just before D; then two narrow bands, of which the second is much darker than the first, between D and E; and a third, broader and fainter, covering E and *b*. I succeeded in getting oxyhæmatin into solution in the case of pigeon muscle, and I found that I could convert it into hæmatoporphyrin, thus proving, as I said before, that the latter pigment is derived from the histohæmatin when it is found in animals possessing no hæmoglobin.

These pigments are without doubt respiratory, as I have shown, and, although attempts have been made to minimise their importance, yet I believe by-and-by someone whose eye has been properly trained to the use of the spectroscope by long and careful study will come forward and confirm my results. Doubtless, if he is not an Englishman, he will saddle the pigment with a new name, and express regret that I had missed some points which he alone is able to point out. However, I shall be happy to show anyone who cares to see it the spectrum of myohæmatin.

Pigments of the Bile.—As all readers of textbooks of physiology know, there are two colouring matters in vertebrate bile: the red one, bilirubin $C_{16}H_{18}N_2O_3$ (or double that formula), and the green one, biliverdin $C_{16}H_{18}N_2O_4$ (Maly). Neither gives absorption bands. Bilirubin cuts off, in even weak solutions, the whole violet end of the spectrum, and that abruptly; biliverdin both ends: transmitting green. Both of them, when treated in solution with nitric acid, give the colour reaction of Gruelin and Heintz, and each stage of the reaction is marked by a characteristic spectrum, which may be made use of in their detection. It is only necessary to treat a chloroform solution of bilirubin, or a weak alcoholic solution of biliverdin, in a test tube with nitric acid, and observe the solution with the spectroscope, to enable one to follow this change. At first a band appears before D, then another after D, and one at F; the second fades away first, then the first one, leaving that at F, which also in time fades away. The pigments corresponding to these changes have some of them received names; for instance, that corresponding to the blue and violet stage is the bilicyanine of Heynsius and Campbell, and that indicated by the band at F, when it is becoming feebler, is known as cholitilin. It is hardly necessary to say that bilirubin is identical with hæmatoidin,[50] a pigment found in old hæmorrhages in the brain, thyroid, and elsewhere; also occasionally in the lungs, and its crystals have been found also in the fæces. Hence there is no doubt that hæmoglobin is readily connected with bile pigment. But I must remark that, although under pathological conditions hæmoglobin is converted into bilirubin, yet it seems to me that under normal conditions the change is probably from hæmatin or hæmatoporphyrin directly into bilirubin. My reasons for saying so are as follows:[51] (1) In bile obtained from a biliary fistula in a case where cholecystotomy had been performed by Mr. Lawson Tait, I found only biliverdin in fresh specimens.[52] Copeman and Winston[53] had a similar experience. (2) A bilirubin-like pigment has been found in the placenta of the bitch.[54] (3) In the eggshells of some birds hæmatoporphyrin and biliverdin have been found side by side by Sorby,[55] Krukenberg,[56] and others. Here the transformation probably takes place in the glands of the oviduct. (4) I have found biliverdin in a hydrocele fluid, into which blood had been effused.[57] (5) In the liver of the pigeon I have seen in one part hæmochromogen and in another biliverdin, which latter was seen filling the ultimate radicles of the biliary ducts in the lobule.[58] (6) In the red sea anemone (*Actinia mesembryanthemum*) I have found biliverdin in the mesoderm, while in the ectoderm a kind of hæmatin occurs: here there is no doubt that the green pigment is formed from the hæmatin.[59] I may also refer to the interesting experiment of Haycraft and Scofield.[60] These observers found that they could change bilirubin into biliverdin by contact with the mucus of the gall badder, and by different reducing means. Hence it is probable that this change takes place in the gall bladder, but the change in the liver is probably from hæmatin or hæmatoporphyrin into biliverdin.

I have described another pigment as occurring in the bile of the sheep and ox, namely, chlorohæmatin.[61] I proved that it is a kind of hæmatin, and changeable by means of energetic reducing agents into hæmatoporphyrin. It gives a curious series of bands which have been taken by MM. Wertheimer and Meyer[62] for methæmoglobin, but they do not belong to that substance. These observers found that in dogs poisoned with aniline and toluidine, oxyhæmoglobin passed over into the bile. But in some cases, though rarely, they found a substance which gave the bands of reduced hæmatin when treated with ammonium sulphides, and in other cases a substance which they call chloro-methæmoglobin, which they say is identical with my chlorohæmatin. In any case, this pigment is evidently on its way to be changed into biliverdin.

The spectroscope may also serve as a help in the detection of bile acids by Pettenkofer's test, as this is denoted by a peculiar spectrum, which I have described elsewhere.

There is no doubt that if the bile were systematically examined in many morbid conditions, most interesting results would be obtained. Indeed, I hope when I get sufficient leisure to do this.

Pigments of Urine.—Most urines, provided they do not contain bile or blood, show an absorptive band at the F line. Now in febrile cases, and in certain pathological conditions, the urine will be found redder than normal, and the band at F will be found broader and darker. Normal urine may not show the band at F owing to its containing enough reducing substance to convert the pigment giving that band into a chromogen; but if it be treated with a little solution of potassium permanganate, the chromogen becomes oxidised into the pigment, and the band at F appears. The pigment which gives this band is urobilin, and when isolated from normal urine it possesses characters which distinguish it from the corresponding pigment present in certain pathological urines. In either case the pigment may be isolated by precipitating the urine with neutral and basic acetate of lead, filtering off the precipitate, decomposing it with rectified spirit and sulphuric acid, filtering, diluting with water and agitating with chloroform in a separating funnel. On evaporating the chloroform the pigment is obtained.[63] Just as in the urine so in solutions of the isolated pigments, certain differences are

[48] Sorby: *Quart. Journ. Micros. Soc.*, vol. xvi, p. 77, *et seq.*

[49] MacMunn: *Proc. Roy. Soc.*, No. 226, 1883.

[50] For the literature on the identity of bilirubin and hæmatoidin, *cf.* Halliburton in the new edition of Watts's *Dictionary of Chemistry*.

[51] Copeman and Winston (*Journ. Physiol.*, vol. x, No. 4) have come to the same conclusion, and believe that the bile when freshly secreted is green, and that the change to yellow or reddish is due to the reduction of the biliverdin in the gall bladder and in the intestines.

[52] MacMunn: *Journ. Physiol.*, vol. vi.

[53] Copeman and Winston: *Journ. Physiol.*, vol. x, pp. 213-231.

[54] Hoppe-Seyler: *Handb. d. phys. u. path. chem. Analyse*, 3rd ed., p. 180; Ettl: *Oesterr. vierteljahr. f. wiss. Veterinärkunde*, xxxvi.

[55] Sorby: *Proc. Zool. Soc. Lond.*, 1875, pp. 351-365.

[56] Krukenberg: *Verhandl. d. phys-med. Gesell. zu. Wurzburg*, N. F., Bd. xvii; Thudichum: *Annals. Chem. Med.*, i, 1879, pp. 93-103; Dickie: *Ann. and Mag. Nat. Hist.*, xii, 1848, p. 169; Liebermann: *Bericht der deutsch. chem. Ges.*, xi, 1878, etc.

[57] MacMunn: *Proc. Roy. Soc.*, No. 226, 1883.

[58] MacMunn: *Journ. Physiol.*, *loc. cit.*

[59] MacMunn: *Philos. Trans.*, Pt. II, 1885, pp. 644, 645.

[60] Haycraft and Scofield: *Zeits. f. physiol. Chem.*, xiv, pp. 173-182.

[61] MacMunn: *Proc. Roy. Soc.*, No. 208, 1880, No. 226, 1883; *Journ. Physiol.*, vol. vi, Nos. 1 and 2.

[62] Wertheimer and Meyer: *Archives de Physiologie*, No. 3, July, 1889, pp. 438-448 and 600-605.

[63] MacMunn, *Proc. Roy. Soc.*, No. 208, 1880; *Journ. Physiol.*, vol. x, Nos. 1 and 1; *Clinical Chemistry of Urine*, pp. 104-110.

found in the spectra which prove beyond doubt that normal and pathological urobilin differ in certain particulars. The band of pathological urobilin at F is dark, broad, and shades off towards violet, while that of normal is narrow, is not deeply shaded, and does not shade off towards violet.

In acid solutions of pathological urobilin other bands are seen, which are missing in the corresponding solutions of the normal pigments.[64] The idea occurred to me in studying the spectrum produced by the action of nitric acid on solution of bile-pigment, that the stage in which the band at F is dark corresponds to the production of pathological urobilin, while that in which the band at F is faint corresponds to the production of the normal pigment. So it has turned out, but we are not to conclude that either of these pigments as it occurs in urine is necessarily derived from bile pigments. By the long continued action of sodium amalgam and of zinc and sulphuric acid, aided by heat on hæmatin, a substance is eventually formed which possesses many of the characters of (pathological) urobilin.[65] And by the action of hydrogen peroxide on hæmatin in acid solutions, another substance is found which possesses the character of normal urobilin, as I have proved, and by reducing this with sodium amalgam it changes into a substance resembling pathological urobilin."[66]

For this and other reasons we may conclude that normal urobolin is a more completely oxidised substance than the pathological pigment, but it is possible—and, indeed, probable—that both are produced under different conditions of metabolism. In this they afford a parallel to urea and uric acid; we know that uric acid is a less completely oxidised substance than urea, yet uric acid is not produced by the same metabolism that produces urea. I believe that normal urobilin may be produced elsewhere than in the liver by the action of nascent oxygen on worn-out hæmoglobin and its decomposition products, and in many cases it does not originate from bile pigments. Pathological urobilin may result from the incomplete oxidation of worn-out hæmoglobin and its decomposition products, and may not in many cases have its origin from bile pigment. It would appear to be excreted, as is now well known, after extravasations of blood into the tissues, into the peritoneum, and elsewhere; in such cases, there is too much material for complete oxidation to take place. On the other hand, there is a pigment present in fæces—stercobilin—and this presents nearly all the characters of pathological urobilin,[67] so that in some cases the presence of the latter in the urine may indicate the absorption of fæcal matters from the intestine. I am convinced that some so-called bilious attacks are due to this cause, for if the pigment is absorbed it must be accompanied by ptomaines, which produce the headache, aching of the limbs, vomiting, and so on. Whether this absorption takes place owing to the liver not performing its guardian function owing to vasomotor disturbance, or whether absorption takes place directly from the intestine, is not clear at present. At all events, everyone knows the beneficial effects of a saline purge in such cases.

In spite of the assertion that the urobilin found in urine is always due to the absorption of hydrobilirubin from the intestine, this hydrobilirubin being supposed to originate from the action of nascent hydrogen, generated by putrefactive processes in the intestine, on the pigments of the bile (Maly and Hoppe-Seyler), I say, without fear of contradiction, that the former may arise in other ways, and that the urobilin of normal urine is a product of oxidation, and that pathological urobilin is an incompletely oxidised substance. By the action of zinc chloride, of that and ammonia, and of other reagents on those pigments, it is easy to prove, as I have elsewhere shown,[68] that hydrobilirubin is not identical with either normal or pathological urobilin. The presence in the urine of urohæmatoporphyrin and the replacement of this by pathological urobilin, and *vice versâ*, teach, when taken in connection with other facts, that the latter may, as I said before, be derived in many cases from hæmatin, and may have no biliary origin. In some cases, of course, we may have urobilin derived from bile pigment as well as directly from hæmatin, but in such cases there is generally evidence of the passage of bile pigment into the blood. It is a well-known fact that in recovery from jaundice the bilirubin may appear in the urine as urobilin.

The spectroscope is helpful, also, in enabling us to detect indican. If the urine, after applying Jaffe's test, is shaken with chloroform, the latter, if indican is present, will show a band before D due to indigo blue, and another after D, said to be due to indigo red. Or even when Jaffe's test fails, it may be detected by boiling the urine with common hydrochloric acid, cooling and agitating with chloroform; the latter shows the same bands as in Jaffe's test.[69]

There are different pigments which become red on treating the urine with nitric acid and other acids, either at the ordinary temperature or after heating, but at present their origin is uncertain, although at least one is derived from a skatol compound.

Other Pigments.—I have now described some of the most important absorption spectra, speaking from a purely medical point of view, but the subject is far from being exhausted. I have not mentioned the lipoderms or fat pigments, which term includes under it the pigments formerly known as luteins, nor the black pigments known as melanines, some of which latter do not owe their origin to hæmoglobin, as is commonly supposed; nor have I been able to furnish more than a partial and unsatisfactory account of the other pigments. Still what I have said will serve to show that the spectroscope has taught us a good deal, and, I believe, will teach us more when it comes to be more generally used. In biology generally it has recently brought many new facts to light; these in turn must help to advance comparative physiology, which at present is not advanced enough to enable anyone to write even an elementary book upon it.

ESTIMATION OF URIC ACID BY HAYCRAFT'S PROCESS.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association, held at Birmingham, 1890.

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The process consists in (1) combining all the uric acid in a given amount (25 cubic centimètres) of urine with silver contained in a solution of nitrate of silver with addition of ammonia. The result is a gelatinous precipitate; (2) the gelatinous precipitate is collected and well washed on an asbestos filter; (3) the precipitate, after washing, is dissolved in nitric acid; (4) the silver thus got into solution is estimated by means of a colour test (Volhard's method). From the silver found the amount of uric acid combined with it is calculated.

Apparatus.—Flasks, pipettes, measuring-glasses, etc., a flask fitted with a rubber bung perforated in two places. Into one of the perforations fits the stem of a funnel containing broken glass and asbestos to form a filter. Into the other perforation fits a glass tube connected with a Sprengel's pump or other means of producing a vacuum.

[The working of the process was then shown on a specimen of urine.]

Addition of bicarbonate of soda. Haycraft says about 15 grains, Hermann considers that it is better to add about 30 grains; the object of the addition of the bicarbonate is to prevent the reduction of the silver combined with the uric acid.

It is always well to add an excess of the silver nitrate solution, as it is probable that when this is done the resulting urate of silver has a tolerably constant composition. When the patient is taking an iodide a precipitate of iodide of silver falls on adding the silver solution to the urine. This does not necessarily interfere with the process of estimating the uric acid; but it should always be an indication for adding more silver, so that the iodine may not deprive the uric acid of its share.

In collecting the urate of silver precipitate on the filter, if the filtrate is not quite clear it may be necessary to pass it a

[64] MacMunn, *loc. cit.*
[65] Hoppe-Seyler, *Physiol. Chemie, loc. cit.*
[66] MacMunn, *loc. cit.*
[67] MacMunn: *loc. cit.*
[68] Hoppe-Seyler: *Physiol. Chemie.*, p. 297; Maly: *Centralbl. f. d. med. Wiss.*, 1871, No. 54.
[69] MacMunn: *Clinical Chemistry of Urine*, pp. 96-98.

second or even a third time through the filter; the urate clogs the filter, and thus aids in its own filtration. When the precipitate has been collected on the filter, wash with plenty of water till the washings give no turbidity on addition of solution of sodium chloride, showing the absence of silver, and that no silver remains in the filter except that combined with uric acid. When this has been done, dissolve the precipitate and wash it through the filter with nitric acid, using plenty and filling the filter up to the brim, so that none of the precipitate on the sides may escape its action. Having got all the urate in solution, the final process is to estimate the silver by a colour test, and the uric acid combined with it is then found by calculation.

The process takes from 30 to 40 minutes, but I never grudge time to the washing process, which, with urines containing much uric acid, may be very slow owing to great clogging of the filter by the gelatinous precipitate.

It is possible, however, to attend to other matters during this process, merely every now and then pouring a little more water over the filter. The same process may be applied to a watery extract of blood, liver spleen, muscle, or other tissues of the body.

The watery extract is obtained by boiling the blood or tissue, previously finely divided, in about ten times its volume of water. I always see that the water is boiling before I add the blood, and I add only a little at a time, so that it shall be coagulated as soon as possible. After boiling for ten minutes the heavy particles are separated by decantation, and the fluid filtered. It is then evaporated down to about the volume of the original blood used and Haycraft's process applied as for urine.

This process for obtaining the uric acid from blood and other tissues is given by Salkowski and Leube[1] and they, after evaporating, proceed to obtain uric acid in crystals, but I have preferred to apply Haycraft's process.

I have, however, obtained uric acid crystals in some cases with a view to confirming my results with the Haycraft process, and they can be obtained either before or after the application of the process.

The advantages of Haycraft's process are its comparatively easy methods and relatively short time required to carry it through, also that it only requires 25 cubic centimètres of urine, so that the excretion can be estimated every half hour and changes, either natural or artificial, watched.

But for this it would have been often quite impossible to estimate the excretions during short headaches, epileptic fits, and short periods of high arterial tension, in all of which the process has enabled me to obtain interesting results.

Hermann[2] praised Haycraft's process as giving results sufficiently accurate for clinical purposes with greater celerity and ease of manipulation than any other process. It has, however, been criticised adversely by Gossage[3] and by Salkowski.[4]

The latter critic, we must remember, is the author of another process for estimating uric acid, which, however, is too long for clinical use and does not, to my mind, necessarily ensure any greater accuracy than that of Haycraft. Its final stage depends on the crystallisation of uric acid from an acidified solution, a process which does not seem to me to give absolute freedom from error. As to results to be obtained from known solutions of urate, Haycraft's figures, given when he published his process, seem to me to leave little to be desired.[5]

The possible error from xanthem mentioned by Salkowski[6] has been already dealt with by Haycraft, who points out that though xanthem combines with silver, the compound it forms is insoluble in nitric acid,[7] and in any case the error from xanthem could only be a very small one.

Variations are also considered by Salkowski to be introduced into the process by variations in the amount of silver which combines with the uric acid, but this is a chemical point which I would leave Haycraft to deal with. I have previously said, however, that it is well, so far as possible, always to add an excess of the silver; so that there shall never be any lack of it present to combine with the uric acid, and when this condition is fulfilled the resultant urate of silver is probably fairly constant in its composition.

To me it appears quite clear that the errors or possible errors from these causes are either so small as to be neglected, or so constant as not to prevent the accurate comparison of results, *inter se*, which for clinical purposes is all that I am concerned with. Further, I would ask: Have those who criticise the process by the light of their own results with it avoided all errors of manipulation? They appear to have repeated the process only some fifteen or twenty times. I have sometimes repeated it nearly that number of times in a single day.

The more important of my results during the last five years agree completely with each other, and with the physiological results produced along with them, and they show that, given the same conditions and the same drug, the results in the human organism are as constant as regards the excretion of uric acid as those in a chemical test tube.

My main facts, that acids diminish, and alkalies increase, the excretion of uric acid and that salicylates and phosphate of soda increase it greatly, while iron and lead diminish it, are the concordant results of very numerous experiments (in the case of acids and alkalies probably extending to three figures) with Haycraft's process, and can be verified as I know in some cases, even by the rough process of direct precipitation (Heintz) which, though doubtless inaccurate, is nevertheless, I think, to be believed when it shows that the uric acid excretion on one day is twice as great as on the previous day.

And these results are, as will now be easily seen, in complete accord with the physiological and pathological effects of the drug above mentioned. In the process itself also there are certain safeguards; thus, after the addition of the silver solution to a urine that contains much uric acid, the fluid may be almost converted into a jelly by the copious urate precipitate; on the other hand, when there is very little uric acid the precipitate may be represented by a slight haze. By bearing these points in mind, a rough idea of the amount present may be formed to the extent of estimating fairly accurately that one urine will contain from five to six times as much as another. Again, the filtration of the one that contains most urate will take five or six times as long as that of the one which contains least. Again, specific gravity and its relation to urea varies to a certain extent with the amount of uric acid present, and though other things may occasionally interfere with this, it is often a useful guide, and I feel more confidence in the accuracy of my results when they accord with this. Thus, take a urine of specific gravity 1025, if there is much uric acid urea will probably be only about 1.5 per cent., whereas if there is little uric acid, urea may be 2.0 per cent. or more.

While my results are constant, and are thus safeguarded, I fail to see that objections to the process resting on more or less theoretical points in chemistry need greatly concern me. I can further show that my results for the most part agree with what was previously known and found out about uric acid by other processes, thus:

Sir A. Garrod[8] pointed out that blood or serum drawn over an inflamed joint contains no uric acid. Similarly, I have found that blood drawn from the seat of a local inflammation contains almost no uric acid, and that blood drawn early in an acute fever, as pneumonia, contains little or none. My explanation of the fact differs from that of Sir A. Garrod, but the facts alone concern us here.[9]

Again, it is pointed out in textbooks of physiology that after death the spleen more constantly contains uric acid than any other gland. Recently I have examined the blood from the heart cavities and at the same time a bit of the spleen, and have found in several cases that the spleen contains from four to five times as much as the blood. The liver, again, I have found to contain from three to four times as much as the blood, a fact also previously pointed out by Sir A. Garrod,[10] and his writings on this subject led me to suggest[11] that,

[1] *Die Lehre vom Harn*, p. 94.
[2] *Zeits. fur physiol. Chem.*, July, 1888.
[3] *Proc. Roy. Soc.*, vol. xliv, p. 284.
[4] *Zeitsch. fur physiol. Chem.*, vol. xiv, p. 31.
[5] BRITISH MEDICAL JOURNAL, vol. ii, 1885, p. 1100.
[6] *Op. cit.*
[7] BRITISH MEDICAL JOURNAL, vol. 2, 1885, p. 1101.
[8] *Gout and Rheumatic Gout*, pp. 187 and 274.
[9] See paper in next volume of *Med.-Chi. Trans.*, on Salicin compared with Salicylate of Soda as to Effect on the Excretion of Uric Acid and Value in Treatment of Acute Rheumatism.
[10] Lumleian Lectures. BRITISH MEDICAL JOURNAL, vol. i, 1883, p. 549.
[11] *Journal of Physiology*, vol. viii, p. 214, and elsewhere.

when an acid diminishes the excretion of uric acid in the urine, it does so by diminishing the solubility of uric acid and causing its retention, in accordance with Sir A. Garrod's observation, in the liver, spleen, and joints, which are naturally less alkaline than the blood and tissue fluids of the rest of the body; and my results are obviously in complete accordance with this suggestion.

I have examined upwards of sixty specimens of blood, some drawn during life, but most taken from the heart cavities after death, and all tend, I think, to show that there is excess of uric acid in the blood—some specimens containing as much as 0.07 to 0.08 per cent.—under exactly the same conditions in which there is excess of it in the urine, and recently I have drawn the urine from the bladder at the same time that I took the blood from the cavities of the heart, and my results seem to show that excess in the urine corresponds and coincides with excess in the blood, and scantiness in the urine with a very small quantity, or even none, in the blood.

Again, my results show that blood drawn during acute fever, as pneumonia, or at the seat of a local inflammation, contains almost no uric acid, and I have previously mentioned that Sir A. Garrod found none in the blood and serum drawn under similar conditions. On the other hand, blood obtained after death from chronic wasting disease, especially if there are urate deposits in the joints, may contain a very large amount, as 0.08 per cent.

From all these facts, I infer that it is safe to argue from the urine to the blood, and that an excess of uric acid in the urine above the relation to the urea of 1 to 33, comes from and is the index of some excess of uric acid in the blood—a fact which I was led to infer several years ago from the physiological and pathological results I can produce by influencing the excretion of uric acid by the urine. And results thus constant and in harmony with those previously obtained by others are, I submit, incompatible with the existence of errors in the process sufficient to vitiate it for clinical and comparative purposes; and, used with due care and sufficient knowledge and experience of the sources of error, I believe that Haycraft's is by far the best process for the clinical estimation of uric acid at present known.

TUBERCULOSIS IN THE SAUROPSIDA.

Read in the Section of Pathology at the Annual Meeting of the British Medical Association, held in Birmingham, July, 1890.

By WALTER K. SIBLEY, M.B.Cantab.,
Assistant-Physician to the North-West London Hospital.

The vertebrate kingdom of animals has been divided into three main divisions, namely, the ichthyopsida (fish and amphibians), the sauropsida (reptiles and birds), and the mammalia (mammals).

Tuberculosis, the commonest disease of domestication both in man and many of the lower animals, has not as yet been found in the ichthyopsida, and, with but very rare exceptions, in only one division of the sauropsida—that is to say, the birds. Until the last few months back no case had been described in the reptiles, but now we find isolated cases occurring in the ophidia when kept in confinement.

Part I. *Birds.*—The abdominal organs—namely, the spleen and liver—were the parts primarily affected; the abdomen often being bulged from the enormous size of the liver, whilst the spleen was usually enlarged many times its natural size. In some cases no deposits were seen in the intestines, at other times these organs were beset with hard nodules often as large as beans. Microscopically the deposits in an early stage consisted of small groups of epithelioid cells, which were often apparently lying in vessels and enclosed by the vessel wall. In a much more advanced stage, each deposit consisted of a central mass of caseation, which was very irregular in outline, and surrounded by a zone of giant and epithelioid cells undergoing degenerative changes. Surrounding this was a ring of granulation tissue, the whole being encapsuled by fibrous tissue. In a still more advanced stage there was a considerable development of fibromyxomatous tissue. In these last stages no bacilli were present in the newly-formed fibrous tissue, but they occurred in densely packed groups in the caseous masses. In the intestine the lesions varied from a small ulcer with thickened edges to pouches occasionally as large as small oranges springing from the gut walls. The walls of these were formed chiefly of caseous tissue and fibrous tissue. Often the lungs presented no obvious lesion. In a few cases there were caseating lymphatic glands in the base of the neck. Tubercular disease of the bones was very rare. In one case of a fowl there was a caseous mass in the neck of the thigh bone, and in another case some caries of the vertebræ. The example of a peacock presented several tumours in connection with the bones and joints, such as the scapula, sternum, and knee-joint; several of these tumours were as large as walnuts. Microscopically, they were formed of granulation tissue, with groups of epithelioid cells, and also giant cells here and there. Tubercle bacilli occurred in parts of these growths.

The bacilli vary much in different classes of birds both as to their number and arrangement, and also their actual size. All of these I believe to be merely local varieties of the same bacillus, the result of the slight differences in the soil in which they are growing. In birds the masses of caseation are very firm; often a furrow appears around them, by the growth and contraction of the fibrous tissue, and so the deposits, which are close to the surface of an organ, may in this way become completely separated. In some birds I have found the nodes formed in the liver lying loose in the abdominal cavity. The deposits appear never to go beyond the stage of caseation; they do not of themselves break down and form cavities, nor do they become calcified. There is a tendency for the disease to extend by continuity and to a considerable new tissue formation.

In a large number of cases which occurred in a farmyard among the fowls there was very strong evidence that the disease was hereditary in its nature, in that the birds became affected during consecutive years when about the same age—that is, young adult life. Also the disease was limited to certain broods, others which lived along with these remaining free from the affection. So, also, pigeons and wild birds feeding in the same yard never became subject to the affection, and the disease was not present in the neighbouring farms.

I have thus far found tuberculosis in the following birds dying naturally in confinement, the diagnosis being in every case made from the microscopical appearances of granulomata undergoing central degeneration, together with the presence of the bacilli: canaries, finches, fowls, geese, guan, owls, peafowls, pheasants, pigeons, swans and vultures.

Part II. *Snakes.*—The first case I met with of tuberculosis in snakes occurred in an Italian snake (*Tropidonotus matrix*), which died in the Zoological Society's Gardens; it is described in full in *Virchow's Archiv* for 1889.[1] This case was marked by the number of tumours in various regions of the body together with general visceral tuberculosis, tubercle bacilli being abundantly present in most of the lesions. Here the seat of the deposits appeared to be in the lymphatic vessels, there being a complete tubercular thrombosis of the main lymphatic channels. The microscopical structure of the lymphatic deposits was the same as that of the visceral deposits.

In addition to this well-marked case of tuberculosis I have examined a few specimens of what appeared to be the same disease, in which the lesions were confined to the subcutaneous tissues. A viper had a large tumour on the side of the neck, which had been watched for over two years without showing any appreciable change in its size. This tumour was composed of very dry caseous tissue lying in definite areas of fibrous tissue.

The study of tuberculosis in reptiles is of great interest, in that the disease can be studied with a complete control of the animal's temperature, as the temperature of a snake's body does not differ much from that of the surrounding medium, so they may be kept at a given temperature and the disease under its various aspects so studied. With this object I have kept various members of the reptile class (inoculated with tubercle) in incubators regulated to definite temperatures. After considerable difficulty I have succeeded in producing tuberculosis in snakes by the inoculation of pure cultures of the bacilli and keeping the reptile at about a temperature of 35° C.

[1] Translated in the *Journal of Anatomy and Physiology*, 1889.

The first successful case died 52 days after the primary inoculation, with miliary tubercles in the liver and lungs, etc. The deposits appeared to be of a caseous nature, most of them containing groups of tubercle bacilli. A full description of inoculated tubercle in reptiles I hope to publish shortly.

In the cases occurring in the London gardens it is seen how the disease is arrested by reduction of the temperature. Thus the average temperature of the reptile house is decidedly lower than that at which the tubercle bacilli can grow, that is to say, it is only during the summer months that the disease can be active, and so far I have only found cases of the disease in those snakes which are kept in cages exposed to the full rays of the sun.

PROTECTIVE AND ANTAGONISTIC INOCULATION IN LEPROSY.

Read in the Section of Pathology, at the Annual Meeting of the British Medical Association, held at Birmingham, July, 1890.

By BEAVEN RAKE, M.D.Lond.,
Medical Superintendent of the Trinidad Leper Asylum.

Many diseases have been described as retarding the progress of leprosy. Thus Danielssen and Boeck,[1] speaking of the effects of an outbreak of variola in the St. George Leper Asylum in Bergen, says: "Après la guérison de ces ulcères et l'entière destruction de ces tubercules, et à l'exception de cicatrices, tantôt petites, tantôt grandes, mais enfoncées, la place ne laissait sentir aucune trace de tubercules aux endroits qui s'en trouvait affranchis." I have noticed similar swelling of the skin and subsequent disappearance of tubercles at the Trinidad Asylum in patients whom I have vaccinated. The following is a typical case:

E. A., negress, aged 17, suffering from mixed leprosy, admitted February 12th, 1889.

February 15th. Vaccinated on left arm.

February 19th. Face swollen; arm beginning to rise, but no inflammation at the site of vaccination.

February 21st. Four successful insertions.

March 1st. Swelling has gone down.

March 2nd. Tubercles almost gone from face; skin dry and wrinkled; fever gone.

March 15th. Face and extremities desquamating; hardly any tuberculation to be seen.

March 18th. No tuberculation; some swelling of fingers and toes.

Hardy mentions pleurisy, pneumonia and variola as acting similarly. Leloir[2] also describes erysipelas as retarding leprosy. This I have noticed in the asylum here. He also mentions a disappearance of cutaneous tubercles when the patient is attacked with phthisis. This is very marked towards the end of old tuberculated cases in Trinidad, and on *post-mortem* examination I have found tubercles not only in the lungs, but often also in the viscera. The connection between leprosy and tuberculosis I hope to discuss in a future report.

All these instances of the retarding effect of other diseases on leprosy seem to point to the possibility of antagonistic inoculation; for variola, pneumonia, erysipelas, and phthisis are each associated with a distinct micro-organism.

It was not long, therefore, before such inoculations were attempted. Cornil injected jequirity into leprous patches without effect. Campana inoculated lepers with erysipelas with the result that nearly all the patients in the ward got erysipelas, and the ward had to be closed. No effect was produced on the progress of the leprosy.[3]

In view of this apparent antagonism, I have been making during the year some experiments on the treatment of leprosy by inoculation of cultures. As we are not yet certain that the bacillus leprae can be grown on the ordinary media, protective or antagonistic inoculation may appear somewhat premature. Still I thought it worth while to take a working hypothesis, and go a little ahead of our actual knowledge, for the cultures from fragments of tubercles or viscera might contain either spores or some secretion of the bacillus, and so set up some recognisable changes when injected beneath the skin.

[1] *Traite de la Spedalskhed*, p. 324.
[2] *Op. cit.*, p. 224.
[3] Leloir, *op. cit.*, p. 356.

Even if the growths are not leprous they may be of value in destroying leprosy bacilli, for Campana has described relief in phthisis from the inoculation of bacterium termo.

There are three conditions in which such inoculations might be of use:

1. In anæsthetic leprosy, to arrest further growth in the nerves.

2. In tuberculated leprosy, to cause local destruction of tubercles, or to protect against further growth.

3. In leprotic fever, to arrest the outbreak of tubercles.

In the first series of cases I have found temporary swelling, redness, and sometimes suppuration, but no permanent effect. I may mention here that I have never known an anæsthetic leper develop tubercles. Leloir,[4] however, mentions three cases in which pure anæsthetic leprosy afterwards became mixed from the development of tubercles. In one of these cases the tubercles disappeared by suppuration, and the case became anæsthetic again. One or two old anæsthetic patients at Cocorite have told me that they were formerly tuberculated. The alleged disappearance of tubercles was, however, before my time, so that I cannot vouch for its truth, nor can I be sure whether they were anæsthetic before they became tuberculated.

In the second series I have noticed in some cases a certain amount of local ulceration and destruction of tubercles, but not to any marked extent. The ulcers soon healed, leaving the tubercles nearly as large as before.

In the third series I thought that the receptivity of the patient might be increased by the leprotic fever, and that possibly the leprosy bacilli, being more active at that time, might be more amenable to the influence of antagonistic cultures. The same local effects were, however, observed in these cases also.

[A detailed account of the various inoculations was given in a table which was shown at the meeting.]

FURTHER PROCEEDINGS OF THE SECTION OF PATHOLOGY.

The Tongue in Disease.—Dr. W. Howship Dickinson exhibited a series of macroscopical and microscopical drawings:—A. The changes represented were chiefly those produced in the organ by diseases external to itself. (Macroscopical and microscopical appearances), namely: 1. Healthy tongue, an average state epithelial covering, vegetable growths; 2. Stippled tongue; 4. Coated white moist tongue; 6. Plastered tongue; 7. Furred and dry tongue; 8. Encrusted dry tongue; 9. Denuded tongue; 10. Red and dry tongue; 11. Red, smooth, covered with membrane; 12. Cyanosis. B. Some of the morbid states proper to the tongue itself were also shown, namely: 1. A form of glossitis affecting children; 2. Annulus migrans; 3. Leucoplakia in a smoker.

Alcohol as an Antiseptic.—Dr. J. J. Ridge read a paper on the Action of Alcohol on Micro-organisms and Cell Protoplasm. He described the effect of minute quantities on cell protoplasm, taking first its effect on the growth of vegetable cells, chlorophyll corpuscles, etc., and secondly on animal protoplasm as exemplified by its action on the eggs of the blowfly. He next described its effect on micro-organisms, the bacilli of certain fevers, of septicæmia.

Tubercular Diseases of Bones and Joints.—Mr. Watson Cheyne exhibited specimens illustrating the Pathology of Tubercular Diseases of Bones and Joints: 1. Specimens showing the chief types of synovial disease. 2. Specimens showing soft deposits in bones, their mode of growth, and their progress. 3. Specimens illustrating the formation of tubercular sequestra. 4. Specimens showing the destruction of cartilage, and caries of the ends of bones. 5. Specimens of tubercular periostitis and tubercular osteomyelitis. 6. Specimens illustrating the pathology of chronic abscess.

Comparative Pathology of Tuberculosis.—Professor J. McFadyean (Edinburgh) discussed the Comparative Study of Tuberculosis in Man and the Common Domesticated Animals (ox, horse, sheep, pig, dog, cat, and fowl). The principal points touched on were: The relative frequency of the disease in the above-mentioned animals; the character of tubercular lesions, and the differences in their distribution and histology in different animals. The distribution of tubercle bacilli, their relative abundance, and the question of their identity

[4] *Op. cit.*, p. 209.

in the various species were next reviewed, and the mode of infection in the different species mentioned. Finally, the subjects of immunity, susceptibility, and heredity were dealt with. Microscopical demonstrations illustrating certain of these points were given.

Physiological and Morbid Conditions of the Fundus Oculi.—Mr. Adams Frost showed a selection from a series of lantern slides to illustrate various ophthalmoscopic appearances. The slides were reproductions of water colour drawings made from nature by Mr. A. W. Head, under the direct supervision of Mr. Frost. The following conditions were depicted. Physiological variations:—Fundus of a fair and of a dark subject. "Chloride tigree," pigment of disc, congenital pigment groups on fundus, connective tissue on disc, opaque nerve fibres, congenital crescent of disc, coloboma. Morbid conditions:—Optic neuritis, optic atrophy (primary, posterior neuritic), albuminuric retinitis, detachment of retina, embolism, retinal hæmorrhage, retinitis pigmentosa and allied conditions; choroiditis.

Ophthalmoplegia.—Dr. Alexander Bruce (Edinburgh) read a paper on the Relations of the Nuclei of the Third Cranial Nerve to Ophthalmoplegia. The communication was illustrated by microscopical sections of the nuclei, projected on the screen by means of Selenka's electric light microscope.

Insidious Bone Lesions in Mammary Carcinoma.—Dr. Herbert Snow's paper dealt in the first place with the so-called rheumatic pains prevailing in every advanced case of scirrhous or encephaloid breast cancer. He pointed out the differences between these pains and those of rheumatism. There was an interference with the hæmogenic function of bone marrow. He commented on decalcification and softening of bones in the neighbourhood of growth, and in the corresponding arm in certain cases, and said that fragility of distant bones was already recognised. The infection of the marrow was a usual and not an exceptional incident in the course of the disease. The early signs of that infection were (1) thickening of the upper epiphysis of the humerus, (2) prominence and thickening of the sternum. The recurrence after long periods of the growth in the opposite mamma was explained by this theory. He next passed on to consider the local origin of cancer. He discussed the local nature of rodent ulcer, squamous epithelioma, sarcoma, cylindroma and lymphosarcoma, and carcinoma. Belief in the constitutional origin was a lingering remnant of the old humoral pathology, and was not in accordance with clinical experience.

Exhibition of Specimens.—Dr. Sheridan Delépine (London) exhibited a large number of macroscopical and microscopical specimens; among these were: *Macroscopical:* (1) Nodular Hepatitis in a case of Malignant Icterus (Dr. Lauder Brunton's case); (2) Cystic Kidney (Dr. Lauder Brunton's case); (3) Myomalaria Cordis (Dr. Dickinson's case); (4) Arteriosclerotic Softening of Cuneus (Dr. Dickinson's case); (5) Arteriosclerotic Atrophy of Kidney (Dr. Dickinson's case); (6) Actinomycotic Abscess of Liver (Dr. Gamgee's case); (7) Aspergillus Niger from a Cutaneous Ulcer (Melanomycosis) (Mr. Rouse's case); (8) *Sable Intestinal* (Dr. Dickinson's case). *Microscopical:* (1) Psorospermia ascending Bile Ducts; (2) Fully-formed Psorospermic Nodule; (3) Charcot's Crystals in Bronchial Casts (Dr. Cavafy's case); (4) Charcot's Crystals in Fæces (Dr. Lauder Brunton's case); (5) Charcot's Crystals in Alcoholic Extract of Liver in Acute Yellow Atrophy (Dr. Dickinson's case); (6) Urate of Calcium; (7) Cystin Fermentation; (8) Cardiac Calculus (Mr. Mann's case). G. F. Crooke, M.D.Edin. (Birmingham): Exhibition of microscopical specimens illustrating the Pathology of the Kidneys and Liver.—Mr. R. Hagyard, M.R.C.S.Eng. (Hull): Displacement of the Semilunar Cartilage of the Knee-joint.

Examination of the Blood. Dr. S. M. Copeman (London) described certain improved methods for the clinical examination of the blood, and demonstrated: 1. The use of a tinted normal saline solution with the hæmocytometer, by which the differentiation of the white corpuscles was facilitated. 2. An improvement in Gowers's hæmoglobometer, consisting of a screen which allows the passage of the transmitted light only, this providing against the fallacy caused by simultaneous reflexion. 3. The hæmotintometer, an instrument for determining the percentage of hæmoglobin in blood, and also for estimating any change in the nature of the blood pigment. 4. The hæmometer, a method of obtaining the specific gravity from a minimal amount of blood or other coloured or colourless fluid.

On Leucocytes.—Mr. C. A. Ballance (London) and Dr. C. S. Sherrington (London) gave a magic lantern demonstration illustrative of the results of their experiments on the conduct and fate of connective tissue corpuscles and leucocytes in tissues in a state of inflammation. The history of the plasma and white blood cells was described, and their life-history in an inflamed area depicted on the screen.

Diseases of the Lungs (chiefly Tuberculous).—Dr. Sims Woodhead gave a demonstration of certain diseases of the lung, especially those associated with tuberculosis. Tubercle in various positions and with various methods of distribution was illustrated, namely: 1. Miliary tuberculosis associated with spread *(a)* by blood vessels, *(b)* by air vesicles. 2. Catarrhal pneumonic tubercle. 3. Chronic lymphatic tubercle. 4. Fibroid phthisis. Further specimens were shown illustrating the mode of spread by lymphatics, air vesicles, and blood vessels. The part played by the glands in interfering with, or aiding the production of, pulmonary phthisis; changes in the pleura in cases of tuberculosis and phthisis; and the histological structure of tubercle. These points were illustrated by means of projections of naked-eye and microscopic specimens.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PAPILLOMA UTERI (TRUE CAULIFLOWER EXCRESCENCE) TREATED WITH CRYSTALLISED IRON PERCHLORIDE.

In the British Medical Journal of May 21st, 1881, I published three cases of this usually rapidly fatal disease, thus treated; and advocated resort to the iron salt as a safe and simple remedial measure, either *per se*, or as a useful preliminary to more radical operative procedures, otherwise difficult or impossible owing to the excessive vascularity of the spongy new growth. The following is a brief epitome of the notes on a recent instance; which appears, moreover, to present more than one feature of unusual interest.

J. C., admitted into the Cancer Hospital on October 7th, 1889, age 38, married, six children; symptoms of five months' duration. A large pulpy mass, bleeding profusely when touched, grew from the cervix, and almost completely filled up the vagina; no healthy cervical tissue could be distinguished, and the case was regarded as very advanced. Three applications of the solid iron salt were made, at intervals of a week; on each occasion two pieces being pushed as high up the vagina as possible, and the orifice protected by the subsequent insertion of one or two pledgets of cotton wool soaked in carbolised oil.

On November 12th the woman was discharged at her own request, with the whole of the "cauliflower" growth removed, and with the malignant lesion reduced to a small excavated ulcer; but for her voluntary dismissal much more might probably have been effected.

In February of last year she was discovered to be pregnant; and on June 19th last was safely delivered, by Mr. F. S. Barnet, of Lewisham, who appears to have bestowed the greatest care upon her case, of a well-developed male child at full term. He informs me that the first stage lasted nine hours; "only a very small portion of the circumference of the os being uninfiltrated with cancer; yet this portion did wonderful work in the way of expansion." No unusual hæmorrhage took place, and no instruments were used; a good recovery ensued. In November last the disease was making slow progress; lactation continued, and the general health was not appreciably impaired. Impregnation must have taken place about the middle of September, 1889; the local condition when the poor woman first came under observation, might well have been held to render such an occurrence absolutely impossible.

Gloucester Place, W. Herbert Snow.

WOUND THROUGH THE PATELLA INTO THE KNEE-JOINT: RECOVERY WITH PERFECT USE OF THE JOINT.

On January 18th, 1889, a little boy, J. F. T., aged 4 years, was sitting on the ground playing near a hayrick, from which his father, an agricultural labourer, was cutting out hay. The heavily bladed knife commonly used for this purpose fell from the rick and cut across the child's left knee, inflicting a diagonal wound about 2 inches long in a direction from the upper and outer to the lower and inner aspect of the joint, completely dividing the patella and exposing the joint. The child was brought without delay into the Totnes Cottage Hospital, and after cleansing the parts, with the help of my colleague, Dr. Raby, the cut surfaces of the patella were accurately approximated, the wound in the integuments stitched with silver sutures and dressed with carbolic oil, pads applied above and below the wound, and a figure of 8 bandage round the knee, the joint being then kept at rest by a posterior splint. The boy never had a bad symptom; the wound healed by first intention, and he returned home on March 13th with a sound joint, wearing for some time after, as a precaution, a simple bandage round the knee.

The report I have of him on November 20th, 1890, twenty-two months after the injury, is that there is on examination a scarcely perceptible projection at the outside of the knee, that a stranger would not observe anything unusual in his gait, that he can lift the leg as well as before his accident, and that he walks two miles every day to school and two miles home again without any bad effect.

This case resembles closely that recorded by Mr. Swain, of Plymouth, in the British Medical Journal of November 15th, 1890, with this difference in the treatment, that my case recovered with a perfectly consolidated patella without the aid of sutures through the bone.

Taunton. J. Currie, M.D.

LIQ. HYD. PERCHLOR. IN DIPHTHERIA.

Noticing in the British Medical Journal of December 13th, 1890, the high percentage of deaths from diphtheria, I am induced to suggest through your columns a trial of liq. hyd. perchlor. in drachm doses, given every hour at the onset, and then at longer intervals as the case improves. I have now adopted this treatment in about sixty cases with the best result, not having had a fatal termination since first trying it. My formula for a child of 3 or upwards is R tr. fer. perchlor. ℥j, liq. hyd. perchl. ʒj, glycerin. ad ℥ij: dose a dessertspoonful every hour from four to six hours, and then every two, three, or four hours as the case may require. For an adult I give ℞ tr. fer. perchlor. ℥ij, liq. hyd. perchl. ʒj, glyc. ʒss, sol. pot. chlor. ad ℥viij, dose ℥j each hour, and repeated as in the case of the child. The addition of potass. iodid. to this mixture does not appear to have any beneficial effect. With this treatment local applications, such as painting the fauces, spraying the throat, or the use of gargles, are not needed, and in my hands appear to do far more harm than good. In severe cases poultices and the steam kettle are certainly beneficial. I find in most cases, after four or five doses, that the membrane becomes dull and soft, and inclined to pucker up; by the end of twenty-four hours it is almost like mucus, and ready for expectoration; and that by the end of forty-eight hours nothing but an inflamed sore throat remains. In one obstinate case I gave a drachm dose to a child, aged 7, every hour for thirty-two hours without any evil result. I have never yet met with a case of salivation from the use of this drug, nor have I seen a case of diphtheritic paralysis follow when it has been employed.

Some time since, when attending two children, the nurse girl contracted the disease. I sent her some medicine, and the next night, after dark and in heavy rain, she came to the surgery for more. The day following, instead of being worse, I found her considerably better. Since then I have not been so particular about confining a patient to one room, but have treated a number of cases where the patients have gone about, indoors and out, as they thought fit, with equally good results.

Huddersfield. Frank A. Coward.

REINFECTION, RECRUDESCENCE, OR WHAT?

The following case, which has just occurred, is of interest in connection with this question:—

On September 20th, 1890, a lad, aged 16, was admitted into the Derbyshire General Infirmary with scarlet fever. As he peeled slowly he was not discharged until November 24th, nine weeks after the appearance of the rash. All his belongings having been disinfected, he returned home and remained there two weeks. He was then admitted into the medical ward of the infirmary for rheumatism in his right knee-joint. This subsided with rest in bed, and he was about to be discharged, when, on December 15th, he showed all the symptoms of a sharp attack of scarlet fever, well-marked rash, sore throat, and reddened tongue, fever, and sickness. Exactly twelve weeks after the first appearance of the rash he had a second and more severe attack.

Among the large number of cases seen in this hospital, recrudescence is fairly common, but always in the second or third week; twelve weeks seems an extreme variation. If reinfection, then he must have caught it either (1) in the hospital prior to leaving, which would make the incubation period three weeks, or (2) in his own home—incubation period eight days—or (3) in the medical ward of the hospital, which is extremely unlikely.

I am inclined to look upon it as an unusual case of recrudescence. He was an unusually long time in desquamating—nine weeks—the same parts over and over again commencing to peel afresh. Then, when convalescent, he seemed to be considerably below the mark, and, finally, eleven weeks after the first attack, he had this effusion into one joint only, and that with no rise of temperature.

Though our methods of disinfecting, etc., are as perfect as can be devised, yet it is no uncommon occurrence to find that after a child has been discharged to its home one or two weeks fresh cases crop up in the same family.

Chas. H. Taylor, M.B., House-Surgeon
Derbyshire General Infirmary.

CONGENITAL MALFORMATION OF THE ŒSOPHAGUS.

A few days ago I attended Mrs. B. in her first confinement. She had gone her full time, and the child (female) was apparently strong and healthy. On my visit the following morning I was informed that everything the child took, either from the breast or spoon, was at once regurgitated through the nose. I accordingly saw it again in the afternoon, and attempted to pass a soft catheter into the stomach. It passed in five or six inches, but, on injecting milk through it, regurgitation ensued immediately, the catheter having apparently become coiled up in a *cul-de-sac*.

The child died about forty-eight hours after birth. With very great difficulty I obtained permission to make a *post-mortem* examination, in conjunction with my assistant Dr. Squire, when we found the following condition of the parts: The pharynx was normal. The œsophagus ended in a pouch-like dilatation an inch and a half below the laryngeal orifice. From the extremity of the pouch a fibrous, cord-like prolongation could be traced for about two inches. We opened the stomach, and passed a probe through the cardiac orifice. We found that the gastric extremity of the œsophagus was represented by a muscular tube of about the normal calibre below, but becoming smaller and thinner as it passed upwards behind the œsophageal pouch above mentioned, and finally opening into the trachea in the fibrous space between the cricoid cartilage and the first tracheal ring.

J. Foster Vince, M.B.Lond.

Summerfield, Birmingham.

NOTE ON THE TREATMENT OF "INTERACTING BLADDER AND KIDNEY DISEASE IN WOMEN."

In the Supplement to the British Medical Journal for December 6th, 1890, an epitome is given of a lecture by Professor Guyon under this title, in which the lesson is taught that "it should be a fundamental law of surgery to run to the assistance of the kidneys by methodical treatment

of the lower part of the urinary tract." I have but little doubt that this principle has been often recognised and acted upon, although English surgeons may have hardly thought it necessary to draw special attention to the subject. An illustrative case which occurred several months ago may be of some interest.

E. S., aged 33, a married woman having eight children, the youngest of which she was suckling, came under my care in August, 1889, with suppurative inflammation of some part of the urinary tract. During the next three or four months large quantities of pus were voided with the urine at short intervals. The temperature at each visit was high (100° to 102.2° F.), and although she was only occasionally confined to bed, the patient rapidly lost strength and flesh. This condition was aggravated by loss of sleep due to painful and frequent micturition. After most careful examination and exploration under anæsthesia—into the details of which I need not now enter—it was decided that the pus must come from the right kidney. At the same time the bladder was undoubtedly largely affected also, the anterior vaginal wall was tender, the passage of a sound caused severe pain, and the main complaint of the patient was one of dysuria.

The right kidney was slightly enlarged, and occasionally the seat of pain, but both kidneys were situated high up beneath the ribs and their examination difficult. There was much less tenderness in the loin than in the region of the bladder. Before considering the question of operating on the kidney, I decided to open the bladder so as to give the latter rest and ensure better drainage for the kidney abscess. This was done in January, 1890, and the good effect of it was at once apparent and has been lasting. The temperature has remained nearly normal since the date of operation; all dysuria ceased at once; the pus has been slowly decreasing in amount; the body weight has been maintained, and although the vesico-vaginal fistula is a necessary cause of discomfort, the patient has throughout been very pleased with the relief obtained and the improvement in her general condition.

The vaginal cystotomy has undoubtedly been of service, but I doubt whether it will prove sufficient to cure the patient. There is still considerable intermittent discharge of pus with the urine, and if this persists drainage from the loin or nephrectomy will still be necessary.

JOHN W. TAYLOR, F.R.C.S., Surgeon,
Birmingham and Midland Hospital for Women.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

HEREFORD GENERAL INFIRMARY.

EXTRAUTERINE GESTATION; ABDOMINAL SECTION; RECOVERY.

(By RICHARD THOMASON, M.R.C.S., Surgeon to the Hereford General Infirmary.)

ON the evening of June 20th, 1889, I was sent for to see Mrs. M., a strong healthy woman aged 37, the wife of a blacksmith residing a few miles from Hereford. On my arrival I found the patient in bed, complaining of labour pains, and supposing her labour to be imminent, although, according to her own calculation, she had only reached the sixth month of pregnancy. Sixteen years had elapsed since her last confinement; during this period she had had no premature labours or miscarriages.

On vaginal examination I found the cervix normal and the os undilated; there was no excess of mucous secretion. On abdominal palpation I found the abdomen to be enlarged by a tumour, which gave me the impression of being "ovarian" rather than the pregnant uterus; and as I could not detect fœtal heart sounds, enlargement of the mammæ, or any other sign of pregnancy, I came to the conclusion that it was a case of ovarian tumour, and told the patient I thought she was not in the family way at all. I gave her an opiate to relieve her pain, and did not see or hear anything more of her until the following January (1890), when she presented herself at the Hereford General Infirmary, and was admitted under my care.

[For the following notes I am indebted to the house-surgeon, Mr. H. G. Nicholson.]

On admission her general health was very good; the temperature and urine were normal. She said she was pregnant, and had felt fœtal movements as late as last September, and had last menstruated in March, 1889. There was an abdominal tumour occupying the lower and central half of the abdomen; the circumference of the abdomen below the umbilicus was forty-one inches and a half; some fluid was detected in both flanks; no fœtal heart sounds, placental *bruit*, or uterine *souffle* detected, nor were the breasts enlarged.

On February 3rd she was aspirated in the median line below the umbilicus, and ʒss of dark coloured fluid evacuated. It was decided to perform abdominal section, but this was objected to by the patient and her relations.

On March 14th a superficial abscess, which had formed around the aspirating puncture, was laid open; the discharge was offensive; dressed with salicylic wool. Temperature 103°; circumference of abdomen, thirty-eight inches and a half.

On April 19th the patient returned to her home. The abscess was very nearly healed. She was fairly well, and was able to perform her ordinary household duties until June 5th, when she was readmitted into the infirmary, and said some hair had come through the wound in her abdomen; there was no decrease in the size of the abdominal tumour. Patient somewhat emaciated; temperature 103°; urine normal. She was still unwilling to undergo an operation, and it was not until June 29th that I obtained her consent. On that date, A C E having been administered, and assisted by my colleagues Messrs. Vevers and Turner, I made an incision in the median line for about 5 inches, commencing at the umbilicus. Having cut through the abdominal wall, I came upon a sac firmly adherent to the parietal peritoneum; the sac wall, which was thick, having been cut through, I was able to extract a fully developed, though partially macerated, fœtus. The cord was cut, and the end left out through the lower end of the wound; the sac was washed out with warm water, a glass drainage tube inserted, the wound closed with silk sutures, and dressed with protective tissue and carbolic gauze.

June 30th. Patient has slept well, very slight pain. Temperature normal; pulse 92. Taken slops. Dressed morning and evening, and sac washed out with sol. hyd. perchlor., 1 in 2,000.

July 2nd. Cord came away to-day. Temperature 100°.

July 6th. A large portion of the placenta came away, also some membranes. General condition good; takes food well. 7.30 P.M. Dressed again; more membranes came away on syringing wound.

July 8th. Wound still discharges; some sloughs came away on syringing. Temperature 98.2°.

July 9th. Drainage tube removed, and dressing changed for Hartmann's wood wool tissue.

July 18th. Dressed now every other day; sac cavity very small; discharge very slight. Patient to sit up.

Uninterrupted recovery from this date, and patient left infirmary on August 16th quite well and strong.

CIVIL HOSPITAL, ADEN.

ANALYSIS OF AMPUTATIONS.

(Reported by G. H. HERBERT, Surgeon.)

WITHIN about a year twenty amputations of the lower limb have been performed at this hospital—one of thigh, sixteen of leg, two Syme's, one Chopart's. Twelve were for sloughing ulcers (one amounting to spontaneous gangrenous amputation above the ankle), three for ulcers not sloughing, two for bone disease, two for injury, one for badly covered stump. Four cases, three of leg and one Syme's, all for sloughing ulcers, died

from exhaustion; but with one exception none of these deaths can be put down to the operation. The exhaustion was simply a continuance of their former state from septic absorption too advanced for relief. The diarrhœa from which they each suffered continued the same after operation. In none was there any appreciable shock noticed, and in those not too debilitated immediate improvement followed the removal of the septic focus.

Statistics of deaths after operation give a totally erroneous notion of the gravity of amputation, except possibly of shoulder and hip.

Natives here are good subjects for operation, being total abstainers from alcohol; but many of the above were almost at the point of death before they would consent to have their limbs removed. No case was refused as too bad for operation, and we were only saved another death on the list by the patient dying while preparations were being made for amputation.

No fewer than four of the leg amputations got hospital gangrene in the stump. It had existed in the ulcers before operation, and the stumps probably got reinfected in some way. Three cases occurred at one time in amputations done on successive days. The disease, of course, would not be excusable except in a hospital for natives mainly filled with ulcer cases. Two were reamputated in the lower third of the thigh: one of these died. This is the only case which can be put down in any way as death due to the amputation: if the disease had not recurred after the primary operation, the man ought to have recovered. Another case less advanced was treated first by very free application of nitric acid to the opened-up stump after cleaning and scraping. It quite failed, and I should not be tempted to try it again. The whole limb became swollen and œdematous, and the disease spread again. The limb was removed at the middle of the thigh, and the patient recovered. The veins at the second operation were mostly found plugged with clots, and the swelling took over two months to subside.

In the remaining case the limb was taken away just below the knee. In this, as in another primary case also high up, sloughing of the flaps occurred from pressure. No splint was used, and the patients persisted in sitting up and resting the end of the flexed stump on the bed. The pressure of the edge of the tibia on the anterior flap may have helped. Since this I have used lateral flaps close below the knee. It was most important to distinguish these from a return of hospital gangrene. The latter began with inflammatory œdema extending upwards, and the flaps separating the wound surface was exposed covered with a thick greyish pulp. It involved the skin only at the margins at first, and took several days to extend through the thickness of the flaps higher up. The pressure sloughing was accompanied by practically no inflammation. It affected a patch, including the whole thickness of the flap, from the first, and this did not extend. There was very little separation of the margins of the flaps, and no pulpy grey lining.

REPORTS OF SOCIETIES.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, DECEMBER 11TH, 1889.

W. DALE JAMES, M.R.C.S., President, in the Chair.

Koch's Treatment. A special meeting of the Society was held to receive the report of Dr. PORTER and Dr. BURGESS, the Society's representatives at Berlin, on Dr. Koch's treatment. After very cordially acknowledging the courtesy and frankness with which they had been treated by the profession in Berlin, and some preliminary remarks on the fluid itself, the syringes used, and the situation chosen for the injection, the question of dose was dealt with. This, of course, varied with the age and general condition of the patient, and also with the nature of the case. In tubercle of the lungs it was not safe to begin with a greater quantity than 0.001 gramme; and when advanced tubercle of the larynx existed, a still smaller quantity was advisable. In lupus and in joint diseases the maximum initial dose was 0.01 gramme for an adult and 0.005 gramme for a child. In consequence of the greater susceptibility to the influence of the fluid in phthisis, the greatest care ought to be exercised in excluding the possibility of tubercle in the lungs before giving the larger dose in lupus. Among other possible sources of danger from the reactionary effects of full doses might be mentioned obstruction of the urinary passages in tuberculous affections of the prostate and ureters, and the possibility of perforation in tuberculous ulceration of the bowels. A case of Dr. Levy's was alluded to, in which facial palsy had followed injection, in a child aged 3, probably due to the existence of tuberculous disease of the middle ear. The symptoms of the reaction were then dwelt upon, instances of delayed and prolonged reaction being cited. The symptoms were divided into two classes: those attending the severer forms of reaction, and those of a milder type. A case of the latter kind, seen by the delegates themselves during the reaction, was related as an illustration, and three instances were given in which they had seen a rash after injection. Other unusual symptoms—such as jaundice, and pains in the region of the heart, spleen, and bowels—were briefly referred to as having come within their own experience. The diagnostic value of Dr. Koch's treatment was then discussed at some length, and the principle laid down that whereas appearances, or definite symptoms, of local reaction might be regarded as conclusive evidence of tubercle, merely constitutional reaction was delusive. In situations such as the skin, larynx, or joints, where the local effects were visible, there was little or no room for doubt. In internal parts local reaction, as a rule, was less evident, but in particular instances in the lungs, bowels, or urinary passages, injection might clear up a doubtful diagnosis. An instance was given of a patient suffering from retraction of one side, the result of old pleurisy, in whom no tubercle had been suspected. Although under observation for several months, there was very little cough and no expectoration. After the second injection of 0.003 gramme, sputa were coughed up containing numerous bacilli. Professor Leyden, whose case this was, believed that in many cases of serous pleurisy there was a latent tuberculosis. Inasmuch as it was possible to obtain constitutional effects from a dose of 0.01 gramme in a perfectly healthy subject, it could only be when reaction occurred from smaller doses that any distinct inference could be drawn as to the presence of tubercle, and experience proved that purely constitutional reaction was inconclusive. Several instances were quoted of cases referred to by Professor Leyden, in which very definite pyrexia and other general symptoms had followed injection when no tubercle was suspected, and no evidence of its existence could be obtained. On the other hand, failure to react to doses of 0.01 gramme, or even considerably more, did not exclude tuberculosis. Several instances were given of cases with well-marked physical signs of phthisis, and bacilli in the sputa, in which injections of considerable strength had failed to produce any effect whatever. The local effects of the treatment, and the conclusions to be drawn from its application, were then discussed under the separate heads of phthisis, lupus, and joint diseases. The local effects in phthisis included various sensations referred to the affected part, and sometimes even distinct alterations in the physical signs during reaction, also increase in the quantity of sputa, and, according to some observers, alterations visible in the bacilli themselves. With regard to the most important question of all the curability of phthisis—no opinion could at present be expressed. Dr. Fraentzel, who had treated phthisical cases by Dr. Koch's method longer than anyone else, had distinctly stated that the treatment would have to be pursued for months, and that patients would have to be kept under observation for a longer period still, and every now and then be subjected to test injections. With regard to lupus, the report stated that the effects of Dr. Koch's treatment must be seen to be believed. The notes of one typical case, seen by the representatives of the Society at Berlin, and the charts of others were shown, in proof of the remarkable action of the remedy in these cases. As in phthisis, so in cases of joint disease, it was too soon yet to come to any definite opinion as to the curative or even remedial value of Koch's treatment. The local effects, on the whole, had been less positive even than in cases of phthisis. The action of the remedy in destroying the tuberculous tissue within the joint might culminate in the formation of an abscess requir-

ing surgical interference, and in many cases no doubt surgery would have to step in and clear out the tuberculous *débris* from the joint. Dr. Koch's fluid, therefore, could only be regarded as having an indirect effect in the case of joint lesions, but it might be expected to avert the tendency to relapses. In conclusion, the delegates regretted their inability to secure some of the lymph for their respective hospitals, but they announced that they had applied for some, and had been promised an early attention to their request.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, DECEMBER 5TH, 1890.

T. CHURTON, M.D., President, in the Chair.

The late Mr. A. F. McGill.—The PRESIDENT referred to the great loss sustained by the Society in the death of Mr. A. F. McGill, who was one of the first secretaries of the Society, and served as President during the last year. He proposed a vote of condolence to his relatives, which was seconded by Mr. T. P. TEALE.

Koch's Treatment of Tuberculosis.—Dr. CHADWICK read a paper giving his impressions of Dr. Koch's method, derived from a short visit to Berlin. Temperature charts showing the various phases of reactions, as well as the signs of definite improvement in cases of lupus, joint diseases, and phthisis were shown, and commented upon. Special stress was laid upon the advantage which might be expected from the fact that the method of diagnosis would lead to a greater sense of security, thus permitting greater freedom to those who, as at present, being as it were under suspicion, were forced to lead lives which were not conducive either to health or proper physical development. The various views as to the action of the remedy were dwelt upon. The changes in the appearance, size and number of the bacilli, as reported by Fraentzel and others, as well as the investigations now being conducted with the view of determining the nature of the so-called necrosed tissues, as well as the capacity for producing infection, was also discussed, and it was urged that the chief objection to the success of the method in phthisis, namely, the danger of sepsis occurring, was founded rather upon theory than upon any actual result observed up to the present time. A few cases which appeared to point to the great practical utility of the method were shortly reported. The PRESIDENT remarked that the applause of the members present assured Dr. Chadwick of the thanks of the Society for his highly interesting account of his observations at Berlin. He (the President) had had the good fortune to witness the treatment of tuberculosis in London, under Dr. Heron and Mr. Watson Cheyne; and his present impression as to the value of the method corresponded with that of the author, namely, that it would probably be found to be of great use in diagnosis and in the treatment of tuberculous disease. It was too soon, of course, to draw any definite conclusions from cases hitherto treated in this country. But with respect to the treatment of phthisis, it was obvious that since the "reaction" included, besides positive necrosis, much surrounding congestion and œdema, the remedy would be dangerous if tuberculous foci were widely distributed in the legs, and might even be dangerous if they were thickly distributed in any considerable area of one lung.—Dr. BARRS was inclined to doubt the general usefulness of Koch's method for diagnostic purposes.—Dr. JACOB compared the reaction in the affected parts to the pain and irritation occasionally caused in gouty joints by certain articles of food or drink. He thought sufficient evidence had been collected in favour of the good effect of the injection of matter prepared by bacterial agency to make one feel that the method was one of considerable promise.—Dr. EDDISON thought the diagnostic power of the new remedy would prove of great use in the detection of early phthisis in cases where coughs occurred in people of tuberculous tendencies. Though the remedy as at present described was not perfect, it seemed better than anything which had preceded it.—Mr. LITTLEWOOD thought it likely to be of more use in surgical cases after the visible tuberculous matter had been removed by operation.—Mr. WARD asked if it would be of use in case of a tuberculous epididymis, when one testicle had already been removed for the same disease. He had recently refrained from operating in a case of this kind, advising the patient to wait till some of the new remedy could be obtained.—Dr. RABAGLIATI suggested that the remedy might produce dangerous effects long after, as in the case of syphilis.

Case.—Mr. ATKINSON showed a case of Malignant Disease of the Breast associated with Paget's disease of the nipple.

Pathological Specimens.—Dr. S. C. SMITH: (1) Ruptured Subclavian Artery, accompanied by fracture of the first three ribs and the blade of the scapula. (2) Secondary Hæmorrhage after ligature of axillary artery in the Stump; specimen showing branch close above the ligature after ligature of subclavian.—Dr. CHURTON: Perforation of Vermiform Appendix.—Mr. MAYO ROBSON: (1) Double Pyosalpinx. (2) Ovarian Cyst of at least twelve years' growth containing cholesterine.—Dr. ALLAN: (1) Cancer of Stomach. (2) Cancer of both Suprarenals and Spleen. (3) Skull from case of Rickets.—Dr. TREVELYAN and Mr. SECKER WALKER: Microscopic sections of spinal cord from case of Locomotor Ataxia, with microphotographs.

Apparatus.—Dr. BARRS showed Dr. Soxhett's apparatus for Sterilising Milk for infant feeding.—Mr. HAGYARD showed (1) a new Osteoclast, devised by Mr. H. O. Thomas and himself. (2) Electric Probe for finding metallic objects.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THURSDAY, DECEMBER 11TH, 1890.

DAVID DRUMMOND, M.D., President, in the Chair.

Cases.—Mr. PAGE showed two men on whom he had performed Anterior Colotomy. The first one, who presented signs of malignant rectal growth, was operated on in June, 1888, and had since been working for two years as a miner, and was still so employed. The second one, operated on in May, 1890, had now secondary deposits in the liver, but had been greatly relieved by the operation. Mr. Page also showed a man the whole of whose Patella he had removed for disease two years before. The patient had gained his livelihood ever since, and his mode of walking, etc., now showed scarcely any abnormality.—Dr. MURPHY showed a man whose tongue he had removed for Epithelioma following Leucoplakia. Dr. Murphy also showed a lad whose upper jaw he had removed for Round-celled Sarcoma, in August, 1890.—Dr. VICKERMAN RUTHERFORD showed a girl with Lupus Erythematosus on the Abdomen of fifteen years' duration. No treatment had any effect. He suggested a trial by inoculation of Dr. Koch's lymph.—Dr. FANN said he had seen a similar case at Mr. Watson Cheyne's demonstration of Koch's method, where the reaction characteristic of tuberculosis was obtained. The PRESIDENT showed a woman, aged 32, with a peculiar Enlargement of the Left Leg, which had been present for two years. No pitting on pressure, and no enlarged superficial veins. The patient showed unmistakable signs of congenital syphilis. The President also showed two cases of Locomotor Ataxy, in one of which there was marked retroflexion of the knees, with Charcot's joint changes, and in the other an extreme degree of ataxy.—Mr. WILLIAMSON showed a patient from whom a piece of steel was removed by the electro-magnet from the interior chamber of the eye.—Dr. OLIVER showed a boy suffering from Tuberculous Disease, who was inoculated according to Koch's method by Dr. J. Rutherford. Dr. Oliver also showed two other cases of Tuberculous Disease (a girl with cavity of the apex, and a man with laryngeal and early pulmonary disease), with the object of drawing attention to the dangers of inoculation when excessive reaction, local or general, was caused. He also mentioned the possible utility of inoculation in children apparently healthy, but with a marked tuberculous family history.—Drs. COLEY, GALLOWAY, LIGHTFOOT, NEWCOMBE, and others, made remarks.—Dr. J. RUTHERFORD described the methods of dilution, injection, etc.—Drs. COLEY and GEORGE MURRAY gave demonstrations of Tubercle Bacilli Stained by Different Methods.—Dr. J. DRUMMOND showed a man suffering from extensive Disease of the Tongue, regarded as syphilitic.

Specimens.—Dr. HEATH showed a specimen of Myeloid Sarcoma of the Lower End of the Femur. Dr. Heath also showed the Cast of a Stump in a case where he had amputated a leg

the seat of old-standing infantile paralysis. The amputation was performed through the knee, and the patellar ligament was stitched to the short posterior flap. By this means the patella was forced between the condyles, and retraction of the posterior flap prevented. An extremely neat and useful stump resulted, and the patient, who previously progressed by means of crutches, was, by means of a pin leg, able to do without them.—Dr. LYON SMITH showed the Spine from a case where he had trephined for paraplegia, resulting from Pott's disease. A marked angle was present at the twelfth dorsal vertebra. At the operation the dura mater was laid open, and the cord rose as if freed from pressure. A few hours after operation the bladder emptied itself for the first time since the onset of the paralysis. Still later the patient had sensation of "needles and pins," and thought he could feel a touch in the legs. Further recovery, however, did not take place, and he died about four weeks after operation from a recurrence of empyema. At the *post-mortem* examination it was found that the pressure was produced by a rough sharp edge formed by the lower margin of the body of the eleventh dorsal and the remains of the body of the twelfth. Over this projecting ridge the cord was stretched, torn, and inflamed.—The PRESIDENT drew attention to the variety in these cases of pressure by bone. In the cases he had seen inflammatory effusion had always been the exciting cause of the myelitis.—Mr. WILLIAMSON showed a specimen illustrating the Changes that followed Excision of the Ankle.—Dr. ADAMSON made some remarks.

Papers.—The following papers were taken as read:—Dr. GEORGE MURRAY: The Spread of Tuberculosis and its Prevention.—Dr. REDMOND: Fatal Case of Plumbism where no "Blue Line" was Found. Dr. C. L. LIGHTFOOT: Alcoholic Amblyopia.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

WEDNESDAY, NOVEMBER 26TH, 1890.

ROBERT PARK, M.D., President, in the Chair.

Microscopic Sections.—Dr. MILROY showed several microscopic preparations made from the cancerous uterus which Dr. Stuart Nairne had exhibited at the previous meeting. Dr. Milroy pronounced the tumour to be a very malignant form of sarcoma, and pointed out that the sections illustrated very clearly how such tumours spread by means of spider-like cells, which projected into the blood spaces becoming detached and carried on by the blood stream.

Puerperal Eclampsia.—Dr. ROBERT JARDINE read a paper on this subject, giving details of a case and discussing the whole subject. He pointed out the great similarity between these convulsions and those of childhood, especially in those cases where the urine was normal. He quoted many cases from various authors, showing that uræmia was not by any means always present. In these cases shock to the nervous system, irritation of the alimentary tract, or of the uterus, etc., was generally the immediate cause acting upon a highly strung nervous system, and causing an explosion or nerve storm.—The paper was discussed by Drs. SLOAN, CAMERON, ST. CLAIR GRAY, RICHMOND, CULLEN, and the PRESIDENT; and Dr. JARDINE replied.

New Fellow.—A. Scott Macgregor, M.B., C.M., was elected a Fellow of the Society.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, DECEMBER 5TH, 1890.

CLINICAL EVENING.

JOHN POLAND, F.R.C.S., President, in the Chair.

Case.—Dr. MACGAVIN exhibited a man, aged 73, with an Epitheliomatous Mass in the Floor of the Mouth, deeply involving the tongue and hyoid muscles, but with little superficial ulceration. The frenum was the probable seat of origin of the disease, and numerous glands were secondarily affected.

Specimens.—Mr. J. G. MAINWARING showed a specimen of Malignant Disease of the Prostate and Bladder.—Dr. MACGAVIN showed a large Pediculated Fibroid Tumour removed from the labium of a young unmarried woman. It weighed one pound and a half. Drs. G. N. Pitt, Ernest Clarke, MacGavin, and the President were appointed a committee to investigate these cases.—Mr. THOS. MOORE gave a demonstration, and showed some Cultivations and Microscopical Specimens of Tubercle Bacilli, in continuation of the work he had carried out in the Bacteriological Laboratory at the Health Exhibition, and of a demonstration of cultivations of bacteria he had given before the Society some years ago. He was indebted to the kindness of Dr. Crookshank for the specimens.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, DECEMBER 3RD, 1890.

C. HAYDON WHITE, L.R.C.P., M.R.C.S., in the Chair.

Papers.—Mr. A. R. ANDERSON showed a patient on whom an operation had been successfully performed for the closure of a large wound in the throat, the result of an attempt at suicide seven years previously. The opening into the pharynx was 2½ inches long and 1 inch wide. The trachea and hyoid bone had fallen so that the "pomum Adami" rested in the episternal notch, and the hyoid bone had assumed a vertical position. He had fed himself for the seven years, chiefly through a tube.—Mr. T. E. LOVEGROVE read a paper on "Count Mattei and his System of Medicine." After a careful examination of the "system," the principal conclusion come to was that the cures reputed to be effected under its use were owing to the good offices of Nature rather than to any specific virtues of the remedies.

Specimens.—Mr. EARLE showed a Pachydermatous Tumour, removed from the scalp of an elderly patient.—Dr. ELDER showed (1) Suppurating Ovary and Tube; (2) Double Follicular Ovaritis.

CORK MEDICAL AND SURGICAL ASSOCIATION.

WEDNESDAY, NOVEMBER 26TH, 1890.

J. COTTER, M.D., President, in the Chair.

Specimens.—Dr. DONOVAN showed the liver of a patient who had died from Primary Carcinoma of that organ. During life no particular diagnostic evidence pointed to the presence of malignant growth, save persistent jaundice. The under surface, quadrate lobe, transverse fissure, common bile duct, and head of the pancreas were involved, the growth presenting the characters of scirrhous cancer; no secondary deposits.—Dr. DONOVAN also exhibited the lungs of a patient, aged 70, showing a large nodulated mass of carcinoma at the apex of the left lung. The entire organ was infiltrated with the growth, although life was considerably prolonged. No secondary deposits had occurred in neighbouring glands.

Abscess of Lung.—Dr. GREENE read notes of a case of pneumonia which had terminated in abscess in a child, aged 6. The patient expectorated a considerable quantity of pus, and fœtid expectoration continued. Having located the abscess, the aspirating needle was inserted deeply into the lower and anterior axillary region of the lung, and some pus was drawn off. The wound was enlarged by a two inch incision made parallel to the side. On inserting a trachea forceps and opening the blades a large amount of pus escaped. Drainage, absorbent dressings, and strict antisepsis completed a perfect recovery a fortnight after operation.

Case of Complicated Typhoid.—Dr. MAGNER related a case of typhoid in which on the ninth day phlebitis occurred with fatal result. In his opinion the crural phlebitis had its origin in an old eczematous ulcer which had been partially cured. Up to the ninth day the fever had run a mild course, but from that date grave symptoms set in, the patient dying of pyæmia on the eighteenth day.

Porro's Operation.—Dr. GIUSANI read notes of a case in which he had performed Porro's operation. The patient was a primipara, aged 20. The bones of the extremities were not deformed, but it was found that the outlet of the pelvis in the ant.-post. diameter was extremely narrowed, the available conjugate being less than two inches. After some unsuccessful attempts to deliver with long forceps, version was tried, but with a like result. Perforation was next adopted, and, that failing, for her safety Dr. Giusani decided on Porro's operation. The uterus having been ligatured by elastic ligature at the junction of the cervix and body, and a guarded pin inserted below it, the child and placenta were extracted, and the uterus cut off above the ligature, a Tait's clamp being

used. There was no hæmorrhage of any moment. He removed the ovaries and appendages, and, after cleansing the peritoneal cavity, the external wound was closed, leaving the uterine stump in the lower angle. The patient recovered from the shock of the operation, and seemed likely to do well at first, but she gradually sank and died. Her sister had also been operated on by the Cæsarean section.—A discussion ensued in which several of the members joined.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 2ND, 1890.

W. G. BURNIE, M.R.C.S., President, in the Chair.

Communications.—Mr. ALTHORPE read notes of a case of Diphtheria in which Tracheotomy had been performed.—Dr. MAJOR read the history of a case of Spinal Caries causing complete Transverse Lesion and Secondary Degeneration of the Cord. The paper was illustrated by diagrams and by microscopical preparations.—Mr. MERCER read notes of a case exhibiting the Hæmorrhagic Diathesis, and the history of a family suffering from Hæmophilia.—The PRESIDENT, with Messrs. HORROCKS, KERR, LAMBERT, GOYDER, RABAGLIATI, and WALKER, joined in the discussions.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 26TH, 1890.

M. A. MESSITER, M.R.C.S., President, in the Chair.

Cases.—The PRESIDENT showed an example of Congenital Absence of the Ribs on the left side.—Mr. BARLING showed a man, aged 24, on whom he had operated after Fracture of the Olecranon nine months after the injury. The surfaces of the fragments were freshened and brought together by one median silver wire suture, and the arm put up in the extended position. Union by first intention followed, and now (nine weeks after the operation) the movements of the elbow-joint were free in all directions.

Specimens.—Mr. CHRISTOPHER MARTIN showed a Hydatid Cyst of the Kidney removed from a lady, aged 46, by Mr. Lawson Tait. The cyst was as large as a man's head, filling up the entire right costo-iliac space. The patient made an uninterrupted recovery. Mr. Christopher Martin also showed a Uterus at the seventh month of pregnancy, containing a placenta prævia removed *post mortem* by Dr. Malcolmson.—Dr. MALINS showed: (1) Fibroid Tumour of Cervix; (2) Channelled Polypus of Cervix; (3) Fibroid of Uterus; (4) Membranous Cast from Vagina.—Mr. F. MARSH exhibited nine Gall Stones removed from a woman, aged 53, by cholecystotomy: they were irregular in shape, and of an average diameter of five-eighths of an inch. The patient made a good recovery.—Mr. JOHN W. TAYLOR showed a specimen from a case in which, on opening the gall bladder, which contained a pint of pus, a slough consisting mainly of the mucous coat was found lying free within the gall bladder; it was removed together with five or six gall stones. As soon as the contents of the gall bladder had been discharged, the ducts became patent, bile flowing freely from the day of the operation. The patient made a good recovery.

Paper. Mr. JORDAN LLOYD read a paper on Gonorrhœal Spermato-cystitis (inflammation of the seminal vesicle).

REVIEWS AND NOTICES.

QUAIN'S ANATOMY. By E. A. SCHAFER and G. D. THANE. Tenth Edition. Vol. II, p. 1. Osteology. G. D. THANE. London: Longmans, Green and Co.

IT has not hitherto been sufficiently recognised in this country that the story of osteology, to be well told, must be told with the pencil as well as with the pen. Cheselden, it is true, had a glimpse of the importance of the artistic side of his subject, but his scientific knowledge was too imperfect to enable him to give efficient guidance or support to Van der Gucht, who drew and engraved his famous tables. In Wilson's *Handbook* the scale of the illustrations was too small to afford scope for the remarkable talent of the brothers Bagge. The lithographic plates of Holden were an important step in the right direction, but the ideal was not attained either by his work or by any of its later contemporaries; and of all our systematic textbooks, perhaps the least satisfactory in its osteological pictures was that one which held the first place as a scientific manual, *Quain's Anatomy*.

It is, however, to the editors of the new edition of the last-named work that we are indebted for the promise of a better era. The most striking feature, indeed, of the volume before us is the series of engravings which replace the hard unsympathetic illustrations of former issues, and Professor THANE, Mr. Gunn, and Mr. Lawrence, who are responsible for the drawings, may be congratulated upon the result of their artistic labours. The cuts are, in all respects, the most attractive and truthful delineations of their kind that have yet appeared. It is not easy to select the best where nearly all are good, but the palm may perhaps be awarded to Mr. Lawrence, of whose work the representation of the forearm bones (p. 96) and os innominatum (pp. 111-2) may be taken as types; there is, however, an indication that some of the sketches of Mr. Gunn—those, for example, of the occipital, temporal, and ethmoid bone—have fallen behind in the competition only from their coarse interpretation by the engraver. Professor Thane's own drawings too are excellent, and some compare favourably both in artistic feeling and originality of conception with any in the book.

There is, of course, no room in the letterpress for so revolutionary a change as that which has been accomplished in the embellishments; but a comparison of the text with the corresponding section in the ninth edition will show that much has been done to improve the accuracy of the descriptions, and that pains have been taken to bring the morphological and other information to the level of the latest science; while the learned editor, with a justice that cannot be too highly commended, has always scrupulously recorded the sources from which he has drawn the more recent additions to our knowledge.

The only serious fault we have to find with the text lies in the somewhat unequal and defective indications for the attachments of muscles and other structures to the various parts of the bones. In some cases the necessary information is given fully and clearly, but in others it is either too scanty or, as in the account of the bones of the hand, is altogether wanting. We think, too, that the editor would have done wisely to introduce into his illustrations the outlines of the muscular areas, after the manner of Holden, and, still more wisely, had he struck out a new departure by marking in similar fashion the areas of ligamentous attachment. The first hint for both of these useful aids to memory is to be found in the prototype of scientific osteography, the too little known *Tabulæ Ossium Humanorum* of Albinus, published in 1784, and it would have been much to the benefit of students had earlier and better advantage been taken of so admirable a model.

We have noticed only one slip that deserves the name of error, and this in connection with the attachment of a muscle—the latissimus dorsi—which is said to be inserted into the inner lip of the bicipital groove; but there are several instances of incomplete description that will call for a further exercise of the editorial pen when the occasion arises. For example, there is no mention of the characteristic "jugular eminence" between the jugular notch and anterior condyloid foramen upon the inner surface of the occipital bone; no reference to the downward direction of the necks of the first and second ribs (when the bone is placed flat upon a horizontal surface); or to the strongly-marked ridge for the attachment of the pubo-femoral ligament, running upwards from the spiral line at the inner side of the neck; or to the innermost vertical facet upon the articular surface of the patella; or to the direction of the nutrient foramina in the metacarpus and metatarsus, a point which bears upon the morphology of the bones. These omissions, and others like them, are only matters of detail; but of such is the science of osteology.

The defects, however, are trifling when considered with the solid qualities of the new volume, which fully maintains the high reputation already gained by *Quain's Anatomy*, under its various distinguished editors. It is a great advance upon the corresponding section of the previous edition, and English-reading students will be fortunate in the completion of a work so well begun.

A Zoological Pocket Book. By Dr. Emil Selenka and J. R. Ainsworth Davis. London: Ch. Griffin and Co. 1890.

The second part of the title, "A Synopsis of Animal Classification, comprising Definitions of the Phyla, Classes and Order, with Explanatory Remarks and Tables," explains the object of the book. The work, in fact, consists of brief definitions, printed at the heads of the pages, the remainder of the page being blank, and followed by a varying number of blank pages, the blank spaces, according to the preface, being intended for students' notes and diagrams. This latter purpose would have been better provided for if the book had been in quarto.

It is confessedly a translation from the German, with additions by the translator. Besides the "definitions," certain tables are given. That dealing with the assumed phylogenetic relations of the various classes is too crowded to convey a clear idea to the student, names of phyla being printed in various directions, and it is not evident (in some cases of "vertebrata") how much a phylum is intended to include. The student may well be puzzled by the "?"s dotted about, intended to indicate ignorance of the ancestral line. It seems to us that such an attempt to place before the student at the outset any sort of phylogeny is a mistake; it can only be explained to him by lectures or by his own reading, and a bare table of this sort is confusing.

On the succeeding page is a tabular statement as to the presence, character, etc., of some of the organs in the various classes. The object of the table is not clear; it is not systematically carried out; it partakes of the "cram" principle. Apart from its inadvisability, some of the statements are misleading; thus, under the head "nervous system" in this table nematoda are marked as "R" (that is, "ring round gullet"). Again, arthropoda as "G G" ("ventral chain"). In the first case, no mention is made of the longitudinal nerves which have ganglion cells upon them. In the latter case, the circumœsophageal ring is not mentioned. On the other hand, the table showing the hosts, etc., of parasitic worms has some merit. The translator has also added a brief summary on the "principles of distribution" and "distribution of mammals."

The classification is more scientific than that generally adopted in England, and is, to some extent, similar to that given under the article "Zoology" in the *Encyclopædia Britannica*; but the authors still retain the group "Vermes," and use it as a lumber room for all sorts of animals.

Of the definitions themselves it is unnecessary to speak in detail. No definition can be perfect; but some of the phrases are misleading or insufficient. This is, perhaps, due to the fact that they are translations. For example, in the case of the polyplacophora no mention is made of the fact that the paired ctenidia are numerous. Nor is there a reference to the molluscan sense organs known as "osphradia." No mention of the swim bladder is made in the paragraph dealing with the ganoid fishes.

Some of the examples are unhappily chosen. For example, the name ceratum has unfortunately been applied to two very different animals—one a myxomycete, the other a flagellate—and in the present book it occurs under both heads, which must be confusing to students, either junior or advanced. But with all its deficiencies—and what book is without them?—the present *Pocket Book* may be found very useful to students, if they have some knowledge of the subject beyond a parrot-like acquaintance with names and definitions.

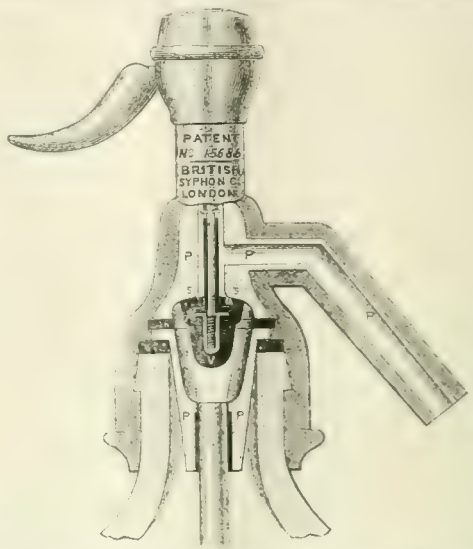
A vast addition to the usefulness of the book would have been made if the dental formula of every mammal mentioned had been given.

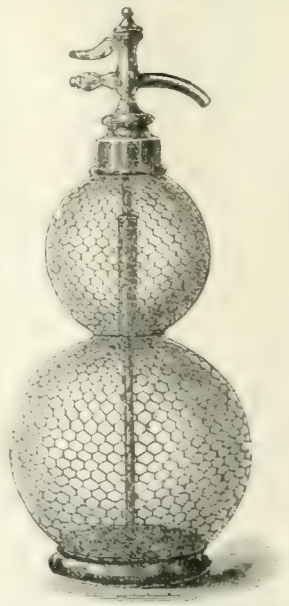
National Health Society.—The efforts made by this Society for the systematic education of women in personal and domestic hygiene seem likely to be crowned with success. A complete course of twenty-four lectures at local centres, attended by some 500 ladies, has just come to a close. Another course begins in January at the following centres:—Westminster, Hampstead, Highgate, Dulwich, and Maida Vale. Full particulars can be obtained from the National Health Society, 53, Berners Street, W.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW SIPHONS AND SELTZOGENES.

In ordinary aërated water siphons and seltzogenes there is a liability that the metal fittings of the valve and tubes should be acted upon by the water, and where the metal used was an alloy containing lead it was possible that serious contamination might occur. New fittings recently designed by the British Syphon Manufacturing Company (2, Gresham Buildings, Basinghall Street, E.C.) appear to be a distinct improvement on all previous patterns. It is claimed—and so far as can be ascertained by inspection the claim is well





founded—that the water only comes into contact with glass or porcelain; the metal head is thickly lined with porcelain (P), the valve (V) is made of "carbonised fibre," the seating (S)

DRAWINGS OF PATIENT SUFFERING FROM LUPUS BEFORE AND DURING THE REACTION PRODUCED BY DR. KOCH'S TREATMENT, AND THREE WEEKS AFTER COMMENCEMENT OF TREATMENT (UNDER THE CARE OF MR. WATSON CHEYNE).



Fig. i.—Before Injection.



Fig. ii.—12 Hours after Injection of .0006 c.c.

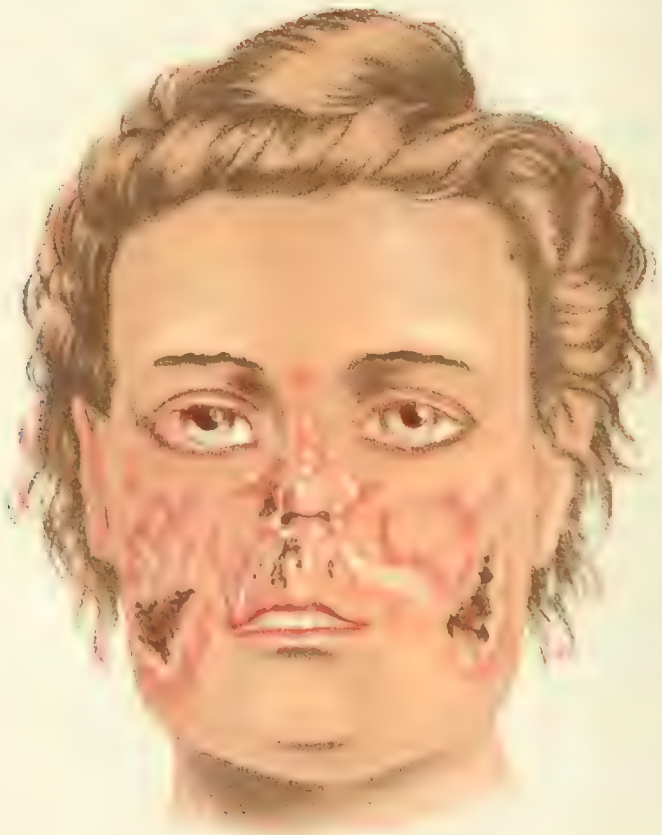


Fig. iii.—Three Weeks after Commencement of Treatment.

forms part of the porcelain lining, and the piston (T) is covered by a tube of ebonite; the glass tube sockets are also made of porcelain. It is stated that the strength of the head is not impaired by the introduction of the porcelain, and this would seem to be the case. The idea which has guided the design of these apparatus is undoubtedly correct, and appears to have been well carried out.

READY-MADE LINSEED POULTICE.

THE use of a linseed poultice is so general, and at the same time attended with so many difficulties and inconveniences, that anyone who discovers a really effectual ready-made linseed poultice, capable of extemporaneous and effectual use, is in a small way a benefactor. We are inclined to think that Robin's ready-made linseed poultice, of which specimens have been sent to us by Seabury and Johnson, 46, Jewin Street, goes a long way towards solving the problem. It is light, flexible, clean, and easily applied. Three minutes' soaking in hot water makes the poultice ready.

THE "FRANKFORT CLARET."

THIS preparation, which is prepared by Mr. J. Fromm, Frankfort-on-Maine, and is introduced into this country by Messrs. Burgoyne, Burbidges, and Co., Coleman Street, London, is prepared from the juice of the bilberry. It is recommended by high German authorities, especially by Professor v. Ziemssen and by Professor Fürbinger, Berlin, who have had considerable experience in its use. The recommendations are based on its purity, low price (18s. a dozen), and its dietetic value. It is stated to be especially useful where there is any tendency to looseness of the bowels, dysenteric, tuberculous, or otherwise. It has been extensively tried in the German hospitals and by leading physicians in private practice, and brings with it altogether strong credentials.

A DERMIC KNIFE.

THE instrument contains, at one extremity, a dermal curette, curved bistoury or abscess knife (Syme's), and a pair of epilating forceps; at the other a comedo extractor, Kaposi's acne lancet and dermatome.

The knife in shape and size resembles an ordinary pocket



knife; the handle is made of German silver (nickel plated) in length 3¾ inches, breadth at widest part ½ inch, and weighs 1½ ounce. It is thus made light, portable, strong, and easily sterilised.

Mr. Yarnall, of Philadelphia, is the manufacturer.

Sydney, N.S.W. W. MCMURRAY, M.D., etc.

THE price of the *Nursing Record* has been reduced to 1d., in order to bring it "within the reach of everyone interested in nursing work."

AT the various hospitals in Belfast Christmas was well observed. The attendance of the public was especially large at the children's hospitals, and ample provision was made for the entertainment of the children.

MIDDLEMORE POST-GRADUATE LECTURES.—Mr. Eales delivered two post-graduate lectures, on December 9th and 16th respectively, at the Birmingham and Midland Eye Hospital, on the subject: "Headaches and Other Results of Ocular Strain and Distress." The lectures were fully illustrated by working models and diagrams, the work of Mr. C. Armstrong Lumley, the resident surgeon.

PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

KING'S COLLEGE HOSPITAL.

CASE OF LUPUS TREATED BY KOCH'S METHOD.

(Under the care of W. WATSON CHEYNE, M.B.)

[For the notes of the following case we are indebted to Mr. A. J. WILLIAMS, L.R.C.P., M.R.C.S.Eng., House-Surgeon.]

[*With a Chromolithograph.*]

BY the courtesy of Mr. Watson Cheyne we are enabled to give this week a coloured lithograph showing the condition of a patient suffering from well-marked lupus, who has been submitted to treatment by the systematic injection of Dr. Koch's fluid.

The patient is a woman, aged 26, who, with the exception of the lupus of the face, enjoys good health. She is a total abstainer. As regards her family history it is to be noted that her mother died of phthisis at the early age of 32 years. The disease began fifteen years ago with an inflammatory attack, which she thinks was erysipelas. The nose was the first to suffer, and afterwards the cheeks, then the gums, palate, and upper lip, each in its turn. The extent of the affection is shown in Fig. 1, as well as a recent extension between the eyebrows towards the forehead. The lobule, alæ, and columella of the nose are all partially destroyed, and the upper lip is swollen and thickened with tuberculous deposit; when seen in profile it looks decidedly longer than natural. On its inner surface the affection has spread to the gums, and thence to the palate. The submaxillary lymphatic glands are swollen, and the whole extent of the diseased area is tuberculous, with a hard and nodular edge, which feels indurated and resistant. A number of operations, probably all scraping, have been done, but with nothing more than temporary relief; the last scraping was done in November 1890.

The first injection of 0.006 gramme of lymph was given by Mr. Watson Cheyne on December 2nd at 8.50 P.M.; and Fig. 2 shows the condition of the face, 14 hours later, when the local reaction was at its height. Within twelve hours the whole of the diseased area became hot and painful, with deep redness and swelling, both of which reached beyond that which originally seemed to be the limits of the disease. A yellow serum exuded in numerous places, either free or in vesicles, and this fluid as it dried formed yellow crusts. The throat, palate, and nose also became sore, the eyelids swollen, and the eyes suffused. The submaxillary lymphatic glands became tender and enlarged, and streaks of redness radiating from the lupus marked the course of their efferent lymphatics. The constitutional symptoms which accompanied these alterations were less upon this first occasion than they were on subsequent ones. By 8 A.M.—that is to say, eleven hours after the injection—her temperature had risen from normal to 102.6° F., the respirations to 32, and the pulse to 132, accompanied with frontal headache and a slight cough. All of these phenomena rapidly subsided, and by the third day (December 5th) her temperature remained at normal, although her face looked as though she was just recovering from an attack of facial erysipelas.

The lupus was still very swollen, and the nose seemed to be in danger of sloughing; the upper lip looked especially thick and protuberant. The exudation had ceased, leaving quantities of crusts which could be peeled off, leaving a healthy surface. From this commencement the treatment has been continued at intervals, injections being given when the temperature had fallen to, and remained steady at, normal.

The second injection was given on December 5th; dose the same –0.006 gramme. As is usual, the reaction was more abrupt upon this occasion, the temperature rising to 104.6° F., and rapidly falling. There was also some further local reaction. After this the injections were repeated on December 8th, 10th, 12th, 14th, 17th, 19th, 21st, and 23rd. The strength of the dose was gradually increased until upon the last occasion 0.02 gramme was administered. Each successive dose seemed to cause less local and general reaction, until on December 19th, and subsequent injections, there was hardly any. Coincidently with this the disease has changed, as is

shown by Fig. 3, reproduced from a drawing made on December 24th. The indurated and nodular margin has gone, and the tubercular masses have ceased to be apparent. Two large crusts are seen in Fig. 3, but the surface left after the separation of similar crusts in other parts has been, although red, quite smooth and free from nodules. The line of demarcation is entirely lost in places, and the patch gradually shelves off into the healthy skin without any recognisable elevation of the surface.

The patient has so much improved under this treatment that it affords encouragement for one to believe that we may in these cases hope for a more successful result than has hitherto been obtained from previous methods of treatment.

CASES AT PADDINGTON GREEN CHILDREN'S HOSPITAL.

Third Report.

The patients mentioned in previous reports published in the British Medical Journal of December 13th and 20th, at pages 1382 and 1435 respectively, still remain in the hospital, and have undergone further treatment during the last fortnight. Most of them have now been injected ten times; and the recent reactions after the operation have been much less marked than were the reactions after the earlier injections, although the doses of the injected fluid have been increased. In fact, the reaction has mostly been so little marked of late, that the patients have been able to take their meals as usual throughout the periods of reaction. The general health of all the patients is good, and the children have more than regained the weight lost during the high temperatures after the earlier injections. The following are notes of the cases, taken from the reports of Dr. Guthrie, the Registrar, and Mr. Leigh, the House-Surgeon, to whom we are indebted for the same.

Case I. W. P. has, during the fortnight, had six injections, the last of which contained 5 milligrammes. The temperature rose on December 18th, after the injection of 3 milligrammes, to 104°; on the 29th, after 5 milligrammes, the temperature rose to 99° only. This boy's abdomen is now quite soft; no hard lumps can be felt, and the ulcer near the umbilicus is quite healed and is contracting.

Case III. F. C., between December 17th and 30th, had five injections, increased from 2 to 5 milligrammes. The temperature rose to 101.8°, 103°, 100.8°, 101°, and 101.4°, respectively, after the different injections. The right eye is now opened naturally, and appears to be normal. The swelling of the humerus has almost disappeared, whilst that of the head of the radius is a little less. The child can flex the elbow almost to a right angle, and now uses that arm in playing with her toys. After one injection (on December 20th) she had a discrete papular rash (much resembling that of scarlet fever, over the trunk) over the whole body and limbs, which lasted two days.

Case IV. E. P., between December 17th and 30th, has had six injections of 2 milligrammes each. The temperature subsequently rose to 104.6°, 102.8°, 102.2°, 102°, 104°, and 102° respectively. The cervical glands are much less swollen, the swelling of the radius is lessened, the discharge from the sinus decreased, and the skin around its edges is more puckered in.

Case V. E. C., between December 17th and 30th, has had six injections, increasing from 2½ to 5 milligrammes. During the subsequent reactions the temperature has not risen above 102°; and after the last injection, on December 29th, no rise above 98.8° was noted. The sinus in the buttock is nearly healed; the glands in the right iliac fossa are not a third of their size three weeks ago.

Case VI. C. N., between December 17th and 30th, has had six injections, increasing from 3 to 7 milligrammes each, whilst the height of the subsequent reactions has been 103.8°, 99.4°, 103.6°, 100.8°, 102°, and 101° respectively. Some improvement was at first noted; lately no change has been observed.

Case VII. A. A., between December 17th and 30th, has had six injections, increasing from 3 to 5 milligrammes. The subsequent highest temperatures during the periods of reaction were 103.8°, 103.4°, 101.6°, 100.8°, 103.2°, and 101.2°. The thickening around the glands in the iliac fossæ has diminished, but the discharge from the sinuses is even more than it was three weeks ago.

Case VIII.—L. B., between December 17th and 30th, has had six injections, increasing from 5 milligrammes to 1 centigramme. The subsequent temperatures during the various reactions have ranged up to 102.4°, 100.4°, 100.6°, 100.8°, 102°, and 101.4° respectively. The cervical glands are much smaller.

Case IX.—P. S., between December 17th and 30th, has had six injections, increased from 2 to 5 milligrammes. The temperature rose during the subsequent periods of reaction to 102.6°, 99.6°, 102°, 102°, 102°, and 99.2°. The swollen fingers are smaller, and have lost all pain and tenderness. They have never since reacted so much as they did after the first injection.

Case XI.—E. R., between December 17th and 30th, has had six injections, increased from 4 milligrammes to 1½ centigramme. The subsequent highest ranges of temperature during the periods of reaction have been 100°, 100.4°, 100.4°, 101°, 99.4°, and 101.2° respectively. On December 19th there seemed to be better expansion at the apex of the left lung, and less loss of resonance. Occasional crepitation was heard in the first intercostal space on the same side near the sternum. At the right apex nothing abnormal was heard. On December 30th it is reported that nothing abnormal can now be detected in the chest.

Case XII.—E. M., between December 17th and 30th, has had six injections, increased from 2 to 5 milligrammes. The subsequent highest temperatures during the reactions were 104.4°, 99.8,° 104.4°, 100.4°, 103.4°, and 99.4° respectively. On December 23rd it was reported that over the right lung the dulness at the base extends as high as the third interspace in front, and nearly as high as the angle of the scapula behind. Tubular breathing, bronchophony, and fine crepitation are also heard over the same region. On December 23rd, below the right nipple is a small area of dulness, with tubular breathing, bronchophony, and crepitations. The upper part of this lung and the left lung are healthy.

GLASGOW ROYAL INFIRMARY.

Report of Cases under Koch's Treatment.

[First report by John Lindsay Steven, M.D., and Charles Workman, M.D., Assistant-Physicians to the Hospital.]

On December 4th, 1890, Drs. Wood Smith, Lindsay Steven, and Charles Workman received from the Empress Frederick of Germany a portion of Koch's fluid for the treatment of patients in the wards of the Glasgow Royal Infirmary. On December 7th, the treatment was commenced in three patients. At a meeting of the medical staff held on December 8th, it was decided to ask the three gentlemen who had obtained the remedy to use it in cases which might be selected by the physicians and surgeons of the house, who formed themselves into a medical and surgical committee respectively for this purpose, Dr. Lindsay Steven to act as secretary to the former, and Dr. Charles Workman to the latter, committee.

Twenty-eight cases in all are now under treatment, namely, seventeen of phthisis pulmonalis, three of lupus, and eight of tuberculous diseases of the bones and joints. The following members of the infirmary staff have selected patients for treatment, namely, Drs. Wood Smith, Alex. Robertson, Wallace Anderson, D. C. McVail, James Dunlop, William Macewen, Henry Clark, D. N. Knox, and W. J. Fleming.

The present report deals in some detail with four of the cases that have been longest under treatment, and which illustrate very well the reactions, both local and general, that have been observed in the infirmary. The progress of these cases and reports of the others under treatment will be published in due course. With regard to the method of observation, it is to be noted that each physician or surgeon retains the entire charge of his case, the subcommittee undertaking the injections, and the recording of the results in a medical and surgical minute book respectively. The temperatures are taken in the rectum every three hours, the pulse and respiration being recorded at the same time. Notes of the progress of the cases are made at short intervals.

The examinations of the sputa have been kindly under-

taken by Dr. James Wilson Cameron, who has been working in the bacteriological laboratory of the infirmary during the past year. The committee also desire to acknowledge the valuable assistance of the house-physicians and surgeons, and also the services of the clinical clerks, Messrs. McCrorie and Moon.

Case I. *Suspected Phthisis: No Bacilli in Sputum: No Reaction after Injections.*—A. W., aged 27, a miner, married, admitted to Ward I, under Dr. Wood Smith, December 4th, 1890. Cough and expectoration of four months' duration, the illness setting in after a severe wetting, and being accompanied by occasional hæmoptysis. Night sweats profuse a month before admission, now moderate. Digestion good. Slight dulness in right infraclavicular and supraclavicular regions, where the respiratory murmur is feeble and accompanied by moderately abundant fine crackling *râles*. Expectoration muco-purulent, and examined by Dr. Cameron for tubercle bacilli on four different occasions (namely, December 6th, 7th, 10th, and 15th, 1890) with absolutely negative results. Family history good with the exception of one brother, who suffered from fistula *in ano*.

December 8th, 1890. 0.001 gramme of Koch's fluid injected at 10.30 A.M. Beyond a slight headache no result.

December 9th, 1890. 0.003 gramme of Koch's fluid injected at 10.30 A.M. Slight headache. Temperature 100° at midnight. Pulse 98, respirations 35.

December 10th. 0.005 gramme injected at 10.30 A.M., without reaction of any kind.

December 11th. 0.01 gramme injected at 10.30 A.M. Temperature rose at 6 P.M. to 100.2°; no other sign of reaction.

After this date the patient received no further injections, as the absence of reactions seemed to indicate that the case was not tuberculous. His temperatures have since remained normal or subnormal, and his cough and expectoration have almost entirely disappeared.

Case II. *Phthisis Pulmonalis: Bacilli in Sputum: Marked Reaction after each Injection.*—M. L., aged 20, single, tailor, admitted to Ward I, under Dr. Wood Smith, December 6th, 1890. Cough and expectoration of two years' duration, coming on after a chill, and accompanied by frequent hæmoptysis. Fistula *in ano* in March last, operated on by Mr. Clark. All the usual symptoms of phthisis pulmonalis. Family history: Two cousins have suffered from tubercle. Expectoration scanty; tubercle bacilli found on two occasions since admission by Dr. Cameron. They were also found several times by Dr. Workman before admission. Chest examined before treatment commenced by Drs. Wood Smith, Alexander Robertson, Lindsay Steven, and Workman, who found flattening, diminished movement, increased vocal fremitus and resonance, tubular respiratory murmur, and a few crepitant *râles* in the right infraclavicular region. In the right supraspinous region the percussion was slightly dull, and here also some sonorous rhonchi were observed. Urine non-albuminous. Temperature normal or subnormal.

December 7th. 0.001 gramme Koch's fluid at 11.30 A.M. Decided reaction; temperature rising all evening till 3 A.M., when it reached a maximum of 102°, after which it slowly declined to 97° on the morning of the 9th. Accompanying the febrile movement there were severe headache, pains throughout the body, and a tendency to fainting. At the height of the fever the pulse numbered 113, and the respirations 18.

December 9th. 0.002 gramme injected at 11 A.M.; marked reaction as before, the temperature beginning to rise at 6 P.M., reaching 102° at midnight, when the pulse numbered 88 and the respirations 24.

December 11th. 0.005 gramme Koch's fluid injected at 10.50 A.M.; at 9 P.M. temperature, 102.8; pulse, 90; respirations, 30. At 10.20 P.M. Drs. Workman and Steven visited, and found the patient sleeping quietly, the pulse being 104, and the respirations 23 during sleep. Accompanying this reaction there was very severe headache, drowsiness, and exhaustion, with pains in the limbs, which continued till the evening of the 12th, when the patient revived very much.

December 13th. 0.01 gramme Koch's fluid at 10.20 A.M. At 9 P.M. temperature 103.2°, pulse 114, respirations 30. This reaction was also accompanied by similar symptoms. No further injections were given till December 19th, the patient in the meantime remaining bright and well, although his temperature in the rectum generally registered between 99° and 100° in the evening.

December 19th. Injections resumed, 0.005 gramme being administered at 10 A.M. At midnight the temperature reached 100.8°, the pulse 89, respirations 20. This reaction did not disturb the patient at all.

December 22nd. 0.008 gramme of Koch's fluid injected at 11.30 A.M. At 10 P.M., when this report was written, the temperature was 102°, and the general state of the patient good. On the whole, the general health of this patient is considerably improved since the treatment was commenced.

Case III. *Phthisis Pulmonalis: no Bacilli in Sputum, but Marked Reaction after Fourth Injection of 1 Centigramme.*—J. McD., aged 34, potter, married, admitted to Ward I, under Dr. Wood Smith, November 21st, 1890. Cough and expectoration of eight months' duration, accompanied at the outset by debility. Night sweats have never been severe; there was no great loss of weight, and the cough has been accompanied by a small amount of white frothy mucus; but on admission the expectoration is noted to have been muco-purulent; no hæmoptysis. Sputum examined on four different occasions for tubercle bacilli by Dr. Cameron with negative results. Family history non-tuberculous. Chest examined before injection by Drs. Wood Smith, Alexander Robertson, Charles Workman, and Lindsay Steven with the following results: Percussion over the left clavicle is duller than over the right. Over the left apex in front sibilant and sonorous rhonchi are heard, but there is no crepitus. Posteriorly the rhonchi are heard at both apices, but at the left there is in addition a slight clicking *râle* audible about the level of the inner end of the spinous process of the scapula. Urine normal. For two days before injection the temperature ranged between 97° and 99.6°.

December 7th. 0.001 gramme of Koch's fluid injected at 11.45 A.M. without any temperature or other reaction.

December 8th. 0.003 gramme Koch's fluid injected at 10.45 A.M. Temperature rose to a maximum point of 100.8° at midnight, pulse 84, respirations 38. Some hours after receiving the injection the patient complained of chilliness, and pains throughout the body. For twenty-four hours after he remained in a state of *malaise*, but did not vomit. By the afternoon of the 9th he was again well.

December 10th. 0.006 gramme Koch's fluid injected at 10.30 A.M. No reaction of any kind followed this injection.

December 11th. 0.01 gramme Koch's fluid injected at 10.30 A.M. Temperature reached a maximum point of 102.6° at 9 P.M.; pulse 93, respirations 34. At 10.20 P.M., Drs. Steven and Workman visited and found the patient in a troubled sleep, with respirations numbering 40 and pulse 94 in the minute. During the evening the patient complained loudly of a sinking sensation in the epigastrium, of general uneasiness, and of severe frontal headache.

By 5 P.M. on the 12th, he had recovered from the effects of the injection.

December 16th. No injections given since the 11th. At 11 A.M. to-day, 0.007 gramme Koch's fluid injected. A severe and prolonged reaction followed this injection. At 9 P.M. the temperature was 103°, pulse 96, respirations 38. The temperature remained very high for several hours, and did not fall below 100° till 3 P.M. on the 17th. Severe constitutional disturbance accompanied the reaction.

December 19th. 0.008 gramme Koch's fluid injected at 10 A.M., followed by a reaction very similar to that of the 16th, but much less severe, the temperature rising only to 101.6°.

December 22nd. 0.01 gramme Koch's fluid injected at 11 A.M. At 10 P.M. the temperature was 101°; general state fair.

Case IV. *Lupus of Three and a Half Years' Duration: Marked General and Local Reaction: Improvement.*—I. S., aged 22, farm servant, unmarried, readmitted December 8th, 1890, to Ward II, under Dr. Wood Smith, complaining of lupus of the nose of three and a half years' duration. On two previous occasions the patient had been an inmate of the ward, first on November 16th, 1888, when the nose, right hand, and right hip were affected; dismissed on March 16th, 1888, much improved.

Second admission, July 10th, 1889; dismissed improved November 6th, 1889.

Family history good. Before the disease commenced three and a half years ago the patient always enjoyed good health.

Present occasion: Ulcerated processes are chiefly marked

on the septum nasi, and on the mucous membrane of the upper lip. Skin of nose and surrounding parts erythematous, not ulcerated, but covered here and there with crusts.

On November 8th, Dr. John MacIntyre made a careful note of the condition of the mouth and throat. The soft palate and uvula had been destroyed by the disease in the past. Two large swollen masses were observed one on each side of the dorsum of the tongue, and extending to the hyoid fossæ, were observed. The epiglottis is much thickened, and shows the cicatrices of old ulceration. Larynx fairly normal; vocal cords act well. The nostrils are so altered by the destructive process, that a thorough examination of the nasal fossæ cannot be made. The nasal pharynx is also involved. The disease has extended forward from the soft palate, and there are also traces of it on the posterior wall of the pharynx. The diseased patches on the left shoulder and right hip are cicatrised. The chest was carefully examined by Drs. Wood Smith, Alexander Robertson, Workman, and Lindsay Steven, the only abnormality observed being a slight tendency to tubularity of the respiratory murmur at the right shoulder behind.

For two days before commencing the treatment the temperature varied between 98° and 99.6°

December 10th, 1890. 0.002 gramme of Koch's fluid injected at 10.30 A.M.

Time.	Temperature.	Pulse.	Repirations.
7 A.M.	98.0	72	20
10.30 A.M.	98.8	74	22
1 P.M.	100.2	72	20
4 P.M.	100.4	100	24
7 P.M.	104.0	120	36
10 P.M.	103.8	126	32
December 11th:—			
1 A.M.	103.6	110	28
4 A.M.	103.0	108	28
7 A.M.	103.0	108	28

The above list of the temperature, pulse, and respiration illustrates very well what occurred after the first three injections of 2 milligrammes. Notes were made of the patient's condition every few hours after the first injection, and were verified by Drs. Workman and Lindsay Steven. The phenomena observed may be summarised as follows: Early in the afternoon, patient complained of a prickly feeling in the skin of the back, and by 5 P.M. it was noted by Dr. Steven that the diseased tissue of the nose had assumed a fiery red appearance, and that the upper lip was much swollen. The swelling increased, and an abundant serous exudation began to make its appearance about 9 P.M. Headache very severe, supper vomited, thirst very great. The mucous membrane of the mouth also became much swollen, and the breathing laborious. The conjunctivæ and the lids of the right eye became much swollen and inflamed, and a tuberculous mass in the palm of the left hand began to give off a yellow discharge. The temperature slowly fell during the next three days almost to the normal, and the acute inflammation of the face subsided, leaving the patch covered with thick brown crusts, which soon fell off, exposing a healthy-looking red surface.

December 14th. 0.002 gramme of Koch's fluid was injected at 12 noon, and was followed by almost precisely similar results. The temperature rose to 104°, but fell to the normal in about twenty-four hours. The local reaction in the face was again very severe, but did not last so long. In addition to the results already mentioned, it should be noted that after each injection an erythematous rash involving the whole body made its appearance, and that the affected patches of skin became acutely inflamed. After the second injection the right eye greatly improved, and she is able to see much better with it.

December 17th. 0.002 gramme of Koch's fluid injected at 11 A.M., and followed by a similar reaction, the temperature reaching 104.2° at 7 P.M.

December 20th. 0.002 gramme of Koch's fluid injected at 10.30 A.M. On this occasion the temperature only rose to 101.8° at 10 P.M., and the local reaction which was witnessed by Dr. Steven at 8 P.M. was also much less severe, though still quite distinct. At the same time Dr. Steven detected crackling *râles* at the right shoulder behind.

December 22nd. 0.003 gramme of Koch's fluid injected at 11.30 A.M. At 10 P.M., temperature 101°; slight local reaction.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

Of ten cases under the charge of Mr. Owen and Mr. J. H. Morgan in the wards of the Hospital for Sick Children, Great Ormond Street, in which Dr. Koch's remedy has been applied by Dr. J. E. Squire, and most of which were suffering from presumed tuberculosis of joints, five received their first injection on December 10th. In some of these there have been reactions and improvement of the local affection has taken place.

The remaining cases, which have been a shorter time under treatment, include a case of lupus, one of caries of the spine, and one of tuberculous testicle. In the case of spinal caries, in a child aged 3½, no reaction has been obtained after an injection of 5 milligrammes.

NORTH LONDON HOSPITAL FOR CONSUMPTION.

Dr. J. E. Squire informs us that he has now five cases under Koch's treatment in this hospital, the earliest injections having been given on December 4th.

Case I.—A man with deposit in the left apex, dating from an attack of influenza in March, 1890, and who showed marked reaction after the first injection, is now able to stand a dose of 1 centigramme without reaction. Already some signs of improvement are noted in the condition of the lung, and the patient reports great improvement in his breathing. Pain at the seat of deposit in the lung was complained of during the reaction, and physical examination detected very harsh breathing, and large moist *râles* over the painful area.

Case II.—A woman with a marked family history of phthisis, who had already been some weeks in hospital without improvement, was also injected on December 4th. She had deposit in the left apex, and pain in the affected part followed the injection, but with no great rise of temperature. The breathing also became quickened, and the cough increased after the injections.

In both these cases tubercle bacilli were found in the sputa before the treatment commenced.

Case III.—In this case the first injection was given on December 9th. The patient, who stated that his father, mother, one sister, and one brother died of phthisis, had been ill three years, and had had repeated attacks of hæmoptysis, the last being about a week before the injections were commenced. In this case there appeared to be much fibrous tissue in the lungs, and there was also some active softening in the right apex. Very slight reaction followed the first and second injections (1 and 2 milligrammes respectively), but the third injection (4 milligrammes) gave a decided reaction, with a temperature of 104.2° F. He has now reached the dose of 1 centigramme at his seventh injection (December 22nd).

Case IV and V.—The other cases have received three and four injections respectively, but it is too early to express any opinion on the result of the treatment.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

A meeting will be held on Friday, January 9th, at 5 P.M., in the board room, West London Hospital, at which several cases which have been treated by the injection of Koch's fluid will be shown; to be followed by a discussion. The following gentlemen will exhibit cases: Mr. Bruce Clarke, Mr. Edwards, and Mr. Keetley.

BIRMINGHAM.

We are informed that the lymph is being used by the staff of the Birmingham Skin and Lock Hospital on eight cases of facial lupus, and that all the cases are doing well and show signs of improvement.

EDINBURGH.

On consideration of a letter from the Honorary Secretary of the Victoria Dispensary for Consumption and Diseases of the Chest, Edinburgh, asking that a certain number of beds in the City Fever Hospital should be set apart for the treatment of selected cases of consumption with Koch's "lymph," the Public Health Committee of the Edinburgh Town Council, on Tuesday last, after consideration, resolved to recommend the Council not to accede to the request.

A paragraph to the following effect appeared in some of the Edinburgh newspapers in the early part of this week: "At a meeting of the Managers of the Edinburgh Royal Infirmary, held on Monday last, a conversation, it is understood, took place on the experiments now going on in the infirmary wards with the Koch lymph. It was explained that there could be no report upon these experiments, because, while conducted in the infirmary, they were more or less of the nature of private demonstrations, and were not under the cognisance of the medical managers. We believe it was further stated that an application, along with the necessary purchase money, had been sent to Berlin for lymph, but as yet no reply had been received. A renewed effort will be made to secure a supply, and, when that is obtained, the experiments will then be conducted under the direct supervision of the medical managers."

ROYAL COLLEGE OF SURGEONS OF IRELAND.

On Thursday evening, December 18th, Dr. McKee, Curator of the museum of the College of Surgeons, delivered a lecture, at the request of the council, on the Koch treatment. The Albert Hall was well filled by members of the profession. Dr. McKee utilised the limelight to show on a large scale photographs of temperature charts, and of patients suffering from lupus and undergoing treatment. The lecture dealt very fully with the subject, and was a most interesting contribution to our present knowledge. At the close a vote of thanks was proposed by Mr. E. Hamilton, seconded by Mr. R. F. Tobin, and unanimously carried. The President, Mr. Croly, who occupied the chair, made some observations, and the proceedings terminated.

AUSTRALIA.

Our Melbourne Correspondent writes under date November 25th, 1890:—The announcement that Dr. Koch has discovered a cure for consumption has created as much interest and excitement here as it has no doubt done in Europe. The Government has been petitioned to despatch a medical man to Berlin for the purpose of gaining the necessary information and instruction. But, notwithstanding the pressure brought to bear both from within the colony and outside, by the suggestion of co-operation with the neighbouring Governments, it has resisted, on the plea that Professor Allen is still acting on behalf of the Government in Europe, and emphasises the fact that Dr. Springthorpe has set out for Berlin for the sole purpose of studying the method. Dr. Springthorpe left at twenty-four hours' notice on the instruction of the chairman of the local Stock Exchange, who has personally guaranteed the necessary expenses. In Dr. Springthorpe we have a very good representative. He occupies a leading position in the scientific world here, and is at present one of the honorary physicians to the Melbourne Hospital. He left too hurriedly to have received any demonstration on the part of the medical profession, but there is no doubt that had his intention been known and time given, he would have been asked to act as representative of the local Branch of the British Medical Association, of which he has been for some years the active spirit. It is hoped that every facility will be given to Dr. Springthorpe to pursue the necessary studies, and any attention shown to him will be gratefully acknowledged by the profession here.

ITALY.

In the Medical Clinic of the University of Rome, there are at present thirty patients under the new treatment. Of these, twenty-seven are suffering from pulmonary phthisis, and three from lupus. Professor Baccelli says that in the latter the effect of the remedy has unquestionably been favourable, and the good done by it has been "progressive." In the phthisis cases the results so far have been very variable, but on the whole "encouraging." Baccelli has modified the ordinary procedure in one important particular by injecting the fluid directly into the veins, as he injects quinine in malaria. The cases he chose for this purpose had proved refractory to the treatment applied in the way described by Koch, even when relatively large doses were used. Five patients have been treated by intravenous injection, and already Baccelli thinks himself justified in affirming that the action of the remedy, when injected directly into the veins, is more rapid than when used in the ordinary manner, and causes reaction where hypodermic injection has failed to do so. The injection is made with a Pravaz's syringe into one of the veins at the bend of the elbow; 1 milligramme was given to begin with, and so far the dose has never exceeded 4 milligrammes. The effect of the intravenous injections is illustrated by the following case: A lad, aged 19, suffering from pulmonary phthisis, had had a series of subcutaneous injections of 1 and 2 milligrammes without any result. An injection of 3 milligrammes was followed by a certain amount of reaction, but no effect was produced by subsequent injections of 4, 5, 7, 8, and 10 milligrammes.

On December 12th 1 milligramme was injected into a vein, and caused slight reaction. On December 13th an intravenous injection of 2 milligrammes was followed by a more distinct result; and on December 15th one of 3 milligrammes caused very marked constitutional disturbance. Subsequent injections of 3 and 4 milligrammes respectively were followed by reaction of gradually diminishing intensity. The patient's condition has improved considerably; he has gained weight, and the physical signs are more favourable. In another case, that of a woman, aged 45, in whom 10, 15, and even 20 milligrammes produced no effect when given subcutaneously, an intravenous injection of 1 milligramme produced a certain amount of reaction. Baccelli's method has also been tried by Dr. Ferrara-Bardile, at Milan, in one case with similar results. The Koch treatment is now being extensively carried out at Naples by Professor Cantani, at Florence by Drs. Kurz and Vanzetti, at Bergamo by Dr. Ferrari, at Bologna by Professor Murri, at Milan by Dr. Ferrara-Bardile, etc. The results are the same as those obtained elsewhere. At Milan two wards have been set aside for phthisical patients in whom the new treatment is to be throughly tested. Drs. Gatti and Visconti have been placed in charge of these wards.

Professor Pagliani, Director of the Public Health Office, has gone to Berlin to see whether arrangements can be made for a supply of the "lymph" to Italy.

According to the *Gazzetta degli Ospitali* of December 21st, difficulties have arisen as to the use of Koch's remedy which may seriously interfere with the clinical experiments now being pursued, at any rate in the province of Milan. The Provincial Sanitary Council has decided that the fluid cannot be used without infringement of the law against secret remedies, and has ordered the confiscation of the "lymph" wherever it is found. The medical profession has protested against this high-handed measure in vain. An official of the Public Health Service has made domiciliary visits in search of the forbidden elixir, but without success; and now all the medical men whose names had been advertised as possessing the fluid have been summoned to surrender it. Dr. Ferrara has therefore had to interrupt his experiments, and so has Professor Maragliano, of Genoa. The Minister of the Interior has also sent a telegram to all the prefects of the kingdom, instructing them to see that, until the Superior Sanitary Council shall have given its decision as to the use of Koch's fluid, it is not used outside university clinics without his express permission. He adds that this permission will only be given to heads of hospital clinics who have witnessed a course of experiments in a university clinic. It is further notified that all further consignments of "lymph" must be addressed to the Minister of the Interior, who will regulate its distribution to hospital and university clinics. By this ordinance all practitioners in Milan are precluded from using Koch's fluid, and Pavia is the only place in Lombardy where it can be legally employed. Later advices, however, state that Dr. Ferrara-Bardile has gone to Rome, and obtained permission to go on with his experiments.

RUSSIA.

The Russian Government has issued an order that although Koch's fluid, strictly speaking, comes under the law as to secret remedies, yet, considering the special circumstances of the case, its employment will be allowed under the control of the authorities and on the personal responsibility of the practitioners in Crown and communal hospitals the scientific organisation of which offers a guarantee of its being rightly used.

FRANCE.

In Lyons a plan, nearly identical with that followed at the Royal Infirmary in Glasgow, has been adopted for investigating the value of Dr. Koch's lymph. A small quantity having been sent to Dr. Lépine, that physician placed it in the hands of the president of the Société Médico-Chirurgicale, who immediately summoned a special meeting of the society. At this meeting it was decided after brief discussion that the physicians and surgeons of the hospitals in Lyons should form a kind of committee to examine the cases, watch the results of the treatment, and present a general report. M. Aubert, the president, and M. Launois, the secretary of the society, state that the society could not doubt that "the appointment of this great commission of investigation would give results more striking and more precise than the statements of individual experimenters."

SPAIN.

The *Siglo Medico* of December 21st states that in the cases of lupus treated by Dr. San Martin the results so far obtained have been similar to those reported elsewhere. In a case of arthritis of the knee great local œdema was caused by the injections. In the cases of pulmonary phthisis no particular improvement is visible. In the Hospital General a patient has died under the treatment. He was believed to be suffering from incipient phthisis at both apices, and an injection of 1 milligramme was given. Intense reaction was set up, and breathing became more and more difficult till death occurred three or four days after the injection. On *post-mortem* examination, deep-seated cavities were found, the existence of which had not been suspected during life. Cases of undoubted tuberculosis are also mentioned in which no reaction was produced, while in some patients suffering from other diseases the injections were followed by the familiar pyrexia, etc.

PORTUGAL.

Dr. Henry Mouton having brought some of the fluid to Lisbon from Berlin, Professor Sousa Martins, in the presence of the other members of the Committee charged with the investigation of the question, began a series of injections in the Hospital de S. José on December 12th. The general impression of those who have followed the experiments so far appears to be that the remedy is applicable only in an extremely limited number of cases, and even in these it is doubtful whether any really favourable result will be obtained.

SWITZERLAND.

About a month ago the Swiss Federal Council sent Drs. Boyet and Tavel, of Berne, to Berlin with a special commission to enter into some arrangemnt with the Prussian Government for the regular supply of Professor Koch's lymph to Switzerland. The usually well-informed *Berner Taghlatt* now (December 20th) says that the commissioners have just returned home, and, unfortunately, with empty hands. That is, they have failed to conclude any agreement with the Prussian Government as to the lymph supply. The cause of this failure is said to be that the Prussian Government is about to settle the supply question in general by legislative enactment. After which the lymph will be dispensed in necessary quantities to any country which will offer guarantees that the remedy will be used in a legitimate way. In other words, Professor Koch and the Prussian Government seem to have decided to make the mysterious lymph a permanent Prussian arcanum. It is to be hoped that Professor Koch will, without delay, protest indignantly against such scandalous imputations.

DR. KOCH'S FLUID IN DIAGNOSIS.

Sir, While the medical world is still deeply exercised in trying to estimate the therapeutic value of Dr. Koch's fluid, its power and usefulness in diagnosis are already firmly established. From Berlin, Paris, London, and elsewhere comes the verdict that the liquid selects for its action tuberculous tissue and it only. Everyone must feel that the position is most serious, and assuredly it behoves us to consider very carefully if the grounds of the conclusion are indisputable. As a contribution to this inquiry, I submit the following questions:—

1. Assume that the vitality of a portion of an organ has been lowered by preceding inflammatory action of an ordinary kind, would the introduction of septic matter—to which Koch's liquid is probably allied—into the circulation not be likely, at least in certain states of the system, such as lowered general tone, to awaken inflammation anew in the affected part, giving rise to constitutional disorder? It is very conceivable that were the lung the organ affected, the course of the symptoms and the physical signs might not correspond with a croupous pneumonia in which the inflammatory action is not ordinary. The following case will illustrate my meaning:—Some years ago a patient, about 6 years old, who had eczema around the mouth, became feverish, and at the same time the eczematous surface, as well as the neighbouring skin, swelled greatly and was intensely red. I was at a loss at first to account for the condition, but in twenty-four hours measles began to show itself distinctly. The explanation of the excessive local action was now obvious. The poison of measles had selected, so to speak, that part, and exerted its malign influence on it at an earlier period and with greater intensity than on the skin generally. The question suggests itself: Would Koch's liquid in any state of the body act in a similar way to that of the measles poison in such a case?

2. When tuberculous disease is undoubtedly present, will the injection of the liquid always give rise to the characteristic reaction? To this question we are already warranted in giving a negative reply. In one of my wards of the infirmary three patients labouring under phthisis pulmonalis are at present undergoing this special treatment. One of them was injected on December 16th with I, and on December 18th with 2 milligrammes, but up to the present time, December 23rd, there has been no reaction. The two others reacted very decidedly to 1 milligramme given on December 16th, and indeed one of them has not yet fully recovered from the effects of the injection—a week afterwards. The usual physical signs are very clear in all the cases. Bacilli have been found in the sputum of each of them, and in the refractory case they have been observed on two different occasions. In two other patients in the hospital the injection of a centigramme has not been followed by fever, though there was sickness and vomiting.

Such cases should lead us to refrain from giving this method of testing the high and unqualified value in diagnosis which many are inclined to assign it. It obviously cannot be absolutely relied on when tubercle is clearly present; and it remains yet to be seen if there are not states of the system local, general, or both, in which feverish disorder will arise from the injection of the fluid in question, even though tubercle is absent.—I am, etc.,

Alex. Robertson, M.D.,
Physician, Royal Infirmary, Glasgow.

The Breslau Medical Society recently passed the following resolution, after long discussion: "The Breslau Medical Society, while thinking it desirable that every new remedy should be tested in hospitals, considers it derogatory to the medical profession that the free use of a remedy recognised by the State and employed by a few favoured persons in private practice should be denied to medical practitioners, and that such remedy should be made a monopoly of hospitals or privileged private clinics." Copies of this resolution have been forwarded to Dr. Koch, the Cultus Minister, and the Medical Chamber.

Dr. Sinclair Coghill (Ventnor), who has returned from Berlin with a supply of Dr. Koch's remedy, has commenced the inoculations on a selected set of cases at the Royal National Hospital for Consumption, Ventnor. Members of the profession will be welcomed at the daily inoculations at 9.30 A.M. Dr. Sinclair Coghill had the honour of being received in private audience by the Empress Frederick on Wednesday before leaving Berlin, where he has been closely studying Koch's method, at the instance of the Board of Management of the Royal National Hospital.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JANUARY, 3RD, 1891.

THE GOUFFÉ TRIAL AND HYPNOTIC SUGGESTION.

IT has happened sometimes before now that some delicate questions, which have perplexed and still perplex the minds of moral philosophers and psychologists, have to be taken up in a rough and ready fashion in the practice of the courts of law. One such is the question of the limits of the moral responsibility for criminal actions. The law can tolerate no intermediate stages between full responsibility and complete irresponsibility. A man, at the time he is committing any act of which the law takes cognisance, is either sane or insane. That has been the most common form of the question, and no doubtful answer has been technically allowable, though both the skilled expert and the reasonable judge know that there is every intermediate stage conceivable. What is essentially the same question, namely, of the limits of responsibility, has been raised very recently in France in a new form in the trial for the murder of M. Gouffé. The criminal act was carried out in a particularly brutal fashion, apparently for the sake of money, about eighteen months ago by the hands of Michel Eyraud, aged 52, and Gabrielle Bompard, aged 21. The deceased was strangled and cut to pieces in Paris, and the remains hidden in a trunk near Lyons. For a long time the criminals had no difficulty in evading the police; but finally Gabrielle Bompard confessed and gave herself up about nine months ago, and Eyraud was caught later on in Havannah. Eyraud was well known as a bankrupt and bad character, and pleaded guilty. Bompard's counsel—perhaps as a desperate and sensational resource—put forward the plea that his client was not responsible, alleging that she had only played her part after being hypnotised by Eyraud, and in such a state being prompted by him to commit the murder automatically. To support such a plea, M. Liégeois, Professor of Civil Law at Nancy, was called as a man well known in the world of medical jurisprudence.

In 1884, after a careful study of the phenomena and possibilities of hypnotism, he had convinced himself that many hypnotic subjects would carry out the simpler orders or suggestions that he gave them without remembering, after awakening, what was their real origin, and, indeed, with a strong impression that they were their own spontaneous impulses. A few, but very few, he considered so "suggestible" that they would carry out automatically criminal actions which had been ordered during hypnotism without recognising them as criminal; for example, that an affectionate daughter would fire a pistol at her mother's head, at an appointed time, a fortnight after such an act had been enjoined upon her when in a state of hypnotism, without any recollection of the command during the interval, or any reminder when the time appointed came. That had indeed happened in M. Liégeois's presence on an occasion when due care was taken that the pistol should be unloaded. The general bearing of this and some similar facts were discussed among French *savants* at a meeting of the Académie des Sciences Morales et Politiques in 1884. Since then there has been much investigation of the results of post-hypnotic suggestion, especially in France and Germany, and a wider recognition of its power, though it is doubtful whether there has been a single attempt to turn it to bad purposes, partly because it needs great skill, knowledge, and the rare opportunity of an extremely susceptible subject, and partly because, in the opinion of many experimenters, it has been found particularly difficult, even with the most highly susceptible subjects, to induce them to do anything thoroughly repugnant to their moral instincts. In this particular case of the murder of Gouffé there was some evidence that Gabrielle Bompard had been hypnotised in her life some time before, but without post-hypnotic suggestion, and without harm of any kind; there was, however, no evidence whatever that Eyraud had hypnotised her, or, indeed, that anyone had hypnotised her about the time of the murder. Professor Liégeois explained to the Court his wide views of what was possible, but admitted that he had no experience of the state of Bompard. A request made by the counsel for the prisoner that the effects of hypnotism should be tried in the open court was refused by the judge. For the prosecution, M. Brouardel, Dean of the Paris Medical Faculty, and M. Ballet, a student of hypnotism and a high authority in insanity, were called. They both gave testimony that in the orthodox opinion of the school of Paris, headed by M. Charcot—from whom, it is true, a few well-known men dissented, such as M. Dumontpallier, of the Hôtel Dieu, and M. Beaunis, Director of the Laboratory of Experimental Psychology—the prisoner had only the signs of a minor degree of hysteria, and would only be susceptible to a minor degree of hypnotism (*le petit hypnotisme*), in which it was quite out of the question that any post-hypnotic suggestion should be acted upon; and further, that of whatever temperament she had been, it would have been impossible to induce post-hypnotic criminal acts by suggestions made in hypnotism. A verdict of guilty was returned by the jury against Eyraud, and of guilty with extenuating circumstances against Bompard. Eyraud was sentenced to death, and Bompard to penal servitude for twenty years.

How far the somewhat lighter verdict against Bompard may have been due to a vague feeling in the jury in favour of the truth of the theory of hypnotic suggestion it is hard to say. The possibility of producing hypnotism or a post-hypnotic state in which an agent is not responsible was keenly argued, and Professor Liégeois, as a representative of the Nancy

school, did not spare himself in upholding the far-reaching power of suggestion against the opposition of the Paris school, which had some bitterness in it.

It is curious to observe that M. Bernheim, the leader of the Nancy school of hypnotism, who was not able to be present through illness, notices the history of Bompard's acts in his *Etudes Nouvelles*, published a few weeks before the trial. This must, we should think, be condemned by all parties as at least premature, especially as his conclusion is in favour of some suggestion having been used. Any permission to hypnotise in court was rightly considered to be entirely out of the question. It would have been a gross addition to the vulgar sensationalism of the trial. Indeed, the crude presentation of a hypothesis which science has hardly yet grasped or estimated when it is brought forward by advocates in a law court is the most damaging thing to the truth, whatever it may be. It requires stern treatment to make it no sport for idle curiosity; and when men of high standing and considerable experience are found to differ on some important points in practical life, it shows the necessity of honestly facing the difficulties of the subject by some such inquiry as that which was undertaken by a committee on hypnotism that was appointed at the last meeting of the British Medical Association.

"UNFIT FOR HUMAN HABITATION."

Under the Housing of the Working Classes Act, 1890, medical officers of health are now required to report upon any dwelling houses, courts, or alleys in their districts which appear to be in a state so dangerous or injurious to health as to be unfit for human habitation. The Housing of the Working Classes Committee of the London County Council, animated by a laudable desire, no doubt, to establish some common basis of understanding amongst metropolitan medical officers of health with regard to the method of working the Act, thereby avoiding inequalities in procedure owing to personal differences of view, invited delegates from the London vestries to meet and discuss the subject with the Committee. At this joint meeting a resolution was passed directing the Medical Officer of Health to the County Council to call a meeting of metropolitan medical officers of health in order to define what is meant by "unfit for human habitation," and to schedule the structural or other conditions which render houses injurious to health and unfit for habitation.

There is much plausibility in the idea of such a meeting of experts to discuss a difficult question, and one which lies at the very root of the whole subject of improving the dwellings of the working classes. There can be no doubt that if medical officers of health were able to arrive at a harmonious understanding on the conditions which render houses unfit for habitation, this would be a very satisfactory result. That there is need of such an understanding will not be disputed, when it is stated that as recently as a year ago three houses in an East End parish, which were stated by the medical officer of health in evidence in court to be in a very fair sanitary condition, were ordered by the magistrate, who himself visited the houses, to be closed, as unfit for habitation, the complainants in this case being the Mansion House Council on the Dwellings of the Poor. But is it possible, by merely discussing the matter at a meeting, to arrive at any conclusion of a definite nature as to the matters referred for consideration? We certainly think not. All that could be stated at such a meeting is what is already sufficiently well known, namely, (1) that the word "dangerous" does not mean unsafe from want of stability, but refers to the health of the inhabitants, and (2) that a building which is unfit for human habitation is one which, by reason of sanitary defects, is either actually injurious to the health of the inmates or is likely to prove injurious. These sanitary defects may be of such a nature that they are capable of remedy, or, on the other hand, they may be incapable of remedy in the existing structure, and, in this case, the only remedy is the demolition of the house.

But it is worth while to call a meeting to obtain such simple enunciations as the above, for it would be impossible to schedule the conditions or defects which cause a house, or a group of houses, to be unfit for habitation. A list might be prepared of what every medical officer of health knows (or should know) to be serious sanitary defects. For instance, want of through light and ventilation to the rooms, passages, and staircases; dampness of walls; improper situation of water-closets in cellars, where there is no back curtilage; small size of rooms; general dilapidation of structure, and numerous other defective conditions; whilst in the case of courts and alleys, want of light and ventilation by overshadowing by surrounding buildings, or the courts being narrow *cul-de-sacs*, closed more or less at one or both ends, are perhaps the principal defects. But how to arrange these so as to lay down positively that the combination of two or more defects would constitute unfitness for habitation, whilst anything less would not do so, would defy the wit of man. The simple truth is that circumstances alter cases, and every case must be judged on its own merits.

The Act of 1890 is an especially important one, for if its provisions are only adequately enforced, a remedy will before long be provided for all those disgraceful conditions of human lodgment which were, and are still, a blot upon our civilisation. The Act, then, must be enforced in London, and the enforcement must as far as possible be equal in the various districts, or some of the worst slums will remain untouched. The only way that we can see to ensure this desired equality is to level the capacities, intelligence, and honesty of purpose of the metropolitan medical officers themselves. The levelling must, of course, be upwards, towards the highest standard attainable. If no medical officer of health were in future appointed in London who not only could show by the possession of a Public Health diploma or former experience in office that he was qualified for his duties, but who also would not be hampered in his work by private and personal interests through being in private practice in his district, a great step would be taken in securing a uniform practice in sanitary matters, without which London sanitary administration is like a chain—no stronger than its weakest link.

THE ROYAL COMMISSION ON VACCINATION.

The Third Report of the Royal Commission on Vaccination, which has just been issued, contains minutes of the evidence taken during the twenty-one sittings held between February 19th and August 7th last. Most of that evidence was given by opponents of vaccination, the most important contribution being that of Mr. Alfred Russel Wallace, who was under examination on four of the sittings. Mr. Wallace contends that whether vaccination is efficacious or not is purely a statistical and not a medical question; but it is curious to find that, although under such circumstances it is only reasonable to expect that the statistics adduced by Mr. Wallace would be carefully prepared and reliable, one of the most important statistical tables submitted by him—namely, that relating to vaccination in France—was withdrawn by him because it was shown, during his examination before the Commission, to be untrustworthy. Mr. Wallace rejects the system of comparing the mortality amongst vaccinated with that amongst the unvaccinated, and attributes the general reduction of the small-pox death-rate to improved sanitation and habits of life. Upon this point, however, the Commissioners have already before them the facts and figures relating to the small-pox epidemic at Sheffield in 1887-88, which, in the words of Dr. Buchanan, show that "if so-called 'sanitary circumstances' have had any influence at all upon the rate of attack and death, such influence is not demonstrable, and can, at the utmost, have been but small." Mr. Wallace's lengthy evidence deserves very careful examination. As regards, however, his mental attitude towards this question, his statement may be noted that "Liberty is in my mind a far greater and more important thing than science."

Evidence of somewhat the same kind was given by Mr. A. Wheeler, of Darlington, whilst Mr. W. Tebb laid before the Commission a number of reports of cases of alleged injuries from vaccination. Mr. Tebb tries to connect vaccination with the spread of leprosy in the West Indies; but when it was pointed out to him by Mr. Jonathan Hutchinson that some hold the opinion that leprosy is not contagious but that it is due to food, and that if that theory is tenable there is no need to believe that leprosy is ever conveyed by vaccination, the witness had no satisfactory answer to offer.

In this same volume is contained the statements of Surgeon T. H. Parke, the medical officer in charge of the Emin Relief Expedition, as to the outbreak of small-pox at Benalya, in Central Africa. In that outbreak one set of natives who had not been vaccinated suffered terribly, and a great number of them died; whilst out of another set of natives who had been vaccinated only four were attacked, and none died from the disease.

We do not feel that the weighty arguments in favour of vaccination have been shaken by the evidence contained in this volume.

SEASONABLE GIFTS.

Among the most seasonable gifts of the year, and one which we have the greatest pleasure in recording, is the receipt by Dr. Holman, Treasurer of the Epsom College, of a second cheque for £500 from the anonymous benefactor of Epsom College. Beneficence on so large a scale is apt to be contagious and to beget a like enthusiasm in well doing. We hope that the record of this seasonable munificence may be inspiring to others, according to their means.

COMPULSORY VACCINATION IN EGYPT.

By a Khedival decree which was published in the *Official Journal* of Cairo on December 17th, 1890, the vaccination of infants is made obligatory throughout Egypt and its dependencies. Every child is to be vaccinated within three months from its birth, except in case of illness, when a medical certificate of postponement is to be obtained. Arrangements are made for the gratuitous performance of the operation, and the duty of securing the vaccination is imposed on the child's father or guardian under pain of a fine or imprisonment. The decree came into operation on its publication on December 17th as regards natives, but three months' grace is allowed as regards foreigners.

DR. GORI, OF AMSTERDAM.

Dr. Marinus W. C. Gori, lecturer on military sanitary science in the University of Amsterdam, died on December 27th. He was well-known from the active part he took in affording help to the wounded during the Franco-German war in connection with the Dutch ambulances, and has since been greatly distinguished on account of his endeavours to promote the interests of his sick and injured countrymen in the accidents which are liable to occur in time of peace. An excellent linguist, he spoke French, German, and English fluently, and wrote each of these languages almost with the same facility as his own. He had been suffering from pulmonary disease for the last two years.

SANITATION AND BACTERIOLOGY IN AUSTRIA.

The Chamber of Deputies in the Austrian Parliament considered on December 12th the report of a commission appointed to inquire into the proposals made by a Deputy, Dr. Roser, for the creation in Austria of an Imperial Sanitary Bureau, after the model of the institute established at Berlin for the whole of Germany. The report recommended the adoption of a series of resolutions demanding the foundation of chairs of hygiene and bacteriology in the faculties of medicine, the introduction of hygiene into the medical curriculum as an obligatory subject, the improvement of the public sanitary service by an increase of the number of doctors nominated by the State, and a general reform of the pharmaceutical department. In the course of the debate attention was drawn to the advantages which Dr. Koch had enjoyed in the Imperial Sanitary Bureau at Berlin, and satisfaction was expressed at the recent decree of the Austrian Minister of Instruction dealing with the question of hygiene in schools.

"GENERAL" BOOTH'S SCHEME AND NORTH KENSINGTON.

One result of the interest created by "General" Booth's book has been the wider recognition of many useful agencies already at work. To many of these increased funds have, we trust, been given, and to all a stimulus to benevolent activity. The newspaper discussion, which still goes on, must also develop a keener sense of the responsibility which attaches to the possession of wealth in the midst of want. We can nevertheless easily understand how dislike of the methods and the manners of the Salvation Army has inspired a good deal of the adverse criticism of the Booth scheme. The methods may seem foolish, the manners may be vulgar, but the poverty and

misery of "the submerged tenth" are near and actual, the dangers are remote, and the public have given the money required, influenced less by the dim and distant possibilities than by the probabilities of present good. Previous efforts to grapple with the problems of poverty have been too limited in their action. An example of a well-conceived scheme, which has succeeded admirably in a limited area, is to be seen in the society called "The North Kensington Friendly Workers amongst the Poor." All classes and all sects have united to investigate and organise this district, so that they know that no poor person need suffer, starve, or be in want. By means of a workroom, a labour bureau, and systematic visitation and relief, this Society has apparently solved the question for North Kensington. If every district in London could have done the same as Mr. H. C. Burdett and his colleagues have done in this instance, "the General" would have been anticipated, but it is in this very universality of its application that the chief merit of the Booth scheme resides.

A JAPANESE MEDICAL SOCIETY.

The Sei-I-Kwai, or Society for the Advancement of Medical Science in Japan (M. Jourdain might have said of Japanese, as he did of Turkish, that it can put a great deal of meaning into a single word), held its tenth annual meeting at Tokyo on October 1st. Dr. Kumagawa reported that the financial situation was satisfactory, the receipts having been 1,059.52 *yen*, against an expenditure of 1,013.11 *yen*, leaving a balance of 46.40 *yen*. The number of meetings during the year had been 41. The total membership of the Society on September 30th, 1890, was 238, of whom 14 (6 foreigners and 8 Japanese) were honorary members, 88 (13 foreigners and 75 Japanese) ordinary members, and 136 "auxiliary" members. The library contained 795 volumes of Japanese, and 1,412 of European works. The Society issues a journal, which, as appears from the report before us, has 16 Japanese and 43 European medical journals on its list of exchanges, and which is now entirely under Japanese editorship. Mr. Kanehino Takaki, formerly a distinguished student of St. Thomas's Hospital, and a Fellow (by examination) of the Royal College of Surgeons of England, was elected President for the ensuing year, the Vice-Presidents being Dr. W. N. Whitney, of the United States Legation at Tokyo, Mr. Y. Saneyoski, F.R.C.S.Eng., and Dr. T. Matsuyama. In the evening the annual dinner took place, after which, that there might be no departure from the strictest European ritual, the floodgates of postprandial oratory were opened. The President congratulated the Society on its increasing usefulness, and himself on being at the head of so illustrious an assembly, and expressed his indebtedness to Dr. Nagayo for his invaluable help ever since the foundation of the Society. "Honorary Member Dr. Nagayo" then thanked everybody all round, and spoke of the excellent work the Society was doing in several ways, notably in publishing a journal which, as he somewhat elliptically remarked, "for nearly ten years not a single month failed to appear containing both in Japanese and English." It is all wonderfully familiar. But for the polysyllabic names and a certain touch of quaintness, it might be a report of one of our own Branch meetings. We can wish the Sei-I-Kwai no nobler fortune than that it may do as much for medicine and its professors in Japan as the B.M.A. has done in this country.

DEATHS UNDER ANÆSTHETICS IN AMERICA.

Anæsthetics have lately been running up a little "butcher's bill" of their own, which is beginning to excite some alarm. America, the cradle of both chloroform and ether, seems to be as unfortunate in that respect as ourselves. A young woman died under chloroform in a Chicago hospital on November 7th immediately after a small mole had been excised from her cheek. After the operation she showed no sign of returning consciousness, and when it was sought to revive her, she was seized with a convulsion and expired. More recently, too, Dr. Justus E. Gregory, of Brooklyn, who had long been suffering from neuralgia in the temple, for the relief of which he was accustomed to inhale chloroform, was found dead in a chemist's shop, where he had sat down to inhale the anæsthetic. The fatal result in this case was the more remarkable that Dr. Gregory is described as having been an expert in the use of the drug. But it is not only chloroform that is responsible for these fatal accidents in America. On October 30th a man died in the Brooklyn City Hospital whilst under the influence of ether, which had been given as a preliminary to a surgical operation. Only 4 drachms of ether had been used when death occurred.

DEATHS FROM CHLOROFORM.

We find in the local papers that have come to hand this week, two more deaths under chloroform. We recorded last week a death under chloroform which occurred at St. Mary's Hospital, London, under similar circumstances. In neither case has any notice been forwarded to this or appeared in any other medical journal and, but for certain means which we take to keep ourselves informed of what is passing by watchful observation of the newspapers throughout Great Britain, in neither case it would seem would any record have been made for the information of the medical public. Without imputing any particular blame to individuals we may once more express the opinion that it ought to be considered a duty on the part of any person who administers chloroform or any other anæsthetic, and who has the misfortune to meet with either a serious accident or a fatality, to put the facts succinctly and completely upon record in a form accessible to his medical brethren—the simplest and most accessible being a brief communication to one or other of the medical journals. Our columns, as we have said, are always open to such communications, and it is much to be desired that the records of mortality from anæsthetics should be kept accurately and fully. The first of the recent cases to which we refer is reported in the *Birmingham Daily Post* of December 13th, and happened at the Wolverhampton Hospital. The operation performed was for the removal of necrosed bone in the leg. The house-surgeon is reported to have stated in evidence that the deceased objected to take either chloroform or ether, and when the facepiece was used he pulled it away. He was then told that he must submit to one of them being used, and he elected to have chloroform. He became insensible under its influence, and the surgeon had just commenced to open the skin, when Dr. Wood called his attention to the patient, who was deadly pale, his breathing had stopped, and the action of the heart could not be felt. Restoratives were applied, and he rallied slightly, but in three or four minutes breathing ceased again, and, although artificial respiration was resorted to for forty minutes, death ensued. A careful examination of the state of the heart and lungs was made before the chloroform was applied, and the witness was unable to account for death taking place. The second case is reported in the *Birmingham Gazette* of December 23rd. The patient, who was a man aged 46 years, was undergoing an operation on the elbow-joint. The evidence of the house-surgeon was that the deceased had had about one drachm of chloroform, and took about seven minutes to get under its influence. About two minutes after the operation was com-

menced breathing became stertorous, and it was found that the heart and pulse had ceased to beat. Artificial respiration was employed ineffectually. The necropsy showed that all the organs of the body were healthy, but congested.

THE EDUCATION AND REGISTRATION OF PLUMBERS.

The proposals which were made by Mr. Ernest Hart at the Liverpool meeting of the British Medical Association, in the Public Health Section, for the education, examination, and registration of plumbers, and which were subsequently taken up by the National Health Society, and repeated by Mr. Hart in a paper which he read at the Congress of Plumbers at the International Health Exhibition, London, in 1888, has had a more far-reaching and practical effect than often falls to the lot of proposals so largely affecting public health on the one hand, and trade prejudices on the other. Mr. W. R. E. Coles, a member of the Council of the National Health Society, and who gave valuable assistance to that Society in arranging the first course of lectures and examinations which were given on its behalf at the Society of Arts, subsequently persuaded Mr. Shaw, the Masters of the Plumbers' Company, and the Company itself, to take up the good work. The Plumbers' Company, with Mr. Coles as clerk, has carried on a most active and effective propaganda. There are now centres of education and examination throughout Great Britain, and at the quarterly meeting of the Court of the Company of Plumbers, held at Guildhall this week, Sir Philip Magnus brought forward a report showing that 1,550 apprentices and journeymen plumbers are now attending plumbing classes in London and the provinces, and that at seven examinations held in the last session, the average number of passes was 44 per cent. of the total number of candidates. The President of the Local Government Board has set the seal of his official approval upon the movement, and many of the leading municipalities now require that persons engaged in plumbing work on their behalf shall hold a certificate of registration of the Plumbers' Company, implying efficiency. The time must now surely be near at hand when the further step may be taken to complete the scheme as originally laid down by Mr. Ernest Hart, to give the sanction of an Act of Parliament to the register, and to give the required protection to the public by protecting the title of registered plumber, so that none others shall assume it than those who have been duly examined and certified. Meantime it is highly satisfactory to see that public opinion has been sufficiently energetic, and the trade sufficiently enlightened, to lead to so large an amount of voluntary registration.

THE DEFICIENCY OF NATIVE-BORN AMERICANS.

The recent census of the United States appears to show that the birth-rate is declining, and is below that of most prosperous European countries. In spite of the very considerable increase in population, the increase due to births, which was about nine millions in the decade 1871-80, was only seven millions in the decade 1881-90. It also appears from the recent census that the number of persons between the ages of 30 and 50 is distinctly below the average. This is the more astonishing since the increase in the population of the States is largely due to immigration, nearly half the adults being foreign born. The number of women in proportion to men is unusually low, and this, taken in conjunction with the deficiency of males between 30 and 50, may, perhaps, help to account for the low birth-rate; but however it is viewed, this low birth-rate is very surprising, though the enormous amount of immigration may prevent the population question ever becoming in the United States the burning question which it is in France. On the contrary, proposals made by Surgeon-General Hamilton, which would operate to considerably restrict immigration, are about to be embodied in a Bill to be introduced into Congress. Among other formalities, it would require every immigrant to be provided with a certificate from the United States Consul nearest to his home testifying that his financial position, physical condition, and moral character entitle him to seek admission into the select society of America.

INFLUENZA AMONG HORSES.

As in the human subject, equine influenza is abrupt in onset; the transition from health and activity to prostration and profound depression is sudden. The temperature rises from the normal to extreme hyperpyrexia (106° or 107°), and often falls as suddenly as low as 97°, the normal temperature of the horse being 100°. Three well-marked varieties of the disease have been described by Dr. George Fleming, C.B. The first, which is apt to be pandemic, is catarrhal in type, and affects especially the bronchial tract; as many as ninety per cent. of the horses in a locality are often affected, the mortality being from two to four per cent. Although closely allied to influenza as it affects the human subject, it is not identical, and seldom coincident with, the epidemic among men; as pointed out in Dr. Symes Thompson's recent *Historical Survey of Influenza*, horses are generally afflicted a few weeks before men. The second form is "equine pleuro-pneumonia." It is more insidious and less widespread than the first form, and is apt to become endemic, as in the Regent's Park Barracks, from which it is rarely absent for a year. It is attended with high mortality, and is followed by protracted convalescence, it is often accompanied by gangrene of lung, and is associated with the presence of a diplo-bacterium capable of inoculation in mice, and is allied to septicæmia. The third variety is erysipelatous in character: the digestive organs, as well as the skin, are affected; it is allied to anthrax. The ass is exempt, cats and dogs suffer but rarely. It is thought by Dr. Fleming that the microbe is capable of propagation outside as well as inside the body, like that of malaria. As regards treatment, care in nursing and ventilation are regarded as of the greatest importance; quinine being the most valuable medicine. How far the epidemic pleuro-pneumonia above described and the erysipelatous type of disease are justly to be styled influenza is a question needing the attention of veterinary surgeons.

THE KENT COUNTY UKASE.

It will be seen with satisfaction from the letter in another column by Dr. Charles Hoar, of Maidstone, that the Kent County Council have withdrawn the obnoxious scale of fees which they had recently issued for the remuneration of medical attendance on the police in that county, and have agreed that the fees for extra medical service shall be those allowed by the Poor-law Board, as recommended by the resolution of the Council of the South-Eastern Branch of the British Medical Association. At the recent meeting of the County Council the chief constable stated that the average payment for medical fees for 382 constables during the past ten years had been 9s. 3d. per head. The scale of fees in the future will be: advice and medicine at residence of medical practitioner, 2s. 6d.; visit, advice, and medicine, one mile from residence, 3s. 6d., and 1s. per mile afterwards; the fees to be doubled for medical attendance

between the hours of 10 P.M. and 7 A.M., and 1s. to be paid for each certificate. Special cases, fractures, dislocations, and operations to be paid for as in ordinary practice. The previous decision of the Committee had been a scale of 1s. a visit and 1s. for medicine. The new scale was adopted for one year, and it will be seen that Dr. Hoar expresses the hope that the difficulty will be found now to have been satisfactorily solved.

THE ETIOLOGY OF CANCER.

THE last meeting of the Edinburgh Medico-Chirurgical Society was mainly taken up by a discussion on Dr. William Russell's paper on a Characteristic Organism of Cancer, read at the previous meeting, and published in the BRITISH MEDICAL JOURNAL on December 13th. Most of those who spoke dissented from Dr. Russell's finding that the organism he had isolated by special staining methods was *the* organism of cancer; some were doubtful whether cancerous growth could in any sense be said to be due to any organism; some held that this particular organism was found in other pathological processes, some that it was an organism of degeneration of cancer, and so on. Dr. Russell, in reply, maintained that in the course of his elaborate and protracted observations, the difficulties referred to by many speakers had occurred to his own mind, but he had, one by one, surmounted them, and was obliged to stand by his thesis till further observation compelled him to abandon it.

WITCHCRAFT AT THE CLOSE OF THE NINETEENTH CENTURY.

A SURGEON practising in the Doncaster Parliamentary Division of the West Riding of Yorkshire sends us the following, for the accuracy of which he vouches: C. A., male, aged 78, consulted me in November last. This was his verbatim statement: "Twelve months ago I gave evidence against Mary Anne Tinker at an inquest on her husband. After it was over she told me she would do my business for me; and she said 'You will never be the man you are no more.' The first time she attacked me she took me by the back part of the neck and driv' me across the house—I had a house of my own then. I could not see her, but I knew it was her. Some weeks back she wrought me dreadful. I could not keep a limb still or anything in me. I found she had travelled to Rotherham then. She often pinches my hands, but not to hurt. She puts wind into me. She puts it into me by blowing into something she has made. She sends things into the room I sleep in; I can't see 'em, but I hear 'em. They hop about from 10 o'clock till 12 o'clock at night or 1 in the morning; they go like this 'flop—flop—flop—flop.' That is when she is blowing into my bowels. She confines my bowels. I saw your assistant some months ago; and after that she took 'it' off for a time. She is a witch, and a proper witch, but how she do it, the dear Lord only knows; I don't." For the credit of education, be it said, this old man was never at school, and can neither read nor write.

FEVER AT BERMUDA.

IT has been recently reported that enteric fever was rapidly spreading among the Guards at Bermuda, that no doubt was entertained about its epidemic character, and that stringent quarantine measures were being adopted. But as similar telegrams some months ago of an alarming character proved to be grossly exaggerated, we would not attach much importance to the present one without official confirmation. Fever of any form is not usually prevalent during the winter months in Bermuda, nor are quarantine measures adopted except in the case of yellow fever. As we before remarked, investigation into the true etiology of enteric fever in Bermuda has hitherto been beset with difficulties, as indeed it has been in most of our tropical and subtropical military stations. In connection with this matter, we would draw attention to a paper by Dr. Kirker, Surgeon R.N., in the *Sanitary Record* of April, 1889, wherein stress is laid on the dangerous characters which rain and well waters develop under storage, and suggesting that the occurrence of enteric fever at such healthy places as Ascension and Bermuda may be explained in this way. In the BRITISH MEDICAL JOURNAL of November 22nd, 1890, there appeared a paper on endemic fever in Bermuda by Christopher Harvey, Staff-Surgeon, R.N., in which he contended that the enteric fever had been localised in the islands long ago, although called by such names as typhus, synochus, etc. There is, no doubt, much truth in this observation, which, however, is equally applicable to many other of our naval and military foreign stations, the terms enteric or typhoid fever being almost unknown to official nomenclature until some thirty years ago. But it is also equally true that this form of fever has been much more prevalent both among our soldiers and sailors during the past twenty years. In Bermuda, in particular, it is affirmed by those having full local knowledge that the disease has obtained a firm endemic hold since the last great epidemic of yellow fever in 1864. Mr. Harvey asserts: "It is clear that it (enteric fever) is kept going in the islands by a continuity of cases among the natives themselves," whose water storage and cesspits are in a most insanitary condition; and from them, and through such sources, it spreads to the soldiers and sailors. We would lay great stress on this opinion, and hope the local sanitary authorities in Bermuda will follow it up.

ENTERIC FEVER AND VENEREAL DISEASE IN INDIA.

THE extent to which enteric fever is prevailing in the European army of India is becoming a very serious matter. The last Report before us shows that in the Lucknow Station Hospital alone 30 men and 2 officers were under treatment for this disease, and at Bareilly 27 men and 2 officers. We have on more than one occasion called attention to the milk supply as one of the most active causes in the propagation of this disease. From information to hand, we find that this is more and more the opinion of some of the best sanitary authorities in India. The only remedy seems to be that the Commissariat Department should take the matter in hand, and keep a sufficient supply of milch cows at all the large stations, and with proper dairy arrangements, and the supply of clean and wholesome food to the animals, secure a sufficient supply of wholesome milk for barrack and hospital use. A costly remedy, it will be said; but enteric fever is a costly disease, and yearly becoming more so. As the matter stands, the present milk supply is not only bad in quality, but insufficient in quantity; so much so that it is at some stations found difficult to obtain milk enough for dysenteric patients. If this state of matters as regards enteric fever is bad, the yearly extension of venereal disease in the army of India is worse. The accounts before us show that at Lucknow alone, out of 150 men arriving at that station from Deolali, 19 had to be at once admitted into hospital with venereal disorders. The South Wales Borderers marched through Lucknow three weeks from their last station; in that short time they dropped 120 men on the road in various station hospitals with this disease. The medical officers complain that their representations, as regards both diseases, meet with no notice. The Government is said "to look on with folded

hands," at the havoc wrought by the two diseases on the young soldiers obtained in this country for service in India by the costly method of voluntary enlistment.

A LEPROUS VILLAGE.

M. Boinet states[1] that leprosy is rare in the mountainous parts of Tonquin, but frequent in the delta, and that the lepers live in villages situated in the environs of some large populous centres. The most curious of these is situated two kilomètres from the French concession of Hanoi, the inhabitants numbering 400, almost one half of whom are affected with leprosy, the remainder being composed of infirm persons and beggars. According to the statements of the chiefs of the village, leprosy is often transmitted hereditarily. Eighty to ninety per cent. of the children of lepers contract the disease, which usually appears for the first time about the eleventh year, and rarely develops after the age of 40, exceptionally before the age of 3 years. Boinet traced heredity only in 15 out of 80 observations; but he recognises that these figures are not sufficient, for lepers who come from the neighbouring villages do not readily acknowledge heredity, and reliable information is impossible. Anæsthetic leprosy is more often hereditary than tubercular leprosy. Boinet concludes that heredity is of slight importance in the development of leprosy, many cases called hereditary being only examples of "heredo-contagion" or simple contagion, the proof of which lies in the late development of leprosy in the children of lepers and in their relative immunity when removed in time from their parents. With regard to this, Boinet states that certain lepers whose resources permit them to do so send their children from the lazaretto as soon as they are weaned, to prevent their contracting leprosy. The lepers of Hanoi doubt the contagiousness of leprosy, and the chiefs of the village, who are interested in denying it, affirm that there has not been a single case of contagion. Boinet, however, in 80 observations made by him, found the possibility of contagion in 51, and in 5 of these contagion appeared clear. Boinet gives particulars regarding cultivations of the bacillus lepræ on agar-agar. If his experiments are accurate, it would appear that the bacillus lepræ develops in stagnant water and in rivers, which he thinks would explain the fact that there are seen at Tonquin leprous foci along the course of small rivulets.

SCOTLAND.

The epidemic of typhoid fever in Edinburgh continues to grow. No fewer than 52 fresh cases were last week reported to the public health officer, as against thirty-three in the preceding week.

The eighth and last of the present series of the Edinburgh Health Lectures was given on Saturday evening, by Mr. R. J. Mackenzie, Rector of the Edinburgh Academy. The subject of the lecture was "Methods of Physical Education, Ancient and Modern."

ANNUAL DINNER OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

The yearly dinner of the Royal College of Physicians of Edinburgh took place on Thursday, December 18th; the President, Dr. T. Grainger Stewart, in the chair. The "function" was one of the largest of recent years. Sir Dyce Duckworth, Professor Gairdner, the Lord Justice Clerk, the Lord Advocate for Scotland, Lord Stormonth Darling, the Dean of Faculty of Advocates, the Lord Provost of Edinburgh, the Moderator of the Free Church Assembly, the Principal of the Edinburgh Free Church College, and many others were present as guests. One of the best speeches of the evening was that of the Lord Advocate for Scotland (the Right Hon. J. P. B. Robertson) replying to the toast of "The House of Commons," as proposed by Professor Gairdner. Sir Dyce Duckworth replied for the Royal College of Physicians of London.

A SCOTCH COUNTY COUNCIL AND ITS PUBLIC HEALTH DUTIES.

On Tuesday, December 16th, the East Lothian County Council met and elected their Chief Constable, Mr. G. H. List, Sanitary Inspector for the county, at a salary of £10 per annum. Mr. List, for aught we know, may be most competent for his new and additional duties; but evidently his County Council do not place a high value on his services, or perhaps they think the sanitary wants of the county few. It is fair to say that this Council has already elected a number of sanitary inspectors to attend to individual parishes. These also are chosen from the police force, and are paid yearly salaries, varying from £1 to £5. One sanitary inspector, who is also inspector of police at Haddington, ministers to the sanitary wants of eleven parishes, and is to receive the annual salary of £29 6s. Certain district medical officers for various parishes have also been appointed. These are, of course, medical practitioners in the county, and they are to receive a yearly honorarium varying from £2 10s. to £5 per annum. We gather further from the report of this meeting as given in the local newspapers, that although the Council was elected in the beginning of February last, and although a committee had been charged, some time ago, to take steps towards the appointment of a medical officer for the county, this committee has so far done nothing. Alongside of all this it is at least amusing to read that the Earl of Wemyss, in some "introductory remarks," stated that, in his opinion, the "Council had started extremely well, had shown itself to be a thoroughly business body, and had not been guilty of any superfluous talk." A further point of interest to the medical profession is that it is proposed that the salary of the medical officer to the county of East Lothian shall not exceed £52 per annum. Yet the spirit of the Local Government (Scotland) Act, 1889, seems to be that the county medical officer, at least, should not be engaged in general practice. If he is, he certainly cannot fitly perform his double function. The county of East Lothian had, in 1881, a population of 37,771. Its greatest length, from east to west, is 26 miles, and, from north to south, 16 miles. It comprises three Royal burghs and twenty-five parishes.

EXTENSION OF UNIVERSITY BUILDINGS AT ABERDEEN.

The recent extension of additional laboratory and classroom accommodation at Marischal College is rapidly nearing completion. Long before the opening of the summer session the work will be quite finished, and the present congestion will be much relieved. It is hoped that the extension will not stop here, but that the agitation will be kept up until there be ample room for each subject. To do this much money is still needed, and the claim upon the goodwill of the wealthier graduates is urgent. There is at present before the Town Council and other bodies interested a scheme to open the front and give a better access to the buildings; and is not this a fitting time for the University authorities to meet the

[1] *Revue de Méd.*, August, 1890, p. 609; *Annales de Derm. et de Syph.*, November, 1890.

civic authorities by making an effort to complete the buildings while they undertake to clear away the old houses, etc., that shut them from view? With the efforts to get additional accommodation for teaching, the number of students is increasing rapidly. There have never been so many students at Marischal College. It is reported that, in spite of the distraction of the rectorial election, the class examinations so far have been very satisfactory.

THE GIFFORD LECTURES AT ABERDEEN.

During the past fortnight the second series of lectures on Natural Religion under the Gifford Bequest has been delivered by Dr. E. Tyler, F.R.S. The interest in these lectures seems to be as intense as ever. The attendance of students, both of arts and medicine, as well as of the general public, has been very large. The lectures have already done much to stimulate the study of anthropology, which till now has hardly received in Aberdeen the attention that it deserves. Dr. Tyler's appointment expires at the close of this session, but he may be re-elected.

DEMONSTRATION BY DR. MACEWEN.

In the Royal Infirmary, Glasgow, on Wednesday, December 17th, Dr. Macewen gave a most interesting demonstration "On Abdominal Surgery." The theatre was crowded by a very representative audience of the medical men of Glasgow and towns in its neighbourhood. Eight patients were shown, on whom operations connected with the abdomen had been performed, and who were now almost ready to return to their homes. Four of these had suffered from ovarian tumours; in three cases the tumour was double, only one being without adhesions of considerable extent. Owing to the method adopted by Dr. Macewen, these cases were dressed only once, that is, immediately after the operation, the dressing not being removed till three weeks afterwards, when the wound was completely closed. This procedure was rendered possible by the use of decalcified bone drainage tubes; and one of its great advantages was that risk of prolapse of the bowel through the wound was obviated. Two cases where hysterectomy had been performed—one for carcinoma—were shown. One was done *per vaginam*, and the other by removing the coccyx and a portion of the sacrum. Dr. Macewen laid great stress on the comparative ease with which vaginal hysterectomy could be performed with successful results in cases of carcinoma, when the case was seen early enough. Perhaps the most interesting cases, from a general practitioner's point of view, were those of laparotomy. The first of these also involved enterectomy. It was a case of chronic intestinal obstruction lasting from five to six months, in which occlusion was almost absolute. The patient, a girl, had a tuberculous family history, and at first her symptoms were very obscure, steadily increasing emaciation being the prominent one. This had continued for some time, when suddenly symptoms of acute obstruction developed. After a time these passed off. Apparent recovery ensued and lasted for two or three weeks, when another attack of pain and vomiting occurred, followed again by apparent recovery. This went on for a time, and latterly a tumour developed in the right iliac fossa. When brought to hospital the girl was extremely emaciated and the tumour was well marked. When the abdomen was opened, about two feet of the bowel were found almost completely occluded and surrounded by a mass of cicatricial tissue, covered by numerous glands firmly matted together. Above the obstruction the bowel was enormously dilated, and below it was normal but of small calibre. At the lower part of the dilatation a perforation existed through which fæces escaped, had worked a passage through the cicatricial mass, which prevented them from entering the cavity of the abdomen, and found their way back into the bowel below the obstruction by another opening. One feature of the case was the alleged absence of constipation, but on inquiry it was found that the motions were scanty and always fluid. It seemed clear that the fæces accumulated in the dilated portion of the bowel and led to the regular recurrence of pain and vomiting, ending in its contents being disgorged by the mouth. Two feet of the bowel with its surrounding mass of tissue were removed; the divided ends of the bowel were united, and uninterrupted recovery ensued. The second case of laparotomy was for gunshot wound. When the abdomen was opened several perforations were discovered by the use of Senn's hydrogen gas method; an obstruction due to the doubling of a wounded part of the intestine was also found and relieved. The bullet was also found. The perforations were sutured, and recovery followed. A case was also shown of stricture of urethra in a youth, the result of an accident, in which the stricture was excised and the divided urethra sutured; a No. 12 catheter could now be passed with ease. The demonstration concluded with three cases of excision: two of the elbow, in which flexion, extension, pronation, and supination could be fully and easily performed; and one of the shoulder. The excision of the shoulder-joint had been performed through an incision extending from the anterior edge of the lip of the coracoid process to the lesser trochanter of the humerus. Seven weeks only had elapsed since the operation, but the youth could raise his arm not only to the level of the shoulder, but also above his head, and easily grasp an object held above him. Extreme satisfaction was shown by those present at the opportunity given them to witness these results, and the hope was also expressed of having a renewed opportunity of seeing other illustrations of the progress of surgery.

IRELAND.

THE LATE MR. A. H. CORLEY.

Mr. Anthony H. Corley, whose death from diabetes was announced a few weeks ago, has left a widow and six children with an inadequate provision. We learn, with great satisfaction, that his professional brethren have begun a subscription, which already amounts to over £2,500.

POISONOUS DISINFECTANTS.

A sad case of suicide has just occurred at Bangor, co. Down. A young married lady named McDowell, it was shown at the inquest, simply went into a chemist's shop and asked for carbolic acid, and was given an eight-ounce bottle for the sum of sixpence. It must be evident that the restrictions upon the sale of poisons are likely to remain quite ineffectual so long as various poisons are openly sold as "disinfectants," "vermin destroyers," and the like.

RICHMOND HOSPITAL, DUBLIN.

Mr. Thomas Myles has been appointed surgeon to this hospital, in room of the late Mr. A. H. Corley. It is only about six weeks since Mr. Myles was appointed assistant-surgeon having resigned his position as surgeon to Jervis Street Hospital. He is Professor of Pathology in the Royal College of Surgeons, and he has already gained an excellent reputation

as a surgeon and a teacher. For the assistant-surgeoncy now vacant there are many candidates, amongst them being Dr. Burgess, Mr. Bulger, Dr. Davis, Dr. Oulton, Dr. H. S. Torney, and Dr. Grandy. The election will not take place for some weeks.

DR. JOHN HARRISON, F.R.C.S.I., OF ROSCOMMON.

GREAT regret has been felt at the decease of this gentleman, who was widely known and respected in Roscommon and adjoining counties. At a meeting held on the day of the funeral the following resolutions were adopted unanimously:—"That at this meeting, called for the purpose of providing for the perpetuation in some public way of the memory of Dr. Harrison, we convey to his relatives the expression of our heartfelt sympathy with them in their great sorrow a sorrow which is shared with them, not only by those here assembled, but by thousands whose sorrow may never meet the public eye." "That a general committee, consisting of the present subscribers, with power to add to the number, be appointed to make such arrangements as may be determined on, to enable his many friends to place on record their testimony to Dr. Harrison's great professional ability, his unlimited charity, and his untiring zeal in the interests of all classes of the community." A subscription list having been opened, over £380 was subscribed in a few minutes.

BELFAST STUDENTS AND THE ROYAL UNIVERSITY.

DR. J. WALTON BROWNE, of Belfast, is a candidate for the examinership in surgery of the Royal University, which is vacant through the death of Mr. A. H. Corley. A memorial has been presented to the Senate of the University from the students of the Belfast Medical School pointing out that this school sends up between 40 and 50 per cent. of the candidates for the degree of M.B., and that it, nevertheless, has only one representative upon the board of examiners. The memorialists pray that Dr. Browne may, therefore, be appointed to the existing vacancy.

NEW YEAR HONOURS.

THE New Year's list of honours bestowed by the Crown contains the announcement that a baronetcy has been conferred on Dr. Quain, and the honour of knighthood on Professor Humphry, of Cambridge. These distinctions have never been better deserved or more worthily bestowed. Dr. Quain has rendered during his long career services to the profession and the public of a very high order and far-reaching importance. To mention only the most distinguished of these services it must be recorded that to him mainly is due the establishment of the order of Licentiates by the Royal College of Physicians of London, a step not only important in itself and to the College as forming the basis of its new era of popular extension and financial prosperity, but likely to be more and more valuable, as years roll on, in leading to professional unification throughout the country, and to the steady advance of the standard of education and the approximation of the whole body of practitioners in this country to university status. The negotiations now in progress for the united action of the two Colleges and the University of London tend still further in that desirable direction. So long as the College of Physicians was merely a close corporation, related exclusively to the class of metropolitan consultant physicians, its influence was but imperfectly felt, and its power and dignity were much less than those which it has now gained or those to which it is likely yet to attain. Signal services have been rendered to the cause of science and to the public welfare by the part which Dr. Quain took in organising and developing the Brown Institute, which has led the way in the cause of scientific biological research in the metropolis, and is capable of becoming the nucleus of a much greater institution, such as almost every other country except Great Britain now possesses. His services on the Senate of the University of London, on the Cattle Plague Commission, and on the General Medical Council, of which he has long been Treasurer, as well as Chairman of the Pharmacopœia Committee, are all well known and too generally understood to need more than a mere enumeration. His claims to scientific recognition do not rest on these public services alone. His classical researches on fatty degeneration of the heart led the way to a new field of pathological and clinical investigation. By undertaking the laborious task of editing that encyclopædia of medicine known to all the world as *Quain's Dictionary*, he laid the profession under no small literary obligation. Academic distinctions have been freely bestowed on him by Universities and Colleges in the three kingdoms. Personally, his kindness of heart, his quick sympathy, and spontaneous geniality of character have secured to him a wide circle of attached friends, to whom the conferring of the distinction now announced will be a source of peculiar pleasure.

The knighthood which has been conferred on Professor Humphry will be regarded as well bestowed by everyone who knows his eminent services to medical science and medical education, the distinction of his character, and the affectionate esteem which he inspires in his colleagues and pupils. During fifty years of devoted and successful service as Surgeon to Addenbrooke's Hospital, twenty-five as Professor in the University, and twenty as a member of the General Medical Council, he has won for himself and for the medical school of which he is one of the founders a position second to none in the provinces. Long before the majority of the University Senate had been aroused to a sense of the duty of providing within their walls for the liberal education of their medical graduates, Sir George Paget and Sir George Humphry formed a high ideal of a university medical school, and with unflagging courage and faith they pressed on towards its realisation. They have happily lived to see Cambridge take its rightful place in scientific and professional education, and the honourable distinctions conferred upon them by the Sovereign are evidence that she has watched with sympathetic eyes their efforts in a cause that was near the heart of her wise and learned Consort, once Chancellor of the University. Sir George Humphry's numerous scientific honours, and the abundant contributions he has made to anatomy and to surgery, are too well known to need recital. We sincerely congratulate him and his university on the new honour now bestowed on him, and trust that the latest orator *De Senectute* will continue to enjoy a green old age, enriched as it has hitherto abundantly been by "honour, love, obedience, troops of friends."

The other medical recipients of New Year honours are:—F. Odling, M.R.C.S.E., Assistant Medical Superintendent of Indian Government Telegraphs at Teheran, appointed a Companion of the Most Distinguished Order of St. Michael and St. George. Brigade-Surgeon Thomas Edwin Burton Brown, M.D., appointed a Companion of the Most Eminent Order of the Indian Empire. James Desmond M'Carthy, M.D., Chief Medical Officer of the Gold Coast Colony, appointed an Ordinary Member of the Third Class or Companion of the Most Distinguished Order of St. Michael and St. George.

THE IMPERIAL RUSSIAN INSTITUTE OF EXPERIMENTAL MEDICINE.

THE ceremony which took place at St. Petersburg in connection with the presentation of an Institute of Experimental Medicine by the Prince of Oldenburg to the Czar, and through him to the Russian Government, was very interesting. Some years ago, when Pasteur first began his experiments on rabies, the Prince of Oldenburg, who, like his father, is well known for his charitable works and for his interest in all scientific matters, established a small laboratory for carrying out Pasteur's treatment in Russia. At the same time he made arrangements for erecting a large institute on the model of the Pasteur Institute, and this was commenced two years ago, and has now been open for some time. Several most valuable researches, especially on rabies and glanders, have already been made in it.

At the inaugural ceremony there was a brilliant assemblage present, and, after a religious service, the presentation was made, and congratulatory speeches were delivered by M. Chamberland of Paris, Professor Pfuhl of Berlin, and Mr. Watson Cheyne of London, who were present by special invitation.

The Institute, which is fitted up in the most complete style and regardless of expense, stands in the midst of extensive grounds on the north bank of the Neva. It consists of a large building completely fitted with rooms for bacteriological work, for chemistry, for physiology, for the study of epidemic and epizootic disease, and of diseases of fish. These rooms are complete in every particular, and there are also some places for those wishing to make independent researches. In addition to the above, there is a department for the treatment of rabies. Besides the large laboratory there are some ten or twelve isolated villas arranged for experiments on all kinds of animals, the arrangements being such that each villa is set apart for the study of a particular disease. And, further, there is a small hospital in which a few patients are being treated by Koch's remedy, and as it becomes necessary further villas can be erected for the experimental treatment of patients suffering from other diseases. The arrangements for disinfection of the rooms and of all the materials used in the experiments are especially noteworthy, all solids being burnt and all liquids disinfected by heat, so that there can be no possibility of the Institute acting as a centre of infection. This most complete institution is one which should be visited by anyone charged with the erection of a similar establishment. It has cost about £70,000, and the estimated cost to the State for keeping it in a state of efficiency is for the present £15,000 a year, but in all probability a further grant will be required.

It is most desirable that Great Britain should also have a similar institute to those in Paris, St. Petersburg, and Berlin, and that the steps which are now being taken to found the British institute of Preventive Medicine should be successful.

It may even be hoped that some wealthy Englishman will follow the example set by the Prince of Oldenburg, and devote part of his wealth to the foundation of an institute which shall enable English scientific men to take their proper share in the discoveries which are being so rapidly made in other countries, and which must be of enormous benefit in alleviating and preventing the sufferings alike of man and the domestic animals.

LONDON POST-GRADUATE COURSE.

THE annual general meeting was held on December 30th at 15, Cavendish Square, Mr. JONATHAN HUTCHINSON, F.R.S., President, in the chair.

The report of the Committee of Delegates for the year 1890 was read. The Committee reported that during the year three courses of lectures and demonstrations, each of eight weeks' duration, had been given. The first course, from January 13th to March 8th, consisted of seventy-two lectures, given at the Hospital for Consumption, Brompton; the Hospital for Sick Children, the Royal London Ophthalmic Hospital, the Hospital for Diseases of the Skin, and the Hospital for the Paralysed and Epileptic, by members of the staff of each hospital. This course was attended by thirty-three practitioners, of whom nineteen entered for the whole course and fourteen for special hospitals.

The second course, from May 5th to June 27th, consisted of eighty-eight lectures, given at the five original hospitals and at two other institutions. At the Bethlem Hospital a course of lectures and clinical demonstrations on mental diseases was given by the resident physician, Dr. Percy Smith; at the Paddington Infirmary a course of lectures on clinical medicine and surgery was given by Dr. Broadbent and Mr. J. Hutchinson, and supplemented by pathological demonstrations by Dr. Savill, the medical superintendent. This course was attended by thirty-three practitioners, of whom eleven entered for the full course and twenty-two for special hospitals.

The third course, from October 13th to December 6th, consisted of seventy-two lectures given at the five original hospitals and at the Paddington Infirmary. The lecturers on clinical medicine and surgery at the Paddington Infirmary were Dr. Bristowe, Dr. Cheadle, Mr. Jonathan Hutchinson, Mr. R. Harrison, and Mr. F. Treves. This course was attended by 54 practitioners, of whom twelve entered for the full course and forty-two for special hospitals. The total number of practitioners who entered in the year, either for the whole or for special courses, thus amounted to 121. Of these there were 105 holding British qualifications (including five medical officers of the army and one of the navy), two holding Indian and seven Colonial qualifications, while seven were American practitioners. Ladies, being qualified medical practitioners, were admitted to the classes at those hospitals of which the medical staff consented to their attendance, and eleven ladies availed themselves of these opportunities. The Committee believed that the instruction and clinical opportunities afforded by the course had been highly appreciated, and many expressions of satisfaction with its working and good wishes for its success had reached them.

It was announced that the lectures on mental diseases at Bethlem Hospital would be resumed by Dr. Percy Smith and Dr. Savage. The Committee had also made arrangements for a course of lectures and demonstrations on diseases of the throat and use of the laryngoscope at the London Throat Hospital during the first term of 1891. It was also announced that Mr. Hutchinson's lecture on Diseases of the Skin would be given, by permission of the Laboratories Committee, in the Lecture Theatre of the Examination Hall of the Royal College of Physicians and Royal College of Surgeons. Other subjects had been suggested as desirable additions to the course. The Committee were unable at present to provide instruction in these subjects; they regarded the widening of the curriculum as an object to be kept immediately in view. In conclusion, the Committee expressed their high opinion of the valuable services of their Secretary, Dr. Fletcher Little.

The Treasurer's report, stating the expenses and profits, which was read, was regarded as satisfactory and encouraging, and the report of the Committee and the Treasurer's report were approved and adopted. After some further business, and votes of thanks to the President and the Secretary, the meeting separated.

LUNACY LEGISLATION REFORM.

AT the last annual meeting of the Adelaide and South Australian Branch of the British Medical Association, the President of the Branch, Dr. W. L. Cleland, Resident Medical Officer of the Parkside Asylum, Adelaide, before resigning the presidential chair, delivered an address upon Lunacy Legislation in Australia, which he stated was fundamentally based upon the English Lunacy Acts, though the details show some points of difference. We regret that he should use the word committal in speaking of the admission of patients into asylums. Clearly the bringing in of the judicial authority required by the English Act of 1889, to which he alludes with approval, was not for the purpose of committing a patient to "durance vile," like a prisoner, but to procure an "order for the reception of a private (or pauper) patient" into an asylum for care and treatment.

It appears that in the Victorian Act the patients in asylums have to be re-examined and recertified (Dr. Cleland calls it recommitted) annually, and the medical man who re-examines

and recertifies them must not be connected with the Lunacy Department, but appointed specially each time by the Government of the day. Dr. Cleland draws attention to the needless expense such a procedure entails, for, as he truly says, "the prospects of recovery in an insane person greatly diminish as years roll on, and the symptoms do not disappear." The absurdity of year after year recertifying an incurable lunatic must be patent to anyone.

The boarding-out system finds no advocate in Dr. Cleland; he has always been opposed to private individuals making a profit out of boarding, or, as he terms it, the "farming" of the insane; and he calls attention to the extreme length to which this system is carried in some parts of Canada, where, in his opinion, lunacy management is quite a century behind the times; and he mentions one institution wherein the description of the management would have done for an asylum before the days of Conolly's great reformation.

In Australia, as in our own country, the question of having separate institutions in connection with existing asylums for the reception of all cases on admission is forcing itself to the front; and Dr. Cleland proposes that each asylum should have a small paid board of official visitors, who should meet weekly and interview the cases admitted. He suggests that the board should be composed of a lawyer, a doctor, and a layman, with the medical superintendent as chairman. The objection to this would be the expense and the reduplication of work it would entail. Every case is, or ought to be, interviewed by the committee of visitors at the next visit after admission. This answers every purpose, and, with the supervision of the Commissioners in Lunacy, affords ample protection to the patient.

A scheme for the formation of "retreats" for the reception of incipient cases of insanity, and which might also serve for inebriates, occupies a considerable portion of Dr. Cleland's able address. He proposes legislation to compel patients to enter such retreats, for he says if a patient with signs of incipient mental disease is to be treated he must be treated compulsorily. Quite so; but he would be no better off in such a retreat than he would be in the reception ward of an asylum among judiciously selected patients and with appropriate surroundings.

The stigma which the popular mind attaches to insanity would be quite as great in a "retreat" as if the patient were in an asylum. In both cases he would be what is called "put away." For the inebriates, "retreats" would be a great boon, and these are the cases where the law should step in and give the friends and relatives of the patient the power to compel him to enter. How often do we see inebriates in one of their periodic outbreaks ruining themselves and causing endless grief and misery to those who, in their sober moments, are nearest and dearest to them. The law should authorise the friends to take them at the first sign of an outbreak and lock them up in such retreats as Dr. Cleland advocates, where the attack could be passed through without the wreck and ruin caused by an unrestrained and unrestrainable debauch.

Dr. Cleland concludes his address with several excellent propositions. With one of them, however, we cannot quite agree; it is to the effect "that there is presumptive evidence that psychological medicine is not at present taught on the lines most conducive to the practical education of the future physicians." We would rather put it in this way, that the regular and systematic teaching of psychological medicine now adopted in connection with most of our medical schools is not taken advantage of by the majority of the future physicians for the simple reason that such a course of instruction is not made a compulsory part of their medical education as it ought to be.

OBSTETRIC TEACHING IN LONDON HOSPITALS.

[FROM A CORRESPONDENT.]

As far as quality is concerned, the obstetric physicians in London leave nothing to be desired, nor are they lacking in quantity. On the other hand, it can hardly be said that, in respect to clinical teaching at the medical schools, they enjoy the same advantages as their colleagues the physicians and surgeons. The latter discharge clinical duties precisely corresponding to the name of the appointment which they hold; but with the obstetric physicians it is otherwise. Thus, "Mr. ——, Surgeon to, and Lecturer on Surgery at, St. Matthew's Hospital," is a correct form of expression, granting that any mention of "medical school" in association with the lectureship may safely be omitted, as the truth is clearly understood. It signifies not only that Mr. —— lectures on surgery, but that he also does true surgery in surgical wards. His obstetric colleague probably bears a homologous professional title, "Dr. ——, Obstetric Physician and Lecturer on Midwifery and the Diseases of Women and Children." This title is absolutely misleading. It is certain that he lectures on obstetrics. He usually devotes part of his course to gynæcology. The words "and Children" practically mean nothing at all. The clinical part of the title is yet more erroneous. Dr. —— has wards, but not for obstetric cases. They are devoted to "diseases of women," to the practice of all that is understood by the much-abused word "gynæcology." The students learn midwifery through attending women at their own homes in the neighbourhood of the hospital. They work under the superintendence of the midwifery assistant. The occasions upon which the obstetric physician is called in are rare, and associated only with bad cases.

This arrangement is not without its advantages. To send a student to a slum, where he sits up all night, is to encourage him to bear inconveniences not to be found in warm surgeries and snug house-surgeons' and dressers' rooms. He has opportunities of cultivating the spirit of resource, and of making use of his common sense. Nevertheless, the outdoor maternity system is faulty, and not in accordance with the principles upon which surgery and medicine are taught. The student has a right to learn the management of ordinary labour direct from the obstetric physician, just as he learns the treatment of common thoracic diseases and fractures direct, for the most part, from the physicians and surgeons. The midwifery assistants are usually picked men of great ability, and always hard workers; yet it is not fair that all practical obstetric teaching should be left to them alone. The student would not care to learn all his clinical and operative surgery from his house-surgeon. The house-staff appointments, it must further be remembered, are not intended to be educational. On the other hand, the hospital authorities could not expect the obstetric physicians to conduct labours at patients' homes. It remains to be seen how clinical obstetric teaching might be improved at our great medical schools.

First, the meaning of the outdoor maternity system must be understood. It exists partly, no doubt, because it has its advantages, and because there is no accommodation in the hospital for labour cases. This want of room suggests something more, for it is not entirely due to the exigencies of other departments in the hospitals. The physicians usually would like more beds, but they cannot encroach upon the surgeons' wards, and, however small the hospital, some beds are set apart for diseases of women. The full truth is, that until lately labour wards and lying-in hospitals had a bad name for high mortality, whilst women attended at their homes did better. Aseptic principles have reversed this condition. There are several admirable lying-in hospitals in London, and the results, as shown in Dr. Boxall's searching monographs, are in the highest degree satisfactory. These results depend on a system of management easily carried on in a hospital, but impossible to establish in outdoor maternity departments. Whilst the patient receives the best kind of treatment, the obstetric physician can teach the student without any risk to mother or child.

In short, obstetric practice can be best and most safely taught in wards. An amalgamation of lying-in hospitals and medical schools is not easy to manage; they represent different forms of lay management and lay interests and ideas. Such an arrangement must at the best be informal, permitting a medical school obstetrician to take a few students to see his work at a lying-in hospital where he holds an appointment. If there were lying-in wards at hospitals which possessed medical schools, strict precautions for the exclusion of all persons engaged in dissecting and *post-mortem* work could easily be enforced. In the obstetric ward the obstetric physician might, under this arrangement, really teach practical obstetrics, no longer bearing a misleading title. Every student could then learn direct from a leading authority how to conduct an ordinary labour. The obstetric physician need never

more come into collision with his surgical colleagues through undertaking surgical work. His time would be taken up, greatly to the advantage of himself and of British obstetric science, in the teaching of the first principles of practical obstetrics, the management of pregnancy, labour, and childbed—natural and abnormal.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 14th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

January, 1891.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 14th, April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election. FRANCIS FOWKE *General Secretary.*

BRANCH MEETINGS TO BE HELD.

DUBLIN BRANCH.—The fourteenth annual meeting of this Branch will be held (by permission of the President and Fellows) in the Royal College of Physicians, Kildare Street, Dublin, on Thursday, January 22nd, 1891, at 4.30 P.M. The annual dinner will also take place on that evening, at the College.

MALTA AND MEDITERRANEAN BRANCH.

A MEETING was held, at the Station Hospital, Valletta, on December 5th. Deputy Inspector-General A. B. MESSER, R.N., President, in the chair.

Election of Officers.—The minutes of the previous meeting having been read and confirmed, the following office-bearers for 1891 were elected:—*President:* Professor S. L. Pisani, M.D., Chief Government Medical Officer. *Vice-Presidents:* Surgeon-General Campbell Fraser, M.S.; and Deputy Inspector-General A. B. Messer, R.N. *Secretaries and Treasurers:* Surgeon-Major L. Manché, M.D., R.M.A.; and Surgeon F. Woore, R.N., *Victoria.*

Paper.—Surgeon-Major MANCHÉ read a paper on Keratitis hypopion, after which a short discussion took place.

Annual Dinner.—A committee was elected to make the necessary arrangements for the annual dinner, which it was agreed should take place at the Royal Hotel, on December 22nd.

JAMAICA BRANCH.[1]

The annual meeting of this Branch was held at the Public Library, Kingston, on December 19th, 1889, the President (DR. GAYLEARD) in the chair. Drs. F. H. Saunders, Turton, H. E. Maunsell, L. M. Clark, Henderson, W. D. Neish, and Da Costa, were present. The minutes of the meeting of November 27th were read and confirmed, and signed by the President.

Mr. W. Bourke's Bill.—A letter from the General Secretary was read, stating that he had placed Mr. W. Bourke's Bill before the Parliamentary Committee.

Branch Representatives.—A letter was read from the same, expressing regret that Dr. Henderson's name had not appeared in the List of Branch Representatives, and stating that the error would be rectified at once.

New Members.—Drs. C. W. M. Castle and F. G. Phillippo were admitted members of the Branch.

Officers for 1890.—The following gentlemen were elected office-bearers for 1890:—*President:* G. C. Henderson, M.D. *President-Elect:* A. R. Saunders, M.D. *Honorary Secretary and Treasurer:* G. F. A. Da Costa, M.B. *Members of Council:* Drs. G. Cooke, Hon. J. C. Phillippo, Plaxton, F. H. Saunders, Hon. C. B. Mosse, C.B., Gayleard, Strachan.

Address of Retiring President.—The retiring PRESIDENT delivered an address, and Dr. G. C. HENDERSON took the chair as President.

Annual Dinner.—The annual dinner of the Branch took place in the evening of the day of the annual meeting. There were present:—Members: F. H. Saunders, Hon. J. C. Phillippo, H. E. Maunsell, A. R. Saunders, Stern, Ogilvie, W. D. Neish, L. M. Clark, Plaxton, Gayleard, Strachan, Henderson, G. Cooke, Turton, Da Costa. Guests: Deputy Surgeon-General Eames, R.N., Captain Dunlop, Brigade-Surgeon Maunsell, A.M.D., Bancroft Oughton, A. H. Robinson, the Chief Justice, F. Phillippoo, W. Morrison.

Papers Read during 1889.—The following is a list of the papers read at the meetings of the Branch in 1889:—The PRESIDENT: Case of Abdominal Pregnancy. M. STERN: The Differences between Yellow and Malarial Fevers. J. W. PLAXTON: Rabies or its "Double." W. H. W. STRACHAN: Acquired Talipes Calcaneus. Hon. J. C. PHILLIPPO: Fevers of the West Indies. F. H. SINCLAIR: Fractures of the Upper Extremity. G. COOKE: Thoracic Aneurysms. Hon. J. C. PHILLIPPO: Gurjun and Chaulmoogra Oil in Leprosy. A. R. SAUNDERS: Hypertonic Paraplegia. J. A. L. CALDER: Injuries of Cranium. F. A. SINCLAIR: Spontaneous Evolution.

New Members in 1889.—The following gentlemen were admitted members of the Branch in 1889:—R. S. Bell, L. M. Clark, E. L. Grant, C. W. M. Castle, F. G. Phillippo.

Deaths.—The following members died during 1889:—T. Clarke (first President of the Branch), T. P. Madden.

A GENERAL meeting of the Branch was held on January 29th, 1890, in the Public Library, Kingston, Dr. G. C. HENDERSON, the President, in the chair. Drs. Gayleard, Plaxton, A. R. Saunders, Strachan, F. H. Saunders, Bronstorph, and Da Costa, were present. The minutes of the last meeting were read and confirmed, and signed by the President.

New Member.—Dr. A. A. ROBINSON was admitted a member of the Branch. Notice was given that Dr. Guiselin would be proposed a member of the Branch.

Specimens.—Mr. PLAXTON showed a large Subserous Myoma of the Uterus, removed after death.—Dr. R. S. TURTON showed the Dura Mater from a Case of Meningitis.

Paralysis from Cerebral Injury.—Dr. A. R. SAUNDERS read a paper on this subject. A boy of about 13 fell from an open window, not more than about three feet from the ground, on his head. He was unconscious, or was said to be so, for a few minutes, but there was no vomiting. The following day he felt well, and appeared to be so for about two months after the accident. He then vomited a good deal, and complained of a constant pain in his head, but almost invariably smiled peculiarly when he spoke of it. In walking he dragged the left foot, as if there was deficient dorsal flexion of the foot. There was well-marked double optic neuritis; vision was

[1] Owing to unavoidable causes the reports of the meetings of this Branch have only recently come to hand; hence the apparent delay in publication.

normal. The boy was put to bed and kept under observation, the treatment consisting of iodides and bromides, with grey powder and bicarbonate of soda at night. The paralysis of the leg increased, the arm gradually became weaker, and the face and tongue became affected on the same side. Double vision occurred once or twice, but was a fleeting symptom. The pupils acted fairly and were equal. There was no loss of sensation as regarded temperature, touch, or pain. The superficial reflexes were all well marked on the sound side; on the paralysed no epigastric, abdominal, or cremasteric could be obtained, though the plantar was obtainable, but not so distinctly as on the opposite side. The urine was normal; there was no loss of sphincter control. The optic neuritis became more intense, numerous hæmorrhages could be seen, and the margin of the disc appeared raised about a millimètre. A semilunar flap was made, with the apex up and the base so arranged as to include the arteries supplying the flap, over the arm centre, just at its junction with the leg centre as determined by Reid's lines. On removing a disc of bone with a one-inch trephine, the dura mater, tense and shining, bulged into the aperture, and on incising this some purulent fluid escaped; the brain substance bulged, but on aspirating in different directions no more pus could be obtained. A second trephine opening was then made above the first so as to expose more of the leg centre; the two openings were connected by removing the intervening portions of bone. There appeared to be, about three-quarters of an inch below the surface, a resistance offered to the aspirating needle, as if by the capsule of a tumour; but as there was no possibility of distinguishing and removing an infiltrating tumour, no further attempt was made. The flap was replaced and boric wool applied over it. The boy did well after the operation; he slept well, had but little pain in his head, the vomiting ceased, his appetite was good, and his spirits were cheerful. The paralysis remained unchanged, with the exception that he was able to move the fingers of the left hand, which he had previously been unable to do, and that there was a slight improvement in the movement of the leg. A considerable hernia cerebri formed, which gave some trouble. About the middle of the fourth week meningitis set in, the convulsive movement affecting equally the paralysed and opposite limbs, and he died twenty-eight days after the operation. No *post-mortem* examination was allowed, but Dr. Saunders had little doubt that the case was one of glioma.

Spontaneous Evolution.—Dr. F. H. Sinclair read a case of spontaneous evolution. It was the fourth confinement in a woman of 25. The case was one of twins; the first child, bulky, and living, had been born some hours when the mother was first seen. The membranes broke and the hand and forearm were extruded from the vulva. Turning was found impossible in the absence of chloroform. The child was born shoulder first, and dead; the head, tightly squeezed against the thorax, followed. The mother made an excellent recovery.

Foreign and Colonial Medical Practitioners Law.—A special meeting of the Branch was held on March 6th, 1890, to consider the Bill entitled the "Foreign and Colonial Medical Practitioners Law, 1890," then before the Legislative Council. A series of five resolutions was adopted, which may be briefly summarised as follows: (1) The Bill provided no means of ascertaining the sufficiency of study or examination. (2) The Bill proposed to confer rights and privileges where there was no guarantee of efficiency. (3) That diplomas which have not been recognised as sufficient by the General Medical Council of the United Kingdom have not the same claim to be placed in the Jamaica Register as those which have. (4) That the Registrar-General could not discriminate between the genuine and sufficient and the bogus diploma in its several species.

A general meeting of the Branch was held on March 26th, 1890, at the Public Library, Kingston, the President (Dr. G. C. Henderson), in the chair. Drs. Da Costa, Strachan, Maunsell, Bronstorph, L. M. Clark, F. R. Saunders, Turton, Plaxton, and several guests were present. The minutes of the last meeting (of January 29th, 1890) were read and confirmed, and signed by the President.

New Member.—F. W. Guiselin was admitted a member.

Syphilide Simulating Varicella.—Dr. W. H. W. Strachan read notes of the case. A woman aged about 30, admitted for chronic malarial poisoning (anæmia and peripheral neuritis), was in hospital fourteen days, when the right eye became irritable, with conjunctival and ciliary injection. A day or two after this an eruption appeared on the face, trunk, and limbs, at first papular, then rapidly passing through the vesicular into the pustular stage. The rash came out in crops, and was not umbilicated; there was none on the soft palate. The resemblance to varicella was perfect: the crops kept appearing and passing away, leaving deep coppery maculæ for some weeks, during which time the patient also passed through an attack of iritis (right eye). The only evidence of syphilitic infection before the present illness was in the history of one stillborn infant (first pregnancy), followed by a miscarriage (second pregnancy) nine and seven years previously to her admission. It was suggested that the infection was of later date than seven years ago, although stillbirth and abortion about that time might indicate a constitution already impregnated with the virus.—Several members agreed in the belief that syphilitic manifestations were modified by race; thus, in the negro, affections of the throat and mucous membranes were uncommon; they were racial and not climatic.

Spread of Syphilis in Jamaica.—The Honorary Secretary read a letter from Mr. G. Cooke calling the attention of the Branch to the spread of syphilis in the island of Jamaica, and to the need for suppressive measures. Several members who had special opportunities for observation endorsed Mr. Cooke's opinion that syphilis had become very widespread of late.—The President believed that the present activity of the disease was due to the repatriation of Jamaicans from Colon and the Spanish Main, and quoted two cases within his personal experience; one woman gave the disease to nineteen men, and another woman gave it to twenty-one.

Spinal Injury.—Dr. R. S. Turton read notes of a case. A man fell down some steps, striking his back in the lumbar region. He was unable to move his lower limbs, which had lost all sensation. He remained quite sensible and free from pain for about an hour and a half, when he complained of pain in the back of his neck. The respirations became shallow and feeble, and he died asphyxiated about thirty-seven hours after the accident. On *post-mortem* examination, there was found a rupture of the supraspinous and interspinous ligaments connecting the seventh cervical and first dorsal vertebræ. There was hæmorrhage around the cord extending upwards and downwards. The bodies of the vertebræ as well as the articular processes were separated, though only to a slight extent.

Recovery from Tetanus.—Mr. G. Cooke read notes of two cases of tetanus which had occurred in his practice. In the first, a carpenter of intemperate habits cut half through the ungual phalanx of his left thumb with a saw. He bound his thumb up with a dirty rag, and proceeded to get very drunk, in which state he continued for two days. On the third day there was complete rigidity of all the muscles, with well-marked opisthotonos. The spasms of the voluntary muscles were very severe, and occurred every fifty seconds. Temperature 101.5°; pulse 90; constipation, and severe pericardial pain. The wound was dirty, and pressure on it instantly produced a spasm. The bowels were cleared out by enema, while the spasms were controlled by chloroform. Large and increasing doses of tinct. cannabis indicæ with chloral hydrate and pot. bromide were given every sixth hour or oftener, so as to keep the patient narcotised; he was kept asleep for a week, only being allowed to awaken partially for the administration of nourishment and wine. Nutritive enemata were given frequently so as to avoid the necessity of swallowing, which seemed to bring on the spasms; a strip of fresh belladonna plaster, three inches wide, was stretched along the spinal column from the nape of the neck to the sacrum. This treatment was continued for about a fortnight, by which time he was almost convalescent. Considerable stiffness of the muscles of the back and neck remained for some days, and the risus sardonicus did not completely disappear for some weeks. The patient made a complete though slow recovery. The second case was that of a healthy black boy, aged 13. He was as rigid as a block of wood, had well-marked opistho-

tonos, and great difficulty in swallowing. There was no wound or history of recent injury. The treatment adopted was exactly the same as in the last case, except that the doses of the drugs were proportionately smaller, and at the commencement a full dose of santonin with calomel was given, in case the disease might have been caused by intestinal worms; none, however, were passed. The boy remained fourteen days under treatment and made a perfect recovery, although the disease was exceptionally severe, the spasms recurring every thirty seconds before treatment was commenced. Mr. Cooke said this treatment was recommended by Dr. A. P. Boon, of St. Kitts, W.I.,[2] as regards the combination of chloral and cannabis indica. Very large doses of chloral could be taken with very marked benefit in tetanus. Case 1 had from 25 to 40 grains every four to six hours for seventeen days, with from 1 to 2 grains of extract of cannabis indica. Such adjuncts as careful nursing and darkened rooms, exclusion of draughts of cold air, etc., must be carefully attended to. After the bowels had been once cleared out at the commencement of the treatment, it was not advisable to make them act again, perfect repose being indispensable. Nourishment must be liquid, condensed, and warm, probably also peptonised. Stimulants were necessary in intemperate cases and where there was danger of a feeble heart being affected by chloral.—The PRESIDENT said tetanus was not now either so common or so fatal in Jamaica as it used to be. Tetanus between 1801 and 1808, on an estate of 500 negroes, caused nine deaths. During the last two years, it caused but two deaths in the whole of the same district.—Remarks were also made by Dr. BRONSTORPH, Brigade-Surgeon MAUNSELL, A.M.D., and Mr. STRACHAN.

List of Members—Correction.—On page xx *for* McCaw, J., Esq., East Finchley, N., *read* McCaw, J. Dysart, Esq., Ivy House, Lincoln Road, East Finchley, N.

SPECIAL CORRESPONDENCE.

LEEDS.

Appointments at the Yorkshire College and the Leeds Infirmary.—Annual Entertainment at the Infirmary.

MR. MAYO ROBSON has been appointed Professor of Surgery in the department of medicine of the Yorkshire College, in place of the late Professor McGill. Mr. Robson, who is one of the Honorary Surgeons to the Leeds General Infirmary, has previously held the posts of Lecturer on Practical Surgery, Demonstrator of Operative Surgery, Lecturer on Pathology, and Demonstrator of Anatomy in the Leeds School of Medicine. Mr. Edward Ward, M.B., B.C., has been appointed Lecturer on Practical Surgery. Mr. Ward is one of the Honorary Surgeons to the Leeds Infirmary. Mr. W. H. Brown, F.R.C.S.Ireland, has been appointed Honorary Surgeon to the Leeds Infirmary, he having held the post of Assistant Surgeon for several years. Mr. H. Littlewood, F.R.C.S., has been appointed Assistant Surgeon to the Infirmary, and Mr. H. Secker Walker, F.R.C.S., Honorary Assistant Ophthalmic Surgeon.

The yearly Christmas entertainment, promoted by the resident staff of the Leeds General Infirmary, was given on December 27th, and was most successful in every sense. The packed audience, numbering 500 or more, included many of the honorary staff and their friends, the nurses, and a number of the in-patients, who all enjoyed the evening thoroughly. In the unavoidable absence of the Mayor of the Borough, the chair was filled by the Vicar of Leeds (the Rev. Dr. Talbot). The programme opened with a presentment of the operetta, "The Gitana," the words of which are by Mrs. Alexander Roberts, and the music by Joseph L. Roeckel. The Rev. Wynn Healey then gave several songs and recitations, the entertainment concluding with an "original farce," the originality of which created great amusement. Mr. W. H. Brown acted as general director of the proceedings, Mr. J. G. McCandlish and Mr. Stott were the stewards, and Dr. E. M. Light was the stage manager. The musical arrangements were in charge of the Rev. H. J. Glennie, and Mr. A. Vincent presided at the pianoforte.

[2] *Lancet*, February, 1878.

MANCHESTER.

Christmas Recess.—Extension of Owens College Medical School and the Royal Infirmary.

The Christmas recess at Owens College Medical School commenced on December 19th, and the classes will be resumed on Tuesday, January 6th. The plans prepared for the governing body by Mr. Waterhouse, R.A., provide for a further block of buildings to cover the whole of a site, measuring 170 feet by 99 feet, immediately adjoining the western side of the present schools, and occupying the space between Coupland Street, Lloyd Street, and Walter Street. The departments sharing most largely in the accommodation provided by the new scheme are those of physiology and pathology, and it is proposed that the rooms now occupied by those branches in the present buildings should, upon the completion of their new quarters, be taken up by several departments, which are at present inadequately provided for.

Some time ago the Board of Management of the Royal Infirmary appointed a Committee to report as to the necessity of enlarging, altering, or rebuilding the Royal Infirmary on its present site. The Committee report that there is an undoubted pressure in the demand for admission of in-patients. No method which appears desirable of curtailing these applications for admission has been suggested. The present site is an excellent one for a general hospital. The existing infirmary is not insanitary. It is undesirable to use the Barnes Convalescent Home at Cheadle except as a purely convalescent hospital. The addition of 120 beds to the present infirmary is recommended. There should be increased provision for the performance of operations, for laboratories, and for waiting rooms for patients and their friends. It was remitted to a Committee to take all the necessary steps for carrying out the recommendations of the Committee, and to report thereon to the Board of Management.

CORRESPONDENCE.

MIDWIVES REGISTRATION BILL.

SIR,—As this Bill is now before Parliament, and may possibly, in some shape or other, become law, and as the subject it deals with is important, I venture to trespass on your space—the more so as, having had great experience in the training of midwives, I can speak with some confidence on the subject.

The Bill, in my opinion, is not alone objectionable in many of its details, but is radically wrong as being founded on a false principle. Its title indicates this, and the framers evidently think that "registration" is all that is needed to improve the present class of midwives, whereas the "education" of these women should be first thought of, and registration, if it comes at all, should not come into operation immediately, or, indeed, till after the lapse of at least some years. What would have been thought if Parliament had passed the Medical Registration Act before medical schools or licensing bodies had been established and in full working order, so that all who desired to practise might have an opportunity of obtaining the necessary education and qualifications to fit them for doing so? Yet this is what the advocates of the Bill under consideration want now to do.

No one can more sincerely desire that the education of midwives should be improved than I do, but I protest against their being registered at all until it is shown that means exist for educating them, that their education be conducted under the supervision of properly qualified medical men, and that when it has been completed they be examined by those in whom both the public and the profession have confidence. The Bill under consideration does not in reality provide for any one of these essentials; it is, as its title states, simply a Registration Bill, with this addition, that the "General Council," or, failing it, the "Privy Council," shall make rules for the admission to examination and course of study to be

pursued previously, etc., but not one word as to where, how, or by whom these women are to be educated, while the examinations are certain to be most unsatisfactory.

If the Bill becomes law, it is evident that a large number of women will at once seek to be educated as midwives. To whom are they to apply for this purpose? What properly qualified staff of teachers exist? If facilities for their education do not exist, it is manifest that either *(a)* it will be impossible for these women to pass the examination, assuming it to be of a standard sufficient to prove that they possess the necessary "knowledge and skill" which the Act is assumed to require, or *(b)* that the examination will become a mere form, if not a farce, or *(c)* that the number of women passing it will be so few that the number of midwives who become registered will be altogether inadequate to supply the demand. My own opinion is that the second of these alternatives will prove to be the actual result, and that the Act will have the effect of actually inflicting an injury on the public, for the women who at present act as midwives are known to be uneducated and possess no title to pose as being educated, whereas those who become "registered" will produce their certificates of registration and will pose as qualified practitioners in midwifery, while all the time they will be in no way really superior to their predecessors save in this, that they may have picked up a few medical terms, by the use of which they may further impose on the illiterate poor, amongst whom they will chiefly practise.

But let it be assumed that the difficulties as to education and examination are got over, and that a sufficient number of educated or partly educated women are annually put on the Register, it will be admitted that out of the thousands of midwives on it a good many will be guilty, or at least be accused of being guilty, of "drunkenness," "incompetence," "infamous or disgraceful conduct," or of some of the other causes for which their names are to be erased from the Register. The Privy Council are "to make regulations for providing for the erasion of the names of those convicted of being guilty." But by whom are the charges to be investigated, where are they to be heard, and by whom is the cost to be defrayed?

A magistrate or county court judge would manifestly be unfitted to investigate the purely professional matters which would crop up on all, and be the chief grounds for the charge in the majority of the cases. Of necessity there should be some form of medical court or courts. Not the General Medical Council; it would not undertake the office. The court should be composed of, or at least in the chief degree consist of, medical men of experience and repute, who must be adequately paid for their services. It must be easy of access, for it would be unjust to compel a midwife to lose time and incur expense in travelling long distances. The members of this court would have a most irksome and difficult task to perform, and the expense attending it would be proportionally great, but unless they discharge their duties efficiently a number of most unworthy and dangerous midwives would be allowed to practise, not alone with the authority given them by holding the certificate of registration, but also with almost absolute impunity, for the Bill contains the extraordinary provision that no private person, "except with the consent of the Attorney-General or of a County Council," may prosecute a registered midwife. Imagine the case of some poor labourer whose wife has died from the incompetence or in consequence of the drunkenness of a midwife! How could he afford to apply to the Attorney-General or have his voice heard in the County Council? No such protection is extended to registered medical men. Why should it be to midwives?

Next, how will the Register be kept accurate? The Registrar of the General Medical Council will testify to the difficulty in this respect, in the case of medical practitioners, all educated men and comparatively few in number. What will it be in the case of these nearly illiterate women who will be likely frequently to change their place of residence, and how will personation be prevented?

But perhaps the greatest objection to the proposed system of registration of midwives is this: "That every woman who at the passing of the Act is *bonâ fide* acting as a midwife" shall be registered, provided she claims to be so within eighteen months. She may be a drunkard, she may be grossly ignorant, may have carried infection from house to house regardless of the deaths which follow in her wake, yet she is at once to be "registered" and her certificate of registration will be by the public accepted as a qualification to practise midwifery. And bear in mind she will now practise with the impunity which the provisions of the Bill will confer.

It will be said that to exclude these women would be unfair, as amongst these will be some fitted to practise as midwives. But the Bill does not propose to prohibit them from practising as such, but only from assuming the "title of midwife." And why inflict an injury on the public for the sake of a few deserving ones, especially as registration is at best a very doubtful advantage, and under existing circumstances a positive evil?

This leads to the question, Is registration of midwives necessary at all? I have endeavoured to show that it is doubtful if it will lead to improved education, and without improved education registration can be of no avail. Let us see how education without registration works when the latter system has been tried.

In Ireland—thanks to the existence of the Rotunda and Coombe Lying-in Hospitals, and of maternities attached to general hospitals—a large number of midwives have for many years been annually trained, a number much more than sufficient for the requirements of that portion of the kingdom. There is now hardly a Poor-law Union in Ireland to which there are not one or more midwives attached; these women are paid small salaries, which they supplement by private practice. The country districts are too poor and too sparsely inhabited to support a midwife without the help of a salary, but in the towns educated midwives are to be found supporting themselves without this aid. In fact, Ireland is fairly well off for midwives, and, as a rule, they are efficient and well conducted; each of these women on passing her examination at the end of the term of training is given a certificate, which with testimonials from medical men must be produced by candidates for the Poor-law appointments I have alluded to; but registration of midwives does not exist in Ireland. Why should not the same system be introduced into England? If an Act of Parliament be needed—and I believe it to be needed—it should be in the direction of encouraging the establishment in large towns of maternities where women could be trained as midwives, and of enforcing their proper supervision during training by duly qualified medical practitioners, and their subsequent examination by impartial examiners; in time these educated midwives would spread over England as they have over Ireland; doubtless the process would be slow, but it would be better to be so than to register *en masse* a number of women, illiterate, ignorant, and in many cases drunkards, whose presence on the Register would lower it in the eyes of the public.

The chief advantage which registration under the proposed Bill will confer on midwives is that without it they will be unable to recover fees. This is a small boon; it does not prohibit—nor could it without great cruelty to the poor prohibit—a woman from acting as a midwife without registration; and as it in no way provides, or even suggests, improved means of educating women, I look on it as worse than useless, and affirm that, if it becomes law, instead of benefiting, it will injure the poor for whose benefit it was supposed to have been introduced.—I am, etc.,

LOMBE ATTHILL, M.D.,
Ex-Master of the Rotunda Hospital, Dublin.

SIR,—Two letters upon this subject which have lately appeared in the BRITISH MEDICAL JOURNAL require comment. Dr. Drage asks why I say that it is impossible for every lying-in woman to be attended by a duly qualified medical man. He might as well ask why every incumbent cannot be a bishop, every soldier a general, every lawyer a judge, and every nurse a doctor. The real reason is that many are too poor to pay the fee rightly demanded by medical men. As a speaker at the Gynæcological Society, who was proposing the abolishment of midwives, said: "Women would not employ a midwife if they were not forced to it by poverty." Some would overcome this difficulty by pauperising every woman who could not afford more than a midwife's fee. They would send her to the relieving officer for help. A fee, varying from 2s. 6d. to 10s., for attending a labour involving large expenditure of time, loss of rest, and often great inconvenience, is utterly inadequate. It is insulting to the recipient's position

and degrading to his profession. It is also stated that my figures are incorrect. I have re-examined them, and find them, not only "approximately true," but more in my favour than I thought. I gave as an argument for the betterment of midwives that the mortality among out-patients, attended by the educated midwives of lying-in hospitals, was only 1 in 600, whereas the average mortality was 1 in 200. Dr. Mansell Moullin said this estimate was "totally opposed to the published figures of all institutions." I have returns from five of the largest lying-in charities of London, as follows:—

Mortality among Out-patients attended by Midwives in 1889.

City of London Lying-in Hospital	1 in 750
Royal Maternity Charity	1 in 571
Queen Charlotte's Hospital	1 in 1,179
British Lying-in Hospital	1 in 600
General Lying-in Hospital	1 in 545

Instead of being 1 in 600, it will be seen that the mortality is only 1 in 729. The question still remains unanswered: How is it that the death-rate among women attended in their confinements by trained midwives belonging to lying-in hospitals amounts to 1 in 729, while the average loss of life is 3 in 600? If the larger mortality is not due to ignorant midwives, to whom is it to be attributed?

Dr. Rentoul welcomes the fact that Sir Walter Foster has withdrawn his name from the back of the Bill. Surely this is grasping at a straw, for Sir Walter Foster has done this because he has not time for the correspondence it involves. He has promised to support the Bill in Parliament, and feels as strongly as ever the necessity for legislation to regulate the practice of midwives. Dr. Rentoul fears the Bill will be used as a back door to admit midwives to the profession. This fear is groundless. Any grade between a midwife and a medical woman would never be tolerated in this country. In Russia, where the distances are so enormous, and a midwife may be a long journey from a medical man, a higher class of midwives exists, who are permitted to deal with obstetric emergencies. I have never heard of anyone proposing to "hand over the guinea confinements to the midwife." This is a fee which may be accepted by a medical man without loss of self-respect or dignity. Dr. Rentoul says: "Give us better trained midwives." He would grant them certificates only when they had attended lectures for six months, and hospital practice for the same time. He would grant them certificates on the condition that they attend natural labours only, and send for a doctor in cases of danger. "This," he says, "is all that is wanted;" and everyone will agree with him. The question is, Can this end be attained by voluntary efforts, or must compulsion be used? The voluntary system has been tried for centuries, and was found inefficacious as long ago as 1616, when Peter Chamberlen prayed to James I "that some order may be settled by the State for the instruction and government of midwives." By the voluntary plan the modes of education differ, the stringency of examinations varies, and the values of certificates range widely. By legislation these might be made uniform, and then the exact worth of a certificate would be known. Dr. Rentoul says: "If we are to have an Act, then let it be a good one." Here, again, everyone will agree with him. By the pains he has taken in pointing out the faults of the present Bill, and the valuable suggestions he has made to remedy them, I hope to live to see him aiding in procuring legislation which will ensure the competence of midwives and the safety of poor lying-in women, and both without injury to the profession.—I am, etc.,

JAMES H. AVELING.

Upper Wimpole Street, W.

THE KENT COUNTY CASE.

SIR,—The deputation, appointed by the police medical officers of Kent at their meeting held at Ashford on November 28th last, was courteously received by the Standing Joint Committee on December 18th.

The Chairman of that Committee informed the deputation that the Standing Joint Committee acceded to their request that the scale of fees in use in East Sussex[1] should form the basis for remuneration of medical attendants on police in this county, and that the fees for extra medical services should be those allowed by the Poor-law Board, as recommended by the resolution of the Council of the South-Eastern Branch. This scale of fees is to be tried for one year.

I cordially endorse the request of the Chairman that the medical men in Kent will loyally carry out this compact in their attendance on the constabulary, and give such services to the members of the Force as are just and necessary. The Committee stated that the abuse of the charges for medicine (now abolished) by a few medical men had led to their recent action in reducing the fees.

I trust that this will be considered by all a satisfactory solution of the difficulty; in which case I am sure the services of the deputation are amply repaid.—I am, etc.,

Maidstone. CHARLES E. HOAR, M.D.

[1] BRITISH MEDICAL JOURNAL, December 6th, 1890, p. 1334.

PROFESSIONAL CONFIDENCES.

SIR,—A most important question of moral and social ethics, which cannot be separated from the more strictly professional aspect of the case, is opened in the paragraph in the BRITISH MEDICAL JOURNAL of December 6th, upon Professor Fournier's inaugural address. It reads: "Thus a doctor may learn that a lady is about to be married to a man whom he knows to be syphilitic, but that doctor must not inform the lady's friends of the fact." I cannot make sure whether this is the would-be dictum of the writer of the paragraph in the JOURNAL, or the statement of Professor Fournier, or the principle upon which "some surgeons" argue. But, on the score of the great estimation in which the medical profession is held by the public, I venture to question the statement, by whomsoever put forth, and I trust that better counsels will prevail if the matter is fairly looked at.

The first object of the profession is not to gain or retain patients, but to cure or, still better, to prevent disease. The case stated is one in which not only the personal happiness and comfort of the unfortunate woman would be jeopardised, but in which irretrievable mischief must of necessity follow; and, in the event of the marriage being fruitful, the terrible consequences of the step might be handed down from generation to generation. No man in a community is an isolated being without reference to his fellows, still less can he be irresponsible to society when he undertakes the possibilities of married life—and it seems to me that a crime of a most serious nature against laws human and divine would be perpetrated by him—and that anyone, but *a fortiori* one entrusted with the interests of public health and well being, who, knowing the circumstances, stood by and allowed the marriage to take place, would be, *ipso facto*, a *particeps criminis*.

Can it be right that an innocent victim should be allowed, under any circumstances, to immolate herself, through ignorance of facts, upon an altar dedicated to the purest and most beautiful purposes of any on earth—and that a man, having no pity for the wife or her offspring, should be permitted to ruin them and bring an additional curse into the world, because of any theory of professional secrecy? Surely it would be the duty of the medical man (A) to insist upon the postponement of the marriage, or breaking off of the engagement—first, may be, by influence brought to bear upon the man himself (which was efficient in a case mentioned to me the other day) or (B) after warning the man, to inform the parents or guardian of the bride, or even the bride herself, or (C), if this were impossible, to even forbid the marriage in the interests of public morality. Certainly such a cause would be a "just impediment" which, even if it did ruin his practice, it would ease his conscience to have "declared."

Let the profession of medicine take a high standpoint in such a moral, sound, and essential question as this. I feel sure that some such line as indicated will commend itself to those among us who look on medicine as something far grander and more noble than a mere means of gaining a livelihood.—I am, etc., C. L. W., M.R.C.S.E.

A LOOSE STITCH IN CŒLIOTOMY.

SIR,—Dr. Heywood Smith calls attention to the above, and thinks it a novelty. The only novelty I see is, that a simple means is rendered more difficult by shotting the ends. I have seen Dr. Halliday Croom do it dozens of times, years ago. Dr. Smith will find that simply knotting the ends of

the silk together would fulfil all that is needed with no loss of time or trouble at all.

Edinburgh. FRED. W. MANN, M.B.

THE ETIOLOGY OF CANCER.

SIR,—In the BRITISH MEDICAL JOURNAL of Dec. 27th, 1890, I find a paper on the Contagiousness of Cancer, read by Mr. Walter Sibley before the Pathological Society. He seems to incline to the opinion that secondary growths are due to local irritation and not to direct contagion. I have a case at the present time under my charge which tends to point to the opposite conclusion. A gentleman, aged 72, consulted me last January, and was found to be suffering from a small growth situated in the rectum about two inches above the anus. This was diagnosed as epitheliomatous, a diagnosis which was afterwards confirmed by Mr. Christopher Heath. Last April he had an external abscess, which healed satisfactorily after being opened.

In July another abscess formed about an inch and a half from the anus, and some little distance from the former one. This was opened, but instead of taking healthy ways as the other had done, I noticed that the edges of the opening began to harden. This induration spread and ulcerated, and at the present moment he has an epitheliomatous growth the size of a large walnut, quite distinct from the internal cancer. As particular attention was paid to avoid all sources of irritation, in my opinion this points strongly to the conclusion that the cancerous discharge, which was continuously dribbling over the surface of the external wound, inoculated this also.—I am, etc., J. H. LILLEY, M.D.CANTAB.

Hereford.

A CHARACTERISTIC ORGANISM OF CANCER.

SIR,—Permit me to express my admiration of the remarkable contribution on the above subject by Dr. Russell in the BRITISH MEDICAL JOURNAL of December 27th, 1890.

There can be no doubt that observers have from time to time come across this organism, but to Dr. Russell belongs the credit of making a prolonged and exhaustive investigation into these bodies, and showing their absence from non-cancerous products. I myself noticed these bodies in cancer early in the present year; in staining cancer with fuchsine, treating the sections with Gram's solution of iodine, and subsequently decolorising with acetic acid; but failing to stain them by Gram's method with gentian-violet, I concluded that they were not fungi. On examining my specimens after seeing Dr. Russell's, I found that I had not left them for a sufficiently long time in the gentian-violet solution, and have subsequently been able to stain them by this method with ease, by leaving them in the solution for six hours.

I can confirm Dr. Russell's observations in every respect. The organism has, no doubt, different forms at various periods of its life history. In addition to those described by Dr. Russell, I have found forms with many processes and a nucleus-like amœba in a condition of great activity, also groups shooting out long club-shaped processes like the clubs in the rag fungus (actinomyces); in addition, forms like those figured by Dr. Russell, but elliptical in shape, and also in the form of short rods. There can be little doubt that this organism in its growth produces some ferment which causes the cells around it to take on that form of growth which is indicated by the term malignant.

As showing how living organisms may enter and thrive in the body, I may mention a curious observation made by me lately. A child suffering from pericarditis was admitted under the care of Dr. Haig, at the Royal Hospital for Children and Women. When admitted, the child had a pink swelling the size of a small raspberry on the pinna of the left ear, which had followed an injury. In this swelling white grains could be seen shining through the thin skin over it; these were evidently composed of particles arranged in a radiating manner, having somewhat the appearance of collections of crystals of uric acid seen in tophi in this region in cases of gout. On examination of these bodies, however, they were found to be colonies of a flask-shaped organism about the size of a red corpuscle, the members of which were actively motile, being driven about by short flagella, and floating in a thin fluid. On evacuation of the collection, the growth disappeared, leaving only a slight scar. All attempts to cultivate the organism outside the body failed. The child left the hospital quite well.—I am, etc.,

S. W. WHEATON, M.D.LOND., M.R.C.P., D.P.H.

The Chase, S.W.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

STAFF-SURGEON J. C. B. MACLEAN, M.A., M.B., has been promoted to be Fleet-Surgeon, December 23rd He was appointed Surgeon, March 30th, 1872, and Staff-Surgeon, July 11th, 1882. He was Surgeon of the *Alexandra* at the bombardment of Alexandria in July, 1882 (promoted Staff-Surgeon), and during the Egyptian war. He received the medal with a clasp for Alexandria, and the Khedive's bronze star.

The undermentioned appointments have been made at the Admiralty S. KEAYS, Staff-Surgeon, to the *Blanche*, December 30th; G. F. DEAN and R. HICKSON, Surgeons, to the *Wildfire*, additional, December 22nd; G. W. L. HARRISON, Deputy Inspector-General, to Plymouth Hospital, December 20th; E. W. SKINNER, to be Surgeon and Agent at Winchelsea, Dogs Hill, and Haddocks; A. TURNBULL, Deputy Inspector-General, to Hong Kong Hospital, December 20th; JOHN LOWNEY and HENRY F. ILIEWICZ, Surgeon, to the *Duke of Wellington*, additional, for disposal, December 29th.

MEDICAL STAFF.

BRIGADE-SURGEON E. C. MARKEY, C.B., is promoted to be Deputy Surgeon-General, ranking as Colonel, *vice* J. Landale, M.D., retired, December 10th, 1890. His previous commissions are dated: Assistant-Surgeon, March 1st, 1859; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1874; and Brigade-Surgeon, April 18th, 1885. Deputy Surgeon-General Markey served in the Afghan war in 1879-80, and was present in the engagement at Saif-u-deen, in the advance to Khelat-i-Ghilzie, and in the engagement at Ahmed Kheyl; he accompanied Sir Frederick Roberts in the march to Candahar, and was present at the battle of Candahar (mentioned in despatches, medal with two clasps, and bronze decoration); also with the Marri Expedition. During the Nile Expedition in 1884-85 he had charge of the Movable Field Hospital with the Desert Column, and was for some time Principal Medical Officer at El Gubat (mentioned in despatches, medal with clasp, and Khedive's star).

Surgeon-Major John MATURIN, F.R.C.S.I., ranking as Lieutenant-Colonel, is promoted to be Brigade-Surgeon, *vice* E. C. Markey, December 10th. Brigade-Surgeon Maturin was appointed Assistant Surgeon, September 30th, 1864; made Surgeon, March 1st, 1873; and Surgeon-Major, September 30th, 1876. He was engaged in the Ashanti war in 1873-74, and received the medal granted for that campaign.

Surgeon-Major H. G. GARDNER, M.B., has retired from the service, receiving a gratuity. Entering the service as Surgeon, September 30th, 1874, he became Surgeon-Major twelve years thereafter. He has no war record.

Sergeant-Major EDWIN THOWLESS, of the Medical Staff Corps, is also appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Hon. Captain R. Howell, retired.

Sergeant-Major FREDERICK KYLE, of the Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Hon. Captain S. Warren, retired.

Brigade-Surgeon J. R. GREENHILL, who is serving in the Bengal command, is appointed to the civil medical charge of Ranikhet, in addition to his own duties.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR F. C. NICHOLSON, M.B., Bengal Establishment, civil surgeon of Dacca, is directed to act, in addition to his own duties, as Superintendent of the Central Gaol of that district, during the absence on leave of Mr. E. W. Payne.

Brigade-Surgeon G. THOMSON, M.B., Bengal Establishment, officiating Medical Adviser to H.H. the Maharajah of Patiala, is confirmed in that appointment from September 26th, *vice* Brigade-Surgeon J. Bennett, retired.

On being relieved of the officiating charge of the civil medical duties of the Ghazeepore District, Surgeon L. J. PISANI, Bengal Establishment, second class supernumerary civil surgeon, is appointed to officiate as civil surgeon of Bijnore, during the absence on leave of Dr. Fink, as a temporary measure.

Brigade-Surgeon J. CLEGHORN, M.D., Bengal Establishment, first class civil surgeon, having returned from leave, has resumed charge of the civil medical duties of the Lucknow District.

Brigade-Surgeon W. R. HOOPER, Bengal Establishment, first class civil surgeon, having returned from deputation duty, has resumed charge of the civil medical duties of the Benares District.

Surgeon F. C. REEVES, Madras Establishment, has returned from furlough out of India.

Surgeon M. A. T. COLLIE, M.B., C.M., Bombay Establishment, is directed to act as Resident Surgeon European General Hospital during the absence of Surgeon R. J. Baker, M.D.

Surgeon-Major J. ARNOTT, M.D., Bombay Establishment, is permitted by the Secretary of State for India to return to duty.

Surgeon S. E. PRALL, Bombay Establishment, on general duty in the Bombay District, is appointed to officiate in medical charge of the 1st (Duke of Connaught's Own) Lancers, *vice* Surgeon W. H. Quicke, in civil employ.

Surgeon-Major JOHN MAITLAND, M.B., Madras Establishment, is appointed Surgeon to Lord Wenlock, the newly appointed Governor of Madras.

Surgeon H. HENDLEY, Bengal Establishment, officiating civil surgeon of the second class, is confirmed in his appointment, *vice* Brigade-Surgeon G. THOMSON, appointed Medical Adviser to H.H. the Maharajah of Patiala.

Consequent on the return from privilege leave of Brigade-Surgeon G. C. Ross on October 30th, Surgeon-Major M. O'DWYER, Bengal Establishment, officiating civil surgeon first class, reverted to the second class.

Surgeon E. H. WRIGHT is brought on the Madras Establishment from October 27th.

The Government of India have requested that it may be pointed out to medical officers that it is beyond the scope of medical boards to make any recommendation for the renewal of a wound pension in the case of an officer.

HONORARY RANK.

REFERRING to the kind of honorary rank accorded to Indian apothecaries, a correspondent points out that a previous correspondent had fallen into a mistake: that the Royal Warrants only makes the commissions of those officers "Senior Apothecaries ranking as Honorary Lieutenants and Captains," and not Honorary Lieutenants and Captains. These subordinate officers, in short, now hold the same anomalous position towards Honorary Captains and Lieutenants as medical officers hold towards substantive Captains, etc.

*** We thank our correspondent for the correction; but an honorary rank that confers no title is surely a curiosity; it is a further illustration of the hollowness of the phrase "ranking as."

OBITUARY.

JEDEDIAH H. BAXTER, M.D.,

Surgeon-General of the U.S. Army.

DR. JEDEDIAH H. BAXTER, who was appointed Surgeon-General of the U.S. Army only in August last, died of apoplexy at Washington on December 4th, at the age of 53. He was born at Derby Line, in the State of Vermont, in 1837, and was educated at the University of Vermont, where he took his M.D. degree in 1860. He practised his profession for some time in Washington, but on the breaking out of the Civil War in 1861 he entered the army as surgeon to the 12th Massachusetts Volunteers. He saw a great deal of active service with the army of the Potomac, and was for some time in principal charge of Camp Bell, the United States General Hospital at Washington.

He was afterwards Chief Medical Officer on the staff of General Fry, the Provost Marshal General. Whilst acting in this capacity Dr. Baxter collected records of the physical examination of more than 100,000 recruits, and from these materials produced a work entitled *Medical Statistics of the Provost Marshal General's Bureau*, which is still a standard book of reference on the subject. His promotion was so rapid that there cannot at any period of his career have been much time for his heart to be made sick by hope deferred. He became Brigade-Surgeon of the United States Volunteers in 1862, and was brevetted Colonel in 1865. When the army was reorganised after the war, in 1867, he was appointed Assistant Medical Purveyor, and in 1872 he was promoted by General Grant to be Chief Medical Purveyor, and in that important post he gave proof of great administrative ability.

With an intellectual versatility which is perhaps more common in America than in this less "go ahead" country, Baxter seems at one period in his busy life to have found time to study law in the Columbia University, and in 1875 that seat of learning conferred on him the degree of LL.B. He was also admitted to the Bar of the Supreme Court of the United States, and seems at some time or other to have been actively engaged in legal practice.

Dr. Baxter was one of those called into counsel at the bedside of President Garfield after he had received his fatal wound from the pistol of Guiteau. His death removes a conspicuous figure from the professional and social life of Washington, where he had held a prominent position for the past thirty years.

UNIVERSITIES AND COLLEGES.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the December sittings of the Board of Examiners in Public Health, the following candidates passed the necessary examinations, and were admitted diplomates in public health:

D. P. Gage, L.R.C.P. and S.Ed., etc., Kilwinning; H. C. Reid, M.B., C.M., Coatbridge; W. Spence, M.B., C.M., Dollar.

SOCIETY OF APOTHECARIES OF LONDON.—Pass List, December, 1890. In the examination in Arts there were 190 candidates, of whom 16 received certificates, having passed in all the subjects required for registration as medical students; 109 passed in one or more of the subjects.

The following candidates passed in Surgery:

Beck, C. A., Bonn University and Middlesex Hospital.
Bennett, J. M., Liverpool University College and Sheffield.
Boardman, E., Madras University and Royal Free Hospital.
Brown, F. H. B., B.A.Oxon., Oxford and Guy's Hospital.
Dempster, J. H., King's College.
Eccles, R. B., St. Thomas's Hospital.
Graydon, A., St. Thomas's Hospital.
Grosvenor, A. A., B.A.Cantab., Cambridge and Guy's Hospital.
Melville, S., Liverpool University College.
Morgan, W. L. G., St. Thomas's Hospital.
Newington, J. S., Edinburgh University.
Norris, B. S., Queen's College, Birmingham.
Passmore, W. E., Westminster Hospital.
Stacpool, H. de V., St. Mary's Hospital.
West, J. T., Queen's College, Birmingham.
Woodd, C. S., St. Bartholomew's Hospital.

The following passed in Medicine, Forensic Medicine, and Midwifery:

Baxter, C. E., Sheffield and Charing Cross Hospital.
Brown, F. H. B., B.A.Oxon., Oxford and Guy's Hospital.
Eden, W. A., King's College.
Houghton, M. J., Queen's College, Birmingham.
Lovell, C. P., B.A.Oxon., Oxford and St. Thomas's Hospital.
Lupton, J., Owen's College, Manchester.
Morgan, C. A., St. Thomas's Hospital.
Nauth, B., L.M.S.Punjab Univ., Lahore.
Norris, B. S., Queen's College, Birmingham.
Parkhurst, L. E., B.A.Oxon., Oxford and St. Mary's Hospital.
Rogers, F. C., Owen's College, Manchester.
Ryan, P. J., University College.
West, J. T., Owen's College, Birmingham.
Woodd, C. S., St. Bartholomew's Hospital.

The following passed in the subjects as indicated.

Forensic Medicine and Midwifery:

Knapp, M. H., St. Mary's Hospital.

Medicine:

Lapthorn, C. A., Middlesex Hospital.
Melville, S., Liverpool University College,
Standring, C. T., King's College.

Forensic Medicine:

Symons, H. B. T., Aberdeen University and Charing Cross Hospital
Wykham, A. L., M.D., Howard University, Washington.

The following having passed the qualifying examination in Medicine, Surgery, and Midwifery were granted the diploma of the Society, entitling them to register and to practise in the same:

Baxter, C. E.	Grosvenor, A. A.	Norris, B. S.
Bennett, J. M.	Lovell, C. P.	Passmore, W. E.
Boardman, E.	Lupton, J.	Rogers, F. C.
Brown, F. H. B.	Morgan, C. A.	West, J. T.
Eccles, R. B.	Nauth, B.	Woodd, C. S.
Eden, W. A.		

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

DIPHTHERIA AND MILK: AN INSTRUCTIVE STORY.

AN outbreak of diphtheria which has just occurred at Surbiton is now believed to have been abruptly terminated; and, if so, then, according to the views of Dr. Owen Coleman, the medical officer of health, this aborted outbreak bears unmistakable evidence not only of the practical utility and benefits of the Infectious Disease (Notification) Act, 1889, but of the necessity for promptly notifying. The first case was notified on December 1st, and no indication was forthcoming as to how or where it was contracted. The next cases were on December 7th and 10th, in parts of the district remote from the first case, and apparently having nothing in common but the same milk supply. Thereupon a visit was made to the dairy in question on December 11th, every facility for investigation being afforded by the proprietor. Nothing was found amiss, but he was duly informed of the suspicion that rested on the milk; and on stating that he received it from the country by rail, he was warned that if a fourth consecutive case taking his milk was reported, he would be required, pending further inquiry, to discontinue taking it from the present source and obtain it elsewhere. On the evening of December 12th information of another case came unofficially and by chance to the medical

officer of health, who immediately saw the milk seller, and, ascertaining that he supplied the house where the case occurred advised that he should at once cease to distribute any more milk from the same source as hitherto. Profiting by the warning of the previous day he had already made other arrangements, and on the next morning, December 13th, the milk sent out was from a totally different source. That evening four more cases were notified, and cases appeared each day till December 17th, on which day the two last were reported. In all 22 houses were invaded, giving 27 cases and 3 deaths, and all the houses were supplied with the same milk.

Of course, though the supply was changed, it was expected that would appear for the next five or six days, as in fact happened. The fact, however, that no case has been reported since December 17th, excepting two in one family who had been in close contact with an infected person, points to the milk being the cause, and that the cause was removed, though it would perhaps be premature to speak with certainty.

The notification of the fourth case was not made till twenty-four hours later, which might have been a serious matter, as the next day being Sunday there would have been a difficulty in getting another supply, and probably delay in bringing pressure to bear, if it had been necessary.

Inquiries instituted at the source of supply have revealed that there has been a succession of cases for some weeks past, that the schools were closed for three weeks, and that three inmates of the farmer's house had been attacked with the disease. The bulk of the milk had been traced to its delivery at another place, and the medical officer of health for that district has been put in possession of all the facts.

PAUPER LUNATIC CERTIFICATES.

C. A. W. writes to ask what is to be considered reasonable remuneration for the guardians to pay to the medical practitioner who, not being an officer of the workhouse, examines a person for the purpose of a certificate under Section 21, Subsection 5 of Lunacy Act, 1889.

*** Our opinion on this question was given on December 20th, p. 1451, in reply to another correspondent. We have repeatedly said that we think 10s. 6d. should be the minimum fee; this has also been recommended by the Council of the Poor Law Medical Officers' Association, by special resolution passed by that body at a meeting at 3, Bolt Court, Fleet Street, on May 1st, 1890.

COUNTY COUNCILS AND THEIR MEDICAL OFFICERS.

Colonel Maitland writes to us that at the meeting of the Kirkcudbright County Council, Mr. Biggar did not propose that the salary of the medical officer for the county should be £15 a year. He (Colonel Maitland), in seconding Mr. Biggar's motion, which was to the effect that the medical officer should not be debarred from private practice, suggested that £150 would be a sufficient salary, and expressed his delight at being able to protest against "the monstrous proposal that the medical officer be given a salary of £400 per year." The protest appears to us far more monstrous than the proposal.

QUALIFICATIONS OF MEDICAL OFFICERS OF HEALTH.

A M.O.H. Eighteen Years writes: I see by your report of the Medical Council meeting, held on November 27th, that Sir W. Foster called attention "to the amount of sanitary officers specially exempted" from holding or obtaining a sanitary diploma, not being registered; and Sir W. Turner admitted it was a disadvantage. As one of those alluded to allow me to say that it is but an act of justice for those of us who came to the front at the first call, and owing to whose attention to the duties the sanitary state of the country was improved and the death-rate lowered, that we should be placed on the *Register* in the same way as the old practitioners qualifying before 1815 were put on the first *Medical Register*, and later chemists and druggists in business before the passing of their Act were permitted to register, etc. Several of us medical officers of health underwent a course of hygiene and analysis of water and food at considerable expense, in addition to our own working up for proficiency. We expect, therefore, to be recognised by being registered, and thus hold the substantive position we deserve and are entitled to.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, December 27th, 3,898 births and 5,186 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 9,715,559 persons. The annual rate of mortality in these towns, which had been 21.3 and 25.1 per 1,000 in the preceding two weeks, further rose to 27.8 during the week under notice. The rates in the several towns ranged from 15.2 in Brighton, 16.6 in Hull, 20.7 in Derby, and 21.8 in Plymouth to 34.9 in Liverpool, 41.3 in Halifax, 43.6 in Manchester, and 44.6 in Preston. In the twenty-seven provincial towns the mean death-rate was equal to 29.1 per 1,000, and exceeded by 2.8 the rate recorded in London, which was 26.3 per 1,000. The 5,186 deaths registered during the week under notice in the twenty-eight towns included 472 which were referred to the principal zymotic diseases, against numbers increasing from 430 to 511 in the preceding four weeks: of these, 199 resulted from measles, 90 from whooping-cough, 55 from diphtheria, 51 from scarlet fever, 39 from "fever" (principally enteric), 38 from diarrhœa, and not one from small-pox. These 472 deaths were equal to an annual rate of 2.3 per 1,000; in London the zymotic rate was 2.3, and corresponded with the mean rate in the twenty-seven provincial towns, among which the zymotic rate ranged from 0.0 in Plymouth, Wolverhampton, Derby, and Hull to 4.9 in Sheffield, 5.0 in Bolton, 5.4 in Bristol, and 7.4 in Preston. Measles showed the highest proportional fatality in Birkenhead, Manchester, Salford, Bolton, Bristol, and Preston; scarlet fever in Preston, Sunderland, and Halifax; and whooping-cough in Norwich, Cardiff, and Sunderland. The mortality from "fever" showed no marked excess in any of the twenty-eight large towns. Of the 55 deaths from diphtheria recorded during the week under notice, 31 occurred in London, 5 in Manchester, 5 in Portsmouth, 2 in Norwich, and 2 in Birmingham. No death from small-pox was registered during the week, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday, December 27th. These hospitals contained 1,631 scarlet fever patients on the same date, against numbers declining from 2,024 to 1,695 at the end of the preceding seven weeks; 74 new cases were admitted during the week, against 139, 123, and 103 in the previous three weeks. The death-rate from diseases of the respiratory organs in London was equal to 9.5 per 1,000, and considerably exceeded the average.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, December 20th, the deaths registered in the sixteen principal town-districts of Ireland were equal to an annual rate of 26.9 per 1,000. The lowest rates were recorded in Armagh and Drogheda, and the highest in Lurgan and Lisburn. The death-rate from the principal zymotic diseases averaged 1.6 per 1,000. The 191 deaths registered in Dublin were equal to an annual rate of 28.2 per 1,000 (against 29.7 and 25.6 in the preceding two weeks), the rate for the same period being 26.0 in London and 24.4 in Edinburgh. The 191 deaths in Dublin included 9 which were referred to the principal zymotic diseases (equal to an annual rate of 1.3 per 1,000), of which 4 resulted from different forms of "fever."

HOSPITAL AND DISPENSARY MANAGEMENT.

THE THIRTEENTH REPORT OF THE COMMISSIONERS OF PRISONS.

It is gratifying to find year after year a steady diminution in the number of prisoners confined in the local prisons of this country. The total number received (including 8,926 imprisoned as debtors or for civil process) during the year ending March 31st, 1890, was 155,437, as compared with 163,849 during the previous year, whilst on March 31st last the number of prisoners resident was 866 less than on the same day in 1889. The average daily resident population showed also a similar diminution, and had it not been for military prisoners serving their time in civil prisons, and convicts undergoing sentence of penal servitude, the number would have been still smaller; in fact, ever since 1877 the decrease in the resident number has been steadily going down from 20,833 to 13,877.

The cause for this reduction in the number of the prison population is undoubtedly due to a decrease in the amount of crime, and in the number of persons who live by crime. The Commissioners state, as a proof of this, that whilst the number of the criminal classes known to the police in the two years 1877-8 was 73,492; in the years 1887-8 the number had fallen to 56,669, and it must be borne in mind that this satisfactory decrease has to stand against a large increase in the general population. Again, the number of houses of known or suspected bad character in the same time showed also a decrease of 1,462, and these facts alone, in the opinion of the Commissioners, are sufficient to establish a marked decrease in criminality throughout the country. Crimes of dishonesty or malice, and drunkenness, say the Commissioners, have largely decreased, although offences against local Acts and by-laws have about kept pace with the population.

A large proportion of the prisoners who are reconvicted have become what they are from bad bringing up, weakness of character, and consequent inability to resist temptation. According to many authorities, this class should be subjected to long terms of imprisonment, which would, for a time at any rate, prevent them committing crime, and, we might add, would also prevent them begetting others to follow in their footsteps.

Another point worthy of note is the fact that the number of prisoners who receive their first conviction is also diminishing every year. The average number in the five years 1880-4 was 84,407. In 1889 it was 71,037. The cause of this general improvement in the prison statistics is attributed by the Commissioners to the influences of good bringing up (mental,

moral, and physical) which has so largely increased of late years, and which is gradually but surely having its effect. The proportion of the sexes among prisoners is striking; out of a total of 14,389 only 2,537 are females.

The general health of the prisons has been exceedingly good. There were 102 deaths during the year from natural causes; of these phthisis claimed 15 cases, diseases of the nervous system 12 cases, pneumonia 20 cases, and heart disease 7 cases. Dr. Gover, the medical inspector, states the large number of cases of pneumonia were the result of the epidemic of influenza; but, he adds, it is remarkable that, notwithstanding this unfavourable influence, the rate of mortality should have been less than that of any year on record, namely, 7 per 1,000 of the daily average population.

On the borderland of lunacy lies the criminal population, and it is interesting to observe the statistics with regard to the mentally unsound among the inhabitants of our prisons.

The total number of cases recorded during the twelve months covered by this report is 294; and although the prison may be said to have been the channel through which many of them reached the lunatic asylum, "imprisonment is not suggested as the cause of insanity in a single instance." Sixty-eight were known to have suffered from previous attacks, no fewer than 213 were of unsound mind when admitted, and in 19 cases the mental condition was doubtful.

INDIA AND THE COLONIES.

BOMBAY.

Progress of Surgery.—In an introductory address, delivered at the opening session of the Grant Medical College, Brigade-Surgeon W. Gray, Professor of Surgery, took as his subject the progress of this branch of medical science in Bombay during the last twenty years, as shown by the results of surgical work, chiefly in its operative aspects, in the wards of the Jamsetjee Jeejebhoy Hospital. From this we learn that in India, under altered conditions of race and climate, some of which would seem to be decidedly unfavourable, practical surgery, thanks to the energy and enterprise of British surgeons, has advanced to at least an equal extent, and on the same lines, as in our own country. Although owing to the superior sanitary conditions of the Jamsetjee Jeejebhoy Hospital, which, it is stated, has always, in this respect, been far ahead of European hospitals, the surgical treatment was, some five-and-twenty years ago, attended with much success. The results of that day, according to Professor Gray, good as they were, would be regarded by himself and his colleagues as very unfavourable now. Septic disease, in this hospital, is now exceedingly rare, and tetanus after surgical operation has quite disappeared. The results of modern surgical treatment, which are shown in this address to have been as brilliant in India as in other countries, more particularly in abdominal and cranial surgery, in wounds of and operations on healthy joints, and in reparative operations of all lands, Professor Gray attributes, not exclusively to Listerism, but also to recent research in surgical pathology, and, in great part, to the use of anæsthetics, without which, it is asserted, "many operations of the present day would practically mean the most cruel and barbarous form of vivisection." Professor Gray, though an eager advocate of the principles of Listerism, has discarded many of the details of this method, and, anticipating, it would seem, many of our surgeons at home, has, in his practice, long been influenced by the conviction that many of its elaborate precautions and appliances are superfluous, and therefore unnecessary. He states that he has never used the antiseptic spray, and expresses his amazement that Sir Joseph Lister did not discard this agent many years ago. The use of the "protective" was soon abandoned. The material employed for ligatures during the past twenty years has always been aseptic silk. Much importance is attached to the use of dressings that are free from moisture and absorbent. Holding that it is impossible to exclude microbes from any open wound, Professor Gray's chief object is to deprive them of such favourable soil as stagnant blood and other effused fluids, and with this object in view he insists strongly on the virtues of surgical cleanliness, without which antiseptics are regarded as being worse than useless. In the course of this address, reference was made to several points of much interest bearing on the main theme of the recent progress in surgical practice, and in the teaching of surgery in Bombay. The phagocytic action of leucocytes, to which attention has of late been directed by Metchnikoff, was, Professor Gray now informs us, known several years ago to Dr. H. V. Carter, who had himself observed leucocytes at work. We learn also that amongst native practitioners there is in India a great distaste for surgical practice. Although zealous when students, and well taught and severely tested in all branches of surgery, and particularly in operative surgery, these native students, after they have become practitioners, devote themselves almost exclusively to medicine. A suggestion is made that this indifference to surgery on the part of medical graduates in India may be due to peculiarities of race and nationality, and to the influence of the Hindu philosophical system. Such an explanation seems to us to be far-fetched and quite unnecessary, for equal enthusiasm for practical surgical exists, we imagine, amongst students in our own country, who, when they become general practitioners, find their opportunities for this kind of work to be too restricted to permit them to pursue such work either to their own satisfaction or for the good of their patients.

MEDICAL NEWS.

Influenza is said to be prevalent in China, but the disease is as yet of decidedly mild type.

The third Dutch Congress of Physical and Medical Sciences will be held at Utrecht on April 3rd and 4th, 1891.

Six deaths from the use of soothing syrups have recently been reported by Dr. A. G. Belleau to the Quebec Board of Health.

The price of the *Nursing Record* has been reduced to 1d., in order to bring it "within the reach of everyone interested in nursing work."

Dr. S. Guttmann, editor of the *Deutsche medicinische Wochenschrift*, has had the title of "Geheimsanitatsrath" conferred upon him.

The William Dudley Trustees, Birmingham, have decided to give a Christmas donation of £1,000 towards the building fund of the new General Hospital, Birmingham.

M. Ph. Diday, of Lyons, the well-known authority on veneral diseases, has been elected an Honorary Member of the Russian Society of Syphilography and Dermatology.

Prince Alexander of Oldenburg has contributed a sum of 400,000 roubles (about £46,000) towards the establishment of a hospital for patients suffering from tuberculosis in St. Petersburg.

The Medical Profession in Russia.—The total number of diplomas of *Arzt* (medical practitioner) conferred during the past year by all the medical faculties of the Russian Empire, including the Military Medical Academy of St. Petersburg, was 685. The number of those who obtained the degree of Doctor of Medicine was 90.

We regret to announce the death of Mr. Henry Holman, M.R.C.S., L.S.A., of East Hockley, Sussex, who died on December 5th at the advanced age of 88. A correspondent, who enjoyed his acquaintance for many years, writes that Mr. Holman has died, mourned by his family and regretted by all who knew him; beloved for his many virtues, among which his tender kindness to the poor was not the least conspicuous.

Medico-Psychological Association.—At the last examination held in the Royal Edinburgh Asylum the following gentlemen were found entitled to the certificate in psychological medicine granted by the Association: Stuart McCallum, M.B., C.M., Carlisle County Asylum; Alexander Mitchell, M.B., C.M., Stirling District Asylum; John Simpson, M.B., C.M., Royal Asylum, Edinburgh.

Dental Hospital of London, Leicester Square.—In consequence of the overcrowding of the stopping department

at this hospital, it has been found necessary to extend the time during which it is open for the treatment of patients; this will necessitate the appointment of five additional assistant dental surgeons, to take charge of that department during the afternoons.

Dr. L. C. Lane, of San Francisco, has built and endowed the Cooper Medical College in that city entirely at his own expense. The building is stated to be extremely well appointed, and the endowment amounts to about twenty thousand pounds.

Medical Teaching in Portugal.—A new medical school, on a scale of equipment adapted to the needs of modern medical education, is about to be erected in Lisbon, at an estimated cost of 400 contos of reis. It has also been decided to make better provision for clinical teaching by the establishment in the Portuguese capital of a "Policlinic," somewhat on the model of the new Policlinico Umberto I, at Rome.

St. Katharine's Nurses.—Her Majesty the Queen has approved the enrolment of 94 persons on the Roll of Queen's Nurses for nursing the sick poor in their own homes. This number includes 1 general inspector of nurses (Miss Rosalind Paget), 22 superintendents, and 71 nurses. The towns and districts at which these nurses and superintendents of nurses work are: London, Edinburgh, Kilmarnock, Dundee, Dublin, Cardiff, Liverpool, Bolton, Manchester, Worcester, East Wemys, and Little Haven.

The Wrong Bottle.—The danger involved in the dispensing of liniments and other poisonous applications in bottles not specially designated either by fluting or by some other indication as containing poisonous fluid is once more shown by the case of a woman, named Clark, who drank from a bottle containing a liniment of aconite, belladonna, and compound turpentine. The bottle closely resembled that in which the husband had fetched a pint of beer, and the room was dimly lighted at the time. A verdict of accidental death was returned.

Leprosy in Columbia.—The Columbian Central Council of Hygiene recently sent a circular to the authorities of the various cities of the republic asking for returns of the number of lepers in their respective districts. The inquiry is as yet far from complete, only 122 replies having been received to a total of 920 letters sent out. These suffice to prove, however, that the number of lepers in Columbia is considerable, especially in the province of Santander. The data, so far as available, tend also to show that in places where the climate is dry and the mean temperature high leprosy is "less contagious" than elsewhere.

Prizes for Medical Students.—The Council of the British Medical Temperance Association announces that the annual examination on Alcohol and its Physiological and Pathological Action on the Body will be held, by written papers, in London and elsewhere, on February 27th, 1891. Intending competitors, who must be registered medical students in their third year, should send their names to Dr. Ridge, Carlton House, Enfield. Prizes of £15 and £10 will be awarded to the candidates who acquit themselves most satisfactorily.

The Metropolitan Schools in 1890.—At St. Bartholomew's Hospital the death of Dr. Matthews Duncan and the resignation of Dr. Godson have created vacancies in the obstetric department not yet filled up. At the Charing Cross Hospital Dr. Abercrombie has succeeded the late Dr. Julius Pollock as Physician, and Dr. Mott has been appointed Assistant-Physician. At Guy's Dr. Hale White has become Physician, in succession to Dr. Pavy, and Dr. Washbourn has been elected Assistant-Physician. At the London Hospital Dr. Sansom has replaced Dr. Langdon Down as Physician, and Mr. Fenwick Mr. Rivington as Surgeon, the vacancies being filled by the appointment of Dr. Percy Kidd and Mr. Openshaw as Assistant-Physician and Assistant Surgeon respectively. At St. Mary's Dr. Luff has succeeded to the vacancy on the medical side caused by the death of Dr. Pearce.

Tuberculosis and Influenza.—The Committee of the Œuvre de la Tuberculose, being anxious to obtain exact information as to the effects of the epidemic of influenza last year in producing or aggravating tuberculosis, will be glad to receive from medical practitioners answers, based on their own experience, to the following questions: 1. Have you seen any cases of the kind? 2. If so, how many? 3. Under what circumstances (age, sex, rapidity of course, termination, etc.) did they occur? 4. If possible the most conclusive cases should be reported in detail. Information supplied on these points will be published in the *Etudes Expérimentales et Cliniques sur la Tuberculose*. Replies should be sent before March 1st, 1891, to the general secretary and editor, Dr. L. H. Petit, 11, Rue Monge, Paris.

Epidemic Alopecia.—M. Bourguedieu (*Annales de Derm. et de Syph.*, November, 1890, p. 923) states that an epidemic of alopecia areata commenced in a brigadier attached to the infirmary of a regiment who had suffered from the disease since July, 1888. From the end of May to the end of July, 1889, forty-four cases of alopecia developed, almost all the patients being troopers, the officers and non-commissioned officers being almost entirely exempt. A farrier and the veterinary assistant were attacked, although they had not been in contact with the men suffering from the disease. In them the affection might perhaps be explained by their having been in contact with the horses, several of which presented a depilation of the tail and mane in the form of bare circular or elliptic smooth plaques, without vesicles or pustules. The hairs, before falling, became dry and powdery. The alterations in the hairs of these animals were found greatly to resemble those of human alopecia areata (atrophy of the bulb, thinning and forming into a cross at the extremity of the hair, absence of parasites). Hairs were examined in October, when many horses were casting their coats. The healthy animals had no smooth plaques, the hairs did not come out in tufts, and the atrophic lesions were less pronounced than in the horses which had the bald plaques.

MEDICAL VACANCIES.

The following Vacancies are announced:

CITY ASYLUM, Birmingham.—Clinical Assistant. Board, lodging, and washing. No salary. Applications to E. B. Whitcombe, Medical Superintendent.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant. Salary, £50 for first year, and, if reappointed, £70 for second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by February 28th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Must be qualified and conversant with the Welsh language. Salary, to commence £85 per annum, with board, residence and washing in the house. Applications to W. Vaughan Jones, Secretary.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon: no salary, but board and lodging provided. Applications to Samuel Whitford, Secretary, by January 15th.

GERMAN HOSPITAL, Dalston.—Honorary Assistant Physician. Must be a native of Germany, or must be fully acquainted with the German language and the peculiarities of the German medical science; must hold diploma of foreign or British University, be Member of the College of Physicians, and fully qualified to practise in Great Britain. Applications to A. Walbaum, D.D., Secretary, by January 20th, 1891.

HAMBLEDON UNION, Surrey.—District Medical Officer and Public Vaccinator for the Witley District. Salary, £60 per annum, with extra fees. Applications to Ferdinand Smallpeice, Clerk's Office, 138, High Street, Guildford, by January 20th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physicians. Applications to the Secretary, Henry Dobbin, by January 14th.

KENT AND CANTERBURY HOSPITAL, Canterbury.—Assistant House-Surgeon and Dispenser. Must reside in the house and be unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications to Charles S. Read, Secretary, by January 24th.

LADIES' CHARITY AND LYING-IN HOSPITAL, Liverpool.—Honorary District Medical Officer for No. 2 District. Must reside in or near district. Applications to William Grisewood, 5, Dale Street, Liverpool, by January 7th, 1891.

LISMORE UNION (Ballyduff Dispensary).—Medical Officer. Salary, £117 per annum and fees. The person appointed must provide a substitute to discharge the duties whenever for any cause he may be unable to do so himself. Applications to Jno. E. Tobin, Honorary Secretary. Election on January 6th.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, Mile End, E.—Assistant Demonstrator of Anatomy. Salary, £90 per annum. Applications to Munro Scott, Warden, by January 10th.

MANCHESTER ROYAL INFIRMARY.—Pathological Registrar. Salary, £100 per annum. Applications to the Chairman of the Medical Board by January 5th.

MANCHESTER ROYAL INFIRMARY.—Surgical Registrar. Salary, £80 per annum. Applications to the Chairman of the Medical Board by January 5th.

NORFOLK AND NORWICH HOSPITAL, Norwich.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing: unmarried, and not more than 35 years of age. Applications to Howard J. Collins, Secretary, by January 12th.

PARISH OF EDAY, Orkney.—Medical Officer for the Parish. Salary, £55 and free house and garden. Applications to Inspector of Poor, Eday, Kirkwall, Orkney.

PARISH OF SOUTH UIST.—Two Medical Officer for sthe Parish. Salary, £70 each (to include medicine to the paupers). Gaelic essential. Private practice may be considered worth £80 to £100 additional per annum. Applications to the Chairman, the Rev. Roderick Macdonald Drimsdale, South Uist, by January 3rd, 1891.

ROYAL FREE HOSPITAL, Gray's Inn Road.—Senior Resident Medical Officer; double qualifications. Salary, £100 per annum, with board and residence in the hospital. Applications to Conrad W. Thies, Secretary, by January 7th.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House-Surgeon; no salary, but board, lodging, and washing provided. Applications to Herbert Shipton, House-Surgeon, by January 7th.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Medical Jurisprudence. Annual fee, £30. Applications to the Secretary of the University Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by January 10th.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Honorary Surgeon. Must be Fellow or Member of the Royal College of Surgeons, England. Applications to the Honorary Secretary by January 5th. Election on January 12th.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Second House-Surgeon; double qualifications; unmarried. Salary, £50 per annum, with board and residence. Applications to the Honorary Secretary by January 5th.

WEST RIDING ASYLUM, near Sheffield.—Pathologist, also to act as Fourth Assistant Medical Officer. Salary, £100 per annum, rising £10 yearly to £150, with board, etc. Applications to the Medical Superintendent by January 7th, 1891.

WILTS COUNTY ASYLUM, Devizes.—Assistant Medical Officer, unmarried. Salary, £120 per annum, with an annual increase to £150, and board, residence, attendance and washing. Applications to the Medical Superintendent by January 6th, 1891.

MEDICAL APPOINTMENTS.

BROWN, W. H., F.R.C.S.I., appointed Honorary Surgeon to the Leeds Infirmary.

BUCHANAN, Leslie, M.B., C.M.Glasgow, appointed House-Surgeon to the Glasgow Eye Infirmary, *vice* Hugh Highet, M.B., C.M., resigned.

CLARE, John, L.R.C.S.Edin., L.S.A.Lond., appointed Medical Officer of Health to the County Borough of Hanley.

CLOWES, Wm. F. A., M.R.C.S., L.R.C.P., Assistant House-Surgeon to the Kent and Canterbury Hospital, appointed House-Surgeon to Essex and Colchester Hospital.

DEAN, Henry Percy, M.S., M.B., B.Sc.Lond., F.R.C.S.Eng., appointed Surgical Registrar to the London Hospital, *vice* T. H. Openshaw.

DEWAR, D., M.B., C.M., appointed Assistant Surgeon to the Glasgow Royal Infirmary.

DICKINSON, George F., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to Charing Cross Hospital.

ENSOR, Edwin T., M.D., L.R.C.P.I. and L.M., L.F.P.S., L.S.A., appointed one of the Medical Officers for the Parish of Kensington (No. 2 Relief District), *vice* C. M. Frost, F.R.C.S.Eng., retired.

EUSTACE, John N., M.B., B.Ch. Univ. Dub., appointed Clinical Assistant to the Richmond Asylum, Dublin.

FRENCH, William Josiah Lowe, L.R.C.P., F.R.C.S.Irel., appointed Assistant Resident Medical Officer to the Children's Hospital, Birmingham, *vice* Mr. A. Max-Sully.

HALL, F. W., M.B., B.S.Lond., appointed House-Physician to Guy's Hospital.

HAROLD, John, L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Physician to Charing Cross Hospital.

HENVEY, William, M.R.C.S., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the North-Western Fever Hospital of the Metropolitan Asylums Board.

HIGHET, Hugh, M.B., C.M.Glas., appointed House-Surgeon to the Hertford British Hospital, Paris, *vice* A. N. M'Gregor, M.B., C.M.Glas., resigned.

HUGHES, S., M.B., C.M., M.R.C.S., L.S.A., appointed Medical Officer of Health for City of Coalville, Utah, U.S.A.

JONES, D. J., L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Obstetrical Officer to Charing Cross Hospital.

JONES, Thomas, M.R.C.S.E., L.S.A., appointed Medical Officer of Health to the Mansfield Woodhouse Urban Sanitary Authority.

JORDAN, H. M., M.R.C.S., L.R.C.P., appointed House-Surgeon to Guy's Hospital.

LANSDOWN, R. G. P., M.B., B.S.Durh., appointed House-Surgeon to Guy's Hospital.

LINDSAY, D. Moore, L.K.&Q.C.P.I., L.R.C.S.I., L.M., appointed Medical Officer of Health for Wasatch County, Utah, U.S.A.

LITTLEWOOD, Harry, F.R.C.S., appointed Honorary Assistant Surgeon to the General Infirmary, Leeds, *vice* Mr. W. H. Brown.

MCLENNAN, Quintin, M.B.(Glas.), C.M., appointed Assistant Surgeon to the Glasgow Royal Infirmary, *vice* James Whitson, M.D.

PARSONS, George Goodson, M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Royal Albert Hospital, Devonport, *vice* Dr. Fraser, resigned.

ROBSON, A. W. Mayo, F.R.C.S.Eng., L.R.C.P.Lond., appointed Professor of Surgery in the Department of Medicine, Yorkshire College, Leeds, *vice* Professor McGill, deceased.

SMITH, John Howie, M.B., M.S.U.E., appointed Assistant Medical Officer to the Workhouse at Crumpsall, near Manchester, *vice* Geo. Ernest Fryer.

SMITH, H. A., M.B., B.C.Camb., appointed House-Physician to Guy's Hospital.

VICKERS, John B., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Hospital, Barrow-in-Furness, *vice* Dr. M. C. Watson resigned.

WALKER, H. Secker, F.R.C.S.Eng., appointed Assistant Ophthalmic and Aural Surgeon to the General Infirmary at Leeds.

WARD, Edward, M.B., B.C., appointed Lecturer on Practical Surgery, Yorkshire College, Leeds.

WARREN, Richard B., L.K.Q.P.I., F.R.C.S.I., appointed Honorary Surgeon to the Carrington Centennial Hospital at Camden, New South Wales.

WEBBER, H. W., M.B., B.S.Lond., appointed Assistant House-Physician to Guy's Hospital.

WILKIN, G. Chas., M.R.C.S., L.R.C.P., L.S.A.Eng., appointed Assistant Surgeon to the London Throat Hospital, 204, Great Portland Street, W.

WOODHOUSE, Edward Robert, M.B., C.M.Ed., appointed Medical Officer to the Stafford Union, *vice* Dr. George Reid, resigned.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Stephen Mackenzie: The Lettsomian Lectures on Anæmia; its Pathology, Symptoms, and Treatment. Lecture I.

TUESDAY.

SOCIETY FOR THE STUDY OF INEBRIETY, 11, Chandos Street, Cavendish Square, W., 4 P.M.—Dr. J. A. H. Crespi: On Inebriety and its Treatment. Dr. T. L. Wright, Bellefontaine, Ohio, U.S.A.: Drunkenness; a Consideration of its Psychology and Responsibility.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Sir Hugh Beevor: Notes on Media for Cultivation of Tubercle Bacillus. Dr. F. J. Smith: Chylous Ascites. Mr. Hurry Fenwick: Large Hydatid in Pelvis Obstructing both Ureters. Dr. William Hunter: Subacute Gastritis. Dr. S. West: Multiple Tubercular Tumours in Brain and Viscera. Mr. Stephen Paget: Imperforate Rectum. Dr. R. Maguire: Acute Verrucose Aortitis. Mr. E. C. Stabb: Two specimens of Dermal Cysts. Card Specimens.—Mr. H. B. Robinson: Webbed Fingers and Toes; Cystic Disease of Testicle: Columnar-celled Carcinoma of Small Intestine. Mr. W. G. Spencer: Lymphosarcoma in Dog surrounding Trachea and Bronchi: Lymphosarcoma in Dog surrounding Aorta: Leucocythæmia in Cat. Dr. G. Gulliver: Acute Endocarditis of the Right Side with Pulmonary Embolism.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Dr. Handfield-Jones, Dr. John Phillips, and others. Dr. W. S. Playfair: On Removal of the Uterine Appendages in cases of Functional Neurosis. Dr. John Phillips: On a Case of Death following Vaginal Injection of Acid Nitrate of Mercury. Dr. W. S. A. Griffith: Case of Obstructed Labour in which a large Fibroma of the Ovary was mistaken for the head of an Extra-uterine Fœtus.

THURSDAY.

HARVEIAN SOCIETY, 8.30 P.M.—Dr. J. Edward Squire: Remarks on cases of Tuberculosis treated by Koch's method.

BRITISH GYNÆCOLOGICAL SOCIETY.—Annual general meeting, 8.30 P.M. Election of Officers. President's Valedictory Address. Dr. R. T. Smith: On Lacerations of the Cervix Uteri.

FRIDAY.

CLINICAL SOCIETY OF LONDON.—Annual meeting. Papers, 8.30 P.M. Dr. Whipham and Mr. G. R. Turner: A case of Intussusception with Volvulus of the Small Intestine in two places. Mr. C. B. Lockwood: A case of Acute Intussusception in a Child 4 years old; resection; death from shock twenty hours after operation.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 5 P.M.—Exhibition of Cases treated by Dr. Koch's Method.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday Morning, in order to insure insertion in current issue.

DEATH.

FISHER.—On December 26th, at 136, Marine Parade, Brighton, and late of Clifton, Stephen Winter Fisher, M.D., lovingly and deeply regretted.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

QUERIES.

F. T. A. asks for any information as to the regulations of the Italian Government to which British medical men must conform in order to admit of their practising in Italy among the English residents and visitors.

MR. H. RAINSFORD (Kilburn Lane, W.) asks: 1. For information of any book published containing an analysis of the principal proprietary medicines, or if any systematic attempt has been made to investigate their properties.

2. A few hints with regard to the treatment of outstanding prominent ears, as a young lady patient, aged 14, is very anxious to be cured of this disfigurement. Maw, Son, and Co. have a set of springs and pads for the purpose, but he does not know whether they are of any use.

ANSWERS.

PILOCARPIN IN DEAFNESS.

DR. T. COKE SQUANCE (Physician and Pathologist to the Sunderland Infirmary, Consulting Physician to the Monkwearmouth and Southwick Hospital) writes: In reply to "M.D.'s" inquiry in the BRITISH MEDICAL JOURNAL as to the administration of jaborandi by the mouth in labyrinthine deafness where a patient objects to the use of the needle, I may say that I have treated two cases in this way with decided benefit, but I gave a nightly dose of m xxx, continued for two months.

NOTES, LETTERS, Etc.

CREOLIN: ANTISEPTIC OR TOXIC?

MR. THOMAS F. CLARKE, M.R.C.S.Eng., etc. (Dartford) writes: The BRITISH MEDICAL JOURNAL of December 13th contains a paragraph with the above heading, in which reference is made to a pamphlet by Dr. Bitter, of Breslau, on the employment of this preparation in midwifery practice. It is there stated that of 2,000 cases so treated, 4 developed symptoms of poisoning. From the excellent results I have invariably met with, I cannot believe that the poisonous symptoms in the cases referred to were attributable to creolin. The symptoms mentioned point to the absorption of carbolic acid, and I would, therefore, suggest that the preparation employed must have been an impure form of creolin largely adulterated with carbolic acid.

I have employed creolin extensively in my practice for surgical dressings, vaginal injections, inhalations, and in the treatment of ozæna, tonsillitis, otorrhœa, etc. In no single instance have poisonous symptoms ever been developed. I also invariably use it now as a general disinfectant, and very largely so in infectious cases; and I never hear the complaints of headache, dryness of the mouth and throat, etc., which were constantly made when carbolic acid was employed.

In the BRITISH MEDICAL JOURNAL of January 11th, 1890, a case is reported of a man who swallowed nearly nine ounces of creolin, and who perfectly recovered within three weeks. Such a result would be impossible with carbolic acid. Only a day or two ago a gentleman well known to me, casually remarked that within the previous ten days he had taken four dozen capsules of creolin (representing 4 drachms of the fluid) for flatulence. Not only were there no ill-effects, but the flatulence had been considerably relieved.

Of the antiseptic properties of creolin there cannot be the slightest doubt, and, in my opinion, it is far superior to carbolic acid.

THE RECENT DISCUSSION ON ANÆSTHETICS AT THE MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

DR. ROBERT KIRK (Partick, Glasgow) writes: If only in the name of common fairness, I may surely claim the right to make a few remarks on the report of the above discussion, which appeared in your issue of November 22nd, 1890. I was asked by the secretary, Dr. Walker Downie, to take part in the discussion, chiefly, I believe, for the reason that I had just published a pamphlet giving a new explanation of that form of syncope which may occur in the early stages of narcosis, and which has been generally referred to as the "primary syncope." In the paper read before the Society, which, as your reporter truly says, was carefully prepared, I presented a restatement of my views on this important subject, which perhaps set them in a somewhat new light, and made the matter plainer than I had previously done.

My complaint is that your reporter has studiously avoided any reference to the distinctive character of my theory, and I desire to supply the omission. My view is simply that syncope may be caused by the reaction which ensues in the circulation when an anæsthetic vapour is allowed to escape from the lungs in superficial anæsthesia, while its occurrence is rendered impossible in deeper narcosis by the presence of a sufficient amount of the agent in the blood. According to this view, therefore, the primary syncope is *reactionary*, and it is impossible to confound this with the "reflex" theory of Dr. Coats. Not that I deny that the action of the vapour in the respiratory tract leads to reflex inhibition of the heart; on the contrary, I maintain that the reaction which can be proved to occur when the vapour escapes is a better proof of this reflex effect than any that has yet been afforded, and also furnishes a new explanation of the *modus operandi* of the reflex mechanism. If the primary syncope is reactionary in its causation it is easily avoidable; while if it be due to reflex inhibition, it is not so, for this danger must increase as the administration proceeds, and the direct inhibition exercised by the chloroform in the blood comes to be added to that produced through reflex agency. The practical outcome of the reactionary theory is momentous; if it be well founded, not a single breath of fresh air is to be allowed until satisfactory anæsthesia is induced, and this rule stands in direct contradiction to the recommendations of the Hyderabad Commission. Neither this Commission nor the Glasgow Committee has ventured to face the facts on which the new theory is based, nor the explanation which it affords of the fall of blood pressure to zero which may occur after the chloroform has been withdrawn, and which has been matter of dispute between these authorities. In these circumstances the continued silence of our most influential medical journals on the subject is a question for the editors and the profession to consider.

"MEDICOS UNDER THE MICROSCOPE."

UNDER this title the editor of the *Gentlewoman* announces a series of special articles, intended to serve, in his own words, "as a guide which will steer the neophyte clear of incompetent or semi-incompetent men into the safe harbourage of the consulting room of the doctor who combines the essential qualities of ability, experience, and high character." "It must," he adds, "be absolutely understood that the gentlemen whose pen-portraits will be given have in no way assisted at, or even consented to, their own delineation." This is a very sorry enterprise, and one which it would be well to abandon. A writer having the necessary qualifications to undertake safely this most superfluous and invidious task, would certainly be debarred by the sense of propriety and his deference to professional reticence from undertaking it. No one who is acquainted with the dignity and worth of professional tradition would be willingly mixed up with a proceeding which will certainly be resented by the subjects of it, no less than by the profession at large. A more unwise and objectionable undertaking it would be difficult to conceive, and it may be hoped that the better sense and wiser second thoughts of the editor will restrain him from pursuing it.

THE CLIMATE OF NEW ZEALAND.

DR. D. H. CULLIMORE (London) writes: As regards the suitability of the climate of New Zealand for the phthisical and weak-chested there is much difference of opinion. Your correspondent, Dr. Garland, in the BRITISH MEDICAL JOURNAL of November 22nd, 1890, speaks highly of Queenstown and other villages on the plateau; of the province Otago in the South Island, and says it is dry and invigorating and well adapted for pulmonary consumption. With this view I cannot entirely agree; I have read everything on the subject preparatory to the publication of my recent work, *The Book of Climates in all Lands*, and have also had some practical experience of the effect of the climate in disease, and, as a result, I have come to the conclusion that New Zealand cannot be specially recommended to people in this country suffering from pulmonary consumptive disease. Taking the country as a whole the climate is moist and variable, with a large number of wet days, a good deal of difference between the day and night temperature, and much wind.

At Dunedin, the capital, situated on the drier side of the South Island, the winter climate is harsh and variable. The annual mean is 50° (the same as London), the wet days are 182, the rainfall 35 inches, and there is 76 per cent. of humidity. Comparing this, say, with the south-west coast of England, the interior plain, at an elevation of 1,000 feet, might be likened to the highlands of Devon, and this is hardly a climate of election for *poitrinaire* Englishmen. There are three classes of invalids who may be likely to go so far away for the sake of their health. First, young men with incipient consumption or with an hereditary taint, who, while eager to get rid of their trouble, are anxious to strike out a career. These require a warm, sunny, dry climate, such as South Africa, Southern California, South Australia, or certain parts of the Indian peninsula, and cannot conscientiously be sent to New Zealand. Secondly, cases of advanced or developed consumption among well-to-do people. These are practically patients; and would find no suitable accommodation in New Zealand, and, on the plains of Otago good houses are necessary, as the nights are generally cold. Still, this class, if able to take the long voyage, would probably find Queenstown, in this part of the country, during the warm months, from November to March or April, beneficial. And they might leave so as to arrive in England in June. The third class are weak-chested artisans. These, if not able to do a full day's work, will have no chance, as competition is great. For a permanent residence for people with a little money Napier, Taumanga, and Nelson, on the north of the South Island, are, I think, the most suitable places.

Nelson is well sheltered from the cold southerly winds, and has a good deal of sunshine and the air is crisp and buoyant; but even here the mean of winter is 40°, of summer 60°, the nightly minimum 30°, and there are 45 inches of rain. The winters are, however, shorter than in this country, and the summers long and cool. In the North Island, Auckland is hot and relaxing, and has a mean of 59°.

In conclusion, I should like to say a word in condemnation of the inconsiderate laudation of unsuitable places as winter health resorts for consumption and allied complaints. Thus I have known Harrogate highly commended, Scarborough praised beyond measure, Edinburgh considered useful, Falmouth, with a moist, mild, rainy atmosphere, set up in competition with the dry, sunny, warm, tone-giving Riviera, and I should not be surprised if in a little time the death-dealing winter climate of Berlin had plenty of advocates.

Albuminuria in the Apparently Healthy.

A Medical Man sends us the following account of his own case: My age is 36. Though not robust, I am apparently healthy, and am very active in body and mind. The existence of albuminuria was discovered when I was 17; the condition has persisted ever since, and may have existed for an indefinite time before, as no change was noticed at that time.

The characters of the urine are usually as follows: Specific gravity 1017 to 1020, sometimes higher. Acidity somewhat deficient. A considerable quantity of acetate of lime crystallises out in the course of about four hours; a very few crystals of the same may be found occasionally in the fresh urine. The urine passed by day almost always contains albumen, the coagulum (on boiling and addition of acetic acid) amounting sometimes to $\frac{1}{8}$ or (by gravimetric estimation) $\frac{1}{4}$ per cent. of dry albumen. But the urine passed in the night or on first rising contains no albumen; albumen is also absent when I stay in bed for illness, even though the illness be attended with high temperature. The quantity of urine varies greatly, but is usually above the average; and there are frequent sudden augmentations of the secretion, occurring either in the night or as the result of insufficiency of circulation in the skin. Want of exercise or exposure to cold produces this effect, but it is hardly ever traceable to mental causes. The watery urine produced under these circumstances is usually free from albumen; but it may possibly contain an irritating substance, for even when the bladder is but slightly distended with it, micturiency is very urgent. These characters of the urine have not changed in the nineteen years during which albuminuria has been known to exist: and the visible characters, at all events, were the same for years before that—in fact, as far back as my memory goes, which is farther than in most persons.

I perspire readily under heat or exertion; in fact, the skin is at times inconveniently active, leading to night sweats from trivial causes, such as warm weather.

My digestive organs are healthy, and I do not overtax them; there is, however, a tendency to sluggishness of the large intestine, with fermentation—a condition which I endeavour to obviate as far as possible. My sexual functions are normal, and albuminuria does not appear to vary under sexual excitement, etc. I was never known to have scarlatina, though I have often been exposed to infection, especially in medical practice. At the age of 28 I had a typical attack of gout in the right foot, and two years afterwards a slight injury produced a similar attack, but none has occurred since. For many years I have suffered at times from articular troubles of a gouty or rheumatic nature. In every case these gouty troubles were traceable to exhaustion from overwork. I have occasionally had migraine, in which pain was usually inconsiderable, but premonitory visual and olfactory symptoms were very marked. The family history is unimportant, except that cases of gout, migraine, and asthma have occurred in relatives—pointing, perhaps, to the uric acid diathesis.

I have not investigated the details of my case as fully as I might, for, being no *malade imaginaire*, I neither pay undue attention to my state of health nor care that anyone else should do so. The point of real interest is that since the existence of albuminuria was discovered I have gone through strenuous mental and bodily work and more than an ordinary amount of trouble, and yet my general health improves rather than fails with years. The symptoms seem to indicate not a renal disease but a defect in the vital chemistry. Nevertheless, I am not blind to the possibility that I may have had in childhood a modified form of scarlatina, which left a limited and hitherto non-progressive lesion of the kidneys, and that this lesion may some day take a fresh start and lead to their disorganisation.

As to treatment, I do not trouble myself much, only using certain simple precautions, namely:—

(1) To avoid renal congestion by keeping the skin warm and always taking my baths tepid.

(2) In view of a chemical cause of the albuminuria, to avoid constipation and septic decomposition in the intestine.

(3) As the cause may be a gouty diathesis, to restrict my nitrogenous diet, be moderate in the use of alcohol, and keep the kidneys (and tissues generally) well washed out by means of a very liberal allowance of watery drinks.

COMMUNICATIONS, LETTERS, Etc., have been received from:
(**A**) Dr. W. C. Arnison, Newcastle-on-Tyne; Mr. F. Arnold, London; Dr. L. Atthill, Dublin; Dr. P. S. Abraham, London; Dr. J. H. Aveling, London; Mr. J. P. Aston, Bradford; Dr. F. P. Atkinson, Surbiton; Mr. R. J. Anderson, Newry; Dr. F. Alderson, London. (**B**) Mr. F. Bramwell, London; Mr. J. G. Blackman, Portsmouth; Mr. J. Bellamy, London; Dr. J. Abercrombie, London; Dr. L. Brocq, Paris; Mr. R. Bruce, Milford-on-Sea; Dr. H. Barnes, Carlisle; Dr. Balding, Royston; Dr. J. W. Byers, Belfast; Mr. C. A. Ballance, London; Dr. Berdoe, London; Mr. W. l'Heureux Blenkarne, Leicester; Mr. H. T. Butlin, London. (**C**) Messrs. T. Crapper and Co., London; Dr. O. Coleman, Surbiton; Mr. C. H. Cattle, Nottingham; Mr. P. F. Casey, Raheny; Mr. J. Clare, Stoke-on-Trent; Dr. J. S. Cameron, Leeds; W. Cluff, M.B., Cookstown; Dr. Wm. Carter, Liverpool; Dr. G. M. Cosgrave, Dublin; Dr. G. W. Crowe, Worcester; Mr. W. J. Cant, Lincoln; Mr. H. Caudwell, Woodstock; Mr. W. F. A. Clowes, Canterbury; Mr. T. F. Clarke, Dartford; Mr. H. Campbell, Birmingham. (**D**) Mr. Alban Doran, London; J. A. Dick, M.B., London; Mr. J. Dix, Hull. (**E**) Mr. R. L. Elliot, Kingsbridge; Mr. T. D. F. Eminson, Kirton Lindsey; Dr. A. Edington, Edinburgh; Mr. G. Eastes, London; Mr. R. Eatough, Farnworth; Dr. E. T. Ensor, London; Editor of the *Nursing Record*, London; Dr. Eddison, Leeds. (**F**) Mr. Adams Frost, London; Dr. W. H. Fenton, Clitheroe; Mr. G. Fleming, London; Mr. T. W. Fox, Rochester; Mr. W. Fox, Clay Cross; Mr. W. P. Feltham, Myingyan; Mr. J. Fraser, Edinburgh; Mr. E. F. Flynn, Sunderland; Fair Play. (**G**) Mr. W. Greyson, Southend; Mr. J. Gunn, Kilmarnock; Mr. J. F. Gillett, Leamington Spa; Mr. C. N. Griffiths, Cheltenham; Dr. M. Gilles, Marseilles; Dr. Grigg, London; Mr. J. Gilden, London; Mr. J. Gillingham, Chard; Mr. T. B. Goodall, Christchurch. (**H**) F. Hewkley, M.B., Stoke Newington; Mr. H. R. Hancock, Burslem; Dr. G. E. Herman, London; Brigade-Surgeon F. W. Hodder, Gronville; Dr. J. P. Harvey, St. Mary Cray; H. Highet, M.B., Glasgow; Mr. R. H. Humphreys, London; Mr. T. Harris, London; Dr. Halliburton, London; Messrs. W. H. Hilliard and Sons, Glasgow; Mr. Reginald Harrison, London; Dr. W. E. Hadden, Portadown; Mr. W. H. Haley, Wakefield; Mr. W. Henvey, London; Dr. J. Berry Haycraft, Edinburgh; Messrs. Hertz and Collingwood, London; Dr. W. W. Hardwicke, Dovercourt; Dr. Holman, Reigate; Messrs. J. Hargreaves and Son, Preston; Dr. L. Henry, Melbourne; S. Hughes, M.B., Coalville; Surgeon H. Herbert, London; Mr. C. Hutchinson, Widnes. (**I**) Dr. R. W. Irvine, Pitlochrie; Dr. C. R. Illingworth, Accrington; Dr. J. Ippolitoff, Grodno, Russia. (**J**) Mr. T. Jones, Manchester; Mr. F. B. Jessett, London; Dr. E. H. Jacob, Leeds. (**K**) Dr. Arthur Kempe, Exeter. (**L**) Mr. P. G. Lee, Cork; Rev. F. Lawrence, York; Mr. E. Lee, Manchester; Mr. J. H. Lister, Bradford; Mr. C. A. Lumley, Birmingham; Dr. Fletcher Little, London; Mr. H. A. de Lantour, Oamara; Sir Thomas Longmore, Woolston. (**M**) Messrs. Mayall and Co., London; Mr. L. Mark, London; Mr. A. McCullock, Tarporley; Dr. T. More Madden, Dublin; Dr. J. A. MacWilliam, Aberdeen; Dr. R. Macdonald, Govan; Dr. S. Mackenzie, London; Surgeon-Major G. G. MacLaren, Dehra Dun; Dr. A. T. Myers, Cheltenham; Dr. A. Matheson, North Berwick; Dr. Morotti, Banbury; Mr. Q. M. McLennan, Glasgow; Mr. U. W. T. Wen Mullen, Bethulie; Mr. H. Maturin, Winchfield; Dr. T. Mackenzie, Edinburgh; Mr. G. W. Mullis, London; Surgeon-Major R. N. McPherson, London. (**N**) Dr. J. Neil, Oxford. (**O**) Dr. J. Oliver, London; Mr. J. Odling, London. (**P**) Dr. Louis Parkes, London; Mr. D'Arcy Power, London; Dr. Partridge, Stroud; Mr. E. J. Powell, Lons; H. Philpots, M.B., Birkenhead; G. G. Parsons, M.B., Weston-super-Mare; Mr. R. G. Patteson, Dublin; Dr. F. D. Pearce, Kingsbridge; Mr. T. A. Palm, Wigton. (**R**) Dr. Ransome, Manchester; Dr. A. Robertson, Glasgow; Mr. A. H. Robinson, London; Mr. S. Rowland, Stoke-sub-Ham; Sir Wm. Roberts, London. (**S**) Dr. Savage, London; Dr. R. Percy Smith, London; Dr. W. Stephen, Liverpool; Mr. F. T. Simson, London; Subscriber; Dr. J. Lindsay Steven, Glasgow; Mr. G. Smith, Birmingham; Dr. J. E. Squire, London; Dr. T. C. Squance, Sunderland; Secretary of the Apothecaries' Hall, London; Mr. W. Shawe, Bath; Mr. F. O. Simpson, Liverpool; Mr. John Shepheard, North Walsham; Secretary of the Zoological Society of London; Dr. W. Gordon Stables, Twyford; Mr. C. Sheather, London; Mr. G. Spicer, Dover; Dr. Sykes, Mexborough; Mr. J. H. Stenhouse, Inverness; The Secretary of the Union Steamship Company, London; Mr. W. J. Smith, Boston Spa; Dr. R. Wade Savage, London. (**T**) Miss M. Thomson, London; Mr. P. Teale, Leeds; Mr. F. Treves, London; Mr. Lawson Tait, Birmingham; Mr. P. la Poer Trench, Berlin; Mr. G. S. Thomson, Cookstown; Dr. G. Thin, London; Mr. W. T. Thomson, St. Andrews; Mr. E. Tredinnick, Salop; Mr. Arthur Thomson, Oxford. (**U**) Dr. Urquhart, Glasgow. (**V**) Mr. H. Vevers, Hertford; Mr. J. B. Vickers, Carnforth. (**W**) Mr. C. H. Wells, London; Mr. P. H. Walker, Lechlade; Mr. J. T. Weysley, Bandon; Dr. Walsh, London; Mr. F. B. Warren, Camden, N.S.W.; Mr. G. Wray, Nottingham; Dr. E. Willoughby, London; Mr. H. S. Walker, Manningham; White Tape; Dr. J. A. Wyeth, New York; Mr. J. Wyllie, Hull; etc.

BOOKS, Etc., RECEIVED.

Essentials of Practice of Medicine. By Henry Morris; with Appendix by Lawrence Wolff, M.D. Philadelphia: W. B. Saunders. 1890.

Arcana Fairfaxiana Manuscripta, with Introduction. By George Weddell. Newcastle-on-Tyne: Mawson, Swan and Mawson. 1890.

Studies in Statistics. By George Blundell Longstaff. London: Edward Stanford. 1891.

Antiseptics in Obstetric Nursing. By John Shaw, M.D.Lond. London: H. K. Lewis. 1890.

Illustrated Lectures on Nursing and Hygiene. By R. Lawton Roberts M.D. London: H. K. Lewis. 1890.

Manual of Bacteriology. By Edgar M. Crookshank, M.B. Third Edition. London: H. K. Lewis. 1890.

Die Tuberkulose der Knochen und Gelenke. Von Dr. med. Fedor Krause. London: Williams and Norgate. 1891.

Œuvres Complètes de J. M. Charcot. Tome IX. Paris: Aux Bureaux du *Progrès Médical*. 1891.

Story Told to a Child. By Francis Vacher. London: Simpkin Marshall and Co. 1891.

Klinischen-experimentelle Studien über chirurgische Infectionskrankheiten. Von Dr. Julius Fessler. Munchen: Dr. C. Wolf and Sohn.

The Micro-organisms of the Human Mouth. By Willoughby D. Miller, DD.S., M.D. Philadelphia: S. S. White Dental Company. 1890.

Die Aetiologie und das Wesen der akuten eitrigen Entzundung. Von Dr. Albert Kronacher. Jena: Gustav Fischer. 1891.

THE LETTSOMIAN LECTURES
ON
ANÆMIA:
ITS PATHOLOGY, SYMPTOMS, AND TREATMENT.

Delivered before the Medical Society of London.

By STEPHEN MACKENZIE, M.D., F.R.C.P.,
President of the Hunterian Society; Physician to, and Lecturer on Medicine at, the London Hospital.

LECTURE I.

The Composition of the Blood.—The Plasma.—The Formed Elements.—The Red Corpuscles: their Sources, Life-history, and Fate.—The Seats of Blood Destruction.—The Colourless Corpuscles; their Sources, Functions, and Fate.—Blood Platelets.—Elementary Granules.—Hæmoglobin.—The Pathology of Anæmia.—Defective Hæmogenesis or Excessive Hæmolysis, or the two combined—Anæmia, Secondary and Symptomatic, or Primary and Idiopathic.

MR. PRESIDENT AND GENTLEMEN.—In choosing anæmia as the subject of these lectures I have been influenced by the following considerations:

1. Anæmia is a condition which we have to take into consideration almost every day of our lives, and has an interest, therefore, for those practising in every department of medicine. 2. It is a disease which has in recent years received a great deal of careful study at the hands of some of the ablest investigators in our own and other countries; and 3, because it is a subject to which I have myself devoted considerable attention. It has seemed to me that the time has come when the careful and detailed work which has been accomplished should be collated, and thus allow of our taking a comprehensive view of the whole subject. How imperfectly I have done this I am only too fully conscious, but I still hope that the bringing together the labours of many workers on a subject of great intricacy will not be without some value. I must apologise in the next place for some elementary details with which you are all acquainted, but with which I am obliged to preface the consideration of anæmia, for unless we define what we agree to consider the normal condition of the blood, we cannot point out what are departures from it.

Should the blood be regarded as an internal medium or as a tissue? The majority of writers and physiologists are inclined to follow Claude Bernard, that the blood is not to be regarded as a fluid tissue, but as an internal medium, bearing the same relation to the constituent tissues as does the external medium to the individual. If we take this view, it must, I think, be the plasma or lymph rather than the blood itself, which should be regarded as an internal medium, seeing that it is the plasma alone which penetrates into the intercellular spaces, bathes the cells with fluid, and thus constitutes what Dr. Harry Campbell has happily and aptly termed: "the internal cell environment."[1] On the other hand, arguments have been advanced in favour of regarding the blood as a tissue, especially recently, by Dr. William Hunter.[2] Whether regarded as a medium or a tissue, a mechanism exists which in all ordinary circumstances maintains a standard, within certain limits, both as regards its quantity and quality.

With regard to the quantity of blood, it has been shown to vary in relation to the body weight in different animals, and that in man it is about one-thirteenth of the body weight. The quantity of blood is liable to constant variations, whilst oscillating round an equilibrium, but unfortunately we have no means by which, clinically, we can estimate the quantity. The mere capacity and fulness of the superficial vessels teach us nothing of the volume of the blood, as we cannot at the same time estimate the amount of blood contained in the capillaries and small veins of the abdominal viscera.

[1] *The Causation of Disease*, by Harry Campbell, M.D. Lewis, 1889, p. 18.
[2] Transfusion, BRITISH MEDICAL JOURNAL, July 20th, 1889.

The Composition of the Blood.—The normal blood consists of formed elements floating in a fluid—the plasma.

The Plasma or Liquor Sanguinis.—The plasma is a clear fluid of a faint straw colour, consisting of fibrin, or fibrin factors, and serum. It is alkaline in reaction, owing to the presence of disodic phosphate and sodium bicarbonate. The reaction of the blood has received but little attention, but von Jaksch has shown that it is diminished in pernicious anæmia, leukæmia, and in fever;[3] and Haycraft states that the reaction of the blood in different conditions may vary as widely as that of the urine. The specific gravity of the plasma varies from 1026 to 1029. The specific gravity of the blood as a whole varies from 1035 to 1068 (Lloyd Jones), or from 1045 to 1075 (Landois). Some valuable observations on the specific gravity of the blood have recently been made by Dr. Lloyd Jones.[4] According to his observations, it is highest at birth, reaches its minimum between the second week and second year, and rises gradually to a point attained in the male between the ages of 35 and 45 (1058.5), and in the female after the climacteric (1054.5). It tends to be higher in the male than in the female, and is probably only the same in the two sexes at the extremes of life. The effect of pregnancy is to diminish the specific gravity to a slight extent within the limits of health. Solid and liquid food cause a fall in the specific gravity, if no alcohol is taken. Gentle exercise causes a fall, but violent exercise and free perspiration cause a rise. It is subject to "diurnal variation," tending to fall during the day and rise during the night's rest. These observations appear to me important, as the specific gravity of the blood is likely to cause an alteration in the red blood corpuscles. Ehrlich has shown that a change of the red corpuscles from the normal to that of degeneration, as displayed by staining with eosin-hæmatoxylin, can be demonstrated in simple traumatic anæmia a very short time after the bleeding. It thus appears, according to him, that the diluted condition of anæmic serum, as such, exercises an injurious influence upon many blood discs. In pernicious anæmia the specific gravity is usually between 1028 and 1038. With fibrin and its formation we shall not concern ourselves, merely remarking that the amount of fibrin seems to present remarkable variations in anæmic conditions. The serum consists of proteids—serum-albumin and paraglobulin (or serum-globulin) fats, extractives, salts, water, and a peculiar yellow pigment (choletelin—MacMunn), on which its colour depends. In anæmia, especially in its severe forms—such as hæmorrhage—there is a diminution in the solids and an increase in the water, so that, temporarily at least, a condition of hydræmia exists. The albuminous constituents, of which hæmoglobin is the chief, are greatly diminished. I do not propose to dwell on the chemical composition of the blood, which will be found very fully dealt with by Dr. Sidney Coupland in his Gulstonian Lectures.[5]

The Formed Elements.—The coloured or red blood corpuscles are biconcave discs of yellow colour. Their average size is 7.5μ (micromillimètres) in diameter, but they range between 6.5 and 8.5 to 9μ, with a thickness of 1.9μ. The percentage of less or greater diameter varies in different individuals. In the newly born and very young child the range is very great, from 3.3μ to 10.3μ, and in certain diseased conditions there is a reversion to this embryonic or infantile type. In such cases the range between the smallest and largest forms may be from 2.5μ to 14μ. To these aberrant forms the terms microcytes and megalocytes have been applied (Osler). The red corpuscles consist of a framework or stroma composed of globulin, which is impregnated with a red pigment consisting of hæmoglobin, which is loosely associated with the stroma from which it may be separated. The stroma appears to have a spongy structure, which soaks up the hæmoglobin. The coloured corpuscles have no distinct membrane. The hæmoglobin may be split up into a proteid belonging to the globulin group, and into a pigment containing iron—hæmatin. The red corpuscles not only vary in size, but in colour, according to the amount of hæmoglobin they contain. This variation in colour, which can scarcely be observed in health, becomes very conspicuous in anæmia. Apart from the quantity of hæmoglobin in a corpuscle, there is no evidence of variations in its quality be-

[3] *Zeitschr. f. klin. Med.*, xiii, S. 350.
[4] *Journal of Physiology*, 1887.
BRITISH MEDICAL JOURNAL, 1881.

yond the amount of oxygen combined with it, and which constitutes the difference between the bright scarlet colour of arterial blood and the purplish colour of venous blood.

Nucleated red corpuscles are found in the embryo, but never, as far as I am aware, in post-embryonal life in conditions of health. As regards the number of red corpuscles in healthy blood, 5,000,000 per cubic millimètre is generally accepted as the average; but, as Hayem,[6] Laache,[7] and others have pointed out, the residents in towns may have only 4,600,000 or 4,500,000 per cubic millimètre when in good general health. The number 5,000,000 per cubic millimètre may be exceeded, and taking the two sexes together the range of health may be said to extend from 5,500,000 to 4,000,000 per cubic millimètre; or, taking the sexes separately, in men the range is from 5,500,000 to 4,500,000, and in women from 5,000,000 to 4,000,000. In this country, where the estimations are usually made by Gowers's very convenient hæmacytometer, the corpuscles are expressed in percentages of the normal—the normal = 100. Expressed centesimally, the range of the two sexes is from 110 to 80; or of the sexes separately, that of men ranges from 110 to 90 per cent., that of women from 100 to 80 per cent.[8]

The Sources of the Red Blood Corpuscles—Hæmogenesis.—At an early stage of embryonal life, when blood makes its appearance, it is a colourless fluid containing only white corpuscles (each with a nucleus), which are derived from certain cells of the mesoblast. These white corpuscles change into red ones, which become flattened, and their protoplasm gets homogeneous and of a yellow colour. All through embryonal life new white corpuscles are transformed into red ones. In the embryo of man and mammals these red corpuscles retain their nuclei for some time, but ultimately lose them. New nucleated red blood corpuscles are, however, formed by division of old red corpuscles.[9] Such is a concise statement by Dr. Klein of the development of the red corpuscles during embryonal life, and no differences of opinion practically exist on this subject. We see foreshadowed here the two modes of development of the red corpuscles believed by observers to take place in post-embryonal life, that is, from the colourless blood corpuscles and from pre-existing red corpuscles, each of which finds supporters. Whilst many histologists and physiologists believe that the red corpuscles are transformed leucocytes, of late a growing uncertainty has spread whether the evidence upon this point is conclusive. Practically all are agreed that a nucleated red blood corpuscle is the immediate precursor of the fully developed non-nucleated red blood corpuscle. The seats of origin of the red corpuscles are generally believed to be the bone marrow, the spleen, and the lymphatic glands, whilst some believe the thyroid body has blood-producing powers.

The tendency of all recent researches following the teaching of Neumann has been to narrow down the birthplace of the red corpuscles in man to the marrow of the bones, but we shall have to pass in review the evidence in favour of the other asserted sources. That the marrow takes a very active share, or the chief share, in blood production is now universally admitted, but the details of the development of the red corpuscles are still much disputed. The evidence that the marrow is concerned in the production of the red corpuscles is mainly that nucleated red corpuscles are always found in this situation, and that their numbers are enormously increased when blood formation is in a state of high activity. Moreover, when hæmogenesis is very active, the yellow marrow of the diaphyses of the long bones and the cancellous tissue of the flat bones disappears, and is replaced by red marrow, having the colour and consistence of raspberry jelly.

The development of the red corpuscles being admitted to take place in the marrow, there are differences of opinion as to the mode in which it occurs. It is believed by many that the red corpuscles arise from the parenchyma of the marrow, either from marrow cells (Neumann, Osler, etc.), or from leucocytes (Kölliker, Fuhrner, Malassez and Gibson), and that their mode of origin is *extravascular*, whilst Bizzozero and Torre, and more recently Denys,[10] believe that it takes place within the lumen of the vessels, that is, that it is *intravascular*. Bizzozero has modified his original opinion in the light of his further observations. At one time he believed that the red corpuscles developed out of colourless corpuscles, the latter passing out of the marrow pulp into the veins of the marrow before assuming hæmoglobin (Gibson). Bizzozero and Denys further agree in recognising an early or immature stage of the red corpuscles in certain cells within the vessels which they call "erythroblasts," but they differ in one important particular in that Denys believes the erythroblasts are transforming leucocytes, whilst Bizzozero maintains that the erythroblasts are young red blood corpuscles containing hæmoglobin.

We owe so much of our knowledge of the structure and functions of the marrow to Bizzozero's investigations, and his latest paper[11] appeared to me to place the facts so clearly and capable of verification that I have obtained the assistance of Dr. James Galloway to carry out a research on the marrow on Bizzozero's lines. These confirm in all essential particulars the conclusions arrived at by Bizzozero, and I have the opportunity, thanks to Dr. Galloway's help, of illustrating the mode of development of the red corpuscles.

In only one particular have we been unable to follow Bizzozero, and that is on the condition of the marrow in animals rendered anæmic by bleeding, and this is owing to the restriction which is placed on experimental research on animals in this country. I have not had the time to obtain the necessary licence by which we are fettered in this country. The observations we have made have been on fowls and pigeons, as Bizzozero and others have found that the marrow of birds is peculiarly favourable for the study of blood development, the ovoid shape and nucleated condition of the red corpuscles rendering confusion between them and other cells more easily avoidable. Indeed, one may go so far as to say that the marrow of birds should be previously studied before one enters upon the investigation of human marrow. Neumann, Malassez, Geelmuyden, and Gibson believe the red corpuscles originate from marrow cells, though the former at one time thought they arose from leucocytes in the bone marrow.

Gibson, whose paper[12] is a valuable contribution to medicine, from which I have gained much information, has described very fully and carefully the changes that take place in their development from marrow cells. He describes a thin ring containing hæmoglobin at the periphery of the cell; this gradually increases so as to fill the whole space between the cell envelope and the nucleus, and as the hæmoglobin-tinted perinuclear substance increases in amount, the nucleus appears to become smaller and to retreat towards the centre of the cell, the cell as a whole at the same time becoming smaller. He believes that the nucleus is the active agent in attracting the hæmoglobin to the cell, and that when its function is fulfilled—that is, when the cell is fully charged with hæmoglobin—being of no further service, it disappears. He believes also that nucleated red blood corpuscles arise in the marrow from white blood corpuscles, and that the white cells which are transformed into nucleated red cells in the bone marrow are not necessarily all produced there, conjecturing that many of them are produced in the lymphatic glands and carried to the bone marrow, there to enlarge and pass through the various stages of transformation.

Osler[13] also believes that the nucleated red blood corpuscle is derived from the clear-bordered narrow cell, there being, in his opinion, no essential difference between the protoplasm of the two cells. He further thinks that the colourless marrow cells are derived from small lymphoid elements resembling free nuclei ("primary lymph cells," "protoleucocytes"). The transformation of the nucleated red cell into ordinary red blood corpuscle is brought about by the gradual disappearance of the nucleus. Osler, too, believes in the development of red corpuscles within the large myeloplaques, and in the elongated cells of the stroma of the marrow, in the

[6] G. Hayem, *Du Sang*. Paris: G. Masson, 1889.
[7] *Die Anæmia*, von S. Laache, Christiania, 1883.
[8] The percentage may be expressed in millions per cubic millimètre by multiplying by 50,000; or millions per cubic millimètre as percentage, by dividing by that number.
[9] Klein's *Elements of Histology*, p. 14.
[10] La Structure de la Moëlle et la Genèse du Sang chez les Oiseaux, *La Cellule*, tome iv, fas. 1.
[11] *Archiv für mikroskopische Anatomie*, Band xxxv, Heft 4, July, 1890, S. 424.
[12] J. Lockhart Gibson, On Blood-Forming Organs and Blood Formation, *Journal of Anatomy and Physiology*, vol. xx, 1886.
[13] BRITISH MEDICAL JOURNAL, 1886, p. 862.

latter case thus supporting the contention of Schäfer[14] that red corpuscles may develop within connective tissue corpuscles.

To return to Bizzozero's observations and our own. Bizzozero advises that the fresh marrow should be teased and examined in its natural fluid, and in a simple solution of sodium chloride (0.7 per cent.), and preparations of fresh marrow hardened in various ways should be examined unstained, and stained with various reagents. Each of these methods is necessary as a control to artificial changes which may be occasioned by the modes of treatment. It appears to me particularly necessary that *sections* of marrow, suitably hardened, should be always examined, as in teased preparations it is difficult or impossible to determine whence cells which are taken to be developing blood corpuscles come from, whether from within the blood vessels or from the parenchyma of the marrow. When a section of marrow (fowl's) is examined with a low power, it is noticed that the vascular network in the long bones consists of a few arteries running in the long axis; from these a few small arteries are given off at an acute angle, which course thence towards the periphery of the marrow, whence they lose themselves in a few narrow capillary vessels. These arterial capillaries open into a close network of very wide venous capillaries which, anastomosing with one another, wander through the whole marrow in a centripetal direction, and empty themselves into large veins which run parallel with the arteries in the long axis of the marrow. The arrangement may be compared to a wheel, the arterial and venous trunks corresponding with the axis and the venous capillaries with the spokes. The great disproportion between the calibre of the arterioles and venules, which is very striking, occasions as a necessity that the blood stream must be peculiarly slow, and therefore favourable to changes taking place within the venules. Moreover, when anæmia is produced, the fat cells are absorbed, allowing of an increase in the parenchyma (lymphatic tissue) and dilatation of the venules. Bizzozero and Denys assert that these capillaries have distinct walls, their outlines being mapped out by a regular border, interrupted here and there by oval elongated nuclei. We can confirm this statement, which is an important one. Some observers believe these venous capillaries have no walls, but are simply tunnelled out of the parenchyma, so that no boundary exists between the parenchyma and the venules.

In extreme degrees of anæmia the venules become so much dilated that they are in many places actually in contact with one another. With sections of marrow hardened in Müller's fluid or in corrosive sublimate, and stained with picric acid, alcohol, and hæmatoxylin, it can be ascertained that there are no hæmoglobin-containing cells external to the blood vessels. Within the arteries and venous trunks blood corpuscles of the usual type found in the blood elsewhere are seen, but in the venous capillaries there are found young embryonal forms of red corpuscles undergoing division. Even in the marrow of healthy animals one observes a tendency of the corpuscles in the venules to arrange themselves in the following manner. In the centre of the lumen are red corpuscles fully developed and deeply stained with hæmoglobin. In the peripheral part of the vessel are found near to, or in contact with, the wall of the vessel a varying number of leucocytes, and in the intermediate area, or middle zone, are a number of cells undergoing mitosis, and which are composed of a spherical nucleus, which is surrounded by an envelope of hæmoglobin-containing protoplasm. These are the young red corpuscles undergoing indirect division, to which, following Löwitt, the name of "erythroblasts" has been applied by Denys and Bizzozero. In animals made highly anæmic by bleeding Bizzozero describes (1) the venous capillaries are markedly widened at the cost of the parenchyma; (2) in the parenchyma is seen an atrophy of the fat cells and a hyperplasia of the leucocytes; (3) the lumen of the venous capillaries is filled out in a most marked manner by young red blood cells and leucocytes; the fully grown red blood cells form narrow streaks in the axis of the vessels; the leucocytes, as well as the young red blood cells (the latter in greatly the preponderating quantity) increase in number actively by the process of mitosis. So far Denys and Bizzozero travel together, but regarding the nature of the erythroblasts they differ. Denys maintains that the erythroblasts are developmental forms free from hæmoglobin between the leucocytes on the one hand and the fully developed red blood corpuscles on the other hand. Bizzozero, on the contrary, asserts that the erythroblasts always contain hæmoglobin, and that they arise from previously existing hæmoglobin-containing cells by a process of karyokinesis. He points out that Denys's observation that the erythroblasts contain no hæmoglobin has been caused by the influence of corrosive sublimate upon the hæmoglobin, and that by examining fresh marrow, marrow hardened in Müller's fluid, and by processes of staining recommended by H. F. Müller and Foà—one may satisfy himself that the youngest forms of red cells already contain a trace of hæmoglobin. Many of these are dividing by mitosis, and he asks, "Can there well be a younger element than a cell which is not yet independent, as it still forms part of another cell from which it takes origin?" Dr. Galloway's and my own observations entirely confirm those of Bizzozero that the erythroblasts at all stages contain a greater or less amount of hæmoglobin.

Bizzozero's conclusions may be briefly summarised by the following statement—That in the marrow of birds: (1) owing to the great disproportion between the calibre of the arteries and venous capillaries, the blood must circulate in the latter with extraordinary slowness; (2) that in the venous capillaries, the blood is different to what is observed in the vessels of any other part of the body, in that the fully developed red blood cells occupy only the axis of the lumen; around them are situated quite up to the vessel wall two sorts of elements; leucocytes are to be found in larger quantities than is usually the case in other parts of the body, and red blood cells which are to be recognised as young red blood cells (erythroblasts) by their round or slightly oval shape, the characters of their protoplasm and their nucleus. Moreover, a certain number of erythroblasts are seen in a state of indirect division. The vessels of the marrow are the only regions of the organism of birds, in their adult condition, in which erythroblasts and their developmental forms are found; in these vessels alone is one able to locate the source (herd) of the red blood cells. (3) In anæmia the venous capillaries are enormously dilated at the expense of the parenchyma, especially the fat cells, the lymphoid tissue increasing, and the leucocytes showing more active mitosis. In the lumen of the vessels, the number of leucocytes increase as well as the erythroblasts, which almost completely fill up the lumen of the venous capillaries; the fully grown red blood cells occupy only a small space corresponding to the axis of the vessel. The number of leucocytes which are found in a state of mitosis is considerable, but that of the erythroblasts is great. (4) On account of the characteristics of its structure, the network of the venous capillaries of the marrow is distinguished from all other networks of the body. It subserves the production of two morphological elements of the blood, namely, the leucocytes and the red blood cells. In the manufacture of the first are associated with it many other organs of the body, and among them also the parenchyma of the marrow itself; in the production of the latter, on the other hand, the marrow is alone concerned. (5) The vascular network of the marrow may, therefore, be considered as a true endovascular organ—a gland which secretes morphological elements. Bizzozero and Torre,[15] in 1884, showed that the blood development in the marrow is the same in all vertebrata as in birds, but the former states he has not found blood corpuscle-containing cells in the marrow of birds. The three main points appear to me to be quite certain, at least as regards the marrow of birds: (1) that development of red corpuscles takes place entirely within the vessels (venules); (2) that the young red corpuscles arise from pre-existing red corpuscles; (3) that the young red corpuscles are formed by a process of indirect division (karyokinesis).

Thus, whilst all observers are agreed that the nucleated red blood corpuscle is the immediate precursor of the fully-developed non-nucleated red corpuscle, they are divided into three camps as regards the origin of the nucleated red blood corpuscle: (*a*) Those who believe that they arise from marrow cells; (*b*) those who believe in their derivation from colour-

[14] Creighton has described the development of red corpuscles in blood cysts by a process of budding from embryonic cells lining their walls.

[15] *Virchow's Archiv*, Band xcv.

less corpuscles (leucocytes, leucoblasts, erythroblasts)—they have not clearly indicated which of the several varieties of the colourless corpuscle is the parent of the red corpuscles; (c) those who deny altogether the development of red corpuscles from white corpuscles, and who believe that all red corpuscles arise from pre-existing red corpuscles by a process of indirect division (karyokinesis). Further, those who adopt the two first views believe in the extravascular origin of the red corpuscles; whilst those adopting the last believe it to be entirely endovascular. It is still a matter of uncertainty as to how the nucleus disappears. Some believe, with Rindfleisch and Ehrlich, that it passes bodily out of the cell; others, with Kölliker and Neumann, that it breaks down and becomes absorbed in the general cell substance. No entirely satisfactory explanation has been hitherto afforded of how the nucleated red corpuscle derived from a narrow cell or leucocyte acquires its biconcave form. That this very special characteristic of the fully-grown corpuscle is no accident we may feel sure, but evidence of a developmental tendency. If we accept the view that the nucleated red corpuscle is derived from a pre-existing red corpuscle no difficulty is experienced, as we have simply an instance of a cell reaching its ultimate and full development, just as a ciliated columnar cell is evolved out of a flat or spherical embryonic epithelial cell. On the other hand, great difficulties are presented in regarding the fully-developed red corpuscle reaching such a highly-specialised form from cells offering such wide differences as the colourless corpuscles and marrow cells.

Blood-forming Functions of the Spleen.—In the human subject the spleen appears to have a limited capacity of blood generation in extrauterine life. Neumann and Freyer have been led to the conclusion that the spleen is practically not a blood-forming organ. Bizzozero and Salvioli have demonstrated that it has decided, if not very active, blood-forming powers. Much of the difference of opinion that exists has arisen from the kind of animal that has been the subject of experiment, for the relative share taken by the cytogenic organs in blood formation differs considerably in different classes. Whilst caution must be exercised in inferences drawn as to the hæmopoietic functions of the human spleen from observations and experiments on animals, seeing how widely they differ amongst themselves, as far as the evidence afforded by the effects of removal of the spleen goes, it is in favour of the human spleen behaving in this respect like the spleen of the dog. A case of removal of the spleen, recorded by Credé,[16] was followed by decrease in the red corpuscles—many of those present were of small size, and some nucleated—and by an increase, relative and actual, in the number of white corpuscles. The blood gradually changed to the normal again by the end of four months and a half. Bizzozero and Salvioli found in guinea-pigs and dogs, made anæmic by bleedings, nucleated red corpuscles in greater or less number. In dogs the spleen became "rose-coloured and very much swollen," and, by simply looking at it, they could say "there will be nucleated red cells here" (Gibson). Dr Gibson[17] has recently made some careful and important investigations on the hæmopoietic properties of the spleen, and concludes that the blood-forming action of the spleen is, in extrauterine life, a subordinate one, but that when the reserve blood-forming capabilities of an animal are called on its activity is increased. That the spleen gives rise to colourless corpuscles is generally admitted. They arise, partly by indirect division from other colourless corpuscles, and partly by budding from the cells of the stroma (Klein).[18]

Blood-forming Functions of the Lymphatic Glands.—It has long been held that lymphatic tissue, whether arranged as glands or occurring in patches of adenoid connective tissue (as in the agminated and solitary glands of the intestine), are the chief producers of colourless corpuscles. It is also thought they may have the power of transforming colourless into red corpuscles. That this power, if it exists, is very sparingly exercised in general is evidenced by the well-known characters of lymph. It is, however, possible that when lymph is delayed in its channels it may bring about the conversion of leucocytes into red corpuscles. This has, it is believed by Gibson, been proved, where, after ligature of the thoracic duct (in a dog), a number of nucleated red corpuscles were found in the abdominal glands. The same results are believed by some to be brought about by the experiments of disease. In cases of chyluria, lymph scrotum, and elephantiasis, in all of which lymphatic trunks are obstructed, the fluid contained in the lymph vessels is said to be reddish, or even as red as blood, when unmixed with chyle. Dr. Gibson thinks that the normally scarcely existing powers of blood transformation in health may be called into greater activity by demands upon the blood-forming powers of the individual. Foà and Salvioli[19] found red corpuscles forming endogenously within large protoplasmic cells in lymphatic glands.

Blood-forming Properties of the Thyroid Body.—It has recently been suggested that the thyroid body, if not in ordinary circumstances a blood-producing organ, may take on this function when all the latent capacity of blood-formation of the organism is called into play. The evidence on which this opinion is based has been shown by Gibson to be very meagre and inexact, and it may be accepted that the thyroid body has no hæmopoietic functions.

We have thus considered all the usually ascribed sources of blood-formation, and find that it practically amounts to this: That in postembryonal life the red blood corpuscles have their birthplace in the marrow, though a slight power of hæmogenesis may exist in the spleen, and possibly in lymphatic structures. We now turn to the other end of the life of the red blood corpuscles.

The Seats of Blood Destruction: Hæmolysis.—The life of every cell is limited, and the red blood cell is no exception to this universal law.

We have abundant indirect evidence of destruction of red corpuscles in the formation of bile, the pigment of urine, and other pigments derived from hæmoglobin. The average life of a red corpuscle has been estimated by Quincke at about two weeks. The most active destruction appears to take place in the portal system of blood vessels. In the spleen, marrow of bones, lymphatic glands (and in the liver of the embryo), are found large cells containing blood corpuscles. The corpuscle-containing cells may contain one or two, or even as many as ten or twenty, red corpuscles in their interior, in all stages of disintegration, from the almost normal red corpuscle to mere granules of blood pigment. From the occurrence of these blood corpuscle-holding cells in the organs of blood formation, one conjectures that by breaking down effete corpuscles they subserve the purpose of supplying the new corpuscles with the necessary raw material for the building up of hæmoglobin-containing protoplasm.

Osler has also described[20] "included corpuscles" in the blood stream, that is, colourless corpuscles containing one or more red blood corpuscles. They are very rare, and must be regarded as red corpuscles which have come to a premature end, and are being removed by predatory or proctorial phagocytes. In ordinary circumstances, when the red corpuscles are about to disintegrate, according to Quincke, they are taken up by the white corpuscles in the hepatic capillaries, by the cells of the spleen, and the bone marrow, and are stored up chiefly in the capillaries of the liver, in the spleen and in the marrow of bone. They are transformed, partly into coloured and partly into colourless proteids, which contain iron, and are deposited in a granular form or are dissolved. Part of the products of decomposition are used for the formation of new blood corpuscles in the marrow and spleen, and also perhaps in the liver, while a portion of the iron is excreted by the liver in the bile (Landois and Stirling). In pernicious anæmia the liver has been shown by Stahel, Quincke, Peters, Rosenstein, Mott, and others, to contain an excess of iron. It was at one time thought possible that this excess of iron was due to its administration; but the observations of Kobert, Cohn, and Gläveck have proved such not to be the case. Dr. William Hunter has worked out very completely and carefully the difficult problem of blood destruction.[21] He describes it as of two kinds. (a) *Passive destruction*, which

[16] *Langenbeck's Archiv*, Band xxviii, p. 401.
[17] *Op. cit.*, p. 173.
[18] *Quart. Journ. of Microscop. Science*, vol. xv, p. 369.
[19] Landois and Stirling, *Textbook of Physiology*, p. 10.
[20] *Loc. cit.*, p. 862.
[21] Summary of Three Lectures on Transfusion, BRITISH MEDICAL JOURNAL, 1889, vol. ii.

is the ultimate destiny of the red corpuscles which live their allotted span and undergo a process of natural decay. This form is evidenced by the presence of pigment in certain organs of the body, chiefly in the spleen, capillaries of liver, and bone marrow. "The chief character of this pigment is the large and varying size of the individual pigment particles, and their irregular shape." It is never found within the liver cells, but always lies enclosed in leucocytes within the capillaries. (*b*) *Active destruction*, in which the hæmoglobin, instead of remaining within the red corpuscles, escapes from them into the plasma, and is in great part excreted by the liver as bile pigment. "The chief character of this pigment is the small uniform size and spherical shape of the individual particles. The assumption of this form by the pigment is independent of the action of the cells, but the conversion of the hæmoglobin into blood pigment is as much the result of cellular activity as in passive destruction." The pigment is formed from free hæmoglobin, and is found chiefly within the liver cells in the portal zone. In conditions of health no trace of blood pigment is usually found as the result of the breaking up in, and the excretion of this free hæmoglobin from, the body. But when, as in pernicious anæmia, excessive activity of blood destruction takes place, it is found abundantly in the liver cells. The amount of bile pigment formed is an index of the amount of active destruction. "It is greatest during digestion, and is most marked of all five or six hours after the ingestion of food. Since we cannot conceive," Dr. Hunter writes, "of an increased formation of bile pigment without a corresponding greater supply of hæmoglobin in the liver cells, we must conclude that the ingestion of food is followed by increased active destruction." It appears to me doubtful whether we need go quite so far as this latter statement with Dr. Hunter. As far as I can see there is some force in Voit's remark: "There is no reason why there should be a greater destruction of red corpuscles during digestion than during the fasting state." One can understand that bile pigment formed during fasting must be derived from destruction of red corpuscles, as there is no other source for the hæmoglobin; but in a diet containing flesh, when bile pigments are greatest, the hæmoglobin taken as food and converted into hæmatin is at least a possible source of bile pigment, without ever becoming organised into blood. According to Dr. Hunter, with whose conclusions on this point most physiologists are in agreement, the spleen and the gastro-intestinal mucosa are the most active seats of blood destruction.[22] The effete and many vigorous red blood corpuscles undergo destruction there; their liberated hæmoglobin is carried by the portal blood to the liver, where it becomes converted into bile pigments. The bone marrow is (outside the portal circuit) the only other seat of blood destruction. The share of the spleen (or, at least, the importance of its share) in hæmolysis is not absolutely established. Schäfer has examined the blood from the splenic vein in a large number of animals, and the result of his observations is decidedly against the view that the spleen is an organ concerned in the destruction of red corpuscles.[23] Dr. Mott has shown that the spleen often does not give the iron reaction, and states that chemical analysis may show no excess of iron, although the liver may contain a great excess over the normal. Dr. Hunter, however, only regards the spleen as *one* of the seats of blood destruction, which goes on when the spleen is removed. Moreover, the presence of iron albuminates in the spleen and bone marrow may be explained by the peculiarities of the circulation in these structures, by the delay in the capillary veins caused by the disproportion between their calibre and that of the arteries discharging into them.[24]

The Colourless or White Blood Corpuscles (Leucocytes).—Amongst the important advances in our recent knowledge of the blood is the recognition that the colourless corpuscles differ much amongst themselves, certainly as regards their morphological characters, and probably as regards their physiological functions. Speaking generally, the colourless corpuscles are larger than the red corpuscles, having an average size of 10μ, but varying between 4 and 14μ. The colourless corpuscle may be described as a globular mass of protoplasm containing one or several nuclei. They number in health about 6,000 per cubic millimètre (Hayem), but their numbers vary much at different times in the same individual in health, and still more so in disease. Max Schultze, Bizzozero, Heyl and Ehrlich, and others have pointed out important differences displayed by them. Ehrlich, especially, has started an important inquiry, which promises practical aids to our knowledge. He has shown,[25] not only that the granules he has described in them differ in their colouring by basic, acid, and neutral dyes, but also in their behaviour in solvent fluids, in their size and shape, in the influence upon them of high temperatures (100° to 180° C.), and in their distribution in the body of the cell. Space prevents my doing more than giving the results of his investigations which have some bearing on my present subject: "(1) In all acute leucocytoses only the mono- and poly-nuclear forms are increased, while the eosinophile cells are apparently correspondingly diminished. (2) An increase of eosinophile cells always indicates chronic changes in the blood-forming organs. (3) Decrease in the number of leucocytes and preponderance of the mononuclear forms, when associated, are a sure sign of defective nourishment of the system of long duration. (4) Severe traumatic anæmia always gives rise to poikilocytosis and the appearance of nucleated red blood corpuscles; frequently also to an increase of polynucleated, eventually of mononucleated, elements. (5) In leukæmic blood the absolute number of eosinophile cells[26] is always increased, often to a very great extent." Of the origin of the white corpuscles, all are agreed that they arise from lymphatic structures, the lymph glands, and disseminated lymphatic tissue, for which Dr. Pye-Smith has proposed the comprehensive and convenient name "lympharia," from the spleen and the bone marrow. Apart from their disputed share in the genesis of the red corpuscles, the active part they play in inflammation as established by Cohnheim, they have recently been shown by Metchnikoff, Ruffer, and others, to act as "phagocytes" or scavengers, whose function it is to remove from the blood and tissues micro-organisms and other deleterious matters. When their life cycle is completed, or under the influence of too powerful bacterial action, they undergo disintegration forming the "elementary granules" found in the blood.

Blood Platelets.—Besides the red and colourless corpuscles, the blood contains some smaller formed elements concerning the origin, nature, and functions of which there are as many theories as the bodies themselves have received names. There are the "hæmatoblasts" of Hayem, the "globulins" of Pouchet, the "Körnchenbildungen" of Max Schultze, the "Elementarkörperchen" of Zimmermann, and the "Blutplättchen" of Bizzozero. They are circular or oval in shape, with well defined margin, and consist of brightly refractile protoplasmic material of a light grey colour, and in the human subject are destitute of nuclei. They vary in size from 1μ to 1.3μ. Their numbers have been variously estimated. Hayem states that on the average there are 250,000 hæmatoblasts in the cubic millimètre. Osler has calculated them at from 125,000 to 300,000 per cubic millimètre, Fusari at from 18,000 to 250,000. Hayem and Pouchet regard them as embryonic red corpuscles, and believe they have been able to trace transitional forms between them and the fully developed red corpuscles. Neumann, Max Schultze, Riess, and Ehrlich, on the other hand, believe that they are the result of blood disintegration, though Osler says there is no corroborative evidence of this. Hayem has described them as tinted with hæmoglobin. Osler, on the other hand, denies that the largest platelets contain even a trace of colour, and Bizzozero also says that they contain no hæmoglobin. What appears at first sight to be an argument in favour of Hayem's view is the fact, generally admitted, that when blood regeneration is most active (as, for example, after hæmorrhage) they are most numerous in the blood. On the other hand, Neumann, Ehrlich, Riess, and Leube believe that in such circumstances

[22] Klein has shown there are reasons for believing that the blood corpuscles are disintegrated by a destructive influence of the matrix of the spleen upon the corpuscles, and not in the manner usually described, the corpuscles being taken up by lymph cells. *Op. cit.*, p. 371.

[23] *Proc. of Physiolog. Soc.*, May, 1890, quoted by Mott.

[24] *Practitioner*, August, 1890, p. 81.

[25] *Zeitsch. für klin. Med.*, 1880, p. 553.

[26] The "eosinophile cell," whose normal and exclusive place of origin is the bone marrow, is a constant constituent of normal blood; frequently there are from 2 to 4 per cent., and their number may be as high as 10 per cent. *Charité Ann.*, xiii, 1888, p. 306.

the chemical changes and thinning of the blood exercise a deleterious influence on the red corpuscles, causing them to disintegrate, and thus give rise to the hæmatoblasts.

There have not been wanting observers who believe that the platelets are *arte facta*—the product of changes in the red corpuscles after they are shed. There is no doubt that similar bodies may be artificially produced, but there seems no real ground for this view of their ordinary production. They are present at the moment blood is withdrawn, and examined under the most favourable circumstances such as instantaneously fix the formed elements. Moreover, Bizzozero, Osler, Karl Laker have observed them flowing in the blood streams of living animals, after taking all precautions that the conditions did not interfere with the vascular contents. Their presence, therefore, whatever their significance, must be regarded as established, and of natural occurrence. Hayem believes they arise from lymph corpuscles while yet in lymph vessels; Pouchet, that they arise in the blood plasma itself by a process analogous to the precipitation of fibrin. Schmidt and others believe they are due to disintegrating colourless corpuscles, whilst Bizzozero is unable to decide whence they come. Recently, Gibson, who has examined into the question with great care and impartiality, believes that under the various names given to these formed elements are included two distinct elements, and that confusion between these accounts for much of the discrepancy in the statements of various observers. He prefers the term "microcyte" for them.

I am afraid it is impossible to choose a term free from all objections, but burdened as this subject is with multitudinous names for the same thing, it appears to me that we should try and agree upon one term. So high an authority on physiology as Dr. Michael Foster has adopted the term "platelet," and it would be a matter of general convenience if all British writers would follow his example. Substituting then the term platelet for microcyte, Dr. Gibson's views are put shortly as follows: [27] There are (1) coloured platelets which, he believes, are simply fragments of broken-down red corpuscles,[28] and (2) colourless platelets which correspond to the "Blutplättchen" of Bizzozero, and these, he believes, are mainly the escaped nuclei of the red corpuscles, though occasionally they may be derived from the nuclei of white corpuscles when these disintegrate. It will thus be seen that Hayem and Pouchet are the chief exponents of the doctrine that the platelets are developmental forms of red corpuscles. Whilst there are widely different views as to the nature and origin of the platelets, there is practically universal accord that they are active agents in the process of coagulation, and in the formation of coagula.

The Invisible Corpuscles of Norris. These have been proved by the researches of Mrs. Ernest Hart[29] and Gibson to be red blood corpuscles decolorised by the method of preparation.

Besides these definite forms, "elementary granules" have been described by Zimmerman and Beale. They are irregular bodies, much smaller than the ordinary corpuscles, and appear to consist of masses of protoplasm detached from the surface of leucocytes, or derived from the disintegration of these corpuscles or of the blood platelets. Others, again, are completely spherical granules, either consisting of some proteid substance or fatty in their nature. The protoplasmic and proteid granules disappear on the addition of acetic acid, while the fatty granules (which are most numerous after a diet rich in fats) dissolve in ether (Landois and Stirling).

Hæmoglobin. The functional activity of the blood depends upon the amount of hæmoglobin contained in the red corpuscles. The hæmoglobin is estimated by various methods—in this country chiefly by means of Gowers's hæmoglobinometer, which is extremely easy in employment, and gives sufficiently exact results for clinical purposes. Under conditions of health the red corpuscles contain a fairly uniform amount of hæmoglobin, so that by estimating the number of corpuscles we have a tolerably accurate indication of the hæmoglobin richness of the blood; or, *vice versâ*, by estimating the hæmoglobin we may gauge the number of corpuscles. In anæmia, however, great variations may occur in the relative proportion of hæmoglobin and corpuscles, so that it is necessary to ascertain the functioning value of the blood to ascertain both the corpuscular richness and the hæmoglobin richness. Hayem recommends that the hæmoglobin richness should be expressed in terms of sound blood, which represents the functional value of the blood. If we divide the hæmoglobin richness expressed in healthy corpuscles by the actual number of red corpuscles, we obtain the value of the individual corpuscle. In dealing with percentages all we have to do is make the percentage of hæmoglobin the numerator and the percentage of corpuscles the denominator of a fraction. Osler has well summarised the variations which take place in the hæmoglobin contents of the red corpuscles:—

(1) In chlorosis, the hæmoglobin is reduced out of proportion to the reduction of the corpuscles, so that the individual worth of each red corpuscle in colouring matter may be very greatly lowered. Thus, the true anæmia (or functioning properties of the blood) may be very much greater than the number of red corpuscles per cubic millimètre would indicate.

(2) In ordinary anæmia from hæmorrhage or from organic disease the average worth in hæmoglobin of each corpuscle usually remains unaltered, and the percentage of colouring matter corresponds with the percentage of the corpuscles.

(3) In certain cases of pernicious anæmia, the interesting fact has been ascertained that the percentage of hæmoglobin is increased, and the anæmia is in reality not so great as the reduction in the number of corpuscles would appear to indicate.

Karl Laker[30] has pointed out that the percentage of hæmoglobin (as tested by Fleischl's hæmometer) may be used as a diagnostic point between benign and malignant tumours. In the former the hæmoglobin is not diminished, whilst it is in the latter. My own observations show that in some cases of cancer (where there was no hæmorrhage or discharge) the hæmoglobin reduction was greater than that of the corpuscles.

Having now—I am afraid at wearisome length—considered the blood in health, we are in a position to discuss the departures from this standard, in so far as they relate to anæmia. Anæmia may be defined as a diminution in the quantity of the blood, of its corpuscles, or of its colouring matter. To the first the term *oligæmia* is applied, to the second *oligocythæmia*, and to the last *oligochromæmia*. Though these do not by any means necessarily correspond in all forms of anæmia, yet as a rule they are coincidently modified. They all have this in common that they indicate "the poverty of the blood in normal functional red corpuscles" (Cohnheim), which is the criterion of the functional activity of the blood.

We have seen that blood corpuscles are constantly being used up in the production of bile, urinary colouring matters, and other pigments derived from hæmoglobin, and the other constituents of the blood are consumed in the processes of tissue metamorphosis and secretions, and that these losses are met by a continual process of blood regeneration, so that a balance existing between the income and expenditure of the blood, a normal though varying condition or equilibrium, is maintained. Anæmia, on the other hand, implies a want of adjustment between the gains and losses. To which end of the process are we to look for the explanation of anæmia? Is it due to defective hæmogenesis or to excessive hæmolysis? Until quite recently, this question, which was raised by every writer on the subject, was incapable of receiving a definite reply. So little was known of the details of blood formation and destruction that it was impossible to say what share modifications of each of these processes took in the bringing about of anæmia. Great advances have been made in the last few years in our knowledge of these processes, and though there are *lacunæ* to be filled up, we are reaching a position in which we can frame our pathology of anæmia on a logical basis. It

[27] *Op. cit.*, p. 107.

[28] Osler, too, describes microcytes arising from the breaking down of red corpuscles, and, like Gibson, has watched their artificial production in the shed blood. The former states they are abundant in all forms of anæmia, chlorosis, splenic anæmia, leukæmia, pernicious anæmia, Hodgkin's disease, and in the anæmia of cancer, phthisis, and other chronic affections. They are most numerous in the primary anæmias, especially progressive pernicious anæmia. He adds they are certainly not always produced by *post mortem* changes.

[29] *London Medical Record*, 1882.

[30] *Centralblatt f. d. med. Wissenschaf.*, 1887, p. 105.

is on this account that I have gone into such detail in what may be regarded as elementary matters, for as long as it was uncertain whether the histological changes observed in the marrow, the spleen, liver, etc., were to be regarded as the causes or the consequences of anæmia, no rational conclusion could be drawn as to its essential nature. We now have reached tolerable agreement as to seats and evidences of blood formation and blood destruction, and are now able to make these the basis of our pathology. We must, therefore, next proceed to discuss the share each of these processes takes in anæmia. It is obvious that, in simple hæmorrhage of all kinds, anæmia begins from excessive loss or expenditure. It is nearly equally certain that, in profuse discharges of pus or serum from the body, there must be a using up of blood, potential or actual, in the processes which bring these about. The blood-forming capacity of the individual may be in full integrity, but the drain may be such that it cannot keep pace with the demand, and anæmia is the result. Besides these obvious causes of blood expenditure, we have recently, from the closer study of certain forms of anæmia, been taught to recognise that an active destruction of red corpuscles may take place, not from an excess of physiological activity in the employment of the elements so destroyed, but by a process entirely pathological. On the other hand, without any undue calls upon it, blood formation may be defective, either in the quantity or quality of the red corpuscles, when again anæmia results. And, lastly, excessive destruction may be associated with defective formation, and thus each may exaggerate the effect of the other.

Some cases of anæmia are clearly connected with some definite morbid process which has primarily nothing to do with blood formation or destruction, but which stands in relation to the anæmia as cause and effect. It is a matter of practical and clinical convenience, as well as pathological propriety, to separate these cases from those in which no such causes can be ascertained with certainty; though I believe that the ultimate pathological standpoint in anæmia of all kinds must turn on the question of defective hæmogenesis or excessive hæmolysis. Yet if we do not adopt some such primary division, we shall have to group together conditions clinically widely different. How are we to estimate the activity of blood formation and destruction? By clinical observations and the revelations of morbid anatomy. Clinically, the activity or integrity of blood formation in anæmia is indicated, positively, by the character of the blood corpuscles, collectively and individually; and, negatively, by the absence of evidence of blood destruction afforded by secretion of faintly-coloured bile and pale urine. Excessive destruction, on the other hand, is evidenced by the dark colour of the urine and fæces produced by hæmolysis, and perhaps by the staining of the skin and other tissues by products of blood destruction. Morbid anatomy teaches us the actual condition of the blood-forming organs, and supplies us with evidence of whether blood destruction has or has not been excessively active in the organs where this is carried on. With the exception of the changes in the blood-forming and destroying organs, the remaining pathological alterations found in anæmia, the fatty changes in the heart and blood vessels, the hæmorrhages, etc., are the direct consequences of the anæmia, dependent upon its degree irrespective of its cause.

Defective blood formation may depend upon deficiencies in the quantity or quality of the food, in its want of variety, or imperfect preparation; upon failure of the powers of mastication, digestion, or assimilation; upon some defect, inherited or acquired, of the hæmopoietic viscera; or upon such unfavourable conditions as deficiency of light and fresh air, unsuitable temperature, and depressing and unhygienic surroundings. Excessive blood destruction depends upon an increase beyond the normal of those processes which cause active blood destruction, as by the processes of fever and inflammation, or the presence of deleterious substances in the blood. In many instances it is difficult to estimate the share which defective hæmogenesis and excessive hæmolysis play.

Anæmia thus depending on such a variety of causes, it becomes necessary to arrange the cases in some order, and the classification which naturally suggests itself, and which has been adopted by most writers on the subject, is into

1. Secondary and symptomatic anæmia; and
2. Primary and idiopathic anæmia.

In secondary and symptomatic anæmia, we have conditions in which the blood deficiency is not the essential feature of the disease, and in which the other symptoms present are not explained by the existence of the anæmia. In primary and idiopathic anæmia, on the other hand, the anæmia constitutes the main feature of the disease, and the other symptoms present are dependent upon it. Dr. Hunter has,[31] in my opinion, very clearly indicated the criteria of an idiopathic anæmia, which he states should comply with the following conditions: 1. That the changes in the blood (as determined by actual examination) must not only apparently, but actually, constitute the most marked feature of the disease. 2. That the other chief symptoms must, in great part at least, be referable to the altered condition of the blood. 3. With regard to the *post-mortem* appearances that the changes in the blood, whether alone, or in the blood-forming or blood-destroying organs, constitute the characteristic morbid feature of the disease. Dr. Pye-Smith[32] would make a third division of cases of anæmia "formed of all cases of anæmia associated with disease of the cytogenic organs, whether or not leukæmic." These, which undoubtedly form a natural and compact group, clinically and pathologically, should, I think, rather be included under idiopathic anæmia. In leucocythæmia we have not only an increase in the number of colourless corpuscles, but a great deficiency in the red corpuscles, and many of its symptoms are directly due to the anæmia. How is the latter produced in leucocythæmia? Is it due to excessive hæmolysis or to defective hæmogenesis? There is no strong evidence of the former, whilst the marked alterations in one or several of the blood-forming organs are suggestive of the latter. As long as the question of the origin of the red corpuscles from the colourless is unsettled, it is difficult or impossible to give a decisive answer to the question of how the defective hæmogenesis operates. If, as many believe, the red are transformed colourless corpuscles, an arrest of development is a ready explanation. If, on the other hand, all red corpuscles arise from pre-existing red corpuscles, this ready and inviting hypothesis is no longer tenable. I would merely draw attention to one point which appears to me to militate against the view of the deficiency of red corpuscles being caused by non-transformation of colourless into red corpuscles. This is the condition of the marrow in this disease. When red blood formation is active the venous capillaries become dilated at the expense of the lymphoid tissue, and the marrow becomes red. When, on the other hand, there is lymphoid hyperplasia of the marrow, this is at the expense of the venules, wherein the red corpuscles are produced: the consequence is there is defective formation of red corpuscles, whilst the eosinophile colourless corpuscles, which we have seen are formed in the lymphatic tissue of the marrow, are produced in excessive numbers. Ehrlich has, as I have pointed out, shown that the eosinophile colourless corpuscles are always increased in leucocythæmia. In "anæmia splenica" a similar difficulty arises in explaining the deficiency of red corpuscles. It has been attributed, with a good deal of plausibility, to the retention and accumulation in the spleen of large numbers of colourless corpuscles, which should normally be transformed into red corpuscles. This explanation assumes, what has not been proved, that the red corpuscles are transformed colourless corpuscles. Further, we have seen that the spleen has little share in the genesis of red corpuscles. If, moreover, as assumed, the colourless corpuscles are retained in the spleen, as long as the red corpuscle-forming process can be carried on, the lymphatic glands and marrow will furnish abundant colourless corpuscles for the manufacture of red corpuscles, if these really arise from them, as in cases of extirpation of the spleen. The same remarks apply to "anæmia lymphatica" (pseudo-leukæmia—Hodgkin's disease). The lymphatic glands, as we have seen, have little to do with the formation of red corpuscles, and the oligocythæmia must in this case be referred to failure of the function of the bone marrow. "Anæmia myelogenica," which stands very nearly related to idiopathic anæmia, differs from it in the fact that the marrow shows a lymphatic hyperplasia, which, as I have pointed out, must interfere with the blood-forming capacity of the marrow. That cases have begun as idiopathic anæmia, and later passed

[31] Is Pernicious Anæmia a Special Disease? *Practitioner*, August, 1888.
[32] *Guy's Hospital Reports*, vol. xxvi.

into leukæmia, lends, I think, support to the view I take. These blood diseases associated with changes in the cytogenic organs, have, as Dr. Pye-Smith has pointed out, much in common with idiopathic anæmia. Many of the symptoms—the frequency of hæmorrhages, irregular pyrexia, their severity and ingravescence, the resistance to preparations of steel, and the more or less marked influence of arsenic, and the almost invariably fatal issue—are common to both.

Thus I consider all cases in which anæmia is not symptomatic should be regarded as idiopathic. The term "idiopathic anæmia" was, as is well known, first employed by Addison for that particular form of anæmia of which he gave such a masterly description. Others besides myself[33] have urged that it should be restricted to the class of cases described by Addison. The progress of our knowledge, however, in my opinion, now renders it advisable to enlarge its meaning so as to embrace all primary anæmias, and to use it as a generic term, including several species. Of these species two are well defined—chlorosis, and the form described by Addison, which has by common consent come to be called "pernicious anæmia," and which name, I now think, it is useless to oppose. Probably, besides these two species, there are other distinct forms of idiopathic anæmia to which I shall have to allude in subsequent lectures.

ON REMOVAL OF THE UTERUS FOR CANCER.

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A MARRIED lady, 55 years of age, daughter of perhaps the most well-known provincial surgeon of Ireland, was sent to me by Dr. Smith, of Belfast, in the end of July last. Though never strong, her general health was always good. She lost her only two children in giving birth to them, on account of some narrowness of the pelvic outlet that required instrumental interference. The periods had ceased for four years without any unusual disturbance. Twelve or fourteen months ago, after some fatigue or exertion, she first noticed slight red discharge. This soon developed into a hæmorrhage, which gradually increased in severity. She lost flesh, became anæmic and feeble, and her general health gave way.

There was too easily recognised epithelial disease of the cervix, extending into the cavity of the uterus. As I was just leaving town for a holiday, I destroyed at once the whole of the sprouting bleeding surfaces by potassa fusa. After a few days' rest in bed the patient went north to Forfarshire, in the hope that the bracing air of the Grampians would recruit her failing health. The house was high above the sea level, and the weather was cold and wet. Finding that after three weeks she was losing rather than gaining ground, she returned south to Ramsgate, where her health improved. She looked better, though still feeble, when I saw her again in the last week of September. Though there was no hæmorrhage whatever since the caustic potass was used, it was too evident that the disease had spread during the last two months. The vaginal surface was still untouched. The uterus was high in the the pelvis, as is generally the case in stout people, and there was a little narrowness of the outlet. In other respects the local conditions were not unfavourable for extirpation.

After two days' rest, the uterus, which contained a small fibroid, was removed by the vagina. As the uterus was drawn downwards the ligaments were tied in small portions. When possible, catgut ligatures were used, silk only to the upper and firmer part of the broad ligaments, which contained the round ligaments and Fallopian tubes. The ovaries and tubes were quite healthy, and were not interfered with. The large wound into the abdominal cavity was closed by horsehair sutures. No drainage tube was used. Some trouble arose from protrusion of intestine, and some pieces of appendices epiploicæ were always in the way, notwithstanding the presence of several flat sponges. The only anxiety after operation arose from the feebleness of the patient; yet she was up and was moved into another room in sixteen days, and left London on the twentieth day after operation.

[33] *Lancet*, 1878, vol. ii, p. 797.

The first time I performed vaginal hysterectomy for cancer was in the Edinburgh Infirmary in 1881. The same principles guided me then as in the above case, except that I brought down the fundus of a very large uterus through the posterior opening, having first washed away thoroughly a quantity of putrid discharge that had escaped from the uterus into the vagina. This bringing down of the fundus is an unnecessary proceeding. I do not think that it helps the tying of the broad ligaments, and it may be not free from danger. I have not done this again. In this case, from the size of the uterus, the opening was very large, and ten horsehair sutures were needed to close it—one-half this number is generally sufficient. It is nine years since this operation was performed; there has been no symptom of return, and the patient is in the best of health.

I have often wondered why vaginal hysterectomy is so seldom performed in this country. It has for years been a recognised operation in America, in Germany, and in Italy, where it is frequently performed by the galvanic cautery. One reason may be that here it has fallen through between the surgeon and the gynæcologist. I am one of those who believe that we shall ere long see this operation, as well as all other abdominal work, pass into the hands of the regular surgeon, of one whose daily work it is to stop hæmorrhage and close wounds. It was not till ovariotomy was undertaken by a hospital surgeon (then Mr. Wells) that confidence in that operation was established.

The total removal of the uterus for malignant disease must, as a rule, be a better operation than the partial removal of the organ. No one nowadays thinks of removing a bit of a cancerous mamma. To remove as much of the uterus as is possible without opening into the peritoneal cavity, and then to follow up the disease of the cavity by the free use of the cautery, seems to me to be monstrously bad surgery. If the disease be confined to the lips it may be sufficient to stop at the internal os, but even this is not free from some danger. I have again and again opened into the peritoneum in my early efforts, though I have not seen any harm arise from this.

A few weeks ago I saw a lady in whom this accident happened, and on whom I operated nearly ten years ago. She had already been operated on several times before I saw her, and she is one of the few who have kept well. Now, I would never hesitate between the partial and complete removal, for from all we know there may be cancerous nests in the very fundus, even though the disease may seem to the eye quite local and limited. On this point it is refreshing to have the opinions of the German surgeons at the international meeting at Berlin in August last; Martin, Hegar, Olshausen, and many others gave no uncertain sound. Be the method of operation what it may, the great thing is that the principle of operation for total extirpation of a cancerous uterus is now established. There is no difficulty in the operation. It requires care, and there is seldom any trouble in applying the ligatures. There seems to be no reason why it should be attended with a large mortality. Its immediate risks are not great. I have not yet had the misfortune to lose a patient after it.

The two things to be attended to are the careful stopping of all bleeding, and the most rigid antisepsis or cleanliness, as some call it. Drainage is not necessary; indeed, there is little to drain if the wound be carefully closed, and it should be as carefully closed as any other abdominal wound. I prefer strong horsehair to anything I know. These sutures cause no irritation; they may remain in any length of time, and are easily removed. Possibly catgut may be better, but I have had a long experience of horsehair, and am satisfied with it. Many years ago an old medical friend came for me in haste to stitch up a badly torn perineum and rectum in the case of a lady whom he had just delivered by forceps. Some weeks after he called to tell me that she had done well, and was leaving town that afternoon. I asked when he had taken out the stitches; there were seven or eight of them. He had never thought of them, for he supposed I had used catgut sutures. He made some excuse for making an examination before she left, but he found no trace of the sutures, and he has confined her since without accident.

The practice of securing the broad ligaments by strong locking forceps, or even by specially constructed clamps, and

letting these remain on for some days, or till they drop away of themselves, does not commend itself to me as good surgery; neither do I care to use the cautery. The chief risk of this operation arises probably from hæmorrhage, and death from hæmorrhage is not infrequent when the cautery is used. The reason of this is that the action of the cautery must be incomplete, there being no room to apply pressure behind the cauterised parts. The simple way to do this operation is to do it with scissors, to go as wide of the disease as the bladder or ureters will permit, to stop all bleeding and oozing, and to close the wound carefully, uniting peritoneum and all the structures. Some are cured, or die years after of other diseases; and when death does come from a return of the disease, it comes in a milder and less terrible form, generally from some intraperitoneal affection. The misery of the spreading of the disease on to the vagina and outwards, and opening into the bladder and rectum, is generally saved to the patient and her friends.

It need not be added that discrimination in selecting cases for operation is absolutely necessary. Unfortunately, the number who are alarmed in the curable stage is few, for the symptoms of the beginning of cancer of the uterus are unknown to, and are thus overlooked by, the patient. Her attention is rarely drawn to symptoms before the disease is past surgical interference. Operated on at an early stage, uterine disease will show results not much inferior to operations for cancer in other parts of the body.

EXTRACTS FROM AN ADDRESS ON THE PRESENT POSITION OF ANTISEPTIC SURGERY.[1]

Read in the post-graduate course of the University of Toronto, December 19th, 1890.

By J. WILLIAM WHITE, M.D.,

Professor of Clinical Surgery in the University of Pennsylvania; Surgeon to the University and German Hospitals.

For several years it has been my custom in my lectures at the University of Pennsylvania to pass rapidly over the evidence in support of the antiseptic theory of wound treatment, with the remark that the time for argument had passed, and that it was merely necessary now to present such facts as might serve to make clear the principles involved and to emphasise the enormous benefit that has resulted from the application of those principles to practical surgery.

I also thought that the whole history of the development and establishment of this great theory, while including the admirable labours of hundreds of medical men in all parts of the world, and constituting one of the brightest chapters in the record of human progress, yet centred around the figure of the English-speaking surgeon, whose name was identified with it from its incipiency, in whose mind the grand conception first took practical and definite shape, and whose patient, unassuming, conscientious work in elevating his original thought into a working hypothesis and in transforming the latter into a theory of worldwide acceptance, seemed to me to present perhaps the best, and certainly the most important, example of the application of purely scientific methods to practical surgery to be found in the history of the profession.

When, however, a noted surgeon, a successful operator, and a vigorous controversialist undertakes to traverse the whole line of thought and argument upon which my confident acceptance of the theory was founded, denies its basal facts, ridicules its logic, jeers at its methods, challenges its records, and attacks its author and his supporters, it seems to me proper that those of us who are teachers should once more review the evidence, consider the situation, and, according to our conclusions, publicly reaffirm or renounce our faith in the theory and practice of antisepsis.

The antiseptic treatment of wounds might, under Mr. Tait's ruling, be described as a treatment directed against the causes of putrefaction in wounds; but a more accurate definition expands it, as Mr. Cheyne has suggested, so as to include treatment directed against the cause, not merely of the putrefactive fermentation, but of all fermentations.

The sterility of the blood and tissues is denied by Mr. Tait, who says "the germs exist already in the blood and elsewhere, and are ever present, according to the best authorities." The elaborate and carefully conducted experiments of Hauser,[2] Watson Cheyne,[3] and others completely contradict this statement, which is really the foundation of Mr. Tait's argument. The germ theory of fermentation is undisputed. Fermentation in wounds can, therefore, be prevented by the exclusion of germs; it has been shown microscopically that these can be kept out (asepsis) or can be destroyed (antisepsis); practically, therefore, it only remains to show the effect upon patients with operative or other wounds of excluding or destroying germs to show the value or lack of value of antisepsis and the antiseptic theory. By looking back a few years to the very beginning of the employment of antiseptics we can obtain the most striking and convincing evidence of the effect of treatment directed almost exclusively, though then very imperfectly, against the introduction of bacteria.

The record of the work of Professor Lister may well begin our series of examples. In Glasgow, in 1864, 1865, and 1866, Mr. Lister's mortality in a series of operations of all sorts was 45.7 per cent., largely from septic diseases. About this time he began to employ gradually some antiseptic methods in his treatment of wounds and during operations. In 1867, 1868, and 1869, his mortality fell to 15 per cent. At Edinburgh, having greatly improved the details of his system, we find that from 1871 to 1887 he treated 553 grave surgical cases with a mortality from septic disease of only 0.36 per cent., a diminution in the death-rate which, when we remember that these different results were obtained by the same man operating upon the same class of patients and for the same injuries or diseases, is so striking as to be in itself conclusive. Still later, an opportunity was afforded to compare Mr. Lister's results with those of a colleague, Mr. Spence, working in the same hospital, but declining to employ antiseptic methods. The total results of their major operations showed that Mr. Spence lost just about three patients where Mr. Lister lost one, while the deaths from infective diseases were 2.4 per cent. among Spence's cases, and one-third of 1 per cent. or eight times less among those of Mr. Lister. When we turn to the work of other surgeons, we find evidence, if possible, still more conclusive of the value of these methods. Nussbaum has shown that during forty years in the clinic under his own direction as well as that of his predecessors, among whom was Stromeyer, the deaths from wound diseases were so common that patients with even the slightest injuries often succumbed to them; that erysipelas and abscesses were matters of daily occurrence; that 80 per cent. of all wounds and sores were attacked with hospital gangrene, and that nearly all patients with compound fractures died; and he states that immediately upon the introduction of the antiseptic system, all these diseases vanished; and healing by first intention, previously almost unheard of in his service, became the rule instead of the exception. Professor Volkmann, in an address before the International Medical Congress which met in London in 1881, testified strongly and clearly to the results obtained in his own practice, selecting two subjects especially, compound fractures and major amputations, as evidence of the value in his hands of the antiseptic method. He said that the mortality after compound fracture had, during the long labours of the surgeons who preceded him as well as during his own, reached the sad height of 40 per cent. Immediately before he adopted the antiseptic method of treating wounds, his last twelve patients with compound fracture had all died of pyæmia or septicæmia. From that time up to the period at which he delivered this address he had treated 135 compound fractures without losing a single patient from either of these wound diseases; 133 were cured; 2 died, one of fatty embolism of the lungs during the first few hours, and one, a drunkard, of delirium tremens. As to the amputations, he asserted that he now cured each year by the antiseptic method more cases of amputation of the thigh, for example,

[1] A reply to Mr. Tait's recent criticism of Sir Joseph Lister's Berlin Address. The full text, with tables, will be published in the forthcoming number of the *Annals of Surgery*.

[2] *Archiv f. experiment. Pathologie und Pharmakol.*, Bd. xx, p. 162.

[3] BRITISH MEDICAL JOURNAL, March 3rd and 10th, 1888.

than during all the rest of his labours before the introduction of the method. In an article on the treatment of compound fractures, Professor Dennis, of New York, has compiled further evidence in this same direction. In the Pennsylvania Hospital, between the years 1839 and 1851, there were treated 116 cases of compound fracture of the leg and thigh; excluding those cases requiring amputation, there were 51 deaths, a mortality of 45 per cent. In the New York Hospital, during the same period, there were treated 126 cases of compound fracture of the leg and thigh; excluding amputations, there were 61 deaths, a mortality of 48 per cent. From 1860 to 1876 there were reported from the surgical clinics of Vienna and Zürich by Billroth 180 cases of compound fractures; excluding amputations, there was a mortality of 41 per cent. from septic disease. In the Obuchow Hospital Reports of St. Petersburg, 106 cases of compound fracture gave a mortality of 68 per cent. In Guy's Hospital, from 1841 to 1861, there were reported 208 cases of compound fracture, with 50 deaths, a mortality of 26 per cent. After the introduction of antisepsis, this death-rate immediately fell to 4 per cent. from an average of 40 to 50 per cent.; and in this article of Dr. Dennis, in which he reports 516 cases of compound fractures, there was no record of death from septic trouble in any fracture of the extremities, which was the class of injuries included in the above statements.

Mr. Tait endeavours to break the chain of reasoning by saying: 1, that the germs are everywhere and cannot be got rid of—a misstatement—and 2, that the presence or absence of sepsis depends on the presence or absence of "pabulum," that is, dead organic matter, blood clot, serum, etc. It has been one of the axioms of antiseptic surgery from the beginning that scrupulous attention should be paid to hæmostasis and to drainage. No one has taught this more earnestly than Lister and his followers, and Tait's adoption of it as his "view" is evidence of his ignorance of the work of others. To be sure he says that Koeberlé first taught him drainage in 1875, and gives due and deserved credit to Chassaignac for his work in this direction, but English and American surgeons have employed drainage fully and carefully since the early part of this century, and Syme in 1826 made the importance of providing a free escape for the discharges from wounds the subject of one of his most important papers. It is easy to say that if you have nothing to decompose there will be no decomposition, for that is what it amounts to. "Get out all decomposable matter," he says, "and you can let the germs in freely," but in practical surgery this is by no means always possible. Mr. Tait deals habitually with a membrane, the peritoneum, which has a remarkable power of self-protection. Microbes gaining access to the abdominal cavity are exposed to destruction either by the serum which it copiously exudes, or by a possible phagocytic action of its enormous numbers of endothelial cells, or by both.

Mr. Tait's remarks against dosage are further evidences of his want of acquaintance with Listerian work and teachings. He says: "With the Listerians one germ is as good as a thousand." I suppose it is safe to class Mr. Watson Cheyne, whom I have just quoted, as a "Listerian." In Mr. Cheyne's lectures on "Suppuration and Septic Diseases"[4] he not only asserted, but proved experimentally, that the number of bacteria introduced modified greatly the intensity of the symptoms and even the character of the disease. Similar observations have been made by Passet,[5] Pawlowsky,[6] and others, and are as well known as any in connection with antiseptic surgery.

It is evident that what is original in Mr. Tait's "hypothesis" is not true, and that what is true in it is not original.

The Prevailing Antiseptic Methods.—It seems apparent, at any rate, that Mr. Tait is not a safe or reliable authority on the general subject of surgical antisepsis, but towards the end of his paper he ventures on a specific fling at Lister's last surgical dressing. The most obvious advantages of the double or mixed cyanide of mercury and zinc are first, that it is non-volatile; next, that it almost entirely unirritating; thirdly, that it is insoluble in water and only soluble in 3,000 parts of blood serum; and, finally, that, while it possesses but little germicidal value, its inhibiting power is so high that a 1 in 1,200 solution is sufficient to keep animal fluids permanently free from putrefaction. This combination of qualities is possessed by no other of the antiseptics which have been mentioned, and its deficiency in germicidal power is easily remedied by including in the manufacture of the gauze dressings which are impregnated with this material a small percentage (1 in 4,000) of sublimate, enough to be germicidal, but too weak to be markedly irritating.

[Dr. White showed a table of 195 cases treated since beginning the use of cyanide gauze, that is, from September, 1889, to December, 1890.] Of the five deaths in this list, two were due to pre-existent and chronic disease: the other three were abdominal cases, operated on with the patients almost *in extremis*, with swollen bellies, intestinal paresis, and in one case with suppurative peritonitis. In the whole list there have not been six freely suppurating cases, and there have been no cases of septic trouble and no deaths from any form of blood poisoning. The majority of these cases have been observed from beginning to end by sections of the University class, and have been under the daily care of my residents at the University Hospital. Upon others I have operated in private.

I am glad to be able to give this positive testimony in favour of the latest Listerian method, which, while it may not be permanent (as there are yet many opportunities for improvement before the ideal dressing is reached), is obviously undeserving the epithets of "deadly and dangerous," applied to it by Mr. Tait, without, I will venture to say, his having taken the trouble to watch its effect in a single instance, to calculate the quantity of cyanide in a single dressing, to consider the improbability of absorption, or indeed to give the matter any serious consideration whatever.

It cannot be disputed that in the light of modern science the operator has a twofold duty, namely, to prevent the entrance of living pathogenic microbes into the wound, and at the same time to preserve the vitality of the tissues themselves. We have abundant reason to believe in a general antagonism between the body cells and the micro-organisms of disease, and it follows that the theoretical propriety of non-interference with these tissues cannot be doubted, and Lister plainly admitted and accepted this new view when he said that the floating particles of the air having been shown to be less harmful than was supposed, we may possibly dispense with antiseptic washing and irrigation, "provided always that we can trust ourselves and our assistants to avoid the introduction into the wound of septic defilement from other than atmospheric sources."

When this method is adopted it is evident that all strong antiseptic solutions which might compromise the vitality of the tissues must be discarded; instruments, silk, ligatures, sponges, etc., must be sterilised by heat, hands must be washed clean in sterilised water (after previous chemical disinfection), and the same is true of the skin over the field of operation. If antiseptic solutions are used at all they must be very feeble—1 to 60 carbolic for instruments (after previous sterilisation by heat), 1 to 10,000 sublimate for sponges, etc.

In the meantime, however, while waiting for further improvement in this direction, I have felt and still feel that it is safer in a large general clinic to depend upon full antisepsis rather than upon asepsis.

[4] British Medical Journal, March, 1888.
[5] *Monatshefte f. prakt. Dermatol.*, B. vi, No. 10, 1887.
[6] *Centralblatt f. Chirurgie*, No. 48, 1887.

NOTES ON THE APPEARANCE OF CERTAIN SPOROZOÖID BODIES IN THE PROTOPLASM OF AN "ORIENTAL SORE."

By R. H. FIRTH, F.R.C.S.Eng.,
Surgeon Army Medical Staff.

The appearance of Dr. Russell's interesting article upon the results of his investigations into the nature of what he considers to be a characteristic organism of cancer prompts me to call attention to the fact that very similar bodies have been discovered in the peculiar ulcer known as "Oriental sore," "Delhi boil," or "Multan sore," etc. In an early issue of the *Scientific Memoirs of Medical Officers of the Army of India*, published at Calcutta in 1885, I think, there appeared a very clear and able article on the presence of peculiar para-

sitic organisms in a specimen of Delhi boil by Dr. D. D. Cunningham, in which similar bodies were fully described as have been found by Dr. Russell in cancerous growths.

Dr. Cunningham in that paper suggested that these peculiar bodies were of a mycetozoïc nature, and probably zoocysts or sporocysts of a monadinic organism. About the same time that Dr. Cunningham's paper appeared, I myself, as well as the late Surgeon-Major Shirley Deakin, of the Indian Medical Service, found similar bodies in other specimens of the

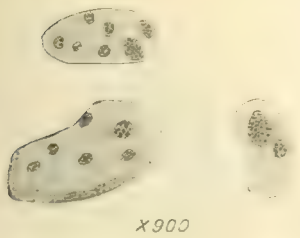


Fig. 1.

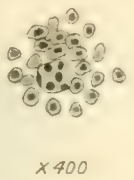


Fig. 2.

Oriental sore. In 1886 I had peculiarly favourable opportunities of seeing many of these sores, owing to the large numbers of individuals who returned invalided with them from Sibi, Rindli, and other parts of Scinde, consequent on the concentration of men and stores on that frontier at the time of the Russian scare of 1885. My sections made of them at that time simply confirmed and amplified the preliminary notes made by Dr. Cunningham. In conjunction with Dr.

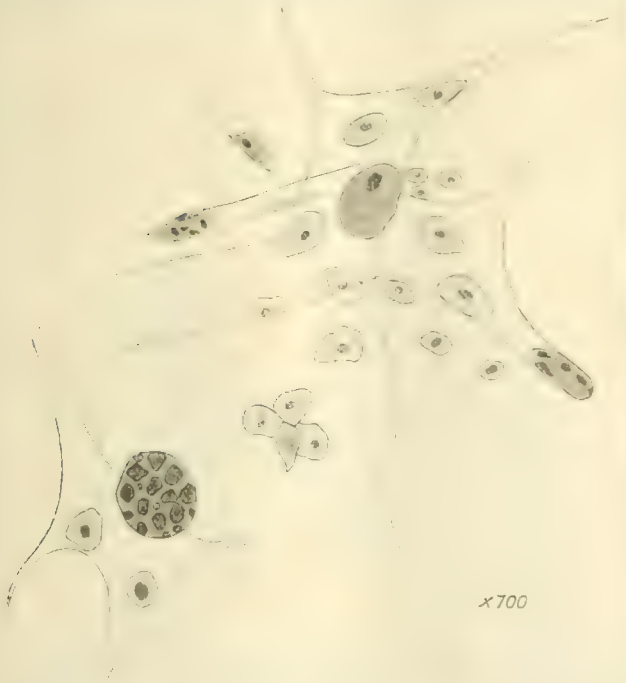


Fig. 3.

Deakin, specimens and drawings of these bodies were prepared by me, together with an exhaustive article on them and their apparent part in the etiology of the Oriental sore, and intended for publication and illustration in the *Indian Medical Journal*, of which the late Dr. Deakin was editor. Owing partly to difficulties in getting lithographs satisfactorily produced, and then subsequently owing to Service exigencies, repeated transfers of the editor to remote stations on the frontier, followed by the outbreak of the Hazara campaign, repeated delays prevented the appearance of our conjoint paper. Just when we were arranging to send the whole subject matter to England for publication, Dr. Deakin contracted enteric fever, and died in 1889. Since then I have been unable to again collect the data and specimens (being in England), or replace them or the manuscript which has become mislaid or lost among the late Dr. Deakin's papers.



Fig. 4.

The fact is beyond dispute that certain bodies staining readily with gentian violet and fuchsin are constantly present in Oriental sores and the adjacent lymphatics. The descriptions given by Dr. Russell of those found by him in cancers agree most closely with those seen by myself in the neoplasm of the oriental sore, which in many of its characters resembles the epitheliomata.

The attached drawings were made by me from fresh specimens in 1886-87, and are imperfect duplicates of some sent with the original paper, now lost and referred to above.

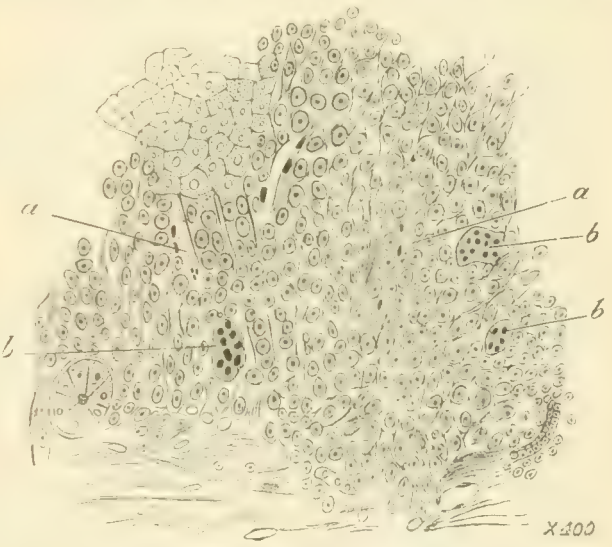


Fig. 5.—Section through an Oriental sore. The remains of a sweat gland are visible, and some swollen cells of the rete Malpighii. The greater part of the field is occupied by round cells. At *a*, a protoplasmic substance is present, slightly stained with fuchsin, apparently occupying lymph channels. At *b*, are certain multinuclear bodies stained with gentian violet. These are the spore-like bodies alluded to in the text.

They, though incomplete, sufficiently explain the nature of the bodies mentioned. These in size varied from 12μ to 6μ; the outline of some was smooth, while of others it was irregular. I have always regarded them as sporozoa, and in 1887 went so far as to suggest to my fellow worker the name *sporozoa furunculosa* to indicate their peculiar pathological influence in tropical climates, where they are probably parasitic in man and animals, giving rise by irritation to processes of excessive hypertrophy in the lost tissues. I once found similar bodies in an ulcer on a dog's back in India. It has been suggested that the real and true home of these bodies is in stagnant or impure water. Both Dr. Shirley Deakin and myself made repeated efforts to trace their life history, but

failed. Under low powers, these bodies appear to be homogeneous, but when highly magnified are seen to be granular or to contain numbers of minute sporelike bodies. Either grouped or in individuals, these bodies seemed to be surrounded by a more or less clear space. Whether actually so, or really due to the fact that their surrounding medium will not stain, is uncertain. I am myself inclined to the latter view, and that the apparently clear space is nothing but a transparent and degenerated state of the cells in which they have taken up their abode. Those further interested in this matter I would refer to Dr. Cunningham's paper, which is the ablest and clearest account of the modern pathology of these sores yet published.

DUPUYTREN'S CONTRACTION OF THE PALMAR FASCIA TREATED BY HYPNOTISM.

By GEO. C. KINGSBURY, M.A., M.D.,
Blackpool.

CASES of Dupuytren's contraction of the palmar fascia, of greater or lesser severity, are very common, but there is as yet no unanimity amongst surgeons as to the best mode of treatment. On one point only is there complete accord, that is, to quote Erichsen, "the treatment is purely operative." Possibly this want of agreement in the profession is the reason why so many patients are willing to put up with the deformity rather than submit to operative interference.

Professor Langhans, as a result of careful microscopic investigation, maintains that the trouble is due to neoplastic or inflammatory changes, partly in the palmar aponeurosis, partly in the neighbouring tissues, including the coats of the arteries and also the capillaries, about which a subendothelial granular adventitia has formed. Dupuytren considered the contraction to be due to fibrous prolongations of the palmar fascia, passing from its lower aspect to the sides of the fingers. Goyraud, on the other hand, regards these fibrous bands as ligamentous structures, extending from the anterior inferior aspect of the palmar fascia to the sheaths of the flexor tendons, and considers them due to a hypertrophied condition of the subcutaneous filaments of fibro-cellular tissue which are normally present.

Amongst the operations recommended are: Goyraud's, which consists in exposing the contracting bands by means of longitudinal incisions, and then dividing them in several places; Kocher's, in which total extirpation of the thickened and shortened palmar fascia, with its extensions, after longitudinal incisions of the skin, is performed; Busch's, which consists of dissecting the contracted fascia from the flexor sheaths by a V-shaped flap, the apex of which points to the wrist; the fingers are then extended and the flap attached to the incision, the result being a Y-shaped cicatrix; lastly, there are the subcutaneous methods, (1) by simple division of the fascia, (2) by Adams's method of multiple division.

Anyone interested in the results of the various operations should consult Mr. Adams's papers or Mr. Macready's.[1] Also Mr. Noble Smith's record of seventy cases, published in 1885. Such a perusal will, I think, lead to the conclusion that the method adopted by Mr. Adams is the most satisfactory and generally applicable. The after-treatment consists in mechanical extension, kept up for some weeks day and night, but continued at night for several months.

There are difficulties in the way of all operative treatment; thus the methods of open incision sometimes leave the hand worse than before, whilst the subcutaneous operation requires the greatest dexterity, and even when this is present accidents may mar the result of the operation, as in the case of Dr. Myrtle, of Harrogate (so ably described by himself),[2] where rupture of the integument, together with serious symptoms arising from prolonged inhalation of ether, rendered it impossible to complete the operation.

The case which I am about to record is interesting, inasmuch as I believe it is the first of its kind which has been published.

[1] BRITISH MEDICAL JOURNAL, February 22nd, 1890.
[2] BRITISH MEDICAL JOURNAL, January 14th, 1882.

E. A., aged 45, a barber by trade, had suffered from a gradually increasing contraction of the palmar fascia in both hands, the right having been more or less affected for twelve years, and the left for eight years. He attributed the ailment to the cramped position of his fingers in shaving and haircutting, but it is interesting to note that his father had for years suffered from phalangeal contraction of the ring and little fingers of both hands. The patient was also subject to subacute rheu-



Fig. 1.—Photograph showing the palmar aspect of the hands and the fibrous bands as they appeared before treatment.

matism, but otherwise healthy. About a year ago both hands became so painful that he was wholly unable to continue his work, and had to dispose of his business. Since then the contraction had remained about the same, but the pain continued very severe, and effort to do any work brought on most

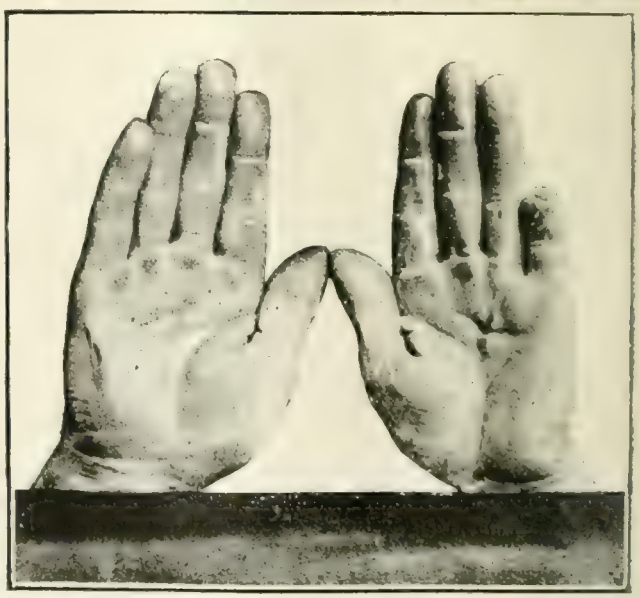


Fig. 2.—Photograph showing condition of hands ten days after treatment. The top of the little finger of the left hand was cut off in a machine accident many years ago.

acute paroxysms. If he grasped anything round, such as a broom handle, the fingers became cramped, and he had to put them in hot water to free them.

The photograph, Fig. 1, shows the condition of his

hands when he came to me for treatment on November 11th, 1890.

I hypnotised the patient readily by Liébeault's method, and he became cataleptic. I then extended all the fingers as fully as possible, and rubbed the palms freely, complete anæsthesia being present. I hoped in this way to be able to modify the pain, but did not expect any further improvement.

The next day he returned, and reported that not only was the pain considerably lessened, but that he had great freedom in the movement of his fingers. I repeated the proceedings of the former day, and since this second sitting he has remained absolutely free from pain, and with perfect motion in every finger.

Fig. 2 shows the present condition of the hand.

Of course, from one case, I do not for a moment wish to draw any hasty conclusion, but I do think a case of palmar contraction apparently cured in two days without the use of chloroform or ether, tenotome or splint, is sufficiently interesting to justify its publication, and also sufficiently striking to warrant the trial of the means adopted in similar cases before having recourse to a difficult or dangerous operation, entailing, even in the most brilliant instances, a tedious and irksome after-treatment.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TWO UNUSUAL CASES OF INFLUENZA.

During the last epidemic of influenza two unusual cases came under my notice. The first, before being placed under my care, had been ill between two and three months with bronchitis and pleurisy, and had come down to this neighbourhood to recruit, as he was considered to be quite convalescent. After being here for a few days he was suddenly seized with bilious vomiting, and the temperature rose to between 103° and 104° F. For this he was treated with effervescing citrate of potassium and small doses of digitalis. In about a fortnight's time he seemed pretty well again, and was allowed to go downstairs, but in two or three days afterwards the temperature began to rise again, and he complained of pain in the left hypochondriac region, together with some tenderness. There was a distinct hard swelling to be felt, and this went on increasing till it could be made out below the ribs as far as the median line. Dr. Broadbent, who saw the case, said the spleen was very much enlarged, and advised the quinine which he was taking to be continued. Upon this treatment the swelling subsided, and the patient eventually got quite well.

In the second case there was sibilant rhonchus and harsh breathing over the whole of both lungs, but little or no expectoration. The temperature throughout the greater part of the illness was only about 97°, while the pulse was about 84, soft. The respirations were about 30 in the minute, and the tongue dry and brown. The treatment consisted in the administration of ammonia and bark; turpentine stupes to the chest; plenty of beef-tea and milk, with brandy and champagne. Upon this the patient slowly improved, and in about a month was convalescent.

The other cases I had under care were more or less of the ordinary type, and were mostly treated with quinine.

Surbiton. F. P. Atkinson, M.D.

A TRAVELLING NEEDLE: REMOVAL.

Some time ago F. S., aged 50 years, consulted me, complaining of a needle in his stomach. The history was that, fourteen years previously, he sat down on a needle, which entered the right buttock. The part was poulticed, and the needle believed to have come away, as no after-discomfort was felt. Five years ago cough, expectoration, with hæmoptysis at intervals, supervened. These signs of lung mischief lasted six months, and were not benefited by medicinal treatment or a sea voyage. A few months after returning he got rapidly well, and continued in good health for over a year, but then developed liver trouble, complaining of pain and tenderness over that organ, which was also found enlarged. There was slight jaundice later. These symptoms only continued a few weeks, but were not affected by treatment, when he again rapidly recovered, and has continued so up to the present.

Examination revealed a sharp body situated under the position of the pylorus and apparently in the right half of the rectus abdominis. Its removal was effected as follows:—Anæsthesia was produced by cocaine. Fixing the needle over the costal cartilages, a fine Graefe's knife was introduced so as to feel the body with its point. A clean cut was then made upwards, leaving a trench-shaped wound, with the needle lying in its apex. With broad-pointed forceps introduced its removal was successfully accomplished. The wound healed by first intention.

It was found to be the blunt half of the original needle, and was coated with rust, showing exposure to atmospheric conditions in the lung. It is probable that, after traversing the right gluteal and lumbar regions, during which period there were no symptoms, it perforated the base of the right lung, occasioning the symptoms mentioned, that it then entered the diaphragm, with negative signs, but on emerging and traversing the upper surface of the liver it set up some perihepatitis, finally entering the posterior surface of the rectus at the upper deficient portion of its sheath and becoming embedded there as found.

It is interesting here to note the gravity and variety of symptoms, with their somewhat sudden beginning and ending; the great tendency for foreign bodies to travel, and in a direction from the periphery towards a more central part (probably to one of rest) of the body. It would also appear that while muscle was the medium of transit, symptoms were here negative.

It is well to remember the necessity for seeing or feeling a foreign body before attempting its removal, especially as one is apt to be induced to do so by strong subjective testimony. Hæmorrhage—a difficulty in the case of a foreign body in the palm, and which is overcome by previously rendering the limb bloodless and taking care to put a pad of wool over the seat of puncture to avoid deepening it while so doing—was easily avoided by the pressure required to fix the needle.

Wm. Tweeddale Thomson, L.A., M.B., C.M.(Edin.).

St. Andrews, N.B.

FRACTURE OF THE HUMERUS: HEREDITARY DEFORMITIES.

The cases of fracture of the humerus from muscular action, reported by Messrs. Greenwood and Tatham, remind me of a case attended by me in 1888 at the Birkenhead Borough Hospital. The patient, a young muscular man, had been spending the day at New Brighton, and amusing himself by throwing stones at some mark on the sea shore. While doing so he felt the humerus suddenly snap, and on examining him I found an oblique fracture just above the insertion of the deltoid. There was no history of any previous fractures.

With regard to your annotation on supernumerary digits, I met some years ago a member of a family in Ireland afflicted—or, as they thought, blessed—by the possession of an extra digit on each hand. I was assured that the peculiarity had been present through several generations. In at least one instance atavism had occurred, a daughter of the family, naturally formed, bearing children with an extra finger. The malformation was looked upon as "lucky," and they felt considerable misgiving whenever a child was born to them with the natural complement of fingers.

I have also recently seen a girl suffering from contraction of the flexor tendons of the second toe of each foot. She told me the same deformity had been common in her mother's family for at least three or four generations.

St. Mary Cray. John P. Henry, M.D., B.Ch.Dub.

DANGERS OF EXALGINE.

I was attending a boy, aged 14, who had nearly recovered from rheumatic fever, when he was seized with most severe pains of a neuralgic character in one leg. I had prescribed pulv. ipecac. co. in 10-grain doses, which generally gave relief; but, having had some exalgine sent me, I determined to

try its effects. I accordingly made it up in 3-grain doses, and sent it with directions as to how it was to be given. The boy had a fairly good night, and did not require any of the draught, but in the morning, the pains being very severe, the nurse gave him a dose of 3 grains an hour before I saw him, and, as he was then no better, I repeated the dose, and then went into the next room to see another patient. In about a quarter of an hour I was alarmed by hearing a loud shriek, and on entering his room I found the boy gasping for breath, and saying he could not breathe; the pulse was in a most alarmingly intermittent condition and failing; pupils dilated. I immediately poured some brandy down his throat, gave a stimulating emetic, and put a mustard poultice over his heart. He rallied slightly, but again the pulse failed. I repeated the stimulant, and sent for ether and a hypodermic syringe, and, as the pulse was bad and the general condition most alarming, I injected 20 minims of ether. I spent the following hour closely watching the pulse and giving stimulants. There is nothing that I can detect the matter with his heart, the temperature was about normal, and he has now recovered.

Exalgine as an analgesic in small doses I find of no use, and in large doses I think it a very dangerous remedy.

E. F. Flynn, L.R.C.S.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

BELFAST ROYAL HOSPITAL.

REMARKABLE CASE OF GALL STONES ASSOCIATED WITH CANCER OF THE GALL BLADDER.

(Under the care of Professor Cuming.)

S. A., aged 40, housewife, was admitted to the Royal Hospital on November 8th, 1890. She had been a patient in the institution on several former occasions, and had suffered from several attacks of biliary colic accompanied by jaundice. The first attack had occurred about ten months before the present admission. The present illness was of about a month's duration, and the chief complaint was of loss of appetite, failure of strength, and dragging pains in the right hypochondrium. On physical examination the liver was found to be somewhat enlarged. Its lower edge could be distinctly felt, and projecting beyond this edge was a tumour, somewhat rounded in outline and projecting almost straight downwards, but slightly inclining towards the umbilicus. The lower end was distinctly apical. There was no jaundice. The temperature rose each evening to about 101°, and on one occasion as high as 102.4°. It was almost normal in the morning. The bowels were confined, but acted readily on the administration of aperients, and the stools were normal in colour. There was no ascites.

From the physical signs and the history of the case the diagnosis of obstruction of the cystic duct and distension of the gall bladder was arrived at. Two attempts were made to reach fluid by the hypodermic needle, but only a few drops of blood were obtained. After the insertion of the hypodermic needle the patient seemed in great pain, the bowels were confined for four days, and the enemata which were administered returned quite pure. There was great nausea and the passage of flatus was interrupted. Ten ounces of olive oil were given in a single dose, which moved the bowels freely and gave great relief from pain. It was decided to cut down upon the gall bladder, and the operation was performed by Mr. Fagan on November 21st. A vertical incision was made over the tumour, which on being exposed was found to be dark in colour and felt very solid to the touch. The trochar was inserted, but only a few drops of blood obtained. Several trials with the grooved needle gave similar results. Some hard nodules were felt on the border of the liver, and the presence of cancer was suspected.

The nature of the case being thus complicated, it was decided not to proceed further with the operation, and the wound was sewn up. The patient never rallied, but vomited almost continuously until death, which ensued thirty-six hours after the operation. At the necropsy, the stomach and duodenum were found healthy. The liver was somewhat enlarged, and contained some cancerous nodules. The anterior wall of the gall bladder was about three-quarters of an inch thick, and was infiltrated with cancerous deposit. The gall bladder contained sixty-four gall stones, also some mucus and pus. There was some ulceration of its internal surface. There was no bile either in the interior or in the walls of the gall bladder. The common bile duct was bile-stained. The cystic duct was greatly dilated.

Murchison and Hilton Fagge have pointed out the frequency of the association of gall stones and cancer of the gall bladder or bile ducts. The present case favours the usual view that the primary condition is the presence of gall stones, and that the cancer is secondary and due to the constant source of irritation. In this case the patient had been a sufferer from attacks of biliary colic for nearly a year. There had been no symptoms of cancerous cachexia, and both the history and the *post-mortem* appearances favoured the view that the malignant deposit was recent. The absence of bile from both the interior and the substance of the gall bladder corroborates the position here taken. The probability is that the patient suffered, first, from the formation and passage of gall stones; that the constant irritation set up the malignant process, that the cystic duct became obstructed, and the bile in the gall bladder, becoming absorbed, was replaced by mucus and pus. If this view be correct, the practical conclusion is obvious, namely, that there is great danger in delay, and that operative measures are indicated as soon as the diagnosis has become clear.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, January 6th, 1891.

W. H. Dickinson, M.D., F.R.C.P., President, in the Chair.

Notes on Media for Cultivation of Tubercle Bacilli.—Sir Hugh Beevor showed several tubes with tubercle bacilli cultivations on potato, broth, and glycerine agar-agar media. He described the different characteristics in the various specimens, and the conditions under which the bacilli were allowed to grow. On potato the growth first became visible in about twenty to thirty days, as a small pin-point spot. It was possible to start growths either from tubes or direct from animals. Spores developed on potato as on other media. The growth did not progress so well as on other media, and never covered the whole surface of the potato on which it was planted. These cultures were kept at a uniform temperature of 82° F. In the cultures in broth, both with and without glycerine, the conditions were varied, and it was found that growths started more quickly than on agar-agar or on potato, and further, that in glycerine broth cultivations could progress, though only slowly, at as low a temperature as 60° F., whereas on potato and on agar-agar no growth could be obtained at this temperature. The addition of corrosive sublimate solution in the proportion of 1-200,000 to broth, had hardly any deleterious effect on the growth of the tubercle bacilli, and he contrasted this with the fact that 1-300,000 would prevent the development of bacillus anthracis. On agar-agar without glycerine it was very difficult to get tubercle bacilli to start, but when glycerine was added, the growth was most luxuriant at suitable temperatures. From these observations the author considered that it was probable that the conditions in Nature under which the tubercle bacilli could flourish were much more diversified than had been previously suspected. In conclusion, he thanked Professor Crookshank for the assistance which he had received from him in carrying out these researches.—Professor Crookshank referred to the enormous mass of work done by the author to obtain these results, some of which were quite new, and he should look forward with interest to a paper on the results of inoculating animals with some of these cultivations.

Chylous Ascites.—Dr. Fred. J. Smith read the notes of a

case of chylous ascites in a woman, aged 67. She had suffered from dysmenorrhœa all her life, and occasionally with dyspeptic symptoms. The final illness began in 1889 with similar dyspeptic trouble, culminating in ascites in July, 1890. Masses of cancer, both abdominal and pelvic, were thought to be present during life. The necropsy revealed primary growths in both broad ligaments, chronic peritonitis, with small nodules of new growth. The liver was much displaced, its capsule thickened, and two large stones blocked the cystic duct. The thoracic duct was perfectly healthy. Dr. Smith was inclined to attribute death to simple, not malignant, chronic peritonitis, and based his opinion on (1) the comparative numerical deficiency of neoplastic nodules; (2) the verified presence of a simple irritant; and (3) the long duration of the case.—Mr. Spencer asked if the fæces had been found to contain fat, and if there had been any evidence of an increased quantity of fat in the intestinal epithelium.—Dr. Maguire said that there was a considerable number of cases on record of carcinoma of the peritoneum in which chylous ascites had been present, probably produced by pressure with subsequent dilatation of lacteal vessels. There were also several other cases of carcinoma of the peritoneum in which a turbid milky fluid had been present, the appearances being apparently due to cellular *débris* in the peritoneal fluid. He had himself seen two cases of true chyluria; the first, at the commencement, seemed to be a case of hepatic cirrhosis with ascites, but on drawing off the fluid, it was found to be fatty. No reaccumulation occurred. At the *post-mortem* examination some time afterwards, a small aneurysm of the renal artery was found imbedded in a dense mass of fibrous tissue, from which it had been impossible to dissect out the receptaculum chyli. The second case had occurred in the practice of Dr. Whitla, and the necropsy was made by Professor Redfern. In this case, the thoracic duct was irregular and narrowed from tuberculous deposit, and in some places the lumen was entirely obliterated. The thoracic duct had ruptured, and in this way the chyle had escaped into the peritoneal cavity.—The President thought that in the case under discussion the obstruction had probably occurred to the lacteals in the mesentery, either from the deposits of new growth or from the adhesions due to the peritonitis.—Dr. F. J. Smith, in reply, stated that the fluid was an emulsion of finely-divided fat with a few leucocytes and some granular matter. There was but little doubt that the fluid was really chyle, as at two spots there had been extravasation beneath the peritoneum, and some of this he had been able to collect and to determine that it was chyle. Neither the fæces nor the intestinal wall had been examined, so far as he was aware, for fat. The patient had never been out of England, nor was there any suspicion of filaria.

Large Hydatid Cyst of the Bladder.—Mr. Hurry Fenwick gave the history of a patient, aged 25, who had been under the care of Mr. R. Debenham for six months for persistent headache, occasional morning vomiting, and increasing emaciation. Six days before his death great irritability of the bladder, culminating in suppression of urine, supervened. A large tense semifluctuant tumour was discovered on rectal examination filling the entire true pelvis. It was separate from the prostate, but had pressed the vesiculæ seminales and vasa deferentia backwards. The bladder had been dislocated upwards and to the right. A catheter could be passed after a slight hitch at the prostate, but the bladder was found empty. It was obvious that both ureters had been strangled at the brim of the true pelvis by the tumour. In order to temporarily relieve the obstructive suppression, Mr. Fenwick aspirated the cyst *per rectum*, and drew off some ounces of hydatid fluid. The ureters immediately emptied their contents, and two or three ounces of urine were at once evacuated by catheter. Next day the patient passed 30 ounces of urine voluntarily. It was then arranged that a suprapubic incision should be carried out, the peritoneum lifted from the apex of the bladder, the cyst opened, evacuated, and drained, but a few hours before the proposed operation the patient died suddenly. On *post-mortem* examination a very large monolocular hydatid cyst was found blocking the pelvis and pressing on both ureters. Both ureters and the renal pelves were greatly distended, and the kidneys much destroyed by backward pressure. No other hydatids were found. The brain was normal. Mr. Fenwick said that many such cases existed in the literature since 1787. Most were situated under the peritoneum lining the back or base of the bladder. Practically the cases might be divided into those cysts which were placed low down (basal) and caused retention by direct pressure upon the prostate, and into those which were situated higher upon the posterior wall (parietal) and evoked but few symptoms of urinary trouble until dangerous renal changes had ensued from backward pressure upon one or both ureters. The former variety were perhaps more successfully treated, for they attracted notice before great damage was done. Rectal aspiration was the usual treatment.—Dr. Smith asked the cause of death, and Mr. Fenwick stated that the patient had died of suppression of urine.

Acute Verrucose Aortitis.—Dr. Robert Maguire showed a specimen of acute verrucose and ulcerative aortitis, with the formation of an acute aneurysm. The patient was in St. Mary's Hospital for four months, and during life presented a systolic murmur at both the apex and base of the heart, and a soft diastolic murmur at the base. He had frequent rigors, with very irregular temperature. The splenic dulness was increased, but the spleen could not be felt. After death there was found ulcerative endocarditis of the auricular surface of the mitral valve, and on the ventricular surface slight recent ulcerations. The aortic valves were thickened, but showed no recent changes. At the junction of the ascending and transverse portions of the arch of the aorta there was a loculated dilatation of the vessel with thin fibrous walls, and containing no fibrinous deposit. On the edges of the dilatation and of the loculi were large fibrinous vegetations, in which, on microscopic examination, there were found numerous streptococci. The spleen was enlarged and contained a pale, but not softened, infarct. The case was looked upon as one of malignant endocarditis, in which the morbific matter had established itself in the aorta, and had caused verrucose and ulcerative aortitis, with the formation of an acute aneurysm.—The President asked if Dr. Macguire had any theories as to the cause of the disease.—Dr. Maguire considered that what evidence there was was against its being directly due to germ infection, as, amongst other reasons, several different kinds of micro-organisms had been found in the diseased parts in this disease, which seemed as if the lesions were simply a kind of trap to catch any stray germs. Dr. Dreschfeld had, however, been able to produce an acute endocarditis and endarteritis by injecting the products from a case of ulcerative endocarditis into an animal. This was, however, the only known example.—Mr. Shattock did not agree with this view of Dr. Maguire's, and referred him to a paper of Dr. Turner's, in a previous volume of the *Transactions*. Mr. Shattock thought that the disease was undoubtedly an acute condition grafted on chronic lesions by secondary infection. Dr. Smith asked how bacteriologists would explain the minute vegetations found on the heart valves in chorea, nephritis, acute pyæmia, and many other acute diseases.—Dr. Crookshank said there was much evidence to show that the micro-organisms present were merely epiphytic in these cases.—Dr. Hale White mentioned that the ratio of ulcerative to chronic lesions was much greater on the right side of the heart than on the left, and felt that this was a difficult point to explain.—Dr. Maguire agreed with Mr. Shattock that this acute condition almost always supervened on chronic disease. The secondary lesions did not, however, necessarily start in the old lesions, but might begin at fresh spots.

Two Specimens of Dermal Cysts.—Mr. E. C. Stabb showed two specimens of dermal cyst. The first was from a blacksmith, aged 30, who had punctured his finger with a rusty nail. The wound healed, but later a swelling formed at the spot. This was tapped and creamy fluid escaped; the swelling, however, returned. When the case came under his notice a cyst was found adherent to the skin. It was then dissected away, together with the skin over it, and was found to be adherent to the subjacent tendon sheath. On examination, it was found to consist entirely of epithelium. The second was removed from the hand of a carman, aged 20, who four months previously had had a punctured laceration of his finger. The tumour in this case was not adherent either to skin or tendon sheath. The cause of the swelling was due to some superficial epithelium having been driven into the deeper tissues at the time of the accident, and afterwards developed into a cyst formed entirely of epithelium cells.

Card Specimens.—Mr. H. B. Robinson: (1) Webbed Fingers

and Toes; (2) Cystic Disease of Testicle; (3) Columnar-celled Carcinoma of Small Intestine.—Mr. W. G. SPENCER: (1) Lymphosarcoma in Dog surrounding Trachea and Bronchi: (2) Lymphosarcoma in Dog surrounding Aorta; (3) Leucocythæmia in Cat.—Dr. G. GULLIVER: Acute Endocarditis of the Right Side with Pulmonary Embolism.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, JANUARY 2ND, 1891.

T. GUNTON ALDERTON, M.R.C.S., L.R.C.P., President, in the Chair.

Treatment of Habitual Abortion.—Dr. LEITH NAPIER read a paper on this subject. Limiting the term "habitual abortion" to a recurrence of abortion three or more times, he discussed the various methods of treatment, classifying them under four headings: 1. Rest or exercise, insisting on the necessity of absolute rest for at least six days in the month. 2. Local cure of uterine disease, chronic endometritis being regarded as the chief cause of abortion, in that retroflexion and other displacements, with atony of the mucous membrane, leucorrhœa, etc., were regarded as resulting from chronic uterine inflammations or congestions. 3. Constitutional treatment. 4. Drug treatment. The value of local treatment was strongly urged. The prolonged exhibition of mercury, even in cases of a non-specific nature, was extolled above all other therapy, while as a uterine sedative viburnum was preferred to any other drug. In his own practice, 77 per cent. of habitual aborters had borne living children after treatment by local methods and drugs.—Dr. HANDFIELD JONES said too great stress had been laid by Dr. Napier on local treatment. He regarded heart disease as the primary cause of chronic uterine disease and retroflexion, and pointed out that the commonest epoch for abortion was that at which the gravid uterus was striving to rise out of the pelvis, cardiac disease generally causing abortion between the fourth and fifth months, failure of the left ventricle leading to uterine stasis, congestion, and petechial hæmorrhages.—Dr. NAPIER replied.

Paper. The GENERAL SECRETARY, in the absence of the author, read Dr. Macnaughton Jones's paper, entitled, "A Plea for the Obstetric Art."

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, DECEMBER 17TH, 1890.

JOS. EWART, M.D., F.R.C.P., President, in the Chair.

Enteric Fever in India.—The SECRETARY read a communication from Brigade-Surgeon H. SKEY MUIR, M.D., on the cause of enteric fever in India, in which exception was taken to certain allegations respecting the sanitary condition of the hill station of Chakrata, made by Surgeon-Major J. Pringle, M.D., in a paper on the same subject read before the Society in May last. He gave a table of the mean and absolute maxima and minima of temperature for five years, which showed an extreme range of from 23° in February to 88° in June, a summer mean of 60°, a winter mean of 43°, and a rainfall of from 50 to 80 inches. Very few men, however, were stationed there in the cold season. The "magnificent water supply," 1,000 feet above the station, had, he stated, been in use since 1870, though until 1887, when iron pipes were laid, it had been brought to the barracks in open channels. The spring below the barracks, to which Dr. Pringle referred, was only used occasionally in hot weather, and never when the monsoons burst. He denied that the outbreak of enteric fever in 1888 could have had any connection with the water supply, since the pipes had been laid for a whole year, and argued that the disease, appearing exclusively among the new comers within a fortnight of their arrival, must have been contracted during the march through the plains. He gave a graphic description of the roadside wells and of the river, from one or other of which the troops obtained their supplies on the march of nearly 80 miles, as well as of the camping grounds, entirely in agreement with Dr. Pringle's account. Though not absolutely exonerating the water supply of Kailana as he did that of the Deobund, he ascribed the annual occurrence of some twenty cases, in nearly every instance, to infection contracted on the way to the station. Dr. PRINGLE fully concurred with Dr. Muir in his condemnation of the filthy water supplies to which the troops were compelled to have recourse on the march, and which he had vainly urged the authorities to protect from contamination. With regard to Chakrata itself and the water from the Deobund, he was pleased to learn that pipes had now been substituted, but the outbreak to which he referred as originating in the station was that of 1883 (the date 1888 in the abstract being a printer's error). Dr. Muir's temperature tables justified his condemnation of the climate, as did the admission that the scarcity of wood for fuel compelled the abandonment of the station in the cold season, the very time when these sanatoria were most useful. Its position, also, north and south, was bad, and exposed it to the direct influence of the hot winds from the plains and the cold from the snow-capped mountains.—Sir JOSEPH FAYRER maintained that too much stress was laid on a supposed specific cause of enteric fever, believing that other influences akin to those involved in the production of malarial fever should be taken into account.—Sir W. MOORE held that the specific germ was pure assumption.—The PRESIDENT argued that the pathological identity of the disease, as shown especially by *post-mortem* examination, throughout the world disproved a multiplicity of causes.

CLINICAL SOCIETY OF MANCHESTER.

TUESDAY, DECEMBER 16TH, 1890.

C. H. BRADDON, M.D., President, in the Chair.

Cases.—Mr. C. E. RICHMOND showed a case of Lymphœdema involving the whole of the left lower limb. It exhibited the characteristic firm elastic swelling, the diameter of the affected limb being greatly in excess of that of the sound. After enumerating the obstructive causes of lymphœdema, Mr. Richmond said that the only one ascertainable in this case was syphilis, where the tertiary sclerosis and gummatous changes in the lymphatic glands of the limb and pelvis might produce the necessary obstruction. The glands in the left groin, though not markedly enlarged, were still considerably more hardened and prominent than those of the right side. There was a fair history of previously acquired syphilis.—Dr. MILLIGAN and Mr. HERBERT LUND showed a case in which the antrum mastoideum had been opened for suppuration following acute catarrh of the middle ear. The patient, a woman aged 47, had a sharp attack of influenza, during which symptoms of acute inflammation in the right middle ear supervened. This was followed by extension to the mastoid process. The principal symptom complained of was extreme pain just behind the attachment of the auricle. Mr. Lund opened the antrum and evacuated about one drachm of pus. A silver drainage tube was inserted. The wound healed up in three weeks. The perforation in the membrana tympani closed, and perfect hearing power was regained. Mr. Lund's suggestion that in cases of chronic discharge from the middle ear, which had resisted the usual methods of treatment, it would be advisable to trephine the antrum and thoroughly drain the cavity, and so relieve the patient from a possible source of future trouble, led to a discussion in which Messrs. T. JONES, S. BISHOP, Drs. SIMPSON, BURY, and others took part. Mr. BISHOP showed a case of Charcot's Disease of the Knee-joint. Mr. T. JONES mentioned a series of cases of Intestinal Obstruction treated by Laparotomy.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, DECEMBER 18TH, 1890.

W. DALE JAMES, M.R.C.S., President, in the Chair.

Ulceration of Ileum in Typhoid Fever. Dr. DYSON showed the ileum from a case of typhoid fever. The patient was a girl, aged 17. She died, on the forty-seventh day of the disease, of exhaustion and hypostatic pneumonia. She had been ill fourteen days before admission to the infirmary, and suffered throughout from vomiting and gastric irritability. In the early part of the case the vomiting was largely biliary: hence great difficulty was experienced in feeding the patient and in the administration of antipyretics. The ulceration of the bowel was extensive. Some of the ulcers were cicatrising, others appeared recent, and several were deep, the floor of the ulcer being formed by the serous coat of the bowel.—Mr. T.

Robinson, Dr. Burgess, Mr. A. Jackson, Mr. Baldwin, Dr. Martin, Mr. Garrard, Dr. Matthews, and Mr. B. Walker joined in the discussion.

Miners' Nystagmus.—Mr. Snell introduced a patient suffering from miners' nystagmus. He said that an impression was current, particularly among the miners themselves, that the use of safety-lamps was the cause of this affection. A case like the one shown was in direct opposition to such an opinion. The patient had worked with safety-lamps for fourteen years and experienced no discomfort with his eyes. In the last three years and a half he had, however, been working entirely with naked lights—candles—and it was during the last year or so only that his symptoms had developed and necessitated his leaving his work. It was a very well marked case of nystagmus. Mr. Snell remarked that he had seen several other cases occurring in men using naked lights. Sewer men, however, worked more with naked lights than with the safety lamp, hence the cases of nystagmus met with were most frequently in those employing the safety-lamps. Mr. Snell said, after an experience of several hundred cases, that the affection was occasioned by the position a proportion of coal-getters were compelled to assume at their work. He had expressed these views in a paper before the Ophthalmological Society,[1] and elsewhere. The position—head and eyes obliquely upwards—was assumed chiefly by men engaged in "holeing." The patient introduced was a "holer," both when using safety-lamps and later when employing candles.—Remarks were made by Mr. Goodall and Mr. H. Boynton Lee.

Cerebral Hæmorrhage.—Mr. B. Walker read notes of a cerebral case. The patient, a woman, aged 63, had a fit of apoplexy, resulting in right hemiplegia, six years ago. The leg, as usual, recovered more rapidly and completely than the arm, the latter shaking so when she attempted to lift anything that it became practically useless. On November 4th last she had a second apoplectic seizure, remaining unconscious for forty-eight hours. After sinapisms had been applied to the lower extremities, and a blister to the back of the neck, consciousness gradually returned, and the first thing the patient did was to lift a cup of water to her lips with the hand which had been so long disabled, and the power of using the arm had continued. Mr. Walker spoke in defence of the old-fashioned practice of counter-irritation, and even bleeding, in some cases of cerebral apoplexy. Mr. James, Dr. Martin, Dr. Dyson, Mr. Jackson, Mr. W. F. Favell, Dr. Matthews, Mr. E. Barber, and Dr. Sidney Roberts also spoke.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Wednesday, December 17th, 1890.

C. Haydon White, M.R.C.S., L.R.C.P., President, in the Chair.

Diagnosis of Abdominal Disease.—Dr. Brookhouse read a paper on "Difficulties and Obscurities in Diagnosis in Abdominal Disease." In illustration of the subject notes of the following cases were read:—That of a boy, aged 13, whose symptoms were difficult to interpret, and did not lead to suspicion of the conditions revealed *post mortem*, namely, perforation of appendix and suppurative peritonitis; that of a woman, whose symptoms pointed for a long time to flatulent dyspepsia, but finally obstruction of the bowels set in, for which colotomy was done, when a malignant growth starting from the mesentery was discovered; that of a woman, aged 51, in whom tumours thought to be kidneys existed in each loin. Whilst under observation a swelling developed in the left groin, which was operated on for femoral hernia; no hernia was found; after death the cystic duct was found blocked by a gall stone, and the gall bladder was distended, there was scirrhus of the left adrenal, and the lump in the groin turned out to be a malignant tumour growing from the pubic bone. Two cases, which recovered, in which obscure tumours existed in the iliac region. A case in which partial obstruction existed for a long time with abdominal pain; after death there was found stricture of the ascending colon, and adherent to the strictured portion was the duodenum, which had apparently been drawn down by a band. After insisting that great caution was necessary in forming an opinion in obscure cases, Dr. Brookhouse concluded with the following rules for investigation:—To learn the family history, especially if the patient was young; to obtain the clinical history, and note the order of symptoms; to learn what could be made out by physical examination; and, lastly, to appraise the value of what was spoken of as the physiognomy of disease.—Remarks were made by the President, Messrs. Hatherly, W. B. Ransom, and Handford.

Vote of Thanks to Colonel Seely.—On the motion of Dr. Aplin, seconded by Dr. Handford, the Society passed a hearty vote of thanks to Colonel Seely, High Sheriff of Notts, for his munificent offer of £10,000 for the provision of convalescent homes and hospitals for the needy convalescents of Nottingham and the country.

MANCHESTER PATHOLOGICAL SOCIETY.

Wednesday, December 10th, 1890.

G. A. Wright, M.B., F.R.C.S., President, in the Chair.

Scrofulous Kidney.—Dr. Railton showed preparations and sections from a case of scrofulous kidney in a boy, aged 2 years and 9 months, who had been an in-patient at the Manchester Clinical Hospital. A tumour was observed on the left side of the abdomen, extending from the ribs to the iliac crest, and reaching as far forwards as one finger's breadth in front of the vertical line of the anterior superior iliac spine. There was no movement of the tumour during respiration, and the percussion note over it was dull. There was, in addition, some slight dulness over the apices of both lungs. One month after admission the child died of tuberculous meningitis. After death, the left kidney was found to be four or five times its normal size, and almost completely transformed into a caseous mass; its pelvis and calyces were dilated, and contained purulent fluid. The ureter was completely closed, accounting for the fact that the urine showed nothing abnormal. The apices of both lungs showed infiltration, caseation, calcification, whilst that of the right showed, in addition, a small cavity. The brain showed a considerable quantity of fluid in the ventricles, exuded lymph in the space between the optic chiasma and pons and along the Sylvian fissures, tubercles on the lower surface of the lateral lobes of the cerebellum and in the longitudinal fissure. Dr. Railton remarked that the disease in the left kidney had probably existed for a long time before that in the lungs, and had no causal relation to it, and that the meningeal tuberculosis was of quite recent date. He asked whether some distinction should not be drawn between a slow caseating process like that in the kidney of this case, or as frequently witnessed in tumours of the cerebellum, and the rapidly disseminating process known as acute tuberculosis.—The President wished to hear some remarks on the differences between urine from a tuberculous kidney and that from a kidney containing stone.—Dr. Bury said the only safe point of distinction would be the presence of bacilli in the urine from a tuberculous kidney.—Dr. Dreschfeld would have expected to find, from Dr. Railton's description of the *ante-mortem* appearances, the kidney much larger than it turned out to be, but had often noticed similar discrepancies in other abdominal tumours. He did not consider that any real difference existed between this class of case and ordinary tuberculosis. The presence of bacilli in the urine would be conclusive evidence in a similar case, but in this the blocking of the ureter rendered such appearance impossible.—The President understood that tubercle bacilli were not at all, or only after great difficulty, to be found in the urine from a tuberculous kidney.—Dr. Hutton objected that the bacilli might come from the bladder.—Dr. Bury said that tuberculosis of the bladder was rare in tuberculosis of the kidney.—Dr. Railton replied.

Tumours of Bladder.—Mr. Southam showed a papillomatous tumour of the bladder from a man, aged 65, in whom the only symptom had been profuse hæmaturia for some months. Also the bladder of a man, aged 66, containing a cancerous (scirrhous) growth.

Tumours of Cerebellum.—Mr. Ashworth showed two cerebellar tumours with sections. The first was from a girl, aged 5½ years, who was brought to the Clinical Hospital on November 13th. She was stupid, drowsy, breathing slowly but not stertorously, pulse feeble and slow (60). At 6 P.M. on the same day she died in a state of general toxic convulsion. On *post-mortem* examination all the organs were found healthy with

[1] *Transactions*, 1884.

the exception of the brain and a small caseous patch in one lung. At the lower part of the middle lobe of the cerebellum, just where it roofs in the fourth ventricle, was found a yellowish, soft, gummy mass, looking like sanious pus, indefinitely marked off from healthy brain tissue. Microscopically, the growth was found to be a soft glioma. Symptoms had been observed for about a fortnight. The second case occurred in a boy, aged 4 years, who was brought to the hospital on November 14th. He had a convulsion in the outpatient room, and died before he could be admitted. On *post-mortem* examination, old pleuritic adhesions were found, especially on the left side. The lungs were congested and œdematous but free from tubercle. A hard tumour, of about the size of a walnut, was found in the right lobe of the cerebellum surrounded by a little pus. The growth consisted of caseous matter, and in one place had undergone calcareous degeneration. The skull was very thin, and the ventricles much dilated and filled with serous fluid. Microscopically the tumour showed a caseous groundwork, dotted here and there with leucocytes and giant cells. The child had been running about with other children the day before his death.—Dr. DRESCHFELD agreed that the specimen of the first case was gliomatous. He had known many cases in which these growths existed in the cerebellum with little or no symptoms. —Dr. HUTTON wished to know whether or not there was any history of an injury in the second case, as he had often known symptoms come on rapidly after injury in cases of cerebellar tumour. He had often seen cerebellar tumours in general tuberculosis without symptoms. He mentioned a case in which after injury death had followed in a few hours; and, on examination, a tumour was found in the cerebellum surrounded by smashed and pulpy brain tissue.—Dr. BURY had known a child with symptoms of cerebellar tumour get better. He had found the latency of these formations much more common in children than in adults; also that staggering gait was a prominent symptom of tumour in the lateral as well as in the middle lobes.—Mr. ASHWORTH, in reply, said that he did not inquire as to injury in the second case.

Epithelioma of External Ear.—Dr. MILLIGAN showed a specimen of epithelioma of the external ear, removed from a man, aged 57. Four years ago, whilst following his occupation of stonemason, he received a severe incised wound across the upper third of his right auricle. The wound healed, but shortly afterwards the scar became hard and painful, then commenced to ulcerate. The ulceration had progressed gradually until August, 1890. There were no enlarged glands to be made out. The patient's mother died of cancer of the rectum, and his brother of a cancerous growth on the back. Removal of the greater part of the auricle was accomplished, and since the operation there had been no recurrence. Microscopically the sections showed the typical appearances of epithelioma. Dr. Milligan said that he considered epithelioma of the auricle to be very rare. Mr. SOUTHAM had only seen two cases, both in men, and in both the upper part of the auricle was attacked. In neither case was there any evident cause or local recurrence after removal. Mr. RICHMOND drew attention to the analogy between these cases and chimney sweep's cancer; the cause in the one he considered to be stone dust, in the other soot.—Mr. YOUNG could call to mind three cases, and did not consider the disease in this situation rare. He considered that perforation for earrings, or direct irritation, was often a cause. He did not think there was any difference histologically between epithelioma and rodent cancer. Dr. BROOK mentioned some clinical and pathological differences.—Dr. DRESCHFELD considered that in rodent cancer endarteritis and endolymphangitis were more marked than in epithelioma. Mr. DEAKIN mentioned that rodent ulcer commenced in the glandular structures of the skin, whilst epithelioma began in the interpapillary processes; that both formations contained cell nests; that the cells of an epithelioma averaged a much larger size than those in rodent ulcer. The PRESIDENT thought there was no hard-and-fast line between the two, and had frequently noticed the two so-called different characters of ulceration to occur in the same growth.—Dr. MILLIGAN replied.

Carcinoma of Testicle.—Mr. C. E. RICHMOND showed a case of soft carcinoma of the testis, with secondary growths in the pelvic glands, liver, kidneys, and lungs. The liver was greatly enlarged, and, growing from the anterior part of the lower surface, was a pear-shaped tumour as large as a cocoanut, which posteriorly and externally adhered to and infiltrated the peritoneum. The tumour extended along the vertebral column, embedding the large blood vessels and both kidneys. It also filled the mediastina, and surrounded the aortic arch. The lungs were studded all over with prominent nodules. The kidneys were both cystic; the right lung dilated to the size of a small water melon. Microscopic sections of the growth, prepared by Dr. Robinson, were shown. The patient was a man, aged 23. The history of the case extended over a period of less than twelve months from the first appearance of a painless enlargment of the right testis. The symptoms throughout were, until close upon death, in no way proportionate to the amount of visceral trouble existing.—Mr. YOUNG could call to mind many instances of rapid glandular infiltration, with only small testicular growths, and he had grave doubts whether or not carcinoma testis, by the time that its growth permitted of its diagnosis, was even then too far advanced for operative interference.—Dr. BURY had brought a specimen of a testicular tumour, the character of which he considered doubtful. A short discussion upon this closed the meeting.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

FRIDAY, DECEMBER 5TH, 1890.

E. H. BENNETT, M.D., President, in the Chair.

The late Anthony H. Corley, M.D.—The following resolution was moved by the PRESIDENT, and unanimously agreed to: "That this meeting of the Pathological Section of the Royal Academy of Medicine desires to record its sense of the loss which the Academy has sustained by the lamented death of Dr. Anthony H. Corley, formerly President of the Section, and to express the deep sympathy which the members of the Academy feel with his afflicted family."

Congenital Deformity.—The PRESIDENT exhibited a dissection of an upper limb congenitally deformed, and a cast of the limb taken previous to its dissection. The specimen was the left upper extremity of a young man, which terminated at the middle of the forearm in a stump, well formed and plump; from the palmar aspect a knob projected which carried on its summit a row of five rounded tubercles. Above the knob and its row of tubercles there was a circular scar on the limb, and at either side of the knob, opposite to the extremities of the bones of the forearm and within the circular scar, there were two minute depressions in which the ends of the bones of the forearm were attached to the skin. The dissection showed that though atrophic in a high degree, the nerves, the blood vessels, and the tendons, such as they were, passed along through the stump to reach and terminate in the knob and tubercles which represented the hand and fingers. Dr. Bennett discussed the views put forward by Montgomery, Simpson, Paget, Cayley, Annandale, and Sturges. It appeared more rational to regard these specimens as examples of arrest of development, caused by constriction similar to that which, when complete, causes amputation, than to refer them to some unknown local disease of the embryo. In the specimen shown the brain, like the parts of the brachial plexus concerned in the supply of the hand and forearm, was atrophic at the region of the motor area of these parts. The ascending parietal convolution in a normal brain in this position presented an average diameter of 12 millimètres. In this specimen, in the region of the arm centre, it was thinned down to rather less than 5 millimètres. The brain will be photographed and figured by Professor Cunningham. Remarks were made by Drs. FRAZER, BEWLEY, and PATTESON; and the PRESIDENT replied.

Dentigerous Cyst.—Dr. A. W. W. BAKER made a communication on the pathology of a dentigerous cyst. A cyst about the size of a small pea was found attached to the palatine root of an upper molar tooth; it presented an unusual peculiarity in being lined with columnar ciliated epithelium, the occurrence of such epithelium being accounted for by the fact that masses of epithelium were frequently seen in the root membrane of teeth, and were thought to be the remains or *débris* of the enamel organ, the development of the cilia being a subsequent process. The cyst gave rise to a good deal of pain, and had semi-purulent contents. The communication was illustrated with microscopic sections and photographs.

The Irish Elk.—Dr. FRAZER exhibited a number of pathological bones of the Irish elk, and make a communication thereon.

Spontaneous Enterectomy.—Dr. BIRMINGHAM submitted an example of spontaneous enterectomy.

Tricuspid Narrowing.—Dr. H. T. BEWLEY showed a heart, the subject of tricuspid narrowing. He called attention to the rarity of the lesion, and to the fact that with tricuspid narrowing mitral narrowing practically always coexisted, and aortic disease in about 50 per cent. of the recorded cases.

Scirrhus of Male Breast.—Dr. PATTESON showed a specimen which had been removed in St. Vincent's Hospital by Mr. M'Ardle a few weeks previously. The patient was a strong, able-bodied man, aged, 67, with a good history, both family and personal. Last March he first noticed the nipple sore, but attributed it to the rubbing of his brace. Shortly after he noticed a small nodule the size of a pea, which kept gradually increasing in size till his admission to hospital in October. At this time the tumour was about the size of a pigeon's egg, firmly adherent to the overlying skin, and slightly to the underlying pectoral muscle. There were some enlarged glands in the axilla. The nipple was slightly retracted. Occasional shooting pains in the side and arm were the only symptoms. The breast and three glands—the largest about the size of a small walnut—were removed, and the patient made an excellent recovery. On section the tumour proved to be a typical scirrhus. Of a total of 1,781 cases of carcinoma of breast, only 1.38 per cent. occurred in males. Billroth gives a somewhat higher percentage, 2.77 in 252 cases. Sarcoma seemed to be more common in the male breast.

CORK MEDICAL AND SURGICAL ASSOCIATION.

WEDNESDAY, DECEMBER 10TH, 1890.

JEREMIAH COTTER, M.D., in the Chair.

Deformities of the Extremities Treated by Osteoclasis.—Dr. GRATTAN read notes and exhibited three patients on whom he had operated by means of his screw clamp. He said he had slightly modified his osteoclast, having increased the handle bar of the screw to 13 inches, thus giving enormous power. The instrument could fracture the thickest femur or other bone at any given point. He had operated fifty-seven times with his special clamp, and was perfectly satisfied with the results. The PRESIDENT, on the motion of Drs. PEARSON and MORIARTY, conveyed the thanks of the Association to Dr. Grattan for thus bringing before the Society his long experience and careful work in orthopædic surgery.

Epileptiform Convulsions.—Dr. W. ASHLEY CUMMINS read notes of a case of epileptic seizures in a man, aged 38. He had the first attack on November 18th, and, on subsequent days, the seizures had recurred with increasing frequency until they took place about every fifteen minutes. They consisted of slight muttering and movements of the lips, lasting about twenty seconds, followed by unconsciousness for about two minutes. There was the cicatrix of an old scalp injury over the occipital region, and the man had suffered from a certain amount of difficulty in turning the eyes to the right or left without corresponding movement of the head since the injury. Bromide of potassium, after purgation, nitrite of amyl, hyoscyamine, chloroform, nitroglycerine, and biborate of soda were tried without the slightest benefit. Chloral-hydrate (grs. xxx) was tried as a last resource with surprising result, in the form of enema every three hours. The fits steadily decreased in number, and the patient was convalescent two days afterwards.

Tracheotomy for Membranous Croup.—The PRESIDENT read notes of a case in which he had performed tracheotomy for croup in a child aged 4½ years. Fuller's tube was inserted. The temperature never exceeded 102°. A soft rubber tube was used a few days subsequent to the operation, and was shortened daily and removed a fortnight from that date, when the external wound was allowed to close.

M. DE QUATREFAGES, the eminent anthropologist and zoologist, recently celebrated the sixtieth anniversary of his taking his Doctor's degree. Though over 80 years of age, he is in excellent health, and works hard. A few weeks ago he was elected President of the French Geographical Society.

REVIEWS AND NOTICES.

SANITY AND INSANITY. By CHARLES MERCIER, M.B. London: Walter Scott. 1890.

THIS volume forms one of the Contemporary Science Series. It is written in a pleasant, clear, and comprehensible style, and whether we agree with the author or not, at least we understand him. Nowadays everyone expects to have everything explained; the age of science, so called, is the age of fresh explanation. Formerly problems of life and of mind were approached from the dogmatic or the introspective sides, now they are studied and explained by sense and so-called common sense.

There could have been no better exponent of the modern school of thought chosen for the purpose of this book. There is a *fin de siècle* cocksureness about things which is satisfying, if not convincing. We have our doubts about the good of explaining scientific subjects to the lay mind; for, just as the patient so frequently misconstrues the lucid explanation of his symptoms by the physician, so the lay mind more frequently than not gets hold of the wrong end of the scientific stick.

Dr. MERCIER'S book is most suitable for the medical man who has no special knowledge of insanity, and who has already got his textbook to refer to; for *Sanity and Insanity* is a book full of principles which will not lead to any definite method of treatment in any individual case; it is a book for the study, not for the bedside. Yet we think there are few intelligent men who would not derive both pleasure and profit from its perusal. Dr. Mercier is the Harvey of nervous circulation; and granting nervous circulation with similar conditions for the circulation of the nervous as of the blood fluid, then many things are readily and reasonably explained, and our author sets to work to do this.

The book consists of fifteen chapters, the earlier ones giving the modern theories as to the structure and general functions of the nervous system. Mind in its relationship to body is considered, and we think certain quotations from the book itself will best give our author's views.

"The relationship of mind to nervous processes is very peculiar, since it is in fact very different from that which is vaguely current, and I will not say accepted but assumed, it will be necessary for the reader to rid himself as far as possible of all the preconceived notions of the matter, and to begin its consideration afresh with a perfectly open mind. In the first place, he must discard altogether the notion that mind can work upon, or influence or produce changes in, the nervous system, or in matter of any kind, however arranged; and, in the second place, he must rid himself of the idea that any nervous process, or any movement or rearrangement of material parts, can ever, under any circumstances, be transformed into a mental phenomenon" ..... (Authors who ought to know better are accused of such presumption). Again, "It is very obvious that if the brain is made up as we know it to be, entirely of cells, fibres, and ground substance, with the necessary framework of connective tissue, blood vessels, and so forth; and if the processes going on in this structure are limited, as we know them to be, to molar and molecular movements, there is neither room, nor need, nor possibility for any interference of mental conditions with these movements of material particles." We hear a great deal of nervous discharge which "we know to be a liberation of energy due to a rearrangement of molecules, due to the falling of the molecules into simpler combinations." "The true connection between nervous and mental phenomena is believed to be this—that when in the course of its circuit (which we have so often traced from the organs of sense to the muscles), a nerve current reaches the highest centres and sets them in action, then this activity of the centres is attended (we cannot say why or how) by a mental state. Every alteration of the nervous tension in these upper centres is attended by a variation in the mental processes."

After a consideration of mental functions in health comes the study of "What Insanity is," and in this chapter the relationship of insanity to conduct is well brought out. We quote the conclusion of the chapter: "In every case of in-

sanity there are present all the three factors—disorder of the highest nerve arrangements, disorder of conduct, and disorder of consciousness; and in many cases the disorder of consciousness includes disorder of thought and feeling of self-consciousness and of consciousness of the relation of self to surroundings. In no two cases, however, are these various factors combined in quite the same way, and thus no two cases precisely resemble one another. On the way in which they are combined depends the form which the insanity assumes."

The consideration of the "Causes of Insanity" is well done, and instead of predisposing and exciting moral and physical causes we have "heredity" and "stress" heredity, and its various conditions are carefully studied, Darwin being laid under contribution. The subject of causation of insanity always proves seductive to writers on the subject; it is full of interest and of imagination, and these two deeply affect Dr. Mercier.

When we come to the author's classification of the forms of insanity, we can only say that he gives broad general distinctions, which fortunately do not add to the schemes of classification, but we fancy they will not advance the subject. Yet, in saying this, we do not wish to leave the book with an unkind suggestion, for we feel the author has devoted time, care, and attention to a subject he understands, and has shown himself to be full of practical feeling and clear discernment.

Pasteur and Rabies. By T. M. Dolan, M.D. Pp. 83. London: G. Bell and Sons. 1890.

Dr. Dolan has reproduced, in a popular form, many of the statements on this important subject which he has already published in the *Contemporary Review*. He has been a very painstaking investigator of the subject of rabies and hydrophobia, but his conclusions are not such as the leading professional authorities accept. Of many inaccuracies in this pamphlet the most prominent is, at the same time, the most obvious, and although its character was pointed out immediately after its first publication, it reappears. After giving M. Pasteur's well-known classification of his cases into Class A, in which the dog was proved to be rabid by the experimental test, or by one untreated patient bitten at the same time dying of hydrophobia; Class B, in which the dog was certified to be rabid by a veterinary surgeon; and Class C, in which the dog was only suspected of being rabid, Dr. Dolan says that this makes "no allowance for non-rabid dogs," although to any unbiassed person it is obvious that such cases are provided for and included in Class C. The same regrettable want of care and logic runs throughout Dr. Dolan's pages.

Such statements carry their own condemnation with them to professional readers. It is, however, explained on pp. 7 and 8 that the readers he writes for are the public and not the medical profession, who, we may add, would not only know how to estimate the value of his assertions, but also to weigh critically the value of the next sentence in the same paragraph, in which he states that "though I have had hundreds *(sic!)* of dog-bitten patients since 1885, I have treated them at home as I had done since 1869, and I have not sent a single patient to M. Pasteur; and," he goes on to say, "I have not had a death from hydrophobia as the result of my scepticism." We can only hope that the public, for whom Dr. Dolan is writing, will not gather from these passages that he is the happy possessor of a prophylactic treatment against rabies. Dr. Dolan is so able a man that we read with regret this unsatisfactory production of his pen.

Lehrbuch der Auscultation und Percussion. Von Dr. C. Gerhardt, Professor der Medicin und Geh. Med. Rath. in Berlin. Fifth edition. Tübingen: H. Laupp'schen Buchhandlung. 1890. Pp. 360.

No detailed description is necessary of such a work as Dr. Gerhardt's, which has won for itself in Germany a reputation which has called forth a fifth edition, and which has been for many years recognised in this country as a standard authority on methods of physical diagnosis. It is somewhat surprising that no translation of the work has as yet appeared in English. Many of the smaller textbooks published in Great Britain and America have in turn acknowledged their indebtedness to Dr. Gerhardt's teaching, but the work itself has hitherto been studied in the original, and therefore has been accessible to the minority only.

The present edition is not greatly altered from those that have preceded it, but considerable improvements and additions have been made, while some less important sentences have been omitted, so that the book is but slightly increased in size. A noticeable feature throughout the new issue is the substitution as far as is possible of descriptive German terms in place of the hybrid words of Greek or Latin origin, or sometimes both, which have crept into medical nomenclature. This alteration is one to be admired on philological grounds, but may not commend itself at first sight to the ordinary reader of medical literature. The general form of the work is not altered, but the number of illustrations has been increased. We can cordially recommend it to the notice of the profession as a trustworthy guide, which has been well edited by its author, and which contains all that is worth recording of the work that has been done upon the subject during the seven years which have elapsed since the previous edition appeared.

Foods and Dietaries; a Manual of Clinical Dietetics. By R. W. Burnet, M.D., Physician to the Great Northern Hospital. London: Charles Griffin and Co. 1890.

The plan of this book, the author tells us, was suggested by the habit which for a number of years he has followed of writing out in detail directions for the diet of his patients. After an introduction dealing with the general principles of dietetics, the author takes us through a long list of diseased conditions, and gives an account of the diet suitable in each morbid state, interspersed with fragmentary remarks of the most varied character on the symptoms, causes, mode of origin, and general management. The dietetic treatment is first indicated in broad outline, and its *rationale* explained, and then follows a detailed dietary for the daily routine of the several meals. The directions given are uniformly judicious, and characterised by good sense and absence of eccentricity. Due attention is given to the dietetic requirements in those cases—such as diabetes, gastric ulcer, gout, obesity, typhoid fever, diarrhœa, scurvy, and rickets—where the choice of food is more especially important.

Separate chapters are devoted to the diet in diseases of children, to the employment of alcohol, and to the preparation and use of prediges ted foods. There is also a useful appendix on sickroom cookery, in which full directions are given for the preparation of articles of diet and dishes for invalids.

The work pretends to no originality, and reveals no evidence of special observation or research on questions of diet, but it shows an adequate acquaintance with existing knowledge on the subject, and may be confidently taken as a reliable clinical guide in the art of feeding the sick.

NOTES ON BOOKS.

Descriptive Catalogue of the Specimens Illustrating Medical Pathology in the Museum of University College, London. By Charles Stonham, F.R.C.S., Curator of the Museum. ("Copies may be obtained at the office of the College.") Some years ago, we are informed in the preface, Drs. Barlow and Harrington Sainsbury began this *Catalogue*, but the latter retired a few years since, and Drs. Barlow and Angel Money, after a time, secured the help of Mr. Stonham, to whom the preparation of this work is almost entirely due. We have ever strenuously advocated the preparation of museum catalogues and their regular maintenance by an intelligent system of issuing supplements. Mr. Stonham has prepared this *Catalogue* after the best models. The histories are not so complete as those attached to the College of Surgeons' catalogues, but until twenty years ago registration at London hospitals was not in a satisfactory condition, therefore the compiler has been obliged to make the best of the older specimens. The tendency of some modern compilers

is to make the histories too diffuse. Mr. Stonham has managed to condense the clinical reports relating to newer specimens, so as to make them clear and to keep the bulk of the *Catalogue* within reasonable limits. The compiler, however, deserves most credit for the excellent pathological summaries which are placed at the beginning of the series. This arrangement renders the *Catalogue* highly valuable for the student, especially at University College. This collection of "medical" pathological specimens is very rich, as might be expected at a College associated with so many great physicians and so able a staff of junior workers. We may especially note the series, "Diseases of the Suprarenal Capsules." It includes some fine preparations of those organs taken from cases of Addison's disease, one occurring as early as 1866. Fifteen years ago the College of Surgeons' Museum did not include one single specimen illustrating that disorder, and the Middlesex Hospital took the lead in richness of specimens. The University College collection includes a good dissection of the kidneys, with the remains of the suprarenal capsules, and neighbouring vessels and nerves from a case of Addison's disease. There is also a fine series of diseased spleens, the *Catalogue* containing an unusually good summary of the subject.

Notes on Domestic and Personal Hygiene. By K. T. L., medallist of the National Health Society. (London: Published for the National Health Society by Allman and Son, Limited.)—As Dr. Owen Lankester observes, in the short preface which he has written for this work, "the book will be found simple, and will serve as an introduction to the vast subject of 'domestic and personal hygiene.'" The pages devoted to diet, dress, and disorders of health are well prepared. The author evidently possesses the rare gift of expressing scientific ideas so as to render them intelligible to the uninformed. Many popular writers unconsciously make such ideas appear imposing, no doubt, but, at the same time, pedantic and incomprehensible. By a clear and simple style the author in this case displays teaching ability. The most original part of the manual is the chapter on "The House." Every householder should acquire a fair general knowledge of domestic hygiene, but, as a rule, he knows very little of the subject or makes a hobby of some special department. Thus we hear of a gentleman who tries a different ventilator in every room in his residence, but can tell his visitors nothing about the drains; whilst another will talk to all his friends about his drainage, unaware, perhaps, that some delicate and complicated appliance on which he relies is misunderstood or misused by his servants, so that his drains are defective after all. This imperfect knowledge of sanitation is partly due to the fact that most popular works on hygiene are made too scientific and technical for the limited intelligence of that careless being—the average householder. In *Notes on Domestic and Personal Hygiene* the householder will find a clear elementary demonstration of the way to keep a house healthy. The chapter on "The House" is adorned with two useful diagrams, illustrating sound and defective sanitary appliances, after the fashion of the illustrations to Mr. Pridgin Teale's *Dangers to Health*.

Golden Bullets; a Story in the Days of Akber and Elizabeth. By WILLIAM W. IRELAND, M.D.Edin., formerly of Her Majesty's Indian Army. (Edinburgh: Bell and Bradfute. London: Simpkin, Marshall and Co. 1890.)—Most readers must have been surprised at the length of the lists of medical novelists recently published in the BRITISH MEDICAL JOURNAL, and compiled with the co-operation of numerous correspondents. Dr. Ireland long ago made good his claim to a place in such a list, but his last venture will give him a higher place than that to which his previous efforts entitled him. With a somewhat reckless faith in his reader's thirst for knowledge, Dr. Ireland boldly states in a brief preface that his novel is written with a purpose—a very laudable purpose—namely, to teach people something about India; still the average novel reader is rather shy of a story with a purpose. The novel, however, opens well, and if the plot is a little slow in developing, it is complicated enough when it comes, and the incidents are sufficiently exciting to stimulate even a jaded appetite. As to the faithfulness of the pictures of Indian scenery and Indian life there can be no doubt, and the reader once embarked with Stephen Ashbourne on his adventurous voyage will pick up many novel impressions and new facts before he lays the book down, leaving the hero in a position to excite the envy alike of the philosopher and the man of action.

The Medical Bulletin Visiting List and Physician's Call Record. Published by F. A. DAVIS, Philadelphia.—The arrangements of this visiting list are rightly claimed to be time and labour saving. One page of thirty lines is to be written up at the beginning of each month. By an ingenious plan of interleaving with half pages, the visits of each day and each week are readily recorded. The parts appropriated for engagements, cash amounts, memoranda, etc., are particularly well arranged. The book is thin and limp, and easily carried in the breast pocket. To many this list will be most useful; but to the busy family practitioner—or to the Poor-law surgeon—thirty lines is too limited a space for his requirements.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A SPLINT FOR THE TREATMENT OF FRACTURE AND DISLOCATIONS OF THE ELBOW IN THE EXTENDED POSITION.

THE frequent occurrence of more or less deformity following the, at present, generally accepted methods of treatment of injuries about the elbow-joint, has led me to treat all such cases, with the exception of fracture of the coronoid, which is most rare, in the extended position, with the hand prone.

This position, as has been shown by the researches and experience of Drs. Illingworth and Nunn in this country, and of Dr. Carl Lauenstein abroad, has many great advantages over the plans usually adopted.

It is most important that the treatment of dislocation should not be detrimental to a possible fracture. The extended position obviates the danger of a fracture which is masked by swelling, and consequently overlooked, being left in such a position that union is either faulty or absent altogether.

As a means of carrying out this method of treatment, I have devised a splint, which is simple, light, and portable. It is comfortable to the patient, and is likely, I think, to be of great value in compound injuries of the elbow.





It consists of three pieces, arranged as follows:—A splint, A, for the arm; B, one for the forearm, extending down to the finger-tips, and on which the hand lies prone; C, a third for the inner side, tapering below, to suit the narrowing of the forearm. The space D between A and B is for the internal condyle. C keeps A and B in the same straight line, and is so hinged to them that it can swing round to either side, and thus the same splint will serve for either arm. When the splint is applied, C is at right angles to A and B. Messrs. Arnold and Sons, London, who have my original design, are the makers.

A. HANBURY FRERE, M.B., C.M.

Wickham Market, Suffolk.

PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

CLINICAL NOTES ON A CASE OF LUPUS TREATED IN BERLIN BY KOCH'S METHOD.

By MALCOLM MORRIS, F.R.C.S.E.,
AND
J. J. PRINGLE, M.B., M.R.C.P.

THE following is the complete clinical record of the case briefly reported in the BRITISH MEDICAL JOURNAL of November 22nd, 1890. It may be considered a typical one both as regards the disease and its progress under the treatment. The case is not advanced as one of cure, but the result obtained far exceeds that produced by any other known method at our disposal both in point of efficacy and rapidity. At the same time it behoves us to urge upon the profession the necessity for extreme caution in the use of this potent remedy, especially as recent experience has demonstrated that the phenomena following its use are inconstant and frequently alarming.

E. N., aged 22, mechanical engineer.

Family History.—Main points of importance: Is seventh of a family of eight. Eldest sister is a complete invalid with caries of bones of foot since the age of 12. One brother has many disfiguring scars on the neck from suppurating glands, at the age of 10.

Personal History.—Main points: After scarlatina, at the age of 5 years, he had middle ear suppuration with discharge, and has been quite deaf on that side ever since. From age of 6 to 13 years, had suppurative disease of bone of both ankles, cicatrices being now present. At age of 12 had severe suppurating glands on right side of neck, which burst spontaneously, leaving a disfiguring scar.

Face: First spot of lupus on the right side of nose appeared in November, 1884, but was preceded by some affection of nasal mucous membrane. Despite repeated cauterisation, disease spread rapidly and destroyed a great portion of right ala of nose. Came under Mr. Morris's observation in February, 1885, who has repeatedly scraped and cauterised it since; the disease has thereby been arrested on the right side, but spread on left.

Palate: The palate was first involved in the summer of 1885, the gums in the beginning of 1889. Both have been frequently scraped and cauterised.

Glands: Masses of caseous glands have been removed from the neck on five occasions since 1885.

Present Condition on November 15th, 1890.—Height, 5 feet 6½ inches; weight, 10 stone. A remarkably intelligent, calm, and reliable patient; well nourished, muscular young man, with dark brown hair and brownish grey irides; teeth and nails good. Face much disfigured by the destruction of a large portion of the nose by lupus, and the operations referred to for it. The neck exhibits five disfiguring scars, the result of spontaneous rupture of abscesses and of operations for the removal of caseous glands. The largest of these is chiefly the result of spontaneous rupture; it is situated on the right side of the neck, parallel to the ramus of the jaw, about an inch below it, and extending behind the angle; it measures 2½ inches in length. This cicatrix is markedly rugged and hypertrophic, and contains several recent lupus nodules. Another cicatrix, lying transversely across the middle line of the neck, the result of operative procedures in 1887-88, and measuring 1½ inch in length, although not hypertrophic, shows many recent lupus nodules. The remaining scars on the left side, which result from more recent operations in 1890, also probably contain lupus tissue, as they are covered with thick scab. In addition to the scars, there are three enlarged hard lymphatic glands in the anterior triangle of the neck, the largest being nearly the size of a pigeon's egg, and situated beneath the left ramus of the jaw. Several smaller glandular enlargements are present on the right side.

Nose: There is extensive destruction of the right side of the nose, the right nostril being reduced by cicatricial contraction to an aperture $\frac{1}{8}$ of an inch in diameter, but the mischief there is apparently quiescent. On the adjacent portion of the nose are numerous comedones. Progressive destruction of tissue is taking place on the left side of the nose, characteristic lupus nodules being present as far outwards as 1⅛ inch from the middle line, and upwards to within ⅛ of an inch of the inner canthus. The most outlying lesion is a typical lupus ulcer the size of a threepenny bit. The upper lip is free from disease, except close to the nostrils, the mucous membrane of which is involved. Over the cheeks, chin, and neck, are numerous comedones and acne pustules, some of which suggest the early manifestation of lupus, but the diagnosis cannot be made with certainty.

Gum: The upper gum, which had been frequently and freely scraped and cauterised, exhibits raised, vascular, spongy granulations, irregular in outline, with intervening bands of cicatricial tissue, and in parts is considerably retracted, exposing the dentine of the teeth, especially of the canines. The mucous membrane of the upper lip is now healthy in appearance, but a year ago complete destruction by cautery of a large lupus mass with central ulceration was performed.

Palate: The whole of the anterior half of the hard palate as far back as the first molar on both sides is uniformly covered with raised, shaggy, vascular, extremely hypertrophic granulations. The posterior half of the hard palate and the middle half of the soft palate are dotted over with irregular fungating nodules, with much intervening scar tissue. There is a large nodule on the base of the uvula, which is œdematous. Immediately above the left anterior pillar of the palate is a deep irregular ulcer, the size of a large pea. The tonsils are slightly injected but not obviously diseased. The pharynx is normal, and laryngoscopic examination merely reveals slight diffuse injection of the larynx, but no tubercle or arytenoid swelling. (Some hoarseness which is at times notable is doubtless due to the fact that he works in a very noisy shop in which it is necessary to shout habitually.) The tongue is clean and free from lupus. The digestive functions are normal. The chest is well formed, and there are no evidences of tubercular disease of the lungs or other internal organs.

He was admitted to the Royal Clinic in Berlin on November 15th under the care of Professor von Bergmann, to whom we take this opportunity of expressing our thanks for his extreme kindness, courtesy, and consideration, both to ourselves and to our patient.

On November 16th, at 8.45 A.M., he received his first inoculation of 0.01g. of the ordinary 1 per cent. solution, in presence of Professor Koch, Professor von Bergmann, and Professor Liebreich. At 3 P.M. he had a severe rigor, when his temperature began to rise. At 5 P.M. he was suffering from *malaise*, depression, headache, somnolence, oppression of breathing, tightness at the chest, and nausea. The tongue was dry, breath very offensive, pulse 136, respiration 28. No further note of pulse and respiration was made throughout the case.

Local Condition.—The nose was swollen, tense, shining, erysipelatous-looking, the epidermis over each lupus point raised from beneath by opaque yellow fluid. The glands in the neck and scars were swollen and very tender, various lupus points about them showing as above. The gums were turgescent, and felt swollen, while the teeth felt loose. Granulations on the palate were enormously swollen and extremely vascular. The erythematous blush was accurately confined to the lupus parts, considerable throbbing pain being complained of there but nowhere else.

On November 17th, at 8 A.M., his state was as follows:—Feels well; has slept fairly, especially during the latter part of the night. Has slight headache and some general aching pains, but the aspect of fever has completely gone. Breath is still peculiarly offensive, respiration tranquil; tongue dry, furred in the centre, red at tip and edges.

Locally.—There is slight flush still over the nose, but the swollen, tender, shiny appearance has disappeared, along with all local pain and throbbing. The lupus looks as if it had been severely blistered, the recent points showing out like deeply-seated pustules, recalling a herpes at its height. A few scabs are present here and there. The gums are less swollen and puffy than last night; the cicatricial tissue there

TABLE.

No. and Date of Injection.	Quantity of a 1 per cent. Solution.	Maximum Temperature.	How long after Injection.	Secondary Rise.	Length of Pyrexia.	Remarks.
1. November 16th, 8.45 A.M.	0.01	40.15° C. 104.2° F.	10 hours	To 38.5° C. 38 hours after injection	39 hours	Reaction both local and general; severe rigor, 3 P.M. At acme of reaction, pulse 136, respirations 36. Headache, somnolence, dyspnœa, sweating, thirst, breath offensive. Local reaction in lupus regions, scars and glands, and round comedones on nose.
2. November 18th, 4.30 P.M.	0.01	37.8° C. 100° F.	6½ hours	Trifling	16 hours	Reaction slight and only general (headache). Solution had been kept for three days, but other patients injected reacted strongly.
3. November 19th, 3 P.M.	0.01	38.8° C. 101.8° F.	5 to 7 hours	None till after apyrexia	18 hours	Reaction, both local and general, severe, but less so than after first injection. Severe rigor at 8 P.M., lasting forty-five minutes. Vomiting.
4. November 21st, 3.30 P.M.	0.01	37.3° C. 99.2° F.	4 hours	?	3 hours	Reaction trifling.
5. November 23rd, 11.45 A.M.	0.015	38.6° C. 101.5° F.	7 to 9 hours	None	14 hours	Reaction moderately severe locally.
6. November 25th, 12.30 noon	0.02	38.6° C. 101.6° F.	10½ hours	None	15½ hours	Reaction locally markedly less than before.
7. November 26th, 9 A.M.	0.02	38.6° C. 101.4° F.	14 hours	None	15 hours	Local reaction *nil*.
8. November 27th, 9.30 A.M.	0.025	37.7° C. 99.8° F.	5½ hours	None	17 hours	Local reaction *nil*.
9. November 28th, 11 A.M.	0.03	37.9° C. 100.2° F.	12 hours	None	16 hours	Local reaction *nil*. Went out.
10. November 29th, 10.15 A.M.	0.04	37.3° C. 99.2° F.	7 hours	Slight, probably accidental	5 hours	Local reaction *nil*.
11. November 30th, 11 A.M.	0.05	38° C. 100.4° F.	6 hours	None	9 hours	Local reaction *nil*. Went out twice.
12. December 1st, 12.30 noon	0.06	37.6° C. 99.6° F.	2½ hours	None	7 hours, ? accidental	Local reaction *nil*
13. December 2nd, 3.45 P.M.	0.08	36.6° C.	1½ hours	None	—	—
14. December 3rd, 7 P.M.	0.1	37.6 C.	6 hours	None	—	—

is not now distinguishable. The changes in the condition of the palate are the most striking. The general swelling has subsided, and the whole surface is glazed. The anterior half is mainly covered with thick brown scab. In the posterior portion the previously existing lupus nodules are now represented by yellow points beneath the mucous membrane. The glands have subsided and are painless. There are yellow adherent scabs over the lupus nodules about the cicatrices. The scars about the ankles are absolutely unaffected.

November 18th. 10 A.M. Feels quite well, looks bright, appetite returned. Blush over the nose completely subsided, leaving many of the comedones previously noted surrounded by minute beads of yellow purulent fluid. The previously lupus portions are covered with thick, brown, adherent scab, which completely obstructs the right nostril. The glands in the neck have entirely subsided. The hardness of the cicatrices persists, and the scabbing over the lupus patches is more marked than yesterday. The gums show superficial ulceration with cicatricial tissue now visible for the first time since inoculation, but there is no scabbing; at one or two points they are bleeding. There is much brown, hard, adherent scab over the anterior half of the palate. Over the posterior part the mucous membrane has yielded, resulting in the formation of minute shallow ulcerations extending some distance over the uvula, the base of which is covered with thick yellow fluid. The condition of the mouth causes considerable pain, so that only soft pulpy or liquid food can be taken. At 4.30 P.M. he had his second inoculation, 0.01 g. being again used. At 11 P.M., when the temperature attained its maximum of 100° F., he felt considerably out of sorts and had severe headache, but none of the other symptoms experienced after the first injection. The solution used was made three days previously, and there is considerable doubt as to its reliability, although other patients inoculated with it reacted normally.

November 19th, 9 A.M. Does not feel so well as yesterday, looks dull, has some tinnitus, and says he feels 'groggy.' Tongue moist, still coated. The signs of local inflammatory reaction are decidedly less marked than yesterday, no effect having resulted from yesterday's inoculation. Swelling of the nose has almost entirely subsided, and very little redness persists. Scab is beginning to separate at a few points. The little pustules surrounding the comedones on the nose have dried up to form minute scabs. The lupus tissue on the gum shows out markedly between the smooth cicatricial tissue, the general swelling having subsided. The scab has separated from the anterior half of the palate, leaving comparatively deep ulcers covered with thick, yellow, gummy secretion. The ulcerations over the posterior part of the palate, including the uvula, are cleaning; they are shallower than those over the anterior part. The fœtor of breath has completely disappeared. At 3 P.M. he received his third inoculation of the same amount of the solution as previously. At 8.45 P.M. he had a rigor which lasted for forty-five minutes, and was worse than after his first inoculation. At 10.15 P.M. he presented a marked febrile appearance, with suffused eyes and apathetic dull look. He complained of severe frontal headache, nausea, cough, and oppression at the chest without expectoration. Locally he complained of throbbing pain and a feeling "as if the teeth were all jammed together and too many for his head." His tongue was dry and brown. At 10.30 he vomited severely, with relief to his headache. The note as to his local reaction runs thus: Some swelling and blush of the nose, but not comparable to that after first inoculation. The abundant scabs prevent the lupus tissue from being observed. The gums are much swollen and tender, bleeding at a few points. The palate is little altered, but rather redder than before. Breath is extremely fœtid. Glands on both sides of the neck are considerably swollen and tender.

November 20th. Fall of temperature and return of feeling of good health. Swelling of nose subsided, but a faint blush still remains there. Scabbing is more abundant than ever over the nose and adjacent parts. The teeth are covered with sordes. The gums are not so swollen as last night, the lupus patches in them showing as livid granular areas upon both sides of the frænum, and between the second incisors and canines on both sides. The palate is more densely covered than ever with thick scab in the anterior half, and, in the posterior half, with pultaceous, yellow, sloughy-looking matter, which is firmly adherent to the deeper parts. The glands in the neck are still enlarged, but not tender.

November 21st, 9 A.M. Feels well, but is decidedly losing flesh. He does not take food with relish. Scab is beginning to separate from nose and neck, the subjacent tissue showing no lupus. On the gums and palate, however, lupus is still discernible, but is more limited than formerly. The palate is

healing rapidly. At 3.30 P.M. he was inoculated for the fourth time, the amount used being again 0.01 gramme. Very trifling reaction, both local or general, ensued.

On November 22nd he felt well, his appetite had returned. A good deal of scab had separated, but more was forming.

November 23rd, at 11.30 A.M., was inoculated with 0.015 gramme. He had slight headache and dyspnœa, but the reaction, although brisk, was of short duration. His nose swelled, but the palate and gums did not react. On this date we were compelled to return to England. The progress of the case may be gathered from the accompanying tabular statement of the results of each inoculation. It may be briefly summarised as exhibiting diminution of both general and local reaction to doses progressively increased up to 0.1 gramme, and administered at close intervals until complete immunity was attained. No local reaction whatever resulted from the seventh and subsequent inoculations, the total number given being fourteen within the space of eighteen days. The patient returned to London on December 6th.

The following note of his condition was made on December 8th:—

Neck: The scars on the neck are softer and flatter, and especially the large one parallel to the ramus of the lower jaw on the right side. No lupus nodules are now perceptible in the transverse cicatrix. Thin adherent scale now takes the place of scab in the scars on the left side of the neck, but there is no lupus tissue visible when it is removed. The effect of treatment upon the glands is very manifest, as they cannot now be felt, with the exception of the largest, which is reduced to the size of a pea.

Nose: As the result of inflammation the contraction of the scar bounding the right nostril has resulted in almost total obliteration of the nostril, and from the same cause a large number of comedones have been removed, leaving patulous, sebaceous ducts. Absolute removal of lupus nodules and arrest of the disease have taken place upon the left side of the nose, the scar tissue left being smooth, shiny, and still somewhat pink. When this pinkness is removed by pressure there is no sign of amber-coloured 'apple jelly' tissue. The ulcer on the left cheek has healed with a slightly raised but firm scar, which is entirely free lupus. There has been no reaction round the acne lesions scattered about the face, and there is now no appreciable change in them.

Gum: Although there is still a slight amount of lupus present in small scattered islets, the mass of spongy granulations has disappeared, leaving smooth, healthy-looking gum.

Palate: A very similar result to that in the gum has occurred on the palate. The ulcer had healed, all of the smaller and most of the larger hypertrophic granulations have disappeared, leaving in places pits which are in process of repair. It is at the back of the incisor teeth that most of the remaining disease exists, but even there daily improvement is noted.

January 3rd, 1891. Since the last report the granulations on the palate and gum have been considerably more raised, and show signs of further activity. There is no return of lupus on the nose.

GLASGOW ROYAL INFIRMARY.

REPORT OF CASES UNDER KOCH'S TREATMENT.

[Second report by JOHN LINDSAY STEVEN, M.D., and CHARLES WORKMAN, M.D., Assistant-Physicians to the Hospital.

IN this report additional details are given of the cases recorded last week.

CASE II. *Phthisis.* This patient, since December 22nd, 1890, has had three injections—namely, December 24th, 0.011 gramme; December 30th, 0.005 gramme; and January 2nd, 0.015 gramme. After the first two of these injections only a trifling reaction was observed, but a very marked reaction followed the third, the temperature rising to 104.4°, and slowly subsiding during the next two days. More blood observed in sputum on evening of 24th, but on 30th it is noted that no bacilli could be found. General state very good.

CASE III. *Phthisis.*—Since December 22nd J. McD. has received three injections—namely, December 26th, 0.01 gramme; December 29th, 0.012 gramme; and on January 2nd, 0.015 gramme. After each injection a decided temperature reaction was observed, but, on the whole, these have been less severe than those previously noted; 0.015 gramme only produced a temperature of 101.8°, with pulse 104, and respiration 32. During reaction complaint of dyspnœa has been prominent. Physical signs much as before; general state good.

CASE IV. *Lupus.*—I. S., since December 22nd, has received four injections—namely, on December 24th, 0.005 gramme; on the 26th, 0.007 gramme; on the 29th, 0.009 gramme; and on January 3rd, 0.01 gramme. The first three of these injections produced practically no temperature reaction, the highest point being 100.4° after the first; after the last of 1 centigramme the temperature rose in twelve hours to 102.4°, to fall in six hours to 99.2°, a trifling reaction indeed compared with those recorded last week as the result of much smaller doses. After each injection distinct, but much slighter, local reaction has been observed. Considerable improvement of the diseased parts, especially within the mouth, falls to be noted.

DISCUSSION AT THE CLINICAL SOCIETY OF MANCHESTER.

AT a meeting held December 23rd, 1890, Dr. JUDSON S. BURY opened a discussion on the treatment of tuberculosis by Koch's method, and gave a detailed account of the method from personal observation during a recent visit to Berlin. Dr. Bury strongly advised the use of very small quantities of lymph in commencing treatment.—Dr. GUMPERT remarked upon the extraordinary power of selection of tuberculous material displayed by the lymph, and pointed out the immense benefit which would be obtained by the early use of the remedy in doubtful cases before the disease had progressed too far for treatment to eradicate it. From observation made in Berlin, Dr. Gumpert urged the importance of using small injections to commence with, increasing gradually until the exact quantity required to produce the desired local change had been determined. A dose of 1 milligramme or even less was sufficient at first. With half a milligramme, distinct reaction had been obtained. Dr. Gumpert afterwards showed a case of Mr. Southam's in which he had injected 3 milligrammes each time on December 8th, 12th, and 18th. The patient, a lad aged 16, had over thirty patches of lupus on the face, neck, back, and legs. He had had a tuberculous affection of the left knee in early childhood, which had produced total stiffness of the joint thirteen years ago. The reaction after this comparatively small dose had been very severe; headache, pain in the chest, and very severe pain in the strumous knee; rigor about nine hours after the first injection, but not after the others; high temperature, 104.4°, 104.2°, and 104.6° F. respectively; repeated vomiting fourteen, fifteen, sixteen, and seventeen hours after the first injection, but not after the others. The stiff knee became slightly movable on the evening of December 9th, and could be bent to an angle of about 120° on the following day. It became painful and stiff again some hours after the second and third injections, and more movable after the disappearance of the reaction, and could now be bent without the slightest pain to a right angle. The lupoid patches were all markedly improved.—Dr. HARRIS having spoken, Mr. COLIN CAMPBELL (Saddleworth) regretted that his observations of the results of Koch's treatment did not enable him to agree with the very favourable opinions expressed by Dr. Bury and Dr. Gumpert. They spoke of "cures" as if they were indubitable facts. He had grave doubts about these cures, and a consideration of the theory advanced to explain the working of the new remedy did not diminish these doubts. He had seen a great number of cases in Berlin, and carefully noted a few in each class. The cases of glandular enlargement were certainly not benefited. "Scrofulous joints" appeared to be improved, but as much improvement often took place from rest alone. As regards lupus, he saw only one case in which a cure was claimed, and he thought Dr. Sutcliffe could give them later news about that one case. The other cures he noticed were also observed sixteen days later by Dr. Sutcliffe, who still reported "no improvement." Where, then, were the "cures?" He had several patients anxious to try the treatment, but on the evidence before him, and his own observations, he was unable conscientiously to recommend it, otherwise than as an

experiment.—Dr. SUTCLIFFE (Stalybridge), from personal observation of cases, thought that the time had not yet arrived for formulating any definite rules as to the best method of using the lymph, or as to the results of its action. Probably the best way to treat phthisis would be by small doses injected at intervals of a fortnight spread over a long period of time, and conjoined with all hygienic, tonic, and climatic treatment available. Dr. Sutcliffe showed an asbestos syringe largely used in Berlin in preference to the one used by Dr. Koch.—Dr. BRIERLEY deprecated following a "method," and using a preparation the composition of which was not known to the profession, and was of opinion that English practitioners would be chary about putting this sensational treatment of tuberculosis into practice. Since the method was purely experimental at present, Dr. Brierley thought the treatment should only be carried out in hospitals where the patients could be constantly under the immediate care of skilled workers.—Dr. SIMPSON, though disliking the secrecy, at present perhaps unavoidable, of Koch's preparation, considered that they would not be justified in passing it by. Its use required great care and caution, and its curative value was not as yet firmly established. In many advanced cases, or where pulmonary tubercle was extensively distributed, it was contraindicated, and it could only be used with the utmost possible caution in any threatening of meningeal tubercle. Then, too, there was some evidence that it might set up activity in some cases where tubercle might have remained. This raised the question, what became of the bacilli? They did not share, it seemed, in the death of the tuberculous tissue. Were they in some cases, by the absorption of this, simply set free with their active properties unimpaired?—The PRESIDENT and others also addressed the meeting.

NOTES FROM BERLIN CLINICS.

By T. STACEY WILSON, M.B., C.M., M.R.C.P.,
Assistant-Physician Birmingham General Hospital.

Variations in the Character of the Reaction.—Persistent Pyrexia treated by Larger Doses.—The Local Effects produced in the Lungs.

IN connection with the apparent uncertainty as to the amount of reaction that occurs in certain tuberculous cases, it is very important to recognise the fact that well-marked and even extreme internal reaction may occur where there is very little temperature reaction. This fact was strikingly brought out recently by Professor Leyden, who pointed out that a case of his which showed *post mortem* extraordinarily severe changes as a result of the new treatment had shown almost no signs of reaction, and the temperature had not risen to 101° F. until a dose of 5 centigrammes was given. This patient—a woman with advanced phthisis and amyloid disease—received in twelve days seven injections, and a total of 1 decigramme of the lymph. We see cases of a less severe nature when the tolerance is to all appearance real; and it is not unusual to meet with cases of chronic tuberculous phthisis, even with extensive cavities, where the dose can be raised as rapidly as in the above case, and with good result.

In contrast with these we sometimes see cases where the reaction is abnormally great, and the patient develops an intermittent pyrexia, as in advanced phthisis. Here we may find ourselves in a dilemma through not knowing whether the fever is due to a reaction produced by too large a dose of the remedy, or to the dose being too small to properly protect the system from the morbid substances produced by the disease or set free by the treatment. Sometimes the former seems to be the case, and the temperature subsides if the injections be omitted for a few days; but in other cases the latter seems to be the true explanation, and the temperature continues high at night until an injection sufficient to cause a very considerable reaction is given.

This question as to the amount of the dose is also of extreme importance when dealing with the hectic temperature of advanced phthisis. Are we in these cases to continue with small doses without increasing them until the temperature comes down? or are we boldly to push on to larger doses and high temperature reactions even to the limit which the patient's strength will allow? From the cases I have had the opportunity of watching, and from what I have been able to hear, I think that the last named is the best for the patient; but upon this as upon very many other points we can only be guided by the results of patiently gathered experience.

Two cases in Professor Leyden's wards illustrated this last-named mode of treatment. In one intermittent pyrexia continued until a good reaction was obtained, and in the other pyrexia increased, if anything, with small doses, and became hectic in type; the patient, moreover, developed considerable pneumonia, with some fresh excavation of one lung. The dose was here increased from 0.0015g. on December 8th, to 0.002g. on December 10th, and 0.005g. on December 12th, and on December 15th 0.008g. was given, and this in spite of the rise during reaction reaching 104°F., while the temperature never fell below 101° or 102°, and on days when no injection was given reached 103° or so at night. After the injection of 5 milligrammes, the morning temperature fell to 100°F., the lowest for five days, and after the injection of 8 milligrammes to 99°F. The most marked change was, however, in the pulse, which fell from 115 or 120 to 85 on December 15th, and 55 on December 18th, with an evening temperature of only 101°F.—the lowest for fifteen days. Next day the pulse was 75, and the temperature was rather higher again. Two days after the injection of 8 milligrammes, the patient was still feeling very low and ill, and dissatisfied with the treatment, but on December 19th was looking and feeling better.

With regard to these advanced cases, the feeling seems to be that the lowered vital powers which usually accompany a hectic temperature renders them more or less unsuitable for treatment. This is especially so with regard to the digestion, for if the patients have not good powers of assimilation, the increased tissue metamorphosis brought about by the remedy will seriously undermine their strength. Further, it is necessary to remember that the remedy itself seems to have some special action on the stomach, for abdominal pains are apt to be caused when there is no reason to suspect abdominal tuberculosis. Too much attention cannot be paid to the diet of patients undergoing the treatment, but especially to that of advanced cases where there is a possibility of gastric or intestinal tuberculosis, for under these circumstances it may happen that both stomach and intestine may be the seat of very extensive ulceration, in consequence, probably, of the sloughing of tuberculous tissue which the remedy has produced. Such a condition has been recently demonstrated in the *post-mortem* examination on one of Professor Leyden's cases which has already been referred to.

As to the nature of the local reaction that takes place in the lungs, there is much still to be learnt, for we have to draw our conclusions almost entirely from evidence of a clinical and not pathological character. In addition to the congestive changes which give rise to the copious watery expectoration so usually seen during the reaction, we can frequently observe the development of actual consolidation, which may be of considerable extent, from the action of the remedy. This may be, however, unaccompanied by any special rise in the temperature, and such was the case in several of the instances that came under my notice at Berlin. I did not hear any expression of opinion as to the prognostic significance of this inflammation, but in most of the cases referred to the physical signs of consolidation cleared up in a week or so, on continuance of the injections. It seems likely that it is of a similar nature to the inflammatory reaction seen in tubercular tissue elsewhere, and is the process by which the morbid tissue is destroyed. It is possible, however, that it may sometimes partake of the character of a true pneumonia.

There is, I think, no reason to doubt that degenerative processes take place in the lungs, and that the tubercular tissue disappears here as elsewhere by a process of exfoliation or absorption. The following points are in favour of this:—

1. The disappearance of consolidation and restoration of resonance and vesicular breathing which is observed in favourable cases.

2. That signs of fresh cavity formation are sometimes to be observed clinically. In one out of two fatal cases where I had an opportunity of seeing the lungs *post mortem* there were evidences of fresh cavity formation, although the changes were not sufficiently unusual in character to be put down with certainty as due to the remedy and not to the usual morbid

processes. These two *post-mortem* examinations have been dealt with at some length in a paper by Dr. Jürgens in the *Deutsche med. Wochenschr.*, but we shall await with much interest a fuller and more detailed account of the changes in the lungs. The systematic search for elastic fibres in the sputa may yield some evidence on this head, although it is by no means certain that they will be increased, since the remedy acts on the tubercles, not the lung tissue proper.

3. Bacilli frequently appear in the sputa for the first time within a few days of the commencement of the injections, or, if previously present, their number is increased at first. Later on the number again diminishes, and, in favourable cases, they disappear altogether. In these cases it seems probable that the bacilli are set free by the breaking down of the tissue containing them.

This seems the probable explanation of the sudden increase in the number of shrunken and broken bacilli which is often observed after the use of the remedy.

In the above remarks I have not dwelt much on the general effect of the remedy in suitable cases, but, before bringing these remarks to a close, I feel bound to say that it was impossible to go through the hospital wards at Berlin without being impressed by the improvement that a very large proportion of the phthisical patients showed from the treatment they were undergoing.

NOTES ON THE DILUTION OF DR. KOCH'S LYMPH FOR TUBERCULOSIS.

Mr. Henry Campbell, Pharmaceutical Chemist, Queen's Hospital, Birmingham, writes:—

Dr. Koch's lymph for the treatment of tuberculosis is sent out in stoppered bottles, each containing 5 cubic centimètres. It is slightly viscid, and has a specific gravity of 1150. It keeps well with ordinary care.

The dose for an adult ranges from 0.001 cubic centimètre to ten times that amount, 0.01 cubic centimètre. In some reports these quantities are called 1 milligramme and 10 milligrammes (or a centigramme) respectively. This is not strictly correct, for 0.001 cubic centimètre of the lymph weighs slightly more than a milligramme.

For hypodermic use the lymph is diluted, a 1 per cent. solution being usually the most convenient; but in some cases a stronger solution (10 per cent.), or a weaker ($\frac{1}{10}$th per cent, or 1 in 1,000), is desirable.

If a dilution made with distilled water is to be set aside for a few days, it must first be raised to a boiling point—a process which Dr. Koch states is likely to weaken the lymph. It is better, therefore, to dilute with a $\frac{1}{2}$ per cent. solution of carbolic acid. If a dilution becomes turbid it is unfit for use.

All measuring apparatus and bottles used to prepare the dilutions should be rinsed with the carbolised water, drained and kept free from dust, and the hypodermic syringe washed with absolute alcohol, and then with the carbolic diluting fluid. Alcohol renders the stronger solutions slightly turbid.

To make the diluting fluid ($\frac{1}{2}$ per cent. carbolic), place a pint of distilled water in a flask, marked at that volume, boil for five minutes, add 44 grains of pure carbolic acid, boil for another minute, cork up, and remove from the heat. When cold, dilute if necessary to one pint with boiled distilled water.

To make the dilutions (metrical system), attach an ordinary half-ounce glass syringe by india-rubber tubing to a pipette of 1 cubic centimètre capacity, and deliver half a cubic centimètre of lymph into a 10-cubic centimètre measure. Rinse the pipette twice with the diluting fluid, add the rinsings to the lymph and dilute the whole to 5 cubic centimètres. Place in a stoppered bottle, and label Dr. Koch's tubercle lymph (10 per cent. solution, No. 1); 0.01 cubic centimètre of solution contains 0.001 cubic centimètre of lymph.

In the same way, dilute half a cubic centimètre of No. 1 up to 5 cubic centimètres, and label (1 per cent. solution, No. 2); 0.1 cubic centimètre contains 0.001 cubic centimètre of lymph.

If required, dilute half a cubic centimètre of No. 2 up to 5 per cent. and label (one-tenth per cent. solution, No. 3); 1.0 cubic centimètre contains 0.001 cubic centimètre of lymph.

The special hypodermic syringe used by Dr. Koch contains (when filled to the mark nearest the india-rubber ball) 1 cubic centimètre, and is graduated into ten divisions. Therefore—

A syringeful of No. 1 dilution = 0.1 cubic centimètre of lymph.

A syringeful of No. 2 dilution = 0.01 cubic centimètre of lymph.

A syringeful of No. 3 dilution = 0.001 cubic centimètre of lymph.

*** The English measurements are not nearly so easily managed as those of the metrical system; and it would be well, in carrying out treatment and giving descriptions, to adhere to this latter, otherwise there would be endless confusion, especially where people have not the opportunity of, or practice in, translating one into the other.

CASES AT VICTORIA PARK HOSPITAL.

We are requested to state that it is proposed to send to a convalescent home three of the patients now undergoing treatment by Professor Koch's method in Dr. Heron's wards in the City of London Hospital for Diseases of the Chest, Victoria Park, E., and that these patients may be seen at the hospital by medical men on Monday and Tuesday next, between 3.30 and 4 P.M.

BRISTOL GENERAL HOSPITAL.

Dr. Markham Skerritt and Dr. Barclay Baron, who recently visited Berlin as representatives of this institution, have received from that city two bottles of Koch's fluid, with which they have commenced treatment in the hospital.

DEVON AND EXETER HOSPITAL.

The staff of the Devon and Exeter Hospital propose to demonstrate Dr. Koch's treatment at the Devon and Exeter Hospital on Wednesday, January 14th, at 10 A.M. Members of the profession in Exeter and neighbourhood wishing to attend may apply to the House-Surgeon for a ticket of admission.

GLASGOW.

The treatment of tubercle by Koch's method goes quietly forward in the Royal and Victoria Infirmaries of Glasgow. The only incident to be noted at present is the death of a patient, who had been an inmate of the Royal Infirmary, and had received one injection of 0.001 gramme, but who, in spite of the expostulations of physicians and nurses, insisted on going home on the second day after, where it has been learned he died two days later. He had been in hospital for seven weeks, and was being treated in the ordinary way. It was at his own urgent request that Koch's treatment was begun, after, of course, it had been decided by the staff that he was a suitable patient for it. Some amount of reaction occurred after the injection, and some hæmoptysis.

At the Western Infirmary the physicians have been put in possession of some of the coveted fluid, and arrangements will shortly be completed for observing its results.

AUSTRIA.

The Association of Medical Practitioners of the First District of Vienna at a recent meeting passed a resolution to the effect that it is highly desirable that Dr. Koch should, "in the interests of science and of suffering humanity," publish the composition of his remedy as soon as possible. The hope was expressed that by the modifications and improvements suggested by other workers the poisonous element might be eliminated from the preparation without injury to its active principle.

RUSSIA.

Experiments with Koch's remedy were begun in the Institute of Experimental Medicine on November 23rd, and a report of the first results obtained was published in the *St. Petersburger med. Wochenschrift* of December 13th by Drs. E. Sperck, W. Kudrewezki, and D. Kamenski. They were similar to those reported by other observers. On December 28th Dr. Lebedew began a series of clinical experiments, in the Red Cross Lazaretto at Jalta, with Koch's fluid, which had been brought

from Berlin a fortnight previously by himself and Dr. Gurian, who had gone there as delegates from the Jalta Medical Society. In consequence of the decision of the Medical Council, however, the lymph could not be used till permission had been obtained from the Minister of the Interior. The medical profession at Jalta has passed a resolution that it is desirable that a special institution for the carrying out of Koch's treatment should be established in the town. The remedy has also been tried in the City Hospital at Riga in cases of tuberculosis of the skin, larynx, and joints.

The first death under Koch's treatment which has occurred in Russia is reported from Simferopol (Taurida). The patient, a district magistrate named Kowalewski, is said to have died after one injection. Nothing, however, is said as to the condition in which he was before the remedy was tried.

DR. KOCH AND THE GERMAN GOVERNMENT.

A WELL-INFORMED correspondent writes:—During the last fortnight various rumours have been telegraphed from Berlin as to the arrangements made, or about to be made, between the German Government and Professor Koch with regard to the future production of his remedy for tuberculosis, and it must be admitted that these rumours have been of a somewhat disquieting character. It has been said that Dr. Koch, and each of his assistants, had accepted a large immediate payment, and that they were to receive a royalty upon all sales in the future. Thus stated, the arrangement, it must be admitted, would partake far too much of the commercial transaction to be agreeable to the traditions of the medical profession, or the customs of men of science. It is, however, easy to give an unfavourable complexion to a transaction really of an honourable nature by inverting the steps by which the final results have been obtained and so misrepresenting their character. It may be well to recall the circumstances under which the lymph has been discovered, and the position of Dr. Koch in relation to the German Government. Dr. Koch has been for many years the director of the Hygienic Laboratory in Berlin. This laboratory is a Government institution, maintained by the Educational Department of the German Government, and Dr. Koch, as its director, has been an officer of that department. All the earlier experiments for the discovery of the now famous lymph were conducted in Dr. Koch's own laboratory in the Hygienic Institute, and there the observations upon guinea-pigs and other animals, which emboldened Dr. Koch to proceed to inoculate human beings, were made. The laboratory, however, presented no facilities for making these investigations upon human beings, and Dr. Koch holds no official position with regard to any of the Berlin hospitals. He therefore found himself in a practical dilemma, inasmuch as if he were to make his experiments in a public hospital it was feared that the premature and eager discussion of incomplete observations and immature results might easily tend to interfere materially with the investigations and to produce evil results. Dr. Koch consequently hired a private house at his own expense, and obtained the assistance of two gentlemen with whom he had private acquaintance Dr. Libbertz, an old schoolfellow, and Dr. Pfuhl, his own son-in-law. The lymph was prepared in considerable quantities in this private house by these two gentlemen under Dr. Koch's supervision, and the earliest injections in man were made in the private hospitals of Drs. Cornet and Levy. It soon became evident, however, that the interest, both among the general public and in the medical profession, was too keen to permit of the continuance of the investigation upon these lines; and Dr. Koch, acting on the advice, or perhaps it might be correct to say upon the instructions, of Herr von Gossler, the Minister of Education, published the now famous preliminary paper, and distributed the lymph to certain of the hospitals in Berlin. Meanwhile, the manufacture of the lymph was carried on in the private house by Dr. Koch and his two personal private assistants. Recently this arrangement has ceased; the house in which the lymph is manufactured has been taken over by the Education Department of the German Government, and Drs. Pfuhl and Libbertz have become officers of that department. The Koch Institute, which the German Government are now erecting, will consist of two parts—a laboratory and a clinical department containing 150 beds. The clinical department will probably be under the direction of Professor Brieger. The observation and treatment of the patients received into it, it is hoped, will afford in the future opportunities for Dr. Koch to prosecute his studies with regard not only to tuberculous diseases, but to tetanus, diphtheria, and typhoid fever. In this way the inconvenience which has arisen from his having no clinical wards of his own will be avoided.

In the laboratory bacteriological investigations will be carried on, and at the earliest possible date the laboratory for the preparation of the anti-tuberculous liquid will be transferred to this department of the Koch Institute. The director of this bacteriological department has not yet been appointed, but the whole institute will be under the general direction of Dr. Koch, who will remain an officer of the Education Department. It is probable that the German Government will offer to Dr. Koch some recognition of the great services he has rendered while acting as a German official, such as was voted to Jenner for his services in a cognate research, and more recently to Pasteur, in France. Large national awards have repeatedly been made to successful generals in Germany and in other countries, and it is felt that there is no reason why a man of science, who has worked for the relief of human suffering, should hesitate to accept a reward which the destroyers of men have never felt the least difficulty in receiving. As to the further rumour that Dr. Koch and his assistants may receive a payment as it were by results in the future, it may be hoped that this rumour is unfounded. Anything like the sale of a secret or the paying of royalties on a remedy would be contrary to the Hippocratic tradition.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

MAIDSTONE (Population, 32,785).—*The Etiology of Diphtheria: Influence of Insanitary Conditions of Houses and Soil: Level of Subsoil Water an Important Factor.* Except for a serious prevalence of diphtheria the year 1889 was uneventful, and a remarkably low death-rate (13.72 per 1,000) was recorded. So serious was the diphtheria epidemic that no fewer than 29 deaths out of 99 cases were caused by it. Such a large mortality naturally gave rise to considerable anxiety in the town. The whole circumstances of the outbreak were very minutely investigated by Dr. Matthew Adams, the medical officer of health, and his special report on the subject is a most interesting appendix to his last annual report. It is not possible in a brief notice to enumerate all the points raised by Dr. Adams, and the circumstances by which he arrives at his conclusions. He believes, however, that the nearest approach to the discovery of a fundamental cause is to be found in the insanitary conditions of the houses or their surroundings, more particularly in the foul states of the house drains, etc., soil adjacent thereto, and the noxious effluvia escaping by the sewer ventilators, and given off from the retained sewage. He argues that "granted that diphtheria is due to a specific microbe whose natural habitat is polluted surface soil and similar situations, its propagation in the soil is due to suitable meteorological conditions, and its reception, in the animal body at least, is favoured by certain coincident pathological states, and perhaps other life-conditions of environemnt special to the organism itself, determining its development and activity." Alteration, therefore, in the level of the subsoil water is, in the opinion of Dr. Adams, a material factor in diphtheria outbreaks.

THE Woolwich Local Board of Health have agreed to purchase for £2,000 a plot of freehold land for the erection of baths and washhouses.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JANUARY 10TH, 1891.

INFECTIOUS DISEASES AND SCHOOLS.

IN few respects have the latter years of the present century been more remarkable than in the great achievements accomplished by sanitary reformers during that time; and it must be admitted that, on the whole, the general public is now vastly more alive to the practical value—not to say necessity—of preventive medicine than was the case less than a generation since. Yet, in one great field at least, the present position of affairs is still far from satisfactory. And this appears to be due less to a want of knowledge on the subject than to a disposition to shirk, in its collective form, the responsibility which nearly every individual is quite willing to admit that his neighbour ought always to recognise and act up to. The yearly aggregate of deaths from infectious disease—theoretically, at any rate, a preventable total—is still enormous. Childhood and youth is the life period *par excellence* at which such maladies are constantly incident; and schools, that is, the places where children most do congregate, supply vast natural seed beds where they may be most readily propagated. On the whole, it may be fairly claimed that schools are not nowadays so constructed and so ordered as markedly to predispose the children, to whom the governing body stands *in loco parentum*, to infection. Dishonest building, incompetently supervised, may, no doubt, accomplish great things in this direction for a time; but public opinion has now been sufficiently aroused and is sufficiently weighty to make the repetition of this sort of jobbery a matter of increasing difficulty and of decreasing profit. We refer more especially to the precaution—or to the lack of precaution—which still obtains to so great an extent in relation to the introduction of infection into these large masses of susceptible humanity. The child which stays away from school because it is ill, and which does not return to school until after it is really well, may yet prove an indirect danger to that school or to others, through the medium of brothers and sisters or of clothing, if its malady be of an infectious character. But everyone with any practical acquaintance with the subject knows that even the moderate precautions which we have supposed to be exercised in such an instance are not carried out—are not even attempted—in half the cases of childhood's infectious ailments. There is no special provision for making known and for enforcing a regular system of hygienic police applicable to such cases, and consequently the business of nobody in particular, being everyone's business, becomes that of nobody at all. Energetic medical officers and conscientious school managers and teachers may work their hardest, and achieve, here and there, a fair modicum of success, but the mass is too vast, prejudice still too stolid, and individual interests too narrow and selfish, to allow of the danger being coped with by any measure adequate to its importance.

What is needed is some system by which the responsible master or teacher of every school should always have, as it were, a mental finger on the health pulse of the pupils under his or her charge, so far as they run the risk of exposure to, or have themselves become the subjects of, an infectious disorder. Very much could be accomplished in this direction by the adoption of such a scheme as has been recently suggested, in accordance with which the occurrence of infectious disease in a pupil, or in the family of a pupil, would be forthwith notified to the responsible head of the school or schools interested; and further—what is equally important—that no pupil thus affected should be again permitted to attend the school until after there had been received from the medical man in attendance on the case, or from the medical officer of health for the district, a certificate to the effect that this might safely be allowed. There certainly appear to be no insuperable objections in the way of carrying out such a scheme. Even if the attendant expense—which should not be a very serious item, and which, moreover, would become progressively less and less in proportion as the plan was efficiently worked—were borne by the schools themselves, the net result would probably be an actual saving to them; for the prevention of an epidemic, even its limitation, means an increase of efficiency to the school, and a corresponding increase in its grant-earning power; while the saving in mental wear and tear and disappointment—to say nothing of the preservation of human life and health and usefulness—it would be well nigh impossible to overestimate. The practical success of such a scheme will greatly depend upon its being worked, for all the areas to which it is applied, upon one and the same system of regulations so far as regards the rules adopted in regard to the incubation and infection periods of the several diseases dealt with. It can only be by following some recognised standard in such cases that friction can be avoided and prejudices and jealousies annulled. The work accomplished in this direction by the Medical Officers of Schools Association has proved of great help and value, not to the profession alone, but to the public at large. The former has found in the *Code of Rules for the Prevention of Infectious and Contagious Diseases*, which was first issued by the Association in 1885, a useful reference and an authoritative statement, of which the public has been content to recognise the weight; and there has now accumulated a large mass of evidence proving the practical value of the several regulations which it advises as applicable to most of the infectious maladies of infancy and adolescence. A very large section of the public has now become impressed with the importance of a systematic and definitive attention to these matters on the part of school authorities, and has shown its willingness to conform to such reasonable regulations as they may think fit to impose in the interests of the school community. Secure of this important leaven of opinion amongst the more thoughtful and influential parents of the land, the responsible managers of all other schools may now, we believe, safely venture to take similar action in relation to the parents and the children with whom they are directly concerned. From the former it may be assumed that they would

meet with but trifling, if with any, opposition; and it would, at all events, be quickly dissipated as the real benefits of the plan became apparent. From the members of an enlightened and philanthropic profession we cannot suppose that it would receive anything but a cordial support.

We fail to see why the scheme should be confined, as has been suggested, to the metropolitan area. London, with its densely aggregated population, may stand most in need of something of the kind; but its blessings are not less applicable to all schools. The fact that such a system is already in force amongst a hundred or so of the largest and best known public schools in England should more than suffice to prove its feasibility; and the results already attained in these quarters may be accepted as evidence of its value. There appears to be nothing standing in the way of its general application throughout the length and breadth of the kingdom which a very moderate amount of instruction, tact, and enthusiasm would not suffice to overcome. As the case stands at present it is no exaggeration to say that there are amongst us vast agglomerations of child-life in respect of which some of the special dangers to health and usefulness are actually encouraged rather than guarded against by the community's supine disregard of a simple system of precautions of which mere selfishness—if only its eyes be open—can at once recognise the value. If each pupil in a school represented a barrel of gunpowder, we should probably have a stringent code of regulations against the admission of a child known to be carrying matches in its pocket. Yet we are, in too many cases, doing nothing to prevent the introduction into a specially susceptible child-mass of one beginning to smoulder—or, it may be, even blazing—with disease.

INDECENT ADVERTISEMENTS.

In the British Medical Journal early last year we drew attention to the Indecent Advertisements Act, 1889, and the beneficial results which might be anticipated therefrom. We also referred in some detail to the principal provisions of the Act, the punishment which could be inflicted for their infringement, and the course of procedure to be adopted in order to carry the Act into effect. A correspondence has recently taken place between Dr. Phillips, one of the honorary secretaries of the Medical Defence Union, Limited, and Mr. Lockwood, Q.C., M.P., who had charge of the Bill, afterwards passed into the Act above referred to. Dr. Phillips points out the defects which the Council of the Association he represents is of opinion exist in the present measure, and draws attention to the fact that in Birmingham at least the Act remains a dead letter, there not having been a single instance of a prosecution under it in the Birmingham police courts since the Act came into operation. Clearly the suggestion he makes on this head is open to the observation that the Act has effected the object for which it was passed, although it has not been necessary to undertake any prosecutions; but the Medical Defence Union urges that the real reason is the difficulty of taking legal proceedings in consequence of the deficiencies in the Act, to which the letter proceeds to refer.

So far as relates to actual proceedings under the Act, we believe that Birmingham is not alone in this respect, for in London, also, but few instances of the enforcement of its provisions by legal proceedings have occurred. Still it cannot be denied that the Act has had a most salutary effect in checking the distribution, in its worst form, of the undesirable class of literature which it was doubtless the chief intention of the Legislature to suppress.

At the same time, there can be no doubt that the Act might and should be extended. Advertisements are frequently inserted in provincial newspapers, and, as was remarked in the British Medical Journal of November 8th, 1890, even in periodicals of a religious or quasi-religious character of "secret remedies" and "certain cures;" and these advertisements we should like to see effectually brought within the penal clauses of the Act.

Further, cases are mentioned by Dr. Phillips, in commenting on Section 5 of the present Act, of advertisements as to nervous debility, apparently being limited to nervous debility arising from sexual excess. We are not prepared to say that the interpretation is correct, but the point is doubtful, and it is one on which no shadow of doubt should be allowed to rest. We would suggest that, if possible, in any amending Act the County Councils or the police authorities should not only be empowered, but required, on a *primâ facie* case being laid before them, to put in force the provisions of the Act.

With regard to whether Section 3 would include the case of sandwich men's placards, it must be borne in mind that the provisions of the Act apply to any person who affixes to or inscribes an advertisement "on any house, building, wall, hoarding, gate, fence, pillar, post, 'board,' tree, or *any other thing whatsoever so as to be visible to a person being in or passing along any street, etc.*" However lenient the Court may be in construing a penal statute in favour of an alleged offender, yet, having regard to the words printed in italics, to exclude advertisements on boards simply because instead of being stationary they are carried by men moving slowly along a street, would be a strained interpretation, and contrary to the letter, and certainly to the spirit, of the Act. Moreover, even the most daring of unprincipled quacks would probably hesitate to put the Act to the test by bringing his advertisements before the public in such a prominent form.

The next point alluded to by the Medical Defence Union is the failure to provide for the cases of placing an advertisement or circular in the letter-box or under a door while making it an offence to throw the same advertisement or circular down an area. This is an omission which we hope will be remedied.

Shortly, to sum the matter up in general terms, the extension of the Act seems desirable in the following directions:—1. To place it beyond doubt that advertisements and pamphlets referring to nervous debility should include nervous debility arising from any cause, or certainly where secret remedies or certain cures are advertised for its treatment. 2. That advertisements of the kind in newspapers or other periodicals should be included. 3. To include in the provisions of Section 3 the placing or affixing of any such advertisement, circular, or pamphlet in or about any land or premises. 4. That the County Council or police authorities should be required to prosecute. This would prevent the necessity of individual action, which might entail a loss of time and some expense. In addition to this, there is always a natural repugnance felt to prominently interfering in cases of this kind.

Mr. Charles Alexander Eastman, a full-blood Sioux Indian, has graduated in medicine at the Boston University.

ECCENTRICITY AND INSANITY.

THERE appear to be two forms of eccentricity—the one arising from an excess of individuality, the other causing a deviation from the ways of one's fellow men, from weakness of judgment, love of applause, and vanity. Maudsley's remark that eccentricities of character, when they are not balanced by a strong judgment, are apt to ripen into insanity, either in the individual or his offspring, is strictly true. In many cases the insane temperament is the cause of the eccentricity. This neurosis is characterised by eccentricities of thought, feeling, and action. People of this kind are not insane, but are strange, queer, or, as the world says, "not quite right." They look at things from a different point of view to that of ordinary persons, have strange habits of thought, and often commit quite purposeless acts. This peculiarity borders closely on genius in some instances, and is often divided from it by a mere line. Men of genius have a deep insight into the nature of things, and eccentric persons think of events under strange and novel relations, but there is this difference: in the former case there is a harmony between the individual and Nature; in the latter, especially if incipient insanity is present, there is the production of the utmost discord.

The eccentricities met with in asylums for lunatics and imbeciles are endless, and must be seen to be appreciated. Dements and low class imbeciles will pass their whole time in collecting rags, bits of stick, and rubbish, which they treasure afterwards with the utmost care. Cases of monomania will often deck themselves out in an astonishing way with the most absurd foppery, and carry in their air and demeanour the idea that they are great persons. Then there are cases whose intelligence is normal, but whose moral nature is defective, and they are strongly impelled to steal articles, sometimes of very little value.

Kleptomania is not uncommonly the first marked sign of insanity. Changes of character will, of course, have previously occurred, but, as usual, will not have been noticed by the friends; the patient steals something, is taken before a magistrate, and found to be insane.

Many such cases are on record. Recently a man was indicted for stealing eight rose trees, the property of a nurseryman. The prisoner seemed to have a mania for flowers, and a short time before had been fined £20 on a similar charge. The prisoner apparently suffered from mental aberration on this subject of flowers only. He was ordered to be detained during Her Majesty's pleasure.

Another case, an example of a large class, was that of a lady subject to periodic attacks of insanity, which were followed in one instance by an irresistible desire to steal. She was acquitted on the ground of insanity, but when asked what passed through her mind when she committed these thefts, she replied: "I cannot tell; but I have such a mad longing to possess everything I see that, were I at church, I should steal from the altar without being able to resist it." Then there are cases of mental weakness, which the law with difficulty recognises, and in which there is a propensity to steal. In one such case the patient was acquitted because the medical commission decided that he had not that degree of discernment and moral liberty which forms a necessary condition of criminality. When hallucinations are present the result may be much more serious. In one case of this kind the patient, an eccentric man, murdered his daughter because, thinking that she was tormented by hearing voices and sounds, he had hoped to cure her by stopping her breath with his thumbs, but had not intended to strangle her.

We are forced to this conclusion that, if insanity is to be lessened, judicious mental training should be insisted upon; a habit of cheerfulness, some mental rest, moderate diet, and temperance are to be cultivated, and overwork, irregular living, and intemperance are to be avoided. Bacon's advice is as true as ever: "To be free-minded and cheerfully disposed at hours of meate and of sleepe and of exercise is the best precept of long lasting."

WE regret to learn that Mr. Hugh Owen Thomas, of Liverpool, died on January 6th of pneumonia. We hope to publish an obituary of this able surgeon in an early number.

ON Thursday, January 8th, Dr. Champneys was elected Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital, and Dr. Walter S. A. Griffith, Assistant Physician-Accoucheur.

WE understand that Professor Victor Horsley has resigned his post as Professor-Superintendent of the Brown Institute, which he has filled with distinction for several years. The vacancy will shortly be publicly declared, and already many candidates are mentioned as being in the field.

THE French Academy of Medicine has been authorised by the Minister of Public Instruction to accept the legacy devised to it by Philippe Ricord for the foundation of a prize to be awarded every two years to the author of the best work on venereal disease which appears in the intervening period.

WE understand that the Committee of the Senate of the University of London will meet on Wednesday next, to consider the most recent scheme for the reconstruction of the University. It is anticipated that the scheme will then be given the final form in which it will be submitted to the Lord President of the Council.

ON Monday next, January 12th, Dr. William Duncan will read a paper at the Medical Society of London on Chronic Disease of the Uterine Appendages, with notes of thirty consecutive cases treated by abdominal section. Sir Spencer Wells, Drs. Priestley, Playfair, and Cullingworth, and Messrs. Lawson Tait, Meredith, and Doran are expected to take part in the subsequent discussion.

MR. HUTCHINSON ON TUBERCULOSIS AND LUPUS.

WE are requested to state that, by permission of the Managing Committee of the two Colleges, the lectures which Mr. Hutchinson will give in connection with the post-graduate course will be delivered in the new premises of the Examination Hall. The first lecture will be on January 13th, at 5 P.M., and its subject the "Nature of Lupus, with special reference to its Connection with Tuberculosis." All members of the profession will be admitted on presenting their cards. Succeeding lectures will be on Tuesdays, at 5 P.M. The entrance to the theatre is in Savoy Street.

OBSTETRICAL SOCIETY OF LONDON.

AT the January meeting of this Society, held on Wednesday last, there was a large attendance of Fellows and visitors to hear a paper by Dr. Playfair, "On Removal of the Uterine Appendages in Cases of Functional Neurosis." The author

opposed the operation in cases of purely functional neurosis, hystero-epilepsy, and hystero-mania, and was in favour of systematic therapeutical treatment even when marked structural disease of the tube and ovary existed, before more radical measures were adopted. A good discussion followed, in which Sir Spencer Wells, Dr. Priestley, Dr. Gervis, and other authorities took an active part. The general opinion was entirely against removal of the appendages for neuroses.

SURGEON-MAJOR HENDLEY.

In the article "New Year Honours," in the BRITISH MEDICAL JOURNAL of January 3rd, we omitted to note that Surgeon-Major Thomas Holbein Hendley, of the Bengal Establishment, is nominated a Companion of the Order of the Indian Empire, and we may take this opportunity of congratulating Dr. Hendley on this somewhat tardy official recognition of his eminent services. His work has not been confined to his duties as an officer of the Indian Medical Service, for he has also done much to forward the study and development of Indian art and manufactures.

CLINICAL TEACHING IN RUSSIA.

MEDICAL reformers in Russia are at present much exercised as to the means of improving clinical teaching in that country. At present there are only two "model" clinics in Russia—namely, that of the Military Medical Academy of St. Petersburg and that of the University of Moscow. The Government has decided to increase the grants hitherto made in aid of medical education, and to add to the number of "model" clinics by utilising all the hospitals in university towns for purposes of clinical teaching.

RESECTION OF THE LIVER.

ON December 8th, Professor Iginio Tansini, of Modena, performed total extirpation of a hydatid cyst of the liver, at the same time excising a portion of that organ. There was very free hæmorrhage from the large cut surface of the liver, which was controlled by catgut ligatures. The wound in the liver was closed by means of sixteen sutures, partly silk, partly catgut. The operation was followed by no rise of temperature, and the patient (a woman) was quite well in less than a fortnight.

AN IMPERIAL WEDDING PRESENT.

DR. F. BRAMANN, Professor of Surgery in the University of Halle, who in the absence of Professor v. Bergmann performed tracheotomy on the late Emperor Frederick, was married recently, and received on the occasion a patent of hereditary nobility as a wedding present from the reigning Kaiser. Kings are sometimes said to have short memories, but this graceful act, which reflects as much credit on the Sovereign himself as on the man whom he delights to honour, shows that William II has not forgotten the services rendered to his father by Dr. Bramann. We may perhaps be allowed to join our voice to those of the noble Professor's numerous friends in wishing him and his bride many years of happiness and prosperity.

"SCHOOL BOARD EXTRAVAGANCE."

IT is not a little amazing that Mr. Hartshorne, the official auditor of the Local Government Board, should have described himself as amazed at finding in the accounts of the Tottenham School Board such items as the cost of spongy iron filters, of a school museum, and a microscope and bracket. Still more surprising is it that the newspaper press generally should have entirely sympathised with his amazement, and considered worthy of public laudation his disallowance of all these items. It is surprising that in days when a knowledge of the laws of health and of the structure and functions of the body were considered to be subjects not altogether unworthy of attention by the people as affecting their personal hygiene, the acquisition of the simple apparatus, authorised by Mr. W. J. Forster, of Clapton, should be treated as worthy of universal ridicule, and that he should be fined in all the costs. After this the National Health Society might well ask itself whether it is worth its while to offer prizes for the successful study of domestic economy and elementary physiology in Board schools which are without some such apparatus as the unfortunate Mr. Forster thought it his duty to provide.

DEATH OF DR. STRANGE.

WE have, with regret, to announce the death of Dr. Strange, of Worcester, of which the sad news has just reached us. Dr. Strange filled with credit the office of President of the Association at the general meeting at Worcester in 1882, which was largely indebted for its success to his activity, ability, and hospitality. He was one of the oldest and most attached friends and members of the Association, and has during a long series of years been regular in his attendance at the meetings of Council, and has proved helpful and suggestive on many important occasions. His long experience, which carried him back through all the most critical periods in the history of the Association, his thorough devotion to its best interests, and his warmth of heart and generosity of character much endeared him to his colleagues. He was greatly respected throughout the county, and his loss will be widely lamented. We hope next week to publish a detailed obituary.

SIR WALTER FOSTER.

SIR WALTER FOSTER having recently resigned the office of Honorary Physician to the Birmingham General Hospital after twenty-two years' service, a deputation, consisting of the Chairman of the Hospital Committee, the Deputy-Chairman, and Mr. Benwell, waited on him on Monday, January 5th, to present him with an illuminated address on the occasion of his resignation. The address is handsomely bound in book form, and beautifully illuminated on vellum by a local artist of repute, Mr. E. Morton. It consists of the following resolution:—"Birmingham General Hospital.—That the Committee, in accepting the resignation of Sir Walter Foster, M.D., M.P., Honorary Physician to this Hospital, after a devoted service of twenty-two years, desires to place on record its high opinion of the manner in which he has performed all the duties appertaining to his office; for the courtesy extended at all times to themselves and his colleagues, and for the assiduous care bestowed upon his patients in the Hospital, and the invaluable information he has so successfully imparted to the students attending his clinique. They further desire to express their hope that his life may be spared for many years to continue his honourable and useful career." It was further resolved: "That the foregoing resolution be engrossed on vellum and presented to Sir Walter Foster." The several members of the deputation spoke of the work done during his long service at the hospital by Sir Walter Foster, and the regret with which his resignation was received. In reply, Sir Walter Foster assured the deputation that it was painful to him to leave an institution in which he had worked so long, and while he still had an active interest in professional work; but he had acted from a strong conviction that it was his duty, after thirty years' service in connection with the Birmingham hospitals, to make way for others to enjoy the advantage and privilege of being connected with the chief medical institutions of the district.

TYPHOID FEVER IN ITALY.

IT is announced that typhoid fever, of which there has for some time been a persistent outbreak at Pisa, is now extending to Florence, and the Government has sent an inspector from Rome to investigate the matter. There is a long standing sanitary feud in this matter between Rome and Florence, and it is quite common to hear it said of cases of typhoid

fever originating in Rome that they have been imported from Florence, and *vice versâ*. Rome has undoubtedly, till quite recently, been subject to frequent outbreaks of typhoid fever, but this has usually been attributed to defective sanitary arrangements in the drains, and internal arrangements of the house, while the Roman water supply is believed to be very pure. Considerable pains and large outlay have been incurred by most of the principal hotels to improve the internal sanitary arrangements, and for the last few years we have heard much less of typhoid fever at Rome. On the other hand, it is stated that at Florence the wells are all polluted by the drainage of the city into the bed of gravel on which the city is founded. We concur in the opinion that the only remedy is in the closing of all wells, but to this it is averred the avarice of the landlords will not consent, though there is a good supply of water brought into the city by the aqueducts. The history of Naples, and the fearful presence of cholera and constant endemic typhoid which prevail there, should be a warning to Italian municipalities as to the prime importance of pure water supply. At any rate, this is a point to which travellers cannot be too strongly attentive. It is lamentable to hear so often of cases in which those who have gone to Italy to spend the winter for the purpose of health, or during visits of pleasure, have been attacked by serious or fatal typhoid fever, or other intestinal disorders.

DEATH UNDER ETHER.

We recorded last week reports which had come under our notice of inquests published in local country papers of cases of death under anæsthetics, of which no medical details have been forwarded to us, and which appear, therefore, to be likely to escape record in the medical journals. It is obviously most important that all such cases should be recorded in order that accurate statistics should be obtained on this important subject, on which clinical evidence is as desirable as scientific experiment. We cannot but think that it ought to be considered the duty of the medical attendant or of the anæsthetist, or, properly speaking, of both, to take the earliest opportunity of putting such cases briefly and authoritatively on record. Meanwhile, we avail ourselves of the notice which appears in the *Manchester Courier* of January 1st of a case which came last week under the notice of the Stockport coroner. The case as reported was that of a lady, aged 44, who had entered the Stockport Infirmary in order to undergo an operation for cancer. Dr. Edwin Rayner, under whose superintendence the arrangements for the intended operation were made in the presence of three other medical men, said there was a sudden stoppage of the pulse. He at once applied every means for artificial respiration, but without effect, and death took place in less than a minute from failure of the heart's action. Dr. Rayner said he had examined deceased's heart prior to ether being administered, and it was then sound. The operation was never commenced, as she was never completely under the influence of the ether. There had never been a case of death taking place under ether at that institution before. The coroner said that the jury must be satisfied that the ether was administered properly, and that there had been no gross carelessness. To this the jury agreed, and a verdict of failure of the heart's action whilst ether was being administered was returned.

WITHDRAWAL OF THE MUZZLING REGULATIONS.

A protest, influentially signed, is about to be addressed to the Home Secretary against the withdrawal of the muzzling regulations for the following reasons:—1. That until muzzling for twelve months be enforced simultaneously throughout Great Britain, followed by permanent quarantine, the extinction of rabies will be impossible, and that deaths from hydrophobia will by consequence inevitably recur in London. 2. That it has been abundantly proved by the experience of London alone, during the epidemics of 1885-86 and 1889-90, that deaths from hydrophobia cease after a period of muzzling, and that it is, therefore, painful to contemplate the risk of a recrudescence of the disease about to be incurred by the inhabitants of the metropolis, now that the muzzling regulation is replaced by a system which has utterly broken down in Vienna, Belgium, and Bradford. The memorialists also add that, after eighteen months' experience, many dog owners are now of opinion that muzzling in large cities is of inestimable benefit not only to mankind, who are thereby saved from the chance of contracting one of the most painful of diseases, but also to dogs, who are prevented by the muzzle from fighting with each other, from picking up garbage (by which they often suffer intensely), and from the risk of poisoning. As to the temporary good effects of the muzzling order while it lasted, Mr. Blanchard Wontner's statement before the magistrate at the Marylebone Police Court on the results attained in London during the year are very instructive. He said that in the year before the order was made there were 400 cases of rabies reported, mainly in London, and the number not reported would no doubt be large. During the three-quarters of the following year the number was reduced to 120, and in the four quarters of the year just closed the number of cases of rabies had been reduced to 15, 13, 8, and *nil*.

LAUDANUM DRINKING.

The facts brought to light at three inquests held recently in the North of England illustrate well some of the defects in the law related to poisons pointed out in the recent memorandum presented by the Chairman of the Parliamentary Bills Committee of the British Medical Association. At an inquest held on December 22nd last, by Mr. Deputy Coroner Bladon at Messingham, near Gainsborough, on the body of Ann Clay, it appeared from the evidence, as reported in the *Retford and Gainsborough Times*, that the deceased, who was 69 years of age, had been for the last six or seven years in the habit of procuring laudanum through a carrier from a druggist in Gainsborough, as there was no chemist's shop in her own village. The carrier said he fetched laudanum twice a week, usually two shillings' worth, but had obtained twice that amount in one week. The druggist never asked any questions about it, being told it was for Mrs. Clay, of Messingham. Dr. Eminson, the medical practitioner who was called in about half an hour before the death of deceased, said that about two years ago he attended the deceased professionally, and had then no doubt that her illness was due to laudanum drinking, precautions being taken at the time to prevent her procuring a further supply. He believed the deceased had been suffering from a cold or bronchitis, but that laudanum was the direct cause of death, as the symptoms of poisoning were very marked. The jury returned a verdict in accordance with the medical evidence, and expressed their opinion that greater restrictions should be placed upon the indiscriminate sale of laudanum. The second case of death from an overdose of laudanum occurred at Jarrow, and, according to the report in the *Newcastle Daily Chronicle* of January 5th, it was stated at the inquest held by Mr. John Graham that the deceased, Emma Lewis, aged 61, suffered from sleeplessness, and had been in the habit for several years of taking laudanum to induce sleep. The third victim was also a female of advanced age, an inmate of the Leeds Workhouse, who died on January 3rd from an overdose of opium. The evidence at the inquest held by Mr. J. Malcolm shows, as reported in the *Leeds Mercury*, that the opium had been brought into the house by another inmate, in spite of the search made among the incomers for the purpose of preventing the introduction of such drugs. The chemist who gave evidence as to the selling of the opium further stated that a large quantity of this preparation was bought by inmates of the workhouse. The incidents in all three cases reflect upon the laxity of the existing legal restrictions upon the sale of poisons in Great Britain. In no other civilised country could so large a quantity of laudanum as that mentioned in the first case be supplied for distribution by a carrier week after week without any breach of the letter of the law; and at both

Leeds and Jarrow preparations of opium are evidently freely supplied without medical authority. Even had the chemists exercised their discretion, and refused to sell the laudanum, the results would possibly have been the same, as no difficulty would have been experienced in obtaining an equivalent quantity of an opiate under cover of the medicine stamp.

THE LATE OUTBREAK OF DIPHTHERIA IN PADDINGTON.

The Sanitary Committee of the parish have just issued their final report on this subject. There were 36 cases notified between May 16th and June 28th. The most remarkable and deplorable set of cases were those occurring in a school attended both by boarders and day scholars, all sons of wealthy parents. Seven of the pupils were attacked, of whom five died. One of these five—the first of the series in point of time—was a boarder. His illness was diphtheria alone. The other fatal cases were those of day boarders, and all these developed measles from the third to the tenth day before the diphtheria showed itself. So virulent was the infection that at the house of one of these boys the father and housemaid were also attacked and died; a brother and sister had measles and diphtheria, but recovered; and three nurses and the parlourmaid were attacked with diphtheria, but happily recovered. The house in which these nine cases occurred had been, within three weeks previously, inspected by the London Sanitary Protection Association, and was afterwards inspected by the medical officer of health and parochial sanitary inspector, with the result that "the only apparent defects were the housemaid's sink wastepipe and the bath waste, a rather long length of pipe, which, although untrapped, delivered into the open." The milk supply, water supply, laundry and washing services, and sanitary condition of every house in which a case occurred were also minutely inquired into, but with negative results. As to the cause of the first appearance of diphtheria in the school, the Committee can offer no explanation; whilst personal infection was probably the cause of its spread amongst the day scholars. It is matter for regret that the very full investigation of the cases made by Dr. James Stevenson, the medical officer of Paddington, did not discover the original cause of the outbreak; but no one who has conducted a similar inquiry in a large city in which the disease is always more or less prevalent, will wonder that the investigation was thus abortive. This report includes a table giving the death-rate from diphtheria for the last five years in the various London parishes, a careful report on the above outbreak presented to the Sanitary Committee of Paddington by Dr. Stevenson, and appendices relating, first, to a water supply (supposed at first to be contaminated, but which this report proves almost conclusively not to have been implicated in the causation of the outbreak), and secondly, to particulars respecting all the cases of diphtheria that occurred in Paddington in the second quarter of 1890.

PRESERVATION OF DEAD BODIES.

Although no useful object can be served by the artificial preservation of corpses, and though we are strongly of opinion that the best thing that can happen to our tenement of clay, when it is no longer informed by the *divinæ particula auræ*, is for it to be resolved as speedily and inoffensively as possible into its constituent elements, yet the prevention of decomposition is a subject of the highest scientific interest, and knowledge of the means of effecting this might conceivably be useful to medical men. A French physician—Dr. Variot—has recently been giving attention to this subject, and he has discovered, or, to speak, we believe, more accurately, perfected a method of preserving dead bodies by galvanoplasty. To facilitate adherence of the metallic deposit he paints the skin with a concentrated solution of nitrate of silver, and reduces this with vapours of white phosphorus dissolved in sulphide of carbon, the skin being thus rendered dark and shiny. The body is then ready for the electric bath, which is served by a thermo-electric battery, giving a regular adherent deposit of copper if the current is properly regulated. With a layer of $\frac{1}{2}$ to $\frac{3}{4}$ of a millimètre the envelope is solid enough to resist pressure or shock. Dr. Variot further incinerates the metallic mummy, leaving holes for the escape of gases. The corpse disappears, and a faithful image, or rather statue, remains. This method certainly seems superior from the æsthetic and sentimental, not less than from the sanitary, point of view to mummification; and if the old Roman fashion of adorning houses with the owner's ancestors should ever be revived, Dr. Variot's galvanoplastic *simulacra* would doubtless be found cheaper and more realistic, if, perhaps, less artistically precious, than a collection of "grandsires cut in alabaster" by an eminent sculptor.

THE COLONIAL BRANCHES OF THE BRITISH MEDICAL ASSOCIATION.

Not the least important and successful part of the work of the British Medical Association is that conducted by the Colonial Branches, and by those established in India. The number of these branches has now been raised to eighteen, for the New Year has brought the welcome news of the complete organisation of a new Colonial Branch at Hong Kong. An excellent beginning has been made, the first roll of the new Branch being signed by twenty-five members, and it is expected that many more names will be received now that the Branch is organised. Dr. Cowie will act as treasurer, and Dr. J. Bell as honorary secretary. The thanks of the Association are due to Surgeon-Major Barrow, for the aid which he has given in the preliminary work of organisation connected with the formation of the Branch. The Malta and Mediterranean Branch, one of the most recently formed, continues to make satisfactory progress and to increase in numbers; the annual dinner was held on the Monday in Christmas week; Brigade-Surgeon O'Dwyer, A.M.S., took the chair, and in proposing the toast of "The British Medical Association," coupled it with the name of Surgeon-Major Manché, to whose indefatigable exertions the success of the Branch has been largely due. Surgeon-Major Manché, in acknowledging the toast of his health, proposed by Staff-Surgeon Williams, R.N., took occasion to pay a compliment to the energy displayed by the Naval Secretary, Surgeon Moore, R.N. The Australian Branches also continue to grow in numbers and importance, and are taking a notable part in the scientific and social work of the profession in those countries. The Nova Scotia (Halifax) Branch, has shown very considerable vigour. Surgeon-Major Tobin, the founder of the Branch, having been elected President, has been succeeded in the office of Secretary by Mr. Arthur Morrow, M.B. A recent decision to hold fortnightly meetings has been fully justified by the attendances, which have been larger than at the monthly meetings previously held. Of the public services which Colonial Branches are capable of rendering examples may be seen in the recent resolution of the Barbados Branch to approach the local legislature on the subject of cottage hospitals, which are much needed in the island; it is also about to take up the questions of leprosy, and of the reform of local sanitation. It would be difficult to overrate the value of these Branches to our brethren in civil practice in Greater Britain, and to the officers of the Naval and Military Medical Services at distant stations, and we hope to be enabled to publish, from time to time, reports of the proceedings of the meetings. We desire specially to invite the secretaries to co-operate by forwarding, at the earliest possible date, brief but adequate reports of the papers read and discussions held; in this way much valuable information will be obtained for all the members, and an important impetus may be given to the study especially of epidemiology. The Colonial Branches now are: Adelaide and South Australia; Barbados; Bermuda; Bombay; British Guiana;

Cape of Good Hope; Colombo, Ceylon; Griqualand West; Halifax, Nova Scotia: Hong Kong; Jamaica; Leeward Islands; Malta and Mediterranean; Melbourne and Victoria; Punjab; South India and Madras; Sydney and New South Wales; Tasmania.

SEVENTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE Presidents of all the principal Societies interested in sanitary progress, together with Sir James Paget, Sir Spencer Wells, and Sir Douglas Galton, have addressed a letter to the daily papers, announcing the general plan of the programme of the Seventh International Congress of Hygiene and Demography. This letter points out the general outlines, with which our readers are already acquainted. The Chairman of the Executive Council is Sir Douglas Galton, K.C.B., F.R.S.; the Treasurer, Professor Hayter Lewis; and the Secretaries, Dr. Corfield and Dr. Vivian Poore. A Reception Committee has been formed, of which Sir Spencer Wells is the Chairman and Mr. Ernest Hart Vice-Chairman, and arrangements are already in a very forward state, both for the general programme of the Congress and for the adequate, cordial, and friendly reception of the members in London. His Royal Highness the Prince of Wales will act as President of the Congress, and will personally preside at the opening meeting. The Corporation of London have referred to a committee the consideration of the proper steps to be taken for the part which it will obviously become that great representative body to take in receiving the distinguished body of visitors which may be expected on this interesting occasion. The Society of Medical Officers of Health have also expressed their desire to take part in the welcome, and a communication has been addressed, by the direction of H.R.H. the Prince of Wales, to the leading municipalities in Great Britain informing them of the programme of the Congress, and expressing his hope that they may take part in promoting the efficiency and success of debates so important to the welfare of the people, and on a subject in which Great Britain has shown an excellent example in leading the way towards progress. The following arrangements have already been made in respect to the Sections: I. Preventive Medicine: President, Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S.; secretaries, Sidney Martin, M.D., M.R.C.P.; Isambard Owen, M.D., F.R.C.P.; Edward Seaton, M.D., F.R.C.P. II. Bacteriology: President, Sir Joseph Lister, F.R.S.; secretaries, William Watson Cheyne, M.B., F.R.C.S.; William Hunter, M.D., M.R.C.P.; M. Armand Ruffer, M.A.Oxon., M.D. III. Relation of the Diseases of Lower Animals to those of Man: President, Sir Nigel Kingscote, K.C.B.; vice-president, Professor G. T. Browne, C.B.; secretary, Ernest Clarke. IV.—Demography, Health Statistics, and Industrial Hygiene. V. Hygiene of Infancy and Childhood: President, J. R. Diggle, chairman of the London School Board. VI. Architecture in Relation to Hygiene: President, Sir Arthur Blomfield; vice-presidents, Professor T. Hayter Lewis, F.R.I.B.A.; Percival Gordon Smith, F.R.I.B.A.; secretaries, Ernest Turner, F.R.I.B.A.; John Frederick John Sykes, M.B., B.Sc. VII.—Engineering in Relation to Hygiene: President, Sir John Coode, K.C.M.G.; vice-presidents, Alex. R. Binnie, M.Inst.C.E.; Percy Boulnois, M.Inst.C.E.; Professor Henry Robinson, M.Inst.C.E.; secretaries, Reginald E. Middleton, M.Inst.C.E.; T. Wallace Peggs, Assoc. M.Inst.C.E. VIII. State Hygiene: President, the Right Hon. Lord Basing. IX. Naval and Military Hygiene. X. Chemistry and Physics in Relation to Hygiene. The offices are at 20, Hanover Square, London, W.

PRIZES OF THE ACADEMIE DES SCIENCES.

AT the annual public meeting of the French Academy of Sciences on December 29th, the names of the successful competitors for the various prizes offered during 1890 were announced. The following were awarded in the Section of Medicine and Surgery: The Montyon Prize (7,500 francs) was divided equally between Professor Félix Guyon, for his *Leçons Cliniques sur les Maladies des Voies Urinaires;* Dr. Auguste Ollivier, of Paris, for his researches on the prevention of various contagious diseases in children; and M. Paul Richer, for his *Traité d'Anatomie Artistique*, reviewed some time ago in these columns. The Bréant Prize (5,000 francs) was divided between M. G. Colin, of Alfort, for his work on fowl cholera; Professor Layet, of Bordeaux, for his *Traité Pratique de la Vaccination Animale*, and for the part he took in founding the Vaccine Institute at Bordeaux, where, in consequence of his efforts, the mortality from small-pox fell from 200 per 100,000 inhabitants in 1881 to 1.4 per 100,000 in 1888. The Godard Prize (1,000 francs) was awarded to Dr. Samuel Pozzi for his *Traité de Gynécologie Pratique*, favourably noticed in the BRITISH MEDICAL JOURNAL not long ago. The Barbier Prize (2,000 francs) was awarded to M. Claude Martin for his book on the plastic surgery of the face. The Lallemand Prize (1,800 francs) was divided between Madame Déjerine-Klumpke, for her essay, *Des Polynévrites*, and M. Georges Guinon, for his work entitled *Les Agents Provocateurs de l'Hystérie*. The Dusgate Prize of 2,500 francs for the best work on the Diagnostic Signs of Death and the means of preventing premature burial was not awarded, nor was the Bellion Prize of 1,400 francs "for discoveries profitable to the health of man or the amelioration of the human species." In the latter case, however, two *encouragements* of 500 francs each were given to Dr. H. de Brun for his *Etude sur l'Action Thérapeutique du Sulfate de Cinchonidine*, and MM. A. Morel Lavallée and Bélières for their work entitled *Syphilis et Paralysie Générale*. The Mège Prize of 10,000 francs, "intended to reward him who shall have continued and completed the work of M. Mège on the causes which have retarded or favoured the progress of Medicine," was awarded to M. Nicaise for his *Physiologie de la Trachée et des Bronches*. In the Section of Physiology, the Montyon Prize of 750 francs was divided between E. Gley and E. Wertheimer. In the Section of Statistics, the Montyon Prize of 500 francs was awarded to M. Topinard for his researches on the colour of the eyes and hair in France, and in the Section of Anatomy and Physiology, the Serres Prize of 7,500 francs for researches on "general embryology applied as far as possible to physiology and medicine," was unanimously awarded to M. Camille Dareste, who is declared, by his work during the last thirty years, to have "incontestably opened a new way for biological research."

SCOTLAND.

GLASGOW SCHOOL BOARD AND BLIND CHILDREN.

THE Glasgow School Board, in terms of the "Act to Amend the Law in Regard to the Education of Blind and Deaf Mute Children in Scotland, 1890," have resolved to carry on the education of blind children, so far as circumstances will permit, in ordinary inspected schools, always up to Standard III, and, where practicable and desirable, to Standard V and upwards. For this purpose they have resolved to provide all needful facilities and equipment in six Board schools, and to appoint a specially-trained teacher, with headquarters in one of the schools, but who shall also visit the other schools to instruct the children, and, as far as may be needful, those selected to instruct them. Where parents are unable from proverty to pay, the Board recognise their obligation to pay for the children, and where necessary also for their board, till their education is complete, or up to 16 years of age; and, when the child is over Standard III, for board and industrial training up to 16 years of age, where the parent desires it. The School Board have asked the directors of the Blind Asylum to indicate their terms for board of children under Standard III, and for board and industrial training of children over Standard III; and if they think the terms reasonable, they intend to ask the sanction of the Scotch Education Department to the proposal. The Department is also to be asked to consider the expediency of providing a special grant in respect of such children, in terms of the Act.

NOTES ON SICILY AS A WINTER RESORT.

By ISAMBARD OWEN, M.D., F.R.C.P.

In an age of health resorts, the climate and attractions of Sicily are still so little known to Englishmen, that a few notes by a medical traveller may not be without interest to the members of the Association.

The chief characteristic of the Sicilian climate is its equableness. From October to May it is seldom either oppressively hot or disagreeably cold. Though it lies so far south, it is surrounded on all sides by wide tracts of sea, and the whole interior is occupied by highlands, of sufficient altitude to temper the heat of the coast, but, except Etna, nowhere sufficiently lofty to breed the bitter winds that are the scourge of the Riviera. As the island is almost entirely under cultivation, a fifth of its area being occupied by fruit trees, a due degree of moisture is seldom wanting in its atmosphere. The sirocco, the hot wind from the Sahara, which blows for a few hours or a few days some ten or twelve times in the year, is the chief drawback; but, on the whole, the sirocco seems less feared in Sicily than in Naples.

I paid a recent visit to the island in November, which, with the following month, forms the wet season, and is reckoned the worst part of the winter. During this visit the climate was that of an exceptionally pleasant English May. Notwithstanding occasional storms of rain, the sunshine averaged about five hours a day; the air, day and night, kept pleasantly warm, and no marked change of temperature was observable at sunset.

Of the two classes of predatory organisms with which the name of Sicily is traditionally associated, little need now be said. Brigandage appears to be quite extinct, and the few highway robbers of whom the remoter districts can boast are too wary to exercise their profession on foreigners, who are apt to raise an inconvenient clamour. Insect pests seem to have diminished correspondingly. During my entire stay I encountered nothing worse than a mosquito, and that only in one place; and my packet of "Keating" returned with me to England unopened.

For invalids Sicily has one serious drawback, in that no English medical man is now settled in the island. English-speaking physicians are to be found in Palermo and Messina, and English prescriptions are dispensed in all the chief towns.

Palermo on the north coast and Taormina on the east coast are the places at present most suitable for a prolonged stay. For a mild and somewhat relaxing climate the situation of Palermo is singularly fortunate. It lies in the hollow of a deep bay, which is surrounded on all sides by mountains reaching to a height of some 3,000 feet. It faces eastward, and receives the morning sun. An isolated mass of rock stands close to the town, and protects it on the north side, but elsewhere a distance of several miles intervenes between Palermo and the hills, allowing a free circulation of air, and obviating direct downward currents from the heights. Furthermore, the intervening space is not a plain, but slopes upwards from the very verge of the sea, and provides ample drainage fall for the whole district. The country, as far as the hills, is thickly planted with orange, lemon, and olive trees, and affords some delightful drives and walks.

The town itself, which has been the capital of Sicily for centuries, and contains nearly 250,000 inhabitants is, on the whole, an agreeable place of residence. Its chief streets are laid out with old-fashioned Spanish stateliness, and the byways, if intricate, are picturesque. Its architectural interest is very great. For a southern town, Palermo is decidedly clean; the people are quiet and well behaved, and beggars are few. A well kept "marina," some beautiful public gardens, and a handsome opera house, nearly finished, are among its attractions. An English church has lately been built at considerable expense. The water supply is drawn from a lonely valley some six miles away in the hills. Much attention has been paid to house drainage throughout the town, but the main outlet is still into the *cala*, or inner harbour, the quays of which are not always savoury.

The brothers Ragusa, who own most of the best hotels in Sicily, have two in Palermo. The Hôtel des Palmes is a large modern establishment of the first class, situated in a new suburb, with a garden, but unfortunately with no view. The Trinacria occupies an older and less cosmopolitan house, but is on the sea front, and possesses a block of really good rooms, looking, from a slight elevation, directly over the marina and the bay, which at this point is cut off from the *cala* by half a mile of breakwater. The Hôtel de France, which faces a large square and public garden, is well conducted, and can also be recommended for English visitors. The other Palermitan hotels are more distinctively Italian.

If a bracing climate is sought, it may be found in the diminutive town of Taormina, the representative of the ancient Tauromenium, which is reached from Messina by a railway journey of one to two hours and thirty minutes' drive. Taormina, which is now little else than a health resort, is perched on a ledge of a precipitous spur of the eastern coast, about 400 feet above the sea, and commands some of the finest views in Europe. The northern and eastern breezes from the Sicilian and Calabrian highlands and from the Ionian Sea are here cool and invigorating, while the snowy peak of Etna, which rises seventeen miles away, serves to break and temper the hotter winds from the south-west. The remains of the huge Roman theatre, at the seaward end of the town, afford a series of pleasant promenades, from which the scenery and the air can be enjoyed without fatigue. For the young and active, the numerous mountain walks furnish ample exercise.

The hotels of Taormina—the Bellevue, the Timeo, the Grand, the Catarina, the Naumachie, and the Victoria—are of moderate size and pretensions, but clean and comfortable, and very reasonable in their charges. The Bellevue is the largest, the Grand the newest and best built, the Timeo the best situated. The Catarina is under English management. The Victoria is the smallest, and has less view than the others. Drugs are to be obtained in Taormina, but medical advice must be sought in Messina or Catania.

Messina can hardly be recommended as a residence. It occupies a windy situation in the narrow straits between two high ranges of hills, and the hotel accommodation leaves much to desire. It has a bad reputation, too, for fevers of a kind commonly called typhoid.

Catania, on the east coast, the second largest town in the island, is the best built and the best kept. Its streets are wide, straight, and clean, its water supply good, its sanitary state excellent; and one at least of its hotels may rank with any in Sicily. On the other hand, it is a dull town for a prolonged stay, with few pleasant walks or drives, and its situation—on a slope facing southwards, with the snows of Etna immediately to the north-west—makes its climate more variable, hotter in summer and colder in the winter, than that of Palermo. The neighbouring seaside town of Aci Reale is not well provided for English visitors.

The climate of Syracuse, which lies near the south-eastern angle of Sicily, is more thoroughly marine than that of any of the places as yet mentioned. The modern town is closely packed on the little island of Ortygia, at the mouth of the great harbour. The country around is the flattest part of Sicily, and Syracuse is freely exposed to winds, which, however, owing to the distance of any considerable range of mountains, are seldom very cold. The sirocco at Syracuse is a milder and moister wind than in the west of Sicily; but, on the other hand, the rainfall in winter is less than in the mountainous parts of the island, and it is an ancient boast of its inhabitants that no day throughout the year is wholly without sunshine. The marshes of the Cyane are cut off from the town by the expanse of the great harbour, and appear not to affect its health. Syracuse has recently entered on a path of progress, demolishing its fortifications, laying out pleasant seaside promenades, cleaning and improving its narrow streets, and lighting itself throughout by electricity. These attractions, together with the historical and archæological interest of the immediate neighbourhood, have made Syracuse a by no means unpleasant place of residence. Its hotels, though old-fashioned, are well kept. English is spoken and English comforts are obtainable at the Casa Politi, the landlady of which is German.

One more place remains to be mentioned. Girgenti, which occupies the former citadel of Agrigentum, is on the south coast, and is reached from Palermo by rail in five hours. It is a crowded little town, ill provided for travellers; but one of the brothers Ragusa has recently opened an establishment

of the first class (Hôtel des Temples) half a mile away, in a villa standing on a slight hill in the midst of the shelving plateau that formed the site of the ancient city. This house, which stands 650 feet above the sea, is well worth a visit. At present it is rather too lonely for a long stay; but it is not improbable that the magnificent site of Agrigentum, with its brilliant air and wide panorama of sea and shore, may once again invite a settlement from a foreign land.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 14th day of January next, at 2 o'clock in the afternoon.

THE following Committees will also meet:—

Tuesday, January 13th, 1891.—4.15 P.M. Subcommittee of Premises and Library Committee.—4.30 P.M. Premises Committee.—5.30 P.M. Arrangement Committee. *Wednesday, January 14th, 1891.*—11.30 A.M. Journal and Finance Committee.

FRANCIS FOWKE, *General Secretary.*

January, 1891.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 14th, April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

DUBLIN BRANCH.—The fourteenth annual meeting of this Branch will be held (by permission of the President and Fellows) in the Royal College of Physicians, Kildare Street, Dublin, on Thursday, January 22nd, 1891, at 4.30 P.M. The annual dinner will also take place on that evening, at the College.

OXFORD AND DISTRICT BRANCH.—The next meeting will be held at 3.15 P.M. in the Radcliffe Infirmary, Oxford, on Friday, January 30th. Notice of papers, etc., should be sent to the Honorary Secretary on or before January 16th.—W. LEWIS MORGAN, Honorary Secretary, 42, Broad Street, Oxford.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN ordinary general meeting of the Branch was held at 198, Union Street, Aberdeen, on December 17th, at 8 P.M.

Minutes.—The minutes of last meeting were read and approved.

Nomination.—Dr. Cushnie (Strasburg) was nominated for ballot at next meeting.

New Members.—Drs. Angus (Aberdeen) and Gregory (Old Aberdeen) were unanimously admitted members of the Branch.

Cases.—Dr. HUTCHEON (Aberdeen) exhibited a boy aged 12, in whom a Retropharyngeal Abscess had almost produced suffocation by compressing the trachea. The patient being *in extremis*, tracheotomy was performed, and on cutting down, a large abscess with fœtid pus was evacuated. Recovery took place rapidly; but some months afterwards abscesses with fœtid pus formed in the right lung, which were cured by creasote internally.—Dr. MAVER (Buxburn) exhibited a patient with a large Aortic Aneurysm. He had had an attack of acute rheumatism about fifty years ago, and was also the subject of acquired syphilis. Under iodide of potassium in 15-grain doses the tumour seemed to be diminishing. Dr. Maver also exhibited an Intestinal Concretion passed by a woman aged 75 years. It was first felt in the right lumbar region, and was evacuated naturally.—Dr. MACKENZIE BOOTH exhibited a patient from whose knee he had removed a Detached Cartilage, and who was now perfectly cured. Dr. Booth also exhibited a woman with a Syphilitic Perforation of the Palate, which he had successfully treated by plastic operation.

Midwives Registration Bill.—It was agreed, on the recommendation of the Council, not to take any action in the meantime in connection with the Midwives Registration Bill.

List of Members: Correction.—Omitted from East York and North Lincoln Branch, page ix, Representative on Council of Association, John Dix, Esq., 25, Albion Street, Hull.

SPECIAL CORRESPONDENCE.

SHEFFIELD.

Future Prospects.—Deaths in the Medical Profession.—The Price of Quinine.

IT is very gratifying to be able to say that the year 1890 ended as it began—well—and that the year 1891 opens with bright prospects in nearly every branch of Sheffield industry. There is a marked absence, it is said, of applicants for employment, who in former years have been compelled to make their cheerless rounds without success. The diminution, also, of pauperism, as well as the decreased expenditure on in and out relief at the workhouse, has been mentioned in previous letters.

Death during the past year has been active among the members of the profession, and those associated with them in medical work. The General Infirmary has been especially stricken in this way. Not only have the medical staff lost its old members—Dr. de Bartolomé and Mr. J. Barber, both, at the time of their decease, members of the consulting staff—but also the Chairman of the Weekly Board and the Treasurer have been removed by the hand of death. In three of these instances the end was sudden. Another veteran, Dr. K. Wilson, has died at the ripe age of 80. Three were also taken away in the early part of the year during the influenza epidemic in one district, two being aged only 28 and 29 respectively.

The Rotherham Guardians are reported to have been recently exercised as to the price they were paying for quinine, and it would seem that there was good reason for inquiries. With quinine at about 2s. an ounce, it is not surprising that they should regard a charge of £2 10s. for four ounces as excessive. The unfortunate point was that the bill had been paid when the Guardians were in "entire ignorance that Howard's quinine was obtainable at 2s. per ounce wholesale." The whole drug bill does not appear to be a large one, but certainly it would be well if the Guardians for the future sought some one to enlighten them on the value of the drugs obtained.

The vacancy for physician at the Public Hospital and Dispensary has been filled up by the election of Dr. Arthur J. Hall, a member of a highly respected local medical family.

AT a recent meeting of the Hackney Board of Guardians, it was stated that the medical officer at Brentwood Schools had reported 94 children under medical treatment, 49 for ophthalmia, and 29 for scarlet fever.

CORRESPONDENCE.

THE "VAGUS TREATMENT" OF CHOLERA AND DIARRHŒA.

SIR,—Now that Dr. Harkin's "vagus treatment" of cholera and diarrhœa is attracting attention, it would be well if medical practitioners were briefly to publish, for general information, cases so treated by them. I know that Dr. Harkin would like his treatment to be fairly tested and honestly reported on. It is in deference to his expressed wish, conveyed in a letter to a friend, which I was permitted to see a few days ago, that I now send for publication my experience of the "vagus treatment" of diarrhœa, etc.

The first time I adopted this treatment was as far back as December, 1885. I had previously seen an article on the subject by Dr. Harkin in August, 1884. My patient was an infant of European parents, aged nearly 2 months. I was called to see her on December 5th, and found her suffering from diarrhœa and vomiting. I prescribed castor oil, followed by grey powder. The next day the child was apparently sinking. The diarrhœa, serous in character, had increased, and nothing could be retained on the stomach. Later in the day I found her in convulsions. I then thought of the "vagus treatment," and at once applied blister fluid as directed by Dr. Harkin. In a short time the child's condition had marvellously changed; she soon slept calmly, warmth returned to the extremities, vomiting ceased, food was retained, and purging diminished. On the 7th I was able to pronounce the child out of danger. I naturally made a note of this, and treated many similar cases in the same way, but not taking notes of these, I shall merely mention three cases which have recently come under my treatment, the particulars of which are fresh in my memory.

In August last I was called to see R. B., a coloured child, aged 2 years, suffering from gastro-enteritis. The child had been ill some days, and was in a bad way, purging freely and vomiting everything. Prognosis most unfavourable. On my visit the day after I applied the blister and left the patient, fully believing that I had seen the last of him. On my visit the next day I found the child drinking barley water and goat's milk, and keeping all nourishment down, and in every way better. The mother described the effect of the blister as "wonderful." The child made an uninterrupted recovery.

On October 23rd last I was called to see a coloured woman, aged 54, suffering from acute gastritis. She had kept nothing down, I was told, for three days, and had fainted several times for want of food. I blistered the vagus, and she only vomited once after the application of the fluid. A few hours after she retained milk and soda water, and the day after she was able to take animal broth freely.

On Sunday last (November 23rd) I visited a brown woman, aged 60, who had been ill since the previous Wednesday with vomiting and purging. She is a midwife, and had caught cold, I was told, while attending a labour case, and had to leave suddenly. When I saw her she was quite insensible, and appeared to be dying from brain exhaustion. While examining her she passed a watery evacuation involuntarily on her bed. I had to do something, so I resorted to the blister over the vagus, and left a lavender water placebo to be given. On Monday this woman was able to keep down egg, milk, and brandy. When I saw her this morning (November 26th) she sat up in bed and conversed with me.

I note these cases for the consideration of those who take an interest (as I do) in Dr. Harkin's vagus treatment.—I am, etc.,

St. Andrew, Jamaica. JASPER CARGILL, M.D.

THE TREATMENT OF UTERINE MYOMA.

SIR,—I have no desire to follow Dr. Skene Keith's intricate criticisms of my tables of cases, even if I could do so at this distance from my records, as nothing but confusion can exist in the minds of your readers from such statements as he makes. He seems to think that "experience" does not grow in the space of ten years; but I find that it does, and therefore I have had repeatedly to alter my views. Even upon the cataloguing of individual cases I have had to change my opinion, and concerning something less than a dozen cases I have, years after their occurrence, seen reason to reconsider and alter their placements. That this has occurred in a few instances out of a detailed record of 2,000 cases can be no matter of wonder; and that the replacement consists, with but one exception, of recoveries, must convince any but a prejudiced mind that my intention was an honest one. The one fatal case removed from the list of cases of removal of the appendages to the list of cases of hysterectomy will prove this still further; for I could easily afford a material addition to the mortality of the former, whilst I confess that the addition of even one to the list of fatalities of hysterectomy was to me a serious trouble.

What, therefore, was a real virtue in my handling of my statistics Dr. Skene Keith wishes to press against me as a piece of dishonesty. The principles on which I have tabulated my cases are doubtless open to differences of opinion; all statistical methods are; and as a pioneer I have had to alter my methods; but in every instance I have stated the fact and have given my reasons. What I want is that the system of tabulation, however it may be constructed, shall be complete and satisfactory in detail. My *brochure* on the surgical treatment of myoma is now in the press, and it shows a record, even if the displaced case can be reinstated, which will establish the efficiency of my method. If the electrical treatment can show a better with the same supply of detail, I shall have nothing more to say.—I am, etc.,

Rome. LAWSON TAIT.

MIDWIVES REGISTRATION BILL.

SIR,—After reading Dr. Atthill's letter, I have come to the conclusion that he has not seen a copy of the amended Midwives Bill, but that he has contented himself with collecting from the medical press the opinions of others, and presenting them to us in the uninviting form of a *réchauffé* dish. I have been led to believe this because he says the "title" of the Bill indicates that its framers think "registration" all that is needed. Now the title is described in the first clause as follows: "This Act may for all purposes be cited as The Midwives Act." This is a comprehensive title, and includes education, examination, certification, and registration. These are only means to an end, and that end is lost sight of by many; namely, the prevention of women calling themselves midwives who are not competent to act as such. Dr. Atthill proposes that an Act should be passed to encourage the education of midwives, and enforce their examination, but he says nothing about granting certificates or registering them. Examination is of little use unless the person passing it can prove the possession of it by certificate, and the certificate is of no value to one who holds it if others can declare they have it, and there is no Register to refer to for proof against them. Dr. Atthill is satisfied with "Home Rule" in Ireland as far as midwives are concerned, and kindly wishes to help us with the management of ours. The King and Queen's College of Physicians of Ireland obtained a Charter in 1673, enabling them to examine and license midwives, and punish all who practised without a licence. Midwives have certainly received more attention, and been better educated in the sister isle. "As a rule," Dr. Atthill says, "they are efficient and well conducted." He, however, thinks the English midwives we propose to educate and register will not be so satisfactory, for he fears "a good many will be guilty, or at least be accused of being guilty, of drunkenness, incompetence, infamous or disgraceful conduct, etc." Let us hope this fear is groundless. Some of the objections which Dr. Atthill mentions have already received attention, and will be remedied after the Bill has been read a second time, but a number of them are due to incomplete knowledge or misapprehension of the intention and powers of the Bill. These will most certainly disappear with further enlightenment.—I am, etc.,

Upper Wimpole Street, W. JAMES H. AVELING.

SIR,—The following case, occurring at the time of the discussion on the Midwives Registration Bill, is perhaps worthy of remark.

On Christmas Day, 1890, at 4 P.M., I was called to see a woman who had been delivered at 10 A.M. by a midwife of over fifteen years' experience. The patient was flooding, and

had all the signs of grave *post-partum* hæmorrhage—blanched, ringing in the ears, loss of sight, pulse barely perceptible; the uterus was enlarged and partially contracted, due, I suppose, to the ergot the midwife had given. The latter said the placenta came away all right and she had put it behind the fire—the usual mode of procedure. I introduced my hand into the uterus and found an adherent placenta, which I removed. On the introduction of ice and antiseptically syringing the hæmorrhage ceased. The patient is slowly recovering.

That the midwife, with her long experience, either failed to recognise or utterly ignored the danger and urgency of the case is proved by the fact that the husband of the patient called me in of his own accord and not at the suggestion of the midwife. Now, the latter is one of the many who will lay claim to be put on the Register.

There is another class of patients—and not by any means few in number—attended by midwives, on the plea of not being able to pay the doctor's fee of 10s. 6d., though the midwife charges 7s. 6d., who apply for medical help and claim to be attended on benefit societies, clubs, or Poor Law. These unfortunate women are suffering from the effects of ignorant or meddlesome midwifery. The medical man loses his confinement fee and also his extra work.

If this Act, as it now stands, becomes law, instead of becoming a boon to the poor lying-in woman, it will prove the very reverse, and the injury to the general medical practitioner will be serious. Even now, although we do not live in Russia or Norway, midwives visit and have medicine made up for women and children. What may they not attempt when they are backed up by an Act of Parliament? Possibly the specialist on diseases of women may reap the benefit—if not in fees, at any rate in experience—from botched midwifery.—I am, etc.,

Bulwell, Notts. SAMUEL ALEXANDER, L.R.C.P.Edin.

A CROWNER'S QUEST!

SIR, Last week I was called to a fatal case of burning, the victim being an infirm woman living with her married son. According to instructions given to the coroner by the London County Council, I am informed that medical evidence must be dispensed with in all possible cases, a circumstance which will invalidate the object of inquiries into the causes of sudden death.

Accordingly I was not subpœnaed, but, being interested in the case, I was present. I am not wrong in saying the evidence was of the most useless type, and totally irrelevant as to the immediate cause of death. Only two witnesses were summoned, and, on account of the darkness of the room in which the deceased was found, neither had actually seen her after death. After I had seen the body I directed the friends to communicate with the police. No police evidence was, however, thought desirable. Both femora, I may add, were obliquely fractured in their lower thirds, the soft tissues superjacent to the shafts being completely destroyed in the incineration. No reference whatever was made to this circumstance, although I had made communication to that effect to the coroner's officer.

The ends of justice are most likely to be defeated if inquiries are conducted on these lines. I am, etc.,

FRANK HEWKLEY, M.B., F.R.C.S.

Stoke Newington, N.

THE CONVULSIVE COUGH OF PUBERTY.

SIR, In your report of the meeting of the Medical Society of London on December 15th the summary of my remarks on Sir Andrew Clark's paper, "The Convulsive Cough of Puberty," contains a statement which I shall be glad to be permitted to correct, since it is almost the converse of that which I actually said. The observation referred to the alleged resemblance of the cough to the sound made in the laryngeal crises of tabes. I said that, while I would not deny that there were cases of laryngeal crises in which a similar sound was made, in all the cases of each disease that had come under my notice the sounds produced were quite different; that I had not understood the paper to assert that in no disease whatever was any similar sound ever produced, but merely that the cough differed so notably from all ordinary forms of cough that it might fairly be described as *sui generis*, and in this I entirely agreed. As a matter of fact, I have never even read a description of the laryngeal crises of tabes which is suggestive of a similarity to the peculiar cough referred to.—I am, etc.,

Queen Anne Street, W. W. R. GOWERS.

THE USE OF THE LANTERN IN PATHOLOGICAL LECTURES.

SIR,—In the BRITISH MEDICAL JOURNAL of December 20th, 1890, I see a note of some remarks made by Mr. Watson Cheyne, at the conclusion of his recently published lectures, on the use of the optical lantern in illustrating lectures on pathology.

I have used the lantern now for several years, and am daily adding to the already large number of slides made for the pathological department of the Yorkshire College. I should feel quite lost without the lantern, though I have a large number of sheet diagrams, which are used mostly for the class on morbid histology. If the lecturer is to continue to exist amid the fast-coming crowd of textbooks, he must make the best of the advantages of his position, not the least of which is the power to elucidate a difficult subject by a number of illustrations far beyond what the most generous publisher would allow in a textbook. Sheet diagrams are very expensive, and unless made by a skilled pathologist require constant supervision in their execution. A lantern can be bought for £2 or less. The cost of oxygen is small. By the use of the ingenious copying frame invented by Professors Barr and Stroud, and described at the recent meeting of the British Association, the copying of drawings and book illustrations is rendered perfectly simple, and an ordinarily intelligent laboratory assistant could be taught in about a couple of hours to make first-rate lantern slides. This machine will be on the market in a few weeks, at a cost, I believe, of about £6, including camera and lens.

There is no need to darken the lecture room beyond shading the screen, which should be inclined forwards, and the lantern manipulated by the lecturer from the lecture table. If the lighting be properly arranged sheet diagrams may be shown at the same time at the sides of the screen. The slides, if made at home, should cost less than 3s. per dozen.

As I remarked, I have already a large number of negatives, and it seems a pity that these and similar ones done by other workers should not be more generally available to lecturers on the subject, and they have cost me much time and trouble, which I would gladly save others. I am quite ready to lend my negatives to any colleague who may wish to print from them; but I think the better course would be to arrange with some competent professional photographer, who would not only print from negatives sent him from various sources, but would also undertake the preparation of diagrams from books, drawings, etc., at reasonable rates. At present these rates (I have paid 24s. a dozen before I began to make them myself) are far too high. A catalogue of negatives in stock should be published.—I am, etc.,

Leeds. ERNEST H. JACOB, M.D.

ESTIMATION OF URIC ACID BY HAYCRAFT'S PROCESS.

SIR,—I see in the BRITISH MEDICAL JOURNAL of January 3rd an account of a paper by Dr. Haig on Haycraft's Method of Estimation of Uric Acid in Urine, in which he refers to my note on the subject, published two years ago in the *Proceedings* of the Royal Society. I think Dr. Haig does not appreciate the exact position of affairs with regard to this method. He simply states that Salkowski and myself have adversely criticised the method, and implies that our objections mainly rest on "more or less theoretical points in chemistry." As a matter of fact they rest on direct comparisons between results obtained by Haycraft's method and those obtained by some other method known to be reliable, and on analyses of the precipitate obtained by addition of silver nitrate to urine, as done in Haycraft's method. Dr. Haig seems to imply that Salkowski was not improbably influenced in his results by the fact that he is the author of another method for estimating uric acid. Such an insinuation against a chemist of Salkowski's reputation is not only impolite, but is ridiculous. All that need be said in answer to it is that Salkowski had, before Haycraft had invented his method, shown that such a me-

thod must be inaccurate by his analyses of the precipitates thrown down in various urines by silver nitrate. Dr. Haig is unable to see why Salkowski's method should be more accurate than Haycraft's. The reason is very simple: in both a silver urate is thrown down containing all the uric acid. Salkowski determines the uric acid by preparing it pure, making allowances for errors of crystallisation, so that the composition of the above silver urate does not matter. Haycraft determines the silver contained in this silver urate, and hence for his method to be accurate it is essential that the composition of this body should be constant, and should contain definite proportions of silver and uric acid. This, according to Salkowski and myself, it does not do, the proportions of silver and uric acid varying considerably with different urines. With Dr. Haig's deductions from his experiments I do not presume to deal, except to point out the rashness of arguing from results obtained by a method which the greater bulk of the evidence at present shows to be so inaccurate, and to regret that he did not always use the "rough" (to use his own words) method of Heintz.—I am, etc.,

ALFRED M. GOSSAGE, B.A.Oxon., M.R.C.S., L.R.C.P.
Westminster Hospital, S.W.

DEATHS UNDER CHLOROFORM.

SIR,—I take it that one of the cases mentioned in the editorial article in the BRITISH MEDICAL JOURNAL of January 3rd, 1891, is that of a case of death under chloroform at the Guest Hospital, Dudley.

As Resident Officer of the Guest Hospital I may say that the fullest possible record of the case will be forwarded you in due course.

With regard to this case, I was not the administrator of the anæsthetic, as I had been summoned to an urgent casualty, nor was I present during the administration of the anæsthetic. Neither was I summoned to give evidence before the coroner. The report from the *Birmingham Gazette* is inaccurate in more than one detail.—I am, etc.,

EDGAR H. STRONG, M.R.C.S.Eng.
University College Hospital.

BONE PLATES IN ENTERECTOMY.

SIR,—In the Bradshaw Lecture on Modern Abdominal Surgery, when speaking of enterectomy, Sir Spencer Wells[1] said: "Dr. Senn has made some valuable additions to the practice of enterectomy by teaching the use of absorbable plates of decalcified bone in facilitating the union of the two *openings* to restore the continuity of the intestinal canal. I have some of these plates here preserved in an *antiseptic* solution as they are kept for use. *They come away with the fæces*, about a week after the operation." (The italics are mine.)

As I was the first surgeon in this country to bring Senn's operation of intestinal anastomosis permanently before the profession, by instituting a series of experiments in conjunction with Mr. Victor Horsley, the results of which I published in the BRITISH MEDICAL JOURNAL in July, 1889, I am sure Sir Spencer Wells will pardon me if I point out one or two slight inaccuracies in the above passage of his lecture, which, if allowed to pass uncorrected, may lead to disappointment and disaster.

First, it is stated that the use of the decalcified bone plates is to facilitate the union of the *two openings* to restore the continuity of the canal. This is not their actual use, as the *open ends* of the divided intestine are inverted and closed by a continuous suture of fine silk or catgut, and the bone plates are inserted into the intestine through an opening made in the convex surfaces of each end, some two inches from the closed extremities. The two plates are then approximated and tied firmly together by means of the threads attached to them, in the manner described by Senn in his article, and by myself in the report above referred to, and in subsequent descriptions of successful operations.

Had Sir Spencer Wells, when getting Mr. Stanhope Bishop's interesting preparation from the Museum of the College of Surgeons, extended his search to the adjoining preparations, he would have found those presented by me, which show what beautiful results are obtained by this method of union of the intestine by approximation discs.

[1] BRITISH MEDICAL JOURNAL, December 27th, 1890, p. 1468.

Secondly, Sir Spencer Wells says the decalcified bone plates are preserved in an antiseptic solution. Here, again, he is in error, as after the bone plates are decalcified they are preserved in *rectified spirit*, the object being to harden them; if they were merely kept in an antiseptic solution, they would be so soft that I question if they would answer the purpose required of them.

Lastly, it is stated these bone plates come away in the fæces, inferring that they pass *per anum*, *whole*. This is not so, as they become absorbed and digested, the length of time taken being slightly longer than when these plates are used for gastro-enterostomy, in which operation the plates entirely disappear on about the fifth or sixth day.—I am, etc.,

Upper Wimpole Street. FRED. BOWREMAN JESSETT.

EDUCATION AND CULTURE.

SIR,—In your leader on "Education and Culture," you put in a moderate and qualified plea for Latin as an instrument of general education. Kindly allow me a word in reply. For the sake of shortness, I shall touch the subject at one point only. You say that Latin "will prove of infinite assistance" to the student, "in the acquisition of other" languages.

Now, we as a nation have a vast and ever-increasing Oriental connection. Hundreds of our countrymen, including many medical men, spend their entire working lives in the East, where they have to learn the languages of Eastern peoples. Does Latin afford the slightest help in learning the languages of India, Burmah, or China, or any Eastern language whatever? Come to Europe. We learn of energetic young officers in the army obtaining special leave of absence in order to acquire the language of our formidable rival, Russia. Is the Latin they learned at school of any service to them? If there is a language that, at the present day, concerns the medical profession, especially in its scientific walks, surely it is the language of Professor Koch. But Latin gives no help in learning German. In fact there is only one group of tongues, the Romance group namely, that Latin affords any key at all to, and of these French is the only one that most of us ever think of learning. As everyone knows, the chief difficulty with French is the pronunciation, and Latin is of no service whatever in mastering this difficulty. In grammatical structure Latin is no practical key to French, the change that Latin has undergone in passing into French having been so great. In the matter of derivation Latin is of some service, but disappointingly little, French being the descendant not of classical or literary Latin, over which we spend so much time, labour, and money in not learning, but of popular Latin, the speech of the Roman rustic and the rank and file of the Roman legions—a speech probably as different from the Latin of Cicero, as the dialect of a Somersetshire peasant is from the English of Ruskin. In fine, the usefulness of Latin in the practical acquisition of "other languages," or "modern languages," is immensely overrated, and this argument for its retention does not bear examination.—I am, etc.,

Oxford. JAMES NEIL, M.D.

THE MEETING OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

SIR,—Mr. Bryant, President of the College of Surgeons, has directed my attention to an inaccuracy contained in your report of my remarks at the above meeting on December 20th, 1890, which appears on page 1504 of the BRITISH MEDICAL JOURNAL of December 27th, 1890. I am there reported to have said, touching the negotiations between the London University and the College of Surgeons, that "the President of the College of Surgeons stated that every Fellow of the College was consulted, because every Fellow who was what he ought to be became a member of the Council." What I did say was that the President of the College of *Physicians* had stated, in answer to Q. 767, in his evidence before the Royal Commission on the Teaching University for London (page 72), "that Fellows of the Royal College of Surgeons are sooner or later, if they are what they ought to be, chosen to the Council."

Mr. Bryant, on the other hand, in answer to Q. 850, was careful to speak of "we of the Council," when questioned as to the opinion of the College of Surgeons upon the question of a doctorate for London medical students.

Probably those who have devoted most attention to this

question would also cordially endorse the aphorism uttered by Mr. Bryant in answer to Q. 867, namely, "Competition in teaching improves; competition in giving degrees lowers," even if they would not go so far as to fear with him (Q. 873) that the motive of such lowering was "to attract students and get cash into their coffers."—I am, etc.,

Gloucester Gate, W. W. J. COLLINS, M.S.Lond., F.R.C.S.

LUNACY ACT, 1890.

SIR,—I enclose a copy, which has been sent to me, of "Regulations prescribed by the justices of the Brentford Division for carrying out the provisions of the above Act."

The first regulation seems framed to impose an additional delay in the early treatment of cases of insanity to that already existing. According to the Act the petition and other papers are to be presented to a judicial authority, not to the clerk, and one can quite understand that the relatives of some private patients would object most strongly to the papers being first submitted to the clerk. If the justices are not willing or able to examine the papers themselves and see that they are in order, but need to have them first submitted to the clerk, one has some difficulty in seeing what advantage to the patient arises from their intervention; but, unfortunately, this is now the law. It seems to me, however, that additional delay and possible annoyance to petitioners should not be caused by such a regulation.

The second regulation seems to be entirely *ultra vires*—no copy of the forms and papers is required to be furnished by the Act, except in the case of a second petition being presented after a first one has been dismissed, and I should very much doubt the legality of this rule.

In the third regulation the submission of the papers to the justice's clerk seems more reasonable, though there is nothing in the Act to render it compulsory.

Such regulations as these seem to me to be worth the notice of the profession, for if the same or similar rules are made by the justices in other divisions, the troubles of petitioners will be more unbearable than they are at present.—I am, etc.,

Bethlem Royal Hospital. R. PERCY SMITH, M.D.

LUNACY ACT, 1890.

REGULATIONS PRESCRIBED BY THE JUSTICES OF THE BRENTFORD DIVISION FOR CARRYING OUT THE PROVISIONS OF THE ABOVE ACT.

1. Any person desirous of presenting a petition for the purpose of obtaining a reception order for the detention of a patient in asylum shall, before waiting upon a justice, submit all necessary papers—namely, the petition, statement of particulars, and medical certificates—to the clerk to the justices at his office—194, High Street, Brentford.

2. That copies of all forms and papers shall be furnished at the time of presenting the petition. The justices particularly ask persons presenting a petition to endeavour to observe this regulation, as it is of great assistance as a matter of future reference.

3. That any person giving notice of having knowledge of a pauper lunatic, or one not under proper care and control, shall, before waiting upon a justice, submit all papers to the clerk to the justices. Persons giving such notice shall, previous to attending, make themselves thoroughly acquainted with the circumstances and position of the alleged lunatic, so as to enable the justice to decide in what manner he will treat the case.

MEDICO-LEGAL AND MEDICO ETHICAL.

M.D.—We apprehend that our correspondent is a somewhat unobservant reader of the BRITISH MEDICAL JOURNAL, otherwise he may have noted that the questions which he submitted in the name of "A Member" were replied to in the number published on December 13th, under the heading of "A Supplanter," page 1401, column 1.

A TARIFF OF MEDICAL FEES.

M.B. M.A. will find the desired information in the *Medico-Chirurgical Tariffs*, published by Mr. H. K. Lewis, 136, Gower Street, W.C., price 2s., with which we may advise him to procure the *Young Practitioner*, price 7s. 6d., and the *Code of Medical Ethics*, 3s., or the three books combined in one volume, 10s. 6d.

The fee for an affidavit varies from 3s. 6d. upwards, according to the length and nature of the affidavit, and the trouble entailed in mastering the details.

CONTRACTS NOT TO PRACTISE.

A sells his practice to B., and signs the agreement not to interest or concern himself either directly or indirectly in exercising or carrying on or assisting to carry on the usual duties of a medical attendant. C., a former patient of A. but now the patient of a neighbouring practitioner and residing within the limit of distance, is seriously ill. A. is in the district staying with some friends, hears that C. is ill, calls on C. and there accidentally meets C.'s medical attendant. Both examine the case and express the same opinion. Does A. violate his agreement, although no money passes from C. to him?

*** Although the visit of A. to C. would nominally constitute a breach of the agreement under the circumstances narrated, it could not in equity be so regarded, for not only had C. never been B.'s patient, but the latter thereby sustained no pecuniary damage. A liberal and generous construction, moreover, of such agreements will, as a rule, always be found more advantageous than an insistence of a fulfilment of the strict letter of the law thereof.

CHEAP DISPENSARIES.

DISPENSARY writes: Two friends of mine, qualified men, propose starting a cheap dispensary—1s. per case, and medicine. They, I believe, intend to have circulars printed and left at the doors of houses in the locality. 1. Will this be infringing any rule set out by the Colleges of London? 2. Is it in the power of the Colleges to erase such members from their list?

*** If our correspondent had been a careful reader of the BRITISH MEDICAL JOURNAL he could not, we think, have failed to notice repeated condemnatory comments on the subject matter of his note, in reply to which we would remark that to "start a cheap dispensary at 1s. per case and medicine, and to leave printed circulars at the doors of houses in the locality," would not only be highly derogatory and contrary to the ethics and true interest of the profession, but justly subject the practitioners in question to the disciplinary laws of their respective Colleges. *Verbum sap.*

CONSULTATION IN AFRICA.

V. W. T. W. (Orange Free State).—Our correspondent has omitted to state whether the gentleman whom he declined to meet in consultation is, notwithstanding the withholdment of a licence to practise by the officially recognised Cape Colony Medical Board, *de facto* a legally qualified medical practitioner—an essential point on which our opinion can alone be safely based. With the view, however, to aid our correspondent, as far as possible, in the absence of such information, we would observe that, if the person in question be (otherwise than in the Cape Colony) a medical man qualified to practise, Dr. W. would not, as we view it, be professionally justified in refusing to meet him, and more especially in a case in which life was imperilled, for the claims of humanity ought to supersede all else. If, on the other hand, he be not a legally qualified man, the M.R.C.S. alluded to, in consorting with him as a partner, would be acting in direct contravention of the ethics of the profession, and not only subject himself to the disciplinary laws of his College, but, being guilty, as he would be, of "covering," he would render himself liable to have his name erased from the *Medical Register* by the General Medical Council.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

FLEET-SURGEON JAMES HAMILTON MARTIN has been nominated a Companion of the Distinguished Service Order, "in recognition of his services during the late operations against the Sultanate of Vitu."

The following appointments have been made at the Admiralty:—E. T. COOK, Surgeon, to the *Speedwell* January 2nd: G. EDWARDS, Surgeon, to the *Duke of Wellington*, additional, January 6th; R. F. BATE, Surgeon, to the *Pembroke*, additional, January 6th; H. W. FINLAYSON, Surgeon, to the *Britannia*, for temporary service, January 6th; R. C. MUNDAY, Surgeon, to the *Impregnable*, additional, January 6th; E. C. CRIDLAND, F. BRADSHAW, and M. J. O'REGAN, Surgeons, to the *Vivid*, additional, January 6th.

MEDICAL STAFF.

SURGEON A. A. PECHELL, M.B., on arrival from England, is posted to the Belgaum and Bangalore Districts, in the Madras command.

ARMY MEDICAL RESERVE.

SURGEON JAMES MACKAY, 6th (Fifeshire) Volunteer Battalion, Royal Highlanders (late the 1st Fifeshire), is appointed Surgeon, ranking as Captain, January 7th.

INDIAN MEDICAL SERVICE.

THE services of Surgeon G. M. J. GILES, M.B., Bengal Establishment, are placed at the disposal of the Military Department.

The services of Surgeon A. E. ROBERTS, Bengal Establishment, officiating medical officer Meywar Bheel Corps, are placed at the disposal of the Home Department.

Surgeon E. R. W. C. CARROLL, Bengal Establishment, is appointed to officiate as medical officer of the Meywar Bheel Corps, *vice* Surgeon Roberts.

Surgeon-Major J. BLOOD, Bengal Establishment, civil surgeon of Shahjehanpore, is transferred to the temporary half-pay list from December 21st.

Surgeon-Major R. PEMBERTON, Madras Establishment, has been granted an extension of his six months' leave on medical certificate.

Surgeon J. W. EVANS, Madras Establishment, civil surgeon of Cochin, and acting district surgeon of Rajahmundry, is appointed to act as District Surgeon and Superintendent of the Gaol at Berhampore during the employment of Surgeon-Major D. Eleum on other duty.

Surgeon C. HENDERSON, Madras Establishment, has returned from 2½ years' sick furlough out of India, granted August 28th, 1888.

Surgeon M. A. T. COLLIE, M.B., Bombay Establishment, is appointed to

act as Professor of Materia Medica and Pharmacy, Grant Medical College, during the absence of Surgeon R. J. Baker, M.D.

Surgeon J. P. Barry, M.B., Bombay Establishment, in medical charge of the 4th Native Infantry, is appointed to officiate in medical charge of the 27th Native Infantry (1st Belooch Light Infantry), *vice* Surgeon S. T. Avetoom, on furlough.

Surgeon-Major Herbert Baillie, M.D., F.R.C.S., died at Roehampton, Cheltenham, on December 25th, at the age of 71.

THE MILITIA.

Surgeon-Major Cooper Hayes Crawford, Medical Officer to the 3rd Battalion of the North Staffordshire Regiment (formerly the 2nd King's Own Staffordshire Militia), died at Ealing on the 4th instant, aged 63.

THE VOLUNTEERS.

Surgeon-Major (ranking as Lieutenant-Colonel) J. B. Kennedy, 1st Essex Artillery (Eastern Division Royal Artillery) has resigned his commission, with permission to retain his rank and uniform. His commission as Surgeon dated from January 3rd, 1868; that of Surgeon-Major from February 1st, 1889.

The undermentioned gentlemen are appointed Acting-Surgeons to the corps specified, all from January 3rd:—Hugh Ransom Bramwell, M.B., Tynemouth Artillery (Western Division, Royal Artillery); Richard Williams, Mersey Division (Submarine Miners, Royal Engineers); Frederick Vasey Adams, 1st Lanarkshire Rifles; Charles Pye Oliver, M.B., Maidstone Division, Volunteer Medical Staff Corps.

Acting-Surgeon A. F. Turner, 2nd Volunteer Battalion, Gloucestershire Regiment (late the 2nd Gloucestershire), has resigned his appointment, which was dated March 20th, 1886.

THE RECENT OPERATIONS AGAINST VITU.

The *London Gazette* of January 6th contains despatches from Admiral Fremantle, Commander-in-Chief on the East Coast Station, reporting the operations recently undertaken against the Sultanate of Vitu. He warmly commends Fleet-Surgeon J. H. Martin, of the *Boadicea*, who acted as principal medical officer of the expedition, for the efficient medical arrangements made by him, and who himself marched the whole of the way traversed by the force landed, and was unremitting in his attention to the sick.

Fleet-Surgeon Martin's reports are also given. Addressing the Chief of the Staff, Captain the Hon. A. G. Curzon-Howe, he says: "I would beg to point out, for your favourable consideration, the willing and painstaking manner in which the medical duties of the expedition were carried out. I feel myself personally indebted to Staff-Surgeon Christie for his cordial co-operation and assistance, and to Surgeons Beattie, Harries, Osborne, and Youel for untiring zeal and attention to the men under their charge, in spite of exhausting marches through the mud and oppressive heat."

Fleet-Surgeon Martin has been nominated a Companion of the Distinguished Service Order for his services on this occasion.

NON-COMBATANT COMBATANTS.

A Combatant draws our attention to the following, extracted from the *Memoirs of the Bengal Artillery*, by Captain Buckle, 1852, pages 16 and 17, showing that it is not to-day nor yesterday that medical officers have led troops in action:—

"The battalion of Sipahis left at Patna with two 6-pounders and 70 Europeans, under Lieutenant Cochrane, was defeated in an engagement into which they were forced in assisting our ally, Ramnarain, against the Emperor's forces in January, 1760. The conduct of the European troops is spoken of as highly creditable. The European officers of the Sipahis all fell, and the Sipahis were cut to pieces or dispersed. The English who remained fought their way back to the city under Doctor Fullerton."

THE ANNUAL REPORT, MEDICAL CORPS, EGYPTIAN ARMY, 1889. We have been favoured with a copy of this very lucid report, which shows the present state and the progress which has been made in the medical reorganisation of the Egyptian army under the able administration of Surgeon-Major Rogers. It will be noticed it is described as the report of the Medical Corps, from which we gather that the Egyptian army is ahead of our own in medical organisation, having formed its medical department into a corps in which the medical officers hold *bonâ fide* army rank and titles. The strength of this corps is 8 European officers, 2 European non-commissioned officers, 45 Egyptian officers, and 143 non-commissioned officers and men. The corps forms part of the Egyptian army, which, since its reorganisation in 1881, has almost doubled, and now numbers 12,095 of all ranks.

The army is spread over three main divisions—Lower Egypt, the Nile Frontier, and Suakin. The report enters into the sanitary condition of the military buildings and their surroundings at the various stations (eight in all) in these divisions. It is evident that although much has been done to improve the habitable condition of these stations, a great deal more has still to be accomplished provided the everlasting "want of money" can be got over. It is clear that if the sanitary condition of the Egyptian troops continues defective, it is from no want of zeal and ability on the part of its medical officers.

The work of the army, and especially the Medical Corps, was largely increased by the attempted invasion of the frontier, by Dervishes, in 1889, which was stopped by their crushing defeat at Toski. The Dervishes drove a starving multitude of refugees in front of them, who, as usual, brought small-pox with them. This disease is endemic on the Egyptian frontier, and is always a standing menace to Egypt proper. The nomad Arab tribes who refuse vaccination, suffer terribly from the disease; while the fellaheen who willingly accept it, and come in contact with those tribes, show a very small number of cases. Such a terror and nuisance is this disease on the Nile frontier, that the report says: "It is a question whether vaccination should not be enforced on any of the tribes who approach the confines of civilisation." We fear this is easier said than done. In addition to duty strictly with the troops on the frontier, it seems the Medical Corps also look after the health of the civil population, as we find mention in the report of the establishment of civil hospitals and dispensaries, and of the equipment of civil wards in the station hospitals. Although the majority of the civilians are Berberin, who, we are told, rely mostly on charms and traditional remedies to cure their ailments, and are averse to hospitals, yet a large number have availed themselves of these hospitals during the short time they have been in operation.

The sanitary condition of Suakin is still very unsatisfactory. The barrack accommodation is "utterly inadequate" for the climate, but steps are being taken to build permanent quarters. About the worst part is the water supply, which, being obtained only from condensing machines, ought to be pure, but is fouled by defective storage. The condition of the foreshore of the practically tideless harbour, which is the general latrine of the whole population, is disgusting and dangerous in the last degree. Nothing but the strong hand of authority and the adoption of some system of earth latrines will overcome this abomination. Altogether, with the exception of Suakin, we are told "a general advance has taken place in improving the sanitary surroundings of the Egyptian soldier."

We congratulate the medical officers, to whom this advance is undoubtedly due. Army medical officers everywhere only want sufficient power of initiation, with due military status and recognition, to make their influence for good always apparent on the soldiers under their care.

THE PRINCIPLE OF EQUALITY.

A correspondent sends us a long communication, in the form of a dialogue between himself and an old friend—a retired combatant officer. The latter wanted particularly to know what was now wrong with the medical department, and was told, they want to be placed on an equality with other officers, without which there can be no fraternity, confidence, or conjoined action, and no army solidarity. The military authorities regard the medical officer's commission as conferring an altogether inferior status, as belonging to a department rather than to the army; as conferring certain advantages of military rank, but not the rank itself, and this notwithstanding that the medical officers exercise command of a corps of men both in peace and war. Their position is thus wholly anomalous, and not paralleled by that of any other body of men. "But why," said the old officer, "should you be called upon to perform any other duty except doctoring pure and simple?" This displayed great ignorance of modern military medical organisation; and he was told the duties of medical officers were so comprehensive and mixed that it was impossible to restrict them as he proposed, but, even if it were possible, it would require the expensive and inefficient system of having two persons to do what is better done by one. He wanted to know what they wished to be called; and was told it was a matter of detail; but, at all events, their title should set forth their military rank, and not, as at present, obscure and confuse it. The social question was next discussed, and although the old gentleman disclaimed all prejudice, it was but too clear he could not shake it off, and wound up by uttering the old warning: "Take care that you don't lose more than you will gain by changes!"

MEDICAL MILITARY PAY.

Audax writes: A recent correspondent draws attention to the fact that all the Director-General of the Army Medical Department has to offer a retired officer, after twenty or thirty years' hard service in unhealthy climates, is the munificent sum of £150 a year, in addition to retired pay, for employment at certain stations under the warrant of 1879. That sum is inadequate for the duties they are called upon to perform, although men with families to educate are obliged to accept it. The State has decidedly the best of the bargain; for what are the duties? At the depôt of a military district they range from the duties of the most junior to those of the most experienced officer. All the medical and sanitary duties of a large barrack and its surroundings fall to him; the discipline and interior economy of the Medical Staff Corps employed; responsibility for hospital equipment and stores; and, not least, the important recruiting duties. On all of these he brings the valuable knowledge of a life-long training and experience; he works single-handed, and is practically on duty day and night, and has often the utmost difficulty in obtaining leave, on which he is sometimes called upon to provide a substitute. Surely he well earns 8s. per diem! Why, bringing his special military training to bear on recruiting alone many times over saves his small salary to the State.

Now, some of the best of these so-called retired pay appointments are tenanted by civil practitioners. This is wrong and unfair to the Medical Staff; whatever value they possess they should surely fall to the regular army surgeon, who alone is properly fitted to fill them. A medical man in private practice cannot, even if he would, duly perform all the functions appertaining to them. More especially is this true of the recruiting duties, evidence of which fact army medical officers constantly have before them in the medical history sheets of young soldiers. Nothing but long army training and experience will make a man a successful, much more an expert, examiner of recruits. It is to be feared this truth was not fully appreciated in the late administration of the department.

To induce the best among the retired officers to accept these onerous and exacting appointments, the War Office should make them more attractive in a pecuniary sense. I would advocate that the officers holding them should draw the military allowances of their rank, in addition to the present pay, the whole, if necessary on financial grounds, to be given in a consolidated sum.

SURGEON I. P. DOYLE.

In his despatches to the Adjutant-General in India, Major-General Sir George White, K.C.B., V.C., late commanding the Upper Burmah Force, wrote: "Surgeon I. P. Doyle, I.M.D., Madras, distinguished himself much by personal courage and care of the sick. On December 9th, 1888, he was twice wounded. On January 1st, 1889, during the withdrawal from Kan to Gangaw, he again distinguished himself, and it is greatly in consequence of his courage and bearing that the wounded got safely into Gan-

gaw. I commend this officer very specially to the consideration of His Excellency the Commander-in-Chief."

The General Officer commanding at Bangalore recently presented the Insignia of Companion of the Distinguished Service Order to Surgeon I. P. Doyle in the presence of the troops and garrison. The General said, in presenting the recipient:

"Surgeon Doyle, you are as yet a young soldier, but I think that the position you occupy this day might well excite the envy of the oldest soldier in the ranks, inasmuch as you have achieved what should be, and I believe is, the dearest ambition of every good soldier, and that is the approval of your Sovereign of gallant conduct before the enemy. What adds, I think, to the interest of this presentation is that you belong to that branch of our profession, the members of which, although their duties are not strictly combatant, yet have ever shown themselves ready to sacrifice themselves at the call of duty, and many of whom have lately been specially fortunate in finding opportunities of distinguishing themselves on service in the presence of an enemy."

The General then dismounted and pinned the insignia on to Dr. Doyle's left breast, which completed the ceremony.

RANK IN INDIA.

A CORRESPONDENT, writing from one of the largest cantonments in India, says the medical service without recognised rank is sinking day by day. As a body it is socially ignored in this station, but that may partly be the result of its having a head who is wholly indifferent to his own position, and will not assert himself, and is content to take a back seat. Medical officers suffer much from having such men placed over them. Then it is now almost impossible to get leave, which is freely given to all others. Will intending candidates not take heed to such facts?

RETIREMENT AT TWENTY YEARS.

FAIRPLAY mentions a rumour that, notwithstanding pledges, Mr. Stanhope in his promised warrant will do away with retirement at twenty years. Such a clear breach of faith and substantial injustice would in no way be counterbalanced by new titles. It would raise a perfect storm and be a gross infringement of vested rights.

*** We have not heard of this rumour, and hardly credit it. No change of the kind can have retrospective application.

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

WANTED, an Exchange to Bengal, either at once or next autumn in time for first troopers. No premium required, necessary expenses excepted. A good opportunity for a surgeon at home on sick or other leave.—Apply to Surgeon M.S., care of Sir C. R. McGregor, Bart., etc., 25, Charles Street, London, S.W.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE GUINNESS WORKMEN'S DWELLINGS.

THE members of the trust appointed to apply the fund given by Sir Edward Guinness for providing improved workmen's dwellings in London have just acquired an additional site of 32,000 feet in extent in Lever Street, at the lower end of the City Road. Here, as in the case of the Columbia Road site and the Marlborough Road (Chelsea) site, there will be no population to displace while building is going on. There will be room for about 200 families. The idea is that in each instance the buildings shall not be more than one superintendent can efficiently take care of. Two-thirds of the space acquired on each respective site will be left open for recreation and other necessary purposes in connection with the dwellings.

DIPHTHERIA AND MILK AT SURBITON: AN INSTRUCTIVE STORY.

DR. F. P. ATKINSON (Surbiton) writes: I am sure Dr. Coleman will excuse me if I supplement the statements made in his report, and say that I somewhat hesitate, for the present at least, to accept the conclusion at which he has arrived.

In the first place I would remark that during the last few months diphtheria has been pretty general throughout the country, and for some little time has been present in many of the surrounding districts. Even in Surbiton and Kingston we have had a certain number of cases occurring at various intervals throughout the present year. Almost every year, from November to February, it is customary for us to get numerous cases of what is termed follicular tonsillitis, owing no doubt to damp fogs, and heavy barometric pressure keeping gases which should ascend, down at the low levels. The road ventilators on Surbiton Hill have been smelling very badly of late, owing, in all probability to this cause the little fall that many of the sewers have, the insufficient flushing they have received during the late frosty weather, and the backing up of the sewage for a certain number of hours in the day to relieve the engines at the new sewage works. But to deal more specificially with his report. From December 1st to December 10th he says three cases of diphtheria occurred, and the dairyman was then informed that if another arose amongst his regular customers the supply would have to be changed. The said dairyman, I am told, did not wait for any further orders, but immediately set about getting milk from an entirely different source, and on December 13th the old supply was altogether stopped. Now, knowing that other cases had already occurred in the neighbourhood at different intervals of time throughout the year, entirely unconnected with this dairy, it appears to me the conclusion arrived at, that the outbreak was due to milk, was rather suddenly formed, especially when one considers that the dairy in question supplies about 300 houses. One of the houses in which the disease broke out was, I am told, very badly drained, and possibly the others may have been defective also. Some of the dwellings in which it subsequently occurred I know were defective, but how is the medical officer of health to know this unless he is informed by the regular medical attendant? No fresh cases, he says, occurred after December 17th, and from this fact and information obtained that diphtheria had been in existence for months past in the villages adjoining the farm from which the milk came, and that two cases occurred at the farm after that supply was stopped being sent here, he came to the conclusion that milk was the cause. But all the cases did not drink the suspected milk, as he has already admitted, and these, together with those of follicular tonsillitis, began to diminish about the same time. How is this altered state of things to be accounted for? Besides, if Dr. Coleman had made inquiries he would have found out that the persons who took on the Surbiton supply after it was stopped here had been taking 12 to 18 gallons from the same farm for the last two years: that they had not heard any complaints made with respect to it, and that there had been none since the increased amount had been taken on.

I am engaged in trying to get further information on this part of the subject, and hope to obtain some expression of opinion later on from the local authorities.

In justice to Dr. Coleman I must say, if report is to be trusted, he has done all he can to prevent injury to the dairyman's business, and, in consequence, less damage will accrue than in many other cases of a like nature.

Finally, I would say that whenever an epidemic arises the houses of those persons affected should be thoroughly examined, so that, as far as possible, sources of danger may be corrected before another visitation of a similar nature occurs. Some of the previous existing defects have, I know, been made good, but some, I fear, have not been looked into at all.

QUALIFICATIONS OF MEDICAL OFFICERS OF HEALTH.

DR. W. ILIFFE (Medical Officer of Health, Derby) writes: Will you allow me a line to endorse the sentiments of "A Medical Officer of Health of Eighteen Years' Standing" with reference to Sir Walter Foster's statements concerning the registration of those medical officers of health who are exempted by the Local Government Act from being competent to obtain a diploma in public health?

I have had some private correspondence on this subject with a gentleman of high standing and great influence in the sanitary world, pointing out the injustice which medical officers of health of old standing and of acknowledged ability, who have done excellent work and service in sanitation, may be subjected to, unless a diploma be granted to them without examination. My opinions in the matter were fully coincided in by him, and he made some steps in the direction of having the anomaly remedied, but without avail.

I sincerely trust Sir W. Foster will take up the cudgels for us, and obtain that which is our undoubted right.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 9,715,559 persons, 6,328 births and 5,343 deaths were registered during the week ending Saturday, January 3rd. The annual rate of mortality in these towns, which had increased from 21.3 to 27.8 in the preceding three weeks, further rose to 28.7 during the week under notice. The rates in the several towns ranged from 16.2 in Leicester, 17.1 in Bradford, 19.6 in Derby, and 20.2 in Hull to 33.1 in Salford, 33.5 in Liverpool, 36.7 in Manchester, and 43.6 in Preston. In the twenty-seven provincial towns the mean death-rate was equal to 27.9 per 1,000, and was 1.8 below the rate recorded in London, which was 29.7 per 1,000. The 5,343 deaths registered during the week under notice in the twenty-eight towns included 476 which were referred to the principal zymotic diseases, against 511 and 472 in the preceding two weeks; of these, 191 resulted from measles, 106 from whooping-cough, 51 from diarrhœa, 49 from scarlet fever, 10 from "fever" (principally enteric), 39 from diphtheria, and not one from small-pox. These 476 deaths were equal to an annual rate of 2.6 per 1,000; in London the zymotic rate was 2.4, while it averaged 2.7 per 1,000 in the twenty-seven provincial towns, among which it ranged from 0.4 in Portsmouth, 0.5 in Hull, 0.6 in Wolverhampton, and 1.0 in Derby to 5.3 in Oldham, 6.5 in Salford, 6.8 in Bolton, and 9.4 in Preston. Measles showed the highest proportional fatality in Salford, Bristol, Oldham, Preston, and Bolton; whooping-cough in Newcastle-upon-Tyne, Sheffield, Birmingham, Salford, and Preston; and "fever" in Derby. The mortality from scarlet fever showed no marked excess in any of the twenty-eight towns. Of the 39 fatal cases of diphtheria recorded during the week under notice, 25 occurred in London, 3 in Manchester, 2 in Oldham, and 2 in Leeds. No death from small-pox was registered during the week, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday, January 3rd. These hospitals contained 1,549 scarlet fever patients on the same date, against numbers declining from 2,024 to 1,631 at the end of the preceding eight weeks; 101 new cases were admitted during the week, against numbers declining from 139 to 71 in the previous four weeks. The death-rate from diseases of the respiratory organs in London was equal to 10.9 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, January 3rd, 761 births and 643 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 20.1 to 24.6 in the preceding three weeks, further rose to 24.8 during the week under notice, but was 3.9 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Leigh and Greenock, and the highest in Paisley and Glasgow. The 643 deaths registered in these towns during the week under notice included 65 which were referred to the principal zymotic diseases, equal to an annual rate of 2.5 per 1,000, which was slightly below the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Edinburgh, Glasgow, and Greenock. The 308 deaths registered in Glasgow included 14 which were referred to whooping-cough, 6 to measles, 4 to diphtheria, and 4 to "fever." Seven fatal cases of "fever" were recorded in Edinburgh, and 4 of measles in Greenock. The death-rate from diseases of the respiratory organs in these towns was equal to 7.4 per 1,000, against 10.9 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town-districts of Ireland, the deaths registered during the week ending Saturday, December 27th, were equal to an annual rate of 24.6 per 1,000. The lowest rates were recorded in Dundalk and Cork, and the highest in Belfast and Dublin. The death-rate from the principal zymotic diseases averaged 1.5 per 1,000. The 212 deaths registered in Dublin were equal to an annual rate of 31.3 per 1,000 (against 25.6 and 28.2 in the preceding two weeks), the rate for the same period being 26.3 in London and 20.2 in Edinburgh. The 212 deaths in Dublin included 11 which were referred to the principal zymotic diseases (equal to an annual rate of 1.6 per 1,000), of which 6 resulted from different forms of "fever," and 4 from whooping-cough.

UNIVERSITIES AND COLLEGES.

LONDON.

B.S. Examination, 1890.—Examination for Honours. Surgery:—

First Class.—E. V. Hugo (Gold Medal), St. Bartholomew's Hospital; W. H. Evans, M.B., B.Sc., University College.

Second Class.—T. J. Dyall, St. Bartholomew's Hospital; A. W. W. Lea, Owens College and Manchester Royal Infirmary; F. W. Hall, Guy's Hospital.

GLASGOW.

Recess.—The classes at the University rose for the Christmas recess on December 24th, and they resumed on January 5th. The matriculation roll is now complete, and shows for the current winter session 2,051 entries, making, with the matriculation for the past summer—which amounted to an additional 97—a total number of 2,148. This is 32 fewer than last year.

The General Council.—The Register of the General Council for 1891 has been made up in accordance with the statute. There are 4,983 names on the roll—an increase of 157 over the roll for 1890. The total number of additions, however, reached 227, of whom 222 were graduates, 3 being professors and 2 members of Court; but 70 names had to be erased because of death.

EDINBURGH.

Statistics.—During the past year the total number of matriculated students at the University of Edinburgh was 3,503, as against 3,602 in 1889, 3,160 in 1880, and 1,768 in 1870. Of this total of 3,503, 1,979 were enrolled as students of medicine. As to the nationality of these, 814 (fully 41 per cent.) belonged to Scotland, 687 (almost 35 per cent.) came from England and Wales, 58 from Ireland, 99 from India, 270 from various British Colonies, and 51 from foreign countries. During the year 54 candidates received the degree of M.D., 210 the degrees of M.B. and C.M., 5 the degree of D.Sc., 28 the degree of B.Sc. The aggregate of the University fellowships, scholarships, bursaries, and prizes awarded during the year in the Faculty of Medicine amounted to £2,560. Among the new benefactions for the year there has to be noted a sum of £320, the gift of Mrs. Milner Fothergill, to provide a gold medal to be awarded biennially, and to be named, in commemoration of her late husband, the "Milner Fothergill Gold Medal in Therapeutics."

Royal College of Physicians of Edinburgh.—The following candidates have been elected by the College since June 30th, 1890:

Fellows.—G. L. Gulland, 6, Randolph Place, Edinburgh; T. J. Thyne, 1, Dean Terrace, Edinburgh; G. Rankin, 23, Jury Street, Warwick.

Members.—J. Macpherson, The Copse, Larbent; W. M'Creadie, Holme Villa, Ferry Road, Edinburgh; J. C. Dunlop, 26, Alva Street, Edinburgh; W. G. A. Robertson, 26, Minto Street, Edinburgh; G. L. L. Lawson, Egremont, Cumberland.

Licentiates.—C. R. Adams, Croydon; D. Archer, Canada; C. P. F. Baillieu, Victoria; R. A. Ball, Cork; S. T. Beckett, Liverpool; R. J. A. Berry, Lancashire; T. P. Blades, Westmorland; A. V. Bowen, Lancashire; R. E. Brown, Durham; L. F. Bucknell, Sydney; A. E. W. Burns, Chatham; F. A. Capps, Portsmouth; W. H. Carlisle, Belfast; Lilian Violet Cooper, Kent; J. Craig, Glasgow; M. Crannitch, Limerick Co.; J. Cross, Nottingham; P. A. Docherty, Perthshire; D. D. Dryden, Plymouth; P. M. Dwyer, Essex; E. V. Eames, Donegal; E. N. Féré, Canada; G. Foggin, Northumberland; J. J. Foley, Cork; T. J. Frost, Clare; Mary Louisa Gordon, Liverpool; F. M. Graham, Monmouth; J. C. B. Graham, Omagh; S. Greenwood, Dublin; L. Hamilton, New South Wales; A. C. Harkness, India; H. R. G. Haynes, Cork; Jane B. Henderson, Bo'ness; F. E. Hodden, Cork; M. C. Hopkins, Meath; D. Horan, Kerry; W. J. Howarth, Pendleton; D. H. Hutchison, Canada; G. A. Ings, Canada; S. V. R. Iyengar, Mysore; W. Johnson, Dublin; T. E. Jones, Wales; R. L. Langstaff, Canada; E. S. Leyburne, Carlow; J. P. Lyons, Clare; A. M'Cune, Kilwinning; J. A. M'Donald, Cork; J. Mackenzie, Sutherland; F. W. Marshall, Staffordshire; A. D. C. Meade, Cork; J. C. Mockler, Lisburn; R. L. Moore, Belfast; O. W. Morgan, Ceylon; A. J. Murchison, Canada; J. Murphy, Limerick; G. J. Naphthine, Melbourne; M. O'Shaughnessy, Limerick; J. H. Peet, Kerry; H. N. Pelly, Lancashire; B. F. Powell, Madras; Margaret Elizabeth Pearse, Madagascar; W. Rae, Glasgow; F. E. Rainsford, Ballinasloe; F. Rawlings, Lancashire; L. Roberts, Conway; G. Robertson, Fife; W. W. Robinson, Chesterfield; J. S. Robson, Derry Co.; J. T. Rogers, Canada; H. R. Ross, Canada; J. Ryan, Limerick; P. M. Sheedy, Cork; A. E. Shepherd, Adelaide; T. N. Stuart, South Africa; A. E. Syme, Melbourne; T. J. Talbot, Dublin; R. G. Taylor, Middleton; C. A. P. Truman, Surrey; A. Wallace, Ballymena; H. M. Walker, Dublin; F. W. Weber, South Africa; Annie Catherine Wells, India; T. P. G. Wells, Blackburn; Hope Wellis, India; Catherine Mary Wickham, Dublin; J. W. Wilkinson, Queen's County; J. Wilson, Newry; K. R. M. Wilson, Airdrie; D. W. Wright, Mallow; G. Wright, Canada; W. E. M. Wright, Bangalore.

OBITUARY.

JOHN MARSHALL, F.R.C.S.Eng., F.R.S., LL.D.,

President of the General Medical Council.

The news of the death of Mr. John Marshall has been received everywhere with painful regret and by none more than by ourselves, with whom recently he had been in frequent communication on subjects relating to the administration of the affairs of the profession, the correspondence bearing marks of that faithful public spirit, thoughtfulness, and attention to detail which, coupled with a large grasp of general principles, and a single-minded devotion to public and private duties characterised Mr. Marshall's whole career; these were main elements in the distinguished success which he achieved, and the considerable influence which he exercised.

Mr. Marshall was born at Ely on September 11th, 1818. He was the second son of William Marshall, a well-known county solicitor, the third generation of that name in the profession. Of his two brothers, William, a solicitor, was a man of very great ability, who became coroner of Ely, and was well known in scientific circles as a highly accomplished naturalist and botanist. The subject of our notice was educated at Hingham School under the Rev. J. H. Browne, uncle of Hablot K. Browne ("Phiz"). Choosing the medical profession, Mr. Marshall was apprenticed to Mr. Wales, of Wisbech, and, when 21, he came to London as a student at University College in 1839, and with its hospital he was connected until his death. He became house-surgeon, and subsequently private assistant to Liston. He succeeded Professor Ellis as demonstrator of anatomy, and assisted in bringing out some of the early editions of *Quain's Anatomy*. He started in practice at 8, Crescent Place, Mornington Crescent, but was very soon afterwards appointed assistant surgeon at University College Hospital, moving to George Street, Hanover Square, and subsequently to Savile Row. He married in 1855, his married life being a peculiarly happy one. Surrounded by the charms and comforts of a cultivated and artistic home, and supported in all the affairs of life by the affection and the counsel of wise and deeply attached relatives, Mr. Marshall was as happy in his domestic relations as in the leading incidents of his public career. The large hospitalities of his home were frequently extended, both in his private and official capacities, to a wide circle of pupils and friends, and it is but natural that a tribute should be paid here to surroundings which added, not only to his private happiness, but to his public efficiency.

Mr. Marshall had suffered much of late years from bronchitis, and acute bronchitis was the illness which proved fatal. It had lasted only a week, and he was seriously ill only for three days. He was attended—on this as on many previous occasions—by his attached friend and pupil, Dr. Thomas Barlow. He was buried, on January 6th, in the Public Cemetery at Ely, where other members of his family are buried. The General Medical Council was represented by Dr. Donald MacAlister, of Cambridge, and many attached friends were present at the house, and subsequently at the railway station and at the cemetery.

Of Mr. Marshall's scientific career, many of the products are standard in medical literature. Acting, as we have said, as Demonstrator of Anatomy in University College, London, from 1847-9, he assisted in the preparation of the English translation of Cruveilhier's Anatomy, which appeared in the *Library of Medicine*. He early became an industrious and original student in anatomy and physiology, attracting especially the attention and warm interest of Professor Sharpey, "the father of English physiology." Among his most important publications must be classed a paper "On the Development of the Great Anterior Veins in Man and Mammalia, including an account of certain remnants of fœtal structure found in the adult, a comparative view of these great veins in the different mammalia, and an analysis of their occasional peculiarities in the human subject." This appeared in the *Philosophical Transactions* for 1850. It was a very able and well illustrated account of the development of the great veins, including a study of the primitive veins and of a vestigial fold, not previously described. He wrote two papers on the anatomy of the brain, which are recognised as part of the classical literature of the subject: one "On the Brain of the Young Chimpanzee," in the *Natural History Review* of 1861; and "On the Brain of a Bush-woman, and on the Brains of Two Idiots of European Descent" in the *Philosophical Transactions* of 1864. These papers contained entirely original descriptions, and may be paralleled in their degree with the well-known work of Gratiolet in this department. Among his other anatomical and physiological works should be mentioned also a paper "On Certain Elastic Structures connected with the Deep Flexor Tendons of the Fingers and Toes," published in the *British and Foreign Medical and Chirurgical Review* (1853).

Among his more popular works were *Outlines of Physiology: Human and Comparative*, two volumes, 8vo., 1867—a work full of information, and which, until it went out of print, was much used by students reading for the Fellowship; and his *Anatomy for Artists*, which is the standard English textbook; the first edition appeared in 1878, and of which the third edition has recently been issued from the press. Of his life-size *Physiological Diagrams*, a series of ten plates, published for the Department of Science and Art, many editions have been sold, and they are still largely in use as the best of their kind. The same may be said of the *Seven Plates of Anatomical Diagrams for Schools of Art*, which he issued. The list of his minor papers include: 1. Letter on Microscopic Appearances of Cholera Evacuations in Report of Royal College of Physicians, 1854. 2. Joint Report with Rev. Mr. Whitehead on Outbreak of Cholera in Broad Street, St. James's, 1854. 3. On the Use of the Galvanic Cautery in Surgery as first suggested and applied by the author in this country. 4. On the Use of Oleate of Mercury and Morphia in Local Inflammation—an oleate being a fatty solution of the active agents above-named, and not a mere mechanical mixture.

An important part of the history of Mr. Marshall's life may be traced in the various teaching appointments which he held. After acting for five years as Curator of the Anatomical Museum, and subsequently Demonstrator of Anatomy at University College, he gave, during eight years, courses of lectures on the uses of bandages and of surgical apparatus, which were, we believe, the first lectures of this kind in London, now so general and found to be so useful. He was for sixteen years Professor of Surgery at the same institution, and during a period of thirty-three years he held in succession the offices of Assistant-Surgeon and Surgeon, subsequently becoming Consulting Surgeon and Emeritus Professor. Mr. Marshall held for four years the office of Fullerian Professor of Physiology at the Royal Institution, and for two years he gave a course of lectures on physiology to ladies and lady teachers at University College, the first course of this kind given in London.

His artistic tastes and capacities were well displayed in his famous Lectures on Anatomy as applied to Art, given in the Government schools, first at Marlborough House, and afterwards at South Kensington for a period of twenty years. These were the first public lectures of the kind given in London to mixed classes of men and women, and they proved the practicability of doing this without offence. For twenty-five years he filled the office of examiner in art anatomy for the Government School of Art; and during the last fifteen years he has been professor of anatomy in the Royal Academy of Arts. In this chair the practice was first introduced into the Academy of admitting the lady students to the lectures—a certain number of special demonstrations being reserved for men only. The number of lectures in the course at first was only nine, but it was subsequently doubled.

Mr. Marshall became early in life a Fellow of the Royal Society, and twice served a term of office as member of the Council. He became President of the Royal Medical and Chirurgical Society, an office which he filled for two years with remarkable success. In the period immediately preceding his presidency, the meetings of the Society had fallen considerably in attendance, if not in the quality of the papers read. Mr. Marshall became President, Mr. Berkeley Hill becoming Secretary; they set themselves to work to give renewed vitality and activity to the work of the Society, and their efforts were attended with remarkable success, the meetings becoming rapidly and much more popular, and largely attended, and the Society entering on a phase of activity which it has not since lost. At University College Mr. Marshall was greatly esteemed and much loved by the students, both as a lecturer and as a man. His lectures were philosophic and well grounded in the results of foreign as well as of British research. He was one of the first to embody in his teaching the doctrines of Virchow and Cohnheim, as he was at a later period one of the very earliest to take up the study of antiseptic surgery in which Lister so greatly distinguished himself. He gave much time and attention to the study of antiseptics, and his practice was both interesting and successful. Without being a brilliant operator in the surgical wards, and without notable eloquence or variety in manner or diction as professor, and in the absence of that incisive and concise dogmatism which makes many teachers peculiarly acceptable to the average student, Mr. Marshall possessed the solid qualities of thoughtful research and far-seeing generalisation which were highly valued by those who are best able to appreciate the qualities of teaching.

Elected to the Council of the College of Surgeons, an office to which he was twice re-elected, his services lasted for a period of thirty years. Mr. Marshall began early to display qualities of mind which raised him to the highest position in the administrative councils of the metropolitan corporations. He became successively President of the College, and its representative on the General Medical Council. His thorough mastery of the finance of the College, his steady application to all the details of its business administration, and the deep interest which he took in the question of education, gave him steadily increasing influence. He took a very earnest part in the negotiations, which ended in bringing about the conjunction of the College of Surgeons and the College of Physicians in a common Examining Board. In this work he encountered considerable difficulties among his own colleagues, but he succeeded in inspiring them with his own strong conviction that such joint action was exceedingly desirable, if not unavoidable, and there can be no doubt of the beneficial result of the labours of himself and others in this direction. One of the chief innovations which Mr. Marshall introduced was the examination at the end of the first year of student life in anatomy and physiology. This practice, which was at first only a recommendation, subsequently became part of the official procedure of the College, and was adopted by the General Medical Council. One good effect of the reduction of the finance of the College into order was, that he was subsequently able to advise and carry the reduction of the diploma fee for the Membership from £21 to 15 guineas.

In the General Medical Council, Mr. Marshall's efforts to advocate, carry, and afterwards defend the conjoint scheme

against strong opposition were effective and of good service to the whole profession. He was elected President on the retirement of Sir Henry Acland. His election is an event so recent that most of his acts since then are well within the memory of all our readers. One of his colleages on the Council writes to us on the subject as follows:—

In the General Medical Council Mr. Marshall was the representative of the Royal College of Surgeons of England. It was, however, always noticeable that, while he ever had at heart the interests of the body which he represented, these were always subordinated to his duty as a member of the Council. In this he set a most admirable example. The ancient "battle of the schools" is a thing of past history. The members of the Council of to-day are proud to regard themselves, not as the mere servants of the universities or corporations which elect them—sent up solely to further the ambitious ends of these bodies—but as men representing the interests of the whole profession, desirous of keeping medical education up to its highest pitch and anxious to preserve the roll of our profession unsullied by the names of unscrupulous adventurers and quacks. To this higher tone of feeling Mr. Marshall's conduct in no slight degree contributed. His colleagues, aware of his excellent business capacity, entrusted to him the management of the daily work of each session—a duty requiring not only method, but tact and discretion. In all that he did he displayed these qualities so markedly that, on the resignation of the Presidency by Sir Henry Acland, it was felt that Mr. Marshall was pre-eminently fitted to succeed him. How well he fulfilled the office of President the profound and sincere grief of his colleagues to-day attests. His work was a pleasure to him. To the youngest member of the Council as to the oldest he was equally courteous and pleasant. It was noticeable that, although during the past two years his voice had greatly failed him, when he spoke there was at once a general and respectful silence. To everyone he gave a fair hearing, and but rarely exercised his presidential powers except in the way of regulating and directing the course of debate. He was no fussy chairman, but a quiet and dignified leader. In the case of the trial of offenders the Council exercises the remarkable power of acting at once as prosecutor, jury, and judge, and from their sentence there is no appeal. The head of such a tribunal must, therefore, be a man of the utmost fairness, and in this respect no more straightforward man could have been found than its late President, while his innate kindness of heart always revolted at the idea of anything approaching undue severity. In the introductory address, which it was his duty to deliver at the opening of each session, he made no attempt at producing an oratorical effusion. He made it a programme of business, and explained in it lucidly what the Council had to do and how best they could do it. To the Council his loss is indeed a serious one, for each member must feel that he has lost, not merely a noble-hearted and honourable chief, but a lovable friend and colleague.

Dr. Samuel Wilks has sent us the following note: As President of the General Medical Council Mr. Marshall always impressed me by his remarkable judicial and administrative powers, so that he made a model chairman. Whatever he said he expressed in a few words, always to the purpose, much in contrast too often with some of the discursive eloquence heard around the table. He was courteous, and at the same time firm, if anyone overstepped the rules of debate. In any difficult question coming before the meeting his wise counsel always turned out to be right, and in those intricate and painful cases where the Council had to sit in judgment upon some accused member of the profession, he would place the case clearly and fairly before the meeting, and if he had to pronounce sentence of guilty he would do so in a few weighty words. In business matters, as an administrator, he was also remarkable, it having often been observed that few men could conduct a business transaction with the same precision and accuracy as Mr. Marshall. It is known that Mr. Marshall was much interested in the formation of a teaching university for London. He was appointed Chairman of the Executive Committee, and in this capacity he worked out a scheme which he made in a remarkable manner accord with the best interests of all the learned professions.

Among the other public services of Mr. Marshall, it deserves to be remembered that he took an active part in tracing out the history of the water-carriage of cholera in connection with the Broad Street pump, a work which laid the basis of a large part of our present knowledge of the spread of enteric disease, and one which has been fruitful in life-saving results throughout the world. He was a member also of the original committee of the society for establishing baths and washhouses at the West End of London. The action of this society led eventually to the formation of parochial baths and washhouses throughout the metropolis.

There is reason to believe that had Mr. Marshall survived somewhat longer, it was in contemplation to offer him a distinguished mark of honour from the Crown. Cut off as he has been in the full activity of his able and useful life, he leaves behind a large body of attached friends and no enemies. His public spirit, his devotion to high professional interests, his love of science, his irreproachable conduct in the affairs of life, his innate gentleness and courtesy, his refined artistic tastes marked him out as no common man. He enjoyed much of the result of his work in the esteem and confidence of his profession, and in the large circle of artistic, literary, and scientific friends and patients to whom his friendship was dear, and whose society made his life the richer and the happier.

EDWARD BELLAMY, F.R.C.S.,

Senior Surgeon to Charing Cross Hospital.

THE premature death of Mr. Bellamy, of Charing Cross Hospital, at the age of 48, is to be added to the painful list of losses which the medical profession has suffered, owing doubtless to the severe weather with which 1890 has ended, and which has continued during the present month. Mr. Bellamy was born at Blandford St. Mary's, Dorsetshire, of which parish his father was rector. He was educated at the Clapham Grammar School under the Rev. Dr. Pritchard, F.R.C.S., Savilian Professor of Astronomy at Oxford, and subsequently at King's College, London, where he developed a great taste for music and the arts, as well as for scientific study. He became assistant demonstrator to the late Professor Partridge at King's College Hospital, and in 1863 took the diploma of M.R.C.S., becoming F.R.C.S. in 1867. He was surgical registrar at King's College Hospital; and was subsequently appointed demonstrator of anatomy at the Charing Cross Hospital, where his teaching was very successful. Later he became assistant surgeon and teacher of operative surgery, and in due time surgeon to the hospital; and in June, 1888, was appointed to the Chair of Surgery. In 1880 Mr. Bellamy was elected a Fellow of King's College, a distinction which he highly appreciated. His artistic capacities marked him out as following in the path of Mr. Marshall, whose decease at a much more advanced age we have the pain of simultaneously recording; and, like Mr. Marshall, he became Professor of Artistic Anatomy and Examiner in the Art Schools at South Kensington. His practical skill as an artist was well shown in the *Students' Guide to Surgical Anatomy*, almost all the illustrations of which were drawn on the wood by himself from Nature. His most important contribution to anatomical study, in addition to this book, was his translation of *Braune's Topographical Anatomy*, a subject to which he attached great importance, and which he taught effectively in his classes. Among his chief contributions to surgical knowledge is a paper on the Removal of a Tumour from the Roots of the Brachial Plexus, which he contributed to the *Medico-Chirurgical Transactions*, in conjunction with Dr. Mitchell Bruce; the articles on Diseases and Injuries of the Nose, and on General and Special Anatomy, contributed to *Quain's Dictionary of Medicine*; and the articles Axilla, Axillary Artery, Shoulder and Scapula, furnished to *Heath's Dictionary of Practical Surgery*.

Mr. Bellamy was an ardent surgeon, modelling his style of operating after his master, the late Sir William Ferguson. He was devoted to his art, and never was happier than when dealing with cases demanding the resource and presence of mind of a skilful operator. Tall in stature and robust in frame, he was given to athletic pursuits, in which he excelled in younger life. His love of art and his tastes as a collector brought him into frequent contact with professional artists. He was a member of more than one art club, and these collateral pursuits added greatly to the interests and pleasures of his life. He had lately been elected

as examiner in more than one of the colleges and universities, and, when seized with fatal illness, was entering on a period which promised to be signalised by professional success, and to reward the long years of labour. A warm friend, kind and actively interested in the successive generations of students whom he assisted in training, attached to his profession, and, having attained a sound mastery of the practical details of his surgical work, Mr. Bellamy had reached a position of no small promise, and his premature death can but be regarded as a misfortune not only to his immediate friends and family, but to many in whose career he was interested, and who may reasonably have looked to him for further instruction and help.

Mr. Bellamy had an attack of pneumonia about six years ago. He had been a little overworked of late; on January 2nd he was again attacked by pneumonia, and died on Sunday afternoon from failure of the heart and circulation.

ROBERT GEE, M.D.Heidelberg, M.R.C.P.Lond., etc., J.P., Liverpool.

We regret to record the death of one of the oldest and most respected practitioners in Liverpool, Dr. Gee, who expired on New Year's Day somewhat suddenly, after an illness of a few hours' duration.

The deceased gentleman obtained his first qualification, M.R.C.S.Eng., in 1841, so that at the time of his death he was in his Jubilee year of professional life. He was a native of Denbigh, and studied in various schools, chiefly in Germany; he settled in Liverpool about forty years ago, and soon afterwards was appointed to the medical staff of the workhouse. He distinguished himself by his energy and skill in dealing with the terrible outbreaks of cholera and fever which occurred in former years, and gained a high reputation as an authority on fever. He speedily built up a large and lucrative practice. He was the prime mover in the establishment of the fever hospital in Netherfield Road, and was officially connected with it for many years. Some years ago he filled the presidential chair of the Medical Institution.

Besides his professional duties, Dr. Gee took a share in the religious, philanthropic, and political life of the city. He loved to gather at his table men who had attained to eminence, especially those who were distinguished in theology and literature; as a magistrate he was painstaking in discharging his duties, and was one of a small committee engaged in the inspection of theatres and other places of amusement.

He was in his 72nd year, and leaves a widow, but no children. Sympathetic references were made to the deceased by the magistrates presiding on the Bench when his death became known.

MEDICAL NEWS.

Presentation.- On Wednesday, January 7th, Mr. E. Claude Kingsford, L.R.C.P.Lond., M.R.C.S., Senior House Surgeon, Bolton Infirmary, was presented by the resident officers and nursing staff with a handsome gold watch, suitably inscribed, as a mark of their esteem and regret at his resignation after three years, and of gratitude for his kindness.

Assisted Research in Russia.—The recently opened Pathological Institute in the University of Moscow has already received 10,000 roubles from the heirs of the late Dr. Kunin, 5,000 roubles from Baron L. Knoop, and 2,000 roubles from Messrs. Junker and Co., bankers, for the improvement of its scientific equipment.

Medico-Psychological Association.—The following were successful at the examination for the certificate in psychological medicine held at Bethlem Hospital on December 18th, 1890:—Frederick W. Pilkington, L.R.C.P., M.R.C.S.; Robert Hitchings, L.R.C.P., M.R.C.S.; James G. Soutar, M.B., C.M.; Jane B. Henderson, L.R.C.P., L.R.C.S.; Robert S. Black, M.A., M.B., C.M.; John A. Hicks, jun., L.R.C.P., M.R.C.S.

New Lunatic Asylum at Florence.—A new lunatic asylum was recently opened at Florence. It is built in separate blocks, the intervening spaces being laid out as gardens. The asylum, which measures 480 mètres in length, and stands on an area of 39 hectares, has accommodation for 600 patients. The director is Dr. Pietro Grilli, the general superintendent being the well known alienist Professor Augusto Tamburini, who will give instruction in mental diseases in the wards.

Scientific Congresses in Russia.—The International Congress of Anthropology and Prehistoric Archæology will hold its eleventh meeting at Moscow on August 13th to 20th, 1892. The labour of organisation has been undertaken by M. Bogdanow, rector of the University of Moscow; and M. Koehler has promised to contribute 5,000 roubles towards the expenses. Immediately after the Anthropological Congress, a Congress of Zoology will be held; it will begin on August 22nd, and will last a week. There will be a special ethnographic, anthropological, and zoological exhibition in connection with both Congresses.

Society for the Study of Inebriety.—A meeting was held on January 6th in the rooms of the Medical Society of London, the President (Dr. Norman Kerr) in the chair. Dr. Crespi (Wimborne) said that though he at one time regarded drunkenness as a purely moral vice, he was now satisfied that confirmed intemperance was a disease. It was imperative that there should be changes in the law to empower any relative to obtain a compulsory order to seclude the inebriate in a home for special treatment. There should also be provision for the poor in institutions conducted by County Courts and paid for out of the rates. Dr. T. L. Wright (Bellefontaine, Ohio), in an elaborate paper, discussed the nature and relations of alcoholic intoxication.

The "Hygienische Rundschau."—The first number of this new journal, the forthcoming appearance we announced some time ago, is now before us. From a perusal of its contents, we think it will be welcomed by all who are interested in practical hygiene and bacteriology. Although each number will contain at least one original article, the chief object of the editors (Drs. Carl Fraenkel and E. von Esmarch) is to give excerpts and reviews of all current literature on hygiene, bacteriology, and especially pathological mycology. The leading article in the present number is from the pen of Dr. von Esmarch on the subject of Disinfection. All English workers in the field of hygiene are invited to send reprints of their communications to either of the editors.

The late Professor Coccius.—Dr. Ernst Adolf Coccius, Professor of Ophthalmology in the University of Leipzig, died recently of apoplexy. He was born in 1825, and was appointed Professor in 1857. His work on the Use of the Ophthalmoscope, published in 1853, contained original observations on the pulsation of the arteria centralis retinæ, the macula lutea, etc. Among other publications of his were "The Mechanism of Accommodation in the Human Eye" (1868); "Ophthalmometry and the Measurement of Tension in the Diseased Eye" (1872); "The Recognition of Visual Purple during Life" (1877), and several others, all bearing the marks of careful observation and original thought.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Fr. Wieger, Emeritus Professor of Dermatology and Syphilology in the University of Strassburg; Dr. Santiago López de Argüëta, Professor of Medical Pathology in, and Rector of, the University of Granada, Spain; Dr. T. S. Warncke, Professor of Pharmacology in the University of Copenhagen; Dr. F. Coppola, Professor of Materia Medica and Experimental Pharmacology in the Superior School of Medicine at Florence; Dr. Richard J. Levis, of Philadelphia, for many years surgeon to the Pennsylvania Hospital and to the Jefferson College Hospital, and formerly President of the Philadelphia County Medical Society; Dr. Proctor Thayer, for more than a generation Professor of Anatomy and Surgery in the Cleveland Medical College; Dr. Rampal, Professor of Anatomy in the Medical School of Marseilles; Dr. C. E. Louis Mayer, *Privat-docent* at Berlin, son of the well-known gynæcologist, Professor K. W. Mayer, and himself a distinguished worker in the same field; and Dr. Diaz Benito, of Madrid, author of treatises on Midwifery, Syphilitic Disease (with atlas), etc., and a prominent advocate of sanitary reform in Spain.

PROFESSIONAL TITLES IN ITALY.—The Prefect of the Province of Milan recently sent a circular to the mayors of all places within his jurisdiction instructing them to set the legal machinery provided for that purpose in motion against all and sundry who shall dub themselves "Doctor" or "Professor" without possessing any valid claim to these titles. The Prefect points out that the usurpation of academic degrees and professional titles is more frequent, as well as more serious in its possible consequences, in the medical profession than in others. According to him, it is quite a common thing for practitioners of "minor surgery" (*bassa chirurgia*), and even "dentists," to call themselves "Dr.," "Professor," etc. The only persons who have a legal right to these learned prefixes are, as the Prefect says, those who have obtained the degree of Doctor from a University, or have had the title of Professor conferred on them by the Minister of Public Instruction.

MEDICAL VACANCIES.

The following Vacancies are announced:

BISHOP'S STORTFORD UNION.—Medical Officer to the Union Workhouse. Salary, £85 per annum, and fees. Applications endorsed "Medical Officer's Appointment" to Henry Baker, Clerk to the Guardians, Bishop's Stortford, by January 10th.

BISHOP'S STORTFORD UNION.—Medical Officer and Public Vaccinator for Hallingbury District. Salary, £57 10s. per annum, and fees. Applications endorsed "Medical Officer's Appointment" to Henry Baker, Clerk to the Guardians, Bishop's Stortford, by January 10th.

BODMIN URBAN SANITARY AUTHORITY.—Medical Officer of Health for the District. Salary, £20 per annum. Applications to Robert P. Edyvean, Clerk. Election on January 13th.

CARLISLE DISPENSARY.—House-Surgeon. Salary, £130 per annum, with apartments. Applications to the Honorary Secretary, Mr. J. Ostell, 14, Bank Street, Carlisle, by January 19th. Election on March 1st.

CITY ASYLUM, Birmingham.—Clinical Assistant. Board, lodging, and washing. No salary. Applications to E. B. Whitcombe, Medical Superintendent.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant. Salary, £50 for first year, and, if reappointed, £70 for second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by February 28th.

COUNTIES OF BANFF, ELGIN, AND NAIRN.—Medical Officer; must devote his whole time and not engage in private practice; must reside within one of the three counties. Salary, £300 per annum, with £50 travelling expenses. Applications to be sent to each of the following: John Allan, County Clerk, Banff; Alex. Cameron, County Clerk, Elgin; and H. T. Donaldson, County Clerk, Nairn, by January 16th.

COUNTIES OF STIRLING AND DUMBARTON.—Medical Officer; must reside in Glasgow, and not hold any other appointment or engage in private practice or employment. Salary, £500 per annum, with necessary travelling expenses. Applications to be with Patrick Welsh, County Clerk, Stirling, and also W. Babtie, County Clerk, Dumbarton, by January 14th.

COUNTY COUNCIL OF AYRSHIRE.—County Medical Officer; must not hold other appointments or engage in private practice, and must reside in Ayr. Salary, £150 per annum. Applications to Chas. G. Shaw, County Clerk, County Buildings, Ayr, by February 2nd.

COUNTY OF DUMFRIES.—Medical Officer. Salary, £300 per annum. Applications to John Robson, County Clerk, Dumfries, by February 2nd, of whom further information can be obtained.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon. Must be qualified and conversant with the Welsh language. Salary, to commence £85 per annum, with board, residence and washing in the house. Applications to W. Vaughan Jones, Secretary.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Five additional Surgeons. Applications to J. Francis Pink, Secretary, by January 20th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon; no salary, but board and lodging provided. Applications to Samuel Whitford, Secretary, by January 15th.

GERMAN HOSPITAL, Dalston.—Honorary Assistant Physician. Must be a native of Germany, or must be fully acquainted with the German language and the peculiarities of the German medical science; must hold diploma of foreign or British University, be Member of the College of Physicians, and fully qualified to practise in Great Britain. Applications to A. Walbaum, D.D., Secretary, by January 20th, 1891.

HAMBLEDON UNION, Surrey.—District Medical Officer and Public Vaccinator for the Witley District. Salary, £60 per annum, with extra fees. Applications to Ferdinand Smallpeice, Clerk's Office, 138, High Street, Guildford, by January 20th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physicians. Applications to the Secretary, Henry Dobbin, by January 14th.

KENT AND CANTERBURY HOSPITAL, Canterbury.—Assistant House-Surgeon and Dispenser. Must reside in the house and be unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications to Charles S. Read, Secretary, by January 24th.

LANCASHIRE COUNTY ASYLUM, Rainhill, near Liverpool.—Pathological Assistant Medical Officer. Salary, £200 per annum, with furnished apartments, board, attendance, and washing. Applications to the Medical Superintendent.

LONDON HOSPITAL MEDICAL COLLEGE, Turner Street, Mile End, E.—Assistant Demonstrator of Anatomy. Salary, £80 per annum. Applications to Munro Scott, Warden, by January 10th.

NORFOLK AND NORWICH HOSPITAL, Norwich.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing; unmarried, and not more than 35 years of age. Applications to Howard J. Collins, Secretary, by January 12th.

PARISH OF EDAY, Orkney.—Medical Officer for the Parish. Salary, £55 and free house and garden. Applications to Inspector of Poor, Eday, Kirkwall, Orkney.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Medical Jurisprudence. Annual fee, £30. Applications to the Secretary of the University Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by January 10th.

MEDICAL APPOINTMENTS.

ANNESLEY, F. J. St. John, M.B., M.Ch., B.A.O.R.U. of Ireland, appointed Assistant Medical Officer to the Eccles and District Medical Association, *vice* Dr. Hewlett.

CLEMENTS, Herbert, L.R.C.P., L.R.C.S.Edin., appointed Junior Assistant Medical Officer to the Staffordshire County Asylum.

CRESSY, George John, L.R.C.P., L.R.C.S.I., appointed Medical Officer of Health for the Warsop Urban Sanitary District of the Mansfield Union, *vice* Mr. C. G. Stein, resigned.

CUNNINGHAM, John, M.B., C.M.Glas., appointed Medical Officer for the Royal Burgh of Sanquhar, Dumfriesshire, N.B.

DAVIS, D. L., M.B.Glas., L.R.C.S.Edin., appointed Medical Officer for the First Central District and the Workhouse of the Neath Union.

DRAKE, Thomas George, L.R.C.P., L.R.C.S.I., appointed Medical Officer of Health to the Thornton Urban Sanitary District of the North Brierley Union, *vice* Mr. E. E. Rawson, deceased.

EAST, Charles Harry, M.D.Durh., M.R.C.S.Eng., appointed Medical Officer for the Kent Church District, *vice* Mr. W. A. Walker, resigned.

FRYER, George Ernest, L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Medical Officer to the Monsall Fever Hospital, Manchester, *vice* Mr. J. P. Williams.

GABRIEL, A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Borough of Dunolly, Victoria, *vice* Dr. Manson, resigned.

GODFREY, Graham Philip, L.R.C.P., L.R.C.S., L.M.Edin., appointed House-Surgeon to the Mansfield and Mansfield Woodhouse Hospital.

GODFREY, Thomas, M.R.C.S.Eng., L.S.A., appointed Consulting Surgeon to the Mansfield and Mansfield Woodhouse Hospital.

GORDON, Thomas Elisha, M.D.Durh., M.R.C.S.Eng., appointed Medical Officer for the Fifth District of the Stroud Union.

GOSSAGE, Alfred M., B.A.Oxon., M.R.C.S., L.R.C.P., appointed Resident Obstetric Assistant to the Westminster Hospital.

GRIPPER, Walter, M.D., appointed Medical Officer to the Female Orphan Asylum, Beddington, *vice* Dr. C. P. Tomkins.

JAMES, G. B., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Westminster Hospital.

KAUFFMANN, Otto Jackson, M.D.Lond., M.R.C.S.Eng., appointed Resident Medical Officer to the Royal Infirmary, Manchester, *vice* Mr. E. S. Reynolds.

MCLACHLAN, Samuel F., M.B., C.M.Glas., reappointed Medical Officer of Health of the Longtown Rural District of the Longtown Union.

MARTYN, Mr., appointed House-Surgeon to the Devon and Exeter Hospital, *vice* Mr. Russell Coombe, resigned.

MILLER, Theodore, M.D.Lond., M.R.C.S.Eng., appointed Assistant Medical Superintendent to the Infirmary, East Dulwich Grove.

MORRISON, James Thomas Jackman, M.A.Cantab., F.R.C.S.Eng., appointed Assistant-Surgeon to the Royal Orthopædic and Spinal Hospital, Birmingham.

O'CONOR, John, M.A., M.D., B.Ch.Dub.Univ., appointed Resident Medical Officer to the British Hospital, Buenos Ayres, *vice* Dr. Hugh Jamieson, resigned.

ODELL, Robert, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Second and Third Districts of the Hertford Union.

O'DWYER, J. J., L.K.Q.C.P.I., L.R.C.S.I., appointed Government Medical Officer and Vaccinator for the District of Gundagai, New South Wales.

PARRY, Thomas Sharp, M.B., B.S.Lond., M.R.C.S.Eng., appointed Surgeon to the Court "Sellars," Ancient Order of Foresters, Great Saughall.

PEARCE, Arthur, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health for the Salcombe Urban District of the Kingsbridge Union.

RENNEY, Henry, M.D., B.S.Durh., appointed District Medical Officer of the Sunderland Union.

SAUNDERS, Frederick H., M.B., C.M.Aberd., appointed Medical Officer for the Ripley District of the Knaresborough Union.

SHARMAN, Eric H., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Westminster Hospital.

SPENCER, Walter, L.R.C.P., L.R.C.S., appointed Medical Officer of Health for the Borough of East Retford, *vice* William Pritchard, M.D., resigned.

THOMSON, William Arnold Urquhart, F.R.C.S.I., L.R.C.P.I., appointed Medical Officer for the Henley and Bray Districts of the Cookham Union.

TREVITHICK, M. A., M.B., B.C.Cantab., M.R.C.S.Eng., appointed Junior Resident Medical Officer to the Royal Free Hospital, Gray's Inn Road, *vice* A. Gale.

TURNER, Frederick, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Buxton Local Board.

WALKER, Benjamin, M.D.Durh., M.R.C.S.Eng., appointed Medical Officer for the Ravenstonedale District of the Cockermouth Union.

WARREN, William, L.R.C.S.I., appointed Medical Officer for the Borough of Kew, Victoria, *vice* Dr. Walsh, resigned.

WILLIAMS, Lewis, M.B.Lond., M.R.C.S., L.R.C.P., appointed House-Physician to University College Hospital.

WILLIAMS, A. Winkelried, M.B., C.M., appointed Pathologist to the St. John's Hospital for Diseases of the Skin, Leicester Square.

WOODHAMS, John Amos, M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Rye Urban Sanitary District of the Rye Union, *vice* Mr. A. E. Vidler.

YEOMAN, Stanley, B.A., M.B., B.C.Cantab., M.R.C.S.Eng., appointed House-Surgeon to the Morpeth Dispensary, *vice* Dr. Webster.

YOUNG, Mr. W. J., reappointed Analyst to the Whitechapel District Board.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. William Duncan: On Chronic Disease of the Uterine Appendages, with short notes of thirty consecutive cases treated by abdominal section. Mr. Alban Doran: On the Treatment of Chronic Disease of the Uterine Appendages.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 8 P.M.—The Annual General Meeting. Business: Election of Officers. Casual communications by Messrs. S. J. Hutchinson, C. Robbins, C. F. Rilot, W. H. Woodruff, F. J. Colyer, J. T. Browne Mason, Storer Bennett and others. Valedictory Address by President.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: On External Examination of the Eye. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. W. R. H. Stewart: On the Examination of Ear Cases.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On Hypochondriasis and Melancholia. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On Diseases of the Skin, Syphilis, and other Subjects.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Mr. R. C. Lucas: On a case of Nephrolithotomy (following Nephrectomy) for total suppression of urine lasting five days; complete recovery and good health five years after the operation. Mr. R. J. Godlee: Removal of large Calculi, first from one kidney and afterwards from the other; death from hæmorrhage after the second operation.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Mitchell Bruce: On the Treatment of Cough. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: On Glaucoma.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 8 P.M.—Sir W. Moore: Is Colonisation in Central Africa by Europeans possible?

HUNTERIAN SOCIETY, 8 P.M.—Mr. Symonds: On Three Cases of Hydronephrosis and their treatment. Dr. E. G. Gilbert: Some Remarks on Colds. Dr. G. N. Pitt: Tubercular Lesions in Alcoholics.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Howard Tooth: On the Anatomy of the Spinal Cord. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Voelcker: Demonstration of Pathological Specimens. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Law: On the Examination of the Throat and Nose.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Mitchell Bruce: On the Treatment of Hæmoptysis.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M. Dr. Percy Smith; Clinical Demonstrations. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On Erythema and Allied Affections.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

MARRIAGE.

FOX—HAY-NEWTON.—On January 1st, at St. Barnabas, Pimlico, by the Rev. Alfred Fox, brother of the bridegroom, Thomas Colcott Fox, B.A.Cantab., M.B.Lond., M.R.C.P., of 14, Harley Street, to Ida Mary, youngest daughter of the late I. S. Hay-Newton, Esq., of Newton Hall, Haddington, N.B.

DEATH.

STRANGE.—January 5th, at Worcester, very suddenly, William Strange, M.D., aged 76 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9. Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. Wed. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30.; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance*—Medical, daily, exc. S., 2; Surgical, daily, 1.30, and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.* Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat Tu., 9; Skin, Tu., 4. Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1. S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women) S., 9,

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30 Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic, F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45 o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electrotherapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9,

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, except W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, except S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4. F., 2; (Gynæcological) Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30. *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30. *Operation Days.*—W. Th., 1.30; S. 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu., F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

SENEX would be much obliged if any kind correspondents would inform him if he could practise in Italy on the licences of the Royal College of Surgeons and Physicians, Ireland; and, if not, what is requisite?

ANSWERS.

TEXTBOOKS ON MENTAL DISEASE FOR GENERAL PRACTITIONERS.

H. M.—Dr. Savage's work on *Insanity*, published by Cassell; or, *A Textbook on Mental Disease*, by Dr. Bevan Lewis, published by Charles Griffin and Co., London.

M.D. BRUSSELS.

DR. J. G. BLACKMAN (Portsmouth) writes: In reply to "Edina," I would advise the following works for the degree of M.D. Brussels:—Medicine: Bristowe or Money. Surgery: Erichsen or Walsham. Midwifery: Playfair. Medical Jurisprudence: Husband or Abercrombie. Hygiene (Public): Louis Parkes. Hygiene (Private): The article in *Quain's Dictionary*. Pathology: Green and Woodhead. Mental Diseases: Savage. Therapeutics and Pharmaco-Dynamics: Brunton or Mitchell Bruce. Surgical Operations: Smith and Walsham. Surgical Anatomy: Gray and McLachlan.

This list is intended to afford some idea of the scope of the examination; but, if "Edina" is not fresh from hospital, he would do well to revisit the wards and dissecting rooms as opportunity offers, and also avail himself of some practical experience in operations on the cadaver.

NOTES, LETTERS, Etc.

WE are requested to state that in the report of the case of chronic tuberculous peritonitis reported last week the actual abdominal section was done by Mr. Spanton.

A PATERNAL LEGISLATURE.

ACCORDING to the *Boston Medical and Surgical Journal*, a Bill has been introduced into the Georgia Legislature to prohibit physicians and drug clerks, who are addicted to the use of whisky or opium, from practising their profession. For the first conviction of drunkenness a fine of 200 dollars would be imposed, and, for the second, the licence to practise is revoked. The proposal is a serious reflection on the profession of Georgia, but we should desire to know whether its provisions might not, with equal justice, be extended *mutatis mutandis* to include legislators?

ERRATA.

OWING to an accidental omission, certain corrections were not made in the proofs of Dr. MacMunn's address "On Some of the Applications of the Spectroscope to Medicine," in the BRITISH MEDICAL JOURNAL of January 3rd.

Page 4.—For "Fraenhofer" read Fraunhofer, and, fourth line from bottom of second column, for "when" read where.

Page 5.—For "Purpuric sulphuric" read purpurin-sulphuric.

Page 6.—Thirty-fifth line from top of first column, for "alkalin" read alkalies. In second column, for "sulphur" read sulphide; for "bromein" read bromine; for "alkalin" read alkalies; for "Hce" read HCl.

Page 7.—For "disruption" read disruptive; line 51 from top of first column, for "their" read these; line 24 of second column, for "then read there; for "reductive" read reduction; for "shred" read study.

Page 8.—For "oxyhæmatin" read myohæmatin; for "Gruelin" read Gmelin; for "cholitilin" read choletelin; for "connected with" read converted into; in second column, for "experiment" read experiments; for "chlorohæmatin" read cholohæmatin; for "chloromethæmoglobin" read cholomethæmoglobin; line 33, for "sulphides' read sulphide; for "absorptive" read absorption.

Page 9.—For "solution" read solutions; for "found" read formed; for "urobolin" read urobilin; for "lipoderms" read lipochromes.

IN Dr. Churton's remarks at the Leeds Medico-Chirurgical Society on the BRITISH MEDICAL JOURNAL of January 3rd, page 17, col. 1, line 20 from the bottom, for "legs" read "lungs."

FLOODS AT CARLSBAD.

THERE is great distress in Carlsbad owing to overwhelming floods due to the sudden rise of the River Tepl. A large number of the poor people have lost everything. The loss is said to amount to £150,000. A public appeal for help has been made, which concludes thus: "Regarding the fact that thousands and thousands are grateful to Carlsbad for the restoration of their health, the Town Council hope that these will will kindly testify their kindly remembrance of Carlsbad by favourably considering the request for subscriptions, which will only be used for parties bereft of the means of existence." It adds also: "The mineral springs are quite in order, and the colonnades have not been damaged. All measures have been taken for the cleaning of the inundated localities, and by continual work the damage will be restored, so that before next season every trace of the inundation will be effaced."

MEDICAL WRITERS OF FICTION.

ONE of our correspondents informs us that *Doctor Middleton's Daughter*, and *A Desperate Character*, both by an author with the *nom de plume* of W. Thomson-Gregg, are really the work of a medical man practising in London. In closing this list of "Medical Novelists and Medical Characters in Fiction," we hope that it will have induced some members of our profession at least to take their pens and try if they cannot produce something better than the tons of trashy novels issued by Mudie to his subscribers, written for the most part by young women who have had no experience of life nor practice in literary composition.

SIMPLE MEANS FOR EXTRACTING FISHHOOKS.

SURGEON-MAJOR THOMAS W. S. LOCKE (Bury St. Edmunds) writes: My thanks are due to Dr. Neale for pointing out that, "according to the *Medical Digest*, it is to Dr. Downie that the credit of the plan described by me for the extraction of fishhooks is due," although, in justice to myself, I wish to state that the idea was not taken from that or any other source, but simply occurred to me when extracting the hook.

In reply to Mr. A. H. Bampton's remark as to using a file to extract a fishhook, allow me to inform him if he obtains a pair of American togele side-cutting pliers, he will find, by using them, a much more judicious and quicker mode than the slower process of filing. This instrument can be obtained at any ironmonger's and will, with the greatest of ease, cut through any size fishhook.

"SUPPORTING" THE PERINEUM.

DR. C. R. ILLINGWORTH, M.D., M.R.C.S. (Accrington) writes: Inasmuch as the danger begins as the head begins to emerge from the ostium, and is the cause of rupture, the best plan is to manipulate it alone by causing flexion to persist. Thus only is the narrow cervico-bregmatic diameter made the limit of perineal dilatation, instead of the destructive occipito-mental.

Dr. Cotton says his plan "aims at directing the head forwards." I maintain that the accoucheur should aim at pulling it backwards, because the pubic arch, by its rigid obstruction, is acting like Poupart's ligament in a femoral hernia, with the head to precipitate extension and engage the longest diameter in the dilating perineum. To prevent this, pull back the occiput with the fingers of the right hand, and press up the bregma with the thumb. Extension of the head is thus prevented entirely, and the occipito-mental or "tearing diameter" never engages the perineum at all.

"THE DECIMAL SYSTEM."

DR. W. W. HARDWICKE (Dovercourt) writes, with reference to a note by Dr. Lattey in the BRITISH MEDICAL JOURNAL of December 20th, that we, of all the nations of Europe (with few and unimportant exceptions), stand alone in this respect. Jogging along year after year with our wretched complicated money relationship of 20, 12, and 4, and with a system of weights and measures made up of multitudinous denominations extraordinary, side by side with which our profession has now virtually adopted also the metric system. Can confusion be worse confounded?

The Decimal Association does not commit itself to any one particular system, its objects being simply "decimal;" but I believe the scheme which receives most favour, and which I have advocated myself for some years, is for weights and measures, the metric system, and for currency, the pound sterling retained as the standard: the tenth (the florin) being taken as the actual unit or integer, being subdivided into 100 instead of, as at present, into 96 farthings. Two decimal places only are thus required for the fraction, whilst pounds in any sum can be at once recognised by inspection, and without any arithmetical calculation. The plan is described in detail by myself in a paper which will shortly be published in the Chambers of Commerce journal.

I need not remind your readers that those members of the profession who take an interest in the subject, and care to master it, can do a great deal towards disseminating a knowledge of the decimal system amongst the outside public.

COLD BATHS.

DR. W. GORDON STABLES, R.N., writes: In a matter of this kind an ounce of experience is better than a pound of theory. Here is mine: I am in my 52nd year, height, 5 feet 9 inches; weight, 11 stone 2 lbs. or 4 lbs., seldom varying. Spare but hard. A Scotchman. General health fair, considering that I work (literary) from 9 A.M. till 9 P.M. for seven months of the year—namely, from October till May. The only rest is a diurnal siesta from 3 P.M. till 4.30 P.M. Summer months spent on the road in my private caravan. Have shaved myself every morning for

seventeen years, which is equivalent to saying I have not, during that time, been very seriously ill. Cold bath every morning, often having to break the ice with a frozen sponge. The addition of hot water, which I tried once—and only once—for experiment, made me shiver for hours after my tub.

What the writer of your paragraph is wrong in is about "the glow." How very old-fashioned! A healthy perpetual bather has a gentle happy reaction, but no glow. I may have been cold in bed, but the ice tub banishes that feeling. A lusty full-blooded man may have a glow. I have come out of the sea in winter—ice on the sea on Aberdeen beach—with such men, and they were not only red, but almost blue, in the skin.

I may add that I am a breakfast eater, getting well through the solids before feeling around for tea or coffee. Much as I enjoy breakfast, I would rather go without it than want my cold tub. Rather than want a cold bath of some kind, were water impossible to find, I would use snow. This is not enthusiasm but common sense. It has always seemed strange to me that medical men, who know nothing from personal experience about constant tubbing any more than an Eskimo does, should attempt to lecture medical men who do know. *Ita vita est.*

Neale's Digest on Foreign Service.

Dr. Robert Batho, Hon. Brigade-Surgeon, Retired List (Jersey), writes: I have been glad to note the letters which have appeared in the medical press reminding the profession that Dr. Neale intends publishing a new edition of the *Medical Digest*, provided a certain number of subscribers communicate with him at once. Individually, I have owned the former issue for many years, and have used the ample margins for corrections up to date. It has constantly been of service to me, and often a source of amusement. When I have seen what I believed to be a "new-found old invention" ventilated, a reference to the excellent index of the *Digest* has more than once enabled me to prove that memory was not entirely at fault, and to fit the new "face" into a comparatively old "panel."

My apology for trespassing on your space is my belief that the work is but little known to officers in the public services for whose use it seems to be so specially adapted. They are limited to a certain weight of baggage, and hence their library has to be condensed in the same ratio as their wardrobe. I think all on foreign service, who have no copy of the *Digest*, will thank me for the hint, and will never regret the moderate outlay for a work which must have entailed stupendous labour on its compiler.

An American Surgery.

The *Boston Medical and Surgical Journal* states that a daily paper from a town in Illinois says: "There is upon the face of the earth no more pleasant place than the interior of the office of Dr. J. P. Slaughter. It has recently been built, and is located some distance from the main highway, affording the traveller only a bird's-eye view of its gigantic proportions. The style of the architecture is the Moresque of the twelfth century. The interior contains a parlour, vestibule, and druggist's room, in all resembling a Gothic cathedral. The eye of the visitor wanders over this expanse, bewildered by its extent and the impossibility of grasping its vast dimensions. It is surmounted by a graceful dome rising a few feet above the roof, and terminating in a colossal ball, which supports a figure of the doctor standing with outstretched arms, as if extending a welcome to all the world. At the corners are highly-decorated arcades, with promenades looking outward over the surrounding country, and inward over the beautiful gardens, ornamented with fountains and statuary. The druggist's room is open at all hours, and is presided over by Sam Parrish. A flight of blue marble steps leads up to the front entrance from the terrace, at the centre of which is an open kiosque about twelve feet in diameter. At the entrance the visitor passes through a self-registering turnstile."

COMMUNICATIONS, LETTERS, Etc., have been received from:

(**A**) A.M.S.; Dr. Izett Anderson, Kingston, Jamaica; Professor J. Attfield, London; Mr. J. Ackery, London; Mr. H. E. Armstrong, Newcastle-on-Tyne; Mr. S. Alexander, Bulwell; Mr. E. Antrobus, Handsworth; Dr. F. P. Atkinson, Surbiton; A. Aulid-Ali, M.B., Rathmines; R. Arthur, M.B., London. (**B**) Dr. E. Barnes, London; Mr. J. W. Black, Edinburgh; Mr. John Bellamy, London; Mr. A. Bryce, Glasgow; Mr. G. A. Bannatyne, Greenock; Mr. G. H. Biden, Upper Norwood; Dr. H. Barnes, Carlisle; Dr. Fletcher Beach, Dartford; Messrs. Burroughs, Wellcome and Co., London; Mr. G. Balfour, Wimbledon; Dr. W. M. Banks, Bournemouth; Dr. Dudley Buxton, London; Mr. L. Buxton, London. (**C**) Dr. R. F. Cook, Gateshead; Mr. W. H. Clague, Ramsay; Dr. G. F. Crooke, Berlin; Dr. W. J. Collins, London; Dr. T. Churton, Leeds; The Council of the Royal Botanic Society, London; The Crystolite Gold Company, London; Mr. O. G. Currie, Hyderabad; Mr. A. E. Clapperton, Glasgow; J. Cunningham, M.B., Sanquhar; Mr. E. Cayle, Glasgow. (**D**) John Dewar, M.B., Portree; Dr. J. Donelan, London; Dr. A. Duke, Eastbourne; Mr. F. A. Davis, London; Mr. A. Doran, London; Mr. W. W. Dickinson, Cullompton; Mr. James Donnet, Bognor; Mr. E. B. Denton, London; Dr. D. Drummond, Newcastle-on-Tyne; Mr. Arthur Douglas, Handsworth; Mr. F. V. de Denne, London; Dr. Lovell Drage, Hatfield. (**E**) Mr. E. East, London; Mr. H. F. C. Eagle, London; Mr. J. E. Erichsen, London; Mr. G. J. Eady, West Hampstead. (**F**) Dr. C. G. S. Fleming, Bath; Messrs. A. Faber and Co., London. (**G**) Dr. W. R. Gowers, London; Dr. G. V. Gilroy, Kurow, Otago; Mr. A. M. Gossage, London; Mr. J. L. Greene, Alexandria; Mr. C. Gordon, Lichfield; Messrs. C. Griffin and Co., London; Dr. F. W. Grant, Elgin. (**H**) Dr. Stanley Haynes, Malvern; Professor Victor Horsley, London; Messrs. W. B. Hilliard and Sons, Glasgow; Dr. Holman, Reigate; Dr. F. T. Heuston, Dublin; Dr. L. Henry, Melbourne; Dr. J. B. Hicks, London; Dr. G. A. Heron, London; Surgeon-General Hassard, Dublin; Historian. (**I**) Dr. W. Iliffe, Derby; Dr. Illingworth, Accrington. (**J**) Mr. T. Joyce, Golden Ball; Dr. R. K. Johnston, Dublin. (**K**) Mr. F. Kerslake, London; Mr. S. Keays, Devonport; Mr. Knapp, Ross; Dr. Norman Kerr, London. (**L**) Miss Lankester, London; Mr. T. V. Lister, London; Surgeon-Major T. W. S. Locke, Coatham; Mr. H. Lund, Manchester; E. N. Larwent, M.B., Trinidad; Dr. B. T. Lowe, London. (**M**) Mr. J. T. J. Morrison, Birmingham; Dr. H. R. Mosse, Clapham Common; Member; Dr. H. March, Rochdale; Mr. R. Mansel-Jones, Brighton; Dr. Manson, London; Messrs. Mayall and Co., London; Dr. J. W. Moore, Dublin; Dr. W. L. Morgan, Oxford; Mr. J. R. Mackenzie, London; Dr. Mackenzie, Balham; Dr. C. Mansell Moullin, London; Mr. J. Marshall, Coatbridge; Mr. J. G. Miller, London; Dr. G. Hunter Mackenzie, Edinburgh; Messrs. Marshall, London; Dr. C. A. MacMunn, Wolverhampton; Medical Staff. (**N**) Mr. G. R. Norris, Wiveliscombe; Mr. A. P. Nootl, Cork; Dr. R. Neale, London; Mr. F. L. Nicholls, Fulbourn. (**O**) Mr. R. Odell, Hertford. (**P**) Dr. H. H. Phillips, Reading; Dr. T. A. Palm, Wigton; Dr. C. Parsons, Dover; Mr. R. D. Patteson, Caledon; Messrs. J. R. Parkington and Co., London; Mr. J. Poland, London. (**R**) Mr. G. N. Robins, London; Mr. K. Roberts, Bishops Lydeard; Dr. F. Rossett, Hokitika; Surgeon S. J. Rennie, Netley; Messrs. Romeike and Curtice, London; Mr. G. Rice, Derby; Dr. T. Rutherford, Kelso, N.B.; The Registrar of the University of London. (**S**) Surgeon M.S.; Dr. J. Scott, Belfast; Dr. F. Howard Sinclair, Belfast; Mr. J. Stevenson, London; The Secretary of the University of Cambridge; Dr. Steele, London; Mr. R. Simpson, Bristol; Mr. W. Shawe, Bath; Dr. S. Smyth, Bournemouth; Mr. J. Bland Sutton, London; Dr. Shelly, Hertford; Mr. E. J. Steinberg, London; Dr. W. Stewart, London; Dr. J. Lindsay Steven, Glasgow; The Secretary of the West London Medico-Chirurgical Society, London; Surgeon; Mr. Walter Spencer, East Retford; Mr. H. E. Symons, Bournemouth; Dr. Markham Skerritt, Clifton. (**T**) Dr. E. Symes Thompson, London; Miss I. Thorne, London; Mr. B. Thornton, Margate; Sir Henry Thompson, London; Dr. J. C. Thresh, Chelmsford; Mr. G. J. E. Trotter, Ajaccio; Mr. D. E. Thomas, Wickham, Market; Dr. G. D. Thane, London; Dr. G. Thin, London; Mr. E. Thompson, Omagh. (**W**) T. W. Wilson, M.B., Birmingham; Dr. H. Woods, London; Dr. T. Williams, London; Dr. O. Wood, London; Mr. H. S. Walker, Bradford; Mr. E. S. Warburton, Treherbert; Mr. D. H. Wysmuller, London; Dr. S. W. Wheaton, London, etc.

BOOKS, Etc., RECEIVED.

The Student's Atlas of Artistic Anatomy. By Ch. Roth. Edited, with Introduction, by C. E. Fitzgerald, M.D. London: H. Grevel and Co. 1891.

The Haunted Man and the Ghost's Bargain. By Charles Dickens. London: Cassell and Co. 1891.

Year Book of Pharmacy. London: J. and A. Churchill. 1890.

Railway Injuries in their Medico-legal and Clinical Aspects. By Herbert W. Page, M.A. London: Charles Griffin and Co. 1891.

Transactions of the Pathological Society of London. Volume XLI. London: Smith, Elder and Co. 1890.

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AN ADDRESS

ON

CHRONIC DISEASE OF THE UTERINE APPENDAGES,

WITH

A TABLE OF THIRTY CONSECUTIVE CASES TREATED BY ABDOMINAL SECTION.

Read at a Meeting of the Medical Society of London.

By WILLIAM DUNCAN, M.D., F.R.C.S.Eng.,

Obstetric Physician to, and Lecturer on Obstetrics and Gynæcology at, the Middlesex Hospital.

Mr. President and Gentlemen,—When asked by our energetic senior Secretary to read a paper before this Society it occurred to me, after some consideration, that this subject would be a good one, inasmuch as it is of the greatest importance, and one about which—especially with regard to diagnosis and treatment—there is at the present moment much difference of opinion. For convenience of reference I have arranged all the cases in a tabular form (see next page):—

Let us consider, *seriatim*, the different diseases of the uterine appendages included under the title of this paper. It is obviously unnecessary to touch upon large tumours which rise up out of the pelvic cavity, as nowadays almost everyone agrees that their proper treatment is by abdominal section. Such, however, is unfortunately not the case with diseases which give rise either to small pelvic tumours or to none at all, but which often entail intense suffering, which are sometimes overlooked and about the treatment of which there is (unluckily for the sufferer) a great diversity of opinion.

Chronic Salpingitis.

Chronic salpingitis is in the majority of cases due to extension of catarrhal or purulent endometritis; sometimes, however, it is doubtless secondary to a pelvic peritonitis. Each Fallopian tube consists, as is well known, from without inwards of peritoneum, circular and longitudinal muscular fibres, with a mucous membrane which is lined by a layer of columnar ciliated epithelium, and thrown into numerous longitudinal folds or plicæ. Glands have been described as present, but there is a complete absence of them; probably the folded appearance of the mucous membrane led to the error. The changes which take place in the tubes when subject to chronic inflammation are well shown in a drawing taken from the beautiful plates of Wyder, of Berlin. The mucous and muscular layers are hypertrophied. The folds of the mucous membrane do not show the normal complicated appearance. Single papillary elevations are seen separated from one another by glandlike invaginations of the mucous membrane, some shallow, some deep. The papillæ are completely bared of epithelium, but it may still be seen in the recesses between the folds. On the surface of the mucous membrane is a zone of closely packed round cells like granulation tissue, whilst beneath this the deeper portion of the mucous membrane is specially characterised by the presence of a large number of spindle cells. Thick walled vessels are present in great numbers in the wall of the tube. I believe a salpingitis may exist like this for an indefinite period, the fluid exuded gradually making its way through the patent uterine end into the uterine cavity; but what happens far more often is this—the inflammation extends to the fimbriated end, a little of the fluid escapes into the peritoneal cavity, and sets up a pelvic peritonitis of varying degrees of severity according to the virulence of the exudation; then the ostium gets closed by adhesions, and the tube becomes transformed into a shut sac by the uterine end also becoming closed. The further changes in the tube depend on the character of the primary inflammation; if it be catarrhal or due to extension of a peritonitis, then serous fluid collects in the tube, the coats of which gradually get thinned out, and finally we have a hydrosalpinx with a very thin transparent cyst wall. When the inflammation has been purulent (as in extension upwards of a gonorrhœa), then the same changes take place, with the important difference that the cysts contents consist of pus, forming a pyosalpinx. In other cases the capillaries of the diseased mucous membrane become engorged with blood, then some of them rupture, and blood gets extravasated into the tube forming a hæmatosalpinx. This condition is shown in some of the specimens on the table, and the microscopical appearances are well illustrated in a drawing by Wyder.

I said just now that as a result of salpingitis and pelvic peritonitis, both the uterine and fimbriated ends of the tube become closed, and then dilatation takes place. This, however, does not invariably happen, for it is a positive fact that in some instances the uterine end of the tube remains patent, and that at certain times the distended tube discharges some of its contents through the uterus and vagina. This interesting condition is known as intermitting hydro- or pyosalpinx, and may go on for an indefinite time unless cured by abdominal section. To explain the phenomenon, we have only to remember that dilated tubes sometimes undergo axial rotation in precisely the same manner as ovarian tumours. This rotation occludes the uterine end of the tube, which, when further dilated, partly unwinds itself, and thus allows the escape of some of its contents.

A specimen, which I removed quite recently from a patient in the Middlesex Hospital, is such a typical example of intermitting hydrosalpinx, and as it cannot fail to convince the most sceptical, I will briefly relate the case. M. A., aged 36, was married at 20, and had one child a year later. About a fortnight after her confinement she got up, and two or three weeks later took cold and was seized withgreat pain in the left side of the lower abdomen, for which she had to lie up three weeks. Nine months afterwards she began to have a white discharge between the periods, and this has continued. In March, 1888, she began to have a profuse watery discharge from the vagina at intervals on walking any distance, and she also had much pain in the back. This intermittent watery discharge continued until her admission to Prudhoe Ward on April 10th, 1889. On examination my note was "left ovary and tube enlarged to the size of a small orange, and displaced below and behind the uterus. The right tube can be felt thickened and displaced downwards; the uterus is normal." I ordered hot vaginal douches night and morning, followed by glycerine tampons; also a mixture of quinine, iron, and sulphate of magnesia. Nine days after admission a watery discharge commenced and went on for a week, at the end of which time the swelling in the left posterior quarter of the pelvis was found to be much diminished in size; three weeks later she was discharged convalescent. On October 20th, 1890 (seventeen months after), she came again, complaining much of pain in the back, left side of the abdomen and left leg, with profuse gushes of watery fluid. On examination I then found a large cystic swelling filling up the left side of the pelvis. When the patient was admitted to hospital three days later the swelling was considerably reduced in size, and the patient said she had a large gush pass from her the day previous. On performing abdominal section I removed the hydrosalpinx; there were no adhesions. I tied the tube close up to the uterus, and on cutting it across the contained fluid began to flow out, showing that the tube was patent right up to the uterus, and doubtless the uterine portion was so likewise. The right tube and ovary were found to be diseased, and were therefore removed. The patient's convalescence was retarded by some troublesome suppuration in the abdominal wall, which latter was thickly loaded with fat.

Another condition which has been erroneously thought to be the explanation of these cases of intermitting hydro- or pyosalpinx is that in which a dilated tube becomes adherent to the bottom of Douglas's pouch, and thus discharges its contents into the vagina, rectum, or bladder. A most interesting case of this kind I saw some years ago in consultation with my brother, Dr. P. T. Duncan. The patient, a widow, was seized periodically with attacks of pelvic inflammation, followed by a profuse discharge of pus *per vaginam*. On examining the lower abdomen, I found on either side, rising up above Poupart's ligament, a tense elastic swelling, that on the right being mobile, but that on the left

Table of Thirty Consecutive Cases of Abdominal Section for Chronic Disease of the Uterine Appendages (One Fatal from Hæmorrhage).

No	Name.	Age.	State.	Symptoms.	Duration.	Physical Signs.	Where operated on.	Parts removed.	Result.	Remarks.
1	A. L.	20	Single	Great dysmenorrhœa, painful defæcation	7 years	Elastic tumour size of orange left side of pelvis	Waterloo Road Hospital.	Left hydrosalpinx, both ovaries enlarged, cystic	Recovery	Perfect health two years after.
2	Mrs. H.	30	Married	Constant backache, pelvic pain	6 ,,	Two elastic tender fixed tumours in pelvis	Middlesex Hospital	Double hydrosalpinx, both ovaries cystic	,,	,, ,,
3	Mrs. L.	32	,,	Constant pelvic pain, menorrhagia	4 ,,	Retroflexed fixed uterus, distended left tube	Private	Left pyosalpinx, right salpingitis, ovaries cystic	,,	Universal adhesions, operation very difficult, ultimate result excellent.
4	Mrs. W.	25	,,	Constant backache, left ovarian pain	5 ,,	Uterus, ovaries, tubes fixed posteriorly	Middlesex Hospital	Left salpingitis and ovaritis	,,	Right appendage left, ultimate result good.
5	F. B.	24	Single	Left ovarian pain, great dysmenorrhœa	6 ,,	Elastic tumour size of orange left side of pelvis	,,	Left ovarian cyst, left salpingitis	,,	Right appendage separated from adhesions and left.
6	Mrs. S.	25	Married	Chronic severe pelvic pain	4 ,,	Elastic tumour to right of uterus size of orange	Private	Suppurating dermoid of right ovary	,,	Tumour universally adherent, ultimate recovery perfect.
7	Mrs. P.	21	,,	Dysmenorrhœa, dyspareunia, menorrhagia	18 months	Sausage-shaped swelling on right, left tube thickened	,,	Right hydrosalpinx, left salpingitis, and ovaritis	,,	Universal pelvic adhesions, ultimate result good.
8	J. T.	26	Single	Menorrhagia, dysmenorrhœa, leucorrhœa	5 years	Uterus retroverted, both ovaries enlarged, prolapsed	Middlesex Hospital	Both ovaries large, left pyosalpinx, right hæmatosalpinx	,,	Dense adhesions, perfect health resulted.
9	Mrs. H.	27	Married	Constant pelvic pain, dyspareunia	17 months	Cystic swelling on right, left appendage enlarged	Private	Right hydrosalpinx, chronic left salpingitis and ovaritis	,,	Universal adhesions, present health perfect.
10	Mrs. B.	34	Widow	Right pelvic pain, menorrhagia	18 months	Uterus retroverted, appendages prolapsed, thickened, fixed	Middlesex Hospital	Both ovaries atrophied, tubes much thickened	,,	Appendages matted together, suppurating parotid bubo, present health moderate.
11	A. J.	22	Single	Severe pelvic pain	4 years	Tumour on left, right ovary atrophied	,,	,, ,,	,,	Suppuration in abdominal wall retarded, convalescence.
12	Mrs. A.	35	Married	Left pelvic pain, yellow discharge	2 ,,	Uterus retroverted, tender swelling to left	,,	Left appendage matted, much diseased	,,	,, ,,
13	Mrs. V.	33	,,	Severe dysmenorrhœa and menorrhagia	10 ,,	,, ,,	,,	Large fibrocystic left ovary, left hydrosalpinx	,,	Ultimate result good.
14	Mrs. D.	30	,,	Chronic pelvic pain, offensive yellow discharge	7 ,,	Elastic tumour big as fist on left side	,,	Left ovary and tube matted together, right ditto	,,	,, ,,
15	Mrs. A. E.	22	,,	Severe dysmenorrhœa, menorrhagia	1 ,,	Irregular swelling on right	Waterloo Road Hospital	Right hydrosalpinx, left salpingitis and ovaritis	,,	,, ,,
16	Miss F.	22	Single	Intense pelvic pain, dysmenorrhœa	2 ,,	Both appendages prolapsed, enlarged, fixed	Private	Ovaries and tubes enlarged, matted together	,,	Cause: pelvic peritonitis following chill; present health excellent.
17	Mrs. M.	37	Married	Pelvic pain, dysmenorrhœa, leucorrhœa	1 ,,	Round tumour, size of orange, anteriorly	Middlesex Hospital	Ovarian tumour full of blood, twisted pedicle	,,	Quite well, three tight twists of pedicle.
18	C. R.	26	Single	Constant pelvic pain (left)	19 months	Prolapsed enlarged ovaries	,,	Fibrocystic ovaries size of horse chestnuts	,,	Ultimate recovery good.
19	Mrs. M. P.	44	Married	Severe pelvic pain, leucorrhœa	5 years	Retroflexed uterus, appendages prolapsed, enlarged	,,	Both tubes distended, adherent to ovaries	,,	,, ,,
20	R. B.	31	Single	Menorrhagia, dysmenorrhœa, leucorrhœa	3 ,,	Enlarged prolapsed ovaries	,,	Ovaries large, fibrous, cystic, tubes normal	,,	Present health excellent.
21	A. S.	23	Single, primipara	Constant pelvic pain, yellow discharge	2 ,,	Uterus retroflexed, fixed, appendages fixed	,,	Nothing removed	,,	See note below [1].
22	Mrs. S.	35	Married	Left pelvic pain, dysmenorrhœa	15 months	Uterus retroflexed, fixed, appendages enlarged, prolapsed	,,	Both ovaries cirrhotic, both tubes dilated	,,	Dense universal adhesions, fixed, uterus replaced, ultimate result good
23	E. B.	20	Single	Chronic pelvic pain, menorrhagia	4 years	Right ovary atrophied, tender, general pelvic tenderness	,,	Both ovaries ill-developed, very small	,,	Uterus ill-developed, present health satisfactory.
24	Mrs. H.	25	Married	Left pelvic pain, constant discharge	1 ,,	Ovaries and tubes fixed in pelvis	,,	Ovaries and tubes matted together	,,	Present health excellent, constipation only trouble.
25	Mrs. W.	27	,,	Menorrhagia, dysmenorrhœa	1 ,,	Uterus fixed, broad ligaments thickened	Waterloo Road Hospital.	Left ovary apoplectic, double hydrosalpinx	,,	Present health good.
26	Mrs. E.	20	,,	Menorrhagia, severe backache	1 month	Tense swelling to left of uterus	Private	Large apoplectic ovary, left hæmatosalpinx	,,	All signs and symptoms of tubal gestation, now quite well.

[1] Case 21 was operated on twice. First time, the appendages were so firmly adherent, and the abdominal wall several inches thick, that it seemed impossible to remove the disease. Troublesome suppuration in abdominal parietes retarded convalescence. Four months later patient returned, begging something more should be tried to relieve her pain. On again opening the abdomen, the omentum and intestines were so matted to the parietes that I was compelled to desist. Patient went out a month later *in statu quo*.

Table of Thirty Consecutive Cases of Abdominal Section for Chronic Diseases of the Uterine Appendages (One Fatal from Hæmorrhage)—(continued).

No.	Name.	Age.	State.	Symptoms.	Duration.	Physical Signs.	Where operated on.	Parts removed.	Result.	Remarks.
27	Mrs. M.	22	Married	Severe pelvic pain, collapse	5 weeks	Tumour filling left side of pelvis	Private	Large apoplectic left ovary, double pyosalpinx	Recovery	All signs and symptoms of tubal gestation now quite well.
28	Mrs. H.	29	..	Menorrhagia, dysmenorrhœa	13 months	Ovaries and tubes enlarged, fixed in pelvis	Waterloo Road Hospital	Chronic ovaritis and salpingitis, appendages adherent	..	Universal adhesions, operation very difficult
29	Mrs. J.	31	..	Dysmenorrhœa, leucorrhœa	2 years	Uterus retroverted, broad ligaments thickened	Middlesex Hospital	Chronic ovaritis and salpingitis, appendages adherent	Death	See note below (2).
30	Mrs. S.	37	..	Pelvic pain, menorrhagia, dysmenorrhœa	6 months	Cystic swelling	Waterloo Road Hospital	Double hæmatosalpinx, left ovary cirrhotic, right ovary apoplectic	Recovery	Present health good.

(2) Case 29 (the only fatal one) was found collapsed half an hour after the operation. She soon rallied by injection of ether. Pulse slow, regular, 80. I was not sent for, but when visiting three hours later, she seemed (and expressed herself as being) quite comfortable. Next day everything seemed well, but after thirty-six hours temperature began to rise, with abdominal pain and distension, so I reopened wound; found abdomen full of blood; cleared this out rapidly; retied right pedicle; irrigated abdomen; patient never rallied.

was fixed, and it was noted that the left tumour diminished in size coincidently with the discharge of pus. Little could be made out on vaginal examination owing to the pelvic inflammation. I diagnosed double pyosalpinx, the left tube being adherent and forming a fistulous communication with the vagina. She refused to run the risk of operation, and I do not know what has become of her.

Chronic Ovaritis and Congenital Defects.

Passing on now to disease of the ovary, the first and most common is chronic ovaritis. This may be secondary to the acute form, or due to extension of inflammation from the uterus and tube, or as a result of peritonitis and periovaritis; the last is a by no means uncommon cause. The ovary gets bound down by adhesions which after a time contract and produce a cirrhotic condition; in other cases the ovary is enlarged, but as a result of the chronic inflammation there is an increased development of fibrous tisue in the stroma, with the formation of small cysts. In either case it is obvious that ovulation can only proceed with great difficulty, and the follicles, as they enlarge, may be unable to reach the cortex.

Congenitally ill-developed ovaries are not common. When they occur, the uterus is (in my experience) likewise ill-developed. The subjects of this condition may be fine, handsome women, but they suffer dysmenorrhœa, and if married, are sterile. I removed a specimen five years ago from a young woman, aged 21, who consulted me for intense dysmenorrhœa. She began to menstruate at 17, always lost only very little for two days, but she described the pain she suffered as "fearful agony:" it began a week before the period, and reached its acme two days after the period was over. She was a tall, fairly healthy-looking dark girl, apparently not a bit neurotic; she lived in the country, and took plenty of exercise in the intervals of the attacks. She has never had any illness beyond the diseases of childhood. On examination (under nitrous oxide) I found the uterus small and acutely anteflexed; the sound entered two inches. Nothing else abnormal was detected; the ovaries or tubes could not be felt. I recommended that the uterine canal should be dilated, and this I did up to No. 12 Hegar. Subsequent to this the two following periods were less painful, but then all the old trouble returned; so after fully explaining the nature of the operation to the parents, I performed abdominal section, and removed a pair of small ovaries with the tubes. The patient recovered without a single bad symptom, and she is now in perfect health.

Yet another case: A few weeks back, a lady from Wales was brought to me by her brother-in-law (a medical man); she is 31, has been married ten years, and has never been pregnant. The catamenia began at 16, have always been scanty, lasting from one to three days; she has suffered pain both during and between the periods; the pain is such that she has to lead more or less the life of an invalid, and it has increased in severity for the last two years. On examination, the uterus was small, and normal in position; the right ovary could be easily palpated, and felt about half the normal size; the most careful examination failed to detect the left ovary. In this case I suggested that electricity might be tried for a couple of months with a view of endeavouring to stimulate the ovaries, but if (as was most probable) this failed, then, provided the patient suffered sufficient pain to justify her in running the risk, the only course left was removal of the appendages.

When mentioning electricity, I meant its application by the introduction of one pole into the uterine cavity, and placing the other on the abdomen, not by using the so-called galvanic stem pessary, for all stem pessaries are fruitful sources of pelvic inflammation, and should only be used on the rarest possible occasions; whilst, with regard to this particular variety, I think most gynæcologists consider it absolutely worthless as a generator of electricity.

Hæmorrhage into the Ovary.

"Apoplexy of the ovary," or, as it might more appropriately be termed, "hæmorrhage into the ovary," is a condition which has been described by various observers, especially by Winckel and Olshausen. Olshausen mentions two varieties: (*a*) hæmorrhage into the stroma, and (*b*) hæmorrhage into the follicles. That the condition cannot be so rare as is usually considered is seen from the fact that it occurred four times in my thirty cases. When an ovary is diseased (as in Case 27, in which it is tubercular), it can be readily understood that extravasation of blood into the stroma might without difficulty take place; that such an extravasation, even though of limited extent, can give rise to great pain, collapse, and fainting was well exemplified in the same case, for on Dr. Steele's arrival he found the patient so collapsed that he had to inject ether. In Case 26 the hæmorrhage apparently took place into an enlarged follicle, and was associated with an effusion into the Fallopian tube of the same side. Probably some extraneous cause in this young married lady—such as coitus close upon the onset of the catamenia—induced excessive hyperæmia of the ovary and tube, resulting in hæmorrhage into these organs.

Symptoms of Disease of the Appendages.

The symptoms of diseased appendages are essentially two, namely, pain and menorrhagia. The pain is variable. In some cases it may only come on at the periods, and then be quite bearable; in others the dysmenorrhœa amounts to intense agony. As a rule in these cases there is more or less constant pelvic pain, which increases in severity for about ten days, or a fortnight before the period comes on, reaching its height at this time, and diminishing after the flow has been fully established. The pain is referred to the side most affected; it is often described by the patient as of a gnawing, tearing character, shooting through to the back, and perhaps down the thigh to the knee.

In some instances it has been described to me by patients as feeling "as if someone had seized hold of their insides and was trying to tear them out." In my experience, the greatest amount of pain is felt as a rule in those cases where from extensive pelvic peritonitis the ovaries and tubes are matted down in the pelvic cavity; in these cases a vaginal examination may reveal nothing beyond some impaired mobility of the uterus, with tenderness on pressure. Usually in chronic disease of the appendages there is pain on coitus, and this may be of all degrees of severity. Not a few of my patients have told me it was so intense that they have been compelled to lead a single life for months.

The hæmorrhage also varies in amount. In most cases the loss at the period is increased. Women will say that their periods, instead of lasting four or five days, now go on, perhaps, for a fortnight; that whilst half a dozen napkins used to be sufficient, now they require eighteen to twenty-four. Others will say with regard to their periods that "they are hardly ever free from them." I believe the loss is greatest in cases of chronic ovaritis and salpingitis; but where the tubes are dilated with serum or pus there does not appear to be much alteration in the amount lost. Another symptom to be remembered is (as already mentioned) the occasional discharge 'in gushes" of water or matter in those cases of intermitting hydro- or pyosalpinx.

Physical Signs of Disease of the Appendages.

The physical signs are of the greatest importance. There is a good deal of difference of opinion respecting them; some able observers never (or hardly ever) find diseased tubes and ovaries on examining their patients, whilst others are constantly diagnosing them. In many instances the signs are sufficiently obvious on making an ordinary bimanual examination, whilst in others it is essential to give an anæsthetic and to examine *per rectum* as well as *per vaginam*.

Can a normal ovary be palpated when in its usual situation? I answer unhesitatingly, Yes, in the majority of cases, where the abdominal walls are thin and lax; not only so, but atrophied or congenitally ill-developed ovaries can be made out; so also can the Fallopian tube, especially near its uterine end. When the tube is thickened from chronic salpingitis, and is about as large as one's little finger, it feels not at all unlike a varicocele in the male, giving the same sensation to the finger that a bag with a few worms inside does. Not infrequently the ovaries and thickened tubes are prolapsed into the pouch of Douglas, when their detection is possible even to the *tactus non eruditus*.

When enlarged ovaries and tubes are matted together by old pelvic adhesions, they give rise to a firm, roundish, or elongated tumour felt in one or other posterior quarter of the pelvis, and perhaps extending somewhat behind the uterus. It is only within comparatively the last few years that the pathology of these tumours has been rightly understood; in my student days they were almost invariably described as cases of pelvic cellulitis in one or other broad ligament, but since abdominal section has been more frequently performed it is clearly proved that cellulitis does not exist except as part of a septicæmia or as secondary to a pelvic peritonitis. Those tumours, then, which are detected at one or other side of the uterus, and which do not depress the vaginal roof or materially displace the uterus, are in the vast majority of cases the result of pelvic peritonitis following upon chronic disease of the ovaries and tubes, whereby these organs are matted together, and to the different structures in their vicinity, such as broad ligament, uterus, omentum, and intestines. When a hydro- or pyosalpinx exists, it feels (in a typical case) an elongated, tortuous, elastic swelling, extending from the side of the uterus outwards in the broad ligament, and backwards into Douglas's fossa. In many cases, however, the dilated tube is roundish instead of being elongated; this is probably due to adhesions. On the other hand there may be a large hydro- or pyosalpinx which the most careful examination under an anæsthetic fails to detect; this is due, I believe, to the fact that the dilatation is "not a tense one." In two cases on which I operated for disease on one side, I found in each, after removing the affected parts on that side, a large dilated tube on the other, which had previously escaped detection. When the ovaries and tubes are matted to the pelvis by adhesions, examination *per rectum* is very important: by this means, also, we can ascertain whether prolapsed ovaries are free or adherent.

The prognosis depends on the conditions present in any individual case; a woman with a pyosalpinx is in constant danger of its setting up acute and fatal peritonitis; even a hydrosalpinx may do the same, although the risk is much less. In most of the other conditions, whilst they are not necessarily fatal, they, as a rule, render life one long state of chronic invalidism, accompanied by greater or less suffering, which may certainly be alleviated by medicines, but which, I fear, can usually only be cured by abdominal section. When this operation is resorted to, the prognosis is very good, as seen in the thirty cases recorded, where there was only one death, and this from the distressing accident of slipping of the pedicle ligature and fatal secondary hæmorrhage. The ultimate prognosis as to sound health is also good, but it must not be forgotten that the full benefits of the operation are not usually felt for several months after, as the patients have to pass through the sympathetic disturbances incidental to the bringing on of the menopause.

Treatment.

The remaining time at my disposal must be devoted to the treatment of these cases. Now, as this is the most important part of the whole subject (at all events, as far as the welfare of our patients is concerned), and as there is such wide divergence of opinion on the point, it demands our most deliberate and dispassionate investigation.

First, when a definite tumour of the appendages is found in the pelvis of a woman who complains of pain, and, perhaps, hæmorrhage, I am strongly of opinion that the condition should, as far as possible, be described to her, and abdominal section recommended after the risks attaching to it have been fully explained.

Secondly, if the tumour be a dilated tube, the same course should be adopted, as even a hydrosalpinx may set up peritonitis. The old methods of treating dilated tubes, either by tapping *per vaginam* or by electricity, are not only unscientific, but also more dangerous than abdominal section. In any case where the symptoms and physical signs lead one to suspect tubal gestation, it is our duty to insist on operation without delay.

Thirdly, in cases where the tubes are thickened from chronic salpingitis, with perhaps, the ovaries enlarged and tender, or even prolapsed; tonics, aperients, repeated blistering, hot vaginal douches and glycerine tampons should be tried for a couple of months; and if at the end of that time there be no improvement, then I do not hesitate to advise removal of the appendages, provided the patient suffers sufficiently to run the risk of the operation.

Fourthly, if after one or more attacks of pelvic inflammation a woman suffers pelvic pain, dysmenorrhœa, and dyspareunia, and perhaps menorrhagia, the great likelihood is that careful pelvic examination will detect the ovaries and tubes matted together and to the surrounding structures, and the mobility of the uterus impaired; but, where probably no definite tumour can be made out, what should be our line of practice in a case of this kind? Are we to pin our faith on Epsom salts (like some do), and, when this drug fails, to fold our hands, express the deepest sympathy with the sufferer, but on no account suggest any operative interference? Surely this practice is just as reprehensible as the opposite one, where the appendages have been removed without obvious disease, but for some neuralgic affection. From personal experience of these cases, I know that nothing short of abdominal section will cure; that the operation is usually extremely difficult; and that the ultimate result is correspondingly satisfactory.

Fifthly, in cases of congenitally ill-developed ovaries, with an acutely anteflexed uterus, associated with marked dysmenorrhœa and sterility, I would, first, under anæsthesia, widely dilate the cervical canal by means of Hegar's dilators. This failing, electricity might be tried, and, as a last resource, nothing is left to be done but removal of the diseased ovaries. With regard to the question of unsexing a woman by the removal of her appendages, it need not influence our treatment in the conditions mentioned under the above five headings, seeing that she is already unsexed, as the appendages are practically useless as far as procreation is concerned; and the subsequent history of those of my patients who are mar-

ried bears out the statements of other observers that the sexual appetite is not usually diminished by the operation. Indeed, in some cases the opposite result ensued.

Sixthly, whenever, on opening the abdomen, the operator finds the ovaries and tubes fixed by adhesions, he should break down the latter with his fingers, and then having brought the appendages into view, carefully examine them for any well-marked visible or tangible signs of disease. If no marked departure from the normal be made out, then it is the operator's bounden duty to stay his hand from removing the appendages. I firmly believe that the cause of the patient's symptoms is, in not a few cases, the presence of adhesions, and that when these are broken down it is unnecessary to proceed further; but how many operators have the moral courage to do this? One or two dilated follicles seen on the surface of an ovary are thought sufficient to justify the spaying of the patient.

Lastly, inasmuch as there is usually an absence of disease of the appendages in cases of ovarian neuralgia occurring in neurotic subjects, any local interference is not only unnecessary, but absolutely unjustifiable, and the same remark applies in great measure to cases of hystero-epilepsy and other mental disorders.

It cannot, I think, be too strongly enforced that removal of the appendages for chronic disease is in most cases much more difficult than performing ovariotomy; indeed, in a very small proportion the operation may have to be abandoned, as occurred to me in Case No. 21; hence the tiro in abdominal surgery ought not to attempt operating on these cases. Again, it is most essential that the patient and her immediate relatives should have the nature of the operation and its risks fully explained to them, as well as the change in life which will be produced by it.

Before concluding, I wish to make a few remarks on the *technique* of the operation.

Anæsthetic.—With regard to this, almost every operator has a predilection for a particular one. Until comparatively recently I preferred my patients to have ether, but now it seems to me that chloroform, given either on a piece of lint or by Junker's inhaler, is the best, as it produces more complete relaxation of the abdominal parietes and there is no risk of lung complication following. A few years back a patient on whom I performed ovariotomy died two days later from acute bronchitis induced by the ether administered.

Antiseptics in the Listerian sense of the term are unnecessary in abdominal operations; indeed, I would go further, and say that the spray may be positively injurious. The great thing is strict cleanliness. The routine practice I carry out is as follows: Having thoroughly washed my hands and forearms in soap and water, using a nail brush vigorously, I then dip them in a 1 in 2,000 solution of corrosive sublimate for one minute. The patient's abdomen is scrubbed with soap and water, and afterwards washed with the corrosive solution. The sponges are wrung out of boiled water, and boiled water is poured over the instruments; nothing else, except that my assistant treats his hands and arms in the same manner as I do. One great element of success in these operations is that, if possible, no fingers but the operator's should be allowed to enter the peritoneal cavity, and on no account whatever should any bystander examine the case or give help until he has rigidly rendered his hands aseptic.

Ligating the broad ligament in these cases requires more care than the pedicle in ovariotomy, and I believe it would be safer in all cases to tie it in three portions with strong silk (Chinese twist). The Staffordshire knot seems not to be so safe as the ordinary method of dividing the double ligature, and tying in two parts after crossing the threads.

A few weeks back I very nearly lost a patient from secondary hæmorrhage after ovariotomy. The pedicle was rather thick and long, and I thought I would show Dr. Noakes, of Nice, who was present, the ease with which the Staffordshire knot can be applied. Having removed the tumour, cleansed the peritoneal cavity, and tied all the abdominal sutures but two, I saw a little blood at the bottom of the incision; on separating the edges, sure enough the abdominal cavity was full of blood. I rapidly seized the pedicle, found the ligature had slipped, so, after retying securely, washed out the peritoneal cavity as quickly as possible with a 5 per cent. boracic acid solution, removing, in doing so, large clots from near the liver and spleen. Had half a minute more elapsed I should have closed the abdomen, and most likely the hæmorrhage would not have been discovered, as the patient was in a very feeble and collapsed condition all through the operation; as it was, she luckily recovered without a bad symptom.

Drainage.—A good deal of difference of opinion exists on the value or otherwise of drainage. Personally I never use a drainage tube in simple cases, but where numerous adhesions have been torn through, causing free oozing of blood, or where some of the contents of a tumour have escaped into the abdomen, then I insert a glass tube for from thirty-six to forty-eight hours, and with the happiest results. One disadvantage of using the drainage tube is that that part of the abdominal wall through which it passes seems to unite less firmly than the rest, so that later on the scar has a tendency to give, causing a ventral hernia.

Flushing the peritoneal cavity is, I think, a proceeding of risk; at the same time, it is very valuable in cases where pus or other irritating fluid escapes into the cavity. I always use a 5 per cent. boracic solution at a temperature of 100° F., introduced through a large india-rubber tube attached to a douche tin. It is necessary after flushing to use a drainage tube. The immediate effect on patients varies; some appear stimulated and others markedly depressed, but I know no way of finding out beforehand which will happen in any given case.

The after-dressing is important. The abdomen having been thoroughly cleansed with a sublimate solution, I place over the wound a strip of oil silk which has been dipped in the solution; this strip is about an inch and a half wide, and long enough to extend a little way beyond the extremities of the incision. Boracic acid is next dusted over the edges of the oil silk and over the rest of the abdomen; plenty of sal alembroth or salicylic wool is next laid on, and the whole firmly fixed by wide strips of adhesive plaster, reaching from below the hips up to the epigastrium. It will be noted that nothing but the oil silk touches the wound: this I find gives every satisfaction, and when the first dressing is removed on the eighth day it causes no pain to the patient. Formerly I used to dust iodoform powder over the wound, but it is not free from risk. I had a succession of cases in which troublesome suppuration took place in the abdominal parietes along the tracks of the stitches; this I could not account for nor prevent until I discarded the iodoform, when the succeeding cases progressed in the normal manner. In other cases it produced delirium.

After-treatment.—My plan is the following:—Nothing whatever passes the lips for twenty-four hours, but if the thirst is distressing I have the mouth washed with warm water frequently, and, provided there be no sickness, a teaspoonful of hot water given every two hours. I believe ice is not so good as hot water, and it certainly produces flatulence. In cases where the operation has been very severe, or in elderly women, a nutrient suppository is administered *per rectum* every four hours. If there be decided pain, a ½-grain morphine suppository is given, and repeated when necessary. Morphine should not be given as a routine practice, and many cases do perfectly well without it, but I think it is distinctly cruel to deny it, as some do, to patients suffering decided pain. After twenty-four hours an ounce of milk and soda is given every two hours, increasing gradually, and with some beef-tea the next day. As a rule, a small cup of ordinary tea with milk is longed for by, and most grateful to, the patient. The urine is drawn off every eight hours for a few days, but when patients have a desire to pass it naturally, even two days after the operation, I always allow them to do so. An aperient is given on the seventh day, before the stitches are removed, and the patient gradually takes solid food. She is turned on the side occasionally after the seventh day, and at the end of ten days allowed to sit up in bed.

So much for an ordinary case. When complications arise the treatment requires modification. Vomiting is the most common, and the ordinary sickness from the anæsthetic is best treated by letting nothing be taken for twenty-four hours. Recently I have adopted, and with distinct success, a plan of Mr. Howse's suggested to me by Dr. Moss, the able resident medical officer at the Royal Hospital for Women and Children. It is to administer *per rectum* at the termination of the operation, an ounce of port wine in an equal quantity of hot water.

In some cases there may be severe vomiting, not from any inflammatory condition of the peritoneum, but probably from mere atony of the bowel. If in addition to the vomiting there be flatulent distension of the abdomen, the case simulates closely one of peritonitis, and it is here that an aperient of sulphate of magnesia or soda acts like a charm.

One of my patients (Case 9), a thin, neurotic lady, had frequent vomiting for six days after the operation (on four days it was black), which nothing would allay. At last I thought I would give an aperient, but as she was very low, I called in consultation an eminent obstetric physician who did not think it advisable to purge. Next day, however, as she continued getting worse, I gave a dose of white mixture, and repeated it every two hours until the bowels acted. The effect was marvellous; she was only sick slightly once after the first dose, and from that time recovered steadily.

Flatulence is a frequent and often troublesome complication. I make it a routine practice to have a soft india-rubber tube passed into the rectum for several inches at least twice a day, and find it gives relief. In a case of Porro's operation which I performed at the Middlesex Hospital, there was enormous flatulent distension a few days after the operation, giving rise to all the signs of acute peritonitis; but on passing a long stiff tube into the colon, a tremendous escape of gas put an end to the unfavourable symptoms. In slight cases a teaspoonful of brandy in half an ounce of hot water gives much relief. My patients suffer little from flatulence since I have discarded the use of ice.

Peritonitis is the only other complication about which I shall speak. It may, of course, have existed before the operation, or it may be due to the escape (at the time of operation) of some pus or irritating fluid into the abdominal cavity; but when it sets in after a straightforward case of abdominal section, I cannot help thinking the operator has to reproach himself that the measures he adopted to ensure strict cleanliness were wanting in completeness. Although when once it has set in it need not necessarily be fatal, I believe the best chance is given to the patient by reopening the wound without delay, and irrigating the cavity thoroughly with the boracic acid solution, and inserting a drainage tube. The only case in which I did this for acute peritonitis coming on two days after I had performed abdominal section recovered completely, and is now, three years after, perfectly well.

Mr. Lawson Tait recommends the use of saline aperients, but I cannot help thinking that even such an experienced and able observer as he may have mistaken flatulent distension and vomiting for peritonitis.

In conclusion, I would remark that simple cases of abdominal section seem to recover equally well if put back, immediately after operation, into the general ward, as when isolated in a special ward for several days.

ABSTRACT OF A PAPER ON THE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

Read at a Meeting of the Medical Society of London.

By ALBAN DORAN, F.R.C.S.,
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My object in reading this essay is to review briefly the subject expressed in its title. Clinical records and statistics are unsuited for the purpose. Treatment by rest, which is relatively speaking expectant, cannot be satisfactorily judged by statistics. It involves essential factors hard to tabulate. Such a task demands special mental gifts and opportunities such as enabled Dr. Boxall to prepare, at the cost of enormous labour, his invaluable tables relating to pregnancy and childbed. On the other hand, the tabulation of operations, with results and after-histories, is work which most men may, with due deliberation, undertake. We do not yet know how to reduce our "rest" cases and operation cases to equal terms in a mathematical sense. We must, therefore, content ourselves with a brief review of all forms of treatment.

Throughout this communication I will, except when I specify to the contrary, speak of chronic inflammatory changes in the Fallopian tubes and ovaries as one complaint, "disease of the uterine appendages." The specimens now exhibited serve to explain the principal varieties of this affection.

The different methods of treatment more or less in vogue are:—

1, Rest; 2, Electricity; 3, Massage; 4, Curetting of the uterus and Emmet's operation; 5, Catheterism of the tubes; 6, Vaginal puncture of cystic tubes; 7, Abdominal section, which includes the following subdivisions: (*a*) The complete operation, removal of the tube and ovary, or oöphorectomy; (*b*) drainage of a hydrosalpinx; (*c*) breaking down of adhesions and drainage; (*d*) essentially "incomplete operations," or simple opening of the peritoneum; (*e*) plastic operations on the tube, or salpingostomy.

Treatment by rest often proves successful if intelligently carried out. The action of drugs must be carefully watched in each case. Thus sulphate of magnesia is very beneficial in most cases, yet others cannot tolerate it. In one case, at least, under my care it set up tympanitic distension of the abdomen with rise of temperature. I witnessed precisely similar symptoms after giving a dose of the same salt to an ovariotomy patient on the eighth day. Intimate intestinal adhesions had been broken down during the operation, and it is evident that the disturbance to the damaged intestines set up by the saline aperient caused the grave complication which followed its administration. In the first case, where the appendages were diseased, intestinal adhesions were probably disturbed as in the second. Both did well when enemata were substituted for aperients. The tampon causes irritation in many cases. The sound had best be dispensed with, and the greatest care must be taken not to make the patient a chronic invalid.

Though electricity may check the growth of fibroids, or may even cure gonorrhœa by killing the gonococci (Prochownik), it is hard to understand how the current can open tubes, clear adhesions, and remove the products of inflammation.

Massage is open to great objections when practised on the genitals, and it is absolutely dangerous when the tubes feel in the slightest degree dilated or the ovaries uneven, that is, in almost the entire class now under consideration. Profuse purulent discharge from the uterus has followed massage, and may signify that pus has found its way out of the tubes. The dangers of deliberately submitting a suppurating tube to treatment by massage are, however, self-evident.

The curette is extensively used abroad, and occasionally in this country. That instrument is properly intended for the cure of endometritis. Foreign authorities declare that endometritis infects the tubes and thus sets up salpingitis, which extends to the ovaries. The cure of endometritis by the curette, by removing the cause will, according to these authorities, cure the disease of the appendages. This principle of treatment is purely theoretical. The curette seems to do good in pure endometritis. Should disease of the appendages be present, few proceedings can be more dangerous than dilatation and scraping. Tissues are thereby irritated in the neighbourhood of inflamed pelvic structures, all for an unsettled theory. The curette has been the direct cause of severe inflammation of the appendages, which some authorities believe that it can cure. Men must not be led astray by pretty French names like "curettage," "hersage," and "écouvillonage." They define proceedings justifiable in endometritis, but not in cases of more extended pelvic disease.

Emmet's operation as a remedy for disease of the appendages is also based upon pure theory. Catheterism of the tubes is difficult, if not impossible, to perform, and dangerous or useless if really effected. Vaginal puncture of the cystic tube has been advocated by Leopold, who notes that even if the tube be not completely emptied by the puncture, its muscular coat can once more act, just as the uterus contracts if the membranes be ruptured and the waters escape during pregnancy. This proceeding, however, involves operating in the dark, and cystic ovaries, or even fœtal sacs, have been perforated by mistake.

Oöphorectomy is the best operation in a large class of chronic cases where subacute seizures occur frequently and at gradually shortening intervals, and where careful bimanual palpation proves the existence of a mass on one or both sides

of the uterus. The tube and ovary are then degenerate and useless. The more cystic they become the more discomfort they cause, and the more probably will they form adhesions to intestine and omentum. The health suffers, the patient is crippled, and, if poor, incapacitated from earning her bread. Pyosalpinx, a not infrequent complication, is in itself a source of danger to the patient. Granting that rest is insufficient to relieve the patient, abdominal section is more satisfactory, and even safer, than the palliative measures above noted.

[The operation was then described.] As a rule, oöphorectomy for chronic disease of the appendages is followed by speedy convalescence. Unfortunately, a permanent cure is not so frequent. Mental symptoms occasionally follow double oöphorectomy. The cases where the stump suppurates are particularly unsatisfactory. Fistulous tracts open, close, and reopen in the abdominal wound for months, discharging thin pus. Such cases find their way to the consulting rooms of others, or to other hospitals than the institution where the operation was performed. The operator hears no more of them, and he or the hospital registrar records them in perfect good faith as "cures." A larger minority suffer from a continuance of the pains which preceded the operation, probably on account of intestinal adhesions, or through irremovable inflammatory products which press on nerves. The ligatures certainly set up trouble in some cases.

A pure hydrosalpinx is often very hard to remove, yet it is a source of great pain, especially during menstruation, when the cystic tube becomes tender and its capsule congested. I have found incision and drainage very efficacious in removing the cause of pain. A considerable part of the cyst and capsule should be trimmed away, so as to prevent any chance of closure and refilling. The great advantage of this practice is that no ligatured stump is left behind in the pelvis. Most satisfactory cases have occurred in my own practice.

Another operation, less radical than oöphorectomy, and yet often effectual, is the simple breaking down of adhesions and subsequent drainage, the appendages, relatively healthy, being left behind. The operation is not always easy; and we have not the advantage of reliable statistical records. We hear much about consecutive cases of oöphorectomy, yet little about this simple breaking down of adhesions. Men do not like to record what may be set down as a "partial operation." They fancy it may be reckoned as a failure. The most honest operator in these cases usually sets to work with a fixed idea that the tube or ovary is at the time the chief or even sole cause of trouble. The cutting away of a tube and ovary after ligature is definite, and in the amputated part there is something to show for one's trouble and for the risk to which the patient is exposed. In so many operations it is right to take something away that surgeons very naturally tend to believe that it is wrong to take nothing away. The patient, too, often averse to the prospect of amputation before she submits to any operative proceeding, is often dissatisfied if she learns afterwards that nothing has been removed. Hence the surgeon must clearly explain beforehand, in all cases where he intends to operate, that the abdominal section is intended to set right what is wrong, and is not necessarily undertaken in order to remove anything. The operation for breaking down of adhesions is not easy, and it requires some experience to know what adhesions may safely be sundered and what should be left alone; and to recognise if the appendages may safely be left behind. A free separation of adherent coils of intestine high above the pelvis is dangerous and useless, and a dilated tube and an enlarged cystic ovary will be a greater source of danger and pain after they have been disturbed than before. The breaking down of adhesions, as a distinct operation, always necessitates flushing of the peritoneum and drainage, for capillary oozing is free in these cases, and suppurating foci are sometimes opened up between coils of intestine. The chief advantage of this proceeding is that there is no fear of the grave mental symptoms which sometimes follow double oöphorectomy.

A simple abdominal incision has sometimes proved sufficient to cure all the indications of disease of the appendages, even the most characteristic objective symptoms. This is often seen when the operator finds numerous intestinal adhesions which he fears to disturb. The same result may follow where the patient suffers great pain beforehand, although no visible or tangible pathological lesion is detected when the abdominal cavity is opened. Statistics on these cases are wanting, for evident reasons explained in relation to the operation for breaking down adhesions. The explanation of these cases is difficult. I find that where chronic peritonitis is present incision of the walls most frequently does good, especially when the parietal peritoneum is much thickened, as in a case under my care a few years ago.

Skutsch and Martin have saved dilated tubes by a plastic operation termed salpingostomy. A hole is cut in the end of the tube, and the serous and mucous coats are then sewn together. This operation may have a great future, but it is inadmissible when suppuration exists, and is almost certain to fail when active adhesive inflammatory processes are in progress, since the new opening must soon be covered up by fresh bands of lymph.

Removal of diseased appendages should be avoided whenever possible. In long-standing neglected cases it is hardly avoidable, yet even then a less severe operative measure, already indicated, may suffice. Practitioners and nurses are growing more and more skilled. Hence neglected cases are becoming rare; unfortunately certain circumstances preclude the chance of their total extinction. I hope, on a future occasion, to be able to analyse a series of cases within my own practice, especially in respect to the relative results of complete and incomplete operations.

THE HISTOLOGY AND PATHOLOGY OF THE FALLOPIAN TUBES.

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AND
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Histology.

The progressive elucidation of the many vexed questions in the anatomy and physiology of the Fallopian tubes has of late years made it possible to approach the subject of their pathology in a more comprehensive and more rational manner; but there are yet many interesting details in the microscopic anatomy of the oviducts which deserve and require careful scrutiny, and it is with these histological details that the first part of this paper is occupied. It will thereafter be easier more fully to grasp the meaning of the pathological changes observed in the material upon which the second part of the communication is based. To take a single example: the study of the normal tortuosities observed in the tubes of infants and fœtuses must considerably influence the conception formed of the twists and dilatations so frequently found as pathological conditions in the tubes of the adult.

The conclusions arrived at in this paper are founded upon the examination of material obtained from Professor A. R. Simpson's operative clinic, from the *post-mortem* theatre in the Royal Infirmary, and in the Sick Children's Hospital, Edinburgh, and from specimens in the possession of Dr. J. W. Ballantyne. Pairs of tubes to the number of 110 were examined, and in all these cases, except 7, the other pelvic organs were, in addition, investigated; 94 pairs of tubes came from adults varying in age from 17 to 76 years, 5 pairs came from children between the ages of 3 and 15, and 11 pairs from fœtuses and newborn infants. Of the 94 cases above mentioned, 61 were consecutive. The methods of research adopted were those usually employed in the microscopic investigation of normal and pathological tissues; but the testing of the patency of the tubes was invariably carried out by means of a mercurial pressure column, and never by the somewhat unreliable probe or bristle. The microscopical examination of longitudinal sections of the tube was found to be a most profitable method of investigation.

Histology of the Tubes.—The examination of the specimens in our possession has revealed the fact that the masterly researches of Henle, Farre, Beigel, Wyder, Martin and others, have so thoroughly exhausted this domain of histology, that

little remains to be added to their accurate descriptions and investigations. Nevertheless, many of the observations of these writers have been strangely overlooked in the textbooks of the day, and in this age of frequent operative interference with the uterine appendages, it is wise to emphasise the descriptions of the tubes already given, and to add, where possible, further details.

Dimensions and Form.—In about 18 per cent. of the normal adult tubes examined, the left was longer than the right; but in all the other cases the tubes were either of the same length, or else the right exceeded the left in length. The longest tube measured 14 and the shortest 7 centimètres, but the usual length was 11 centimètres in the right, and 10 centimètres in the case of the left tube. The transverse measurement of the isthmus varied from 2 to 4 millimètres, and of the ampulla from 7 to 9 millimètres. The ostium abdominale measured from 2 to 5 millimètres in diameter, but it was noted in tubes removed by laparotomy for disease of the ovaries that the abdominal orifice was physiologically closed, whilst in tubes obtained from the *post-mortem* theatre, the ostium was somewhat gaping. The well-known comparison of the tube to a trumpet (tuba) requires to be slightly modified, for the two parts of the oviduct (isthmus and ampulla) differ from each other in form, and the latter shows at its outer end a distinct constricting neck. This point of narrowing divides the ampulla proper from the pavilion or infundibulum, and the walls of the infundibulum consist of the fimbriæ (Fig. 1).

The Fimbriæ.—The fimbriæ are major and minor (primary and secondary), and the major are musculo-mucous, the minor mucous in character. In the fissures between the major fimbriæ, which vary from three to five in number, are implanted the minor fimbriæ, which are often very profuse. The minor fimbriæ are entirely mucous, and are a distinct continuation of the tubal folds or plicæ which, after their passage through the ostium, show a marked tendency to enlarge and branch, and each fimbria shows a roughened granular surface of a yellowish grey colour, and the fimbriæ collectively are imbricated like the petals of a rose. The major fimbriæ consist of a proximal musculo-mucous part and a distal mucous, the distal part closely resembling a minor fimbria, and being a continuation of a larger tube fold, whilst the proximal part is lined internally by mucous membrane thrown into folds, and externally consists of a continuation of the longitudinal muscular fibres of the tube, and is covered by peritoneum up to the point from which the distal part takes its origin. There are oblique as well as longitudinal fibres in the proximal part of the major fimbriæ.

The circular fibres of the tube entirely cease at the point of tubal narrowing, and in the fissures between the major fimbriæ where the minor fimbriæ are implanted the termination of the circular muscular fibres coincides with the muco-peritoneal line. This muco-peritoneal line, a line unique in the histology of the body, may truly then be said to mark the outer limit of the muscular tube wall. The minor fimbriæ and the fringed margins of the major are identical in structure, and, in the greater number of cases, resemble each other in form, being broad at their free ends, and narrow and petiole-like at their attached ends, which are in direct continuation with the tubal plicæ. One of the major fimbriæ is much larger than the others, is known as the ovarian fimbria, and, in the great majority of specimens, strikingly resembles in form a steel pen with dentate margins. It has on its mucous aspect a central furrow, and passing obliquely towards the margins are ridges of the mucosa continuous with the tubal plicæ, and forming the fringed edges. This fimbria differs from the other major fimbriæ in the fact that it has in its whole extent longitudinal and oblique muscular fibres; and in some cases in which the ovarian fimbria does not quite reach the ovary, and in which the communication is formed by the ligamentum infundibulo-ovaricum of Henle, these muscular fibres are sometimes found constituting part of this ligament. This ligament, which fills the intervening space between the end of the ovarian fimbria and the outer extremity of the ovary, is sometimes smooth, sometimes fringed; but the fringes, when they exist, differ in character from the fimbriæ proper, and may properly be called accessory fimbriæ.

There is one additional point with regard to the primary fimbriæ, and that is that two, or occasionally three of them, may join by their apices to form loops, and along the outer aspect of these loops the peritoneum passes continuously from side to side.

To summarise: there are at the pavilion of every tube from three to five major fimbriæ, including the ovarian, and a varying number of minor fimbriæ, which differ much in size and form, and it is to variations in the number and form of these minor fimbriæ that the profusely fringed or scantily clothed appearance of the outer end of the tube is due.

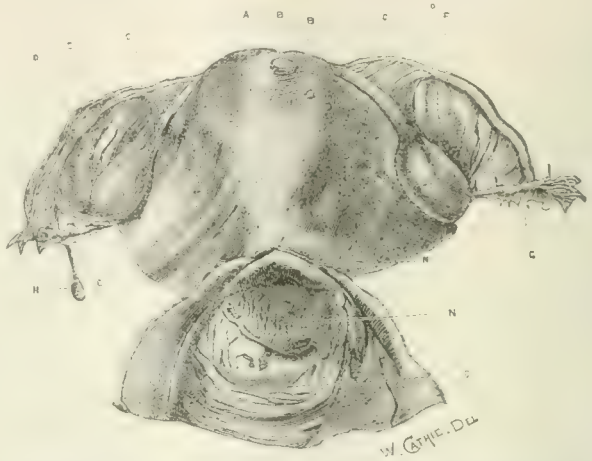


Fig. 3.—Posterior view of uterus and appendages. A, the uterus enlarged; BB, subserous uterine fibroids; CC, right and left utero-ovarian ligaments; DD, right and left ovaries; E, left Fallopian tube opened to show the longitudinal folds of mucous membrane, and the continuity with the ovarian fimbria; F, right Fallopian tube; GG, right and left ovarian fimbria, "pen-shaped," reaching to the outer end of the ovary; H, pedunculated cyst from the tubules of Kobelt; M, posterior lip of cervix; N, anterior lip, hypertrophied, firmly adherent to the vaginal wall, and covered with tubercular ulcerations; O, vagina. One-third natural size. Removed *post mortem*.

A neck of constriction internal to the pavilion has been mentioned (Fig. 1). This was invariably observed in fœtuses above 6 months, in newborn infants, and in children between 3 and 5 years, and also was found almost always in adult specimens. This neck of constriction we venture to compare to a sphincter in appearance, and so far microscopical examination has confirmed our belief, for in all the specimens examined the circular blood vessels at this point were more numerous and larger than elsewhere, and in a few specimens it could be clearly seen that the circular muscular fibres of the tube wall were more numerous at the neck of constriction



Fig. 1.—Posterior view of outer two-thirds of Fallopian tube and ovary (adult), showing: A, muco-peritoneal line; B, a major fimbria; C, a minor fimbria; D, margin of the ovarian fimbria; E, the neck of constriction; F, the ampulla; G, pedunculated cyst; H, ovary. Natural size. Removed by abdominal section.

than elsewhere in the ampulla. This sphincter-like part of the tube measured in adults from 3 to 4 millimètres in breadth and thickness (see Fig. 1).

The ampulla (with this neck and pavilion) in the specimens examined constituted the outer two-thirds of the tube, whilst the isthmus formed the inner third. The tube has its greatest lumen at the ampulla, and in this part of the tube the lumen gradually enlarges from within outwards, the maximum measurement being reached just internal to the neck of constriction. It is in the ampulla in the adult that convolutions when present are situated, and these convolutions have lost to a great extent the spiral character which they possess in the fœtus and newborn infant, and in their case also the peritoneum closely follows the tube windings, thus forming another character which serves to distinguish them from the fœtal and infantile twists. The isthmus of the tube in adults is almost invariably straight, and whilst its size increases from within outwards, as does that of the ampulla, its rate of increase is much less. The intramural portion of the tube (that is, that part which lies in the uterine wall) is in reality much smaller than has been commonly described, for its internal orifice terminates at the apex of a conelike depression in the upper angle of the cavity of the uterus, this depression being the uterine cornu of that side. The cornu tapers gradually as it passes outwards, and at the root of insertion of the round ligament the canal is found to be much smaller than at any point in the tube. At this, the narrowest point, the tube proper begins, for here the tubal folds commence. The intramural canal, partly cornual, partly tubal, traverses the wall in a curved manner, the curve having its concavity downwards, and at its highest point lying very close to the peritoneum covering the superior uterine wall. Embryology has shown that before the tube can be structurally differentiated from the uterine cornu, its internal limit is marked by a substance which ultimately becomes the round ligament.

Before proceeding to describe in more detail the microscopical characters of the tube, there is one structure—the hydatid of Morgagni—which calls for passing notice. Whilst stalked cysts, the so-called hydatids of Morgagni, were found in 57 per cent. of the specimens examined, the true hydatid of Morgagni was discovered in only 8 per cent. of the adult cases and in 20 per cent. of the fœtuses and infants. The true hydatid is always attached by a pedicle to the fimbriæ or to the tube itself; it varies in size from that of a pea to that of a small bean; it is lined by a mucosa with simple folds covered by a single layer of ciliated columnar epithelial cells; its wall is always composed of muscular fibres arranged circularly and longitudinally; its outer membrane is the peritoneum; its stalk is always muscular, and its contents consist of clear, limpid fluid.

The so-called hydatids are pedunculated cysts arising from the curved tubules of Kobelt, or stalked terminal cysts from Gartner's duct (called by some the organ of Rosenmüller), and these always are found attached to the anterior surface of the mesosalpinx at a point midway between the outer extremity of the ovary and the fimbriated end of the Fallopian tube. Their stalk is entirely fibrous, so are their walls, which are lined by cubical epithelium, and their size varies from that of a pea to that of the closed fist (Fig. 1, G).

Longitudinal and transverse sections of the Fallopian tube were examined microscopically, and with regard to the muscular wall it was found that the circular fibres were more numerous in the isthmus and intramural portions than in the ampulla. In the isthmus the muscle fibres are definitely arranged in an inner circular and an outer longitudinal layer, the circular fibres outnumbering the longitudinal; but in the ampulla the arrangement into layers is not nearly so definite, and the circular and longitudinal fibres are practically equal in number. In the ampulla, also, longitudinal fibres are in some specimens found lying internal to the circular and bulging into the bases of the mucosa. In the tubes of a pregnant cow examined it was found that the longitudinal fibres were internal, the circular external, and that the longitudinal formed well-marked bundles opposite the bases of the folds; this arrangement may account for the well known coiled form of the tubes in this animal.

On the mucous membrane of the tube are folds, and these are simple and compound. They are fewer, shorter, and less branched in the isthmus, and there the lumen has a stellate appearance, whereas in the ampulla they are more numerous, more branched, and the lumen is filled with their multiform ramifications. The folds vary in number in the isthmus from five to fifteen, and in the ampulla from fifteen to twenty-eight, and of these about three in the isthmus and eight in the ampulla are branched, the others being simple. Although a submucous layer is not invariably present, it is occasionally found, especially in young women, as a thin layer most evident in the isthmus. When present the submucosa consisted of round and spindle-shaped connective tissue cells of an embryonic character. The tube folds have a basis of similar cells with connective tissue fibres, a central artery, and are covered by columnar ciliated epithelium. With regard to the existence of glands, the appearance of the isthmus on transverse section is distinctly suggestive of such, and several of our specimens, especially those taken from infants and children, show characters identical with those figured by Bland Sutton,[1] and these appearances, conjoined with the presence of mucous and albuminous fluids in the tubes, strongly predispose us to accept the affirmative conclusion arrived at by the above-named author.

The tubes are covered in two-thirds of their circumference by a serous coat, and this is attached to the muscular by a loose layer of areolar tissue in which run a few longitudinal muscular fibres and blood vessels. At the point of the mesosalpinx where the two layers separate to embrace the tube muscular fibres continuous with the circular and with the longitudinal layers of muscle in the tube wall spread out into the broad ligament; in this situation are to be found in some specimens tubular structures lined by a cubical or columnar non-ciliated epithelium, but with regard to the nature of these structures we have arrived at no conclusion, their close proximity to the tube seeming to show that they are not parovarian.

The above description refers mainly to the Fallopian tube in the adult, but there are certain features which are peculiar to the tubes at different periods of life which must be enumerated.

In the fœtus of six months the average length of the tube is 1.9 centimètre, the thickness of the isthmus is 1 millimètre and of the ampulla 2.5 millimètres, the average length of the ovarian fimbria is 5 millimètres, and the space between this fimbria and the outer end of the ovary measures 4 millimètres, and is always smooth, never fringed. In the case of the newborn infant (Fig. 2) the tubes average in length



Fig. 2.—Right Fallopian tube and ovary of newborn infant (full term). Natural size.

3 centimètres, the thickness of the isthmus is 1 millimètre, and of the ampulla 3.6 millimètres, the length of the ovarian fimbria is 6 millimètres, and the interspace 4 millimètres, and always smooth.

The naked eye and microscopic appearances in the six months' fœtus and newborn infant are practically the same, the only difference being the absence in the infant of spiral convolutions on the isthmus tubæ. The ampulla shows from one to three spiral convolutions, the coiling being from before backwards on both sides of the body, so that the twist is negative on the right and positive on the left side of the body. The peritoneum never follows the windings, but is always very loosely attached to the tube, forming, as it were, an elongated sheath for it. Microscopical examination of the tube in the fœtus and infant reveals an extremely cellular submucosa, both in isthmus and in ampulla, but more abundant in the former; a muscular layer, which in the isthmus shows no mingling of circular and longitudinal fibres although it does so in the ampulla, and in which the longitudinal fibres are scanty in both parts of the tube, and a very thin serous covering with an underlying loose areolar tissue layer. In the muscular coat fibrous tissue intervenes between the bundles of muscular fibres both in the longitudinal and circular layers.

With regard to the appearances of the tubes in childhood

[1] *Trans. Obst. Soc. Lond.*, vol. xxx, 1888.

only three children were examined, their ages being 3, 4, and 5 respectively. In the child of 3 years both tubes measured 3 centimètres in length, in that of 4 years both were 4 centimètres in length, but in that of 5 years the right measured 6 centimètres and the left tube 5 centimètres. The thickness of the tube at the ampulla measured 3, 4, and 5 millimètres respectively in the three children. The isthmus measured 1 millimètre in the two younger children, and 2 millimètres in the older child. In all the three the ostium abdominale measured 1 millimètre in diameter. The ovarian fimbria measured 5 millimètres in the youngest child, and 10 millimètres in the other two. The interspace, which was smooth, measured 5 millimètres in the two younger, and 9 millimètres in the older child. In these children the isthmus was straight in two, and slightly wavy in the third; the ampulla showed the same twists as in the infants, and the fimbriæ were in these children, as also in the fœtuses and infants, ill-developed and scantily clothed. Under the microscope cilia on the mucosa were carefully looked for, but they were only seen in one specimen, and that only at parts. The cells lining the tubes were more cubical in character than in the adult. The submucosa was present, was cellular, with a slight admixture of fibrous tissue, and stained deeply with picrocarmine. The muscular coat showed appearances similar to those in the infant, with less fibrous tissue and with a few longitudinal fibres lying internal to the circular fibres, and resting upon the submucosa. The areolar layer under the peritoneum was loose, and showed blood vessels and a few isolated longitudinal muscular fibres.

In the adult the appearances of the tubes have been already described, but there were minor histological differences in nulliparæ, multiparæ, etc., which we hope to describe at some future time.

The senile changes in the tubes were found to consist in narrowing and straightening of the canals, with a loss of curvatures, atrophy of the muscular fibres, more especially the longitudinal ones, which, in a woman of 76, were all but absent; conversion of the submucosa into fibrous tissue, fibrous changes in the mucosa, and obliteration of the tubal folds in the isthmus near to its uterine end. In the isthmus, also, the epithelium was found to be shed, and formed what might be called a tube cast, blocking the lumen. The areolar layer underlying the peritoneum was firmer, more fibrous, non-muscular, and more closely united to the muscular coat.

(To be continued.)

CASE OF RECURRENT TYPHLITIS; REMOVAL OF DISEASED VERMIFORM APPENDIX; RECOVERY.

By T. PRIDGIN TEALE, M.A., F.R.S.,
Consulting Surgeon to the General Infirmary at Leeds.

Early in October I was requested by Mr. Raynes, of York, to see Mr. P., a cricketer and football player, who was beginning to recover from a fourth attack of inflammation in the region of the cæcum. My advice was that as soon as all acute symptoms had subsided he should come into the Leeds Infirmary with a view to operation.

History.—In November, 1889, during a game of football, he was "tackled" round the waist and thrown to the ground. No harm seemed to result, but in March last he was seized with pain in the right iliac fossa for the first time. The pain soon passed off, but returned the next day, and continued with increasing intensity for about three days, when a tender swelling was discovered in the iliac region. At the end of three weeks the attack subsided. There had been neither sickness nor constipation. Six weeks from the commencement a tumour could be felt on deep palpation in the right iliac fossa. At the end of seven weeks he had a second attack, much like the first, which lasted three weeks. After a week's convalescence a third attack set in, which practically kept him an invalid, unable to work, until the fourth and most severe attack in the beginning of October, about which I was consulted. The lump found after the first attack could be felt in the intervals, but was now obscured by the tympanitic state of the abdomen, the body being "as hard as a board." At this time no tumour could be felt *per rectum*. There was great tenderness over the iliac region, and the bowels acted with difficulty. Seeing that he had been practically an invalid and disabled from following his employment for six months, that he had been almost constantly in pain during this period, that the attacks increased in severity and in the tendency to obstruction of the bowels, and that there was a persistent hard swelling to be felt in the situation of the cæcum, I decided to operate.

Operation.—October 13th. The patient being under ether, I made an incision about 4 inches long directly over the tumour, in the line advised by Mr. Treves in his most instructive paper published in the British Medical Journal for November, 1889. The incision, passed obliquely inwards and downwards between the umbilicus and crest of the ilium, and, ended a little above and to the outer side of the middle of Poupart's ligament.

On opening the peritoneal cavity the tumour was reached easily, and consisted of adherent omentum and small intestine surrounding a harder centre. By dint of great care in separating, tying, and dividing the adherent omentum, and in gradually disentangling adherent bowel, the imprisoned vermiform appendix was cleared of all adherent structures, and fully exposed. A catgut ligature was applied a quarter of an inch from the cæcum, and the enlarged appendix was cut off one-third of an inch from the ligature, the end of the stump being invaginated and stitched. After due cleansing and washing out by boiled water, and the introduction of a drainage tube, the wound was closed by stitching together first the edges of the peritoneum, and afterwards the muscular and cutaneous sides of the wound. The drainage tube was removed in forty-eight hours. Recovery took place without a drawback, and he was allowed to sit up in three weeks and two days. Eight weeks after the operation, he was perfectly well, was recovering from the anæmic state to which he had been reduced, and had entirely lost the pain which for six months had rarely left him. His report of himself on December 17th is: "I am able now to take the same meals as the rest, and also to walk two or three miles a day without feeling tired or any the worse for it."

THE PARASITIC NATURE OF PSORIASIS; ITS TREATMENT BY MERCURY.[1]

By E. D. MAPOTHER, M.D., F.R.C.S.I.,

For many years I treated psoriasis by mercury, under the belief that it was an atavistic manifestation of syphilis; but, remembering that no other manifestation concurs, that it does not appear in the earlier and has been delayed till the later years of life, and that while the psoriatic are very many, the offspring of the hereditarily syphilised are very few, some other view had to be substituted. The dates of development also threw doubt on the suggestion that it was an hereditary blemish; and, indeed, the number of cases in which descent can be traced has been much overrated; for instance of 267 cases tabulated in *Guy's Hospital Reports*, other members of the families are recorded as being affected in only 36, and of 385 patients of Dr. Bulkley anterior heredity was proven in only 33. Then, no diathesis or condition of life seems to control the malady.

Greatly preferring to act on even the suggestion of a rational principle than empirically, I read with true pleasure Lang's assertion that the disease was parasitic. Not being a sufficiently expert histologist to decide between the eminent ones who differed, I had to be content with a full study of the evidence for and against the existence of the epidermidophyton, and reflections on the analogies between psoriasis and diseases positively parasitic, such as tinea versicolor or circinata, and presumably so such as syphilis and leprosy. From these latter it plainly differs in attacking the skin only.

As to proofs of communicability, we have the statement of such an observer as Unna that a nurse gave the disease to three children under her charge, and reliable records of its

[1] Read in the Section of Dermatology at the Annual Meeting of the British Medical Association held at Birmingham, July, 1890.

having been accidentally inoculated in the operation of vaccination, the subjects having had proneness, and intentionally on the human skin and on that of the rabbit. Into the latter animal it has been also introduced by the peritoneal stomata and by the blood. These points support the belief that the micro-organisms are carried in the circulation, not spread superficially.

I have seen dozens of spots come out in a day, which is more after the manner of an exanthem than of a local parasitic affection—for example, tinea versicolor. It strikingly contrasts with the exanthems as to recurrence; but this, however, may be due to reliance being so often placed solely on local treatment which could not affect the germs in the blood.

Psoriatic spots often creep on at the edge as they heal in the centre, but this character is shared by cutaneous lesions in which the microbe invades from without, as the tineæ, or from within, as the syphilides. When two rings of psoriasis spread and touch, the healed centres are not invaded, as if the soil for the fungus was exhausted. Unlike many other forms of dermatitis, patches cannot be produced by mechanical injury unless the subject be already affected, and in such instances it is far more likely that the germs are attracted from the blood than carried over the skin, which may have its cuticle unbroken, or that they uprise out of a latent local source. Psoriasis never appears over scars, owing probably to the altered capillaries of the injured papillæ not admitting the fungus from within.

Predisposition—that is, fitness of soil—would be transmitted by descent more readily than would the micro-organism itself, and the want of such proneness may account for the extreme difficulty of transmission. However, parasitism is not thus disproven, for another malady—tinea versicolor—is of this kind, and yet most rarely spreads to other individuals. Again, the want of success in cultivating these microbes is common to both affections. Although psoriasis prevails all over the world, it is very frequent and severe with the coloured races, amongst whom all parasitic diseases run riot. I have ascertained that many psoriatic patients have had in earlier life one of the tineæ.

The following further considerations tend towards convincing us that the pathogenic parasite reaches the skin through the blood. The lesions due to microsporon furfur, microsporon minutissimum and trichophyton, which clearly invade from without, are not attended with dilatation of the vessels of the papillary layer. Such is, however, an essential feature of psoriasis, caused probably by the microbes blocking the capillaries, which here are normally narrow and free in communication with the lymphatics. The striking symmetry of the eruption points more to distribution of the microbe under the influence of the vasomotor and trophic nerves than along the surface, and a symmetry in the progress towards cure may be often observed during internal treatment by mercury. The fungus does not appear to be aërobic, the face and back of the hands being rare sites, which might be due, besides the action of air and light, to their frequent ablution, to their active capillary circulation preventing blockage, or to their thin cuticle not affording a fit nidus. Depressing influences, such as parturition, lactation, scanty food and mental trouble, which often appear to induce outbreaks in the predisposed, must clearly act through the system rather than locally. The sudden production of psoriasis from "*le choc moral*" recorded by French writers seems scarcely credible. During acute diseases, especially pneumonia, the hyperoxidation in the cutaneous capillaries has removed the eruption. The other internal remedies besides mercury which have been most successful—carbolic acid, iodide of potassium, and arsenic—are parasiticides, the last named having, at least as regards ague, that repute. Against its powers in conquering psoriasis (which I have always doubted), such a witness as Mr. Hutchinson can be cited; he gave it internally, while he applied to one-half the body an ointment of white precipitate and chrysarobin; on that half the eruption improved, on the other it did not.

The victory may be assigned to either of the local weapons; I, while declaring for the mercurial, acknowledge the powers of chrysarobin locally and also internally, for that parasiticide freely applied to one side of the body has, being absorbed, benefited the eruption on the other half. If arsenic be a parasiticide, its external application should be useful, and, like other irritants, it would probably increase leucocytes which wage war on all microbes. These cells abound in psoriatic skin.

It is, however, very probable that the fungus may propagate from those remarkably common sites of it, the elbows and knees; in some cases the scaly disease has been in these scaly places alone for many months, and it is plainly desirable that persistent efforts to extirpate it should be made. The cutis in these regions has not a very active circulation, as the vessels dip plentifully into the periosteum, so close below, and the cuticle is thick and dry and laminated by the frequent movements of the joints. The old remedy—sulphur-fume (sulphurous acid) baths, which it was said prevented relapses—would act as a local parasiticide.

Even if it is only likely that psoriasis is due to a parasite, especially of the vegetal class, mercury—the destroying power of which all acknowledge—is deserving of the fullest trial. Its salts, as well as those of arsenic and silver, when taken internally, tend to the skin for elimination. This is most palpably so with regard to silver salts, for the few grains which have stained the whole skin could not do so if equally distributed through all the tissues. The mercurial compound will permeate the capillary blood vessels and lymphatics as well as the deeper part of the cuticle, in all of which situations we must suppose the microbes lodge and germinate.

The eliminative powers of mercury—diuretic, purgative, and cholagogue—may also act beneficially by deriving from the skin, and its influence over the vasomotor and trophic nerves is undoubted. It has been occasionally recorded that psoriasis has disappeared while mercury was being given for syphilis, for the one confers no protection against the other malady, another argument against their having any correlation. Relapses, which are at least 90 per cent. under mere local treatment, are much less frequent under mercurialisation, a statement which I regret I cannot support by figures. Out-patients with the eruption are so careless that it is very difficult to collect statistics.

In nearly every case mercury should be employed internally and externally. I have usually given three grains of blue pill every night for about eight weeks, the average time at which the eruption is removed being six weeks. The same cautions which one observes in treating syphilis are necessary, and as is then the case also, occasional interruptions and failures must be expected. Donovan's solution, a very favourite remedy, probably acts by the mercury it contains; in twenty drops, a usual dose, there is one-fifth of a grain of the biniodide.

Hospital patients with extensive eruption I have treated, after removing the scales by the usual means, by inunction into the eruption of diluted mercurial ointment, they being meanwhile kept in bed, and thus surrounded by an atmosphere of the metal. A small patch, if in a convenient site, may be often cured by covering it with the ointment and a piece of adhesive plaster on leather, carefully superimposed. In private practice ammoniated mercury—1 part to 7 to 14 parts of a mixture of lanolin and vaseline—forms a more suitable application, and the protoiodide is a good preparation for internal administration at the same time.

Calomel ointment was used by Colles and Crampton seventy years ago, when venesection was a routine remedy for psoriasis. It is not absorbed, nor does it excite hyperæmia like other local applications, and must act as a parasiticide.

Diday has removed small spots in one or two weeks by applying the acid nitrate of mercury, and if the bichloride were used in the manner Dr. Reynolds, of Chicago, employs it in treating tinea, equal success might follow. He fixes on the positive electrode a sponge wet with a 1 per cent. solution, and finds that if pressed on the patches it will soak in very deeply. By the same device solution of cocaine may be made to produce anæsthesia of the deepest portion of the cutis, and Edison the electrician has proposed to treat uratic deposits in an analogous mode. Rochard's ointment (biniodide of mercury) has sometimes rapidly cured by setting up an inflamed state not unlike the kerion of tinea tonsurans.

Lastly, baths containing bichloride and sal ammoniac (1 part each to 2,000 of water) have been suggested, and if used with extreme care they seem to promise well.

Although I have professed so much faith in mercury, I do

not advocate neglect of other measures, for instance, any drug indicated by constitutional conditions which may concur, and daily baths to prevent relapses, for a healthy skin resists the invasion of any parasite, and a dietary composed largely of vegetable foods, the husk of the cereals being excluded, for in this way we could limit supplies for the keratin which is so excessively produced in psoriasis.

ON A FORM OF HYALINE DEGENERATION.

By ALEXANDER EDINGTON, M.B., C.M.,

Syme Fellow: Assistant to the Professor of Surgery, Edinburgh University; Lecturer on Bacteriology in the Edinburgh Medical School; and Lecturer on Comparative Pathology in the New Veterinary College, Edinburgh.

[From the Surgical Laboratory of the University of Edinburgh.]

Of late years the use of aniline stains for ordinary and pathological histology has gradually been growing in favour, and more especially is this the case where it is necessary to determine microscopically in a tissue the existence of a certain degenerative condition, for instance, the so-called amyloid change. Aniline stains have, however, certain grave disadvantages, inasmuch as they cannot be held, for all ordinary purposes, to be as certain in their effects as the older carmine and hæmatoxylin preparations. Their power of selection is not sufficiently definite, and hence their use has come to be somewhat restricted to special conditions and where it is desired to bring out certain bodies, which possess the power of retaining such stains beyond those of the surrounding tissues. To the bacteriologist they are invaluable, because one can stain with their aid micro-organisms deeply, and, by the use of alcoholic or other solvents, discharge it more or less entirely from the tissue elements, of which latter, the nuclei of cells seem to have a greater retaining power than the cell elements themselves. Owing to the fact, however, that such stains frequently stain degenerating particles in a more marked way than other stains do, those, whose lines of work do not ordinarily demand the use of such methods, are liable to be frequently puzzled by the pictures presented to their eye of tissues so stained frequently showing smaller or larger stained points. It is in this connection that I propose to detail the form, character, and, so far as I have been able to discover, the mode of production of certain peculiar masses to which Dr. Russell has applied the name of "fuchsine bodies." These are brought to view in certain tissues when stained with carbol-fuchsine, and seem to be of a hyaline nature, and have no relation whatever with fungi.

This form of hyaline degeneration occurs in certain specific inflammations as tubercle, syphilis, rhinoscleroma, etc., and also in certain new growths, and more particularly in those which are somewhat rapid in their formation. Of the latter, one finds in it lymphosarcoma, in scirrhus, and in epithelioma. It may also be present in others, but I have not, so far, had the opportunity of studying them in this connection. I shall speak of it as affecting: 1. The protoplasm of modified connective tissue cells; 2, the nuclei of such cells; 3, the protoplasm of cells of epithelial type; 4, the nuclei of such cells; 5, intercellular material.

The stain which I have made use of is that recommended by Dr. Russell, and is used as follows: First, a saturated solution of fuchsine in a 2 per cent. aqueous solution of pure carbolic acid. This stain is best made by heating the carbolic solution slightly, so as to dissolve a full amount of fuchsine, and when this has become quite cold, so that the excess of fuchsine has crystallised out, it may be filtered, and is then ready for use. Secondly, a 1 per cent. solution of iodine green in a 2 per cent. aqueous solution of carbolic acid. This is used as a contrast stain which stains the undegenerated tissue elements. The method of use is to take the sections from water to the carbol-fuchsine, in which they are allowed to remain for ten minutes, when they are to be washed for a few minutes in water, then transferred to absolute alcohol for half a minute, and then placed in the iodine green solution for five minutes. From this they are then taken and rapidly dehydrated in absolute alcohol, cleared in clove oil, and then mounted in Canada balsam.

In the case of scirrhous cancer, so stained, one will find that the healthy cells and their nuclei are delicately stained with iodine green, but very numerous cells will be found to have begun to degenerate, and others will be found in a very advanced condition of disintegrative change. All points of degeneration take on a fuchsine staining—very brilliantly in the case of the advanced, less so in the more recent, while in the case of nuclei, which are only taking on the change, it may be found that their staining is by a mixture of both the stains used. The onset of the condition evidently is irregular in its order of production; in many cases the nucleus is the first to undergo this change, and in such conditions the cell will be found to contain a spherical, or nearly spherical, body, whose nature at first it is difficult to reconcile with that simply of a degenerated nucleus, but a careful study will demonstrate its mode of formation from such a source so clearly that all doubt as to its true nature will soon be set aside.

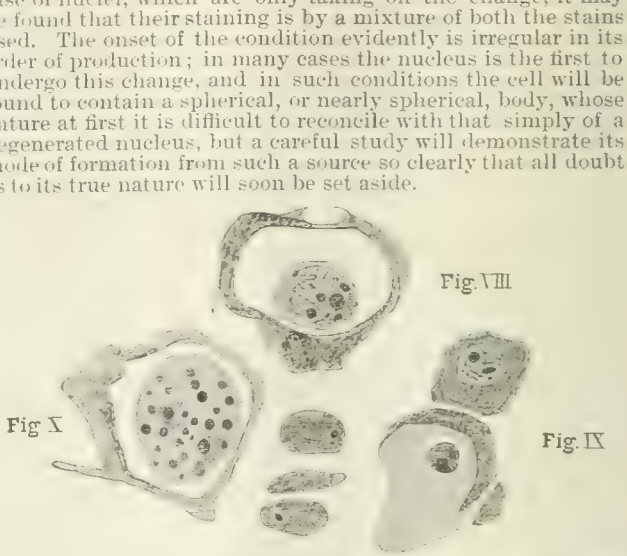


Fig. VIII.—A cell from scirrhous cancer in which degeneration is far advanced, and in which hyaline grains are seen.

Fig. IX.—A cell in the early stage of degeneration in which the nucleus has been first affected.

Fig. X.—A cell in a very advanced stage of degeneration.

In some cases the change overtakes a nucleus when in active division and when it consists, for the most part, of a mass of chromatic nuclear fibres. In such a case one can trace the onset of the change in these fibres, as the portions degenerated take on the fuchsine stain. In connection with this latter condition one may find, scattered here and there throughout the tissue of a scirrhous cancer, bundles of faggot-like bodies, which at first glance look like bundles of bacilli. Their nature, as the broken-up chromatic fibres of a nucleus, can, however, be easily made out with a good lens. The occurrence of degeneration of the protoplasm in the cell presents some peculiar features. As the change progresses, the nucleus may take on a definitely spherical form, or it may undergo a pathological segmentation, whereby a considerable number of smaller bodies are scattered throughout the cell, which take on a brilliant fuchsine stain. Such bodies in this situation are not, however, always derived from the nucleus, but may be deposited within the cell by degeneration of its own protoplasm. In other cases the cell is evidently filled with semifluid contents, amongst which numerous spherical globules of this hyaline material may be found. These masses, wherever found, vary considerably in size, in some cases occurring in large masses which have long been familiar objects to bacteriologists, while in in other cases they are of small size. Of the nuclei, the chromatic filaments of epithelial and endothelioid cells seem to withstand the degenerative process longest. In the case of epitheliomata, we find the degeneration manifesting itself in two distinct conditions. First, that in which we find one or more small masses included within a cell; and secondly, that in which we find foci or clusters of very beautiful spheres which stain brilliantly of a pink colour. These two conditions are independent of each other, and the latter is peculiar to epithelial tissues.

In such a tumour one finds modified connective tissue cells undergoing changes which as a rule start in the nucleus, but not constantly so, while in the case of cells possessing epithelioid characters the nucleus, as has been said, seems to withstand for some little time. The appearances so far presented in such a tumour are quite analogous to what has been spoken of as occurring in scirrhous cancer. The appearance of foci

is not at first sight, however, so easy to understand, as may be seen from Figs. I and II; but a careful study shows that

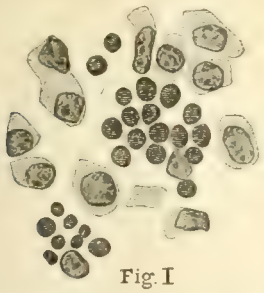


Fig. I

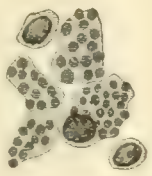


Fig. II.

Fig. I.—A group of so-called fuchsine bodies among healthy cells.
Fig. II.—A smaller group of the same showing their relation to the cells in which they have been deposited.

epithelial cells which are found in or near cell nests, or in which the cell is modified after that of those found in the cornified layer take on a different form of change. In this case it is the cell as a whole which degenerates, and as a result of this we may find, by examination with a low power, very numerous instances of cells which are stained much more deeply than those around. As the change progresses here, we find that a sort of shrivelling takes place, so that the normal outline of the cell is lost, and a mass of hyaline material is left. This mass at a later period breaks up into smaller masses, and these subsequently undergo a sort of slow liquefaction preparatory to their removal from the tissue; and



Fig. III

Fig. III.—A mass of epithelium which has undergone hyaline change: nuclei may be seen, one healthy, while the others are in different stages of change.

during this process they give rise, by their breaking up, to groups of brightly stained bodies, almost, if not absolutely, spherical.



Fig. IV.—Epithelial cell becoming hyaline, its nucleus degenerated and with a healthy nucleus lying above it.
Fig. V.—A mass of hyaline material which is now in process of breaking up into spherules.
Fig. VI.—Another mass in which the process is still better seen.
Fig. VII.—A cell in which hyaline grains are being deposited, and of which the nucleus has remained so far healthy.

In Fig. VI it may be seen that a degenerated mass is breaking up into almost regular hexagonal units, and this method of breaking up seems to be the starting point for the formation of foci of spherical bodies, of which the size are for the most part regular in each group. The spheres in the different foci, however, show very great variation in size, some being very small in one group, while in another the individual units may be three or four times as large. In the case of rapidly growing lymphosarcomata, in addition to the appearance of hyaline nuclei within the cells, we may find great strands or masses of hyaline material scattered throughout the tissue, whose nature as arising from particular cells or intercellular stroma it is difficult to demonstrate. In some cases one may find vessels filled up with such a material, and in the broken up after-condition one may see appearances like a string of spherical bodies placed in a line. The drawings which illustrate these conditions have been very carefully made by Mr. Murray, and are most faithful reproductions of the appearances produced by them.

In conclusion, a word may be said as to the method of staining. This cannot be held as absolutely certain to define accurately the degenerated nuclei. The process is one whereby the whole tissue is first deeply stained with carbol-fuchsine, then partially decolorised by absolute alcohol, and subsequently stained by iodine green. If, therefore, the tissue is left too long in the alcohol it may be found afterwards only to show iodine green staining. There can be no doubt that carbol-fuchsine has the power to a certain extent of resisting the replacing action of the iodine green in nuclei, which are degenerated, and better still in the fuchsine bodies; but if the fuchsine is first of all almost entirely removed, one can find that nuclei, which otherwise would have retained the latter stain, are stained now by the iodine green. Thus it is evident that this stain can only show the presence of hyaline degeneration of this kind, but cannot be held as definitely showing either where the process begins or ceases.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PELVIC CELLULITIS: INCISION: RECOVERY: SUBSEQUENT PREGNANCY.

Read in the light of Dr. Cullingworth's recent paper on "The Differential Diagnosis of Pelvic Inflammations in the Female,"[1] the following case of pelvic cellulitis, going on to abscess formation, requiring operative interference, and resulting in a perfect recovery and subsequent pregnancy, is of some interest:—

Mrs. C., aged 31, was admitted to Cumnock Cottage Hospital on December 18th, 1888. On October 8th she had been delivered of her seventh child, after a labour of only two-and-a-quarter hours' duration, and before the arrival of her doctor. Three-quarters of an hour afterwards the placenta was removed manually. On the third day she had rigors; the discharge had almost ceased, and what little discharge there was was offensive. Although feeling far from well, she attempted to rise on the sixth day, but she had to return to bed and remain there.

On admission she complained of "weakness" and of "pains in the right side." She was very thin and anæmic. Her lips were pale, her tongue furred, her bowels loose, and her pulse almost imperceptible. She had no cough, and her urine was normal.

Vaginal examination revealed a resistance in the right lateral fornix, which a bimanual examination showed to be due to a thickening and induration of the base of the right broad lateral ligament.

On January 20th, 1889, the following note was made:—In the right iliac fossa can be felt a swelling about the size of a hen's egg—hard, and painful to touch. Percussion gives a dull note over the swelling, which measures 3 inches parallel to Poupart's ligament, and extends 2 inches above it. *Per vaginam*, the anterior, the posterior, and the left lateral fornices are empty, but in the right fornix there is a distinct bulging—hard and tender, but without fluctuation.

On February 1st the swelling had slightly increased in size, and fluctuation was detected.

[1] British Medical Journal, December 27th, 1890.

On February 6th the abscess was aspirated, and several ounces of pus were withdrawn. So rapidly did it refill, that on February 10th I opened the abscess, by Hilton's method, at a point half-an-inch above Poupart's ligament, introduced a drainage tube, and applied a wood-wool dressing. The temperature, which had been running up to 101° F. and 102° F., at once fell to normal, and remained normal for ten days. A week later it was found necessary to enlarge the wound so as to admit of the reintroduction of the drainage tube. Thereafter the patient gained strength, and made an uninterrupted recovery. Since leaving hospital she has attended to all her household duties; she has recently given birth to another child, and she now enjoys perfect health.

In the light of Dr. Cullingworth's paper, the points to be noted are these:—Etiology.—Occurred after labour in which a hand (not previously rendered aseptic) had been introduced to remove the placenta. Amount of Pain.—Present, but never very excessive. Physical Signs.—Distinctly those of a cellulitis. Had the case been left to Nature, the abscess would almost certainly have pointed "above Poupart's ligament, where intraperitoneal abscesses never do." (Cullingworth). Lastly, while a pelvic peritonitis invariably leaves some evil effects behind it, and not infrequently calls for an abdominal operation, a pelvic cellulitis, even of a severe type, may be absolutely recovered from.

Edinburgh. THOMAS MACKENZIE, M.A., M.B.

ŒSOPHAGEAL VARICES IN CIRRHOTIC HÆMATEMESIS.

APROPOS of the very interesting and instructive papers on the above subject, in the BRITISH MEDICAL JOURNAL of December 27th, I may say I was called in the night, three or four months ago, to a gentleman who was believed to be suffering from alcoholic cirrhosis, and who was vomiting blood. Upon my arrival I found that several pints of blood had been vomited, and almost directly after I entered the room another attack of hæmorrhage occurred. The blood gushed from the mouth "as from a hose," or as if a tap were turned on, and to the extent of quite 1½ pint. The quantity lost was said to be increasing and to be getting fresher. There had been slight morning hæmorrhages from the nares occasionally from time to time, and some oozing in the night from the gums, which were spongy. The pharynx was congested with tortuous venous radicles, but no oozing of blood from its surface. The abdominal veins were prominent, and there was a suspicion of fluctuation. In the light of the papers referred to, the condition of the patient and the profuse and gushing character of the hæmorrhage, which was venous but unaltered by gastric action, I believe that the blood came from distended and ruptured œsophageal veins. But my purpose in writing is as to treatment. Ergot obviously is inappropriate in such conditions. Astringents are antagonistic to the physiological import of the hæmorrhage. Ice is depressing and likely to set up or aggravate gastric catarrh. The remedy is hamamelis, of which I have some twelve years' constant experience, and which is contained in the *Addendum to the British Pharmacopœia*. This remedy was followed by marked and rapid abatement of the hæmorrhage, and in three days the patient was about as usual, although he had lost six to seven pints of blood, and eating all before him, which was quite a new experience for him. There was a marked subsidence of the abdomen consequent upon the hæmorrhage, and the hamamelis was continued for some weeks once or twice a day. The superficial abdominal veins settled, the patient's general health has steadily improved, the morning hæmorrhages have disappeared, and there has been only one return of the hæmatemesis, which was promptly checked by hamamelis, taken as before, and of which the patient keeps a supply by him.

Bradford. JNO. PITNEY ASTON.

SULPHATE OF ESERINE IN KERATITIS HYPOPYON.[1]

MY object is to invite attention to a simple remedy which I have found very useful in arresting and curing keratitis hypopyon. The disease is due to the deposition of some micro-organism on an abrasion of the cornea in persons of enfeebled constitution.

The treatment adopted by the generality of medical practitioners and by a good number of specialists has been, and is still, the application of hot fomentations with decoction of camomile flowers, poppyheads, or belladonna leaves; of antiseptic lotions, particularly boracic acid, 1 in 50; or of corrosive sublimate, 1 in 5,000; atropine drops which, if they are useful in lulling the pain, are, however, hurtful in increasing the tension of the eyeball; and, lastly, insufflations of powdered calomel or of iodoform which are supposed to act beneficially in reviving the healing up process of the corneal ulcer. In case these means should fail in arresting the progress of the ulceration and of causing the absorption of the pus, cauterisation of the ulcer with the thermo- or galvano-cautery, or the emptying of the hypopyon by cutting through the cornea is often practised. Though both these procedures are very often successful, they are not devoid of danger, and require a well trained operator for their performance. Moreover, it is not always easy to get the patient to submit to an operation, and perhaps more than one, requiring the use of the cautery or of the knife.

I am convinced, after a trial of about ten years, that a solution of sulphate of eserine (gr. ij per ounce) dropped, two or three times a day, into the affected eye, which has to be kept constantly well bandaged up, while the patient's state of health is improved by means of good nourishing diet and a tonic mixture, say the citrate of iron and quinine with liquor strychninæ, is all that is required to cure almost every case of keratitis hypopyon. In a very few exceptional cases only does it become necessary to perform Saemisch's operation of cutting across the cornea, including the whole ulcerated surface, and thus giving issue to the pus, reducing the intra-ocular tension, and stimulating the edges of the atonic ulcer to heal up. De Wecker, of Paris, was, I believe, the first to recommend this treatment about ten years ago. Having found it very successful in a great many cases, some of which were quite hopeless, without operation, I can recommend it very strongly.

Malta. L. MANCHÉ, Surg.-Major, M.S.

[1] Read at a meeting of the Malta and Mediterranean Branch.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ADELAIDE HOSPITAL, DUBLIN.

SCROFULOUS DISEASE OF THE KIDNEY: NEPHRECTOMY: RECOVERY.

(Under the care of FRANCIS T. HEUSTON, M.D., F.R.C.S.I., Professor of Anatomy Royal College of Surgeons, Ireland.)

[History furnished by Miss MAGUIRE, Medical Student in Charge.]

J. R., aged 13 years; his father and mother are alive and healthy, as also two brothers and a sister, but five brothers and sisters died in infancy; disease not known.

When between 2 and 3 years of age he had a severe fall which injured one of his hip-joints. From this accident he was ill for a long period, a large abscess discharging itself in the groin; three years since he had scarlatina and whooping-cough, followed by a dry cough, with pains at intervals, referred to the lumbar region. In July, 1889, patient fell from a lift, his brother falling on him. He was unconscious for a short time, but was able to walk home. Subsequent to this he has suffered from a dull aching pain in the left lumbar region, lasting for about half the day, usually most severe in the morning, and was not affected by movement. In the early part of August patient noticed he had to micturate nine or ten times during the night, also frequently during the day; this was occasionally accompanied by pain in the penis, but never referred to the bladder; he did not notice any change in the characters of the urine passed. He attended as an outdoor patient at the Adelaide Hospital, when his urine was found to

contain a large quantity of pus, and on one occasion blood. His symptoms not improving, he was admitted on October 16th, 1889, when he presented the following conditions:—Patient weighs 4 stone; is very emaciated, anæmic, and delicate-looking; is restless, and sleeps badly; complains of pain, sometimes in his back, sometimes in the lumbar region; this pain, which is of a dull aching character, does not extend from the above positions; tongue is clean, transversely fissured; he takes food well, and does not complain of thirst; his bowels are constipated; temperature normal. Urine: He passes daily from 40 to 46 ounces, from 2 to 6 ounces being voided about every two hours, which froths when passed. Micturition is not now painful. Examination: Urine very pale; reaction neutral; specific gravity, 1009; deposits a thick white precipitate containing large quantities of pus with a little mucus. Albumen is not more than to be accounted for by the amount of pus present; chlorides $\frac{1}{10}$th of normal quantity; urea 1.1 per cent.; microscope shows pus corpuscles; large flattened epithelial cells, single and in masses of from twenty to thirty; a few epithelial tube casts—a specimen was examined for bacillus tuberculosis, but without success. The patient's abdomen appears normal, but becomes very rigid on palpation, when a rounded tumour is to be felt immediately below the costal arch on the left side, which moves with diaphragmatic respiration, and presents a distinct rounded margin. On deep pressure, a second tumour is to be felt below the former; pain is complained of on pressure over the anterior aspect of the abdomen in the position of these tumours, but not posteriorly.

The patient was detained under observation until October 31st without any appreciable change in his condition, when Dr. Heuston made the usual oblique incision for kidney exploration in the left lumbar region, and found the kidney much enlarged, with several opaque spots visible on its surface, which, on being punctured with a needle, gave a sense of resistance, but no solid substance was to be felt. An incision was then made into the kidney, when some pus and urine escaped from a large abscess sac, which was found to contain a quantity of caseous material, it being now seen that the organ was studded with caseous patches; the kidney was carefully separated from surrounding structures and the hilum exposed; the ureter being separated from the vessels was ligatured some distance below the pelvis and divided. The vessels were ligatured in two places with silk and divided, the ligatures being then cut short; the wound was closed with deep and superficial sutures, a drainage tube was introduced, and antiseptic dressing applied; the entire operation occupied a little over an hour.

Subsequent examination of the kidney showed it was all in a diseased condition, containing, in addition to the large cavity already described, a number of small abscesses, also numerous deposits of caseous material. Microscopic examination proved the presence of giant cells in large quantities.

November 1st. Patient did not sleep much, and vomited frequently during the night. Morning temperature, 102.6° F.; urine, 17 ounces; acid in reaction; specific gravity 1028, contains lithates, a few pus cells, and a number of granular casts.

November 2nd. Slept well; wound dressed and found healthy; urine, 60 ounces, pale, acid; specific gravity, 1016; temperature, 101.8° F.

November 4th. Slept well; bowels moved three times; urine, 46 ounces; specific gravity, 1024, acid; temperature, 100°F.; wound nearly healed.

November 5th. Passed urine three times during the night, 36 ounces acid; specific gravity, 1022, high coloured, contained pus, mucus, and tube casts, with some albumen; chlorides $\frac{1}{10}$th normal; urea, 2.5 per cent.; temperature, 100° F.

From this date patient progressed favourably, and on November 18th the urine was as follows: 27 ounces, acid, normal colour, specific gravity 1018, urea 2.3 per cent., chlorides $\frac{1}{4}$ normal, pus small quantity.

November 23rd. Allowed out of bed, and on January 18th, 1890, he was discharged from hospital, being then 4 stone 7 pounds in weight; sleeping and eating well, and did not complain of pain, or frequency of micturition.

Remarks.—In publishing the above careful notes so fully, I am induced to do so as the case may prove of interest to the members of the profession, owing to the uncertainty which exists as to the diagnosis of such cases, and the advisability of operative procedure. The success of this operation being so dependent on the limitation of the disease to one kidney, it is of the utmost importance to form a correct diagnosis. The devices recommended by such authorities as Silbermann, Sands, Glück, Pawlik, etc., must be placed on one side as impracticable, the only reliable method, in my opinion, being that of Mr. Greig Smith, who depends upon the characters of the urine, as to quantity, percentage of solids (especially urea), and the presence of no more albumen than is to be accounted for by the pus in the urine. The above, taken in conjunction with the signs and symptoms of the case, should generally enable a tolerably accurate opinion to be formed as to the condition of the kidneys. As to the advisability and advantage of such an operation, it will suffice for me to state that this patient called to show himself to me about a month after his discharge from the hospital, when the improvement in his general appearance was most marked. He looked strong and healthy, and had gained considerably in weight. He stated that he did not suffer in any way, and felt quite well.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 13th, 1891.

Timothy Holmes, M.A.Cantab., President, in the Chair.

A Case of Nephrolithotomy (following Nephrectomy) for Total Suppression of Urine Lasting Five Days; Complete Recovery and Good Health Five Years after the Operation.—Mr. R. Clement Lucas read notes of this case, which was mentioned by the medical journals at the date of the operation, in 1885, as a case of exceptional interest, but the author had delayed publishing it until sufficient time had elapsed for a judgment to be formed as to the permanence of the cure. The patient was still enjoying the best of health and freedom from pain, discomfort, and hæmaturia, which, for seventeen years before her right kidney was removed, were almost constantly present. The operation for total suppression of urine was one that the author had long considered justifiable, and he had on more than one occasion previously publicly advocated its performance. The patient had been under the care of Mr. F. D. Atkins, of Sutton, Surrey, to whom much credit was due both for the original diagnosis and for the promptitude with which he acted when total suppression occurred. F. F., aged 37, was first admitted into Guy's Hospital on June 22nd, 1885. There was a strong family history of consumption. For seventeen years she had suffered from hæmaturia at intervals, and for nine or ten years this had been accompanied by pain on the right side of the abdomen, and for seven years a tumour, diagnosed as a floating kidney, had been felt on this side. On July 14th the right kidney was removed by lumbar incision. It was a mere shell containing masses of stone and weighing 21 ounces. The wound healed completely, and she left the hospital convalescent on August 10th, just within a month of the operation. All went well for three months. She had returned to her household duties, was free from pain and hæmaturia, and much satisfied with the result of the operation. On Sunday, October 24th, 1885, she was suddenly seized, between 7 and 8 A.M., with agonising pain in the back and left loin. The pain passed through the loin to the front of the abdomen and groin. About 8 o'clock she passed a little urine, but from that time all secretion stopped. Vomiting commenced about half-past 8 on the same morning, and was continued at intervals and whenever anything was taken. Mr. Atkins was called to see her, and found the bladder empty. Vomiting and anuria continued throughout Sunday, Monday, and Tuesday. On Tuesday Mr. Lucas met Mr. Atkins in consultation, and advised operation. The symptoms continued without cessation on Wednesday, when she was brought to London, but Mr. Lucas's medical colleagues still advised him to postpone operation till a further trial had been given to diuretics, and in deference to their opinion he waited another day. On the afternoon of Thursday, the fifth day of anuria, the patient became drowsy and weaker, so that it was difficult to rouse her to obtain answers to questions. Her pulse was weak, her tem-

perature 99°, and she had become less sensitive to pain and indifferent to what was passing around. Ether was given, and Mr. Lucas cut down on her remaining kidney and discovered a conical stone acting as a ball-valve to the top of the ureter. The stone was rather more than three-quarters of an inch in length, and from three-eighths to five-eighths in diameter. Urine began to drip away out of the wound as soon as the pelvis of the kidney was opened, but the pelvis was not found much dilated. For twelve days all urine was passed by the wound in the loin. Then an ounce and a half was passed with great pain from the bladder, and the quantity gradually increased. After the nineteenth day all the urine was passed naturally. The wound ran an aseptic course, and the patient's temperature scarcely rose above normal. Healing was complete ten weeks after the operation. During the last five years she had been employed in household duties and had enjoyed good health. The patient was exhibited, together with her right kidney, which was excised, and the stone removed from the left kidney for total suppression of urine.

Removal of large Calculi, first from one Kidney and afterwards from the Other: Death from Hæmorrhage after the Second Operation.—Mr. RICKMAN J. GODLEE read a paper on this subject. A gentleman, aged 37, first complained of renal symptoms in 1886. In the autumn of 1888 a diagnosis of left renal calculus and left pyelitis was made, but mischief on the right side was also suspected. In November, 1888, a large quantity of stone—uric acid and phosphatic—was removed from the left kidney. The patient made a rapid recovery, but the closure of the wound was not permanent, and after several febrile attacks it was found best for the patient to wear a plug permanently in the fistula, to prevent periodical accumulations of pus and urine in the kidney. At one time the ureter became completely blocked, and an operation was undertaken to remove a stone which was supposed to be obstructing it. None was found, but the ureter became again patent after the operation, and the state of the kidney very much improved. The patient now became convinced that he had stone in the right kidney. The risks of an operation were explained, but he was recommended to submit to it, and on November 19th, 1890, large masses of uric acid stone were removed. No bleeding followed the first incision into the kidney, but the laceration that was caused by the removal of the stones gave rise to very free venous hæmorrhage, which was easily controlled by pressure. At the completion of the operation there was little or no bleeding, but it was thought safer to plug the pelvis of the kidney. The patient remained in fair condition for an hour and a half after the operation, and then suddenly died, as the result of fresh hæmorrhage from the kidney. The rarity of the accident was dwelt upon, and attempts were made to suggest means of combating it if it arose. Mr. Godlee read a letter from Mr. Mayo Robson, in which it was related that three years ago after making a small incision into the cortex of a kidney violent hæmorrhage occurred, and in order to avoid a fatal result Mr. Robson had found it necessary to remove the kidney. On examination a large abnormal vein existed in the kidney near the surface, and from this, which had been wounded during the operation, the blood had escaped; and Mr. Robson mentioned in his letter a second case of hæmorrhage from the kidney, which had happened in the practice of another gentleman, and in which the result had been fatal. Neither of these cases had been published, but the first had been shown at a meeting of the Leeds Medical Society.—Mr. ARBUTHNOT LANE had experienced violent hæmorrhage from a kidney, which, after passing big sutures into the kidney substance in the neighbourhood of the bleeding, stopped at once when the sutures were firmly tied.—Dr. G. HARLEY, after complimenting the authors on their papers, spoke of the duty of physicians of endeavouring to remove calculi when small by chemical means, and stated that this could almost certainly be done. The difficulty was in diagnosing cases sufficiently early, as cases were likely to be mistaken for cancer, gallstones, Bright's disease, or lumbago. He showed a specimen of a large calculus, which had been removed from the body of a man after death, who had been considered for seven years previously to be suffering from lumbago, and whose urine when examined had never been found amiss. He also brought twelve specimens of small calculi to show that calculi had not always merely a local, but also a constitutional, cause, and that calculous disease had been traced through three generations. Such a family history was that of a London physician who had passed a renal calculus when 37 years of age. His uncle had had a calculus removed by Liston, and the physician had found a certificate of a *post-mortem* examination on an ancestor who died in 1620, aged 71, of gout, in whom a stone was found which weighed 16 ounces. He next stated that the amount of disturbance in the organism was not directly due to the size of the calculus, and showed two stones, the first of which was only passed after severe colic, whereas the second, though much larger, came away comparatively easily. He next showed some calculi removed after death from the kidney of a child of 10 months. He then related a case of a patient who, after having passed a uric acid calculus, was treated with alkalies for a year, when he passed a calculus of oxalate of lime; after this the patient took lactic acid, and later passed a phosphatic calculus; these stones were all of nearly the same size and shape. From this he concluded that, if it was possible to produce calculi in a patient by chemical means, it should be possible also to remove them.—Mr. G. R. TURNER related the case of a woman who had been under Dr. Whipham's care in St. George's Hospital with two large renal tumours and with well-marked symptoms of renal calculi. He had cut down on both kidneys and removed a calculus from each kidney. The patient died thirteen days later of asthenia. There had been no suppression of urine. He then gave an epitome of forty-three cases from the St. George's Hospital *post-mortem* records in which renal calculi had been found. He summed up by saying that the prognosis seemed to depend in part on the amount of suppuration of and destruction of kidney substance that had occurred before the operation.—Mr. T. SMITH asked Dr. Harley how it was possible to differentially diagnose between scrofulous kidney and renal calculus. He asked Mr. Godlee what part of the kidney he had opened in his case and what dressing had been used, as he was acquainted with a rash which sometimes followed the use of iodoform dressings. He agreed with Mr. Turner that the condition of the kidney affected the prognosis, and mentioned the case of a delicate lady from whom he removed a kidney for calculus without first cutting it open; and he was glad that he had done so, as, after removal, he had found it contained mortar-like material as well as calculus, and he suspected that the former, if left *in situ*, would probably have prevented the healing up of the sinus.—Dr. HARLEY said that he did not know how to distinguish between scrofulous kidney and renal calculus.—The PRESIDENT congratulated both authors on their papers, and thought that Mr. Lucas's was a unique case. He considered that the discussion had not sufficiently turned upon the treatment of hæmorrhage.—Mr. LUCAS, in reply, felt that his success had been partly due to the ample time afforded for thinking over the case. The frequency with which renal calculus was unilateral, as shown by Mr. Turner's statistics, was, he felt, an important fact. If there was much degeneration of the kidney, he agreed that it was preferable to remove it with the stone. Dr. Harley was, he believed, too sanguine in hoping that surgical interference would not be needed in future, and advised physicians not to delay too long before calling in surgical help. One easy and by no means formidable method of determining whether the symptoms in any given case were due to the presence of a calculus or to tubercular disease was to get a surgeon to explore.—Mr. GODLEE was still uncertain as to whether it was best to plug the wound or not, as if bleeding went on behind a plug, a cavity was formed into which the hæmorrhage continued, and prevented contraction of the tissues, and pointed out how in hæmorrhage into the bladder, the bleeding could not be stopped until the clots were removed and the bladder able to contract. He thought Mr. Lane's plan of suture a very good one. With reference to Mr. Turner's case, he should have been disposed to try for recovery from the operation on one kidney before attacking the other. He informed Mr. T. Smith that he had incised the outer part of the kidney, and he believed that this was the proper rule to follow unless a stone was very small, and could be easily felt. The only objection was that if the stone could not be detected by feeling the outside of the kidney, it was somewhat difficult to find the way into the pelvis. In his case the dressing used had not been iodoform, but either carbolic gauze

or boracic acid. In his case it would have been impossible to remove the first kidney operated on, as disease of the opposite one was even then suspected. He thought the best plan was first to remove the stones, and later, when the other kidney had been ascertained to be healthy, to remove the kidney if necessary.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 9TH, 1891.

CHRISTOPHER HEATH, F.R.C.S., President, in the Chair.

Intussusception and Volvulus in Two Places of the Small Intestine.—Mr. TURNER read for himself and Dr. WHIPHAM the particulars of this case. E. H., aged 29, cook, was admitted into St. George's Hospital, under the care of Dr. Whipham, January 29th, 1890. She had suffered many years from "indigestion." Three weeks before admission she suffered from influenza, and soon after the onset of the disease experienced sudden acute pain at the umbilicus for about ten minutes; uncontrollable vomiting followed this. The attack passed off, and it was not until January 28th, during the act of defæcation, that she again felt intense umbilical and lumbar pain. There was a doubtful history of blood in the motions. She vomited and had hiccough. The symptoms were somewhat relieved by morphine before admission. The catamenia were irregular. On admission she was restless, with an abdominal aspect, distended belly, quick pulse, and a pelvic tumour. An enema brought away some foul-smelling blood-stained fæcal matter. Abdominal section was performed by Mr. Turner. The pelvic tumour proved to be the uterus enlarged to the size of the third month of pregnancy. Volvulus of the small intestine in two places was found, consisting at the lower place (the upper ileum) of one coil of bowel round another, and, higher up, of a twist of the jejunum on its mesenteric axis. These were unravelled, and then in the right hypogastric region an intussusception involving the jejunum (some five feet from the pylorus) was discovered. There was no difficulty in relieving this, but the intussusception, though not entirely lustreless, was deeply congested and on the verge of gangrene. The question of excision of this portion of the intestine was considered, but the state of the patient was evidently such as to forbid the attempt. The peritoneum was flushed and drained by one of Keith's tubes, and the wound united in the usual way. The patient had no further vomiting, but died some twenty-four hours after the operation. *Post-mortem* examination showed the intussusception to have been caused by a polypoid growth of the small intestine; all causes of the obstruction had been removed by the operation. The uterus was filled with blood clot, and was about the size of the third month of pregnancy; there was a true corpus luteum in the right ovary. It was suggested that the volvulus was secondary to the intussusception. Some remarks were made as to the diagnosis and rarity of the case, and as to the necessity in cases of obstruction requiring abdominal section for the operator to be quite certain that all the possible causes of obstruction had been removed. In this case they were no fewer than three, and in many there was more than one.

Acute Intussusception in a Child aged 4 years: Resection: Death from Shock Twenty Hours after Operation.—Mr. C. B. LOCKWOOD described a case in which resection of an intussusception had to be practised under these circumstances. The patient, who was a strong and healthy female aged 4 years, had been seized with purging and vomiting five days previously, but no blood or slime was passed with the motions. The sickness continued, and the abdomen became distended, but, nevertheless, a tumour about three inches long could be felt in the right iliac fossa. An intussusception was diagnosed, and the abdomen opened by an incision in the right linea semilunaris with the faint hope of being able to withdraw the invaginated bowel. There was slight peritonitis, and the invaginated bowel, which was part of the ileum, was firmly adherent to its ensheathing intestine (which was also ileum), and the peritoneum split at every attempt at withdrawal. It was therefore decided to resect the intussusception, and, with this end in view, the peritoneal sac in the neighbourhood of the wound was washed with sponges, and the intestines above and below the diseased part were controlled with an elastic band. The intussusception and a wedge of mesentery were removed, and, after the distended intestines had been emptied of gas and fæces, suturing was done by the Czerny-Lembert method. The abdomen was closed after having been irrigated with hot water, but this increased the shock instead of diminishing it. There was exhaustion before the operation, and considerable collapse after it was finished, and from the latter the child never rallied, and died twenty hours after the operation. The examination showed that the lumen of the bowel was quite pervious, and that the line of sutures was quite secure. In commenting upon this case, the fatal result was attributed mainly to the time occupied in the operation. The resection of a portion of mesentery had much to do with this, as it caused troublesome bleeding and seemed unnecessary. The emptying of the distended bowel was of great importance, both as an aid to the performance of the operation and as adding to the subsequent security of the stitches and relief from obstruction. The literature of the subject seemed to show that out of fifteen cases of resection of intussusceptions three had recovered. However, a distinction should be made between acute and chronic cases. Finally the desirability of adopting other methods of operating, with the view of saving time and diminishing shock, was alluded to.—Dr. ORMSBY (Dublin) related a case of obstruction of the bowels which he had treated in August, 1889. The patient was a woman who had been confined about six weeks previously. She then had trouble about the pelvis and her bowels had remained unrelieved for forty days. She was in a moribund condition when she came under the speaker's care. He at once opened the abdomen, when the intestines, which were greatly distended, protruded. He punctured them in three or four places and could then find his way about in the abdomen. He found the seat of obstruction at the middle of the descending colon. It was a band of lymph crossing in front of the bowel, and was soon broken down with the finger. The abdomen was closed, the patient being much collapsed. However, at the end of thirty hours she had a good motion, and finally recovered.—The PRESIDENT considered that Mr. Turner's case of intussusception accompanied by volvulus of the small intestine was very rare indeed.—Mr. H. CRIPPS said that, as to the question of dealing with a case of irreducible intussusception, he thought that resection gave the best chance of recovery. He mentioned a case at St. Bartholomew's Hospital, in which the ileo-cæcal valve was found protruding at the anus. It could be reduced for some two or three inches. Laparotomy was performed, when, with a finger and thumb pushing from below, Mr. Cripps was able to pass the intussuscepted part up to the situation of the ileo-cæcal valve. Then came a difficulty. The child lived some time afterwards; and at the *post-mortem* examination all was found reduced except the ileo-cæcal valve itself, which jutted into the cæcum, and formed a swelling as large as a champagne cork. If one were unable to push the piece back, what would have to be done in such a case? He himself should leave the intussusception, and make an artificial anus above the ileo-cæcal valve. The surgeon should see these cases early enough, in order to be able to do them good. He also related a remarkable case that occurred at St. Bartholomew's Hospital about ten years ago. A child was brought in with a substance that looked like a "leathern strap" protruding from the anus. About six inches of it were pulled out and cut off; the child was then admitted. Pieces of bowel were gradually removed, and the child recovered. Six months afterwards, when it died from measles, nearly the whole of the large bowel was found to have gone.—Mr. HOWSE said that when the ileo-cæcal valve protruded, the adhesion was at the valve, which was so tightly fixed that it was impossible to reduce it without tearing the bowel. He did not think abdominal section was the proper line of treatment, but that the better method was to cut away the protruding ileo-cæcal valve from the anus. The two cut ends of the bowel might then be sewn together, and if this procedure were conjoined with abdominal section, the whole protrusion might then be reduced into the abdomen. He was led to this line of treatment by an Italian case in which the ileo-cæcal valve was cut off by mistake, and the bowel returned, the patient afterwards recovering. He thought that was the most successful way of treating the most serious cases. Where there was great gaseous distension of the bowels he objected

to puncture for its treatment. Paralysis of the muscular coat of the bowel supervened, and fæculent matter was apt to escape however fine the trocar employed. Even if stitches were put in the peritoneum was so rotten that they would not hold. He thought puncturing for the treatment of flatus was often fatal.—Mr. PARKER said that in a case in which he had found great difficulty in returning the bowel into the abdomen he had passed a long tube into the bowel from the anus, and then by manipulation of the bowel at the abdominal wound he had found the flatus pass away by the long tube. In another case of a child in which an acute was engrafted upon a chronic intussusception, he found the acute could be reduced whilst the chronic malposition could not be returned. He consequently put back the bowel into the abdomen with the chronic intussusception unreduced, and thought the child would die. But he happily recovered. The bowels acted, and there was a hard mass in the groin for months afterwards. But the child was now quite well, and the mass in the groin had quite disappeared.—Dr. WHIPHAM thought great care should be exercised in the administration of opium in such cases. It was right to use it at an early stage of the disease. It relieved pain and spasm and peristaltic action, but after a time, when constipation had been established and vomiting was occurring, it masked the symptoms, and great caution should at such time be exercised in its use. Opium then led to a deceptive calm, often simply disastrous, since it encouraged delay in operative proceedings. The disease went on in the belly, and the patient being quiet and comfortable, one at last drifted into that worst form of surgery, "too late" surgery.—Mr. BARKER spoke of cases in which the intussusception could not be reduced by any ordinary amount of traction. For these he some years ago suggested a plan of treatment. If the portion of intussuscepted bowel was too swollen and solid to be reduced, he suggested the making of a longitudinal incision through the intussusicipiens, the removal of the intussusceptum by a cut across it, stitching of the two edges of the circular wounds in the intussusceptum together; with special care to secure them most carefully at the mesenteric edge; finally, washing of the edges of the longitudinal incision and stitching of it up. Some bleeding from the cut surface would be rather beneficial. He threw out the suggestion some four years ago, but had not yet had an opportunity of carrying it out. He had since then had three cases in which he had reduced the intussusception. As to the distension of the bowels, he had thrust his scalpel into the gut, and let gas and fæces come away; had then stitched up the wound and reduced the bowel into the abdomen. He thought it safer to deal with an incision than with a puncture. In considering the treatment, the question arose, When ought one to operate? He believed as soon as injections had failed, if the diseased returned, the time for operation had come. *Per se*, the operation was not a very severe one. His last cases were 4 or 6 months and 4 years old respectively, and both recovered.- Dr. KINGSTON FOWLER mentioned the case of a patient who had been in the Middlesex Hospital. She had pain in the abdomen which increased until obstruction supervened. Abdominal section was advised by the surgeon, but the patient refused. A few days afterwards the patient passed by the anus a portion of bowel, to which was attached a melano-sarcomatous tumour. As soon as an intussusception of the bowel was detected in the Middlesex Hospital, the injection of air, etc., was first tried, and if this failed the surgeon was called in; but the relief afforded by the surgeon was too often not successful, whilst cases which were almost *in articulo* did sometimes recover if left alone.- Mr. TURNER, in his reply, said that he believed his case was almost unique in its complications.—Mr. LOCKWOOD said that, in his case, he had removed a portion of the mesentery, which caused some bleeding and increased the time occupied in the operation, and the gravity of the operation for the patient. In his paper he had collected nine cases in which an aperture was made into the bowel above the intussuscepted portion, all of which had died. As to the suggestion of Mr. Barker, he would remind his hearers that the bowel that had to be sutured longitudinally was soft, and could not well be expected to heal. For simple great distension he had made an incision with the scalpel, and then closed it with a ligature.

ANNUAL MEETING.

The remainder of the sitting was occupied with the business of the annual meeting.

Report of Council.—The retiring Honorary Secretary (Dr. T. BARLOW) read the report of the Council, which stated that the past year had been unusually prosperous. The members now numbered 518. Two distinguished foreign honorary members, Dr. Bigelow and Professor von Nussbaum had died, and seven ordinary members, including Sir W. W. Gull, Bart. The question of the incubation period of certain infectious diseases was still under the consideration of the committee appointed to investigate the subject. The rules of the Society had been revised, and would be submitted to the meeting for adoption. The treasurer's financial statement showed that the balance in hand in January, 1890, was £58; in January, 1891, it had increased to £119, after payment of all the year's expenses.—The President, Mr. C. HEATH, moved, from the chair, the adoption of the Council's report, and the satisfactory financial statement of Dr. Ord, the Treasurer; and the resolution was carried.

Votes of Thanks: New Rules.—Mr. HOWSE proposed a vote of thanks to the retiring President, which was felicitously seconded by Dr. WHIPHAM.—Mr. C. HEATH returned thanks for the vote, and proposed that the meeting should adopt the new rules. The chief change effected in them was that the annual meeting would for the future be held at the end of the session, that is at the second meeting in May, instead of at the first meeting in January.—Votes of thanks to the retiring Vice-presidents and members of Council were cordially adopted; and Brigade-Surgeon MYERS and Mr. PARKER proposed a very hearty vote of thanks to the retiring Secretary, Dr. Barlow, after three years of office. This was carried with much applause, and Dr. BARLOW replied in feeling terms.

Election of Officers.—The result of the ballot for officers and council for the year 1891, was then declared, and was found to be the same as the list proposed by the outgoing Council. The following is that list. The gentlemen whose names are marked with an asterisk were not on the Council, or did not hold the same office, during 1890. *President:* *Sir Dyce Duckworth, M.D., LL.D. *Vice-Presidents:* C. Bastian, M.D., F.R.S.; *A. B. Duffin, M.D.; H. G. Howse, M.S.; *H. G. Sutton, M.B.; *B. Hill, M.B.; S. Sibley. *Treasurer:* W. M. Ord, M.D. *Council:* J. Abercrombie, M.D.; *T. Barlow, M.D.; C. E. Beevor, M.D.; R. L. Bowles, M.D.; T. Churton, M.D.; E. Diver, M.D.; *D. W. C. Hood, M.D.; *P. Kidd, M.D.; A. E. T. Longhurst, M.D.; T. J. Maclagan, M.D.; *W. Pasteur, M.D.; P. H. Pye-Smith, M.D.; W. H. A. Jacobson, M.Ch.; *W. Anderson; *A. A. Bowlby; *G. Buckston Browne; J. R. Lunn; Malcolm Morris; R. W. Parker; J. K. Thornton. *Honorary Secretaries:* *D. W. Finlay, M.D; W. H. Bennett.

MEDICAL SOCIETY OF LONDON.

MONDAY, JANUARY 12TH, 1891.

J. KNOWSLEY THORNTON, M.B., President, in the Chair.

On Chronic Disease of the Uterine Appendages.—Dr. W. DUNCAN read a paper on chronic disease of the uterine appendages. This paper will be found at page 101. (A few clinical notes have been omitted.)—Mr. ALBAN DORAN read a paper on the treatment of this class of affections, an abstract of which is published at p. 106. The PRESIDENT asked Dr. Duncan whether the cases related by him were consecutive, and whether they comprised all the cases of the kind which had been thus treated by him. If not, what principle had been followed in the selection of the cases?—Dr. DUNCAN explained that the list did not purport to include all his cases treated by abdominal section. Years ago, before the Waterloo Road Hospital was placed in a condition of sanitary repair, his results in all cases of abdominal section had been so awful that he would not like to publish them. In other respects the cases were consecutive.—Professor SINCLAIR, of Manchester, pointed out that severe attacks of puerperal fever were a frequent cause of the affections for which these operations had subsequently to be undertaken, and as these had decreased of late years in consequence of greater care and skill in operations and instrumental labours, the number of cases of disease requiring operative interference had tended to

diminish. He observed that little had been said of gonorrhœa as a cause of severe forms of the disease. In relation to this subject he related an anecdote of a student of his, a man who knew his work well, who, on presenting himself for examination in London, had been asked the most frequent cause of ovaritis, in answer to which he had mentioned gonorrhœa. Thereupon the examiner retorted: "I am talking of respectable married women, and not of strumpets." He urged that strumpets were not the only people who suffered from severe attacks of gonorrhœa; on the contrary, they took care of themselves whereas the respectable married woman, not being warned, frequently fell a victim to infection at the hands of her husband. Another frequent cause of these diseased conditions was ill-advised treatment, especially at the hands of the younger men who had obtained a smattering of gynæcology, and were but too anxious to display their skill. He instanced the case of a weakly married woman who had applied to a newly fledged practitioner on account of a sore throat. The practitioner elicited the fact that, though married, she had never been pregnant, and thereupon he obtained permission to examine her, declared that the uterus was retroverted, and forthwith inserted a pessary. In the sequel the woman developed a hæmatocele, followed by abscess in the left broad ligament and Fallopian tube which burst into the rectum. He hoped someone would be bold enough to condemn this tendency to rash treatment on the part of general practitioners. He alluded *en passant* to cases of intermitting hæmatocele, and mentioned an example of this affection. The patient had been under his observation for seven years, but as the tumour invariably cleared up after treatment, he had been unable to ascertain the condition of the parts. He had operated for removal of the tubes during the last ten years but he had found it a difficult and dangerous operation. With regard to prognosis, he said there were operators who assured their patients that the operation was practically unattended with danger, and he mentioned a striking example of the folly of so doing. He urged that the Staffordshire knot ought to be abandoned as utterly unreliable, as much so, indeed, as Keith's clamp for ovariotomy. Lastly, he expressed unreserved approval of the practice of flushing the peritoneum, and expressed his surprise that Sir Spencer Wells should have obtained his results in view of the fact that he boasted of having resorted to flushing on only two occasions. In conclusion, he said that operators were disposed to regard the woman's escaping with her life as constituting *per se* a satisfactory result; but he urged that more attention should be paid to the ultimate effects upon the general health.—The PRESIDENT recalled that in his opening address before the Society he had denounced the tendency complained of by Dr. Sinclair.

The discussion was then adjourned until Monday, January 26th.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JANUARY 7TH, 1891.

A. L. GALABIN, M.D., F.R.C.P., President, in the Chair.

Specimens. Dr. PHILLIPS: Genital Organs from a Fatal Case of Purpura Hæmorrhagica. Dr. DAKIN: Tubercular Uterus and Appendages.—Dr. HAYES: (1) Distended Fallopian Tubes; (2) Fibroid Polypi.

On Removal of the Uterine Appendages in Cases of Functional Neurosis.—Dr. PLAYFAIR read a paper on this subject, in which he detailed several cases that had come under his observation:—1. A case of neurosis treated by removal of the appendages, without benefit, subsequently cured by systematic treatment. 2. A similar case in which the operation was recommended, and about to be performed, when the patient refused her consent, likewise cured by systematic treatment. 3. A case of neurosis, in which there was distinct evidence of structural disease of the appendages. In this instance the neurotic symptoms were first dealt with, in the hope that the patient would be sufficiently bettered to avoid the necessity of operation. 4. The subject of hystero-epilepsy and mania treated by removal of the uterine appendages was considered, and an illustrative case given. The general conclusions arrived at were:—1. That the removal of the appendages was not a legitimate procedure in cases of purely functional neurosis. 2. That when marked structural disease of the appendages coexisted with severe neurotic conditions, the latter should be treated in the first instance, in the hope that operation might be avoided. 3. That in hystero-epilepsy and hystero-mania the results of operation had been so unsatisfactory that it was a procedure of very doubtful expediency, and not to be recommended.—Sir SPENCER WELLS referred to a pamphlet by Dr. Ross, of Toronto, on "The failure of the removal of the tubes and ovaries to relieve symptoms." He says, "To operate on organs not diseased for the relief of indefinable pain symptoms, hysterical symptoms, cataleptic symptoms, epileptic symptoms, is to my mind unjustifiable. A craze seems to have taken hold of the profession. The axiom seems to have become, if a woman has indefinite pains and local symptoms, take out her ovaries. This axiom requires a radical change." Dr. Ross went on to say, "I have seen these unjustifiable operations done both in Europe and America.....Many cases in which ovaries and tubes are removed to relieve certain nervous symptoms remain unrelieved..... Many cases I hear of as cures are not cures.....From our many failures to remove nervous diseases, as hysteria and epilepsy, by castration, we can see that the ovaries play but a part in their causation; and I believe that we might as well hope for relief of these diseases by enucleation of both eyes as by removal of both ovaries, or both tubes, or both tubes and ovaries, or even tubes, ovaries, and uterus." Dr. Ross related a case where he removed the ovaries in 1886. In 1888 he was able to report that his patient had been in splendid health ever since operation, but in 1890 had to say "her mental condition is not what it was before. She seems lazy, indolent, and fat, and is not the bright little woman she was before the operation, even when she had her aches and pains. Sexual intercourse is only indulged in as a marital duty; it gives neither pain nor pleasure." Then Dr. Ross proceeded: "Many deaths from these operations have been recorded.....A girl's prospect of marriage, maternity, and a happy life are blasted for ever by such a procedure." He (Dr. Ross) then referred to a case where a lady of his acquaintance was operated on in the provinces, and her case was brought before the Gynæcological Society in December, 1888, very soon after the operation as a practical cure. He (Sir Spencer Wells) had seen that lady that day; she had never been well since the operation, but very much worse than before, and her case instead of being a cure was a deplorable and disastrous failure. He had seen other cases almost as unsatisfactory, and he fully concurred in all that Dr. Playfair and Dr. Ross had said against unnecessary and unjustifiable mutilation for transitory disease.—Dr. PRIESTLEY referred to the debate on the subject at the International Medical Congress held in Copenhagen six years ago. The preponderance of the best opinion was adverse to operation. His own experience was not favourable to it. It was not free from danger and was not easy, nor did it cure, proving that severe ovarian pain without disease is but the expression of a general neurosis. The proposal to remove the uterine appendages arose really from mistaken diagnosis, and was comparable to treating as the real ailment the pain in the knee associated with hip-joint disease in children, or the pain in the calf of the leg so often experienced by women who were the subjects of phlegmasia dolens. It was well known that neurotic cases often got better spontaneously. Alteration of surroundings, an engagement to marry, or other occurrence, was sufficient. Dr. Priestley said that neuralgia of the testicle was not treated by castration, therefore why was castration performed in women? He referred to the remark of the late Dr. Matthews Duncan about the dangerous precedent of allowing a patient to decide upon an operation. He contended that these cases were best treated by medical and moral treatment as recommended by Dr. Weir Mitchell. He would lay it down as a rule that the appendages should only be removed when there was distinct local disease, ascertainable by examination; and he would put still some further limit to this, for it was well known that both ovaries and tubes might be considerably enlarged and yet return to their natural size without operation. In those formidable diseases mania and epilepsy he did not venture to give an opinion.—Dr. GERVIS said he agreed with the first and third conclusions of Dr. Playfair, but in the second he should be influenced by the interpretation to be put on the word "marked." If it sig-

nified organically and permanently affected, then he failed to see any object in hesitating at operation, unless the local conditions gave rise to no symptoms of importance. But if it meant only a condition which came within the limits of what was curable, then certainly systematic treatment should be tried before any idea of operation was entertained. He believed systematic treatment combined with massage was often of real value, not only in curing the general neurotic condition but the local malady.—Dr. Horrocks said it was necessary to remember that a functional neurosis was a complaint without an organic lesion to account for the symptoms. It was always difficult to prove a universal negative. Hence, when a woman complained of pain in the ovarian region it was not easy to say that she had no disease in the pelvis to account for such pain. If no disease could be found and yet the patient complained persistently of pain and distress, which remained unrelieved by systematic treatment, it became a question whether it was not justifiable to open the abdomen and examine the pelvic viscera, with the object of discovering, if possible, the source of the pain and removing it. In such a case, if the ovaries and tubes were found to be healthy, ought they not to be dropped back into the pelvis and left alone? He mentioned a case now in Guy's Hospital, under his own care, which had been treated twelve months without benefit. She was waiting to have abdominal section performed to relieve her ovarian pain, although, on careful examination, no disease could be found in the pelvis. He did not think that healthy ovaries and tubes should be removed in cases of true functional neurosis.—Mr. Alban Doran said there was a great difference between the removal of the appendages for disease and their removal for a neurosis. In the first case, even when the patient might have recovered without operation, structures absolutely diseased were removed, the ligatured pedicles remaining as relatively small sources of irritation. In removal of the appendages for neurosis, structures only assumedly morbid were cut away, whilst the ligatured pedicles remained as definite sources of irritation in these neurotic patients. Some believed the induction of the menopause cured the neurosis, but the menopause was always more or less of a shock, and a premature menopause was a still greater shock.—Dr. Heywood Smith said that in his experience many cases had been entirely relieved from intense neurosis of the ovaries by their removal. He mentioned a case of intermittent melancholia cured by removal of the uterine appendages. One ovary was beginning to undergo cystic degeneration.—Dr. Hayes thought neurotic symptoms were not usually present where there was disease of the appendages; and even if they were present they were not relieved by removing the diseased appendages. Where these organs were diseased, they should be removed for other reasons. He was led to believe that patients often submitted to these operations in order to escape from the inconveniences of menstruation and childbearing.—Dr. Playfair, in reply, said Dr. Heywood Smith had misunderstood him. His paper was not written with the view of opposing operation in suitable cases of structural diseases which he himself constantly practised, but to show its inefficiency in cases of purely functional nervous breakdown. He could only repeat his conviction that these cases had generally nothing to do with the reproductive organs. In mixed cases, operation should follow, not precede, the attempt to cure the neurotic symptoms.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Friday, November 19th, 1890.

J. M. Finny, M.D., President, in the Chair.

Left Hemiplegia with Aphasia.—Dr. Beatty exhibited a young girl suffering from left hemiplegia with aphasia. There was complete loss of taste and smell on the left side, and left hemianopsia was present and symmetrical.—Dr. C. J. Nixon remarked that left hemiplegia was usually explained by a double lesion in the common situation; but the fact of the patient being left-handed explained all the phenomena that existed, assuming there was a single lesion. In place of the left hemisphere administering to the phenomena of speech, in this instance it was the right hemisphere that acted.—Dr. Beatty, in reply, located the lesion in the angle and posterior segment of the internal capsule on the right side.

A Case of Scleroderma.—Dr. Nixon read the notes of a case of unilateral scleroderma, in which there was hemiatrophia facialis, atrophy of one side of the body, and alopecia confined to the side of the head corresponding to that of the body implicated. The patient was exhibited, and the existing features of the case were dwelt upon. Large patches of morphœa were engrafted upon the sclerodermatous skin. Dr. Nixon gave reasons why the affection should be regarded as a trophoneurosis. The treatment adopted was the administration of cod-liver oil and a mixture containing muriate of quinine, tincture of the perchloride of iron, and the liquor of the hydrochlorate of arsenic. The local treatment consisted in the use of warm baths, with shampooing, rubbing the indurated skin with lanolin. The patient was kept warmly covered, and warned to avoid wet or cold.—Remarks were made by Dr. Tweedy, Dr. Beatty, and the President; and Dr. C. J. Nixon replied.

Cystinuria.—Dr. Walter G. Smith read a paper on cystinuria. The condition was rare, scarcely 70 cases being on record. A boy, aged 8 years, was reported by his mother to have passed urine of a fragrant orris-root odour, and depositing a greenish sediment. His health was excellent in all respects, and there were no symptoms of urinary irritation. Out of six occasions upon which the urine was examined, once only was cystin found. The crystals were identified by their form, solubility in ammonia, and insolubility in acetic acid. The true formula of cystin was $(C_3H_6NSO_2)_2$. The following is a summary of Dr. Smith's review of the facts at present known concerning cystinuria: 1. Cystin, or a cystin-like body, occurs in small amount in human urine as a normal product of proteid metabolism. 2. No relationship exists between uric acid and cystin. 3. Associated with cystinuria, pathologically, is the occurrence, in the urine and fæces, of certain ptomaines, belonging to the class of diamines, namely, (*a*) Penta-methylene diamine (cadaverin), $C_5H_{14}N_2$; (*b*) Tetra-methylene-diamine (putrescin), $C_4H_{12}N_2$. 4. Normal urine and fæces never contain diamines, nor do they occur in cystin calculi. 5. The formation of diamines is due to the agency of specific bacteria in the intestine. 6. The exact nature of the correlation between cystinuria and diaminuria has not yet been determined. 7. Cystinuria may persist for years without apparent injury to the health of the patient. 8. The therapeutical indication is to disinfect the contents of the bowel. Dr. Smith exhibited some microscopic slides showing the characteristic crystals of cystin.

Section of Obstetrics.

Friday, January 2nd, 1891.

S. R. Mason, M.B., F.R.C.S.I., President, in the Chair.

Specimens.—Mr. M'Ardle exhibited: (1) Subperitoneal Fibroid, removed from a patient aged 32 years; (2) Ruptured Ovarian Cyst, removed from a lady aged 24 years; (3) Large Ovarian Cyst.—Dr. W. J. Smyly showed a Large Fibromyoma which he had removed on account of hæmorrhage. The pedicle was treated extraperitoneally, and the patient made a good recovery. He also showed Tubes and Ovaries removed for Gonorrhœal Salpingitis.—Dr. Macan showed a Fibrous Tumour removed from a patient who had been two months married, and was about two months pregnant. The operation was not difficult, but the peritoneum became infected from the stump, and she died on the fifth day after operation.—Dr. Macan also showed a Multiple Ovarian Cystoma removed from a patient.

Three Ovariotomies in one Patient.—Dr. Macan read a paper on a case on which he had performed abdominal section three times, and removed an ovary each time. He drew attention to the fact that a great many similar cases to this had been explained by a separation of one ovary into two parts by some constricting band. Professor Winckel, in his work on the "Diseases of Women," said no case was absolutely proved to be one in which three ovaries were present unless the three ligaments of the ovaries were also found. As his case did not fulfil this condition, he was obliged to place it in the second class, where there was a greater or less probability of three ovaries being present. The chief points of interest in the case were:—First, the performance of laparotomy three times on

the same patient; secondly, the probability of three ovaries being present; thirdly, the occurrence of a hernia in the abdominal walls, which would, in any case, have called for operative interference.—Dr. F. KIDD thought that the title of the paper was based on an assumption, as no microscopical examination of the tumour had been made at the time, nor was any description given as to where or in what manner the pedicles of these various tumours had been ligatured with reference to their attachments to the uterus. He believed the presence of a third testicle had never been demonstrated, and there was a great analogy between the testicle in the male and the ovary in the female.—Dr. HORNE wished to know if both Fallopian tubes had been removed, and thought the occurrence of menorrhagia, subsequent to the removal of two ovarian tumours, very unique and difficult of explanation.—Dr. BAGOT said that Dr. Macan had stated that this was the first case in Ireland in which a third laparotomy had been performed. He thought that it must have escaped Dr. Macan's memory that he had previously performed a third laparotomy in the case in which he mentioned that he had operated for abscess of the bladder wall. As to the method of flap-splitting the abdominal walls in operating for hernia, he had seen patients operated on by this method by its originator, Dr. Hänger, in Leipzig; it was certainly the best method he knew of.

Fæcal Fistula.—Dr. W. J. SMYLY said this fistula was the result of coitus, and passed through the navicular fossa upwards and backwards into the rectum. The case was cured by dividing the perineum, and thus splitting flaps on the lateral walls and uniting them by continuous catgut suture.—Dr. MASON referred to another case in which injury to the vagina had been caused by forcible connection.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, JANUARY 7TH, 1891.

C. HAYDON WHITE, L.R.C.P.LOND, M.R.C.S., President, in the Chair.

Gastrostomy.—Mr. A. R. ANDERSON showed a man, aged 55, on whom gastrostomy had been performed on June 26th, 1890, for malignant stricture of the œsophagus. The disease was situated in its lower portion close to its termination in the stomach. The patient was then much emaciated, and could only swallow fluids in small quantity and with considerable difficulty. He spat up blood-stained mucus, and any attempt to pass a bougie caused bleeding. There was no history of syphilis or of injury to the gullet. After the operation he improved greatly in health and gained weight, but there had been some falling off during the last month.

Laparotomy for Abdominal Injury.—Mr. ANDERSON read notes of the case of a youth, aged 18, over whose abdomen the wheel of a heavy cart had passed, the injury being followed by symptoms closely resembling those of ruptured bowel. An exploratory laparotomy revealed nothing beyond considerable intraperitoneal hæmorrhage. The abdomen was washed out, and the patient made a good recovery.

Hysterical Lethargy.—Dr. HANDFORD read notes of the case of a young married woman, aged 37, who was first seen late on the evening of July 20th, in conjunction with her usual medical attendant. She was supposed to be suffering either from meningitis or uræmia. Her illness had begun three days previously with headache, delirium, and vomiting. She soon improved sufficiently to go about and take solid food. On July 20th she became unconscious, but at long intervals cried out, "I shall go mad." There was no alteration of the reflexes, no affection of the sphincters, no optic neuritis or ocular paralysis, and no albumen in the urine. The breathing was quiet, and the pulse soft and regular, speed 100. The temperature remained normal throughout. She could swallow a few spoonfuls of milk, but retained it a long time in her mouth. The limbs were flaccid, but there was no paralysis. The physical signs pointed to the absence of any serious organic disease, and hysterical lethargy—corresponding to one of the phases of hypnotism in which the unconsciousness was deepest—was suspected. Next day it was ascertained from some other friends that she had been subject to hystero-epileptic fits since childhood; and also that she had lately been overworked and underfed, and had helped to nurse a neighbour's child who died of tuberculous meningitis, and who had been accustomed to cry out, "I shall go mad." The patient gradually recovered consciousness and mental power, but it was a month or more before she talked readily. Dr. Handford also mentioned the case of a boy, aged 10, in whom, after a very trivial head injury, unconsciousness came on suddenly at the end of a week. The boy was supposed to be dying, but during examination sat up and began to laugh. He had previously shown some wilfulness. He soon got quite well.—The PRESIDENT, Messrs. ANDERSON, PRYCE, and CATTLE made remarks.

Specimen.—Dr. WILLIAM RANSOM showed the organs from a case of Ulcerative Endocarditis. The patient was a man, aged 24. There were large masses of vegetations on the wall of the left auricle and on the mitral valve, ruptured chordæ tendineæ, pneumonia, old infarcts in spleen and kidney, recent superficial hæmorrhage in pia mater over frontal lobe of right hemisphere. The vegetations were practically solid masses of micrococci.

Sterilisation of Milk for Infants.—Dr. WILLIAM RANSOM read a paper on this subject, in which attention was drawn to the probability of milk being a frequent agent in producing tuberculous disease in infants. Soxhlet's apparatus for sterilising milk was exhibited, and the possibility demonstrated of attaining the same object with the ordinary boat-shaped bottle and ordinary domestic utensils.

Examination of Sputum.—Dr. CATTLE read notes on this subject.

Demonstrations, etc.—Dr. HANDFORD demonstrated the Diazo Reaction in Ehrlich's Test for the Urine in Enteric Fever.—Dr. WM. RANSOM showed Micrococci in Ulcerative Endocarditis.—Mr. ANDERSON showed an Encysted Vesical Calculus.—Dr. CATTLE showed Tubercle Bacilli stained by different methods.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, DECEMBER 10TH, 1890.

M. A. MESSITER, M.R.C.S., President, in the Chair.

Hammer Palsy and Exhaustion Paralysis.—Dr. SUCKLING showed a toolmaker, aged 36, who had for twelve months suffered from weakness of the right arm and leg, with inability to follow his employment. In his work he used a little hammer, and for many years he had done ten hours' work daily, the movements required being very fine and precise. His illness began with inability to direct the strokes of the hammer, and cramp on using it. After a long walk he dragged his right leg, and after talking for a time speech became very difficult, the difficulty being purely motor. He had at these times pain in the left side of the head. There was no optic neuritis, and no alterations in the reflexes, or any signs of organic disease. He had much improved with rest, galvanism, and tonics. The occurrence of hemiplegia and aphasia after effort in a case of hammer cramp was of interest.

Intestinal Obstruction.—Mr. CHAVASSE exhibited a specimen taken from a woman, aged 45, in whom complete intestinal obstruction had existed for a fortnight previous to operation. An exploratory incision, made as for inguinal colotomy, revealed annular scirrhus at the junction of the descending colon and sigmoid flexure. Three inches and a half of the bowel, with the neoplasm, were resected, the lower opening was closed and dropped back into the peritoneal cavity, and an artificial anus established at the upper one. The operation lasted one hour. The patient, who was exhausted by her previous inability to take nourishment, subsequently had three copious evacuations of the contents of the bowels, each being accompanied by syncope. On the last occasion, fourteen hours after operation, restoratives failed to rally. Examination showed that the small opening left in the gut by the encroachment of the growth had become blocked by pieces of undigested apple skin, thus causing the final obstruction.

Uterine Fibroid removed per Vaginam.—Dr. PURSLOW showed a fibroid tumour of the uterus taken from a patient, aged 53, who was admitted in a collapsed condition from uterine hæmorrhage. She was found to have a fibroid tumour, apparently in the anterior uterine wall. The bleeding was stopped by plugging and ergotin, but recurred, and a laminaria tent was introduced. Two days later the tumour began to slough, and the patient had very severe septicæmic symptoms and

purulent discharge. She was placed under an anæsthetic, and the tumour was removed piecemeal with the volsella, the uterus being plugged after operation. She had no further hæmorrhage, and gradually recovered after some further slight septicæmia.

Ovarian Cystoma. Mr. JOHN W. TAYLOR showed this specimen removed from a young single woman who, during childhood, had suffered from hip-joint disease. She consulted Mr. Taylor with all the signs of ascitic fluid in the abdomen. Mr. Taylor supposed the case to be tuberculous peritonitis, but on opening the abdomen a large cyst of the broad ligament was found containing 10 pints of fluid. The patient made a good recovery.

Fibromyoma of Uterus.—Mr. CHRISTOPHER MARTIN showed a large solid tumour of the ovary removed by Mr. Lawson Tait from a lady, aged 32, single. It had been growing many years, and six years ago a very eminent London gynæcologist said it was hopeless to attempt to remove it. Microscopic sections showed it to be a fibromyoma undergoing calcareous degeneration. It weighed over 9 lbs. It had no connection with the uterus, the pedicle being formed by the elongated right broad ligament. The wound healed by first intention, and the patient returned home in perfect health.

Dermoid Cyst of Ovary. Mr. CHRISTOPHER MARTIN also showed a dermoid ovarian cyst removed by Mr. Lawson Tait from a married lady, aged 28. It was glued to the posterior surface of the lower part of the uterus, and interfered with delivery, so that craniotomy had to be performed in the patient's first labour, and premature labour was induced when she again became pregnant. The patient made an easy recovery. The tumour was the size of a cocoanut, and was filled with dense masses of matted hair mixed with fatty matter.

Tarsectomy. Mr. JORDAN LLOYD showed bones removed by tarsectomy from a boy, aged 9 years, with an exaggerated talipes equino-varus. The bones consisted of the whole astragalus, the anterior half of the os calcis, the cuboid, and a portion of the scaphoid. The foot came into good position, and the wound healed solidly by primary union within three weeks. The boy was still under treatment, and the sole of the foot was flat on the ground when the patient stood upright.

Sequestrum Removed from a Fistula in Ano.—Mr. JORDAN LLOYD showed a sequestrum, the size of half an adult finger, which he had removed through a perineal incision from a boy, aged 7 years. The boy had been sent to Mr. Lloyd as a case of ordinary fistula *in ano*, but at the time of operation a sinus was traced, running up the side of the bowel towards the pubes, the body of which in its right half was found to be necrosed. There was no history of an acute attack of any kind. An abscess formed gradually in the right ischio-rectal fossa, and opened about five months before coming under Mr. Lloyd's care. The patient made a good recovery.

Scrivener's Palsy in the Muscles of the Neck.—The PRESIDENT showed a man who had been in the habit of writing with a pen held in his mouth. He wrote in this way a good legible hand, and followed the occupation of a clerk, but latterly the muscles of his neck commenced to fail, and he had had to discontinue the practice.

Paper. Dr. EUSTACE HILL read a paper on the Chemical Composition of Condensed Milk, and their Use as Food for Infants.

REVIEWS AND NOTICES.

HANDBOOK TO DR. KOCH'S TREATMENT IN TUBERCULAR DISEASE. By EDWARD F. GRÜN, M.R.C.S., L.R.C.P., and WALTER D. SEVERN, Assoc. Roy. Coll. Sci. London: J. and A. Churchill. 1890.

As the result of a most careful perusal of the *Handbook to Dr. Koch's Treatment in Tubercular Disease*, we feel compelled to state our conclusion that it would have been perhaps better for their own credit, and certainly more for the good of the profession, had the authors not rushed into print so precipitately on their return from Berlin, as it is evident that they have not prepared and thought out their work sufficiently well to enable them to render their book either very interesting or permanently valuable.

Koch's treatment is not a thing to be taken up lightly and unadvisedly, and we cannot help thinking that this so-called handbook, in the hands of even the best physicians—many of whom are necessarily comparatively ignorant of the fundamental principles of practical bacteriology and inoculation methods—might be the indirect cause of very serious accidents.

With the first chapter of the work it is scarcely necessary to deal beyond stating that it gives only one method of staining, and that method probably not the best, although it is generally used in the Charité, where the assistants are of course accustomed to the somewhat complicated method. It also gives a very incomplete account (which would have been better left out) of the method of cultivating the tubercle bacillus. The chapter commences with a misstatement, for Koch distinctly says that his method does not cause the death of the tubercle bacilli, but only of the tissues in which they are growing. Then follow omissions of points bearing on matters of fundamental importance; for example, in speaking of the sterilisation of the syringe, it is merely stated that "it suffices to rinse the glass part first with mercuric chloride solution 1 in 2,000, and then thoroughly with absolute alcohol." This is all that is said at this point about this sterilisation, though later, at the part giving the description of the method of inoculation, it is incidentally mentioned that "the tube of the needle must be cleansed before and after every operation with a silver wire and absolute alcohol." We are then told "that before use each time the solution should be heated up to kill any spores of bacteria which may have sprouted in the intervening time." As the conditions under which spores on the one hand and the organisms that result from this sprouting on the other are destroyed are very different, it would be well to know to which phase of the life of the organism reference is here made, as such a description as this may refer to either or both. We are also told that "the injections are preferably made early in the morning; 9 A.M. is the time adopted in Berlin, and would be a good hour at all times." How 9 A.M. can be a good hour at all times is almost as incomprehensible as how spores can be killed when they "have sprouted in the intervening time," especially as we are afterwards told that 8 o'clock in the morning may with advantage be one of the "all times" to which reference is made.

We speak thus strongly of this part of the book because we wish to deprecate, in the most forcible manner possible, this rushing into print on the part of those, who, not giving themselves time to think out a subject that involves the gravest issues, may do an incalculable amount of harm both to patients who may come under this method of treatment and to the method itself.

We are ready to believe that this work does not fairly represent the knowledge of the authors, for the clinical part of the work and the notes on the cases that they observed in Berlin are of a much higher order than the work in the first part. But here, again, the language is slipshod, and the proof-reading is far from perfect. Some sentences are incomprehensible; whilst in a book of fifty pages such a word as "supiginous" should not be allowed to occur. Everything, in fact, points to a somewhat hurried and careless writing, for which an apology may be accepted by most readers, who will feel, however, whilst accepting it, that the authors really owe such apology to themselves. They may have been first in the field; but this fact will bring them little credit especially from those who read the first twenty pages only. From those who are not discouraged and read further, the authors will receive credit, no doubt, for their careful notes on some of the cases that they have observed, and for the fact that they have brought within reasonable compass a description of some of the more important cases that were treated in Berlin during their sojourn there, but we should strongly advise anyone who wishes to carry out Koch's treatment to go into the matter for himself much more carefully than he possibly can with only the help of the handbook before us.

It is to be hoped, indeed, for the sake of both authors and possible readers, that the edition is not large. The authors would, then, do well to reconsider the subject carefully, and, having thoroughly revised and extended their work, they might place it before the profession in a form more com-

plete. Their present effort is, no doubt, well meant, but the result is far from satisfactory.

One of the best features in the book is the drawing comparing normal—principally spore-bearing—tubercle bacilli in sputum with a specimen of sputum after treatment, in which the bacilli have become degenerated and their number diminished.

On Severe Vomiting during Pregnancy. By Graily Hewitt, M.D.Lond., F.R.C.P., etc. London: Longmans, Green, and Co. 1890. Pp. 147.

Dr. Hewitt's views of uterine pathology are familiar to all who take an interest in obstetrics and gynæcology. The volume before us is the application of "the mechanical system of uterine pathology" to the vomiting of pregnancy. According to Dr. Hewitt, in by far the majority of cases of vomiting during pregnancy, slight or severe, the vomiting is a reflex effect of irritation seated in the uterus, and due to "undue pressure or tension of the nerve filaments distributed in the walls of the cervix, especially those in the vicinity of the internal os." The alterations most frequently present in the uterus are briefly: flexion, rigidity, and impaction, and the impaction and rigidity are connected with the flexion. "The probable order of events prior to pregnancy in the majority of cases of severe pregnancy vomiting may be thus stated: 1. Weakness (from inadequate nutrition) of the uterine tissues. 2. Occurrence of undue degrees of flexion. 3. Metritis and subsequent rigidity of cervix (and, after pregnancy has set in). 4. Increase of degree of flexion and displacement, etc." (p. 127). If Dr. Hewitt's theory is correct, the following propositions ought to be true, and, if shown to be true, they might be held to prove the theory, at least until some other explanation is forthcoming: 1. In cases of pregnancy with flexion of the uterus, vomiting should be more severe and more often present than in cases without flexion. 2. In cases of pregnancy with severe vomiting, flexion of the uterus should be more often present than in cases with little or no vomiting. 3. In cases of vomiting with flexion of the uterus, relief should follow removal of flexion, which does not follow other treatment, or occur if the flexion is left unrelieved. Dr. Hewitt makes no attempt at all to demonstrate the two first propositions. His line of argument is that indicated in the third proposition, and consists in (1) showing that flexion is often present with vomiting (omitting any estimate of how often it is present without sickness); (2) giving a theoretical explanation of how flexion ought to cause vomiting; and (3) relating cases to show that disappearance of the vomiting follows removal of the flexion. But many of the cases quoted from other authors were treated in other ways besides removal of flexion, and the vomiting of pregnancy usually gets better spontaneously, at or about the mid-term of pregnancy; therefore his cases do not perfectly demonstrate the proposition, proof of which we have desired.

We have said enough to indicate our opinion of the strength and the weakness of Dr. Hewitt's argument. It only remains to be added that the author has bestowed much labour on the collection of cases, and his statement and defence of his theory are characterised by ingenuity, temperance, and candour. The book will at least do good by preventing the possible evils of uterine displacements during pregnancy from being overlooked.

Report of the First Meeting of the Australasian Association for the Advancement of Science. Published by the Association. 1889.

We have much pleasure in noticing the first of what we trust may be a long series of volumes containing the proceedings of the annual meeting of the Australasian Association for the Advancement of Science. This Association was founded in 1888, upon the same lines as the British Association, and its rules are practically the same. The first meeting was held at Sydney, and the General Committee resolved that the annual meeting should be held at different cities in the Australasian Colonies; Melbourne being fixed upon for the second meeting place, and a New Zealand town for the third. The Report before us shows the arrangements of the meeting to have been what our readers are familiar with in connection with the gatherings of the British Association and of our own Association. The scientific work of the meeting was conducted in the following Sections: A. Astronomy, Mathematics, Physics, and Mechanics. B. Chemistry and Mineralogy. C. Geology and Palæontology. D. Biology. E. Geography. F. Economics and Social Science and Statistics. G. Anthropology. H. Sanitary Science and Hygiene. I. Literature and Fine Arts. J. Architecture and Engineering. Excellent addresses were delivered in each section by the President, and afterwards the several papers were read and discussions took place thereon. The Sections with which we would most particularly deal are those most nearly allied to medicine.

In the Chemical Section papers were read on Butterine, or as it has been called by Act of Parliament in this country, margarine; on the Dissolved Matter Contained in Rain Water collected at Canterbury, New Zealand; on the Chemical Laboratory at the University of Sydney, which, when completed, will leave little to be desired. In Biology, the President discussed in his address the influence of Physiographic Changes in the Distribution of Life in Australia. Among the papers read we notice the following: A Comparative Study of Striated Muscle, by Dr. Haswell; Note on the Nomenclature of the Sexual Organs of Plants and Animals, by Professor Jeffrey Parker; On a New Australian Mammal akin to the Cape Mole, by Dr. E. C. Stirling. In the Section of Anthropology, the papers were chiefly of a linguistic and ethnological nature.

It is curious to note that there was not a single paper read treating of the physical anthropology of the Australasian aborigines, notwithstanding the opportunities which exist for observations on them, and the many interesting and important points which remain to be worked out before the natives become extinct—which there is every indication will happen before many years elapse. In the Section of Sanitary Science and Hygiene, the President discoursed on the Various Hygienic Aspects of Australian Life. The other papers contained in the Report are On the Classification of Persons who have been Exposed to the Infection of Small-pox, so as to show the Relation between the Incidence of the Disease and Different Degrees of Protection by Vaccination, or by a former attack: Theatre Hygiene: the present Sanitary Condition of Sydney as compared with the past; and Sanitary Sewerage. All these are interesting papers, and may be read with much advantage by those interested in sanitary questions. The volume consists of 659 pages of well printed matter, and is illustrated by no fewer than 49 plates and maps; it also contains many statistical tables of considerable value. The volume shows that scientific work is being pushed with commendable zeal in those distant parts of the British Empire. It is reasonable to expect that with the increasing facilities offered by the universities, the amount of good work done in the Australasian Colonies will steadily increase.

NOTES ON BOOKS.

Physiological Quantities or Constants. By V. H. Wyatt Wingrave, M.R.C.S., L.S.A. (London: Henry Kimpton. 1890.)—In this handy little book, Mr. Wingrave has arranged some of the most important figures relating to quantity and measurement, in a manner very convenient for reference. The numbers are taken from the most recent editions of standard physiological textbooks, and are arranged with admirable clearness and precision. It need hardly be said that the work before us is not intended to supplant these textbooks, but we fancy that students going up for examination will find this waistcoat pocket companion more suitable for the purpose of refreshing their memory than a bulkier volume.

Colour Blindness and Defective Sight in Relation to Public Duty. By George Mackay, M.D.Edin. (Edinburgh: Macniven and Wallace. 1890.)—This little pamphlet is a reprint of one of a series of "Health Lectures for the People," and it would be well if the people would read it, for although it contains

nothing that is new, it indicates in a very concise but clear manner the dangers to which the travelling public are constantly exposed by the ignorance or supineness of those whose duty it is to determine the physical capacity of men employed as seamen or on railways. After a brief account of the nature of light and the physiology of vision, the author points out the nature of congenital colour blindness, the principle of Holmgren's wool test, and the utter inefficiency of the tests adopted by the Board of Trade and most railway companies. The subject of tobacco amblyopia is also touched upon, and the necessity of the periodical testing of the vision pointed out. A great many other objects are dealt with, such as the eyesight of school children, the prejudice of employers of labour against men wearing glasses, while at the same time they do not insist upon any standard of vision, and many other matters which we have not space to enumerate. The pamphlet contains nothing that is not admitted to be true by all authorities, and it ought to be widely read by the public as a summary of our knowledge of the subjects of which it treats.

Illustrations of Diseases of the Skin and Syphilis, with Remarks. By Tom Robinson, M.D. (London: J. and A. Churchill.)—The first plate shows the appearance of fully-developed syphilis on the body of a child twenty-four hours after death, drawn by Burgess. The second shows the appearance of syphilis in the palm; the third kerion, or suppurating ringworm. The author announces that this is the first fasciculus of a series which he hopes to produce. The production of coloured plates representing skin diseases requires no apology, so long as the artistic execution is sufficiently good. Without depreciating the value of Mr. Burgess's delineation of the appearances in the dead child, we cannot help thinking that his skilled brush might have been better employed in delineating the appearances in the living subject.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

IMPROVED HYPODERMIC INJECTOR FOR THE ADMINISTRATION OF PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

A few years since I suggested a safe little instrument as a substitute for the hypodermic syringe. It consisted simply of an elastic measuring ball and an injecting needle. The balls were made in several sizes, and each ball was capable of holding a definite amount of fluid, and was marked with a number indicating its capacity in minims.

The improved injector is especially intended for the ad-



ministration of the antituberculous lymph, and its cost is so moderate that a separate instrument can be employed for every patient; it possesses many of the special qualities of Professor Koch's more elaborate syringe. The measuring balls are made in two convenient sizes, one having a capacity for holding one fluid centimètre, and the other for exactly half that quantity. The needle is attached to the ball by a simple joint, and it carries a large boss, which serves for a handle during its introduction. The injector can be instantly and perfectly charged by simply compressing the ball between the thumb and finger, and then inserting the open end of the joint into the lymph. The needle must then be fixed on the ball and filled by a similar movement. The little instrument should always be carefully preserved from dust, and both before and after every operation it ought to be washed out with absolute alcohol, and then by a ½ per cent. solution of carbolic acid.

Some very valuable notes by Mr. Henry Campbell, of Queen's Hospital, Birmingham, on the metrical dilution of the lymph for hypodermic use appeared in the British Medical Journal of January 10th, 1891.

The safety hypodermic injector can be obtained from Messrs. Mayer and Meltzer of Great Portland Street.

John Ward Cousins, M.D.Lond., F.R.C.S.,
Senior Surgeon to the Royal Portsmouth Hospital and the Portsmouth and South Hants Eye and Ear Infirmary.

STERILISED ALPINE MILK OR CREAM MILK.

We have examined several tins of this milk. Our analyses agree with those put forward by the vendors, and show that the preparation is a genuine milk of good quality, condensed to one-third. It is quite free from added sugar, and from so-called "preservatives." The claims made for this product, which differs entirely from those commonly known as "condensed milks," are justified; and we may call attention to it as one which is likely to be valuable to the profession.—(Loeflund and Co.: Baelz and Co., St. Mary Axe, E.C.).

MALT AND HYPOPHOSPHITE BISCUITS.

These biscuits are made from malt and wheat flour, and contain hypophosphites. They are free from adulterations and impurities, and are well manufactured and palatable. They are intended to be used under medical direction.—(Reade Brothers, Wolverhampton.)

WARRINGTON CHLOROFORM.

We have examined a specimen of this chloroform, which, we are informed, is manufactured by a special process. It is quite free from the impurities commonly found. The results of our analysis enable us to state that it is a very pure product.—(A. H. Mason, 46, Jewin Street, London.)

IMPROVED MALT EXTRACT WITH COD-LIVER OIL.

We have received and examined several bottles of this preparation. The malt extract possesses a very high diastasic power; its action upon starch is unusually rapid. The oil used is a genuine cod-liver oil. The preparation is free from "preservatives" and from other adulterations. It is sound and well manufactured.—(Loeflund and Co.: Baelz and Co., St. Mary Axe, E.C.).

MOLFA SOAP.

Some specimens of this soap have been submitted to us for examination. The results of our analysis show that it is a well-manufactured hard soap, of very good quality. The soap is "superfatted," contains no free alkali, and is free from excess of water, from insoluble matters, and from adulteration of any kind. (Dinneford and Co., New Bond Street).

VICHY NATURAL MINERAL WATER, ST. LOUIS.

It is claimed that this is a mineral water containing a small amount of arsenic, and that it is especially useful in certain disorders. We find the arsenic to be present in about the amount stated upon the labels.—(Sources de Vichy.)

"CONCENTRATED CLAM JUICE," OR "EXTRACT OF CLAMS."

This is a liquid preparation of peculiar saline fish-like odour and taste, not unlike those possessed by oysters, put up in hermetically sealed tins. Our analysis points to the juice being what it claims to be, namely, a watery extract of shell fish. It does not appear to be possible to put up the preparation in anything else but tins, but it is satisfactory to find that it is free from any trace of poisonous metals. When prepared according to the directions given it forms a very appetising broth. The preparation may prove useful in many cases.—(A. H. Bailey, Boston, U.S.A.: G. Fuller, Tower Chambers, Moorgate Street, E.C.).

PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

A FURTHER COMMUNICATION ON A REMEDY FOR TUBERCULOSIS:

By Professor Dr. ROBERT KOCH,
Berlin.

[*The German Text from which this is translated is published in the Deutsche Medicinische Wochenschrift, January 15th, 1891.*]

[*Continued from page 1195, volume II, 1890.*]

Results of Recent Therapeutic Experience.

Since the publication of my experiences with a new remedy for tuberculosis two months ago, many doctors have been put in possession of the remedy, and have thus been enabled to make themselves acquainted with its qualities by their own experiments. As far as I can judge by the publications that have appeared on the subject, and the letters addressed to me, my statements have, on the whole, found full confirmation. That the remedy exercises a specific action on tuberculous tissue, and can in consequence be employed as a very delicate and certain reagent in searching out hidden, and diagnosing doubtful, tuberculous processes, is agreed on all sides. And in regard also to the therapeutic effect of the remedy, most accounts agree that, in spite of the relatively short duration of the treatment, many patients show improvement, varying only in degree. In not a few cases I am informed that cure even has been attained. Only in some exceptional cases has it been affirmed that the remedy may not only be dangerous in too far advanced cases—which is freely admitted—but that it directly hastens the tuberculous process, that it is in fact harmful *per se*. I myself have had the opportunity during a month and a half of collecting further experiences regarding the therapeutic effect and the diagnostic value of the remedy in about 150 cases of various forms of tuberculosis, and I can only say that all I have lately seen is in harmony with my former observations, and that I have nothing to retract of what I have before stated.[1] So long as the only point of importance was to judge of the correctness of my statements it was not essential to know what the remedy contains, and what its origin is. On the contrary, it was clear that subsequent experiments would be all the more unprejudiced the less was known of the remedy itself, but now that such experiments in sufficient number have been made and have proved the importance of the remedy, the remaining task is to study the remedy beyond the application it has hitherto found, and if possible to apply the principles which lie at the foundation of its discovery to other diseases. This task, of course, demands a full knowledge of the remedy.

The Steps by which the Discovery was made.

I therefore think the right moment has come to make the necessary statements which follow, before I discuss the remedy itself. I think it imperative for the better understanding of its action to trace shortly the steps that led me to its discovery. If a healthy guinea-pig be inoculated with a pure cultivation of tubercle bacilli, the inoculation wound generally becomes sealed, and seems to heal up during the next few days. It is only in the course of from ten to fourteen days that a hard nodule is formed, which soon opens, forming an ulcerating spot which persists until the death of the animal; but the case is very different if an already tuberculous animal be inoculated. The most suitable animals for this experiment are those that have already been successfully inoculated four to six weeks previously. In the case of such an animal also the small inoculation wound becomes sealed at first, but no nodule is formed, a peculiar change taking place at the point of inoculation. Already, on the first or second day, the spot becomes hard and dark-coloured; and this is not confined to the point of inoculation, but spreads around to a diameter of 0.5 to 1 centimètre. During the next few days it becomes more and more clear that the epidermis thus changed is necrotic. Finally it is thrown off, and a flat ulcerated surface remains, which generally heals quickly and completely, without carrying infection to the neighbouring lymphatic glands. Thus the inoculated tubercle bacilli act quite differently on the skin of a healthy guinea-pig and on that of a tuberculous one. But this remarkable action does not belong exclusively to living tubercle bacilli, but also in the same degree to dead ones, whether killed by low temperatures of long duration, which I at first tried, or by boiling heat, or by certain chemicals.

This peculiar fact having been ascertained, I followed it up in all directions, and it was then further found that pure cultivations of tubercle bacilli thus killed, after they have been ground down and suspended in water, can be injected under the skin of healthy guinea-pigs in large quantities without producing anything but local suppuration.[2] Tuberculous guinea-pigs, on the other hand, can be killed by an injection of very small quantities of such suspended cultures, the time being from six to forty-eight hours, according to the dose; a dose which is just insufficient to kill the animal is sufficient to produce a widespread necrosis of the skin in the region of the point of inoculation. If the suspended matter be still more diluted, so that it is scarcely turbid to the eye, the animals remain alive; and if the injections be continued at intervals of one or two days, a noticeable improvement in their condition soon sets in; the ulcer at the point of inoculation becomes smaller, and finally cicatrises. This is never the case without such

[1] As regards the duration of cure, I should like to state here that of the cases which I had provisionally marked cured two have been again received into the Moabit Hospital for further observation, and that for three months no bacilli have been present in their sputum; the physical signs, too, have gradually quite disappeared.

[2] Injections of this nature are among the simplest and most certain methods of producing suppuration free from living bacteria.

treatment. The swollen lymphatic glands become smaller, the condition as regards nutrition improves, and the progress of the disease is arrested, if it is not already so far advanced that the animal dies of debility.

Difficulties in the Way of the Therapeutic Application.

These facts formed the foundation of a therapeutic method against tuberculosis. But an obstacle to the practical employment of such suspensions of killed tubercle bacilli was found in the phenomenon that the tubercle bacilli are by no means reabsorbed, nor do they disappear in any way, but for a long time remain unchanged in their position, producing smaller or larger suppurating centres. Thus it was clear that in this method the curative effect on the tuberculous process is obtained by a soluble substance, diffused, so to speak, into the fluids that surround the tubercle bacilli, and transferred without delay to the circulating fluids of the body, whereas that which has the pus-forming quality seems to remain behind in the tubercle bacilli, or at any rate to be only very slowly dissolved. Thus the only important thing to be done was to carry out the process, which takes place within the body—*outside* of it also—and if possible to extract and isolate the curative substance from the tubercle bacilli. This problem required much work and time before at last I succeeded, by the help of a 40 to 50 per cent. solution of glycerine, in extracting the active principle from the tubercle bacilli. My further experiments on animals, and finally on human beings, were made with liquid thus obtained; and in this way also the liquid which I let other physicians have in order to repeat the experiments was obtained. *The remedy with which the new therapeutic treatment of tuberculosis is carried out is, therefore, a glycerine extract of pure cultivations of tubercle bacilli.*

The Composition of the Remedy.

Besides the active principle there pass from the tubercle bacilli into the simple extract all other substances soluble in 50 per cent. glycerine, and therefore there is found in it a certain quantity of mineral salts, pigment, and other unknown extractive substances. Some of these substances can be removed from it without difficulty, for the active principle is insoluble in absolute alcohol, and can be precipitated by it—not pure, it is true, but in combination with other extractive substances likewise insoluble in alcohol. The colouring matter, too, can be separated out, so that it is possible to obtain a colourless dry substance from the extract which contains the active principle in a much more concentrated form than the original glycerine solution. But this purifying of the glycerine extract has no advantages as regards practical application, as the substances thus removed have no action on the human organism, and the process of purifying would, therefore, only cause unnecessary expense. The constitution of the active principle can as yet be only a matter of conjecture. It seems to me to be a derivative of albuminous bodies, and to be in close relation to them, but it does not belong to the group of so-called toxalbumins, as it can withstand high temperatures, and in the dialysator passes quickly and easily through the membrane. The quantity of active principle present in the extract is, in all probability, very small; I estimate it at fractions of 1 per cent. Thus, if my assumption be correct, we have to deal with a substance the action of which on the tuberculous organism far surpasses that of the strongest drugs known.

Probable Mode of Action of the Remedy.

Various hypotheses may, of course, be formed as regards the specific mode of action of the remedy on tuberculous tissue. Without in any way affirming that my view is the best possible explanation, I imagine the process to be as follows:—The tubercle bacilli in their growth produce in the living tissues—just as in the artificial cultivations—certain substances which have various but always deleterious influences on the living elements of their surroundings—the cells. Amongst these substances is one which, in a certain concentration, destroys living protoplasm and causes it to undergo a transformation into the condition called "coagulation-necrosis," by Weigert. The tissue having become necrotic, this condition is so unfavourable to the nutrition of the bacillus, that it is unable to develop further, and finally in some cases it dies off. In this way I explain the remarkable phenomenon that in organs freshly attacked by tuberculous disease—for instance, in a guinea-pig's spleen or liver filled with grey nodules—numerous bacilli are found, whilst bacilli are rare or entirely absent when the enormously enlarged spleen consists almost entirely of whitish substance in a condition of coagulation-necrosis, such as is often found in guinea-pigs which die of tuberculosis. A solitary bacillus, however, cannot produce necrosis at a great distance, for as soon as the necrosis has reached a certain extent the growth of the bacillus, and, in consequence, the production of the necrosis-producing substance, diminishes, and thus a sort of mutual compensation sets in, and to this it is due that the growth of isolated bacilli is so remarkably restricted, as, for example, in lupus, in scrofulous glands, etc. In such cases the necrosis only extends over a part of the cell, which then, in its further growth, assumes the peculiar form of a giant cell; I thus follow in this statement of my views the explanation of the growth of giant cells first given by Weigert. Now, if the necrosis-producing substance were artificially added to that contained in the tissue surrounding the bacillus, then the necrosis would extend further, and thus the conditions of nutrition of the bacillus would be much more unfavourable than is usually the case. Then, not only would the more completely necrosed tissues disintegrate, slough, and—where this is possible—take with them the enclosed bacilli, carrying them outward; but the baccilli would also be disturbed in their growth to such an extent that they

would die off much sooner than is the case under ordinary conditions. It is in calling forth such changes that, to my mind, the action of the remedy seems to consist. It contains a certain amount of the necrosis-producing substance, of which a correspondingly large dose has a deleterious influence—even in healthy persons—on certain elements of the tissues, probably on the white blood corpuscles or cells closely related to them, thus giving rise to the fever and the whole peculiar complex symptoms. In tuberculous persons a much smaller quantity suffices to cause, at certain spots—that is, wherever tubercle bacilli vegetate and have already impregnated their surroundings with the necrosis-producing substance a more or less extended necrosis of cells with the accompanying symptoms affecting the entire organism. In this way it is possible to explain—at least for the present—in a provisional way the specific influence which the remedy in certain well recognised doses exercises on tuberculous tissue, as well as the possibility of increasing the doses in so remarkable a fashion, and, finally, to explain the curative effect which the remedy undoubtedly possesses where the circumstances are at all favourable.

REMARKS
ON
THE EFFECT OF KOCH'S REMEDY ON THE INTERNAL ORGANS OF TUBERCULOUS PATIENTS.

Delivered in the Discussion on Professor B. Fraenkel's Paper at the Berlin Medical Society, on January 7th, 1891.

By Professor RUDOLF VIRCHOW.
Berlin.

[Translated from the *Berliner klinische Wochenschrift*, January 12th, 1891.]

With reference to a rather large number of preparations which I have brought here, I beg to be allowed to make a few introductory remarks. In the first place, I wish to say that I do not, as will readily be understood, propose to speak here of my own casual observations on patients, but only of what we have been able to establish by way of anatomo-pathological research. From the beginning of the injection period up to the end of the year that has just passed away the total number of deaths of patients treated by injections of Koch's fluid that have come before us has been 21. Besides these we have already had in the course of the present year, I believe, 6 or 7 other cases; even this very day we have had an opportunity of submitting some new specimens to examination.[1]

It is obvious that this anatomo-pathological material must differ considerably from the clinical, in which processes visible to the eye stand in the foreground of observation and of interest, while we are, of course, much more concerned with the internal parts, most of which are inaccessible from the outside, and the diseases of which can in many cases be only very superficially discovered, even by the most accurate examination. Perhaps, however, you will be interested in having the opportunity, even once, of seeing such results, and comparing them with those obtained by the direct examination of parts within reach.

Of the 21 cases which we had up to the end of December, 16 were phthisical in the narrow sense in which the word is usually employed as denoting disease in which the essential element is that the lungs are affected. As regards the other 5 cases, there were among them an exquisite case of severe bone and joint tuberculosis; a case presenting the peculiar complication of carcinoma of the pancreas, with some small smooth-walled cavities with surrounding induration in the apices; a case of empyema in a lying-in woman, who would probably have died even without the injection; a case of pernicious anæmia with very slight old-standing changes in the lungs and tuberculous pleurisy; lastly, a case of tuberculous arachnitis. The other 16 cases were, as I have already said, cases of pulmonary phthisis, in all of which ulcerative processes of greater or less extent were present; most of them were examples of true consumption.

I cannot now enter into the details of these cases: perhaps I may have an opportunity of doing so at some future time. I may, however, be allowed to make some general remarks on them to the following effect: Just as the activity of Koch's remedy, as seen externally, manifests itself principally in the setting up of very acute irritation in the affected parts, with intense redness and great swelling, so does it also in the internal organs. We have seen very marked instances of this. I have here a preparation which may well be taken as a typical specimen. It comes from the clinic of my colleague, Professor Henoch, and belongs to the case of tuberculous arachnitis already referred to. I may observe that there were also changes in the lungs, consisting in some rather old-standing patches of caseous pneumonia, which might be looked upon as the source of metastatic arachnitis, and a number of recent inflammatory changes. After four injections, in all amounting to 2 milligrammes, the last of which was given sixteen hours before death, the patient (a boy, aged 2¾ years) died, and colossal hyperæmia of the pia mater as well as of the brain substance, the like of which I never remember to have seen before, was found. The preparation before you was at first preserved simply in glycerine; it has kept fairly well also in the dry state. It shows on the surface extreme engorgement of the vessels of the pia mater, whilst internally the brain substance is dusky red in appearance. I take this opportunity of mentioning that in this case—the only one, it may be added, of tuberculous arachnitis which has yet come before us for examination—I personally examined the tubercles; I cannot, however, say that I saw any evidence in them of retrogressive changes. The tubercles were very well formed, and presented the usual appearances of meningeal tubercles.

Similar acute hyperæmias and swellings are also seen in other internal parts. In particular it was repeatedly noted by us that even the surface of old pulmonary cavities showed unusually intense redness of the granulation layers; moreover, hæmorrhagic infiltrations of the walls were not seldom present, and even recent hæmorrhages were observed in the cavities. Thus in a man, aged 30, with an old rectal fistula and numerous tuberculous ulcers of the colon, death was the result of hæmoptysis from an old ulcerated cavity; he had received seven injections, the last thirteen days before his death, on which occasion the first bleeding occurred.

The processes observed, however, are not merely transient congestive swellings as to which it may be assumed that they will, perhaps, disappear in a very short time, but there can be no doubt that in the internal parts actual inflammatory processes, and especially active proliferations, occur to an intense degree. This holds good chiefly with regard to two places in which such appearances are very conspicuous; these are, first, the edges of existing ulcers; and next, the neighbouring lymphatic glands, especially the bronchial and mesenteric. The lymphatic glands present a quite unusual degree of enlargement, and notably that form of medullary swelling characteristic of acute irritations, which is caused by rapid proliferation of the cells in the interior of the glands. It is in harmony with these large acute swellings that frequently also an increase in the colourless elements of the blood can be detected—a condition of leucocytosis to which may, perhaps, be attributable the relative frequency with which various infiltrations of white blood corpuscles in the neighbourhood of the affected parts, especially around the tubercles themselves, can be observed.

These swellings occasionally assume a very dangerous character. I will only refer to the phenomena which are seen in the larynx, where, even in cases in which the ulcerated surfaces themselves become clean, the adjoining parts swell to

[1] In addition to this, my assistants have made necropsies in a large number of similar cases in other hospitals and in private, and I have seen the most important results of these examinations.

an enormous extent, and cause constrictions of a very critical nature. Together with these changes, there occasionally occur other more violent forms, which take on a phlegmonous character, and remind one of œdema glottidis erysipelatodes and retropharyngeal abscess. Here is a fresh specimen of the condition from a case which occurred in January, and which will be particularly interesting to you.

As regards these inflammations, you will understand that it would be difficult to say of every inflammation occurring in such a patient whether or not it had been caused by the injection. We have at present no criterion of an objective kind which could enable us to make such a distinction. I am not in a position, although I have seen rather a large number of such cases, to say precisely how such a kind of inflammation is to be recognised and distinguished from other inflammations which occur in the course of phthisis independently of these injections. Yet there is one thing which is somewhat remarkable; and I will for the present, on account of the lateness of the hour, confine myself to an accurate statement of what we found in the lungs.

It was noticed that among the fatal cases of ulcerative phthisis the large majority exhibited recent changes of great extent, more particularly in the lungs, but also pleurisy—and for the most part very severe pleurisy—simple and tuberculous, frequently hæmorrhagic and not infrequently bilateral.

The changes in the lungs themselves may be divided into two fairly distinct categories. One of these corresponds approximately to that condition which we are accustomed to call caseous pneumonia, or, anatomically, by the name of caseous hepatisation. With respect to this, it should be understood that it is very doubtful whether caseous hepatisation stands in any direct relation to the injection. I should perhaps, for my own part, be inclined to deny any such connection were it not that some of these cases are of quite special significance. From the most characteristic one of these comes this piece of lung, which shows such extensive caseous hepatisation that I do not remember to have seen anything like it for years. The lower lobes of both lungs, especially the right, were as large as in ordinary hepatisation, but the individual foci were packed so close together that there was hardly any normal lung tissue between them. The lung, when fresh, looked like a piece of blood pudding thickly studded with pieces of lard. The parts not occupied by caseous hepatisation had a blackish-red appearance, and contrasted sharply with the caseous portions. This patient (an architect, aged 33) had received six injections, the last one four weeks before his death; the treatment was then discontinued, according to the statement of the doctor, because there was persistent fever, and infiltration of the lower lobe came on. In this case, therefore, the infiltration first began after the injections, whereas previously there had only been induration at one apex; and, as to this, it was afterwards proved that for the most part it presented an older and more indurative character.

Here the acute occurrence of the change after the injections is established beyond doubt. But in other cases also the whole condition of the lungs was in no slight degree different from what we are accustomed to see in cases of consumption. I may also point out that among the 16 cases of phthisis which we had in December there were 5 which showed recent caseous hepatisation in greater or less degree, but none approaching in extent the one just mentioned.

A second change is likewise found in the lungs, which must also be described as inflammatory. It is, in my opinion at least, even more different from what we usually find, although I must here also say that I cannot lay down any universally valid pathognomonic criterion. The pneumonias which develop in the course of phthisis can, as is known, be divided into three different classes. They are either caseous or of the ordinary fibrinous type—these also occur—or catarrhal, the so-called smooth pneumonias in which the essential feature is that accumulations of cells are present in the alveoli. All this is occasionally seen in phthisical patients. I may also remark that pure fibrinous pneumonia, in the ordinary sense of the word, has been present in none of the injected cases.[2] The caseous form I have already mentioned. Any other variety will approximate in type to one of the forms which, according to the ordinary ritual, are classified under the head of catarrhal pneumonia. Injection pneumonia has, in fact, points of similarity to the catarrhal variety, but I must say it has also certain differences. The ordinary catarrhal pneumonia, as we find it in phthisical patients, shows accumulations in the alveoli, which can easily be squeezed out, and are relatively fluid in character. Sometimes they are so thin as to resemble jelly, and it was on the observation of this fact that Laennec based his old doctrine that tuberculous infiltration, as he expressed it, begins with a gelatinous infiltration. Here, however, the product is not gelatinous; on the contrary, it is very watery and turbid, and it might be called a turbid infiltration. It reminds one of a phlegmonous condition. In some places it is somewhat thicker; occasionally it has, to a certain extent, the external aspect of caseous infiltration, without, however, attaining the decidedly dry character of the latter, so that if the two are situated side by side there is no difficulty in distinguishing the one from the other. The catarrhal-phlegmonous product is softer, moister, and looser than the other. Among the specimens here exhibited there is a perfectly fresh one, which, besides a colossal ulcerated cavity at the apex, shows caseous, and—if I may use the expression—catarrhal infiltration side by side in the lower lobe. In two other specimens also caseous and catarrhal hepatisation may be seen side by side. Among the 16 cases of last year, there are 7 which show this more diffuse soft hepatisation.

This form has also something whereby it is clearly distinguished from the ordinary catarrhal hepatisation. It happens that in the midst of these patches foci of softening become developed, which quickly lead to breaking down of the parenchyma and to a kind of excavation—for instance, in the lower lobe—such as hardly occur except in gangrenous bronchopneumonia. This, indeed, was not very frequent. Such a result appears to me to indicate that in these cases a more potent injurious influence has been at work than that which we in other cases recognise as the cause of catarrhal pneumonia. In fact, I am under the impression that—I will not say all these cases—but a certain number of them, exhibit inflammatory processes analogous to those which we see develop on the external parts after injection, and which present a higher or lower degree of intensity, according to the nature of the individual and the special features of the case.

As regards the other results of our examinations, one thing was noted, the significance of which will have to be tested by careful clinical observations on the course of a number of cases: that is the development of fresh tubercles in these patients. It must be understood that I speak on this point with great reserve, as we possess no certain basis of fact which would enable us to pronounce with any certainty as to the duration of small tubercles—I speak here of the submiliary forms—and the age of the submiliary tubercles. On the whole, however, we are disposed to look upon such tubercles as fresh formations. A few observations on the eruption of such tubercles subsequent to injection have already been made clinically in the case of the laryngeal mucous membrane. With reference to this, I may point out that under the eyes of the observer small tubercles, speedily giving rise to new ulcers, have suddenly appeared in places which till then seemed perfectly free. People have comforted themselves with the assumption—at least, so I gather from published records—that these tubercles were present before the injection, but had escaped detection; and it is taken for granted that they will be attacked and destroyed by the remedy and transformed into ulcers. As to the correctness of this opinion in the cases cited I can, of course, say nothing; but I can say that we, examining the internal organs after injection—and especially those which I have always considered the most reliable for the observation of these fresh forms, namely, the serous membranes—have seen the eruption of entirely new submiliary tubercles under circumstances which made it scarcely probable that the tubercles were of older date. This holds good particularly of the pleura, the pericardium, and the peritoneum. The supposition that the tubercles would be powerfully influenced by the action of the remedy, and that their substance would thereby become necrosed, was never realised. All the submiliary tubercles, of which I am here speaking, were perfectly intact, even when

[2] Only partial fibrinous hepatisation was sometimes found in conjunction with other changes.

the injections had been made weeks before. All the more am I convinced that the eruption first appeared *ex post*.

As to the lungs themselves, you know well how difficult it is to recognise these very fine tubercles in their interior with certainty. I will therefore not speak of that, and will confine my remarks to parts in which either (as in the mucous membrane of the larynx) miliary tubercles first appeared after the injection, or after a long course of injection entirely fresh and uninjured tubercles have been found on the serous membranes. Here is an intestine from one of the January cases, in which entirely fresh submiliary eruptions are seen in the vicinity of old intestinal ulcers; the same man (aged 41) had also fresh tubercles in his pericardium.

How these new eruptions are to be explained must be left for further consideration. Nevertheless, I venture to point out that if we assume that all tubercles are produced by bacilli, such out of the way parts as the pericardium deserve special attention. In one other case the so-called epicardium presented in one place not in contact with an affected part of the lung, a small focus where four submiliary tubercles were situated close to each other in the middle of an area of intense hyperæmia. Here there was no alternative but to suppose that the germs had reached that place by way of metastasis. How could we help thinking of metastatic processes here, and conjecturing whether, in fact, the bacilli had not been mobilised, and whether they had not been diffused through the body by a process of infection? Since, as you know, Dr. Koch himself considers the bacilli to be sufficiently refractory to the action of his remedy and we have not found that they are destroyed the possibility must not be overlooked that if in any one place a process of softening whereby the products of disintegration are rendered more fluid, or at least more mobile, is set up by the action of the remedy, these products will also be displaced, and may give rise to new foci in other places. Such a consideration is not far-fetched; and with it is connected another. If we see that during the treatment a whole lower lobe becomes filled with foci of caseous hepatisation, it is an easy step to the conclusion that material which is set free in the upper lobe by breaking up, and which is not coughed up, will perhaps be drawn in by inspiration, with the result that pneumonia such as is caused by foreign bodies and in this case of caseous character—is set up.

I consider myself bound at least to give expression to this view, and to add a warning to practitioners to operate with greater caution in cases where it is not certain that patients have the strength completely to expectorate the broken down tissue, and the habit of doing so, and where there is, therefore, a possibility that transference of material to other parts of the lung may take place with the result of creating new foci of disease.

Permit me now to mention a little point: that is, the breaking down itself, to which my colleague Dr. Koch attaches particular importance as being the principal result effected by his remedy. I admit that all which we have seen indicates that such an effect is produced in many places. It is not yet clear to me, however, how it is that this necrotic effect does not occur universally that, for instance, as I have already said, the submiliary tubercles resist the remedy in many places. I acknowledge that, as has been stated by some earlier observers, for instance, in tuberculous pleurisy, individual tubercles, especially if they are at all of large size, assume an unusual turbid yellowish appearance, and, in fact, can be seen with the microscope to undergo a process of disintegration. But in other cases, even after injections continued up to the day of the patient's death, nothing of the kind occurred.

Even large tubercles show themselves very refractory. We have lately had a very remarkable case, in which tuberculosis of the vertebral column and long bones was present in a boy aged 3 years; large tubercles were also found in the brain. The injections in all amounted to 0.012 g. It was a case from the surgical department in which there was vertebral caries with gravitation abscesses, and many points of disease were present in the joints and long bones of the lower limb. At the necropsy it was found that the boy had an unusual abundance of the so-called solitary tubercles in his brain and cerebellum. As is well known, these tubercles owe their name to the fact that there is usually only one which may be of the size of a walnut; in this case, however, there was a whole heap, I think seven; they were therefore properly not solitary, but they belonged to that category. They were like large lumps of cheesy matter. Neither in them nor in their vicinity were any considerable changes to be seen. I noticed in their interior some soft places, but these occasionally occur in other cases without anything particular having taken place. At all events, the nodules showed no marked breaking down.

In conclusion, I wish to call attention to two points of prime importance which are rightly taken into account in every case of phthisis, namely, ulcers of the intestine, and ulcers in the respiratory organs, particularly the lungs.

As regards the intestine, there can be no doubt that necrotic processes similar to those observed on the external parts of the body in lupus, etc., take place in intestinal ulcers. In old-standing ulcers with extensive surface and thick edges, particularly in which new submiliary eruptions have occurred, we see such necrosis to an excessive degree. An example of this is afforded by the intestine here shown which comes from one of the January cases, namely, the man with the fresh pericardial tubercles. The necrotic process there reaches right through to the serous coat. If the man had lived a couple of days longer perforation would undoubtedly have taken place, as in another case recently mentioned, I believe, by Dr. B. Fraenkel, in which the patient died in consequence of such a perforation. Although perforation and necrosis occur also in other cases of tuberculous ulcer of the intestine, I feel myself obliged to point out that here we have two very severe cases, in which the necrotic process must have taken place very rapidly, occurring in the short space of two months.

The same holds good with regard to ulcers in the respiratory organs in which very rapid disintegration takes place, and the size of the loosened masses is sometimes altogether out of proportion to the ability of the individual to expel them from his body. In this way all kinds of complications from retention and aspiration will be caused.

Among the other specimens I may mention one case of tuberculosis of the larynx of altogether unusual severity, in which twenty injections were given, the last on the day before the patient's death. This was the same man who has already been mentioned as the subject of pericardial tubercles and gangrenous ulcers of the intestine. As regards the point under consideration, a fresh eruption of tubercles of extreme intensity can be seen extending over the whole of the larynx and trachea.

Another specimen shows fresh caseous hepatisation; it comes from a case in which six injections were made—the last four days before the patient's death. We have also one such case in which three injections were given, the last a week and a half before the patient's death, and in which caseous foci and diffuse inflammatory processes are found side by side. Lastly, I exhibit a specimen which was obtained only this morning; it shows the formation of abscesses, starting from bronchiectases of the lower lobe, in progress in the lungs.

HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

Since our last report (in the British Medical Journal, December 20th, 1890) there have been marked changes in several of these cases, and as announced in last week's Journal, three cases (those numbered I, II, VII) are about to be sent to a convalescent home. Through the kindness of Dr. Heron we have been able to make a careful comparison of the condition of these patients at the present time with what it was at the commencement of the treatment. Dr. Heron has unreservedly allowed us to examine the notes of the cases as well as the patients. To his fellow-workers, Drs. Wethered, Adamson and Scott, we are indebted for considerable assistance.

Case I. *Phthisis.*—G. M., aged 23, has been injected altogether 38 times—of which the last 14 have been of the maximum dose of one decigramme. The only time that any reaction has occurred with this dose was on December 27th, after the second injection, when the reaction was severe. However, since that date, during the last 12 injections there has been

no reaction whatever. The patient says that he is much better with only a slight occasional cough, no sweats, the shortness of breath has almost disappeared. He has gained three pounds in weight. There are still tubercle bacilli in his sputum. Physical signs: The dulness of the left side has not altered. *Râles* can be heard all over the left front. They are, however, not so numerous nor so liquid as they were at first. On the right side no adventitious sounds could be heard on January 13th, nor were any to be heard over either back.

Case II. *Phthisis.*—A. D., aged 40, has had thirty-six injections, of which the last twelve have been of a decigramme each. This patient also had a severe reaction on December 27th, with temperature seven hours after injection of 103.8° F., accompanied by thirst, rigor, headache, and *malaise*. He had a second reaction on January 11th, with temperature of 103.8° F. in twelve hours, with rigor, increased cough, headache, and pains in the joints. No reaction since. January 13th. Dulness unaltered. An occasional *râle* can be heard on coughing, under the right clavicle and in the right supraspinous fossa, but nowhere else. Tubercle bacilli are still present in the sputum. The quantity of daily expectoration has diminished from ℥ij to ℥ij. He has gained ten pounds in weight since the commencement of the treatment.

Case VII. *Phthisis.*—H. B., aged 28, has been injected thirty-eight times, the last eleven being of a decigramme each. The patient has gained four pounds and a half in weight. Physical signs, January 13th: Right front, slight dulness, with bronchial breathing above the right clavicle. No adventitious sounds. An occasional creak can be heard in the right supraspinous fossa. Left side: An occasional crepitant sound below the left clavicle. No dulness. In left supraspinous fossa breath sounds harsh, with crepitation after coughing. This case was the first injected for phthisis in this country.

The above cases are those that are about to go away to a convalescent home.

Case III. *Phthisis.*—B. W., aged 22, has only had twenty-seven injections, of which the last ten have each been of a decigramme. He has only had one reaction, on December 27th. It is remarkable that this case, for the first time on that day, as well as Cases I and II, which had not reacted for a long time previously, should all have shown such considerable reactions. Although a decigramme was injected in each case, yet only in B. W.'s case was it the first time that the injection was of this amount. Owing to increased hoarseness and the presence of an ulcer on the left aryteno-epiglottidean fold, the injections in this patient have been discontinued since January 9th, and potassium iodide in 10-grain doses, with inunction of mercurial ointment, substituted. The patient, however, is not improving, and Dr. Heron proposes shortly to recommence the injections. This patient has been remarkable for the want of reaction to the injections, and Dr. Heron has noticed in two other syphilitic cases that they are very refractory to the fluid. This patient's physical signs are unaltered, and there are still tubercle bacilli in his sputum.

Case IV. *Lupus.*—L. T., aged 21. Twelfth injection of 12 milligrammes on January 12th followed by a slight local and general reaction. The local condition is much improved and she has gained five pounds in weight.

Case V. *Lupus.*—E. R., aged 27, has greatly improved.

Case IX. *Lupus.*—E. F., aged 57. Tenth injection of 12 milligrammes on January 10th, the condition of her face is much improved, and the small patch on the back of the right wrist has entirely disappeared, it being now difficult even to discover the scar. On January 5th a centigramme produced a violent reaction in this patient.

Case VI. *Phthisis.*—H. D., aged 14, had an attack of pleurisy with effusion on the left side which commenced on December 17th, 1890, during which she lost two and a half pounds in weight. Injections were recommenced on December 30th, and she has had altogether twenty-six injections, the last being 3 centigrammes. There has been no reaction, and the patient's general condition is improving. She has regained the two and a-half pounds weight lost during the pleurisy and added two pounds more.

Case VIII. *Anæmia.*—A. B., aged 18, left the hospital for Christmas. She returned to be seen last week and was then perfectly well; the swellings in her knees had disappeared, and no signs could be discovered anywhere.

GLASGOW ROYAL INFIRMARY.

REPORT OF CASES UNDER KOCH'S TREATMENT.

[Third report by John Lindsay Steven, M.D., and Charles Workman, M.D., Assistant-Physicians to the Hospital.]

In this report details are given of three fresh cases of which no notes have previously appeared.

Case V. *Phthisis Pulmonalis: Bacilli in Sputum: Marked Reactions.*—J. McC., aged 38, clothier, married; admitted December 6th, 1890, under Dr. Wood Smith, complaining of cough and expectoration, with debility, but no severe night sweats, of nine months' duration. Expectoration muco-purulent, and examined on two occasions by Dr. Cameron was found to contain bacilli. Cough not severe; no hæmoptysis. Fistula-in-ano three years ago. Family history not tubercular. Physical Examination:—Anterior aspect: flattening, diminished movement, dulness, and numerous fine crepitant and wheezing *râles* in right infraclavicular region. Posterior Aspect: Slight dulness and fine crepitant *râles* at right shoulder. Vocal fremitus equal at both apices in front and behind. Bronchial wheezing *râles* throughout the chest. Urine non-albuminous. Temperature for two days before treatment commenced normal or subnormal. Treatment: From December 8th, 1890, to January 3rd, 1891, seven injections were administered, the highest dose being 0.008 gramme, this having been given on the last three occasions, and the treatment having been commenced with 1 milligramme. A marked reaction followed each injection, lasting on an average about twenty-four hours. The lowest maximum point of the reactions was 102.8°, the highest 104.2°, the latter having taken place upon January 3rd, after the patient had been absent from hospital for a week. Between the first six injections an interval of one, or at most two, days elapsed between each, the temperature during the intervals falling to normal or subnormal. The phenomena of the reaction were strictly typical; nothing unusual in the state of pulse or respiration, the highest pulse-rate having been 132, and respirations 32, during reactions. Injections produced changes in the sputum, and sensations of dyspnœa, as well as pain in the chest. After the first injection sputum became tinged with blood for first time in the illness. *Râles* at right apex not so abundant, and patient considers his general state improved.

Case VI. *Phthisis Pulmonalis: Bacilli in Sputum: Marked Reactions.*—J. C., aged 23, single, a clerk; admitted December 11th, 1890, under Dr. Wood Smith, complaining of cough and expectoration of nine months' duration. Pleurisy five years ago, since which winter cough. During the last nine months severe cough, dyspnœa on exertion, night sweats, emaciation, debility, and frequent hæmoptysis. Dr. Cameron found tubercle bacilli in the expectoration. Physical Examination:—Anterior Aspect: Flattening, dulness, tubular respiratory murmur, and crackling *râles* over right apex as low as the third rib. Posterior Aspect: Dulness in both supraspinous regions; sonorous and sibilant rhonchi at both bases. Urine non-albuminous. Temperatures for five days before treatment commenced ranged between 98° and 100°. Treatment: Between December 16th and January 2nd seven injections administered, ranging from 1 to 8 milligrammes. Characteristic reactions after each, with the exception of two given on December 26th and 29th, when the temperatures did not go so high as on the other occasions. The most severe reaction took place after 0.008 gramme, administered on January 2nd, when the temperature reached 104.4°, the pulse 140, and the respirations 29; and when the usual temperature level was not returned to till after a lapse of about thirty hours. Nothing unusual observed in the state of pulse or respiration during reactions. Amount of the sputum slightly increased after the first injections, but diminishing somewhat as treatment is continued. After the last injection sputum rusty and pneumonic in character, and much complaint of dyspnœa, and constriction in the chest. In the intervals of injection the temperature curve presents the same characters as noted before treatment was commenced. No great change in patient's general state, except that crackling *râles* are now quite distinct in the left infraclavicular region.

Case VII. *Phthisis Pulmonalis: Bacilli in Sputum: Ankylosed Hip-joint: Reactions not Characteristic.*—D. R., aged 27, a clerk, single; admitted December 6th, 1890, under Dr. Wood Smith, complaining of cough and expectoration of six months' dura-

tion; frequent hæmoptysis, night sweats never severe, emaciation and debility slight. Morbus coxæ at 8 years of age, operated on by Dr. Hector C. Cameron, and completely recovered from at the age of 18, since which good health till the present illness. Mother died at 45 years of age of bronchitis. Sputum, examined on two occasions, contains bacilli. Physical signs made out by Drs. Wood Smith, Lindsay, Steven, and Workman. Anterior Aspect: Dulness, tubular respiratory murmur, and abundant coarse crackling *râles* throughout the whole inspiratory murmur in right infraclavicular region. Posterior Aspect: Dulness, loud tubularity, and crackling *râles* (less numerous than in front) in right supraspinous region. Rest of chest presents nothing remarkable. All the phenomena indicate a very chronic case, not producing much constitutional deterioration. Urine non-albuminous. Temperature for two days before treatment normal or subnormal. Treatment: Eleven injections have been administered, the first of 1 milligramme on December 8th, the last of 0.015 gramme on January 2nd, 1891. On six occasions this patient has received a centigramme or more of the fluid, and the peculiarity of the case consists in the comparatively slight reactions which resulted from these tolerably large doses. On three occasions, however, a distinct rise is recorded, when the temperature curve was elevated to 100.8°, 100.4°, and 100.6° respectively, after doses of 1 centigramme. During these reactions there was nothing noteworthy in the state of the pulse or respiration. After each injection, however, he suffered from sickness and *malaise;* and the last of 0.015 gramme, although not elevating the temperature above 100°, produced a slight hæmoptysis accompanied by considerable uneasiness in the chest. Between the injections the temperature has been mainly normal or subnormal. The patient has not lost in weight, and the condition of his chest is, if anything, improved.

HARVEIAN SOCIETY OF LONDON.

At a meeting of the Harveian Society on January 8th, Dr. J. Edward Squire read a paper entitled "Remarks on Some Cases of Phthisis treated on Dr. Koch's Method." He said no doubt a notable epoch in therapeutics was attained. Here was a fluid with a selective affinity for the pathological products of a specific inflammation, itself a product, as was stated, of the micro-organism associated with this special disease. This possibility had long been recognised. It was five or six years since Dr. Wooldridge, from a pure culture of the bacillus anthracis in a liquid proteid material, separated the bacillus by filtration, and found that inoculation of this fluid in animals was protective against the anthrax virus. Encouraged by this success he had commenced similar researches on the tubercle bacillus which were interrupted by his untimely death. Dr. Squire proposed the following theoretical explanation of the limitation of the action of the lymph to tuberculous tissue. He defined active tuberculous tissue as tissue in a condition of inflammation produced by the specific irritation of the products of the vital activity of a colony of tubercle bacilli. Dr. Koch's lymph was believed to contain as its active principle these products of the bacilli, and though not sufficiently powerful to set up a specific inflammatory action in healthy tissues, it was enough, when added to the actively inflamed (tuberculous) tissues, so to increase the morbid changes that death of the part resulted from the intensity of the inflammation (that is, by sloughing). Some details as to dosage were then given. Dr. Squire's remarks were illustrated by eight cases under treatment all of which had been so far benefited. Seven were of phthisis, one a child under Dr. Barlow's care with lupus in the Hospital for Sick Children. The dose must be proportioned to the amount of active tubercle diagnosed rather than to the age of the patient. Children were given a smaller dose to begin with than young adults with limited or recent tuberculous deposit, as they were more easily depressed, and in some children a weak and very frequent pulse followed; in others the reaction was not such as to interfere with their sleep at night. Dr. Squire went on to describe the reaction which followed the administration of the remedy. As bearing out the contention that only tuberculous material was affected thereby, he mentioned two cases where the inflamed area produced by blisters showed no change after injection, whilst a lupus patch in close proximity became red and swollen. In conclusion, he emphasised the necessity for a careful selection of cases, and competent supervision of patients throughout the treatment, and especially during reaction.—Mr. D'Arcy Power said that he had seen one of the lupus cases mentioned by Dr. Squire. A third injection of 6 milligrammes had been given ten hours previously. He was quite appalled by the severity of the reaction, and by the amount of collapse which was produced. He thought that if this case was to be in any way taken as a type of what usually occurred, the very greatest care should be exercised in the selection of suitable patients, and injections should only be given when very skilled nursing could be obtained.—Mr. Noble Smith had watched Mr. Watson Cheyne's cases with great interest, and thought that he had witnessed a marked improvement after injections in cases of tuberculous disease of the hip and elbow. He advocated treatment by rest as well as by injection in patients suffering from joint disease. —Dr. Waterhouse narrated the case of a lady with advanced phthisis whose life he thought had been undoubtedly prolonged by Koch's treatment as it was carried out by Mr. Watson Cheyne. After the injections the temperature decreased; there were no night sweats or diarrhœa, and the bacilli disappeared from the sputa, though she still coughed up much lung tissue. A herpetic eruption appeared over one trochanter, however, apparently as a result of the treatment, for it was not a bedsore.—Dr. O'Connor, in watching cases which had been injected was struck by the effect which appeared to be produced upon the mucous membranes of the body. He asked Dr. Squire whether in his patients the treatment had produced any symptoms of pneumonia. He also inquired whether any perfectly healthy persons had been inoculated. Mr. Edmund Owen was present at the meeting solely that he might express his thanks to Dr. Edward Squire for the kindness, care and discretion with which he had carried out the injection treatment upon the patients at the Children's Hospital. On the inauguration of the treatment, Mr. Owen had stated that his mind was quite open upon the subject of Koch's remedy. It was still open—wide open. He would briefly say that, as regards the children who were injected, their tuberculous joints had undergone no more improvement than might reasonably have been anticipated from treatment in hospital upon the old lines, with rest in bed and fixation of the limb. There was one child with tuberculous ophthalmia, tuberculous dermatitis of the lip, and tuberculous disease of the knee. The eye got worse under the injections, the lip got better, and the knee swelled a little. It was customary, however, for tuberculous dermatitis to improve under ordinary treatment. As regards the knee, when the local excitement subsided, the chronic affection seemed to be unaltered. During the progress of the injections in a case of tuberculous disease of the hip-joint, an anomalous rash appeared upon the child's body. It was shown as a case of "Koch eruption," and as such was regarded with considerable interest. In due course, however, several other children in the ward broke out in unmistakable measles, on which the real nature of the first eruption was manifested. Had they been ignorant of the fact that Koch's treatment was occasionally associated with a morbilliform eruption, the ward would not be—as was now unfortunately the case—in quarantine. Probably that evening's meeting was the first occasion of an able and scientific paper on a medical subject being illustrated by a quotation from a daily newspaper. He did not blame the author of the essay for making the quotation, but he could not refrain from expressing his regret that members of the profession had so widely used the public press for purposes of advertisement. There seemed to be a desire to struggle into the heaven of notoriety by the aid of Professor Koch's coat-tails.—Mr. Mortimer said that as Registrar to the Hospital for Sick Children in Great Ormond Street he had carefully watched the cases which had been injected by Dr. Squire. He believed that, if the treatment was to be of service, acute and not chronic cases should be selected.—Surgeon William A. Morris, A.M.S., said that though he had not gone to the Continent expressly to study Koch's method, during a week he had recently spent in Berlin he had endeavoured to see all he possibly could. He saw Professor Ewald's cases as well as those under the care of Professor Bergmann; and though the selective action of the drug was very apparent in lupus, he did not see a single case where

there was a distinctly favourable result. The remedy, which appeared to be chemically allied to the ptomaines, was a virulent poison, comparable to snake poison; and he fully endorsed the lecturer's opinion that the greatest care should be taken in selecting cases for injection. The results hitherto obtained were those of physiological research rather than practical medicine.—Dr. SQUIRE briefly replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

THE meeting of the Surgical Section of the Royal Academy of Medicine in Ireland on January 23rd, is set apart for the discussion of Koch's treatment of surgical tuberculosis. Any Fellows having experience of the treatment, and who wish to make communications not exceeding 10 minutes in length, are requested to communicate at once with Mr. Thornley Stoker, the Secretary to the Section, at 8, Ely Place, Dublin.

GENERAL HOSPITAL, NOTTINGHAM.

SINCE December 13th last, Professor Koch's treatment has been regularly carried out in the General Hospital, Nottingham. About sixteen cases in all have been injected, and some have received as many as fifteen doses. The largest single dose reached has been 4 centigrammes, in a case of tuberculous empyema, which has certainly improved, but is still under treatment. Cases of pleurisy, with and without effusion; early phthisis, with laryngeal affection and without; lupus; tuberculous glands; tuberculous testes; and tuberculous joint affections have been treated. The reactions have displayed all the variations described, including a variety of rashes. No untoward or alarming symptoms have arisen, and the cases are progressing favourably.

THE Staff of the Dorset County Hospital have obtained a supply of Koch's fluid for use in suitable cases.

NOTES FROM BERLIN.

[FROM OUR SPECIAL CORRESPONDENT.]

THE address delivered at the last meeting of the Berliner Mediz. Gesellschaft, on treatment by Koch's lymph, made a great impression on the meeting, and medical circles are keenly excited by Virchow's results, which seem to some to be almost a death-knell to the lymph. Others, again, continue as hopeful as before, and point to cases, in which a continuous improvement can be observed, as the best refutation of all pessimistic views. Burgomaster Ninter of Danzig is one of these steadily improving cases, though the newspapers some time ago reported him much worse, half blind, etc. The fact is, that the treatment is agreeing with him wonderfully well, and that his tuberculous symptoms are improving steadily.

It seems that Minister von Gossler's scheme for the State manufacture and sale of the lymph is not destined to run smoothly. We hear on good authority that differences have arisen in the Cabinet, not only on the "secret remedy" question, but also with regard to the principle involved in a profit to be made out of the remedy by the State.

About a year ago a committee was formed for the erection of a consumption hospital for the poor. In view of Koch's discovery the committee suspended work last autumn; but as Koch himself is the strongest advocate of hospital treatment, the meetings of the committee have been resumed, delegates from the different medical societies of Berlin have been chosen, and it is hoped that, with Dr. Leyden as President, the work will be pushed on successfully.

So many consumptive patients have been and are still travelling to and from Berlin, that there is quite an alarm just now about the danger of infection in railway carriages. The railway companies have issued special instructions as to the cleaning and airing of sleeping cars; and besides this, the Reichsgesundheitsamt (Board of Health) has ordered a scientific examination of the cushions, woodwork, etc., of some of the railway carriages on the most frequented lines, hoping thus to clear up the question a little. If danger should really be found to exist, special precautions will be made obligatory.

ITALY.

THE first case of death among patients undergoing Koch's treatment in Italy occurred at Naples on December 28th. A lad of 18 had been admitted into the Gesú e Maria Hospital, under Professor De Renzi, suffering from very advanced phthisis with large cavities, and so weak that he could not stand on his feet. At his own urgent request he received an injection of half a milligramme on December 23rd, and as there was no reaction a dose of 1 milligramme was administered on the following day; this was followed by slight reaction. On the 26th 2 milligrammes were injected, and more marked reaction ensued. During the night there was abundant expectoration of blood-streaked sputum, with hacking cough. On the 27th the patient was in a very prostrate condition, and, although he rallied somewhat on the morning of the 28th, he died at 9 P.M. from suffocation during a violent fit of coughing.

In answer to inquiries whether the restrictions imposed by the Italian Minister of the Interior on practitioners wishing to use Koch's remedy applied to foreign doctors, the Sub-Prefect of San Remo has stated that they can employ the method among their own countrymen, subject only to such regulations as have been enacted by their respective Governments.

DOSAGE.

DR. CHARLES WORKMAN (Glasgow) writes: In reading the Clinical Notes on a Case of Lupus, by Drs. Morris and Pringle, in the BRITISH MEDICAL JOURNAL of January 10th, I note that they write that: "On November 16th, at 8.45 A.M., he received his first inoculation of 0.01 g., of the ordinary 1 per cent. solution." This would mean that he received one-hundredth of a cubic centimètre of a 1 per cent. solution of the original fluid; that is the ten-thousandth of a gramme. What I think the authors mean (on reading the description) is that the patient was given one cubic centimètre of a 1 per cent. solution, which would be one centigramme of the original fluid.

The same mistake has been made in the tabulated statement, by putting at the heading "Quantity of a one per cent. solution," instead of "Quantity of the fluid (administered in a one per cent. solution)."

HARVEIAN SOCIETY OF LONDON.—The following is a list of the names of gentlemen proposed by the Council as officers of the Society for the year 1891:—*President:* *Mr. H. Cripps Lawrence. *Vice-Presidents:* *M. Handfield-Jones, M.D.; Mr. J. E. Lane; *Mr. C. B. Lockwood; Stephen Mackenzie, M.D. *Treasurer:* *Mr. Malcolm Morris. *Hon. Secretaries:* Mr. D'Arcy Power; *G. William Hill, M.D. *Council:* *Mr. T. Bryant, F.R.C.S.; *Mr. W. W. Cheyne; *Mr. G. P. Field; *J. F. Goodhart, M.D.; *Mr. C. D. Bowditch Hale; *Wm. Winslow Hall, M.B.; W. H. A. Jacobson, M.Ch.(Oxon.); *R. Maguire, M.D.; H. W. Page, M.C.(Cantab.); S. Phillips, M.D.; *M. Pricket, M.D.; *C. T. Williams, M.D. An asterisk is prefixed to the names of those gentlemen who did not hold the same office the preceding year.

LUPUS AND TUBERCULOSIS.—On Tuesday last Mr. Jonathan Hutchinson, F.R.S., delivered the first of a series of three lectures on lupus. The lecture, dealing more especially with its relation to tuberculosis, formed a part of the second course of the London Post-Graduate Lectures, and was held in the theatre of the new Examination Hall on the Embankment. The audience, which numbered about one hundred, included Sir Andrew Clark, Bart., Sir Joseph Lister, Bart., Dr. Henry Monro, Dr. Pye-Smith, Mr. Marcus Beck, Dr. Allchin, and Dr. Abercrombie. At the commencement of the lecture Mr. Hutchinson demonstrated a very interesting case of lupus, one of those borderland cases which seem to serve as connecting links between lupus vulgaris and lupus erythematosus. The lecture was throughout profusely illustrated with drawings from Mr. Hutchinson's boundless store.

BABY FARMING.—A woman named Mitchell, living in Vauxhall, was tried on January 14th at the Surrey County Sessions for gross neglect of two children who had been entrusted to her care, and for whom she had received considerable payments. She was found guilty and sentenced to twelve months' imprisonment. At an inquest held before Dr. Danford Thomas on the body of an infant aged one year and six months, one of the eight children found at 18, Eastlake Road, Loughborough Park, a verdict of manslaughter was returned against a Mrs. Reeves.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JANUARY 17TH, 1891.

NATURE AND PREPARATION OF KOCH'S REMEDY.

WE are once more able to present to our readers, immediately on its appearance in Berlin, another important communication, long looked for, from Dr. Koch, in which he has followed up his first statement with regard to the discovery of a remedy for tuberculosis. We must at the outset express our great satisfaction that Dr. Koch has at length been enabled to make known the nature of his remedy. The position created by his first publication, now two months ago, was from the first unprecedented, and had been felt to be unsatisfactory, even by those most in sympathy with Professor Koch. Apart altogether from the ethical grounds on which, opposed as it was to the Hippocratic tradition, his action in this respect was to be deprecated, there were practical disadvantages no less serious attending such a course. So long as the nature of the remedy was unknown, room was left for a flood of premature speculations regarding its mode of action, which could only serve to delay the recognition of the real issues involved.

In his present paper Dr. Koch defends his action in this matter on the ground that it was not essential to know what the remedy was, and that the very absence of knowledge rendered an unprejudiced opinion regarding its true value more likely to be formed.

Dr. Koch was led to the discovery of his remedy by observing the different results following the injection of tubercle bacilli into guinea pigs, according as the animal was healthy, or was already suffering from tuberculous disease. In the former case the inoculation was followed by local hardening and ulceration, the ulcer remaining unhealed up to the time of death; in the latter the changes were altogether localised, the epidermis at the seat of inoculation became necrosed, was finally thrown off, and left a clean, rapidly-healing ulcer. If, however, instead of being fully active, the cultures of the bacilli were weakened in various ways, by exposure to cold, to heat, or to various chemicals, and, having been suspended in water, were then injected, the result was different. In healthy guinea-pigs the only result was local suppuration, whereas tuberculous guinea-pigs were killed by injections of even small doses in from six to forty-eight hours. If the solution was further diluted, and injected at intervals of one to two days, a notable improvement in the condition of the animal set in, leading ultimately to its recovery.

These were the data on which the therapeutic application of his method to man was based. Dr. Koch found that the tubercle bacilli so injected did not spread, and concluded therefore that their action on the organism at large must be due to soluble substances absorbed into the circulation. This substance he finally succeeded in obtaining by extracting pure cultures of tubercle bacilli with 60 to 70 per cent. glycerine. His observations as to the effect of tubercle bacilli on guinea-pigs agree in all respects with what we know of the action of other pathogenic organisms. It has long been known with regard to anthrax, for example, that in animals not naturally subject to the disease, or in those rendered immune against it, injections of bacilli are followed by local changes, which are entirely absent when the animal is one susceptible of the disease. Furthermore, it is known that the same result is obtained when anthrax bacilli weakened in any way—that is to say "attenuated"—are injected under the skin of animals readily susceptible. In such cases the local changes predominate, but at the same time important general changes take place, by which the animal is subsequently rendered immune against further attacks of the disease. The important point established by these observations—which we owe to Pasteur and to his school—is that immunity against disease is the result of changes occurring locally in the first instance, and extending subsequently to all the tissues of the body—changes produced by the action of soluble substances derived from the bacilli, and not by the bacilli themselves.

Professor Koch's treatment is thus based on a recognition of this principle. He has applied to tuberculosis what many observers, both in this country and abroad—Chamberland, Roux and Yersin, in France; Behring, Fraenkel, and Kitasato, in Germany; and Wooldridge and Hankin, in this country—have already found to obtain for other diseases, such as anthrax, septicæmia, tetanus, and diphtheria.

As to the nature of the active ingredient of the glycerine extract, Dr. Koch's observations leave yet very much to be ascertained. It can be thrown down by absolute alcohol, and is thus obtainable; still mixed, however, with other extractive bodies in a much more concentrated form than that which he recommends for therapeutic purposes. It resists the action of high temperature, in this respect differing from the "toxalbumins" of Brieger and Fraenkel—bodies of utterly unknown nature except that they belong to the class of proteids. It resembles more the "albumose" isolated by Hankin from anthrax cultures, and with which he conferred immunity against the disease, and the substance obtained by Roux and Chamberland from cultures of the septic bacillus with which they obtained a similar result.

As to its mode of action, Dr. Koch somewhat expands his previous statements regarding the power of the remedy in causing necrosis, but any discussion on this point must be reserved for later consideration. The suggestions he throws out in this direction will lend an additional interest for some time to come to all pathological observations regarding the nature and mode of origin of tuberculous tissue. They cannot be deemed so far to explain the necrotic action which the new remedy undoubtedly has on tuberculous tissues. The necrosis which occurs in tuberculous tissue is not an injurious but a curative process, inimical as it is to the further development of the bacillus.

His explanation of the mode of action of the remedy is

perfectly conceivable, and justifies the hope based upon it that a substance which has such a specific action in destroying tuberculous tissue must possess a potentiality for good which will commend it to the profession as an agent which is likely to render the greatest service in the cure of tuberculosis, and may even prove effective in entirely freeing not only men, but many useful animals, from a terrible scourge.

PROFESSOR VIRCHOW ON KOCH'S REMEDY.

THE remarks made by Professor Virchow on the specimens that he showed at the discussion on Professor Fraenkel's paper at the Berlin Medical Society on Wednesday evening last week are calculated to give pause to those who, having seen cases of tuberculosis treated by Koch's method, have thought that all that was necessary in order to treat phthisical patients in the same fashion was a bottle of lymph and one of Koch's hypodermic syringes.

That a careful study of the nature, the extent, and the position of the tuberculous lesion was desirable has been gradually forced home, but that, in addition, the most careful selection of cases to be treated was absolutely necessary had scarcely entered into the calculations of some of those who considered themselves qualified to carry out Koch's method of treatment. We say this advisedly, as, from the nature of the cases recorded in the report of Virchow's "Remarks," which we publish in full elsewhere, it will be gathered that even those most directly under the influence of Koch's own personality and teaching have not been able to differentiate the cases likely to receive benefit from the injection of the lymph from those which would probably be injured by the same treatment. Virchow and his pupils have now had the opportunity of examining a number of cases that have been treated, and much light is thrown on the nature of the processes that occur during the course of treatment. The most remarkable fact that is brought out in these cases is, that, in the human subject at any rate, we cannot depend on the disintegration of small tuberculous nodules taking place even in those cases in which we should naturally expect that such change would occur. It is found even in cases where the injections have been made very shortly before death, and for a considerable period previous to that time, that when the patient succumbed young tuberculous nodules, especially on the serous surfaces, were frequently seen, and in these there was not the slightest trace, even under the microscope, of the degenerative changes which are so characteristic of tubercle that has reached a certain stage of development.

We must assume, therefore, that the nature of the changes that occur in the human subject after the injection of the "lymph" are not the same in all respects as those that followed Koch's experimental injections.

The next most important fact brought out is, that Koch's statement that the bacilli are not killed is undoubtedly correct. Virchow, moreover, holds that not only are they not localised in a very large number of cases, but that there is actually an increased tendency to the formation of metastatic tuberculous nodules or areas, even at considerable distances from the original tuberculous focus. It has been stated that in the case of lupus the reaction—that is, the intense congestion and infiltration with leucocytes of the tissues that succumb—is usually localised, but in the case of the internal organs this localisation is not nearly so defined, although the hæmorrhages and hæmorrhagic infiltrations are always most marked in the granulation tissue of the tuberculous areas.

In the lymphatic glands, near the tuberculous foci, there is usually extreme swelling, much congestion, and great proliferation of the cells in the interior of the glands; the number of the leucocytes is increased in the blood, and it appears that to this increase of the leucocytes the cellular infiltration around the dilated and imperfectly developed vessels of the granulation tissues is due, especially when the blood stream is slowed in consequence of the intense inflammatory congestion. A most important question is that associated with the nature of certain changes found in the lower lobes of the lung in cases of chronic apical phthisis that have been treated by injection. In one case, up to the time when the injections were commenced, there had been no trace of any consolidation in the lower lobes of the lung, but, after six injections had been made, persistent fever came on, and infiltration of the lower lobe was diagnosed. When the patient died it was found that we had here the pathological changes that are usually associated with acute phthisis, secondary to a chronic apical tuberculosis with cavity formation; it differed only from other cases of the same kind, in that it was more rapid in its course and the *post-mortem* changes gave evidence of a more acute process than is usually met with.

From a careful consideration of this case it would appear that the injection did its work in the usual fashion, but too well; the local reaction was obtained, death and separation of the tuberculous tissues in the wall of the cavity were obtained, but the sloughs, in place of being expectorated as they usually are in cases of ordinary phthisis, where the disintegration and separation take place but slowly, were detached in large quantities and were drawn, partly by inspiration and partly by gravity, into the bronchi of the lower lobes of the lung. Thence they made their way into the smaller terminal branches and set up the mixed fibrinous and catarrhal pneumonia characteristic of this condition, with the well-known patches of caseous degeneration at the usual intervals. Other cases of a similar kind were shown, from which the lesson to be learned is only too obvious.

Another danger—also the result of this rapid and extensive sloughing—is met with in the intestine, where, contrary to the usual course of events, there was at the base of the tubercuious ulcer either perforation, or extreme thinning which would have soon ended in perforation.

Beyond these more or less mechanical or gross pathological methods of extension, it must be borne in mind that, owing to the dilatation of the blood and lymph channels, especially where the cell reaction is not good, the way is opened up for the ready transportation of tubercle bacilli from the original foci to parts situated either near to or at some distance from them. Virchow found abundant evidence of this in a case of tuberculous endocarditis, a condition that is not very frequently met with. One of the most important lessons to be learned, however, is that a patient in an advanced stage of phthisis, in whom on account of imperfect nutrition, and especially as the result of imperfect oxidation, the general tissue cells are in a condition of lowered vitality, an irritant or stimulus, such as Koch's lymph appears to be, set up a reaction of degeneration in place of

increased defensive activity. In these cases, in fact, the lymph acts on the weakened cell as an extremely powerful irritant would on a healthy cell, the cells so powerfully stimulated being able to offer little resistance either to the attacks or to the passage of the vigorous tubercle bacilli.

In taking up this ground, we wish it to be most distinctly understood that we can as yet offer no opinion as to the effect that these observations of Virchow's will have on the methods of carrying out Koch's treatment. We feel, however, justified in saying that such a careful and complete account of the anatomo-pathological changes met with in these tuberculous patients who have been subjected to it will prove of enormous value in drawing the attention of physicians and surgeons to the fact that such treatment requires to be used with care and discrimination, directly proportionate to the powerful action which this remedy appears to exert both generally and locally. This is especially the case in patients who, though not necessarily far advanced in phthisis as measured by the number and extent of the tuberculous areas, are nevertheless, by reason of imperfect nutrition, of weakened thoracic muscular system, or of a want of habit of expectoration, are totally unfitted to be subjected to the risk of having set free in their organs or tissues masses of dead tissue in which active tubercle bacilli may be present in enormous numbers. Such patients, if inoculated at all, should be only so treated after a prolonged and careful course of good feeding, plenty of fresh air, and careful nursing; whilst as regards many of them it can never be hoped that they will derive the smallest benefit from the treatment. It is evident, too, that in advanced cases of phthisis it can prove of little value, but for this Koch's own statements should have been sufficient to make everyone fully prepared.

In conclusion, we would say that anyone who thinks of carrying out Koch's treatment should make himself thoroughly master of Koch's original statements, which are calm to a degree, and are as unbiassed as any man could expect those of the author of such a method to be, and then to read most carefully the lectures given by Cornil in Paris, and the demonstration given by Virchow in Berlin. The method is still on its trial, and those who wish to keep an open mind can only do so by a careful study of scientifically observed facts as they are placed before us.

THE PLACE OF PHYSICAL EDUCATION.

I.

We seem at last to be awakening to something like a true perception of the truths contained in the famous phrase of the great captain who once told the British public that his victories were won in the Eton playing fields. The marvellous range and precision of modern weapons, the introduction of smokeless powder, and the degradation of the bayonet to a mere trenching tool, have taken nothing from the forceful suggestiveness of the Iron Duke's assertion. Not play only, nor work only, in the almost antagonistic sense which these terms have until lately borne, but that combination of play and work which alone can make men out of what would otherwise develop into shiftless idlers or precocious pedants, is recognised as the ideal of true education; and the proper application of this principle is the problem which calls for immediate attention.

In most of our larger schools, at all events, the physical training obtainable is no doubt good, so far as it goes. But when we come to analyse it, we see that its value lies mainly in the system of combined exercise and recreation which is more or less generally enforced by what amounts to nothing less than a compulsory edict—a system which, up to the present, owes far more to school traditions and public opinion than to any set design or special fostering on the part of the recognised educationalists, and a compulsion which has sprung mainly from youthful ambition, and is carried out almost entirely by boy authority. It seems that, almost instinctively, the schoolboy has evolved, as the complement of intellectual labour, some sort of system whose value lies in its disciplined exercise of the body; and that, long before we realised its nature, mankind had empirically laid its hand upon the truth that physical training is, equally with mental training, an integral factor of all true education. This linked and complementary duality of our being is explained by the physiologist, who tells us that, even if life have not a physical basis, it certainly manifests its existence and its advancement only by virtue of recurrent physical changes in the organism. Just as in some manual operations the tired right hand and left brain centres can be relieved and allowed to recuperate by the alternative employment of the left hand and the right brain, so the local nervous (physical) exhaustion begotten of mental effort, provided it has not been carried to excess, is no bar to the physical effort (with its associated mental training) involved in muscular exercise; while both forms of exertion are necessary, in due proportion, to the welfare and to the healthy development of the whole organism.

If these facts be admitted; if it be granted also that there are some forms of recreation which involve little or no bodily exercise, and some forms of exercise—such, for example, as the more mechanical and automatic forms of drill—which imply little recreation; that the great educational value of the most useful and most popular games lies in the systematic exercise which they call for, or which they impose on those who engage in them successfully; and, also, that there are many boys in every school who, if they were left to themselves, would shirk their games much in the same way, and for the same kind of reasons, which would induce most boys, if left without compulsion, to shirk their intellectual work; then it behoves all school authorities to provide a physical education not less carefully arranged and systematised, and not less impartially applied to all their pupils than is the moral and intellectual training to which their efforts have hitherto been, in some respects, too exclusively devoted.

Fortunately, the application of such a system would not involve in many large schools any very radical or conspicuous changes. And if the real nature of the problem be recognised, and the data for its solution accepted, it should nowhere be impossible to bring about such alterations of method and such additions to existing practice as may be required in any particular case.

The first essential is to rid the mind of all notions of an essential antagonism between work and play, to substitute the revelation that these two forms of exercise are mutually important factors in education; and thereupon to graft the corollary that each demands not merely its due recognition, but an equal share of forethought, method, and application, if the total product of their joint effects is to be really satisfactory to all concerned. Viewed in this light compulsory games cease to be a bugbear to the parent, who feels that his

child must be made to train his body properly just as he must be made to train his mind.

There are at least two forms of physical education which should be compulsory for every school boy and every school girl—regular drill by a competent and kindly drill-sergeant, and swimming properly taught by a paid and qualified instructor. The former not only improves the carriage and corrects slipshod habits of body, but favours discipline, fosters the habit of ready and prompt obedience, and stimulates both emulation and *esprit de corps*. The latter is not only an excellent and healthy exercise in itself, but endows the learner with an additional power for good which is never forgotten, and which may at any time prove of the greatest service to himself or to others. Of course due care must be exercised that in these, as in all other cases, the young, the naturally timid, and the comparatively weakly are protected against anything like overwork and bullying. Mere drill does not imply much recreation, and should not be too long continued, while it is necessary to see that no boy is allowed to bathe for too long a time or too often during the day, or to dawdle over his dressing.

In boys' schools cricket holds its own as the most useful and the most popular of games. Here, again, it is necessary to see that every small boy is compelled to take his share of playing with lads of his own size and age, as well as of "fagging" at the nets for his older and more skilful schoolfellows; many a player may thus be made, to his own great advantage, out of apparently doubtful material; but if a boy has developed no aptitude for the game by the time he reaches the upper school or the upper forms, the attempt will not have been to his detriment, while he may then be permitted to devote himself to such other forms of exercise as have proved more decidedly suited to his individuality. During the winter months football takes the place of cricket to a great extent, and where boys are properly graded, as they always should be, in respect of age, weight, and size, football can be strongly recommended for all except those few whom the medical officer will certify as unfit for this more violent form of exertion. If the game is a rougher one for all concerned, its average of accidents is not greater than—and certainly, amongst boys, is not so serious as—that of the injuries which occur during the pastimes that obtain during the warmer months, while its encouragement of the virtues of pluck, forbearance, and good temper, its excellent training of wind and muscle, its need of rapid judgment and ready resource, are qualities which deservedly commend it as a method both of physical training and of moral education.

But it must not be forgotten that, while a boy may play his due share of cricket every day for every week of the season, he cannot without detriment engage in the more exhausting football for more than two, or at most three, days in a week, nor for much more than about an hour at a time at the outside. The intervals between football, however, may be well filled up by racquets, fives—and its various modifications—and by that excellent form of exercise, the paper chase. Few things does a healthy boy enjoy more at the time, or look back to with greater interest, than a good cross-country "run." But here, again, arrangement and forethought are necessary to prevent some boys from shirking and to safeguard others from being overpressed.

The various forms of athletic sports are to be encouraged, with the doubtful exceptions of throwing the hammer and putting the weight. These are special forms of exercise which involve great strain on the still miniature frame, and are at the best of but doubtful utility for the growing lad. Systematic running and jumping may be safely and cordially recommended. A boy will soon learn, with the aid of a little skilled advice and supervision, whether long or short distances are likely to be his *forte*, and should be encouraged always to do his best in practice. Parents should learn that the long-distance races are not the really trying or dangerous ones; and, though it would be an obvious absurdity to force or even to allow young children to run in "the mile," it cannot be too clearly impressed upon boys themselves that "the quarter" is a far more trying race than either the hundred yards, which is run in a single breath, or the mile, in which there is some time for comparative rest and for pulling oneself together for the final spurt.

Opportunities for boating and for skating do not exist everywhere. Both are excellent exercises; but the stipulation which should be enforced whenever either is obtainable is that no pupil should be permitted to take part in them unless he has learnt to swim.

Gymnastics occupy a position somewhat different to that of the exercises already mentioned. Most valuable as a means of systematic bodily training, they should, to some extent, and as to the so-called "free exercises" at least, be made compulsory for every pupil on entrance into the school. But they must be under the direct supervision of a competent and responsible instructor; the kind and amount of each exercise must be carefully adapted to the capabilities of each individual pupil, the time allotted to each exercise must not be unduly extended, and a careful record should be kept of the condition and progress of every boy. Above all, it should be recognised that no amount of training in a gymnasium, however carefully arranged, can take the place of exercise in the open air, for either physical or moral good. Similar remarks apply to boxing and to fencing. Both are admirable, but they must be allowed only in the proper place and at proper times, and under skilful supervision. Gloves and foils should never be allowed out of the gymnasium; they may easily become a source of dangerous accidents if imported into studies or elsewhere, and may degenerate into instruments of bullying.

The subject of training scarcely calls for consideration here; for a healthy boy leading a healthy life in a healthy school should practically always be in training for the particular form of exercise that is in vogue at the time.

In correspondence with these particulars, there should exist such an arrangement of the hours of work, etc., as shall not drive off the time of exercise into the duller or darker hours of the day; nor permit of active work, whether physical or mental, being undertaken either just after or immediately before the meal hours; nor must boys be allowed to hurry over or to shirk their meals. Not good food merely—which, while good in itself, is too often lacking in variety—but a good physiological method of feeding is requisite for growing children especially; and the habits thus unconsciously formed in early life are certain to prove either a burden or a blessing to the individual in after-years. Dress, again, is a subject of no slight importance. To be appropriately clothed while taking active exercise; to have facilities and definite rules for changing that clothing as soon as the game is over; together with due provision for cleaning, dry-

ing and airing the discarded foot and body coverings; all this is essential not only to comfort, but to health. Yet too many reformers are content to stop at this point, ignoring the influence for good or for evil which the child's ordinary clothing has upon his ordinary daily life. It is perhaps impossible for those who are not constantly made to regard the health aspect of school life to realise how many schoolboys spend the greater part of every day clad in tight collars, tight waistcoats, and most un-"hygienic" boots. This is largely owing to the fact that boys and girls are growing animals; whence it follows that the garments which are made to fit the individual to-day must begin to be too small by a month hence; though the restraint of natural freedom is so gradually induced that it is hardly appreciated by those most concerned. There can be no doubt that, theoretically at least, a less gripping garb—something founded on the combination of trousers hung on the hips, that is, below the iliac crests, and a jersey or loose flannel shirt open at the neck, instead of a waistcoat, with an additional jersey or "sweater" in cold weather, is the rational type of dress for youth, at all events. And some large schools with specially good physical records undoubtedly owe no small part of their conspicuous success to the adoption of this style of attire for ordinary everyday wear by their pupils. The system is popular amongst the pupils; it is, even allowing for the first cost of the change, less expensive in the long run to parents, and its immediate results are undoubtedly favourable to those most directly affected by it; while its ultimate effects upon the later life of a rising generation—its positive gain on the side of respiratory and circulatory power, easy carriage, and muscular freedom, and its negative advantage by discouragement of pernicious fashions in clothing—can scarcely be overestimated.

In every school there must be a residuum of the relatively or absolutely weak and feeble. If such children are to be exposed to the ordeals which form a necessary part and a valuable part of education in a large school, it is only reasonable that they should be protected from an excessive incidence of trying conditions. It is also equally reasonable that neither their feebleness, nor their presence in the school, should be permitted to influence their more capable comrades to the prejudice of the latter. The child of 12 is not expected to play so hard or for so long at a time as the lad of 18; neither should they be called upon to exercise their mental faculties for equal periods; but if the delicate child is fit to "work" at all, he is also fit, and must be made, to "play" also. The kind and the extent of physical exercise apportioned to him must be determined by the medical officer, who knows better than anyone else the kind and the amount of physical exertion involved in each game played in the school, and who will gladly avail himself of the help afforded by the notes on each new boy's health certificate, as well as of the information which the family doctor can furnish as to the individual's constitutional and other peculiarities. Some forms of exercise at least will be open to every boy, and but very few will be really barred to the most delicate. As a matter of constant experience, it is not the players, but the shirkers, the idlers, and the miscalled "delicate" lethargics amongst the onlookers who go to swell the sick list in inclement weather, who worry their house-masters and vex the souls of their fathers by repeated interruptions of school work, and rend the heartstrings of unwisely anxious mothers by accounts of coryzas and sore throats.

PRACTICAL DISINFECTION.

In the first number of the new publication *Hygienische Rundschau*, edited by Professor Carl Fraenkel, of Königsberg, and Dr. E. von Esmarch, of Berlin, Dr. von Esmarch enumerates some of the points that should be specially attended to in the use of disinfecting apparatus. He agrees with most authorities that steam, either circulating or under pressure, and without the admixture of air, is by far the best means of disinfecting clothing and other articles that will withstand the action of moist heat. As to whether circulating steam or steam under pressure is best, he thinks that it is entirely a matter of convenience, but it will be readily understood that where large chambers have to be constructed it would be difficult and extremely expensive to build them of sufficient strength to withstand any great pressure from within. Even in the case of smaller sterilising chambers, the expense of obtaining them sufficiently strong is so great that in most cases their use is precluded. The main desiderata for a perfect disinfecting apparatus are that it shall be close to the source of the steam supply; that there shall be sufficient steam developed to fill it thoroughly and to keep up the temperature for some length of time; that the steam shall be sent in at the top and passed out at the bottom, in order that every crevice of the apparatus may be filled; and that where it is used in large establishments it shall be placed between two rooms, into one of which articles to be treated are to be taken, and passed in at one door of the steriliser; while the other room should be at the other end of the steriliser, and into it the clothes should be passed, so that they shall not again be brought into contact with unsterilised clothing, etc.

Articles that are to be disinfected should not be allowed to remain too long in contact with steam, and before being steamed they should be thoroughly heated, so that there is no opportunity for the steam to condense on cold surfaces, and in the same way they should be well dried by heat after the steaming process has been concluded. Twenty minutes is quite long enough to allow most ordinary articles to remain exposed to a moist heat of 100° C., so that they should be left for this length of time after the temperature has once been raised to this point, this being determined by an electrical contact thermometer or a thermometer placed in a tube through which the steam escapes; some simple manometer should be used to determine the pressure that has been obtained by super-heating the steam. The greatest attention should be paid to this point of time of exposure, for it is the experience of all medical officers of health that nothing deters people from sending their clothes to be sterilised so much as the fact that they are frequently ruined by too long an exposure to the action of the steam. A certain amount of discrimination must also be used in determining what articles can be safely steamed, and an officer of health who ordered stamped plush, leather, skins, or waterproof material to be exposed to heat would render himself liable to be heartily laughed at by all practical men; whilst a washerwoman would be able to advise him that linen or similar material placed in contact with iron would be absolutely ruined by "iron mould." Grease should always be removed if possible before the articles are put into the steriliser, otherwise it becomes fluid and is liable to spread to other parts. Blood and pus are, of course, coagulated by the heat at the same time as they are

sterilised, and can be afterwards removed by means of chlorine or other chemical solvents. Musty bedding and old clothes should on no account be put into the sterilising chamber along with new articles and fine linen, as the fusty smell, which is never destroyed by the heat, is communicated from one to the other, and can only be got rid of by long-continued exposure to a plentiful supply of fresh air. Lastly, Dr. von Esmarch insists that disinfected clothing should not be sent back to infected rooms, and that in all large towns there should be some establishment to which poor people might be taken whilst their houses and clothing are being disinfected. It may be said that these are all truisms, but they are truisms that are constantly being forgotten, especially by men whose experience is not very extensive.

Dr. von Esmarch has done well to place before his colleagues the more important points to which attention has to be paid in carrying out the practical working of disinfection, not only in public institutions and in large towns, but in places where the process has to be carried out on a comparatively small scale.

We regret to announce the death of Dr. George Gulliver, Assistant-Physician to St. Thomas's Hospital, which occurred on January 11th from acute pneumonia.

ONE MILLION CASES OF INFLUENZA.

Dr. Benjamin Lee, Secretary of the Pennsylvania State Board of Health, has reported to his board an estimate of the extraordinary losses of life by influenza during the recent epidemic. The number of cases in the State was probably not fewer than 1,120,000, and the number of deaths was 7,880, or at the rate of 1 death in every 142 cases.

THE TYPHOID EPIDEMIC IN FLORENCE.

It is futile to deny that there is a severe epidemic of typhoid in Florence. The statements are, however, we are sure, much exaggerated as to the mortality. The cases apparently stretch along the line of one of the water supplies. The official figures up to this date which have been received by us are as follows: Total number of cases since the outbreak, 1,055; total number of deaths, 114, or 9.34 per cent.

THE DUKE OF BEDFORD.

The late Duke of Bedford was a munificent benefactor of the Cremation Society of England, and had presented upwards of £3,000 to its funds. In addition he had given half an acre of land, adjacent to the ground of their existing crematorium at Woking, and had caused to be erected, at an expense of £400, a crematorium for his own use, which he held on lease from the Society. We understand that the executors of the deceased nobleman are making arrangements to carry out his expressed wishes for the cremation of his remains. The Duke had, during his life, inspected the building, and had left full directions on the subject.

ROYAL COMMISSION ON TUBERCULOSIS.

The Royal Commission on Tuberculosis has been meeting regularly during the last few months, and much evidence from experts and clinical physicians bearing on the matters referred to has been collected. It has now been decided, we understand, to pursue the inquiry in a different direction by a careful examination into the various systems of meat and milk inspection abroad, by the collection of statistics bearing on the subject, and probably by the initiation of further researches of an experimental nature, to settle some of the doubtful points concerning the degree of infectivity of the products of tuberculous animals.

THE PRESIDENCY OF THE GENERAL MEDICAL COUNCIL.

We understand that the members of the General Medical Council having been consulted as to the necessity of summoning a special meeting for the purpose of electing a President, have decided that the election shall take place at the next statutory meeting of the Council in May, and no special meeting will therefore be called. It appears that the special items of business which the Council desired the President to undertake have already been attended to by the late Mr. Marshall.

PROFESSORS VIRCHOW AND HELMHOLTZ.

Our Berlin correspondent writes: Professor Rudolf Virchow's 70th birthday will be celebrated with due honours on October 13th of this year. Professor Waldeyer, Drs. W. Reiss, Bartels, Langerhaus, Ad. Meyer, and Professor B. Fraenkel have issued a circular inviting friends and admirers of the great pathological anatomist to subscribe to a gift of honour, which is to take the shape of a golden portrait medal (about 19 centimètres in diameter).—We understand that a committee is in course of formation in London under the presidency of Sir James Paget, to enable his English admirers to participate in the compliment. Professor R. von Helmholtz's 70th birthday will also fall this year on August 30th, and will, no doubt, be celebrated with the honours so eminently his due.

TRAINED NURSES FOR WORKHOUSES.

The Kensington Infirmary, following the example set by the Marylebone Workhouse, is considering a scheme for the training of its own nurses in accordance with the somewhat special requirements of Poor-law nursing. The Association which seeks to promote the employment of skilled nursing in workhouse and Poor-law infirmaries, with which the name of Miss Louisa Twining is inseparably connected, has, since its formation, sent out 329 nurses, and trained at its own expense 126 probationers. A branch of the Association is now working in the northern counties, and Miss Twining states that guardians are increasingly becoming aware of the false economy, the cruelty, and inhumanity of pauper nursing.

THE SHOP ASSISTANTS ACT.

The abounding faith of English people in the efficacy of Acts of Parliament for remedying all the evils of life has the defects of its robustness. We are far too apt to be content with our laws and leave them to operate by themselves. But a good law is after all only an instrument which will effect nothing until it is used. How a proposed law shall be made efficacious seems to trouble the reforming legislators very little. The Shop Hours Regulation Act is a fair example of this. It was provided that "persons under eighteen years of age should not be employed for more than seventy-four hours a week, including meal-times, in any shop." It seemed simple enough; the language did not appear likely to afford much opportunity for the disputations of lawyers, yet the Act to this day is practically inoperative. The overworked shop assistants called for bread; we gave them a stone. Unless the aggrieved person himself inform against his employer, the Act is powerless to protect him, and as a consequence of such "protection" he would, of course, forthwith lose his employment. The remedy obviously consists in the appointment of proper officers to watch the shops and prosecute the offenders.

LECTURES FOR SANITARY OFFICERS.

In continuation of the courses previously held by the Parkes Museum, a further course of sixteen lectures to sanitary officers, by well known authorities, will be given on Tuesdays and Fridays, at 8 P.M., at 74A, Margaret Street, W. This eleventh course of lectures and demonstrations will include the following: January 30th, Sir Douglas Galton, K.C.B.,

on Ventilation, Warming and Lighting. February 6th, Dr. Louis Parkes, on Water Supply. February 17th, Professor Corfield, on Sanitary Appliances. February 27th, Mr. Shirley F. Murphy, on Infectious Diseases. Dr. Sykes will give three lectures on the General Powers and Duties of Inspectors of Nuisances; Objects and Methods of Inspection; and Nature of Nuisances. Mr. A. Wynter Blyth will lecture on Diseases of Animals in Relation to Meat Supply; Characteristics of Vegetables, Fish, etc., Unfit for Food; and on Sanitary Law. Dr. A. Bostock Hill, on Trade Nuisances.

LEPROSY IN RUSSIA.

The municipal authorities of Riga are about to erect a leper-house at a distance of from six to seven versts from that city, at an estimated cost of 55,800 roubles. This includes a house for the medical superintendent and one for the warden, besides a *post-mortem* room, etc. Although the number of lepers in Riga and its neighbourhood amounts to about 100, the new larazetto will contain only 40 beds. As isolation is not compulsory, it is thought likely that accommodation thus provided will be sufficient for the lepers who voluntarily seek admission. It is expected that a hospital for lepers, with accommodation for 40 or 50 patients, will be opened some time in the spring, at Nennal, a place about 70 versts from Dorpat. A branch institution, with 10 or 15 beds, will also be established in the immediate neighbourhood of that city, which will serve the purpose of a receiving house for the hospital at Nennal.

SOLDIERS' FIRST FIELD DRESSINGS.

Our cotemporary, the *Broad Arrow*, mentions that henceforth a small roll of bandages, etc., suitable for binding wounds received in battle is to be placed in the knapsack of every soldier of the French Republic, and, in commenting on the fact, observes: "If our military advisers had had the same happy instinct, how much happier would have been the lot of the British soldier in many campaigns." This hit at the military authorities of our country can hardly be regarded as a fair one, seeing that soldiers' first field dressings, similar to those recently adopted by the French, were originally instituted by the British War Department as far back as the time of the Crimean war, and have been issued to our troops in every campaign that has occurred since that date. Moreover, it often happens in campaigns, when troops have to assault fortified places in elevated positions, or when they have to move rapidly in very light marching order, that the knapsacks are ordered to be left behind, so that the place selected by the French for the carriage of the field dressing is not one for imitation. On occasions such as those just alluded to, the chief purpose of the first field dressing, which is, that under no circumstances should any soldier receive a wound without having upon his person the means of applying a dressing to it, would be entirely defeated.

PLAYING WITH FIRE.

The danger of the use of cotton-wool to represent snowflakes in charades and other Christmas entertainments has received a terrible exemplification in the accident which has filled so many households in Leeds with sorrow like that of Rachel. We do not wish to say one word that could add to the anguish which must be felt by those who organised and managed the entertainment which had so fatal an ending; but we trust that the sad event will prove a useful warning to others. The use of these cotton wool "properties" is so common that the only wonder is that accidents are not more common. A day or two after the melancholy occurrence at Leeds the dispenser of a country hospital, who took the part of Father Christmas in an improvised entertainment, was severely burnt. Not many years ago some Christmas decorations, in which, as usual, cotton wool was a prominent feature, took fire in a well-known metropolitan hospital, and a tragedy of the most appalling nature was only prevented by the presence of mind of one of the house-surgeons. As it was, the greatest alarm was caused among the patients, one whose carotid artery had recently been tied jumping over a bed in his fright, and other critical cases being dangerously upset. There must be many narrow escapes of the same kind which never come to the knowledge of the public. The danger is bad enough in private houses, but in hospitals or schools it is not to be thought of without a shudder. No medical man needs to be told of the possible consequences of even small burns, or that death is not the only, or perhaps the worst, result that may ensue. There are few who have had the opportunity of following the after-career of a case of severe burn about the face or neck in which perfect "recovery" has taken place, but must have thought it would have been better for the sufferer's own sake that he should have died at once rather than have been condemned to the death in life of hideous and too often irremediable deformity caused by the shrinking of the scars. We earnestly trust that the fearful object-lesson presented by the Leeds accident will sink deep into the public mind, and that, at any rate, all who have charge of children will realise that the use of cotton wool for Christmas decorations is in a terribly real sense playing with fire. It is hardly too much, perhaps, to suggest that after the verdict of the Leeds jury anyone who in future takes any part in organising an entertainment in which children of tender years dressed in cotton wool have to carry Chinese lanterns should, in case of fatal accident, be liable to be tried for manslaughter.

BRITISH MEDICAL BENEVOLENT FUND.

The annual general meeting of subscribers to this fund was held at 34, Seymour Street, Portman Square, W., the residence of the Treasurer, at 4 P.M. on Tuesday, January 13th, 1891, when Sir James Paget, Bart., F.R.S., President, occupied the chair. The Treasurer's financial statement and report of the Committee were submitted to the meeting. From them it appeared that £1,208 18s. 6d. in subscriptions, and £576 13s. 3d.—an increase of £33 over the same item last year—together £1,785 11s. 9d., had been received in the donation department, and £1,768 10s. had been voted in grants to 159 applicants. In the annuity department 15 new annuitants have been elected, making a total of 85; 6 of these, being medical men, have the £20 annuity raised to £26 from the special fund dedicated to that purpose. The 85 annuitants absorbed £1,617 13s. 4d. Investments to the amount of £9,114 8s. 2d. have been effected, and the income resulting will afford a means of materially lightening the burden upon the grant department by allowing for a large increase in the number of annuitants. One bequest alone—that of the late Mr. Chapman—obtained for the fund by the personal influence of Dr. Cooper Rose, has produced £12,300; £1,000 has been received from the estate of the late Miss Ling, £100 from Mr C. Pooley, of Cheltenham, and £90 from Miss Annie Hadfield Rae. The working expenses have been kept in the same ratio as before to the income and expenditure, the heaviest item being that for the printing and distribution of the report. The Committee was then reappointed, and Sir Andrew Clark, Bart., Dr. Cooper Rose, and Mr. Thomas Smith were elected Vice-Presidents. The officers were re-elected, and votes of thanks given to the auditors, Messrs. Parker, Young, and Kiallmark; to the Treasurer and Honorary Secretaries, and to the medical press for their valuable notices. A proposal, made by Dr. Urquhart, Honorary Local Secretary for Perth, having reference to the place for holding the annual meeting, was considered, but the subscribers present were unable to agree to the proposal. A very cordial vote of thanks to the President, Sir James Paget, for his invaluable services to the fund and for his kindness in taking the chair, terminated the proceedings. The Committee wish to bring prominently before the profession the characteristics of this fund, which, intended for qualified medical men and their families, extends immediate help to applicants properly recommended without any publicity or canvassing, and is worked upon the most eco-

nomical principles, all the officers, with the exception of the collector, giving their services gratuitously. Subscriptions may be sent to the Treasurer, or to the Honorary Financial Secretary, Dr. Sidney Phillips, 62, Upper Berkeley Street, W.

TRAVELLING IN WINTER.

THERE is one railway journey which should be undertaken in the depth of winter, and so far as we know there is no other winter railway-trip in the world so well worth undertaking. This is on the marvellously beautiful line which runs through the St. Gothard Pass to Italy. To pass through that wondrous scene of ice and snow in such weather as this actually compensates for the many discomforts of a long railway journey in winter. It is about the only bit of winter travelling we could honestly recommend for its own sake. For the rest, bad is the best, and happy the man—still happier the woman who has not occasion in arctic weather to venture near the gloomy precincts of a railway station. The discomforts of travel in winter for those who cannot afford first-class fare, are, in such weather as we have endured of late, little short of prohibitive. The slight mitigation of the foot-warmer is not always conceded to third-class passengers, and on some of the French railways we read of actual fights amongst the passengers for the possession of the coveted comforts. It is often maintained that our English railways are much superior to those of the Continent, but so far as the warming of the carriages is concerned, we are in fact much behind the German and Swiss lines. In every compartment there is an apparatus for the supply of warm air, which can be regulated at the will of the travellers; and one can journey over the St. Gothard line in the depth of winter in a genial temperature. A third-class railway journey on one of our Southern lines in this terribly severe weather is a danger not lightly to be encountered by any one in weak health. The inadequate accommodation offered to third-class travellers on the South-Eastern Railway, for example, acts as a positive deterrent to those who can afford only such fares. Practically it is impossible to travel with decent regard to comfort in the way of light and warmth in a winter like the present, except in a first-class compartment; but as it is proved that the third-class traffic is the main support of our railways, it is not wise or just to make such profitable customers uncomfortable, not to say miserable, in a freezing temperature.

THE MATTEI FABLE.

THE January number of the *Review of Reviews*, issued this week, contains a long article on Count Mattei's so-called system of medicine. As to the nature of his remedies we learn practically nothing, except that, like those retailed by Sequah Limited, they are manufactured from certain herbs, and that the directions for the preparation of the necessary dilutions are given in the ordinary jargon of homœopathy. The globules and liquids, however, are "instinct with a potent, vital, electrical force, which enables them to work wonders." This process of "fixing the electrical principle" is carried on in the secret central chamber of a Neo-Moorish castle which Count Mattei has built for himself in the Bolognese Apennines, and the aged manufacturer (he is 82), being under the delusion that the "regular faculty" wish to assassinate him, sleeps "in a donjon keep, approached by a steel drawbridge at the top of a lofty tower, with a trusty Andrea Ferrara by his bedside, and a tiny toy revolver ready to hand." The "red electricity" and "white electricity" supposed to be "fixed" in these "vegetable compounds" are in their very nomenclature and suggestion poor and miserable fictions. There are always a string of "cures" to vouch for every cancer cure—of which dozens have been and are before the world—unhappily all equally futile, up to the present time; just as there are for every quack medicine under the sun. Every sensible person knows what they are worth. When Mattei's results have been examined by a capable expert, they have been found wanting. The last report of Dr. Lovegrove[1] was to the effect that after careful examination he found that any "reputed cures" were not cures, but simply cases in which the good offices of Nature had produced amelioration. The attempt to establish a parallel between Koch and Mattei obviously breaks down. Koch from the first announced his intention to publish his methods of preparation at the earliest possible date. In withholding details he followed an unusual course, but one which highly eminent persons well acquainted with Koch's intentions, methods, and reasons vouched to be justified in the meantime by the dangers which might attend premature publicity. Koch has now fulfilled his promise of early publication, and his paper will be found in another column.

SCOTLAND.

DEPUTY SURGEON-GENERAL C. GRAVES-IRWIN.

DEPUTY SURGEON-GENERAL C. GRAVES-IRWIN was entertained at dinner on January 3rd by the officers of the Medical Staff serving in Scotland, on the occasion of his retirement from the service. The Divisional Staff, the Presidents and Secretaries of the Colleges of Physicians and Surgeons, and some of the medical professors of Edinburgh University, were invited to meet him, and bid him farewell in his official capacity.

THE COLD WEATHER, INFLUENZA, AND THE DEATH-RATE.

FOR the week ending January 10th, the mortality in Glasgow was at the rate of 39 per 1000, an advance of 9 per 1000 on the previous week. For the corresponding week in the three preceding years the rate was 32, 29, and 25. To the severe weather is attributed so unusually high a rate, pulmonary diseases being the cause of death in the majority of cases; and the number of old persons who have succumbed is particulary noticeable. There is no epidemic disease exercising any special influence on the death-rate. But there are many circumstances that recall the epidemic influenza of last spring; and though there are no cases of its occurrence reported, there are not wanting suspicions that in some way its influence on the health of the people is not yet in abeyance.

EDINBURGH SCHOOL OF MEDICINE FOR WOMEN.

THAT section of the Edinburgh School which bears the name of the "Edinburgh School of Medicine for Women," held a public meeting on January 8th, 1891, under the presidency of the Marchioness of Tweeddale. A series of resolutions was passed by acclamation. The most important point before the meeting was the urgent need for funds, a sum of £2,000, it seems, is wanted to remove "the debt now resting on the premises, and to establish the School on a satisfactory basis." The other section of this Medical School bears the title of "The Scottish Association for the Medical Education of Women," and the school managed by that Association, and called "The Medical College for Women," is being carried on with great vigour. The great disadvantage of this latter school is the want of clinical possibilities. The students at present are only permitted to receive such instruction at the Royal Edinburgh Hospital for Sick Children. Application was some time ago made to the managers of the Royal Infirmary for access to that institution, but there has thus far been no definite result. Wanting this, students are obliged to go to Glasgow for their clinical teaching, and there every facility seems to be given them.

THOMSON LECTURES IN ABERDEEN.

THE Thomson Lectures are being delivered at the Free Church College this year by Mr. M. Pattison Muir, M.A., Fellow and

[1] Nottingham Medico-Chirurgical Society, Wednesday, December 3rd, 1890; BRITISH MEDICAL JOURNAL, January 3rd, 1891.

Prælector in Chemistry of Gonville and Caius College, Cambridge, and his subject is the Chemistry of Fire. The lectures are fully illustrated by experiments. Mr. Muir is a successful lecturer, and the attendance of the general public—to whom the lectures are open—is very large.

ABERDEEN CLASS REUNIONS.

During the late holidays no fewer than eight triennial class reunions were held, and were largely attended by former students now scattered over the world. The great feature of the reunion is the reading of the class register, and the discussion of reminiscences and experiences. Such meetings do more than anything else to keep inviolate and fresh the companionships formed in student days.

ABERDEEN STUDENTS' REPRESENTATIVE COUNCIL.

A statutory meeting of the Students' Representative Council was held on January 11th. The report of the Council to the Inter-university Conference, which had been drawn up by the Executive, was submitted and fully discussed. A letter was read from Dr. Struthers expressing sympathy with the four medical students who lost all their belongings by a fire in their lodgings last week, and enclosing a subscription of a guinea. It was agreed to open a subscription list on their behalf, and the representatives were asked to collect subscriptions in the various classes. The rest of the business was chiefly routine.

IRELAND.

The widow of the late Professor Davies, Professor of Latin in the Galway College, has been granted an annuity of £100 out of the Civil List.

Professor Gairdner has accepted the invitation of the Ulster Medical Society to deliver an address before the Society, and is expected to do so in April. His visit is looked forward to with great pleasure in Belfast.

BALLYDUFF DISPENSARY: LISMORE UNION.

Dr. Dennehy, medical officer, having been removed by sealed order by the Local Government Board for refusing to reside at Ballyduff, an election to the vacancy took place last week. There were four candidates, and after several polls Dr. Stephenson, of Carrick-on-Suir, was selected.

THE LATE MR. JOHN MARSHALL.

The late Mr. John Marshall's public services to the profession were highly esteemed in Ireland, where also his private character had endeared him to many friends. He received the honorary degree of Master in Surgery from the Royal University of Ireland; and only last year Trinity College conferred upon him the honorary degree of M.D. These honours, we have good reasons for knowing, were highly prized by the late President of the General Medical Council.

DEATH OF DR. J. A. BYRNE.

We regret to announce the death of Dr. John Augustus Byrne, of 21, Merrion Square, Dublin. He had been suffering from typhoid fever, which first showed itself in November, and he was for a long time in a very critical condition. He had, however, recovered sufficiently to be able to move about, but he was very weak, and some days ago serious symptoms of heart failure supervened, which terminated in death on Tuesday, January 13th. Dr. Byrne was a graduate of Trinity College (1848), L.R.C.P. (1864), and L.R.C.S. (1847). He was Professor of Midwifery in the Catholic University School of Medicine, and Gynæcologist to St. Vincent's Hospital. He was also an Examiner in Midwifery in the Royal University. He had written many papers on subjects belonging to his special branch of the profession.

THE LATE DR. ANTHONY CORLEY.

We are glad to hear from the Committee who are engaged in raising a fund to lighten the effects of the blow which has fallen on Dr. Corley's family by his sudden death that the subscription list has already reached a considerable amount. The wide professional reputation of Dr. Corley, his ready benevolence to all who needed help, and his high character, have ensured widespread sympathy to those who are engaged in this praiseworthy effort, and although unable to publish the extended list forwarded to us, we shall be happy to do anything in our power to forward the objects in view. We may again mention that the Honorary Secretaries are: W. Thomson, 54, Stephen's Green East; R. Theodore Stack, 10, Westland Row; A. Tenison Collins, Hibernian Bank, College Green; C. E. Fitzgerald, 27, Upper Merrion Street; R. K. Johnston, 22, Lower Baggot Street.

ULSTER MEDICAL SOCIETY.

The last meeting of this Society held in the Museum, Belfast, on January 7th, was devoted to a discussion upon "The Etiology and Treatment of Pleural Effusion and Empyema." The President (Dr. Dempsey) occupied the chair, and there was a very large attendance. The discussion was opened by Dr. Lindsay, who gave an analysis of about 50 cases, upon which his remarks were based. His conclusions were (*a*) that chill and exposure are somewhat common causes of pleurisy, rheumatism a rare cause, and tubercle commoner than has been usually believed, but not so common as has been recently maintained by Dr. Barrs of Leeds, Landouzy, and others; (*b*) that in cases of moderate serous effusion early tapping does not hasten recovery, and that a large proportion of cases get well in three weeks under counter-irritation and iodide of potassium; (*c*) that early tapping is the best course if the effusion be large in amount, or if much dyspnœa be present; (*d*) that in empyema the best results are obtained by free incision and drainage, with or without resection of the ribs, and without washing out the pleural cavity. He was inclined to employ Bulau's method of continuous siphon drainage, in any case where free incision was contra-indicated. Professor Whitla had seen some good results reported from the use of salicylates in pleural effusion, but had no personal experience of them. He was inclined to practice aspiration somewhat earlier than had been recommended by Dr. Lindsay. Dr. Byers had had several cases of pleural effusion in rheumatic subjects, and thought this association was commoner in children than in adults. He thought the difficulty of diagnosing the presence of fluid in children, without the use of the needle, was very great. Professor Sinclair endorsed the views of the opener of the discussion. He thought the fact that pleural effusion was apt to become purulent was a strong argument against its being usually of rheumatic origin. His experience of free incision in empyema had been highly favourable. Dr. Calwell, Dr. O'Neill, and the President having spoken, Dr. Lindsay replied, and the discussion came to an end. At the same meeting Mr. Fagan showed a very interesting case of Extroversion of the Bladder, upon which he had operated successfully.

Presentation.—Dr. A. Campbell Munro, Medical Officer for South Shields, has been presented by the members of the South Shields Literary and Scientific Society with a valuable gold watch, which was accompanied by a diamond ring for Mrs. Munro.

THE BROWN INSTITUTION.

As already announced, Mr. Victor Horsley has resigned the position of Professor-Superintendent of the Brown Institution in consequence of the pressure of other work. The post, which is a pathological one, has not yet been declared vacant, but will, no doubt, shortly be advertised. Among probable candidates, the names of Mr. Walter Spencer, M.S., who has worked at the institution for the last three years, Dr. Sidney Martin, Dr. Ruffer, Dr. Wright, and Dr. Sherrington, Lecturer on Physiology at St. Thomas's Hospital, have been mentioned.

At this period of change of directorship it may be interesting to review the circumstances under which the institution was founded, as well as the scientific and hospital work which it has been the means of advancing since its foundation.

The institution was founded, under the trusteeship of the University of London, by means of money left by the late Mr. John Brown, a citizen of London, who conceived the very far-reaching idea of founding a laboratory for the investigation and study of the diseases incidental to the domestic animals more especially, to which he added a hospital wherein the animals of poor people, who were unable to pay for veterinary advice, should receive treatment without charge, save a minimal one for drugs. For the fulfilment of the work of the institution a professor was appointed who should direct the staff of the institution, and be responsible for the work in the laboratory and hospital, the efficient service in the latter being secured by the appointment of a veterinary surgeon. The position of Professor-Superintendent has now been held by Dr. Burdon Sanderson, Dr. Greenfield, Dr. Roy, and Mr. Horsley, while the veterinary surgeoncy has been occupied by Mr. Duguid and Mr. Ernest Batt.

In the laboratory since 1884 there has been an annual average of thirteen workers engaged in original research, and the result has been a considerable accumulation of valuable scientific and practical knowledge, most of which has been published in the columns of the BRITISH MEDICAL JOURNAL, or in the *Philosophical Transactions* and the *Proceedings* of the Royal Society, the Local Government Board *Reports*, and other scientific journals. Since 1884 Dr. Klein has made a large series of well-known investigations into scarlet fever, vaccinia, diphtheria, anthrax, etc. Here also Dr. Wooldridge carried out the brilliantly original investigations into the chemistry of the blood and tissues, which were cut short so prematurely by his early death. Mr. Lingard, who has since been appointed Director of the Indian Government Bacteriological Institute at Poona, made during the same period an extensive study of typhoid fever, tuberculosis, anthrax, and especially noma and spreading gangrene. Dr. Cash, now Professor of Therapeutics in the University of Aberdeen, made the greater part of his investigations in the laboratory of the institution. Many original investigators have carried out researches there besides those mentioned: Mr. Dowdeswell, Dr. Money, Mr. Parker, Mr. Ballance, Dr. Edmunds, Mr. Watson Cheyne, Dr. Mott, Dr. Semon, Mr. Wright, Mr. Shattock, Mr. Jessett, Dr. MacFadyen, Dr. Tooth, Dr. Ruffer, Dr. Evans, and others. Mr. Clarke has made researches into the cause of "roaring" in horses, with considerable success in ameliorating the condition. Since 1885 Dr. Beevor has been engaged, in conjunction with Mr. Horsley, in the minute analysis of motor representation in the cortex cerebri and internal capsule not only of the lower monkeys but also of the orang as well as other investigations, the expenses of these researches, like many of those referred to above, being defrayed in part by the Scientific Grants of the British Medical Association. Many other researches have been carried on, as the pathological changes of function and structure of the central nervous system, especially in epilepsy, rabies, etc., and numerous observations have been made by Mr. Horsley on the pathology of myxœdema and cretinism.

Mr. Spencer has for several years investigated the pathological material and made the test inoculations, and with Mr. Horsley has, during a long period, been engaged in the investigation of the results of intracranial pressure and compression of the brain and allied work.

Pathological material has been, and is being, constantly sent to the institution by private individuals, the police, and other Government authorities for examination and report.

Original researches have been carried out as to the recognition of rabies, foot-and-mouth disease, and numerous other conditions for the Agricultural Department, and the Commission appointed by the Local Government Board to inquire into M. Pasteur's treatment of rabies. While in a few cases the expenses of these researches for Government departments were defrayed, the institution has never received any direct support from the Government, but has provided for the work performed within its walls out of its own foundation.

It will be seen from the above slight sketch that the work of the institution is one of considerable and growing importance in the scientific world, and we shall therefore await the selection of Mr. Horsley's successor with very great interest. From the terms of the founder's bequest, it is evident that the duties of the Professor-Superintendent—namely, the investigation and study of diseases—are those which belong to the province of pathology, and, in accordance with this view, the previous elections to the post have been invariably made. It is also of great importance that the head of such an institution should be one capable of assisting and appreciating other workers in the same field who desire to avail themselves of the opportunities afforded by it, while he should possess such discrimination and firmness as to enable him to prevent its resources from being wasted upon investigators incapable of doing them justice or advancing science. Notwithstanding, however, the difficulty which might be feared in finding a candidate combining all these necessary qualities, we have no doubt that from among those offering themselves on the present occasion, the committee will be able to select one who will fulfil the aspirations of all who desire the progress and prosperity of the institution.

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THIRTEENTH LIST.

Presented by L'ASSOCIATION FRANCAISE POUR L'AVANCEMENT DES SCIENCES.

COMPTE RENDU DE LA 18ME SESSION. Tomes 1, 2. Paris. 1889.

Presented by Miss BAKER, Islington.

DODONAEUS REMBERTUS, Stirpium Historiæ. Antwerp. 1616.

Presented by the AUTHOR.

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LEWIS (W.). An Experimental History of the Materia Medica. 1768.
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Presented by ERNEST HART, Esq., Honorary Librarian, London.

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BOURNEVILLE (Dr.). Recherches Cliniques et Therapeutiques sur l'Epilepsie, l'Hysterie et l'Idiote. 1890.
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BOOKS NEEDED TO COMPLETE SERIES.

The Honorary Librarian will be glad to receive copies of the following volumes needed to complete series in the Library.

AMERICAN JOURNAL OF THE MEDICAL SCIENCES. Before vol. 31 and vols. 45 to 75.
——— GYNECOLOGICAL SOCIETY. Transactions. Vol. 10.
——— ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. Transactions. Vol. 1.
——— SURGICAL ASSOCIATION. Transactions. Vols. 4 and 7.
BRAIN. Vols. 1, 2, 3, 4, and since July 1888.
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New Sydenham Society's Publications. Vols. 8, 9, 14, 17, 24, 27, 29, 34, 39, 40, 44, 48, 56, 60, 64, 69, 70, 77, 81, 83, 85, 87, 89, 90, 91, 93, 94, 96, 99, 101-104, 106, 107, 108, 110, 118, 120-125, 127, 128.
Ophthalmological Transactions. Vols. 3 and 6.
Pathological Transactions. Vols. 1-20.
Pennsylvania Medical Society. Transactions. Before vol. 14 and vols. 16-21.
Provincial Medical and Surgical Journal. 1840.
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Royal London Ophthalmic Hospital Reports. Any vols.
St. Bartholomew's Hospital Reports. Vol. 8.
St. George's Hospital Reports. Vol. 10 and upwards.
Society of Medical Officers of Health. Transactions. Any vols.
University College Hospital Reports. All before 1885.
Yearbook of Pharmacy. 1888.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

Meetings of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must sent in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

Dublin Branch.—The fourteenth annual meeting of this Branch will be held (by permission of the President and Fellows) in the Royal College of Physicians, Kildare Street, Dublin, on Thursday, January 22nd, 1891, at 4.30 P.M. The annual dinner will also take place on that evening, at the College.

North of Ireland Branch.—The winter meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday, January 29th, at 4 P.M. Gentlemen who wish to bring any subject before the meeting will kindly communicate as early as possible with John W. Byers, M.D., Honorary Secretary, Tower Crescent, Belfast.

HALIFAX, NOVA SCOTIA BRANCH.

The officers of this Branch elected for the ensuing year are:—*President:* William Tobin, F.R.C.S.Irel.; *Vice-President:* Dr. Fowler, A.M.S. *Treasurer:* Dr. Thomas Trenaman; *Secretary:* Arthur Morrow, M.B. *Council:* Drs. Weston, A.M.S., Wickwire, Black, Cunningham, Campbell, Goodwin, and Fleet-Surgeon Bolster, H.M.S. *Bellerophon.*

SYDNEY AND NEW SOUTH WALES BRANCH.

The ninety-fifth meeting of the Branch was held in the Royal Society's Room, on November 7th, 1890, G. T. Hankins, M.R.C.S., President, in the chair. There were present:—Drs. Fiaschi, Quaife, Pockley, Scot-Skirving, Cohen, Hodgson, A. E. Wright, E. F. Ross, G. A. Marshall, Ellis, Megginson, Shand, Newmarch, McDonagh, Brady, Todd, Kendall, J. Parker, Breneman, Thomas, Arthur, Parker, and Worral. Dr. Goode was present as a visitor.

Minutes.—The minutes of the previous meeting were read and confirmed.

New Member.—Dr. J. Goodlet Murray, of Parkes, was elected a member of the Branch and Association.

Cases.—Dr. Odillo Maher exhibited a patient upon whom he had performed Corneal Transplantation, and explained the mode of procedure.—Dr. E. Fairfax Ross exhibited a patient suffering from Congenital Malformation of the Heart, and explained the case.

Papers.—Dr. Shand read some notes on a case of Tibial Implantation.—Drs. Fiaschi, Scot-Skirving and Hankins discussed the case.—Dr. Scot-Skirving read some notes on a case of Facial Anæsthesia. The patient was exhibited. Diagrams illustrative of the paper were also shown.—A discussion ensued, in which Drs Brady, Thomas, Pockley, Hankins, and Megginson took part.

Instruments.—Dr. Shand showed an improved Resection Saw.—Dr. Brady exhibited a pair of Post-Nasal Forceps; also a large Rhinolith.

List of Members: Correction.—On the Title Page read for the Representative of the East York and North Lincoln Branch, on Council of Association, John Dix, Esq., 25, Albion Street, Hull.

SPECIAL CORRESPONDENCE.

PARIS.

The Death-rate in Paris.—Dangers of Movable American Stoves.—Infectious Diseases.—Medical Students and Revaccination.—Cholera in Japan.—Poisoned Wound.—Prizes.

The intense cold has raised the death-rate from many causes, notably from cerebral congestion and from respiratory affections. During the last four weeks of 1890 there were 832 deaths from pulmonary affections, and 850 from phthisis.

During the same period the use of movable American stoves has caused several fatalities. This stove is one of slow combustion; in order that its use be free from danger, many conditions must be realised—the chimney must draw well, and all apertures connected with the stove must be completely closed. Frequently atmospheric conditions prevent a good draught, or ignorant people turn the key at night instead of leaving it open, and thus render the combustion slower. In some cases care is not taken to tightly fit in the lid of the stove; in others the smoke containing the carbonic acid gas, proceeding from the American stove, travels along the chimney of an adjacent flat and asphyxiates the sleepers in the room. Dr. Rochard estimates that there are in France from ninety to ninety-five deaths yearly due to the use of the American stove, and sixty thousand of these stoves are in use.

The Conseil d'Hygiène has issued instructions to be observed in cases of small-pox, typhoid, and diphtheria. The precautions recommended are well-known, though not sufficiently practised—isolation, disinfection, and in small-pox cases vaccination of members of the family not attacked. All cases should be notified, in Paris, to the Commissary of Police, and in country villages and towns to the Mayor.

According to a recent decree, medical students cannot be registered without presenting a certificate of revaccination. The students already registered can begin a new term only by producing such a certificate. The medical schools and faculties are considering the measures to be taken to ensure revaccination of the students.

At the Comité Consultatif d'Hygiène Publique, Dr. Proust read a report on the cholera epidemic in Japan which broke out last June. Nagasaki was the first town attacked: the epidemic slowly invaded most of the provinces of the empire, but has now almost died out. Cholera appears annually in Japan, but it principally attacks the Japanese; foreigners suffer from it but slightly; in the last epidemic there was but one fatal case among them. Dr. Proust added that the Japanese Sanitary Service is perfectly organised, and its practical working is excellent.

The following incident is reported from Angers. A patient had an abscess opened; the linen, poultices, etc., were thrown

into a farmyard where rabbits and poultry ran about. A few days after, one of the rabbits was killed, and slightly scratched the hand of the owner of the farm, who killed it. A few hours after his hand became very painful, the arm and hand became rapidly swollen, and death ensued three days after the scratch was inflicted.

The Lacaze prize of £400, given every ten years for the best essay on typhoid fever, has been awarded to Dr. Chantemesse and Dr. Widal; the Jeunesse prize to MM. Wurtz and Bourges; the Barbier prize, £24, to M. Janat for surgical instruments, and Dr. Loewenberg, for an apparatus for measuring the tension of the tympanum.

MELBOURNE.

Sanitation of Melbourne.—Hospital Reform in Melbourne.—Actinomycosis, Tuberculosis and Cancer.—Bacilluria.

Dr. Gresswell, our newly imported sanitary medical officer, has set himself to the task of cleaning the Augean stables of insanitary Melbourne. He has shown the greatest deference and consideration to his own profession, a fact which has assisted in securing for him a good deal of popularity and hearty co-operation. His recently published report on the sanitary condition of Melbourne reflects the greatest credit upon his ability and perceptive powers. In each instance his recommendations have been based on personal observation. With regard to sanitary inspections and the supervision of dairies, he insists on urgent reforms which are extremely practical and sensible. His report deals also with buildings, inadequate drainage, defective ventilation, and the want of proper receptacles for house refuse. For dealing with the disposal of excreta he advises the erection of desiccators and the institution of the double pan system. Dwelling on the importance of pure potable water as a condition of health, he observes that pollution largely takes place through leakage into the pipes where they are laid down in polluted soils. Mr. Mansergh, who came from London at the request of our Government, has devised a system of sewerage which will interweave with the suggestions made by Dr. Gresswell, and which, in combination, should make malodorous and insanitary Melbourne a city of health and sweetness. The importance of these reforms is apparent when we remember the fact that we have every year a total of 2,000 preventable deaths. At present our death-rate is 21.25 per 1,000 of the population, but we hope to see this number reduced to 10.0 per 1,000 before another ten years have passed. The cost of Mr. Mansergh's metropolitan sewerage system is estimated at £5,500,000. He declares for the sewage farm. Dr. Gresswell is now urging on the public the advisability of establishing an infectious diseases hospital. He remarks that during the first five months of the year 263 fever cases, most of them typhoid, had to be refused admission to the Melbourne Hospital, and 58 at the "Alfred," besides a considerable number at the other institutions.

A Royal Commission on Charities is at present sitting, and taking voluminous evidence on the administration of medical relief. It is composed of representatives of the leading charities, and it is somewhat feared that this very composition will rob it of the independence of opinion which it is naturally expected such a Commission should possess. For each member representing an institution under observation naturally resents criticism as if it were directed against himself personally. The hospital accommodation still remains for the accommodation of a city of 421,000 what it had been with half that number. A new hospital is now asked for, and the public will be called upon to subscribe largely, as it is regarded as unfair to appeal to the Government to bear the brunt of the expenditure. It is calculated that there is 1 in every 14.6 of the population seeking hospital relief. That is assuming, in round figures, the population to be about 500,000, there are 34,143 enjoying relief. The accommodation of beds is only 0.10 of the population.

Mr. Archibald Park, in speaking of human and cattle diseases in Australia, draws attention to the mistakes made in confounding tuberculosis in rabbits and cattle with actinomycosis. In Queensland, a peculiar form of cancer is found in the human subject, attacking the parotid region and ending fatally. It is more prevalent in the district where cattle are affected with actinomycosis, and medical opinion tends to show that the disease is a similar affection to the so-called cancer in cattle. Actinomycosis is, next to pleuro-pneumonia, the most prevalent of chronic affections in Australia, and is constantly being mistaken for tuberculosis, an error which ought not to occur where careful microscopic examination is made.

In a paper read by Dr. Ross, of Warrnambool, he describes four cases of bacilluria, which had in common the discharge of bacilli by the urine, but in other respects showed great differences both as far as the bacilli themselves, and the clinical symptoms of the disease, were concerned. As he believes himself to be the first who has examined the matter bacteriologically, he claims the privilege of calling the bacilli in honour of the discoverer of the disease, "Bacillus Ureæ Roberts."

CORRESPONDENCE.

SENN'S DECALCIFIED BONE PLATES.

Sir,—At page 89 of the British Medical Journal of January 10th, Mr. Jessett criticises some expressions of mine in the Bradshaw Lecture, published on page 1468 of your last volume. He objects to the phrase "union of the two openings" a phrase I did not employ. I said "approximation and union of the two openings," and I referred to Dr. Senn's pamphlet for details.

Secondly, Mr. Jessett says I am in error in stating that the plates are preserved in an antiseptic solution. Those I showed at the lecture were sent to me by Dr. Senn, and were so preserved. Mr. Jessett says they are "preserved in rectified spirit." Dr. Senn says he keeps the plates after decalcification "in a solution of equal parts of alcohol, glycerine, and water, which keeps them in a pliable, soft condition," and adds, "When the plates are to be used, they are washed in a 2 per cent. carbolic acid solution" (page 31 of his pamphlet).

Thirdly, Mr. Jessett says I was wrong in the statement that "the plates come away with the fæces about a week after the operation." I did not say, or infer, that they pass whole. He says they are "absorbed and digested." Dr. Senn says, "The plates will come away with the fæcal discharges about a week after the operation" (page 44). Let me ask Mr. Jessett, when he next criticises my sayings, to quote me correctly, and to study Dr. Senn's pamphlet before he ventures to interpret his meaning.—I am, etc.,

Upper Grosvenor Street. T. Spencer Wells.

MIDWIVES REGISTRATION BILL.

Sir,—I had hoped that any discussion on so important a subject as the above would have been conducted seriously, and I have read Dr. Aveling's letter with both regret and surprise.

He seems to consider it sufficient to meet my criticisms of the Bill by, in the first place, making two assumptions, both of which are absolutely erroneous; secondly, by a statement which is obviously equally incorrect, and concludes with a "hope," which he will find, by reason of the frailty of human nature, never can be realised.

Dr. Aveling says I have "not seen the Bill, and have contented myself with collecting the opinions of others." I beg to inform him I have the Bill before me, and that it was sent to me by a member of Parliament immediately on its introduction; that I have read very little of what has been written on the subject, and, therefore, if I reiterate the opinions of others, it only shows that if those who judge for themselves, as I have done, arrive at the same opinion as to the demerits of the Bill, there must be some good grounds for our objections. That I state mine in an "uninviting" form is a matter of regret to me; it is my misfortune that it should be so, but not my fault.

Next, Dr. Aveling says I would "enforce their examination (namely, of midwives), but say nothing about granting certificates, or registering them." Had he read my letter with any care, he would have observed that I state that "In Ireland each woman, on passing her examination at the end of her term of training, is given a certificate," and recommended that this system be introduced into England; and as to

"registration." I really thought most of my letter was about it.

Finally, Dr. Aveling "hopes" my "fears are groundless" that amongst the many thousands of women whom the Bill proposes to put on the Register "a good many will be guilty, or at least be accused, of drunkenness, incompetence, etc." In fact, he appears to infer that the moment a woman is registered she will be freed from the vices and defects which detract from the merits of ordinary mortals, and of which anyone who reads the papers knows that the women at present acting as midwives, and who are all to be registered as soon as the Bill becomes law, seem to have their full share. Among medical practitioners many are annually accused of "drunkenness, incompetence, and disgraceful conduct"; nor are such accusations confined to members of our profession. The Bar, and even the Church, have amongst their members not a few "black sheep"; but amongst the 15,000 uneducated women whom the Bill proposes to put upon the Register, Dr. Aveling appears to believe that the fear that any such should be found is "groundless."

Dr. Aveling admits that in Ireland "midwives have received more attention and been better educated" than in England, but he appears to be annoyed that one, who for forty years has taken an active part in bringing about this desirable state of affairs, "should kindly wish to help (Englishmen) with the management" of theirs. I am a registered medical practitioner, and my name appears on the same Register as does Dr. Aveling's, and I refuse to admit that anything touching the welfare of the poor in any portion of the United Kingdom is alien to me; and more, it augurs badly for the spirit in which the Bill is drawn if the authors of it refuse to accept "aid" in this new departure from, or even to listen with patience to the opinions of, those who, whether they are foreigners or only inhabitants of a distant portion of the same kingdom, have experience in the matter equal, at least, to that of those whose unbounded self-confidence has, ere this, wrecked many a good cause.

Dr. Aveling informs us that "some of the objections mentioned have already received attention," but no intimation has been given as to what these are. That alterations will be made grudgingly, and in consequence of the opinions of others which I am glad to find must have coincided with my own—is self-evident, but when we are favoured with the knowledge of what these concessions are, I fear they will be found insufficient to meet the requirements of the case, and I trust that those who are really interested in endeavouring to establish a class of properly educated midwives throughout the kingdom, and who are not tied down to the idea that registration alone will effect this, will unite in their efforts to have this Bill remodelled. Remember all that is at stake: that it is the lives of helpless infants, and nearly as helpless women, whom this Bill proposes to hand over to the tender mercies of uneducated women, protected, as they will be, by its provisions, except, perhaps, under extraordinary circumstances, from the fear of any punishment for misconduct.—I am, etc.,

LOMBE ATTHILL.

Dublin.

SIR,—I think it will be agreed that it is unnecessary for me to go further into Dr. Aveling's *nihil ad rem* answer to my question. The fact remains that no woman need be without skilled assistance at the time of labour in this country.

With regard to statistics, I will simply remark that it is fallacious to compare statistics taken from the results of lying-in charities with those of general practice, because the wards of the hospital are always available for any cases which are thought proper for admittance. In private practice such cases have to be dealt with on the spot, however bad the hygienic surroundings may be.

Looking at the maternity statistics of foreign countries, where midwives are more generally employed than in this country, the introduction of midwives does not seem encouraging: and I should like to know why Dr. Aveling has not given us the death-rate in maternity cases in Ireland, where the condition of things exists which Dr. Aveling desires to see here. He has still to prove that the introduction of a second-rate class of practitioners will lower the death-rate in private practice. I am, etc.,

Hatfield, Herts. LOVELL DRAGE.

DUPUYTREN'S CONTRACTION OF THE PALMAR FASCIA TREATED BY HYPNOTISM.

SIR,—The cure of a case of contracted fingers under the influence of hypnotism, recorded in the BRITISH MEDICAL JOURNAL of January 10th, was accomplished in a manner so simple and apparently so effectual that the further development of the method will be watched with interest. If Dr. Kingsbury obtains the same success when he has applied this treatment to the more severe and more common forms of Dupuytren's contraction, he will have made an improvement in the means of cure that will be joyfully welcomed by the patients, if not by the surgeons, and will justify his claim to an original conception. It is very desirable that its effect upon the ordinary Dupuytren's contraction should be known, for the case presented by Dr. Kingsbury can hardly be considered a typical example of the affection; and, indeed, a heartless critic might object with some plausibility to admit the case to this category.

The case treated by Dr. Kingsbury was first hypnotised, and then the fingers were extended—I presume, forcibly extended. The cataleptic trance was induced apparently as a ready and harmless means of procuring insensibility. It cannot be supposed to have had any direct local influence, for in cases of Dupuytren's contraction the fingers are absolutely rigid, even during the deepest chloroform narcosis.

Heretofore gradual extension without incision of the fascia has not been satisfactory, and it was the indifferent results obtained by mechanical extension that rendered the treatment by incision so general. Of the forcible and sudden extension employed by Dr. Kingsbury less is known. It has been in use on the Continent from time to time, and a case, treated in this way without success at Vienna, was subsequently dealt with by Kocher after his own method.[1] A gentleman, suffering from some gouty trouble, came under the care of my colleague, Dr. R. W. Burnet, two years ago, after he had been treated for contracted fingers by forcible extension at Aix-les-Bains, and cured, but the cure was not perfect, nor at all comparable to the result of subcutaneous division.—I am, etc.,

Queen Anne Street, W. J. MACREADY.

ESTIMATION OF URIC ACID BY HAYCRAFT'S PROCESS.

SIR,—Mr. Gossage[2] thinks that I do not appreciate the exact position of affairs. May I in reply state what I take to be that position, namely, that Mr. Gossage's assertion that his criticisms rest on the results obtained by "some other method known to be reliable" contains a pure assumption, and begs the whole question?

To take one method and assume that it is correct, and then criticise another method because it does not give identical results, is a form of argument which is obviously open to both sides.

Further on Mr. Gossage is so good as to tell me why Salkowski's method is more accurate than Haycraft's, and the reason appears to be that Salkowski produces his uric acid down on the nail, "making allowances for errors of crystallisation."

No doubt if Salkowski produces 3 grains of uric acid by his process, the urine in question contained no less than this quantity; but when it comes to making allowances for errors of crystallisation, even if no other allowances should be made for errors of manipulation in a long process, there is some room for doubt as to the real amount of uric acid present: in other words, Salkowski's process cannot claim absolute accuracy, or be set up as a standard.

While, however, I deny infallibility to Salkowski's process, I do not claim it for Haycraft's; the whole object of the paper which Mr. Gossage criticises being to point out that Haycraft's process is sufficiently short and simple for clinical use, and sufficiently accurate for comparative purposes, in which, as Mr. Gossage will recollect, I have Hermann with me. It really matters little to me what process is used, as any of those at present in vogue will serve to demonstrate my results; but as five years' experience has convinced me that Haycraft's process is clinically useful, I endeavoured to point

[1] *Centralb. f. Chir.*, No. 26, June 25th, 1887, s. 485.

[2] BRITISH MEDICAL JOURNAL, January 10th, 1891, p. 88.

out the fact to others; and my argument is not in the least affected by the dispute regarding the chemistry of urate of silver, which Professor Haycraft is no doubt well able to deal with.

Mr. Gossage takes the trouble to point out my rashness in arguing from results obtained by such a method. I would remind him that these results not only agree completely *inter se*, but are in practically complete accord with the published results of others obtained by various processes, including those of Salkowski and Ludwig; and he will, if necessary, find further evidence of this agreement in a paper of mine in the forthcoming volume of *St. Bartholomew's Hospital Reports*.

I will merely say in conclusion that I am as much impressed with the quality of the evidence on my side, as Mr. Gossage appears to be with the "bulk" of that on his.—I am, etc.,

ALEXANDER HAIG, M.A., M.D.Oxon., F.R.C.P.

Brook Street, W.

OTHER CROWNER'S QUESTS.

SIR,—Dr. Hewkley's letter in the BRITISH MEDICAL JOURNAL of January 10th shows very clearly what complete farces inquests are as a rule. Only last week a patient whom I had previously attended for bronchitis for six weeks, and who had been at work for a week in apparently good health, died very suddenly one night before any medical assistance could be procured. The Coroner's officer came to see me the following day to ask my opinion as to the cause of death. I refused to divulge what was probably the cause of death, namely, syncope from valvular disease of heart (mitral regurgitant), which lesion he had had for many years, although I never mentioned the fact to anyone. The wife and a neighbour only were called at the inquest, and the jury returned a verdict of death from natural causes.

Another case was that of a child, aged 2 years, who was put to bed one night, not appearing very well. In the middle of the night the mother found the child dead. The mother and the proverbial neighbour only were called at the inquest, and the jury returned the usual verdict of death from natural causes.

If these two inquests are a fair sample of what takes place throughout the country—as they certainly are in this town—can it be wondered that the ends of justice are most likely to be defeated?—I am, etc.,

Nottingham. F. C. WOOD, L.S.A.Lond.

PROFESSIONAL CONFIDENCE.

SIR,—Your correspondent, C. L. W., takes a crooked view of the ethics of the question when he maintains that it is the duty of a medical man attending a syphilised lover to warn the *fiancée*, or her friends, or (more absurdly, though not more cruelly) forbid the marriage publicly.

How came the physician in possession of the knowledge that his patient had syphilis? By the former entrusting him with the secret in perfect confidence in its safety in the hands of a man of probity and honour. If the physician put up a public notice in his consulting-room, or personally told all his patients, "Any person having syphilis is warned that Dr. So-and-so holds himself at liberty to divulge that fact to the patient's *fiancée* or wife," then patients would know what to expect, and most certainly would have no cause of complaint, if they were foolish enough to consult the doctor, whatever course he might pursue in the matter.

But for a man to invite confidence on the implied understanding of secrecy, and then to betray the secret on any ground whatever, is as base an action as that of the spy or informer who worms himself into a plot in order to betray the conspirators to the Government.

Your correspondent states that the first duty of a medical man is to cure, or, better still, to prevent disease. Quite true. But the antecedent necessity is, that the patients may have such confidence in the practitioner's inviolable honour, that they may entrust him with the cure of their diseases in perfect certainty of silence.

Once let it go forth to the world that the Hippocratic oath of secrecy is no longer binding on our profession, and every patient, male or female, who suffers from any shameful disease would become the willing prey of quacks, whose secrecy might be better depended on than that of more highly educated but less trustworthy practitioners. The health of mankind would suffer, although the cure of disease is, according to your correspondent, the first duty of the physicians, in order that the morbid consciences of men like your correspondent might be satisfied. The happiness of one girl would be possibly secured at the cost of untold misery to thousands of unborn generations.

This is one of the mawkish sentimentalities of the present day. There is no ground for speaking by implication of those who oppose your correspondent as "looking upon medicine as a mere means of gaining a livelihood." They act on far other and higher grounds. They believe that to act as your correspondent suggests, would be a mere "doing evil that good might come." Beyond a manly private protest to the offender, the honourable physician has no right to go—because he has morally pledged his word and his honour in undertaking the case that he will maintain perfect secrecy—and if for any cause, however apparently right, he breaks that implied promise of secrecy, he has become that most shameful of all things, a liar and betrayer.—I am, etc.,

W. S., M.R.C.S.E.

DANGERS OF EXALGINE.

SIR,—Under the heading of "Dangers of Exalgine," Dr. Flynn, in the BRITISH MEDICAL JOURNAL of January 10th, supplies us with some facts which go to show how many valuable drugs are thrown into discredit. I wonder it did not occur to Dr. Flynn before writing, to inquire how far "the danger" was due to over-dosage. I understand the maximum dose of exalgine to be six grains. Here Dr. Flynn, on his own testimony, administered six grains within an hour to a boy of 14 years, "*who had nearly recovered from rheumatic fever!*" Dr. Flynn says: "There is nothing that I can detect the matter with the heart." That may be so. But the heart of a patient recovering from any fever, and especially rheumatic fever, must necessarily be weaker than a healthy heart. Further, even supposing the boy to have been in health and exceptionally robust, I hold the dose was too large, seeing that there was no previous knowledge of the action of the drug in this particular case. In the strongest and healthiest, too, we must never forget the question of idiosyncracy.

This case, then, I consider no proof of "the dangers of exalgine." My personal knowledge of the drug extends over nearly twelve months, during which period I have prescribed it with marked success in the alleviation of pain in a great variety of cases. In none of my cases have I seen any symptoms of danger, but I do not think of treating convalescing fever patients—even adults—with three grains of exalgine, and instruct that the dose be repeated in an hour if no benefit follows the first dose.—I am, etc.,

D. GAIR BRAIDWOOD, M.B., C.M. (Edin.).

Halkirk, Caithness.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following appointments have been made at the Admiralty:—E. FERGUSON, Staff-Surgeon, to the *Forward*, September 30th; H. HADLOES, Deputy Inspector-General, to Bermuda Hospital, January 10th; H. MACDONNELL, Deputy Inspector-General, to Haslar Hospital, January 10th; G. J. IRVINE, Staff-Surgeon, to the *Vivid*, January 10th; P. N. RANDALL, Surgeon, to the *Warspite*, January 10th.

INDIAN MEDICAL SERVICE.

THE services of Surgeon-Major O. BAKER, Bengal Establishment, are placed at the disposal of the Chief Commissioner of Burma.

Surgeon G. A. CONES, Bengal Establishment, who entered the service on March 30th, 1878, is promoted to be Surgeon-Major from December 13th.

Surgeon-Major W. R. BROWNE, M.D., Madras Establishment, district surgeon at Tanjore, is appointed Surgeon at the Madras General Hospital, from the date of taking over charge.

Surgeon B. B. GRAYFOOT, Bombay Establishment, is directed to act as Secretary to the Surgeon-General with the Goverment of Bombay, *vice* Surgeon M. A. T. Coffe.

Surgeon-Major W. FINDEN, Bengal Establishment, is appointed from the officiating to the medical charge of the 7th Bengal Cavalry, *vice* Surgeon H. Hendley, transferred permanently to civil employment.

Surgeon-Major H. HAMILTON, Bengal Establishment, is appointed from the officiating medical charge of the 5th Bengal Cavalry to the medical charge of the 10th Bengal Infantry, *vice* Surgeon-Major W. Duncan, retired from the service.

Surgeon-Major A. DUNCAN, Bengal Establishment, is appointed from the medical charge of the 14th Sikhs to the medical charge of the Corps

of Guides, *vice* Surgeon-Major J. Lewtas, appointed Joint Civil Surgeon of Simla.

Surgeon M. A. KER, Bengal Establishment, is appointed from the medical charge of the wing 12th Bengal Cavalry to the medical charge of the 19th Bengal Lancers, *vice* Surgeon J. D. M. Swinburne, deceased.

Surgeon A. BUCHANAN, Bengal Establishment, is appointed to the medical charge of the 14th Sikhs, *vice* Surgeon-Major A. Duncan.

Surgeon F. C. CLARKSON, Bengal Establishment, is appointed from the officiating medical charge of the 2nd Battalion 4th Goorkhas to the medical charge of the 36th Sikhs, *vice* Surgeon G. H. Fink, transferred permanently to civil employment.

Surgeon J. C. WHITE, Bengal Establishment, is appointed from the officiating medical charge of the 19th Bengal Lancers to the medical charge of the wing 12th Bengal Cavalry, *vice* Surgeon M. A. Ker.

Surgeon F. W. GEE, Bengal Establishment, is appointed to the medical charge of the Loralai Outposts.

Surgeon S. T. AVEROOM, Bombay Establishment, in medical charge of the 27th Bombay Light Infantry, is allowed furlough to Europe for one year on medical certificate.

In spite of the fact that the number of hospital assistants of the Madras Presidency is thirty-three under its established strength, the Government of India has telegraphed for the withdrawal from Burmah of twelve of this class, lent by Bengal, as they are wanted, it is said, for field and transfrontier service in the North-Western Provinces. The Madras Native regiments in Upper Burmah will thus be crippled of medical aid.

Inspector-General JAMES ANDERSON, M.D., late of the Bengal Establishment, died on January 3rd, at Westbourne Park, in his 79th year.

The following is the allotments of annuities in the Bombay Medical Retiring Fund for 1891:—Deputy Surgeon-General C. J. Sylvester, M.D., £252; Surgeon-Major A. W. G. Adey, £210; Deputy-Surgeon-General W. P. Partridge, £210,*; Deputy Surgeon-General C. Joynt, M.D., £168*; Deputy Surgeon-General J. Cruickshank, M.D., £168*; and Deputy Surgeon-General C. K. Colston, £168.* (* Lapsed to Government, these officers having received a refund of their subscription.)

THE MILITIA.

MR. PHILIP BARNET BENTLIF, M.R.C.S.Eng., L.S.A.Lond., is appointed Surgeon to the Royal Jersey Artillery, January 10th.

Mr. FRANCIS NEEL GAUDIN, M.R.C.S.Eng., L.S.A.Lond., is appointed Surgeon to the 2nd East Regiment Royal Jersey Militia, January 10th.

THE VOLUNTEERS.

THE undermentioned gentlemen are appointed Acting Surgeon to the corps specified:—Surgeon S. DAVIES, M.B., from the Volunteer Medical Staff Corps (Woolwich Division) to the 3rd Kent (Royal Arsenal) Artillery, January 7th; JOHN FREDERICK STURROCK, M.B., 1st Forfarshire Artillery, January 7th; WILLIAM MORE HOPE, 2nd Volunteer Battalion, Gloucestershire Regiment (late the 2nd Gloucestershire), January 7th; WILLIAM EVANS, 1st Cadet Battalion, King's Liverpool Regiment, January 7th; EDWIN HAWORTH, M.B., 3rd Lancashire Artillery, January 10th.

Acting-Surgeon W. C. ADAMS, 19th Middlesex (St. Giles's and St. George's, Bloomsbury), has resigned his appointment, which bore date March 28th, 1883.

The appointment of Acting-Surgeon J. S. CLAYTON, as second Lieutenant, bears date November 7th, 1890, and not November 15th, as stated in the *London Gazette* of November 14th.

Acting-Surgeon A. JONES is, with other officers, transferred from the 3rd Lancashire Artillery, January 1st: but is considered to have received a commission of the same rank and date as that previously held by him in the 3rd Lancashire, namely, May 3rd, 1884.

Acting-Surgeon S. G. MILNER, 1st Surrey (South London) Rifles, has retired on account of ill-health; his commission dated from January 24th, 1885.

Surgeon and Surgeon-Major C. F. LEWIS, 2nd Volunteer Battalion Royal Sussex Regiment (late the 2nd Sussex), is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the Dover Brigade Infantry Volunteers, January 7th.

Surgeon and Surgeon-Major G. E. ELLISTON, 1st Volunteer Battalion Suffolk Regiment (late the 1st Suffolk), is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the Harwich Brigade Infantry Volunteers, January 7th.

The following announcement is substituted for that which appeared in the *London Gazette* of October 31st:—Surgeon J. J. A. V. C. RAYE, 1st London (City of London) Artillery, resigns his commission. [The previous announcement referred to was that the services of Surgeon Raye were dispensed with.]

THE FORTHCOMING WARRANT.

SURGEON-MAJOR M.S. writes: Mr. Stanhope has now a golden opportunity of once and for all settling the rank and titles question. Let him not miss it; and let him distinctly understand that the only real solution is in granting the medical officers substantive rank and titles in their own corps, like the Royal Engineers.

MEDICAL CHANGES IN INDIA.

SURGEON-MAJOR I.M.S., referring to the rumoured abolition of the military portion of the Indian Medical Service, writes: He would, on the contrary, abolish the Medical Staff in India, handing over the European troops on disembarkation to the charge of the Indian Medical Service. He thinks this would work well; while to place native regiments in charge of junior officers of the Medical Staff would be disastrous to the wellbeing of the men of the native army.

*** The suggestion is not new, but, we think, is now less likely to be adopted than ever. It might work if a European army was created for India, which we also think exceedingly improbable. Our correspondent's proposal is against both sound finance and good policy. India, as a part of the Empire, is garrisoned by the Imperial army, of which the Medical Staff is an integral part for duties at home and abroad: how could it be divorced in India? The road to India is held by the Imperial army, and reinforcements in any emergency could only be obtained from home. Where would India obtain a sudden supply of medical officers if the Medical Staff are not allowed to land at Bombay? Our correspondent, on reflection, must see his proposal would not work. There are plenty of both junior and senior officers of the Medical Staff with much Indian experience, and we fail to see how it would be disastrous to entrust native troops in their charge.

RANK OF ARMY MEDICAL OFFICERS.

THE Parliamentary Bills Committee has published the analysis of "the evidence of experts before the Camperdown Committee." We strongly advise all interested in this subject to procure copies of this very clear and vigorous analysis of the evidence given by the military and medico-military witnesses, as we feel sure a perusal of this pamphlet will enable them to judge of the proper value of the evidence which was given on both sides. They will be supplied to officers desiring to circulate them, and sold at the price of 3d. per copy.

"ASSISTANT-SURGEON" R.N.

A.M.S. is puzzled to know why, in the records of service given in the journals, naval medical officers are invariably described as having entered the service as "surgeon." Were there not assistant-surgeons prior to 1873 in the R.N.?

*** We have referred this question to the Director-General of the Medical Department of the Navy, to whose kindness we are indebted for the information that the rank of assistant-surgeon in the Royal Navy was abolished by Order in Council of March 24th, 1873, and that of surgeon substituted. The rank of assistant-surgeon has, therefore, been expunged from the official Navy List.

MEDICO-LEGAL AND MEDICO ETHICAL.

CORONERS' INQUEST.

H. F. C. E. asks whether he is entitled to a fee of a guinea for each attendance before a coroner. In the case in point he gave evidence one day: the inquest was then adjourned. He attended adjournment and gave evidence again. The case was further adjourned.

*** The Coroners' Act, which prescribes the fees to be paid to medical witnesses at an inquest, does not provide for adjournments, and we are advised that more than £2 2s. cannot be claimed for attending to give evidence when a *post-mortem* examination has been made by the witness, and £1 1s. where a *post-mortem* examination is not required, to include adjournments.

EXECUTOR'S BILLS.

MEMBER B.M.A. writes: I attended a patient during the months of March, April, and May in 1887, and have not yet sent in my bill. The patient died during the same year. I want to know if there is any legal limit of time for me to submit my account as I have not done so yet, and am now about sending it in for the first time.

*** It is provided by Sect. 29 of the Act of Parliament, 22 and 23 Vict., cap. 35, that where an executor or administrator shall have given the notices, therein defined, to creditors to send in their claims against the estate of the deceased, such executor or administrator shall, on the expiration of such notices, be at liberty to distribute the assets of the testator or intestate amongst the parties entitled thereto, but nothing in the Act contained is to prejudice the right of any creditor to follow the assets into the hands of the person or persons who may have received the same. Our correspondent should, therefore, send in his account to the executor of the deceased person, who may not have distributed the assets. If they have been distributed, a right exists to sue the person or persons beneficially interested, as above mentioned; but, before any proceedings are taken, our correspondent should, of course, be advised by a solicitor having all the facts of the particular case before him.

NOTIFICATION IN SCOTLAND.

M. C. R. writes: On October 30th last I reported to the medical officer of health for our burgh six cases of scarlet fever, all of a very mild type. The fever was practically over then, and desquamation of the skin was going on in three of the cases. On December 13th a local newspaper published the burgh sanitary inspector's report for last month as part of its report of the proceedings of a meeting of the police commissioners, which contained the following statement:—

"On October 30th last, Dr. M. (name and address given) reported five individuals as suffering from scarlet fever, and the following day the parties referred to were visited at their respective residences by the assistant sanitary inspector, who found them not only free from fever, but all in their usual health, with the exception of a young child, who had a slight attack of bronchitis. All the parties have been visited several times since, but as yet there is no appearance of fever of any kind."

The medical officer of the burgh tells me that he knows nothing about the matter. As the statement quoted is calculated to do me great injury, kindly say if I could successfully raise an action for libel against the sanitary inspector or the newspaper; if not, how should I act in the matter? If possible, I must have some redress.

*** The answer to the questions raised by our correspondent must be

determined by the law of Scotland, which, from what hereafter appears, seems not to be so well ascertained as it is in this country. According to English law, so far as the newspaper is concerned, we do not think an action would lie, having regard to the Law of Libel Amendment Act, 1888, and the recent decision of the Court of Appeal in Allbutt *v.* The General Medical Council, 23 Q. B. D., in which it was laid down in general terms that reports of proceedings of public bodies of matters of public interest, if accurate, and published *bonâ fide* and without malice, are privileged. The Act above mentioned, however, does not apply to Scotland. It is laid down in Bell's *Digest of the Laws of Scotland* that "in regard to proceedings at public meetings generally, much may be said in favour of allowing protection to fair reports thereof, yet the point has not been decided in this country." With regard to the officer making the report, it is stated in Bell's *Digest* that a qualified privilege in general attaches to every occasion on which a person is called on to express an opinion or to communicate information either in fulfilment of a duty, or in furtherance of a legitimate interest; and, in all probability, to succeed in an action against the officer in question, it would be necessary in Scotland as in England to rebut the assumption in law by evidence of malice, which it would lie on the plaintiff to adduce. In our opinion this would be difficult in the case in point, but it would be well for our correspondent to take the opinion of a Scotch lawyer, as we can quite understand the sense of injury sustained which our correspondent experiences, although his letter already published should go far to obviate any detrimental result.

AN INSUFFICIENT AGREEMENT.

E. J.—With regard to the alleged over-valuation of a practice, or insufficient introduction, we are advised that, unless fraudulent misrepresentation is established, the purchaser is not entitled to relief. The rights of the parties must depend upon the terms of the written agreement, and this being so, there is nothing to show that the vendor can be required to procure, or endeavour to procure, for the purchaser the appointment of medical officer to a club. Further, the vendor, not having been bound in express terms not to practise in the neighbourhood, he cannot, we think, be restrained from so doing. The authorities on the subject have been somewhat conflicting, but the Court of Appeal has recently decided that a vendor of a business is not, in the absence of an express agreement, to be restrained even from soliciting his old customers, and we think this principle would hold equally good in the case of a professional practice.

ALLEGED CASE OF "COVERING."

J. S.—Our correspondent should furnish the Registrar of the General Medical Council with particulars of the alleged "covering" by Y., the qualified practitioner, and an inquiry would probably be held as to his conduct.

With regard to the alleged unqualified practice by X., particulars should be sent to the Clerk to the Society of Apothecaries, Blackfriars, when, if sufficient evidence is forthcoming, the Society would doubtless take proceedings under their Act to suppress it.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

INFECTIOUS DISEASES (NOTIFICATION) ACT, 1890.

H. F. C. E. writes: The Clerk to the Vestry here refuses to pay me for a certificate of a notification of an infectious case, the reason given being that the certificate was not sent in until five days after decease of patient. I may say that this assertion is disputed by me. However, the point I wish to ask is: Have the local authority any power whatever to refuse to pay?

*** It is provided by Section 3 (1) (*b*) that every medical practitioner, attending on or called in to visit the patient, shall forthwith, on becoming aware that the patient is suffering from an infectious disease, to which the Act applies, send to the medical officer of health for the district the prescribed certificate. By Section 4 (2) the local authority shall pay to every medical practitioner for each such certificate duly sent (that is, forthwith on becoming aware, etc.) the fee specified in the Act. In the particular case referred to we think payment of the fee cannot be insisted on unless it be shown that the certificate was sent within due time. It is a simple question of fact.

INFECTIOUS HOSPITALS IN ESSEX.

Dr. Thresh, Medical Officer of Health to the Chelmsford urban and rural sanitary districts, is pressing upon the authorities the desirability of establishing an infectious disease hospital for this part of Essex. The subject has been before considered by a joint committee of the urban and rural authorities, but the committee failed to come to any decision. It seems very desirable that such a hospital should be established soon, as from Dr. Thresh's reports it appears that he has much difficulty in controlling localised outbreaks of diphtheria and scarlet fever, the houses where such disease originate almost invariably not admitting of any sort of isolation being practised.

THE POPULATION OF LONDON DISTRICTS.

Dr. J. Stevenson.—On the hypothesis that the rate of increase that prevailed between 1871 and 1881 has been since maintained, the estimated population of Paddington in 1890 was 117,836; but on account of the rapid decline in the birth-rate in recent years this estimated rate of increase was revised, and a smaller rate of increase assumed to exist, which gives the estimate published in the British Medical Journal of November 1st, namely, 113,245. Until the approaching census in April next sets at rest all doubts on the subject, all estimates must be conjectural and only approximately correct.

DUTIES OF MEDICAL OFFICERS OF HEALTH UNDER THE NOTIFICATION ACT.

A Member.—It is no part of the duty of a medical officer of health under the Infectious Disease (Notification) Act, 1889, to verify the diagnosis of cases of infectious disease reported to him by medical men under the Act. We have repeatedly stated that in our opinion a medical officer of health should not examine the patients of another practitioner unless he has previously obtained his consent to do so.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, January 10th, 6,247 births and 5,394 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 10,010,426 persons. The annual rate of mortality in these towns, which had increased from 21.3 to 28.7 per 1,000 in the preceding four weeks, declined again to 28.1 during the week under notice. The rates in the several towns ranged from 15.7 in Derby, 18.8 in Nottingham, 20.2 in Hull, and 21.2 in Huddersfield to 32.9 in Newcastle-upon-Tyne, 33.9 in Birkenhead, 35.5 in Manchester, and 39.8 in Preston. In the twenty-seven provincial towns the mean death-rate was equal to 27.3 per 1,000, and was 1.8 below the rate recorded in London, which was 29.1 per 1,000. The 5,394 deaths registered during the week under notice in the twenty-eight towns included 485 which were referred to the principal zymotic diseases, against 472 and 476 in the preceding two weeks; of these, 183 resulted from measles, 134 from whooping-cough, 54 from scarlet fever, 46 from diphtheria, 40 from diarrhœa, 28 from "fever" (principally enteric), and not one from small-pox. These 485 deaths were equal to an annual rate of 2.5 per 1,000; in London the zymotic rate was 2.5, and corresponded with the mean rate in the twenty-seven provincial towns, among which it ranged from 0.0 in Wolverhampton and in Derby, and 0.9 in Hull and in Cardiff to 3.9 in Birkenhead, 5.7 in Halifax, 6.7 in Bolton, and 6.9 in Preston. Measles showed the highest proportional fatality in Oldham, Huddersfield, Bristol, Birkenhead, Halifax, Preston, and Bolton; scarlet fever in Plymouth; whooping-cough in Preston, Halifax, and Norwich; and "fever" in Halifax. Of the 46 fatal cases of diphtheria recorded during the week under notice in the twenty-eight towns 28 occurred in London, 3 in Norwich, and 3 in Manchester. No death from small-pox was registered during the week, either in London or in any of the twenty-seven provincial towns; one small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday, January 10th. These hospitals contained 1,483 scarlet fever patients on the same date, against numbers declining from 2,021 to 1,549 at the end of the preceding nine weeks; 89 new cases were admitted during the week, against 74 and 101 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 11.5 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 1,023 births and 755 deaths were registered during the week ending Saturday, January 10th. The annual rate of mortality in these towns, which had increased from 20.1 to 24.8 per 1,000 in the preceding four weeks, further rose to 28.8 during the week under notice, and was 0.7 per 1,000 above the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Dundee and Edinburgh, and the highest in Paisley and Glasgow. The 755 deaths registered in these towns during the week under notice included 68 which were referred to the principal zymotic diseases, equal to an annual rate of 2.6 per 1,000, which slightly exceeded the mean zymotic rate during the same period in the large English towns. The highest zymotic rates were recorded in Glasgow, Leith, and Greenock. The 755 deaths registered in Glasgow included 12 which were referred to whooping-cough, 7 to measles, 5 to diphtheria, and 4 to scarlet fever. Three fatal cases of "fever" occurred in Edinburgh, and 8 of measles in Greenock. The death-rate from diseases of the respiratory organs in these towns was equal to 9.2 per 1,000, against 11.5 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, January 3rd, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 36.1 per 1,000. The lowest rates were recorded in Lisburn and Wexford, and the highest in Sligo and Lurgan. The death-rate from the principal zymotic diseases averaged 1.9 per 1,000. The 275 deaths registered in Dublin were equal to an annual rate of 40.6 per 1,000 (against 28.2 and 31.3 in the preceding two weeks), the rate for the same period being 29.7 in London and 22.5 in Edinburgh. These 275 deaths in Dublin included 11 which were referred to the principal zymotic diseases (equal to an annual rate of 1.6 per 1,000), of which 7 resulted from different forms of "fever," 2 from measles, and 2 from whooping-cough.

Presentation.—Upon his retirement from the office of Senior Resident Medical Officer at the Royal Free Hospital to take up the post of Surgical Registrar at St. Thomas's Hospital, Mr. C. E. Stabb was presented by the nurses with a handsome silver cigar case, engraved with his initials, as a took of their esteem and good will.

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

THE following course of instruction in practical hygiene at the Chemical Laboratory, to be given by Mr. H. Robinson, M.A., Assistant to the Professor of Chemistry, beginning April 17th, 1891, is announced. It is adapted to meet the requirements of the University and those of the General Medical Council for candidates seeking the diploma in Public Health.

The course will consist of practical instruction in the sanitary examination of water, air, and foods, chemically and microscopically, and in the laws of heat, the principles of pneumatics, hydrostatics and hydraulics, having special regard to the requirements of medical officers of health. It will also include the preparation of different media used in the cultivation of micro-organisms, and their cultivation therein by inoculation from air and water. Short lectures will be given in explanation of the above subjects, and of analytical reports in general relating to water, air and foods, and the interpretations to be put on them.

Water.—Qualitative examination: chemically as described in Parkes's *Practical Hygiene*, the colour, odour, the suspended matter. Quantitative examination: estimation of free ammonia, albuminoid, ammonia, organic carbon, oxygen consumed (Tidy, and De Chaumont), nitric and nitrous acids, chlorine, total solids, lime, magnesia, alkalinity, sulphuric and phosphoric acids, silica in solution, the hardness before and after boiling. Clark's process for softening water. Explanations and illustrations of methods employed to purify water by chemical processes, and by filtration.

Air.—Qualitative examination for foreign gases and suspended matter. Quantitative examination: estimation of carbonic acid and oxidisable matter.

Water and Air.—Bacteriological methods of examination, estimation of the number of micro-organisms, moulds, and fungi, and their identification.

Antiseptics and Disinfection.—The relative value of various antiseptics and disinfectants and the methods of employing them.

Foods. Quantitative examination of milk, butter, tea, coffee, sugar, beverages for alcohol, aërated waters for poisonous substances. Qualitative examination of bread and flour, of cereal, farinaceous and other food substances, and condiments, chemically and microscopically for common adulterations, colouring matters, animal organisms, and poisonous substances. The examination of food substances for fungoid growths, and poisonous substances resulting from the same.

Heat. Temperature: thermometers, maximum and minimum, mercury, alcohol, various scales, linear and cubic expansion of solids, expansion of liquids, force exerted by solids and liquids expanding, maximum density of water, expansion and density of gases, air thermometer and absolute temperature, fusion, latent heat, solution, solidification, crystallization, changes of volume on solidification and liquefaction, vaporisation, tension of aqueous vapour, evaporation, laws of ebullition, influence of pressure on boiling point, cold due to evaporation, hygrometry and hygrometers, moisture of the atmosphere, conductivity of solids, liquids and gases, convection, radiant heat, specific heat.

Gases.—Physical properties: expansibility, weight, pressure, the atmosphere, atmospheric pressure, Torricelli's experiment, different kinds of barometers and corrections for temperature, Boyle's law and its applications, laws of the mixture of gases, diffusion, mixtures of gases and liquids, absorption, the siphon, different kinds of pumps, velocity of efflux, Torricelli's theorem.

Liquids. General characters: equality of pressures, vertical pressure, downward and upward; pressure independent of the shape of the vessel, pressure on the sides of vessels, conditions of the equilibrium of liquids, water level, spirit level, artesian wells, determination of the volume of a body, specific gravity and hydrometers, capillarity, osmotic action, diffusion of liquids, dialysis, effusion and transpiration of gases.

Fees. Fee for the course, including the use of the apparatus (if not destroyed) and reagents: To members of the University, £9 9s.; to non-members, £12 12s.

SHUTTLEWORTH SCHOLARSHIP.—An examination will take place at Caius College on March 11th for the Shuttleworth Scholarship, vacated by F. H. Edgeworth, B.A., M.B. Subjects: Botany and Comparative Anatomy; value, £56 a year for three years. Candidates must be medical students of Cambridge who have passed the previous examination, and are of not less than eight terms standing. Names to be sent to the Tutors of Caius by March 1st.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in Anatomy and Physiology at a meeting of the Examiners on January 12th:

J. Prior, F. Horseman, R. Coates, and C. Oldfield, students of Yorkshire College, Leeds; J. W. Nayler, E. Bower, D. W. S. Muir, of Queen's College, Birmingham; J. M. Hall and J. McConnell, of Queen's College, Belfast; E. A. Fraser, of St. Mary's Hospital; F. J. Sadler, of Oxford University; W. Barwise, of Owens College, Manchester; J. F. Rudall, of St. Thomas's Hospital; P. A. Dykes, W. P. Gwynn, of Bristol Medical School; R. C. Badham, of Sydney University and London Hospital; J. H. Saunders, of Melbourne and Mr. Cooke's School of Anatomy and Physiology; F. H. Langlands, of Middlesex Hospital; W. Anderson, of the University of California.

Passed in Anatomy only:

A. H. Hardcastle, of Yorkshire College, Leeds; J. Moses and W. S. Newton, of London Hospital; and S. C. C. Fenwick, of St. Mary's Hospital.

Passed in Physiology only:

T. B. Abbott, of Yorkshire College, Leeds; F. D'M. Williams, of Bristol Medical School; B. Watts, of Sheffield Medical School; and W. T. Talbot, of Boston University and London Hospital.

Passed in Anatomy and Physiology on January 13th:

J. B. Winter, of Guy's Hospital; J. L. M. Bunch, of University College; J. Evans, J. Sterry, and J. K. K. Benjamin, of St. Bartholomew's Hospital; P. W. Spaull and H. Huskinson, of St. Thomas's Hospital; C. M. Mathew, of St. George's Hospital.

Passed in Anatomy only:

H. B. Emerson, of Leeds and Mr. Cooke's School of Anatomy and Physiology; J. W. Taylor, of Bristol Medical School; G. H. Tomlinson, of Queen's College, Birmingham; R. Alcock and H. C. Renshaw, of Owens College, Manchester; F. R. E. Milman and A. E. Scott, of Middlesex Hospital; W. Allingham, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; J. A. Crump, D. D. Brown, and A. G. Ewbank, of St. Bartholomew's Hospital; F. A. Stephens, of King's College; A. E. Couzens and A. Hewetson, of St. Mary's Hospital; H. Shepheard and G. Davidson, of St. Thomas's Hospital; E. J. Eedle, of Charing Cross Hospital, and T. W. Golding, of Charing Cross Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only:

P. R. Ash, A. Knowles, and W. Parkinson, of Yorkshire College, Leeds; A. L. Knapman, J. Brown, and T. Clegg, of Owens College, Manchester; T. P. Stokes, of Sheffield and Mr. Cooke's School of Anatomy and Physiology; F. B. Cooper, of Sheffield Medical School; E. G. Walls, of Queen's College, Birmingham; A. G. Cooley, of Durham University; V. J. Robin, of Adelaide University and Mr. Cooke's School of Anatomy and Physiology; J. S. Williams, of London Hospital; C. M. Spain, H. S. Taylor, and W. E. Kirby, of University College; C. W. Grant-Wilson and J. S. Hudson, of St. Thomas's Hospital; H. W. Joyce, of King's College and Mr. Cooke's School of Anatomy and Physiology; E. C. Drake, of Westminster Hospital and Mr. Cooke's School of Anatomy and Physiology; J. Thomas, of St. Bartholomew's Hospital; F. H. Dayus, of St. Mary's Hospital; F. H. R. J. U. Walker, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; J. W. Culmer, of Guy's Hospital.

Passed in Anatomy and Physiology on January 14th:

C. E. Carpmell, A. H. Trevor, and C. H. Harding, of Guy's Hospital; H. J. Finch, of Westminster Hospital; E. S. Winter, P. L. G. Skipworth, F. E. A. Webb, of St. Bartholomew's Hospital; T. G. Anderson, of Adelaide and Mr. Cooke's School of Anatomy and Physiology; F. S. Beachcroft, of Middlesex Hospital; C. H. Stewart, of St. Thomas's Hospital; J. R. P. Phillips, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; F. R. S. Gaman, of University College Hospital.

Passed in Anatomy only:

L. M. Breton and H. Knight, of St. Thomas's Hospital; H. T. Jenkins, of University College; W. J. Burroughs and G. E. Lockyer, of Guy's Hospital; T. Smith and R. Bebb, of London Hospital.

Passed in Physiology only.

S. R. Wright, of Charing Cross Hospital; E. S. Chilcott, of St. Mary's Hospital; W. S. Mayne, of University College; F. E. Fielden, of St. Bartholomew's Hospital; R. W. Dillon, of St. Thomas's Hospital.

THE LORDS COMMITTEE ON HOSPITALS.—An excellent official index (price, 8d.) has been published to the evidence taken last year before the Special Committee of the House of Lords appointed to inquire into metropolitan hospitals, of which Lord Sandhurst was Chairman. As nearly 10,000 questions have already been put, the index will be of great service. The Committee did not sit during the autumn session, but we understand that it will shortly be reappointed, although nothing as yet has been settled about the very necessary extension of the inquiry to the provincial hospitals.

OBITUARY.

WILLIAM STRANGE, M.D., F.R.C.P.,

Vice-President of the British Medical Association.

THE death of Dr. Strange removes from the ranks of the Association one of its oldest and most respected members, and widens the gap in the Council of the Association which has been caused by the decease during the last year of so many of its most valued and beloved veterans. He has gone over to the majority to join the ranks so lately swelled by the deaths of de Bartolomé and Waters, whose life-long friend and colleague he had been in the Council, and who had, like him, filled the office of President, and had permanently become Vice-President. Dr. Strange was not less earnest than any of his colleagues and predecessors in the punctual fulfilment of the duties of his office, and during the long series of years in which he held high place in the Councils of the Association, he readily imposed upon himself the sacrifices necessary for the diligent attendance on the quarterly Committees and Councils of the Association. He took a very lively interest in all its affairs, and was to the last active in thought and suggestion. Quite recently we had from him a valuable memorandum on the subject of the duties, sphere, and engagements of medical officers of health, a subject which had been commended to the notice of the Parliamentary Bills Committee by the Section of Public Health at the last annual meeting of the Association. It was a subject with which Dr. Strange had a long acquaintance, due to the experience gained in his post of medical officer of health for his own district, and as a friend and colleague of the late Dr. Rumsey, of Cheltenham, in the long inquiries and labours which the Public Health Committee of the Association carried on for many years, with the help of many distinguished men, such as Acland, Rumsey, A. P. Stewart, Sibson, and Farr; and of the Editor of the BRITISH MEDICAL JOURNAL. Those labours resulted in the appointment of the Royal Sanitary Commission, and the enactment of the Public Health Act, and all that has followed, so that Strange may long be remembered as one of the working pioneers in sanitary science and administration, and one who aided the Association in what was, perhaps, its greatest and most far-reaching achievement for the public good.

Dr. Strange was born at Shapstone, in Buckinghamshire, but his family removed, and his early years were passed at Ashwell House, Brackley, Northamptonshire. He went through his medical studies at Edinburgh as a contemporary of W. B. Carpenter, Hughes Bennett, and Edward Forbes; his friendship with these distinguished men greatly influenced the ardour and bent of his studies; for in Paris, also, where he subsequently went to study under Andral, Chomel, and Magendie, he was able to maintain and renew the association.

On entering medical life he became interested in questions of public health, and made official investigations in Lancashire, and gave important evidence before the Health of Towns Commission. In 1846 he published "An Address to the Middle and Working Classes as to Prevention of Excessive Sickness and Mortality in the Large Towns." At that time, however, public medicine hardly offered a career; and such posts as existed were few and far between. He began private practice at Bridgnorth, in Shropshire, but removed, in 1854, to Worcester, becoming Physician to the Worcester Infirmary in 1876, in the place of Sir Charles Hastings, resigned. To this institution he continued for nearly thirty-one years to render valuable services; at the time of his death he was, and had long been, senior physician. He was also honorary consulting physician to the Worcester Dispensary, the City and County Orphan Asylum, and the prison; and was the active adviser and one of the founders of the City and County Nursing Institution.

In 1872 he was appointed Medical Officer of the city and subsequently of the rural authority of Worcester, an appointment which he held at the time of his death. He was not only officially able and active, but he addressed himself to the diffusion of knowledge of the laws of life and of the prevention of adult and infant mortality (which at one time rose to a great height in Worcester) by various useful organisations. His solicitude for the health and welfare of the community led him to take an active interest in the establishment of open spaces, and in the creation of a system of public kitchens for the poor.

Dr. Strange took a most active and leading part in the formation of the Worcestershire Medical Society, of which he had been Honorary Secretary and Librarian since its formation and the gift of Sir Charles Hastings' library. When it was proposed that the British Medical Association should celebrate its jubilee annual meeting in 1882 in Worcester, the place of its birth, Dr. Strange was nominated by the voice of his associates and colleagues in the district as the President of the year, and was elected by the Council to that office. He fulfilled the duties with vigour, unfailing interest in the work, and great courtesy and hospitality. It was in all respects a highly successful and very memorable occasion. In his address he paid a due tribute to the memory of the founder, Sir Charles Hastings, as a Worcestershire worthy and a benefactor of his profession; and disclosed those interests in public health and collateral literary pursuits which were congenial to his character.

The subjects of medical interest which chiefly engaged his attention were "Infantile Mortality," "The Etiology of Enteric Fever," "The Sources of Health," etc., and his writings are chiefly to be found in the BRITISH MEDICAL JOURNAL, the *Medical Times and Gazette*, the *Sanitary Record*, and in some of the popular periodicals and magazines.

To the last he took a keen interest in the affairs of the day. In addition to the manuscript memorandum, of which we have spoken, addressed to the Chairman of the Parliamentary Bills Committee of the British Medical Association, he had, only a few days before his death, published a letter, with the signature of X., on "Unconscious Cerebration," and had paid a visit, as usual, to his hospital wards. The cause of death was angina. He was attended in his last illness by his friends and neighbours, Dr. Crowe and Dr. Read.

A man of religious conviction; of much intellectual freshness and energy; trusted and respected as a consultant by his professional brethren; active and earnest in the performance of public duties; eager to promote the best interests of his profession; much attached to the Association, and a constant attendant at its meetings. Dr. Strange passed a busy career with credit and usefulness, and was rewarded by his due sense of duty well done and by a large tribute of affection and respect.

H. O. THOMAS, M.R.C.S., M.D. (HON. CAUSÂ), ST. LOUIS.

THE death of Mr. H. O. Thomas, briefly noticed in our last issue, has removed from the profession one who has left a permanent mark on the history of surgery.

He was a native of Anglesea, and was born in 1833. His father, the late Mr. Evan Thomas, was a well-known bone-setter, who practised with singular success in Great Crosshall Street, and acquired a wide reputation with the public. From his father, however, he inherited nothing but his name and his mechanical genius, and his practice and success were the result of his own industry and talent. He was the eldest of five brothers, all of whom entered the medical profession. He studied at University College, London, at the University of Edinburgh, and in Paris, and obtained the M.R.C.S. in 1857. Three years later he commenced practice in Liverpool, and shortly afterwards married. His natural bent was towards surgery. He was fond of detail, and always prepared his own dressings and appliances. He was never on the staff of a hospital, but on Sunday mornings was accustomed to see at his own house a crowd of gratuitous patients who came to him from all parts of the town and from the neighbouring parts of Lancashire and Cheshire.

It is worthy of remark, at a time when experimenters seem to show somewhat undue haste in bringing their discoveries to the light of day, that Mr. Thomas had been using and perfecting his splints for nearly twenty years before he published them to the profession. This was certainly not due to any desire on his part to court secrecy for his discoveries, as he constantly showed them to his professional friends, but it was rather due to his innate modesty, and to the fact that for many years those of his brother practitioners to whom the splints were shown failed to perceive their value. About the

year 1875 he formed the acquaintance of Mr. Rushton Parker, now Professor of Surgery in University College, Liverpool, who was then surgeon to the Stanley Hospital, and showed him his splints, saying that he had for a long time found them very useful, but that none of those to whom he had shown them had paid them much attention. Mr. Parker believing that the splints were a new departure in surgery, urged on Mr. Thomas the desirability of making them known, both for the sake of humanity and for his own reputation. Accordingly, in 1875 appeared a small work from the pen of Mr. Thomas, entitled "Diseases of the Hip, Knee, and Ankle-joints," and figuring for the first time the splints that bear his name. They were favourably received at University Hospital in London, and Mr. Erichsen included a description of them in the seventh edition of his *Surgery*, published in 1877. Henceforth their recognition spread rapidly, and they were soon adopted generally by the profession. His method of wiring the fragments in fracture of the lower jaw had been noticed by Mr. Bryant some years before.

Deeply engrossed as Mr. Thomas was in carrying on a large and arduous practice, his interests were by no means limited to his profession. He was warmly attached to literature, and was an enthusiastic student of archæology. His house was adorned with valuable works of art, and he had collected an extensive library, some of his volumes on archæology being especially choice. It may safely be said that those who knew him best, loved him best; but the most engaging aspects of his character were only revealed to those who were privileged to enter his family life. He had a love, almost a passion, for music, and spent much of the limited time he could give to the domestic circle in playing on the flute. He had a great fondness for children, and loved to snatch a moment from his almost constant round of labour to enjoy a few minutes' romp with them. He had exceptional control over himself; one who knew him well affirms he never saw him lose his temper, though when occasion arose, he never hesitated to express his indignation. He never nursed a grievance, and could not perform a spiteful act. He was full of anecdote, and revelled in humour. Most of his writings—and they are fairly voluminous—were composed after 10 o'clock at night, after a day of ceaseless work. He had just completed his advertised list of works when his fatal illness struck him down, and he was about to engage in the composition of a work on Orthopædics conjointly with his nephew, Mr. Robert Jones. His last published contribution was a paper "On the Action of Drugs on the Iris and Ciliary Muscle," which appeared in the *Provincial Medical Journal* for January in the present year.

His appearance was striking, and once seen he was not easily forgotten. Seated on a high four-wheeled gig, his exceedingly slight figure encased in a dark blue coat buttoned high in the neck, with naval cap, and smoking the constant cigarette, he might be seen driving about at all hours of the day, frequently accompanied by his wife. He seldom walked except the shortest distances, and his habit of relying on conveyances seems to have led to the chill that ushered in his fatal illness. On the Wednesday before his death he was visiting a patient at Warrington, and on leaving the house found there was no car at hand and started off to walk to the station. Fearing he would be late he hurried, perspired, and subsequently caught a chill. Soon afterwards pneumonia set in, and in spite of the most attentive care he sank on Tuesday the January 6th. He was attended by his friend Dr. William Carter, and his nephew, Mr. Robert Jones, was constantly by his bedside. He was 57 years of age, and leaves a widow, but no children.

Some time ago the University of St. Louis conferred the honorary degree of M.D. on him, at the same time with Professor Bergmann.

THOMAS FARQUHAR, M.D.

The death of Dr. Thomas Farquhar, of the Indian service, of which the announcement appears in the *Times*, will be learned with regret by a large circle of Indian and other friends. In his early service he was, it is stated, a member of the Punjabee force; and, in charge of the Guide Corps, he joined the Yusufzai frontier campaign, and was present at the engagements of Chilianwalla and Goojerat. He rendered signal service in the outbreak of cholera at Agra in 1856; and in the following year, during the Mutiny, was conspicuous for his brave attitude and devoted labours among those beleagued for many months in the fort of Agra; he also took part in the action fought under its walls on July 5th, 1857. Lord Lawrence appointed him his body surgeon, which office Dr. Farquhar held throughout his viceroyalty. In all these posts, by his singular devotion to the interests of those about him and generous nobility of character, Dr. Farquhar secured the love and friendship of all who knew him. He lived latterly at Aberdeen, where his loss as a philanthropist will be greatly felt.

MEDICAL NEWS.

A handsome brass lectern has been presented to St. Thomas's Hospital Chapel by the new Treasurer, Mr. J. G. Wainwright.

Colonel Charles Sutherland, M.D., has been appointed Surgeon-General of the United States Army by the President, in succession to Dr. J. H. Baxter, whose death we recently announced.

The Royal Meteorological Society will hold an exhibition of rain gauges, evaporation gauges, percolation gauges, and similar instruments at 25, Great George Street, Westminster, from March 17th to 20th.

The late Dr. Thomas Rhodes Armitage, of 33, Cambridge Square, Hyde Park, who died at Cashel, Tipperary, on October 23rd, 1890, and was well known for his benefactions to the blind, leaves personal estate valued at £217,420.

At the celebration of the twenty-fifth anniversary of the foundation of the Society of the Friends of Science in Posen the Medical Section elected Professor Koch, Sir Joseph Lister, and M. Pasteur honorary members.

Hygiene for Women.—The examination for the certificate of the National Health Society will take place on January 20th, at 53, Berners Street. This is a special examination for the 500 ladies who have lately attended Dr. Schofield's courses on "Domestic and Personal Hygiene."

Dental Hospital of London.—The advertisement in our issue of January 3rd, relating to the Dental Hospital of London, should read that 5 Assistant Dental Surgeons are required, and not 5 Dental Surgeons as printed. A corrected advertisement appears in this week's issue.

Women and Children's Hospital, Cork.—Amateur theatricals in aid of the funds of this institution were held last week in the Imperial Hotel, Cork. A comedietta entitled *Breaking the Ice* and Theyre Smith's comedy *Uncle's Will* were creditably performed, and were fairly attended.

The Ceylon Government have appointed Dr. J. D. Macdonald, Physician and Medical Superintendent of the General Hospital, Colombo, and Professor of the Principles and Practice of Medicine, Ceylon Medical College, to proceed to Berlin to study the treatment of phthisis as practised by Professor Koch.

Influenza in Central Africa.—Consul John Buchanan, C.M.G., writing on October 11th from Mount Zomba upon the Shiré Highlands of Central Africa (our new protectorate), reports a severe epidemic of influenza there. "A good many people," he says, "have died, both young and old. Most of the Europeans at Blantyre have had it in a more or less severe form."

Morison's Prizes for Lunacy Attendants.—The Council of the Royal College of Physicians of Edinburgh, on the recommendation of Dr. T. S. Clouston, Morison Lecturer for the year, has awarded the prizes, left by the late Sir Alexander Morison, a former president of the College, for meritorious attendance on the insane, to Mary Ann Anderson, Midlothian and Peebles Asylum, eleven years' service, and to David Robertson, Murray Royal Asylum, Perth, thirty years' service.

Fever in London in 1890.—The returns as to fever patients in London which were laid before the Metropolitan Asylums Board on January 10th shows a satisfactory diminution in the

number of cases which have been dealt with in the previous fortnight. The Chairman stated that the total admissions for last year were 8,307—1,793 in excess of the total admissions for 1887, the year of what was thought to be a great epidemic of fever in London. The increase, he thought, might be attributed to the increasing popularity of the Board's hospitals.

THE SANITARY INSTITUTE.—Donations to the amount of £600 have been made to the institute during the past year by the honorary officers and members of the Council, and a considerable portion of this amount has been devoted to rearranging and improving its museum and sanitary appliances, and to the preparation and printing of a catalogue. The museum being open free to the profession and the public, want of funds has hitherto prevented the Council from undertaking this work, although they long felt it to be much needed in order to make the teaching of the museum fully available.

THE BRITISH NURSES ASSOCIATION.—Her Royal Highness Princess Christian presided on January 9th over a general meeting of the Council of the British Nurses Association. Sir William Savory, as the Vice-President of the Association, presented Her Royal Highness with the first copy of the first Register of the Association, containing the names of the first 1,700 nurses who had been enrolled as members. Sir Richard Quain proposed a vote of thanks to the Princess for the great personal interest she had taken in the formation of the Association; the motion was seconded by Sir Dyce Duckworth, and carried with acclamation.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Loiseau, Director of the Ophthalmic Institute of the Belgian Army, and well known for his labours in the field of ophthalmology; he was the inventor of a metric optometer for the detection of defects of refraction in recruits, which was adopted by the Belgian Government; Dr. Pécholier, Professor Agrégé in the Medical Faculty of the University of Montpellier; Dr. A. F. Holt, Surgeon-General of Massachusetts; and Dr. Richard, President of the Municipal Council of Paris.

THE NITRIFYING FERMENT.—The *Philosophical Transactions* of the Royal Society for 1890, vol. 181, contain an interesting paper by Professor P. F. Frankland and Mrs. G. C. Frankland on the Nitrifying Process and its Specific Ferment. They have succeeded, by processes of fractional dilution extended over nearly three years, in isolating an organism which will not grow upon gelatine peptone, but proliferates very slowly in broth. It is the active agent in nitrification, and is present in ordinary garden mould. It nitrifies ammoniacal solutions in the absence of organic matter, producing nitrites, but no nitrates. It has a characteristic form, and does not render the solution it nitrifies turbid.

THE LIBRARY OF THE BRISTOL MEDICO-CHIRURGICAL SOCIETY.—This library was formally opened on January 5th, by Mr. S. H. Swayne, the President of the year. There was an influential attendance of members, and after the President had reviewed the history of medical libraries in Bristol, Mr. Augustin Prichard, Dr. J. G. Swayne, Dr. Shingleton Smith, and Mr. Nelson Dobson spoke on the advantages and possibilities of the library and reading-room that day opened. A good room has been obtained in the club house of the Literary and Philosophical Club. Mr. L. M. Griffiths, the Honorary Librarian, will be glad to receive communications from any interested in the matter.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting, held on the 8th inst., the following list of officers, council, and microscopical committee was adopted:—*President:* W. Mitchell Banks, F.R.C.S. *Vice-Presidents:* Damer Harrisson, F.R.C.S.E.; D. M. Williams, M.K.Q.C.P.; *J. Nelson Cregeen, L.R.C.P.; and *F. W. Lowndes. *Hon. Treasurer:* *J. W. Warburton, M.D. *Hon. General Secretary:* E. W. Hope, M.D. *Hon. Secretary, Ordinary Meetings:* A. Barron, M.B. *Hon. Librarian:* *Peter Davidson, M.B. *Council:* H. Briggs, F.R.C.S.; William Carter, M.D.; G. G. Hamilton, F.R.C.S.E.; A. Samuels, M.D.; J. Wiglesworth, M.D.; *T. Bushby, L.R.C.P.; *R. Caton, M.D.; *Charles Hill, M.D.; *J. R. Logan, M.B.; *Frank T. Paul, F.R.C.S.; *G. G. S. Taylor, M.D.; and *Glynn Whittle, M.D. *Microscopical Committee:* A. Barron, M.B.; T. B. Grimsdale, M.B.; G. G. Hamilton, F.R.C.S.Ed.; *F. Johnston, M.B.; *F. C. Larkin, F.R.C.S.; J. R. Logan, M.B.; F. T. Paul, F.R.C.S.; and Arthur Wilson, M.R.C.S. Those marked (*) did not hold the same office last year.

MEDICAL VACANCIES.

The following Vacancies are announced:

CARLISLE DISPENSARY.—House-Surgeon. Salary, £130 per annum, with apartments. Applications to the Honorary Secretary, Mr. J. Ostell, 14, Bank Street, Carlisle, by January 19th. Election on March 1st.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's Inn Road, W.C.—House-Surgeon. Applications to the Secretary by February 7th.

CHARING CROSS HOSPITAL.—Assistant Surgeon; must be F.R.C.S.Eng., and reside within three miles of the Hospital. Applications to Arthur E. Reade, Secretary, by January 28th.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant. Salary, £50 for first year, and, if reappointed, £70 for second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by February 28th.

CITY OF LONDON LUNATIC ASYLUM, near Dartford, Kent.—Assistant Medical Officer, unmarried, not less than 25 years or more than 35 years of age. Salary, £150 per annum, with board, lodging, washing, and attendance. Applications addressed to the Visiting Committee to be sent to the Clerk, Henry F. Youle (of whom the forms of application can be obtained) by February 3rd.

COUNTY BOROUGH OF ST. HELENS.—Assistant to the Medical Officer, doubly qualified. Must have or obtain within twelve months of appointment a diploma of sanitary science, public health, or State medicine. Age not less than 25 nor more than 38. Salary, £200 per annum. Applications to the Chairman of the Parliamentary Committee, Town Hall, St. Helens, endorsed "Assistant to M. O. H.," by January 23rd.

COUNTY COUNCIL OF AYRSHIRE.—County Medical Officer; must not hold other appointments or engage in private practice, and must reside in Ayr. Salary, £450 per annum. Applications to Chas. G. Shaw, County Clerk, County Buildings, Ayr, by February 2nd.

COUNTY OF DUMFRIES.—Medical Officer. Salary, £300 per annum. Applications to John Robson, County Clerk, Dumfries, by February 2nd, of whom further information can be obtained.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications to the Secretary by January 20th, of whom particulars of duties can be obtained.

DENTAL HOSPITAL OF LONDON, Leicester Square.—Five Assistant Dental Surgeons. Applications to J. Francis Pink, Secretary, by January 20th.

DUNDEE ROYAL LUNATIC ASYLUM.—Resident Clinical Assistant. No salary, but board, etc., provided. Applications to Dr. Rorie, Asylum, Dundee.

DUNDEE ROYAL LUNATIC ASYLUM.—Assistant Medical Officer; unmarried. Salary, £100 per annum, with board, apartments, and washing. Applications to Dr. Rorie, Asylum, Dundee.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon; must possess surgical qualifications; no salary, but residence, board, and washing provided. Applications to J. D. M. Coghill, House-Governor, by January 31st. Election on February 6th.

GERMAN HOSPITAL, Dalston.—Honorary Assistant Physician. Must be a native of Germany, or must be fully acquainted with the German language and the peculiarities of the German medical science; must hold diploma of foreign or British University, be Member of the College of Physicians, and fully qualified to practise in Great Britain. Applications to A. Walbaum, D.D., Secretary, by January 20th, 1891.

HAMBLEDON UNION, Surrey.—District Medical Officer and Public Vaccinator for the Witley District. Salary, £60 per annum, with extra fees. Applications to Ferdinand Smallpeice, Clerk's Office, 138, High Street, Guildford, by January 20th.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior House-Surgeon, double qualifications. Salary, £60 per annum, rising to £70, with board and residence. Applications to T. G. Mabane, Rockcliffe, Westoe, near South Shields, by January 20th.

KENT AND CANTERBURY HOSPITAL, Canterbury.—Assistant House-Surgeon and Dispenser. Must reside in the house and be unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications to Charles S. Read, Secretary, by January 24th.

LANCASHIRE COUNTY ASYLUM, Rainhill, near Liverpool.—Pathological Assistant Medical Officer. Salary, £200 per annum, with furnished apartments, board, attendance, and washing. Applications to the Medical Superintendent.

METROPOLITAN HOSPITAL, Kingsland Road, E.—Dental Surgeon. Applications to C. H. Byers, Secretary, by January 21st.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant; double qualifications. Salary, £120 per annum. Applications to the Honorary Secretary by January 24th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Clinical Assistant for In-patient Department; non-resident. Applications to the Secretary by January 15th.

PARISH OF TONGUE, Sutherlandshire.—Medical Officer. Salary, £165 per annum, house, garden, and croft available. To enter duties in February. Applications, with certificates, to John Murray, Inspector of Poor, Tongue, Sutherlandshire.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House-Surgeon. Board, lodging, and washing; no salary. Applications, with testimonials by January 28th, addressed to the Chairman, Medical Committee.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—House-Surgeon. Must be medical graduate of a university or member of a college of surgeons of United Kingdom, registered and unmarried. Salary, with board and residence, £70 per annum. Applications to the Chairm of the Committee at the Hospital, Portsmouth, by January 29th.

ST. LUKE'S HOSPITAL. Resident Clinical Assistant. Appointment for six months, with board and residence. Applications to the Secretary not later than January 22nd.

STOCKPORT INFIRMARY.—Assistant to House-Surgeon, must be qualified. Appointment for six months with board and residence. Applications with testimonials to Lieutenant-Colonel S. W. Wilkinson, Honorary Secretary, by January 19th.

MEDICAL APPOINTMENTS.

ADAMS, James, M.D., F.R.C.S., reappointed Medical Officer of the Eastbourne Borough Sanatorium.

BEALE, Peyton T. B., F.R.C.S.Eng., appointed Surgeon to the out-patients of the Great Northern Central Hospital, *vice* Mr. H. W. Allingham, F.R.C.S.Eng.

BENNETT, James Moore, M.D.St.And., M.R.C.S.Eng., appointed Junior Assistant Resident Medical Officer to the Workhouse and Infirmary of the township of Toxteth Park.

BRUNTON, Walter Reyner, L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Medical Officer to the Portsmouth Lunatic Asylum, Milton, near Portsmouth, *vice* Nathan Raw, M.B.

CHEATLE, Arthur H., M.R.C.S., L.R.C.P., appointed Junior Resident Medical Officer to the Eveline Hospital for Sick Children, Southwark Bridge Road.

CRANSTON, William L., M.R.C.S., appointed Medical Officer of Health for the Shire of Swan Hill, Melbourne.

DENNING, Robert Nickle, reappointed Medical Officer of Health of the Elland Urban District.

DOUGLAS, Archibald Robertson, L.R.C.P., L.R.C.S.Ed., etc., appointed Assistant Medical Officer to the East Riding Lunatic Asylum, Beverley.

DRAPER, Thomas M., M.R.C.S., L.R.C.P.Lond., appointed Senior Assistant Resident Medical Officer to the Workhouse and Infirmary of the Township of Toxteth Park.

DUNN, Mr. Frederick, appointed Public Analyst for the Shires of Castlemaine and Heathcote, Melbourne.

GIBSON, James, M.B., C.M.Glasg., reappointed Medical Officer of Health of the Greetland Urban District.

JACOB, Henry William, M.A., M.D., appointed Assistant House-Surgeon to the General Infirmary, Birmingham, *vice* Mr. Gordon.

KIRSOPP, Thomas, M.B.Lond., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the No. 2 District of the Horsham Union.

KRUSE, Mr. John, appointed Public Analyst for the Shires of Mornington and Numarkah, Melbourne.

LITTLE, William C., appointed Medical Officer of Health for the Shire of Wimmera, Melbourne.

MACKIE, Dr., reappointed Medical Officer to the Brechin Infirmary.

PLUMMER, Selby W., M.B., B.S.Dunelm, appointed House-Surgeon to the Royal Infirmary, Newcastle-on-Tyne, *vice* Burdon Cox, resigned.

ROSS, Wm. C., M.B., appointed Medical Officer of Health for the Shire of St. Arnaud, Melbourne.

SWINDELLS, J. A., M.R.C.S., appointed Medical Officer of Health for the Shire of Glenlyon, Melbourne.

THOMSON, W. Ernest F., M.A., M.B., C.M.Edin., appointed Resident Medical Officer of the Parish of Eday, Orkney, N.B.

WARING, Holbert Jacob, M.B., L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant House-Surgeon to St. Bartholomew's Hospital.

WESTON, Edward Francis, M.R.C.S.Eng., L.S.A., appointed by the Justices of the Staffordshire Quarter Sessions, Private Asylum Medical Visitor.

WILLIS, Julian, M.R.C.P.Ed., M.R.C.S.Eng., appointed Medical Officer to West Middlesex Waterworks Company, *vice* W. T. Wyatt, M.A., M.D.Oxon., resigned.

WHITE, G. B. M., M.B., B.Sc., F.R.C.S., appointed Surgical Registrar to the University College, London.

WHITE, Percy H., M.B., C.M.Edin., M.R.C.S., L.D.S.Eng., appointed Assistant Dental Surgeon to the National Dental Hospital, Great Portland Street, W., *vice* Mr. R. D. Pedley.

VAUGHAN, Alfred Pardoe, M.B., appointed Medical Officer of Health for the Shire of Doncaster, Melbourne.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: On Lachrymal Diseases. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. G. Bailey: On Anæsthetics.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Stephen Mackenzie: The Lettsomian Lectures on Anæmia: its Pathology, Symptoms, and Treatment. Lecture II.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On Hysteria, Delirium, Mania. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On Special Forms of Lupus.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Delépine: Melanotic Sarcoma of the Liver. Mr. T. F. Chavasse: Diverticulum of the Œsophagus. Dr. S. Copeman: Hæmatoporphyrin in Urine. Dr. W. Hunter: Subacute Gastritis. Dr. S. West: Multiple Tubercular Tumours in Brain and Viscera. Mr. Stephen Paget: Imperforate Rectum. Dr. Job Collins: Hypertrophied Kidney. Dr. Rolleston: Mediastinal Tumour. Card Specimens: Mr. L. A. Dunn: Caries of the Scapula. Dr. Delépine: Charcot's Crystals and Leprosy.

ROYAL STATISTICAL SOCIETY, Lecture Theatre of the Museum of Practical Geology, 28, Jermyn Street, S.W., 7.45 P.M.—Inspector-General Robert Lawson: The Operation of the Contagious Diseases Acts, from their introduction in 1864 to their ultimate repeal in 1886.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Mitchell Bruce: Demonstration of Cardiac Cases. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. B. Lawford: On Optic Neuritis.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, W., 8 P.M.—President's address: Election of Council and Officers.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7 P.M.—Mr. R. H. Scott: On a Peculiar Development of Cirrus Cloud observed in Southern Switzerland. Colonel W. F. Badgley: On Dew. 8.15 P.M. Annual General Meeting.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Beevor: On the Anatomy of the Brain. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Voelcker: Demonstration of Pathological Specimens. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. G. Stoker: On Neuroses of the Larynx.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Dr. R. T. Smith: On Two Cases of Tubercular Salpingitis. Introductory Address by President, Dr. Chapman Grigg.

NEUROLOGICAL SOCIETY, National Hospital for the Paralysed and the Epileptic, Queen Square, 8.30 P.M.—Annual meeting: election of officers; Address by the President-Elect, Dr. Bristowe: On the Relation of Mind to Brain.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Mitchell Bruce: Demonstration of Pulmonary Cases.

CLINICAL SOCIETY OF LONDON.—Living specimens, 8 P.M.—Mr. Stephen Paget: A Case of Acromegaly. Dr. Balmanno Squire: A Case of Lupus which has recovered under treatment. President's address, 8.30 P.M. Papers.—Dr. Sidney Phillips: Two Cases of Typhoid Fever fatal at a late Period of the Disease without Ulceration of the Intestine. Mr. C. Mansell Moullin: Three Cases of Septicæmia due to Sewer Gas. Dr. Hale White and Mr. W. A. Lane: A Case of Stricture of the Pylorus following upon Hydrochloric Acid Poisoning, in which a modified Loreta's operation was performed.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstrations. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On the Disease called Lichen.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

ILLINGWORTH.—On January 9th, at Clayton House, Accrington, the wife of C. R. Illingworth, M.D., M.R.C.S., of a son.

TAYLOR.—On January 10th, at 9, Minster Yard, York, the wife of Edward Muscroft Taylor, of a son.

MARRIAGES.

FULLER—BERRY.—On January 7th, at the Parish Church, Cottingham, by the Rev. Canon Yates, Andrew Fuller, Surgeon, of Bugbrooke, Weedon, to Beatrice, second daughter of Charles Berry, Esq., of Middleton.

HANLY—BRADLEY.—Thursday, January 8th, at St. Anne's Catholic Church, Aughton, by the Most Rev. Archbishop Scarisbrick, Dr. John Joseph Hanly, M.A., of Ormskirk, to Walburga Mary, fourth daughter of Mr. Joseph Bradley, Aughton, Lancashire.

DEATH.

HOPKINS.—January 8th, aged 60, John Walter Hopkins, M.R.C.S., L.R.C.P., Brunswick House, Leeds.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

Central London Ophthalmic. *Operation Days.*—Daily, 2.

Charing Cross. *Hours of Attendance*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9. Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

Chelsea Hospital for Women. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

East London Hospital for Children. *Operation Day.*—F., 2.

Great Northern Central. *Hours of Attendance.*—Medical and Surgical, M. Tu. Wed. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

Guy's. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

Hospital for Women, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

King's College. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30.; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

London. *Hours of Attendance*—Medical, daily, exc. S., 2; Surgical, daily, 1.30, and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

Metropolitan. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

Middlesex. *Hours of Attendance.* Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

National Orthopædic. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

North-West London. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

Royal Free. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women) S., 9.

Royal London Ophthalmic. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

Royal Orthopædic. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

Royal Westminster Ophthalmic. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

St. Bartholomew's. *Hours of Attendance.*—Medical and Surgical, daily, 1.30. Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

St. George's. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic, F., 1.15.

St. Mark's. *Hours of Attendance.*—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

St. Mary's. *Hours of Attendance.*—Medical and Surgical, daily, 1.45 o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electrotherapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

St. Peter's. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

St. Thomas's. *Hours of Attendance.*—Medical and Surgical, daily, except W and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, except S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological) Th., 2.

Samaritan Free for Women and Children. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

Throat, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30. *Operation Day.*—Th., 2.

University College. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30. *Operation Days.*—W. Th., 1.30; S. 2.

West London. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu., F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic, W., 2 Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

Westminster. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not to his private house.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessari y for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted, will be found under their respective headings.*

QUERIES.

Replacement of Retroflexed Fundus Uteri.

A Member writes: I would like to ask some of my medical brethren who have a larger experience in gynæcology—(1) Can a Hodge's pessary be depended on of itself, when inserted without other measures, such as the use of the sound, to raise the retroflexed fundus? (2) Do they ever find it necessary or desirable to use chloroform or other anæsthetic when using a sound or adjusting a pessary? I have had many cases, but none of them presented the same difficulties. The patient, whom I saw for the first time a few days ago, is a widow who has had no children. The pelvis is deep, the fundus, difficult on that account to reach, is acutely flexed and seemingly pretty firm in its position, the vagina narrow, and os vaginæ very small, barely admitting the forefinger, and the patient is very sensitive to pain. Any expression of opinion which would aid me in the case I would be obliged for.

ANSWERS.

"Outstanding Ears."

Surgeon writes: In reply to Mr. H. Rainsford's (Kilburn Lane) query in the British Medical Journal of January 10th: With regard to treatment of "outstanding prominent ears in young lady patient," why not vivify the back of ears and skin on head opposite, or keep both in contact till union is effected?

Books on Hypnotism.

Dr. R. Mansell-Jones.—An answer to a similar question was published in the British Medical Journal of December 20th, 1890, p. 1455. It was there stated that Moll's work on *Hypnotism*, translated from the German, and published by Walter Scott (London), would be found a useful work in commencing the study of this subject.

Isolation after Diphtheria.

Drax.—In cases of diphtheria, even after the disappearance of all membrane in the throat or mouth, it is advisable to keep the patient in isolation for a week or longer, using disinfectant lotions during this period to gargle the throat and mouth. This course is especially advisable in the case of children before allowing them to return to school or mix with others of their family.

Methylated Chloroform.

Dr. John Rose.—The best methylated chloroform can be safely employed for producing artificial anæsthesia. The ready test of evaporating a few drops from the hand and noting whether any unpleasant odour remains will, with the best varieties, show that practically no odour persists. The Warrington chloroform recently introduced into the market is prepared without methylated alcohol, but by a process which enables it to be sold at a price which is, we believe, practically that of the methylated product. This chloroform is a reliable and not unpleasant smelling material.

Nurses' Costumes Competition.

Dr. R. F. Cook (Gateshead).—There have been two competitions held during the last twelve or fourteen months. The earlier one was for the most approved nurse's uniform; the later was an invalid jacket competition. Our correspondent probably has the former in his mind. A large number of hospitals sent dressed dolls for that competition, and the first prize was carried off by the Salop Infirmary; the second by the Radcliffe Infirmary, Oxford. The Charing Cross Hospital also showed dressed dolls, and they were actually the most approved of all; but inasmuch as the "show" was held at the Charing Cross Hospital, honour forbade the entering into the competition of the matrons and nurses of that institution. The competing dolls have been shown at several other hospitals, and are still in existence. They may be viewed, we are informed, on presentation of card at the office of *The Hospital*, 140, Strand, W.C.

NOTES, LETTERS, Etc.

READERS of *Little Lord Fauntleroy* will hear with regret that the original of that fascinating creation died recently of consumption. He was the son of Dr. Swan M. Burnett, of New York, and had been brought to Europe by his mother, the popular novelist, in hope of a cure for his disease.

THE climate of the Outer Hebrides was not only 16 degrees warmer than that of London from December 10th to 24th, but it was also more equable. This warmth at the northern stations was felt also more or less on the east cost of Scotland. This difference was due to the effects of oceanic warmth, and not to the mere direction of the wind.

CONSUMPTION OF QUININE IN AMERICA.

AN American contemporary states that while the annual supply of quinine for the whole world is estimated at 6,000,000 ounces, more than half that amount is consumed in the United States alone. Is it malaria or the fashionable craving for "pick me ups," of which a good deal has been heard lately, that is responsible for this large consumption of the drug?

LAVATORIES IN RAILWAY CARRIAGES.

FOLLOWING the example of the Midland Railway, the directors of the Great Western Railway have decided to provide lavatories in connection with all classes on their long-distance trains. The travelling public will hail this change with satisfaction, and will hopefully expect its introduction on the other great lines of traffic. It is recommended alike by considerations of comfort and of health. To all it ensures a distinct gain in convenience, while for many sick and weak persons who may have to travel by rail, it signifies the satisfaction of a crying need.

COLD BATHS.

DR. J. FARRAR (Gainsborough) writes: Anent the rather vigorous letter of Dr. W. Gordon Stables on this subject, in the BRITISH MEDICAL JOURNAL of January 10th (p. 99), and in support of his contention, it may perhaps interest your readers to peruse the following paragraph from the last edition of my little book on *Baths and Bathing*, recently published. It is mentioned to illustrate the fact that: "A man who has all his life been accustomed to the habitual morning dip, appears to be able to despise alike both cold water and the cold piercing blasts of winter." The paragraph runs as follows:

"I have in my mind at present a gentleman, aged 86, who habitually, summer and winter alike, takes his cold bath on first rising in the morning; and he has never yet suffered from any complaint that could fairly be attributed to this daily practice of cold bathing. He never wears an overcoat, in snow or rain, and no muffler; and he is able to take his daily morning walk, of at least three miles, no matter what the weather is like."

I may add that this gentleman is still living, and that during the present severe weather, when it has been cold enough to keep ordinary old men between the blankets, he is up before the sun, and still has his usual dip, having to break the ice before creeping in.

Of course, while this is safe in one who has all his life been accustomed to the daily cold bath, the result would be very different in other cases, where such a practice has been habitually neglected.

WINTER BATHING IN THE SERPENTINE.

IN reference to an article on Cold Water Baths in the Serpentine in Winter in the BRITISH MEDICAL JOURNAL of January 3rd, a correspondent writes: It may be stated that the water itself in the spaces broken in the ice was found to have a temperature of 34° F. That of the air on the banks was then about 26° F. during the day it was tried, so that really the bathers were plunging into warmer water than the air. This, he adds, may therefore account for the stoicism and innocuousness of the bathing marvel.

COMMUNICATIONS, LETTERS, Etc., have been received from:

(**A**) Dr. C. Aitken, Penarth; Professor J. Attfield, London; Dr. Atthill, Dublin; Mr. F. Adsett, Worthing; Mr. W. Allen, Manchester; Dr. J. Adams, Eastbourne; Messrs. Allen and Hanbury, London. (**B**) Mr. Balding, Royston; Dr. F. Ballon, Leadville, Colo.; Dr. H. Barnes, Carlisle; T. M. Bonar, M.B., Probus; Dr. A. H. Benson, Dublin; Dr. P. Boobbyer, Nottingham; Messrs. Burroughs, Wellcome and Co., London; Dr. Berdoe, London; D. G. Braidwood, M.B., Halkirk; Mr. P. T. B. Beale, London; Mr. P. B. Bentlif, Jersey; Mr. H. Bradburn, London; Mr. Bullen, Wakefield; Mr. G. Balfour, Wimbledon; Surgeon-Major Bourke, Secunderabad; Dr. R. Bell, Glasgow. (**C**) Surgeon W. J. Colborne, Gibraltar; Mr. J. B. Coumbe, Twyford; Dr. G. W. Crowe, Worcester; Mr. M. Calder, Greenock; Dr. G. Cowen, New Malden; Mr. W. J. Cant, Lincoln; Mr. H. Chambers, Cottingham; Dr. Ward Cousins, Southsea; Dr. H. E. Crook, London. (**D**) Mr. A. R. Douglas, Durham; Dr. Wm. Duncan, London; Mr. F. W. Dix, Rugby; Mr. G. D. Deeping, Southend; Denaeyer's Peptonoids and Extract of Meat Company, London; Messrs. Danielsson and Co., London; Mr. V. Dickinson, London; Messrs. W. and C. Davies, Brighton. (**E**) Dr. E. J. Edwardes, London; Mr. H. T. C. Eagle, London. (**F**) Mr. J. A. Fox, Penzance; Dr. J. Farrar, Gainsboro'. (**G**) Mr. L. M. Griffiths, Clifton; Mr. A. V. Griffiths, Fenton; J. Gibson, M.B., Greetland; Mr. E. Goodall, Wakefield; Mr. R. Garden, Aberdeen; Fleet-Surgeon C. C. Golding, Southsea; Mr. W. Gregson, Southend. (**H**) Mr. P. Hutchinson, London; Professor V. Horsley, London; Mr. J. D. Hutchinson, Aberdare; Mr. H. M. Holt, Malton; Mr. J. P. Henry, St. Mary Cray; Dr. De Vere Hunt, Cardiff; Dr. Herman, London; Surgeon-General Hassard, Dublin; Dr. C. Holman, Reigate; Mr. W. E. Holmes, Roscommon; Mr. W. B. Holdernesse, Windsor; Mr. F. R. Humphreys, London; Dr. H. Handford, Nottingham; Dr. A. Haig, London; Mrs. Haughton, London; Surgeon Hall, Forest Hill. (**I**) Income Tax Repayment Agency, London. (**J**) Mr. G. S. Johnson, London; Mr. W. Jones, Liverpool; Dr. E. H. Jacob, Leeds; Mr. R. K. Johnston, Dublin; Mr. W. H. Johnson, London. (**K**) Mr. E. M. Knapp, Ross; Mr. F. Kerslake, London; Dr. H. Ker, London; Surgeon R. Kirkpatrick, Edinburgh Castle. (**L**) Mr. J. R. Lunn, London; Mr. H. A. Lawson, Craiglockhart; Dr. Fletcher Little, London; Mr. J. Limat, Newcastle-on-Tyne; Dr. W. Y. Lush, Weymouth. (**M**) Mr. R. Martyn, Exeter; Mr. A. W. S. McComiskey, Killough; Dr. C. A. MacMunn, Wolverhampton; Mr. A. H. Middleton, Dublin; Messrs. Murany et Cie., Paris; Mr. C. Moxham, Bury St. Edmunds; Miss H. McLintock, Church Stretton; Mr. J. Macready, London; Dr. C. W. Mansell-Moullin, London; Dr. R. Maguire, London; Mr. John Marshall, Coatbridge; Mr. E. Millais, London; Mr. Wm. Marriott, London; Miss A. McConnell, London; Medicus; Dr. Stephen Mackenzie, London; Messrs. Maclean and Sons, Edinburgh; Member. (**N**) Miss M. Nichol, London; Dr. D. Nicolson, Wokingham. (**O**) Mr. W. Odell, Torquay; Mr. J. Ostell, Carlisle. (**P**) Dr. C. E. Paget, Salford; Dr. H. Page, Redditch; Mr. D'Arcy Power, London; Dr. G. W. Potter, London; Mr. C. H. W. Parkinson, Wimborne; Mr. J. J. Powell, Bristol; Dr. Louis Parkes, London. (**R**) Mr. E. Richardson, Bedford Leigh; Dr. J. Rorie, Dundee; J. Rae, M.B., London; A. B. Rideal, M.B., Southborough; Dr. J. Rose, Chesterfield; Mr. J. M. Richards, London; Surgeon A. G. Reilly, St. George's, Bermuda; Dr. Rentoul, Liverpool; Mr. K. Roberts, Bishop's Lydeard. (**S**) Mr. W. T. Stead, London; E. H. Strong, M.B., London; Dr. Saundby, Birmingham; Dr. Sykes, Mexborough; Mr. F. Shapley, Sidcup; Mr. P. Swain, Plymouth; Dr. J. Lindsay Steven, Glasgow; The Secretary of the Sanitary Institute, London; Mr. Morton Smale, London; Mr. R. W. Sisson, Newcastle-on-Tyne; Miss Strange, Worcester; Mr. J. Sharples, Preston; The Secretary of the New South Wales Branch of the British Medical Association, Sydney; Mr. E. G. Stocker, Weedon; Mr. P. Selby, Newcastle-on-Tyne; Dr. W. T. Stoker, Dublin; The Secretary of Gresham College, London; The Secretary of the Society for the Prevention of Hydrophobia, London; The Secretary of the West London Medico-Chirurgical Society, London; The Secretary of the Royal Statistical Society, London; The Secretary of the National Health Society, London. (**T**) Mr. E. Tredinnick, Craven Arms; Mr. C. W. Thies, London; Dr. Thin, London; W. E. F. Thomson, M.B., London. (**W**) Mr. J. C. Worthington, South Lowestoft; Mr. J. S. Wood, London; Mr. N. J. Wise, Trowbridge; Mr. E. W. White, Birmingham; Mr. F. C. Wood, Nottingham; Mr. T. Walker, Camberley; Mr. C. Workman, Glasgow; Mr. J. West, London; Mr. W. Roger Williams, London; etc.

BOOKS, Etc., RECEIVED.

A Textbook of Chemical Physiology and Pathology. By W. D. Halliburton, M.D., B.Sc. London: Longmans, Green and Co. 1891.

Aphorisms in Applied Anatomy and Operative Surgery. By Thomas. Cooke, B.A., M.D. London: Longmans, Green and Co. 1891.

Hygiene and Public Health. By B. Arthur Whitelegge, M.D., B.Sc. London: Cassell and Co. 1890.

A Memorial of O. W. Wright, A.M., M.D. By J. S. Wright, M.D. Cambridge: The Riverside Press. 1890.

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REPORTS

TO THE

SCIENTIFIC GRANTS COMMITTEE

OF THE

BRITISH MEDICAL ASSOCIATION.

REPORT ON THE ACTION OF THEBAINE, NARCOTINE, AND CERTAIN OF THEIR DERIVATIVES.

By RALPH STOCKMAN, M.D., F.R.C.P.E.,

Lecturer on Materia Medica Edinburgh School of Medicine; Research Scholar British Medical Association;

AND

D. B. DOTT, F.I.C., F.C.S.

[From the Laboratory of the Royal College of Physicians, Edinburgh.]

WHILE investigating the action of morphine and its derivatives, it occurred to us that a study of some of the other opium alkaloids might throw light on the relationship between their chemical constitutions and physiological actions. With this view we have examined thebaine, methylthebaium sulphate, narcotine, hydrocotarnine and cotarnine. We did not extend our observations further, as our results simply confirmed what we had already found with morphine and codeine,[1] namely, that the addition or substitution of certain radicals modifies very superficially the original action of the alkaloid.

Thebaine.—This alkaloid ($C_{19}H_{21}NO_3$) is found in opium Grimaux considers it to be the vinyl ether of morphine ($C_{17}H_{18}(C_2H_3O)NO_2$), just as codeine is the methyl ether. According to this view it is morphine in which a hydrogen atom has been replaced by the radical of vinyl alcohol.

Action of Thebaine.—The action of thebaine was considered by Magendie, and later by Cl. Bernard, as identical with that of strychnine, an opinion which has been confirmed by many subsequent observers. Baxt, however, shows very clearly in frogs that after small doses (¾ to 1 milligramme) there is a distinct narcotic stage lasting twelve to eighteen minutes, and followed by violent strychnine-like tetanus. After larger doses tetanus supervenes at once without any narcotic symptoms. In rabbits no trace of narcotic action is visible (v. Schroeder). In dogs and mice Harley observed a very slight hypnotic effect, easily overlooked on account of the tendency to tetanus. In man, Frommüller and also Leidesdorf found thebaine to be a very feeble narcotic. The former gave it up to 6 grains by the mouth, and up to 1½ grains subcutaneously. Rabuteau (¾ to 2½ grains subcutaneously), Arzerouny (¼ to ½ grain subcutaneously), Schroff (1½ to 3 grains by mouth), Eulenberg (¾ grain subcutaneously), Bouchut (7 grains by mouth), and Reissner all found it to have practically no narcotic action. Most probably, however, it has a very feeble narcotic effect, too insignificant to be of therapeutical value.

Rabuteau and Arzerouny state that, given hypodermically, it is an excellent analgesic in neuralgic pains, but Eulenberg got negative results.

Cl. Bernard ranked thebaine as the most poisonous of the opium alkaloids, but his experiments were conducted on dogs; and from Frommüller's and other observations it is evidently not so in man. On motor nerve terminations thebaine exercises a marked paralysing effect. This is always visible in frogs, but in mammals death takes place from tetanic convulsions before the peripheral nerves are much affected.

Thebaine, therefore, in physiological action belongs to the morphine group. It stands, however, at the extreme limit of it, and more closely resembles strychnine than morphine. The slight preliminary narcotic stage which is observed after small doses stamps it as somewhat different from strychnine, but this is the only difference in the action of the two alkaloids, and it is absent after large doses.

Action of Sulphate of Methylthebaium $(C_{19}H_{21}NO_3CH_3)_2SO_4$.—This is an addition product formed from thebaine. The iodide of methylthebaium ($C_{19}H_{21}NO_3CH_3I$) is prepared by adding a molecule of iodide of methyl to thebaine; to obtain the more soluble sulphate of methylthebaium the iodide is decomposed with sulphate of silver, when iodide of silver is precipitated, and sulphate of methylthebaium remains in solution. After being crystallised out and purified, the latter is obtained as colourless, well-formed crystals, very soluble in water.

The action of this substance has been previously investigated by Crum Brown and Fraser. Their attention was directed chiefly to the paralysing action on motor nerves, which they found to be very marked, and they also point out that the lethal activity of thebaine is much diminished by the addition of methyl iodide or sulphate. These results we are able to confirm, but we have found that the addition of iodide or sulphate of methyl does not do away with the convulsant action of thebaine on the spinal cord. Jolyet and Cahours[2] and Tillie have pointed out[3] that this is also true of strychnine, the typical convulsant poison.

Thebaine paralyses motor nerves, but with small doses this action is not sufficiently developed to prevent the manifestation of its convulsant effect on the spinal cord. Both with strychnine and thebaine, if very large doses be given, the motor nerves are so much depressed that convulsions are either entirely or almost entirely absent. In the case of sulphate of methylthebaium the paralysing action on the terminations of motor nerves is developed so early and so markedly that the frog soon lies completely flaccid and paralysed, and hence the tetanising action of the alkaloid cannot be manifested. If, however, the motor nerves be protected by tying the vessels to a part and so preventing the access of the poison, tetanic convulsions are seen in the protected limb. We have shown in a previous paper that the same state of affairs is seen with the methyl-addition derivatives of morphine and codeine. Hence sulphate of methylthebaium in sufficient dose has a powerful convulsant action on the spinal cord, but this is masked by the early paralysis of the motor nerves.

Experiments on Frogs. Sulphate of methylthebaium in small doses depresses the spinal cord just as very small doses of thebaine will do so. It is, however, not so powerful a convulsant poison, and hence larger amounts may be given without inducing tetanus. As the following experiment shows, the administration of 2 milligrammes will depress the spinal cord and produce a certain degree of paralysis without visibly affecting the motor nerves.

Frog, 24 gms. 3.2 P.M. 0.002 gms. methylthebaium sulphate in ½ c.c. water subcutaneously. 3.8. Is less accurate and precise in its movements. 3.15. Reflex is greatly diminished, respiration slower, chin and belly resting on table; only responds to very severe pinching; sciatic nerves excitable by very weak current (250 mm. Du Bois-Reymond coil). 3.25. Is quite flaccid; no response even if severely pinched; sciatic nerve excitable to same weak current. 3.45. Beginning to recover and move about. 4.30. Is nearly well.

Larger doses, such as 1 centigramme, depress the spinal cord and brain very markedly, but the paralysing action soon extends to the motor nerves, which become wholly paralysed. If the animal be kept under observation until the paralysis of motor nerves has passed off, it is seen that there is marked increase in the reflexes. The following experiment shows this:

Frog, 26 gms: 12.28 P.M. 0.01 gm. methylthebaium sulphate subcutaneously. 12.32. Drowsy, lies on back, reflexes depressed. 12.34. Pupils very small, respiration ceased, resting chin and belly on table; sciatic nerve excitable at 170 mm., but not to weaker current. 12.45. Sciatics excitable at 110 mm. 1.0. Quite flaccid, no response on stimulation; sciatics excitable at 70 mm. 1.30. Complete paralysis of sciatic nerves. 2nd day. Motor nerves still paralysed. 3rd day. Slight reflex on pinching, otherwise is quite flaccid. 4th day. Sitting up

[1] BRITISH MEDICAL JOURNAL, vol. ii, p. 189, 1890.

[2] *Comptes Rend.*, lxvii, 1868

[3] *Jour. Anat. and Phys.*, xxiv 509.

in normal position: very great increase in reflex excitability. 5th to 9th day. There was still marked increase in the reflex excitability.

Even with very large doses the motor nerves are paralysed later than the spinal cord.

Frog, 28 gms: 1.44 P.M. 0.03 gm. methylthebaium sulphate subcutaneously. 1.50. Quite flaccid, pupils very small, respiration ceased; sciatic nerves excitable at 310 mm. 1.55. Sciatic nerves excitable at 60 mm. 2.0. Sciatic nerves quite paralysed.

If the sciatic nerves be protected and the alkaloid thrown directly into the circulation so as to reach the cord at once in comparatively large amount, then no preliminary depression is seen, but tetanus is induced at once. This can be proved by the following experiment.

Frog: Brain destroyed; aorta tied low down to protect the sciatic nerves. 1.25 P.M. 0.02 gm. methylthebaium sulphate in $\frac{3}{4}$ c.c. water injected into left branch of aorta; at once there was rigid, well-marked tetanus; this was followed by frequent tetanic spasms, both spontaneous and on stimulation; this condition lasted till 1.40, when the animal gradually became much exhausted, and at 2.0 it simply gave a spasmodic twitch when pinched.

It is evident, therefore, that methylthebaium sulphate given subcutaneously exercises a primary depressant effect on the spinal cord; that it more slowly paralyses the terminations of motor nerves; that comparatively large doses are required to paralyse motor nerves, and as soon as the paralysis has worn off an increase in the reflex excitability is seen. When large doses reach the cord at once there is tetanus without any previous depression. We have previously pointed out a similar state of matters with regard to the addition compounds of morphine and codeine.

Rabbits. Small doses caused no observable narcotic effects; 2 decigrammes caused death from paralysis of motor nerves, with symptoms as described by Crum Brown and Fraser. Owing to the higher organisation of mammalia it is impossible to work out the action of methylthebaium on them with the same completeness as can be done with frogs, but its action in both cases is similar.

From our experiments we conclude that the physiological action of thebaine is not profoundly altered by the addition of methyl sulphate. Its tetanising power is much diminished, while its paralysing actions on the spinal cord and on motor nerve terminations are greatly increased. Sulphate of methylthebaium may clearly be included in the morphine group, as it induces a narcotic and a tetanic stage. The narcotic stage, like that of thebaine itself, is (in mammals, but not in frogs) extremely ill-defined, its most prominent action, especially in mammalia, being paralysis of motor nerves. But when special methods of investigation are used its close physiological relationships to thebaine and to morphine can be readily demonstrated.

Literature. Albers, *Virchow's Archiv*, xxvi, 225, 1863; Arzerouny, *Etude sur la Thébaine*, Thèse de Paris, 1872; Baxt, *Reichert und Du Bois-Reymond's Archiv*, 1869; Cl. Bernard, *Les Anesthésiques et l'Asphyxie*, 1875; Bouchut, *Comptes Rendus*, lxxiv, 1289, 1872, and *Bull. Gén. de Thérap.*, 1872; Brown and Fraser, *Trans. Roy. Soc. Ed.*, xxv, 1868; Eckhard, *Beiträge*, etc., viii, 133, 1878; Eulenberg, *Hypodermat. Injection*, Berlin, 1875; Falck, *Deutsche Klinik*, 1870; Frommüller, *Studien über die narkot. Arzneimittel*, 1869; Fubini, *Chl. f. d. med. Wissenschf.*, 1880, 773; Harley, *Old Vegetable Neurotics*, London, 1869; Leidesdorf, *Wien. med. Wochenschr.*, 1868; Magendie, quoted by Pelletier, *Journ. de Chim.*, ix, 1833; Mitchell, *Amer. J. Med. Sc.*, lix, 17, 1870; Müller, *Das Thebain*, Inaug. Diss., Marburg, 1868; Orfila, *Toxicologie*, 5 ed., vol. ii, Paris, 1852; Ott, *Boston Med. and Surg. Journal*, 1875; Rabuteau, *Comptes Rend.*, lxxiv, 1109, 1872, and *Gaz. Hébdom.*, 1872; Reissner, *Allg. Zitschr. f. Psychiatrie*, 75, 1867.

Narcotine, Hydrocotarnine, and Cotarnine. During our research we also examined the actions of these three substances as they are chemically closely allied. The result showed that the chemical differences alter their action in degree but not in kind.

Narcotine ($C_{22}H_{23}NO_7$) is, next to morphine, the most abundant alkaloid in opium. Von Schroeder and other observers have shown that its action is similar to that of morphine, but very considerably weaker.

By the action of oxidising agents it can readily be split up into cotarnine and an organic acid, thus:—

$$\underset{\text{Narcotine.}}{2\,C_{22}H_{23}NO_7} + O_2 = \underset{\text{Opianic acid.}}{2\,C_{10}H_{10}O_5} + \underset{\text{Cotarnine.}}{2\,C_{12}H_{13}NO_3}$$

From narcotine, opianic acid and hydrocotarnine, can also be obtained:—$C_{22}H_{23}NO_7 + H_2O =$

$$\underset{\text{Opianic acid}}{C_{10}H_{10}O_5} + \underset{\text{Hydrocotarnine.}}{C_{12}H_{13}NO_3}$$

Cotarnine differs from hydrocotarnine by 2 H, and can easily enough be transformed into it by the action of nascent hydrogen.[4]

Action of Hydrocotarnine.—This alkaloid is present in opium in small amount, and was first extracted by Hesse in 1871. F. A. Falck[5] showed that it causes tetanic and soporific symptoms very much like those of codeine. In rabbits he found it less poisonous than thebaine or codeine, but more so than morphine. Pierce[6] found that $2\frac{1}{2}$ to 5 decigrammes caused in rabbits, kittens, and guinea-pigs, tremors and convulsions.

The action of hydrocotarnine has been very imperfectly investigated, and hence a number of experiments was necessary to enable us to compare it with the other opium alkaloids. As a result, we find that it possesses the typical actions of the morphine group.

Frogs.—After 1 to 2 milligrammes (dissolved in hydrochloric acid and water) have been given subcutaneously to a frog, the animal becomes distinctly narcotised, it is lethargic and dull, and its reflexes are diminished. In a short time there supervenes an increase in the reflex excitability, which lasts for several hours, the animal ultimately recovering. If the dose be increased ($2\frac{1}{2}$ to 5 milligrammes) the narcotic stage is very short, the increase in reflexes coming on in a few minutes, and lasting for a much longer time. The following experiment shows this:—

Frog, 30 grammes: 2.18 P.M. $2\frac{1}{2}$ milligrammes, hydrocotarnine subcutaneously in solution. 2.25. Has gradually got much duller, head resting on table, pupils smaller. 2.28. Reflexes faintly increased. 2.30. Reflexes greater, pupils dilated. 2.40. Very great increase in reflexes. 5.30. Reflexes have been greatly increased, but not to marked tetanus. 2nd to 6th day. Reflexes remained greatly increased. 7th to 8th day. Gradually returned to normal.

One centigramme is about the lethal dose, death however taking place only after some days. Like other alkaloids of the morphine group,[7] which we have investigated, the direct injection of hydrocotarnine into the aorta causes at once tetanus without any previous depression. A dose of $2\frac{1}{2}$ to 3 milligrammes is necessary; smaller amounts caused a transient depression of reflexes followed by an increase (the same as seen after subcutaneous administration).

Like other opium alkaloids, it paralyses the terminations of motor nerves in frogs, but not to a marked degree. To obtain complete paralysis, it was necessary to inject the alkaloid directly into the abdominal aorta (1 centigramme); when it was given hypodermically, the nerve terminations were never more than slightly depressed.

Rabbits. Falck found about 2 decigrammes to be a fatal dose for medium-sized rabbits. We used smaller amounts, and found that from 2 to 4 centigrammes caused a slight degree of narcosis, with great slowing of respiration, and some diminution in the size of the pupils. This condition lasted for a few hours. The narcosis was never deep, and on increasing the dose it did not become deeper, but there was developed a tendency to increased reflex. The action is best studied by giving it in repeated small doses. The animal is at first drowsy, and then, as more is given, gradually passes into a condition of excited reflexes. Death occurs in tetanus.

The action of hydrocotarnine is, therefore, the same in kind as that of narcotine. Much smaller doses are required to produce both the narcotic and tetanic stages in animals, and the toxicity is increased. The alteration is, however, entirely quantitative.

Action of Cotarnine.—This alkaloid is not found in opium, but, as previously mentioned, can be obtained from narcotine.

[4] Beckett and Wright, *Journ. Chem. Soc.*, xiii, 573, 1875.

[5] Toxikol. Studien über das Hydrocotarnin, Inaug. Diss., Marburg, 1872.

[6] *Jour. Chem. Soc.*, xiii, 585, 1875.

[7] British Medical Journal, ii, 189, 1890.

It has been examined physiologically by Buchheim and Loos,[8] who, as the result of their experiments on frogs, referred it to the curare group, characterising its curare-like action as extremely feeble. Pierce[9] found that 5 decigrammes subcutaneously had no action on kittens or rabbits.

From our experiments, we conclude that it has a certain amount of paralysing action on motor nerves, not greater, however, than certain other members of the morphine group. It, however, distinctly causes a narcotic and tetanic stage if given in appropriate doses. This is shown in the following experiment:—

Frog, 32 gms.: 1.18 P.M. 2½ milligrms., cotarnine subcutaneously. 1.24. Duller. 1.34. Head on table, very lethargic, respiration ceased. 2.15. Very slight increase reflexes. 7.0. Reflexes very distinctly increased. 2nd day. Reflexes much greater. 3rd day. Reflexes still increased.

When larger doses are given the paralysis of motor nerves interferes greatly with the other symptoms. Large doses, such as 1 to 2 centigrammes, quickly paralyse motor nerves, but in one or two experiments the heart stopped before the motor nerves were paralysed, and they remained excitable to electricity even after death. The injection of small amounts into the aorta causes tetanus at once. Thus:—

Frog decapitated, aorta tied in lumbar region to protect sciatic nerves: 3.5 P.M. 2 milligrms. cotarnine in 12 m hydrochloric acid and water *per aortam sinistram*; at once there was increase of reflexes, and in about two minutes rigid tetanus, which lasted for half a minute: after this the frog lay flaccid, but each stimulation gave a rigid tetanus. At 3.15 it was quite exhausted.

Rabbits.—In rabbits the narcotic action is feeble. Doses of 5 to 10 centigrammes caused only slight drowsiness and depression with slowing of respiration. On increasing the dose to 0.15 gramme there was a great tendency to tetanus, and in one case this amount proved fatal. Doses of 3 to 5 decigrammes always proved fatal in a very short time, the animal dying in tetanic convulsions. Death was due to paralysis of respiration, accompanied by considerable depression of the heart. The motor nerves were never paralysed, and were always at death quite sensitive to a weak interrupted current. Although in frogs cotarnine depresses or paralyses the terminations of motor nerves, yet in mammalia this action is scarcely perceptible, as death occurs early from depression of the medullary centres. In our previous paper we pointed out that a similar state of matters is found with morphine.

Cotarnine, therefore, clearly belongs to the morphine group in action, and resembles closely hydrocotarnine, from which it differs in composition only by two hydrogen atoms.

SUMMARY.—It is evident that the chemical change represented in these three substances does not alter the similarity of their action, but simply affects their dosage. No radical change of action is produced in them by the change in chemical constitution. In all three the kernel of the molecule is probably the same, and until it is altered the changes in physiological action are only superficial. We have shown that the same is true for morphine, and it is now known that it also holds good for some other alkaloids, such as cocaine and caffeine.

Meconoisin.—This substance was discovered in opium by T. and H. Smith,[10] who very kindly gave us a quantity for physiological investigation. It is not an alkaloid but a neutral principle, contains no nitrogen, and has the formula $C_{11}H_{10}O_4$. As nothing is known regarding its pharmacological action, we thought that a short note on the subject might not be out of place here. When 1 to 2 centigrammes dissolved in water was administered subcutaneously to a frog, the reflexes gradually became more and more exaggerated, but scarcely to tetanus. This lasted for one or two days, the animal ultimately recovering. When 3 to 4 centigrammes were given tetanus supervened and the animal died, usually in about twenty-four hours. In rabbits, doses up to 1 decigramme had no visible effect, and, as the experiments on frogs showed that meconoïsin simply stimulates the spinal cord, we did not think it necessary to carry our observations further.

[8] Eckhard's *Beiträge zur Anat. und Phys.*, v, 179.
[9] *Jour. Chem. Soc.*, xiii, 585, 1875.
[10] *Pharm. Journ. and Trans.*, 3, viii, 981.

REPORT ON PATHOLOGY OF THE PROTEIDS OF THE BODY.[1]

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THE changes in structure of a diseased tissue or organ which we study in pathological anatomy are associated with chemical changes, which are of as great importance as the structural changes, and which with these latter changes are associated with the disease of the function of the tissue or organ. I wish to-day to bring before your notice a few of the chemical changes which occur in disease, limiting myself, however, to the changes occurring in the proteid constituents of the body in the albumins and the globulins. The importance of these proteids in the metabolism or nutritive changes occurring in the organism is very evident. The tissues and fluids are largely composed of proteid substances, the blood and lymph containing from 7 to 10 per cent. of albumin and globulin. The solid tissues of the organs are composed largely of proteids, although not exactly in the same form in which we examine them chemically. For example, dead muscle such as we know as meat is largely composed of an insoluble proteid called myosin, and is represented in the living muscle by a body which coagulates on the death of the muscle, the coagulum, or clot, forming what we know chemically as myosin. From this point of view, therefore, we may look upon myosin as a dead proteid, and myosin as it exists in the live muscle as a living proteid.

CHANGES OF PROTEIDS DURING DIGESTION.

In order to sustain the vitality of the tissues, proteids or nitrogenous food must be taken into the body, and it is the changes which these proteid foods undergo in digestion that first concern us.

Whatever the source of the proteids taken into the stomach, they undergo certain definite changes by the action of the gastric juice, that is, they are first changed into syntonin or acid albumin, then into bodies called albumoses, and, finally, into peptone. It is to the albumoses that I more particularly wish to draw your attention.

These are bodies which are intermediate between the proteids taken in with the food and peptone, and they thus give reactions which, on the one hand, relate them to ordinary proteids, and, on the other, to peptone.

The two albumoses I wish to speak of are called proto-albumose and deutero-albumose. They are readily soluble in water, cold or boiling. One of them, proto-albumose, is precipitated by nitric acid, and, unlike ordinary proteids, this precipitate is soluble on heating the solution. The other albumose, deutero-albumose, is not precipitated by nitric acid. Both give a brilliant pink reaction with copper sulphate and caustic potash—the so-called peptone or biuret reaction. After their formation they are, of course, absorbed, and, during their absorption, they are converted into the proteids of the body, that is, into the proteids of the blood. Some portion of them may go to the liver by the portal blood; if so, they are taken up by the liver and never pass beyond. We have, then, the important fact that during life albumoses do not exist in the body. Although they are formed in the stomach they are not found in the blood, lymph, nor in the tissues, and, when present in the body, are a a sign of disease.

The physiological changes which the proteids of the tissues themselves undergo are known only by the crystalline products formed during the metabolism of the tissues. These crystalline products are, as is well known, urea, uric acid, kreatin, kreatinin, etc.; they are excreted in the urine chiefly.

Although normal peptic digestion results only in the formation of albumoses and peptone, yet pancreatic digestion can go a step further, and split up peptone into two crystalline nitrogenous bodies—leucin and tyrosin.

The unorganised digestive ferments, pepsin and trypsin, can thus change ordinary proteids, albumins and globulins, into albumoses and peptone (proteid bodies), and into leucin and tyrosin (non-proteid bodies, amido-acids).

[1] The report was read and a demonstration given before the Pathological Section at the Annual Meeting, 1890.

In artificial digestion pepsin is capable of also forming non-proteid bodies, and Brieger has isolated from artificial peptic digestion an alkaloid (ptomaine) or diamine-peptotoxin, but it has not yet been shown that this poisonous body is formed during digestion in the stomach.

Digestion of Proteids by Micro-organisms.

It will make the subject more clear to you if I next proceed to state the changes undergone by proteids under the action of micro-organisms. If I allow a proteid in solution to undergo putrefactive decomposition, I find that in the early stage of the change, albumoses are found. My friend, Professor Halliburton, has also found this to be the case in decomposing muscle. Fresh muscle contains no albumoses; they only appear when putrefactive decomposition begins. The researches of Selmi, Gautier, Brieger, and others, have shown that the change of the proteid does not rest here: other products are formed, the so-called ptomaines, many of which are poisonous.

We have many examples in disease in which putrefaction plays a *rôle*: for example, the decomposition of a clot or portion of retained placenta in the uterus, that of the pus in empyema, etc. The micro-organisms which cause putrefactive decomposition are several in number. Let us now see what a single organism will do; a pathogenous one. If the bacillus anthracis, the organism which produces splenic fever or anthrax, is allowed to grow in a solution of a pure proteid mixed with a certain proportion of mineral salts, it is found that the first change the proteid undergoes is into albumoses, proto- and deutero-albumose—bodies having reactions similar to the albumoses found in peptic digestion. But the change goes a step further, and an alkaloid is produced together with small quantities of leucin and tyrosin. This alkaloid forms crystalline salts with acids; it is itself a yellow amorphous body. Other pathogenic micro-organisms probably act in a similar way; future research will decide this point.

I may sum up what I have already said as follows:—

1. The presence of albumoses in the body is a pathological and not a physiological condition.

2. Albumoses are formed from proteids in two ways: (*a*) By the action of unorganised digestive ferments, such as pepsin; (*b*) by the action of bacteria, which also further split up the albumoses into non-proteid bodies, alkaloids or ptomaines.

Physiological Action of the Bodies formed from Proteids.

Now the importance of the proper study of these albumoses, which are formed from proteids, is that they are poisonous. It would take more time than is allotted to me to detail to you the action of all the albumoses which have been hitherto described. There are, for example, poisonous albumoses present in snake poison. The active principle of jequirity seeds, which are used for trachoma, is, as I have shown, largely composed of a poisonous albumose, and lately a similar body has been obtained from castor-oil seeds. I shall limit myself to albumoses which are important in disease, and to which the name of pathogenic has been applied.

The albumoses formed in digestion of the stomach are poisonous; introduced in a certain dose into the circulation of an animal they produce death. The symptoms are a well-marked fall of blood pressure and coma. Introduced under the skin they are not so poisonous as would be expected, but, as I found, they do produce death, with the symptoms of profound coma, great subcutaneous œdema being seen at the site of injection.

The symptom which is interesting from a pathological point of view, caused by these albumoses, is a rise of body temperature, as Ott and Calmar has shown. When introduced into the body of an animal they raise the temperature two or three degrees, producing a fever, which is indeed evanescent, but quite evident.

The symptoms produced by the albumoses and alkaloid formed by bacillus anthracis are a local subcutaneous œdema at the site of injection, fever, and gradual somnolence, leading to coma and death. The spleen is also enlarged.

Bearing in mind the chemical and physiological action of these albumoses, we are in a better position to appreciate the importance of their occurrence in disease.

Occurrence of Albumoses in Disease.

Albumoses are present in the body in collection of cells and fluids which are undergoing degeneration in effusions, abscesses, deposits in phthisis and in osteomalacia. As an example of this, we will take the case of empyema. Pus is composed of a highly albuminous liquid containing cells (leucocytes) which degenerate and are finally destroyed. If pus in the case of empyema be diluted with water boiled and filtered, the filtrate gives no precipitate with nitric acid, but gives a bright biuret reaction; this is due, as I have found, to the presence of albumose, and not to true peptone. In one case the amount of this albumose was estimated in 88 ounces of pus; it was found to be 0.464 per cent., so there were in 88 ounces of pus 11.6 g. of albumose=179.6 grains. There was, therefore, a large quantity of albumose present. This pus was obtained from a patient who was admitted into the City of London Hospital for Diseases of the Chest, under Dr. Thorowgood, for pleurisy with serous effusion; the chest was tapped and the man became much better. Four months afterwards he was readmitted with empyema on the same side, and with the usual hectic fever. The urine on the second admission contained a large quantity of deutero-albumose; the amount of this was estimated before and after removing the pus from the chest. The amount of albumose in the urine, the amount of urine passed, and of pus evacuated, are shown in the following table:—

A. S., aged 46. Case of Right Empyema (without Phthisis); Hectic Fever.

Date.	Amount of Pus Evacuated.		Amount of Urine in 24 hours.	Amount of Deutero-albumose in Urine.	
1889	Ounces.		Ounces.	Grammes.	
Aug. 30			36	3.4	Before operation.
Aug. 31			38		
Sep. 1			40		
Sep. 2			32		
Sep. 3			30	2.487	
Sep. 4*	64	Continuous drainage.	36	1.206	
Sep. 5	15		50		
Sep. 6	15		68		
Sep. 7	11		48	2.33	After operation.
Sep. 8	9		84		
Sep. 9	8		88		
Sep. 10	7.5		64		
Sep. 11	10		66	2.586	
Sep. 12	8.5		78		
Sep. 13	7.5		64		
Sep. 14	7		48		

* Operation 88 oz. pus, containing 11.6 grammes deutero-albumose.

It will be seen that the amount of albumose in the urine diminished greatly after the operation, but began to increase again owing to the chest being incompletely evacuated. This case also shows very well the dependence of so-called peptonuria on the presence of large abscesses in the body. In all cases of empyema that I have examined there was albumose in the pus and albumose in the urine, and this, taken with the fact that when albumoses are injected into the circulation they are excreted in the urine (Neumeister), the dependence of peptonuria on abscess formation is confirmed. In cases of pleural effusion albumoses are present in small quantities only; but as I have examined only two cases I cannot say whether their presence is constant. Neumeister found no albumoses in pleural effusion. In pyopneumothorax a large quantity of albumose is present in the pus. In cases of phthisis without empyema slight peptonuria is not an uncommon symptom; in seven cases, carefully examined, albumoses were found in the urine four times. Albumoses are present, however, in the urine in only small quantity, unless there is empyema as well, and the presence of a large amount of albumose in the urine of these cases usually indicates pus formation.

From the facts that albumoses are present in pus, and that, as Ott has shown, they produce fever when introduced into the blood, we may look upon these bodies as one of the chemical factors of fever. There are no doubt other factors; leucin, which is present in many specimens of pus, also causes fever, and there may be alkaloids present which are also fever producers. These have not, however, been as yet isolated.

An interesting question arises as to how the albumoses are formed in pus. We have seen that they may arise in two ways—either by the action of digestive ferments (such as pepsin), or by the action of micro-organisms. There is no evidence that a digestive ferment exists in pus: one, however, acting in a slightly alkaline medium, may be set free by the leucocytes during their disintegration, and this ferment would then act on the proteids (albumen and globulin) present in the pus. It is more probable, however, that the albumoses are formed by the micro-organism present in fresh pus, namely, the staphylococcus pyogenes aureus. As Christmas has shown, this organism can form a proteid poison when cultivated in a suitable medium. There is, therefore, some ground for ascribing the origin of the albumoses in pus to the action of the staphylococcus. The occurrence of albumoses in cases of breaking-down tubercle may be due to the action of the tubercle bacillus; but this point is unsettled.

The presence of albumoses in disease cannot in all cases be ascribed to the action of micro-organisms. Thus albumoses have been found in a case of glycosuria (Gowers) and in osteomalacia (Bence-Jones, Kühne), and in the latter disease Virchow found in the diseased bones an albumose similar to that excreted in the urine. We may, perhaps, ascribe the formation of albumoses in such cases as osteomalacia to the rapid breaking down of lowly organised cells. In the puerperal state, in which "peptonuria" is sometimes a symptom, the origin of the albumoses may be in the degenerating cells of the hypertrophied uterus which is undergoing involution. The origin of the albumoses in other cases, such as in measles, is at present involved in obscurity.

The cases we have just been considering (pus, osteomalacia, etc.) belong to a class in which the changes of the proteids into albumoses, etc., are secondary to the primary disease. For example, pus is first formed, and the albumoses, etc., are formed afterwards. It is otherwise with pathogenous organisms. The way in which a micro-organism produces a disease is probably by forming chemical products which act as poisons. With the bacillus anthracis the products found are first albumoses and then an alkaloid, and it is these which produce the symptoms and lesions of the disease. These products are formed from the proteids. It is readily seen that the cases of disease caused by micro-organisms (of which anthrax is a type) belong to a different class to those first considered. In those the products formed from the proteid were the cause of the symptoms and lesions of the disease; in the first class they are secondary to the primary lesion.

REPORT ON THE SPECIFIC GRAVITY OF THE BLOOD IN DISEASE.

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In the course of a research on the specific gravity of the blood, on which Dr. Sherrington and myself have been engaged during the past three years, we were led to turn our attention to the pathological aspect of the question, for the reason that we thought it might throw some light on the changes which we found occurred normally under various conditions. This part of the work fell mainly to my share, and, consequently, Dr. Sherrington has kindly asked me to publish the results obtained.

Until quite recently, records of the specific gravity of the blood in disease were very scanty, owing to the necessity for the removal of a considerable amount of blood for the purpose, while the operation was by no means an easy one, involving, as it did, the use of the specific gravity bottle. Moreover, this method was open to objection from the fact that, except with very elaborate precautions, it was practically impossible to take the specific gravity of uncoagulated blood, and hence defibrinated blood was used on the supposition that its specific gravity did not appreciably differ from that of the fluid circulating in the living vessels.

Our method, which is based on one described by Professor Roy,[1] has the great advantage that it is capable of giving extremely accurate results with but a single drop of blood.

The requisite apparatus consists of:

1. A series of solutions of various specific gravities, ranging from 1025 to 1070, it being advisable that a considerable quantity of each of the intermediate degrees be provided if an extended series of observations are contemplated. For ordinary use a much less number will, however, suffice, as the numbers at each extremity of the scale are seldom if ever required.

Professor Roy used water to which glycerine was added in each case until the mixture was of the necessary specific gravity, and such solutions have been used and recommended by Lloyd Jones;[2] but we speedily found that they were unreliable, as the specific gravity tends to alter somewhat after a time, particularly if, as is often the case, a mould develops on the surface of the fluid. Our fluids are made up from a stock solution of equal parts of glycerine and water saturated with boroglyceride and magnesium sulphate, with the addition of a small quantity—1 in 1,000—of corrosive sublimate. This stock solution is diluted with water if the specific gravity is to be lowered, while its density can be increased to any needful extent by the addition of more glycerine and boroglyceride.

Such a solution has the advantage of "keeping" perfectly, the specific gravity also remaining absolutely constant. In our own case we found that, after a lapse of three years, there was hardly an appreciable alteration of density in any of the solutions comprising a range of between 40 and 50 degrees. We insured the accuracy of the graduation, in the first instance, by taking the specific gravities of the fluids by means of hydrometers which were specially made by Dring and Fage for the purpose, controlling the results in most instances by the method of weighing. For use, small quantities of the fluids made up were kept in a series of two-ounce bottles, the stoppers of which were carefully greased, so as to prevent any change of density due to evaporation. The small bottles were fitted into wooden stands for convenience of transit.

2. A number of small glass pots, about 1½ inch deep and ½ inch wide, of which probably at least half a dozen will be required at one time.

3. Fine capillary pipettes, formed by drawing out a piece of small glass tubing, the last quarter of an inch of which should be bent at right angles to the stem. To the opposite wider extremity a piece of india-rubber tubing should be fixed, to which the mouth may be applied when the contents of the pipette are to be expelled.

It is usually possible, with practice, to make a fairly accurate guess as to what the specific gravity of the blood in any case is likely to be, so that, to use the method, six or more of the small pots are filled from the small bottles by means of a fairly large pipette, with such fluids of varying degrees of density as are likely to be required. If there is no clue as to those that may be needed, it is as well in a first observation to omit every other number, so as to have a longer range in case of necessity. A finger is then cleaned, and a fairly large drop of blood is obtained by pricking it with a sharp spear-pointed needle, care being taken not to exert any pressure on the finger, as with a ligature, since any such procedure may cause a considerable difference in the specific gravity of the blood obtained. The drop is drawn up into one of the capillary pipettes by suction applied to the india-rubber tube, and the pipette is at once lowered beneath the surface of the fluid in one of the small pots, into which some of the blood is gently blown. If the pipette is held so that the end is horizontal, it is obvious that the drop of blood when expelled will have no tendency either to rise or fall, provided that it is of the same density as the fluid contained in the pot, while if its specific gravity is higher than that of the fluid, it will tend to fall, and, if lighter, it will rise. With a little care it is comparatively easy to find a fluid in which it remains stationary, or at any rate to hit upon two adjoining numbers, in one of which it may slowly rise, while in the next it may as slowly fall. If greater accuracy be needed, in order to obtain a reading correct to a decimal part of a degree, an intermediate number may be obtained by carefully mixing measured quantities of the two numbers between which the specific

[1] *Journal of Physiology*, 1884, p. ix.

[2] BRITISH MEDICAL JOURNAL, 1888, vol. ii, p. 1345.

gravity has previously been found to lie. In this manner readings to one-half or one-third of a degree may be obtained, or even to one-tenth of a degree should it be necessary.

At the commencement of our research we were careful always to note the temperature of our solution when an observation was taken, so as to make a correction for a standard temperature; but we speedily found that the error thus introduced was so infinitesimal that it could be neglected.[3] An observation should be made as speedily as possible, as we occasionally noticed a slight difference in density of the last portion of the blood blown from a pipette if this point were not attended to; also each pipette should be employed for one experiment only, so that a good stock should be kept ready for use.

During the last three years I have examined the specific gravity of the blood in a large number of patients in St. Thomas's Hospital and elsewhere, with the results which are given in tabular form below. The list of diseases is, perhaps, not a large one, and there is still a wide field for observations of this nature, but I somewhat naturally turned my attention mainly to cases of an anæmic nature, as it was to be expected that in these the most marked results would be found.

Specific Gravity of the Blood in Various Diseases.

Disease.	Myself.	Quincke.	Becquerel and Rodier.
Anæmia:			
Chlorosis ...	1041—1043	1035.2—1049.1 (probably included cases of pernicious anæmia)	1045.8 (mean of observations on six chlorotic girls).
Pernicious anæmia	1027—1031	—	—
Leucocythæmia ...	1048.5—1051 (1 case in last stage) 1032	1044.3	(1036—1049.5 Robertson) range of five cases.
Gastric ulcer ...	1038 (very anæmic)—1050.5	—	—
Lymphadenoma ...	1052	—	—
Hæmoglobinuria	1050.3—1052	—	—
Hæmophilia ...	—	—	—
Scurvy	—	1060.8	—
Cardiac	1033 (very anæmic) 1049.5—1052		1052.5 (mean of series of 24 cases). 1050.2 (mean of series of 31 cases in third stage).
Angina pectoris ...	—	1058	—
Diabetes	1058—1059 (2 cases only)	1054.9—1059.5	—
Cirrhosis of liver	1052	1049.6 (with hæmophilia)	—
Acute nephritis ...	1057	—	—
Chronic nephritis	1054.5—1060	1017.3—1048.7	—
Uræmia ...	1052	1050.5	—
Tuberculosis of kidney	1048.5	—	—
Tubercular peritonitis ...	1057	—	—
Typhoid fever ...	—	1054.1—1062.1	—
Cerebro-spinal meningitis	—	1057.9	—
Pyæmia	—	1050.5	—
Chorea ...	1053	—	—
Rheumatism and hysteria	1058.5	—	—

especially as cases admitted into hospital would be likely to be of a severe character. On anæmic cases, or cases in which anæmia was a prominent symptom of the disease, nearly a hundred observations were made. Unfortunately the number of observations made on other diseases has been much less numerous, but the results are given in the hope that they may possibly be of use for purposes of comparison by anyone who who may think it desirable to make use of this method in the future.

The observations were for the most part taken at the same time of day, usually about 11 A.M., since, as Lloyd Jones has shown, there are diurnal variations in the specific gravity of the blood dependent for the most part on the ingestion of food and drink. The effect of exercise had not to be taken into account, as most of the patients examined were confined to bed. In addition the blood was generally taken from a similar part, but this is not a precaution to which much attention need be paid, as provided the effect of compression be eliminated, the specific gravity of the blood in all superficial parts of the body is practically the same.

In the table I have placed side by side with my own results, for purposes of comparison, some obtained by Quincke and others working with the older methods.

In the table the numbers on either side of a hyphen denote the maximum and minimum of the observations relating to that particular disease; where one number only is given, that is the only one that has been recorded. It is worth noting that it is not possible in some cases to form at all a correct judgment of what the specific gravity of the blood is likely to be from the appearance of the patient, as under certain circumstances, which are at present but ill-understood, the tint of the skin does not necessarily form an index of the poorness or the reverse of the circulating blood. This fact has also been noted by Oppenheimer, who, in the course of a series of observations on the enumeration of the blood corpuscles with the hæmacytometer, frequently came across such apparent discrepancies, the anomaly being explained, according to him, by the theory of an irregular circulation.

It would be well if, whenever an examination of the blood were made with the hæmacytometer and the hæmoglobinometer, the specific gravity were to be determined also as a matter of routine, since the extra trouble involved is very slight, and the information obtained may be of considerable value, especially in connection with the simultaneous determination of the number of corpuscles and the percentage amount of pigment.

The question now arises as to what changes in the composition of the blood alterations in its specific gravity are to be attributed. Obviously they might be due to one or all of three causes:

1. An increase or diminution in the number of the corpuscles, the specific gravity of individual corpuscles and of the plasma remaining unchanged.

2. A variation in density of the plasma, the specific gravity and the number of corpuscles remaining unaltered.

3. A simultaneous variation in density, both of corpuscles and plasma, with or without alteration in the number of corpuscles.

With the object of throwing some light on this point, if possible, a series of experiments were carried out, in which the number of corpuscles in a specimen of blood, as determined by the hæmacytometer, was compared with simultaneous observations on the specific gravity. For this prepose a ligature of string was passed round one limb of a rabbit, so as to induce stasis of the blood current, which we had found usually caused a considerable rise of specific gravity in the blood of the ligatured part after a longer or shorter interval.

The results of some of these experiments are shown in the following table:

Experiment.	Specific Gravity of Blood before Ligature.	Specific Gravity after Ligature.	Number of Corpuscles before Ligature per Cubic Millimètre.	Number of Corpuscles after Ligature per Cubic Millimètre.
1	1057	1060.6	6,550,000	8,165,500
2	1057.3	1062	6,625,000	8,966,000
3	1058	1068.6	6,322,310	10,288,900
4	1058.6	1058.3	6,183,300	6,092,750

In the fourth experiment the ligature, which was of stout thread instead of string, appears to have stopped the arterial as well as the venous flow, as when a drop of blood was removed from the part below the ligature it was of an extremely dark purple colour, while, as is shown in the table, both the specific gravity and also the number of corpuscles had fallen slightly instead of rising, as in the other cases. The experiment is quoted, however, as it forms a useful control to the others, in which, apparently, the venous flow only was obstructed.

It appears, then, that when a rise of density of the blood is

[3] See also Lloyd Jones, *op. cit.*

produced artificially, it is accompanied by a, at any rate, closely corresponding rise in the number of the blood corpuscles—Hayem states that the specific gravity depends on the corpuscular richness of the blood[4]—the difference possibly being caused by the passage of a certain amount of plasma into the lymph spaces. On the other hand, we find that while the density remains unaltered, even under abnormal circumstances, the number of the corpuscles is practically unaffected also.

These experiments, then, taken together, afford evidence in favour of variations in the number of corpuscles in the blood being largely concerned in bringing about differences in its specific gravity, particularly as certain other of our experiments, which cannot be quoted here, have similarly shown a fall in the number of corpuscles associated with a similar fall of specific gravity. But pathologically, at any rate, the problem is evidently more complex than would be inferred from the foregoing statements. Thus, in a severe case of pernicious anæmia which was in St. Thomas's Hospital, under the care of Dr. Bristowe, a few months back, the specific gravity of the blood was found to be 1027 only, while the number of red corpuscles in a cubic millimètre was slightly over 500,000. Now normal human plasma or serum has a specific gravity of 1028, about the same, or a little higher, than that of the entire blood in this case. The specific gravity of the red corpuscles is also, normally, so much higher than that of the blood, and more particularly, therefore, of the plasma, that even supposing that in this case their density was considerably lessened, as may be inferred from the case with which, as I have shown elsewhere, the corpuscles break down or their hæmoglobin diffuses out, still we are driven to the conclusion that for the blood to show so low a density as the case in point, the specific gravity of the plasma must be lower still. It was unfortunate that it was not possible, at the time, to determine accurately the specific gravity of the liquor sanguinis in this instance.

Under certain circumstance, also, we have been able to lower the specific gravity of the blood for a length of time, from 25° to 30°, without a corresponding fall in the number of the corpuscles present in it, so that in these experiments also, an account of which is about to appear in the *Journal of Physiology*, it would seem that a considerable dilution of the plasma had been brought about. Christison, moreover, has shown by the older methods that the density of the blood serum is sometimes considerably lowered, more particularly in the early stages of kidney disease, when the specific gravity may be 1020 or even 1019. It would appear, then, that a rise of specific gravity in the blood may be the result of the formation of new corpuscles, or of a draining away of a certain part, particularly the watery portion of the plasma, such as occurs in cholera, or, to a much less extent, after the use of saline purgatives, while a lowering of specific gravity, particularly if marked in extent, will always have a pathological significance, although the cause may be a somwhat complex one; since, as we have seen, it must be the result of diminished specific gravity either of plasma or of corpuscles; of a large decrease in the number of the corpuscles; or, as is most probable, of all these factors combined.

[4] *Du Sang*, 1889, p. 400.

PORTSMOUTH (Population, 141,254).—*Scarlatina of a Mild Type: Pet Dog attacked by a Diphtheritic Affection.* With a very favourable death-rate (18.1 per 1,000), a small prevalence of zymotic disease, and a good record of sanitary work, Dr. Mumby's report for 1889 bears satisfactory comparison with those of former years. Scarlet fever, though widespread through the district, was of so mild a character as to cause only 11 deaths, but whooping-cough and diarrhœa caused a greater mortality than usual. Small-pox was three times introduced into the borough. Two cases proved fatal. Diphtheria, though not remarkably prevalent, was of a fatal type. Many of the cases were associated with sanitary defects and dampness. In one household, where 5 cases occurred from drinking impure water, a pet dog was also taken ill and had to be killed. On making a *post-mortem* examination, Dr. Mumby found a distinct false membrane attached to the pharynx.

THE LETTSOMIAN LECTURES
ON
ANÆMIA:
ITS PATHOLOGY, SYMPTOMS, AND TREATMENT.

Delivered before the Medical Society of London.

BY STEPHEN MACKENZIE, M.D., F.R.C.P.,
President of the Hunterian Society; Physician to, and Lecturer on Medicine at, the London Hospital.

LECTURE II.

Secondary Anæmia. Paroxysmal Hæmoglobinuria.—The Symptoms of Anæmia.—Oligæmia.—Oligocythæmia.—Degrees of Anæmia.—Alterations in the Blood Corpuscles.—Hæmorrhages.—Circulatory Organs.—The Urine.—The Alimentary System.—Pyrexia.—The Nervous System.—Chlorosis.—Pernicious Anæmia.

MR. PRESIDENT AND GENTLEMEN,—Before proceeding to describe the symptoms of anæmia, I had intended to review the nature of secondary anæmia. The extent of my subject, however, is so wide that I am obliged to omit what I had prepared, and only allow myself to discuss one form of secondary anæmia. This, which has important bearings on many of the debated points in the pathology of anæmia, is paroxysmal hæmoglobinuria. This particularly interesting, and important disease is of a purely hæmolytic nature, which lends itself to the study of the blood changes. As is well known, the attacks are excited by cold. To Dr. Copeman we owe some exceedingly valuable information on the changes in the blood in this remarkable disease. He has shown[1] that in intentionally induced attacks there may be a loss of from 129,000 to 824,000 red corpuscles per cubic millimètre in the course of two or three hours; and that as many as 824,000 corpuscles per cubic millimètre on one occasion were destroyed in a quarter of an hour. At the same time the percentage of hæmoglobin fell from 53 to 49. Dr. Copeman calculates that the reduction of red corpuscles in an attack reached the extraordinary number of 4,032,000,000,000. The blood-forming powers in this disease are exceedingly active. In one attack, watched by Dr. Copeman, the corpuscles were reduced from 3,612,500 to 2,930,000, and at the end of six days had risen again to 3,540,000 per cubic millimètre. Still further important changes were observed in the arrangement and forms of the red corpuscles, and in the rapidity with which these changes took place. In the course of from half an hour to two or three hours, the *rouleaux* formation was partially or entirely lost, and many red corpuscles had become pyriform or spindle-shaped, and some were nearly colourless. The specific gravity of the blood was also observed to fall about 5° in an attack. The fact that such rapid changes in the forms of the red corpuscles may take place by a process of hæmolysis is of extreme importance, and goes to show that the poikilocytosis met with in many other forms of anæmia may be due to destructive changes. As Dr. Hunter has pointed out,[2] the appearance of hæmoglobin in the urine in the disease is due to the destruction of corpuscles taking place in the general circulation, whence the hæmoglobin is conveyed to the kidneys and excreted. In pernicious anæmia the destruction takes place within the portal circuit, and all the hæmoglobin is converted into biliary and urinary pigments, and none is excreted, as such, by the kidneys.[3]

THE SYMPTOMS OF ANÆMIA.

Whenever hæmorrhage of any more than the most trivial degree exists, there must necessarily be diminution in the volume of the blood—oligæmia. The water is quickly replaced by the plasma from the lymphatic system, the deficient albu-

[1] Bristowe and Copeman, *Trans. Medical Soc.*, 1889, p. 256. Copeman, *Pract.*, Sept. 1890, p. 161.

[2] *Lancet*, vol. ii, 1888. An Investigation into the Pathology of Pernicious Anæmia.

[3] I should have liked to allude to the detailed and careful observations of Dr. Rutherford Macphail, On the Blood of the Insane, *Journ. of Mel. Science*, 1884 and 1885, had space permitted.

men and salts are soon supplied from the food, but the corpuscular deficiency remains for a time. In hæmorrhage it is the red corpuscles which are especially deficient, as owing to their "wall-loving" propensities fewer colourless corpuscles are shed; and, moreover, as Cohnheim points out, the lymph is an inexhaustible source for these. In experimentally induced anæmia in the dog, the number of red corpuscles continues to fall for some days after the hæmorrhage, and does not reach its minimum until eight or nine days. Successive hæmorrhages at intervals are more dangerous than a single hæmorrhage exceeding them in amount, apparently by interfering with the renovation of the blood. How great a loss of blood the human subject can bear is not ascertained, but dogs do not survive a greater loss than from one-nineteenth to one-fourteenth of their body weight.

Oligocythæmia.—In nearly all forms of anæmia the red corpuscles are diminished. The only form of primary anæmia in which this does not necessarily occur is chlorosis. The greatest reduction of the number of red corpuscles is in pernicious anæmia, in hæmorrhage and purpura, and in certain cases of malignant growths. In a case of puerperal hæmorrhage of Hayem's, which recovered, the corpuscles were as low as 850,000 (17 per cent.), and many of these were wanting in colour. Quinquaud has recorded a case of purpura with a corpuscular richness of only 740,000, Hérard one in which it fell to 620,000 on the day of death, and I have published a case in a child 11 months old in which the corpuscles were only 290,000 per cubic millimètre, or 5.8 per cent., just before death.[4] What is the lowest number of corpuscles which may be reached without death resulting? With the exception of a case of Quincke's—to be subsequently alluded to—the lowest that I know of is one cited by Laache, a case of pernicious anæmia, in which the red corpuscles were reduced to 407,480 (8.1 per cent.), and later rose to 4,148,000 per cubic millimètre at the time of publication. I think we may fix 7.5 per cent. as the lowest which can be reached without being necessarily fatal.

It is convenient in practice to have some scale or measure of degrees of anæmia. For some years past [5] I have been in the habit of using the following measure of the severity of the anæmia: Anæmia commences with red corpuscles at 80 per cent. It is moderate at from 80 to 65 per cent., first degree; it is decided at from 65 to 50 per cent., second degree; it is grave at 50 per cent., third degree; and usually fatal at about 10 per cent. (7.5 actually), fourth degree. My original scale was 65 per cent. moderate, 50 per cent. grave, 35 per cent. very grave, and 20 per cent. or thereabouts fatal. Increase of knowledge has compelled us to shift the last number to a considerably lower level. Though the diminution of red corpuscles is the most important element in diagnosis and prognosis, it is, of course, modified by the relative hæmoglobin richness. M. Hayem has given us a much more complete and valuable scale, which expresses the functional value of the blood. His estimation takes cognisance of the coloured corpuscles, the hæmoglobin, and the individual worth of the corpuscles, as well as the size of the discs.[6] He also makes four degrees.

As Hayem points out, the anæmia is less grave when the same amount of hæmoglobin is distributed amongst a large number of small globules than amongst a smaller number of larger globules, as the former must facilitate the globular functions. All observers have noticed the fluctuations which take place day by day in the number and sizes of the red corpuscles.

Size of the Red Corpuscles.—In health we have seen the red corpuscles range between 6.5 and 9μ. In anæmia the range is much greater, from 2.5 to 16μ. The term microcyte is conveniently applied to corpuscles from 2.5 to 4μ, and megalocyte to those whose dimensions range from 9 to 16μ. Both these extremes, and gradations between them, are found in all varieties of anæmia primary and secondary. Both microcytes and megalocytes are more common in pernicious anæmia than in other forms. Megalocytes, nevertheless, are found in chlorosis, in which disease a large number of corpuscles are smaller than normal.

Eichhorst's Corpuscles. This term is applied to microcytes of a deep colour and spherical shape, to which Eichhorst first drew attention.[7] He believed at one time that they were diagnostic of pernicious anæmia; they are certainly common in this form of anæmia, though they are sometimes entirely absent,[8] and they have been found in other forms. These corpuscles are from 3 to 4μ, have not the usual biconcave aspect, and Eichhorst describes them as resembling "droplets of fat tinged with red."

Poikilocytosis (ποικιλος, varying in shape, κυτος, cell), the name suggested by Quincke[9] for the variously deformed red corpuscles, has been generally adopted, but Ehrlich has recently proposed to substitute for it "Schistocytosis." The shapes assumed by the corpuscles are very varied: ovoid, pear-shaped, battledore, rod-shaped, bent forms, and irregularly outlined shapes are met with.

Nucleated Corpuscles.—Nucleated corpuscles, similar to what are found in the blood of the embryo, and at all times in the marrow, are occasionally, though rarely, found in the blood in anæmia of different kinds, and are probably evidence of its severity rather than of its nature.

Remarkable fluctuations of opinion have taken place regarding the nature and significance of these abnormal forms. At one time considered as peculiar to pernicious anæmia, increasing observation has shown that they may occur in all forms of anæmia. They indicate that the blood elements have undergone a change, constructive or destructive, but the observations of Boas and Copeman in hæmoglobinuria show we must be cautious as to the inferences we draw regarding their origin. Copeman has pointed out how readily crystals of hæmoglobin are formed in pernicious anæmia, a proof of the increased fragility of the corpuscles.[10]

The Colourless Corpuscles.—In pure anæmia the leucocytes are not increased in number actually, nor in many cases relatively. Not infrequently, however, at the close of cases of profound anæmia, there is an augmentation of the colourless corpuscles.

Hæmoglobin. In my first lecture I dealt with the variations which take place in the percentage of hæmoglobin in the chief varieties of anæmia. I will only add that in some cases of cancer the hæmoglobin is reduced disproportionately to the corpuscles. Thus I have recorded a case of cancer of the stomach where the corpuscular richness was 46 per cent., and the hæmoglobin 30 per cent., and, later, the corpuscles were 30, and the hæmoglobin 15, per cent.; in another case a corpuscular richness of 50 per cent., with 25 per cent. of hæmoglobin, and at the time of death the corpuscles were 33 per cent. and the hæmoglobin 25 per cent. The worth of the individual corpuscles was thus at one time not more than one-half of the normal. In most cases of purpura of which I have notes, the hæmoglobin deficiency has been below that of the corpuscles. In regeneration of the blood, as a rule, the corpuscles increase disproportionately to the hæmoglobin. This is usually well seen in chlorosis, but exceptions do occur.

Hæmorrhages. In anæmia there is a liability to hæmorrhages, external and interstitial. Epistaxis, menorrhagia, and bleeding from the gums are the most common forms of external hæmorrhage, but hæmorrhages occur, also, from the stomach and bowels. Of interstitial hæmorrhages, extravasations into the retina are the most frequently seen, though I suspect, if we could see the brain, they would be found there equally frequently. Less common than retinal hæmorrhages are those into the skin—purpura. At one time retinal hæmorrhages were regarded as diagnostic of pernicious anæmia; but Quincke, Litten, myself[11] and others, have recorded cases where retinal hæmorrhages occurred in symptomatic anæmia. It may, I think, be now regarded as established that hæmorrhages in connection with anæmia are dependent upon its degree irrespective of its nature, and that the tendency to hæmorrhage occurs when the red corpuscles are below 50 per cent., and is more dependent on the deficiency in the number of corpuscles than in the amount of hæmoglobin.

Circulatory Organs. In anæmia of moderate severity the

[4] British Medical Journal, 1883, vol. ii, p. 409.
[5] *Lancet*, 1883, vol. ii, p. 1047; *Ophthal. Soc. Trans.*, 1884, p. 132.
[6] *Op. cit.*, p. 407.
[7] *Centralb. f. d. med. Wissenschaft.*, 1876.
[8] Grainger Stewart (British Medical Journal, 1876, vol. ii, p. 40) and others.
[9] *Deutsch. Archiv f. klin. Med.*, 1877, Band xx.
[10] *St. Thomas's Hospital Reports*, 1887.
[11] *Ophth. Soc. Trans.*, vol. iv, p. 132.

heart's impulse is often diffused and of a jarring character, but in extreme degrees it becomes feeble and often imperceptible. Increased area of dulness, indicating dilatation, is found in some cases, and there is no doubt that anæmia *per se* may give rise to enlargement of the cardiac chambers, as in a case of pernicious anæmia I have recorded.[12] Murmurs are frequently heard over the cardiac area. Dr. Kingston Fowler[13] has given a very complete account of these, and with his observations my own in the main agree. Eichorst[14] states that in three out of seven cases of pernicious anæmia examined by him a diastolic murmur was heard, and refers to other published cases. He states it may be transitory or persist till death, when the aortic valves may be found competent. Dr. Ernest Sansom thus explains such cases:[15]

"I have occasionally found murmurs in anæmic subjects closely resembling a double aortic—that is, systolic and diastolic. In such cases you will find that the systolic is the hæmic *souffle* heard at the aortic base, and generated either in the aorta, the subclavian artery, or in the pulmonary artery; and the seeming diastolic is really a continous venous hum generated in the great veins of the neck. This continuous hum is overpowered during the systolic period by the arterial murmur, but it is audible during the diastole, so the murmur appears to and fro."

Schwald[16] gives a somewhat similar explanation. The arterial tension, contrary to what would be expected, is sometimes increased in anæmia (Broadbent, Sansom, Bramwell), and Dr. Broadbent is inclined to attribute to arterial spasm a share in the production of the dilatation of the left ventricle often encountered.[17] My own experience corresponds with that of Dr. Byrom Bramwell, that the arterial tension is only increased in cases of slight or moderate anæmia,[18] or, I may add, anæmia of rapid occurrence. In profound anæmia the tension is low, and the artery is empty between the beats. The increase of tension occasionally met with is no doubt of nervous origin. Cohnheim[19] has shown that anæmia is an exciter of the vasocentre, and acts more vigorously in proportion to its degree and rate of progress. The low arterial tension in the late stages of pernicious and other grave forms of anæmia is probably due to the fatty degeneration of the left ventricle, and possibly to exhaustion of excitability of the vasomotor centre. To the former cause is also due the dropsy which usually occurs towards the close of severe anæmias, though an hydræmic condition of the blood no doubt favours it. The œdema of anæmia is slight in degree, and usually limited to the feet and legs. Nothing like anasarca is ever seen, but dropsical effusions of moderate amount are found in the serous cavities in many fatal cases. Œdema of the feet and ankles is not uncommon in chlorotics who are much on their legs, and disappears when they are put to bed—a proof of its dependence on cardiac feebleness. Palpitation and breathlessness are explained partly by the cardiac feebleness and in part by the deficiency of oxygen carriers in the blood.

Pyrexia. Occasional and irregular pyrexia is common in anæmia of whatever nature. I have found it in traumatic anæmia in previously healthy persons and after hæmatemesis, and in my notes of cases of chlorosis I find slight degrees of pyrexia very common, "a mimic reproduction of the irregular 'anæmic fever' that appears in pernicious anæmia" (Coupland). It is more pronounced in the latter than in other forms, but some cases of pernicious anæmia are throughout apyrexial. The fact that fever occurs in chlorosis is important, as its occurrence in pernicious anæmia, in concurrence with the exacerbations of other grave symptoms, has been regarded as evidence of blood destruction.

The urine supplies us with most valuable knowledge as to the changes which are taking place in the blood, and becomes our chief source during life of information as to whether hæmolytic influences are at work. We shall deal with this more fully under pernicious anæmia. Albuminuria is not uncommon in the late stages of severe anæmia, and is best explained by Cohnheim's theory of degeneration of the glomerular epithelium due to the defective quantity and quality of the blood passing through the glomerular tufts.

The Alimentary System.—Functional and organic diseases of the digestive system are common in all forms of anæmia, and may stand in the double relationship of cause and effect. Anorexia, nausea and vomiting, and gastralgia are exceedingly common, the latter, sometimes associated with gastriectasis, being often very marked in chlorosis. Constipation is present in some cases, diarrhœa in others, the latter often being encountered in cases of pernicious anæmia.

The nervous system shares in the general disturbance. Sustained mental activity is rendered impossible, and an unstable condition or "irritable weakness" of the nervous centres is induced, which shows itself in hysterical phenomena in some cases of chlorosis. In profound chronic anæmia, as in the acute anæmia of severe hæmorrhage, delirium and convulsions may close the scene, or be followed by coma. In anæmia, especially in its primary, but not very profound, forms, neuralgic affections are very common, explained by the late Dr. Anstie, as "the cry of the nerves for healthy blood." Amaurosis, from optic neuritis and consecutive atrophy, occurs in some cases of anæmia, especially that following hæmorrhage.

We must now pass on to consider the principal species of idiopathic anæmia. In doing this, my object is rather to review the facts regarding them in relation to their pathology than to give a complete clinical picture, which the time at my disposal does not allow of. First of all we must consider

Chlorosis.

In this form of anæmia the observations of Duncan[20] in two cases, have in the main been confirmed by all subsequent observers, namely, that the essential feature in the blood change is a diminution in the hæmoglobin capacity—an oligochromæmia. In many cases the red corpuscles are scarcely at all below the normal, whilst the hæmoglobin is reduced to from 60 to 30 per cent. In other cases, the red corpuscles are also deficient, but in these also the hæmoglobin is disproportionately reduced. Thus, two categories of cases are found in chlorosis, to the first of which Laache[21] would give the name "pseudo-chlorosis," while the second he would call "true chlorosis." What is common to both is that the corpuscular worth is diminished. Whilst, however, this is characteristic of chlorosis, it is not peculiar to it. In severe cases of chlorosis, the corpuscles undergo a notable diminution, constituting what some would designate chloro-anæmia. Thus Laache has published a case in which the corpuscles were as low as 2,440,000 (48.8 per cent.), Coupland a case with 2,090,000 (41.8 per cent.), Gowers a case with 26 per cent., whilst M. Hayem records a case in which the actual number of red corpuscles was 937,360 (18.7 per cent.). Another characteristic of chlorosis is the relatively large number of small red corpuscles of 3μ to 6μ, but they may be reduced to even 2.2μ (Laache). Though some large or even giant corpuscles are occasionally found in chlorosis, Malassez stands almost alone in stating that, as a rule, the corpuscles are increased in size in chlorosis. Poikilocytosis is sometimes present, as in the diagram exhibited, which is taken from a girl, aged 18, with 85 per cent. of red corpuscles, and 35 per cent. of hæmoglobin. In chlorosis there is little liability to hæmorrhage, which we have seen stands intimately related with severe degrees of oligocythæmia. This applies to retinal hæmorrhages, which, apart from inflammatory changes, are certainly rare. Papillitis and papillo-retinitis are, however, probably more common in this form of anæmia than in any other. Saundby and Eales[22] found that, of fifty cases of chlorosis examined by them, 10 per cent. presented unequivocal evidence, and in a further, 8 per cent., there was evidence of some degree of neuro-retinitis. Hirschberg was the first to note the occurrence of optic neuritis in chlorosis. Gowers has recorded several cases, and cases of double papillo-retin-

[12] *Lancet*, 1878, vol. i, p. 13.

[13] *On the Origin of Anæmic Murmurs.* Churchill, 1884.

[14] *Die progressive perniziöse Anæmie*, 1878, s. 224. Since this was in type I have seen an important paper by Dr. Handford in the *Intern. Journ. of Med. Sci.*, December, 1890, "On the Condition of the Heart in Anæmia," which deserves attention.

[15] *Diagnosis of Diseases of the Heart*, p. 131.

[16] *Deutsch. med. Wochensch.*, 1889, No. 21.

[17] *The Pulse.* Cassell and Co., 1890, p. 160.

[18] *Diseases of the Heart.*

[19] Lectures on General Pathology, *New Sydenham Soc. Trans*, vol. 1, p. 428.

[20] *Sitzungsbericht d. k. k. Acad. d. Wissensch. in Wien*, Bd. lv, 1867.

[21] *Op. cit.*, s. 86.

[22] *Ophth. Rev.*, i, p. 303.

itis have been recorded by Mr. R. Williams[23] and myself.[24] In my own case, which is one of several I have seen, the corpuscular richness was 80 per cent., and the hæmoglobin only 30 per cent.

The existence of hypermetropia, as first pointed out by Gowers,[25] increases the liability to inflammatory changes. Cardiac murmurs and venous hum in the neck constitute part of the clinical features of chlorosis with which all are familiar, and with them are associated palpitation and breathlessness on exertion. In speaking of the symptoms of anæmia in general, I have remarked that pyrexia is by no means uncommon in chlorosis. In some cases the pyrexia is considerable, constituting what has been called "febrile chlorosis." Hayem stated that chlorosis only assumes a febrile form when the globular richness, expressed in healthy corpuscles, is below 1½ million. With regard to the urinary system, most authorities state that it is normal in amount, pale in colour, of low specific gravity, and contains but little urea and uric acid, and my own experience agrees with this. Dr. Hunter has shown that the urine in chlorosis in three cases he examined contained only 1.76 milligrammes of iron, whilst that of health averages 5.65 milligramme per diem.[26] Further observations on the urine in chlorosis, clinical and chemical, are greatly wanted. The alimentary system very frequently, though not invariably, shows signs of disturbance, and sometimes these are so pronounced that some would make a variety, "dyspeptic chlorosis." How far they are caused by the anæmia and how far by the conditions that give rise to chlorosis are much debated questions. Constipation is exceedingly frequent, and is believed by many to be causally related to chlorosis. Its absence in many cases, and the frequency with which constipation occurs in young people who are not anæmic, make the dependence of chlorosis upon constipation very doubtful, and I believe its importance has been considerably overrated. The nervous disturbances—"the irritable weakness" of chlorosis are very characteristic phenomena, and to be explained partly by the anæmia and in part by the conditions that give rise to it. The age at which it occurs and the sex of the sufferers imply a highly sensitive and mobile, if not unstable, condition of the nervous system. As well known, chlorosis is frequently associated with menstrual irregularities, especially amenorrhœa; but it also occurs in those whose catamenia are regular, if somewhat scanty, and may coexist with excessive menstrual discharge. Leucorrhœa is very common in chlorosis, disappearing with its subsidence.

Chlorosis occurs almost exclusively in women, though occasionally cases are met with in young males. It is met with, especially between the ages of 14 and 24. All are familiar with Niemeyer's oft-quoted statement: "According to my observation, obstinate chlorosis attacks all young girls without exception, in whom the menses have appeared in the twelfth or thirteenth year, and before the development of the breasts and pubes."[27] It is occasionally hereditary, and possibly congenital. The narrowing of the aorta, the thinning of the arterial tissues and irregularities of position of the arterial branches, described by Virchow, though not invariably present, point to developmental defects. The character of the blood, its poverty in hæmoglobin, comparative richness in other albuminates, the markedly renovating influence of iron, all indicate a defective hæmogenesis, a "hypoplasia" of the blood as well as that of the blood vessels (Immermann). Moreover, there is little or no evidence, clinical or pathological, of excessive hæmolysis. There is no drain upon the system other than that of menstruation, and this, in many cases, is suspended. On all of these grounds we are justified in regarding chlorosis as due to defective blood formation, often associated with, and possibly in some cases due to, disturbances in the generative system. Most probably both are due to some inherited or acquired developmental feebleness of the blood-forming organs rendering them unequal to the calls made upon them, which, treated promptly and properly in most cases, is of transitory duration, but which, more profound in degree or imperfectly treated, may prove a lifelong complaint.

[23] British Medical Journal, 1884, vol. i, p. 10.
[24] *Ibid.*, 1885, vol. i, p. 328.
[25] *Medical Ophthalmoscopy.*
[26] *Med. Soc. Trans.*, vol. xiii.
[27] *Textbook of Practical Medicine*, American translation, 1876, vol. ii, p. 743.

Pernicious Anæmia.

I have already given reasons which appear to me sufficient for adopting this name for another variety of idiopathic anæmia. First described by Addison in his lectures in 1843, which were published in 1853, a knowledge of the disease was confined to a few until Gusserow in 1871 and Biermer in 1872 (the latter calling it "progressive pernicious anæmia") drew attention prominently to the subject. Since then a large number of writers at home and abroad have contributed to our knowledge of the disease.

It is impossible to allude to the work of most of these in the time at my disposal, but I must mention the service Dr. Pye-Smith has done to medical literature in his articles in the *London Medical Record*, 1877, and in *Guy's Hospital Reports*, vol. xxvi, in which will be found historical and critical reviews of the literature, and valuable original observations and pathological teaching. I must also allude to Dr. F. Taylor's paper in *Guy's Hospital Reports*, and since this was in type to a paper in a forthcoming number of the same *Reports* by Dr. Hale White, of which he has allowed me to see a proof, to Dr. Sidney Coupland's able and complete Gulstonian lectures on anæmia in 1881, and to Dr. William Hunter's numerous and valuable contributions on the subject. Dr. Hunter's clinical, chemical, pathological, and experimental investigations, carried on over a series of years, have, by the ability with which they were conceived and the exactness with which they have been carried out, added more to our knowledge on the subject than those of any individual worker since Eichhorst's valuable treatise in 1878.

Pernicious anæmia manifests itself insidiously by increasing pallor and weakness. In a large proportion of cases disturbances of the alimentary canal (nausea, vomiting, diarrhœa, etc., and not infrequently stomatitis) precede or accompany the onset of the disease, and such disturbances are of common occurrence throughout its course. The patient, whilst losing colour and strength, maintains, as a rule, his flesh. Since Addison's time the details of the anæmia which is so striking to the naked eye have been most carefully investigated by means of modern instruments of precision.

I have already pointed out that the specific gravity of the blood is reduced from 1038 to 1028, and that its alkalinity is lessened. In this form of anæmia the solids of the plasma are greatly diminished. Great attention has naturally been devoted to the red corpuscles, and there have been noted the following alterations: (*a*) Their cohesiveness is modified; normal *rouleaux* formation is rarely seen; usually the corpuscles are arranged singly, or collected into clumps, consisting of a few red corpuscles irregularly grouped together. (*b*) The reduction in the number of the corpuscles is remarkable, and only equalled by cases of hæmorrhage and rare cases of malignant growths, and only exceeded by cases of fatal spontaneous hæmorrhage such as purpura with epistaxis. At a time when the disease is recognisable, the number is below 50 per cent., and generally at or below 30 per cent. (2½ to 1½ millions per cubic millimètres). In fatal cases the numbers at the close of the case are extraordinarily low. Thus Lépine has recorded a case with 378,000 per cubic millimètre (7.5 per cent.) the day before death. Worm-Müller with 360,000 (7.2 per cent.) Quincke has published a case in which the corpuscles were reduced to 143,000 (2.8 per cent.) without death resulting, but all Quincke's numbers read much lower than those of any other observer. It may be stated that in fatal cases the corpuscles generally sink to about 18 to 16 per cent. before death, and, with the exception of Quincke's case, no case has been known to recover in which the corpuscles have fallen as low as 7.5 per cent. It will thus be seen that nearly all cases have reached the stage which I have called "grave anæmia" (50 per cent.) when first recognised, and nearly all to Hayem's fourth degree of anæmia, or "*aglobulie extrême*" before death. (*c*) Poikilocytosis, though, as has been shown, not peculiar to this form, is more constant, and carried to a more extreme degree than in other varieties of anæmia. The most remarkable alterations in the forms of the corpuscles are sometimes observed. (*d*) Their size presents great variations. Many microcytes (Eichhorst's corpuscles) are usually seen, and, though not peculiar to, are most common in this form of anæmia. On the other hand, megalocytes are also

present. What, however, is especially characteristic of pernicious anæmia is the large number of red corpuscles above the normal size, but not so large as to really deserve the name of megalocytes—corpuscles of from 8 to 12μ. Nucleated corpuscles have been found by many observers, but are not always present. (*e*) The vulnerability of the corpuscles is increased. This is shown by the manner in which the colouring matter separates from the stroma, as pointed out by several observers,[28] and, as Copeman has shown, by the readiness by which blood crystals form from them without the addition of any reagent. (*f*) The hæmoglobin capacity of the corpuscles is generally increased, so that the percentage of hæmoglobin exceeds the percentage of corpuscles, and the worth of the individual corpuscles is increased, often to 1.25, and occasionally to as much as 1.75 (1.0=normal).

I have, however, recorded a case[29] in which the worth of the corpuscles was as low as, on one occasion, 0.75, and, on another occasion, 0.26. In the great majority of cases the worth is increased, so that, as pointed out by Osler, the anæmia is less than is indicated by the deficiency of corpuscles. The fact, however, that the majority of the corpuscles are larger than normal neutralises to a great extent any advantage accruing from the increased worth of the individual corpuscles, as the same amount of hæmoglobin distributed amongst a smaller number of large corpuscles must expose a smaller superficies than distributed in a larger number of small corpuscles. The colourless corpuscles are not, as a rule, increased in pernicious anæmia, but a marked leucocytosis has been observed by Litten, and Gottlieb, and myself as a premortal phenomenon. Hæmorrhages are more common in this form of anæmia than in any other, especially due, as I have pointed out, to the oligocythæmia. Retinal hæmorrhages are almost invariably present, and petechiæ are not uncommon. External hæmorrhages, especially epistaxis, bleeding from the gums, and metrorrhagia are common, and other hæmorrhages not rare. After death hæmorrhages into the brain and its membranes have been found in several cases, and minute extravasations beneath the serous membranes are not uncommon. In one case I found small hæmorrhages in the liver. The troubles in the circulatory system, characteristic of anæmia, are pronounced, but do not call for special remark. Pyrexia is present in the majority of cases. It is irregular in its course and duration. The temperature often runs up to 101° or 102°, and may be even as high as 104°. It does not remain high long. Exacerbations of most of the symptoms have been noticed to accompany a rise of temperature in some cases, but this is not invariably the case, and some cases of pernicious anæmia are non-febrile throughout their course. I have already alluded to the disturbances in the alimentary system. The skin acquires a peculiar tint—a "faded leaf," or discoloured wax, or a lemon tint, which is very characteristic. The interpalpebral conjunctiva is often yellow, but in some cases is pearly-white. The "lemon tint" has been found to vary from time to time, and an increase to occur at periods when the urine becomes darker and more bile is passed by the fæces; in one case the pyrexia being at the same time increased. In some cases the yellow colour is more marked, and Bartels has collected eleven cases, and added a twelfth of his own,[30] in which it amounted to a true icterus. In these cases no disease accounting for it was found in the liver; and Bartels attributes the jaundice in such cases of pernicious anæmia to a more acute course than usual; in other words, to an unusual activity of destruction of red corpuscles. Dropsy, to a slight degree, about the feet and ankles, is common towards the close of the disease, but never anything amounting to an anasarca.

The urine presents important changes in many cases which, according to some observers, have great diagnostic and pathological significance. Several observers (Fagge and Pye-Smith, Bristowe, Eichhorst) have remarked that in some cases the urine has a dark colour. This has been shown by Dr. Hunter[31] to vary from time to time to time, with aggravations in the other symptoms. He states that the colouring matter is "pathological urobilin," whilst in one case Mott found it was caused by normal urobilin. MacMunn's observations go to show that normal urobilin is, in all probability, derived from the hæmatin of the tissues, and perhaps from the hæmatin of the food, whilst pathological urobilin is derived, in all probability, from the bile pigments, and to a less extent from hæmatin. Connected as its appearance in the urine seems to be with increased secretion of dark bile, Dr. Hunter considers that the excretion of large quantities of pathological urobilin is valuable evidence of excessive destruction of red blood corpuscles. He has also found in the urine pigment granules in renal cells and casts in one case, whilst corresponding granules, which gave a blue reaction when treated with a solution of ferrocyanide of potassium, and afterwards dilute hydrochloric acid, in the epithelium of the convoluted tubes of the kidney in all the cases, twelve in number, of pernicious anæmia he had examined. Dr. Hunter has further shown that in pernicious anæmia there is a remarkable increase in the excretion of iron in the urine, a fact which has also been previously pointed out by Dr. Magee Finny, from analyses made by Professor Reynolds.[32]

So much in the way of inference hangs on the condition of the urine, that I must raise the question whether dark urine, or urine containing an excess of normal urobilin or pathological urobilin, is invariably present in pernicious anæmia. In several cases of my own, with *post-mortem* examinations confirming the diagnosis, the urine was never noticed to be dark, being "amber" or "straw-coloured" throughout. I find also among recorded cases the urine is stated to have been "pale" in a fatal case by Byrom Bramwell, and by Mott (the latter only one examination); "very pale" in two cases (one fatal) by Bramwell; "natural" in colour in four cases (one fatal) by Bramwell and one by Musser.[33] My own cases, it is true, were not examined especially with reference to this point of colour, though the many observations made are against it being overlooked. The same remark possibly applies to the other published cases, with the exception of that by Mott, who was one of the first to call attention to the fact that the urine is often of dark colour in pernicious anæmia. Eichhorst, whilst recording a case in which the urine was of dark colour, states it is usually of bright-yellow colour, and that dark (*dunkel*) urine is exceptional—possibly by "*dunkel*" turbid is meant. In some of Laache's carefully recorded cases the urine was pale in colour. It is possible that the cases in which the urine is dark may form a separate category from others in which this peculiarity is wanting, but I especially direct attention to the point that it may be cleared up by future observers.

Dr. Hunter, struck with the similarity of the hæmolytic process in pernicious anæmia with that induced in animals by the action of toluylene-diamine, more especially as regards the limitation of its action to the portal blood, was led to the conclusion that the blood destruction in the former is due to the action of a poison of a cadaveric nature, and that this is probably produced within the gastro-intestinal tract and absorbed from thence. Accordingly he instituted some investigations on this point, and these had as their result a demonstration that there is in pernicious anæmia a marked excess of aromatic sulphates in the urine, derived from the sulphur of the proteids of the food, and that this is indicative of increased but perverted gastro-intestinal activity and absorption. He has been able to obtain from the urine two ptomaines, identical with putrescine and cadaverine obtained from putrefying meat, and a third ptomaine which appears to be a special diamine body, distinct from putrescine and cadaverine. Dr. Hunter points out that ptomaines belong to the group of nitrogenous bases formed from proteids by the action of bacteria. Ordinary putrefactive organisms do not give rise to ptomaines in the urine, but they have been found in the urine and fæces in cystinuria by Udransky and Baumann and by Brieger. Neither putrescine nor cadaverine possess any markedly poisonous properties, but they derive their importance from the fact that they are the common products of bacteria, differing widely in their pathological qualities. But the presence of even non-poisonous ptomaines, pointing to the existence of special micro-organisms in the alimentary tract, has a special significance, in the opinion of Dr. Hunter, as indicating the existence of one condition more than any other favourable to the production of other and more

[28] Byrom Bramwell, *Edin. Med. Journ.*, 1887; Mackern and Davy, *Lancet*, 1877, vol. i, p. 642.

[29] *Ophthal. Soc. Trans.*, vol. i, p. 50.

[30] *Berlin. klin. Wochenschr.*, 1889, No. 43.

[31] Observations on the Urine in Pernicious Anæmia, *Practitioner*, 1889 and 1890.

[32] BRITISH MEDICAL JOURNAL, 1880, vol. i, p. 44.

[33] *Proc. Phil. Co. Med. Soc.*, 1885.

poisonous ptomaines. The symptoms in one case of pernicious anæmia of Dr. Hunter's appear to support such a conclusion. Exacerbations occurred from time to time presenting the nervous phenomena of toxic poisoning. Dr. Hunter, therefore, feels justified in drawing the conclusion that the special factor required to initiate the symptoms peculiar to the form of anæmia is the presence, under certain favourable conditions, of micro-organisms of specific nature within the gastro-intestinal tract; and these favourable conditions he conceives to be such as have been met with—malignant disease and such other organic changes as have been found in association with this disease, or functional disturbances of the mucous membrane of the stomach and intestine induced by the presence of intestinal parasites, or by prolonged bad nourishment. Dr. Mott, in a valuable communication to which I have already several times alluded, does not believe that there is always a relation between the pyrexia, the diminution of corpuscles, and the colour of the urine. He points out, as Dr. Hunter has done, that ulceration in the intestines may exist in which the whole contents of the bowel must swarm with micro-organisms of many kinds, with everything to favour absorption of their contents without pernicious anæmia occurring. Further, that though constipation and anæmia may concur, and the latter may be benefited by curing the former, in such cases of fæcal poisoning, the corpuscles are not broken down, but insufficient colouring matter is found.

The morbid changes found after death in pernicious anæmia indicate three processes: 1. The effects of the anæmia, in the bloodless condition of all the organs, with the exception in some cases of the spleen; and in the fatty and degenerative changes, especially marked in the heart and blood vessels. 2. The activity of the cytogenic organs, especially the bone marrow, which is usually red and vascular (and containing enormous numbers of developing red blood corpuscles) where it is normally yellow and fatty. 3. The signs of excessive hæmolysis and of the process of removal of the broken down corpuscles; the former, as demonstrated in the liver and spleen, by the evidences of active destruction of the red corpuscles; the latter, in the presence of blood pigment containing iron in the kidneys. Thus the evidence goes to show there is excessive blood destruction and its consequences, which the blood regeneration, however active, is unequal to compensate for. Dr. Hunter's pathology is so coherent, and supported by so much direct evidence, that I am convinced of its adequacy and correctness in some at least of the cases regarded as pernicious anæmia. For cases in which the urine is pale throughout, containing no pathological urobilin and no excess of normal urobilin, and no increase of iron—if such should be proved to occur—another explanation must be found; some different evidence of blood dissolution must be found, or unequivocal evidence afforded of defective hæmogenesis. Ehrlich remarks: "Degeneration and regeneration course side by side in uncomplicated anæmia; it depends upon the preponderance of one or other process whether this simple anæmia ends in a cure or in the progressive pernicious form."[34]

THE HISTOLOGY AND PATHOLOGY OF THE FALLOPIAN TUBES.

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[*Continued from page 110.*]

PATHOLOGY.

When it is stated that a comparatively small number of the tubes examined showed absolutely normal appearances, it will readily be understood that a brief notice of some of the most interesting pathological specimens is all that is possible in the limited space and time at disposal. The pathological conditions selected for special consideration in this paper are:—First, tubal hypertrophy; secondly, the cystic conditions known as hydro-, hæmato-, and pyosalpinx; thirdly, certain malformations and displacements of the tubes; fourthly, tubercular disease; and fifthly, cancerous affection of the Fallopian tubes.

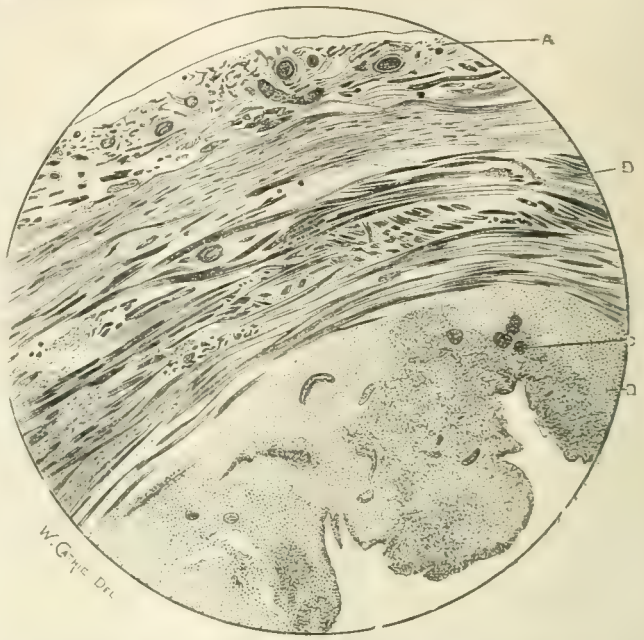


Fig. 4.—Hypertrophy of the Fallopian tube × 40 diameters: A, arcolar and peritoneal layers; B, circular and longitudinal fibres greatly hypertrophied and mingled; C, tubular and elongated structures lined by non-ciliated columnar epithelium and closely resembling gland acini; D, submucosa greatly thickened.

Hypertrophy of the Fallopian Tubes.—Whilst a few of the specimens showed the physiological tubal hypertrophy of pregnancy, one specimen exhibited a condition resembling great hypertrophy, which calls for a detailed notice. The uterine appendages were removed by Professor Simpson from a girl in whose history there was a strong suspicion of gonorrhœal infection. The tube was in all its extent manifestly enlarged, being about the size of the thumb, and was covered by old inflammatory adhesions which brought it into close relation to the ovary. The ovary, which was but slightly enlarged, showed on section one or two pea-sized cystic cavities. The peritoneal coat, as defined in the first part of this paper, was not at all enlarged. The loose arcolar tissue connecting this coat with the middle muscular coat contained a number of isolated hypertrophied longitudinal and circular muscular fibres, and was very vascular. The muscular layer of the tube wall was greatly hypertrophied, and the longitudinal and circular fibres were so blended together that two separate layers could not be recognised, although the longitudinal fibres were somewhat more marked on the outer side and the circular on the inner. A few longitudinal fibres were seen entirely to the inner side of the circular lying in the submucous tissue. The inner coat of the tube was enormously thickened, and consisted of round and spindle-shaped cells, some of which had one, others two or more nuclei, and others, again, were simple granular cells, and between them ramified a few delicate fibrils of connective tissue. These cells at parts invaded the muscular layer separating the fibres from each other. The tubal plicæ, at some points nine, at others twelve in number, were simple and compound, and consisted of the same structural elements covered by a single layer of non-ciliated columnar epithelial cells. Tubular-looking structures lined by a similar layer of cells were everywhere visible in the mucous and submucous tissue and in the substance of the plicæ, and these structures were round, oval, or irregular in shape. We hesitate to regard this case as one of simple hypertrophy of the tube, for the appearances seen are

[34] *Charité Annal.*, 1888.

so strongly suggestive of benignant adenoma that that title recommends itself as the more appropriate one.

The Cystic Conditions of the Tube known as Hydro-, Hæmato-, and Pyosalpinx.—In order to give some idea of the relative frequency of the cystic conditions of the tubes, it may be stated that in our sixty-one consecutive specimens (which were the only ones available for this purpose) tubal cystic dilatations occurred in nine cases, or 14 per cent. Seven of these cases were examples of hydrosalpinx, one was a hæmato- and one a pyosalpinx. Two additional specimens of hydrosalpinx were obtained from Professor Simpson's practice.

Hydrosalpinx.—In all the specimens showing this condition it was noted that the tubes were tortuous, that the ostium abdominale was blocked, and that there was no communication with the uterine cavity. In the great majority of the cases the hydrosalpinx was bilateral. In the specimens removed by laparotomy the swelling was of the size of a walnut, whilst in those obtained from the *post-mortem* theatre it varied from a tumour of that size to one having the dimensions of the head of a six months' fœtus (Fig. 5). In the smaller-

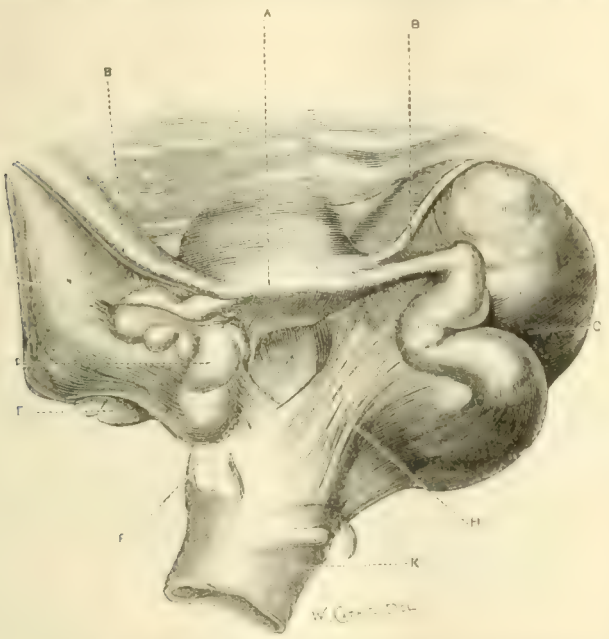


Fig. 5.—View of uterus and appendages from above, showing double hydrosalpinx. One-half natural size. A, fundus uteri; BB, right and left round ligaments; C, large hydrosalpinx of right Fallopian tube; D, smaller hydrosalpinx of left Fallopian tube; E, outer end of left ovary, seen below the margin of the displaced mesosalpinx; F, pouch of Douglas; K, rectum; H, adhesions.

sized specimens the mucous membrane of the tube showed the normal folds, whereas in the larger ones the lining of the tube was smooth. The thickness of the wall of the larger cysts was not uniform, varying from 2 to 5 millimètres.

On microscopical examination of the smaller specimens the peritoneal covering was found to be normal, the muscular coat, both in its longitudinal and circular fibres, was hypertrophied, the submucous coat was absent, and in the mucous coat the branched folds were flattened and reduced in size, and the simple folds at parts had completely disappeared. The epithelial covering of the mucous membrane was, in some places, perfectly normal, and in others the cilia were absent, but the methods of hardening employed might in part account for this. In the larger specimens the wall was almost entirely fibrous, and it was impossible to differentiate the three layers. Near the blocked ostium abdominale the muscular fibres were few, and in some sections entirely absent, and as the uterine end was approached they were relatively more numerous although even there they were scanty. The lining of the cyst in those larger specimens at parts consisted of a low cubical epithelium, and at other parts a layer of round cells was its only representative. The folds, both simple and branched, were absent.

The contents of the large hydrosalpinx consisted of a transparent yellowish limpid fluid which, after standing, deposited a greyish sediment; the specific gravity was 1010, the reaction was neutral or slightly alkaline, there was an abundant precipitate with heat and also with nitric acid. The sediment showed granular *débris*, red blood corpuscles, small homogeneous, non-nucleated, hyaline cells, and a few nucleated, non-ciliated epithelial cells. In all the cases extensive pelvic peritonitis was present, and all the specimens were removed from married women except one (the largest), which was found in a prostitute. The ages of the patients varied from 30 to 61 years, and in all the cases where complete clinical history was obtained there was sterility. With regard to the causation of this disease, whilst it is possible that the persistence of fœtal tortuosities may have some effect, we believe that more potent factors are to be found in pelvic peritonitis causing kinking of the tubes, and in inflammation affecting their lining membrane.

Pyosalpinx.—In one example of this disease, the affection was unilateral, the right tube and ovary were found firmly fixed to the posterior uterine wall, and covered by a thick layer of membranous adhesions, which, when removed, exposed a swelling the size of a pigeon's egg, occupying the middle portion of the tube and containing pus; and the left tube, with the exception of a few peritonitic adhesions, was healthy. The pus-containing cavity was lined by a tissue composed of round cells devoid of an epithelial covering; there were some tubal folds upon which the epithelium was also absent, and the muscular wall was thickened and showed minute hæmorrhagic foci.

Hæmatosalpinx.—The patient from whom the only specimen of hæmatosalpinx was obtained was admitted into Professor Simpson's ward in the Edinburgh Infirmary, complaining of symptoms of pelvic peritonitis. She was aged 25, married, but sterile, and she died a few days after her admission to the infirmary. At the *post-mortem* examination there was found recent general peritonitis, and the pelvic viscera showed the following advanced pathological conditions. There was a pus-containing cyst of the left ovary, the size of a child's head, the left Fallopian tube was represented by one primary, and several secondary and tertiary cyst cavities containing a dark grumous fluid, and having darkly pigmented walls. The primary cavity, which was proved to be the dilated tube, showed on its inner aspect a roughened granular wall, but the secondary and tertiary cavities which were cysts in the wall of the tube had a glistening lining membrane. The right Fallopian tube was in a similar condition, showing as it did primary and secondary blood cysts. The atrophic remains of the right ovary were found adherent to the wall of the tube. The ovarian cyst, the two distended tubes, the uterus, and the rectum, were all bound together by dense recent and chronic inflammatory adhesions. The condition of the pelvic viscera was such as to place insurmountable difficulties in the way of any attempt at the removal of the ovaries and tubes during the life of the patient, and it was fortunate that no such attempt had been made.

The microscopic examination of the wall of the primary cavity revealed the fact that at some points atrophied remains of muscular fibres were visible, but that the greater part of the wall was composed of fibrous tissue. Towards the uterus, where the tube was less dilated, muscular fibres were larger and more numerous, and the wall was very vascular, showing numerous minute hæmorrhages. The mucous membrane was entirely destroyed, its place being taken by a pigmented fibro-cellular tissue. The secondary and tertiary cyst walls presented similar microscopic appearances, but the muscular fibres in them seemed to predominate. No folds were seen on the interior of any of the cysts. The contents of the cavities showed under the microscope red blood corpuscles, which presented a very singular appearance due to the precipitation of the hæmoglobin at four or five points in the cells, and in some specimens blood crystals were found.

Malformations and Displacements of the Tubes.—In 2 out of 61 cases there were accessory ostia at the abdominal end of the tube; they did not coexist with dermoid cyst of the ovary or with varicosity of the pampiniform plexus, conditions with which they have been stated to be associated. In a case of tubercular disease of the tubes, to be hereafter described, there was congenital absence of the outer two-thirds of one tube.

A displacement of the left tube was more frequently met with than of the right, and this displacement was, in all the cases, backward. In the 61 consecutive cases: in 5 the left tube was displaced, in 2 the right tube, and in 1 both tubes were dislocated backwards. The explanation of the fact that the left tube is more frequently displaced is probably due to the greater tendency for inflammation to occur on the left side, which, in its turn, is most likely to be associated with the absence of the valve in the left ovarian vein.

Tubercular Disease. In a case of primary tubercular disease of the tubes, with congenital absence of the right Fallopian ampulla and associated tubercular disease of the uterus, it is deemed to be necessary to give a short note of the clinical history of the patient. She was an unmarried woman, aged 28, admitted to the Edinburgh Infirmary, suffering from symptoms of tubercular meningitis. She had a phthisical family history; her menstruation, which began at the age of 17, was irregular in type and habit, and had been entirely in abeyance during the six years preceding her present illness; and, on her death, the *post-mortem* examination revealed tubercular disease of the brain, uterus, and Fallopian tubes. The lungs and peritoneum were healthy.

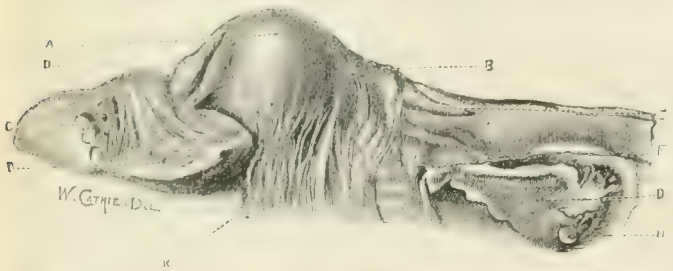


Fig. 6.—Posterior view of uterus and appendages showing double tubercular salpingitis, congenital absence of the outer two-thirds of the right Fallopian tube, and displacement of the left ovary. A, fundus uteri; BB, tubercular nodules, situated in the isthmus of each Fallopian tube; C, parovarian cysts; DD, right and left ovaries; E, cone-like termination of right Fallopian tube (isthmus), the ampulla being absent; F, cut margin of the posterior layer of the mesosalpinx which has been dissected away; H, small pea-sized fibroma attached to the posterior border of the right ovary; K, adhesions passing backwards from the posterior uterine wall. One-half natural size. Removed *post mortem*.

Naked-eye examination of the pelvic organs showed that both oviducts were affected. The left presented, in its inner third, an oval-shaped nodule measuring 1 centimètre in diameter, which involved the superior and lateral tube walls, was of a firm consistence, and, on section, the cut surfaces presented a greyish glistening appearance. The lumen of the tube at this point was slightly dilated, and contained a few drops of thick, yellowish, and caseous looking pus, which, when washed away, left a smooth wall behind; on the uterine side of the nodule the tube was completely occluded. The ostium abdominale was blocked and firmly bound to the superior surface of the ovary, which, along with the tube, was displaced downwards and backwards. The right tube was also affected, and showed a somewhat similar nodule similarly situated. Its lumen, however, had undergone a greater dilatation, and contained a larger quantity of pus. The outer two-thirds (that is, ampulla) were absent. A vigorous search was made for the missing portion, and several likely structures were examined microscopically, but with no result. A small portion of the tube, about 4 centimètres long, with a cone-like tapering extremity, was the sole representative on this side, and this, as already stated, was the seat of tubercular disease. Both ovaries were enlarged, but apparently were free from tubercle. The uterus was smaller than normal (length, 6 centimètres; length of cavity, 5 centimètres; breadth, 4.4 centimètres; thickness, 2.9 centimètres), was covered with perimetric adhesions, and showed, on section, the following appearances: The mucous membrane in the upper part of the body presented a granular irregular surface of a yellowish-grey colour, and was somewhat thickened; partly in the superior and partly in the left lateral wall was situated a cavity about the size of a walnut, containing a thick caseous material, which, when washed away, left a roughened wall behind. The cavity ran in the direction of the interstitial portion of the left tube, but did not communicate with the interior of the uterus, and the tube, in its passage through the uterine wall, was completely destroyed. The uterine mucous membrane opposite the tubercular cavity was greatly thickened.

As the microscopical characters of the tubercular affection were practically the same in each tube, the description of one only is given. The peritoneal covering was slightly thickened, the mucous membrane was replaced by a thick layer of fibrous tissue; and although the muscular coat was atrophied, the entire thickness of the tube wall was increased. The peritoneal coat showed no tubercular follicles: these were, however, abundant in the muscular coat, the muscle fibres of which were separated from each other by a small round cell infiltration; and although the fibrous tissue representing the mucous membrane showed no follicles, it was evidently the result of a tubercular process, as the bacilli were found therein. The muscular fibres in the immediate vicinity of the follicles were undergoing fatty degeneration. Some of the follicles were typically tubercular, containing as they did a centrally placed, branching, many-nucleated giant cell surrounded by an inner layer of large and an outer layer of small lymphoid cells; other follicles contained lymphoid cells only. Tubercle bacilli were detected around the giant cells, between the connective tissue fibres in the layer which represented the mucous membrane, and in the caseous *débris* contained within the lumen. No tubercle follicles or bacilli were detected in the ovaries. Numerous giant-celled tubercle follicles were seen in the superior and left lateral walls of the uterus surrounding the cavity which had replaced the interstitial portion of the left tube, and a few were observed in a corresponding position on the right side. In the mucous membrane lining the upper half of the left lateral wall, and in this part of the mucosa alone, tubercle follicles were found. Tubercle bacilli were found in the uterine wall in and around the fibrous wall of the tubercular cavity.

In this case the tubercular lesions were much more advanced in the tubes than in either the uterus or brain, and whilst the symptoms of brain disease were recent, those of menstrual disturbance were of long standing, and for these reasons we regard it as more than probable that the process originated in the tubes. Heywood Smith and Rutherford,[2] Jeannel,[3] Gardner,[4] Orthmann,[5] Chandeleux,[6] Hegar,[7] and Klinovitsch[8] have recently reported cases of primary tuberculosis of the tubes, but such conditions are rare. Secondary tuberculosis of the oviducts, on the other hand, is well known to be comparatively common, so much so that German gynæcologists have recommended the examination of the vaginal discharges for tubercle bacilli, when this condition is suspected. If it be permissible to draw conclusions from a few cases, it would seem that the most frequent position in secondary tubercular disease of the tubes is the ampulla, whilst in the primary lesion it is the isthmus. The congenital absence of the outer two-thirds of the right tube makes this interesting case truly unique. It need scarcely be added that there had been in this case no surgical interference with the pelvic viscera.

Cancerous Affection of the Fallopian Tubes.—In one only of the specimens examined was the Fallopian tube the seat of cancerous disease. The left tube, which was the one affected, measured 4 to 5 centimètres in length, its isthmus was 8 millimètres in cross section, and its ampulla was enlarged into a hard nodular mass about the size of a walnut. The fimbriated end of the tube was completely blocked, and its fimbriæ were lost in surrounding adhesions. Both the tube and ovary were displaced inwards and downwards into the pouch of Douglas. The serous covering was slightly thickened, the muscular and mucous coats were markedly hypertrophied. The lumen was filled with yellowish-grey material of the consistence of

[2] Heywood Smith and Rutherford. *Brit. Gyn. Journ.*, August, 1889.
[3] Jeannel. Salpingite tuberculeuse à Forme kystique, *Gaz. Hebd. de Med.*, 1888.
[4] Gardner. Double Tubercular Pyosalpinx, *Med. News*, Philadelphia, 1889.
[5] Orthmann. Demonstration eines Falles Pyosalpinx tuberculosa duplex, *Zeitschr. f. Geb. u. Gyn.*, 1889.
[6] Chandeleux. Deux Cas de Salpingite Tuberculeuse, *Province Méd. Lyon.*, vol. iii, 1889.
[7] Hegar. *Die Entstehung, Diagnose und chirurgische Behandlung der Genital Tuberculose des Weibes*, 1886.
[8] Klinovitsch. Cases of Primary Tuberculosis of the Fallopian Tubes, *Ejened. Klin. Gaz. St. Petersb.*, 1889, ix. p. 101.

cream, and the lining membrane was covered with thick granular-looking villous projections. The right tube was apparently free from malignant disease, but both ovaries showed foci of commencing cancerous disease, and in the cervix uteri also there was commencing cancer. Some parts of the affected tube showed, on microscopic examination, the characters of scirrhous cancer, other parts showed a growth more adenomatous in type. In the mucous membrane were seen spaces filled with a large number of polymorphous epithelial cells with large nuclei. The projections on the mucosa were covered by several layers of epithelial cells, with deeply-stained nuclei, and some of these cells were proliferating. In the centre of some of the villous growths were small spaces filled with closely-packed cancerous cells. Scattered at intervals in the muscular coat were large spaces, some of which were densely filled with polymorphous cells, and there were also smaller spaces similarly filled. Lying in the stroma between the spaces were epithelial cells arranged singly or in twos and threes, and immediately around the large spaces small round cells infiltrated the stroma. The growth was most marked in the lower part of the tubal wall at the spot where the folds of the broad ligament separated to embrace it, and outside the muscular layer at this part were several masses of



Fig. 7.—Cancer of the Fallopian tube. × 320 diameters. A, wide spaces filled with epithelial cells; B, epithelial cells lying singly or in twos and threes in the stroma; C, transverse section of bundle of muscular fibres; D, small space filled with epithelial cells; E, small round cell infiltration; F, muscular fibres; H, fibrous stroma.

epithelial cells, with the central cells arranged in a tubular manner. Possibly these were tubules of the parovarium which had become affected. Their lumen was lined by cubical epithelial cells. In Doran's case of primary cancer of the tube similar and similarly situated structures were seen, which were not by him regarded as parovarian; they were lined by ciliated columnar epithelial.[9] Cancer of an adenomatous type was seen in both ovaries, and there was commencing malignant disease of the cervix. The isthmus of the right Fallopian tube showed cells of a suspicious nature, probably cancerous. The patient, who was married but sterile, was 35 years of age, although she looked 50, and for two years before death had suffered from dysmenorrhœa.

We have hesitated whether to classify this condition as primary or secondary in the tube, and it is always difficult to decide such a question. The malignant disease in the abdomen (of the pylorus, etc.) was far advanced, but so was the cancerous disease of the tube, and further dysmenorrhœa was a symptom complained of before any other. On the whole we are inclined to place this case among the secondary cancerous affections of the tubes, and we are the more led to this conclusion by the fact that in the only three cases of undoubted primary cancer of the tubes recorded the ages of the patients differed markedly from that in our case. In these three cases, of which one was reported by Sänger, of Breslau,[10] the second by Orthmann,[11] and the third by Doran,[12] the age of the patient varied from 46 to 51, and Doran suggests that there is a distinct relationship between the onset of the menopause and the appearance of malignant disease of the tubes. The patient in our case was only 35. In connection with this subject, Schroeder[13] states that in cancerous disease of the ovaries the tubes remain long unaffected, and in two of our cases this was strikingly verified, for in both of these specimens the ovaries were undoubtedly the seat of primary cancerous disease, and yet the tubes were found, on microscopical examination, to be perfectly healthy.

Cysts in the Peritoneal Covering of the Tubes.—In about 15 per cent. of the cases examined small cysts were found in the peritoneal covering of the tubes; these varied in size from that of a pea to that of a bean, and the smaller ones were frequently arranged in clusters. Some of the cysts contained a clear, limpid, yellowish fluid, but others were found to be filled with a yellow, gelatinous, semi-solid material, which, before the cysts were pricked to allow of its escape, gave to them a very hard and firm consistence. Had this last-named variety of cyst been felt during life the laparotomist might easily have been led to mistake them for malignant nodules upon the tube, and the resemblance was the more marked from the fact that they were usually arranged in groups and always small in size. On microscopic examination the semi-solid contents were found to consist of colloid masses and epithelial cells undergoing colloid degeneration. The smooth lining wall of the cysts was probably covered by endothelial cells, for such cells were seen in the contents, although none were to be distinguished *in situ*.

In only one pair of infantile tubes was there a pathological condition, and this was in the 7 months syphilitic infant. Many of the tubal folds were adherent at their apices, forming transverse bands, and in the muscular wall were a few deposits of small round cells exactly resembling those found in the liver and other organs in this infant. These were the syphilomata of Parrot, and the so-called miliary gummata of other authors.

[Many of the observations and statements made in the above paper are taken from the M.D. theses of Drs. Ballantyne and Williams, the former of which gained a gold medal and the Gunning-Simpson Prize in Obstetrics, and the latter a gold medal, at the University of Edinburgh.]

[9] *Trans. Path. Soc. Lond.*, vol. xxxix, 1888.

[10] *Centr. f. Gyn.*, 1886, p. 601.

[11] *Op. cit.*

[12] *Lancet*, 1888, i, p. 879.

[13] *Ziemssen's Cyclop. of Pract. Med.*, vol. 10.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE TREATMENT OF DIPHTHERIA.

FOR the purpose of this note, I need only profess myself of the number of those who regard diphtheria as a specific exanthem, the local manifestations of which appear, of course, after the general infection. For this reason I attach little importance to the tonsillar and pharyngeal troubles (though, of course, their occurrence in the larynx constitutes an accidental complication of the greatest danger); and I disregard, as not only useless but as positively mischievous, the measures generally adopted by those who, fearing systemic infection from what they view as the primary seat of the disease, are chiefly concerned with the repeated removal, by means of solvents, etc., of the diphtherial membrane. Nor need I give reasons—for they will occur to all—why, with my views, the indications for therapeutic treatment that suggested themselves comprised a germicide, an antipyretic, iron, iodine, soda.

The immediate results of the adoption of this treatment were more than gratifying. It is true I have only eight cases

to quote, these being all that have come into my hands during the two years and a half that I have practised this method; and for this reason I should not now offer my experience were I not personally convinced that at this time its employment would be the means of saving life.

My eight cases were verified by the presence of membrane on pharynx and tonsils, and albumen in the urine. The drugs are very simply combined in the following formula: R. Sodii salicyl. ʒij, syr. ferri iodid. ʒss., aq. ad. ʒvi. M. One tablespoonful (for an adult) in a wineglass of water every hour till the physiological effect of the salicylate manifests itself by the "noises in the head;" afterwards sufficiently often to maintain this effect. For children, of course, the dose is proportionately diminished in quantity, but not in frequency. The diet is, after the universal practice, supporting and stimulating. In my experience, this method, if started early in the disease, will abort it in from twenty-four to forty-eight hours, and at any stage will at once modify its virulence.

In none of my cases has the larynx been invaded; none have been followed by paralysis, and there has been no death. This formula has also given the best results in acute tonsillitis and scarlet fever, and it has been of much service in chronic tonsillar enlargement.

Ross. E. M. KNAPP.

FRACTURE OF ANTERIOR SUPERIOR SPINOUS PROCESS OF THE ILIUM.

I NOTICED with interest Mr. J. N. Eustace's communication in the BRITISH MEDICAL JOURNAL of December 27th, 1890, on a case of fracture of the anterior superior spinous process of the ilium. I do not, however, quite agree with him that this fracture is of very rare occurrence *per se*.

In September, 1889, I was in attendance on a man over 50 years of age, who had complete separation of the anterior superior spinous process and displacement downwards from slipping on the pavement and striking the iliac crest against a low stone wall. Nine years ago, I was called to see a coal miner who had sustained a similar fracture, but without displacement, from falling violently against a trolly while working underground. Both cases did well.

Elgin, N.B. FRANCIS WM. GRANT, B.Sc.(Edin.), M.D.

ANTIFEBRIN IN TYPHOID FEVER.

IN reference to Mr. Readman's note on this subject in the BRITISH MEDICAL JOURNAL of November 29th, 1890, I should like to add a word of warning to those that have been spoken before as to the dangerous nature of the drug. Like your correspondent, I was charmed with its action in a case of typhoid occurring in a lady, aged 49 years, whom I treated nearly five years ago. She came badly through an attack of typhoid of nearly a month's duration, and after about eleven days of low temperatures had a relapse, the temperature running to 104° and higher in the evenings. Twenty-grain doses of quinine did not bring it down when repeated hourly, and I turned to antifebrin, which at that time was coming into vogue in this country. Four-grain doses every hour kept the temperature often at normal, and usually below 101°. This treatment was continued over three weeks, and with the exception of a condition of collapse following the administration of the drug on one occasion, but soon relieved by a large dose of brandy, the patient had no bad symptoms from its use. After a prolonged period of utter prostration, delirium, and for several nights together convulsions, the patient made an excellent recovery. Since then I have used the drug largely, but never in doses of more than six grains. But last winter I attended a lady, aged 35, in an attack of typhoid, to whom I gave the drug in four-grain doses, but who was made extremely ill by it. Otherwise she had no bad symptom, her temperature keeping below 103.5° F. in the evening, and her pulse good, and though she vomited milk she did not do so when it was peptonised. At the end of the second week, however, her pulse, which had been 110, suddenly ran to 135 per minute, becoming small and rapid; and Dr. Eddison, who kindly saw the patient with me, suggested that we should give a grain of antifebrin every hour instead of the larger dose at longer intervals. The patient, however, continued to grow worse; the temperature was unaffected by the drug in smaller doses, and in the third week peritonitis supervened, and she died.

I may be wrong, but I could not help feeling in my own mind that the sudden change in her condition was due to the use of this drug, and that it would have been better to have treated the high temperature by other and less dangerous means. I would submit that where antifebrin is exhibited it should be used with extreme caution, that three grains is a sufficient dose to commence with until we find the particular susceptibility of the patient to the drug, and that where the patient is profoundly influenced by a comparatively small dose we should discontinue the use of a remedy which may be fascinating, but which is not easily controlled.

Riley, Kirkburton. G. A. HAWKINS-AMBLER, M.R.C.S.

SIMPLE GASTRIC ULCER: PERFORATION: DEATH.

ON October 6th, 1890, I was called to visit a farmer's daughter, a girl of 17, who had been complaining slightly of colicky pains, with nausea and a tendency to vomit. On arriving an hour after, I found that the patient had died suddenly about two hours before, and just a quarter of an hour after the father had left for me. His statement, corroborated later by the mother, was that his daughter had always been very healthy, never ailing until October 4th, when she felt sick on going to bed, but nothing was thought of it until 12 o'clock, when she was troubled with pains passing across the stomach and up the left side into the arm. After the application of warm plates she fell asleep. Next morning she vomited slightly after breakfast, and occasionally at other meals, which consisted chiefly of tea, gruel, or soups, but the vomiting was never excessive and contained no blood. The pains were not constant, and shifted from time to time; thirst was also complained of.

On October 6th she was able to be up and walk about a little until noon, when she took some soup and tea, went to bed, and felt very easy, but died suddenly an hour and a half afterwards.

The patient had been at a dance on October 2nd, did her work as usual on October 3rd and 4th, in the evening drove to the station to meet her father, and helped him to unyoke on their return.

At the *post-mortem* examination I found a typical example of perforating ulcer of the stomach presenting the regular gouged-out appearance, and large enough to admit the point of my little finger easily. There were fully two quarts of fluid in the abdomen, apparently just the food she had taken, with no evident admixture of blood, but no peritonitis. The girl was remarkably well nourished. The symptoms all through were exceptionally mild, death taking place thirty-nine hours after their first appearance.

Otago, New Zealand. G. VEITCH GILRAY.

A SIMPLE METHOD OF EPIDERMIC GRAFTING.

I LATELY had under my care a child, aged 9 years, who had sustained an extensive burn of the buttocks and thighs through her skirts having caught fire. The skin was destroyed posteriorly from the lower third of the thighs to the lumbar region, excepting the skin in the fold of the nates and around the anus. She suffered much from shock, and was excessively nervous and timid, so that the dressing of this large sore was an ordeal to both patient and surgeon. As soon as the sloughs had separated and a healthy granulating surface was established, grafts were taken from the mother's arm, a fair proportion of which were successful. But the procedure was regarded by the child as formidable, and increased the terror which each dressing occasioned. As soon as the nervousness of the child was sufficiently overcome to allow of it, I adopted the following method, which I wish to recommend. I took as grafts portions of the newly formed epidermis, with a corresponding portion of the recently covered granulating surface from the margin of the ulcer, where the epidermis was still transparent, and transferred them to central portions of the sore. This was done painlessly, or even without the patient being aware of it, by clipping out portions with a small and sharp pair of blunt-pointed scissors, each graft being just large enough to ensure that in transplanting it the epidermic surface was kept outwards, and the deeper part of the excised portion in appo-

sition with the granular surface. In order to do this the ulcer must of course be already in a rapidly healing condition, so as to afford a sufficient margin of transparent epidermis from which to excise the grafts. The mode of dressing which I adopted was to cover the whole surface with Lister's protective, and then apply an antiseptic dressing in sufficient quantity to allow it to be left for three days, and to keep the discharge from putrefaction during that time. The surface was washed with warm saturated boracic acid solution at each dressing. This method has several advantages; there is no sticking of the dressing, both patient and surgeon are spared frequent changes of dressing, healing takes place rapidly, and the grafts are left undisturbed long enough to take. At each change of dressing a few grafts may be clipped from the edge of the ulcer or from previous grafts, and the patient scarcely be aware that anything more than the usual change of dressing has been effected. The grafts are more likely to take than when portions of the whole thickness of the skin are used.

Other surgeons, unknown to me, may have practised this method without thinking it of sufficient importance to make it known. But so simple and painless a method of hastening cicatrisation in these tedious cases seems to me worthy of more general adoption.

Wigton, Cumberland. THEOBALD A. PALM, M.A., M.D.

MALARIAL CIRRHOSIS OF THE LIVER.

DR. SAUNDBY, in his valuable paper published in the BRITISH MEDICAL JOURNAL of Dec. 27th, 1890 on cirrhosis of the liver, describes the malarial variety. There is, he says, an absence of ascites. As regards the absence of ascites and the unusual presence of jaundice, my experience is somewhat different. One case will suffice. About three years ago I saw a gentleman who had been fifteen years in India, and who, during the greater part of that period, suffered from intermittent fever, and for five years from enlargement of the liver. He was a man of temperate habits, particularly for the last ten years, but reckless in other respects—often exposing himself up to the knees in water under a powerful sun, in the pursuit of game. Eventually, as the result of a bad chill, ascites appeared. When I saw him on return to London he was very thin, his liver was enlarged, there was much ascites, and his skin was a greyish yellow; he still had attacks of fever. As the result of frequent tappings he improved so much that his recovery seemed not improbable, but owing to prolonged exposure to cold the fever, the congestion, the ascites, and the œdema of the extremities all reappeared, and he died soon after, about ten months from the time I first saw him.

There could be no doubt but that this was a case of post-febrile tropical cirrhosis, for he was a perfect type of the so-called malarial saturation. Of the other cases I could not be sure that fever was the sole cause, for alcohol may have lent a helping hand. The congestion which precedes the enlargement is not generally acute, and is often not noticed, and, as I pointed out years ago when in Burmah, fevers are frequently followed by enlargement of the liver in the European, and but rarely in the native, the spleen in the dark races being the organ to suffer. This is, I think, due to a certain predisposition to hepatitis among Europeans, owing to the effect of heat, alcohol or unsuitable food, which the acclimatised, vegetable-eating, and more temperate native escapes. Those who suffer from ascites due to malarial cirrhosis should at once return to Europe, where, under the influence of a temperate climate and the avoidance of chill, they may hope to lose their fevers, and, with tappings, also their ascites, if not their hepatic enlargement. They would also do well to winter in the Riviera, where they can get out in the day, and where, though it is cold about sunset, the temperature of the house is one of great equability.

D. H. CULLIMORE, M.D., M.R.C.P.Lond.

Welbeck Street, W.

MUNIFICENT GIFTS TO EASTERN COUNTIES CHARITIES.—An anonymous donor has forwarded two bank notes for £1,000 each to the Essex and Colchester Hospital and the Eastern Counties Asylum for Idiots respectively. Similar munificent anonymous donations were received by the two institutions last year.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

MANCHESTER ROYAL INFIRMARY.

SPINA BIFIDA OCCULTA: NO PARALYTIC SYMPTOMS UNTIL SEVENTEEN YEARS OF AGE: SPINE TREPHINED TO RELIEVE PRESSURE ON THE CAUDA EQUINA: RECOVERY.

(Under the care of Mr. JONES.)

J. L., aged 22, came to England twelve years ago. On his arrival here he worked in a mackintosh manufactory for a year. Leaving this he found employment at cap making, and worked a treadle sewing machine on an average for ten hours a day for five years. This occupation he was obliged to abandon on account of severe cramps in the left leg—the one he worked the treadle with. For two years he was unemployed, the leg becoming more and more helpless.

In September, 1888, he was admitted as a surgical in-patient, suffering from talipes equino-varus of the left foot. The foot was inverted, its inner border forming an angle of about 120 degrees with the internal surface of the tibia. The cuboid and astragalus were unduly prominent on the dorsum and outer side of the foot, the arch of which was considerably increased. There was also atrophy of the extensor muscles, but no loss of sensation. The movements of the ankle joint were very limited and painful. To rectify the position of the foot, the head of the astragulus and the posterior part of the cuboid were removed, afterwards the tendo Achillis was divided, and the foot brought as near the normal position as possible. Healing of the wound progressed very slowly, in marked contrast to what was seen in subsequent operation wounds of the right foot. In November the patient was sent to Cheadle with the wound healed and the foot in fairly good position. In January, 1889, he left Cheadle, being able to walk imperfectly. Very soon he began to experience severe burning pain in the sole of the left foot, which was speedily followed by discharge from several points. Some of these healed, while others broke out. About the end of July he observed that his right foot began to give him pain. The pain was of a burning character, similar to what he had experienced in the left foot. He went to a chemist who supplied him with a lotion, but previous to its application he removed several pieces of bone from the sinus in the sole of the left foot, immediately behind the fifth metatarso-phalangeal joint. In October he was readmitted into the infirmary, suffering from perforating ulcers on both feet, also with the right foot in a state of talipes equino-varus. There was an unusual amount of muscular wasting in both legs. Dr. Ross was now asked to see him, with the view of, if possible, determining the cause of the paralysis. On examination of the back a spina bifida occulta was found in the upper part of the sacral region. The patient was transferred to the medical side of the hospital for treatment by Dr. Ross. His condition, as detailed in the medical report of November 23rd, 1889, may be described in the following terms: He was troubled with cramps in the legs, but not so frequently as formerly. On tapping the spinous processes of the vertebræ patient experienced pain, which was first noticed at the first dorsal, and increased in intensity down to the fifth lumbar. There was general wasting of the muscles of the left leg, and, to a slighter degree, of those of the right limb. Constant fibrillar contraction in the muscles of the back and legs.

Reflexes (1) superficial: (*a*) Plantar reflexes lost in both feet; (*b*) gluteal reflex very slight, especially on the left side; (*c*) cremasteric, abdominal, epigastric, erector spinæ, and scapular reflexes well marked. (2) Deep: Patellar tendon reflex lost in both legs.

Patient is a long while in micturating after he has determined to make water. He is unable to walk owing to the muscular weakness and the pain in his feet, especially in the situation of the old ulcers, which have now healed. Pressure of the soles induces pain of a burning character.

Sensation.—Sense of touch and pain normal in head, neck, front of chest to level of the third rib. Below this, sensation abnormal as in the following figures.



Dotted Area.—Area of hyperæsthesia, gradually becoming less marked as it ascends.

Shaded Area.—Area of relative anæsthesia, but still painful to the touch. The scrotum is hyperæsthetic, and on passing a catheter great pain is produced along the urethra; on passing the catheter against the wall of the bladder patient complained of great hyperæsthesia. When he passes his water he complains of great burning pain along the urethra.

Electrical Reactions.—The muscles of the legs all responded to the faradic current (weak), the tibialis anticus and extensor longus hallucis more readily than the rest.

To the galvanic current:—

	Left.		Right.	
	A. c.c.	K. c.c.	A. c.c.	K. c.c.
	Cells.	Cells.	Cells.	Cells.
Tibialis anticus	25	20	25	20
Extensor longus digitorum ...	30	25	25	20
Extensor longus hallucis	25	20	20	20
Peroneus brevis	35	30	30	25

On breaking the current neither anodal nor kathodal contraction occurred with the same number of cells as on making the current.

The patient remained under medical treatment for seven months, and, no improvement being observed, the question of trephining the spine, with the view of discovering whether there was any pressure on the cauda equina in the vicinity of the old spina bifida was now discussed. It should be mentioned that the spina bifida had been almost forgotten by the patient himself, although when questioned about the matter he admitted that his mother had mentioned it to him; but it had undergone a spontaneous cure, leaving him as he thought in all respects in a perfectly normal condition. He had been able to engage in games like any other lad in his native village, and could walk and jump without any difficulty whatever.

The spinal deficiency corresponded with the spine of the second sacral vertebra. In this situation there was a readily discovered hole in the bone over it; the skin was puckered and covered with short hairs, the portion of skin corresponding with the position of the bone deficiency being depressed. The patient was again transferred to the surgical side on July 3rd, 1890, and eight days later the following operation was performed. He was placed under the influence of chloroform and turned face downwards. The parts selected for operation were shaved and thoroughly washed with perchloride solution (1 in 1,000), and a quadrilateral skin flap, with its base to the left side, reflected. The flap consisted chiefly of the puckered skin already mentioned, and its centre corresponded with the second sacral vertebræ. After separating and holding aside the spinal muscles, sufficient of the first sacral vertebra was removed to expose the cauda equina. A dense adventitious fibrous band now came into view, stretching across the spinal canal and compressing the cauda equina. It was about half an inch wide, its lower border almost touching the cicatricial tissue, which represented the old spina bifida, while its upper border was quite free. Under this a director was passed, and after its division the two portions were removed. The portion of the cauda equina thus exposed was found deeply grooved, showing most unmistakably how it had been constricted and pressed upon. The skin flap was now replaced after the wound had been cleaned, and its edges brought together with a continuous silk suture. Dry dressing of wood wool; no drainage tube employed. The wound was dressed on the following day merely because the patient complained of severe pains in the back; nothing abnormal detected.

July 14th. Pain much less; temperature normal.

July 25th. He had shooting pains in the legs, but says he has much more power in them.

Massage of the Legs.—The constant current was commenced July 30th. Shooting pains confined to the left limb, the patient rapidly recovering strength in his lower extremities.

August 6th. Went to Cheadle, being able to stand, and all the shooting pains and hyperæsthesia having disappeared. He was readmitted from Cheadle on September 24th for the purpose of having the position of the right foot corrected. There was still considerable equino-varus, and the fourth and fifth toes were drawn backwards on to the dorsum of the foot.

On October 9th, the patient being under chloroform, a T-shaped incision was made over the head of the astragalus, which was removed with an osteotome. Rectification of the foot found to be impossible until the tendo Achillis and the plantar fascia had been divided. After this was done the foot was fixed in a plaster-of-paris bandage in its corrected position, the wound having been previously dressed with iodoform and wood wool.

October 24th. Plaster removed, when the foot, with the exception of a slight amount of inversion, was found to be in good position. This was corrected by an artificial muscle acting on the peroneal border of the foot. Both legs have been massaged regularly with great benefit to the patient, his condition improving daily and his power of locomotion returning very rapidly.

November 22nd. He could walk about with the aid of crutches, and was able to stand and make his bed without any support whatever. From two crutches he then got to one and a stick, and then used a stick alone; now he is able to walk a short distance even without a stick.

The last operation he had performed consisted of the removal of the right fourth and fifth toes, which caused him great inconvenience when he wore his boot. The operation wounds healed in a few days.

Present Condition.—December 17th, 1890. Has regained his normal health, and is able to walk without any difficulty and without pain. The act of micturition is still slow and occasionally painful. The right foot continues in good position; not so the left, which is slightly inverted and ankylosed, still it does not interfere with free progression. The muscles of the legs are returning, and there is a considerable difference between the circumference of the legs now and six months ago.

Literary Intelligence.—Bruns's *Beiträge zur klinischen Chirurgie*, which is now edited by Professors Kraske and Trendelenburg, has been somewhat enlarged in scope. The seventh volume, which has just begun to appear, will contain reports from the surgical clinics of Basle, Bonn, Freiburg, Heidelberg, Tübingen, and Bonn. An illustrated monthly, called the *Bacteriological World*, has recently appeared in America; it is edited by Dr. Paul Paquin, of the State University, Columbia, Mo.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, JANUARY 20TH, 1891.

W. H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Melanotic Sarcoma of the Liver.—Dr. SHERIDAN DELÉPINE showed several sections from a liver which had been shown to him in 1885 by Dr. Burnet. The liver had originally been received from Dr. Barron. The specimen had already been exhibited as a card specimen by Dr. Burnet.[1] Dr. Delépine had made a complete histological examination at the time, but had almost forgotten the case until he was examining a melanotic tumour of the skin, which led him to suspect that there was a constant passage of some substance allied to melanin from the epidermis into the cutaneous lymphatics, and that this constant formation of pigment by the skin was probably connected with the formation of hæmoglobin.[2] On the other hand, he had previously ascertained that a great part of the iron set free by the decomposition of hæmoglobin was periodically stored up in the liver, to be used afterwards,[3] probably in the formation of fresh hæmoglobin. The microscopical appearances of the liver were as follows: The capsule was thickened, and the stroma increased. The vessels were many of them dilated or obliterated from pressure of the new growths in their walls, and some contained micrococci. The endothelium of many of the intralobular veins had proliferated to such an extent as to block and even distend the lumen. In some of the capillaries and in some of the openings of the intralobular veins into the sublobular veins were to be seen oily-looking, greyish-brown, transparent globules, and these formed possibly one of the ways in which pigment passed into the blood, and thence into the urine. The hepatic epithelium was much atrophied and compressed between the sarcoma nodules, the relation being the same as the atrophied trabeculæ between the spaces in a cavernous angioma in the specimen, these spaces being filled in the specimen with sarcoma cells, in the latter with blood corpuscles. The sarcomatous nodules consisted of large spindle cells, more or less pigmented with melanin. These masses had originated from the endothelium of blood vessels. The case presented the following points of interest: 1. The whole of the liver was involved by changes beginning in the vessels, changes which suggested an irritation of the endothelium of these vessels, a kind of proliferative endophlebitis. 2. The changes were entirely limited to the liver, and therefore seemed to be connected with the functions of that organ or with the nature of the products brought to it by the portal vein. 3. The contents of the vessels were gradually being replaced by an embryonic tissue similar to that from which both the blood and blood vessels had originated, and little different from those which the author had on several occasions seen to be shed from the endothelial surface of the vessels, a fact to which the late Dr. Handfield Jones[4] had also attracted attention. 4. The extreme activity of growth of these endothelial cells could be estimated at at least 15 lbs. 13 ozs. of embryonic connective tissue which had originated in the vessels of the liver. This excessive amount of growth was all the more striking that during the four years the man was under observation he gained only 6½ lbs.; so that the organ grew to such an extent as to more than compensate the loss of weight which took place in other parts of the body. The distribution seemed to indicate clearly that it was started by some irritative process. 5. The accumulation of pigment having the characters of melanin in a liver which was thus rendered incapable of performing its usual function was suggestive. There were many observations which tended to prove that melanin was not—at any rate in many cases—a derivative of hæmoglobin, and if not, it was difficult to account for its accumulation in the sarcomatous cells which grew from the walls of the hepatic vessels. The question naturally arose as to whether the melanin or some antecedent of it might not be brought to the tumours by the blood vessels or lymphatics; and whether, when not utilised in the usual way, it might not become precipitated. The changes which occurred in the urine in cases of melanuria showed that it was only after the urine had become oxidised that it assumed its dark colour, and might not a similar process occur in the tissues?—Dr. PENROSE referred to a card specimen of melanotic sarcoma, which he was showing, that had been taken from the body of a woman, aged 44, who was greatly emaciated at the time of death, and was said to have been ailing for about eighteen months. The urine had been repeatedly examined, and Dr. Delépine had found that it contained uromelanin. At the *post-mortem* examination the liver was found of a dark colour, and so entirely infiltrated with a pigmented new growth that no liver cells could be detected. The cells of the growth were of a sarcomatous rather than of a carcinomatous type. There were no other growths, but some tiny spots of pigment in the endocardium on both sides of the ventricular septum of the heart.—Mr. ROGER WILLIAMS asked if the rectum had been examined for a primary growth, as melanotic disease of the liver was not infrequently secondary to growths in this region.—Dr. HALE WHITE said that in all the cases he had found on record of primary melanotic growths of the liver death had ensued in four months from the onset of symptoms. Dr. Penrose's case seemed exceptional in the long duration of the symptoms. The eyes as well as the rectum should have been carefully examined as the possible situation of a primary growth.—Dr. CAYLEY referred to a case recorded in the *Transactions* of a melanotic hepatic tumour in which ten years before death one of the patient's eyes had been removed for a melanotic growth. This showed how long a time might elapse before the development of a secondary deposit.—Dr. DELÉPINE, in reply, said that he was informed that other growths were looked for in every part of the body with a negative result, and there had been no history of a primary growth. The tumour appeared to grow very rapidly during the fortnight before death, and all its characters were those of a primary growth.

Diverticulum of the Œsophagus.—Mr. T. F. CHAVASSE showed a specimen taken from the body of a man, aged 49, who was much emaciated, and on whom gastrostomy was performed at the Birmingham General Hospital in July, 1890, as an endeavour to arrest starvation. The patient had given a history of dysphagia extending over a period of ten years. Death took place two days after the completion of the operation from pneumonia and exhaustion. The *post-mortem* examination revealed a posterior diverticulum 4 inches in depth from the level of the arytenoid cartilages, 3½ inches in breadth, and 2½ inches in thickness, with a mouth 1 inch in diameter, and a capacity of 6 ounces. The walls of the sac were as thick as those of the œsophagus, and lined throughout with mucous membrane. When filled with fluid the opening in the œsophagus was firmly closed by the pressure of the distended sac. There was no malignant growth present. It was pointed out that the absence of muscular tissue, except at the mouth of the sac, supported the contention of Zenker and von Ziemssen that these posterior diverticula were primarily due to the effects of pressure, and not to a congenital defect as held by some authorities. The various lesions which gave rise to such diverticula and the rarity of the condition were discussed. Reference was made to the ages and modes of death in the authentic cases that had been recorded.

Hæmatoporphyrin in Urine.—Dr. S. M. COPEMAN showed specimens of urine containing hæmatoporphyrin from two cases under the care of Dr. Ranking, one of which died, while the other had recovered. Reference was also made to two other cases, recently published in the BRITISH MEDICAL JOURNAL, in which the symptoms were similar, and the pigment, although its true nature was not at the time determined, was apparently identical. All four patients were highly neurotic women of middle age, who had suffered from habitual constipation, sleeplessness, and abdominal pain, although no organic mischief could be detected. Great prostration, and sometimes apparent inability to move the limbs, was accompanied by the excretion of small quantities of urine only, which had a dark, purple-red colour, but contained neither hæmoglobin, bile pigment, albumen, or sugar. Finally, three of the four patients died collapsed and comatose within

[1] *Trans. Path. Soc.*, vol. xxxvi, p. 252.
[2] *Physiological Society*, December, 1890.
[3] *Practitioner*, xlv, 95.
[4] *Trans. Path. Soc.*, 1885, p. 158.

a week of the appearance of severe symptoms. The absence of blood from the specimens of urine was determined by the spectroscope, which showed a four-banded spectrum at first sight, not unlike methæmoglobin, but which underwent no change on the addition of reducing agents such as ammonium sulphide. Measurement of the wave lengths of the absorption bands showed that the pigment was hæmatoporphyrin. The use of simple clinical tests, such as the guaiacum test, gave no reaction while boiling; the use of nitric acid, and saturation with magnesium sulphate, also gave no result, showing that proteids were absent. Strong sulphuric acid brought about a change in colour of the fluid, while the spectroscope showed that the pigment had become converted into acid hæmatoporphyrin. Maps were shown of the spectra yielded by the fluid both before and after the addition of sulphuric acid. The addition of zinc and ammonia gave no distinct fluorescence, thus proving the absence of urobilin. With the same reagents the band at F did not shift, so that the pigment had not reached the stage of urohæmatoporphyrin. The bands of the unaltered fluid did not, however, exactly correspond to those usually assigned to hæmatoporphyrin as far as could be judged by comparing spectra of alcoholic and aqueous solutions of the respective pigments, that present in the urine having probably undergone a slightly less degree of metabolism. It might, however, fairly be called neutral hæmatotorporphyrin. All the specimens of the urine had a peculiar smell, resembling acetone, and did not undergo any putrefactive change for months. The suggestion was made that the disease from which the patients had suffered was allied to pernicious anæmia, in which also a considerable excess of pigment, apparently derived from abnormal hæmolysis, was present in the urine. The obstinate constipation, which was a marked symptom in all the cases, might have led to the absorption of poisonous products from the intestine, in which case the blood destruction would be likely to take place in the portal system a theory supported by the absence of proteids in the urine such as were found together with the pigment after a paroxysm of hæmoglobinuria.—The PRESIDENT pointed out the remarkable fact that two of these cases had come from the same house, and wondered what local cause could have been at work.—Dr. W. HUNTER referred to the acidity of the urine and the resistance to putrefaction as shown in these urines, and which indicated, he thought, a nearer relation to pernicious anæmia than to paroxysmal hæmoglobinuria. He thought that the disease might possibly be due to some unascertained form of poisoning, and the fact that two cases came from the same house perhaps lent some support to this view. It was probable that the changes in this disease, as well as in pernicious anæmia, occurred in the portal blood and in the liver, though the fact must not be overlooked that similar changes could go on in other tissues, as the muscles; and a familiar instance was the change that occurred in cases of subcutaneous extravasation of blood, where the changes to bilirubin could be seen.—Mr. EDGAR WILLETT referred to the fact that the waters of Tonbridge Wells were rich in iron, and asked if this might not have something to do with the two cases that came from there.—Dr. BERNARD O'CONNOR asked if there could have been any poisoning by coal gas. The PRESIDENT asked if there had been any history of malaria or any discoloration of the skin.

Dr. COPEMAN stated that no history of malaria could be obtained, nor was there any discoloration of the skin. He had at first suspected some local poisoning, but had been able to exclude coal gas and arsenical poisoning, and the patients were at the time under strict medical observation and on milk diet. Many urines besides that in pernicious anæmia withstood putrefaction. If the disease under discussion had any relation, it was probably to pernicious anæmia. There were no proteid bodies in the urines in these two diseases, whereas it was always present in hæmoglobinuria. Constipation had been a most marked feature in the cases, and this was possibly an important fact. The presence of iron in the water had probably but little to do with the condition, as hæmatoporphyrin was an iron-free hæmatin.

Subacute Gastritis.—Dr. WILLIAM HUNTER then described a case of subacute gastritis occurring in a man aged 59, who, during the last three years of his life, presented all the features of pernicious anæmia. Throughout the entire course of his illness there were none of the usual symptoms of dyspepsia, the only sign pointing dubiously in this direction being a raw and tender condition of tongue from time to time, the surface of both tongue and fauces presenting angry red patches, sometimes going on to vesicle formation. Shortly before death these subsided, leaving the tongue pale and flabby, its mucous membrane presenting a smooth and atrophied appearance. The necropsy revealed characteristic changes in the liver, spleen, and kidneys, connected with excessive destruction of blood. The stomach showed no obvious morbid appearances to the naked eye, except that it was very thin. Microscopically there were found, localised in patches at the cardiac end of the stomach, changes both in the mucous and submucous coats. The changes were partly of simple atrophic and partly of subacute inflammatory character, in the former case the tubes being fewer in number and replaced by fibrous tissue, while in the latter the tubules were also reduced to a state of atrophy by the pressure of active proliferating connective tissue cells by which they were closely surrounded. Around these inflammatory foci the capillaries were greatly distended. The submucous coat was in parts greatly thickened, especially in those parts opposite to the inflammatory areas in the mucous membrane. The vascular changes involved not only the arteries and veins, but extended also to the arterioles and capillaries, and the walls of the vessels were greatly thickened and infiltrated with active cells, the thickening being at parts almost so great as to lead to occlusion. These changes in the submucous coat were also continued to the cardiac end of the stomach; in the pyloric region the changes were of the more chronic character usually found in persons dying after the age of 50, the thickening of the coats of the vessels and the slight increase in connective tissue being unaccompanied by any active proliferation of cells. The appearances were demonstrated by a series of microscopical specimens showing the changes around the gastric follicles and in the vessel walls. The case raised a question as to the nature and causation of certain forms of gastritis which ran their course unattended by any special gastric symptoms, and it also suggested an inquiry into the relation between the gastric changes and hæmolytic changes in the blood which constituted the distinguishing pathological feature of the pernicious anæmia with which they were not infrequently associated. The factors which brought about simple atrophy of the tubes, which was common in people dying above the ages of 45 or 50, were the same as operated at this period of life to induce similar changes in other organs, namely, diminished blood supply and impoverishment of blood. In the present case the extreme poverty of the blood and the marked thickening of the vessel walls might both be looked on as factors in causing a certain degree of atrophy. But the chief change was the subacute inflammatory process which was present in both the mucous and submucous coats. The lesion in these two coats did not appear to him to stand to each other in the relation of cause and effect, but both seemed to be the result of some special inflammatory process localised in certain portions of the mucous membrane. Certain of the veins and lymphatics in the inflamed area were filled with large numbers of bacilli, which stained readily; while the numerous bacilli and bacteria on the surface of the mucous membrane, where putrefaction had already set in, failed to do so. Evidence of mycotic infection had been found in a few other cases, and these suggested the possible relationship between organised infection and certain subacute processes in the stomach, which ran their course, as in the present case, without any of the usual symptoms of stomach disease. The relation between the gastric and the hæmolytic changes no less than the nature of the former was also a matter of pathological importance, and, in this connection, he mentioned that he had isolated from the urine during life certain products of bacterial activity not usually found in the urine, either in health or in most diseases. Two of these he had identified as well-known putrefactive alkaloids cadaverine and putrescine and the third also was like these, a diamine body, but distinct from them. He was inclined to connect the destructive changes in the blood with the absorption and presence of these bodies, and these in turn with the inflammatory changes in the gastric walls. Dr. NORMAN MOORE referred to the enlarged glands that had been seen in the case, and asked Dr. Hunter if such a complete examina-

tion had been made that one could with certainty exclude the existence of cancer.—In reply, Dr. HUNTER said that a very careful examination had been made and no cancer found, but even if cancer had existed, it was just as difficult to account for the connection between the anæmia and the cancer as it was to connect the ulcers of the stomach with the anæmia, and he was quite certain that there was no malignant growth in the stomach.

Multiple Tuberculous Tumours in Brain and Viscera.—Dr. SAMUEL WEST showed several organs taken from the body of a boy, aged 14, who had been admitted into hospital for headache and double optic neuritis. A diagnosis of cerebral tumour (probably tuberculous) had been made. He had been ailing for a year, but had had no definite symptoms until a month before his admission. He then had headache and vomiting, and in a few days his eyesight began to fail. The patient was delicate and anæmic, but except for a few enlarged glands in the neck, axillæ, and groins, presented no abnormality except double optic neuritis. The patient died six months after the onset of definite symptoms. Nothing occurred except gradual failure of strength, severe headaches, and occasional vomiting. Three or four indefinite fits had occurred at irregular intervals, but they were of no value for localising the seat of the cerebral tumour. At the *post-mortem* examination caseous nodules, varying in size from a pea to a nut, were found in many parts of the body: on the parietal and visceral layers of the pleuræ and the peritoneum. The lungs were studded with small nodules. The bronchial glands were as large as Tangerine oranges, and very hard. On the peritoneum nodules were situated on the stomach intestines, and the capsules of the liver and spleen, but they did not invade the deeper tissues of these organs. The mesenteric glands were enlarged. There were ordinary tuberculous ulcers of the intestines, but without secondary tuberculous nodules on the peritoneal surface over them. One small gland had formed a communication with the intestine, and was discharging into it. The kidneys were studded with nodules, but there were none in the suprarenal capsules. The swelling in the left wrist was filled with caseous substance. In the brain there were twelve tumours of varying size, nearly all in the white matter in all parts of the brain, and only one reached the surface. The left optic thalamus seemed to be entirely converted into a tuberculous mass. The cerebellum contained nodules in both lateral lobes, and a large one in the middle lobe. The case might be called one of chronic general nodular tuberculosis. It was rare in man, though resembling what was commoner in some animals. Clinically it was of interest on account of the entire absence of symptoms until six months before death, and even then limited to those general ones of cerebral tumour, which did not suffice to suggest the position of the lesion.

Card Specimens.—Mr. DUNN: Caries of the Scapula.—Dr. PENROSE: Melanotic Growth in the Liver.—Dr. DELÉPINE: Charcot's Crystals.—Dr. ROLLESTON: (1) Communication between the Ventricles of the Heart; (2) Aneurysm Bursting into Left Bronchus.—Dr. F. GALLOWAY: Aneurysm of the Superior Mesenteric Artery with Hæmorrhage into the Mesentery and Peritoneal Cavity.

HARVEIAN SOCIETY OF LONDON.

ANNUAL MEETING.

THURSDAY, JANUARY 14TH, 1891.

THOMAS BRYANT, F.R.C.S., President, in the Chair.

Election of Officers.—The following gentlemen were unanimously elected officers for the ensuing year:—*President:* *Mr. Henry Cripps Lawrence. *Vice-Presidents:* *M. Handfield-Jones, M.D.; Mr. J. E. Lane; *Mr. C. B. Lockwood; Stephen Mackenzie, M.D. *Treasurer:* *Mr. Malcolm Morris. *Honorary Secretaries:* Mr. D'Arcy Power; *G. William Hill, M.D. *Council:* *Thomas Bryant, F.R.C.S.; *Mr. Watson Cheyne; *Mr. G. P. Field; *J. F. Goodhart, M.D.; *Mr. C. D. Bowditch Hale; *Wm. Winslow Hall, M.B.; W. H. A. Jacobson, M.Ch.Oxon; *Robert Maguire, M.D.; Herbert W. Page, M.C. Cantab.; Sidney Phillips, M.D.; *Marmaduke Prickett, M.D.; *C. Theodore Williams, M.D. An asterisk is prefixed to the names of those gentlemen who did not held the same office the preceding year.

President's Address.—The outgoing PRESIDENT delivered an address on the Treatment of Internal Strangulation and Obstruction. He divided his cases into three main groups. The first included what were usually called, but, as he held, wrongly, cases of acute obstruction; the second, cases of chronic colonic or rectal obstruction, and of acute symptoms grafted upon the chronic; the third, cases which could not well be placed in either of the two former groups, and the nature of which was obscure. In the year 1884, when Harveian lecturer, he had pointed out the expediency of separating cases of acute intestinal strangulation from those of obstruction. He dwelt likewise upon the mechanism of strangulation, and illustrated from the familiar example of a strangulated external hernia the changes which the bowel underwent when strangulated within the abdomen, either in the shape of an internal hernia, volvulus, constricting band of any kind, or acute intussusception. He showed, moreover, how in all these conditions the pathological changes were identical; that in all there was more or less sudden or complete interference with the venous circulation of the part, and that this, if not relieved, would of necessity end in complete blood stasis, and, as a consequence, "static gangrene" and death of the part strangulated; death under these circumstances taking place from these pathological causes, and not from obstruction. When, therefore, they were called to a case which they might be disposed to consider one of acute obstruction, but which he would prefer to consider one of acute strangulation, they should mentally see either the gradual increasing venous congestion of the strangulated part or its rapid congestion; they should picture the venous blood congestion passing on to a more or less rapid and complete blood stasis, when they could not be too alive to the fact that death of the strangulated bowel, if not of the patient, was not far distant. This condition of mind encouraged the surgeon to act with foresight and decision, as he would do in an example of external strangulated hernia, and to deal with his case of internal strangulation by the only means that could save life, namely, by laparotomy. On the diagnosis of a bowel strangulation being made, the surgeon should at once proceed to explore the abdomen, first, to find out the exact cause of the strangulation, and, secondly, to relieve it. It was true that failure often followed the attempt, but it was equally true that success was more likely to attend an early effort than a late one; and under all circumstances it should be remembered that where success ensued it meant that a life had been saved, which under other circumstances would to a certainty have been lost. With regard to the second group of cases, the President said the digital discovery of growth or ulceration when the disease was low down, and the ballooning of the rectum when it was higher up, with the history of the case and other symptoms, afforded ample evidence upon which a working diagnosis could be made in the majority of cases; and when the diagnosis had been made the line of treatment to be followed could be summed up in the use of laxatives to ward off symptoms of obstruction, and a well regulated diet, with colotomy (lumbar, if possible), as soon, at least, as the first symptoms of impending blockage appeared. When acute symptoms had been grafted upon the chronic, some difficulty in diagnosis might be experienced; but such cases rarely if ever simulated those of internal strangulation, and under such circumstances some delay for purposes of investigation could generally be sanctioned. The third group comprised, therefore, for purposes of treatment, examples of the first group in which operative delay was justifiable from doubtful diagnosis, or necessary from want of consent or other cause; cases of the second group in which acute symptoms had been grafted on to the chronic; cases of faecal impaction of the cæcum or colon (he excluded the rectum, as this condition was so readily detected); cases due to some local peritonitis, the result of injury, or the extension of inflammation from a pelvic or other organ; cases of chronic intussusception or of early stricture; cases in which the diagnosis of internal strangulation was not sufficiently clear, or of colonic obstruction from stricture sufficiently evident, and yet in which symptoms of obstruction were markedly present—namely, abdominal pain existing in various degrees, and more or less abdominal tenderness and distension. Peristalsis might or might not be visible; if very visible, it sug-

gested chronicity; vomiting might be present or persistent, and this was aggravated by food. Constipation, more or less complete or prolonged, might coexist, and a repeated examination of the rectum failed to give any evidence of local disease. How was such a case to be treated? Were purgatives of steadily increasing power to be regularly administered? Were enemata of gradually increasing quantities and strength to be consecutively employed? Was their old friend the long tube to be called into requisition, and were they still to delude themselves that by means of it the sigmoid flexure might be washed out? Was the patient, when under an anæsthetic, to be inverted, succussed, and his abdomen manipulated by abdominal taxis for thirty or forty-five minutes with the hope that some good might come from it? For his own part, he said, Away with all these measures as a routine practice. In some few cases they might be applicable, but in most they were full of grave danger. In a modified form abdominal kneading was in certain cases of value; indeed, he had employed it with success. In cases of obstructed bowel from some mechanical cause, such as a band, when symptoms were not severe; in cases of fæcal, cæcal, or colonic obstruction; in cases of obstruction due to matting together of the intestine from some antecedent peritoneal inflammation, the practice might be of use. In any case of acute trouble in which bowel strangulation was suspected it must be full of danger, and should be condemned. In these cases an exploratory abdominal incision was far less likely to do harm, and far more likely to do good if undertaken in time.

Annual Report.—Dr. MAGUIRE, the Senior Secretary, read the annual report, which indicated that the financial condition of the Society was prosperous, and that a large amount of good work had been done during the preceding year.

Installation of New President.—Mr. THOMAS BRYANT then left the chair, and inducted the newly-elected President, Mr. CRIPPS LAWRENCE.

Votes of Thanks. A vote of thanks to the retiring President was proposed by Mr. MORTON, and seconded by Dr. WALL, and a similar vote to the retiring Vice-Presidents and members of Council was proposed by Surgeon-General HARRIS, and seconded by Dr. CARSON SMYTH.—Mr. EASTES regretted that Mr. Field felt himself obliged to resign the office of Treasurer to the Society, which he had held for several years; and Dr. BLENKINSOP seconded the motion.—Dr. BEALE proposed and Dr. MALCOLM seconded a vote of thanks to the Secretaries.

Conversazione.—After the business of the evening had been concluded, the Society entertained a large number of its members and their friends at a smoking concert. Mr. Hans Bronsil performed violoncello solos with his accustomed skill, and songs were charmingly sung by Messrs. William Coates and Ben Grove, Mr. Septimus Webb acting as accompanist.

HUNTERIAN SOCIETY.

WEDNESDAY, JANUARY 14TH, 1891.

STEPHEN MACKENZIE, M.D., President, in the Chair.

Hydronephrosis.—Mr. C. J. SYMONDS read a paper entitled Three Cases of Hydronephrosis and their Treatment. 1. A girl aged 17, with a tumour in the right loin, was aspirated four times within three months, nine pints in all being withdrawn. She came three years after with a very large tumour. The kidney was laid open and drained; no calculus was found, but the ureter was greatly dilated. The permanent sinus was a cause of distress, and some months later the kidney was removed. Recovery was good. 2. A housemaid had a recurring renal tumour, filling and emptying of its own accord. The kidney was incised, no calculus being found, but a dilated pelvis and the orifice of the ureter contracted. As the organ was very movable it was sutured in position, lest by falling it should kink the ureter. The kidney was drained for three months and then allowed to heal. She returned seven months later with severe recurrence. The kidney was then removed, recovery being good, though delayed by a ligature which caused pyrexia and a little pus. 3. A boy aged 9, who was run over by a carriage, suffered successively from concussion of the brain, hæmaturia, local peritonitis, left and then right pleural effusion, and thrombosis of the left external iliac vein. Five weeks after the accident he had a swelling in the left loin, which suddenly gave way with urgent and copious micturition. The same thing had occurred again at intervals ever since for the last three years. The cyst took about six weeks to fill, causing pain, *malaise*, and ill temper, and then quickly subsided, so that no tumour could be found. Aspiration had not cured it. With respect to the treatment of hydronephrosis, spontaneous evacuation cured some cases, and might be assisted by posture or manipulation. Aspiration proved curative in a few, but need not be pursued beyond three or four times. If this failed, the kidney should be incised and explored, a calculus being removed if found. If the ureter were pervious, the kidney should be fixed and drained. If the canal were contracted and could not be dilated, the kidney should be removed. The existence of a sinus did not in these cases increase the difficulty of performing nephrectomy. The abdominal method of operating offered advantages in some cases; the condition of the other kidney could be ascertained, and a calculus in the ureter could be detected and removed.—Mr. R. CLEMENT LUCAS thought the third case might be a perinephrosis, such as occurred after injury, the fluid collecting in a cyst outside. Movable kidneys, which used to be looked on as remote curiosities, were really sources of much danger. The organ might drop over the ureter, compressing it, and occluding its lumen, with sudden pain, and in this way cause gradual distension of the pelvis. He had lately removed such a kidney, distended by 24 ounces of fluid. It was very movable, dropping down to the pelvis and in other directions. Another case he had seen of great mobility had now become hydronephrotic. Calculus was also prone to occur. Movable kidney was thus a serious complaint; the organ should be stitched up and fixed. He never drained a hydronephrotic kidney, though he used to teach the practice; it left an awkward sinus, and if this closed there was danger of recurrence. All such kidneys, unless aspiration cured them, should be removed, an operation free from anxiety, and readily performed. Perinephrosis sometimes subsided after repeated tapping.—Dr. G. NEWTON PITT referred to some specimens showing how the disposition of vessels along the pelvis of the kidney and the ureter might give rise to a kink in the latter, and thus cause hydronephrosis.

Tubercular Lesions in Alcoholism.—Dr. G. NEWTON PITT read some notes on the *post-mortem* appearances in chronic alcoholism. In thirty cases in which phthisis was present, a dense, fibroid, pigmented change was almost invariably present in some portion of the lung, far more frequently than in other cases of phthisis. Grey or yellow tubercles were less common, and caseous broncho-pneumonia was quite the exception. The prevalence of these fibroid, and to a certain extent reparative, changes appeared to be associated with the taking of a large amount of alcohol. *Primâ facie* the chronic dyspepsia and irregular habits, the lack of food, and the gross improvidence and recklessness of these patients would lead one to expect that their mortality from phthisis would be high. The Registrar-General's Reports, however, showed that the mortality from phthisis of publicans and others, whose occupations exposed them to special temptations to drink, was rather below than above the average. But acute tuberculosis and pneumonia were very prone to occur in such patients, and the tuberculous nature of the disease might often be overlooked during life. It was noteworthy that about three-fourths of the cases of alcoholic neuritis, and about a fifth of those of alcoholic cirrhosis of the liver, were found after death to have tuberculous lesions also. The association of such lesions with cirrhosis was seldom insisted upon, but was of importance. Out of 110 cases of alcoholic cirrhosis, in 23 there were tuberculous lesions—phthisis most commonly—but in some acute tuberculosis or tuberculous peritonitis. Dr. Pitt's conclusions were that tuberculous lesions in the lung in alcoholic subjects generally assumed a fibroid form, and that tuberculous lesions were not infrequently associated with alcoholic neuritis and hepatic cirrhosis. Drs. F. J. SMITH, TURNER, and GILBERT, and the PRESIDENT discussed the paper, and referred to cases illustrating and confirming the conclusions arrived at.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, JANUARY 9TH, 1891.

H. E. ARMSTRONG, M.R.C.S., President, in the Chair.

An Anomalous Fever.—Dr. WHITELEGGE read a report of an epidemic of an obscure form of fever, which prevailed for about two months at Slaithwaite, in the East Riding of York. The population (about 5,600) were in prosperous circumstances, and mostly engaged in woollen and worsted work. There was no system of notification, and the first intimation of the epidemic that the medical officer of health, Dr. Walker, received was on September 22nd, when he heard that a number of the hands at some mills were ill with what was believed to be enteric fever. By September 29th over 100 were absent and 4 deaths had occurred; but the disease was not confined to the mill hands. The water supply was suspected, since it was derived from a large covered tank, and several cases of undoubted enteric fever had occurred in houses adjacent; but analysis exculpated the water, though by way of precaution that used in the mill and all drawn from a single tap was henceforth boiled. Dr. Whitelegge endeavoured to ascertain the relative incidence of the disease on the mill hands and on the general population, and on the operatives in the several departments; but the task was beset with difficulties, for, apart from the absence of notification, the *employés* resided in a number of different sanitary and registration districts and were of very migratory habits. He found, however, that 56 of the hands at the mills had "fevers," some well defined, others obscure. The actual number employed was variable, but he ascertained that the incidence of the disease was greater among persons under 18 and among females, much greater in one mill, and more in the upper floors. It was mainly in three of the ten departments, namely, the carding, the combing and drawing, and the spinning and twisting rooms that the cases occurred. There was no overcrowding, the cubic space being at least 1,000 feet per head, and the conditions of the rooms were identical except as to temperature, that of the carding room being about 85°, of the combing room 75°, and of the spinning room 70°. The incidence of the attacks was greater in the hotter rooms, and the only two deaths at the mills were of persons employed in the carding or hottest room. The dining room in the building was used by 170 persons on an average, and was very crowded, 100 took their meals in the workrooms, and 340 went home, or to various eating houses in the town. The 170 who used the dining room gave 30 cases, the 100 who took their meals in the workrooms 5 cases, and the 340 who went out 9 cases. The preponderance of the attacks among those frequenting the dining room was conspicuous, for though constituting only 28 per cent. of the hands, they contributed 68 per cent. of the cases. The only satisfactory explanation of this was in the greater facilities for infection consequent on the crowded state of the room during meals. The sanitary arrangements were not perfect, but the closets were well kept and free from smell. The wool could not have been the source of contagion, since the sorters, who handled it first, escaped entirely; nor could the food have been the cause of the illness, for all alike brought their own from their houses or the shops in the town. There were about 250 cases of fever in the district, of whom 44 were employed at the mill. Some were undoubtedly enteric fever, with rose rash, diarrhœa, etc., but a larger number rather resembled typhus, though in none of them was the rash to be seen. They were for the most part young persons or children. The incubation period was about a week; the attack set in suddenly with fever and headache. There much delirium, but no diarrhœa. It ran a short course generally of a few days or a week, but in some was prolonged to the second or third week, and in these there were pulmonary complications, though only two developed acute pneumonia. The infectious nature of the disease was evident, especially by the number of children attacked; but the houses where most cases occurred were by no means the more insanitary. Altogether the deaths numbered 18, of which only 2 belonged to the mill: but it was impossible to obtain a single *post-mortem* examination.—Mr. WYNTER BLYTH stated that the recent researches of German bacteriologists had demonstrated the existence of several distinct forms of disease hitherto included under the designation of enteric fever. The ulceration of Peyer's patches might be caused by various microbes, and was, therefore, a common condition or accident, and not pathognomonic of one specific disease. Enteric fever would thus have ere long to be subdivided into several, of which, he thought, this was one, as were other so-called anomalous forms. Meanwhile, the term "continued fever," though an expression of ignorance, should be retained for those in which the symptoms of true enteric were wanting.—The PRESIDENT said that, in his twenty years of sole charge of a fever hospital, he had found typical cases of enteric to be the exception, especially of late, and he had been in the habit of describing a large group as typho-enteric. Anomalous forms of typhus, on the other hand, were far less frequent, though intestinal hæmorrhage was occasionally met with, even in typical cases. He was often compelled to criticise the diagnoses of medical practitioners, who, for example, had described cases of typhus as measles. The fact was that, though no one familiar with typhus could have any doubt as to its diagnosis, very few medical men had had any opportunity of gaining an acquaintance with that disease. He was inclined to look on Dr. Whitelegge's cases as a mild form of typhus.—Dr. WILLOUGHBY agreed with the President, whose opinion seemed to receive support from the highly infectious character, the incubation period of not more than a week, and the short duration of the illness. From Dr. Longstaff's observations on the seasonal prevalence of fevers in London, it appeared that, though the so-called "continued fever" was generally held to imply unrecognised cases of enteric, and was absent from the returns of the hospitals, the curve described by the deaths registered in the metropolis as such was absolutely identical with that of typhus, and utterly unlike the curve of enteric fever.—Dr. WHITELEGGE, from his experience of a fever hospital, could confirm the President in every respect, but, while there had been a strong family likeness among the cases in question, the only differences having been in their duration, the entire absence of a rash made their diagnosis as typhus difficult and, to say the least, doubtful.

Outbreak of Enteric Fever.—Dr. WILLOUGHBY read notes of a localised outbreak of well-marked enteric fever in a village in Buckinghamshire, having a population of 1,800. Twenty-four cases occurred, with three deaths, all, with one exception, among a dozen families occupying two detached blocks of cottages, one in the high road and the other in a brickfield at some distance. The former obtained their water from "Hubbock's well" at the end of a blind lane off the main road, the latter from a well in the brickfield. Both were shallow wells, not more than 4 feet deep, dug in the surface sand resting on a stiff clay, and alike, from the downward approaches, received storm waters and surface washings. Hubbock's well contained 16, and the brickfield well 6 or 7 grains of chlorine in the gallon, other evidence of organic pollution being in like proportion, and the former was exposed to further contamination by percolation from cowyards. The men and boys from both rows of cottages worked in the brickfield, and the first case of enteric fever occurred in one of the cottages adjoining it, where the cesspit abutted on the wall of the house. This family furnished 5 of the 24 cases and 1 of the deaths. Direct contamination of the well from the cesspit was out of the question, but there was ocular evidence of fæcal fouling of the ground in the proximity of both wells. Dr. Willoughby came to the conclusion that the first case owed its origin to the conditions of the cesspit, and that, whether directly or indirectly, the wells were successively infected by the enteric stools; their pollution being followed in each instance by the simultaneous appearance of a batch of cases. For a time the people were persuaded to boil the water, but as soon as the alarm subsided and this precaution was neglected, a fresh outbreak occurred within three weeks. The only case in the population habitually using the deep wells in the village was that of a young man who, having assisted at the funeral of the first patient, partook of "refreshments" at the house, and developed the disease twenty days later. At the time of Dr. Willoughby's visit the cesspit in question had been abolished, and after consultation with the medical officer of health and the parochial medical officer, he advised the entire reconstruction of the well in the brickfield, the filling up of Hubbock's well, and the sinking of another in a spot pointed out as beyond the risk of any kind of pollution.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THURSDAY, JANUARY 8TH, 1891.

DAVID DRUMMOND, M.D., President, in the Chair.

Characteristic Organism of Cancer.—Dr. LIMONT demonstrated Dr. Russell's alleged characteristic organism of cancer, and expressed his belief that the bodies shown were not fungi. With this opinion, the members taking part in the discussion coincided.

Koch's Treatment and the Daily Press.—Dr. MURPHY, according to notice given, called attention to the fact that a paragraph concerning the Society's discussion on Koch's lymph had been communicated to the Newcastle daily papers, and moved that "The members of the Northumberland and Durham Medical Society deeply regret that a portion of the transactions of last meeting has been communicated to the Newcastle daily papers, and they trust that this expression of their disapproval of such proceeding will prevent its repetition." This was seconded by Dr. ANDERSON, and carried unanimously.

Recovery from Tuberculous Meningitis.—Dr. ADAMSON showed a lad who, he believed, had recovered from tuberculous meningitis. The illness began in November, 1889, with pain in the back and legs, soon followed by severe occipital headache and also convulsions; still later there was vomiting. Patient was insensible for from six to eight weeks. Before the illness there was more or less deafness for some time; during convalescence the gait was very unsteady and staggering. Since the illness the patient had suffered from a certain amount of loss of memory.—Dr. PEART had been struck by the number of cases that died at the fourteenth day. He had seen a case of recovery, the patient, however, being left deaf and idiotic.—Dr. OLIVER had seen a case of recovery in a child, aged 3 years.—Dr. GIBSON did not think there was on record an undoubted case of recovery.—Dr. ANDERSON regarded the case as one of "cerebral irritation."—The PRESIDENT said the occurrence of recovery was proved both by clinical records and *post-mortem* examinations. He had lately made a *post-mortem* examination of the body of a lad who recovered from tuberculous meningitis, and died of tubercle of the lung.

Koch's Treatment in Lupus.—Dr. LIMONT showed two boys suffering from lupus, whom Mr. Page had treated for a month by Koch's fluid. The usual reactions had followed injection, and the boys were considerably improved. Dr. Limont said scraping would have given a better result in less time and with less discomfort to the patient; the permanency of cure effected by Koch's treatment had yet to be proved.—Dr. C. L. LIGHTFOOT showed a girl whom he treated for lupus of the nose three years ago by free scraping, followed by the application of equal parts of lactic acid and kaolin; the wound healed in a week, and had remained sound ever since.

Fæcal Fistula. Dr. ANGUS showed a woman, aged 50, on whom Dr. Arnison had operated for fæcal fistula resulting from a Littre's hernia, which had become gangrenous and formed an abscess. The opening, which was in the small intestine, was closed by Lembert's sutures, and the patient made a good recovery, and now suffered no trouble of any kind.

Cholecystotomy.—Dr. MURPHY showed a man, aged 45, on whom he had performed cholecystotomy. Two months previously he had suffered from hepatic colic and vomiting without jaundice, and when seen there was an indistinct tumour in the region of the gall bladder. At the operation the gall bladder contained opalescent fluid, and a large oval gall stone was removed from the cystic duct by the lithotomy scoop. The gall bladder was stitched to the abdominal wall; a small fistula still remained, but was closing.—Dr. SQUANCE spoke on this and some similar cases.

Operation for Typhlitis.—Dr. HUME showed a man on whom he had successfully operated for relapsing typhlitis. In March, 1889, the patient fell, injuring himself in the right iliac region, and was confined to bed for six days with pain, fever, vomiting, and urinary trouble. He returned to work, and continued at it till January, 1890, suffering, however, from time to time from vomiting and diarrhœa. Early in 1890 a hard tender swelling appeared in the right iliac and lumbar regions. The operation was performed in June, 1890. An incision was made between the outer edge of the rectus and the inner side of swelling; adhesions between the omentum, small intestines, cæcum, and bladder were separated; the appendix, which was adherent to the cæcum, elongated and distended with mucus, was ligatured close to the cæcum and removed. The patient recovered rapidly. Dr. Hume pointed out that the object in operating and the mode of carrying out the operation differed in acute typhlitis and a chronic case such as this.

Specimens.—Dr. A. E. MORISON showed a Gangrenous Penis. The patient, aged 66, had been laid up for two weeks with subacute bronchitis, and had suffered from pain during micturition for a few days before the penis became black and swollen. Half an inch of penis was left. The patient had previously lost both legs from gangrene following exposure at sea. Dr. A. E. Morison showed a Pelvis removed from a woman who had died of pelvic hæmatocele. The patient was aged 25, and was still suckling her last child, aged 14 months. Three months before death she missed two menstrual periods, and when first seen she had suffered for five weeks from flooding, colicky paroxysmal pain, rectal tenesmus, and frequent micturition. A swelling in the posterior fornix pressed the uterus forwards against the pubes. Temperature 105°, pulse 160, patient not fit to be operated on. She died in a typhoid state. The specimen showed left pyosalpinx and a hæmatosalpinx the size of the fist on the right side, with a ring-like swelling passing round the rectum. Dr. Morison also showed a Rectum excised for cancer; before excising he performed inguinal colotomy. The patient had now gained two stone in weight, and the inguinal opening formed a very satisfactory anus.—Mr. MORGAN showed a Varix of the Saphena, which was attended by pain, vomiting, and fever, and somewhat resembled a femoral hernia. He tied both ends and excised, and the patient made a rapid recovery.—Mr. RUTHERFORD MORISON showed the Temperature Chart of a case of Ovariotomy. The patient was aged 70, and no rise of temperature followed the operation. He also drew attention to the fact that the patient had suffered from considerable uterine hæmorrhage.—Dr. SQUANCE showed a specimen of Malignant Disease of the Œsophagus and Stomach. The patient, a man, aged 70, was found to have one obstruction six inches, and another fifteen inches, from the teeth. The first stage of gastrostomy was performed, but the patient died suddenly thirty hours later. *Post mortem* two patches of scirrhus were found in the sites diagnosed.—Dr. HUME showed a Tibia operated on in 1883 for ununited fracture. The patient lately came to Dr. Hume, and as the leg had become useless through deformity it was amputated. A section showed the ivory pegs lying unchanged in the bone.—The PRESIDENT showed a number of specimens and drawings illustrating varieties of Cirrhosis of the Liver, and drew attention especially to an example of acute cirrhosis with jaundice, the result of alcohol.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, JANUARY 9TH, 1891.

T. CHURTON, M.D., President, in the Chair.

Early Diagnosis of Abscess in Prostate.—Mr. T. P. TEALE gave an account of some cases where he had detected the presence of small suppuration in the prostate, and described the method of incision from the perineum. Mr. N. PORRITT, who had operated on one of the cases seen by Mr. Teale, said the patient had passed pus in the urine for two years. On incision he found a small cavity filled with caseous matter. A good recovery ensued, and he thought the operation not a difficult one.—The PRESIDENT asked if an aspirator needle could not be used for exploring.—Dr. S. SMITH thought there was a possible danger of cutting a distended or baggy rectum in the operation recommended by Mr. Teale. This might be avoided by using a sinus forceps to make a way after a transverse incision of the skin, till the prostate was reached. He related a case where after rupture of the urethra there was some leakage of urine on emptying the bladder by catheter; but when the patient was taught to press firmly on the perineum with a pad, when using the catheter, the leak healed in about a week.—Dr. GORDON BLACK related a case where an elderly man suffered from symptoms of vesical and prostatic irritation, for which he had had many diagnoses and much

treatment. The urine contained grape seeds and other matter derived from the rectum, and great relief was given after a course of moderate purging by sulphur water, but nothing abnormal could be felt in the prostate.—Mr. TEALE, in reply, said he thought the use of the aspirator would be more difficult than an incision with a bistoury.

Syphilitic Myositis.—Dr. BARRS described a case of syphilitic myositis.—The PRESIDENT remarked that syphilitic growths in muscles and elsewhere were usually insular. A generalised interstitial inflammation of a muscle was the analogue, pathologically, of the now admitted diffuse interstitial hepatitis due to syphilis. He had himself published a case of this latter disease some years ago; the liver was greatly enlarged and the patient was exceedingly ill, but recovered in a fortnight under pil. hydrarg., gr. 5, every eight hours. Commonly, syphilitic disease of the liver, as of muscles, was insular. Multiple neuritis would seem to be occasionally due to syphilis, as in a case also published by him and quoted in Dr. Buzzard's "Paralysis from Peripheral Neuritis," in which a complete cure was effected in less than a month by mercurial inunction. Such a rapid cure was, he thought, not seen in neuritis due to alcohol, the only alternative and otherwise hardly sustainable theory of causation in that case.—Mr. HARTLEY thought the existence of other causes of neuritis, for example, injury, should not be forgotten, and described a case where two years after a dislocation of the elbow he had seen paralysis of the arm and fingers, with wasting coldness and numbness especially in the area of the ulnar nerve.

Operative Treatment of Trachoma.— Mr. H. BENDELACK HEWETSON excised with scissors the granulating surface in cases of excision of the lid, and after detaching for a short distance the palpebral conjunctiva, joined the edges by a number of sutures. He had operated on a good many cases with varying, but on the whole good, results.—Remarks were were made by Dr. S. SMITH and Mr. HARTLEY.

Modification of Zwanke's Pessary.—Dr. BRAITHWAITE had had a Zwanke's pessary made considerably broader in an antero-posterior direction and less wide laterally. He found it of great use in cases of prolapse in elderly women, in which the ordinary form was not successful.—Dr. HELLIER was in the habit in those cases of using in order a Hodge, a ring, and Zwanke's pessary, and, failing these, a cup and stem, and one form of the latter, which could be supported by an ordinary diaper, was of great use.

Cases.—Mr. MAYO ROBSON showed a case illustrating a new way of performing Sigmoidostomy.—Mr. W. H. BROWN showed a case of severe Symmetrical Gangrene of Both Feet.

Specimens.—Mr. MAYO ROBSON showed (1) Ruptured Fallopian Tube, successfully removed for extrauterine fœtation; (2) Hæmatosalpinx, possibly the result of old extrauterine fœtation, removed successfully.—Mr. LITTLEWOOD: Bladder showing an Enlarged Middle Lobe of Prostate.—Dr. JACOB: Sarcoma of Mesenteric Glands, infiltrating large and small intestine and kidney.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

FRIDAY, JANUARY 9TH, 1891.

Professor PURSER, M.D., President, in the Chair.

Exhibitions.—Professor CUNNINGHAM exhibited models illustrating the cerebral anatomy of men and the anthropoid apes.—Professor BIRMINGHAM showed (1) a largely-developed and ossified Hyoid Arch, in which the condition of the hyoid apparatus in the dog and some other carnivora was reproduced; (2) a specimen of persistent Left Superior Cava, in which the usual arrangement of the azygos veins was reversed.—Professor BENNETT exhibited a series of Human Fibulæ, showing the great range of variation which appeared to be common in the mode of articulation of this bone with the tibial condyle. Having noticed the fact that even the fracture of the upper part of the fibula, resulting from strain of the ankle-joint, had been unknown until demonstrated by the collection contained in the Museum of Trinity College, he showed examples of complete absence of any superior tibio-fibular joint in consequence of the failure of fibula to reach up to the tibial condyle.—Professor CUNNINGHAM alluded to the fact that in vertebrates there appeared to be a tendency to the entire disappearance of the fibula. He discussed the functions of the bone, and held that the lower end, in its relation to the ankle-joint, was of vastly greater importance in man than the upper. The mode of ossification showed this. The downward shrinking of the fibula might be regarded as a tendency towards the disappearance of the least useful part of the bone.—Professor BIRMINGHAM pointed out that in one of Professor Bennett's specimens the articulation of the head was absent, but a little way down a strong exostosis connected the bone with the tibia; this, possibly, was compensatory. In the present condition of the lower end of the bone, the upper articulation could not be well spared.—Dr. W. H. THOMPSON had observed a distinct interval between the tibia and fibula at their upper extremities within a normal capsule and synovial membrane, and considered that in many cases that was the condition present. He also had seen fibulæ with two lateral facets, both cartilage-covered, one on the superior and one on the lateral aspects of the head, and had noted many intermediate conditions between the normal and some of the more marked that Dr. Bennett had shown.—Professor BENNETT replied.

Anatomy of the Mastoid Region.—Professor BIRMINGHAM read a paper on the anatomy of the mastoid region, with guides for operating. He referred to the great variability of the course of the lateral sinus, showing that it might wander up or down to the extent of an inch some distance behind the ear. A method of mapping out the limits within which it might vary was given as follows: one line was drawn from $\frac{1}{2}$ inch above the external occipital protuberance, convex upwards to a point $1\frac{1}{2}$ inch behind and $1\frac{1}{4}$ inch above the centre of the auditory meatus; another line from $\frac{1}{2}$ inch below the protuberance to Reid's base line $1\frac{1}{2}$ inch behind the meatus. Above or below the space included between these lines there was no danger of the sinus. The sinus might always be exposed if the pin of a $\frac{3}{4}$-inch trephine were placed at a point $1\frac{1}{8}$ inch behind the centre of the bony meatus, and on the level of its upper border. In trephining for the temporo-sphenoidal lobe the pin of the trephine should be placed at a point $1\frac{1}{2}$ inch behind and $1\frac{3}{4}$ or 2 inches above the centre of the meatus. If a point $1\frac{1}{4}$ inch behind and above the meatus were selected there would be danger of wounding the sinus in 15 per cent. of the cases. The sinus was occasionally within $\frac{1}{32}$ inch of the surface of the mastoid behind the ear; sometimes it was only $\frac{3}{32}$ inch from the back of the meatus, consequently all perforations here should be made with the greatest care. The mastoid antrum could be reached in every case without wounding the sinus or entering the cranial cavity, if a $\frac{1}{4}$-inch drill were sent straight in at such a point that the anterior margin of the aperture it made was as close as possible to the bony meatus, and its upper margin not more than $\frac{1}{32}$ inch above the level of a line prolonged backwards horizontally from the upper border of the meatus. The drill should never go in more than $\frac{3}{4}$ inch, otherwise the labyrinth would occasionally be injured. The antrum would usually be reached at a depth of $\frac{3}{8}$ inch. The idea of opening both cranial cavity and antrum by one trephine hole, made above and behind the meatus, was in many cases impracticable. As a simple rule for avoiding the sinus, perforations behind the ear should be made in front of a vertical line drawn $\frac{1}{4}$ inch behind the posterior margin of the meatus. The margins of the meatus ought always to be exposed, and bearings taken from it as a fixed landmark. (The paper was illustrated by photographs shown with the lantern.)—Professor BENNETT said he had tested Professor Birmingham's method on the dead body, and had found the practical value of his rules to be amply proved.—Remarks were made by Dr. THOMPSON and Professor CUNNINGHAM; and Professor BIRMINGHAM replied.

HANDSWORTH (Staffordshire) (Population, 30,300).—*Scarlet Fever and Whooping-Cough: Low Death-rate.*—Scarlet fever and whooping-cough were very prevalent during the year 1889, and Dr. J. B. Welch attributes to their influence most of the increase which he has to record in the death-rate. The number of deaths was, however, not excessive, and, were it not for comparison with the exceedingly favourable years which preceded, the death-rate of 13.4 per 1,000 for 1889 would have been by no means a bad record. Good sanitary work seems to be in progress in this district.

REVIEWS AND NOTICES.

Outlines of the History of Medicine and of the Medical Profession. By Joh. Hermann Baas, M.D. Translated, revised, and enlarged by H. E. Handerson, M.A., M.D. New York: J. H. Vail and Co. 1889. Pp. 1173.

A German History of Medicine, presented to us in an American translation, once more draws attention to the fact that among the English-speaking races "the department of the history of medicine has remained almost a *terra incognita*." In Paris, "medical history has always enjoyed a chair of its own at the Université," as has been the case also at Vienna; and if in Germany the subject has not obtained the same distinction, it is not for want of appreciation of its value and importance, since our author declares that "it is a branch [of medical science], properly speaking, created by the Germans in the 18th century, or at all events, if this statement is not accepted, a branch which since that period has fallen more and more into the hands of the Germans, so that until recently medical history was to be called a peculiarly German department of science." In England, however, since the time of Dr. Freind, the subject has been utterly ignored and neglected; and this, as the translator points out, not from any inherent deficiency in the English race of historic capacity, but apparently from a want of appreciation of the importance of historical research in the department of medicine. John Hunter, and his successors and imitators, so replaced "authority" by "observation," that those theorists who most neglected his methods of accurate observation sheltered themselves behind his discredit of "authority," from the one service the study of previous writers afforded, namely, the exposure of their theories by the light of history; for, as our author points out, "in almost all new systems old principles exclusively, or at least chiefly, reappear.....in the hurry and work of the day, history, and especially medical history, is never, or at least never deliberately, consulted to guard against the repetition of bygone theories and fruitless efforts .....And yet history is the sublimest of all experimental science to which in medicine certainly the eyes should be always and everywhere directed. But physicians seem to be condemned to the fate of rarely discovering the golden *via media* of truth between the bye-paths of error."

What a commentary on Lawson Tait's attack upon surgical theories is the statement that "whatever in the course of ages admits of being employed in medicine to establish a theory cannot ever escape such a fate!"—what a proof that even the views of the great Birmingham surgeon himself are not original, is the following quotation from Stahl (1660 to 1734), in which we seem to hear the "Bodfi" speech in an earliest echo: "The structure of the meandering passages in the ear, of the anvil, the hammer, and the stirrup, and, what a noble discovery, the round ossicle, if they were unknown, would render the physical knowledge of the body very defective. But medicine (that is practical medicine) profits by this knowledge precisely as much as by the knowledge of the snow which fell ten years ago."

And truly the history of the medical theories of the past are enough to make us look doubtfully on those of the present. Of the Brunonian system it is said "that it destroyed more human beings than the French Revolution and the wars of Napoleon combined"—a statement our author charitably doubts on the ground "that Nature for the most part makes up for the faults of the physician;" of that of Rasori ("Stimolo and Contrastimolo") that it was no longer a "system," but systematic murder under the infatuation of a theory. "While," says our author, "we read the sympathetic epitaph 'the unhappy patient died,' or 'the unfortunate patient breathed forth his soul,' a feeling of oppression comes over every sensitive nature." Yet even of this system we find that, "in spite of the therapeutic atrocities pointed out, some of the inconceivably numerous and eminent followers of Rasori were able, by the help of statistics, to report favourable results." (To alter the saying of Madame Roland, "Oh statistics! what crimes and follies are wrought under your ægis!") Here theory, being logical, was unusually deadly, since it insisted on a method of treatment strictly consistent with its own dictates. "Fortunately such has been the case with comparatively few systems," which have been mercifully illogical or inherently foolishly harmless; but in all we see how "long centuries of experience and the venerable conclusions of great minds may at times be utterly lost to posterity, and in times too which they believe they may boast to be of the highest intelligence: and poor sick humanity must ever supply the material of investigation for such theoretical systems (constructed, we may admit, with the best of intentions), and for the therapeutics based thereon."

The two main faults of the work are a certain dryness and heaviness, essentially Teutonic, but beneath which most interesting information lies concealed well worth the unearthing, and an ultra-Teutonic spirit of partisanship, which takes away much of the claim of the writer to historic fairness, since he often ignores the claims of discoverers of other nations to due recognition in favour of those of Germans, or minimises the merits of foreigners unjustly. One or two instances of this latter fault will suffice. In a note on page 845 (for which the translator apologises), most slighting reference is made to the antirabic and other inoculations of Pasteur. On page 847 the late Mr. Joule is thus referred to: "He (Mayer) originated the mechanical theory of heat, though his priority in the matter was contested for some time by the Englishman, James Prescott Joule, a brewer of Manchester." On page 852 almost entire credit is given to the Germans, Wichmann and Hebra, for the proof of the existence of the itch mite, while Renucci is disposed of in a half contemptuous sentence. Among the helminthologists on the same page the name of Cobbold is conspicuous by its absence; and we could multiply instances of this fault.

It is, however, much pleasanter to point out some of the great merits of the book than its fewer defects. We have had occasion before in a leading article to quote it on the subject of "Military Surgeons of the Middle Ages;" and, indeed, on the whole subject of the history of military surgery its information is full and interesting. We recommend the Secretary of State for War to study it carefully: it will at least give him a precedent for the high-handed manner in which he treats the medical officers of Her Majesty's army, in the case of Feldmedicus Ellenberger, of Zimmendorf, who, as late as 1758, was flogged at the command of a colonel. We also respectfully commend the action of a dying German general to the notice and imitation of some of our own martinets; he left orders that fifty blows apiece should be given to the "tausand sackerments feldscherer" (which may be freely translated "those d——d army surgeons") in case the necropsy on his body gave results different from those which were to be expected from their diagnosis of his disease.

But the history teems with most interesting facts and amusing anecdotes, even when hidden in much dulness. Which among us knows that enemata were popular remedies in ancient Egypt, and that the sacred ibis was supposed to have been their hallowed inventor, "for it was believed that when constipated she administered them to herself by the aid of her long bill?" It appears that Bob Sawyer was not entirely original, for it is the habit of the Chinese physicians "to wear large spectacles made of window glass to convey the impression that they are *savants*." Even short, well cleansed nails are not a discovery of the present day, for in the Indian *Vedas* are directions to the physician to keep his nails clean and cut close.

Coming to more modern times, the advice of Arnold, of Villanova (*circ.* A.D. 1300) is even occasionally followed at the present day, mere copyists that we are. "If thou can'st find nothing by an examination of the urine, declare that an obstruction of the liver exists. If, again, the invalid says he suffers from headaches, thou must say they spring from the liver. Particularly, however, use the word 'obstruction,' since it is not understood, and it is of great importance that people should not understand what thou sayest." This same shrewd practitioner was the first to administer brandy, which he regarded as the elixir of life. Nor is the modern practitioner solely indebted to Master Arnold for useful advice. We have known certain physicians who guide their conduct on an aphorism current in the school of Salerno in the thirteenth century, namely, "that the physician must say to the patient that he will recover, to the relatives that he is very ill. If he dies it will then be said that the physician foresaw the re-

sult; if he recovers, his reputation will likewise be increased."

There are amusing little anecdotes and shrewd sayings scattered here and there throughout the book for the benefit of the diligent reader, to whom they come as wells in the desert. For instance, Frederick William I of Prussia, father of Frederick the Great, sent this naïve consolation to Hoffmann (the physician to whose care the king entrusted his tall grenadiers) when he had the misfortune to lose his wife: "After all it is better she should have died than you, for you will certainly do more good in the world than your wife could have done."

On one occasion J. P. Frank, of Vienna (1745-1821) saw eight physicians sitting by the side of a dying man, when he remarked, to the delight of his colleagues, "This reminds me of the grenadier of Wagram, who, when hit by eight balls, cried out, 'Sapperment! it takes eight bullets to kill a French grenadier.'"

The character given to Dr. Douglas, of Boston, America, by his brethren might be applied to more eminent physicians with little breach of charity. It was this, that "he was always positive and sometimes accurate." Dr. Fothergill spoke of the poor as "bridges to the pockets of the rich," a true aphorism often used by the late Sir J. Y. Simpson to his students, but by him altered into "the hearts of the poor are the road to the pockets of the rich." Hufeland's remark, too, was a shrewd one, that "successful practice requires only one-third science and two-thirds of *savoir faire*."

Among curious illustrations of the manners and customs of our ancestors is the law published by Isabella I. of Arragon in 1496 for the protection of married women, according to which the latter need not permit their husbands to have sexual connection with them oftener than six times a day! In the Spanish *Fuero Juzgo*, translated by Ferdinand III. in 1241, it is enacted that: "No physician may undertake to bleed a woman in the absence of her relatives; if he has done so he shall pay 10 solidi (about the value of 5 oxen!) to the relatives or to the husband, since it is not impossible that occasionally some sport may be associated with such an operation." In the same equitable code: "If a physician injures a nobleman in bleeding him he shall pay 150 solidi; if, however, the patient dies, the physician shall be delivered up at once to the nobleman's relatives to be dealt with as they think fit." What that treatment probably was is shown in a note which states that "Nicholas and Donatus, physicians to Austragilde, wife of Gontram, King of Burgundy (561-593), were so unfortunate as to lose their royal patroness by small-pox (581), and in compliance with her dying injunction were slain upon her tomb by her faithful husband."

The position of medical students cannot have been very lofty even as late as the eighteenth century, since in Vienna they used to receive from the rector *Bettelzeugnisse*—papers authorising them to beg in public for their better maintenance. In Spain, moreover, this custom survived far into the present century, where it was the habit during the vacations for students to wander about begging like the mediæval "travelling scholars."

Curious are the following notes. That wooden legs were early invented is proved by the so-called Alemannic Code (613-628), which says: "After their feet were cut off they walked with stilts." The title of Doctor was introduced at Salerno about the middle of the twelfth century, and was then first solemnly bestowed on graduation. In the work of Nicholas Præpositus (*Antidotarium*, 1140) we find the only recently disused apothecaries' weight—probably the first occasion on which it was published—the only difference in its composition being that nine, instead of eight, drachms make its ounce. Nicholas Præpositus is also stated to have been the originator of our term *quid pro quo*, this being the title of his alphabetically arranged catalogue of equivalent drugs capable of replacing each other when for any reason one or another drug was wanting. The English title "hock," as applied to all Rhenish wines, had its origin with Hoffmann, of Halle and Berlin (already mentioned as physician to the father of Frederick the Great), who wrote up "Hockheimer" as the best of all wines—an opinion which was spread in England by (among others) his devoted disciple, Brown-Langrish (ob. 1759), so that it has become in England, in shortened form, the title for all Rhenish wines.

We regret that space prevents our quoting more largely from this work, but we recommend our readers to procure it, and study it for themselves, since, in spite of its great faults, it is a work the like of which has never been written in English. Even to the general reader it possesses interest. In the Charles White, of Manchester, for instance, who is so favourably mentioned (p. 674) as the first representative of conservative surgery, the first resector of the humerus, and the originator of the reduction of dislocation of the shoulder with the heel in the axilla (a method ordinarily ascribed to the invention of Sir Astley Cooper), we recognise with pleasure that Mr. Charles White, so frequently referred to by De Quincey in the first volume of his autobiography, as being the best surgeon in the north of England, as having published a work on craniology, as so skilfully attending Mrs. Schreiber, and as possessing a museum in which were the mummy of a lady patient in a clock case, and the skeleton of the highwayman who murdered the lady on the Bristol College Green (the story of whose crime, or rather its concealment, De Quincey relates so graphically)—that Mr. Charles White whom De Quincey places before us as the high-souled, urbane, clever surgeon, deserving of all honour and praise; one of that band of provincial surgeons which has ever been a credit to English practice, whose memory and worth such histories of medicine as this keep alive everywhere except at home. Abroad men are anxious to raise up literary monuments to their professional fathers, in the hope that their sons will so honour themselves in future days; but in England our desire seems to be to forget the past, and to wipe out the memory of both ourselves and of our predecessors, as though in very deed we accepted and adopted that aphorism of the great Boerhaave, which says: "If we compare the good which a half-dozen true sons of Æsculapius have accomplished since the origin of medical art upon the earth with the evil which the immense mass of doctors of this profession have done, there can be no doubt that it would have been far better if there had never been any physicians in the world."

THE CONVOLUTIONS OF THE BRAIN. By SIR WILLIAM TURNER, M.B., LL.D., F.R.S.S. L. and E. 53 pp. Williams and Norgate. 1890.

THIS admirable and freely illustrated monograph represents the address delivered to the Anatomical Section of the Tenth International Medical Congress in Berlin, 1890.

Anyone who has attempted to follow the intricate windings of the convolutions of the human cerebrum must feel thankful to those anatomists who have devoted their energy to the study of the cerebral cortex, in order to furnish the surgeon with a descriptive topography, which may enable him to recognise the various parts with ease and precision. To this kind of work the distinguished author of the present monograph has devoted many years of patient observation. In addition, Sir WILLIAM TURNER has not left out of sight the morphological aspect of the cortex of the brain, or, as he prefers to call it, the pallium; it is to this part of the matter that the researches detailed in the address deal. To comparative anatomists the work is of great importance, as it contains a new classification of mammalia in relation to the development of the olfactory portion of the brain. This is a modification of the method introduced by Broca. For instance, the macrosmatic mammals, such as ungulata and proper carnivora, possess large organs of smell. Microsmatic mammals, such as seals, whalebone whales, apes, and men, have the olfactory apparatus relatively feebly developed; and anosmatic mammals, such as dolphins and toothed whales, have apparently no organs of smell. The descriptions are rendered lucid by admirable figures of the brain of thirty mammals, all of which, save three, are original.

In addition to the valuable information afforded in pure anatomy and morphology, the address is increased in value by some interesting remarks on the probable mode by which the convolutions are produced, and an expression of opinion that the convolutions do not exhibit a progressive and continuous development from the lower mammals up to the higher apes and man. In each order of mammals, the brain apparently follows its own plan of evolution, so that it is not uncommon to find in the same order some species with smooth brains, others with convolutions, others, again, with

convolutions much more complicated in their arrangement. The study of what Turner calls "the convoluted surface of the pallium" in mammalia does not sanction the view that there has been a continuity of evolution from ornithorhynchus to homo. It is impossible to do justice in a review to this piece of work, which is certainly not the least important of Sir W. Turner's many valuable contributions to scientific anatomy.

NOTES ON BOOKS.

Rudiments of Sanitation for Indian Schools. By PATRICK HEHIR, M.D., F.R.C.S.E., Surgeon Bengal Army; Lecturer on Hygiene in the Hyderabad Medical School; Diplomate in Sanitary Science, Cambridge.—This useful little work is published under the direction of the Educational Department of His Highness the Nizam's Government. To those who are old enough to carry their recollections back for forty years, to the time when Dr. Maclean, single-handed, established the Hyderabad Vernacular School of Medicine, the advance made in the present day will appear almost incredible. The mere fact that there should be such a thing, in that part of India, as a "Department of Education," speaks volumes. That English should now be taught in the schools of the Hyderabad country to such an extent as to make a work on hygiene intelligible to boys and girls, is, if possible, a more astonishing fact still. It is greatly to the credit of the Nizam's Government that an attempt to instruct the rising generation in the laws of health should be made in this rational way. We think Dr. Hehir's book admirably adapted for its purpose, and we wish it every success.

A Manual of Urine Testing. Edited by JOHN SCOTT, B.A. (Belfast: W. Mullan and Sons. 1890.)—This little book attempts to give in a very handy form the rules for the chemical examination of the urine and the diagnostic inferences to be drawn from it. The arrangement is very good and the methods employed are generally trustworthy. A book of this kind, if it cannot be comprehensive, should be accurate within its very narrow limits, and should contain at least the common truths, if it has not room for more. But the editor of this *Manual* can tell his readers that phosphaturia occurs in fevers, diseases of the nerve centres and of bone, but takes no account of the common phosphaturia of dyspepsia. Ammoniacal urine is said to indicate a great many things, but not bladder disease or dirty vessels. A solution of corrosive sublimate is said to be a test for albumen, although in urine it cannot be, as it gives a precipitate with urea. What does the editor mean by "a few drops of calomel?" Would it not have been well to have referred to the numerous substances which reduce copper besides glucose? The apparatus of Gerrard for the quantitative estimate of urea is very useful.

Care of the Sick at Home and in the Hospital. By Dr. TH. BILLROTH, Professor of Surgery in Vienna, etc. Translated by J. BENTALL ENDEAN. Pp. 337. (London: Sampson Low and Co.)—A handbook for nurses and for use in private families, from the renowned Professor of Surgery at Vienna, has for some years been in extensive use in Austria and Germany, and in its English dress cannot fail to be equally appreciated by those whom it most concerns in this country. The volume is ripe with the product of thought and experience, and enters into the minutest details concerning nearly all the duties likely to fall to the lot of the nurse either in the hospital or in the home circle. Apart from the technical matter which may be found in most of our own textbooks, the author gives a short description of the more important diseases and injuries, and in the form of an appendix to the book is added a chapter on the structure and functions of the human body, copies of which appear to have been distributed in another form to each probationer attending the classes at the Rudolfinum a practice which might well be followed by our nurse-training schools. The pamphlet, however, would be rendered more clear and intelligible by the addition of a few anatomical diagrams to the text. The book contains numerous illustrations of temporary or provisional splints, and no fewer than eleven pages are devoted to drawings demonstrating the various ways in which bandages may be applied, especially the handkerchief bandage, which appears to be far more in use in Germany than with us. Disinfection and disinfecting processes are very much alike everywhere; but from some remarks of the writer relative to the disposal of the excreta, infective or otherwise, we should be inclined to prefer the sanitary arrangements of most English hospitals, where there are proper appliances for the purpose. We infer from the author's admirable introduction to his book that sectarian differences have had very little influence on the nursing question, either in Austria or Germany. Deaconesses' associations and Catholic orders have their parent houses with infirmaries attached, where nurses undergo a certain amount of training, while other women, unconnected with any religious body, are trained at the female nursing schools of Germany. It is clear that no class of the community can claim a sole right to nurse the sick; and if this truism had been better recognised by the ecclesiastical authorities in France, we should have been spared the pain of witnessing the disruption which has taken place of late years in the domestic management of the Paris hospitals. We can only add that Professor Billroth's book is excellent from every point of view, and can be confidently recommended to nurses as a trustworthy guide.

A Talk with Young Mothers: a Homely Talk on how to take care of the Health before, during, and after Confinement. By FLORENCE STACKPOOLE, Diplomée of the London Obstetrical Society; Lecturer to the National Health Society, etc. (London: Published for the National Health Society by Allman and Son, Limited.)—The authoress has attempted a difficult subject—the teaching of the hygiene of pregnancy and childbed to young married women. The pamphlet is mainly intended for the poor. Amongst the needy we find a superstitious trust in various popular fancies respecting pregnancy, childbed, and nursing. The authoress combats these tendencies by explaining how far the mother can take care of herself. Very strict advice is most rightly given respecting the importance of care after abortion. The pamphlet is entirely free from the offensive sentimentality so conspicuous in many popular works on the same subject.

The Medical Student's Manual of Chemistry. By R. A. WITTHAUS, A.M., M.D. 3rd Edition. (New York: William Wood and Company. 1890.)—This work does not appear to possess any remarkable superiority which can recommend it for general use, either in the way of originality of treatment, accuracy of detail, or the publication of the results of recent research. Indeed, the general arrangement of the book is very similar to that adopted in a well known treatise on chemistry, which is much used both in this country and in America. The paragraphs on the physiological action of some chemical compounds, which are interspersed throughout the book, convey information, often meagre, which would be much better obtained (because there more completely dealt with) from works on materia medica and therapeutics. In one case the physiological action of a compound, namely, nitrous oxide, is most incorrectly stated. On page 106 the student is informed that nitrous oxide can be inhaled longer than any gas, except oxygen or air, "owing to the readiness with which N_2O is decomposed into its constituent elements." Of such decomposition occurring in the human organism there is not a tittle of evidence; indeed, physiologists are at the present time generally agreed that the gas is exhaled unchanged. The book has the advantage of being readable and in good type.

DEATHS IN THE PROFESSION ABROAD.—Amongst the members of the medical profession in foreign countries who have recently died are: Dr. S. Lucca (aged 88), the senior physician at Marienbad, where he had practised since 1841; Dr. Samuel Lewis (aged 77), founder of the well-known "Lewis Library" of the Philadelphia College of Physicians; and Dr. Szokalkski, Professor of Ophthalmology in the University of Warsaw.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

DERMATOS SOAP.

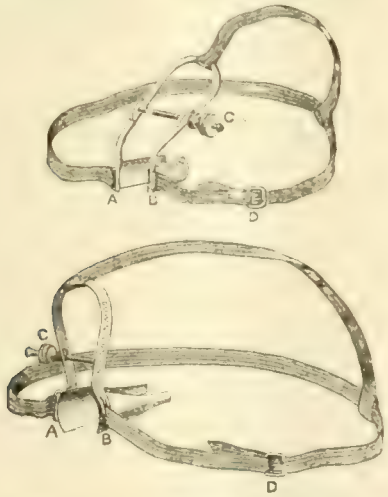
We have analysed some samples of this soap, and find that it is of good quality, superfatted, devoid of free alkali, and free from adulterations and impurities. It is claimed that it is especially useful in skin affections. Without entering into its merits in this respect, it may be stated that it can be relied upon as non-irritating, and as being a high class soap.—(E. James and Co., 61, Mark Lane, E.C.).

A NEW FORM OF ENVELOPE.

A novel and very ingenious method of closing envelopes without the use of gum has been patented by Mr. W. H. Hook. The flap of the envelope has a flanged end; when the envelope is to be closed the flanges are folded inward and pushed through a narrow slit in the under flap. The flap is then found to be firmly held, and the envelope can only be opened by tearing. The habit of moistening adhesive envelopes with the tongue is objectionable, as the gum or other glutinous substance commonly applied by manufacturers may possess injurious irritating qualities. The envelopes are manufactured by Messrs. Millington and Sons, Budge Row, E.C.

NEW SELF-RETAINING NASAL AND AURAL SPECULA.

A difficulty being often found whilst performing minor operations on the nose and ear in retaining the specula, I have devised two self-retaining specula, the details of which Messrs. Down Brothers, St. Thomas's Street, Borough, have carried out most faithfully from my drawings. To them I am also indebted for the accompanying electrotypes.



1. A nasal speculum, consisting of a Thudichum's speculum bent at an obtuse angle just above the tip of the nose, with a screw C working through the two branches of the spring to take off excessive intranasal pressure, so that the blades can be fixed at any distance comfortable to the patient; on each blade is a wire loop A and B, through which the ends of an elastic band are attached. This goes round the head horizontally, joining another band which passes from the top of the spring between the eyes over the head to the occiput, and buckles round the head; these bands retain the speculum firmly in the nose, and both hands are left free to operate.

2. An aural speculum. This is a modification of Mr. W. H. R. Stewart's speculum—namely, Kramer's blades cut off short, joined to a curved flat spring, with a screw C working through its two branches: the whole instrument is, however, much lighter, and, moreover, has a wire loop A and B attached to each blade (similar to the nasal speculum), to which are fixed ends of an elastic band. This passes horizontally round the head below the eyes, joining another band at right angles, which crosses perpendicularly over the head, and, being secured with a buckle D, keeps the speculum firmly in the ear with the same advantages that are obtained with the preceding nasal speculum.

These instruments were exhibited by Messrs. Down Brothers in the museum at the British Medical Association's meeting in Birmingham.

C. Niel Griffiths, M.R.C.S., etc., late House-Surgeon to the London Throat and Ear Hospital.

Cheltenham.

A SAFETY VACCINATOR.

This appliance has been designed by Dr. Roderick Macdonald, of Govan, who thus describes the method of using it:—

"I break off both ends of charged vaccine tube; then push tube into nozzle of syringe with left hand, having syringe between thumb and index finger of right hand, the right thumb closing valve or hole on side of syringe; press the ball of syringe; the displaced air discharges contents of tube



as wanted, and to perfection. When I want to retain some of the contents I rest the tube (distal end) perpendicularly on left hand, removing right thumb from hole on side of syringe. Of course the air rushes in, making it impossible for the lymph to ascend. I use the instrument daily in my practice and find it most practical, and I never have an unfavourable case of vaccination. I am confident it will be the vaccinator of the future in all countries."

The instrument is made by Messrs. Hilliard and Co., 65, Renfrew Street, Glasgow.

THE NEW SURGICAL "TUBULAR-EYED" NEEDLE.

Dr. Arthur Kempe (Exeter) writes: The above needle—as described by Dr. Page, of Redditch—was, at my instigation, made by Messrs. Walters and Co., London, some three years ago. I exhibited samples at a meeting of the South-Western Branch of the British Medical Association held at Newton Abbott.

Dr. H. Page (Redditch) writes: Messrs. Spencer and Sons, the manufacturers of the tubular-eyed surgical needle, having received many retail orders for the same, desire it to be stated that the needle can be had through all the usual retail houses; Messrs. Spencer and Sons are the wholesale manufacturers only.

CHIMNEY POTS.

The Manager of the Patent Chimney Pot Company (Leeds) writes: In the British Medical Journal of November 15th, 1890, our "Champion" chimney pot or ventilator is mentioned, but there is a small mistake in the article. The circle of trumpet-shaped holes is at the base of the pot when set; the neck below the trumpets is for the purpose of holding the lime which is used in securing the pot on the chimney.

CREOLIN.

The Secretary of Jeyes' Sanitary Compounds Co. (Limited) writes: With reference to your editorial note on page 1390 in the British Medical Journal of December 13th, 1890, *re* "Creolin, Antiseptic or Toxic," we think it would be interesting to you to know that in Germany a number of spurious imitations are sold under the name of "creolin," and therefore it is not surprising that Dr. Bitter finds "that the preparation of 'creolin' usually on sale appears to be unstable." In this country the word "creolin" is protected, and therefore the medical profession is supplied with a uniform preparation. We think it would be interesting to your readers to know the other side of the question.

On February 1st, Dr. Berry Hart will take up duty as medical officer for the quarter at the Edinburgh Royal Maternity and Simpson Memorial Hospital, while Dr. Freeland Barbour will act as assistant physician. At the same time George Balfour Marshall, M.B., C.M., and G. H. Alexander, M.B., C.M., will enter on duty as house-physicians.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JANUARY 24TH, 1891.

THE CLASSIFICATION OF DISEASE.

I.

THE eighteenth century, if we may include in that period the last few years of the preceding and the first thirty years of the present century, was essentially a period of systemisation and classification in all departments of knowledge. The great work of Linnæus, while itself the outcome of this direction of activity, was in a still greater measure its fostering and continuing cause.

Although Spencer's first reason for classification, namely, the facility of identification,[1] was no doubt the originator of this tendency of scientific thought at that time, still the wonderful facility with which the natural objects of the vegetable kingdom lent themselves to a system of classification which showed in its turn relations hitherto unsuspected between objects apparently unlike (relations whose further consideration led to the invention of so-called natural systems) induced the extension of the classificatory spirit into every other science.

Hence medicine did not escape, nay rather became the favourite hunting ground of the classifier and systemiser. It was, indeed, inevitable that physicians who, consciously or unconsciously, looked upon diseases as separate entities, and who, being themselves frequently naturalists of no mean order, had seen the benefits which botanists and zoologists derived from the classification of the entities of their sciences, should endeavour to obtain a like advantage from the similar treatment of those of their own, and they would have been right had they merely sought out a system of classification which would have enabled them to arrange diseases into some order for their better consideration and study. It was as necessary for them as for the naturalist to compel order out of chaos; but they were not content with this, they applied the methods which had produced such great results in another science to their own, and this not merely in principle but in detail, and even in terminology. The botanist had his classes, his orders, his genera, and his species, and the physician must have his too.

Our ancestors were not to blame for failing to perceive that the gradations of likeness and difference which made the objects of the organic world fall naturally into a system of classification, were the results of different circumstances acting on structures originally similar (it needed Darwin to discover that), and that hence the methods which proved so successful here could not be applied to objects in their origin essentially different, mere accidental and temporary productions. They were, however, to blame for not imitating their exemplar Linnæus, who had been guided by the slow and careful examination and comparison of natural phenomena to the building up of his system;[2] they, on the contrary, seized his system *en masse*, adopted it in a moment, and spent the rest of their time in striving to make their facts and observations fit it, and woe to those facts and observations which failed to do so.

The natural result of this unscientific method of procedure was the birth of numberless unsatisfactory, inconsistent, and constantly shifting systems of medical classification and nomenclature, based upon theories as unsatisfactory, but all agreeing in the adoption of the terminology of the great Swede. Every fresh philosopher could see the faults in his predecessors' system, but each attributed these to the personal mistakes of the latter, and not to the inherent vice of the original conception.

We find, for instance, Dr. J. Mason Good—the last of the "Nosologists," as Graves calls them[3]—complaining of the systems of his predecessors that "their classification was perpetually shifting from one ground of arrangement to another." Of Cullen's—while he considers it to have been the best of its day—he declares that "it was in one division derived from the temperature of the body, in a second from its anatomical structure, in a third from its chemical depravities, and in a fourth from its topography; thus offering us in each division a new principle, and one that has no common class or analogy with the rest."[4]

Nor was Dr. Mason Good alone in his objections to Cullen's system. We find John Abernethy[5] complaining that in it "we find diseases of arteries, veins, glands, tendons, joints, and bones brought together under one order and designated by the same name—*tumours*—some of which were only enlargements in natural parts, while others were entirely new productions, having no existence in the original composition of the body." But, while both these writers complain, it occurs to neither of them to escape from the trammels of the system itself, but only to amend it. While Abernethy proposes an exclusively anatomical classification of tumours, he claims for them the position of an order in the class of local diseases, and further subdivides them by their likeness to normal tissues into genera, which he further distinguishes into species. And while Good points out the inconsistency of Cullen's classification, he proposes one to the full as complicated, and withal open to exactly the same objections. It

[1] *Principles of Biology*, i, 294.

[2] Yet it is only fair to say that Linnæus himself fell into the same error, since he invented a classification of diseases which divided complaints (like plants) into numerous genera, etc. (325, we believe).

[3] *Clinical Medicine*, 1843, p. 20.

[4] *Study of Medicine*, 4th edition, 1834, vol. i, p. x. It may, perhaps, be interesting if we give an outline of Cullen's system, once of value:—

CLASS I.—*Pyrexiæ.*	CLASS II.—*Neuroses.*	CLASS III.—*Cachexiæ.*	CLASS IV.—*Locales.*
Order I: Febres— 1 Intermittent 2 Continued	Order I: Comata	Order I: Marcores	Order I: Dysæsthesiæ
	Order II: Adynamia	Order II: Intumescentia	Order II: Dyscinæsiæ
Order II: Phlegmasiæ	Order III: Spasmi	Order III: Impetigines	Order III: Apocenoses
Order III: Exanthemata	Order IV: Vesaniæ		Order IV: Epischeses
Order IV: Hæmorrhagia			Order V: Tumores
Order V: Profluvia			Order VI. Ectopiæ
			Order VII: Dialyses

[5] *Surgical Observations*, 1804, vol. i, p. 5.

is, perhaps, worth while pointing out the absurdity of his system, since it obtained wide acceptance, and yet it is a matter of wonder that no contemporary appears to have detected its failings. The reason of this doubtless was that, while all physicians clung to some kind of imitation of the Linnæan system, and since a consistent one was an utter impossibility, they were glad to accept any complete one without too close inquiry into its merits and defects.

Dr. Good called his system a physiological one. He divided it into six principal classes, according to the function their contained diseases affect. His first class consisted of diseases affecting the digestive function; his second, those affecting the respiratory; the third, those affecting the sanguineous; and so on. His classes he subdivides into orders, according to the different regions concerned in the production of each function affected by the diseases of the class. For instance, the first order of his first class includes all the diseases affecting the alimentary canal. This he further subdivides into genera, according to the various separate portions of each region affected; thus, the first genus of the first order of the first class is misdentition. His genera he divides into species by the ordinary rules of recognition of disease—that is, by the difference from each other of the various diseases forming it. Thus, of his genus misdentition he forms the species: teething, toothache, toothlessness, etc.

The only excuse for any such classification of disease lay in looking on each separate disease as a definite entity; and it was as absurd in Good to proceed from the individual entity, a disease, to the part affected, thence to the region affected, and finally to the function disordered as forming the basis of a rational system of classification, as it would be for a naturalist to proceed from the individual animal to the country it inhabited, thence to the continent in which this country was placed, and, finally, to its effect upon the vegetation of the continent on which it dwelt, and to base thereon a system of classification. Yet Dr. Good's work passed through four editions, and no one pointed out its inherent weakness, and this was the more remarkable since his system, such as it was, was not even self-consistent. For instance, the first order of his third class, which according to his scheme should have contained diseases affecting the general anatomical factors of the sanguineous function, is occupied by fevers (always the *crux* of the classifier), while the first order of the fourth class, instead of being composed of diseases affecting the nervous system, contains only the disorders of a nervous function, namely, affections of the intellect.

THE VITAL STATISTICS OF 1889.

The Registrar-General's Annual Report, which has just been issued, deals with the vital statistics of England and Wales for the year 1889. Although the earlier publication of quarterly returns somewhat discounted the interest attaching to the principal statistical facts of the year, the report now published gives detailed information relating to the causes of death and the ages at death, which are absolutely necessary to the true appreciation of the general death-rate. It is satisfactory to note that the marriage-rate showed a decided recovery from the exceptionally low rates recorded in recent years, although it was much below the average. Taking into account the low marriage-rate it is not remarkable that the birth-rate continued considerably depressed, and was only 30.5 per thousand persons living, actually the lowest recorded during the last fifty years. Since 1876, when the English birth-rate was 36.3, and at its maximum, it has continuously declined. As is invariably the case, the rural counties yielded the lowest birth-rates, and the mining and industrial counties the highest rates. The proportion of illegitimacy corresponded with that in the preceding year, which was the lowest on record.

The death-rate in 1889 was equal to 17.9 per thousand living, and very slightly exceeded the rate in 1888, which was the lowest recorded since the establishment of civil registration in 1837. It is worthy of note that the English death-rate exceeded 20 per thousand in each year previous to 1880, while in each year of the past decade it has fallen below that point. As regards the ages at death, it appears that at every period from five to forty-five years, the death-rate among both males and females was the lowest ever recorded; and although among children and among persons upwards of 45 years of age, the death-rates were not the lowest recorded, yet they were considerably below the average of recent years. In reference to this age mortality, the Registrar-General states that the diminution of mortality attributable to sanitary measures has been much more marked in the earlier stages of life than among older persons. With regard to infant mortality, an interesting analysis is given of the comparative death-rates among infants in the country generally, in two manufacturing counties, and in two groups of rural counties. From this it would appear that while the conditions of life in the manufacturing counties are highly unfavourable to infants at all periods in their first year, the destructive influences are much more intensely active after the first three months are past than in that earlier period; for while the rates in the two manufacturing counties are only about 50 per cent. higher than the rates in the rural counties for infants under 3 months of age, they are from 80 to 100 per cent. higher for infants between three and six months.

With reference to the assigned causes of death during the year, the death-rate from zymotic or specific febrile diseases, though in excess of the very low rate in the preceding year, was considerably below the average. During the whole of 1889 only 23 deaths resulted from small-pox in England and Wales—less than one-tenth of the smallest number recorded in any previous year. The Registrar-General, however, is of opinion that it is probable that most of the 83 deaths ascribed to chicken-pox were in reality modified cases of small-pox. Although the mortality from most of the zymotic diseases has in late years showed a large decrease, the mortality from measles has shown a great excess. The marked reduction in the mortality from scarlet fever was fully maintained. Diphtheria mortality, on the other hand, showed a marked further increase, and with one exception was higher than in any of the previous twenty-five years. The Registrar-General draws attention to the vagueness with which the term diphtheria is used, and its probable interchange with croup; as, while the deaths referred to diphtheria have increased, those ascribed to croup have diminished. The mortality from enteric and other fevers, whooping-cough, and diarrhœa were all below their respective averages. The special feature of the Registrar-General's report is an exhaustive analysis of cancer mortality. That there is a real increase in the frequency of cancer can hardly be doubted in the face of the constant growth of mor-

tality from that disease. It seems a startling statement that "one out of twenty-one males, and one out of twelve females, who reach the age of 35, die eventually of cancerous disease." As regards sex, the increase of cancer has been much greater among males than among females; a comparison between the periods 1851-60 and 1871-80 showing an increase among males of 62 per cent., and among females of only 43 per cent. As regards age, it appears that the increase has been greater with the advance of age, the rates under 25 years of age showing no increase whatever. An analysis of the statistics of cancer in the several parts of the body shows that, although the disease is vastly more common among women than among men, yet this excess is entirely due to the great liability of the female breast and generative organs to be thus affected; and that when these organs, and those that are especially likely to be secondarily affected from them, are excluded, the excess is invariably on the side of the male sex.

On the whole, the Registrar-General's report on the health of the people in 1889 is highly satisfactory, as evincing proof of the beneficial results of the progress of sanitary science, and affording every encouragement to medical officers of health and to all interested in sanitation to persevere in efforts which have already yielded such gratifying results.

ADMISSION OF WOMEN TO THE OXFORD MEDICAL EXAMINATIONS.

SINCE the question of the admission of women to the medical examinations of the University of Oxford was recently submitted to full consideration, it may not be amiss to examine for a moment what was suggested by the authors of the proposed statute. Had the statute become law, it would have been competent for any woman to present herself for the medical examinations, and if successful she would have obtained a certificate which would have proclaimed the fact, but which, of course, would not *per se* have entitled her to get her name placed on the *Medical Register*.

It was not for one moment to be imagined that so novel an experiment would be permitted to pass without considerable discussion and vehement opposition. It was not, indeed, difficult to pick holes in the details of the scheme, apart from the principle which it involved. In the first place, it was not proposed to exact from the women so admitted the same preliminary test which is undergone by men who present themselves for the Oxford medical diploma. Mr. Case, who may be considered as the most formidable opponent of the scheme, was not slow to take advantage of this point. "I cannot," he said, "imagine, therefore, why the University is asked to pass a statute which would award some sort of medical certificate or testamur to women whose previous education will have been a disgrace to Oxford and a degradation to the medical profession." His other main objection was, to say the least, amusing, and surely cannot have been a serious one; he is afraid lest the ladies should attend the lectures of the Regius Professor of Medicine in company with the medical students. We would not for one moment dispute Mr. Case's dictum that there is nothing in the statutes of the University to prevent it; but it is a pity that Mr. Case should not have taken some trouble, before advancing such an argument seriously against the scheme in question, to inform himself as to how many of the present medical graduates have listened to lectures from the lips of the Regius Professor. If there is one thing certain, it is that of the few lectures which have been delivered by the Regius Professor, a fair proportion have been attended by members of both sexes, and if we mistake not Mr. Case has himself formed one of the audience.

Such considerations, however, are mere details compared with the real question at issue. If Oxford thinks it right to admit women to medical examinations, and then refuses to grant them a diploma, it is possibly no one else's place to complain, though for our part we incline to the opinion that the adverse vote of Congregation has saved the University from being placed in a somewhat undignified position. The practical value of the concession, had it been granted, has been accurately gauged by Mrs. Garrett Anderson, who grasps the situation exactly when she says: "Thirty years ago women might have welcomed the Oxford proposal as being possibly a step towards getting a degree. But times have changed, and at the present day women have a wide choice of good medical qualifications, any one of which they can get on exactly and precisely the same terms as men. Why, then, should they trouble about passing examinations at Oxford which are to lead to nothing? Will they ignore what gives them all they want for the sake of something which gives them nothing? I feel sure they will not."

The opponents and the promoters of the scheme may well rest on their oars. It has been rejected by a narrow majority; had it become law, it would have proved to be neither a credit to the University nor an advantage to female aspirants for a medical degree.

SANITATION AND CHOLERA IN EGYPT.

A PERUSAL of the reports from mudirs, governors and sanitary inspectors leads to the conclusion that in some of the larger Egyptian towns, notably Tantah, an attempt has been made to improve the more glaring sanitary faults, but that on the whole very little was done which, had cholera visited Egypt, would have had any effect in mitigating its ravages.

Villages are still surrounded by putrid ponds; cemeteries, almost without exception, are veritable *foyers* of infection; the vast majority of the people live in filthy unventilated hovels; any whitewashing that was done was on the outside of huts, where instead of being salutary it is, in a cloudless climate, absolutely the reverse. Mosque and other drains still, with very few exceptions, discharge into the watercourses and ponds whence the people obtain their water supply; and the *medahs* (ablution basins) and latrines are still maintained in the same horribly insanitary condition as formerly.

Mudirs and governors have almost without exception represented the sanitary condition of their districts as perfect, and some of the sanitary inspectors, for obvious reasons, have endorsed their remarks; but mudirs and governors do not know what sanitation means; or else, like many Europeans, have the most lordly contempt for it. If it be really desired to remedy the sanitary condition of the people, power should be given to the sanitary officials, who are the experts in the matter, to enable them to improve the existing deplorable state of things. It is worse than useless to attempt superficial sanitary reform under local authorities who are ignorant of the first principles of the science.

Last year, happily, Egypt escaped the pestilence, but who will guarantee the country against its advent next year? If the cholera does come, let it not find those in authority

unprepared. Give the Sanitary Department the means of organising a force to resist its attacks. Their requirements are not enormous. A soldier is not sent into battle without weapons; at least give him the money to buy a shield. Above all, let not all real work be paralysed by the institution of commissions—by the entrusting to amateurs the duties that belong to specialists. If an expedition to the Soudan were necessary, the command would not be entrusted to a financier; neither, if a conversion of a public debt were again on the *tapis*, would a general be charged with the delicate negotiations necessary for its accomplishment. The voluminous reports of these commissions should be compared with the work they accomplished; they were styled "executive;"—wherein did they execute anything? They met round a table, talked a great deal, spoiled an immense amount of paper, smoked an inordinate number of cigarettes, and executed absolutely nothing. All they did was to create a false sense of security, and waste the time of the sanitary officials who had to attend them.

If, in an emergency, the sanitary protection of the country is to be entrusted to amateurs, then let the Sanitary Department be at once abolished, and the money now spent on it economised.

Professor Victor Horsley commenced the delivery on Tuesday, January 20th, of a course of nine lectures on the Structure and Functions of the Nervous System, at the Royal Institution, Albemarle Street, to be continued on each successive Tuesday up to March 17th. Part I, The Spinal Cord and Ganglia, forms the subject of the present series; Part II, The Cerebral Hemispheres, will be dealt with in Session 1892; and Part III, The Cerebral Hemispheres and Cerebellum, in 1893.

DEGREES FOR LONDON MEDICAL STUDENTS.

Meetings of the special committee of the Senate of the University of London were held on January 14th and 19th. We understand that in consequence of the revision and alteration which the scheme for the reorganisation of the University then underwent, its discussion by the Senate was deferred at the meeting on January 21st to a special meeting of the Senate, which will be held on Wednesday next.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We understand that the Solicitor-General has given an opinion to the Council of the College of Surgeons favourable to the holding of meetings of the Fellows of the College at suitable periods, to discuss its affairs within the building of the College. This opinion, which is in accordance with the recent application of the Fellows to the Council, but contrary to the legal opinions which the Council had previously received, is, we believe, likely to be acted upon at an early date.

MR. HUTCHINSON ON KOCH'S TREATMENT IN LUPUS.

Mr. Jonathan Hutchinson's next lecture in the Post-graduate Course will be chiefly devoted to the Results of Koch's Treatment in Lupus; cases recently under treatment by Mr. Watson Cheyne, and Drs. Heron, Colcott Fox, Gayton, and Abraham will be exhibited at 4.30 P.M. The lecture will be given on Tuesday afternoon, at 5 P.M., in the Examination Hall on the Embankment, the use of which has been specially granted by the Royal Colleges for this course. It is to be hoped that the precedent thus established will be followed in the future in the case of other courses of lectures. The theatre on the Embankment is central, most commodious, and well lighted by the electric light.

KOCH'S TREATMENT AT BRISTOL AND LIVERPOOL.

At the Bristol General Hospital there are already eighteen patients under treatment, under the care of Dr. Markham Skerritt, Dr. Harrison, and Dr. Barclay Baron. Of these, six are suffering from lupus, one is a case of serous pleurisy, and the remainder are the subjects of pulmonary and laryngeal disease. The reaction in lupus has been of the ordinary type, and the patients are doing well. The definite reaction in the case of serous pleurisy is of interest, as in accordance with the experience of the Berlin observers that reaction occurs in all instances of this condition. Reaction has followed in the phthisical patients, but it is too early to estimate the influence of the treatment on the pulmonary lesion. The injections have not in any case given rise to serious symptoms. All medical men in the neighbourhood who are interested in the study of Koch's method are invited to watch the progress of the patients, as the supply of lymph is sufficient to ensure the continuous treatment of an increasing number of cases.

Our Liverpool correspondent writes:—A supply of Koch's lymph has been received here by Dr. Leslie Roberts, who has employed it on several patients in the Royal Infirmary, by permission of the staff of the institution. They are all doing well, and in some the improvement is marked. They are cases of phthisis, and one of lupus. In the former the reaction was slightly marked, and in the latter was almost entirely local until a dose of four milligrammes was reached, when there was a sharp rise of temperature. A supply has also been received by Dr. K. Grossmann, for use in the Stanley Hospital, but there has not yet been time to complete experiments on its efficacy.

SIR GEORGE MURRAY HUMPHRY.

The Cambridge Medical Graduates Club has invited Sir George Murray Humphry to a congratulatory dinner to be held on February 24th. Sir George Paget, K.C.B., president of the club, will preside. Among the guests invited to meet Sir George Humphry, are: The Vice-Chancellor of the University of Cambridge; The Provost of King's College, Cambridge; Sir James Paget, Bart.; Sir Joseph Lister, Bart.; Sir Andrew Clark, Bart.; Sir William Bowman, Bart.; Sir Henry Acland, Bart.; and Professor G. D. Liveing.

THE TYPHOID EPIDEMIC AT FLORENCE.

In spite of the reassuring statements that have appeared in various quarters, the epidemic of typhoid fever at Florence seems to show little sign of abatement. According to the *Gazzetta degli Ospitali* of January 18th, the fever has now attacked the soldiers of the garrison. The municipal authorities have at last been induced to issue instructions that only water which has been boiled should be used for drinking purposes. That this precaution is not merely a counsel of sanitary perfection, but a most urgent necessity, is sufficiently shown by the fact that of one hundred wells which have been examined the water was contaminated in ninety. Even in the School of Military Medicine the water has been found to be polluted, and one of the students, Dr. Secondi, died of typhoid a few days ago. The authorities have now ordered all wells in houses where cases of enteric fever have occurred to be closed.

THE MEDICAL DEFENCE UNION.

The Medical Defence Union (Limited) has issued an annual report containing a satisfactory record of work done during 1890. The statistical statement shows that the Union has continued to advance steadily in numbers, in financial stability, and range of influence. The reports of the proceedings of the Council of the Union published from time to time in the British Medical Journal have kept our readers informed of the work carried on, and in a recent article we have discussed at length the defects in the In-

decent Advertisements Act pointed out by the officers of the Union. It would be impossible here to give any adequate account of the work done by the Union for its members; suffice it to say, that in many instances the mere discovery that an accused or persecuted member was prepared to withstand legal proceedings and had a complete organisation at his back was alone sufficient to nip the attempt to blackmail in the bud. Further particulars as to the work and aims of the Union can be obtained from the Honorary Secretaries, Medical Institute, Birmingham.

PROGRESS OF CREMATION IN ENGLAND.

The Cremation Society of England has now existed seventeen years. The crematorium and the buildings at Woking have been thoroughly tested, and are in every respect efficient and commodious. The appearance they present to the eye—a combination of early Gothic architecture, extremely well executed, surrounded by beautiful trees and shrubs—is, especially in summer time, picturesque and pleasing. During the past year no fewer than fifty-four bodies have been cremated. Among them may be named the late James Nasmyth, the distinguished engineer, a generous supporter of the Society; the well-known Rev. J. MacNaught, of Liverpool, and the late Baron Huddleston, on which last occasion the service, performed in the Society's chapel by the Rector of Ascot, was attended by a distinguished assembly of relatives and friends. The Society is earnestly asking for support to complete their plan of erecting cloisters for the reception of cinerary urns. For this, and also for the purpose of promoting the interest of cremation, by publishing, lecturing, etc., the Council of the Society urgently appeals to the public for donations and annual subscriptions. It may be as well to add that a payment of ten guineas constitutes the donor a member for life, and entitles him to be cremated without charge after death. Since the beginning of the present year 1891, the remains of Kinglake, the historian, and of his Grace the Duke of Bedford, K.G., have been cremated.

THE MIDWIVES REGISTRATION BILL.

The following resolution was unanimously agreed to at the annual meeting of the Devon and Exeter Medico-Chirurgical Society, held at Exeter on January 16th: "The members of the Devon and Exeter Medico-Chirurgical Society strongly disapprove of the Midwives Registration Bill (Amended)." At the meeting of the Sheffield Medico-Chirurgical Society on January 15th a discussion was held on the proposed Midwives Registration Bill. After a legal opinion on the Bill had been read, the President invited discussion, in which Mr. Arthur Jackson, Dr. Keeling, Mr. West Jones, Dr. Martin, Dr. Hargreaves, Mr. R. Favell, Mr. E. Skinner, Mr. Wrench, Mr. E. Barber, Dr. Sinclair White, Dr. S. Mathews, Dr. Stokes, Dr. Law, and Mr. E. W. Thomson took part. All the speakers, without exception, were strongly opposed to the Bill in its present form. Dr. Martin proposed, and Mr. A. Jackson seconded, the following resolution, which was carried unanimously: "That this meeting of the Sheffield Medico-Chirurgical Society is of opinion that the passage of this Bill for the Registration of Midwives through the House of Commons should be delayed, and that a Committee of the Society, consisting of the President, Secretary, Dr. Keeling, Mr. A. Jackson, and Dr. Martin be appointed to see the members of Parliament for Hallamshire and the borough of Sheffield, and to take such other steps as may be needful to secure delay."

WORKMEN AND HOSPITALS.

Evidence of the greater interest which skilled workmen in many parts of the country are taking in the local hospitals is continually being afforded by reports of the donations made to medical charities, and of the legitimate desire of workmen thus subscribing to take a share in the management of the institutions which they assist in supporting. As an instance of the one, we may quote the statement that the workmen in the employment of Messrs. J. S. Fry and Sons contributed over £445 to medical institutions in Bristol during 1890; of the other, a notice of motion to be made at the annual meeting of the Chester General Infirmary, on January 27th, by the Chester and District Working Men's Hospital Saturday Committee is an example. The resolution runs as follows:—"That, in consideration of nearly £1,300 having been collected for the Infirmary by the Chester and District Working Men's Hospital Saturday Committee during the past five years, a Governorship be granted for each £20 collected on behalf of the Infirmary, and that the Committee elect their own governors according to their subscription list each year." An annual sum of about £260 no doubt represents a very small fraction of the total annual expenditure of the Infirmary; still it is a move in the right direction, and the co-operation of the working class will be welcomed by none more warmly than by the medical officers of hospitals and infirmaries, so long as it is understood that real inability to provide the needful skilled attendance and nursing remain the only valid claim upon the gratuitous services of medical institutions of this nature.

NEW BRANCHES IN HONG KONG AND IN BURMAH.

Fresh evidence of the extraordinary vigour and vitality of the British Medical Association, and of its power to meet the needs of the profession under very varying circumstances, was afforded at the meeting of the Council on January 14th. One hundred and eighteen new members whose applications for admission had been received during the last quarter of 1890 were elected, but it is still more interesting to note that the Council was enabled to give official recognition to two new Branches, both, as it happened, in the Eastern Hemisphere. The one is the Hong Kong and China Branch, organised under the presidency of Deputy Inspector-General Nimmis, R.N.; in recognising this Branch, special thanks were tendered to Surgeon-Major F. E. Barrow, of the Army Medical Staff. The other new Branch was that recently organised in Burmah, mainly through the exertions of Deputy Surgeon-General Sibthorpe, as the Council of the Association acknowledged in the formal resolution recognising the Branch. It is interesting, and to those entrusted with the conduct of the British Medical Journal extremely gratifying, to note the practical evidence which the officers of the medical services of the navy and of the army have given in recent years of appreciation of the services which the Association is able to render to British medicine in distant stations. Four of the newest Branches of the Association—the Malta and Mediterranean, the Nova Scotia, the Hong Kong, and the Burmah, owe their inception and organisation to officers of one or other of the great medical services.

THE AMERICAN CLIMATE AND THE JEWS.

Under the direction of Dr. John S. Billings, a special inquiry was made during the recent census into the vital statistics of the Jews in the United States; special schedules were sent out to the heads of 15,000 Jewish families, and returns were received from 10,618 families, comprising 60,630 persons. All these families had resided at least five years in the United States, and it was hoped in this way to obtain a mass of statistics showing the effect of any special influences peculiar to the climatic or social circumstances of the United States. In a *Census Bulletin* (No. 19) just issued Dr. Billings reports the results, which are illustrated by a series of elaborate statistical tables. It would appear that the Jews in the United States preserve many of the peculiarities which have been noted with regard to their vital statistics in Europe. As in Europe, their marriage-rate, birth-rate, and death-rate are all lower than their neighbours'; their expectation of life is better at all ages. It is curious to read that the relative loss of the Jews from diphtheria, diarrhœal diseases, diseases of the nervous system (especially of the spinal cord), diseases

of the circulatory and urinary systems, of the bones and joints, and of the skin has been greater, and from tuberculous diseases (including scrofula), less than their neighbours'; their death-rate from cancer would appear to be about the same. But perhaps the most inexplicable fact, if fact it be, is that the birth-rate appears to be diminishing, owing, partly at least, to a diminished fertility in women born in the United States—"those mothers who were born in the United States only averaged 3.56 children each, as against 5.24 for those born in Germany, 5.63 for those born in Russia and Poland, 5.27 for those born in Hungary, and 5.44 for those born in Bohemia." Further, it appears that among males "the general death-rate is greater among those whose mothers were born in the United States, and least among those whose mothers were natives of Russia and Poland." Dr. Billings, however, points out that the death-rate of males during the best years for manual work (15 to 45) is less among those born of parents born in the United States. It would be premature to speculate as to the causes of these somewhat disquieting facts, for we are promised statistics as to immigrants of other nationalities, but they are not at variance with some well ascertained facts, as, for instance, the high death-rate of many American cities. They, however, suggest the reflection whether the advantages of somewhat higher wages, and the possession of a marketable vote, may not be purchased too dearly at the cost of municipal disregard of elementary sanitation, and the vagaries of the McKinley tariff.

MEDICAL PROVIDENCE AND MUTUAL SELF-HELP.

THE reports laid before the last meeting of the Council of the Medical Sickness and Life Assurance Society included the balance-sheet and accounts for 1890, and were of a singularly satisfactory character. The written testimony of many members to the invaluable aid which their connection with the Society had afforded during trying times of total disablement from practice, owing to sudden accident, or illness, sometimes of prolonged duration, was of a peculiarly striking character, some of the cases involving incidents of a very touching character. One gentleman, to whom a sudden and considerable accession of independent fortune has made the provision for sickness a matter of indifference, wrote to testify to the comfort and security which his connection with the fund had afforded him prior to the happy circumstance. The remarkable saving in the authorised and usual costs of administration of such funds again contributed a considerable amount to the reserves, and a part of this reserve was applied to the payment of the market premium on a 4 per cent. stock purchased for investment, so that it stands in the books at par. The continued success and growing usefulness of this now great and important Society, the efficiency and order of its administration, the remarkable rapidity with which it has attained a maximum of financial stability, the unprecedented economy of its administration without any sacrifice of the greatest care and efficiency, are subjects of congratulation, not only to the presiding officers, but to the whole profession for whose benefit it was founded and is carried on. Nor can it fail to be satisfactory that a wholly professional society, carried on with the highest and best skilled technical advice and under official supervision, has thus been able to afford so excellent a model of efficiency, economy, and success in the sphere of providence. A full report of the proceedings of the meeting will be found at page 197.

COMPULSORY LATIN.

To the controversy as to the continuance of Greek as a compulsory subject at the universities, raised by Mr. Welldon's paper at the Head Masters' Conference, Professor J. Stuart Blackie has contributed a remarkable letter, published by the *Times* on January 21st—remarkable in itself, and still more remarkable as coming from one whose great reputation was made as a teacher of Greek. As to the necessity for learning Greek in order to obtain a reasonable standard of culture, Professor Blackie employs a most pungent argument. "The Greeks," he writes, "learned no language but their mother tongue, and were nothing the less the wisest people in the ancient world and the teachers of wisdom to all generations." But he goes a good deal further than the head masters of Harrow and of Rugby; he calls in question the supreme value of Latin as an element in education. Two or three centuries ago Latin was the key to storehouses of knowledge not otherwise accessible; but "it is not so now. The most rich and various storehouses of all sorts of knowledge, both speculative and practical, are open to a modern British man without any key but his mother tongue; and an Englishman or a Scot, in the latter end of this nineteenth century, 300 years after Shakespeare, has no more need of going to dead languages for the sake of the culture that belongs to a well-educated gentleman than a Newcastle man has to send to the end of the world for coals which he has at his own door. . . . . What was once an anomalous necessity has now become an absurd anachronism and a scholastic tradition." Professor Blackie is for requiring from the candidate for an ordinary pass degrees in Arts—as to Medicine he appears to reserve his opinion—a familiar knowledge of some one foreign tongue, ancient or modern, for he writes: "Even on the supposition that linguistic training is the very best possible for a youth of good promise in this nineteenth century, it is quite certain that German is as good for this purpose as either Latin or Greek, with this immense advantage—that the language of Goethe and Bismarck, if once learned, will likely be used, while, in the case of Greek and Latin, it seems an undeniable fact that nineteen out of twenty British youths who have gone through the traditional routine of a classical education forget easily in three months all that they have painfully acquired in as many years." Dr. Wade, in his Presidential address to the Association at Birmingham, was thought by many to have been over-bold when he maintained that the question whether Latin should be retained as a compulsory subject in the curriculum of medical students was one which might be debated; it was said that his action would tend to hasten the fulfilment of the prophecy that within a few generations medicine would cease to be a liberal profession. But he found a powerful ally in Professor Huxley, and now it would seem that Professor Blackie is prepared to back Professor Huxley; and if these two representative men are not men of culture, some new definition of that much-abused phrase must be devised.

DIPHTHERIA AND TYPHOID FEVER AT ST. BARTHOLOMEW'S HOSPITAL.

A STATEMENT has appeared in a contemporary which would seem to imply that the sanitary conditions of St. Bartholomew's Hospital are not what they ought to be. "Diphtheria and typhoid fever have been raging," it is asserted, "for two months." Matters, however, are by no means so serious as such statements would imply, nor is there, we are informed, any foundation for the statement that a ward where the nurses sleep was ever used for cases of diphtheria and scarlet fever. The ward in question is situated in the same block of buildings as that in which the diphtheria patients were placed, but it has never been used for such cases. It was prepared for their use by special cleansing and painting, under the supervision of the hospital architect, before the nurses were placed there. It has been discontinued as a sleeping place for the nurses during the past eight weeks, and can, therefore, have but little to do with any case of diphtheria which has occurred within that time. The facts of the case, we are informed, are as follows:—During the year 1890, 140 cases of diphtheria were admitted to the hospital, and during the same period 26 nurses and ward maids have suffered from diphtheria or diphtheritic sore throat; all of these have recovered excepting four, who are now under treatment, and all of whom are

practically convalescent. Nineteen, at least, of these nurses and wardmaids, as well as the matron, who has had a slight attack, are known to have been in personal attendance on diphtheria patients, whilst 2 acquired the disease within four days of commencing work within the hospital walls. As to the outbreak of typhoid fever 97 cases of this disease were admitted during the year 1890, and 4 nurses acquired typhoid, one of whom has unfortunately died, the only death, be it remarked, which has occurred among the nursing staff during the past three years. It would appear that steps have been taken by the Treasurer and Almoners to mitigate the spread of the disease. Immediately following the removal of the nurses from their old sleeping quarters two months ago, the Treasurer's house was ordered to be got ready for their accommodation, the hospital architect was instructed to go fully into the sanitary arrangements of the hospital, and though he could find nothing defective, was ordered to substitute the most modern sanitary appliances in place of any that might be considered to be antiquated. The patients in the diphtheria ward were reduced from 16 to 8, and instructions were issued that none but the urgent cases should be admitted. Extra diet, including port wine, was ordered for the nurses, and an increase in the night-nursing staff was sanctioned.

SCOTLAND.

Not a few medical men practising in Edinburgh have had to give in to weather and work; in fact, three are at the present moment laid aside with pneumonia, and three with enteric fever. During the past fourteen days there has been an unusually large number of cases of pneumonia.

SCOTTISH UNIVERSITIES COMMISSION.

The forty-third meeting of the Scottish Universities Commission was held in Edinburgh on January 19th, when evidence relating to the University of St. Andrews was heard from Professors McIntosh and Bell Pettigrew.

BERBERINE.

At a meeting of the Royal Society of Edinburgh held on January 19th, Professor W. H. Perkin read a paper on "Berberine," an alkaloid extracted from berberis vulgaris, which alkaloid showed close relations to hydrastine, narcotine, and papaverine. He stated further that the oxidation products of berberine gave rise to a variety of new compounds.

PROPOSED EXTENSION OF THE EDINBURGH ROYAL INFIRMARY.

An adjourned meeting of the contributors to the Edinburgh Royal Infirmary was held on Monday, January 19th. It was shown that the total number of patients treated during the year was 8,695, as against 8,606 in the previous year; while there was a daily average of over sixty children under treatment during the year. The daily average of outdoor patients was 240, against 220 of the previous year. The ordinary income for the year was £31,552 6s. 9d., while the ordinary expenditure was £37,945 15s., giving an excess of expenditure over income of £6,393 8s. 3d., which falls to be met from legacies and donations. The expense of maintenance per bed occupied was £21 1s. 9¼d., an increased of nearly £1 over last year. This increase was shown to be due to medical and surgical appliances. It was admitted that the opportunities for clinical instruction is "hardly sufficient for the number of students." To this there might fairly enough be added, "nor hardly equivalent to the amount of fees which these students pay, nor to the vast importance of the Edinburgh Medical School." Substantial additions to the infirmary buildings were urged; and one speaker suggested that the managers might secure the neighbouring site of the Royal Hospital for Sick Children, which it was believed would soon be available for purchase.

THE SCOTTISH BOARD OF SUPERVISION AND THE PUBLIC HEALTH DUTIES OF SCOTCH COUNTY COUNCILS.

The Board of Supervision has issued a long circular to Scotch County Councils, with special reference to the appointment of medical officers and sanitary inspectors under the Local Government (Scotland) Act, 1889. The circular, to a certain extent, bears the *imprimatur* of the Secretary for Scotland, and it must be granted that there was urgent need for some such guidance from those who are primarily responsible for the proper adminstration of this exceedingly good piece of legislation—urgent need, inasmuch as some County Councils have already shown that, guided by paltry notions of false economy, they were prepared to make, and in some cases had already made, appointments which tended to bring the administration of the Act into ridicule. Already in these columns reference has been made to some such appointments. The circular now issued must meet with the unanimous approval of the medical profession in so far as it relates to the public health officers and sanitary inspectors, their status and functions under the Act. The question as to whether the Board of Supervision have the power to direct County Councils in the matter need not here be discussed. The Board undoubtedly gives the intentions which the framers of the Act entertained, intentions which some County Councils have failed to grasp. The more important paragraphs of this circular are these: "It was the obvious intention of the framers of the Act that the persons to be appointed to these important and responsible posts should be of high standing in their respective professions. Scientific attainment and considerable practical experience are among the qualifications required by the Act; and the services of persons so qualified cannot be obtained unless adequate salaries are attached to the offices." "The Secretary for Scotland and the Board of Supervision are further of opinion that the County Councils should select persons for these offices who are able to devote their whole time to the discharge of their duties under the Public Health and Local Government Acts." "It is of the utmost importance that the chief medical officer of the district, to whom notifications under the Infectious Diseases Act must be sent, and who grants the certificates in respect of which proceedings under the Public Health Act are taken, should be entirely independent of private practice and local connection." "The Board have now to intimate that they cannot recommend a scheme by which the chief constable is appointed the sanitary inspector for the county, or by which members of the police force are appointed sanitary inspectors under the Public Health Act.

GLASGOW EYE INFIRMARY.

Changes of considerable importance have recently occurred in the staff of this institution. Some time ago Dr. S. C. Renton resigned his surgeoncy, and quite recently he has been followed by Drs. Knox and Henry E. Clark. It has been for some time rumoured that there was a considerable amount of friction in the relations between certain members of the surgical staff. One cause of disagreement has recently been removed by the decision of the directors that in future all the surgeons shall be entitled to teach, and students will be at liberty to take the course of any surgeon they please. Hitherto the privilege of teaching has been rigidly reserved to the senior surgeon. The new arrangement is a wise one, if very late in being adopted: and it is a great pity that an institution should lose the able and experienced services of such men as Drs. Renton, Knox, and Clark before the necessity of such a rearrangement as this becomes obvious to the directors.

KOCH'S LYMPH IN ABERDEEN.

Professor Smith-Shand and Dr. Blaikie Smith have each received from Berlin a small bottle of Dr. Koch's antituberculous fluid, and it is intimated that the remedy will be applied to suitable patients at a clinical demonstration in the Royal Infirmary on Thursday morning.

HOSPITAL SUNDAY AT ABERDEEN.

The annual collection for the funds of the Royal Infirmary was taken in all the churches in Aberdeen on Sunday, January 11th. The weather was stormy, and consequently the attendance at the churches was not so large as usual. On this account the offerings suffered to some extent, and in several cases the collections have yet to be completed. It may be stated, however, that so far as can be ascertained the amounts collected in most instances are larger than those subscribed last year. And it is expected that when the gross amount is reached, the Directors of the infirmary will have reason to be gratified at the response given to the appeal for increased pecuniary support. The returns which have been obtained show that a sum of nearly £740 was collected as compared with £627 2s. 8d. at the corresponding date last year.

GIFFORD LECTURES, ABERDEEN.

The course of lectures on Natural Religion, under the Gifford bequest, by Dr. E. B. Tylor, F.R.S., which has been so successful, was completed on Monday. Dr. Tylor, in conclusion, expressed the opinion that it appeared to be worth while to try whether some foundation for the higher and later superstructure of philosophy might not be found in the observances and thoughts and beliefs of people who, though their ideas may have been crude and though their knowledge was small, yet lived long ago, and were precursors in the great course of development which was now recognised as the stream along which human events, intellectual or material, had to be traced. Dr. Stewart, in proposing a vote of thanks, referred to Dr. Tylor's mastery of his subject, to his being evidently a truth seeker and a truth lover, to his candour and openness of mind, and to his readiness to communicate his knowledge. The President of the Students' Representative Council moved a vote of thanks to the Senatus for having chosen anthropology as the subject of lectures, and for having elected Dr. Tylor as its exponent.

IRELAND.

DINNER BY THE PRESIDENT OF THE COLLEGE OF PHYSICIANS.

Dr. J. Magee Finny, President of the Royal College of Physicians, gave a dinner on Monday, January 12th, to His Excellency the Lord Lieutenant and a very large and distinguished company. Amongst those present were Lord Wolseley, the Lord Chancellor, the Lord Chief Justice, Mr. Justice Monroe, the Attorney-General, M.P.; Sir G. H. Porter, Bart.; Sir John Banks, K.C.B.; Sir West Ridgeway, K.C.B.; Dr. Gordon, President of the Royal Academy of Medicine; Mr. Croly, President of the College of Surgeons; and Sir William Kaye. The toasts were few in number, and His Excellency, in response to that of his health, made a statement as to the work which the Government had undertaken for the relief of distress in Ireland. He concluded by proposing the health of Dr. Finny, who replied. Some excellent glee singing was a feature of the proceedings, which were altogether brilliant.

IRISH POOR-LAW RELIEF RETURNS.

The Local Government Board have issued a statement, showing the receipts and expenditure of the various Unions, and the number of persons who received workhouse and outdoor relief throughout the country during the year ended September 29th, 1890. The total number of persons who received relief in 1889 was 491,132, and last year 448,011. In the former year the average daily number on outdoor relief was 62,330, while in 1890 it was 61,984, or a decrease of 346. The workhouse inmates in 1889 numbered 369,570, and in 1890, 332,407, or a decrease of 37,163. The expenditure under the Labourers Acts in 1889 was £186,990, and for last year £164,787, being a decrease of £22,203. About 598,000 persons received assistance under the Medical Charities Act. These figures are approximately correct, and will appear in the forthcoming annual report thoroughly revised.

IRISH MEDICAL ASSOCIATION.

At the meeting for the election of new officers, under the revised constitution of the Irish Medical Association, the following were elected:—*President:* Dr. G. I. Mackesy, Waterford. *Vice-Presidents:* Leinster—Dr. Macdonnell, Dundalk; Ulster—Dr. Duncan, Fintona; Munster—Dr. Gelston, Limerick; Connaught—Dr. Crean, Ballyhaunis. *General Council:* Dr. St. G. Ashe, Dublin; Dr. A. Benson, Dublin; Dr. R. Browne, Dublin; Sir Charles Cameron, Dublin; Dr. F. Carre, Letterkenny; Dr. Chapman, Dublin; Dr. Chaplin, Kildare; Dr. A. Croly, Dublin; Dr. Davys, Swords; Dr. Delahoyde, Dublin; Dr. J. K. Denham, Dublin; Dr. Franks, Dublin; Dr. S. Gordon, Dublin; Dr. E. Hamilton, Dublin; Dr. R. A. Hayes, Dublin; Dr. R. Hemphill, Clonmel; Dr. Hepburn, Dublin; Dr. A. H. Jacob, Dublin; Dr. J. B. Kelly, Drogheda; Dr. Kinkead, Galway; Dr. P. J. Macnamara, Kilmallock; Dr. F. V. McDowel, Baltinglass; Dr. Meldon, Dublin; Dr. Minchin, Dublin; Dr. Oulton, Dublin; Dr. Purcell, Dublin; Dr. P. C. Smyly, Dublin; Dr. W. T. Stoker, Dublin; Sir W. Stokes, Dublin; Mr. W. Thomson, Dublin; Mr. W. Wheeler, Dublin; Dr. J. Usher, Dublin. *County Councillors:* Antrim, Dr. J. G. Jefferson; Armagh, Dr. Gray; Cavan, Dr. Caldwell; Cork, Dr. W. J. Cummins; Donegal, Dr. H. T. Warnock; Down, Dr. T. H. Brownrigg; Dublin, Dr. R. F. Maguire; Fermanagh, Dr. Fitzgerald; Galway, Dr. R. Fletcher; Kerry, Dr. Falvey; Leitrim, Dr. R. Bradshaw; Londonderry, Dr. T. Gilmore; Meath, Dr. J. Ringwood; Queen's County, Dr. Tabuteau; Waterford, Dr. T. Cutler; Westmeath, Dr. J. Dillon Kelly; Wexford, Dr. G. E. T. Greene; Wicklow, Dr. A. S. Bleakley.

PARLIAMENTARY BILLS COMMITTEE.

A meeting of the Parliamentary Bills Committee of the British Medical Association was held on January 13th at the offices of the Association, 429, Strand. Present: Dr. Aveling, Dr. Wickham Barnes, Dr. Bridgwater (Harrow), Mr. J. W. Browne, Mr. H. T. Butlin, Dr. Cameron (Huddersfield), Dr. H. Radcliffe Crocker, Dr. Walter Dickson, Mr. Eastes, Sir Walter Foster (Birmingham), Mr. Galton, Mr. Hemming (Kimbolton), Dr. Withers Moore, Dr. Needham (Gloucester), Mr. G. C. Parkinson, Dr. Phillips (Reading), Mr. Rivington, Mr. Sibley, Mr. Spanton (Hanley), Dr. Thomson (Bournemouth), Mr. Wallace, and Mr. Ernest Hart in the chair.

The minutes of the previous meeting, which had been printed and circulated, were approved.

The General Secretary announced that letters of apology for non-attendance had been received from Dr. Agar (Henley-in-Arden), Dr. Wm. Carter (Liverpool), Dr. Harrison (Clifton), Dr. Hugh Ker (Halesowen), Mr. R. H. Nicholson (Hull), Dr. Philipson (Newcastle), Mr. Prankerd (Bath), Dr. Urquhart (Perth).

The Mortmain Act.

The Chairman reported that, in accordance with a resolution passed at the previous meeting, the memorandum by Sir John Simon and the one by himself had been printed in the British Medical Journal of November 1st, 1890, pp. 1027-1031. Copies of these memoranda had been forwarded to the highest legal authorities, and he had received replies from, among others, Lord Herschell, Sir Horace Davey, and Sir Edward Clarke, which showed the views they took upon the subject. They had had a great number of letters from the secretaries

and managers of hospitals expressing the deepest interest and the most earnest desire that in some way the suggestions in the memoranda for diminishing the injury to hospitals should be carried out. But, of course, it was not sufficient to have their own strong wish and the wish of the managers of hospitals unless it proved practicable to the legal authorities. Lord Herschell, to whom he had written, as being the late Lord Chancellor, wrote:

16, Grosvenor Gardens, S.W., December 17th, 1890.

DEAR MR. HART,—I quite agree with the objections which are taken to the present mortmain law in the memo. you have sent me. If provision were made for the sale of lands devised, within a limited time, I should see no objection to allowing devises for charitable purposes.—Yours truly, HERSCHELL.

Sir Horace Davey replied as follows:

House of Commons, December 1st, 1890.

DEAR MR. HART,—I must apologise for not having answered your letter enclosing pamphlet on the Mortmain Acts sooner. It was accidentally mislaid amongst some other letters and overlooked.

My own opinion on the subject, founded on long practical experience with the working of the law, is: (1) That the distinction between real and personal estate as regards charitable gifts is artificial and not worth maintaining. (2) That, at any rate, the doctrine of "impure personalty" or "personalty savouring of realty" is founded on no sound principle, and is capricious and arbitrary in practice. (3) That the exemption of certain favoured hospitals from the operation of the Acts is indefensible. If the law against giving gifts to charities is to be maintained as founded on sound policy, it ought to be general in its application. If, on the other hand, certain hospitals can be safely exempted, I cannot see why the rule should apply to any.

When the Acts were recently consolidated I was not in the House of Commons, and had no opportunity of expressing my views. I do not think you will get people to agree to abolish the law against giving land to charity, but I think they might be disposed to abolish the "impure personalty" doctrine. It is fair to say that the tendency of the Courts at present is to restrict the doctrine to the narrowest limits.—I am, dear Mr. Hart, yours faithfully, HORACE DAVEY.

Ernest Hart, Esq.

Sir Edward Clarke writes:

Royal Courts of Justice, November 12th, 1890.

DEAR MR. HART,—I have read your little pamphlet, and am in substantial agreement with it. I must not make any pledge as to my action in the House of Commons because of my official position.—Very faithfully yours, EDWARD CLARKE.

Ernest Hart, Esq.

The Chairman pointed out that practically the letters of Lord Herschell and Sir Horace Davey ran together. Sir Horace Davey's way of getting over the difficulty was, not to declare that if land was devised to hospitals they should be cut off altogether from receiving the legacy, but that in course of time the land should be sold, and the proceeds handed over to the hospital authorities.

A resolution, proposed by Dr. CAMERON and seconded by Mr. SIBLEY, was passed, authorising the Chairman to have a Bill drafted on the lines of the memoranda, and to consult Lord Herschell, Sir Horace Davey, Lord Selborne, and any other legal authorities as might be thought advisable, as to the best means of introducing a Bill for the purpose in Parliament.

The opinion was expressed that such a measure would be a great public boon.

RANK, ETC., OF ARMY MEDICAL OFFICERS.

The CHAIRMAN said they were not in a position to report more than that the matter was in a very active stage. Mr. Stanhope was pledged to give a final decision as to the recommendations of the Camperdown Commission in the course of this month, and certain private interviews had taken place recently on the subject, which were of great promise, but of which he did not feel at liberty to speak publicly. Personally, he thought that their labours were about to reach the period of fruition, and he took a hopeful view of the position.

THE ROYAL COLLEGE OF SURGEONS BILL.

Mr. H. T. BUTLIN reported that Mr. Lawson Tait had, some time since, during the Chairman's absence, sent a letter to the General Secretary (Mr. Fowke) suggesting that the Parliamentary Bills Committee be called together, as the College of Surgeons Bill was an urgent matter, and hinting in very plain terms indeed that the Association should make itself responsible for a great deal of the sum which would be required to pass a private Bill through Parliament. Neither Dr. Withers Moore nor himself saw reason at that time to call the Committee together.

Dr. WITHERS MOORE said that they had no power to involve the Association in any expense with regard to the Bill, and he had written to the Secretary of the Royal College of Surgeons to say he had no *locus standi* in the matter.

The CHAIRMAN said that communications, he believed, had been recently entered into with some members of Parliament who would introduce it into the House of Commons in proper shape as a public Bill.

The following resolution, moved by Mr. HEMMING and seconded by Dr. CAMERON, was carried: "That if the Bill to be introduced into the House of Commons be of the same form and character as the Bill which was approved by the Committee to be introduced into the House of Lords, this Committee will, in accordance with the instruction of 1889, take means to assist its progress in the House."

MEDICAL OFFICERS OF HEALTH AND PRIVATE PRACTICE.

The CHAIRMAN reported that copies of the resolution on this matter passed at the previous meeting had been duly forwarded to the health authorities in Scotland, but only three replies had been received. The Clerk to the County Council of Sutherland wrote: "The medical officer for this county has been appointed on the lines suggested in your resolution." The Clerk for the County Council of Dumfriesshire said: "My Council have already resolved that it be a condition of the appointment of medical officer of the county, that he do not hold any other appointment or engage in private practice or employment." The County Clerk for the County Council of Dingwall, writes: "I may inform you that the County Council have already appointed Dr. William Bruce, of this town to the office, and debarred him from private visiting practice, but allowed him to engage in consulting practice."

LUNACY ACTS.

The CHAIRMAN said there had been a little misunderstanding as to the convener of the Subcommittee appointed at the previous meeting, and it had not yet met. It was proposed by Dr. NEEDHAM and agreed to, that Dr. Mickle be appointed to act as Honorary Secretary and Convener.

THE MIDWIVES REGISTRATION BILL.

The CHAIRMAN said he had endeavoured to obtain all the information in his power. He had sent a copy of the Bill to every member of the Committee, with a request that he would bring it under the notice of his Branch and have it discussed: and at a later date he wrote a further letter to the representatives of the Branches, requesting them to communicate the resolutions. Those resolutions had been printed and were before them, and had for the most part been published in the BRITISH MEDICAL JOURNAL. Most of the Branches, so far as he saw, were in favour of the Bill in principle, but suggested certain amendments in the Bill. He invited discussion.

Mr. HEMMING said, with regard to the South Midland Branch, that it had been found impossible to get a meeting together of their widely distributed Branch, but he believed the opinion of the Branch to be that of the Cambridgeshire and Huntingdonshire Branch, "that sufficient provision is not made in the proposed Bill for the proper education of midwives, or sufficient security for the competence of those midwives now in practice." The general feeling of the South Midland Branch was, he thought, not in favour of the Bill.

Dr. AVELING said he thought they might take it for granted that the profession as a whole, with few exceptions, were in favour of improving the education and at the same time limiting the sphere of action and the malpractices of midwives. The question really on which there seemed contention was as to the method in which legislation for the purposes should be carried out; and he thought that brought them to a point which required the greatest attention. That part which had been referred to most by opponents was that which dealt with the *bonâ-fide* midwife; and he (Dr. Aveling) quite agreed with those who thought that that clause required amendment. He thought a more stringent explanation of what a *bonâ-fide* midwife meant should be made in the amendments to the Bill. The majority of the objections to the Bill were for the most part so trivial and had so little foundation that it would not be right for him to take up the time of the Committee in considering them. At the bottom of all objections was a belief with certain practitioners that it would be injurious to them from a pecuniary point of view, which was

a pure assumption, and probably exactly opposed to the facts. The number of midwives after the passing of the Act would certainly decrease. They knew that the number of women who returned themselves in the census as midwives did not amount to more than 3,000. These, he imagined, would be the women who would be registered *bonâ-fide* midwives. There was an immense number of women, however, acting as midwives who attended any labour, but they did not call themselves midwives, and they would not register themselves as midwives; they were what was called in the country "handy women." They were not midwives, and would not apply to be registered, especially if the definition is made more certain. It would not injure the medical man, because he would be sent for much more frequently. It was the ignorant midwife, who waited for Nature to complete the natural labour, not knowing the difficulties, and waiting too long before sending for the medical man. The intelligent midwife would send for the doctor in difficult cases. Midwives, also, would be a great advantage to him in relieving him of unremunerative practice, in being able to watch a labour, and so save the doctor time in that way, and prevent his being sent for too soon. Therefore he thought the fear of actual injury to the profession was without any foundation. The next difficulty was the granting of certificates to existing midwives; that he thought was a question that required attention, and the clause required to be altered. Their opponents, with regard to the question of education, proposed that it should be voluntary, while he contended it should be compulsory. The voluntary system of education had been carried on for centuries, and had been found to completely fail. They proposed that existing maternities should be requested to pay more attention to the instruction of midwives, and in that way they should be improved, and everything put on a more satisfactory footing. He (Dr. Aveling) maintained it was perfectly impracticable, and would not produce the effect they wanted—the existence of properly educated midwives. Another contention was that students would not be able to get a sufficient number of cases. Dr. Rentoul had petitioned the General Medical Council to the effect that students for the future should be compelled to attend fifty cases of midwifery each during their instruction. He (Dr. Aveling) had calculated that if that were carried out the maternity charity would be increased to such an extent that at least a tithe of the labours of England and Wales would be attended in a charitable way, and this proposal to allot all these midwifery cases to charity was quite in opposition to what he wished to be done in regard to midwives. There were plenty of cases for both if they had a moderate number of from twelve to twenty-five. It was said also that midwives who were registered would on the strength of that register practice beyond what the Act gave them the power of doing. That was an assertion, he believed, without any grounds whatever. They would be open to be punished if they did so. He had before him the petition to the House of Commons against the Bill, and he could not find one good objection to the Bill in it. He (Dr. Aveling) had made some calculations which appeared in a paper he read at the Gynæcological Society. He had examined them, and, although they had been ferociously attacked, he still found them correct. The most startling was the following: that in cases where trained midwives were employed by lying-in hospitals to attend women in childbirth at their own homes, there was only a mortality of 1 in 729, whereas the ordinary average in practice was 1 in 200. Now, that was a very extraordinary fact. How were they to account for a mortality of 1 in 200, when they understood that midwives had only a mortality of 1 in 729? This was a very strong argument for requiring a minimum of education among midwives. He also maintained that the public safety demanded that there should be legislation on this subject. There were no fewer than 30,000 lives every year placed in the hands of midwives. There was no other calling where a similar number of lives were at stake in which the Legislature had not interfered and required evidence of knowledge, as had been done in the case of ship captains, in mines, and in other directions. Wherever so many lives were dependent upon individuals, those individuals were made to pass an examination and receive a certificate before they were able to assume the responsibility of their position.

Dr. PARKINSON maintained that the starting of a new class of midwives would affect injuriously the interests of this general practitioner. He based his remarks on his personal experience as a practitioner in a country town. They had had for some years past a trained midwifery nurse, but the woman did not attend the class of cases she ought to have attended, but persons above the lower class, who could well afford to pay a guinea fee. This seemed to him an example of what would take place. His great objection was—and it was felt a great deal by the medical men in the country—that a medical man when he starts in practice has only had his twenty cases in hospital. His only way of gaining experience was by attending cases under the supervision of some senior medical officer, and it would be a great loss to him to have this advantage cut away. It was all very well for those who had gone through the storm and had come safely into port to look down on the younger man starting in practice, to whom small midwifery fees were of great importance. Such cases were important to the younger man as introductions to practice, and the ready money enabled him to tide over many a difficulty.

The CHAIRMAN: We want to know exactly on what principle the vote is to be taken. The principle that the whole profession has gone on hitherto has been that as a matter of duty to the State and a matter of safety to the lives of the people the present state of things ought not to go on, but some means should be taken to compel the publication of a list of adequately educated women instead of this census list of uneducated persons calling themselves midwives. Does that meet with your approval?

Dr. PARKINSON: Yes.

Dr. CAMERON said he should like, as a representative of the Yorkshire Branch, to put before the Committee the reasons which induced them to oppose the Bill. They had, to a large extent, been stated by Dr. Parkinson. The Yorkshire Branch did not think it desirable to institute what they were inclined to look upon as a new class of midwifery practitioners—persons taking a licence. It was pointed out at the meeting of the Branch that they had taken a great deal of pains to exclude half-educated practitioners from the *Register* of surgery, midwifery, and medicine, and it was highly undesirable to institute a new register called the midwifery register. It was also considered, by an ex-president, that the unregistered women would be very apt, after a little while, to leave midwifery, and that they would be called in to look at a child who was teething or who had measles, and the regular practitioner might be ousted. He had thought it right to put forward these, not as his own suggestions. The Branch, as a whole, considered the Bill ought not to be passed at all; but the Special Committee appointed had drawn up certain amendments.

Dr. BRIDGWATER said he had always felt that there was some difficulty in the term "midwife." It had struck him, in thinking it over in his own mind, that they would get over much of the difficulty if they could, instead of calling them midwives, style them highly-trained nurses, whose qualifications were guaranteed by examination and registration; that they were capable of attending women in hours of great emergency, and of conducting simple cases to their ultimate end; the remuneration would then be as a reward for their trouble taken in qualifying themselves for the register. He thought if they were kept within that limit it would take away a great bone of contention. They must all recognise that such a skilled person would be a boon to the practitioner, who could report to him during the hours of labour.

Mr. GALTON proposed a resolution "to approve of the principles of the Bill, and to appoint a special committee to examine into its details." He said they must admit that a class of midwives did exist, and always would exist. It seemed to him that all the objections grew out of the assumption (a large assumption) that the passing of this Bill would necessarily increase the number of those who practised midwifery. He did not believe it for a single moment. He believed the stricter examination and the stricter regulations under which they would be placed, would diminish and not increase their number.

Mr. SPANTON said he seconded the resolution, because he was fully in accord with the sentiments which had been expressed as to the action of the Committee. They had heard

some very large objections to the Bill, the principal of which seemed to be that the damage to the existing medical men, especially to the younger medical men, might be serious. He had spoken to a medical man who had a very large dispensary practice, who expressed the opinion that the Bill would be of the greatest possible benefit, and he had spoken to another medical man who depended almost entirely upon midwifery (low priced), who said he should hail the Bill with great pleasure. These were the opinions of men who, it was stated, would be injured by the Bill. He did not think Dr. Bridgwater's suggestion that they should institute a new class of medical nurses, would work at all, because it would strike at the very essence of the Bill. He took it that one of the objects of the Bill was to prevent nurses acting as midwives, and to restrict the work of midwives as much as possible, and prevent any interference of duties. He was fully in accord with the principle of the Bill.

Dr. PARKINSON proposed the following amendment: "That while desirous that every woman should have adequate medical attendance in childbirth, this Committee considers the existing Poor-law arrangements should be improved rather than a new class of women should be instituted who would appeal to the public for practice in detriment to the profession, and therefore it opposes the Bill."

On being put to the vote the amendment only found two supporters, and the resolution was carried.

Dr. CAMERON moved and Dr. BRIDGWATER seconded the following resolution, which was carried *nem. con.*: "That it be an instruction to the Subcommittee to consider whether the title of the Bill might not be changed so as to prevent the suggested possibility of a new class of registered persons being confused with duly qualified medical practitioners."

A subcommittee was appointed to further consider the Bill, consisting of Mr. Sibley, Dr. Holman, Dr. Bridgwater, Dr. Grigg, Mr. Galton, Mr. Wickham Barnes, Mr. Wallace, and it was decided to ask Dr. Aveling and Dr. Rentoul to attend the meeting of the subcommittee.

Mr. S. Sibley was unanimously elected to act as Chairman (*pro tem.*) during Mr. Ernest Hart's absence.

THE SANITARY CONDITION OF SOUTHEND.[1]

WE received some time ago a copy of Dr. Thresh's report, but were asked to defer our criticism on the subject matter until we were put in possession of some remarks which the Sanitary Committee of the Local Board of Southend wished to make on the statements contained therein. Dr. Thresh's report, taken by itself, reveals, in regard to the sanitary condition of Southend, a state of affairs which cannot be considered creditable to the sanitary authority of that town. We are, however, pleased to find that, in some important respects, Dr. Thresh has been misinformed: and we are also bound to admit that, assuming the criticisms of the Sanitary Committee to be fully warranted, Dr. Thresh has, in certain matters, placed a rather more unfavourable construction on the facts than he was altogether justified in doing. We certainly think it a matter for regret that Dr. Thresh was not put in the way of, or did not avail himself of, the facilities which should have been offered him to verify every statement of fact contained in his report. Of course the conclusions and recommendations which an expert submits as the result of investigations he has been specially asked to undertake are always open to criticism, but these are not called in question by the Local Board. We are glad, indeed, to learn that the Local Board are willing to adopt, and have already taken steps to carry out the majority of Dr. Thresh's recommendations. The remarks of the Sanitary Committee are almost entirely limited to an elucidation of the statements of facts in the report, and it is certainly very regrettable that any misunderstanding should have arisen in a matter of such importance to the future interests of a rising and popular health resort.

Whilst giving due recognition to the explanations tendered by the Sanitary Committee, it certainly appears that the Local Board has not been well advised in regard to the sewerage extensions undertaken within recent years owing to the rapid growth of the town. The small pipe sewer system was adopted in Southend twenty years ago, and very possibly at that time thoroughly met the requirements of the town: but since then Prittlewell and Porters Town (outlying districts) have developed enormously. These new parts have been sewered, and the sewers connected with one of the old main outfall sewers—a pipe 15 inches in diameter, which extends under the beach for 4,000 feet, with a very slight fall, and is known as the Pier outfall. This outfall sewer was, no doubt, sufficient for the town when it was very much smaller, but even the Local Board now admits that it is inadequate for storm waters, and Dr. Thresh says that certain houses in the town are liable to become periodically flooded with sewage. The Sanitary Committee objects to the phrase "periodically flooded," but it is admitted that, during very high spring tides, which may occur twice in a year, such flooding of yards and roadways in low-lying parts is possible, and has actually occurred. As a consequence of the inadequacy of the outfall sewer, during heavy rainfalls, sewage is passed on to the beach through certain storm overflows or relief sewers in the centre of the promenade, and offensive gases escape over the covered platform from which the electric tram starts. This is a place much frequented by visitors, and Dr. Thresh says "it is certainly not improbable that a sojourn here—breathing the specifically polluted sewer air—may have been the cause of many cases of typhoid fever." There are three other sewers with outfalls into the Thames, but two of these are liable to become tide-locked, when fæces and paper may accumulate around their mouths, and, according to the evidence of an inhabitant, subsequently float off and circulate amongst the bathing machines.

The ventilation of the sewers is admittedly inefficient, with the result that, as the tide rises, the air in them becomes compressed sufficiently to force the water seals of road gullies and of house pipes not disconnected from the sewers. The pressure of air in the sewers was brought to the notice of the Local Board by Mr. Shirley Murphy, in his Report of 1888, and he advised further ventilation; but the Board apparently did not act on this advice, as the substitution of shaft ventilators up the sides of houses for the roadway openings was continued, the proportion adopted apparently being the erection of one shaft for every two roadway ventilators closed. There can be little doubt that owing to this increased obstruction to the escape of air, together with the larger volumes of sewage which the sewers are called upon to carry, their condition as regards ventilation is far more serious now than it was in 1888. Not only are the sewers deficient in calibre and wanting in ventilation, but Dr. Thresh alleges that in all the older portions the joints are or were of clay, causing the porous subsoil to become saturated with sewer air, which is drawn into the basements of large numbers of houses. These defective conditions are denied by the committee, but it is admitted that land springs discharge into the sewers at various points, showing that they are not watertight. On the system of flushing the sewers, Dr. Thresh speaks with disapprobation, but he was evidently not aware of all the steps which were being taken in this direction during periods of dry weather.

The house-drainage of 122 houses in Southend, in which cases of fever were reported last year, was examined, and numerous defects were discovered—some of a character likely to give rise to escapes of sewer air into houses. But it must be remembered that all the older portions of Southend (in which a majority of the fever cases occurred) were either built before any building by-laws were in force, or under those of 1870, which were naturally far less stringent in their provisions than those of more recent date. Houses built since 1881, when a new code of by-laws was inaugurated, are shown in Mr. Murphy's Report to be free from most of the defects characterising the older houses. Although no doubt some progress has been made in bringing the older houses up to the standard of those more recently erected, still it is evident that further effort is required in this direction, and this the Local Board has determined to make.

Dr. Thresh reports the absence of any arrangements for isolating fever patients, or for systematically disinfecting the excreta of the sick and the closets and drains of infected houses, but the Sanitary Committee state that use was made of a neighbouring hospital for infectious diseases, and that proper disinfecting precautions were taken, but at what period of

[1] Report on the Outbreak of Typhoid Fever during the Autumn of 1890 in the Southend Urban Sanitary District, by John C. Thresh, D.Sc Lond., M.B., B.Ch.Vic.

the epidemic is not stated. The absence of such measures would be very discreditable to the sanitary authority of a place like Southend, where sanitary precautions and vigilance of the highest order are needed to prevent the dissemination of infectious disease, liable to be imported at any time by the crowds of day excursionists and visitors who flock there in the summer months. A moderate estimate of the day excursionists gives the number as averaging 2,000 daily, whilst the number of resident visitors at the height of the season is said to be 20,000, and those of a class, be it understood, not particulary convinced of the necessity of taking any precautions themselves against acquiring or spreading infection.

Dr. Thresh discusses and excludes the agency of milk and of water in disseminating the disease. The Water Company appears to have taken all proper precautions to prevent any possibility of pollution of its wells and water mains. Although all the samples of water submitted to analysis were pronounced pure and free from any dangerous contamination, it is a very remarkable circumstance, of which no explanation is offered, that the samples (taken from the deep wells in the chalk) exhibit a hardness of only 3 grains per gallon, whilst the chlorine amounts to over 20 grains per gallon. That water from deep borings in the chalk should be so soft and contain so large an amount of chlorides is certainly very unusual. Dr. Thresh has no doubt as to the disease having been principally disseminated by means of specifically infected sewer air, and he exhibits an interesting table contrasting the Southend outbreak with those at Kidderminster, Beverley, and Longton, which were undoubtedly due to infected water supplies. The total number of cases occurring in Southend from the beginning of January to the end of October, 1890, was 156, of which the case mortality was only 3.85 per cent. Sixty cases of the fever occurred in 1889.

It is somewhat remarkable that there has been recently an unusual amount of typhoid fever at Leigh, Shoebury, Southchurch, Rochford, and other places in Essex on the north bank of the Thames—a prevalence greater than in other parts of Essex. This is worth bearing in mind, in view of the pollution of the river by the metropolitan sewage discharge at Barking and Crossness, and the emptying of thousands of tons of liquid sludge every week from the sludge ships somewhere off the Nore.

We do not think, however, that Southend is entitled to complain much of the pollution of the Thames by the London sewage, or to attribute its troubles to this cause, in view of the admittedly defective condition of its own sewers, and the discharge of its liquid refuse so close to its own shores. There can be no doubt that defective local conditions have played a part in the recent epidemic of typhoid fever, and to apply a prompt remedy for the defects brought to light is the first duty of the sanitary authority. We are glad to learn that this is the view of the Local Board, which now has under consideration a scheme of sewerage for a new part of the district that will intercept some of the sewage, and provide relief for the existing congested sewers, whilst it is also proposed to remove two of the defaulting sewer outlets to prevent the possibility of sewage being cast back upon the beach. Dr. Thresh's urgent recommendation to consult a skilled sewage engineer upon the whole question is also assented to.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The quarterly Committee meeting of the Medical Sickness, Annuity, and Life Assurance Society was held on Wednesday, January 14th, at 38, Wimpole Street. The founder of the Society, Mr. Ernest Hart, presided, and there were present: Dr. G. E. Herman and Mr. S. W. Sibley (Treasurers), Dr. F. De Havilland Hall, Messrs. F. Wallace, E. Bartlett, G. W. Crowe (Worcester), J. Brindley James, and Dr. J. Pickett. It was stated that 40 new proposals had been received during the quarter, which, after allowing for deaths and lapses, gave a net increase of 26, and brought the total effective membership to 1,109. The severe weather had exercised a perceptible influence on the number of sickness claims, and 20 members were now in receipt of weekly payments on account of complete inability to practise owing to sickness or accident, £642 having been paid under this head during the quarter, which was, however, well under the amount anticipated and provided for in the calculation of the tables. During the quarter, £2,500 of Canada 4 per cent. Incribed Stock had been purchased as an investment at a cost price of 105¼. The balance accumulated as the result of economy in administration and the honorary services of the officers and Council had enabled the Committee to easily pay the premium on this (£137 10s.) out of the Management Fund, and the stock thus stood to the credit of the assurance funds as a 4 per cent. investment bought at par.

The annual return for the Registrar of Friendly Societies had been prepared, and showed a net increase in the number of members of 105, after allowance being made for the death of 5 members, and the loss of 29 from other causes. The income for the year to the premium funds was £11,098, against £10,096 in 1889; the expenditure from the same funds for the year being £3,953: namely, £2,986 for sickness pay, £800 for payments on the deaths of insured members, £135 surrender values to members withdrawing, and £40 as an annuity premium paid to the representatives of members dying before the age at which their annuity would have commenced.

The sickness payments had been considerably increased owing to the epidemic of influenza in the first quarter of the year, this adding to the cost by £584; while, from the same cause, 252 members in all (nearly 1 in 4) had been disabled from practice, as compared with 152 in the preceding year. In face of these extraordinary cases, the sickness for the year had been less than that provided for in the tables. The rigid economy in management had been fully maintained, the whole charge on the premium income being under 4 per cent., a ratio that will compare most favourably with any similar organisation, and is, indeed, unparalleled, although the work is certainly largely more intricate and difficult than that of ordinary assurance. The saving accumulated in the Management Fund, owing to care and a very large amount of honorary work, has reached £3,327 in less than seven years. The following are the increase of reserves in each of the funds during 1890: Sickness, £3,762; annuity, £3,136; life assurance, £247; and management, £541. The total increase is £7,686 for the year and the funds of the Society now amount to £44,403, of which £43,100 are invested in the names of the trustees—Mr. Ernest Hart, Dr. W. M. Ord, Mr. J. R. Upton (Solicitor), and Sir T. Spencer Wells—for the sole benefit of the members, the remainder being at the bankers' (the Union Bank of London) to meet current charges as they arise. Full particulars as to the work and position of the Society, with copies of the first valuation report of the Consulting Actuary (Mr. F. G. P. Neison, F.I.A.), forms of proposal, prospectuses, etc., may be obtained (post free and without charge) of the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, London, S.W.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

Meetings of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as

eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

NORTH OF IRELAND BRANCH.—The winter meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday, January 29th, at 4 P.M. Gentlemen who wish to bring any subject before the meeting will kindly communicate as early as possible with JOHN W. BYERS, M.D., Honorary Secretary, Tower Crescent, Belfast.

BATH AND BRISTOL BRANCH.—The third ordinary meeting of the session will be held at the Museum and Library, Bristol, on Wednesday evening, January 28th, at 7.30 P.M., A. B. Brabazon, M.D., President. The following communications are expected: 1. Nelson C. Dobson: A Series of Twenty-five Abdominal Operations. 2. J. Wilding, M.B.: Aneurysm of the Arch of the Aorta opening into the Trachea, with Specimen. 3. J. P. Bush: A Case of Intussusception treated by Operation. 4. C. F. Pickering: Cases of Arthrectomy. E. MARKHAM SKERRITT, R. J. H. SCOTT, Honorary Secretaries, Clifton.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting will be held at Guy's Hospital on Wednesday, February 4th, at 8.30 P.M. A paper will be read by Dr. Frederick Taylor on Ulcerative Endocarditis. Clinical cases from the wards of the Hospital will be shown.—HECTOR W. MACKENZIE, M.D., Honorary Secretary, 77, Lambeth Palace Road, S.E.

FORMATION OF THE BURMAH BRANCH.

A MEETING was held on October 14th, 1890, at the office of the Principal Medical Officer, Rangoon District. Present: The Right Rev. the Bishop of Rangoon (J. M. Strachan, M.D., D.D.), Drs. Sibthorpe, Sinclair, Wight, Robinson, Gray, Leslie, Sellick, Pedley, De Souza, and Sutherland. A letter was read from Dr. Johnston, stating his regret at being unable to attend the meeting.

Preliminary Arrangements.—The BISHOP OF RANGOON was voted to the chair, and the following resolutions were put to those present: It was proposed by Deputy Surgeon-General C. SIBTHORPE, and seconded by Dr. DE SOUZA: "That steps should be taken to establish a Branch of the British Medical Association in Burmah, from the 1st January, 1891, its head quarters to be in Rangoon."—Carried. It was proposed by Surgeon E. O. WIGHT, M.S., and seconded by Dr. SUTHERLAND: "That this Branch be called the Burmah Branch."—Carried. It was proposed by Surgeon G. W. ROBINSON, M.S., and seconded by Surgeon E. O. WIGHT, M.S.: "That a Provisional Committee and Secretary be appointed to draw up by-laws for the Branch, and submit them to another meeting." Carried. It was proposed by Dr. PEDLEY, and seconded by Dr. DE SOUZA: "That the Committee shall consist of the following members: Drs. Sibthorpe, Leslie, Sutherland, Robinson, and Pedley; and that the Secretary shall be Dr. Sutherland." Carried. It was proposed by Surgeon J. LESLIE, I.M.S., seconded by Surgeon SELLICK, I.M.S.: "That those present and those wishing to join the Branch Association shall pay to the Secretary the sum of Rs. 2 each, to cover cost of printing, stationery, postage, and books."—Carried. It was proposed by Dr. SUTHERLAND, and seconded by Surgeon G. W. ROBINSON, M.S.: "That a circular shall be sent by the Provisional Secretary to all medical men registerable under the Medical Act in the province, informing them of these resolutions, and asking them to join the Branch."—Carried. Dr. DE SOUZA proposed a "Vote of thanks to the Chairman."—Carried.

A second meeting of the proposed Burmah Branch was held on December 15th, 1890. Deputy Surgeon-General C. SIBTHORPE in the chair.

By-Laws.—The by-laws were read. It was proposed by Surgeon-Major O. BAKER, and seconded by Surgeon WOODS: "That the by-laws be accepted."—Carried.

Conduct of Meetings.—The rules for the conduct of the meetings were read. It was proposed by Surgeon-Major O. BAKER, and seconded by Surgeon DAVIS: "That they be passed with the addition of Rule No. 11."—Carried.

Recognition of Branch.—It was proposed by T. F. PEDLEY, M.D., and seconded by Surgeon DAVIS: "That the Provisional Secretary inform the General Secretary of the British Medical Association of the desire of medical men in the province to form a Branch in Burmah, and that steps should be taken to have the Branch recognised."—Carried.

SPECIAL CORRESPONDENCE.

LEEDS.

Licensing of Schoolrooms for Entertainments.—The late Mr. A. F. McGill.

AT the adjourned inquest on the victims of the Wortley calamity the verdict of the jury contained a rider not referred to in the note published last week, but which is deserving of attention. It runs as follows:—"We recommend that the licensing authority should consider the advisability of withdrawing the resolution as to the free use of schoolrooms for such entertainments, in order that the provision may be made in licences for protection of the public as on other licensed premises, and especially with a view to safeguarding children of tender age whose services are used for attracting audiences."

At a meeting held in the Leeds Infirmary on Friday, the desirability of establishing some memorial of the late Mr. A. F. McGill was considered. Several gentlemen having spoken in eulogistic terms of the deceased surgeon, it was proposed to perpetuate his memory by instituting a prize in surgery to be competed for by the students at the Yorkshire College. It was stated that this memorial would be in the form most in consonance with the wishes of Mr. McGill. This proposal met with unanimous acceptance, and an influential committee was appointed to work out the details.

MANCHESTER.

Cancer Pavilion and Home in connection with the Proposed Owens College Hospital.—The Southern Hospital.—Epidemic of "Pink Eye" amongst Horses.—Manchester Medical Society.—Hospital Sunday.

In a recent issue of the BRITISH MEDICAL JOURNAL it was announced that a large plot of ground in the vicinity of Owens College had been given to the Council of the College as a site for a hospital, to be called the College Hospital. It is proposed forthwith to begin with the organisation of a Cancer Pavilion and Home, which, it is hoped, will ultimately form a branch of a large general hospital for Owens College. For the present one of the large buildings already on the estate will be utilised, but it is considered essential that ere long entirely new buildings should be erected. The objects of this institution are threefold: 1. The treatment of cancer patients: (2) the study of the disorder and remedies: (3) the provision of a home for incurable patients. Each of these three objects is to be pursued in connection with Owens College and under the supervision of the professors and lecturers in its medical school. Nearly £11,000 have already been subscribed towards the scheme, £5,000 having been generously given by the legatees of the late D. Procter.

Within a short period, also, it is contemplated that the Southern Hospital—at least the department for women and children—should be transferred to a site on the College Hospital estate. It is widely held that increased hospital accommodation is urgently needed in Manchester, and, as has been announced, the managers of the Royal Infirmary propose to enlarge the present infirmary by the addition of one hundred and twenty beds. It becomes a question for the citizens of Manchester whether this is the best way of solving the problem of increased hospital accommodation. Negotiations, it is stated, are taking place between a committee of the Owens College Council and the Managers of the Royal Infirmary with a view, if possible, to utilise the College Hospital estate for the best interests of the suffering poor, and to promote in the highest degree the cause and progress of medical education in Manchester.

An epidemic of what is popularly known as "pink eye" is at present raging among the horses in this neighbourhood. It

began to show itself in Manchester about two months ago, and it is stated that there is now hardly a stable of any size free from it. In some cases death is very sudden. A horse may look all right in the morning and die in the evening. The general symptoms are a running at the eyes, swollen legs, weakness, and high temperature. If the malady is noticed in time and properly treated the animal usually recovers in two or three days.

The annual meeting of the Manchester Medical Society was held at the Medical School, Owens College, last week, Dr. J. Ross presiding. The secretary read the annual report, in which it was stated that twenty-two new members had been elected during the year, and that the Society had held ten meetings, of which three were clinical meetings, held in the afternoon. The completion of the new library catalogue was recorded with satisfaction, and it was stated that the number of books added had been greater than in any of the previous six years, and that its use by members and students was increasing. It now contained 29,670 volumes and a number of unbound pamphlets.

Hospital Sunday has been fixed to be held on February 15th.

CORRESPONDENCE.

KOCH'S REMEDY FOR TUBERCULOSIS.

SIR,—The generally excellent translation of Koch's recent article given in the BRITISH MEDICAL JOURNAL of January 17th contains a verbal error, which is of such importance that I venture to ask permission to direct attention to it through your columns, for the sake of such of your readers as may not have seen the original.

Next to the revelation of the nature of the fluid, the chief point of interest in this article is the account which Koch gives of the observation upon the guinea-pig, which led him to his great discovery. He found that the introduction subcutaneously of a portion of a pure culture of tubercle bacilli produced widely differing effects upon a healthy animal and one in an advanced stage of tuberculosis. In the healthy guinea-pig the little wound of the operation healed, the skin remaining unaffected until opened up again several days later by ulceration occasioned by the bacilli developing beneath. But in the tuberculous animal the skin at and around the site of inoculation showed on the same day or the day following signs of commencing necrosis, which eventually resulted in the throwing off of a slough. There were other important differences in the results of the inoculation in the two cases, to which I need not refer. But the fundamental fact upon which Koch bases his explanation of the remarkable action of his fluid upon tubercular tissue is that the tubercle bacilli, or rather their chemical constituents, cause death of tissue in the skin of a tuberculous animal, but leave that of a healthy animal intact. The translator has rendered *Haut* (skin) as if it were *Oberhaut* (epidermis), and has thus failed to convey the essential point.—I am, etc.,

London. JOSEPH LISTER.

A SUGGESTED TREATMENT OF TUBERCULOSIS.

SIR,—The communication from my friend Dr. Lawrence, of Chepstow, which I enclose, appears to me to be well worthy of attention. I can answer for his competence as an observer, and it may be taken as a definitely certified fact that two cases of advanced phthisis recovered after passing through a severe attack of small-pox. The tubercle bacilli must, it would appear, have been destroyed in some way or other, perhaps by the sustained high temperature as suggested by Dr. Lawrence, perhaps by the products of the variolous microbe. Whatever the explanation, the fact is interesting, and opens the door to investigation on other lines than those of Koch.—I am, etc.,

London. W. H. BROADBENT.

"Now that all the world is alive with excitement and anxiety to hear further details and results, with statistics of Dr. Koch's treatment and cure of tuberculous disease of the lung, and that his treatment is still in its initial stage, and we learn by his deep researches that his remedy does not kill the tubercle bacilli, but the tuberculous tissue, which gives us clearly and definitely the limit that bounds the action of the remedy, showing that it can only influence tuberculous tissue and has no effect on the dead tissue, the question arises, How are the bacilli got rid of in the cases which are cured by his treatment? Is it by the process of starvation? It would strike any casual reader of his excellent paper that if we could find means of destroying the bacilli, which was no doubt Koch's original object, then there would be no necessity to destroy the tuberculous matter that the bacilli luxuriate in. The discussion which has arisen in connection with Koch's method has reminded me of two remarkable cases that fell under my observation some years ago, and have often given me some moments of questioning why my patients in the last stage of tuberculous disease should have recovered and are now in most robust health. The patients, both young men, were in the last stage of pulmonary consumption, with large vomicæ and great emaciation. They were both attacked with small-pox of a virulent type, with very high temperatures. In each case they were well nursed and supported, and fed hourly with liquid nourishment and brandy, and both recovered from the small-pox, and at once the pulmonary symptoms disappeared. The patients laid on flesh, and are now the living images of health. Now, in these cases, did the small-pox bacilli predominate and become masters of of the situation, and exterminate their weaker brethren the tuberculous bacilli, or did the phagocytes, so ably described by Professor Ray Lankester, stimulated by an exalted condition of things, put on an active condition and destroy the tuberculous bacilli? Or did the high temperature kill or cause their exit in the same way as we often hear of worm fever, where the temperature is so high that it is too warm for the comfort of the entozoa, and they make their exit, the fever being the cause of their exodus, not the worm the cause of the fever? Would it not be possible to produce such a temperature as would destroy the bacilli, and are these cases instructive enough to throw a gleam of light on so interesting a subject?

Chepstow. A. G. LAWRENCE, M.D."

RECENT DEBATES ON GYNÆCOLOGY.

SIR,—On page 139 of the BRITISH MEDICAL JOURNAL of January 17th, my friend Professor Sinclair is reported as saying, "The Staffordshire knot ought to become obsolete, for it was not to be trusted." Surely there must be some mistake. I have tied the knot certainly nearly four thousand times, and I know of its constant use by others with equal success when it is properly tied. Professor Sinclair must have meant that there were hands who could not be trusted to tie the Staffordshire knot. If it is tied according to the instructions I have given, its failure is an absolute impossibility.

On the same page, Sir Spencer Wells alluded to a case operated upon here and seen by him that day (January 7th), and characterised by him as a "deplorable and disastrous failure. He had seen other cases almost as unsatisfactory." I confess I see nothing discreditable to the operator in one or two failures out of every hundred of such cases, for there is not a single surgical operation which knows no failure. If there is anything discreditable in the present case, the discredit must lie at Sir Spencer Wells's own door, and not at mine; for if the original account[1] of the case be read, it will be seen that, "during the last seven years, she had been the patient of a distinguished gynæcological baronet, who had, however, failed to relieve her. Ultimately she had been referred to him (Mr. Tait), and he had operated. She had double pyosalpinx of old standing, and it was very difficult to say which was tube and which was ovary. There were abscesses in both ovaries, and if he had attempted to tap them from the vagina, he would have been obliged to tap several cavities. Instead of doing anything of the kind, he opened the abdomen a month since, and the patient was now practically cured. A case like that was worth a dozen hypothetical imaginations. There was a woman who had been an invalid for years who could have been relieved at any time, who had been under the care of all the well-known specialists of London, many of whom had declared that there was nothing the matter."

If anybody is to blame for the "deplorable and disastrous

[1] *Transactions of the British Gynæcological Society*, 1888, p. 457.

failure," it is Sir Spencer Wells, who, during seven long years, treated this poor woman by pessaries, etc., instead of employing the only remedy possible—removal of the diseased organs. The reason, probably, why Sir Spencer did not do this I am prepared to argue, if he cares to prolong the discussion.

But the most interesting part of the case remains. Sir Spencer Wells saw the case on January 7th because of my absence in Italy. On my return I saw the patient on January 14th. I take the liberty of controverting every word Sir Spencer Wells says about the case. It is not a failure at all. So far as the tubal and ovarian abscesses are concerned, the patient is not only "practically cured," but she is absolutely cured, for I have the diseased parts in a bottle.

The patient is now suffering from another condition altogether which Sir Spencer Wells cannot have discovered, or I am sure he would honestly have mentioned it, and not have fallen into the absurd mistake recorded as part of his speech at the Obstetrical Society. The whole story of this case is so interesting, and will prove so full of instruction, for others as well as Sir Spencer Wells, that I shall in due season give it in full detail.—I am, etc., LAWSON TAIT.

Birmingham.

SIR,—In the BRITISH MEDICAL JOURNAL of January 17th I find, in an otherwise excellent summary of a few remarks made by me at the meeting of the Medical Society on January 12th, a phrase which might be construed as implying something offensive. I am made to say that Sir Spencer Wells "boasts" of having resorted to flushing of the peritoneum only twice in the whole of his practice. I intended merely to emphasise my belief in the efficacy of irrigation, and I expressed surprise that such results as those of Sir Spencer Wells could be obtained without flushing. I did not use the word "boasts," and I did not mean to imply anything derogatory. Quite the reverse.—I am, etc.,

Manchester. W. J. SINCLAIR.

THE MIDWIVES REGISTRATION BILL.

SIR,—Dr. Aveling has worked for years to secure the passing of a Midwives Registration Bill. Had he and others striven only to improve the training of midwives, much better results would have accrued; but Dr. Aveling has lately made a most momentous statement; in the BRITISH MEDICAL JOURNAL of December 13th, 1890, p. 1,400 he says: "If it were possible, I would have every woman attended by a duly qualified medical man." I am certain this can be accomplished, and this I shall prove. Let us take four classes of the "poor."

First, those given State relief: All these are now provided for. This is verified by referring to the "order of the Poor-law Commissioners of July 24th, 1847," known as the "Extra Medical Fees Order." Articles 182 and 183 give boards of guardians power to pay their medical officer a confinement fee of 10s. to 40s. for a natural or abnormal labour, or for attendance immediately after labour, on any woman who is, or is not, receiving relief. How is this order carried out? Some guardians do their duty; others order their medical officer to contract himself out of the order, preferring to send on their cases to a voluntary hospital. Again, a very few contract with a midwife to attend for a fee varying from 3s. 6d. to 6s., evidently going on the principle that any kind of aid is good enough for a pauper, always provided there is no public scandal. Now why does not Dr. Aveling urge the Local Government Board to see that this order is carried out? Here is a field for real work. Dr. Mouat, in a paper read before the International Congress in 1881, stated that in eight years there were 86,726 births in the lying-in wards of workhouse hospitals. How many others were attended outside by the district medical officers? I implore Dr. Aveling to see that these "poor women" receive due attention.

Secondly, I call attention to lying-in cases attended by voluntary medical charities. No doubt a small number of lying-in hospitals force their midwives upon the poor, but this need not be. Many lying-in hospitals do not employ midwives; take a few cases. The Oxford Lying-in engages two doctors, paying each £70 per annum, and 10s. 6d. per case. The Newcastle Lying-in ceased to employ midwives, and has now engaged two doctors, each at £40 per annum and 10s. 6d. per case. The Glasgow Maternity Hospital has lately taken over the midwife department of the Sick Poor Association; and here in parenthesis I would say that the poor women require good district nurses, and not midwives. At the City of London Lying-in, the medical staff are paid one guinea for each instrumental labour, and 2s. 6d. per visit when called in to advise on a case of labour. I need not refer to those lying-in hospitals where assistant obstetric physicians are paid. These examples show that each lying-in hospital might have a perfect staff of paid district medical officers acting in harmony with a nursing association for the poor. The cost would not be greater, for at seventeen lying-in hospitals £3,432 was paid last year to midwives. (Some patients treated at lying-in hospitals do not seem to be charity cases at all, and these might be excluded. Thus at St. Mary's, Manchester, a woman secures attendance for 5s.; at the Malvern Lying-in, for 2s. 6d.; at the Brighton and Hove, for 6s.; at the British Lying-in, for £2 2s.; at the Clapham Maternity, 5s. for out- and 10s. for in-patients; at the Bristol Dispensary, for 6s. 6d.; and at St. John the Divine, 5s.) Have those lying-in hospitals which now employ midwives ever tried to form a medical staff? I believe there are not 1,000 certified midwives in England.

Thirdly, I refer Dr. Aveling to the one hundred or so provident dispensaries and sick clubs at which women can obtain the services of a "duly qualified medical man," by paying from 2s. to 2s. 6d. per month for seven to nine months before confinement. Look at the St. Paul's Parish Maternity Society, where a doctor is paid a fee of £1 for each case, the patient paying 10s. and the Society 10s. The Royal Standard Benefit Society, by Article 26, makes a grant of 40s. to a benefit member when his wife is confined. The National Deposit Friendly Society grants to each female member a month's sick pay during confinement. Why can we not encourage thrift? Or is our own profession so absolutely thriftless that it takes a morbid pleasure in pauperising others, and in competing against those who encourage such thrift societies as the above?

Fourthly, remember that large host of young doctors who are now doing next to nothing, and who simply snap at a 15s. confinement fee. In 1888 there were only 48.8 births, on an verage, to each doctor. Surely the woman is very poor who cannot save sixpence per week for thirty-six weeks for her confinement. Let me call attention to the fact that each person in this country spends, on an average, 1s. 4d. per week on drink, or £16 13s. 6d. per family per annum. I am almost sick of all the cant talked about "poverty." All the poor are amply provided with duly qualified doctors—by the Poor Law, by medical charities, by provident dispensaries and clubs, and by young doctors.—I am, etc.,

Liverpool. ROBERT REID RENTOUL.

SIR,—I should like to ask Dr. Rentoul through the medium of your columns whether he is posing as an amender or as a direct opponent of the Midwives Bill? He is certainly taking the position of instructor-in-general to the medical public.

I have received from him a circular dated December 10th, 1890, on the subject. It contains "suggested amendments." These "amendments" are for the most part such as to make one wonder whether the whole paper is not rather of the nature of a "skit" than of a serious production. Can any one read this circular or the letter in your issue of December 27th, 1890, and not come to the conclusion that Dr. Rentoul is giving himself out as if he were for the better education, etc., of midwives, while all the time he is dead against the whole of the higher education of women? It is a common enough tactic with politicians to make statements for the purpose of having them corrected, but I did not know we had condescended to such questionable proceedings in discussing medical matters.

If Dr. Rentoul thinks as he appears to do, and has the courage of his opinions, why does he not propose a Bill for the abolition of midwives altogether? It is one of the two alternatives before us—either repression within proper bounds or extinction—no one has had the hardihood to suggest the latter so far.

Let us keep these these four points before us:—

1. That in the past from time immemorial there has been the

grossest maltreatment of their patients by uneducated and uncontrolled midwives.

2. That the entire abolition of midwives is quite impossible for such reasons as the sum of money required to compensate them for the loss of their lawful profession; the real demand there is for them, and so on.

3. That legal restraint of some kind is now openly called for by the midwives themselves, by the medical and by the lay press, and that too much light has been thrown on the possible horrors of "midwives' midwifery" to allow it to be blotted out readily from the memories of those who have once had their minds enlightened.

4. That we must be leaders if we do not wish to degenerate into mere lookers-on, who, absorbed in the most petty and narrow-minded considerations of trade, have forgotten that their lives are, or should be, devoted to the relief of suffering humanity.—I am, etc.,

Queen's Crescent, N.W. F. R. HUMPHREYS.

DECALCIFIED BONE PLATES IN ENTERECTOMY.

SIR,—Sir Spencer Wells complains that I have quoted him incorrectly and failed to interpret the meaning of Dr. Senn's pamphlet. Allow me to point out to Sir Spencer Wells that Dr. Senn made the assertion that "the plates came away with the fæces about a week after the operation," when describing the different steps in the operation of ileo-colostomy—not enterectomy—in which one of the bone plates is placed in the colon and the other in the approximated portion of the ileum. In this part of the bowel the plates do not become absorbed so quickly as in the small intestine or stomach; but even here, as I have proved in practice, they do become so absorbed.

In cases of enterectomy and union of the small intestines by bone plates, the plates undoubtedly become absorbed and digested. In this the experience of Dr. Senn coincides with mine. On page 31 of his pamphlet, in describing the preparation of the plates, he says: "and such plates undergo no change in size after their introduction into the stomach and intestines until they are gradually removed by absorption and disintegration, from the third to the tenth day." This passage appears to have escaped Sir Spencer Wells's notice, although he makes two quotations in his letter from the same page of the pamphlet.

One word as to the solution in which Dr. Senn directs the plate to be preserved. In the *Annals of Surgery*, vol. vii, page 180, he says: "For preservation the plates are kept in absolute alcohol." I have always kept mine in rectified spirit, which I find answers well. I am, etc.,

Upper Wimpole Street, W. FRED. BOWREMAN JESSETT.

DANGERS OF EXALGINE.

SIR,—I regret Dr. D. Gair Braidwood did not make himself better acquainted with the dose of exalgine before writing his letter published in the BRITISH MEDICAL JOURNAL of January 17th. The maximum dose is 10 grains, not 6 grains, that amount being given by Drs. Bardet and Dujardin-Beaumetz. Professor Desnos, Hôpital de la Charité, has given as much as 26 grains daily. He has given 4 grains every consecutive hour. Professor Fraser, of Edinburgh, on the other hand, has obtained his results from doses of $\frac{1}{2}$ to 1 grain.

In my case I had given exalgine two days previously in doses of 3 grains every three hours with very slight relief. Exalgine is supposed to cause death by asphyxia; in my case syncope nearly caused a fatal result.—I am, etc.,

London. E. F. FLYNN, L.R.C.S.

MEDICO-LEGAL AND MEDICO-ETHICAL.

A SUBSTITUTE'S FEES.

MEDICUS writes: A and B. are two practitioners on friendly terms, living close to one another in the same district, and have an understanding that in either one or the other's absence, any patient seeking in a hurry the absent medical man's services can be sent on to the other address, and a division of fee or fees charged subsequently privately made. In A's absence an urgent case arises, and the servant directs the messenger to B's house. B attends, and finds the case to be one of concealment of birth on the part of a servant living in the house of A's patient. The child is dead, and the case being thought one of infanticide, B is ordered to make a *post-mortem* examination, and give evidence before the coroner, for which he receives two guineas. No fee is paid for attendance on the young woman—at least, none up to the present. Now should B, having obtained the management of the case through A, divide, as expected, the two guineas with him or not?

*** In view of the mutual arrangement entered into between A and B, for a division of the fees under the circumstances above narrated, there cannot, in our opinion, be any reasonable doubt but that a moiety of the coroner's fee should be handed to A, and also of any sum that B may receive for professional attendance on the servant in question.

DUTIES OF MEDICAL REFEREES OF ACCIDENT INSURANCE COMPANIES.

IF "X. Y. Z." will refer to the *Code of Medical Ethics*, chap. iii, sect. 1, rule 4, which, in the crowded state of our columns, is too long for insertion, he will find the desired information to the effect that all medical referees, whether acting on behalf of railway or accident insurance companies and the like, are enjoined to arrange an appointment with the patient's medical adviser, or otherwise to obtain his sanction for an examination of the case.

"DR." OR "MR."

A. writes: A. and B. are two practitioners in a small town. A. is M.R.C.S., L.S.A., and styles himself "Mr." on his plate. B. is M.B., M.R.C.S., and assumes the title of "Dr." on plate and cards. B. has on three occasions known to A. (and perhaps at other times) gone out of his way to reprove three patients of A.'s for referring (in casual conversation) to A. as "Dr. A.," and to explain that A.'s degrees are "only College," whereas he (B.) had a "University degree." Is this ethical behaviour? If unethical, what should A. do?

*** In responding to A's questions we may note: 1. That the possessor of the degree of M.B. is not, otherwise than by courtesy, entitled to the designation of "Dr.," and certainly would not be so addressed within the precincts of the University. That B. should venture to reprove patients of A. for referring in casual conversation to the latter as Dr. A., would seem to indicate a hypercritical and somewhat uncharitable frame of mind, and would not unfairly subject him to a like rebuke for assuming a title to which he has no legal claim. Mr. ——, or , M.B., would be a more appropriate inscription on his card or door plate. 2. A dignified silence on the part of A., or a courteously-worded and charitable exposition of the relative academic position of A. and B., would, in our opinion, be the most becoming attitude for the former to adopt.

We need scarcely remind our correspondent that "Doctor" is almost invariably the appellation by which society—and especially the commonalty—address medical practitioners in general, irrespective of collegiate or university distinctions.

WE may remind some of our correspondents who urgently ask for immediate replies to their inquiries that the questions submitted frequently involve points not always governed by general principles, and requiring the gravest consideration. It is, therefore, impossible in many cases to give a reply in time for the next issue of the BRITISH MEDICAL JOURNAL.

NAVAL AND MILITARY MEDICAL SERVICES.

HART'S ARMY LIST FOR 1891.

THE fifty-second annual issue of *Hart's Army List* is before us, corrected up to December 30th, 1890. Its contents and reputation are too well known to need recapitulation. One new feature, however, of the present volume has a special interest for medical men, namely, the addition of the full qualifications of the medical officers of the army. Last year, it may be remembered, some few were given, and officers were invited to supply any deficiency in their own cases. This year the work is completed, and all are given, even to those on retired or half-pay and to the Medical Reserve of Officers. From what source the information has been obtained is not stated. It would be well, therefore, we think, if medical officers would themselves test the accuracy of the qualifications given, for it is not at all unlikely that, now that "Hart" has led the way, the War Office authorities may condescend to follow suit, and perhaps avail themselves of the information so sedulously obtained.

THE NAVY.

THE Greenwich Hospital pension of £50 a year, vacant by the death of Deputy Surgeon-General W. Gunn, M.D., has been awarded to Deputy Inspector-General H. PIERS.

The following appointments have been made at the Admiralty:—F. MCCLEMENT, M.D., Fleet-Surgeon, to the *Iron Duke*, February 12th; F. A. TREVAN, Staff-Surgeon, to the *Ringarooma*, not dated; C. W. BUCHANAN-HAMILTON, Staff-Surgeon, to the *Tauranga*, not dated; EDWARD C. MATRON, Fleet-Surgeon, to the *Impérieuse*; H. G. T. STRICKLAND, Staff-Surgeon, to the *Boscawen*, additional; H. F. ILIENWICZ and JOHN D. HUGHES, Surgeons, to the *Impérieuse*; RICHARD BARNARD, Surgeon, to the *Ganges*; WILLIAM HAYES, Surgeon, to the *Porpoise*.

MEDICAL STAFF.

DEPUTY SURGEON-GENERAL CHAMNEY GRAVES-IRWIN, M.B., has been placed on retired pay. His commissions are dated: Assistant-Surgeon, February 24th, 1854; Surgeon, December 1st, 1863; Surgeon-Major, March

1st, 1873; Brigade-Surgeon, November 11th, 1880; and Deputy Surgeon-General, December 10th, 1884. He served in the Eastern campaign in 1854, up to the September 22nd, and again from July 15th, 1855, and was at the battle of the Alma, and at the siege and fall of Sebastopol (medal with two clasps, and Turkish medal). His retirement vacates the post of principal medical officer at Edinburgh.

Surgeon J. R. S. ROBERTSON, M.B., has resigned his commission, which was dated August 4th, 1883. During the Nile Expedition in 1884-85 he served with the Mounted Infantry Camel Regiment, and was present in the action at Abu Klea and in the reconnaissance to Metammeh (medal with two clasps, and Egyptian bronze star).

Surgeon VERE EDWARD HUNTER, who entered the service February 3rd, 1883, has been placed on temporary half pay on account of ill-health, December 29th, 1890.

Quartermaster D. J. GILLMAN has assumed the duties of Quartermaster at the training School at Aldershot in succession to Captain S. Warren.

The newly appointed Quartermasters, E. THOWLESS and F. KYLE, are stationed, the former at Jamaica, the latter at Barbadoes.

Brigade-Surgeon A. F. CHURCHILL, M.D., who is serving in the Bengal command, has leave for 118 days on private affairs.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:

	From	To
Surgeon-Major H. W. A. Mackinnon, D.S.O.	Madras	Dover.
Surgeon-Major R. N. M'Pherson	Bengal	Portsmouth.
,, J. H. Moore	Pembroke Dock	Devonport.
,, J. C. Dorman, M.B.	Dublin	Bengal.
,, J. J. Morris, M.D.	Portsmouth	Parkhurst.
Surgeon A. Hewett	Sheffield	Ceylon.
,, D. Wardrop, M.B.	Portsmouth	Bengal.
,, P. M. Carleton, M.D.	Newry	Enniskillen.
,, D. O'Sullivan	York	Straits Settlements.
,, R. H. S. Sawyer, M.B.	Dublin	Gibraltar.
,, W. J. Baker	Horfield	Devonport.
,, H. H. Johnston, M.B.	Mauritius	Edinburgh.
,, H. R. Whitehead	Pirbright	London.
,, D. V. O'Connell, M.D.	Bombay	Aldershot.
,, J. M. Reid, M.D.	,,	Netley.
,, R. J. M'Cormack, M.D.	Malta	Woolwich.
,, F. W. C. Jones, M.B.	Bombay	Aldershot.
,, A. E. Morris, M.D.	Bengal	Dublin.
,, A. O. Fitzgerald	,,	,,
,, R. E. Molesworth	,,	Aldershot.
,, C. L. Josling	,,	Colchester.
,, R. L. R. Macleod, M.B.	,,	Dover.
,, G. G. Adams	,,	Horfield.
,, W. B. Day, M.B.	Madras	Portsmouth.
,, D. R. Hamilton, M.B.	,,	Chester.
,, C. T. Blackwell	Bombay	Woolwich.
,, S. G. Allen	Belturbet	,,
,, M. T. Yarr	—	Home District.
,, V. H. W. Davoren	Cork	Bombay.
,, M. L. Hughes	Aldershot	Malta.
,, T. Moynihan	Belfast	Sierra Leone.
,, J. M'Laughlin, M.D.	,,	,,
Quartermaster W. McCallum	Cape of G. Hope	Woolwich Dist.

INDIAN MEDICAL SERVICE.

THE promotion of Surgeons T. H. SWEENY, D. F. BARRY, M.D., G. F. A. HARRIS, JOHN ANDERSON, C. J. BAMBER, and MALACHI O'DWYER, all of the Bengal Establishment, to be Surgeons-Major, and which was announced some time ago in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

Surgeon-Major JOSEPH BLOOD, Bengal Establishment, who has been on sick furlough since December 21st, 1889, has been transferred to the half-pay list from December 21st, 1890. His commission as Surgeon dates from March 31st, 1877; that of Surgeon-Major from March 31st, 1889. He was in the Afghan war in 1878-79, and was at the occupation of Candahar and the advance to the Helmund (medal).

Brigade-Surgeon B. T. SUFFREIN, of the Madras Establishment, has retired from the service from October 12th last. He was first appointed to the department as an Assistant-Surgeon July 27th, 1859, and attained the rank of Brigade-Surgeon December 31st, 1885. He has no war record.

Surgeon-Major WILLIAM DUNCAN, M.B., Bengal Establishment, has also retired from the service, which he entered as Assistant-Surgeon October 2nd, 1865, being made Surgeon-Major twelve years thereafter. He served in the Afghan war in 1878-79, receiving the medal granted for that campaign.

Surgeon-Major EDWIN SAUNDERS, of the Bengal Establishment, has also retired. His commission as Assistant-Surgeon is dated April 1st, 1869, and that of Surgeon-Major April 1st, 1884.

Surgeon G. M. J. GILES, M.B., Bengal Establishment, is appointed Medical Officer to the Lawrence Lunatic Asylum at Sunawur, *vice* Surgeon E. R. W. C. Carroll, who vacates that appointment.

ARMY MEDICAL RESERVE.

THE following notification is substituted for that which appeared in the *London Gazette* of November 25th, 1890:—Surgeon J. J. A. V. C. RAYE, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve, November 26th, 1890. [The notification referred to was to the effect that, Surgeon Raye's services having been dispensed with, he ceased to be an officer of the Medical Reserve.]

THE VOLUNTEERS.

SURGEON E. STEWART, M.D., Middlesex Yeomanry (Duke of Cambridge's Hussars), has resigned his commission, which was dated March 26th, 1886.

Acting-Surgeon H. R. JONES, M.B., of the 2nd Lancashire Artillery, is promoted to be Surgeon January 17th.

The undermentioned gentlemen are appointed Acting-Surgeons to the corps specified:—HENRY HAY, M.B., and THOMAS PETER GROSART WELLS, Fourth Division Submarine Miners Royal Engineers: ALFRED HERBERT MARSH, 3rd Volunteer Battalion Cheshire Regiment (late the 3rd Cheshire): ALEXANDER GORDON PATERSON, M.D., 1st Volunteer Battalion Royal Berkshire Regiment (late the 1st Berkshire)—all dated January 17th.

Surgeon and Surgeon-Major H. R. SMITH, 3rd Volunteer Battalion Hampshire Regiment (late the 3rd Hampshire), is seconded while serving as Brigade-Surgeon in the Portsmouth Infantry Volunteer Brigade.

Surgeon H. G. READ, London Division Volunteer Medical Staff Corps, has resigned his commission, which bore date May 19th, 1888.

EMPLOYMENT OF RETIRED MEDICAL OFFICERS ABROAD.

A CORRESPONDENT again addresses us on this subject, on which he says no official action has yet been taken, although it was placed before the authorities some time ago, and favourably received. He thinks, if it was clearly put before the Secretary of State for War, its reasonableness would commend itself to him. Retired medical officers, he says, would accept service in certain of our colonial and foreign garrisons on the same conditions as those employed at home. We do not doubt it, and think it would help to diminish the foreign service of the active list; but we fear the number of retired medical officers who would volunteer for such appointments would be small, and it is probable the number of charges in which they could be suitably employed abroad is rather limited.

ADVERTISEMENT FOR CANDIDATES.

A CORRESPONDENT says twenty commissions in the Medical Staff are to be competed for shortly. Intending candidates should cry "hold" until the following pressing points are satisfactorily settled: 1. Definite substantive military rank and title. 2. Sick leave regulations the same as for other officers. 3. Foreign service back to three and five years. 4. Recognition of rank and seniority on mixed boards. 5. Formation of a Royal corps, as in the Engineers.

These points, often insisted on, should be reiterated again and again until the public, the profession, and especially intending candidates fully grasp them.

ARMY "DOCTORS."

PERSEVERE maintains that in recommending such titles as Surgeon-Captain, etc., the Commission put the cart before the horse. He advocates putting the military title first, the professional after it. Unless this is done, the medical officers will continue to be colloquially simply "doctors." How, with a compound title, are they to be addressed in society? There is no middle position between the military and civilian in the army; if medical officers are not soldiers, then they must be civilians pure and simple.

PROMOTION IN THE MEDICAL DEPARTMENT.

SENEX writes: The recent promotions for the Chin Lushai Expedition, in which the medical department did not figure, seems to show that for it promotion for field service is practically at an end. In other branches of the army promotion by selection is fully carried out, and we see colonel after colonel superseded. In the Medical Staff promotion is entirely by seniority, tempered by absolute unfitness. This, of course, simplifies administration, but the result is the senior ranks are crowded with old men, some, indeed, old before their time through severe foreign service in the executive ranks.

PAY OF ARMY MEDICAL OFFICERS.

HISTORIAN writes: It is right to dispel the popular error that the pay and allowances of medical officers are out of proportion to those of other officers. The Appendix 18 of the Camperdown Report shows that the pay of the Royal Engineers in every rank exceeds that of medical officers. A deputy surgeon-general receives £951 9s. 8d. a year, but the similar rank of colonel on the Staff £987 19s. 8d. A surgeon-general—ranking as a major-general—receives £1,387 1s. 1d. per annum, but a major-general in command £1,700; see Article 117 of the Pay Warrant. Interested persons like to throw dust in the eyes of the public on this matter.

OFFICER COMMANDING TROOPS ON BOARD.

WE have before us copy of a General Order issued at a Mediterranean station, in which a surgeon-major is named as "in medical charge of invalids and officer commanding troops on board" one of Her Majesty's troopships. This shows that the military authorities do not hesitate when it suits them, and probably when they have no alternative, to place a medical officer in command of a mixed body of soldiers. What do "my military advisers" say to this? Can a "civilian" command troops? We wonder if the surgeon-major received any command money?

A STUDENTS' SUPPER.—The Third Year Medical Class at Aberdeen yearly sup together. This year they supped in the Palace Hotel. Professor Cash was Chairman, and Dr. Garden was Croupier. There was a good attendance, and, according to the programme, which was very happily edited by Mr. Christie with quotations from the national bard, "Wi' merry sangs and friendly cracks, I wot they didna weary."

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

BOARD OF STUDIES.—The Special Board for Medicine have elected Sir George Murray Humphry, Professor of Surgery, to be a member of the General Board of Studies until December 31st, 1894.

CLERK-MAXWELL STUDENTSHIP.—Candidates for this studentship in Experimental Physics are requested to send their names to Professor Thomson, 6, Scroope Terrace, Cambridge, by February 21st.

DEGREES.—At the congregation on Thursday, January 15th, the following degrees were conferred: M.B. and B.C.: Walter Winslow, B.A., Caius (thesis, The Causes of Death in Enterica); Robert Stanley Thomas, B.A., Jesus (thesis, Typhlitis); Jermyn Francis Gillett, B.A., Sidney (thesis, Treatment of Pneumonia by the Ice-bag); William Hubert Sale Fosbery, B.A. (thesis, Adhesions of Ovarian Cysts).

MEDICAL BOARD.—Joseph Griffiths, M.A., M.D.Edin., Assistant to the Professor of Surgery, has been nominated an additional member of the Special Board for Medicine until December 31st, 1891.

LONDON.

A MEETING of Convocation was held on January 20th; Dr. F. J. WOOD, chairman, presided.

Revised Scheme for the Reconstitution of the University.—The CHAIRMAN informed the meeting that a protest from 300 Fellows of the Royal College of Surgeons opposing the scheme had been presented. He said that the Committee of the Senate who had taken the matter in hand had now completed their revision of the scheme, which would be placed on the table of the Senate at the meeting of that body next day (Wednesday). It would then probably be ordered to be printed and placed before the members of the Senate, and afterwards be discussed at a special meeting of the Senate. He expected the Privy Council would decline to accept the scheme until it had received the assent of all the parties concerned in it.—It was afterwards proposed by Dr. W. J. COLLINS, seconded by Dr. S. THOMPSON, and resolved: "That the Clerk of Convocation be requested to make application to the Senate for their latest revised scheme for the reconstitution of the University as soon as it may be completed, and that he be instructed to post a copy of the same forthwith to every member of Convocation." Dr. Collins thought the scheme should not go to any other body before it came to Convocation. The CHAIRMAN thought there was every disposition on the part of the Senate to send the scheme to Convocation at the earliest possible date; but whether that date would be before the scheme was sent to the Colleges he could not say. The Colleges had not yet approved of it as revised. The Senate had gone far beyond the recommendations of the Royal Commission in order to meet the requirements of the Colleges, and undoubtedly desired to have the scheme carried out, and that as quickly as possible.

Report of the Annual Committee. Dr. W. J. COLLINS presented the report and moved its reception. This was seconded by Dr. O'REILLY, and carried unanimously.

Diplomates in Public Health. Dr. W. J. COLLINS moved the adoption of the following motion recommended by the Annual Committee: "That in view of the recent changes made in the examination in subjects relating to Public Health, this House respectfully urges upon the Senate the equity of conferring the degree of M.D. (State Medicine) upon those M.D.s who had, previously to 1889, been awarded the diploma in Public Health, and upon those M.B.s who had, previously to 1889, been awarded the diploma in Public Health, and who shall subsequently pass in the Mental Physiology of the M.D. Examination." He remarked that the D.P.H. Examination was founded in 1875, and remained in vogue until 1889, when it was made a branch of the M.D. Examination. The former title (D.P.H.) was, therefore, now obsolete, and those gentlemen who had taken it had an unmarketable degree. They desired the M.D. (State Medicine) degree, having formerly passed an examination equal to that now required for it. Two of the graduates who had obtained the D.P.H. were Bachelors of Medicine; it was urged that they should have the M.D. (State Medicine) degree upon passing the examination in Mental Physiology of the present M.D. degree, that being the only subject of the M.D. Examination in which they had not been hitherto examined.—Dr. S. THOMPSON asked if there was any precedent for such a proposition.—Dr. COLLINS said that there was one in the case of matriculation. Formerly, women were simply allowed to pass an examination in Arts, and were not admitted to Matriculation. When women were admitted to this examination, those who had formerly passed in Arts were allowed to rank amongst matriculated students. This question of the diplomates in Public Health was, therefore, not only one of equity, but also of precedent.—Dr. M. BAINES seconded the proposition, which was carried unanimously.

Examiners for the Matriculation Examination.—Mr. H. A. NESBITT moved: "That, in the opinion of Convocation, it is desirable that special examiners should be appointed to conduct the Matriculation examination."—Dr. NAPIER seconded the proposition.—Mr. TYLER proposed as an addition to the motion: "That the questions of the honours division at Matriculation and of moderators be referred back to the Annual Committee."—Mr. LYNE seconded the amendment.—Mr. FITCH defended the present system. The numbers to be examined being very great, the Senate had already appointed assistant examiners, who first examined the papers and then reported to their chiefs. The chiefs then examined the papers of all those proposed for the honours division and of those whom it was proposed to reject. The questions also, before being actually set, were always submitted to certain members of the Senate supposed to be specially conversant with their subjects, and these members often proposed the omission or amendment of the questions about to be set. He thought it also better that there should be uniformity from the lowest to the highest grades, and that, therefore, the same examiners should set all the papers. Every examining paper, too, should not only find out the good moderate men who had done enough to pass, but should also contain a few stiff questions that would enable the higher student to exhibit his knowledge and stimulate him to higher work.—The discussion was continued by Mr. THORNTON, Dr. WEYMOUTH, Dr. O'REILLY, and Mr. PAUL.—Dr. SILVANUS THOMPSON thought examination papers should not only find out the two things mentioned by Mr. Fitch, but should also discover the ability of the examinees as well as the amount of knowledge they had gained. He thought the University would gain if special examiners for the Matriculation examination were appointed.—Mr. HINTON, Mr. GERRARD, and Sir P. MAGNUS having spoken, Mr. NESBITT replied.—Mr. TYLER withdrew his amendment, whereupon the original proposition was carried by a large majority.

The House shortly afterwards adjourned.

EDINBURGH.

STUDENTS' REPRESENTATIVE COUNCIL.—At a statutory meeting of this Council, held on January 17th, a letter was read from the Lord Rector (Mr. Goschen) with reference to the appointment of the Rector's Assessor to the University Court. A clause in the Universities (Scotland) Act of 1889 recognises the interest of the Council in the appointment of that Assessor, and Mr. Goschen requested that two or three suitable names might be put before him. In response to this the name of Lord Stormonth Darling was proposed and unanimously agreed to; no other name was suggested.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in Anatomy and Physiology at a meeting of the Examiners on Thursday, January 15th:

D. S. Owen, A. J. Russell, A. E. Kennedy, and H. P. V. Wiggins, students of London Hospital; F. E. Reynolds and J. E. H. Davies, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; A. W. Quait, of St. Thomas's Hospital; A. Murdock, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; J. A. Procter and J. P. Atkinson, of King's College; A. W. Denny, of Charing Cross Hospital; A. H. M. Hood and H. Witham, of Westminster Hospital; and J. D. Seller, of St. Mary's Hospital.

Passed in Anatomy only.

W. H. Read, of Grant Medical College and King's College; J. J. Culmer and A. Alexander, of Guy's Hospital; E. C. Pern, of St. Thomas's Hospital; W. E. E. Powles, of London Hospital; C. W. Williams and D. D. Brown, of St. Bartholomew's Hospital.

Passed in Physiology only.

J. B. Bettington and G. H. Steele, of Guy's Hospital; H. W. Clarke, of St. Mary's Hospital; G. R. Hannon, of King's College; F. W. J. Goodhue, of St. Thomas's Hospital; C. Corben, of St. Bartholomew's Hospital; and P. C. Spark, of Charing Cross Hospital.

Passed in Physiology only on January 16th.

B. E. Church and P. T. Jones, of St. Bartholomew's Hospital; C. M. Welburn, A. W. C. Lindsay, C. M. Smith, and J. A. Edsell, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; H. Andreae, of University College; W. F. C. Dowding and H. N. N. Dodd, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; E. E. S. Silver, J. G. B. Coleman, E. S. Tuck, and A. B. Creak, of Guy's Hospital; W. Pell, G. E. Kinnersley, F. W. Mason, and W. G. Macauley, of St. Thomas's Hospital; G. R. Swinhoe, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; F. Whitelaw, of St. Mary's Hospital; G. E. Williams, of London Hospital; W. H. Gossage, of Westminster Hospital; and C. M. S. Farnum, of King's College.

Passed in Anatomy only on January 13th.

F. B. Webster.

OBITUARY.

GEORGE GULLIVER, M.A., M.B.Oxon., F.R.C.P.,

Senior Assistant Physician to St. Thomas's Hospital, and Physician to the London Fever Hospital.

Dr. George Gulliver, whose premature death we announced with much regret in the British Medical Journal of January 17th, was born at Windsor in 1851. He was the only son of the late Mr. Gulliver, F.R.S., at one time surgeon to the Royal Horse Guards, who was distinguished for his classical researches on the blood, lymph, and chyle, and who contributed largely to other subjects in physiology and to various branches of natural history. He was also a member of the Council of the Royal College of Surgeons, professor of comparative anatomy and physiology to the College, and Hunterian orator. It is of interest to note that the home of the Gullivers was at Banbury in Oxfordshire, where Dean Swift records that he had seen the tombs and monuments of the Gullivers.

Dr. George Gulliver was educated at King's School, Canterbury, and subsequently entered at Pembroke College, Oxford. He took his degree of B.A. in 1873, obtaining a first class in the natural science school. He was a friend and pupil of the late Professor Rolleston, and under him he acted as Demonstrator of Anatomy. On the recommendation of Professor Rolleston, Dr. Gulliver, whilst an undergraduate, was appointed Naturalist to the Transit of Venus Expedition. On his return he contributed to the *Philosophical Transactions* a "Report on the Zoology of the Island of Rodriguez," for which he received the thanks of the Royal Society. In 1875 he entered as a student at St. Thomas's Hospital, and four years later he was admitted a Member of the Royal College of Surgeons, and took the degrees of M.A., M.B.Oxford. Later, he served as Clinical Assistant to the Hospital for Consumption, Brompton, and to the City of London Hospital for Diseases of the Chest. At both these institutions he formed friendships which were only ended by his untimely death. His marked professional attainments and his personal qualities were soon recognised at St. Thomas's Hospital. During the years 1880 and 1881 he held the joint offices of Resident Assistant Physician and Medical Registrar. He was elected Assistant Physician in 1882, and two years later, when Mr. Charles Stewart transferred his services to the College of Surgeons, he was appointed Lecturer on Comparative Anatomy, a post for which he was eminently fitted by his early associations with his distinguished father, and subsequently by his studies at Oxford. He was elected a Fellow of the Royal College of Physicians in 1886, his Membership dating 1881.

In July, 1883, Dr. Gulliver was despatched by the Foreign Office to Egypt, where cholera was epidemic. He was attached at first to the Ibrahim Pacha Hospital at Cairo, but shortly afterwards, at his own request, he was transferred to Assouan to supervise the reorganisation of sanitary matters. On his return he read a valuable paper on the "Etiology and Pathology of Cholera" before the Epidemiological Society.

Dr. Gulliver was a Fellow and Member of various medical and scientific societies, to which he occasionally contributed. Among his writings may be mentioned Syphilitic Ulceration of Trachea, Cysticerci of Brain, Malignant Growth of Thyroid in Myxœdema, which appeared in the *Transactions of the Pathological Society*. To the *St. Thomas's Hospital Reports* he contributed the Statistical Medical Reports for 1880 and 1881, and papers on Ulcerative Endocarditis after Acute Pneumonia, and Gangrene of Lung. In 1888 he contributed a paper on the Structure of Pelomyxa palustris to the *Journal of the Royal Microscopical Society*. A few weeks before his death he had agreed, at the request of a firm of publishers, to write a treatise on fevers, a task for which his position as Physician to the London Fever Hospital gave him unrivalled facilities.

Dr. Gulliver was an excellent clinical observer and physician, and took a keen interest in his work as demonstrator of morbid anatomy at St. Thomas's Hospital. Outside his purely professional work his chief scientific study was comparative anatomy. His knowledge of this subject was thorough and essentially practical. He loved to spend his Sunday afternoons at the gardens of the Zoological Society, of which he had long been a Fellow. There he would entertain his intimate friends with pithy and quaint comments on the nature and habits of the various animals. He was well versed in English literature, and was the possessor of much general knowledge. He was deeply interested in ecclesiastical architecture, for which, no doubt, he acquired a taste when resident at Canterbury.

Dr. Gulliver was a man of retiring and reserved manners. His opinions, however, on persons and things were usually very pronounced, though he rarely gave expression to them in public. This was due, partly to his dislike for public disputation and partly to motives of generosity. To his personal friends, however, he would express himself with characteristic brevity and point, and would defend his views with skill and tenacity. In his friendships no man was more staunch, and few could rival him in hospitality and generosity. He was very popular with those who knew him well, and at the Savile Club, where he was a frequent visitor, his loss will be keenly felt by a large circle. Within the last year he had been elected a member of the Athenæum Club.

Dr. Gulliver was of medium height and spare build, and, although not robust, enjoyed good health up to the time of his fatal illness. He was taken suddenly ill on January 3rd, and there is little doubt that the malady was due to the extreme severity of the weather. It was soon apparent that the disease was acute pneumonia, and to this he succumbed on January 11th, the eighth day from the onset. Five days later he was laid by the side of his father in the ancient churchyard of Nackington, a hamlet near Canterbury. The burial service was read by the Rev. J. Grant Mills, the Hospitaller of St. Thomas's Hospital. Among those present to honour his memory were Mr. Nettleship, the Dean of the Medical School of St. Thomas's Hospital; Mr. Makins, the Vice-Dean; Dr. Sharkey, Mr. Bernard Pitts, Mr. Ballance, Dr. Hadden, and Dr. Gogarty, physician to the Kent and Canterbury Hospital.

Dr. Gulliver was unmarried. His aged mother, whose constant companion he was, survives to mourns his loss.

THOMAS GRAHAM BALFOUR, M.D., F.R.C.P., F.R.S.,

Surgeon-General (Retired).

Dr. Graham Balfour, whose death we regret to have to announce, was born on March 18th, 1813. He came of a family well known in the neighbourhood of Edinburgh, settled at Pilrig House between Edinburgh and Leith; one of its members, Dr. Balfour's great grandfather, was a well known professor in the University of Edinburgh. Graham Balfour, almost as a matter of course, was sent first to the High School of Edinburgh, and afterwards to the University; for a short interval, however, he attended the then newly established Academy. During his undergraduate days in the University, the great men who had earned for Edinburgh the title of the modern Athens, or had at least maintained its right to that proud designation, were still to be seen in its streets—Walter Scott, Jeffrey, Cockburn; and among the holders of chairs in the University were Wilson, Alison, Chalmers, and Christison, the last named still a young man.

During this period of his life Graham Balfour made himself acquainted with many of the most picturesque parts of Scot-

land, and spent many holidays also at the manse of Colinton, where the old minister, who was Dr. Balfour's uncle and Mr. R. Louis Stevenson's grandfather, lived the life which the latter has so well described. Among other friends of this time was Dr. John Brown, the author of *Rab and His Friends*, and with this amiable and accomplished man Dr. Balfour maintained a friendship only ended by Dr. Brown's death a few years ago.

Graham Balfour took the degree of M.D. in the University of Edinburgh in 1834; in 1836 he entered the army, and was immediately gazetted to the staff in order to assist in the work of digesting the medical returns of the army, which had been accumulating at headquarters since the era of Waterloo. The direction of this work was at first confided to Dr. Henry Marshall, but on his retirement on account of ill-health it was carried on by his two assistants, Dr. Graham Balfour and Lieutenant (afterwards Sir Alexander) Tulloch. The first fruits of their labours were published in the four volumes with the general title *Statistics of the British Army*.

In 1840 Dr. Balfour was gazetted Assistant Surgeon to the Grenadier Guards, and for eight years served with the 3rd Battalion, and in 1848 was promoted to be Surgeon of the Duke of York's Asylum for Soldiers' Orphans at Chelsea. In 1847 he and Lieutenant-Colonel Tulloch began another volume of statistics, which was published in 1853, but the Crimean war then put an end for the time to this work. In 1855 Dr. Balfour appeared with Colonel Tulloch at the numerous meetings of the Commission appointed to investigate the report made to the Special Commissioners nominated when the Medical and Commissariat services broke down under the strain of the Crimean war; and in 1857 he was appointed Secretary to the Commission, presided over by the Right Honourable Sidney Herbert, directed to inquire into the regulations affecting the sanitary conditions of the army and the organisation of military hospitals and the treatment of the sick and wounded. This Committee sat for a year, and by its report brought about a complete reorganisation of the Army Medical Department, and had the reforms then introduced been maintained, the Army Medical Service would probably be at the present day as contented as it was for many years after. When, however, military advisers had succeeded in whittling away nearly all the wise arrangements of Sidney Herbert's Committee, we again find Dr. Balfour's services requisitioned, and he acted on Lord Camperdown's Committee as the representative of the Royal College of Physicians of London.

When the Statistical Branch of the Army Medical Department was formed in 1859, Dr. Balfour, who had been promoted Deputy Surgeon-General, was placed in charge, and for fourteen years he continued to edit the statistical reports of the army, which are among the most precious data not only of the military administrator, but of epidemiologists in general.

The other official employments of Dr. Balfour may be briefly summarised: In 1867 he represented the War Office at the International Statistical Congress at Florence, and was chosen President of the Section for Naval and Military Hygiene. He was promoted Surgeon-General in 1873, and, after a short period in charge of Netley Hospital, he went to Gibraltar. In 1876 he retired, after forty years' service.

Since his retirement Dr. Balfour has resided mostly at Wimbledon, but has taken an active share in the work of scientific London. In 1888 he was chosen President of the Statistical Society; in 1889 he again took part in the labours of the Statistical Congress which met that year in Paris. He became a member of the Metropolitan Asylums Board in 1890, and served upon the Statistical Committee and the South-Western Hospital Committee.

Dr. Balfour received from various learned societies testimony of the esteem in which he was held as a man of science. He was elected a Fellow of the Royal Society in 1859; he was a foreign correspondent, member of the Académie Royale de Médecine de Belgique, and, before his election as President, had thrice served as Vice-President of the Statistical Society. He became a Fellow of the Royal College of Physicians in 1860, under the provisions of its new charter; he served from 1862 on the Special Committee of the College for the Nomenclature of Diseases, and subsequently on the Council. In 1887 he was appointed Honorary Physician to the Queen.

J. G. F. BAILLARGER, M.D.,

Formerly President of the Paris Academy of Medicine.

Jules Gabriel François Baillarger, one of the leading alienists of France, died on December 31st, 1890. He was born at Montbazon (Indre et Loire) in 1809, and took his Doctor's degree at Paris in 1837. He had been *interne* at Charenton under Esquirol, and this circumstance determined his subsequent career. In 1840 he was appointed Physician to the Salpêtrière, where for twenty years he delivered clinical lectures, which never failed to attract large audiences. At the same time he was associated with Esquirol, and afterwards with Moreau, in the direction of the lunatic asylum at Ivry. In 1847 he became a member of the Academy of Medicine, of which he was chosen President in 1878.

Baillarger was the founder of the Société Médico-Psychologique and of its organ, the *Annales Médico-Psychologiques*. He contributed to medical literature many important papers on general paralysis and its premonitory symptoms, psychical and psycho-sensorial hallucinations, melancholia, goitre and cretinism, etc. He received a prize from the Academy of Medicine for some communications submitted to it in the early part of his career on the structure of the cortical layer of the brain, pellagrous paralysis, etc.

In addition to his scientific eminence, Baillarger was distinguished for his public spirit on behalf of the profession to which he belonged. He was the founder of the Association Mutuelle des Médecins Aliénistes, and his kindness of heart and generosity made him widely beloved. He was the most charitable of men, but was careful to conceal his good works even from those nearest to him. His funeral was attended by a large number of members of the Academy of Medicine, and a funeral oration was delivered by M. François-Franck in the name of that distinguished body.

GIAMBATTISTA BORELLI, M.D.,

Senator of the Kingdom of Italy.

Dr. Giambattista Borelli, a leading Italian surgeon, who died on January 10th, was born at Boves, in North Italy, in 1813. After graduating in medicine and surgery at Turin, he was appointed Surgeon to the Mauriziano Hospital in that city, a post which he held for forty-six years. He published a considerable number of papers on hernia, angular ankylosis of the knee, nasal polypi, tumours of the mouth, etc. He was awarded a gold medal of the value of 500 francs by the Medical Society of Toulouse for a prize essay on iodine injections.

In addition to his professional labours, Borelli was for many years editor of the *Gazzetta Medica di Torino*, which at that time bore the title of *Gazzetta Medica degli Stati Sardi*, and in 1858 he founded, and for fifteen years edited, the *Giornale d' Oftalmologia Italiana*, the first periodical in Italy devoted to ophthalmology. He was three times chosen by the Turin Academy of Medicine to represent it at Ophthalmological Congresses at Paris, Brussels, and elsewhere.

He represented his native town in the Italian Chamber of Deputies for some years, and in 1881 he was named a Senator of the Kingdom. In the domain of politics he was no less active with his pen than in the purely professional sphere. He wrote much on political, economic, and social subjects, some of his publications making a considerable stir at the time.

Borelli was a member of many scientific societies, Italian and foreign, and he received many other marks of distinction. Among these was the Cross of the Legion of Honour, which was conferred on him by Napoleon III for the attention which he bestowed on the French wounded after the battles of Palestro and Magenta. One of the patients who came under his hands at that time was General Boulanger, then only a sub-lieutenant.

Borelli was a man of great benevolence, and laboured strenuously to improve the condition of the "masses." He probably prized far more than all his other honours and dignities the title of "Padre dei Poveri" (Father of the Poor), by which he was known at Turin.

According to a recent enumeration, the number of doctors in Vienna is 1,315. This number does not include 177 medical men practising in the suburbs. The proportion of doctors to inhabitants is about 1 to every 1,000.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1890.

THE vital and mortal statistics of the twenty-eight great English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending December last 73,111 births were registered in these twenty-eight towns, equal to an annual rate of 28.0 per 1,000 of their aggregate population, estimated at nearly nine and three-quarter millions of persons. In the corresponding periods of the preceding three years the birth-rate in these towns was 31.8, 30.6, and 30.0 per 1,000 respectively. In London the birth-rate last quarter was equal to 27.2 per 1,000, while it averaged 28.7 in the twenty-seven provincial towns, and ranged from 21.4 in Brighton and in Huddersfield, and 22.4 in Nottingham to 33.8 in Sunderland, 36.5 in Cardiff, and 39.3 in Newcastle-upon-Tyne.

During the quarter under notice 57,566 deaths were registered in the twenty-eight towns, equal to an annual rate of 22.1 per 1,000, against an average rate of 20.8 in the corresponding periods of the preceding eight years, 1882-89. In London the rate of mortality was 21.3 per 1,000, while it averaged 22.7 in the twenty-seven provincial towns. The rates in these provincial towns ranged from 16.5 in Derby, 17.8 in Nottingham, 17.9 in Hull, and 18.4 in Leicester to 25.3 in Blackburn, 25.9 in Bolton, 31.4 in Manchester, and 31.7 in Preston.

The 57,566 deaths in the twenty-eight towns last quarter included 7,402 which were referred to the principal zymotic diseases, equal to an annual rate of 2.8 per 1,000; in the fourth quarter of the preceding eight years, 1882-89, the zymotic death rate in these towns averaged 2.5 per 1,000. The lowest zymotic death rates in the twenty-eight towns last quarter were 0.9 in Derby, 1.4 in Huddersfield, and 1.7 in Plymouth, in Wolverhampton, and in Hull; while they ranged upwards in the other towns to 4.3 in Salford, 5.0 in Birkenhead, 5.2 in Manchester, 5.4 in Bolton, and 6.7 in Preston. The 7,402 deaths referred to the principal zymotic diseases included 2,300 which resulted from measles, 1,781 from diarrhœa, 914 from scarlet fever, 906 from whooping-cough, 781 from diphtheria, 720 from "fever" (principally enteric), and not one from small-pox. The 2,300 fatal cases of measles recorded in the twenty-eight towns during the last three months of 1890 were equal to an annual rate of 0.88 per 1,000, which showed a marked increase upon the rates in recent quarters, and with one exception exceeded the rate in the corresponding period of any year on record. The rate of mortality from this disease in London was 0.87 per 1,000, and differed but slightly from the mean rate in the twenty-seven provincial towns, among which measles showed the highest proportional fatality in Manchester, Oldham, Birkenhead, Preston, and Bolton. The 1,781 deaths referred to diarrhœa were equal to an annual rate of 0.68 per 1,000, which was higher than in the corresponding period of any year on record. In London the diarrhœa death-rate did not exceed 0.43 per 1,000, while it averaged 0.90 in the twenty-seven provincial towns, and was highest in Hull, Manchester, Bolton, Blackburn, and Preston. The 914 fatal cases of scarlet fever were equal to an annual rate of 0.35 per 1,000, which showed a slight further increase upon the rates in the preceding two quarters, but was considerably below the average rate in the corresponding periods of the previous eight years, 1882-89. In London the rate of mortality from scarlet fever was only 0.25 per 1,000, while it averaged 0.43 in the twenty-seven provincial towns, among which this disease showed the highest proportional fatality in Sunderland, Halifax, Manchester, Sheffield, and Liverpool. The number of scarlet fever patients in the Metropolitan Asylum Hospitals, which had been 1,035, 1,166, and 2,059 at the end of the first three quarters of the year, had declined to 1,549 at the end of December last; the admissions, which had increased from 1,001 to 2,059 in the preceding three quarters, further rose to 2,278 during the last three months of 1890. The 906 deaths from whooping-cough were equal to an annual rate of 0.35 per 1,000, which showed a further decline from the rates in recent quarters, and was below the average rate in the preceding eight December quarters. In London the whooping-cough death-rate was 0.35 per 1,000, and corresponded with

Public Health Statistics relating to Twenty-eight Large English Towns, for the Fourth Quarter of 1890.

Towns.	Estimated Population middle of 1890.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Rate per cent. of Uncertified Deaths.	Deaths of Children under one year of age to 1,000 Births.
28 Towns	9,715,559	73,111	57,566	28.0	22.1	2.8	7,402		2,300	914	781	906	720	1,781	2.2	189
27 Provincial Towns	5,293,898	40,843	32,315	28.7	22.7	3.1	4,387		1,261	618	287	496	443	1,273	3.1	201
London	1,421,661	32,268	25,251	27.2	21.3	2.5	3,019		1,041	296	491	410	277	508	1.0	175
Brighton	123,659	709	616	21.4	18.6	2.3	77		11	3	1	5	4	17	3.7	169
Portsmouth	142,952	1,174	791	30.6	20.6	2.0	78			6	28	4	20	20	1.0	147
Norwich	95,352	768	591	30.0	23.2	3.4	87		10	1	12	32	12	20	1.3	202
Plymouth	78,780	621	495	29.4	23.4	1.7	36		7	3	2	—	10	14	1.0	188
Bristol	232,248	1,623	1,238	26.0	19.9	2.1	133		70	9	4	9	11	30	2.3	169
Wolverhampton	83,106	650	481	29.5	21.6	1.7	38		14	1	1	2	3	14	1.2	209
Birmingham	461,805	3,484	2,518	28.1	20.3	2.1	265		26	11	25	67	17	89	3.7	202
Leicester	154,341	1,132	761	27.3	18.4	2.2	93		24	11	4	9	9	36	1.8	217
Nottingham	211,909	1,171	1,168	22.4	17.8	2.0	133		52	12	6	11	27	55	1.5	187
Derby	100,871	668	416	21.7	16.5	0.9	25		1	1	6	1	4	9	0.9	154
Birkenhead	105,019	826	680	29.3	24.1	5.0	140		70	6	6	17	22	19	1.5	218
Liverpool	613,163	4,367	3,972	26.5	24.1	3.1	506		19	224	25	56	57	115	7.0	210
Bolton	115,846	877	805	28.2	25.9	5.4	167		85	9	2	9	10	51	2.6	210
Manchester	379,437	3,268	3,201	32.1	31.4	5.2	532		221	70	36	39	59	127	1.9	211
Salford	242,509	1,783	1,501	27.1	23.1	4.3	278		71	36	51	21	53	63	3.1	221
Oldham	146,716	1,017	930	25.8	23.6	3.5	138		86	6	1	9	7	26	1.9	218
Blackburn	123,553	992	840	29.9	25.3	2.9	95		11	8	1	4	11	60	3.7	249
Preston	105,103	913	891	32.3	31.7	6.7	190		70	7	6	25	12	70	4.3	286
Huddersfield	94,253	541	502	21.4	19.8	1.4	35		1	2	3	11	6	9	1.0	187
Halifax	82,034	567	535	25.7	25.2	2.8	61		17	14	3	9	8	10	5.6	228
Bradford	210,515	1,508	1,316	23.4	20.4	3.8	245		122	23	3	19	15	63	1.4	214
Leeds	363,799	3,098	2,134	31.7	21.8	2.9	284		76	19	13	31	50	95	1.0	178
Sheffield	332,837	2,886	2,174	32.3	24.3	4.0	358		110	67	18	42	28	93	5.2	212
Hull	213,833	1,783	1,025	31.1	17.9	1.7	99		8	2	6	6	12	65	4.3	158
Sunderland	136,506	1,237	851	33.8	23.2	2.9	107		5	23	1	26	16	36	0.7	208
Newcastle-on-Tyne	102,987	1,720	1,073	39.3	24.5	1.9	84		1	3	11	20	7	37	2.0	163
Cardiff	117,012	1,117	748	36.5	23.8	3.2	99		11	5	3	12	10	30	2.5	191

the mean rate in the provincial towns, among which it was highest in Birmingham Birkenhead, Sunderland, and Preston. The 781 fatal cases of diphtheria were equal to an annual rate of 0.30 per 1,000, against 0.20 and 0.21 in the preceding two quarters: this rate exceeded that in any corresponding quarter on record. In London the rate of mortality from diphtheria was as high as 0.42 per 1,000, while it averaged only 0.20 in the twenty-seven provincial towns, among which, however, this disease showed excessive fatality in Newcastle-upon-Tyne, Manchester, Salford, Norwich, and Portsmouth. The 720 deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever) were equal to an annual rate of 0.28 per 1,000, which, although it showed a further increase upon the exceptionally low rates in the preceding two quarters, was below the average in the corresponding periods of the previous eight years. In London the rate of mortality from "fever" during the quarter under notice was 0.23 per 1,000, while it averaged 0.31 in the twenty-seven provincial towns, and was highest in Leeds, Portsmouth, Salford, and Birkenhead. Not a single case of small-pox was registered during the three months ending December last, either in London or in any of the provincial towns; and only one small-pox patient was under treatment during the quarter in the Metropolitan Asylum Hospitals.

The rate of infant mortality in the twenty-eight towns, measured by the proportion of deaths of children under one year of age to registered births, was equal to 189 per 1,000, and considerably exceeded the rate in the corresponding period of any year on record. In London the rate of infant mortality was 175 per 1,000, while it was as high as 201 in the twenty-seven provincial towns, among which it ranged from 147 in Portsmouth, 154 in Derby, 158 in Hull, and 163 in Newcastle-upon-Tyne to 221 in Salford, 228 in Halifax, 248 in Oldham, 249 in Blackburn, and 286 in Preston.

The causes of 1,261, or 2.2 per cent., of the deaths registered in the twenty-eight towns during the fourth quarter of 1890 were not certified, either by registered medical practitioners or by coroners. The proportion of uncertified deaths in London was 1.0 per cent., while it averaged 3.1 in the twenty-seven provincial towns, among which it ranged from 0.7 in Sunderland, 0.9 in Derby, and 1.0 in Portsmouth, in Plymouth, and in Leeds to 4.3 in Preston and in Hull, 5.2 in Sheffield, 5.6 in Halifax, and 7.0 in Liverpool.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, which have an estimated population of 10,010,426 persons, 6,077 births and 5,240 deaths were registered during the week ending Saturday, January 17th. The annual rate of mortality in these towns, which had been 28.7 and 28.1 per 1,000 in the preceding two weeks, further declined to 27.3 during the week under notice. The rates in the several towns ranged from 11.9 in Hull, 17.7 in Derby, 19.0 in Nottingham, and 19.1 in Brighton to 29.9 in Bristol, 31.4 in Preston, 35.0 in Manchester, and 35.2 in Halifax. In the twenty-seven provincial towns the mean death-rate was 25.8 per 1,000, and was 3.4 below the rate recorded in London, which was 29.2 per 1,000. The 5,240 deaths registered during the week under notice in the twenty-eight towns included 404 which were referred to the principal zymotic diseases, against numbers increasing from 472 to 485 in the preceding three weeks; of these, 141 resulted from measles, 113 from whooping-cough, 54 from scarlet fever, 35 from diphtheria, 32 from "fever" (principally enteric), 29 from diarrhœa, and not one from small-pox. These 404 deaths were equal to an annual rate of 2.1 per 1,000; in London the zymotic rate was 1.8, while it averaged 2.3 in the twenty-seven provincial towns, among which it ranged from 0.2 in Hull, 0.5 in Derby, 0.7 in Plymouth, and 1.1 in Portsmouth to 3.8 in Oldham, 4.2 in Salford, 4.4 in Preston, and 5.0 in Halifax. Measles showed the largest proportional fatality in Leeds, Bolton, Oldham, Halifax, and Preston; whooping-cough in Preston, Huddersfield, Sunderland, Leicester, Salford, and Birmingham; and "fever" in Norwich. The mortality from scarlet fever showed no marked excess in any of the large towns. Of the 35 deaths from diphtheria recorded during the week, 23 occurred in London, 3 in Manchester, 2 in Birmingham, and 2 in Salford. No death from small-pox was registered during the week, either in London or in any of the twenty-seven provincial towns; and one small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday, January 17th. These hospitals contained 1,434 scarlet fever patients on the same date, against numbers declining from 2,024 to 1,483 at the end of the preceding ten weeks; 106 new cases were admitted during the week, against 101 and 89 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 11.8 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, January 17th, 884 births and 729 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 20.1 to 28.8 per 1,000 in the preceding five weeks, declined again to 27.8 during the week under notice, but was 0.5 per 1,000 above the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Leith and Edinburgh, and the highest in Glasgow and Paisley. The 729 deaths registered in these towns during the week under notice included 53 which were referred to the principal zymotic diseases, equal to an annual rate of 2.1 per 1,000, which corresponded with the mean zymotic rate during the same period in the large English towns. The highest zymotic rates were recorded in Glasgow, Paisley, and Greenock. The 364 deaths registered in Glasgow included 12 which were referred to whooping-cough, 6 to measles, 3 to scarlet fever, and 3 to diphtheria. Two fatal cases of diphtheria occurred in Edinburgh, and 4 of measles in Greenock. The death-rate from diseases of the respiratory organs in these towns was equal to 8.7 per 1,000, against 11.8 in London.

HEALTH OF IRISH TOWNS.

In the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, January 10th, were equal to an annual rate of 31.1 per 1,000. The lowest rates were recorded in Dundalk and Drogheda, and the highest in Dublin and Lurgan. The death-rate from the principal zymotic diseases averaged 2.4 per 1,000. The 244 deaths registered in Dublin were equal to an annual rate of 36.0 per 1,000 (against 31.3 and 40.6 in the preceding two weeks), the rate for the same period being 29.1 in London and 20.1 in Edinburgh. The 244 deaths in Dublin included 15 which were referred to the principal zymotic diseases (equal to an annual rate of 2.2 per 1,000), of which 6 resulted from whooping-cough, 4 from typhoid fever, and 2 from diphtheria.

"UNFIT FOR HABITATION."

D.P.H.CANTAB. writes: As the medical officer of health for a large combined district, I must contest most strongly that a house which is "unsafe from want of stability" is undoubtedly "so dangerous ... as to be unfit for habitation." If this is not so the rural medical officer of health has no power to procure the closure of such a house, unless it be admitted that it is "premises in such a condition as to be a nuisance or injurious to health."

The Housing of the Working Classes Act (Section 30) does not require that a house shall be "so dangerous" to health, but only "so dangerous as to be unfit for habitation, before it becomes my duty to represent it to the sanitary authority. It is clear that Section 4, Subsection (*b*), makes it the duty of the medical officer of health to condemn on account of conditions some of which are there set out, and are of a sanitary character "injurious to health," whilst Subsection (*a*) authorises him to condemn, on account of other conditions which are not set out, and which, it is fair to assume, need not be of a sanitary character, such as defective stability, described simply by the words "unfit for habitation," regardless of their being "injurious to health" from any cause whatever.

I trust the metropolitan medical officers of health will not attempt to define any minimum requirements, for, if they do, such requirements will simply be handed over to property owners and their lawyers to carp at. Let each medical officer of health condemn anything that he thinks fit, and not be afraid to do so. When the magistrate—bred in the lap of luxury, and not with feelings blunted by the constant inspection of the dens of the poor—comes to inspect the place, depend upon it he will not be slow to grant a closing order.

The fact, as stated by you, that a year ago three houses in an East End parish were closed by the magistrate when he visited them, although the medical officer of health thought them in fair order, thoroughly supports my contention.

DIPHTHERIA AND MILK SUPPLY AT SURBITON.

DR. F. P. ATKINSON (Surbiton) writes: I learn that the Metropolitan Dairy Protection Association, on learning that the slight outbreak of diphtheria at Surbiton was said to be due to milk, communicated with the officials of the London County Council, and they immediately set about making inquiries with regard to the supply of the milk in question. The Council, I am given to understand, are now satisfied that the milk has arrived in London in a sound condition, so that, supposing this to be correct, we have no other alternative but to fall back upon the conclusion that defective drainage in some way or other was the chief cause of the epidemic.

INDIA AND THE COLONIES.

INDIA.

THE MEDICAL SERVICES OF INDIA.

For years past the Government of India has been engaged in the congenial task of cutting down the administrative ranks of the two medical services. The work goes on apace. The last operation in this direction has been the reduction of two deputy surgeons-general in the Army Medical Staff and two in the medical department of the Indian army. The duties of the reduced officers are to be taken in all second class districts by brigade-surgeons.

The first scheme of the authorities was to make the brigade-surgeons have charge of the station hospitals at headquarters and be medical advisers to the officers in command, but not to be considered in the strict sense of the term administrative officers; the deputy surgeons-general

from the nearest first class district having, in addition to their own duties, to visit the second class districts for boards and inspections. This scheme was not communicated to the surgeons-general of either service until it was made public. As usually happens when this course is followed, this "cheap" scheme was found to be "nasty;" it would not work.

The second scheme is believed to be that the brigade-surgeons are to be administrative officers in the second class districts—in other words, to do the duty of deputy surgeons-general on a reduced salary. This means a stoppage of promotion and so much money taken from the department.

Another scheme is on foot, rumours of which have been in the air for some time. This is to reduce the number of the medical service of India, to convert it into a purely civil service, and to hand over the medical duties of the native army to the Army Medical Staff in addition to their own duties without additional pay. This is surely a flagrant breach of faith. We do not see how such extra duties can be imposed on the Medical Staff in this manner in the face of the terms under which many entered the British army. It is equally a gross injustice to the sister service, inasmuch as under this scheme its members, reduced to a civil department, can never hope to enjoy the advantages held out to them in the Government prospectus, the document on the terms of which they entered the service. We cannot see how a scheme of this kind can be made retrospective without, as we have said, a distinct and quite intolerable breach of faith. At all events, it is our plain duty to make the information that has reached us known in the schools, and, above all, to stimulate the medical members of the House of Commons to elicit the facts of the case, as affecting both services, by questions addressed in the proper quarter.

Cremation. The supporters of cremation in England will, no doubt, be encouraged to learn that the practice, which was hitherto confined to Hindus in India, is now being introduced among the Buddhists in that country and in Ceylon.

Medical Aid for Women.—The year's work of the National Association for Providing Female Medical Aid for the Women of India, judging from the second report which has just been issued, has been of a highly satisfactory character. Four scholarships (three in London and one at Edinburgh) are offered this year to ladies who will qualify themselves for the association, and two ladies—namely, Miss A. Baumler, M.D., and Miss C. N. Grahame, M.D., have recently gone to take up their duties in India. Ladies serving the fund are likely in future to be kept "in waiting" in India for a time before receiving their definite appointment, an arrangement which will enable them to study languages, as well as native customs and prejudices.

MEDICAL NEWS.

An exhibition of £30 in natural science at Sidney Sussex College, Cambridge, has been awarded to E. M. Corner, of Epsom College.

A synopsis of the additions made in 1890 to the *British Pharmacopœia* of 1885 has been issued as a supplement to the Messrs. Martindale and Westcott's *Extra-Pharmacopœia*.

Dr. A. P. Brubaker has been appointed Professor of Materia Medica and General Therapeutics in Jefferson Medical College, in succession to Dr. Bartholow.

We hear with pleasure that the Swiss Federal diploma, which gives the right of practice, has been granted to Dr. Holland, of St. Moritz. This act on the part of the Swiss authorities ends satisfactorily a long controversy.

Mr. T. Bedford Bolitho, M.P., has sent to the West Cornwall Infirmary his scheme for a convalescent home in memory of his deceased father. He proposes a first endowment of £10,000 for eight beds, and adds that more money is available to make the Edward Bolitho Convalescent Home thoroughly useful.

Dr. Nicholas Senn has resigned the professorship of Surgery and Surgical Pathology in Rush Medical College, Chicago.

Society for Relief of Widows and Orphans of Medical Men.—The quarterly Court of Directors of the Society was held on Wednesday, January 14th, at 20, Hanover Square. The President, Sir James Paget, presided. Five new members were elected; the resignations of two accepted, and the deaths of two reported. An application for a grant was received from a widow, and assistance was given her. It was resolved to distribute £1,418 10s. among the 64 widows, 15 orphans, and 3 orphans on the Copeland Fund now receiving grants. The expenses of the quarter were £80 5s. 6d. The Treasurer announced that a sum of £360 had been given in presents to the widows and orphans at Christmas, and that one orphan had through age ceased to be eligible for further grants.

The British Gynæcological Society.—At the annual meeting of this Society, which took place on Thursday, January 8th, Dr. Routh delivered his valedictory address as President, and the election of officers for the ensuing year was proceeded with. Dr. Grigg was elected President; Dr. Edis, Treasurer, *vice* Dr. Bantock; and Drs. Fenton and Dickenson, Secretaries. The annual report, brought up by the Treasurer (Dr. Bantock), showed that, in spite of unusually heavy expenses for the current year—partly in consequence of the change of residence and partly in connection with legal proceedings against recalcitrant Fellows for unpaid subscriptions—the financial condition of the Society was eminently satisfactory, as was also the steadily increasing number of home and foreign members. Dr. Grigg will deliver the inaugural address, on taking the chair as President, on Thursday, January 22nd.

Odontological Society.—At the annual general meeting of the Odontological Society, on Monday, January 12th, Mr. Felix Weiss, President, in the chair, the following officers for the year 1891 were elected:—President: S. J. Hutchinson, M.R.C.S., L.D.S. Vice-Presidents (Resident): J. Stocken; David Hepburn; T. H. G. Harding; (Non-resident) W. Bowman Macleod, Edinburgh; J. H. Redman, Brighton; R. T. Stack, Dublin. Treasurer: Thomas Arnold Rogers. Librarian: Ashley Gibbings. Curator: Storer Bennett. Editor of the *Transactions:* Walter Coffin. Honorary Secretaries: J. Ackery (Council); W. A. Maggs (Society); F. Henri Weiss. For foreign correspondence: Councillors (Resident): C. S. Tomes, F.R.S.; Willoughby Weiss; W. H. Woodruff; W. Hern; F. Newland Pedley; C. J. Boyd Wallis; F. J. Bennett; Cornelius Robbins; E. G. Betts; (Non-resident) M. de C. Dickinson, St. Leonards-on-Sea; A. A. de Lessert, Aberdeen; Alex. Fothergill, Darlington; W. B. Bacon, Tunbridge Wells; H. B. Mason, Exeter; Mordaunt A. de C. B. Stevens, Paris; T. S. Carter, Leeds; Edmund Binns, Middlesbro'; W. S. Woodburn, Glasgow.

The New Philadelphia Policlinic.—The new buildings recently constructed for the Philadelphia Policlinic and College for Graduates in Medicine have been designed with the view of combining a number of special clinics under one roof in such a way as to facilitate post-graduate teaching of a strictly practical nature. The building is constructed of brick and terra cotta; it has a frontage of 96 feet and a depth of 143 feet. The arrangements for heating and ventilation are most complete, and a special feature—which may be commended to the attention of English architects—is that all the corners in the building are rounded so as to leave no place for the familiar little dust-heaps to accumulate. The Policlinic is at present lighted with gas, but it is intended to have electric illumination as soon as there are sufficient funds for the purpose. It may be well to add that the institution, which is said to be the only one of its kind in the States, does not exist solely for the educational benefit of medical men. Since the opening of the Policlinic, in 1883, something like 30,000 poor patients have been treated in the twelve special departments of which it is composed. In 1889 the number of new cases was 4,607, and the further visits of old patients amounted to 18,006. There is therefore no lack of clinical material for post-graduate teaching in Philadelphia.

MEDICAL VACANCIES.

The following Vacancies are announced:

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon; double qualifications. Applications to Joseph Eastwood, Secretary, 15, Richmond Terrace, Blackburn, by January 27th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238a, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and lights provided. Applications to the Secretary by February 7th.

CHARING CROSS HOSPITAL.—Assistant Surgeon; must be F.R.C.S.Eng., and reside within three miles of the Hospital. Applications to Arthur E. Reade, Secretary, by January 28th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Physician to the Out-patient Department. Applications to A. C. Davis, Secretary, by February 2nd, of whom application forms can be obtained.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant. Salary, £50 for first year, and, if re-appointed, £70 for second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by February 28th.

CITY OF LONDON LUNATIC ASYLUM, near Dartford, Kent.—Assistant Medical Officer, unmarried, not less than 25 years or more than 35 years of age. Salary, £150 per annum, with board, lodging, washing, and attendance. Applications addressed to the Visiting Committee to be sent to the Clerk, Henry F. Youle (of whom the forms of application can be obtained) by February 3rd.

CITY OF WORCESTER.—Medical Officer of Health. Full particulars to be obtained of Samuel Southall, Town Clerk, Guildhall, Worcester, to whom applications should be sent by January 26th.

COUNTY COUNCIL OF AYRSHIRE.—County Medical Officer; must not hold other appointments or engage in private practice, and must reside in Ayr. Salary, £450 per annum. Applications to Chas. G. Shaw, County Clerk, County Buildings, Ayr, by February 2nd.

COUNTY OF DUMFRIES.—Medical Officer. Salary, £300 per annum. Applications to John Robson, County Clerk, Dumfries, by February 2nd, of whom further information can be obtained.

DUNDEE ROYAL LUNATIC ASYLUM.—Resident Clinical Assistant. No salary, but board, etc., provided. Applications to Dr. Rorie, Asylum, Dundee.

DUNDEE ROYAL LUNATIC ASYLUM.—Assistant Medical Officer; unmarried. Salary, £100 per annum, with board, apartments, and washing. Applications to Dr. Rorie, Asylum, Dundee.

FARNHAM UNION.—Medical Officer for the Aldershot District. Salary, £80 per annum. Officer to provide medicines, etc. He will be appointed Public Vaccinator for the District. Applications to Edward M. Seakins, Clerk, South Street, Farnham, by January 28th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon; must possess surgical qualifications; no salary, but residence, board, and washing provided. Applications to J. D. M. Coghill, House-Governor, by January 31st. Election on February 6th.

KENT AND CANTERBURY HOSPITAL, Canterbury.—Assistant House-Surgeon and Dispenser. Must reside in the house and be unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications to Charles S. Read, Secretary, by January 24th.

LANCASHIRE COUNTY ASYLUM, Rainhill, near Liverpool.—Pathological Assistant Medical Officer. Salary, £200 per annum, with furnished apartments, board, attendance, and washing. Applications to the Medical Superintendent.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon; double qualifications. Salary, £70 per annum, with board and residence in the institution. Applications to the Chairman, House Committee, by January 31st.

METROPOLITAN HOSPITAL, Kingsland Road, E.—Dental Surgeon. Applications to C. H. Byers, Secretary, by January 31st.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury.—Surgeon; must be F.R.C.S.Eng. Applications to B. Burford Rawlings, Secretary-Director, by February 5th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant; double qualifications. Salary, £120 per annum. Applications to the Honorary Secretary by January 24th.

PARISH OF TONGUE, Sutherlandshire.—Medical Officer. Salary, £165 per annum, house, garden, and croft available. To enter duties in February. Applications, with certificates, to John Murray, Inspector of Poor, Tongue, Sutherlandshire.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House-Surgeon. Board, lodging, and washing; no salary. Applications, with testimonials by January 28th, addressed to the Chairman, Medical Committee.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—House-Surgeon. Must be medical graduate of a university or member of a college of surgeons of United Kingdom, registered and unmarried. Salary, with board and residence, £70 per annum. Applications to the Chairman of the Committee at the Hospital, Portsmouth, by January 29th.

ST. GEORGE'S HOSPITAL, S.W.—Lecturer on Midwifery. Applications to the Dean by January 31st.

UNIVERSITY OF SYDNEY, N.S.W.—Demonstrator of Physiology. Salary, £350 per annum; £60 allowed for passage expenses to Sydney. Applications to the Agent-General for New South Wales, 9, Victoria Street, S. W. (of whom full particulars can be obtained), by January 31st.

WINCHCOMB UNION, Winchcomb.—Medical Officer for the No. 2 or Vale District of this Union. Salary, £65 per annum, with additional fees. Applications to J. H. Stephens, Clerk, by February 5th.

WORCESTER GENERAL INFIRMARY.—Physician. Applications to be sent addressed to the Executive Committee of the Worcester General Dispensary, under cover to the Secretary, Mr. W. Stallard, Worcester Chambers, Pierpoint Street, Worcester, by February 7th.

MEDICAL APPOINTMENTS.

ADAMS, William, F.R.C.S., appointed Consulting Surgeon to the National Hospital for the Paralysed and Epileptic, Queen Square.

ARBUCKLE, —, M.D., reappointed Medical Officer of Health to the Thorne Rural Sanitary Authority.

BARCLAY, John, M.D.Aberd., reappointed Medical Officer to the St. Brandon Lodge of Oddfellows, Banff.

BALDWIN, Thomas Arthur, B.A., M.D.Dub., L.R.C.S.I., appointed Temporary Medical Officer for the Parish of Cottingham, Hull.

BELL, Thomas F. Wm., M.B., C.M.Aberd., appointed Medical Officer for the Nunneys District of the Frome Union.

BETTS, Frederick Bernard, L.R.C.P.Lond., M.R.C.S.Eng., appointed Junior House-Physician to the Westminster Hospital.

BERRY, James, B.S.Lond., F.R.C.S., appointed Surgeon to the Royal Free Hospital, *vice* F. J. Gant, F.R.C.S., resigned.

BLAYNEY, John H., L.F.P.S., L.M.Glas., appointed Medical Officer of Health to the Great and Little Heatons, Prestwich Union Rural Sanitary Authority.

BRERETON, James Barry, L.R.C.P.I., L.R.C.S.I. & L.M., reappointed Medical Officer to the Gildersome Urban Sanitary Authority.

BRICKWELL, John, M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Stoke District of the Eton Union.

BROWN, Edward, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Sapperton District of the Cirencester Union, *vice* Mr. Palmer, resigned.

CATO, Alexander McLean, L.R.C.P.Lond., M.R.C.S.Eng., appointed Senior House-Physician to the Westminster Hospital.

CHAMPNEYS, Francis Hy., M.D., B.A.Oxon., F.R.C.P.Lond., M.R.C.S.Eng., appointed Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital.

CROSSE, Reginald E., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Norfolk and Norwich Hospital, Norwich, *vice* H. C. Nance, M.R.C.S., L.R.C.P.

DEAN, Hy. Percy, B.Sc.Lond., M.B., appointed Surgical Registrar to the London Hospital Medical College.

DENNING, Robert Nickle, M.D., B.A.Dub., L.R.C.S.I., reappointed Medical Officer for the Elland Urban District.

DERRY, Bartholomew Gidley, M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the District of the Bodmin Urban Sanitary Authority.

DODS, Louis F., L.S.A.Lond., appointed Deputy Medical Officer to the Bagbrooke District of Northampton Union.

DOUGLAS, A. R., L.R.C.P., L.R.C.S., appointed Assistant Medical Officer to the East Riding Asylum, Beverley.

EAST, C. H., M.D., appointed Medical Officer to the Kentchurch District and Workhouse of the Abbeydore Union.

EVANS, Willmott H., M.D.Lond., F.R.C.S.Eng., B.S. & B.Sc Lond., appointed Registrar (Medical and Surgical, to the Royal Free Hospital, Gray's Inn Road, *vice* Mr. E. W. Roughton.

FOWLER, R. S., F.R.C.S.Edin., appointed Consulting Surgeon to the Royal United Hospital, Bath.

GANT, Fredk. Jas., F.R.C.S.Eng., appointed Consulting Surgeon to the Royal Free Hospital, Gray's Inn Road.

GRIFFITH, Walter S. A., M.D.Camb., M.R.C.P.Lond., F.R.C.S.Eng., appointed Assistant Physician-Accoucheur to St. Bartholomew's Hospital.

HANDS, Arthur, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Cottage Homes of the Wolverhampton Union.

HAWKINS-AMBLER, George A., L.R.C.P., L.M.Irel., M.R.C.S.Eng., appointed District Medical Officer and Public Vaccinator to the Kirkburton District of the Huddersfield Union, *vice* H. A. Lowndes.

HOUSLEY, John, M.D.St.And., M.R.C.S., reappointed Medical Officer to the Worksop Urban Sanitary Authority.

JENNER, William, M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer of Health for the Baldock Urban District, Herts.

KILNER, Dr. Charles Scott, appointed Honorary Assistant Medical Officer to the Suffolk General Hospital, Bury St. Edmunds, *vice* Dr. F. E. Image, resigned.

KNAPP, Edward M. Molineux, L.R.C.P., L.M.Edin., M.R.C.S.Eng., appointed Medical Officer of Health for the Rural Sanitary District of the Ross Union.

LIMRICK, Wm. Somerville, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health for the Waterloo-with-Seaforth and Great Crosby Urban Districts.

OWEN, J. Lewis, M.R.C.S., appointed House-Surgeon to the Denbighshire Infirmary, Denbigh, *vice* Dr. D. G. Evans.

PUGH, John Williamson, M.R.C.S.Eng., L.S.A., M.B.Univ.Lond., appointed Medical Officer to the Eastern District of the Parish of Brighton, *vice* Mr. John Morris.

ROUGHTON, Edmund W., B.S., M.D.Lond., F.R.C.S., appointed Assistant-Surgeon to the Royal Free Hospital, Gray's Inn Road.

ROUSE, E., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Barnstaple Port Sanitary District of the Barnstaple Union.

SCHORSTEIN, G. J., M.B., B.S.Oxon., appointed Assistant Demonstrator of Anatomy to the London Hospital Medical College, *vice* H. P. Dean.

SCOTT, Richard J. H., F.R.C.S.Edin., appointed Surgeon to the Royal United Hospital, Bath, *vice* R. S. Fowler, F.R.C.S.Edin., resigned.

STEPHENSON, Dr. Edward F., appointed Medical Officer for the Ballyduff Dispensary District of the Lismore Union, *vice* Dr. Denneby.

SWEETEN, Benjamin, M.B., C.M., appointed House-Surgeon to the Alnwick Infirmary, *vice* Dr. William Smyth.

TATE, George, M.B., C.M.Edin., appointed Assistant House-Surgeon to the Staffordshire General Infirmary.

THOMPSON, Charles Sinclair, M.B., C.M.Edin., appointed Medical Officer for the Workhouse of the Bideford Union, *vice* J. Thompson, resigned.

THOMSON, Ernest F., M.B., C.M., appointed Medical Officer to the parish of Eday, Orkney, *vice* Arthur Beveridge, M.B., C.M.

VICTOR-HUGO, Edward, M.B., B.S.Lond., appointed Assistant Medical Superintendent to the Paddington Infirmary, *vice* J. Ernest Hillier, M.B., M.A.Cantab. resigned.

YOUNG, Edwd. Herbert, M.D.Durh., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Okehampton Rural Sanitary District.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: On Affections of the Cornea. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. W. R. H. Stewart: On Otorrhœa.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Adjourned discussion on Dr. William Duncan's and Mr. Alban Doran's papers on the Operative Treatment of Chronic Disease of the Uterine Appendages.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On Mental Stupor, Dementia. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On the Prognosis and Treatment of the different Forms of Lupus.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Dr. P. H. Pye-Smith: The Therapeutical Value of venesection, its Indications and its Limits. Sir G. M. Humphry: On Macrodactyly and some other Forms of Congenital Overgrowth, and their Relation to Tumours.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. C. Y. Biss: On Asthma and its Results. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: On Glaucoma.

HUNTERIAN SOCIETY, 8 P.M.—Clinical evening. Dr. Dundas Grant will show (by limelight) a case of Epithelioma of the Larynx treated by Thyrotomy, and other cases. Mr. T. Mark Hovell: Multiple Papilloma in Larynx of Boy, aged 3½, removed by Forceps. Mr. John Poland: Rheumatoid Arthritis in a Child.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Charlton Bastian: On Some Varieties of Hemiplegia. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Barlow: On the Morbid Anatomy of Rickets. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. G. Stoker: On Malignant Disease of the Larynx.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M.—Patients and card specimens at 8 P.M. Dr. Berry (Edinburgh): 1. An Unusual Result of Cataract Extraction. 2. On the Connection between Accommodation and Convergence. Mr. Tatham Thompson (Cardiff): 1. Miner's Nystagmus among the South Wales Colliers. 2. Case of Emphysema of the Conjunctiva. Mr. Lawford for Mr. G. W. Johnston (Vancouver): Penetration of Eyelash into Anterior Chamber; Removal by Operation. Mr. Hartridge: 1. Case of Chronic Glaucoma with Hæmorrhage into Cup. 2. Set of Models for demonstrating Errors of Refraction.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. C. Y. Biss: On the Treatment of Asthma.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstrations. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On the Disease called Acne.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BATEMAN.—January 13th, at 4, Charles Street, St. James's, S.W., the wife of Dr. Newton Bateman, of a daughter.

MASON.—On January 17th, at Rosemont, Maidenhead, Berks, the wife of David James Mason, M.D.Edin., of a son.

DEATH.

CRESSY.—At Hayesden Wallington, Surrey, on January 15th, William Everard Cressy, M.R.C.S.E. & L.S.A., aged 76.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9. Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. Wed. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30.; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30, and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.* Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women) S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30 Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic, F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45 o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electrotherapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, except W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, except S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological) Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30. *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30. *Operation Days.*—W. Th., 1.30; S. 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu., F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

FINAL EXAMINATION OF THE ENGLISH CONJOINT BOARD.

M.B. asks what books are usually read for the final examination for M.R.C.S. and L.R.C.P.Lond.

*** We are advised that books often read are: (1) Dr. F. Taylor's *Practice of Medicine*; (2) Mr. Erichsen's *Surgery*; (3) Dr. Galabin's *Diseases of Women*, and Dr. Galabin's *Midwifery*.

LECTURES TO ASYLUM ATTENDANTS.

B. writes: I am about to commence a series of lectures to the attendant staff. I should be indebted if you would inform me what books are most adapted to this purpose. We propose to instruct them in the rudiments of anatomy and physiology and in nursing, especially as adapted to the care of the insane.

*** *The Handbook for the Instruction of Attendants on the Insane*, published by Baillière, Tindall and Co., London. *Aid to the Injured and Sick*, published by the National Health Society, 41, Berners Street, London, W.

DISINFECTION AFTER PUERPERAL FEVER.

DRAX asks: What time, after attending a case of puerperal fever, ought to be allowed to elapse before attending another case of midwifery if clothes are baked and you take a 1 in 3,000 corrosive sublimate bath?

*** We have referred this question to Dr. Herman, who writes: If your correspondent will be careful to wear clean clothes, to well wash hands and nails with soap and a nailbrush before touching the patient, and to see that the nurse does the same, he need not (after doing what he proposes doing) let any interval elapse. Greater safety will be given if he dip hands and instruments in a 1 in 1,000 sublimate solution before any manipulation; and if, immediately after the placenta has been expelled, he wash out the vagina (and the uterus, if hands or instruments or a decomposing fœtus have been within it) with a 1 in 2,000 sublimate solution.

NOTES, LETTERS, Etc.

THE number of M.D.'s in the United States is said to be greater in proportion to the population than in any other country in the world. In a recent number of the *Medical Record* of New York may be read, at secondhand, the following curious advertisement, which affords striking evidence of the disastrous results of the downward competition which overproduction tends inevitably to engender:—"Wanted, a physician, to work in a drug store as clerk and write prescriptions. Send for particulars and salary. Good town and good location."

PUBLIC HEALTH IN PORTUGAL.

BY decree dated December 4th the Portuguese Government sanctioned a further allocation of 130 contos of reis for the purposes of the Public Health Service. This, with the amounts previously granted, makes a total sum of 310 contos of reis which Portugal has recently voted for the protection of the health of its citizens against epidemics.

DOSAGE OF KOCH'S FLUID: A CORRECTION.

MR. MALCOLM MORRIS and Dr. Pringle are much indebted to Dr. Workman, of Glasgow, for kindly pointing out an obvious error in the clinical notes of a case of lupus, published in the BRITISH MEDICAL JOURNAL of January 10th, which escaped their observation in reading the proofs. The amount of the first inoculation administered to their patient was 1 cubic centimètre of the ordinary 1 per cent. solution, that is, 1 centigramme (0.01) of the original fluid.

AN EARLY CASE OF CÆSAREAN SECTION IN IRELAND.

ACCORDING to the *Dublin Journal of Medical Science* for December, 1890, the first successful case of Cæsarean section in the three kingdoms was performed in January, 1738, by a handy woman, named Mary Dunally, with a razor, on Alice Neal at Charlemont, between Armagh and Dungannon. Twenty-seven days after the operation the patient was able to attend Armagh market, walking to and from the city with her marketing.

A CORRECTION.

DR. J. D. MORTIMER (The Hospital for Sick Children, Great Ormond Street) writes, with reference to the report of the recent discussion at the Harveian Society, that his remarks were to the effect that, for certain reasons, the definite consequences noticed in comparatively active disease could not be expected in the very chronic cases treated by injection at this hospital.

PRIZE ESSAYS.

THE Paris Société d'Hygiène de l'Enfance offers prizes for essays on the following subjects: Complementary Feeding of Infants during Suckling; Preparation for Weaning; Hygiene and Sanitation of Schools; Hygiene of Children employed in Flower and Feather Workshops. Essays should be sent before May 1st, 1891, either to the President of the Society, Dr. Chassaing, 207, Rue Saint Antoine, Paris, or to the General Secretary, Dr. Toussaint, 7, Rue d'Eughien, Argenteuil (Seine et Oise), from whom all further particulars may be obtained.

HUMANITY AND FEES.

ACCORDING to the *St. Petersburger medicinische Wochenschrift* Dr. Gelström, of Sebastopol, was recently fined 5 roubles and condemned to five days' imprisonment for having declined to attend a woman in labour without previous payment of his fee. In consequence, it is stated, of this refusal the woman was taken to a hospital, where she died soon after admission.

THE OLDEST RUSSIAN SURGEON.

ON December 16th, 1890, Dr. W. A. Karawajew, Emeritus Professor of Operative Surgery in the University of Kiew—whom the *St. Petersburger medicinische Wochenschrift* calls the "Nestor of Russian surgeons"—celebrated the fiftieth anniversary of his appointment as Professor. Dr. Karawajew was born at Wjatka in 1811. He took his doctor's degree at Dorpat in 1838, and in 1840 was appointed Extraordinary Professor in the then recently founded Medical Faculty of Kiew, becoming Ordinary Professor in 1842. The town of Kiew elected him an Honorary Citizen on the occasion of his professorial jubilee, and paid him a very unusual compliment by giving his name to the street in which he lives.

THE LATE DR. STRANGE.

DR. ALEXANDER INGLIS (Cheltenham) writes: As a former colleague of the late Dr. Strange at the Worcester Infirmary, I hope you will pardon me making a slight correction in the obituary notice of him in the BRITISH MEDICAL JOURNAL of January 17th.

The notice says: "becoming Physician to the Worcester Infirmary in 1876, in the place of Sir Charles Hastings, resigned." As a matter of fact, Dr. Strange succeeded the late Dr. Richard Sladin Davis in 1861. The contest was between Dr. Strange and myself. It was in the old days of voting by proxy. Dr. Strange polled 321 votes; I had 320. The result being so close made a considerable excitement at the time; and, as Sir Charles Hastings had intended to resign the following year, he kindly placed his resignation at once in the hands of the governors, in order that I might be appointed; so that, to be accurate, I succeeded Sir Charles Hastings as Physician to the Worcester Infirmary. Sir Charles died in 1866.

A CASE OF LACTATION IN AN INFANT THREE DAYS OLD.

DR. EDMUND E. DYER (Alloa, N.B.) writes: In the case of a healthy female child of a Mrs. H., upon my first visit, about twelve hours after delivery, I noticed that the breasts of the child were somewhat large and apparently slightly inflamed. At my second visit, three days after the child was born, I was told by the mother that milk had come away from the baby's breasts in large quantities, and had, indeed, overflowed. The nurse, I found, had obtained a breast pump, and had been drawing the milk off, thus encouraging the flow. The breasts were quite full, much swollen, soft, slightly inflamed about the nipples, and apparently very tender, with a flow, which was easily induced, of a watery, yellow-looking fluid, having the appearance of ordinary human milk, as also had that which was shown to me as having been drawn off by the pump. On causing the breasts to be painted with a little tinctura belladonnæ (this preparation I consider preferable to the linimentum, on account of its not staining, and so not obscuring any changes in the skin), the flow stopped, and the size of the breasts diminished rapidly.

*** Our correspondent will find in the weekly SUPPLEMENT to the BRITISH MEDICAL JOURNAL for October 11th (p. 13) a note on the secretion of milk in infants containing some facts as to this curious occurrence, which it would appear is by no means so rare as is generally supposed.

KOCH AND VIRCHOW.

F.R.C.P. sends us the following rhymes, which convey in a terse and humorous fashion some of the criticisms of Dr. Koch's method and theories to which Professor Virchow recently gave expression in more serious form.

Who'll kill the bacillus?
"I," said Herr Koch,
"With my lymph and syringe
I'll kill the bacillus."

Alas! Doctor Koch,
With false hopes you fill us;
For, firm as a rock,
Holds the field—the bacillus.

And assembled bacilli
Through a cultur'd bacillus
Say, "We're not quite so silly
As to let Herr Koch kill us."

"Must admit," owns Herr Koch,
"I can't kill the bacillus,
Only cut off the stock
Of supplies from bacillus."

Replieth Herr Virchow,
"No lack of supply;
From one organ driven
To another he'll fly."

So some vow with a twinge,
"No more shall you drill us
With your lymph and syringe,
You can't starve the bacillus."

LIQ. HYD. PERCHLOR. IN DIPHTHERIA.

DR. C. R. ILLINGWORTH (Accrington) writes: Dr. Coward, in his communication upon the above subject, states that "the addition of potass. iodid. to this mixture does not appear to have any beneficial effect." There is a very good reason. Iodine is set free by the double decomposition set up between the iodide and iron in the mixture he prescribes.

Were Dr. Coward to prescribe the iodide and hyd. perchlor., the biniodide of mercury formed with excess of iodide would give him even better results than he has already got in the treatment of diphtheria, because the biniodide is a much more potent germicide than the bichloride; but no iron perchloride should be given until all the exudation has been stopped. The treatment may be advantageously supplemented by the local application of a solution of the biniodide in iodide of sodium or potassium of the strength of 1 in 500 by means of a straight brush every hour or two.

THE LAY NEWSPAPER AS A MEDICAL CRITIC.

"AN INTELLIGENT READER" writes: The talented young men who write the "leaders" in the daily press never shine so much as when they deal with scientific subjects. In a leading article[1] upon Koch's most recent publication your contemporary the *Standard* illustrates the fact most admirably. We are informed by that journal, in the first place, that the fluid "is a glycerine extract from a pure cultivation of the tubercle bacilli in the bodies of guinea-pigs," "its specific property . . . is that it kills the living protoplasm—that unorganised substance which forms the contents of cells in animal and vegetable substances alike—and thus deprives the tubercle bacillus of the conditions necessary to its growth."

Well may the writer proceed that "to the layman all this is only moderately intelligible." His farther conclusion is, however, if anything, rather less intelligible or, at least, acceptable to either physician or layman, namely, that if Professor Virchow's statement be correct "the lymph and all that concerns it *will soon be as much forgotten as the cholera bacillus which Dr. Koch was supposed to have discovered*." (The italics are mine.) For a serious writer to talk about "pure cultivation in the bodies of guinea-pigs" or to speak of a remedy as "killing living protoplasm and so depriving the tubercle bacillus of the condition necessary to its growth" (very much necessary, one would imagine, to more than the growth of the bacillus) are sufficient exposures, but to speak of Koch's cholera bacillus as "supposed to be discovered" and as quite "forgotten" is a more astonishing example of the kind of knowledge which satisfies the general readers of the latter half of the nineteenth century.

After this one is not astonished to learn that the "bacterial and bacillar origin of disease is the latest fashion in pathology" (a statement only equalled in inaccuracy of fact by inaccuracy of language) or that "the assertion that injections of the lymph destroy tubercle in the lungs is simply an inference."

COMMUNICATIONS, LETTERS, ETC., have been received from:

(**A**) Mr. S. Atkinson, London; Mr. James Anderson, Footscray; Mr. H. Ashton, Glasgow; Mr. J. Ackry, London; Mr. W. Alexander, Liverpool. (**B**) Dr. J. Brown, Clifton; Dr. Bronner, Bradford; Dr. A. Betrix, Geneva; Mr. A. B. Brown, New York; Mr. J. Brown, Buenos Ayres; Mr. J. Berry, London; Mr. J. A. Bruce, Taungs; Mr. A. H. Benson, Dublin; Mr. Blackett, London; Mr. A. G. Blomfield, Exeter; Dr. H. Barnes, Carlisle; Dr. W. H. Broadbent, London; Mr. H. N. Baron, Pailton; Mr. J. H. Blayney, Middleton; F. D. Boyd, M.B., Edinburgh. (**C**) Messrs. Cassell and Co., London; Mr. C. Cressy, Wallington; Mr. J. Coulton, Sheffield; Dr. Collins, Sydenham; Country Surgeon; Dr. F. W. Cock, London; Dr. J. S. Conyn, Bradford; Dr. T. Cooke, London; Mr. G. H. Corbishley, Macclesfield. (**D**) Mr. H. F. Davis, Bristol; Mr. Doran, London; Mr. F. C. Dodsworth, Gunnersbury; Demaeyer's Peptonoids and Extract of Meat Company, London; Mr. A. Donald, Manchester. (**E**) Mr. Edward East, London; Inquirer; Surgeon W. Eames, Yokohama; Dr. A. Edington, Edinburgh; Mr. H. M. Earle, St. Leonards-on-Sea; Messrs. Evans, Lescher, and Webb, London. (**F**) Mr. C. R. Francis, London; Mr. W. Fergusson, Banff; Mr. E. F. Flynn, London; Dr. H. Fox, London; Professor Michael Foster, Cambridge. (**G**) Dr. H. S. Gubbett, Eastbourne; Mr. J. Graham, Belfast; Dr. E. Gumpert, Manchester; Mr. A. M. Gossage, London; Dr. E. H. Galton, London. (**H**) Mr. F. Hinde, Banbury; Mr. R. Hickson, Chatham; Dr. H. Hearsey, London; Dr. Hughes, Holyhead; Professor Victor Horsley, London; Mr. J. Lawrence Hamilton, Brighton; Mr. F. Hinds, Worthing; Mr. W. B. Holderness, Windsor; Dr. A. H. Hoffmann, Hunshaughon-Tyne. (**I**) Dr. W. W. Ireland, Prestonpans; Dr. A. Inglis, Cheltenham. (**J**) Mr. E. Lloyd Jones, Cambridge; Mr. F. B. Jessett, London; Dr. J. A. Jackson, Hexham. (**K**) Mr. D. Kennard, Lambourn; Mr. T. S. Kirkland, Blayney, New South Wales; Dr. G. C. Kingsbury, Blackpool; Mr. C. T. Kingzett, London. (**L**) Mr. C. J. Lacy, London; Lady Superintendent of the Nurses Co-operation Society, London. (**M**) Member; Mr. A. B. MacDowall, Crouch End; Mr. E. Marston, London; Mr. A. H. Middleton, Shankhill, co. Dublin; Mr. A. H. Mason, London; Mr. W. J. Maitland, London; Mr. W. Martindale, London; Sir William Moore, London; Mr. Leonard Mark, London; Medical Officer to a Large District; Mr. J. D. Mortimer, London; Mr. A. Milroy, Kilwinning; A Medical Officer of Health; Surgeon W. G. Macpherson, Woolwich; Dr. H. G. Mackenzie, London. (**N**) Mr. T. Llewellyn Nash, Dublin; Dr. J. Stuart Nairne, Glasgow; Mr. J. C. Norman, Hadleigh. (**O**) Mr. W. Odell, Torquay; Observer; Dr. John O'Conor, Buenos Ayres. (**P**) Mr. T. A. Palin, Wigton; Mr. E. P. Prior, Loddon; Dr. Young J. Pentland, Edinburgh; Dr. Leslie Phillips, Birmingham; Mr. D'Arcy Power, London; Dr. G. W. Potter, London; Mr. R. P. Porter, Washington; Mr. R. Prichard, Cardiff; Dr. Louis Parkes, London; Mr. J. Poland, London; Dr. Parry-Jones, Wrexham; C. S. Parry, M.B., Carmarthen. (**R**) Mr. J. R. Ratcliffe, Birmingham; Mr. L. C. Railton, Manchester; Mr. E. W. Roughton, London; Dr. G. Robertson, London; J. R. S. Robertson, M.B., London; Mr. G. W. Rigden, Taunton. (**S**) Dr. A. T. Smith, Dublin; Mr. W. Stallard, Worcester; Dr. W. Saul, Lancaster; The Secretary of the Sanitary Assurance Association, London; Mr. Bland Sutton, London; The Secretary of the Blackburn and East Lancashire Infirmary, Blackburn; The Secretary of the Royal Institution, London; Dr. R. J. H. Scott, Bath; Ernest Solly, M.B., London; Dr. Markham Skerritt, Bristol; Messrs. Seeley and Co., London; Mr. F. Simms, London; Dr. Sykes, Mexborough; Dr. G. C. Stephen, London; Dr. W. J. Sinclair, Manchester; The Secretary of the Sheffield Medico-Chirurgical Society; Sick of It; Dr. W. E. Steavenson, London; Mr. A. Shanks, Airdrie. (**T**) Mr. R. W. Taylor, New York; Mr. Lawson Tait, Birmingham; Mr. C. W. Thies, London; Mr. H. H. Tomkins, Ramsey; Dr. Tizard, Bayeliffe. (**U**) Dr. A. R. Urquhart, Perth. (**V**) G. H. Vos, M.B., London. (**W**) Sir T. Spencer Wells, London; Dr. Wood, London; Miss Jane Wilson, London; Mr. J. Williamson, Farnham; Mr. J. M. Wyborn, Bromley; Dr. J. A. Wilson, Glasgow; Dr. E. Willoughby, London; Dr. Hale White, London; W. H.; Dr. H. McLean Wilson, Edinburgh; Mrs. Woodcock, Starcross; Mr. W. Roger Williams, London, etc.

[1] *Standard* for Friday, January 16th.

BOOKS, ETC., RECEIVED.

Pocket Medical Lexicon. By J. M. Keating, M.D., and Henry Hamilton. London: H. K. Lewis. 1891.

The Treatment of Consumption: Dr. Koch's Remedy. By A. E. Bridger, B.A., B.Sc., M.D. London: John Hogg. 1891.

La Série Aromatique en Thérapeutique. Par le Dr. de Buck. Gand: A. Siffer. 1890.

Examen Químico y Bacteriológico de las Aguas Potables. Par A. E. Salazar, Y. C. Newman, con un Capítulo del Dr. Rafael Blanchard. Londres: Burns and Oates. 1890.

Saint Raphael with Valescure and Boulourie as a Winter Health Resort. By Howard D. Buss, M.R.C.S. Saint Raphael: V. Chailan. 1890.

Mémoires d'Ophtalmométrie. Par E. Javal. Paris: G. Masson. 1891.

Materia Medica. Catechism Series. Part I. Edinburgh: E. and S. Livingstone. 1891.

The Crime in Health and Disease. By H. Aubrey Husband, M.B. Second edition. Edinburgh: E. and S. Livingstone. 1891.

The Daughter, Her Health, Education, and Wedlock. By William M. Capp, M.D. Philadelphia and London: F. A. Davis. 1891.

Hunterian Lectures on Intracranial Inflammations starting in the Temporal Bone, their Complications, and Treatment. By Arthur E. J. Barker, F.R.C.S. London: H. K. Lewis. 1890.

Cliniques Chirurgicales de l'Hôtel Dieu de Marseilles. Par le Docteur L. Villeneuve. Paris: Felix Alcan. 1891.

La Topographie Cranio-Cérébrale, Applications Chirurgicales. Par René-Leon Le Fort. Paris: Felix Alcan. 1890.

Social Diseases and Worse Remedies. By T. H. Huxley, F.R.S. London: Macmillan and Co. 1891.

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LECTURE
ON
PHAGOCYTOSIS AND IMMUNITY.

Delivered at the INSTITUT PASTEUR, December 29th, 1890.

By Dr. ELIAS METSCHNIKOFF,

Chef de Service de l'Institut Pasteur, Paris; late Professor of Zoology in the University of Odessa.

[Translated from the Original Manuscript by J. G. Adami, M.A., M.B.Cantab., John Lucas Walker Student in Pathology in the University of Cambridge.]

It is not possible to study the bacteriology of disease without noticing that, while in many cases the invading micro-organisms are to be found solely in the fluids of the body, in not a few affections they present themselves in the interior of certain cells, and this either partially—some being within the cells, others free in the blood plasma and the lymph that bathes the various tissues—or exclusively, all the bacteria that are visible being intracellular. Many of the facts bearing upon the terms of this relationship between tissue cell and micro-organism are now well known, yet it is worth while to recapitulate the more important, in order to show that from them it is possible to gain a general law, and what is more, that from a study of such facts some insight may be gained into the phenomena of immunity.

It may, in the first place, be postulated that, whenever a micro-organism is discoverable within a cell, its passage thither has been by means of protoplasmic movements, of amœboid movements either on the part of the microbe, or of the cell itself. The first alternative is the rarer, although it certainly exists, and of this the malarial parasite affords an excellent example; for here in the amœboid stage of its existence the hæmatozoön makes its way into the interior of a cell that possesses no active movements of its own, namely, the red blood corpuscle, and from the substance of this corpuscle the parasite gains its nourishment. Other sporozoa furnish instances almost equally good. More commonly, however, as in the case of all bacteria, where we have to deal with micro-organisms which, even when mobile, are destitute of protoplasmic appendages, it is the cells which play the active part; certain cells include the parasites. Of such, the amœbiform leucocyte of the blood and lymph is the most typical example, capable, as it is, of sending out pseudopodia in all directions, while a closely-allied form is the cell of the splenic pulp. But there are also cells, as, for instance, those forming the endothelial lining of the vessels, which are very definitely fixed, which, nevertheless, can give off protoplasmic processes from their free surface, and so capture and include bacteria.

All these may be spoken of as *Phagocytes*, and may be divided into the two broad groups of *fixed* phagocytes (endothelial cells, etc.) and *free* (leucocytes); not that the terms "phagocyte" and "leucocyte" are synonymous, for of the latter three main forms may be distinguished, of which one is practically immobile and never takes up bacteria. This is the *lymphocyte*, characterised by its relatively small size, its large single nucleus, and the small amount of surrounding protoplasm. The two remaining (phagocytic) forms are (1) the large uninuclear leucocyte, whose prominent nucleus is at times lobed or reniform, which stains well with aniline dyes and possesses much protoplasm and active amœboid movements—the *macrophage*—and (2) the *microphage*, a small form, also staining well, but either multinuclear or with one nucleus in the process of breaking up. (See Fig. 3.) If now we compare the endothelial cells with these, it is evident that their properties connect them closely with the macrophage; and, in fact, there is now little or no doubt that a very large proportion of the macrophages are of endothelial origin.

Leaving aside the subject of amœboid microbes and their life within animal cells, it is to the phagocytes and their relation to the bacteria that I wish specially to draw your attention.

Taking as wide a view as possible of this relationship, we can first determine that *the more malignant the micro-organism the rarer is its presence within the phagocyte.* Thus in those which of all diseases are the most rapidly fatal—in chicken-cholera affecting birds and rabbits, in hog-cholera ("choléra des pores") given to pigeons and rabbits, in the anthrax of mice and other specially sensitive animals, in the "septicémie vibrionienne"[1] of guinea-pigs and birds, and in yet other diseases of peculiarly swift course—the corresponding bacteria are only very exceptionally to be found within the cells, but remain free in the neighbourhood of their introduction, and thence invade the blood. For all the above-mentioned diseases are not localised, but, on the contrary, present the characters of general acute septicæmia, causing death within twenty to thirty-six hours, or, in certain cases, even within six hours.



Fig. 1.—Staphylococcus pyogenes aureus contained in epithelial cell *a*, and leucocytes (microphages) *b b* of alveoli of lung of rabbit (Lachr), *c c* vacuoles.

And when we pass to those diseases in which the bacteria are to be found either in part or almost wholly within the phagocytes, the same law still applies; for in such cases the disease has lost its suddenness, tending to have a slower course, or, indeed, to be of a chronic nature. Even in those affections in which an acute course is accompanied by considerable phagocytosis, the fatal termination is far from occurring at the same early period as in the diseases recorded above. Thus mouse septicæmia, characterised as it is by frequent intracellular bacteria, has a duration in the mouse two and a half times as long as that of anthrax in the same animal. But in general a well-marked phagocytosis is associated with diseases presenting an essentially chronic development; it is in affections such as tuberculosis, leprosy, rhinoscleroma, glanders, that the specific bacteria are most readily taken up by the phagocytes; it is here that at the seat of the disease we meet with innumerable macrophages—epithelioid cells in which lie the individual micro-organisms.

Further if we consider the phenomena associated with the resolution of an infectious disease, this inverse relationship between the malignancy of the malady and the occurrence of phagocytosis is, if possible, yet more clearly demonstrated. Notice, for instance, what obtains during the progress of relapsing fever, a malady still fairly common in Russia and other Sclavonic countries, and one which, while presenting many difficulties to the bacteriologist in that the specific spirochaete has so far resisted cultivation, and in that it cannot be communicated to the ordinary animals of the laboratory, is nevertheless in many respects not ill adapted for our present purpose. Here, during the sudden access of the fever, the spirilla are present in the blood in enormous numbers, they all are free in the plasma, and not a single intracellular spirillum is to be met with. During the apyretic stage (and in the monkey this is, at the same time, the stage of resolution) not a single free spirillum is discoverable in the blood, while the phagocytes of the spleen contain the microbes. The like phenomena repeat themselves in all those cases where it is possible to follow the fate of the micro-organisms of acute disease during the stage of recovery. Thus rats and pigeons very frequently survive an attack of anthrax, and, where this

[1] The disease produced by a micro-organism, which in appearance and methods of growth is curiously like Koch's cholera spirillum. Gamaleïa, its discoverer, named it "Vibrio Metschnikovi;" and as such, in place of M. Metschnikoff's own vaguer "septicæmic vibrio," it will be spoken of in later reference to its properties. The disease it originates will be spoken of as "vibrionic septicæmia."—Trans.

occurs, the bacteria, which at the commencement of the disease were for the most part free, now, during resolution, are for the most part included within leucocytes and splenic phagocytes.

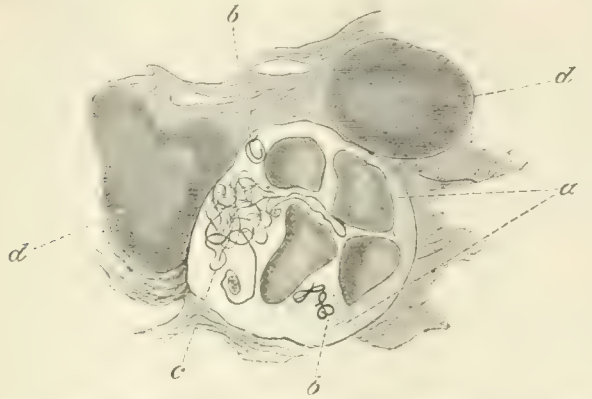


Fig. 2.—Resolution of acute infectious disease (relapsing fever), spleen pulp of monkey (Macacus erythr.), showing (*a*) a microphage, multinuclear, with incepted spirochaetes: (*b*) solitary, and (*c*) forming dense tangle, (*d d*) nuclei of splenic tissue (Zeiss, $\frac{1}{12}$; ocular 4: × 1515 diam.).

Nor is this all: analogous phenomena as a rule attend immunity, which, most often, is but *recovery in operation from the very onset of a disease*. The more closely one studies this condition of immunity, the more is one led to the conviction that immunity and recovery are very intimately connected, that one can pass by slight gradations from the resolution of disease to the production of immunity. So it is that, in inoculating refractory animals with the microbe to whose action they have been rendered immune, it is found that the parasite *begins to develop, but that from the onset a reaction on the part of the organism shows itself*, accompanied by a considerable emigration of leucocytes which soon include the bacteria in great numbers.

This relationship of phagocytosis to acquired immunity is in the highest degree instructive. Where a given species of animal is specially sensitive to the onslaught of one or other micro-organism, there, during the course of the disease, the phagocytes are inoperative, including none, or almost none, of the bacteria. On the other hand, when by previous vaccination these animals have been rendered refractory, their phagocytes have acquired the property of including the same bacteria. As an example of this I may cite the action of the bacillus of anthrax and of the vibrio

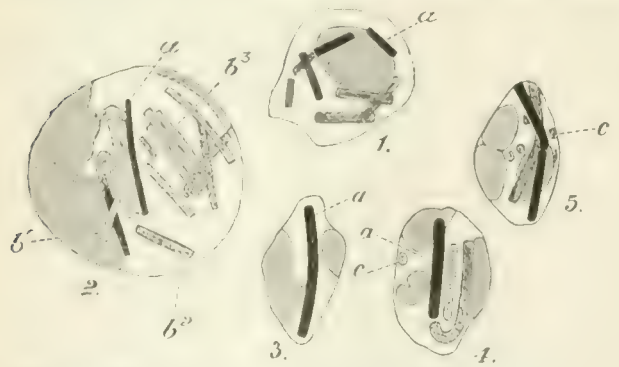


Fig. 3.—Anthrax of pigeon (an animal but slightly susceptible to the disease) to show stages of destruction of bacilli by phagocytes. *1* and *2*, macrophages; *1*, from exudation from eye of refractory bird; *2*, from muscle or region of inoculation of bird that succumbed; *3*, *4*, *5*, microphages—all from eye twenty-seven hours after inoculation; *a*, *a*, unaltered bacilli; b^1 b^2 b^3, bacilli becoming more and more degenerated and indistinct; *c c*, *débris* of bacilli (Zeiss $\frac{1}{18}$, ocular 3).

Metschnikovi. In ordinary rabbits the development of anthrax is only followed by a very feeble phagocytosis, while in vaccinated rabbits this phagocytosis is very extensive. Corresponding, but yet more strongly marked, differences are to be made out between the unvaccinated guinea-pig—an animal most readily affected by the vibrionic septicæmia—and the guinea-pig vaccinated against the same: after inoculation with the vibrio Metschnikovi, none of the vibrios are to be found in the cells of the former, in the latter the phagocytes are simply replete with the microbes.

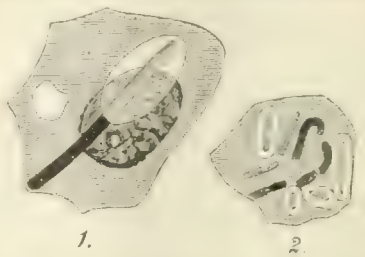
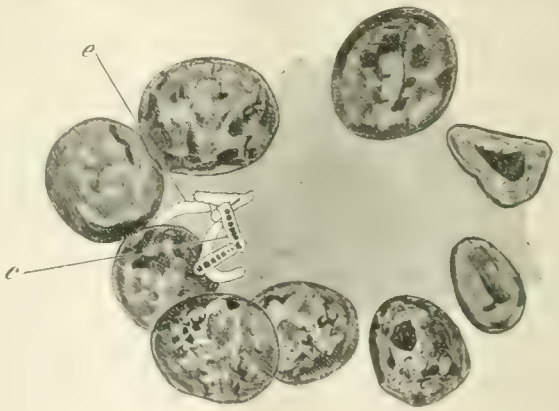


Fig. 4.—Phagocytes, macrophage and microphage, to show stages of digestion and destruction of bacilli, from spleen and eye respectively of white rat with anthrax. In *1* part of the bacillus is unaffected, but a vacuole has formed around the other part, which further has now lost the power of taking the stain. In *2*, various stages are seen, the bacilli passing through the granular badly staining, to the vacuolated unstained, until finally but faint "shadows" are observable (Zeiss $\frac{1}{18}$, oc. 3).

The facts enumerated thus far would seem to prove that there exists a certain antagonism between the microbes and the phagocytes, and this view is confirmed by the fact that in general the microbes find the interior of the phagocytes an unfavourable medium for their development and con-



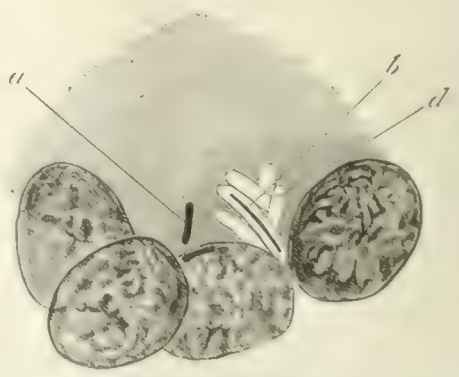


Fig. 5.—Two giant cells seen under high magnification (× 1515 diam.) from a rodent, the spermophile, inoculated with tuberculosis, to show stages in the destruction of the bacilli. *a*, unaltered bacillus; *b*, bacillus staining badly, and with greatly thickened capsule; *c*, bacillus granular and breaking up; *d*, *e*, "shadows."

tinued existence. Very often it is possible to determine absolutely that the parasites are killed within the phagocytes; after inoculating refractory animals with bacteria, an afflux of white corpuscles towards the region of inoculation, followed by the inclusion of the bacteria and by their death, is seen to occur. These stages can be well followed where the anthrax bacilli are taken into the phagocytes of animals that are, or have been rendered, immune. They occur also with a long series of other micro-organisms studied in this connection, and among others in the case of the tubercle bacillus invading animals that are more or less resistant. The giant cells of tuberculosis are, in fact, huge multinuclear phagocytes; and here the intracellular destruction of the bacilli is the more clearly demonstrable inasmuch as the micro-organisms exhibit such very evident signs of degeneration; the bacilli swell, their enveloping membrane becomes much thickened and highly refractive, and in time the contents lose their power of fixing the staining material, so that eventually nothing is left but slightly yellowish forms, recalling in proportions and position the enlarged bacilli, and these shadowy bodies unite into small masses of an amber-like appearance. Analogous transformations never being observable outside the phagocytes—that is to say, either in cultures or in caseating masses—these changes may well be regarded as due to a specific action upon the part of the giant cells.

The broad fact that the invasion of the organism by microbes most often induces, on the one hand, an inflammatory reaction with its associated emigration of leucocytes, and that, on the other hand, the phagocytes are capable of including and destroying the invaders, leads us to admit that *the afflux of phagocytes to the invaded region, and their bactericidal properties, are mechanisms which serve to ward off bacterial attack and to maintain the integrity of the organism.* Where the phagocytes do not, either immediately or eventually, intervene, but leave the field free to the microbes, these last multiply without hindrance, and succeed in killing the animal within, it may be, an excessively short period. Thus the micro-organism of hog cholera, which is left quite untouched, kills the pigeon in the course of a few hours—often within five hours after inoculation: chicken cholera kills not only pigeons but also rabbits in an equally short period. In other diseases in which the phagocytes appear upon the scene in relatively large numbers, and even include the micro-organisms, the latter gain the day whenever and wherever the phagocytes are incapable of destroying them or of preventing their growth.

This manifest bactericidal action is to be compared with the phenomena of intracellular digestion characteristic of amœboid cells in general, and of leucocytes and other microbic phagocytes in particular. These cells have the power of digesting with ease red corpuscles and other organised elements; just as have the amœbæ proper, and other protozoa. Among these last are many which have been found to include and transform bacteria in exactly the same way as do the phagocytes of the higher animal.

Now, in determining the intervention or non-intervention of the leucocytes in this war between the organism and the bacteria, a very great part is played by the sensitiveness of these cells to external influences, and especially to the chemical composition of their environment. The leucocytes are powerfully attracted by many micro-organisms and the resultants of their growth, and as powerfully repelled by others and their resultants, or, as it is expressed, they have a *positive chemiotaxis* for certain microbes, a *negative chemiotaxis* for others. The existence of these chemiotactic properties has been so clearly proved of late by the researches of Leber, Massart and Bordet, and Gabritschewski that I need not enter into a fuller explanation of the subject here. Where *negative* chemiotaxis manifests itself, there, being shunned by the white corpuscles, the parasites freely propagate themselves and induce the death of their host. Nevertheless, this chemiotaxis is not immutable, and the cells can become accustomed to substances from which they shrank at first—a negative may thus be transformed into a positive chemiotactic state. Such obtains in acquired immunity: the cells which, in the unvaccinated animal never included the bacteria, now, in the vaccinated, take them up readily.

* * * * * * * *

There is not a single portion of the theory which I have just expounded but has encountered a lively opposition. Even the fundamental fact that the phagocytes are capable of including the microbes has had doubts thrown upon it; it has been held that the latter insinuate themselves into the former. Only after successive series of observations upon the phagocytes and the living microbes has it been proved that assuredly it is the phagocytes which by the aid of their pseudopodia themselves include the micro-organisms. The observer can see the whole process in the case of immobile bacilli, can see the leucocyte approach, send out pseudopodia, and gradually include the individual bacillus. Or conversely in cases of negative chemiotaxis, one can, in blood taken from the monkey during the access of relapsing fever, observe the actively moving spirilla come into contact with a leucocyte, and even become attached by one end to its surface; yet, however active the movement, one never finds that the spirillum succeeds in piercing the surface and gaining an entrance. If it be suggested that this entry may take place in consequence of the force of active growth and elongation of bacilli, then apart from the fact that here but one set of cases is embraced, it can be determined that this force is too feeble, it can be seen that, during the active growth of the anthrax organism in the blood, the elongating chains of bacilli curve in and out between the corpuscles, but never penetrate the cells.

From another side the objection has been formulated that in many cases the organism gets rid of its invaders without the aid of the phagocytes. According to those who support this objection, this happens in the anthrax of pigeons (Czaplewski), and of refractory rats (Behring, Franck), in symptomatic anthrax of various refractory animals (Rogowicz), and in the septicæmia of vaccinated guinea-pigs due to the vibrio Metschnikovi (R. Pfeiffer). A re-examination of the cases here adduced has, however, shown that in each a very considerable phagocytosis can be proved, and that the negative results of the above observers have been due to insufficient methods of observation.

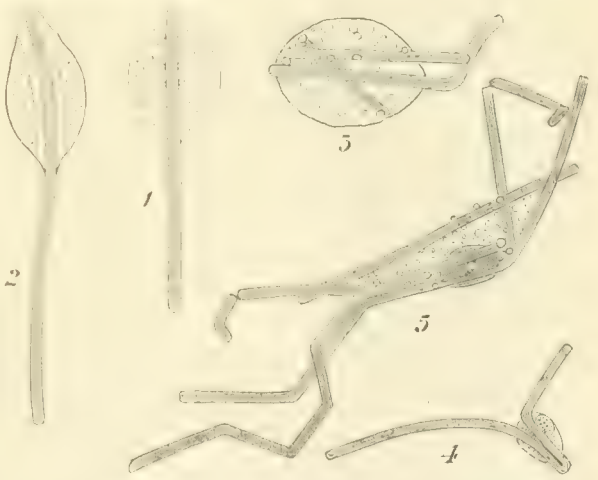


Fig. 6.—Bacilli of anthrax growing out of phagocytes that have been killed by the addition of bouillon to the drop of exudation in which they were contained from the refractory pigeon. *1* and *2*, stages in growth of same bacillus; 2, $\frac{3}{4}$ were later than *1* (Zeiss F, oc. 4, for 1, 2, 3, D × oc. 5 for 4, $\frac{1}{18}$ and oc. 2 for 5).

While accepting that the phagocytes do truly absorb the micro-organisms, other opponents of the theory have urged that these cells are only capable of including micro-organisms already killed by other means, and that living microbes are solely to be found within the cells in those cases where there has been a fatal ending—in tuberculosis, mouse septicæmia, and so on. Against this may be brought the fact determined by Lubarsch, that the phagocytes of several animals refractory to anthrax take up living bacilli that have been injected with greater eagerness than they include those which have been killed before injection. But further, this objection may be disposed of by direct observation of bacteria undergoing development from within the interior of phagocytes after the

latter have been destroyed by a substance which is at the same time a favourable medium for bacterial growth, as, for instance, beef broth. Such observations have been made upon pigeons rendered immune to anthrax.

During the last year or two great stress has been laid upon the fact that the bodily humours themselves possess most marked bactericidal properties, and, in fact, against the theory of phagocytosis has been brought another based upon this power of the humours to destroy the micro-organisms. Observer after observer has remarked that in blood plasma, defibrinated blood, blood serum, and in the blood as a whole, in the removed aqueous humour and other fluids and exudations of the body, many species of bacteria perish after a longer or shorter interval, and forthwith an endeavour has been made to find in these facts some elucidation of the phenomena of immunity. Yet the more deeply one examines into the question, the more one is convinced that no relationship exists between the two. Thus it happens often that the bactericidal property is more developed in susceptible species than in refractory; so with regard to the anthrax bacilli, in the very sensitive rabbit the bactericidal properties of the humours are more pronounced than they are in the refractory dog; and Behring and Nissen, the two who almost simultaneously first drew our attention to these phenomena, in their combined research recently published, admit that, as against the bacteria of anthrax, pneumonia, and diphtheria, this bactericidal property exists to the same degree in the juices of animals of the same species, whether they be susceptible or have been rendered immune. Often, again, it has been determined that the blood removed from the organism has a greater power of destroying bacteria than it has within the organism. A small quantity of blood withdrawn from the body will, in certain instances, kill a mass of bacilli greater than that which, injected into the circulation, would inevitably cause death. Evidently, therefore, in this bactericidal influence, extravascular phenomena enact an important *rôle*, —phenomena, that is, which have no connection with what occurs in the living refractory organism.

From another point of view, strong arguments have been directed against this theory of the tissue fluids. It has been shown, specially by the researches of M. Haffkine, that the death of the bacteria transported into organic fluids is largely due to the sudden change of medium, and that in passing from one medium to another by successive slight modifications in the fluid of growth, it is easy to make bacteria live in fluids which, when the change of environment has been abrupt, swiftly lead to their destruction.

In order to gain an idea as to the part played in the refractory animal by the fluids and the phagocytes respectively, the endeavour has been made to separate the two by placing under the skin of frogs (which are naturally immune to anthrax) minute packets formed of filter paper or of animal membrane, and containing the bacilli. The paper, while permitting the passage of fluid, wards off the wandering amœboid cells for a certain time. Shielded in this way from the phagocytes, though exposed to the action of the juices, the bacilli grow well and produce the characteristic felted mass of anthrax filaments. Baumgarten has not been able to confirm this experiment, but Hüppe and Lubarsch have repeatedly verified it.

But it is not even necessary to take these precautions in order to assure oneself that anthrax spores germinate in the juices of refractory animals. Recently, for instance, M. Trapeznikoff has found that when these spores are injected into the dorsal lymph sac of the frog, they constantly tend to develop into bacilli whose further growth is stopped by the phagocytes, which include them, along with such spores as have not had time to germinate. Eventually the bacilli so absorbed are digested by their hosts, while the included spores remain intact, although incapable of giving birth to bacilli for so long a time as the phagocytes remain alive. And I might adduce other similar cases. Such a comparative examination proves that in the living body the bactericidal property resides in the phagocytes, and not in the fluids.

Still it may be urged that possibly these cells, which can thus devour and destroy the living microbes, are only in a position to attack bacteria whose virulence has already been lessened by other means. Were this so, the microbes present in a refractory organism should behave, not like parasites, but as simple inoffensive saprophytes. Hence these microbes—powerless to produce upon a refractory soil the toxic substances which render them pathogenic and dangerous—should easily be included and destroyed, so that, according to this hypothesis, which has frequently been brought forward, the phagocytes play a purely secondary and dependent part, waiting until the microbes are weakened before they seize upon them. In favour of this view the fact has been cited that certain micro-organisms cultivated in the blood or serum of vaccinated animals become attenuated, so that they no longer induce a fatal disease. The bacillus anthracis grown in the blood of vaccinated sheep no longer kills rabbits, and, according to Roger, the streptococcus erysipelatosus grown in the blood of vaccinated rabbits only occasions a slight and passing disturbance in susceptible members of the same species. But here again we are dealing with fluids withdrawn from the body, and so modified in various ways. Let us make an observation more strictly to the point. Take, for instance, a rabbit vaccinated against anthrax and inoculate it with anthrax bacilli, thus allowing these to exist directly within the refractory organism. Such bacilli as are not destroyed preserve their virulence for a sufficiently long period, and it is possible to kill a guinea-pig with a drop of exudation taken from the region of injection thirty hours after subcutaneous inoculation, eight days after inoculation into the anterior chamber of the eye. A sojourn of so long duration within the vaccinated organism, then, has not deprived the microbes of their virulence, although twenty-four hours suffices to completely attenuate the bacilli cultivated in the removed blood of vaccinated sheep.

Years ago, it was established in M. Pasteur's laboratory that the refractory organism, instead of being an unfavourable soil for the preservation of virulence, tends the rather to reinforce this property. To exalt the virulence of an attenuated micro-organism, one always employs, not animals very susceptible to the specific disease, but those which are slightly susceptible, or it may be, under many circumstances, refractory. In this manner, the most active anthrax virus has usually been obtained by passage through birds, notably fowls; the greatest virulence of chicken cholera was gained by passage through the vaccinated cock, and quite recently M. Malm has shown that passage of the anthrax bacillus through the organisms of dogs, which of all mammals are the most refractory in this respect, increases its virulence in a most remarkable manner, so that the general law may be laid down that an organism which is but slightly susceptible or is refractory is able not only to preserve, but even to exalt, the virulence of bacteria. The principal argument in favour of the hypothesis, that pathogenic micro-organisms become simple inoffensive saphrophytes when they find themselves in a refractory region, loses therefore its *raison d'être*.

M. Bouchard, in his objection to the theory of phagocytosis, may be regarded as introducing but a modification of this hypothesis. He holds that pathogenic bacteria placed under favourable conditions give rise to substances which hinder the inflammatory process, and that only when these inhibitory substances are inadequately represented do the cells intervene. When, therefore, the organism rendered refractory by vaccination becomes an unfavourable soil for the production of these inhibitory bodies, the bacteria can no longer prevent the inflammatory reaction; free emigration of the leucocytes ensues, these cells seize upon the impotent microbes, and put a stop to their further growth. In this theory, the part played by the phagocytes is again secondary, depending upon a dearth of anti-inflammatory substance.

If the theory could be accepted in certain cases, it is nevertheless inapplicable as a general rule. In all those affections which are characterised by the absence of leucocytes upon the field of battle there is certainly no lack of inflammation. The very reverse obtains. In anthrax affecting small mammals, just as in the vibrionic septicæmia of pigeons and guinea-pigs and other analogous diseases, we find that there is a very distinct dilatation of the vessels, accompanied by great exudation; the inflammatory reaction is well marked, nothing is wanting save the determination of the white corpuscles. Or employing yet further that affection, which is, as it were, the touchstone of the bacteriologist, a still clearer proof of our contention is to be gained, if we inoculate a

rabbit on the one ear with a small quantity of virulent, on the other with a like quantity of attenuated, anthrax virus. In the course of a few hours the external signs of inflammation are far more conspicuous in the former; the vessels are greatly enlarged, and there is literally a huge exudation of clear serous fluid into the part; in the latter the external signs are less prominent, but examination of the seat of inoculation shows it to be packed with leucocytes. Consequently, the phenomenon we are discussing is to be explained not by an absence of the inflammatory process, but much more satisfactorily by a negative chemiotaxis of the leucocytes, which, instead of being attracted by the bacterial products, are repelled; where the animal is vaccinated or refractory a much slighter inflammation is sufficient to produce an abundant emigration of the leucocytes.

During the last few days Behring has brought forward another view which would explain immunity in a wholly different way. According to him the bacteria can live and even preserve their virulence in the refractory organism, but the *toxines* excreted by them now undergo a modification so as to be rendered completely inoffensive for the animal. And to this "toxicide property" of the organism is to be attributed the essential quality of the immune state. It is impossible to pronounce upon the arguments that have led up to this theory, for as yet they have not been circumstantially set forth, but already one can declare that such a theory is in no wise applicable to the phenomena of immunity in general. In three diseases remarkable for their pronounced toxic character—vibrionic septicæmia, pyocyanic disease, and hog cholera affecting the rabbit—as shown by the experiments of Charrin, Gamaleïa, and Selander, the toxines are so little attacked by the refractory organism that the same quantity of these substances (freed from bacteria) suffices to kill an animal very susceptible to one or other disease, and an animal vaccinated against it and thus completely immune. So too non-fatal doses of these toxines produce in animals of the two categories the same febrile and inflammatory reactions. The proof is clear that there is no special destruction of toxines in the refractory animal, and that the "toxicide property," if it exists, is not one whit more developed after vaccination than before.

Passing in review all these counter theories we see that each of them can only be applied to a certain number of facts; in some an attenuating or even bactericidal influence of the juices is relied upon, in others an anti-inflammatory action; in yet others a toxicide property. Still the phagocytic reaction is the only constant in all those cases of immunity and recovery that have as yet been sufficiently studied, and while certain of the factors mentioned (the attenuating and toxicide properties) do not in the least touch upon the continued existence or otherwise of the micro-organism, the bactericidal power of the phagocyte puts an end to the parasite itself, and thus at a given moment prevents further manifestation of its virulence, or preserves the animal attacked at a time when the toxicide properties would be found wanting, and the microbe remaining alive would consequently gain the upper hand.

But while thus placing before you the important part played by the phagocytes, I do not wish it to be thought that these cells are unaided in their contest by other defensive means possessed by the organism. This is far from being my view. Thus, in the febrile reaction, we see a puissant auxiliary very definitely favouring the work of the phagocytes. This febrile reaction has only to be inhibited—as was done by M. Pasteur in the anthrax of fowls—and animals naturally refractory to the affection succumb to the ravages of the bacilli. It is not possible at the present time to state fully and accurately all these influences which are associated in aiding phagocytic action, but already, we have the right to maintain that *in the property of its amœboid cells to include and to destroy micro-organisms, the animal body possesses a formidable means of resistance and defence against these infectious agents.*

A MEETING was recently held at the Academy of Medicine, New York, for the purpose of organising an American Electro-Therapeutic Association. The committee consists of Drs. G. Belton Massey, A. H. Goelet, and H. R. Bigelow.

A CASE OF TACHYCARDIA OR RAPID HEART SUCCESSFULLY TREATED BY ELECTRICITY AND LARGE DOSES OF BELLADONNA.

By THOMAS OLIVER, M.A., M.D., F.R.C.P.,
Physician to the Royal Infirmary, Newcastle-upon-Tyne, and Professor of Physiology, University of Durham.

In July, 1890, I was asked by Dr. Farquharson, of Newcastle, to see with him in consultation a young man, aged 28—a nervous, anxious-looking and emaciated man, who was slightly cyanosed. There was no history of rheumatism. Five or six years ago he met with an accident, and again, two years ago, when he fell over a "tipping" with his horse and cart. Though not materially injured at the time, he felt as if he had had a shock. From this date he became extremely nervous, and began to lose all his energy and pluck; he became afraid even of his own horse. He now began to suffer from attacks of violent palpitation, which would last for several days, and within the last three months he has been seldom free from these attacks of palpitation and a sense of cardiac distress for more than a week at a time.

When seen first by Dr. Farquharson in these attacks the pulse rate was generally from 190 to 230 in the minute. In his quiet state the pulse seldom exceeded 90, and when this was the case there could be heard a well-marked mitral systolic murmur. There was no albuminuria, no distended jugular veins, and no œdema of feet, but the left pupil was noticed to be smaller than the right—a condition of things which became more pronounced, Dr. Farquharson stated, if the stomach were distended with flatus. He had lately been the subject of dyspepsia and constipation, and when these were present his cardiac distress was increased. Beyond a sense of discomfort, of præcordial pain and uneasiness which the excited action of the heart caused, there was no marked dyspnœa. His sleep was broken and fitful. By his illness he had been rendered quite unfit for work.

The slight cyanosis alluded to was noticed in the lips, on the face, and in the finger ends. The pulse was small and extremely rapid. I counted up to 240 beats in the minute and then lost it. It was upwards of 250 on Dr. Farquharson's reckoning, but on this point we speak guardedly. Knee-jerks were slightly exaggerated. The lungs were perfectly healthy. Heart: the apex beat, which was very diffused, was felt two inches external to the nipple; there was also marked epigastric pulsation; pulsation, too, was seen and felt to the right of the sternum at the level of the right ventricle. The area of cardiac dulness was increased transversely. The tap of the heart could be seen and heard quite distinctly several inches from the chest—I thought about two feet. Over the aortic area—extending up to the episternal notch and down the sternum to the xiphoid cartilage—was heard a rough grating systolic murmur, followed by a well-marked second sound. It was only by counting the loud second sound of the heart that we were able to estimate the rate of cardiac pulsation. In addition to the grating systolic murmur mentioned above a soft mitral systolic could be heard, which was carried towards the left axilla, and particularly towards the back at the level of the fifth dorsal spine. Pressure upon the pneumogastric nerve in the neck slowed the action of the heart. The urine was normal; the internal organs of the abdomen appeared to be healthy.

We arranged that he should have 30-minim doses of tinct. belladonnæ, with small doses of Fowler's solution; that for a few days the ether spray should be applied to the back of the neck, and afterwards the interrupted current to the pneumogastric, one pole behind the neck high up, and the other along the course of the nerve in the neck. Within a fortnight he was very much better. His pulse was never higher than 120 a minute, and that only during excitement. A sphygmographic tracing taken at this time showed low arterial tension and well marked dicrotism. There was still the well-marked pericardial grating and mitral systolic murmur. The area of cardiac dulness remained as before; in its lateral diameter it measured 6½ inches.

It is now seven months since I saw him, and Dr. Farquhar-

son tells me that the patient has made an excellent recovery. Only once since the beginning of July has there been a return of the very rapid action of the heart, and on that occasion it only lasted two or three hours instead of the three or four days as previously. His pulse at present is never higher than 80 in the minute. For the last few weeks he has been taking arsenic and digitalis.

From being an anxious-looking, irritable, and nervous man, unable to follow his employment, he has become calm and more self-possessed, and is now able to carry on his employment, not so much in the outdoor department as in looking after the financial concerns of the business. The only unpleasant symptom which has been left is something akin to agoraphobia. In coming into Newcastle by road or rail he has to cross the High Level Bridge which spans the river Tyne, and whether he is in the train or on the roadway he always experiences, when on this bridge, unpleasant sensations originating at "the pit of the stomach as if a void had been suddenly created." This is so apt to be followed by increased rapidity of the heart that knowledge of this fact prevents him making the journey into Newcastle as frequently as he would.

The subject of tachycardia has attracted considerable attention since Dr. Samuel West and Dr. Sansom have written upon it, and latterly our interest in it has been revived by the remarks made by Sir Dyce Duckworth in the discussion which he opened at the Birmingham meeting of the British Medical Association on Functional Disorders of the Heart. In the absence of a rheumatic history, the origin of the disorder in our patient must be sought for in some condition of the central nervous system induced by the fright and shock, although the pericardial grating, the mitral systolic murmur, and enlargement of the heart—in the absence of any pronounced vascular lesion, such as aneurysm—must not be lost sight of. The immediate effect noticed when gentle pressure was applied to the pneumogastric nerves in the neck, and the good result which followed electrical stimulation, point in the main to a central cause suspending the inhibitory action of these nerves upon the heart, or to increased activity of the accelerating branches of the sympathetic.

ON CYCLICAL OR INTERMITTENT ALBUMINURIA.[1]

By W. P. HERRINGHAM, M.D., F.R.C.P.,
Physician to the West London Hospital and to the Paddington Green Children's Hospital.

A LECTURE of Dr. Goodhart's, published in the BRITISH MEDICAL JOURNAL, contained a request that more cases of this form of albuminuria should be published; and, since they are not often seen under conditions which allow thorough examination, I think it worth while to report the following case.

B. B., aged 13, was admitted under me at the West London Hospital, on January 6th, 1890, and discharged on April 23rd. He was a thin, pale boy, with a feeble circulation and a soft pulse; weighing 4 stone 3 lbs., and varying during his stay one or two pounds above this. He had a slight systolic murmur at the apex, and while in the hospital underwent an attack of subacute rheumatism. He was brought to me because every meal produced almost immediately abdominal pain, and a desire to go to stool. This was cured during his stay, and I only mention it particularly because we took some pains, in view of the albuminuria, to be quite certain that the pain was not that of renal colic. We found that the urine was intermittently albuminous. It was examined 91 times while he was an in-patient; 33 times it contained albumen, 55 times it held none, and three specimens were doubtful. The conditions were varied that we might discover the cause of the albuminuria.

First as to position, since that appeared the most important agent. Urine passed while in bed was examined 34 times. Albumen was found thrice only. There was but a faint trace each time, and all three specimens were taken during the first week of his stay. Urine passed while he was up and about the ward was examined 50 times. It contained albumen 29 times, in 3 the reaction was doubtful, and 18 times there was none. I spoke of the case to my friend, Dr. Haig, who reminded me of Semmola's theories, and suggested that when the boy was up he would get chilled, and that the cold, by contracting the vessels of the skin and altering the metabolism which goes on in these, might produce some form of albumen more diffusible than ordinary. In order to test this I ordered him to lie on a sofa in the ward instead of walking about, and I found that he, indeed, became thoroughly chilled while lying still, but that the urine never contained a trace of albumen though the experiment was repeated on five different days. Wondering, then, whether the actual weight of the blood when he was erect could produce venous stagnation, I thrice sat him upright in a chair for several hours, since in this position there is the same weight of blood above the kidneys as is carried when one is walking about. The urine once contained albumen and twice gave no reaction, but all three experiments were performed during a period when, as I shall relate, the albuminuria had almost ceased, so that the negative results are probably of less importance than might appear at first sight. On the last of these three days, March 4th, I made him, after sitting all the forenoon in a chair, perform violent exercise with the arms, thinking that the excitement of the heart and consequent increase of arterial pressure, might be found to produce albuminuria; the urine, however, remained quite normal.

The amount of albumen varied considerably on different days, without any obvious reason, and at different times on the same day. On nine separate days we examined every specimen passed, and found that the heaviest precipitate was in the middle of the day before dinner. It faded towards the evening to a faint trace or none. It took two or three hours after he had risen to reach its maximum. One day I kept him on the sofa till after dinner. He dined at 1 P.M. and began walking about at 2 P.M. Urine passed at 2.45 P.M. contained no albumen, but that passed at 4.0 P.M. gave the reaction.

Since the period of maximum albuminuria concurred, when his habits were those of ordinary life, with the time at which the greatest relative amount of uric acid is passed, and since Dr. Haig's recent papers had made a deep impression upon me, I determined to test the relations of uric acid, of urea, and of the acidity of urine to the albuminuria.

TABLE II.

Date.	Quantity.	Acidity Equivalent in Grains of Oxalic Acid.	Amount of Uric Acid.	Amount of Urea.	Uric Acid Urea.	Albumen.	Position.	Diet.
	Ozs.		Grains.					
Feb. 1	30	17.6	5.599	320.85	$\frac{1}{57}$	Absent	In bed	Meat.
,, 2	34	24.8	8.461	371.33	$\frac{1}{44}$	Present	Up	,,
,, 3	36	17.6	7.531	393.38	$\frac{1}{52}$	Absent	On sofa	,,
April 3	$25\frac{1}{2}$	46.0	5.053	339.75	$\frac{1}{67}$	Present	Up	Fish.
,, 5	31	32.0	6.669	320.38	$\frac{1}{48}$	,,	,,	Meat.
,, 16	21		5.273	300.93	$\frac{1}{57}$	Absent	,,	Milk.

The estimation of uric acid was carried out by Haycraft's process, the value of which appears now to be very doubtful. I could not, however, find that either the acidity of the urine or the absolute or relative amounts of urea and uric acid had any constant relations to the albuminuria. For, though albumen tends to appear with the higher proportion of uric acid—when, for instance, the $\frac{\text{uric acid}}{\text{urea}} = \frac{1}{33}$, $\frac{1}{47}$, and $\frac{1}{57}$—it is absent in other specimens when the proportion is $\frac{1}{51}$, $\frac{1}{52}$, $\frac{1}{53}$, $\frac{1}{55}$, as well as in many where the fraction is less. An excessive percentage of urea has been suggested by Dr. Ralfe as an explanation, but it did not occur in any regular connection with the albumen in this case.

The same thing might also be inferred from the little effect that diet by itself had upon his disease. For first, he passed

[1] Read in the Section of Medicine at the Annual Meeting of the British Medical Association held in Birmingham, July, 1890.

Table I.

Date.	Time of Day.	Quantity.	Acid, its Equivalent in Grains of Oxalic Acid.	Amount of Uric Acid.	Percentage of Urea.	Amount of Urea.	Proportion, Uric Acid / Urea.	Albumen.	Position.	Diet.
		Ozs.		Grains.		Grains.				
April 3	7.30 A.M. to 1.30 P.M.	3	8.593	1.218	3.8	53.01	1/43	Present	Up	Fish.
,, ,,	1.30 to 3.45 P.M.	4	5.27	0.933	2.1	39.06	1/41	Absent	,,	
,, ,,	3.45 to 7 P.M.	4	8.784	0.684	2.9	53.94	1/78	,,	,,	
,, ,,	7 P.M. to 4.50 A.M.	9	19.725	1.539	3.4	147.69	1/95	,,	In bed	
,, ,,	4.50 to 7.30 A.M.	5½	4.003	0.689	1.8	46.03	1/66	,,	,,	
April 5	7.30 to 11.15 A.M.	6	4.394	1.679	1.6	44.64	1/26	,,	Up	Meat.
,, ,,	11.15 A.M. to 5 P.M.	5	4.394	1.165	2.2	51.15	1/44	Present	,,	
,, ,,	5 to 7.45 P.M.	7	4.589	1.197	1.7	55.33	1/46	Absent	,,	
,, ,,	7.45 P.M. to 5.25 A.M.	13	19.032	2.628	2.8	169.26	1/64	,,	In bed	
April 8	7.30 A.M. to 12.30 P.M.	4	6.44	1.374	3.2	60.72	1/44	Present	Up	Meat.
,, ,,	12.30 to 2.45 P.M.	4	5.56	?	1.9	35.34	?	,,	,,	
,, ,,	2.45 to 6 P.M.	5	9.07	0.933	2.7	62.77	1/67	,,	,,	
April 16	7.30 A.M. to 1.45 P.M.	3	8.3	0.7	3.4	48.23	1/68	Absent	,,	Milk.
,, ,,	1.45 to 4.45 P.M.	4	11.12	0.995	3.0	55.8	1/56	,,	,,	
,, ,,	4.45 to 8.45 P.M.	6	6.14	1.213	2.6	72.54	1/59	,,	,,	
,, ,,	8.45 to 5.15 A.M.	8	25.77	2.365	3.3	125.16	1/52	,,	In bed	
April 20	7.30 to 10.15 A.M.	2½	3.416	?	2.8	62.55	?	Present	Up	Milk.
,, ,,	10.15 A.M. to 4.10 P.M.	3½	5.856	1.202	2.6	42.38	1/35	,,	,,	
,, ,,	4.10 to 6.46 P.M.	2	4.687	0.497	3.0	27.9	1/56	,,	,,	
,, ,,	6.45 P.M. to 4.45 A.M.	6	?	0.788	2.9	80.91	1/103	,,	In bed	

albumen regularly while he was on fish diet; secondly, he passed albumen once during a short period of milk diet; thirdly, the chief precipitate occurred in the morning before he took any meat; fourthly, he was taking meat regularly during a period of nearly a month, when he had hardly any albuminuria; and fifthly, he on many days took meat while in bed and yet passed no albumen.

Between February 10th and March 4th there was a period for which I am quite unable to account, during which the albuminuria almost ceased. During this time the urine was examined 13 times on twelve days while he was up, and albumen was only found certainly thrice and doubtfully once. One, however, of the other nine specimens was of evening urine which would naturally be free from albumen. At the time we hoped that the immunity was due to treatment, but this fond hope was subsequently shattered. He was ill in bed with rheumatism for several days ending March 23rd, when he rose again. For the next three days he passed no albumen, but it began again on the 26th.

Nor did the microscope help me any more than other methods of inquiry. I was never able to see any casts, but there were plenty of leucocytes in the field, and more than once some oxalate crystals. Oxalates have been found in several cases, but their importance is a very doubtful matter.

As a result of these various observations, I came to the conclusion that position was the most important of all the conditions that I could consider, and though this may act in many unknown ways, I am at present inclined to believe that it produced its effect simply by increasing the weight of blood resting on the renal veins. One thing seems to be very common in this class of patients—a weak circulation and a general loss of tone. This would greatly predispose to a condition of venous stasis such as I suppose to be present, and to which the kidney is, by reason of its double capillary system, more liable than other parts. I have, at any rate, failed to find any other factor likely to have a bearing on the case.

The greater liability to albuminuria in the forenoon is, perhaps, due to the weaker state of the circulation at that time, and since exercise is the best stimulant, the instances in which we could postpone the albuminuria till the afternoon by keeping the patient at rest may probably be explained by the absence of exercise.

Lastly, I would add that this case is on all fours with the cases of Rooke,[2] Dukes,[3] Pavy,[4] and von Noorden,[5] and that I should offer this explanation for this class alone. There are many other forms of intermittent albuminuria; indeed, in children, I believe slight albuminuria is generally intermittent, but I should think that they probably depend on quite other causes.

[2] British Medical Journal, 1878, ii, 596.
[3] *Lancet*, 1878, ii, 794.
[4] *Lancet*, 1885, ii, 706; 1886, i, 437.
[5] *Deutsches Archiv f. klin. Med.*, Leipz., 1886, xxxviii, 20

Treatment was of little avail in this case:

From Jan. 6 to 15	Fish diet	No drugs	Albuminuria.	
,, ,, 16 to Feb. 7	Meat ,,	Hydrochloric acid	Albuminuria.	
,, Feb. 8 to 13	,, ,,	Atropine	Little albuminuria.	
,, ,, 14 to 18	,, ,,	Arsenic	,,	,,
,, ,, 19 to 25	Fish ,,	,,	,,	,,
,, ,, 26 to Mar. 11	Meat ,,	,,	Little albuminuria up to March 4; then increasing.	
,, Mar. 12 to 23	Fish ,,	Salicin	For subacute rheumatism; in bed.	
,, ,, 24 to 26	,, ,,	Arsenic	No albuminuria	
,, ,, 27 to 28	,, ,,	,,	Albuminuria.	
,, ,, 29 to Apr. 5	,, ,,	Iron	,,	
,, Apr. 6 to 11	Meat ,,	,,	,,	
,, ,, 12 to 14	,, ,,	Digitalis and arsenic	,,	
,, ,, 15 to 20	Milk ,,	,,	Little albuminuria.	

MULTIPLE MULTILOCULAR CYSTS OF THE MESENTERY.

By WILLIAM ROBINSON, M.S., M.D.,
Stanhope.

Sir Spencer Wells contributed to the British Medical Journal of June 14th, 1890, a note on mesenteric and omental cysts, and a description of the latter was given by Dr. Ransom in the Journal for November 8th, 1890. These reports induce me to publish a few brief notes of a similar rare case.

A little girl, aged 24 months, was brought to me on September 7th, 1889, owing to the great and increasing size of her belly preventing her from walking and stooping. The enlargement was first noticed three months before. The child was anæmic and had signs of slight rickets (enlarged bone ends, lax joints, and history of sweating of the head); there were nebulæ of the corneæ and a history of severe bronchitis at 12 months of age. The belly was now 20½ inches in circumference; the enlargement was most marked on the left side, and was not quite uniform; on palpation the growth could be felt to extend from the left hypochondrium (where there was stomach resonance) to the brim of the true pelvis, into which it did not seem to dip, as the lower rounded end could be mapped out, and from the left loin to the median line, near which was a depression in its inner border; in fact, in shape and position it felt just like a uniformly enlarged kidney. The growth was highly elastic, freely movable, and dull on percussion, but the note varied in different parts of it; the left loin and groin were both dull. Sometimes on very slight percussion some resonance could be made out on the front of the tumour at the upper part. It was impossible to elicit a wave of fluctuation either in the whole or any part of the swelling. Alteration of the patient's position caused no alteration in the signs. Under chloroform all the above signs were verified, and an examination *per rectum* showed the pelvis was not invaded by the growth. On puncturing the growth with a hollow needle 2 or 3 drachms

of a straw-coloured limpid fluid, alkaline in reaction and highly albuminous, were obtained; the needle seemed to traverse a thick wall before the fluid came. On boiling the precipitated albumen with double the amount of strong acetic acid, the precipitate became gelatinous. On standing the fluid deposited a clear gelatinous material. Urine, 8 ounces in the twenty-four hours, acid, no albumen, no sugar, no casts.

On the following day I opened the abdomen, Mr. John Waldy assisting me and Mr. A. C. Waters giving chloroform. The incision was 3 inches in length in the median line. On dividing the peritoneum, an extremely thin, transparent cyst wall projected through the incision, and on sweeping the finger round the growth numerous soft adhesions were torn through; the growth was felt to be free of the pelvis and adherent behind. On tapping the cyst, 2 pints of fluid, similar to that obtained the day before, escaped. The mass was then gently drawn through the wound, and the descending colon throughout its entire length and the mesocolon separated from the growth, several double ligatures being used; the peritoneum was stripped off the tumour as this separation was made. Several smaller cysts were punctured, and one large multilocular cyst with thick white fibrous walls was also punctured; the pedicle contained a vessel which proved *post mortem* to be the inferior mesenteric vein. There were several small cysts the size of small marbles in the mesentery an inch or more away from the main growth, which I ruptured by squeezing. Both kidneys and the spleen were felt to be normal. The operation lasted over an hour; extremely little blood was lost, and the child was much collapsed after it.

At 9 P.M. the same night the child was crying as if in pain; there was rattling in the trachea; the lips were natural in colour; the pulse was almost uncountable and the temperature 102.5° F. Drop doses of tinct. opii had been given two or three times. At 2.15 A.M. the next day the child died.

The *post-mortem* examination, made the same day by Mr. Waters in my presence, showed the growth to have sprung from the upper part of the mesentery. Everything in the abdomen was found to be satisfactory; there had been no oozing of blood; the kidneys, spleen, liver, intestines, pelvic organs, and heart were normal. The lungs showed numerous depressed bright pink patches—to the extent of two-thirds of all the lung substance—which on section were carnified and contained hardly any air, and felt firm (atelectasis). The chest cavity was much encroached upon by the pressure from below, the lower ribs being bulged outwards.

A CASE IN WHICH SLOUGHS OF RENAL TISSUE WERE PASSED BY THE URETHRA.

By JOHN M. RATTRAY, M.B.,
Frome;
AND
J. GREIG SMITH, M.A., F.R.S.E.,
Bristol.

T. H., manufacturer, aged 45, a short, thick-set, plethoric man, was seen medically for the first time on April 29th, 1890. He had never been ill before, and the cause of the trouble he was treated for so many weeks he attributed to catching cold while attending a funeral three days before he sought advice.

His first symptoms were those of liver congestion. He looked very ill, and had flushed face, suffused eyes, thickly coated tongue, liver tenderness, and heavy bilious-looking urine. The first attack was a short one, for on May 8th he was so far improved as to be able to go downstairs and venture out of doors for a little fresh air in the verandah in front of his house. His temporary recovery was, however, of very short duration.

On May 11th he was taken seriously ill, and went to bed, where he remained for many weeks. His symptoms now were precisely those of acute Bright's disease. Fever ran high, urine scanty, dense, of smoky colour, with casts of blood and granular hyaline matter. Treated with hot bottles, milk diet, jalap and saline medicines, he made but little improvement, and flatulence and vomiting caused him intense distress.

On May 16th, his pulse becoming intermittent, a consultation on his case was held by Dr. Rattray, his usual medical attendant, and Mr. R. L. Willcox, of Warminster. Mr. Willcox, on palpating the left kidney deep down in the abdomen, struck on a very tender spot, and he gave it as his opinion that there might ensue a pyelonephritis, consequent on the probable presence of a calculus in the pelvis of the kidney. During the fortnight subsequent to the consultation, active symptoms subsided, the temperature lowered to normal, the redness of the urine cleared away, and Mr. H. was in comparative ease. The albumen disappeared, and for a few weeks the urine was plentiful (65 to 90 ounces in twenty-four hours), pale coloured, low specific gravity (1010 to 1015), and deposited a heavy cloud of mucus on settling. Microscopically, clusters of pus corpuscles, granular matter, and epithelial squames were detectable daily. An offensive smell in the urine suggested to Dr. Rattray the expediency of washing out the bladder with boroglyceride and Sanitas fluid. Sounding for stone was tried on several occasions, but gave negative results. The case went on in a chronic state for many weeks. Recrudescence of active symptoms took place from May 24th to 27th, June 15th to 18th, and again on July 18th and onwards. On June 17th Dr. Rattray made a careful examination of the patient, and, thinking he detected a fulness of the left loin, he asked Mr. H. for the benefit of the opinion of a surgical authority. While waiting to decide as to this,, the patient gradually recovered again, and for the following weeks so improved that he was able to leave his room and walk out of doors, one day going about a hundred yards from his house.

On July 18th Mr. H. had the final exacerbation of his symptoms. This was certainly his worst attack. Temperature rose to 104°, urine was loaded with albumen, pain in left loin set in, and flatulence and vomiting were continuous, intractable, and terribly distressing. Jalap, pilocarpine injections, hot bottles, etc., were tried all day, and at last, in despair and despite albuminuria, Dr. Rattray was impelled to administer morphine hypodermically. This was done with good result, and Mr. H., by means of repeated small doses of morphine, was tided over the worst of the attack.

Dr. Rattray had always cautioned Mr. H. to be careful to always pass his urine into a vessel, so that he might at all times see whether there passed from him a piece of grit or diseased substance.

On July 20th Mr. H. showed Dr. Rattray a piece of tissue which he passed the same morning after a considerable amount of pain. This was kept, and subsequently examined by Mr. Greig Smith, who saw Mr. H. in consultation on July 22nd. After consultation, expectant treatment being decided upon, there was a gradual and uninterrupted progress to recovery. Urine became quite normal. On August 25th the patient left for Weymouth, and in three weeks returned in perfect health. He has now resumed his business, and declares that he never felt better in all his life.

REMARKS BY MR. GREIG SMITH.—When I saw the patient the urgent symptoms had abated, but the patient was still seriously ill. I could detect no signs of renal enlargement, and no local evidence of perinephric inflammation. The case altogether was very puzzling, and no diagnosis was come to. The pieces of tissue which Dr. Rattray showed me threw a new light on the case. To the naked eye one of them, the size of a pea, was evidently the apex of a renal papilla, and this was afterwards confirmed by microscopic examination. I had seen pieces of renal tissue passed in a case of sarcoma of the kidney with large blood cysts, but was not aware that pieces of renal tissue were sometimes passed as sloughs in acute nephritis. This latter conclusion, or rather, working hypothesis, we adopted, and I returned, not having performed the operation I went prepared for. It was hoped that the passing of these sloughs signalised the termination of the complaint, but no definiteness in prognosis was ventured upon.

On referring to Ebstein's work[1] I find that he speaks of the occasional separation of small portions of renal substance in cases of suppurative disease of the kidneys, and their discharge through the urethra. He refers to two cases, both of

[1] *Ziemssen*, vol. xv, p. 357.

which proved fatal. If the literature were examined, it is likely that other cases might be found. In my own experience, and in that of everyone to whom I have described it, the above case is unique and seems worthy of being recorded.

CONGENITAL OCCLUSION OF THE URETHRA.[1]

By JAMES ADAMS, M.D., F.R.C.S.Eng.,
Eastbourne.

My attention has been directed to this rare condition by a case which occurred in my practice in October, 1889. I attended a confinement, and after a natural labour a male child was born at full term, who was well formed, and in every respect apparently normal, except he was the subject of hypospadias. Two hours afterwards I was sent for to see the child, because the nurse, who was a trained and intelligent woman, thought something was wrong, as the infant, although he had been bathed and dressed, and had passed a motion, had not micturated. The meatus was patent, so I tried to pass a small blunt silver probe down the urethra, but it would go only a very short distance. I directed the nurse to give the child a warm bath and keep him in the water for fifteen minutes, and to repeat the bath two or three times during the next twelve hours if no urine passed.

The next morning, fifteen hours after birth, I found that no urine had been passed and the child was beginning to be restless and uneasy, but without symptoms of distress. I again tried to pass, with all gentleness, the silver probe, and failed to get it further than the previous attempt. I now took a small French catheter, and that seemed to be brought up at the same distance from the meatus. Being a non-metallic instrument, I used as much force as it would bear, but did not succeed in getting beyond the obstruction. I withdrew the catheter and tried again, and this time succeeded in penetrating what I believe to have been a thin membranous structure which was occluding the urethra. The urine came freely through the catheter, and I had no further trouble with the case.

It is open to remark that the urethra might not have been occluded, being merely narrowed by a congenital stricture, or that the urethra was of normal calibre, and that its sides were agglutinated by inspissated secretion. While I am unable to disprove either of these opinions, I may say that had it been a stricture I should have expected subsequent trouble, and had it been the other condition I should have expected the hot baths externally, and the effect of the warm urine internally on the vesical side of the obstruction to have caused its disappearance. Another point tending to support my view that it was an organic occlusion of the urethra is the fact of the infant being a hypospadian, showing some developmental abnormality of the mesoblast in this region. And in a case of congenital occlusion reported by Mr. Forster, of Darlington, in the BRITISH MEDICAL JOURNAL of January 3rd, 1885, the infant was also the subject of hypospadias.

The only other instance I have met with of this condition was in 1878. This was a premature child, born at seven months, and a weakly specimen for that age. I was unable to pass a probe or catheter, and the child died forty-eight hours after birth, never having passed any urine. The child was too feeble to bear any further surgical proceedings, even if the parents would have consented.

The literature of this subject is very scanty, and in several of our English textbooks no reference is made to it. American works contain the fullest account of it, and I quote the following by Professor Duplay from *The International Encyclopædia of Surgery*, edited by John Ashhurst, M.D.:—

"These occlusions, which result from gluing together of the two corresponding halves of the penis, may occupy any point in the canal, but the meatus urinarius is the seat of election. Sometimes the mucous membrane of the glans is seen to pass in front of the meatus without anything being seen at this point which could indicate the existence of an orifice..... Most frequently the meatus is well formed, and ends in a *cul de sac* at a distance of a few millimètres. We have only a very small number of examples of occlusions situated at other points of the canal. The diagnosis is especially easy when the occlusion is in the meatus or in the fossa navicularis. Deeper occlusions may escape the first examination, but the ineffectual effort of the infant to urinate, and sounding with a curved stylet or very small catheter will usually render error impossible."

I will also give the short description found in Gross's *Surgery*:—

"The most common of these congenital vices are first closure or contraction of the meatus; and, secondly, absence, contraction, and change of form of the urethra. Occlusion of the external meatus always demands prompt interference. When it is caused simply by a duplicature of the lining membrane forming a sort of hymen, a vertical incision in the direction of the natural outlet is generally all that is required, the edges of the wound being kept asunder by means of a bougie. When the imperforation depends upon the presence of fibrous tissue and reaches a considerable distance back, the operation will be more serious, and will require to be performed with a trocar."

The diagnosis in these cases is easily made, for the subjects are newly born infants who are unable to pass water, and if the obstruction is at the meatus the condition is at once recognised, and if the obstruction is further down the urethra, the use of the catheter makes it evident. If the surgeon is unable to penetrate the obstruction by means of a soft catheter, he cannot judge how far the occlusion extends between the point where the catheter is brought up and the bladder, as it may involve the whole of that portion of the urethra, or only a small part of it.

On the question of treatment the proper course to adopt is clear where the occlusion consists of a membranous veil covering the meatus. This veil must be incised, and the orifice kept patent by passing a bougie daily for a week or ten days. Also in cases similar to mine, where a non-metallic catheter can be with moderate force thrust through the soft and easily lacerable membrane occluding the urethra, this treatment is clearly the one to follow; but in those still rarer cases where the urethra is obliterated for some distance, it appears to me there presents itself to the surgeon a most unfavourable condition to deal with satisfactorily.

Three courses are open, namely (1) forcing a passage by means of a curved stylet, or small curved trocar and cannula; (2) perineal cystotomy; (3) suprapubic puncture. The objection to forcing a passage is that it is an unsurgical and hazardous proceeding, and that you are working in the dark and have no guide to rely on. If you reach the bladder so much the better for your patient, for your treatment saves his life and leaves him with a urethra in its normal position.

Another argument in favour of this course is that it has been adopted with success, notably in the case mentioned above, where the urethra was said to be wholly obliterated. With regard to perineal cystotomy by the median method with the finger in the rectum, the distance to reach the bladder is short, and as it would be distended, one would feel more certainty of finding it than by the first plan. But I should give the preference to suprapubic puncture by small trocar as being simplest and safest, and I should fix in a rubber catheter and wait upon events. Afterwards, when the child was old enough, the suprapubic opening might be enlarged, the bladder explored, and a passage made from its interior by means of a curved trocar and cannula as near along the normal position of the urethra as could be ascertained.

[1] Read at a meeting of the East Sussex District of the South-Eastern Branch of the British Medical Association.

A CLINICAL NOTE ON THE SOPORIFIC ACTION OF MERCURY.[1]

By W. J. TYSON, M.D.,
Folkestone.

I AM not aware that the above action of mercury in the class of case I am about to describe has been recorded. No doubt the fact is known to many of you, yet it does not appear to me to be so generally, and that is my reason for bringing the subject forward at this meeting.

The cases in which I have found blue pill—for this is the

[1] Read in the Section of Medicine at the Annual Meeting of the British Medical Association held in Birmingham, July, 1890.

form of mercury I am referring to—give such good soporific effects are rather difficult to describe, and must be given in a more or less general way. Many men would call them cases of biliousness, and for want of a better term I am content to use it. The patients are generally over 40, complaining of lassitude, loss of appetite, a general fulness of the abdomen, pains in the shoulder-joints, tongue generally of a whitish brown colour, a nasty taste in the mouth, eyes are rather "thick," a want of clearness of thought, more or less dull pain in the head not confined to any one particular spot, irritability of the skin, and, above all, sleeplessness at night. There may be many more symptoms and signs than the above, or few of them may be present, but, when the symptom of sleeplessness is prominently complained of, it is here that we find the soporific action of blue pill followed by saline draughts peculiarly brought out. Now, the symptoms detailed are principally those found under the heading of bilious dyspepsia, but there is this important clinical difference: whereas sex, richness of food, want of exercise play important parts in producing the above form of dyspepsia, the cases that I have in mind are found as often, if not more so, in women, and where the plainest diet and moderate exercise have been taken.

There is a little doubt that the sea air has something to do with the above state of health; people who have come down to the seaside after a long residence inland frequently develop after a few days' sojourn all the aforementioned symptoms. I believe that we who practise in seaside resorts would less often be called upon to prescribe for this condition were a little mercurial taken immediately by the patient on his arrival, but perhaps, on the whole, this had better be left in our hands.

Again, I do not associate these cases with those which are commonly called "lithæmia," or the substitution of uric acid for urea as the final product of disintegration of albuminous substances within the body: under this last condition you obtain the more remote symptoms of gout.

What is the exact action of the mercury which brings about the above happy result I do not know, nor am I anxious to speculate or propose theories. Murchison supposed that it possessed a double action, for whether or not the secretion of bile was increased, there was certainly more bile passed when mercury was being taken; thus an eliminating action was brought about, so that less of the bile constituents were absorbed from the intestines than usually. Again, he supposes, in some way or other, the albumen is more thoroughly disintegrated. But what is important for us to know is the use of a drug which will enable you to give your patient a good night, whilst at the same time you are treating the root of the disease, and apparently not giving ordinary soporific drugs.

It is needless for me to use any padding to this paper in the way of quotation of cases; they would be uninteresting and wearisome; and the title of my paper does not admit of it.

THE TREATMENT OF SPASMODIC TORTICOLLIS BY EXCISION OF THE SPINAL ACCESSORY NERVE.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

The three cases recorded below illustrate the beneficial effect of excision of a portion of the spinal accessory nerve in obstinate cases of spasmodic torticollis. In each instance the spasm, which chiefly involved the sterno-mastoid, was of a severe nature, quite incapacitating the patients from following their occupation; it had come on without any apparent cause, had been present for some months, and had resisted all the ordinary methods of treatment, for example, large doses of bromide of potassium, galvanism, massage, counterirritation, etc. Two of the patients had been specially sent to my colleague, Dr. Ross, to receive the benefit of his advice, and it was at his suggestion that neurectomy was performed.

The operation was carried out in the same manner in each case. An incision three inches long was made along the anterior margin of the upper end of the sterno-mastoid, and the nerve having been exposed by a careful dissection, about one-third of an inch of its trunk was excised just before it enters the under surface of the muscle. The immediate effect of the operation was to completely paralyse the sterno-mastoid; the spasm ceased, and the position of the head at once became greatly improved. The head does not immediately become quite straight, for it appears as though the affected sterno-mastoid, as well as the muscles of the neck generally, become the seat of slight contracture or shortening, in consequence of the long-continued faulty position in which the neck has been held. This has to be afterwards overcome by manipulation—namely, by forcibly but gently straightening the head two or three times a day—assisted by an artificial muscle. The latter is provided by means of an elastic band fixed above to a poroplastic cap, and below to a belt or plaster-of-Paris bandage round the waist, and arranged in such a way that the extension acts in a line parallel with the unaffected sterno-mastoid. In some cases a second elastic band, attached behind in a vertical line from the occiput, will be found useful. The apparatus is worn for a few weeks or for several months, until the head has regained its normal position and can be held straight without any effort on the part of the patient.

Case I.—Female, aged 31 years, admitted April 27th, 1889, suffering from tonic contraction of the right sterno-mastoid muscle. She enjoyed good health until about six months previously, when the head became gradually rotated to the left and drawn over to the right side. When admitted the right ear was almost in contact with the shoulder, and she complained of severe pain in the neck on the same side. May 29th neurectomy was performed.

Case II.—Male, aged 35 years, admitted April 25th, 1890. In this patient the spasm, which had been present for about five months, in addition to the left sterno-mastoid, involved slightly the trapezius and scaleni on the same side. Some clonic spasm was also present, so that the head was not only drawn over to one side, but it also exhibited a constant rotatory movement. May 27th neurectomy was performed.

Case III.—Male, aged 24 years, admitted September 16th, 1890. The spasm had been present for about three months, and the condition was almost identical with that met with in Case II. October 4th neurectomy was performed.

Present Condition.—In Cases I, II, where intervals of eighteen and six months have elapsed since the operation, the head can now be held quite straight, and the patients are following their occupation as usual. Occasionally, and generally towards evening, when tired and exhausted with their day's work, there is a slight tendency for the spasm to recur: this is, however, becoming less marked and less frequent (especially in Case I) as time goes on, and can always be overcome by an effort of the will. In Case III, where a month has now elapsed, the head is almost straight, and though it still requires some effort to keep it so for any length of time when the apparatus is left off, the condition of the patient is daily improving.

I have now performed the operation upon seven patients,[1] and the results have been sufficiently encouraging to make me recommend its adoption in similar cases when palliative treatment has been tried and found ineffectual.

The most suitable cases for operative interference are those in which the spasm is tonic in its nature and confined to the sterno-mastoid; but even if other muscles have become involved, excision of a portion of the spinal accessory nerve is still worth a trial, for no other plan of treatment is likely to be attended by such satisfactory results.

[1] My first three cases, together with a more detailed description of the operation, will be found recorded in the British Medical Journal, 1885, July 11th. Case III, which had been operated upon only a few weeks previously to the publication of the paper, was there described as unsuccessful, but after the patient left the hospital the spasm completely subsided, and has never returned.

Sir Algernon Borthwick will take the chair at the festival dinner to be held on May 11th to commemorate the twentieth anniversary of the foundation of the Chelsea Hospital for Women.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

TREATMENT OF GUINEA-WORM BY WEIGHT EXTENSION.

DURING the course of four years' service in the Punjab frontier I had occasion to treat a good many cases of guinea-worm, and, finding the usual native method of treatment very tedious, I determined to try the effects of extension by small weights. The result was very satisfactory, and much more rapid than in the ordinary method. My experience of this way of dealing with the parasite extends to between forty and fifty cases; and as I am now serving in a part of India where the parasite is not often seen, I bring it to notice in the hope that some of the readers of the BRITISH MEDICAL JOURNAL, who may have better opportunities, may feel disposed to give it a trial.

The following is the method I have employed: If the portion of the parasite extruded is not sufficient to wind up, it is picked up with forceps, and a piece of twine 6 inches long, having a weight at the other end, is attached to it; as soon as the parasite outside is long enough, it should be wound round a slender round piece of ivory about 1¾ inch long, and having a loop of wire hanging from its extremities; to this loop is then attached, by means of a hook, the twine with the weight. The weight should be from 4 to 6 drachms, according to the thickness of the individual parasite we have to deal with; it is only necessary to exert slight extension, and, when possible, this should be effected in the same axis as the parasite enters the body. When the patient has to get up, or at night time, the extruded portion should be wound up to the place of exit without using any force, and the weight is then detached. Not more than two or three inches of the animal should be left unwound, as it is liable to dry and break, and it is always better to keep it moist with water.

L. J. PISANI, Surgeon I.M.S.

North-West Provinces, India.

TWO FATAL GLAND CASES.

THE following brief notes of two cases of tuberculous gland disease are, perhaps, of sufficient interest to place on record, a fatal termination due directly to diseased cervical glands being somewhat unusual.

Early in 1889 a girl, aged 8, came under my care complaining of slight difficulty of breathing. Respiration was harsh and noisy; there were a few isolated glands on each side of her neck, movable and of hard consistence; none of them being larger than hazel nuts, and none of them pressing on the trachea, this tube being, as far as could be felt, free from pressure. Laryngoscopic examination gave negative results. The lungs were normal. A very careful examination failed to discover evidence of enlargement of mediastinal glands. The child was badly nourished, and steadily wasted. In spite of treatment, no permanent improvement took place. About the end of the first week in May she developed symptoms of nausea and difficulty of swallowing. She died on May 22nd of exhaustion. A week before her death she began to cough up foul-smelling pus. The necropsy showed the superficial cervical glands above mentioned to be ordinary tuberculous glands caseating in parts. In immediate posterior relation to the lower end of the trachea I found an abscess cavity with two or three small glands matted together degenerating and discharging into the abscess sac at its upper end, and between the lower end of the abscess and the trachea there existed a ragged opening. The rest of the body was apparently healthy, but badly nourished.

The second case was an apparently healthy boy 11 years of age, an inmate of the Deaf and Dumb Asylum. In September, 1890, the glands on both sides of his neck began to slowly increase in size till the third week in October, when he had a very mild attack of scarlatina. The glands increased more rapidly after this, so that in the second week of November they were in compact masses in both anterior triangles, though not of sufficient size to cause apparent pressure on the trachea. The temperature remained at 100° F., indicating suppuration, though none could be definitely made out. The boy's breathing had the same harsh sounds as in the previous case, although it was free. There was never any difficulty in swallowing, and the pharynx was normal. The parents declined any operative interference. On November 20th, when sitting at a light tea with the nurse, he suddenly began to gasp and choke and in a minute or two was dead. There was no evidence that the food choked him. A necropsy was unfortunately not permitted.

From a consideration of the history, symptoms, and mode of death of this case, I am inclined to the belief that the boy died in consequence of the sudden bursting of a glandular abscess into the trachea, the pouring out of the matter into the windpipe causing spasm of the glottis. Whether this is the true explanation or not, the fact remains that death resulted from a sudden hindrance to breathing in a subject whose only apparent disease was enlargement of glands. The conclusion I would wish to draw is, that whether glands be large or small, recent or of long standing, it is dangerous to delay, even for a day, an operation when there is evidence of direct or indirect interference with respiration.

BERTRAM THORNTON,
Surgeon to the Royal National Hospital for Scrofula, Margate.

LIQ. HYDRARG. PERCHLOR. IN DIPHTHERIA.

THERE can be no doubt that the usual methods of treating diphtheria are far from satisfactory, and I am glad to find my own experience confirmed by Mr. F. A. Coward in the BRITISH MEDICAL JOURNAL of January 3rd. There are four points I wish to notice: 1. That the addition of pot. iod. does not alter the therapeutic effect of liq. hyd. perchl. in diphtheria; 2. that the addition of arsenic (Fowler's solution) is certainly beneficial; 3. that the treatment is applicable to every stage of the disease, from early sore throat to later paralytic stages; 4. that it does away with topical applications and their after-effects. I give the two following cases as illustrations:

CASE I. On November 9th, 1890, Dr. W. B. R. gave chloroform for me in the case of a child suffering from diphtheria, for which I did tracheotomy. In spite of my protestations, Dr. R. sucked the wound, and on the 10th he felt the throat uncomfortable. On the 11th it was congested, 12th distinct patch, which on the 13th had spread rapidly from the right tonsil over the anterior pillar of the fauces. The above treatment was now commenced. A line of demarcation formed, and there was no further spreading, and what threatened to be a serious case was pronounced out of danger in a few days. This case is interesting as happening in a medical man, who was able to take almost hourly notes of his own case.

CASE II.—W. T., aged 16, came to me on December 24th, 1889, after having had tracheotomy done in Sheffield. When I first saw him he complained of shortness of breath, loss of appetite and general weakness. The two former conditions cleared up after the ordinary treatment, but the latter continued, until at last he was not able to get in and out of bed without assistance. A phthisical history was given to me at first, and for some reason or other the true history was held back. I was not satisfied with their account of the case, and ultimately discovered, in searching for the cause of the paralysis, that the boy had had diphtheria. I immediately put him on liq. hydrag. perchlor., pot. iod., and arsenic (Fowler's solution), with the result that the case ended in perfect recovery.

I shall be glad to learn more of this treatment, since it has proved itself not only worthy of trial, but of trust, in a disease which is admittedly among the worst we can be called upon to treat.

Norton, Malton, Yorks. H. MAINWARING-HOLT.

TAPPING THE VENTRICLES IN HYDROCEPHALUS.

THE interesting paper by Mr. Mayo Robson, of Leeds, published in the BRITISH MEDICAL JOURNAL of December 6th, 1890, induces me to send some particulars of a case under my care last April at the Children's Hospital, Brighton.

M. W., aged 14 months, was admitted in a semicomatose condition, presenting the usual signs of acute hydrocephalus.

together with abnormally large cranium and bulging anterior fontanelle, which latter was as large as a half-crown piece. As the course of the disease rapidly progressed I consulted my colleague, Mr. Leigh, who kindly consented to tap the lateral ventricles. This was done by Dr. Roberts passing a trocar and cannula through the left lateral angle of the fontanelle, the instrument being directed inwards, with a slight inclination towards the mesial line, to the depth of an inch and a half.

On withdrawing the trocar about 2 fluid drachms of clear cerebro-spinal fluid escaped. The stop cock of the cannula was then turned to prevent further flow, whilst over its mouth was placed one end of a long fine india-rubber tube previously filled with a weak solution of common salt (2 per cent.), the other end being placed in a vessel under the bed, and containing a similar solution. The usual antiseptic precautions were taken, but no anæsthetic was considered necessary. The patient lay very quiet, with the trocar maintained *in situ* by a stock of moistened salicylic wool, the rest of the scalp being covered by dry salicylic wool secured by blue gauze. Dr. Richards, the house-surgeon, was instructed to withdraw 1 fluid drachm of cerebro-spinal fluid every three hours. This was readily accomplished by turning the stopcock, each withdrawal being immediately attended by a lessening of the collapse and coma, whilst the anterior fontanelle became gradually depressed, and the edges of the cranial bones in its vicinity overlapped each other. The patient, however, became weaker, and died three days after the operation. The *post-mortem* examination showed that the trocar had passed through the superior frontal convolution, and entered the left lateral ventricle through the roof of the anterior horn, close to the corpus striatum. There were no secondary changes anywhere along the track of the instrument. The ventricles, whose capacity equalled quite 6 fluid ounces, contained about 2½ fluid ounces of clear fluid. This dilatation was doubtless mainly induced by a caseous deposit at the summit of the transverse fissure, which pressed upon and constricted the iter, but some recent tubercle and lymph existed in both Sylvian fissures. The brain substance generally was somewhat softened, especially the corpus callosum. Recent tubercle was found in other organs of the body, but its presence gave rise to no signs during life.

Brighton. W. C. Chaffey, M.D.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

LONDON HOSPITAL.

CONVOLUTED TUMOUR OF SCALP.

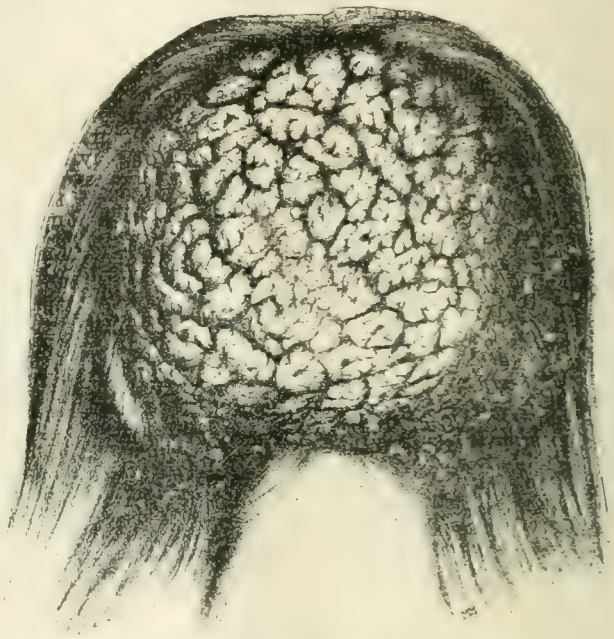
(Under the care of C. W. Mansell Moullin, Surgeon and Lecturer on Physiology to the London Hospital.)

The patient, a young woman aged 28, from whom the accompanying illustration was taken, was admitted in September, 1890, suffering from an eczematous and very offensive eruption behind the ears and at the back of the neck. The whole of the back of the head was covered by a growth of the most extraordinary character. It extended from the vertex above to the nape of the neck below and the ears on either side, and was composed of folds of skin and fibrous tissue, separated from each other by deep fissures, and winding in and out in a fashion that immediately called to mind the convolutions of the brain. The light pink, almost yellow, colour of the greater part of the surface still further increased the resemblance.

The folds were not symmetrical, and did not follow any definite order or arrangement. In the middle, a short distance above the external occipital protuberance, was one approximately central, and the others showed some slight evidence of concentric growth, but not to any marked extent. Below the line of demarcation was clear; but above and at the sides little irregular projections were visible around the borders of the mass, and the patient (who was very reticent and would give little information about it) seemed to think it was slowly extending.

So far as could be ascertained the fissures were quite half an inch in depth in the centre, but the convolutions were so tightly pressed together that it was very difficult to make certain.

A few hair follicles were visible on the convexities of the ridges, but very few hairs. On the other hand in the fissures, especially near the margin, the hairs were abundant and of great length. The rest of the head was so thickly covered that the patient had no difficulty in completely concealing the mass.



There can be no doubt it was congenital in origin, and that it had increased with the growth of the patient; but it was not possible to ascertain whether the greater prominence it had recently assumed was due to actual growth or to its becoming more exposed.

The immediate cause of the patient applying for relief was an attack of eczema, excited by the retention and decomposition of the secretion of the skin in the fissures. There was a considerable degree of redness and of thickening behind the ears and on the nape of the neck, and the discharge was very offensive, but this soon disappeared under a lotion of borax and acetate of lead. At the same time the necessity of absolute cleanliness was strongly impressed upon the patient, as there seemed a very fair degree of probability that the persistent irritation kept up in this way might not only tend to more rapid growth and wider extension of the convolutions, but might possibly end in something worse at a later date.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

CASE OF ACUTE BILIARY CIRRHOSIS.[1]

(Under the care of David Drummond, M.D., Physician and Pathologist to the Infirmary; Lecturer on Pathology, University of Durham College of Medicine.)

A. C., aged 34, married, a shipwright, was admitted into the Royal Infirmary on November 17th, 1888. According to the patient's account of his illness, he was a healthy man until four months before his admission to hospital, when he caught a chill after a wetting, and in consequence was laid up with a severe cold. He suffered much from cough and profuse sweating, chiefly at night. This illness proved obstinate, and though able to leave his bed after a time, he continued

[1] The case was communicated to the Section of Medicine at the Annual Meeting at Birmingham, in connection with the discussion on Hepatic Cirrhosis.

to feel ill and was unable to return to his work. Soon his ankles were observed to be swollen, and by degrees the œdema ascended the legs. Next he complained of pain and tenderness in the right hypochondrium, and the bowels became constipated, though occasionally they were spontaneously relieved by brief attacks of diarrhœa. Then swelling of the abdomen was noticed, and shortly before he came under observation jaundice of the conjunctiva and skin made its appearance. There was no history of syphilis; he owned to very intemperate habits, but chiefly drank whisky. Family history was unimportant.

State on admission: Jaundice perceptible but not deep; œdema of the legs and scrotum. The abdomen was distended; the tongue furred. Pulse 92, temperature 102°. The urine was scanty (about 30 ounces), dark, contained bile, specific gravity 1032, acid, no albumen. He complained of thirst, nausea, loss of appetite, constipation, cough, and pain in the region of the liver. The abdomen contained a large quantity of ascitic fluid; none of the abdominal organs could be examined satisfactorily owing to the tension of the walls, though a sense of increased resistance in the right hypochondrium suggested considerable enlargement of the liver. There were no cardiac murmurs. The breath sounds were generally feeble, except at the left apex, where harsh metallic breathing was audible. The cough was hollow and ineffectual, though at times it was accompanied by white tenacious expectoration streaked with blood.

The jaundice deepened rapidly, and the ascites increased notwithstanding a more copious flow of urine, the result of the employment of the resin of copaiba, and watery evacuations from the bowels induced by resin of scammony, etc.

On November 26th, 198 ounces of bile-stained fluid were drawn off. Hiccough and delirium came on, and he died on November 30th, a little over four months from the apparent commencement of the illness.

Post-mortem Examination.—Deep jaundice; upper part of trunk thin, the abdomen distended, the legs and scrotum œdematous. The heart weighed 9 ounces, valves healthy. The lungs were congested and œdematous; no tubercle, no consolidation. The abdomen contained a large quantity of blood-stained fluid. The liver was much enlarged, weight 6½ lbs.; the surface was smooth except in places along the anterior border, where the capsule was thickened and somewhat puckered. On section, the liver substance was firm and presented a coarsely mottled appearance—dark reddish-brown patches on a yellow-grey ground, not unlike the nutmeg state. The gall bladder contained a puriform fluid; the common bile duct was patent; the liver was not bile-stained. Beyond the appearance due to the presence of bile, the kidneys were normal; the spleen weighed 30 ounces. The various organs were tested for lardaceous degeneration, but with negative result. The brain was not examined.

The microscopical examination of the liver showed very distinctly that the increase in the size of the organ was due to round cell infiltration surrounding the small bile ducts. The patches of small round cells were very numerous and varied much in size. The larger groups of cells embraced the small portal radicles as well as the bile ducts, but the smaller were associated with the bile canaliculi alone. There was comparatively little fibrous tissue formation, but where it was at all evident it was more intimately connected with the branches of the vena portæ than with the bile ducts. The nuclei of the duct epithelium were strikingly proliferated, and the appearances so often described as due to new bile ducts were very manifest. In a considerable number of the patches of round-cell growth, giant cells such as are commonly seen in tubercle were observed.

Remarks.—This case belongs to a class the existence of which has not yet, I believe, been fully recognised. It is an example of acute alcoholic biliary cirrhosis. For a while I was a little at a loss whether to ascribe the condition to alcohol or tubercle, but a careful review of the morbid anatomy—naked eye and microscopical—convinced me that the case was not tuberculous. The importance of distinguishing between acute and chronic forms of disease is sufficiently obvious. I may, therefore, be permitted to express a hope that other practical physicians may be induced to place upon record cases that serve to justify the opinion that such a clinical distinction exists. What we want is more information upon the clinical features of the varieties of cirrhosis of the liver.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 27th, 1891.

Timothy Holmes, M.A.Cantab., President, in the Chair.

The Therapeutical Value of Venesection: its Indications and its Limits.—Dr. P. H. Pye-Smith in his paper recorded cases in which he had used bleeding from the arm, amounting to nearly fifty in number. The patients were suffering from bronchitis, acute and chronic broncho-pneumonia, lobar pneumonia, miliary tuberculosis of the lungs, valvular disease of the heart and pericarditis, Bright's disease, aneurysm, apoplexy, and epilepsy. The general results were stated, and the remedy was then considered, not as one adapted for any single disease, but as useful in meeting certain indications of pathological states. These indications were stated as follows: First, cyanosis with distension of the right side of the heart, whether from pulmonary or from some other obstruction to the circulation; secondly, the intense pain of aortic aneurysm; and thirdly, uræmic and prolonged epileptic convulsions. The counter-indications for bleeding were then considered, and criticism was offered of its use in fevers, in inflammatory disorders, in acute pneumonia, in hæmorrhage, and in apoplexy. An appendix of cases concluded the paper.—Dr. Stephen Mackenzie agreed with the author that the time was now ripe for reconsidering the subject of venesection. Although it had in olden days been abused, yet there was no doubt that it was a method of great practical value. He had himself always been in the habit of bleeding for certain conditions, and particularly in the first class of Dr. Pye-Smith's cases: that of distension of the right side of the heart when life was in jeopardy, and where the pulse was slow and feeble. Here relief was immediate, and benefit might be permanent. The diseases were of various kinds, such as heart disease, capillary bronchitis, and pneumonia, where the right side of the heart was endeavouring to get blood through the lungs. He referred to the case of a lady who was the subject of pneumonia. When he saw her she was stupid, heavy, cyanotic, with pulse 120, respirations 52, temperature 104° F.; 26 ounces of blood were removed, and next morning the temperature was 98.2° F., at 5 P.M. 104° F., at 9 P.M. 102° F., with pulse 120, respirations 53. Five ounces were then withdrawn by leeches; the temperature remained between 102° F. and 104° F., pulse 130. The next night her condition was again desperate, the temperature 103.5° F., pulse 130, respirations 30. Immediate benefit ensued after the removal of 12 ounces more blood; the temperature went down to 102° F., and never rose again, and the patient gradually recovered. He had known life to be saved in cases of hæmoptysis, where the blood was running into the trachea and bronchi, and the patient was pulseless. On bleeding the hæmoptysis ceased, and the patient recovered. Marked venous congestion, with cardiac struggling, were the indications for bleeding. In the second class (aneurysms) there were other means of obtaining the same result, but if potassium iodide, nitrite of amyl, and nitroglycerine had been used and failed, and bleeding had succeeded, then that was strongly in favour of this mode of treatment. He related the case of a patient with aneurysm, with very severe pain, who had been taking 5 grains of iodide of potassium three times a day, whose pain ceased after 30 grains of iodide of potassium; and the other two drugs gave the means of reducing arterial tension, which was equivalent to the abstraction of blood. In the third class of cases (those of uræmia) he had once been accustomed to bleed, but the results had not been encouraging, and if the cause of the arterial tension was, as he believed, due to some toxic influence, then the best mode of treatment was, he believed, by morphine; and he mentioned the case of a girl with symptoms of uræmic poisoning, who had derived great relief from the injection of one-eighth of a grain of morphine. But in a case with dilated left ventricle, cyanosis, œdema, and suppression of urine, venesection gave such relief that on a second recur-

rence of the symptoms the patient asked to be bled.—Sir GEORGE HUMPHRY felt that it was an opprobrium to the profession that a man could have lived through a period in which venesection had been very largely employed, and also through a period in which it was never used. As an apprentice, he used constantly to bleed at the spring and fall as a preventative. In inflammatory affections, also, such as acute pleurisy, it was the means of giving immense relief; and he related the cases of two men, brothers, of the same age, both with acute pleurisy, and in whom the conditions appeared to be precisely similar. One, under ordinary antiphlogistic treatment, died in a few days, whereas the other, after the removal of a pint or more of blood, recovered; and he could not help thinking that the first might have been saved had venesection been practised. In inflammatory affections of the lungs bleeding was attended with very little trouble to the patient, and was frequently attended with immediate relief. After injuries of the brain, the result of venesection was often markedly beneficial. He mentioned the case of a man with a head wound from a pickaxe. At first there were no symptoms, but later inflammatory cerebral symptoms set in, from which, after bleeding, he soon recovered; whereas, if no blood had been let, it was probable that a fatal result would have occurred. He then asked the question how it was that so important an agent, once so generally employed, should have passed into almost complete abeyance; so much so, that in recent years he had found many students and young practitioners completely ignorant of how to set about blood-letting. The answer was, he believed, to be found in the abuse from over-use of the remedy, which had in some cases done great harm, and also to the statistics of Dr. Hughes Bennett, of Edinburgh, showing that cases of pneumonia, in which no blood was abstracted, had been more successful than those in which it had been. He thought a useful lesson might be learnt that an immoderate use of any remedy was liable to bring it into unmerited disrepute.—Dr. BROADBENT said that an additional reason why venesection had been abandoned was because human intellects were always dominated by theory rather than by experience. The decision against bleeding had been arrived at from the results in cases of pneumonia, a disease in which it was only of benefit in the early stages. He had been brought up in a school that condemned venesection, a position confirmed by the results that he used to see in Paris in cases of rheumatic fever, pneumonia, and other acute conditions. As an independent physician, its proper use had by degrees become apparent to him. In the three categories mentioned by Dr. Pye-Smith, he had employed the method. In aneurysm, he agreed with Dr. Stephen Mackenzie that its use would be very rarely needed, if iodide of potassium were freely given. In cases of over-distension of the right ventricle of the heart, his experience differed from Dr. Pye-Smith's and Dr. Mackenzie's in that he had had better results in cases of mitral valve disease, particularly in mitral stenosis, than in cases of bronchitis. In the latter disease he relied more on the use of emetics. With an overloaded right heart, the indication for venesection was forcible cardiac impulse, with a small, almost imperceptible, irregular pulse. The forcible impulse showed the power of the heart's action, and that it was in a position to benefit by the relief given by venesection. In pneumonia, the opportunity of benefiting by venesection came quite early, and he mentioned the case of a patient to whom he had been called, who was livid, pale, almost pulseless, speechless, and unable to cough. After the removal of 16 or 20 ounces of blood, the breathing became easier, cough and voice returned, and the patient soon asked to be allowed to get up, as he felt so much better. In uræmic convulsions, Dr. Broadbent's experience of venesection had been uniformly favourable. The convulsions were not, he believed, directly due to the toxic action on the brain, but only indirectly through the high arterial tension produced by the poison, and then venesection acted in the same way as in over-distension of the right side of the heart. He recalled a case in which convulsions from high tension without uræmic poisoning were relieved by the abstraction of blood ten or twelve years ago, and the patient had never since had evidence of kidney disease. In cases of cerebral apoplexy, he felt that the opportunity for employing venesection would be in early ingravescent hæmorrhages. Only one such opportunity had occurred to him; a case of granular contracted kidney, but in it no blood would flow from the opened vein, owing, as he believed, to the peripheral arterial spasm. In a case of uræmic dyspnœa, with acute dilatation of the heart, although two veins were opened, no blood would flow, but the life was saved by the administration of nitroglycerine. He suspected that the benefit derived from bleeding as a prophylactic, mentioned by Sir George Humphry, was due to the fact that the patients had a high arterial tension—not an uncommon condition, though the cause of much mischief to the head and to the heart.—Mr. HULKE had seen great benefit from bleeding in cases of broken ribs with pleurisy in strong men. He had no doubt that it was of great advantage in some cases of aneurysm, and related how a woman, with an abdominal aneurysm, used to find such relief from the abstraction of 8 or 10 ounces of blood that she used frequently to come to the hospital for that purpose. In some cases of head injury it was of very great value, and he mentioned the case of a man who had had an injury to the head, from which he seemed to be recovering, until one day Mr. Hulke, on going into the ward, found him in a fit, convulsed, cyanosed, and insensible. After the removal of half a pint of blood the breathing improved, and, after the removal of a pint or more, he was much better, and next day quite convalescent.—Mr. WILLIAM BATEMAN mentioned the value of venesection in cases of head injuries in strong healthy men, and related two cases: one, a coachman, who had hit his head against a wall. Some time later he became stupid, convulsed, and unconscious, but half an hour after the removal of half a pint of blood was sleeping quietly. In the second case a strong man had fallen down and knocked his head. He had similar symptoms to the last patient, and a similar treatment was tried with good result.—Mr. GEORGE POLLOCK thanked Dr. Pye-Smith for bringing this subject before the Society. He had himself found bleeding most successful in cases of injury to the chest with fractured ribs, punctured lung, and pneumothorax. He mentioned the case of a man with angular curvature of the spine who had fractured some ribs and had a puncture of his lung. In this case the distress was frightful, and it was charming to see how great was the relief afforded by venesection. He thought that teachers of surgery did not lay enough stress on the subject, as he only rarely found a candidate for Her Majesty's medical services who had any idea of how the operation of venesection should be performed.—Mr. JONATHAN HUTCHINSON congratulated Dr. Pye-Smith on having chosen a subject which both physicians and surgeons could discuss. He mentioned a specimen of a cured aneurysm in the London Hospital Museum after repeated bleedings. Owing to the prejudice against venesection amongst the public, he recommended that other means should, if possible, be tried first. He spoke very favourably of the energetic application of a hot bath for a long time to the lower extremities, a method easy of application, as the patient could be moved low down in the bed, and his legs allowed to rest in a deep foot bath at the foot of the bed. This plan was perfectly efficacious if the desire was to divert a quantity of the blood from one part to another without diminishing the total quantity.—Dr. ANGEL MONEY agreed generally with the author, and also with the various speakers, but felt convinced that venesection should not be performed in the very young or very old. He then described a method of determining a flow of blood to a given part, for which he was indebted to Dr. Barlow. The plan was to bandage the part with an Esmarch's bandage and then rapidly release it, when a considerable reaction set in. Dr. LEE thought that the reason why bleeding had fallen into disuse was that experience had been against it, and the cause why students did not know how to bleed was that physicians did not practise it. When physicians had determined the mechanical and physiological conditions in which its employment would be profitable, then the practice would revive.—Dr. ANDERSON BERRY thought that the general practitioner would be glad to leave the responsibility of the use of the lancet to the consultants. The only occasion on which he had performed venesection was to determine if life was totally extinct.—Dr. PYE-SMITH, in reply, was thankful for the general support which his paper had received. He felt that the time had come when it could be shown that, if rightly used, venesection was a valuable remedy. The only way of determining its use was by forming

an opinion from the careful consideration of the results of experience. The old idea that venesection was a cure for certain diseases was fallacious, and we knew now that its use was to meet certain physiological conditions. The cases on which his paper was based included both successes and failures in each division, a result which was met with in every method of treatment. In all the cases of aneurysm to which he had referred potassium iodide had been used, and he again referred to the case of a man who had suffered agony which was unrelieved by large doses of morphine, chloroform, and ice to the aneurysm, yet within five minutes of the abstraction of blood he was relieved and fell asleep. Bleeding, as he had first seen it practised in Paris for rheumatic fever and for typhoid fever, had been attended with pernicious results. Finally, he thanked the surgical members present for their discussion on his paper.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 23RD, 1891.

Sir DYCE DUCKWORTH, M.D., LL.D., F.R.C.P., President, in the Chair.

Living Specimens.—Mr. BALMANNO SQUIRE exhibited a case of Lupus in a woman, aged 35, which had lasted twelve years prior to treatment, and had since remained well for seven years. The treatment was erasion and multiple linear scarification.—Mr. STEPHEN PAGET showed a case of Acromegaly of ten years' standing, the patient being a man, aged 42. His height had decreased 6 inches, and there was a molluscous growth on the body.—Mr. RAYMOND JOHNSON showed a girl, aged 7, with Bilateral Adduction Spasm of the lower extremities, associated with Congenital Dislocation of the Head of the Left Femur from the Acetabulum. There was a history of malpresentation at birth, and it was suggested that the condition of the limbs might be due to injury of the cortex of the brain then produced. The upper limbs were normal, the mental condition fairly good, and the head presented nothing unusual. Fits began when the child was a year old, and ceased two years ago. When the child attempted to walk the right limb was in front, but the spasm of the limbs was often at such times so great as to prevent walking altogether.—Mr. ARBUTHNOT LANE showed a child having an unusual Congenital Cleft at the top of the Nose. A fine probe passed upwards and backwards for an inch and a quarter.—Mr. W. G. SPENCER exhibited a boy, aged 8, with a Swelling of obscure nature at the Root of the Right Side of the Neck, the diagnosis of which it was proposed to clear up by means of exploratory puncture. The lad had had chronic bronchitis almost from birth, and his fits of coughing and the swelling were both worse at night.

President's Address.—After thanking the Society for the honour conferred upon him by electing him President, and congratulating the members upon the flourishing condition of the Society, Sir DYCE DUCKWORTH proceeded to refer to Dr. Koch's discovery of a material which appeared to have a noteworthy effect upon tuberculous disease. He felt bound to express his own personal opinion to the effect that many unseemly features had been noticeable. First, it appeared to him that Professor Koch for whose scientific position, probity, and trustworthiness he had the highest esteem—had himself been unduly and unfairly pressed in respect of disclosing his research. Secondly, he noted that an unwholesome excitement had been fostered by an undue haste to carry out a plan of treatment which had not as yet been authoritatively and minutely recommended by the author of it. The profession should have waited till Professor Koch published his researches, and laid his method formally before the profession. Such knowledge as was possessed at present encouraged the belief that a material of powerful energy had been produced, having some relation with such textures as were the seat of tuberculous disease. Professor Koch had tardily broken silence, and had divulged some meagre particulars respecting the nature of the fluid now so prominently connected with his name. It was hard to conceive why such delay should have been thought necessary, and it could only be regretted that the untimely and incomplete revelation of his researches should have placed so eminent a man in a position which the profession in this country must plainly regard as unprofessional. While venturing unhesitatingly to affirm this, Sir Dyce Duckworth still felt that some malign influences and unwise counsels had had a restraining effect upon the work of a man hitherto regarded as a conscientious and philosophic observer, causing him to pursue a course which it might be trusted no one now more bitterly regretted than himself. In the face of such reports as could be studied, and with the rigid criticism of Professor Virchow on the matter, medical men might be pardoned if they hesitated to apply this method.—Sir ANDREW CLARK proposed a hearty vote of thanks to the President for his able address, which he extolled for its interest, its valuable suggestions, the felicity of its ideas, and the language in which they were conveyed, and the strenuous endeavour of its author to elevate the whole tone of professional feeling and procedure.—Dr. ORD, in seconding the resolution, spoke of the intellectual character of the address. He remarked that a good surgeon had the lion's heart and lady's hand; he thought the good physician should also have the poet's mind, which included the artistic feeling and much more.—At the suggestion of Sir ANDREW CLARK, the vote was acknowledged by the members all upstanding.—The PRESIDENT expressed his thanks.

Two Cases of Typhoid Fever Fatal at a Late Period, without Ulceration of Intestine.—Dr. SIDNEY PHILLIPS's first case was that of a man who, after fourteen days of illness with diarrhœa, came into St. Mary's Hospital on September 6th, 1890, with spots and other signs of typhoid fever; for some days there was nothing noteworthy in the course of the case, but on the 20th the temperature rose to 104.4°, the delirium greatly increased, there appeared a copious eruption of many fresh spots, and the tremor already marked became much more severe. On the 25th, the signs of the typhoid state became marked, and the pulse rate 150 per minute; there were never more, and often less, than three stools a day, never any melæna. He died on September 28th. The necropsy showed that Peyer's glands in the lower third of the ileum were in the stage of deposit; there was a general enlargement of the mesenteric glands; no ulceration existed anywhere in the intestine. The second patient, also a man, came into St. Mary's Hospital, after eight days' illness with typhoid fever, and spots were seen on September 23rd, or eight days after admission. Four days later, the pyrexia increased to 104°, with signs of commencing pneumonia at the right base. These signs soon became more fully developed. He sank into a typhoid state, and died on the fifteenth day after coming into hospital. Throughout his illness the tremor had been extreme; there was never diarrhœa, but the stools were of a typhoid nature. No hæmorrhage occurred. At the *post-mortem* examination, Peyer's patches were found in a stage of deposit, but no ulceration existed. The mesenteric glands were much swollen and soft, the base of the right lung was in a state of red hepatisation. Dr. Phillips remarked that ulceration usually occurred in typhoid by the ninth or tenth day; the first of the two patients died some time after the twenty-fourth day; the second some time later than the twenty-first day of the disease. In neither case was there any ulceration of intestine. Since writing the paper he had found the record of a similar case in *La Semaine Médicale*, of March, 1890, and these cases showed that though there was always a presumption that ulceration was present after the tenth day of enteric fever, epidemics of typhoid varied in type, and these cases showed that ulceration might be long deferred, perhaps never present, throughout the course of even a severe attack. Dr. Phillips also drew attention to the fact that though severe tremor in typhoid was usually regarded as associated with deep ulceration, it was not necessarily indicative of it, as the cases proved. The determination of the absence of ulcers in any given case of enteric fever was of great importance in reference to treatment. The cases showed that the existence of ulceration must not be taken as proved on account of the late stage the disease had attained, nor on account of excessive tremor. The signs more to be relied on were melæna and excessive tympanites and diarrhœa; and if these were absent, there was no reason to abstain from aperients if otherwise indicated.—The PRESIDENT asked if the author was prepared to make an absolute diagnosis of typhoid fever in these cases in which there was no ulceration. Were they to be treated differently

from the cases in which there was ulceration? He himself treated all as if ulceration were actually present.—Dr. Ewart said that eighteen months ago he had written to the late Dr. Gulliver on this very subject. Among the cases usually labelled "enteric" he thought there were occasionally some which were not examples of true typhoid disease, but cases in which there had been absorption of some of the poison, which had not produced typhoid, but simply a "tumefaction" of the glands. Such cases—lasting only a short time—were generally found amongst others of true typhoid in every epidemic of the disease. Where was one to draw the line? In one case it seemed to be simply irritation of the abdominal glands, and in the other case true typhoid. Was it not curious that the ulceration was sometimes limited to the immediate neighbourhood of the ileo-cæcal valve, sometimes to the colon only; whilst, in other cases, it might extend from the ileum to the stomach, and even to the œsophagus? He had seen two cases of the kind in the last eighteen months. In the innumerable cases that recovered, too, it might be that many had no ulceration at all. He did not gather that Dr. Phillips placed the diagnosis of his two cases on an unassailable foundation.—Dr. J. K. Fowler had never seen a fatal case at such an advanced period of the disease without ulceration of the intestine; but he thought there were many cases of recovery of "abortive" typhoid in which probably there had been no ulceration. He would not, like, however, to administer a purgative to such cases. He asked, What attempt had been made in Dr. Phillips's cases to reduce the temperature? As to the "typhoid" state, those who used antipyretic treatment found a complete absence of the same. In respect to the tremor, he thought abdominal signs would be more likely than tremors to indicate deep ulceration.—Dr. Longhurst thought they could not speak of typhoid fever as the product of one poison only. There were probably many kinds of typhoid, which would eventually be differentiated. This circumstance and the idiosyncrasy of the patients were probably enough to account for the absence of ulceration in the two cases brought forward by the author. —Dr. S. Phillips thought the diagnosis of his cases rested securely on the general symptoms—the rash, the temperature chart, etc.—whilst at the *post-mortem* examination the spleen was enlarged, together with the mesenteric glands. The pneumonia in the one case was a very common complication of typhoid. The other organs besides the lungs had the usual lesions of typhoid. These were not cases of "aborted" typhoid. In cases that "aborted" there was probably never any ulceration in the intestine. As to the treatment, the cases were sponged every hour when the temperature went up, and they had quinine. He did not give antipyrin and antifebrin, because he preferred quinine. He should be chary of using purgatives in a case of the kind, but he could not forget that he had seen calomel administered in cases that had recovered.—Dr. Glover asked for information respecting the antipyretic measures that Dr. Fowler had employed so successfully. Dr. Fowler, in reply, said he had no special experience to lay before the Society, but that he was speaking of general antipyretic measures, such as cold bathing, the application of iced towels, iced sponges, or the wet sheet, and the administration of antipyrin, antifebrin, the hydrobromate of quinine, and sulphate of quinine.

MEDICAL SOCIETY OF LONDON.

Monday, January 26th, 1891.

J. Knowsley Thornton, M.B., President, in the Chair.

Adjourned Discussion on the Operative Treatment of Chronic Diseases of the Uterine Appendages.

The President, in reopening the debate, asked Dr. Duncan his reasons for selecting only the last thirty cases from his practice. Though statistical records were not of great value, because they did not show in individual cases the factors which led to success or failure, yet it was well to study the whole experience of any individual operator and to ascertain the amount of his failure before he attained fair success in operating. Whatever value attached to the comparison of masses of statistics did not belong to a limited list such as that presented by Dr. Duncan, which was likely to mislead and give a false impression as to his practice and as to the dangers of these operations. He pointed out that these operations were not entitled to rank with ovariotomy because tumour always killed, if not removed, whereas a large proportion of these women whose appendages were removed would certainly not die, and many of them would get well at the menopause. He admitted, however, that there were many cases in which operations of expediency might be performed. He then criticised the paper in detail. He doubted if cirrhosis of the ovary resulted from the pressure of adhesions, for such adhesions were often absent in certain cases of ovaritis. He thought that in most cases the cirrhosis preceded the peritonitis. He thought that most cases described by the author as congenitally ill-developed ovaries were the result of acute disease during childhood, especially about puberty. In these cases he would avoid dilatation of the cervical canal as likely to set up inflammation. He regarded amenorrhœa as a more important symptom of diseased appendages than menorrhagia. He challenged the statement that the pain was referred to the side most affected, his experience having been the opposite. Personally he had found, contrary to Dr. Duncan, that most cases with a palpable ovarian tumour presented marked menorrhagia, whereas this was by no means constant in the milder cases of chronic inflammation of the appendages. He agreed that rectal examination was very valuable, often more so than vaginal. Anæsthesia as a rule should be avoided for the purpose of examination, for the following reasons: (1) Its own inherent risks. (2) The absence of pain allowed examination to be pushed to dangerous lengths, and (3) the absence of recorded sensations was a loss to the examiner in arriving at a correct opinion. It might, however, be necessary in a very neurotic patient. Though he did not deny the occasional existence of intermittent hydro- or pyosalpinx, yet he thought they were very rare conditions. It was often years rather than months before patients experienced the full benefits of operations for removal. In many cases of tubal gestation waiting and watching constituted the best course, and he mentioned several cases diagnosed as probable tubal gestation which recovered perfectly with nothing beyond rest. Blistering and tampons did no good. He saw no good likely to follow dilatation of the cervix and electricity. He said the removal of the ovaries unsexed a woman and destroyed her sexual desires, his statement being based on the results of careful inquiry into the after-history of his patients. He added that it was often extremely difficult to determine, even by the aid of the microscope, whether ovaries were or were not diseased. He had only once failed to complete operation for removal of the appendages, in consequence of the matting together of the parts. The transfixion of the pedicle should be made through the utero-ovarian ligament, using No. 2 silk and tying slowly. He drained at present more frequently than he used to, but left the tube in a much shorter time. He had seen little good, and much evil, result from flushing the peritoneal cavity, and he was not alone in this experience. He had discarded oiled silk as a dressing many years ago, preferring gauze next to the wound. He had not had half a dozen cases of stitch-hole suppuration in his practice. He had seen so many cases recover from subsequent peritonitis without opening, and he had seen such disastrous results from interference during the acute stage, that in most cases he preferred to adopt expectant treatment, giving opium and atropine. Passing to Mr. Doran's paper, he did not think massage could be of service, while it could not be other than dangerous in many cases. He agreed with his remarks as to the absurdity of thinking that electricity could destroy adhesions, open up closed tubes, or kill gonococci, without damage to the patient. He preferred to leave catheterism of the tubes to abler manipulators than himself. Vaginal puncture had nothing to recommend it, and much to discountenance its use. Drainage of a hydrosalpinx was far more dangerous than salpingotomy, but mere separation of adhesions sometimes gave satisfactory results. Speaking generally, he would encourage patients to lead a natural life, and not one of chronic invalidism. The curette might be useful in endometritis before the tubes and ovaries were involved, but where this was the case its use must be very dangerous. Without thorough asepsis the curette was more likely to set up disease in the appendages than to cure it. He did not believe that the mental condition and after-effects referred to by Mr. Doran were at

all frequent. The continuance of pain, which sometimes occurred after these operations, usually arose from inflammatory troubles causing adhesions, often due to imperfect asepsis. He thought that persistence of menstruation after these operations was due either to imperfect removal or to the presence of a supernumerary organ. His own experience of it was *nil*. Even after complete removal, however, periodic metrostaxis might occur from habit or irritation of ovarian nerves by the ligature, or by inflammation. He said the words of Dr. Mary Dixon, quoted by Mr. Tait with approval at a discussion at that Society in 1888, in reference to the operation for removal of the appendages—"it will save more lives than ovariotomy, because more need it"—were as absurd as they were misleading. The diseases for which ovariotomy was performed always killed, in time, unless relieved by operation, while the diseases for which the appendages were usually removed not only killed but rarely, but, in the vast majority of cases, did not even shorten life, though they often rendered it very miserable. The two operations could not, therefore, be fairly compared. The amount of sterility said to be due to these chronic diseases of the appendages was exaggerated and misleading, and both ovaries and tubes were often removed when only one side was affected. Many of the cases in which pain recurred on the other side were neurotic cases which ought never to have been touched at all, and many of the others were the result of bad surgery or of imperfect asepsis.

Dr. Routh said that in the epitome of cases which had been circulated nothing had been mentioned as to the previous treatment; and though gynæcologists had been accused of setting up inflammation in these cases, yet they brought about many recoveries without removal of the appendages. He quoted a case of pyosalpinx in which the pus became consolidated, and later on a collection formed on the other side. The pyosalpinx burst in attempting removal with a fatal result. He advocated puncture followed by aspiration either *per vaginam* or *per rectum*, injection of the sac with iodine and drainage of the tube. He had treated seven cases in this way without a single fatal result. The average age in Dr. Duncan's thirty cases was only 27. The lives of these women were saved, it was true, but they had been castrated. Their matrimonial love and future desire for having children were gone, and this mutilation gave rise to a moral aspect of the question which they ought seriously to consider. He looked with horror upon cases treated with this result which might possibly have got better by other means. This objection did not apply to clitoridectomy, which did not necessarily destroy the sexual appetite. Salpingotomy might perhaps have been adopted in some of these cases. He quoted a case of gonorrhœa in which, on examination at about the third day, he felt the tubes to be enlarged. Electricity was applied to the interior of the uterus, and the patient was cured. He thought that it was a matter for regret that Dr. Duncan had not given the whole of his results of these operations.

Dr. Heywood Smith was in favour of menorrhagia and not amenorrhœa being the commoner accompaniment of ovarian disease. He frequently found the pain greatest on the opposite side, and this he thought might be accounted for by concomitant uterine displacement. He was surprised to hear the President advocate delay in cases of tubal pregnancy, and he asked how long they should wait, and how in case of delay the patients could get well. He said it was quite the exception for the sexual appetite to be lessened after removal of the appendages. In cases of sexual excitement removal of the clitoris was more likely to be efficacious than removal of the appendages. He pointed out that the operation was usually done either to prolong life or to relieve the sufferings of the patient. Relief was absolutely necessary for poor people to enable them to earn their living. He wondered what the effect would be as far as menstruation was concerned if the tubes were removed and the ovaries left.

Mr. Lawson Tait said he was glad to find himself generally in agreement with the authors of the papers and with those who had spoken. He ridiculed the moral view of the question which Dr. Routh had put forward, and failed to see why an operator should be appealed to as a Christian to promote the development of the sexual faculties. In his own experience he thought he had restored more sexual appetites than he had destroyed, and he could give numerous instances of patients who had led practically a single life before operation returning with cheerfulness to their marital duties afterwards. It was absurd to say that women were ashamed to appear before mankind after their ovaries had been removed, and he believed that any man would gladly allow himself to be made a eunuch if he suffered the pain endured by patients with disease of the appendages. He was surprised to hear the President say that flushing did harm, for he was in the habit of using it constantly, and he had never had a mishap from it. The same remark applied to drainage. He found the drainage tube most valuable, especially in giving warning of the beginning of hæmorrhage. He kept it in a much shorter time than formerly—two or three days instead of five or six. As to the Staffordshire knot, like other knots, it must be tied with care. Once or twice it had failed in his hands through not attending to his own directions for its use, but it was unfair to say that the knot was not to be trusted. It was the man who tied it who was not to be trusted. Referring to the quotation of Dr. Mary Dixon, he recalled that at the time it was made there was great scepticism as to the very existence of pyosalpinx until Dr. Fowler's remarkable figures from the Middlesex Hospital records showed how fatal that disease was. Hence, it was not unfair at that time to say that more women would benefit by the removal of the appendages than by ovariotomy. Now, however, the fatality of that disease was not so great, because most cases were treated early. He was constantly protesting against the mixing up of cases which ought to be operated upon with those which should not, and because some of his critics were unable to recognise those which should be treated by operation they accused the operators of practising ignorant empiricism. He emphasised the essential difference between cases like the neurotic ones, which demanded a guarded opinion, and those cases in which there was a clear diagnosis in which operation was the only thing to save life, or, at any rate, to relieve suffering. In cases like those of menstrual epilepsy, where he used to remove the appendages, he now hesitated to do so, but from recent experience he was still inclined to think that a vast field lay before them in this class of neurotic cases where operation might give relief. Referring to the treatment of pyosalpinx by electricity, he said it required a very robust faith to believe that this measure could cause pus to dry up. Let its advocates try it on a whitlow or a suppurative arthritis, where one could see and judge the result before making assertions which could not be proved.

Dr. Lewers divided Dr. Duncan's cases into three groups; 3 were cases of ovariotomy, 24 of diseased tubes, and 3 of ovaries removed on account of chronic pain. With reference to the first group, he said it was singular that they should be so few in proportion to the rest. In a series of 40 abdominal sections at the London Hospital there were 30 ovariotomies. He then referred to the history of cases not operated upon. In 100 *post-mortem* examinations he found 17 cases of dilated tube, but only in one or two had this condition caused death. Five of the 17 were cases of pyosalpinx. The advanced age of the patients was remarkable, and in many the disease was quiescent, and had undergone a natural cure. A prolonged course of palliative treatment should precede operations, and he would prefer to wait two years rather than two months. In some of the cases quoted the evidence that the ovaries was diseased was incomplete.

Dr. Amand Routh emphasised the value of palliative treatment, and quoted a case in which operation had been advised but, the patient's husband dying, sexual rest was obtained, and the patient got perfectly well. The measures he adopted were rest, administration of ergot, hot douches, and the occasional painting of the posterior *cul-de-sac* with strong iodine.

Dr. Rutherfoord alluded to the paucity of cases of ovarian cysts in Dr. Duncan's list. In the case of ill-developed uterus with chronic dysmenorrhœa he thought the treatment by dilatation of the cervix would fail to relieve.

Dr. Cullingworth agreed in the main with the authors of the papers. In speaking of chronic inflammation of the uterine appendages, he said great importance should be attached to a history of recurrent attacks of peritonitis. As to preliminary palliative treatment, in many cases it was not at all desirable, and he should certainly not prolong it in the way Dr. Lewers advised. He asked what tonics and aperients could do to cure a pyosalpinx. Repeated blistering was an absolute barbarism whether outside or inside. Hot vaginal

douches were fashionable, and did no harm, but they did no good. Glycerine tampons were the merest child's play. It was the rest in bed that did the good, and beyond this nothing short of surgical treatment was of avail. A comparison of cases treated by rest and by operation must be very fallacious, for constant rest only alleviated a mischief temporarily, and it broke out again later on. As to the suggestion that adhesions should be separated and the parts left in unless diseased, he urged that it should be remembered that a healthy-looking tube might be full of pus. In cases of unilateral pyosalpinx the opposite tube ought also to be removed whether it looked healthy or not. His mind was open to conviction, but he did not at present countenance or teach the view that tubes or ovaries should be removed unless there was distinct evidence of gross physical lesion. He agreed with Mr. Tait as to drainage and flushing, and he concluded by expressing his opinion of the absurdity of believing that curetting could possibly cure disease of the tubes.

Dr. Duncan, in reply, said that his table commenced from the time when the obstetric physicians at the Middlesex Hospital gained the right to operate on these cases. He had operated on nine cases at Waterloo Road previous to this, with one death. Since his paper had been written he had operated upon ten more cases, with two deaths: one from hæmorrhage from slipping of the ligature, and the other which he attributed to difficulty with the drainage tube. He had included the three cases of ovarian disease because his list included all tumours which did not rise above the pelvic brim, and these specimens were of the same size as a pyosalpinx. In cases where there was a difficulty of diagnosis, and especially in unmarried girls, anæsthesia was useful. In cases of suspected tubal gestation he could not see the advantage of waiting, but would operate at once. He regretted to hear Dr. Routh advocating puncture for pyosalpinx. He had seen a case in which this procedure had set up acute peritonitis. In none of the cases had ovaries been removed which were not adherent.

Mr. Doran, in reply, said that it did not necessarily follow that adhesions would re-form after they had been broken down. The conditions under which they originally formed were unfavourable, but not so after the operation for breaking them down. Scraping out the uterus was useless and empirical in tubal disease. He much regretted the idle talk that had been indulged in with regard to the sexual condition after ablation of the appendages. He concluded by advocating delay rather than decision in dealing with cases of chronic disease of the appendages, just as, on the contrary, they should be decided and not dilatory in dealing with patients with ovarian tumour.

BRITISH GYNÆCOLOGICAL SOCIETY.

Thursday, January 22nd, 1891.

W. Chapman Grigg, M.D., President, in the Chair.

Specimens.— Dr. Spanton showed two specimens of Dermoid Cysts of the Ovary which he had recently removed: one from a married woman, aged 23, and the other from a single woman, aged 42. Both patients were on the road to recovery.—Mr. Lawson Tait showed the Tubes and Ovaries which he had removed from a woman who had been an invalid ever since an attack of gonorrhœa contracted seventeen years before. She had been many years under treatment without relief, and, recognising chronic suppuration in the abdomen, he had opened the abdomen and removed the ovaries, which were filled with pus, and the tubes, which were the seat of pyosalpinx. The patient had subsequently developed a hæmatocele, from the effects of which she was still suffering, but he was sure that further measures would have for effect to put an end to her trouble. He protested against this case being looked upon as a "disastrous failure," and still more strongly against any attempt to make capital out of an isolated case, even if it were a failure, which he denied. Mr. Tait showed a second specimen, being a Simple Solid Ovarian Tumour, which, though it was noticed at the age of 22, was diagnosed to involve the uterus, and nothing was consequently done. After six years of anxious waiting, the patient had been sent to him, and he had removed the tumour, which had no connection with the uterus, without difficulty, and the lady was now well, and was shortly about to be married. He also showed another case of the same kind to illustrate the suffering to which patients were subjected by the diagnosis not having been made and appropriate treatment carried out at an early period of the case. He alluded to certain remarks which had been made in reference to several of these cases at another society, and urged that it was unfair and improper to make such attacks when he was not there to explain the circumstances of the cases.—Dr. Routh suggested that the best course would be to appoint a committee to investigate the cases and report thereon.—This motion was seconded by Dr. Fancourt Barnes, and agreed to, and the committee was ordered to consist of Dr. Edis, Dr. Heywood Smith, and Mr. Jessett.—Dr. Heywood Smith showed a Tumour which he had removed from a married woman, aged 41. It involved the uterus, and he would have removed this organ with the tumour but that the woman was suffering from shock, and he was obliged to desist. He also showed a specimen which he asked should be referred to the committee to ascertain whether it was a tumour growing from the uterus or whether it was a part of a double uterus.

President's Address.—The President, who took his seat for the first time, then delivered his inaugural address; his object being, he said, to strike the intellectual balance sheet of their work for the last five years. He alluded to the great changes which had taken place in professional opinion during that period, and urged the Fellows of the Society to continue on the path which had already been productive of such brilliant results. He deplored the movement against the Midwives Bill, and protested against the assumption that poor women were better attended by cheap practitioners than by properly trained midwives. He urged that the exigencies of a busy private practice made it impossible for the medical man to leave the cases sufficiently to Nature, hence a grave abuse of the various means of expediting labour. Speaking as one who had a large opportunity of seeing the results of this class of practice, he asserted that he met with more cases of injury and physical disaster from the imprudent and unnecessary use of forceps and turning than from negligence or ignorance on the part of midwives. It was a case of *trop de science*. He hoped, therefore, that the proposed legislation would come to pass with such restrictions and safeguards as might be advised. He insisted upon the value of antiseptics in obstetrics, whatever might be the case in surgery of the abdomen. Passing on to discuss the electrical treatment of fibroids, he thought that this method had a future before it in a restricted class of cases, for it possessed an undoubted power in arresting hæmorrhage and in promoting absorption of inflammatory exudations. Lastly, he insisted upon the necessity for a more complete history of the cases that came before the Society, particularly in respect of the etiology and family history; also as to the ultimate effect.—After a cordial vote of thanks to the President for his eloquent and thoughtful address, the Society adjourned.

Future Meetings.—We are requested to intimate that in future the meetings of the Society will take place on Thursday, instead of Wednesday as heretofore.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Manchester Meeting.

Friday, January 16th, 1891.

James Braithwaite, M.D., President, in the Chair.

Election of Officers.—The annual meeting was held and the following office-bearers for the year 1891 were elected:—Dr. Braithwaite (Leeds) was elected President in place of Dr. Wallace (Liverpool), whose term of office has expired: the following were elected Vice-Presidents: Drs. Lloyd Roberts and Nesfield (Manchester), Drs. J. E. Burton and McFie Campbell (Liverpool), Mr. C. J. Wright and Dr. Hellier (Leeds), and Dr. Keeling and Mr. Arthur Jackson (Sheffield); Dr. Sinclair (Manchester) was appointed Honorary General Secretary, and Dr. Walter (Manchester) Honorary Treasurer; the following gentlemen were appointed Local Secretaries: Dr. Donald (Manchester), Dr. Briggs (Liverpool), Mr. Sydney Rumboll (Leeds), and Mr. Richard Favell (Sheffield.)

Installation of New President.—The retiring President (Dr.

Wallace (Liverpool) made a few remarks congratulating the Society on the work of the past year. The President, Dr. Braithwaite (Leeds) then took the chair.

Vaginal Hysterectomy.—Dr. Keeling (Sheffield) showed two specimens of uterine cancer removed by vaginal hysterectomy, and read notes of the cases. The first was one of cancer of the cervix in a widow, aged 40. The body of the uterus was freely movable and unaffected by the disease. The operation was performed in July, 1890. The patient lost blood by the bladder for forty-eight hours after the operation, but otherwise her convalescence was uninterrupted, and she left the hospital six weeks after the operation. Fifteen weeks afterwards she was again examined, and a ring-like swelling was found in the vaginal roof. There was a yellow discharge, but the patient's general condition was very good. A month after this the recurrent growth was very marked. The second case was one of malignant ulceration of the cervix with enlargement of the body of the uterus. The whole uterus was removed in November, 1890, only three ligatures being used for each broad ligament. There was profuse hæmorrhage during the operation. The case ended fatally some weeks after from congestion of the lungs and meningitis. At the necropsy there was no evidence of cancerous infiltration.—Dr. Wallace, Dr. Sinclair, Dr. Donald, Dr. O'Hagan, and the President took part in the discussion.

Ectopic Gestation.—Dr. Robertson (Oldham) read notes of case of ectopic gestation and exhibited the specimen. The patient, who had previously borne two children, commenced to have uterine hæmorrhage nine weeks after a menstrual period. Ten days afterwards she commenced to have attacks of pain in the lower part of the abdomen, accompanied by vomiting. She was then admitted to the Oldham Infirmary. At that time she was blanched and her abdomen was distended, but no definite tumour could be made out. The case was diagnosed as one of intraperitoneal bleeding, and as she became more pallid and the abdominal distension increased, it was decided to make an exploratory incision. On opening the peritoneum, liquid and coagulated blood escaped freely. On the left side of the pelvis a round tumour was felt, with a mass protruding from it, and on traction being made a small fœtus was brought into view. As bleeding was still going on freely, the pedicle of the tumour, which appeared to be composed of uterine tissue, was transfixed, tied with silk, and divided. The fluid and coagulated blood was then washed out of the abdomen by a stream of hot water, a drainage tube was inserted, and the wound closed. The patient was discharged cured about a month after the operation. Some remarks were made by Dr. Sinclair and the President.

Hydatidiform Mole.—Dr. Lauder (Manchester) read notes of a case of incoercible sickness of pregnancy resulting from a hydatidiform mole. A multipara, aged 28, was admitted into the Maternity Hospital on November 4th, 1890. She had missed three periods and was suffering from obstinate vomiting. After trying small quantities of milk by the mouth for some days, nutritive enemata and suppositories were administered. Some days after this nourishment by the mouth was again tried, a teaspoonful of peptonised milk being given every hour; but the sickness returned in a few days and rectal alimentation was resumed. On November 10th uterine hæmorrhage occurred, and it was decided to induce abortion. It was found, however, that the uterine cavity was occupied by a hydatidiform mole. On this being scraped out the patient rapidly improved, and was soon after discharged cured.—The case was discussed by Dr. Donald, Dr. Edge, and the President.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Friday, January 2nd, 1891.

John Poland, F.R.C.S., President, in the Chair.

Suprapubic Cystotomy.—Mr. W. Johnson Smith (Seamen's Hospital, Greenwich) read a paper on suprapubic cystotomy. Allusion was first made to the fact that not only in operations for free opening of the bladder, in which modern improvements such as distension both of bladder and rectum—came into play, but also in simple puncture and aspiration, most surgeons at the present day operated above the symphysis pubis and not by way of the perineum. In cases of retention in which the bladder could not be relieved by way of the urethra, puncture above the symphysis and temporary retention of a fair-sized cannula would, it was held, be far preferable to repeated aspiration. Suprapubic cystotomy was advocated as being a more beneficial procedure than the perineal operation in cases in which drainage of the bladder was indicated. After reference to the value of the high operation in the removal of certain forms of stone and of new growths from the interior of the bladder, more or less prolonged drainage by the suprapubic method was commended as a valuable aid to the treatment of severe stricture, penile fistulæ, and other affections of the urethra, especially in cases in which the urine had been rendered foul by chronic cystitis. Mr. W. Johnson Smith also showed two very large calculi he had removed by the suprapubic method.—Messrs. Wm. Lockhart, J. G. Mainwaring, Drs. Moon, MacGavin, and the President took part in the discussion which followed.

Treatment of Venereal Disease.—Dr. Robert S. Wainewright read a paper on the essential principles in the treatment of constitutional syphilis, of soft chancre, and of gonorrhœa (in the male). Three methods of treating the earlier stages of syphilis were mentioned: (1) The radical cure or Hutchinson's plan; small doses of mercury were given for a very prolonged period, with a view to prevent the appearance of tertiary or even secondary symptoms. (2) The ordinary London plan: the symptoms of syphilis were treated as they arose by the internal administration of mercury. (3) The expectant or Edinburgh plan: only local applications were used to cure the earlier syphilitic manifestations, and the giving of mercury internally was avoided. This was the best method of treatment. The tertiary stage of syphilis should be treated by very large doses of iodide of potassium (30 to 60grs. ter die). Soft chancre often produced a bubo, which should be treated as a soft chancre of the gland, not as a mere inflammation. Gonorrhœa (in the male), if treated in the earliest stage by capsules of sandal wood oil (mx to mxv ter die), could often be cured in a fortnight or less, as the urine was thus rendered completely antiseptic.

REVIEWS AND NOTICES.

A Manual of Public Health. By A. Wynter Blyth. M.R.C.S., L.S.A. London: Macmillan and Co. 1890.

This work is intended to impart a knowledge of the subjects with which those engaged in the public health service ought to be well acquainted. On the whole, we think the volume will be welcomed by those to whom it is addressed, as although in some particulars it fails to convey enough information on certain branches of the subject, yet in various others the chapters are exceedingly well written, the information conveyed being such as to be practically useful, and at the same time well up to date.

From a medical point of view the most interesting section is that devoted to the etiology of the zymotic or micro-parasitic diseases. The explanations of the occurrence of what the author calls "micro-strife" in the animal body, and of the acquired immunity conferred thereby are in accordance with the most recently established bacteriological facts.

In the chapter on small-pox there is little that requires notice. The statistics as to the efficacy of vaccination are those given by Dr. Barry in his report on the epidemic at Sheffield. "It is probable," says the author, "that revaccination every seven years of the population would extinguish small-pox altogether. It seems monstrous that with this powerful agency at command there should be any necessity for spending sums of money on small-pox hospitals when a complete and thorough compulsory revaccination of the community would at once stamp it out." We should say, however, that the compulsory revaccination of the community every seven years would be a more costly measure than the provision and maintenance of small-pox hospitals. Still the advocacy of such a measure is sufficient proof that those who are brought most into contact with small-pox are not in the least likely to favour the abolition of compulsion for primary vaccinations. Under scarlet fever attention is drawn to the

fact that in some of the London fever hospitals albuminuria has been on the increase in successive epidemics, this apparently being due to the cubic space in the wards having been gradually decreased owing to the wards in successive years becoming more crowded with patients. The importance of ample cubic space for small-pox and typhus patients to prevent the spread of infection has long been recognised, and now, in the case of scarlet fever, it is shown how important ample space in the wards is for the patients themselves. The connection of scarlet fever with a disease in milch cows is touched upon, and, in the author's opinion, the evidence generally tends to prove that Klein's views are correct. The danger of the infection of typhus passing to medical men and nurses is alluded to, and the advice is given that the chests of patients should not be examined until the bedclothes have been turned down for some minutes, and that the long binaural stethoscope should always be used in preference to the short one. A short account of the symptoms of this disease is appended, and is likely to be of use in arriving at a diagnosis, for typhus is more often mistaken for other diseases than any other.

An interesting account is given of tetanus, and the discovery of its specific bacillus in garden earth and the soil of different localities. The author regards croupous or fibrinous pneumonia as one of the class of maladies produced by a micro-parasite. It is infectious, and not infrequently prevails in an epidemic form. This view he has held and taught for the last thirteen years. The bacteriology of pneumonia is very fully given, and Gamaleïa's views are set forth at length (seven pages). In a manual the introduction of so many bacteriological researches which have not been confirmed and generally accepted appears to be a mistake. It is perplexing to the reader, who does not wish to learn anything that is still debatable and likely to be upset by the work of future discoverers, which already appears to have been the case with the diplococcus pneumoniæ if Klein's results with the Middlesbrough pneumonia cases are to be accepted. Even the author does not assert that Gamaleïa's views are correct.

The article on diphtheria is well written, and contains a summary of the most recent work in connection with this disease. The discovery by Roux and Yersin that the symptoms of diphtheria are due to the manufacture of a soluble poison by the bacilli in the tonsillar mucous membrane, which circulates in the blood, but that the bacilli are not truly parasitic in the tissues, was one of vast and far-reaching significance, opening the way for the discovery of chemical vaccines, not only for this, but for allied diseases. Klein has confirmed these results, in as far as he has shown that in the cat the disease is of a similar nature, whilst in the cow the bacillus becomes a true parasite, spreading and multiplying in other tissues besides those at the seat of inoculation, and appearing in the milk of even unaffected udders. Our knowledge of the micropathology of diphtheria has certainly become immensely expanded within quite a recent period, and we are probably only on the threshold of further revelations of great magnitude, to be presented to the world by the labours of Koch and his assistants. With regard to the different forms of diphtheria, we agree with the author that certain cases of acute sloughing throat, which occur in badly-drained houses or over-crowded hospitals, are not true diphtheria dependent on the specific bacillus, but are due to septic infection, there being no false membrane and no paralysis if the acute stage should be survived. There are, of course, mixed cases of septic and true diphtherial infection, but in the latter false membrane is evident at some stage of the disease, whereas in the acute sloughing throats septic infection is evidently productive of all the serious symptoms.

The chapter on tuberculous maladies is worthy of careful study. Attention is drawn to the frequency of tuberculous degeneration of the mesenteric glands in children under the age of 5 years who are affected with tubercle. In these cases the tuberculosis of the mesenteric glands was in all probability the primary lesion, pointing to the introduction of the tuberculous virus into the alimentary system by means of food. This fact is of the greatest importance, in view of the frequency of tuberculosis in milch cows, and the demonstration of tubercle bacilli in the milk of animals with tuberculous udders. On the question of the propagation of tubercle by the consumption of the meat of animals which have suffered from so-called localised tubercle in the lung or other organs, the author is of opinion that the evidence given in the Glasgow meat case goes to show that such meat does in fact generally contain a few of the bacilli or their spores, and that such meat when eaten in a half-cooked state by young children who inherit some weakness of tissue resistance, or are at the time in a state of imperfect health may, and does, produce a certain amount of tuberculous infection. The bacteriology and pathology of tuberculosis in its various forms is very well and carefully discussed. With regard to the prevention of tuberculosis, the author writes: "Phthisis and miliary tuberculosis should be treated, in a public health sense, exactly as an infectious fever; the sufferer should be isolated, the liquid and solid excreta disinfected, preferably with 10 per cent. carbolic acid, and the sputum of the phthisical received on rags or paper and burned. The propagation of tuberculosis by milk is to be met by a more rigid inspection of milch cows than has heretofore been made, and when proper abattoirs are established throughout the country a strict meat inspection will then be possible, but until that is done a very large amount of the meat consumed must be derived from tuberculous animals."

On the subject of typhoid fever the author believes that this disease does not arise *de novo* in the ordinary acceptation of this term, nor does he believe that in every case the infective colony must have descended from micro-organisms flourishing in a human body. He pronounces the most reasonable theory to be that the cause of typhoid is a vegetable parasite capable of having an independent existence and propagating its kind, and completing its cycle of existence quite independently of the body. Probably its normal existence is that of saprophyte. Hence its endemic prevalence in certain parts; hence the impossibility of always tracing typhoid from one person to another, and hence the mysterious isolated outbreaks which from time to time occur. Nevertheless, he accepts the view of Eberth's bacillus being the actual cause of the disease. In the cases of country villages, where typhoid breaks out continually every autumn, and no special sanitary defect can be discovered, "the whole area of the soil is probably infected." Children become infected by sitting about on the ground and eating their food with earth-soiled hands. In those cases it is recommended that an attempt should be made to disinfect the soil, as well as the drains, and all existing water supplies from wells should be, if possible, discontinued, no matter how pure they may seem to be.

Asiatic cholera, diarrhœa, malaria, and septic diseases are all treated of in this section, in addition to those diseases already mentioned.

Another interesting chapter is that devoted to the diseases of animals, rendering their flesh unfit for food, and food rendered poisonous by commencing septic changes. In this latter section an account is given of several well-known poisoning outbreaks in various parts of the country. The section devoted to the duties of sanitary officers will prove a very valuable guide to medical officers of health and inspectors of nuisances. The chapters treating of nuisances, offensive trades, and disinfection may be specially commended as worthy of careful study by all health officers, and the same may be said of the chapter on statistics. The subjects of more purely hygienic concern, namely, water supply, air and ventilation, meteorology, drains, sewers, and sewage disposal have been considerably curtailed, and cannot be regarded as exhaustive treatises of the matters with which they are concerned. What information there is on these subjects is no doubt likely to be of practical use to a health officer, but many very important matters have been either altogether disregarded or very lightly touched upon. We fail also to see the use of long accounts of the metropolitan water supplies and sewers in a manual of public health. The London sewers more especially are not such as a sanitarian need be specially proud of. The arrangement of reservoirs, described as being in use at Barking, has now given place to large works for the precipitation of the sewage of the northern half of London, and for pumping up the semi-liquid sewage to the sludge ships.

The letterpress and illustrations are good, and the author's style is, in most places, clear and concise. In some of the chapters a rearrangement of the subsections and headings would not be amiss, as at present there is a disconnection of

topics which are very closely related to one another, and which might well have been considered together or successively.

NOTES ON BOOKS.

The Dignity of Woman's Health, and the Nemesis of its Neglect. By Robert Reid Rentoul, M.D., etc. (London: J. and A. Churchill, 1890. P. 144.)—This book is dedicated to mothers, and is written with the laudable object of inducing them to give their daughters such information about menstruation and marriage as may prevent them from incurring illness through ignorance. The intention is wholly good. The somewhat inflated tone of the work may perhaps impress the public more than the measured language of science. The chief fault we notice is that it is often over-dogmatic about trifles. Confidence in the medical profession is not strengthened by stating opinions as to which daily experience suggests doubt as if they were unquestionable facts, or by urging on everyone, for the sake of health, sacrifices and practices which are only necessary for the few. Thus Dr. Rentoul would have girls leave school during the few months in which menstruation is beginning. Is this necessary? May not a girl at this time be much better off under the charge of a wise schoolmistress than an injudicious mother?

A Compend of Equine Anatomy and Physiology. By William R. Ballon, M.D., etc. (Edinburgh: Young J. Pentland. 1890.)—This little work will prove useful to advanced students, and to practitioners wishing to refresh their knowledge of equine anatomy. To the student commencing the subject the style would prove very distressing, as the book is greatly condensed, and reads, in fact, like the *précis* of an extensive work on the subject. The author, by following well-known anatomists, has kept free from errors, but presents a mingling of their various nomenclatures, and his method of expression presupposes considerable acquaintance with the subject on the part of the reader. The section on physiology is very meagre indeed. The plates from Chauveau's *Comparative Anatomy*, in a measure, relieve the "cram"-like construction of the book.

Das Cylinderepithel-Carcinom des Magens und des Dickdarms. Von Gustav Hauser, Ph.D., Privatdocenten der pathologischen Anatomie an der Universität Erlangen. Mit 12 Tafeln. (On Cylinder-epithelium Cancer of the Stomach and Large Intestine). (Jena: Fischer, 1890.)—Dr. Hauser has produced a valuable monograph on a highly interesting type of disease. Of necessity, he treats at length of past and current theories on the origin of cancer, but almost purely from a histological and pathological standpoint. One section of the work is devoted to a close analysis and demonstration of the varieties of this form of cancer. Dr. Hauser takes great pains to distinguish the histology of primary deposits from that of metastases. The chapters on etiology, based on histology and doctrines relating to micro-organisms, are very important, but do not admit of cursory review or criticism. In the opinion of many readers, the most interesting department of Dr. Hauser's work will be the excellent clinical reports of cases upon which the publication itself is grounded. The plates are beautiful specimens of microscopic drawing. *Das Cylinderepithel-Carcinom* is a book which medical libraries should possess. It is also worthy the attention of every physician and of the increasing class of surgeons who attempt complicated operations upon the rectum and stomach.

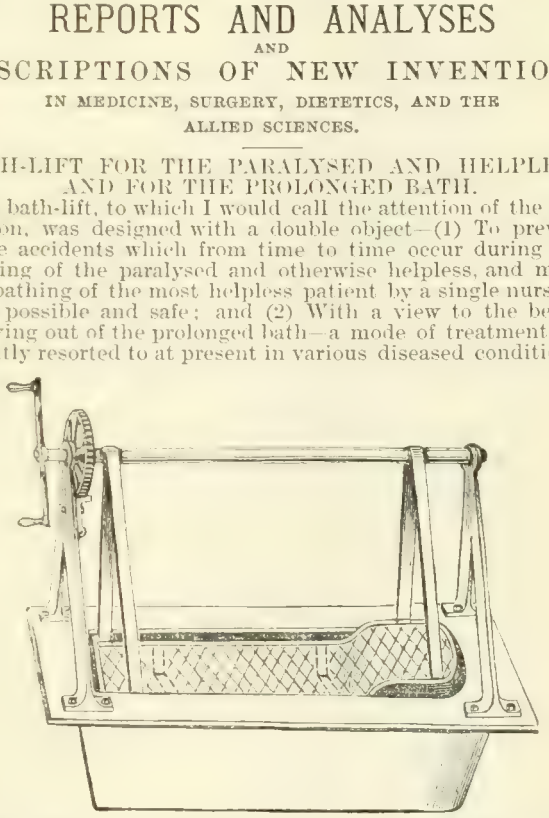
Diary for 1891 of the Sanitary Record and London Medical Recorder. (London: W. H. Allen and Co., Limited.)—The ninth annual issue of this diary should prove to be as useful as have been its predecessors to medical men and others engaged in sanitary work. Apart from the ordinary provision for recording each day's engagements and doings, the periodically recurring duties of sanitary officials are briefly indicated. There are, in addition, upwards of sixty pages of varied information, including a summary of the sanitary legislation of last year, a copy of the Housing of the Working Classes Act, 1890, a list of the Acts of Parliament affecting sanitary interests, with the chief textbooks, the regulations of the various examining bodies as to diplomas in public health, recommendations as to vaccination, infectious hospitals, the duties of medical officers of health, sanitary inspectors, etc. There is also a very instructive paper by Dr. Vacher, of Birkenhead, on the Physical Appearances of Sound and Unsound Food. Such a volume is by no means an encumbrance on the library table, and it has the additional advantage of retaining its usefulness as a book of reference long after the particular year for which it is prepared.

The Demoniac. (Bristol: J. W. Arrowsmith, 1890.)—This is a "shilling shocker" by Walter Besant. A Cambridge athlete, with a promising career before him, is suddenly possessed by an evil spirit—the said spirit being whisky. Till one fatal night he had never yielded to its temptations, but heredity was too much for him, and he drank a whole bottle of it in a quarter of an hour. Then the horrors came, then more alcohol. How the "gyp" of the College encouraged the habit, how the demoniac thirst recurred regularly every two months, how the doctors fought the demon, and how one of them was betrayed into writing a learned paper on "Simulated Alcoholism," makes excellent reading for a winter evening, and makes one seriously think of taking the pledge. *The Demoniac* is in Mr. Besant's best style, full of satire, humour, and interest up to the last page.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

BATH-LIFT FOR THE PARALYSED AND HELPLESS, AND FOR THE PROLONGED BATH.

This bath-lift, to which I would call the attention of the profession, was designed with a double object—(1) To prevent those accidents which from time to time occur during the bathing of the paralysed and otherwise helpless, and make the bathing of the most helpless patient by a single nurse at once possible and safe; and (2) With a view to the better carrying out of the prolonged bath—a mode of treatment frequently resorted to at present in various diseased conditions.



The accompanying diagram gives a very good idea of the apparatus. It consists of a light rigid frame supporting a strong net, and raised at the end to form a pillow. This can be raised to the level of the top of the bath and lowered at will by means of the handles attached to the revolving bar, a rack and pinion arrangement making it impossible for the net to "go down with a run," and the bent cross-bars (shown through the net in the woodcut) keep the net three inches from the bottom of the bath-tub when at its lowest. In use, when the patient is brought alongside the bath, the net is raised, the patient is

comfortably laid upon it and gently lowered into the water prepared for him beneath. The bath over, the patient is raised level with the top, and there rubbed dry and prepared for bed. Nurses and others who have attempted singlehanded to lift a helpless person from the bottom of a bath will be able to appreciate the usefulness of this contrivance.

The advantages of this lift in cases of prolonged immersion are many, not the least of which is that the patient is supported in mid-water, his weight being equally distributed, and no portion of his body being allowed to come into contact with the bottom of the tub. Again, if the patient be delirious or maniacal the limbs can easily be secured to the net and all dangerous struggling is obviated. There is sufficient space between the edge of the net and the side of the bath to prevent the fingers being injured should the bather grasp the rod. The apparatus can be made to fit any shape or size of bath, and can be fixed to an ordinary bath in a few minutes. Moreover, the net and revolving bar can be removed in a moment leaving the legs only standing, so that in a private house the bath may not be monopolised by the invalid. The machine should, I think, prove of great use, both in private houses and in public institutions. It is manufactured by Mr. J. Ward, 246, Tottenham Court Road.

Northampton. S. A. K. Strahan, M.D.

CLINICAL AND PATHOLOGICAL WAX MODELS.

In reply to a correspondent in a recent issue, we stated that since the death of Mr. Towne, of Guy's Hospital, no clinical wax models of any importance had been made in this country. We are informed that Messrs. Baillière, Tindall, and Cox have recently instituted a department, in connection with their London house, for the production of wax and other models of the highest possible finish and merit.

Anatomists have long been alive to the importance of models for teaching. There is, however, a difference in the cost of anatomical as compared with clinical and pathological models, owing to the fact that when the moulds are made for the former, slight skill is required to produce large numbers, and the subjects required are always the same. But in the latter the subjects depicted are ever changing.

The material used for the most familiar clinical models is wax, which, being costly, has led to many attempts to use other substances. Mr. C. W. Cathcart, of Edinburgh, recommends a mixture of glycerine, gelatine, and oxide of zinc. The impression made with this mixture is very perfect, and can be coloured with ease; but models made with this substance do not, we understand, last more than three or four years. Messrs. Painter and Hudson-Cox (analytical chemists), of London, on the other hand, have introduced a material which is less than one-half the cost of wax, and, in addition to giving a good impression and perfect texture, has the advantage of a very high melting point.

From time to time fear has been expressed that models made in wax will decay, and instances of their so doing are pointed out to us in some of our museums. On the other hand, we can point to effigies in wax which have been handed down to us in a perfect state through centuries. The cause of decay in some of our museum specimens is probably careless treatment. In the admirable collection at the Hôpital St. Louis, Paris, where there are upwards of 2,000 models made by M. Barretta, there is not the slightest sign of decay in any specimen, and as the work represents upwards of thirty years' study, we may consider this a fair test. The same may be said of Mr. Towne's models in Guy's Hospital Museum. There are, however, a few specimens in our museums which are undoubtedly made with paraffin wax, which in a few years becomes a dirty grey.

The Museum Committee of the Royal College of Surgeons have, we are informed, already added specimens to their museum from the studio of Messrs. Baillière, Tindall, and Cox. The new models are in wax, one of them being a growth on the shoulder of a female for many years under the care of Sir James Paget, and removed thirty-two years after it had been in existence by Mr. Thomas Smith. The growth seems of a doubtful character; there is a drawing of a microscopic section of the growth on the stand of the model, which completes the record of the case. Another notable model is a case of morphœa, which is under the care of Dr. T. Colcott Fox, at the Westminster Hospital.

Messrs. Baillière, Tindall, and Cox have secured the services of Mr. W. Swainson, under whose personal direction the whole of the work in their studios is conducted.

THE MASTICATOR.

This is an ingenious and useful little invention. It consists of a fork with cutting attachment for the purpose of shredding or mincing meat before conveying it to the mouth, thus facilitating the subsequent operation of mastication. The essential part of the instrument is a shield perforated with a series of slots, on the under side of which is an attachment fitted with twelve fine teeth-like cutters, ranged in four groups of three, which project through the slots or openings of the fork-like case into which they are set. Both parts are readily and securely fitted over the fork, and are easily removed for cleansing. It is sold for 2s. 6d. with the fork, and is manufactured by The Cryolite Gold Company, 63 and 64, Chancery Lane, W.C.

A TONGUE-DEPRESSING INSUFFLATOR.

In noticing a handy tongue depressor, designed by Dr. J. D. Osborne, we observed that the method suggested of using the instrument also as an insufflator was objectionable, inasmuch as the operator, in order to blow the powder, had to bring his mouth into an awkward position, and a position which in the case of diphtheria or other infectious throat diseases was not void of danger. To meet this objection Dr. Osborne has designed a new attachment. It is a small rubber bulb, with a nozzle in the form of a scoop, which exactly fits the tube of the insufflator; the powder to be insufflated is taken up in the scoop, and thus conveyed to the tube of the instrument; by compressing the bulb, the powder is distributed over the throat with ease. An ordinary syringe nozzle is also fitted to the bulb, and this combination can be conveniently used as a syringe for the nose or other cavities where a small quantity of fluid is used. The agent in this country is Mr. John M. Richards, 46, Holborn Viaduct.

A NEW WATER-CLOSET.

Surgeon-Major McNamara is the inventor of a new method of fixing a water-closet. The water-closet pan, flushing apparatus, and the soil pipe are fixed outside the wall of the house, and when not in use the whole of these structures are exposed to view from the outside, but when in use a wooden swing frame with the seat attached is pushed out so as to be placed in position over the pan. After use the frame and the seat are again swung in, and the house is then cut off altogether from the water-closet pan. The object of the invention is to prevent any escape of foul odours from water-closet apparatus into a house. There appear to be two great objections to the carrying out of Surgeon-Major McNamara's idea, the first being the very unusual and unsightly objects presented by the water-closets exposed to view in this way, and secondly, the fouling of the parts of the apparatus and their rapid destruction when thus exposed to wind and rain. The invention may be applied to water-closets in use, by fixing the swing frame in the same place as the front boards or risers of the seats of the closets, and removing as much of the exterior wall behind the closet as may be necessary for the full exposure of the pans to the open air. This seems to us a far more sensible plan than fixing closets altogether outside the house, where they could not be properly supported, and where some sort of covering would have to be contrived to hide the objectionable object from view.

Large Legacies to Charities.—Archbishop Walsh, trustee under the will of the late Mr. Hugh Blaney, applied to the Vice-Chancellor on Monday, at Dublin, in reference to this matter. Mr. Blaney had left £90,000 to the Mater Misericordiæ, St. Vincent's, and Jervis Street Hospitals and six other charities. The Crown had taken proceedings to compel the executors to pay 10 per cent. legacy duty upon these legacies on the ground that upon the construction of the will the objects of these charities were not confined to Ireland. Counsel now applied for leave to defend, and an order was made accordingly.

PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

A LECTURE
ON
THE NATURE OF LUPUS,
WITH ESPECIAL REFERENCE TO ITS RELATION TO TUBERCULOSIS.

Delivered in the Post-Graduate Course at the Examination Hall, January 27th, 1891.

By JONATHAN HUTCHINSON, F.R.S., LL.D.,
Ex-President of the Royal College of Surgeons.

[Mr. Hutchinson, at the opening of his lecture, made some remarks on "rhinoscleroma," in which he said the nostrils and upper lip become involved in a lumpy, thick, indolent growth, which is certainly infective, almost as certainly inflammatory in its beginning, and very prone to return after operation. This disease is not absolutely restricted to the parts from which it takes its name. Although very different in many features from other forms of lupus, it is easy to prove that in its main features it comes much closer to lupus than to any other malady, and that it has good claims to be one of the family. He then continued as follows.]

We can no longer say with any regard to pathological accuracy that the disease which eats away the tip of the nose and the alæ nasi, and is attended by the brownish-yellow apple-jelly deposit, is "lupus," and that the others have nothing to do with it. We can no longer speak of a "true lupus," and place the other maladies apart as if they bore resemblance only, and had no real relationship. No, the relationship is real, and its bond consists in this, that all these various maladies depend upon inherited tissue vice. That inheritance renders its possessors liable to chronic inflammations, which assume specialised peculiarities in each in connection with the inheritance of other tendencies, and modifiable also by the part of the body on which they are first displayed. In some connection, as yet very ill understood, it would appear that these inflammations are peculiarly apt to be attended by the development of the tubercle bacillus. Our knowledge does not permit of our being in any way definite as to what the relationship of the two really is. We must wait for further facts. I am bound, however, to repeat what I have already said, that, looking at the facts as we have them from a clinical point of view, they do not favour the belief that infection with the tubercle bacillus is the sole and efficient cause of the disease which we call "lupus."

The possession by inheritance of peculiarities as regards cell nutrition, and proclivity to its disturbance, seems to me at the basis of all maladies which assume the lupus type. It is also, doubtless, of many others. In lupus, that which is inherited seems to be a susceptibility to external influences, above all to that of cold, but sometimes to that of heat also. This appears to me to be the key to a real knowledge of the nature of the disease. I have suggested over and over again that lupus erythematosus is after all only a modified form of chilblain. Amongst the modifications which it has received there is one which I admit to be all-important. It is this: that the products of the inflammatory action—or perhaps it would be safer to say its attendants—become capable of spreading the disease by contagion. Chilblain inflammation is but little, if at all, capable of infecting the adjacent tissue; but it has become so when it assumes the name of lupus erythematosus. This is its chief peculiarity. Since I had the pleasure of addressing you last week, a case has come under my notice which so emphatically illustrates these views that you will almost suspect that I have invented it. I show you the drawings from the case of a lady a little past the middle period of life, residing in Essex. You will see that her hands are covered with patches of dusky erythema which affect the palmar surfaces more than the dorsal ones. Her fingers are swollen, and their tips are peeling and excoriated. The nails are thin, softened, and flattened out by the swelling of the fingers. Her hands are disabled, and she cannot dress herself without the assistance of her maid. We turn to her face, and on the nose and cheeks we find the characteristic bat's wing patches of lupus erythematosus, and a similar condition involves both her ears. Her affection began in the early part of the present winter, which, as you know, has been exceptionally cold. In reference to the possible influence of season, however, it must be remarked that the patient has been living in warm rooms and surrounded by every comfort. Shall we call the disease lupus erythematosus or acute erythematous chilblains? In one sense it matters but little what we call it, for in the beginning I hold that they are the same thing. As regards prognosis, however, very much depends upon the name. If it be chilblains only, it will probably pass wholly away when the warm weather comes; if it be lupus, it will be relieved by warmth, but not cured. It will demonstrate infective qualities, other patches will occur on adjacent parts, and it may probably prove incurable. I have myself no doubt whatever that the disease has to some extent passed into the lupus condition, and that the prognosis just suggested will be the one realised. At the same time, I have no doubt that the red patches which you see on the hands are to all intents and purposes acute chilblains, and that they will pass away when the warm weather comes. In saying this I am not speaking at haphazard. A lady whom I have been attending for the last three years for patches of lupus erythematosus on her nose, cheeks, and chest, had her disease begin during cold weather by an attack of inflammation of the hands, attended by cracking and excoriation of their tips. Very soon after this a patch formed on her nose, and, although her hands have long since got well and continued so, the disease in most typical conditions still continues on her face. This will be a suitable place for me to tell you that both these ladies had enjoyed very fair health through life up to the date of the attacks which I have described. Both of them had suffered from chilblains in childhood, but in neither had the proclivity been severe, nor had it persisted in adult age. In both of them, as I hold is usual in lupus erythematosus, there was an overwhelming family tendency to tuberculosis. Miss G., the first patient, had lost a brother and a sister from phthisis, and, to use her own expression, "all her father's family excepting himself had died of it." She herself, on account of chest delicacy, had been obliged to take cod-liver oil for six months. In Mrs. K.'s case (the second one) the facts were almost equally strong, and she herself, although a lady of great energy, was fragile and delicate. You will ask, on the hypothesis that lupus erythematosus is not a bacillary disease, and on the more than hypothesis that chilblains have nothing to do with bacilli, what is the bond of connection between tuberculosis, lupus erythematosus, and chilblains? I must reply with what is only a conjecture. The lupus and the chilblains are directly and essentially connected as depending on the same kind of cell organisation and vascular endowment. They are influenced by the same kinds of disturbance of vascular equilibrium—such, for instance, as sex, inherited delicacy, etc.—which are at the basis of Raynaud's symptoms. Their connection with tuberculosis is probably indirect and non-essential. They imply and reveal a state of constitution in which the bacillus, once implanted, will easily flourish. The discoveries of the future may perchance demonstrate a closer connection than this, but for the present this is all that we can say.

Amongst the best established and yet the most remarkable of the laws regulating the transmission of tendency to disease are those which produce what are called "family diseases." By this term, in the special and conventional sense, it is not meant that there is tendency to the recurrence of the same malady in successive generations, but that in one and the same family of children several examples of the same malady are produced.

Family diseases, using the term in this sense, are all more or less peculiar; although they approach and resemble, they are never exactly the same as those which are transmitted from generation to generation. Ichthyosis is one of the best examples of what is meant; but deaf-mutism, colour blindness, retinitis pigmentosa, and a host of other maladies also

afford examples of it. Family diseases are by no means always congenital; indeed, as a rule they are not so, but wait until the patient has attained a certain age, and until the tissues have been subjected, so to speak, to a certain amount of trial in the highway of life, before they are developed. Then it is found that they will not bear ordinary exposure. The skin becomes dry and harsh in the case of ichthyosis, or the retina speckled with pigment in the case of that of retinitis pigmentosa. Although, as I have just said, these family maladies are never the exact reproduction of any other recognised disease, yet they have, I think, invariably their prototypes, which they resemble, and which probably stand to them in some mode of parental relationship. We must suppose for their explanation that in the father and mother of children so affected certain peculiar inheritances meet and become welded together in their offspring. Amongst the minor forms of disease which come under this law of family production I believe that we must count some cases of exaggerated tendency to freckles and some others to chilblains. Probably there is a family form representative of nearly all the types of intrinsic disturbance of health. I exclude by the word "intrinsic" all maladies caused by accidents or due to contagion. Now, it happens that there is a family disease of which the following are the main features:—The children—several in the family, and always all of them apparently healthy at the time of birth—become in early childhood liable to the production on a most extraordinary scale of freckles. At first the disease is thought to be only freckles, and in many cases it stops there; but in some others the freckles inflame and become vascular, and ulcerations occur, and when they heal little vascular tufts—stigmata—remain. The face is always the part most severely affected, and exposure to either sun or cold is the influence which exaggerates the disease. The tip and alæ nasi are often attacked, and then sometimes to a considerable extent destroyed. In later stages bossy masses of granulation tissue may form on the ulcerated surfaces, and later still, in exceptional instances, the ulcers may assume the condition of epithelial carcinoma. Some of the milder cases of this malady recover, and many probably survive without actually recovering; in not a few, however, it ends fatally in an early period of adult life. It fell to my lot, through the kindness of Mr. Balmanno Squire, to have the opportunity of examining two children who were the subjects of this malady, and who were the first in whom it had been observed in Britain. I cannot tell you the interest which they excited in me. "Here," I exclaimed, "we have the family form of lupus." It was a disease certainly not common lupus, but partaking of all its characters, affecting the same parts, evoked by the same class of causes, and tending to the same results. Subsequently, when I became acquainted with cases which were attended by pigmentation only, I was inclined to modify the expression, and to say that it was a family form of freckles. But later still, reviewing the facts which have since been so ably collected by numerous observers, I am inclined to go back to my original position, and to hold that Kaposi's disease is really and essentially a family form of lupus. You will see that it unites in itself lupus vulgaris and lupus erythematosus, being symmetrical, but at the same time showing a tendency to destroy by ulceration. Its relationship to freckles is, of course, undoubted, and I put it aside, not as in any degree ignoring it, but simply because the relationship to lupus is much more important. Probably after all the tendency to freckles, when extreme, reveals an irritability of cell structures of the same kind as that which lupus discloses. I need scarcely remind you, for it has been often remarked, that strumous children are very liable to freckle.

The argument which I adduce from this demonstration of a family form of lupus is that the latter cannot be a disease due to the accidental implantation of a parasite; if it were so it could not have a family form. As to what the value of the argument may be, and as to the cogency of the facts on which I have built it, I leave them for your consideration.

It remains to say a few words in defence of the attempt to constitute a family of lupus diseases, instead of allowing one single member of it to arrogate that name, and leaving a whole series of cognate affections to receive each for itself a distinctive designation. It is quite possible that I have not succeeded in convincing you—or at any rate all of you—that the maladies of which descriptions have been given are really all of them in their essential nature lupus. I may, however, claim to have brought before you clinical evidence that these several maladies do exist. Even of the very rarest I have been able to produce more than one case (with the exception, perhaps, of Dr. Morrow's), and thus to prove that the malady in question keeps close to its type. Whilst this keeping close to type is true of a certain number of cases in each group, I think I may also claim to have proved by demonstration that there are ill-marked or mixed examples of every one of these type forms which constitute connecting links between them. If now we refuse to recognise a lupus family, if we continue to insist that there is a "true lupus," that lupus erythematosus is distinct from lupus vulgaris, and that the other diseases which I have claimed as belonging to the same family are yet further apart from it, what is our position? It seems to me to be this: that we shall have to continue to use a number of separate names, and to invent many new ones, burdening the memory of the observer in each instance with detailed descriptions, and at the same time not giving the least assistance by nomenclature as to the real nature of the things described. We shall be involved in what is surely an *a priori* improbability—the suggestion that there are a large number of separate maladies resembling each other in some of their features, but in reality wholly different, having neither known parentage or relationship, and being in many instances *sui generis*. Such would certainly be the position, if we refuse to accept a lupus family, of the maladies known as rhinoscleroma, lymphangeioma pigmentosum, Kaposi's disease (or xeroderma pigmentosum), tuberculosis papulomatosa cutis, and a number of others. If we accept, on the other hand, the word lupus as the family name for them all, coupling with it in each instance some distinctive epithet, this laboriously contrived confusion is avoided. The diseases in question, as I have already, and I fear at too great a length, endeavoured to prove, have all of them these features in common. They attack chiefly those parts of the surface of the body which are exposed to the influence of cold and irritants, and they occur by preference to those who are by inheritance or acquisition of somewhat feeble organisation, and who are proved to be in greater or less degree liable to the attacks of the tubercle bacillus. Every one of the diseases named is developed most commonly in the period of adolescence. They are all infective in their local qualities, and continue to spread slowly for an indefinite number of years; and it is possible in every one of them that after prolonged duration as a non-malignant chronic inflammation a tendency to cancer may be shown. Every one of them disorganises the tissues which have been affected by it, and leaves behind it a scar. Concerning almost all of them, we freely admit that syphilis may produce very close simulations, and at the same time we utterly deny that their type forms have any connection, remote or otherwise, with such taint. Finally and most importantly, it is true that if the word "lupus" were used in the sense for which I have pleaded, it would in every case to which it is applied afford a clue to a correct treatment. With the exception only of the most erythematous forms of erythematous lupus, destruction by local measures of the infective material is required in every case, and, without any exceptions at all, attention to the general health by the use of a liberally tonic regimen is requisite, together with the protection of the parts from all external irritation, and more especially from cold. As regards prognosis, it is, speaking in general terms, the same in all. Very few cases will be really cured, and in almost all instances—even under the most careful and persevering treatment—an inveterate tendency to relapse, or to a reproduction of the malady, will be witnessed.

I might add that all diseases of the lupus family are liable when inflamed to have the inflammation assume the character of erysipelas. This is a point which many observers have noted; and, further, it has been generally agreed that after attacks of erysipelas the lupus is usually in a much improved condition. This was an article of creed which the late Mr. Startin was very fond of expressing, and excepting in erythematosus—in which such attacks may prove fatal—I have always been accustomed to hail erysipelas in lupus as a direct gain to the patient. We must, I think, keep this

fact in mind when we examine the results of Koch's treatment.

Before proceeding to endeavour to estimate the different measures of success attending the different plans of treatment for lupus, it may be well to say a few words as to the grounds upon which such plans have been based, and what may be reasonably expected of them. My argument has been that lupus processes of inflammation originate in persons who are locally or constitutionally of feeble cell nutrition and prone to vascular disturbance. That a parasitic bacillus attends many of them is to be freely admitted: that its implantation constitutes the initial stage of lupus may be strongly doubted. The influence of enfeeblement of the general health, of exposure to weather and to cold as causes of the aggravation of lupus, must be admitted by all without a moment's hesitation. It is an old observation that those who live in country districts and are exposed to weather suffer more from lupus than those who dwell in towns. It is also a matter of quite general knowledge that most forms of lupus become worse in winter. Applying these facts to the development of principles of treatment, we should expect that much might be done by attending to the general health of the patient, and by protecting him from the influence of cold. Such is, I may say, undoubtedly the fact. Whatever increases the general tone does tend to restrict the lupus process, and to favour the healing of its ulcers. If the patient can be allowed to remain in warm rooms during the winter, or still better, if by changes of climate he may be enabled to enjoy summer weather all the year round, the chances of recovery from lupus will be very much increased. As regards lupus vulgaris, I cannot think that it is reasonable to expect a cure, unless advantages of this kind can be obtained. If the patient is still to be exposed to a defective dietary and hard life, if the vigour of his nutrition is to diminish rather than increase, there will then be no chance of his recovery from his lupus. The causes which set it agoing still remain in action, and they, in conjunction with his constitutional tendency, would begin the disease anew, even if by successful surgery it had been completely cured. As well hope to prevent the recurrence of chilblains in cold weather as that of lupus in a patient who has once suffered from it, and in whom no changes can be made in the conditions of life. In reference to these assertions, I might ask attention to the results of treatment of lupus in two special classes of cases in which I think nothing even approaching a cure is ever obtained. I allude to those first—a large class—in whom lupus begins in young persons who are obviously of very feeble health; and secondly, to those—a small class—in whom it begins in the aged. Senile scrofula in all its forms is less amenable to treatment than that of young persons, for it occurs at a time when the powers of life are on the wane, and when it is impossible to do anything definite in the way of their reinvigoration. On the other hand, the cases of lupus in which we do obtain cures, or in which we approach them, are those in which the disease begins in young persons or in early adult life, and is not associated with any conspicuous enfeeblement of health or of circulation. In these cases the advance of years is, if accompanied with suitable local and constitutional treatment, in our favour. The patient gets to eat and to drink more, and as the period of growth ceases, the constitution often settles down into a state of more assured vigour. To use a popular phase, "he grows out of his delicacy."

In what has just been said I have been speaking solely of the constitutional element in lupus; but we must not forget for a moment that there is another, and even more important one—I refer, of course, to its locally infective tendencies. In a few cases constitutional treatment, or the improvement in health stamina which comes with advancing years, is sufficient to put an end completely to the lupus process. Examples of perfectly healthy scars without the least fragment of lupus tissue remaining, and without any tendency whatever to relapse in winter, may not infrequently be seen under these circumstances. Very often they are in patients who have suffered from the disease on several parts at once, and in whom some patches have undergone cure, whilst others have persisted. Although not very common, they are abundantly sufficient to prove the point that the lupus process may, in exceptional instances, come spontaneously to an end. In the majority of cases, however, it may be freely granted that whatever be done for the benefit of the general health, it does not cure the lupus patch. The latter continues, in virtue of its own infective elements, to spread at its edges and to produce fresh satellites. It is here that surgery comes to our aid. By treating the lupus nodules exactly as we should those of cancer or any other material known to be infective, we can do very much towards effecting a cure. Undoubtedly the surgeon takes the most conspicuous, if not really the principal, share in the cure of lupus. If I speak a little doubtfully on this point, and if I seem to rate measures of constitutional treatment more highly in comparison with local ones than I have done in some of my former writings on lupus, it is because I have become more and more convinced that it is absurd to expect a permanent cure of a disease by measures which do not include the removal of its original causes. The results of surgical treatment, however careful and persevering, are, I fear, on the whole, strongly confirmatory of this impression, for however excellent may be the cure at first obtained, the disease almost invariably relapses on fresh exposure to cold.

I will now pass to consider the details of the local measures which have been chiefly employed. We will, if you please, consider that enough has been said as to the paramount importance of protection from cold and attention to the general health. The different measures of local treatment have all had a common object- that, namely, of getting rid of the infective material. When I was a student at the York Hospital, I was taught to use for this purpose a chloride of zinc paste, sparingly and thinly applied, and I have never since seen better results from any treatment than, as far as my memory serves me, we occasionally obtained from this. Its use, however, is inconvenient on some of the parts which lupus most commonly attacks—the nose, for instance.

When I came to London and worked as assistant to the late Mr. Startin, at the Blackfriars Hospital, we treated all our lupus patients by repeated applications of the acid nitrate of mercury and an arsenical paste. If the surface were not broken, the acid nitrate was applied; but if there was an ulcer, then it was our practice to fill it with the paste. These applications were made over and over again. Our cases were very numerous and attended frequently, and half my occupation many an afternoon consisted in making these applications. The patients always took tonics and cod-liver oil, and often, for many years together, minute doses of mercury. The results were on the whole very satisfactory, but the treatment was tedious and the periods of attendance very long. When some years later the patients at this hospital passed under my own care, and I had also at the Metropolitan Free and at the London Hospital many other cases, I tried to expedite the cure by the use of the actual cautery instead of the acid nitrate. I had cautery irons of various sizes made, and we used them, under an anæsthetic, very freely. This was long before the introduction of M. Paquelin's ingenious little instrument, and at that time we used to heat our irons in the fire. At the time I thought this method, as regards expedition, a great improvement, and wrote strongly in its favour. I recollect that my friend, Dr. McCall Anderson, of Glasgow, also took it up, giving figures of my cautery irons. Somewhat later, Mr. John Gay made the radical proposal that lupus nodules should be cut out with the knife, and treated exactly as we would those of cancer, but unfortunately the inapplicability of this excepting to a small number of cases was only too obvious. You could not cut away the greater part of a man's nose or cheeks. Later still came the introduction of the process of erasion by means of Volckmann's scoops. This attained a very wide popularity, and it is indeed a very efficient method. The general verdict would, I think, appear to be in its favour over all other methods of local destruction. For myself, I may admit that I doubt if it possesses any advantages over the use of the actual cautery or the acid nitrate of mercury. I was accustomed some years ago to use it frequently, but I find myself now falling back more and more on the older methods. Instead of the arsenical paste which Mr. Startin employed so much (Dupuytren's paste), I now use the liquor arsenicalis. The latter may be painted on with a camel-hair pencil, and, if the

surface be not too large, the patient may be trusted to do it himself. It does not perhaps matter so much which of the several methods of getting rid of the lupus tissue we adopt, provided we do it very freely, and repeat it as often as is necessary. I have a decided impression, however, that the sores left after the acid nitrate or the actual cautery heal better than after the scoop. In many instances undiluted carbolic acid, freely and repeatedly applied, is very efficient, and it has the great advantage that, if the patient be intelligent, he may be trusted to make the applications. I am quite aware that in this sketch I have not enumerated by any means all the methods which are employed in the local treatment of lupus. There are many others, but I think that for the most part they are of the same class. I must not, however, omit to mention that Dr. Unna, of Hamburg, some years ago introduced a method by the application of plasters containing salicylic acid, which for a time obtained great favour with some well qualified to judge. I cannot speak from much personal experience regarding them, but have formed the impression that they are not less troublesome nor more efficient than some of the other methods. In this connection it may be well to state that whatever in the nature of a plaster or other application protects a lupus patch from the influence of air and keeps it warm invariably does good. This is of especial importance in reference to lupus necrogenicus and all lupoid affections of the extremities. As regards the prognosis of lupus, it is at once to be candidly admitted that examples of complete and permanent cure are rare. At the same time it is to be asserted that under favourable conditions and perseverance on the part of both patient and surgeon, great improvement may be obtained, the disease kept in abeyance, and a condition secured which nearly approaches a cure. In cold weather, however, and if through any influence the state of the health is lowered, relapses are almost certain to occur in almost all cases. I have recently had under observation a lady who when young was quite cured of lupus under the old methods by the late Dr. Anthony Todd Thompson. She enjoyed thirty years of immunity, and has only now relapsed when her tissues and her circulation have become enfeebled by age.

We must now engage in the most interesting question of all in reference to the treatment of lupus—that is, the effect upon it of the injections of Koch's fluid. As all are aware, it is now about three months since this remarkable fluid—a glycerine solution of substances resulting from the pure cultivation of the tubercle bacillus—was placed in the hands of the profession. It was reputed to have the power, when used by means of hypodermic injection in most minute quantities, of causing the cell structures adjacent to bacillary deposits to inflame. Very soon after its introduction it was announced that the most remarkable demonstrations of its effects were to be obtained in cases of lupus vulgaris. In these it caused the patches to inflame and certain small fragments to undergo necrosis, and after this a process of healing set in which left the patient, if not absolutely cured, at any rate in a greatly improved condition. During the last three months trials of this remedy have been very extensively made, and I now purpose to attempt some sort of brief summary of their results. I know that it will be said that it is too early to arrive at any conclusions, and, in a certain sense, this must be admitted. Very definite results have, however, on some important points been obtained, and it is highly desirable that, for the guidance of future investigators, these should be stated. My own personal experience—that is, as regards patients under my own care—has been very small, but through the kindness of many friends I have had opportunities of collecting facts over a tolerably wide field. In endeavouring to report upon them it may, I think, be stated in the first place that the original statement that the injection of Koch's fluid does cause lupus patches to inflame has been well borne out, but not without some striking exceptions. In a case under my own care, the portraits of which I have shown you, and concerning which the diagnosis of lupus vulgaris cannot come into any question, no effect whatever was produced on the patches, although the patient's temperature rose on every occasion after nine or ten successive injections. In this case Dr. Heron made the injections and examined the patient at all stages with the utmost care. I avail myself of his skill as a diagnostician in reference to diseases of the lungs to assure you that the patient had no indications of pulmonary tuberculosis which would explain the recurrence of febrile reaction. After about a month's treatment, the injections having ceased to produce fever, we laid them aside, and the patient is now exactly as he was before they were begun. I have received information concerning more than one case in which somewhat similar results were observed. In one, about which Dr. Abraham is my informant, neither febrile reaction nor local reaction resulted, although the patient displayed nodules of the apple-jelly deposit of lupus in considerable abundance. Without an exception all my friends report that in the cases in which the lupus patch has been made to inflame the results, as regards its subsequent improvement, have been very definitely good. Large areas, which had been previously swollen and covered with scab and crust, have been made to heal, and the resulting scar has been flat and sound. No one, however, ventures to report an instance of complete cure. Of the cases which have been shown to me as the most satisfactory, I am bound to say that in every one there has been evidence at some part of the edge of the remains of lupus tissue, ready, I do not doubt, to start into fresh growth on the slightest provocation. In reference to this point I have to make a most important assertion, and that is, that the treatment does not always influence the essential element of lupus. The brown apple-jelly-like deposit which is universally acknowledged as the most characteristic of the lupus conditions sometimes remains untouched. This assertion is illustrated by a case which Dr. Heron was kind enough to show me, and in which he had practised injections some ten or twelve times. In this instance the inflammatory swelling of the parts affected had been quite got rid of, and the patient considered herself very much benefited. Nodules of lupus were, however, scattered about her cheeks in a conspicuous manner, and had she come under my care without my knowing anything of the previous treatment I should certainly have regarded her as an ordinary case of lupus still standing in need of efficient treatment by either the cautery or spoon. In the case which Dr. Gayton was kind enough to send us last week—and which had been under Mr. Watson Cheyne's treatment in King's College Hospital, and had received great benefit—you had equal opportunities with myself of judging whether it could be called a cure. The lupus edge was still there. As substantiating my statement that the treatment does not always destroy the most characteristic part of the lupus formation, I might quote from a letter from Mr. Waren Tay, of the London Hospital, who, speaking of a case in which great benefit has been obtained, remarks "that there still remain nodules which I should much like to attack with the scoop." The cases which appear to derive the greatest benefit are those in which there is most of inflammatory swelling, and in which the more specialised elements of the lupus process are least abundant. You will see the bearing of this statement. Should it be supported by future facts we shall be obliged to suspect that the remedy is, after all, one for certain conditions of the inflammatory process, and not for tuberculosis. Even in this position, however, it is possible that it may still prove of great help to us in the treatment of certain forms of lupus. I am not aware that it has yet been tried in any of the cases of what has been described as perfectly quiet lupus—such, for instance, as those of which I showed two portraits illustrating single patch lupus occurring on the cheeks of healthy persons, characterised by a thick growth of apple-jelly, and by the entire absence of any surrounding inflammation. These cases would be very suitable ones in which to test the power of the fluid in attacking the lupus growth itself; and from what I have seen thus far I quite expect that they would escape its influence. In the most rare forms of lupus the remedy has not yet been tried. On lupus erythematosus, however, a good many experiments have been made. It was foretold by those who believe that what they call "true" lupus is bacillary, and that lupus erythematosus is not so, that the fluid would have no effect on the latter; and, in the main, this prognostication has been fulfilled. In a very marked case under my own care, and in which Dr. Heron was kind enough to carry out the treatment, the patient had good febrile reactions after repeated injections,

but without any inflammation of her lupus patches. This remarkable result was, perhaps, explained by the supposition that the lady had tuberculosis of the lungs as well. She was, as is usual in lupus erythematosus, of a phthisical family, and she had herself been treated for suspicious symptoms. In her case, a week after we had abandoned the injections in the belief that they were doing no good, the erythematous patches on her face suddenly disappeared almost wholly. A number of discs on the upper part of her chest, however, some of which were so thick and definite that some observers were inclined to regard them as lupus vulgaris, remained wholly untouched. She had had nine or ten injections and latterly in full doses. I have seen this patient to-day, and her face patches are already returning to their first condition.

Apart from the question of its direct influence on the lupus itself, some collateral observations of much interest have been made as to the possible results from Koch's fluid. I am told that it has repeatedly caused general erythematous eruptions on the skin and in some nodular effusions into the cellular tissue. In one case the inflammation of the lupus (on the face) passed into unquestionable erysipelas of a rather severe type, and the patient was for some time in danger. In two cases, at least, during the febrile reaction old chilblains became again inflamed.

If we are obliged to report that nothing that can be called a cure of lupus has yet been obtained in London practice, it may seem unnecessary to ask whether cures are lasting. On this point, too, however, I am sorry to say that some evidence is already forthcoming. I fear it is the fact that relapses occur very quickly. The patient who was taken to Berlin by Mr. Malcolm Morris and Dr. Pringle, and was for a time supposed to be almost cured, is now, I am assured by both the gentlemen concerned, in a condition almost as bad as before the treatment.

If, on the whole, we are obliged to return a qualified verdict as regards this method of treatment in London, it by no means follows that it may not in the future be put to some use. On the contrary, it has in many cases done very great good, and no one can doubt that the fluid possesses very remarkable powers. It may be that in the future we shall learn to combine the older methods of destruction of the lupus deposit by means of cautery or caustic, with suppression of the attendant inflammation by injections. What I have seen would certainly lead to the belief that some patients are by the injections brought into a condition much more favourable for surgical treatment than they were before. The ill effects of the treatment on the general health, although obvious and considerable for a time, seem to pass away. No one has reported to me any instance of permanent damage. I may confess that nothing which I have seen leads me to be hopeful that very prolonged periods of treatment will avail more than short ones. If febrile reaction has ceased to occur, I do not think that there is any further hope that the lupus nodules will be attacked. On this point, however, as well as on many others, we need further experience. Amongst those to whom I have been most indebted for the facts upon which the preceding statements are based are Dr. Heron, Mr. Watson Cheyne, Mr. Waren Tay, Dr. Gayton, Dr. Radcliffe Crocker, Dr. Pringle, Mr. Malcolm Morris, Dr. Colcott Fox, Dr. Abraham, and Mr. James Startin. To these gentlemen you and I are alike indebted for the opportunities they have afforded us of seeing their cases this afternoon. For myself I cannot sufficiently express my sense of the compliment they have paid me in placing their facts at my disposal, and giving me leave to make my own criticisms. I hope that I have not been premature in expressing the opinions which I have done. If I have spoken with less enthusiasm of the results of Koch's treatment of lupus than it really deserves, I can only say that it will give me great pleasure in the future to change my opinions. By the kind permission of the two Colleges we shall meet in this well-lighted and beautiful theatre every Tuesday afternoon for the next five weeks. On any of these lecture days cases illustrating Koch's treatment of lupus will be welcomed, by whomsoever they may be sent, and those will be most welcome which come nearest to demonstrating completeness of cure. It is only by combined effort and by the public examination of the facts that satisfactory conclusions can be reached. Although, as you know, these lectures are not in any way under the sanction of the Colleges, nor does their Committee of Management incur any responsibility in connection with them, yet I feel sure that this use of the theatre, which they so liberally allow us to occupy, is in entire consonance with its original destination. We are doing our best to elucidate one of the most important pathological questions of the day.

CASES AT PADDINGTON GREEN CHILDREN'S HOSPITAL.

Fourth Report.

Previous notes of the following cases have been published in the British Medical Journal of December 13th and 20th, 1890, and of January 3rd, at page 22. All ten cases have since received several injections, except Case vii, and that girl has been injected once only during the last three weeks. All the patients have much improved, except that same Case vii and Case ix, in which very little improvement has been manifested. We are again indebted to the notes of Dr. Guthrie, the Registrar, and to Mr. H. L. Lack, the House-Surgeon, for many particulars respecting the cases.

Case i.—W. P. Eight injections during the last three weeks (making seventeen altogether). The three last times each injection consisted of 2 centigrammes. The temperature never rose above 101.4° F., except on the last occasion of all, when it rose to 104.2°, and continued high for eighteen hours, with subsequent rapid defervescence. He vomited seven times during those eighteen hours, and had severe abdominal pain. The abdomen is now soft; the wound nearly healed. His general health has greatly improved. The boy looks rosy, and has a good appetite.

Case iii.—F. C. Nine injections during last three weeks (making eighteen altogether); quantity increased up to 12 milligrammes. Still reacts slightly; the temperature has never recently risen above 101.5°. The eye is well. The strumous nodule over the knee has nearly disappeared. At the elbow two small, local, well-defined abscesses (not yet opened) are manifest, but there is no general enlargement of the joint, of which the movement is tolerably free. General health greatly improved.

Case iv.—E. P. Eight injections during three weeks (making sixteen altogether). The quantity injected has been increased up to 7 milligrammes. Generally reacts slightly; after one injection the temperature rose to 103.2°. The radius and sinus running down to it are both slightly improved. Discharge almost ceased. General health good.

Case v.—E. C. Nine injections during three weeks (making nineteen altogether); the quantity in each increased to 4 centigrammes. No reaction after any recent injection. The enlargement of the iliac fossa has greatly lessened. January 21st. A small sequestrum has come from the sinus in the back this morning, and a probe being passed inwards 2 inches touches dead bone near the sacro-iliac joint. General health good. Is shortly going out, and will then be injected twice weekly.

Case vi.—C. N. Has had nine injections during last three weeks, making nineteen altogether; the quantity injected has been increased to 25 milligrammes on two occasions. These caused no rise of temperature, but great pain in the abdomen. The quantity injected lately has, therefore, been reduced to 2 centigrammes, which does not give abdominal pain. The sinus has quite healed, and all thickening at the hip has disappeared. The joint seems firmly ankylosed; general health very good; the improvement in this case is most marked.

Case vii.—A. A. After December 30th the temperature rose to 103°, and remained high for nine days. Meanwhile, pain at the left knee and hip-joint became marked; there was fulness in front of the hip-joint, and the upper end of the femur became much thickened and tender. Chloroform was given on January 8th, and the sinus leading to the front of the hip was opened up and explored with the finger. It led to the neck of the femur, which was partly bare. All the thickening about Poupart's ligament and around the sinus had disappeared. Large drainage tubes were inserted, and extension splint and weight put on. On the following day the temperature became normal, and remained so with slight diurnal fluctuations until January 15th, when one injection of 4 milligrammes was made; the temperature subsequently rose to

101.4°. No injection has since been given as the temperature has been irregular, varying between 99.0° and 102.0° daily. The child, however, manifests no signs of general improvement; she has disease of the hip-joint, probably produced by extension from the suppurating glands. The discharge from the sinus is much increased since the last injection.

Case viii.—L. B. Eight injections during the last three weeks (making eighteen altogether). The quantity has been increased up to 4 centigrammes at the last two injections. The temperature on January 10th rose to 103.2°, and there was some diarrhœa; but the last four injections have been followed by no reaction. General health very good. Glandular swelling nearly disappeared. Patient to go out and return three times weekly for injection.

Case ix.—P. S. Nine injections during last three weeks (making nineteen altogether). The quantity has been increased to 4 centigrammes on the last occasion. No reaction has followed either of these nine injections. The fingers have not recently diminished in size. General health very good.

Case xi. L. R. Nine injections during last three weeks (making nineteen altogether). The quantity has been increased to 6 centigrammes on the last two occasions. The last injection was followed by subnormal temperature. On January 12th Dr. Herringham reported that the expansion of the lungs was equal and normal. The respiration was puerile; expiration on the right was more prolonged than on the left. A few slight *râles* could occasionally be heard at the right apex, both at the front and back, when the child was made to cough or breathe deeply. There was then no bronchial breathing at the left apex behind. General health very good. Is to leave the hospital, and return for injections three times a week.

Case xii.—E. M. Nine injections during the last three weeks (making eighteen altogether). The quantity has been increased to 4 centigrammes. No reaction followed any of these nine injections, and after the last two injections the temperature became subnormal, falling to 96.0°. The lung symptoms have much improved. On January 10th it was reported that there was dulness, with tubular breathing and bronchophony, and a few crepitations over a small patch below and around the right nipple. Nothing abnormal was heard at the base behind. The lungs elsewhere were normal. General health very good. She is to leave the hospital for the Convalescent Home at Wembley.

CASES AT KING'S COLLEGE HOSPITAL.

Fourth Report.

Through the kindness of Mr. Watson Cheyne we are able to report the further progress of the cases under the Koch treatment at King's College Hospital. A sufficient time has now elapsed to allow an opinion to be arrived at as to the effects produced. In lupus the result is most striking and satisfactory. The patient whose portrait was given in the British Medical Journal of January 3rd has continued to improve (Case i). She has now had twenty injections, and the last was followed by a slight local reaction. Her nose is soundly healed without further loss of substance; all the crusts have separated, and the skin is soft without nodules. She herself is highly gratified with the result, and seems to think that it has amply repaid the course of treatment. The question now arises as to when the injections should cease, but it is probable that more will be given. In another of the cases of lupus mentioned in our previous reports (Case ii) the face is remarkably improved. It may be recalled that this young woman had lost the lobe and ala of the nose, and had had a great many operations performed. The nose is now soundly healed, and beginning to assume a normal colour. She herself says that her face is now better than it has ever been after any of the operations. She has had eighteen injections of a gradually increasing strength, the last being 0.2 g. Only the first ten caused reaction, and her general appearance and health seem decidedly improved. She, too, is highly gratified with the result. The youth with lupus in the left axilla and in the right popliteal region (Case v) has now had eighteen injections. His progress has been decidedly slow, but there are now no tuberculous nodules, and the patches feel dry and harsh and look like patches of chronic eczema. His general health seems unaffected, except for the better.

In another case of lupus of the face (Case xx), in a woman of 60, improvement is as marked as in the others of the same class. She has been six weeks under treatment, and has had twenty injections, their strength having been gradually increased to 0.12 g. For some reason, perhaps on account of her age, she has never had any marked general reaction, except on the first occasion, when her temperature was 103° F. The last case we need mention is that of a nurse (Case xxiv), also with lupus of the face. She has also improved very much, and has had ten injections. We merely mention it because she is able to attend at the hospital for the injection and then go away. This plan has been unattended with any ill result. The cases of joint disease, in which the synovial membrane only seemed involved, also exhibit marked improvement. The girl, aged 6½ years (Case xi, J. H.), who had a marked affection of the hip with considerable pain and restriction of movement, can now, after twenty injections, be pronounced cured. No splints or extensions have been used, and the hip is painless, with perfect movement in all directions, except in extreme abduction. She has not, however, walked upon the leg. The improvement might plausibly be put down to the rest in bed, but another case of the same severity, and not mentioned before in these reports, was kept at rest a fortnight without injections on purpose to test this question. The disease steadily progressed, and made no improvement until injections were begun. The more advanced cases of tuberculous joint disease, and particularly those in which there was evidence of tuberculous bone disease cannot, we think, be said to have improved. Those with septic sinuses seem least amenable, and upon some operations have been done to remove tuberculous deposits. It seems as if it would in future be better to begin the treatment by taking away the cheesy material. In the case of tuberculous enlargement of the cervical and axillary glands, occurring in a man aged 38 (Case vi), the greater part have been excised, and as they proved to be mere masses of tuberculous cheesy deposit, it seems unlikely that any remedy could have caused their removal.

The following is the sequel of the very interesting case of tubercle of the iris which was sent from Moorfields for injection (Case xvii). In our last report we gave rather a gloomy view of the progress of the eye, and since then the organ has been excised, the disease having steadily advanced. Mr. Cheyne has ascertained that the eye is tuberculous, and has also performed some inoculations with it into the eyes of rabbits. Further, after the excision of the eye, a fresh injection of lymph was given, and produced a marked reaction; inasmuch as the eye, which never reacted well, was gone, it seems possible that the girl has a concealed tuberculous focus in some other region.

Case iv, a child, who became tuberculous after circumcision, has also to be recorded as one in which no good result has ensued. The infant has steadily passed into a hopeless state, and became so ill and emaciated that a week ago the injections were stopped. The result was interesting because the hectic temperature, which was in abeyance during the injections, appears again after their cessation. The most we can say of this unfortunate child is that the remedy has done no harm, but has perhaps prolonged its life a few weeks.

Curiously enough, the patient with anæsthesic leprosy (Case xxv) has volunteered the opinion that her hands are better. She says, and it seems true, that the fingers are looser at the joints, and that the hand can be opened more widely. She has now had fourteen injections, five of which reacted.

IRELAND.

In the Surgical Section of the Royal Academy of Medicine, Friday and Saturday evenings (January 23rd and 24th) were devoted to papers on Koch's treatment of surgical tuberculosis. As many surgeons wished to put their results on record, the Council limited the length of each communication to ten minutes. The reading of papers took up the whole of the first evening, when those who made communications were Mr. F. A. Nixon, Dr. Bennett, Mr. T. Myles, Dr. Franks, Sir W. Stokes, Dr. Tweedy, Mr. Tobin, Dr. Meldon, Dr. J. K. Barton, and Mr. Thornley Stoker.

The papers showed that a large number of cases of lupus, joint, bone, and glandular cases are under treatment, but

few were reported as cured. The lupus cases showed the best results. Most of the readers expressed their belief in the efficacy of the remedy, but stated that sufficient time had not elapsed to make a declaration as to curative effects in the majority of cases.

On Saturday evening there was a discussion, in which Dr. Lentaigne, Mr. McArdle, Mr. William Thomson, Dr. Bennett, Dr. Franks, Mr. Myles, Mr. Tobin, Mr. Thornley Stoker, and others took part. The criticism was on the whole favourable, but there was some dissent from the prevailing view that a cure has been found for tuberculosis.

RADCLIFFE INFIRMARY, OXFORD.

Several cases of tuberculosis have been under treatment with Koch's fluid at the Radcliffe Infirmary, Oxford. Dr. Brooks has injected some cases of pulmonary phthisis, lupus, and other local tuberculous affections. The cases have only been under observation during the past three weeks, so that a definite opinion as to the result of the treatment cannot be arrived at. In most of the cases there has been improvement, but in one case of phthisis, with old pleurisy, pneumothorax developed after two injections had been given.

SUNDERLAND UNION INFIRMARY.

We are informed that Dr. Prowde, the medical officer of the Sunderland Union Infirmary, has received from Berlin a supply of the above fluid, and that it will be employed on several suitable patients who are at present under his care.

USE OF THE INJECTIONS IN PREGNANCY.

Dr. Lambinon, of Liége, is strongly against the injection of Koch's fluid in pregnant women. That it causes rise of temperature, we all know. That the rise is especially high in those cases which are most typically tuberculous we have also been abundantly informed. A sickly woman bears a rise of temperature badly, and her sickliness and fever combined are likely to provoke abortion if she be pregnant. Phthisical women are apt to abort, so that the new treatment would, in cases of this kind, only aggravate a natural tendency. The peril to the fœtus, even if retained till term, is always great when the mother is feverish. The rise of the fœtal pulse in cases where the mother contracts any form of fever is well known. Runge has proved that pregnant rabbits can bear a high temperature which is sufficient to kill their unborn offspring.

Dr. Charles (*Journ. d'Accouchements*, Jan. 15th) recommends that both in cases of phthisis and of external tuberculosis in pregnancy, when it is thought justifiable to inject Koch's fluid very small doses, not exceeding 1 milligramme in the adult, should be given at first, and should be very slowly and gradually increased, so as to avoid violent reaction which might cause abortion or kill the fœtus.

NOTES FROM BERLIN.

[from our special correspondent.]

On Sunday morning, January 18th, an address was presented to Professor Koch by a deputation of students from the Berlin University. In thanking the deputation, Koch said that, though he had striven to do his duty as a teacher, he was fully aware that his best powers had always gone to his scientific work. He spoke of the high and difficult calling of the scientific inquirer as being a purely ideal one, and said he was happy to find Berlin students sympathising with his ideal pursuits, as it proved their own ideality was not extinct.

The Prussian Budget for 1891 includes a demand for 165,000 marks (£8,250) for the new Koch Institute, which is being built close to the Charité Hospital. The annual expenses are calculated at 235,405 marks (£11,770), which are divided as follows: 20,000 marks (£1,000) for salary for the director, Professor Koch; for salaries of heads of departments, 6,000 marks (£300) each; salaries of various assistants together, 17,650 marks (£882); for scientific researches, 50,000 marks (£2,500); for nurses and servants' wages, 14,400 marks (£720); hospital expenses, 46,300 marks (£2,315); for drugs, 12,000 marks (£600), etc. A revenue of 70,000 marks (£3,500) is calculated for from paying patients.

It is stated that the chemists will shortly be permitted to dispense and sell Koch's lymph. Regulations are about to be published concerning its price, dosage, mode of keeping, etc.

The meeting of the Berliner Medizinische Gesellschaft on Wednesday, January 21st, was of exceptional interest. Amongst the demonstrations in connection with Koch's remedy, some specimens exhibited by Virchow aroused general attention. These specimens were taken from the body of a man of 54, who had been admitted to the Charité as an in-patient on October 6th of last year, suffering from pleurisy, and whose condition had been satisfactory up to November 20th, when treatment by Koch's remedy was begun. There was no fever, no loss of weight. Since November 20th five injections of 5 milligrammes each had been given, followed each time by powerful reactions. After the last injection (January 9th) fever set in, which persisted until death (January 20th). *Post-mortem* examination showed, besides old-standing induration in the lungs and remains of the pleuritic condition, an exceptionally widespread miliary tuberculosis, extending over the lungs, the spleen, the kidneys, and the liver.

The discussion on Fraenkel's address was resumed by Professor Ewald, who gave a report of his experiences with Koch's lymph in the Augusta Hospital. One hundred and fourteen cases have undergone the treatment at this establishment, the total amount of lymph used being 32,000 milligrammes. Ewald classed the cases in the usual manner, giving a detailed history of some specially characteristic ones. He summed up as follows: "Gentlemen, if I am openly to express my conviction, I must say that I have not yet seen a single case that I could really call cured." He went on to say that it was impossible almost in any one case to foretell the effect of the treatment, giving examples of cases which had seemed most likely to do well and which nevertheless had ended fatally. Before beginning the treatment, he said, the physician should inform the patient of its uncertain effect and possible danger, just as the surgeon did before performing a difficult operation the issue of which might be doubtful. The patient should, however, also be told that in a certain number of cases the improvement following the injections had been greater than had ever been known to result from any other remedy in so short a time. In short, the decision as to the employment of the treatment should be left to the patient.

Dr. James Israel, Surgeon to the Jewish Hospital, gave an account of 24 surgical tuberculous cases treated by the lymph during from thirty to sixty days. One case of hydrops tuberculosis of the knee he pronounced to be cured; 2 cases ended fatally; 5 cases, 1 of which was lupus, remained absolutely uninfluenced by the treatment, the injections, though followed each time by the well-known general reaction, producing neither local reaction nor even the slightest beginning of any therapeutic effect; 1 case of tuberculosis of the prostate showed neither general nor local reaction, even after injections of 4 centigrammes, nor any change of condition; 6 cases showed decided improvement, 5 showed no improvement, 2 cases relapsed, and 3 became decidedly worse. Dr. Israel gave a detailed history of 3 of his cases, which were specially interesting, and, in conclusion, summed up as follows:—1. The remedy does not in all cases, even if we exclude caseous foci, exert an influence on tuberculous tissue. 2. The remedy does not always produce decided necrosis, but sometimes inflammatory phenomena also. 3. The intensity of the local reaction bears no proportion to the intensity of the general reaction. 4. The intensity of the local reaction is no criterion of the therapeutic effect. Good effects may be achieved where the local reaction is feeble. Intense local reaction may be unaccompanied by any favourable therapeutic effect.

Dr. J. B. Russell has submitted his annual report on the health of the city. The movements of the death-rate in Glasgow since the commencement of registration in 1855 are shown by the following figures: Mean death-rate for the 6 years, 1855-60, 29.9; 10 years, 1861-70, 30.4; 10 years, 1871-80, 28.6; 5 years, 1881-85, 26.32; 5 years, 1886-90, 24.10 (10 years, 1881-90, 25.2).

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JANUARY 31ST, 1891.

THE LONDON WATER SUPPLY.

NOTICE has been given, on behalf of a Committee representing the majority of the London vestries and district Boards, of a Bill to be introduced into Parliament during the session dealing with the question of the London water supply. The Bill proposes to transfer the works of the eight water companies now supplying the metropolis to the London County Council, or some other representative body, on terms to be fixed by a board of arbitration; and to empower the new water authority to supplement the existing supply by taking water from wells to be sunk at Rickmansworth and Leatherhead. The question of the assessment of water rates, or the charge to the consumers, will also be taken into consideration, but this is a matter of detail with which we have no concern. That of the purchase of the property and vested interests of the existing companies is one of greater magnitude and difficulty, which, as our readers will remember, caused the downfall of a ministry, the companies, under the conditions of Lord Cross's Bill, being masters of the situation; and there is little ground for hoping that easier terms could be made at the present time.

The Committee for County Purposes of the City Corporation, under the presidency of Sir W. Guyer Hunter, in their report, estimate the value of the capital, both ordinary and preference, at £33,444,513; and calculating the interest on this, if borrowed at 3 per cent., to be less than the net profits of the companies as at present available for dividend (that is, after deducting interest on preference and loan capital) anticipate a margin of £108,012, which might be applied to a sinking fund. But, viewed simply as a financial speculation, it is doubtful whether any real advantage would accrue to the public by a mere transfer of control to an elective authority; popular representation, as one has learnt from the history of the London School Board, being no guarantee of a policy of economy. The problem which casts all other considerations into the shade, and which it is quite as possible for Parliament in its omnipotence to deal with under the present management, is that of obtaining a sufficient supply of purer water, water that may be relied on as beyond the reach of contamination under any circumstances. Many provincial towns, as Manchester, Liverpool, and Glasgow, with populations averaging half a million, have already achieved this; but the only one of the metropolitan companies that supplies such a water is the Kent Company, which depends entirely on deep wells in the chalk. The New River Company, indeed, derives about a fourth part of its water from such wells, but has recourse to the river Lee for the rest. The Bill in question provides for supplementing the present sources by others, but if it goes no further, it will merely mean that the increased demands of a growing population are to be met without drawing still more largely from the Thames and the Lee; the limits permitted by their Acts having been already reached by the Southwark and Vauxhall and by the East London Companies.

It is greatly to the credit of the companies, or rather of the way in which they have performed the duty imposed on them by Parliament of filtering the water taken from the rivers, that, except under the special circumstances of heavy rainfall or floods, the quality of the water served out by them is, on the whole, so good; but the fact remains that rivers receiving the sewage, whether crude or after having undergone some sort of treatment, of over one and a half million of people, are in the highest degree undesirable sources of water supply, alike on scientific and æsthetic grounds. No system of conservancy can exclude the crude excreta of the floating population of a large navigable river, or that of the countless isolated dwellings and villages on its banks. The best methods of chemical treatment yield effluents which, even if inoffensive to the senses at the moment of discharge, undergo subsequent putrefaction, while they afford no guarantee of the destruction of pathogenic organisms; and the heavy lands of the river sides are for the most part ill-suited for the purification of the sewage by irrigation and intermittent filtration. Besides, for several months in the year the Thames and Lee, with their affluents, are swollen by floods, which carry into the rivers the surface waters and washings of highly manured arable lands and the raw dung of pastures; and, lastly, there will always remain the possible consequences of outbreaks of cholera or enteric fever in the riparian towns or on board the river craft. What is really wanted, and what future legislation should aim at attaining, is not merely to supplement the deficiency in the quantity of water required by the metropolis, but to substitute for the present sources others of unquestionable purity.

THE REVIVAL OF VENESECTION.

THE discussion which took place at the last meeting of the Royal Medical and Chirurgical Society of London was in many respects interesting and noteworthy. Dr. Pye-Smith is to be congratulated on having so effectually succeeded in directing attention to a subject which must always have a real, if even only a historical, interest.

The reflections and conclusions contained in the paper were based upon the record of some fifty cases coming under the notice of the writer, in which venesection had been resorted to. The range of diseases in which it was employed included such acute affections as bronchitis, acute bronchopneumonia, lobar pneumonia, miliary tuberculosis of the lungs, with others of more chronic nature, such as valvular disease of the heart with pericarditis, Bright's disease, aneurysm, and epilepsy; its value in other conditions, such as hæmoptysis, apoplexy, uræmic coma, was also considered.

The discussion which ensued was remarkable, on account of the almost complete unanimity which the speakers expressed in favour of the adoption of this method of treatment in suitable and urgent cases. All testified to the great and

immediate relief which venesection gave under such circumstances—a relief unattended by any ill consequences on the subsequent progress of the disease.

Considerable differences of opinion, it is true, existed as to the cases most likely to be benefited by the treatment, or, rather, as to the cases which, in the experience of the various speakers, had most benefited by the treatment. For it was one of the noteworthy features of the discussion that there was a commendable absence of recourse to theoretical considerations as a basis for the practice.

In this respect the subject of venesection occupies a different position from that held by it in the former "bleeding era," to which reference was made in such humorous and instructive fashion by Sir George Humphry and Mr. George Pollock. The practice was then based on the humoral pathology which so long dominated the practice of medicine—that pathology which ascribes disease to the presence of deleterious agents in the blood, and which seemed, therefore, to justify the withdrawal of a certain quantity of the noxious blood as one of the best ways of curing it. As Dr. Broadbent pointed out, it was because the practice had been based so entirely on theory that it was carried to excess, and fell into such disrepute.

One of the chief merits of Dr. Pye-Smith's paper and of his subsequent remarks was to lay stress on the importance of resorting to venesection not for the cure of pathological conditions as such, but for the relief of distressing symptoms depending on temporary alterations in the physiological balance of the circulation. As to the first indication laid down for the performance of the operation—cyanosis with distension of the right side of the heart depending on pulmonary or other obstruction to the circulation—there was a consensus of opinion favourable to the operation, but Dr. Broadbent did well to point out that before resorting to venesection under such circumstances, there should be evidence, as shown by the disparity between the strength of the heart's beat and the weakness of the pulse, that the right ventricle was still acting powerfully, and able to take advantage of the relief afforded it by the withdrawal of blood.

As to the second indication—the pain of aortic aneurysm—the cases mentioned by Dr. Pye-Smith and Mr. Hulke, in which instantaneous relief was thus given, were very striking; and evidence of its curative effect on the aneurysm was also incidentally adduced by Mr. Jonathan Hutchinson. Nevertheless, as Dr. Stephen Mackenzie pointed out, it may be doubted whether in iodide of potassium, nitrite of amyl, and nitroglycerine, we do not possess remedial agents equally powerful and equally efficacious in relieving the high arterial tension on which such attacks of pain depend. The discussion, indeed, brought out the fact that it is in relieving pain that venesection finds one of its best applications, and more especially in relieving the intense inflammatory pain of pleurisy, pleuro-pneumonia, or the severe pain with threatening onset of cerebral symptoms following injury to the skull.

To those accustomed, as most now are, to regard loss of blood, from whatever source, as an unmitigated evil, the suggestion to follow up an extensive bleeding from the lungs by a further bleeding from the arm, is startling. Nevertheless, something can be said, and was adduced by one of the speakers, in favour of its adoption in cases in which the patient is in urgent danger of suffocation from the reflux of blood into the bronchi. It is, however, peculiarly open to the objection brought against the operation of venesection generally—that in the present state of public opinion as to bloodletting, the discredit of a fatal result is too likely to be hastily assigned to the venesection. Apart from such considerations, however, the general result of an unusually animated discussion will be to direct attention once more to the possible advantages attending the judicious employment of a mode of treatment long condemned as not only useless but dangerous.

THE "RE-GREENING OF VEGETABLES" WITH SULPHATE OF COPPER.

The Health Committee of Glasgow have had before them the question of the attitude which ought to be adopted by the Police Commissioners and the sanitary authorities on the question of the adulteration of canned vegetables, specially in reference to re-greening; and they have decided to intimate to dealers in canned vegetables that the sanitary officials will institute proceedings whenever the circumstances in connection with the re-greening are sufficient to warrant a prosecution. This decision is based upon a report on the subject, drawn up by the medical officer of health, Dr. J. B. Russell; the sanitary inspector, Mr. Peter Fyfe; and the city analysts, Drs. R. R. Tatlock and John Clark. At the conclusion of their report these gentlemen express the opinion that "the process of re-greening is essentially fraudulent in its intention and commercial results; that re-greening with sulphate of copper certainly does not make vegetables more wholesome—probably always makes them less wholesome, and in some proportions undoubtedly does so; that the public ought, in purchasing preserved vegetables, to ask for ungreened, or at least for vegetables free from salts of copper; that the local authority, as guardians of the public health, ought to come to an understanding as to the sale of vegetables containing salts of copper, but hold themselves free to act according to the circumstances of the case and the scientific evidence to be had from time to time." The body of the report contains an account of French law and practice on the subject, specially interesting because France is the seat of this industry, which employs 20,000 persons, and represents a business of 40 million francs. The process of re-greening, or *reverdissage*, is no part of the original process of preservation, devised by Appert at the end of last century, but has been added to it to impart to the preserved vegetables appearances of freshness. Nine-tenths at least of the green preserved vegetables sold in France or abroad are re-greened with sulphate of copper, according to Gautier; and the process consists in plunging fresh vegetables from five to fifteen minutes in a boiling solution of sulphate of copper, of strength varying according to the nature of the vegetable, but still more according to the practice of the individual manufacturer. According to a French Commission, reporting in 1881, from 8 to 27 parts of copper salt per 100,000 of dried vegetables were found as the results of analysis.

In 1853 this practice was prohibited by a police ordinance applicable to Paris only, but in 1860 the French Consulting Committee of Public Health advised its extension to the whole country, which was carried out. Manufacturers have since striven to obtain the withdrawal of this prohibi-

tion, and, as a result, numerous commissions have been nominated by Government, councils of hygiene, etc., and numerous reports by experts have been obtained, but all reporting in the sense that re-greening perpetrates a fraud upon the consumer, and is attended with risk, and the prohibition was again and again reaffirmed by the Government till April 18th, 1889, when the Consulting Committee of Hygiene of France adopted a report by M. Grimaux, and declared, "in the position of our information as to the noxious influence of salts of copper, there is no ground for prohibiting the present practice of re-greening with salts of copper." Three days afterwards the prohibition was withdrawn, and the manufacturers were freed from a restraint which, though it had been practically inoperative, they had felt to be burdensome. The report of M. Grimaux, while sanctioning the free manufacture of preserved vegetables, expresses the opinion that the consumer ought to have the power to select the food which he purchases, and that it will, therefore, be necessary "that ungreened vegetables should be marked *légumes au naturel*, and that re-greened vegetables should be distinguished as *petits pois ou haricots à l'Anglaise*, a designation under which they are known to the trade." This is very nearly on a level with a previous suggestion that re-greening for export should be permitted, but *not for home use*. The Glasgow report on the subject goes on to add, "the foolish British public expects to get green peas at Christmas such as it gets from the market gardens in summer. The French manufacturer makes them to suit its whim. The consequence is that it eats stale peas greened with sulphate of copper all the year round. We find the following in one of the documents put into our hands, a letter from a Glasgow firm of retail dealers: 'It is interesting also to note that the heaviest sale of preserved peas takes place in that period of the year when fresh peas are in season. The diner (at restaurants and hotels) assumes that the peas placed before him are fresh, and no attempt is made to undeceive him. The fact that a large proportion of the peas passing into consumption are obtained through this channel could be easily attested by dealers who are in the habit of supplying such establishments.'"

A law against the colouring of food stuffs exists in Germany, and also in the State of Massachusetts, U.S.A. Seeing that the French Government have annulled their prohibition in the interests of the manufacturers, it remains for the consumers to take care of themselves; and that is what the Glasgow consumers, through their Health Committee, have decided to do.

PHAGOCYTOSIS AND IMMUNITY.

THE fact that one attack of a contagious malady, such as small-pox or scarlet fever, renders an individual immune against a second attack has never received adequate explanation. It is even more difficult to explain satisfactorily the immunity conferred on an animal by inoculating it with the attenuated virus of a disease which in its ordinary form is often, and in a few cases invariably, fatal, such, for instance, as protective inoculation for anthrax, chicken cholera, and the older method of vaccination to protect from or modify an attack of small-pox.

In the interesting lecture recently delivered by Dr. Elias Metschnikoff at the Pasteur Institute, a translation of which is published at page 213, an attempt is made to prove that the defending powers exercised by the amœboid cells of the organism are in a large measure concerned in conferring this immunity. The aggressive characters of these amœboid cells has earned for them the name of "phagocytes," and Metschnikoff points out that they are of different kinds and originate in various ways.

In connection with the subject of immunity, it is important to remember that these phagocytes can include and destroy micro-organisms; but the more malignant the micro-organism the more rarely is it found within the phagocyte, and this is especially true of such diseases as chicken cholera, hog cholera given to pigeons and rabbits, and anthrax of mice. All these diseases have the character of general acute septicæmia and cause death within twenty or thirty-six hours.

According to the views expressed in this lecture, we are to believe that when the micro-organisms are attacked by the phagocytes, an animal may recover from the disease. In the malignant forms, where the phagocytes do not intervene—that is, phagocytosis or amœbic warfare is not established—then the bacteria overrun the organism, and induce death. This partiality of the phagocytes is attributed to their sensitiveness to external influences, and especially to the chemical composition of their environment. These cells are powerfully attracted by many micro-organisms, and repelled by others. This attraction and repulsion are expressed by the terms "positive chemiotaxis" and "negative chemiotaxis." Now the basis of the theory appears to be that the chemiotaxis of the phagocytes of a given animal is mutable, and that cells may be gradually attracted to substances in a mild form from which they shrank when presented to them in a concentrated form. Hence by inoculating an animal with an attenuated virus the chemiotaxis, previously negative, will acquire positive characters, and at last be induced to attack the micro-organism of a malignant disease should occasion arise. Any attempt to explain immunity from infectious diseases on a rational basis will be very welcome. The theory propounded by Metschnikoff is, like all the previous communications made by him on the subject of intracellular digestion, the outcome of patient and industrious observation, and must command our attention. His views, formulated for the first time in a consecutive manner in this lecture, promise to revolutionise opinions as to inflammation and fever, and this attempt to explain the power of the cells to confer immunity from infectious diseases is sure to be hotly contested, for every important contribution to this confessedly obscure subject must necessarily be in a large measure hypothetical.

MR. SYDNEY JONES has this week fulfilled his term of office as Surgeon to St. Thomas's Hospital. On his retirement, Mr. John Croft has succeeded to the Senior Surgeoncy.

ON December 19th the distinguished physiologist, Professor Carl Ludwig, of Leipzig, celebrated the fiftieth anniversary of his taking his doctor's degree at the University of Marburg.

AT the annual meeting of the Obstetrical Society of London, on Wednesday, February 4th, there will be a ballot for the election of S. Tarnier, M.D., Professor of Obstetrics, Faculté de Médecine de Paris, as an Honorary Fellow (Foreign Subject), to replace Professor F. C. Faye, of Christiania, deceased. The number of Foreign Honorary Fellows of the Society is limited to ten.

It is understood that Dr. James Andrew has resigned his appointment as Physician to St. Bartholomew's Hospital. The students of the Medical School will unanimously regret the prospect of losing so excellent a clinical teacher.

Lord Tredegar, Lord Aberdare, Lord Kensington, and Mr. Arthur J. Williams, M.P., have each subscribed £100 to form the nucleus of a fund for the establishment of a department of medical science at the South Wales and Monmouthshire University College.

We understand that the Secretary of State for War has recently been in communication, both personally and by letter, with Sir Andrew Clark, President of the Royal College of Physicians, as to the question of the rank and titles of army medical officers.

We regret to record the death of Dr. W. O. Markham, which occurred on January 23rd. Dr. Markham was editor of the British Medical Journal from 1861 until 1866, when he accepted the appointment of Poor-law inspector. For many years he had lived a most retired life. We hope to publish a full obituary notice in an early number.

RELICS OF JOHN HUNTER.

The Council of the Royal College of Surgeons have decided to devote a sum of money to the arrangement of a series of shelves and show-cases to contain books, correspondence, etc., belonging to John Hunter, for permanent exhibition in the Museum. Steps are being taken to ascertain how this scheme may be most satisfactorily carried into effect.

DEATH UNDER CHLOROFORM.

The *Carlisle Patriot* contains a brief record of a case of death while under the influence of chloroform. The deceased was a young man who, on November 22nd, was knocked down by a railway train, and sustained a dislocation of the shoulder. On January 19th, as we gather from the newspaper report, he was seen by Dr. Lediard of Carlisle, Mr. Page of Newcastle, and Drs. Armstrong and Wotherspoon of Brampton. It was deemed advisable to give chloroform, and during the manipulation of the joint the patient succumbed. The circumstances were reported to Mr. Lee, the Coroner for East Cumberland, who did not consider it necessary to hold an inquest.

UNIVERSITY AND KING'S COLLEGES.

By a concerted arrangement University and King's Colleges in London have issued a simultaneous appeal for funds to carry on and extend their work of University education in London. Both Colleges ask for £50,000, and there is no doubt that both could easily dispose of this sum in extension of existing accommodation and in more liberal provision for teaching. No part of the funds asked for will, it would appear, be available for the medical faculties, and the appeal, therefore, possesses only a secondary or general interest for the medical profession. It is, however, certain that, whatever the final result of the long negotiations for the reorganisation of the University of London and the consolidation of University education in London may be, the medical profession in general, and medical students in London in particular, have everything to gain from any movement which will make London a greater centre of University life than it has been in the past.

INTERNATIONAL CONGRESS OF HYGIENE, 1891.

A correspondent writes:—The time at which this important Congress meets in London is fast approaching. It is clearly desirable that its organisation should be completed at an early date, if its success is to be worthy of its previous history, its meeting-place in London, its Royal President, and the vast importance of its subject-matter. No definite appointment, however, of a General Secretary to the Congress has yet been made. In view of the exacting and multifarious duties which will fall to be discharged by the General Secretary, this delay is to be regretted, and it is to be hoped that this indispensable official will soon be appointed. Those who recall the International Medical Congress of 1891 will realise how much of its undoubted success was due to the able and energetic action of its General Secretary, now Sir William Mac Cormac.

COMPULSORY LATIN AND GREEK.

In the British Medical Journal of January 24th, reference was made to a letter on the value of Greek and Latin as educational agents, which Professor J. Stuart Blackie had published elsewhere. It was pointed out that he appeared to reserve his opinion as to the desirability of making Greek and Latin, or Latin alone, compulsory parts of the medical curriculum. We have since received from Professor Blackie the following letter, in which he briefly discusses the subject: "Dear Sir,—My decided opinion is that one ancient and one modern language should be demanded of all who take honours in any of the learned professions. For law, I should say Latin and German; for medicine, Greek and German; and for theology, Greek and German. But at the same time I am quite willing to give the candidate an option, so that instead of Greek he might take Latin; and instead of German, French or Italian, or even Spanish; but what I would insist on is that the languages should be known thoroughly and practically, and not in the way of cram for examination purposes.—Sincerely yours, Joh. S. Blackie."

THE UNIVERSITY OF TRINITY COLLEGE, TORONTO.

The authorities of this University resolved, at a meeting of the Corporation held last month, to discontinue the practice of granting musical degrees to candidates not residing or examined in Canada. The opposition raised by the musical faculties of the United Kingdom to what they deemed an undesirable encroachment on the privileges of the home universities has apparently brought the Toronto authorities to the opinion that the exercise of their claim to grant degrees abroad is really a matter of small moment to themselves when weighed against the risk of misconception and doubt among their friends in this country, and of sinister construction put upon their motives by unfriendly critics. The University will therefore receive no more matriculants in London after the expiration of the current academical year, ending on February 1st, 1891. The legal question as to the chartered powers of Trinity College remains unsettled by judicial authority, but it will probably not again be raised, so long as the present resolution of the University remains in force.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following is a complete statement of the lecture arrangements for 1891: The lecture hour is 5 P.M. precisely each day. Mr. John Bland Sutton, F.R.C.S., Erasmus Wilson Lecturer, will give three lectures on the Value of Comparative Pathology to Philosophical Surgery, on Monday, Wednesday, and Friday, February 9th, 11th, and 13th. Professor Charles Bagge Plowright will give three lectures on Fungi in Relation to Plant Disease, on Monday, Wednesday, and Friday, February 16th, 18th, and 20th. Professor William Watson Cheyne, F.R.C.S., will give three lectures on the Pathology of Tubercular Diseases of Bones and Joints, on Monday, Wednesday, and Friday, February 23rd, 25th, and 27th. Professor Benjamin Thompson Lowne, F.R.C.S., will give three lectures on the Anatomy and Development of Insects in Relation to Recent Views on the Origin of Vertebrates, on Monday, Wednesday, and Friday, March 2nd, 4th, and 6th. Professor Charles Stewart, M.R.C.S., will give six lectures on

Secondary Sexual Characters, and Some New Additions to the Museum, on Mondays, Wednesdays, and Fridays, March 9th, 11th, 13th, 16th, 18th, and 20th. Dr. John Rose Bradford, Arris and Gale Lecturer, will give three lectures on the Physiology of the Vasomotor System, on Monday, Wednesday, and Friday, May 25th, 27th, and 29th. Professor James Berry will give three lectures on Goitre: its Pathology, Diagnosis, and Surgical Treatment, on Monday, Wednesday, and Friday, June 1st, 3rd, and 5th. Professor William Anderson will give three lectures on the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes, on Monday, Wednesday, and Friday, June 8th, 10th, and 12th. Professor Reginald Harrison will give three lectures on Observations on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture, on Monday, Wednesday, and Friday, June 15th, 17th, and 19th.

FATAL DIPHTHERIA.

THE high mortality occasioned by diphtheria when it attacks people living under insanitary conditions is instanced by the occurrence of five deaths from this disease in the family of a labourer living in Foxhall, a village situated a few miles from Ipswich, in the Woodbridge rural sanitary district. There were only two sleeping rooms in the cottage occupied by this man with his numerous family, and the water supply is said to have been condemned some time ago as impure, but nothing had been done to substitute a better supply. The disease broke out in the family in the latter end of December, and all the five deaths occurred within a fortnight. There may have been some constitutional liability in the members of this family to suffer exceptionally from attacks of diphtheria, but the insanitary surroundings, and the failure to isolate the first case that arose, are circumstances calling for remedial action on the part of the sanitary authority. A fatal case of diphtheria was also recently the subject of an inquest at Tottenham. The evidence showed that the drain under the back room of the house in which the deceased lived had a leak in it, and that the deceased had complained of the foul smells. In October, 1889, a death from diphtheria occurred in this house, and the drains were then found to be choked. The sanitary inspector, in a report to the local board, states that the leak in the drain was a very slight one. It is well known, however, that very slight causes may sometimes produce very serious effects.

CREMATION AND DEATH CERTIFICATES.

THE Duke of Bedford's death has brought the subject of cremation once more prominently forward. It is well known that the deceased Peer was an enthusiastic advocate of this process, that he subscribed liberally to the funds of the Society, and was himself reduced to ashes at Woking a few days ago. Some apparent mystery, however, attended the inquest and the subsequent proceedings, and the partisans of burial have endeavoured to improve the occasion by trotting out the well-worn medico-legal arguments against the disposal of the dead by fire. To this Sir H. Thompson makes most effective answer in a letter addressed to the *Standard* of January 23rd. He there points out that a body cannot be received for cremation by the Society, over which he so worthily presides, until two distinct certificates have been submitted to and approved by him. The first of these is from the ordinary medical attendant of the deceased, and gives full particulars of the cause of death. The second is furnished by an independent practitioner, who carefully and separately investigates the circumstances, and states his conviction that none of these could ever make exhumation necessary; and it is not until the sufficiency of this searching inquiry has been fully verified that the President gives his formal permission, and allows the cremation to take place. It would be well for the general public if similar precautions were taken elsewhere; for Sir Henry next proceeds to show how deplorably lax our present system of death certification is, and how many thousand burials take place annually "without any evidence whatever as to the cause of death." We may supplement his observations by a few figures. In 1889, according to the last report of the Registrar-General, 518,353 deaths were recorded in England and Wales. Of these, only 474,174 were certified by medical practitioners, and of these the causes in 25,466 (4.9 per cent.) were either ill-defined or not specified; of the remainder, 29,079 were certified by coroners, and 15,100 (2.9 per cent.) were not certified at all. When it becomes generally known that human beings can thus be shovelled wholesale into their graves without inquiry or comment, and that murder need not become a fine art in order to ensure success and avoid detection, we feel convinced that the "evident sense" of the country will demand an alteration of the law. Sir Henry Thompson pleads earnestly for the *médecin vérificateur*, an independent official resident in each district, who "investigates systematically the cause of every death within twenty-four hours of its occurrence." This plan works well on the Continent, and there is no reason why it should not work with equal efficiency here. But whatever machinery may be adopted, it is quite evident that the meshes of our present system are far too loose, and that in the interest of justice some process of tightening must be adopted. Dr. Cameron has already introduced Bills into the House of Commons to accomplish this end, and when he returns from Algiers we understand that he will be asked to try his luck once more. We should have thought, however, that this is just one of those questions which any Government would be glad to take up, and which a strong department could readily work through Parliament by common consent. We throw out the hint to Mr. Ritchie, who has already distinguished himself by effective sanitary legislation, and would urge him to direct his mind seriously to the evils which Sir H. Thompson has so forcibly denounced. But whether improvement is effected by public or by private means, the credit will always be due to the Cremation Society and to its distinguished President of having pointed out the evils and suggested the remedy.

TUBERCLE BACILLI IN THE BLOOD.

AN observation which, if confirmed by other observers, will make a most serious impression on the opinion of the profession as to the safety of Professor Koch's treatment, has been published in the last number of the *Berliner klinische Wochenschrift*, by Dr. Victor Liebman, of Trieste. The communication, it is expressly stated, is only a preliminary one, but it is of such very great importance that it is desirable that all those who are working with the fluid should make early investigations as to its correctness. From the circumstantial way in which these statements are detailed it would appear that the research carried on by him must be essentially correct in all points. No similar research having been published, Dr. Liebman has nothing with which to compare his own observations, but he states very distinctly that though control phthisical patients who had not been treated with the Koch fluid were found to have in their blood no tubercle bacilli, those patients who had received one or more injections of the fluid were no longer in the same condition, as tubercle bacilli, not in large numbers certainly, but still in sufficient numbers to be pretty easily demonstrable, were circulating in the blood stream. In order that no fallacies might creep in through the presence of accidental impurities, all the slides, cover glasses, and apparatus with which he was working were sterilised with hydrochloric acid and absolute alcohol; the tip of the finger of the patient was then carefully washed with ether, alcohol, and distilled water; a needle previously sterilised by being passed through a flame was used to make the puncture, and the blood drawn off was spread in thin layers on cover glasses, dried and heated in the ordinary manner, after which they were stained for half an hour in a solution of fuchsine in carbolic acid, washed thoroughly with distilled water, and then kept for one minute in the following solution: 1.5 grammes methylene blue, 30cc.

absolute alcohol, 20cc. sulphuric acid, 50cc. distilled water. The observations were made in nine cases, and Dr. Liebman found, in all those cases in which there was marked reaction quickly following the injection of small doses of the fluid, that bacilli could be demonstrated in the blood. Hitherto it has been supposed that tubercle bacilli were present in the blood only in cases of acute miliary tuberculosis resulting from the invasion of the blood stream through the ulceration of the wall of a vein, or through considerable and rapid destruction of tissue by the tuberculous lesion. Here, however, we have a number of cases of consolidation of the apex of the lung, of small cavity formation, of infiltration of both lungs, affection of the larynx, ulceration of the intestine, and of tuberculous joint disease, most of them, at any rate, running comparatively a chronic course; in these, contrary to the usual course, and differing from the control cases, bacilli were found in the blood. The importance of this fact will not be overlooked. It bears out in a most remarkable manner Professor Virchow's observation[1] that the bacilli "appeared to be mobilised," and to be much more readily transported from the diseased tissue to the circulating fluids. Of course, in a matter of this kind, theory must not be set against facts. At the same time, it will not be wise to take alarm unnecessarily when any unforeseen accidents occur, although these accidental conditions must be examined most carefully, and probed to the very bottom. We have still much to learn about Koch's treatment and its effects on the tissues and on the patients.

THE LIBRARY OF THE ROYAL COLLEGE OF SURGEONS.

The plan introduced last year of keeping the Library of the Royal College of Surgeons open in the evening has been found to work well. Experience has, however, shown that very few readers remained after 7 P.M., and still fewer—an average, in fact, of only three a night—were found to persevere in their literary researches so late as 8 P.M. The library is now open until 7 P.M., and is very largely used up to that hour. The excellence of the arrangements for the comfort and convenience of readers is highly appreciated by all those who make use of the library. Last year the total number of readers was over 10,000. During August the library is closed at 6 P.M., and during September it is entirely closed. A *List of the Transactions, Periodicals, and Memoirs in the Library of the Royal College of Surgeons of England* has been prepared by the Librarian, Mr. J. B. Bailey, and may be obtained through Messrs. Taylor and Francis, price 1s. The *List*, though only a bare enumeration, will be found extremely useful by persons carrying out researches in the literature of medicine. Mr. Bailey, however, promises us full bibliographical details of each set in the new catalogue of the library, which is now in preparation.

ENTERIC FEVER AND RIVER POLLUTION.

We learn that further outbreaks of enteric fever have occurred on the Teeside. At a special meeting of the Stockton Rural Sanitary Authority, held recently, the medical officer of health reported on 26 cases which had been notified to him in one week, there being as many as 150 cases in the district at the time. The second epidemic has occurred in the same area as that previously attacked, the cases being distributed over the district supplied with the water of the Stockton and Middlesbrough Company. It has not been confined to any class of the population, neither does it appear from the medical officer's report to have picked out houses the sanitary condition of which is specially defective. The medical officer will no doubt present a complete report on the outbreak; in the mean time temporary measures of precaution have been advised, and the inhabitants of the district have been recommended to boil their water before using it for domestic purposes. But further action is absolutely necessary in the public interests, and we are glad to hear that the North Riding and Durham County Councils have been petitioned to demand of the authorities concerned that they shall cease to pollute the Tees with sewage. Such a petition ought to receive immediate and earnest attention from an authority which is specially charged with the duty of preventing river pollution. By means of the Notification of Infectious Diseases Act, sanitary authorities have acquired additional facilities for tracing epidemics to their source; and in this way polluted river water has been discovered to be the cause of outbreaks sometimes large and sometimes small. Except in London, we have as yet heard very little of even the existence of County Councils as sanitary authorities, but the urgency of the present case is such that we can hardly believe it possible that the County Councils in question can afford any longer to neglect their obvious duty.

[1] British Medical Journal, January 17th, p. 127.

SCOTLAND.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

At the last meeting of this Society Dr. J. Halliday Croom read a paper on Some Recent Work in Abdominal Surgery, in which he gave a survey of the present position of the subject, and notes of his own cases. Dr. Harvey Littlejohn read a paper on an Outbreak of Typhoid Fever in Edinburgh, in which he showed that the recent epidemic started originally from an infected dairy in the neighbourhood of the city, and that secondary foci of infection were established; further, that the outbreak of enteric fever at the Children's Hospital was a thing apart, being distinctly due to drain sources. Dr. J. Playfair showed the Kidney, Ureter, and Bladder from a case of Hydronephrosis in an infant aged 6 months. Dr. A. Thomson showed a specimen of Intracranial Tumour; and Mr. Caird showed, for Mr. Ernest Neve, F.R.C.S.E., of Cashmere, a Urethral Calculus.

SCOTTISH MICROSCOPICAL SOCIETY.

The fourth meeting of this Society was held in Edinburgh on January 16th, Professor Rutherford, F.R.S., President, in the chair. The President referred to the loss the Society had sustained by the decease of one of its Vice-Presidents, W. Adolf Paul Schulze, a native of Saxony, who settled in Glasgow as a merchant, and devoted his leisure time to microscopical optics, and especially to photomicrography, in which he acquired very remarkable skill, his article on the subject in the *British Journal of Photography* for May 24th, 31st, and June 7th, 1889, being one of the best expositions of the practice of that difficult subject which has yet appeared. Mr. G. W. Watson, L.D.S., read a paper on the Pathology of Dental Caries, which he illustrated with sections and photographs of carious teeth prepared by himself, and shown on the screen with the oxyhydrogen microscope. The destruction of dentine by micrococci and bacilli growing in the dentinal tubules was clearly shown. Mr. James Hunter, F.R.C.S.E., gave an interesting lantern demonstration of the Properties of Simple Leuses, and Professor J. McFadyean, B.Sc., gave an account of the Morphology of Actinomyces.

OPHTHALMIC SURGERY IN GLASGOW.

For months past negotiations have been going forward between the managers of the Royal Infirmary and the directors of the Ophthalmic Institution, in reference to a proposal that the Royal Infirmary should take over the Ophthalmic Institution. The infirmary has no regularly organised and equipped eye department, and it will undoubtedly be an easy way to acquire such by taking over the Ophthalmic Institution and its assets, which are valued at £11,000. The directors of that institution, have always reported continued prosperity, and deal with close on 4,000 cases annually; the annual income has gone on increasing, and has for several

years been considerably in excess of the expenditure, so that now they have a few thousand pounds invested. The directors ask the infirmary managers to agree to erect on infirmary ground, or in its proximity, and in all time coming maintain, a building containing an equal amount of accommodation to that at present afforded by the Ophthalmic Institution. If the amalgamation take place, the ophthalmic department of the infirmary will be kept apart for a few years, and separate subscriptions will be asked for it. At the annual meeting of the Royal Infirmary the proposals were approved of, but they still require the sanction of the Ophthalmic Institution subscribers.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY

THIS Society meets on Monday next, February 2nd, to listen to an address from Mr. Lawson Tait, the Honorary President, on "The Principle of Exploratory and Confirmatory Incisions." The meeting will, for this occasion, be held in the Philosophical Society's Hall, 207, Bath Street. All members of the profession in Glasgow and neighbouring towns are cordially invited to the meeting.

EPIDEMIC DIPHTHERIA IN PAISLEY.

A NUMBER of cases of diphtheria and sore throat occurred during the last quarter of 1890 in Castlehead, a district of Paisley. From the first there appears to have been a suspicion that a particular milk supply was implicated, but the sanitary officials failed to find anything at the dairy in question which would account for the supposed infective quality of the milk sent out from there. Early in December, however, the disease continuing to spread, and assuming a more malignant type, the drainage of the dairy was again examined, and the drain from the byres was found to be choked with refuse, and sunk for part of its length much below its proper level. On this being rectified—the milk supply in the interval being stopped—the epidemic ceased. Out of 23 families in Castlehead supplied with this particular milk, 20 families, representing 45 persons, were affected. This proportion is a very high one, and is apparently due to the circumstance that they were well-to-do people who store milk on their own premises, and consume it in large quantities. Amongst the poorer classes living near the dairy, who obtained their milk from it, the proportion of attacks was very much smaller. A similar incidence has been observed in previous outbreaks of milk diphtheria. It is certainly a matter of regret that the sanitary officials were not able to arrive at a more exact knowledge of the cause of the outbreak at an earlier period in the epidemic, or that a more thorough examination of the dairy drainage was no made in the first instance. t

IRELAND.

THE PREVENTION OF INTEMPERANCE.

THE members of the Woman's Organisation for Prevention of Intemperance among their own Sex have addressed the profession in Ireland, asking their aid in furtherance of the cause. Having regard to the extent of the evil of intemperance, the writers make the following suggestions :—1. That alcoholic stimulants might be less frequently ordered, and that when necessary they might be given in the form of pure spirit suitably diluted. 2. That, before ordinary alcoholic stimulants, medical men would carefully ascertain whether the patient is affected with any personal or hereditary predisposition to intemperate use. 3. That, when ordered, the exact quantity to be taken and the length of the time it is to be continued should be stated. 4. That you will use your influence to dispel the widespread delusion that alcoholic stimulants are of any important food value. The document is very temperate and fair in tone, and will no doubt receive the attention of those to whom it is addressed.

THE RIGHTS OF AN UNBORN CHILD.

A CURIOUS case was before the Court of Queen's Bench, Dublin, on Monday last, January 26th, on demurrer, which involved a point as to the rights of a child *in utero*. The mother was injured in the terrible Armagh railway accident, which resulted in about a hundred deaths. She was pregnant at the time, and she subsequently gave birth to a deformed child. The mother had received £800 compensation for her own injuries. Her case now was that the railway company accepted her as a passenger, knowing her condition, and that the deformity from which her child suffers was the result of the accident. The defendants demurred that an unborn child had no right of action for personal injuries. Counsel contended that the unborn child had no personality, but was simply part of the mother; and that this was shown by the fact that the law did not hold a person guilty of murder or manslaughter who destroyed a child before it was born. A child *en ventre sa mère* could not take real property by inheritance. After a long reference to the law in such cases, the Lord Chief Justice said he wished it to be clearly understood that in deciding this case he did not intend to go to this length—that if a person, knowing that a woman is pregnant, wilfully inflicts injuries on her with a view to injuring the child, and the child is born a cripple owing to the injuries so wilfully inflicted, an action does not lie at the suit of the child when born. He was far from saying that an action would lie under such circumstances at the suit of the child when born, but before he would hold an action under such circumstances did not lie he would desire to hear further discussion as to the limitation of the rule of civil law, that a child *in utero* is considered as already born when it is necessary for the benefit of such unborn child so to consider it. He decided this case on the simple ground that there were no facts set out in the statement of claim which disclosed a duty towards the child before it was born. It was now settled law that railway companies do not warrant the safety of passengers. All they undertook was a duty to carry with due and reasonable care, and their liability for negligences arose from a breach of that duty. On this ground he was of opinion that the present action was not maintainable, and that the demurrer should be allowed. The other judges concurred, and the demurrer was allowed.

THE HOSPITALS COMMITTEE.

Guy's Hospital: Evidence of the Treasurer and of the Dean of the Medical School.—St. Bartholomew's Hospital: Evidence of the Clerk and Warden.

THE Select Committee of the House of Lords to make inquiries with regard to the London hospitals and other institutions for the care of sick poor having been reappointed on Friday, January 23rd, resumed their sittings on Monday last, under the presidency of Lord SANDHURST.

Mr. LUSHINGTON, the Treasurer of Guy's Hospital, was the first witness called, and, in reply to the Chairman, stated that he had been twenty-seven years in the Bengal Civil Service, after which he was elected treasurer of Guy's Hospital, a position he had held for fifteen years. During that time a great improvement had been effected in the management of the hospital, and especially in the nursing department. At the time he was elected treasurer, the system of nursing was that the sisters in charge of the wards were not trained nurses, and knew little or nothing of their duties. They practically came in and went out when they pleased so long as they were in when required by the medical staff. But that had been changed. There had been no alteration in the constitution of the hospital since he had been there. The hospital was founded by Guy about 1725, and in his will he defined what should be its constitution. It consisted of sixty governors, self-elected. Out of that body of governors there was a Court consisting of nineteen members, and this Court practically discharged the whole business of the hospital.

The CHAIRMAN: How is the Court nominated?—They are elected amongst themselves, but seven go out every year.

What are the particular functions of this Court?—They manage the business of the hospital.

In the absence of this Court, you represent the hospital?—Yes.

The whole year, barring the occasions when the Court meet, you are in full power?—That would be so.

The WITNESS added that if anything of importance occurred in the meantime he would call a special Court. He had not called one for several years. But besides the Court, there were sub-committees for the consideration of important subjects. There was a sub-committee to consider the expediency of adding to the buildings of the hospital. With reference to to the finances of the institution, the Witness stated that the hospital had three large estates—in Hertfordshire about 10,000, in Lincolnshire about 13,000, and in Essex about 9,000 acres. There was also an estate in Southwark, round about the hospital, which produced about £6,000 a year. The estates used to give about £50,000 a year, but that had greatly fallen off in consequence of the agricultural depression. They had lost in Essex quite 40 per cent. of their rents, and in Hertfordshire and Lincolnshire from 25 to 30 per cent.

The CHAIRMAN: Have you any farms on your hands?—We have about 1,400 acres on hand in Essex. We have a net amount to spend on the hospital of about £25,000 or £26,000.

How do you make up your deficit?—From two or three different sources. First there is a certain income from the lady pupils, from the out- and the in-patients, and we have further raised £100,000 from the public.

With all these different methods of procuring money, are all the beds full?—No; we can take in 600, but this year we have about 427 or 428 beds full.

This is a very densely populated district?—Yes.

And very short of hospital accommodation?—There is no hospital immediately near at hand in case of serious dock or wharf accidents. The nearest is a small hospital at Poplar.

That makes the case the stronger. Yours is the only hospital, and yet for want of funds you are obliged to keep over 100 beds closed?—That is so.

Mr. LUSHINGTON continued that with regard to the purchases he did not order instruments unless the Instruments Committee, consisting of surgeons, specified in a special book what instruments were required; and then he did not sanction the purchase unless they were found to be necessary after careful inquiry. The General Court elected the senior officials, the superintendent, chaplain, matron, physicians and surgeons, and the assistant-physicians. House-physicians were appointed by the treasurer, on the recommendation of the medical school. Dr. Steele was really not medical superintendent, and had nothing to do with the medical work of the hospital. He was appointed resident superintendent, and had nothing to do with the medical department. There were resident surgeons until recently living in the hospital, and at its expense, and they had their meals provided at the expense of the hospital. When the College was opened in May they went over to the College, and the College authorities were paid the cost.

You have actually no resident medical officer residing within the walls of the hospital?—Yes, we have a medical officer and surgeon on duty, who sleep in the hospital.

And they are called down in case of an accident in the night?—Yes, or in case of serious illness.

Have these gentlemen any salaries?—No.

The WITNESS then gave evidence as to the nursing department at the hospital, and stated that a separate account was kept as to the nursing, although it was included in the accounts of the hospital. Besides the hospital nurses they had an Institute of Nurses for sending out private nurses. He did not think the hospital patients suffered at all on account of nurses being withdrawn from the hospital for the Institution. It was certainly not their practice to take nurses out of wards to send out as private nurses.

In reply to Lord CATHCART, Mr. LUSHINGTON stated that the conduct of the medical students was excellent. He could not quite endorse Dr. Steele's statement that he did not know of any case of expulsion. There was no danger that the free patients would suffer in their treatment in consequence of paying patients being received.

Lord THRING: With regard to the management of the hospital, you would not object if the governors took a little more active interest in the hospital?—I can always get all the assistance I want from the governors. I do not think business would be done any better.

In further answer to Lord THRING, WITNESS stated that great care was taken with the patients who died in the hospital, and that everything was done, both in the hospital and in the mortuary, with order and decency. There was no disposition, he believed, on the part of the surgeons to keep beds vacant for interesting cases, to the detriment of other urgent cases.

The CHAIRMAN: Which side of the hospital is the fuller—the medical or surgical?—I think we have nearly twice as many surgical as medical cases. There were, he added, a large number of out-patients; they now had to pay a small sum.

With regard to provident dispensaries, do you find they were starved out by the free charities of London?—No; on the contrary, they flourish very well in some districts—for instance, in Bloomsbury.

You have a system of attending midwifery cases at their own homes?—Yes.

Is yours the only institution which assists women free in that district?—I believe so.

I suppose if they were not attended by you free the expense would fall upon the Poor Law?—Certainly.

And would have to be performed by the Poor Law also for nothing?—Yes, in a great number of cases. Out of every 1,000 persons in Guy's Hospital 600 come from a radius of two miles, so that the charity was keeping 600 who would otherwise go to the Poor-law infirmaries—that was assuming that the patients were all poor.

You are assuming that everyone who comes to you is in a state of destitution—that can hardly be the case.—Say, then, instead of 600 that 450, or 75 per cent., of the persons who are treated are destitute.

The WITNESS further stated that the accounts of the hospital were audited by chartered accountants. As to the question of a central body controlling all the medical charities, he should consider it decidedly objectionable, and would destroy the spirit of interest which was now diffused among hospitals. He would like to see a systematic form of accounts, so that the public might be able to understand better than now which hospital managed its affairs economically.

You have a very good medical school at Guy's?—Yes.

Who is at its head?—I am.

The management of the hospital and the responsibility of the medical school rests on your shoulders?—Yes. I am an honorary officer; the surgeons and assistant-physicians are not honorary, but they receive only a very small salary.

Lord CATHCART: The midwifery cases are taken for the purposes of education?—Yes.

And then there is not very much philanthropy in it—it is an educational matter?—These women would come badly off if it were not for our midwifery department.

Yes, but your motive is education.

The WITNESS further stated that the charge for out-patients at first caused a great reduction in the number, but now the number was nearly as large as it used to be. The examination of female cases was conducted with the greatest care, and always in the presence of a female.

Dr. EDWIN COOPER PERRY, F.R.C.P., Assistant-Physician to Guy's Hospital, Dean of the Medical School, Demonstrator in Morbid Anatomy, and Warden of the residential College, stated that the fact of a gentleman not having a diploma of the College of Surgeons or the College of Physicians, London, did not prevent his getting an appointment at the hospital. The Medical College was for the residence of the students, and of the total number of nearly 500 there were 52 residing in the College. His functions came under two heads—namely, the business management of the College, and the superintendence of the students as regarded discipline. Having given in detail the recent history of the College, the Witness stated, in reply to the CHAIRMAN, that it was a commercial speculation, and no part of the hospital money had been used for the building.

Does it pay its way?—The College was opened by Mr. Gladstone last March, and since the commencement of the winter session—last October—every room has been occupied. But at present it is not possible to say whether as a commercial speculation it will succeed. With reference to the superin-

tendence and discipline over the students, the witness said that considerable elasticity was necessary, because the residents were not juniors by any means. The system adopted at the College was found to be very popular. As to the medical school, the number of students had considerably increased of late years. In 1886 the full students—those who had entered for the full curriculum—numbered 69.

What do they pay?—125 guineas.

The WITNESS continued that in 1887 the number was 64 full students; in 1888, 74; in 1889, 85 and 6 dental students; and in 1890, 101 with 16 dental students.

How long does the curriculum last?—Until lately it was a curriculum of four years in the case of the qualifications M.R.C.S. and L.R.C.P., and in the case of the qualifications of the Universities of London, Oxford, and Cambridge five years. The total entries of students from 1886 were as follows: In 1886, 101; in 1887, 95; in 1888, 103; in 1889, 144; in 1890, 164. Those were the new entries.

Do you think the system of individual schools to be a good one, or would you prefer a great central university?—My own feeling about the matter is this: that, as regards the large medical schools, a central university would be of little value, because those schools could afford to give adequate remuneration to their lecturers, demonstrators, and teachers. But, as regards the smaller hospitals, I think that there can be no question that it would be better to have a central institution for teaching the scientific parts of the three professional subjects. The remuneration (the Witness added) came from the fees of the students, which formed the school funds. Last year the income from the students' fees amounted to £11,000. Of that sum about £3,000 was spent in carrying on the school.

In answer to Lord CATHCART, Dr. PERRY stated that he did not think any central institution could be generally used for anything more than the teaching of the preliminary subjects; the students would have to go back for clinical work and lectures to the hospitals.

Lord MONKSWELL: With regard to the London diploma, do you think your hospital is right in not requiring it?—Yes. I think there is a certain safeguard in requiring Membership of the College of Surgeons where you have a large number of ignorant electors; but, in Guy's, where we have a large governing body, it is not requisite.

The WITNESS, in reply to the CHAIRMAN, stated that he had never had occasion to find fault with the sanitation of the wards of Guy's Hospital.

The Committee then adjourned until Thursday.

At the meeting on January 29th, Mr. W. H. CROSS, Clerk to St. Bartholomew's Hospital, stated, in answer to the CHAIRMAN, that the affairs of the hospital were conducted by an executive committee and a house committee. Having given details of his own duties, the Witness stated that he was a salaried officer and resided on the premises. His salary was £1,000 a year. He would, of course, receive any complaints, and in case of anything serious the steward would report to him. The steward was an important official, and kept a record of patients and saw to their allocation.

The CHAIRMAN: As a general rule, do you not think it an inconvenient system to have two heads, as it were? You are supreme in the absence of the treasurer, and at the same time you have a very important official who is not directly under you?—It would be much better to have someone on the spot who had supreme authority.

The system of accounts and the method of checking them having been explained, the WITNESS stated that the house committee dealt with the estates of the hospital, which were in various countries, and comprised about 11,000 acres. The principal estates were in Essex, and the hospital had an agent in Chelmsford. The treasurer and almoners visited the estates when necessary in case of change of tenants or otherwise. The almoners were four in number, and each held office for four years. They were, as a rule, men of large business experience. With regard to the system of accounts kept by other hospitals, he said that a mere examination of the accounts was perhaps not sufficient for a subscriber who wanted a full knowledge of the affairs of a hospital. He did not think there would be any great advantage in a uniform system of accounts. He did not suggest that a uniform system of accounts should not be tried; but there were difficulties in the way of comparison in order to ascertain the relative economy of different institutions with any degree of certainty. As to the tabulated figures submitted by the Charity Organisation Society relative to the London hospitals, the Witness stated that, so far as St. Bartholomew's was concerned, he could not arrive at the figures given by the Society, and did not know how the conclusions were reached. The system of inquiring into the circumstances of the outdoor patients at St. Bartholomew's had worked well. He thought there should be an inquiry officer at each of the general hospitals. The patients who came to St. Bartholomew's were very poor.

The CHAIRMAN: Do you have a return of the names and number of the patients of the out-patient department?—The names of the surgical cases are recorded, but not of the medical cases. The object of keeping a record of surgical casualties is to enable us to answer inquiries in case of accidents.

Have you had any outbreaks of diphtheria?—We have had several cases of diphtheria among our nursing staff during last year. We took into the hospital last year from the outside 140 cases of diphtheria, being double the number we received in the previous year. Several of our nurses—23—and 3 of our ward sisters have been attacked with a more or less severe form of diphtheria. The matter has been engaging the very anxious attention of the treasurer and almoners ever since there was any idea that our nurses were suffering from diphtheria; and that matter is still under consideration. All cases of diphtheria, at whatever stage, were admitted. The practice of isolating diphtheria had been commenced.

In reply to Lord CATHCART, he said that there was no reason to think that there was anything wrong in the nurses' quarters. Some of the nurses were moved from the cubicles because it was found necessary to disinfect after a case of scarlet fever in a nurse.

In reply to Lord ZOUCHE, he said that he did not think any danger arose as to infection from the antiquity of the building.

Lord MONKSWELL: With regard to this outbreak of diphtheria, your surveyor has been investigating for two months?—Yes. Generally speaking, he could not discover anything to account for the illness; but he pointed out that some of the appliances were not of the most modern type, and should be improved; and orders were given for the newer appliances.

Did he say anything about the sleeping accommodation of the nurses, officers, or students?—No.

The ward sisters sleep in the hospital?—All but two sleep in the hospital.

Are the ward assistants put in what you consider a sanitary bedroom?—Yes, I think so.

Are not some of them in a bedroom underground?—No; some of the male attendants have beds underground.

Have they suffered from illness?—One of the attendants had diphtheria last summer.

In reply to the CHAIRMAN, he said that any complaints in regard to the nurses' food would be made to the matron, and if it were a matter of discipline she would report to him.

Dr. NORMAN MOORE, F.R.C.P., stated that there was no dean at the hospital. He was assistant-physician, lecturer on pathological anatomy, and warden of the College in which the resident students were received. There were about 500 students, and the hospital had maintained that number for many years. They could conveniently teach a little larger number than that. In the residential college they could accommodate about twenty-seven students. He had powers of discipline over the students, and was, under the Committee, the highest authority, apart from the government of the hospital as a whole. He was in favour of schools being attached to large hospitals, and, if they compared the results of medical education in England with that in other countries, there was no reason to think that the English was the less good. He had not been to Vienna, but he was well acquainted with the system of medical education there. The teachers in London would bear favourable comparison with those of any countries. The general moral training of medical students was superior to that given in any country. Whether they had many good lecturers depended upon the ultimate rewards to be obtained from successful teaching, and those rewards were greater here than elsewhere. By a central university they

might secure as good but not better lecturers than at present. It would be useful if students of medicine were taught chemistry at public schools. A great laboratory might form a part of a central university, but he did not think it was a public want, because there were good laboratories in England. He would not by any means say the method and means of medical education were not capable of improvement. With regard to the out-patient department of the hospital, on the whole it worked with advantage. It was impossible to see a large number of out-patients unless done systematically. The patients could not, he thought, be seen at the rate of sixty an hour. The Witness then denied some of the statements made by previous witnesses as to the neglect of out-patients. In former years no doubt the arrangements were less perfect than at present. The staff had been enormously increased and the system reorganised. From his experience the free departments of St. Bartholomew's were not abused. It was a very rare occurrence for anyone to come who could afford to pay for good medical advice. He was strongly in favour of maintaining the out-patient departments. If not maintained they would do a serious injury to the progress of medical education. And besides, that was the only way of preventing the neglect of the sick poor.

The CHAIRMAN: If the out-patient department were made merely a consultative department, would that be an advantage?—It would not meet the wants of the poor, and it would lead to the neglect of numbers of serious cases of disease. The Witness continued that he understood it was suggested that there should be some selection by medical men outside to decide whether the patients should be treated. That he thought would be injurious to the poor, because the most competent person should decide whether a patient should go to a hospital.

Lord THRING: How are your lecturers paid, by salaries or a system of fees?—Entirely on a system of fees.

In other words, the lecturers receive the whole of the money paid by the students?—That would give an incorrect idea, because every lecturer has to pay for the common expenses of the school. The amount paid depends entirely on the number of students.

With regard to *post-mortem* examinations, do you hold a *post-mortem* examination of the bodies of all who die in the hospital?—No, not unless their friends give leave. Every effort is made not to give offence to friends and relatives.

In answer to Lord ZOUCHE, the WITNESS said that about two-thirds of the friends of the deceased patients gave leave for *post-mortem* examinations to be made.

Lord MONKSWELL: Do not you think it would be worth while to pay something so as to secure *post-mortem* examinations?—I do not see why it should be done. It is of quite as much importance to the friends as to the medical staff. There is always something to be learned from every dead person. With reference to the conduct of the students, the Witness stated that it was excellent, and they compared favourably with the undergraduates of the universities. It was only in the case of physically ejecting a student that reference would be made to the treasurer. Of course it occurred every year that students were told to leave.

In answer to the CHAIRMAN, the WITNESS stated that a student could attend more than one London medical school. If dismissed from one, it was not very likely he would be able to go to another school, because of the communication between the heads of the school. The students' fees last year amounted to £14,000. Out of that they had to pay the whole of the expenses of the school and the different lecturers. The school expenses last year amounted to over £4,000. The expenses included all the servants, a large museum, a considerable library, and the working expenses of the lecturers. The amount of fees the lecturers received depended upon the number of students who attended his classes. The residential college in the hospital was part of the property of the governors, and practically paid its own expenses.

The CHAIRMAN: It is not a commercial speculation?—No.

The WITNESS then, in reply to Lord MONKSWELL, stated that he was opposed to special hospitals, as in most of the so-called special diseases—particularly cancer and chest complaints—the cases could be treated at general hospitals.

Mr. CROSS was re-examined with regard to the hours of work and rest of the nurses, and their food and recreation; he stated that St. Bartholomew's was quite a free hospital so far as receiving patients was concerned.

The Committee adjourned until Monday next.

ROYAL COLLEGE OF PHYSICIANS.

AN ordinary comitia of the College was held on Thursday, January 29th, at 5 P.M.; Sir ANDREW CLARK, Bart., F.R.S., President, in the chair.

The minutes having been read, the PRESIDENT made a graceful allusion to the baronetcy recently conferred on Sir Richard Quain, which was suitably acknowledged by that gentleman.

The following gentlemen were admitted Members: H. J. Campbell, M.D.Lond.; E. C. Carter, M.B.Edin.; E. L. Fox, M.D.Camb.; H. G. Turney, M.B.Oxon.

Communications were received from the Registrar of the University of London, and from the Royal College of Surgeons.

A letter was read from the Medical Society of London respecting the triennial Fothergillian Prize, and asking that the President of the College should be one of the judges for the prize.

On the motion of Dr. C. T. WILLIAMS, seconded by Dr. RUSSELL REYNOLDS, it was resolved to accede to the request on condition that the President might, if necessary, devolve the duty on one of the Censors.

Sanction was given to a draft report to the Charity Commissioners respecting a proposed change of day for the delivery of the annual Bradshawe Lecture.

A communication was received from the Secretary of the University of Toronto.

The following were appointed a committee to consider the Midwives Registration Bill: Dr. Farquharson, Dr. Priestley, Dr. Sturges, and Dr. Douglas Powell.

The following were elected to fill the vacancies on the Council: Dr. W. H. Ransom, Dr. Stevenson, Dr. C. T. Williams, and Dr. Whipham.

Dr. THEODORE WILLIAMS proposed: "That it be referred to the Council to consider how far the services of non-resident Fellows connected with provincial medical schools can with advantage be made available for the College examinations." The points in favour of his proposal were: (1) that a large number of the Fellows did live in the provinces; (2) that about one-third of the candidates came from the provinces; (3) that there were many Fellows competent to undertake such duties; and further, that provincial Fellows of the College had frequently taken part in the examinations of the Universities of Oxford, Cambridge, and London. He had ascertained by inquiry that many of the Fellows would be willing to undertake such examination and would esteem it a high honour.

The motion was seconded by Dr. LEECH, of Manchester, and was agreed to unanimously.

A report was received and adopted from Dr. Hermann Weber and Dr. Burney Yeo respecting some mineral waters from Persia, and a copy was ordered to be sent to the Foreign Office.

The quarterly report of the Finance Committee was received and adopted. The only point of importance related to the examination in surgery of candidates for the Licence who registered before 1884, suggesting that in future the examination should only be held twice a year instead of quarterly, as the number of candidates was extremely small.

The annual report of the examiners for the Licence was received, and it was resolved that in future the percentages of passes and rejections should be published.

On the recommendation of the Committee of Management, it was resolved that the University of Adelaide be in future recognised by the College.

The quarterly report of the Laboratories Committee was received and adopted.

A list of works presented during the past quarter was laid on the table, and the thanks of the College returned to the donors.

THE MIDWIVES REGISTRATION BILL:

The Obstetrical Society of London.

The annual meeting of this Society will be held on Wednesday, February 4th, at 8 P.M. In the usual circular which has been issued to the Fellows it is announced that after the delivery of the annual address an opportunity will be afforded for discussing the question of examination and registration of midwives. In respect to this question, the following memorandum has been issued by the Council of the Society:

Memorandum of the Proposed Legislation regarding the Examination and Registration of Midwives. (Compiled from Minutes of Council and Transactions.)

The Obstetrical Society of London was the first in promoting the education of midwives.

As early as the autumn of 1870, under the presidency of Dr. Hall Davis, a Committee was formed to consider what steps might be taken for the promotion of obstetric education. This Committee urged the institution of a board for the examining and licensing of midwives. The rules formulated were published at page 21, vol. xiv, of the *Obstetrical Transactions*. These were read at the annual meeting of the Society in 1872, and on the proposal of Dr. Graily Hewitt, seconded by Dr. Routh, they were carried unanimously, after a discussion by ten speakers.

Examinations having been adopted, it was necessary to keep a Register. Up to December, 1890, 1,130 candidates have offered themselves for examination, of whom 918 are now on the Register; 197 having been rejected, 13 did not present themselves, and 2 have been struck off the Register for misconduct.

The Society soon found that it would be advisable to call on the State to take over the examination and registration of midwives which it had initiated, and consequently, in the year 1873, a deputation of the Society was made to interview Mr. Stansfeld on the subject. Since then repeated interviews have taken place, which were notified in the *Transactions* and the medical journals.

Year after year the question has been brought before the Fellows of the Obstetrical Society in the presidential addresses now published in the *Transactions*. In 1874 Dr. Tilt discussed the question very fully (see vol. xvi, pages 21 to 27). Dr. West, in his address in 1878, said that a scheme had been drawn up by the Council, with the sanction of the Society, for the examination and registration of midwives (vol. xx, page 12). Dr. Playfair in 1880, Dr. Matthews Duncan in 1881, Dr. Gervis in 1883, and Dr. Potter in 1886, have each of them dwelt on the subject in their annual addresses, and their recommendations have each time been received and adopted by the Society.

No dissentient voice on the part of any Fellow of the Society has been heard up to now.

The objections which we learn have quite recently been raised in the medical press, and in circulars freely distributed amongst members of the medical profession, have never been previously made, either at any meeting of the Society or by due communication to its Council.

From year to year successive Councils have, since 1872, carefully discussed every aspect of the question, and, through a system of examination, gained practical experience as to the value of examinations.

It has appeared highly desirable that the class of midwives should be duly subjected to the restraint of a deliberate and judicious system of examination and registration.

The Bill last submitted to the Council by the Parliamentary promoters was much transformed from its original shape. Numerous amendments were suggested by the Council, which were accepted by the promoters of the Bill, but afterwards thrown out by the Select Committee of the House of Commons. Beyond supporting the principle of registration, the Council of the Obstetrical Society is in no way responsible for the present Bill.

The Council sees no reason, however, to depart from the view continuously held by all previous Councils of the Society, but emphatically approves of the principles of examination and registration of midwives.

Manchester Medico-Ethical Association.

We are informed that a copy of the following circular has been forwarded to every member of Parliament in Lancashire and Cheshire:—

Dear Sir, — The Manchester Medico-Ethical Association, comprising one hundred and fifty of the most influential and representative medical practitioners of Lancashire and Cheshire, having carefully considered the Midwives Registration Bill (1890) in ordinary meeting and in committee, request us to solicit your strenuous opposition to this Bill, which is down for second reading in the House of Commons on the 27th instant.

In support of our request we beg to submit the following considerations, and the legal opinion annexed, most respectfully to your notice:—

A. Any such Bill would be most highly prejudicial to the public interest by enabling ignorant and unskilled women, who have either received no medical education or an education extending only over a few months, to undertake and perform serious and dangerous operations upon lying-in women, which are only performed by registered medical practitioners after mature consideration and consultation.

B. The medical treatment of the diseases of women and children would, without doubt, amongst the poorer and working classes, pass into the hands of midwives registered under this Bill, who would be permitted to practise the science of medicine as if they had received a complete medical education and training.—(See legal opinion below, par. 10.) Thus two great classes of the community would not receive the skilled treatment of their diseases they are entitled to—only to be rendered by registered medical practitioners—but would be under the care of ignorant untrained persons.

C. After mature consideration, and by the advice of the medical profession generally, Sir W. Foster, M.D., M.P., has withdrawn his name from "the back" of the Bill. Dr. Farquharson, M.P., and Sir W. G. Hunter, M.D., M.P., in no way represent the spirit of the medical profession, and have little experience of family practice. The General Medical Council has declined to support the Bill, and while it is proposed that the Council should "frame and approve the rules" for the education of midwives, the Council is given no power to enforce the carrying out of these rules, although a midwife registered under this Bill will be placed upon the same footing as a registered medical practitioner. The Royal College of Physicians of England has also repudiated the Bill, as being injurious to public health.

D. It is generally considered that this Bill is used as a backdoor entrance to the medical profession, and a plan to avoid the extended educational course necessary to qualify anyone to undertake the treatment of the diseases of women and children. While giving the promoters of this Bill every credit for good intentions, we respectfully beg to state that, in the opinion of this Association, they are supporting a scheme which, instead of being a public benefit, will have most disastrous effects upon the health and welfare of the community, and will, at the same time, seriously interfere with the education of both male and female medical students.

Soliciting your careful perusal of the above, and awaiting your reply, we have the honour to be, dear sir, your obedient servants,

A. Wahltuch, M.D., President.
F. H. Collins, M.D., } Honorary
F. M. Pierce, M.D., } Secretaries.

Legal Opinion of an eminent Barrister-at-Law, December 29th, 1890.—1. If the Midwives Registration Bill become law, a registered midwife, who has been granted a "certificate" by a County Council, will possess a "medical diploma," as defined by Section 27 of the Medical Act of 1886. 2. A registered midwife will also be able to style herself "midwifery practitioner." 3. A registered medical practitioner will have power to employ a midwife as his legally qualified assistant in midwifery. 4. It will not prevent a midwife from prescribing medicines, using forceps, turning, or performing other midwifery operations; vaccinating and treating complaints of women and children. 5. It does not make it illegal for a midwife to employ an unqualified assistant. 6. It does not make it illegal for a woman who is not educated and registered to practise midwifery. 7. It does not make it illegal for a midwife, who has been removed from the register, to practise midwifery. 8. It does not make it illegal for a registered midwife to conduct abnormal abours

and to ask and accept fees for so doing. 9. According to the definition of the expression "medical corporation," as defined in Section 27 of the Medical Act of 1886, "County Councils" will claim, and may be allowed to be, "medical corporations." 10. This being so, a "medical corporation," granting diplomas in medicine and surgery, would, by Section 3 of the Medical Act of 1886, have the right to combine with County Councils, and to recognise their diploma as granted to practise midwifery, and to register it, along with the medical and surgical diplomas, in the *Medical Register*."

Meeting in Pimlico.

At a meeting of registered medical practitioners held at the Grosvenor Hotel, Victoria Station, on Saturday, January 24th, at 4 P.M., Mr. Dewar in the chair, the following resolutions were proposed by Dr. J. Crawford:—

1. "This meeting of medical practitioners strongly disapproves of the Midwives Registration Bill now before Parliament, as it attempts to disassociate midwifery from medicine and surgery in the persons of qualified midwives. This being so, it is wrong in principle, and will consequently be fraught with danger to the public, and cannot but be opposed to the high aims of the medical profession. At the same time, this meeting feels the great need there is for a better system of medical aid and competent nursing of necessitous poor women during and after labour in towns and country districts."

This was carried by a large majority.

2. "That this meeting calls upon the direct representatives of the General Medical Council and others who have maintained that medical students after four years' medical education are imperfectly educated in the subject of midwifery, and that their attendance on lying-in women is fraught with danger to the public, to oppose a Bill which legalises the attendances of women designated midwives at the bedsides of puerperal patients, notwithstanding the fact that their imperfect education has only extended over three months; and, further, that their refusal to do so is a glaring instance of inconsistency in matters relating to the education of persons qualified to attend midwifery cases."

This was passed unanimously.

Royal College of Physicians of Ireland.

(Statement of the President and Fellows.)

The President and Fellows of the Royal College of Physicians of Ireland have considered the Bill to provide for the registration of midwives, prepared and brought into the House of Commons, and ordered to be printed November 28th, 1890, and are of opinion that the registration of midwives, as proposed by the said Bill, will not tend in any marked degree to render more efficient the women practising as midwives, unless steps be first taken to improve their education.

The College hold that the question of registration of midwives should be postponed until it is shown that facilities exist for the education of such women as may desire to practise as midwives, and further think that the proposed registration of all women who, at the passing of the Bill, may be in practice as midwives would be most objectionable and fraught with extreme danger to the public welfare.

The President and Fellows note that, under the provisions of the proposed Bill, the duty of framing and approving rules regulating the conditions of admission to examination, the qualification of examiners, the method, period, and subjects of such examinations, and the general standard to be attained by women passing the same is to devolve on the General Medical Council, or, in default, on Her Majesty's Privy Council, an arrangement which in either case would be objectionable, and likely to prove unworkable.

They further observe that the County Councils under the Local Government Act for England (bodies which are quite unsuited to undertake such functions) are to appoint examiners and to arrange examinations, whereas, in the opinion of the College, any alteration should be in the direction of placing the examination and licensing of midwives in the hands of the various medical licensing bodies.

Under these circumstances the President and Fellows of the Royal College of Physicians of Ireland would suggest that the whole subject of the education and registration of midwives should be referred to a Select Committee of the House of Commons before any legislation be entered on, in order that the matter may be fully and carefully considered.

John Magee Finny, M.D., Univ.Dubl., President,
John William Moore, B.A., M.D., Univ.Dubl.,
December 22nd, 1890. Fellow and Registrar.

The Apothecaries' Hall, Ireland.

The Governors and Court of the Apothecaries' Hall of Ireland have prepared the following petition:

To the Honourable the House of Commons, in Parliament assembled.

The Petition of the Governor and Court of the Apothecaries' Hall of Ireland, against the "Amended Midwives Registration Bill,"

Humbly sheweth—

That the "Amended Bill" for the Registration of Midwives does not provide for the better nursing and care of the sick poor, inasmuch as it affords no test as to the qualification of any person practising as a Midwife; it provides no facilities for the training and education of midwives.

Your Petitioners would therefore humbly suggest that the Bill be submitted to a Select Committee for investigation, and that the inquiries by such Committee might have special reference to the physical, mental, and moral fitness of persons now claiming to be registered as midwives. And your Petitioners will ever pray.

R. G. O'Flaherty, M.B.T.C.D., Governor.
Robert Montgomery, M.R.C.S., Secretary.

Royal College of Surgeons in Ireland.

The Council of the Royal College of Surgeons of Ireland have prepared a petition with reference to the Midwives Registration Bill. The petition will shortly be presented in Parliament.

[Further notes with reference to this Bill will be found at pages 245, 255, and 256.]

THE MEDICAL DEFENCE UNION.

The annual meeting of the Medical Defence Union, Limited, was held at the office of the British Medical Association, on Wednesday, January 28th, the President, Mr. Lawson Tait, in the chair. There was a large attendance of members.

The Chairman, in moving the adoption of the report, called attention to the paragraphs dealing with the manner in which they were debarred in a very important area of their work from the prosecution of irregular practitioners. By the 42nd Section of the Medical Act, 1858: "Any sum or sums of money arising from conviction and recovery of penalties as aforesaid, shall be paid to the treasurer of the General Council of Medical Education and Registration." By the 43rd Section it is provided that: "All moneys received by any treasurer arising from fees, to be paid on registration, from the sale of Registers, from penalties or otherwise, shall be applied for expenses of registration and of the execution of this Act." The result outside the Metropolitan Police area was so far satisfactory, inasmuch as the General Medical Council, who were paid the fines, had refunded to the Union the expenses to which they had been put; but within the metropolitan area, under the 47th Section of the 2nd and 3rd Vict., chap. 71, they were debarred from obtaining the repayment of the expenses to which they were put; the fines going to the police fund and into the coffers of the Home Office.

The Chairman stated that he had been in correspondence with Mr. Matthews with a view to arranging a deputation to the Home Secretary to wait upon him upon the subject.

The following resolution, moved by Dr. Felce, and seconded by Mr. George Brown, was carried unanimously: "That this meeting strongly approves of the action taken by the Council with regard to the divers operations of the 42nd Section of the Medical Act, 1858, and of the 47th Section of the 2nd and 3rd Vict., chap. 71, and urges the Council to press upon the Home Secretary the desirability of taking such action as will enable the fines in question to be paid over to the General Medical Council."

The report was unanimously adopted.

The election of officers was then proceeded with. The whole of the officers, with some slight alteration in the list of elective officers of Council, were unanimously re-elected, with the addition of Dr. Rentoul as a Vice-President, and Dr. Leslie Phillips as an Organising Secretary at an honorarium of £50 per annum.

Midwives Registration Bill.—Dr. RENTOUL moved the following resolution in substitution of one of which notice had been given: "That this annual meeting of the Medical Defence Union protests against the Midwives Registration Bill now before Parliament, and that a copy of this resolution be forwarded by the Secretaries of the Union to the Right Hon. W. H. Smith, the Right Hon. H. Matthews, the Right Hon. C. T. Ritchie, and to other members of Parliament, urging them to oppose the Bill." Dr. Rentoul, in moving his resolution, said the title of the Midwives Registration Bill was a misnomer. By Section 27 of the Medical Act of 1886 the certificate granted by a County Council to a midwife under this Midwives Act would be a medical diploma, and she would have the power of styling herself a medical practitioner. A registered practitioner would also have the power of employing these registered midwives as his legally qualified assistants in midwifery. The General Medical Council was given power to frame and approve rules, but was given no power whatever to see that these rules were carried out. He called attention to the registration clause, pointing out that, under this clause, two classes of women could be registered—(1) *bonâ-fide* midwives, (2) those who became pupil midwives within eighteen months after the passing of the Act; that would allow not only the 15,000 midwives spoken of by Dr. Aveling to be registered right off, but it would allow also all those who entered as pupil midwives within eighteen months after the passing of the act to register. All these women would be registered without any moral certificate. Clause 6 said midwives were to conduct normal labours only in accordance with the prescribed regulations. No one was appointed to draw up those regulations. If the General Medical Council were to draw them up, they would not administer them. If this duty was assigned to the Privy Council, it would simply mean that they would ask some senior practitioner to draw them up. Another point was that the Bill did not make it illegal for a woman to conduct abnormal labours, to turn, apply forceps, vaccinate, or to treat puerperal cases in women or diseases of infants. The Bill was, therefore, a Medical Practitioners Bill. It broke down the Medical Act of 1886, which, in order to give the public the most skilled treatment, enacted that each man was to be qualified in medicine, surgery, and midwifery. The midwives said that the general practitioner was qualified after having personally conducted three labours; whereas the Obstetrical Society insisted that the midwife must present a certificate showing that she had attended twenty-five labours, and in Scotland thirty labours. In 1888, 1,300 students were qualified, and Sir William Turner said that about one-third of this number were rejected. That meant that in 1888 there were 1,733 senior medical students attending confinements, and if those 1,733 students were to conduct thirty cases each that would mean 51,990 confinements. Fifty-nine medical charities in the United Kingdom attended to 50,790 confinements a year: this was exclusive of 6,882 attended by the Poor-law infirmaries. Ninety-two members who had sent him proxies were unanimously opposed to the Bill. [The proxies were ruled out of order, as the rule of the Union with regard to them had not been carried out.]

The following amendment was moved by Dr. FELCE: "That in the opinion of this meeting the Midwives Registration Bill is not a suitable question for the Union to consider."

The CHAIRMAN expressed his opinion that the subject was not one which the Medical Defence Union ought to take up. Personally he thought they could very well go on as they had been going on for a number of years. The Bill would, in his opinion, affect medical men according to the nature of their practices and the locality. To persons with large practices in large towns it would be pretty sure to do harm; while it would benefit second and third-rate practitioners throughout the country by clearing their practices of a great deal of undesirable and ill-paid work.

Mr. GILBERT, Dr. BUCKELL, Mr. JUSTIN MCCARTHY, Mr. GEORGE BROWN, Dr. HUGH WOODS, and others joined in the discussion.

On the amendment being put, the voting was declared to be equal.

Dr. Rentoul's resolution was then put to the meeting, and carried, the voting being 17 for and 13 against.

A vote of thanks to the Chairman brought the proceedings to a close.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting will be held at Guy's Hospital on Wednesday, February 4th, at 8.30 P.M. A paper will be read by Dr. Frederick Taylor on Ulcerative Endocarditis. Clinical cases from the wards of the Hospital will be shown.—HECTOR W. MACKENZIE, M.D., Honorary Secretary, 77, Lambeth Palace Road, S.E.

DUBLIN BRANCH.

THE fourteenth annual meeting of the Dublin Branch was held in the College of Physicians on January 22nd, 1891; Dr. J. K. BARTON, President, in the chair.

Report of Council.—Dr. J. MOLONY, Secretary, read the report, which stated that a committee had been formed to investigate the rules under which appointments were made to the hospital staffs in England and Scotland: and the representative of the Branch on the Council had informed the Council of the Branch that the question had proved to be most complicated, and required most delicate and careful handling. On the subject of the Army Medical Staff grievances, the following letter was addressed to the Secretary of State for War:

"SIR,—With reference to the enclosed resolution, which was unanimously adopted at a meeting of this Council, held at the College of Physicians in Ireland on the 3rd instant, I am directed to inform you that this Council, representing members of the British Medical Association, begs strongly to urge on you the necessity that exists for allaying the present state of discontent prevailing among the officers of the Medical Staff of the army.

"This Council considers this can best be done by adopting in their entirety the recommendations made by the Parliamentary Committee, presided over by Lord Camperdown.

"I have also to point out that the Parliamentary Committee in question having heard the evidence, not only of officers of the Medical Staff, but also of your 'military advisers,' were thus able to form an unbiassed opinion, which should not, this Council considers, be now lightly set aside.

"In conclusion, I beg to inform you that the feelings of unrest and discontent engendered in the minds of officers of the Medical Staff, a result of the uncertainty of their prospects and ill-defined position in the army, is fast spreading to the medical schools in this country, the consequence of which will be an almost certain falling off in the number and quality of candidates for the Army Medical Staff."

The Council regretted to state that no answer had been received to this letter.

The subject of a petition to the House of Lords in favour of the Members of the Royal College of Surgeons of England, who desired to have a voice in the management of that College, was also before the Council, who declined taking action in the matter. Deep regret was expressed for the loss the Branch had sustained by the death of Mr. A. H. Corley. For several years Mr. Corley was a member of the Council, and on every occasion where matters concerning the welfare of the profession were under consideration, his calm deliberations and keen foresight seldom failed in carrying the weight of opinion with his views.

Dr. FINNY, President of the College of Physicians, moved the adoption of the report, and said that he was glad to know that the feeling against Irish graduates being admitted to hospital appointments in England was gradually altering to more favourable action, so that hospitals hitherto closed to them were being opened up. He regretted to learn that no reply had been received from the War Office on the subject of the grievances of the medical department.

The motion was seconded by Dr. THORNLEY STOKER, and carried.

Election of Officers.—The following were elected officers for the ensuing year:—*President:* Walter G. Smith, M.D., F.R.C.P. *President-elect:* Sir W. Stokes, M.D., F.R.C.S. *Vice-Presidents:* Arthur Wynne Foot, M.D.; W. Thornley Stoker, M.D., F.R.C.S. *Council:* Lombe Atthill, M.D.; Sir John Banks, K.C.B.; J. K. Barton, M.D., Ex-Pres.; E. H. Bennett, M.D.; Kendal Franks, M.D.; T. W. Grimshaw, M.D.; E. Hamilton, M.D.; F. T. Heuston, M.D.; W. Moore, M.D.; J. W. Moore, M.D.; L. H. Ormsby, M.D.; R. H. Swanzy, M.D. *Representative on the Council of the Association:* T. W. Grimshaw, M.D. *Honorary Secretary and Treasurer:* John Molony, F.R.C.P.I., St. Patrick's Hospital, Dublin.

Vote of Thanks to Retiring President.—On the motion of Sir W. STOKES, seconded by Dr. GORDON, a vote of thanks was passed to the outgoing President.

President's Address.—The new PRESIDENT delivered an address dealing with the subject of hospital dispensaries.

Registration of Midwives.—Dr. LOMBE ATTHILL moved: "That in the opinion of this Branch the registration of midwives, as proposed by Parliament, will not tend in any marked degree to render more efficient the nurses practising as midwives, unless steps be first taken to improve their education; that the question of registration be postponed till it is shown that facilities exist for the education of such women as may desire to practise as midwives, and that the proposed registration of all women at present practising as midwives would be a most dangerous proceeding. This Branch is further of opinion that any legislation on the subject of improving the education or status of midwives should not be undertaken without serious consideration, and desires to urge on the Government the necessity of having it referred, in the first instance, to a Select Committee for consideration and report." He said he believed any movement which would improve the condition of these women would meet with the hearty support of every member of the Branch, and, indeed, of every member of the medical profession. However, when they examined the Bill they found that the proposed legislation was utterly worthless, and that it was calculated to lead to lamentable consequences. It really was simply a Registration Bill. Every *bonâ-fide* midwife might be at once registered, were she 19 or 90 years of age, no matter what was her character. Such a woman once admitted on the register could recover fees, and, further, be free from prosecution by a private person, except with the consent of the Attorney-General or the County Council, and the subsequent examination after the first registration was to be conducted by these County Councils; they might as well leave it to the Dublin corporation.—Dr. HORNE seconded the motion, and pointed out that the Bill referred to County Councils, but no such bodies existed in Ireland.—The motion was carried.

Abuse of Medical Charities.—Dr. ALEXANDER T. SMITH moved: "That the Dublin Branch of the British Medical Association desires to impress on the medical men of the various charitable institutions in and around Dublin the necessity of exercising a careful scrutiny into the financial circumstances of those who avail themselves of medical or surgical relief, so that charity is not abused, and only the really poor attended to; and that the Branch disapproves of institutions known as provident dispensaries."—Dr. SAMUEL THOMPSON seconded the motion.—Dr. THORNLEY STOKER thought abuses did exist, but provident dispensaries, when properly managed, provided an admirable means of relief to the more respectable section of the poorer classes.—Dr. GRIMSHAW did not believe that Dublin hospitals were abused to the same extent as London hospitals. He thought the part of the motion referring to provident institutions far too sweeping. When provident dispensaries were properly managed, they formed the best means of getting rid of the abuse of the hospital dispensaries.—After some discussion the motion, with the exception of the last clause, was adopted.

Paper.—Dr. ASHE read a paper on "A Suggestion for a Voluntary Higher Grade Conjoint Examination."

Dinner.—In the evening the members and their friends dined in the College of Physicians under the presidency of Dr. W. G. Smith. Amongst those present were Sir A. Reed, Inspector-General Royal Irish Constabulary; the President of the College of Physicians; Surgeon-General Sinclair; the President of the Royal Academy of Medicine (Dr. Gordon); Dr. T. W. Grimshaw (Registrar-General); E. H. Bennett, F.R.C.S.; Lombe Atthill, M.D.; J. K. Barton, F.R.C.S.; Thornley Stoker, F.R.C.S.; the President of the Royal College of Surgeons; Very Rev. Gerald Molloy, D.D.; Ed. Hamilton, F.R.C.S.I.; Mr. E. Pennington; A. V. Macan, M.D.; Kendal Franks, F.R.C.S.; J. W. Moore, M.D.; Dr. Patton, LL.D.; Isaacke Ash, M.D.; C. B. Ball, M.D.; Dr. V. Ball, C.B.; Mr. W. J. Goulding; Mr. J. G. Nutting; J. W. Usher, M.D.; Mr. F. E. Ball; Mr. M. Burke; G. P. L. Nugent, M.D.; R. A. Hayes, M.D.; Mr. W. Armstrong; J. H. Chapman, M.D.; S. T. Gordon, M.D.; Dr. Tichborne; Dr. Jozé, Mus.Doc.; Mr. Cox; Mr. Robert Cantrell; W. Wright, M.D.; F. J. Davys, M.D.; Mr. G. E. R. Manders; Dr. A. T. Smith; Dr. M'Cutcheon; Dr. T. Collins; Dr. Parsons; Dr. Boyce; Dr. Falkiner; R. H. Moore, F.R.C.S.; John Molony, F.R.C.P., Honorary Secretary. The toast of "The Universities and the Licensing Bodies" was responded to by Rev. Dr. MOLLOY, Dr. FINNY, and Mr. H. G. CROLY. The toast of "Our Visitors" was responded to by Surgeon-General SINCLAIR. Mr. J. K. BARTON (Ex-President) proposed "The British Medical Association," and the PRESIDENT responded. The other toasts were "The Secretary (Dr. Molony)" and "The Press." Dr. Hayes sang, and Dr. Tichborne played the violoncello, to the great delight of the company.

SPECIAL CORRESPONDENCE.

BERLIN.

Tattooing as a Source of Tuberculous Infection.

IN the January number of the *Therapeutische Monatshefte*, Professor Liebreich publishes some suggestive remarks on tattooing as a possible source of tuberculous infection. In the Friedrichshain Hospital Professor Liebreich saw a tuberculous patient, whose family history was good, and whose tuberculous disease dated from the time of his military service; he was tattooed on both his arms. The Professor asked him how the colours rubbed into his tattoo-punctures had been moistened, and he answered, "With spittle and beer." It is well known that the tattooing brush, with which the colours are introduced into the punctures previously made by needle points, is moistened by simply putting it into the mouth. Professor Liebreich thinks that tuberculous infection may be carried by tattooers to a greater extent than would at first be

thought probable. At any rate, if the tuberculous patient seen by Liebreich were to tattoo another person in the same fashion as he himself was tattooed, the proceeding might be characterised as tuberculous inoculation *in optimâ formâ*.

MANCHESTER.

Manchester Royal Eye Hospital.—Manchester and Salford Sanitary Association.—Proposed Owens College Hospital.—Manchester Odontological Society.

In their seventy-fifth annual report, the Board of Management of the Royal Eye Hospital state that during the past year the patients admitted, though in excess of the year 1888, show some slight diminution as compared with 1889. The number of patients admitted in St. John Street during the year under review was 10,811, and in Oxford Street 7,459, or a total of 18,270. The in-patients numbered 1,275, and their average stay in the hospital was $21\frac{2}{5}$ days. The number of accident cases attended to has been 3,042. The financial position continues satisfactory.

The annual meeting of the Manchester and Salford Sanitary Association was held in the Town Hall, Manchester, last week. To this association are affiliated the following societies: the Ladies' Association, the Manchester and Salford Noxious Vapours Abatement Association, the Committee for Securing Open Spaces for Recreation, the Manchester and Salford Children's Holiday Fund, and the Cheap Meals Committee. The committees of these several societies reported favourably on the work done by each, but there is still the chronic difficulty, that the funds at the disposal of the Association are miserably inadequate to the work which the societies are called upon to undertake in a city so populous and with so high a death-rate as that of Manchester.

In the British Medical Journal of January 24th, it was announced that a conference would take place between the committee of the Council of Owens College and the Board of Management of the Royal Infirmary relative to the proposed erection of a hospital on the Stanley Grove Estate. The College authorities are prepared to grant a site for a large hospital of 500 beds, or under certain conditions that a hospital should be established there by the Infirmary Board of Management as a supplement to the accommodation already provided at the Royal Infirmary. It was stated that the infirmary authorities had already considerable responsibilities, and it would be matter for careful consideration on their part as to whether the proposals submitted to them would unduly add to these responsibilities. At the monthly meeting of the Infirmary Board held on Monday last, it was stated that the Board had not had sufficient time to consider the offer made by the Owens College authorities, and ultimately the matter was referred to the Infirmary Committee to consider the whole subject, and take such steps as they thought desirable.

On Saturday last the members of the Manchester Odontological Society held their annual dinner, Mr. H. Campion in the chair. It was stated that efforts are being made to obtain a new dental hospital, and towards this end £1,000 had been received from the Procter trustees.

SHEFFIELD.

Midwives Registration Bill.—A Centenarian.—Alcohol in Workhouses.—Hospital Sunday.

There is considerable opposition locally in the profession to the Midwives Registration Bill, and the feeling here is that time is needed for the fuller consideration of the subject, and that, should legislation be deemed necessary, the present Bill requires considerable amending. The Medico-Chirurgical Society at its last meeting appointed a committee to seek the assistance of the county and borough members of Parliament in obtaining delay in legislation.

In a former letter (May 10th, 1890) it was mentioned that Chesterfield boasted of having a centenarian as a resident. He was 100 years old on May 5th, 1890, but has succumbed to the inclement weather, and passed away on January 20th, 1891. He is reported to have been a man of even temper and cheerful disposition. At 80 he entered into wedlock for the second time, and at 99 he not only kept his own garden well trimmed, but often lent a hand to a neighbour. He had formerly been a gardener and farmer, and settled at Chesterfield when nearly 70, to spend the remainder of his days in retirement. He came of a long-lived family; his father died at 88, and his mother at 82. Another family connection died as the result of an accident within a few days of her 97th year.

An interesting return has been issued showing the expenditure in the unions of Derbyshire, Nottinghamshire, Leicestershire, Lincolnshire, and Rutland in alcoholic drinks for the two years ended Lady Day, 1889 and 1890. There is very considerable disparity in the expenditure for paupers in the Derbyshire workhouses for the last year considering the number of inmates. Thus Bakewell, with 139 inmates, spent £3 9s. 1d. in wines and spirits, and nothing in beer or stout; Chapel-en-le-Frith, with 76 inmates, expended £4 4s. 7d. for wines and spirits, and £3 9s. 4d. for beer and stout; Chesterfield, with 340 inmates, £1 4s. for wines and spirits, and £1 16s. for beer and stout; Glossop, with 119 inmates, spent for wines, etc., £2 6s. 6d., and for beer, etc., £3 3s. Hayfield heads the list by expending £12 19s. 8d., namely, £9 1s. 3d. for wines and spirits, and £3 18s. 5d. for beer and stout.

The Hospital Sunday collections were made at the different churches on January 25th. Last year the amount collected was £2,046, being a little less than in previous years. The day was remarkably fine and mild, and in great contrast to the extremely unfavourable condition of last year. The first returns give the amount as £2,197, but there are other sums yet to come in.

CORRESPONDENCE.

THE MIDWIVES REGISTRATION BILL.

Sir,—It seems to me the time has now arrived when the official backers of the Midwives Registration Bill may usefully take up their pens and give some reasons for the faith that is in them. During the last few weeks a perfect deluge of controversial literature has been showered upon me, and I shall ask your permission, at some future time, to make a detailed reply to the criticisms of my opponents. All that I wish now to do, however, is to clear the ground by correcting two misstatements—no doubt inadvertently made—of plain matters of fact. They both occur in a document issued by the Manchester Medico-Ethical Association, and have a very important bearing on the present controversy. The first of them is that the "General Medical Council has declined to support the Bill." This is an incorrect and misleading way of describing their action. The Bill has never been formally considered by the Council, and they are therefore in the position of having pronounced no opinion on it, either for or against. But that their attitude is one of benevolent neutrality, and that they recognise the necessity for legislation is shown by the following extract from a letter written by Mr. Marshall in his official capacity to the Lord President of the Council not long before his lamented death:

"The Council is most warmly interested in the adoption of some practical measure of the kind contemplated, and would, if private legislation should fail to accomplish so beneficent a purpose, urge upon Her Majesty's Government the preparation and adoption of a well-considered statute at as early a period as possible."

Secondly, we are told that "the Royal College of Physicians of England has also repudiated the Bill as being injurious to public health." There is no foundation for this statement, and it would be instructive to know on what authority it is made. The College has never had the Bill before them, or considered it in any way.—I am, etc.,

Reform Club. R. Farquharson.

Sir,—In the British Medical Journal of January 24th, p. 195, Dr. Aveling makes some extraordinary statements. He says we petitioned the Medical Council that each student "should be compelled to attend fifty cases of labour." The petition (see Minutes of Medical Council, vol. 27, p. 26) said: "personally conduct thirty cases."

Secondly, he says that if each had to conduct this number of labours there would be a fearful increase in the number of cases which receive charitable aid. This is not so. Thus, the

figures before me show that, during 1889, 50,790 confinements were attended by 59 medical charities; 25 metropolitan charities attended 26,460; 20 provincial, 12,155; 7 Irish, 7,770; and 7 Scotch, 4,406. There are other charities from whom I have not received returns. Nor do I include about 6,882 attended in the workhouses in England; I do not include those in Irish and Scotch Poor-law infirmaries; nor those attended by the district medical officers as outdoor cases. At present we know Poor-law cases are not available for the instruction of students, although they are open for the training of pupil midwives. The Act which prevents this could be repealed. Now, what has Dr. Aveling to say to this threatened abuse of charity? In 1888, 1,300 students were qualified, and Sir W. Turner states that about one-third of this number were rejected; that is, there is a yearly average of 1,733 senior students attending midwifery. Now, if each of these personally conduct—not "be present at"—30 labours, a total of 51,990 would be required. Do the above figures not prove that there are a sufficient number of cases, and that the suggested improvement in the training of students in midwifery will not lead to an increased abuse of our charities? If the infirmaries were opened there would be a decided lessening in the number of charity cases—a reduction by about 12,000 per annum. Can anyone prove these figures wrong? Dr. Aveling further seems to forget the resolution passed by the Medical Council relating to the fifth year of medical study, and the power of practitioners to take pupils.

Thirdly, Dr. Aveling refers to the death-rate in childbed. Surely I need not tell him that no one puts too much faith in the mortality statistics of childbirth, and for this reason: the "puerperal period," according to the Registrar-General, is 31 days; some doctors say it is 7, others 14, and others 21 days; of course, the doctor who calculates his puerperal period at 31 days will have a heavier mortality than those who say it is 7 days. Again, we know that the majority of lying-in charities discharge their cases by the tenth day. Therefore their mortality will be lighter, and in the proportion of 10 to 31 days. I know of a charity where "not one death occurred in the lying-in wards during the year." This was so. Why? Because any cases showing feverish or serious symptoms were at once transferred to the medical wards and died there.

In the Fiftieth Report of the Registrar-General, p. xxxiv, he says: "It must be admitted that childbirth mortality is in all probability very much understated in our official returns, the fact of parturition being often unjustifiably omitted, and the secondary cause of death alone stated in the medical certificate." During 1889, 29,079 persons were interred without any medical certificate being granted, and 25,466 deaths were registered, although "no cause" or "ill defined cause" of death were given. We must be wary of death-certificates. But take Dr. Aveling on his own ground. The following figures are taken from the Registrar-General's annual reports:

Year.	No. of Maternal Deaths due to Puerperal Fever and Accidents of Childbirth.
1886 ...	3,877, or 4.62 deaths to every 1,000 births registered.
1887 ...	- - , or 4.69 ,, ,, ,,
1888 ...	4,160, or 4.73 ,, ,, ,,
1889 ...	3,581, or 4.05 ,, ,, ,,
Previous 10 years, 4.62 per 1,000.	

Surely these figures show a great improvement, although we know that, as civilisation advances, the complications of pregnancy and childbirth increase. Had Dr. Aveling secured his Midwives Registration Act in 1882, he would no doubt have put the improvement down to his legislation. I do not, however, wish to prove anything relating to the necessity of a Midwives Act from these figures, for it would be misleading. But I would call attention to the fact that the puerperal death-rate varies in different counties. Thus in 1888 the maternal death-rate was in London, 3.74; in Huntingdonshire, 1.42; Norfolk, 4.07; Herefordshire, 4.72; Derbyshire, 6.06; Lancashire, 5.80; North Wales, 7.49 to every 1,000 registered births. These great differences cannot be explained by reference to a Midwives Bill. The Registrar-General states that the puerperal mortality and that of erysipelas show a great tendency to rise and fall together; and I think that when students are prohibited from going to a confinement from the dissecting room, a further fall will take place. These statements show that the figures are quite useless in proving the necessity for a Registration Act. Does our Medical Registration Act prevent puerperal fever?

Fourthly, Dr. Aveling says: "There are no fewer than 30,000 lives placed in the hands of midwives every year." The prospectus of the Midwives' Institute says that "about 7 out of every 10 cases of childbirth take place without a doctor." Now, in 1888 there were 879,868 births, that is, the "10,000" (?) midwives attended 659,901, and the 18,000 doctors 216,967, each doctor attending 13½ confinements per annum, and each midwife 65 cases! Such are the statistics put forward!

At the meeting of the British Gynæcological Society this Bill was discussed. Dr. Aveling brought forward this motion: "That public safety demands legislative action to enable poor women to know whether midwives are safely competent or dangerously ignorant." The argument is that a registered midwife is competent! The "poor woman" is to consult the Register, price about 10s., and be thus protected.

I would say, do not put the slightest trust in this Bill, and treat it with the greatest suspicion until Dr. Aveling gives us absolute proof that the House of Commons will embody in the Act:

a. That the present ignorant "midwives" will not be registered until they are educated.

b. That they shall be educated for the same period as other nurses—three years.

c. That no woman shall be allowed to practise for gain unless registered.

d. That midwives shall not employ unqualified assistants.

e. That no midwife shall continue to practise when removed from the Register.

f. That it will be penal for her to perform any obstetric operation, or to fail to send for skilled help.

g. That they shall not perform any of the duties of a physician or surgeon.

h. That they shall not attend any labours except those where the vertex presents in the first or second position.

Statistics show that the mortality among infants in occiput posterior cases is 1 in 5. I venture to say that if any surgical operation gave such deadly returns it would be hissed out of existence. And although the mortality to infants in breech cases is 1 in 3½, the promoters of this strange Bill say that midwives shall conduct such.—I am, etc.,

Liverpool. ROBERT REID RENTOUL.

PRACTICAL CURE OR DISASTROUS FAILURE?

SIR,—At page 199 of the BRITISH MEDICAL JOURNAL of January 24th the surgeon who operated on a case which I have described as a "deplorable and disastrous failure" says "the discredit must lie at Sir Spencer Wells's own door, and not at mine;" and he defends this statement by referring to his own account of the case published in the *British Gynæcological Journal* in 1888. The following is a copy of this account, from page 457 of the *Journal*:—

"At the meeting of the British Gynæcological Society of December 12th, 1888, Mr. Lawson Tait said he had a specimen to show which bore very much upon what had just been said. He showed the appendages from a lady 39 years of age with a very remarkable history. She had been married at the age of 17 or 18, and had two children within twenty months of her marriage. Soon after her second confinement she contracted gonorrhœa from her husband, and she had never known what it was to be well since. She had led a life of single misery for several years. Then she married again, but her health did not improve, and she never became pregnant by her second husband, so that ever since 19 or 20 she had been absolutely sterile. During the last seven years she had been the patient of a distinguished gynæcological baronet, who had, however, failed to relieve her. Ultimately she had been referred to him, and he had operated. She had double pyosalpinx of old standing, and it was very difficult to say which was tube and which was ovary. There were abscesses in both ovaries, and if he had attempted to tap them from the vagina he would have been obliged to tap several cavities. Instead of doing anything of the kind, he opened the abdomen a month since, and the patient was now practically cured. A

case like that was worth a dozen hypothetical imaginations. There was a woman who had been an invalid for years; who could have been relieved at any time; who had been under the care of all the well-known specialists of London, many of whom had declared that there was nothing the matter."

In the letter you published last week the operator adds that if "there is anything discreditable in the present case the discredit might lie at Sir Spencer Wells's own door and not at mine.....during seven long years he treated this poor woman by pessaries, etc.;" and he adds that the case is "not a failure;" the patient is "absolutely cured, for I have the diseased parts in a bottle." This lady is now in London. I have submitted the following questions to her, and I add her replies:

1. During the seven years, 1881-88, were you under my care, and did I fail to relieve you? Reply: I consulted you in 1879, after Dr. Palfrey had failed to do me any good; you operated on me in the summer of 1879. I was in good health after that until you again operated on me in 1880; after that I enjoyed good health until 1887.

2. Had you before 1888 been an "invalid for years," or "led a life of single misery for several years?" Reply: Except between my second confinement and 1879 I had been in good health.

3. After your second confinement had you "been absolutely sterile?" Reply: I had two children after my second confinement—one born dead, one lived two weeks, and I had one miscarriage at three months.

4. Have you been "under the care of all the well-known specialists in London, many of whom declared that there was nothing the matter?" Reply: You are the only medical man I consulted in London between 1879 and 1888, and no one ever told me that there was nothing the matter.

5. Did I treat you "for seven long years by pessaries, etc.?" Reply: No, you never used a pessary, or, after your second operation in 1880, treated me except for slight ailments, and that seldom. In 1887, while you were abroad, I was treated by Mr. Smith, of Brighton, after a carriage accident, and was recovering when you returned.

6. Remembering your state before and after the operation performed at Birmingham, in November, 1888, has that operation proved to be, in your opinion, a "practical cure," or a "deplorable and disastrous failure?" Reply: A decided failure.

I need only add to this the fact that the operation I performed in 1879, assisted by Mr. Thornton, was amputation of part of the elongated cervix uteri. Dr. Palfrey had repeatedly injected solution of perchloride of mercury into the substance of the cervix, and it was feared that the disease was papilloma or epithelioma. Examination proved that it was simple hypertrophy of the utricular glands or adenoma. About a year after this amputation the remains of the cervix showed some tendency to enlarge and proliferate, and I destroyed the left side by the actual cautery. For two or three days after this there was a good deal of pain and some fever, but they soon subsided, and until 1887—about seven years—the patient was as well as most people, and for several months after her second marriage, in February, 1888, remained in good health, riding, rowing, and walking four or five miles without fatigue. Since the operation in 1888, which I believe to have been unjustifiable, she has been a confirmed invalid, menstruating profusely and in almost constant pain. The failure to the husband has been "disastrous" in expenditure, to two devoted daughters in health and anxiety from continuous nursing, and to the patient "deplorable" in more than two years' almost continuous suffering and shattered health. It is a very poor consolation to her to be assured that she is absolutely cured because "her diseased parts are in a bottle." The whole case, in my opinion, strengthens all that I have ever said against the performance of unnecessary mutilatory operations on women, and proves that the tendency of such proceedings is to lower the standard of surgical ethics, and to endanger the character of British surgery.—I am, etc.,

Upper Grosvenor Street, W. T. SPENCER WELLS.

THE SANITARY CONDITION OF SOUTHEND.

SIR,—In the reference made to the above subject in the BRITISH MEDICAL JOURNAL of January 24th two statements are made, to which, I think, you will in fairness allow me to reply. The first is an expression of regret that I did not avail myself of "the facilities which should have been offered me to verify every statement of fact" contained in my report. To this I reply that a draft of my report was sent to Southend on November 20th, and, at the same time, I offered to attend a meeting of the Board to read and discuss it. This offer was not accepted, but apparently the report had been submitted to the officials, for a few slight errors in the details of the complicated sewerage system were pointed out to me by the clerk and corrected. The report was then signed, and it was not until December 29th that I heard anything of the "alleged" inaccuracies. This was at a meeting of the Committee which I had been invited to attend. After hearing all that could be said, I declined to alter a single word, as I am convinced that there is not a misleading statement in the report.

The second statement refers to the Southend water supply: "It is a very remarkable circumstance, of which no explanation is offered, that the samples (taken from the deep wells in the chalk) exhibit a hardness of only 3 grains per gallon, whilst the chlorine amounts to over 20 grains per gallon. That water from deep borings in the chalk should be so soft and contain so large an amount of chlorides is certainly very unusual." To this I reply that in south-east Essex, instead of being very unusual, it is the rule, and almost without exception. In this locality the bored wells yield a water remarkable for its softness and for the amount of sodium chloride and sodium carbonate it contains. Whether the boring extends into the sands, etc., beneath the London clay, or still deeper into the chalk, does not appear to affect the quality of the water, but merely the quantity available. I have examined, in the Maldon District this year, five samples of water from such bored wells in which the hardness did not exceed three degrees, and in which the chlorine varied from 22.9 to 47.0 grains per gallon. All these waters are, organically, exceptionally pure. Moreover, two of the wells supplying Southend are three miles apart, yet yield practically identical waters.

I also quote in my report an analysis of Professor Tidy's, made ten years ago, showing that the water has undergone no change whatever in the interval. Professor Tidy has also recently examined the Southend water, and in his published report confirms my conclusion, that the water supply has had nothing to do with the outbreak. He says:

"Regarding the water supplied to Southend from a medical point of view, I cannot imagine that anyone would suggest it as a possible cause of typhoid. One thing, to my mind, is absolutely certain—namely, that if any typhoid exists within the area of supply, the water of the company has nothing to do with it."

In my investigation, however, I did not rely on mere microscopical or chemical examination, but upon a most rigorous examination of everything in connection with the water system, and the result of my investigation was, as stated in my report, that no possible source of contamination could be discovered.

At the present time a special report on the water supplies of the various parishes in my districts is in the hands of the printers, and in it are contained complete analyses of over twenty waters of the same character as those supplying Southend. These analyses were made by myself during the past year, and a copy of the report shall be sent you when issued.—I am, etc.,

Chelmsford. JOHN C. THRESH.

*** Dr. Thresh does not quote the whole of the first of the two sentences to which he takes exception; it ran as follows: "We certainly think it a matter for regret that Dr. Thresh was not put in the way of, or did not avail himself of, the facilities which should have been offered him to verify every statement of fact contained in his report."

RICHMOND SURGICAL HOSPITAL.—Mr. Michael J. Bulger has been appointed Assistant Surgeon to this hospital, *vice* Mr. Thomas Myles, who has been promoted to the senior staff in succession to the late Dr. A. H. Corley.

AT TRALEE, on January 24th, Daniel O'Donoghue, schoolmaster, his wife, a girl named O'Shea, and Carroll Sullivan, surgeon, were committed for trial on a charge of administering a noxious drug to a young woman. Bail was accepted for Dr. Sullivan and Mrs. O'Donoghue.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following appointments have been made at the Admiralty:—JAMES MCMORDIE, M.D., to be Surgeon and Agent at Belfast; GEORGE T. BROATCH, Surgeon, to the *Duke of Wellington*: ROBERT HARDIE, Surgeon, to the *Defiance*; JOHN GRANT, Surgeon, to the *Firebrand*: A. E. WEIGHTMAN, Surgeon, to the *Duke of Wellington*, additional, January 12th.

MEDICAL STAFF.

SURGEON-MAJOR A. HARDING, who is serving in the Bombay command, is transferred from general duty in the Mhow District to general duty in the Poona District.

Surgeon-Major H. CHARLESWORTH has been appointed to the medical charge of the mission which accompanies Sir W. Kirby Green to the Shereefian Court in Morocco. The mission left Tangiers on December 8th, 1890. Surgeon-Major Charlesworth accompanied Sir W. Kirby Green on a similar mission in 1887, and received the thanks of the War Office for the services he then rendered.

ARMY MEDICAL RESERVE.

SURGEON BENJAMIN OSMOND BARNARD, M.B., Royal Alderney Artillery Militia, is appointed Surgeon, ranking as Captain, January 28th.

INDIAN MEDICAL SERVICE.

THE service of Surgeon F. J. DRURY, Bengal Establishment, are placed temporarily at the disposal of the Government of Bengal.

The services of Surgeon A. S. LETHBRIDGE, Bengal Establishment, Inspector-General of Gaols, Bengal, and which were placed temporarily at the disposal of the Home Department, are placed temporarily at the disposal of the Department of Finance and Commerce.

The undermentioned officers, all of the Bengal Establishment, have leave of absence as specified: Surgeon-Major H. J. LINTON, 24th Punjab Infantry, for one year on medical certificate; Surgeon F. WYVILL-THOMSON, M.B., 22nd Punjab Infantry, for nine months on medical certificate; Surgeon-Major R. JAMESON, M.D., Deputy Sanitary Commissioner 1st Circle North West Provinces and Oude, for six months in extension, on private affairs.

Surgeon C. N. C. WIMBERLEY, Bengal Establishment, is appointed to the officiating medical charge of the 31st Punjab Infantry, *vice* Surgeon J. G. Jordan.

Surgeon-Major P. J. FREYER, M.D., Civil Surgeon of Moradabad, is appointed to be in visiting medical charge of Bijnore, from the date on which Surgeon L. J. Pisani proceeded to Mussoorie.

Surgeon-Major EDWARD JOHN WARING, M.D., F.R.C.P., F.R.C.S., C.I.E., late of the Madras Establishment, died in London on January 22nd, aged 71.

THE VOLUNTEERS.

SURGEON AND HONORARY SURGEON-MAJOR R. D. REID, M.D., Lanarkshire Yeomanry (Queen's Own Royal Glasgow and Lower Ward of Lanarkshire), has resigned his commission, which was dated April 10th, 1854; he is permitted to retain his rank and uniform.

Acting-Surgeon J. HILL, 2nd Hampshire Artillery (Southern Division Royal Artillery), also resigns his commission, dated March 10th, 1888.

Acting-Surgeon W. M. JENNINGS, who joined the 1st Durham Engineers, Fortress, and Railway Forces, Royal Engineers, on February 1st, 1890, is now appointed Second Lieutenant in the same corps.

The services of Surgeon R. K. TAIT, Tyne Division Submarine Miners Royal Engineers, are dispensed with: his commission dated from February 1st, 1889.

Mr. ROBERT COWAN LEES, M.B., is appointed Acting-Surgeon to the 1st Lanarkshire Rifles, January 24th.

Acting-Surgeon M. F. ANDERSON, M.B., 3rd Volunteer Battalion Royal Highlanders (late the 3rd Forfarshire), has resigned his appointment, which bore date February 15th, 1888.

Surgeon A. WRIGHT, 1st Volunteer Battalion Essex Regiment (late the 1st Essex), is granted the rank of Surgeon-Major, ranking as Major, January 24th.

Surgeon W. DUNCAN, M.D., 1st London (City of London Rifle Volunteer Brigade), has resigned his commission, which was dated February 1st, 1889.

Acting-Surgeon W. GAY, M.D., 1st West Riding of Yorkshire Artillery (Western Division Royal Artillery), has resigned his appointment, which was dated March 22nd, 1890.

Surgeon and Surgeon-Major (ranking as Major), T. S. ELLIS, 1st Gloucestershire Engineers, Fortress and Railway Forces Royal Engineers, has also resigned his commission, with permission to retain his rank and uniform. His commission as Surgeon bore date February 3rd, 1871; that of Surgeon-Major, February 1st, 1889.

Acting-Surgeon T. M. WILKINSON, 1st Volunteer Battalion Lincolnshire Regiment (late the 1st Lincoln), has likewise resigned his appointment, which was dated June 19th, 1878.

CHANGES IN "THE OFFICE A.M.D."

N. writes: It has become generally known to the officers of the Medical Staff of the army that Mr. Clarke, who for very many years has been the right-hand man of the Director-General A.M.D., is about to retire, and much interest is manifested as to whether his successor in such a responsible appointment is to be, like him, a civilian, or a new departure made and one of themselves installed in his stead.

There can be little doubt but that it is not to the advantage of the medical service—individually and collectively—that a civilian, who must of necessity know nothing of the ins and outs of the medical officer's life at home, abroad, or on active service, should, to a great extent, work out the routine connected with all that affects so large a body of officers, while, were Mr. Clarke's vacancy to be filled by an officer of the Medical Staff, naturally animated by the same feelings as his brother officers, the change would be hailed with satisfaction by the entire medical service, and there is every reason to believe that the army at large would benefit by such an alteration in the staff of the Director-General.

*** If the change here indicated could be carried out we should be pleased, but there is little chance of it. Our correspondent does not seem to realise how powerfully the civil element in the War Office controls army administration. It is rightly or wrongly a constitutional axiom that the military and civil element must be united in carrying out army administration; civil rule, therefore, permeates every department, not only as carrying out the constitutional theory, but on the more practical ground of maintaining continuity of administration. But while it must be admitted that permanent officials are essential in every department of the State, that is no reason, of course, why they should be thrust into positions, or arrogate to themselves functions, for which they may be little suited. Our correspondent thinks that certain of the duties now, or lately, carried out by Mr. Clarke would be better in the hands of a medical officer, meaning, no doubt, the keeping of the roster and the posting of medical officers; we agree with him. But it is not necessary that Mr. Clarke's civil successor should be called upon or permitted to take up such duties; he can be fully employed, and may well be trusted with, the custody of confidential records and documents, and continue to form the connecting link in the office with the Permanent Under-Secretary for War. In this connection we think we are right in stating that when the roster was instituted on the recommendation of Mr. Sidney Herbert's Commission of 1858, it was intended to be an open document in the hands of the Surgeon-General at headquarters, on whom, therefore, the duty of posting officers under the orders of the Director-General would naturally fall. We do not envy the individual on whom the duty falls, as it is necessarily somewhat of an invidious character, but, at all events, it should be considered military and not civil.

HOW ARMY MEDICAL OFFICERS ARE DISPOSED OF.

A CORRESPONDENT writes: The *London Gazette* of January 20th announces the resignation by Surgeon John Robert Stevenson Robertson, M.B., of the commission he has held since August, 1883. It is a pity that the *Gazette* did not give the reason why Mr. Robertson sacrificed seven of the best years of his life, as it would be a salutary warning to those thinking of entering the service.

The reason was that he was refused the privilege of exchanging, although he offered a suitable substitute to go to India in his place, and his object in remaining at home was to qualify for an examination which would further mark his high attainments in the profession. Although his application was strongly backed by the principal medical officer in Ireland, the military authorities refused him this privilege, which is freely conceded to the youngest lieutenants in the service for reasons which are altogether unknown to the Queen's or any other regulations. It might be thought that Mr. Robertson—who was in the terrible square at Abu Klea, and was the first to attend to Sir Herbert Stewart—would have been treated with a little consideration. But the "military authorities" see doctors forced out of the service with a light heart. Possibly before long their complacency will be disturbed.

COMPOUND TITLES.

SICK OF IT writes: The whole principle of compound titles is absurd, and the medical is the only body to whom it is proposed to apply it. Why should an M.R.C.S. or an L.R.C.P. be described as "Surgeon-Lieutenant" any more than "Physician-Lieutenant?" The "Surgeon" General at headquarters deals almost exclusively with statistics and hygiene; why should he not be called "Statistician" General or "Hygienist" General? Then, again, why not describe the Adjutant-General for Musketry as "Musketeer" General?

THE INDIAN MEDICAL SERVICE.

H. A.—If our correspondent will apply at the India Office, he will get official information regarding the medical service of India—terms of service, and so on; and in a little book recently published by Dr. Webb, of the Bengal Medical Service (Churchill), he will get the fullest details about the service.

FIRST FIELD DRESSINGS IN THE FRENCH ARMY.

SURGEON W. G. MACPHERSON, Medical Staff (Royal Arsenal, Woolwich), writes: In the BRITISH MEDICAL JOURNAL of January 17th, p. 139, there is a note on "Soldiers' First Field Dressings," which conveys a somewhat erroneous idea of the first field dressing of the French army. As a matter of fact, the first field dressing—*pansement individuel*, as it is called—adopted by the French military authorities within the last twelve months is the *beau idéal* of what such a package should be. The package is carried, not in the knapsack, but, as is the custom in most armies, in the left breast of the tunic between the cloth and the lining. It contains (1) a compress of charpie between two folds of gauze, similar to "Gamgee" dressing, 3½ inches square, but capable of being teased out into a much larger and thicker pad; (2) an eight-ply piece of gauze 4 inches by 3½ inches; (3) a gauze bandage 4½ yards long folded flat; (4) a piece of remarkably fine and beautifully prepared waterproof material ("mackintosh") 12 inches by 6 inches; (5) two safety pins. The whole is of such excellent material and so well compressed that it

is contained in a package measuring about 4½ inches by 3½ inches by ½ inch. The package has two envelopes, the inner of waterproof material similar to that already mentioned and hermetically sealed, the outer of stitched cloth. All the material is sterilised and impregnated with sublimate solution (1 in 1,000). No army at present possesses a first field dressing containing so much material in so small a space and so completely protected from contamination.

MEDICO-LEGAL AND MEDICO-ETHICAL.

We may remind some of our correspondents who urgently ask for immediate replies to their inquiries that the questions submitted frequently involve points not always governed by general principles, and requiring the gravest consideration. It is, therefore, impossible in many cases to give a reply in time for the next issue of the BRITISH MEDICAL JOURNAL.

FEES FOR ATTENDANCE IN COURT.

W. H. J. writes: In November a child was brought to me for examination, the case being one of chorea through fright from a dog. The patient was plaintiff in the case, and my examination was made on behalf of the defendant. I made and sent to the defendant's solicitor a report, and received a guinea for the examination and the same amount for the report. On being served with the subpœna I was handed another guinea. The case was postponed from time to time, and on two occasions I received a letter from defendant's solicitor asking me to be at the court the following morning at 10 A.M., which I was.

Am I entitled to anything for my attendance other than what I have received, and, if so, to whom have I to look for payment?

*** We think that, under the circumstances stated, our correspondent is entitled to a further fee, and he should make an application for it to the solicitor of the defendant by whom he was subpœnaed. We assume it is quite clear that "W. H. J." attended on each occasion at the express request of the solicitor. It is always desirable to have a clear understanding on the question of fees for giving evidence in these cases, owing to the difficulty which may be involved if the witness is left to his remedy against the party on whose behalf the subpœna was served. It has been held that the solicitor of such party is not liable for the expenses of a witness except where he expressly pledged his credit for the payment of them, and the witness gave credit to him and him only.

A MISUNDERSTANDING.

In view of the fact that neither "A." nor "Quæror" had been pre-engaged to attend the primipara case, and that the latter was entirely ignorant of another practitioner having been sent for, and further, that "A.," through his own mistake, not only went to the wrong person, but failed moreover to make any communication to the *de facto* attendant obstetrician on the subject, we think there can be no reasonable doubt but that "Quæror" is fairly entitled to the fee. At the same time, it may be well to note that if "A." had not made, as alleged, an unauthorised visit, and "spoken very angrily" (a very unjustifiable proceeding, if true) to the patient, it may have become a question whether, under the circumstances, it would not have been sound policy and expressive of a friendly feeling to have tendered half the fee to "A." In view, however, of the exceptional visit and alleged irate address to the patient, we do not feel justified in urging the point.

"MONOGRAPHS" FOR PATIENTS.

M.B. writes to ask if it be ethically correct for a practitioner to write a monograph on any medical subject; say, for example, "Headaches, their Causes and Treatment," and print it in pamphlet form for distribution amongst his patients, and his patients only, giving his name and address on the pamphlet, providing that he does not extol therein his own merits. Would he be justified in giving notes of cases he has treated?

*** Although there is no ethical rule within our knowledge which directly condemns the suggested course of procedure, we are clearly and decidedly of opinion that such would be contrary to the true spirit of medical ethics, and therefore inadmissible. Indeed, a monograph, or other publication, not intended for the especial information of the profession, but rather as an indirect device for the promotion of self, would stand condemned of itself, and impartially and rightly be regarded as a solicitation for practice through the medium of a printed circular. *Verbum sapientibus satis est.*

SCALE OF CHARGES.

M.B., C.M.—Our correspondent will find the information he is desirous to obtain, as to scales of charges, in the *Medico-Chirurgical Tariffs*, published by Mr. H. K. Lewis, 136, Gower Street, W.C., price 2s, post free.

THE L.S.A. AND THE TITLE OF "DR."

M.D. (SUBSCRIBER).—L.S.A.Lond., 1888, is legally both a physician and a surgeon, and he could not legally be prevented from calling himself "Dr." so long as he does not affix the letters M.D. He must not, of course, hold himself out as being a Member of the Royal College of Physicians.

A L.S.A. whose diploma is dated after June 30th, 1887, is eligible for any appointment (the qualifications of which are the right to practise medicine, surgery, and midwifery), including the army, navy, and Indian appointments.

The fact of the person referred to being gazetted "Surgeon" to a volunteer corps does not increase his privilege to call himself Surgeon.

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

LECTURER IN INVERTEBRATE MORPHOLOGY.—The General Board of Studies will shortly appoint a University Lecturer in the Advanced Morphology of Invertebrates, in consequence of the resignation of Mr. Weldon, F.R.S., Fellow of St. John's College, appointed Jodrell Professor at University College, London, in succession to Professor Ray Lankester. The appointment is for five years, and the stipend £50 a year. Application is to be made to Dr. Sidgwick, Hillside, Chesterton Road, Cambridge, Secretary to the Board.

HISTORY OF ANATOMY.—The new anatomical school was opened with a special lecture by Professor Alexander Macalister on "The History of Anatomical Study in Cambridge," at 12 noon on Thursday, January 29th. The new dissecting room is already fully occupied by some 150 students, and the supply of anatomical material is abundant. We hope shortly to publish a description and plans of the handsome range of buildings just erected for the departments of Anatomy and Physiology.

DEPARTMENT OF PATHOLOGY.—The Professor of Pathology (Dr. C. S. Roy, F.R.S.) gives notice that the following courses of instruction in pathology will be held during the Lent and Easter Terms in the Pathological Laboratory:—

I. A course of lectures on the Elements of Pathology, by Professor Roy, on Mondays, Wednesdays, and Fridays, at 9 A.M., commencing on January 21st.

II. A Practical Pathology course on Morbid Histology and Bacteriology, by Professor Roy and Mr. E. Lloyd Jones, on Tuesdays and Thursdays, 2 to 4 P.M.

III. A course of demonstrations in Morbid Anatomy, by Mr. E. Lloyd Jones. One hour weekly, at times to be fixed after the class has met.

Attendance on the above courses during both Lent and Easter Terms is required in order to be signed up for the conjoint examinations of the Royal Colleges of Physicians and Surgeons.

The fee for these courses for each term is £3 3s., which must be paid to Mr. J. W. Clark, New Museums.

IV. An advanced course of lectures on the Pathology of the Heart, by Professor Roy, to be held during the Easter Term twice weekly, at such hours and on such days as are found most convenient for those who desire to attend.

BOTANIC GARDEN.—The Syndicate describe the new range of plant-houses for tropical and subtropical specimens, erected at a cost of some £3,000, as highly satisfactory. During the building, the remaining houses for temperate plants have been discovered to be decayed beyond repair, and they propose that they be rebuilt according to modern design, at a cost of £2,200, if the money can be found.

BIOLOGICAL STATION AT NAPLES.—The Board for Biology report that the University's table in Dr. Dohrn's Institute at Naples has been occupied on eight occasions for six months each by Cambridge students of biology. The term of five years for which the University has made an annual grant of £100 towards the expenses of the Institute having expired, the Board recommend that it be renewed for five years more.

DEGREES. At the Congregation on Thursday, January 22nd, the following degrees in medicine and surgery were conferred: M.B. and B.C.: Edwin Webster Hardwicke, B.A. (thesis, Anæmia); James Jenkinson Knox, B.A., Cavendish College (thesis, Hydronephrosis); Frederick Eustace Batten, B.A., Trinity College (thesis, Cerebral Hæmorrhage); Francis Charles Martley, B.A., Trinity College (thesis, Pyæmia); Charles Robert Arnold Sutton, B.A., Clare College (thesis, Multiple Neuritis); Sydney Nevill Harrison, B.A., Trinity College (thesis, Paroxysmal Hæmoglobinuria).

DINNER TO SIR GEORGE HUMPHRY.—A meeting of medical practitioners of the town and county of Cambridge, and of teachers in the departments of medicine and natural science in the University, was held in the Anatomical School on Saturday, January 24th, Sir George Paget, K.C.B., in the chair. It was agreed to invite Sir George Humphry to a congratulatory dinner in the Hall of Downing College on Wednesday, February 18th, in token of the esteem in which he is held by the profession in Cambridge and the surrounding counties. Sir George Paget will preside. Letters from some seventy medical men, chiefly members of the Cambridge Medical Society, warmly approving of the proposal, were laid before the meeting.

THE CONJOINT BOARD IN SCOTLAND OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The quarterly examinations for the Triple Qualification in Edinburgh, took place in January, with the following results:

First Examination.—Of forty-nine candidates, the following twenty-six passed:—G. Moore, Newcastle West, Limerick; Annie Florence Mary Cornall, Bristol; L. W. Harvey, Glenbrook Passage West; F. Isherwood, Darwen, Lancashire; R. A. McW. Robinson, Broughshane, co. Antrim; H. G. Palmer, Portsmouth; A. A. Fermie, Calcutta; C. Holding, Southampton; T. Messenger, Silloth; J. C. Lynd, Limavady; R. D. Jameson, Trinidad; J. J. Hayes, Kilfinane; D. W. Reese, South Wales; D. A. Anderson, Belfast; K. J. Roy, Dundee; W. P. Dunsmore, Devonport; E. Jeffery, Falmouth; J. Lamont, Argyleshire; A. Forde, Cork; E. S. Forde, Cork; M. Stark, Kirkintilloch; J. T. Armstrong, Dublin; G. G. Roe, co. Mayo; W. McK. Morison, Stornoway; J. FitzGerald, Cork; and D. Morrissy, Passage West, co. Cork.

Second Examination.—Of sixty-seven candidates, the following thirty-two passed:—C. A. Macnab, Wishaw; J. Dunlop, Glasgow; Gerda Baniza Jacobi, Gothenburg; G. Ellis, Ossett; T. H. Hosford, Cork; T. L. Wilson, Glasgow; S. M. Giffen, Belfast; T. J. Tonkin, London; F. W. Clark, Market Drayton; C. J. A. Coates, Kinsale; H. G. Palmer, Portsmouth; I. H. Ross, Demerara; T. J. Selby, Cumberland; H. R. Williams, Anglesea; E. W. Longden, India; P. I. de Villiers, Cape Colony; W. Beatt, Ireland; C. Stewart, Scotland; A. F. Downey, Ireland; G. M. Stocks, Edinburgh; R. MacCarthy, Paisley; A. J. Hassard, Monkstown, Dublin; S. H. Merryweather, Yorkshire; A. E. Hodges, co. Cork; W. J. M. Barry, Cork; J. F. D'Abreu, India; W. Fisher, Melbourne; A. J. A. Peters, Arbroath; J. A. Walsh, Kilkenny; M. P. Coghlan, Piltown, co. Kilkenny; A. A. D. Parker, Blaenavon, Monmouthshire; and C. E. Ross, Stornoway.

Final Examination.—Of eighty-seven candidates, the following forty-four passed and were admitted L.R.C.P.&S.E. and L.F.P.&S.G.:—C. C. Salmon, Victoria; W. H. Nash, Dublin; J. C. Fenwick, Bishopwearmouth; A. S. Duke, Dublin; H. E. Taaffe, Londonderry; Agatha Porter, Glasgow; R. P. Cooke, Ballyfarnon; A. E. Woodcock, Cleckheaton; T. E. Hughes, Rhyl; G. Vert, Haddington; J. T. T. Ramsay, Dundee; E. R. Morton, Canada; W. H. B. Vanes, Worcestershire; F. P. Dodd-Thomas, Chester; H. Meggitt, Barton-on-Humber; R. J. Collier, Belfast; T. Leahy-Lynch, Dublin; C. E. Lester, Sydney; F. Nuttall, Bury, Lancashire; J. Grout, London; J. W. Davies, Africa; G. E. G. Metcalfe, Blackheath; J. G. Mackintosh, Edinburgh; G. K. Crosthwaite, Canada; F. R. Mallett, Bolton, Lancashire; J. McCullough, co. Down; R. W. Morrow, co. Down; E. G. MacSweeny, Cork; B. Tomkys, Bilston; G. Astin, Burnley; W. H. Cuthbert, Oswestry; W. H. Harbison, Melbourne; J. Gilmour, co. Derry; C. Robson, Lincolnshire; V. F. Allen, co. Cork; A. W. Spinks, Bradford; S. J. Bolton, Kilrea; C. E. Southwell, Leeds; J. Suley-Wheeler, Fleet; C. R. Dunhill, Madras; P. J. Godfrey, co. Tipperary; J. B. Munro, Coatbridge; W. F. Chevers, Cheltenham; and R. Scott, Kinross-shire.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Fellowship Examination. The following gentleman having passed the necessary examination, has been admitted a Fellow of the College:

P. J. Murphy, Thomastown, co. Kilkenny, L.R.C.S.I., 1881, and L.R.C.P.I., 1881.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, January 22nd.

Children's Life Insurance Bill.—The BISHOP OF PETERBOROUGH, in moving the second reading of this Bill, explained that last year a second reading was given to this Bill, which was afterwards referred to a Select Committee to take evidence and report. The end of the session came before the Committee were able to report, and it also put an end both to the Bill and to the Committee. It was therefore necessary that the Bill should be reintroduced as a matter of form. It was precisely the same measure as he had introduced last session. He thought it right to state, however, that it contained the second clause of the Bill of last session, commonly known as the "undertaker's clause," and this in spite of the fact that the Committee had resolved that it should be omitted. The reason for its inclusion was not that he desired the re-enactment of this clause—in point of fact, he was the first in the Committee to move its omission; but until the Committee had finally reported on the Bill he had no right on his own authority to amend the measure. He therefore felt himself bound to reintroduce the Bill in the same form in which it was presented last year, the resolution to which the Committee had come to omit the second clause taking effect, no doubt, when the Bill was reported with amendments. He thought it was necessary to offer this explanation in order to prevent misapprehension out of doors.—The Bill was read a second time and referred to a Select Committee to take evidence and report.—The BISHOP OF PETERBOROUGH gave notice that on the morrow he would move the names of the Select Committee.

Friday, January 23rd.

Select Committee on the Children's Life Insurance Bill.—LORD NORTON, on behalf of the BISHOP OF PETERBOROUGH, moved: "That the following lords be named of the Select Committee: the Lord Chancellor, the Earl of Derby, Earl Spencer, the Earl of Harrowby, Earl Beauchamp, the Earl of Selborne, the Bishop of Peterborough, the Bishop of Ripon, Lord Clifford of Chudleigh, the Marquis of Lothian, Lord Poltimore, Lord Brougham and Vaux, Lord Kinnaird, Lord Norton Lord Herschell, and Lord Thring."—The motion was agreed to.

The Select Committee on Hospitals.—Lord SANDHURST moved: "That a Select Committee be appointed to continue the inquiry with regard to all hospitals, and provident and other public dispensaries and charitable institutions within the metropolitan area for the care and treatment of the sick poor which possess real property or invested personal property, in the nature of endowment, of a permanent or temporary nature, and to receive, if the Committee think fit, evidence tendered by the authorities of voluntary institutions for like purposes, or with their consent, in relation to such institutions; and, further, to continue the inquiry as to what amount of accommodation for the sick is provided by rate and as to the management thereof, and to report to the House; and that the witnesses before the said Select Committee be examined on oath, and also that the following lords be named of the Committee—the Archbishop of Canterbury, Earl Cadogan, the Earl of Winchilsea, the Earl of Lauderdale, Earl Spencer, Earl Cathcart, the Earl of Kimberley, Lord Zouche of Haryngworth, Lord Saye and Sele, Lord Clifford of Chudleigh, Lord Sandhurst, the Earl of Erne, Lord Lamington, the Earl of Arran, Lord Monkswell, and Lord Thring." The motion was agreed to.

HOUSE OF COMMONS.—Monday, January 26th.

Consumption of Methylated Spirits.—Mr. O'NEILL asked the Chancellor of the Exchequer if his attention had been called by the Inland Revenue authorities, or otherwise, to the fact that methylated spirits, as well as ether, were used as an intoxicating beverage in parts of the counties of Antrim and Derry; and, if so, what steps he intended to take to check the evil resulting from such a dangerous practice.—The CHANCELLOR OF THE EXCHEQUER said the Inland Revenue Commissioners had carefully inquired into the allegation that methylated spirits were used in Antrim and Derry for consumption, but had not been able to find that such practice prevailed. If the hon. member could supply him with any evidence as to the practice, or indicate the sources from which such evidence could be procured, the matter should be followed up vigorously.

INDIA AND THE COLONIES.

INDIA.

ENTERIC FEVER AND THE MILK SUPPLY.—In the *Pioneer* for December 4th, 1890, Brigade-Surgeon Hamilton (who read a paper on enteric fever before the British Medical Association at the Birmingham meeting in July last) draws attention to the fact that it scarcely falls within the range of the duties of regimental officers to look after the regimental dairies; but he holds, on the other hand, that Government should establish a "milk and butter supply branch" of the Commissariat department. The present system of allowing the sale of bazaar milk is radically bad, whilst under many contracts there is no guarantee that the milk is not contaminated, in some cases, in the most extraordinary manner. He gives, as an example of what may be the results of a bad milk supply, the condition of affairs at the military prison at Lucknow situated in the Kaisar Bagh. Here the health of the prisoners was very bad, and for fifteen years the mortality averaged no less than 100 per 1,000 per annum; that is, 10 per cent. of the prisoners died yearly. The milk supply at that time was obtained by contract, and was brought from the milkmen's houses in their own cans. "The medical officer in charge of the station prison, Surgeon-Major Exham, drew attention to these facts, with the result that arrangements were made to have the cows milked at the prison. From that date the health of the prisoners improved in a truly remarkable manner, and for three years there was not a single death among them. I have have been here now for five years, and during that time, with the exception of a few cases of cholera this last hot season, there has been practically no mortality in the military prison. Can cause and effect be more forcibly illustrated?" He advocates that the cows could be obtained at the Government farms at Hissar and elsewhere, the heifers being made over to the "Milk and Butter Supply Branch" of the Commissariat as the bullocks are to the "Transport Branch." Good food, fresh air, and exercise should be ensured to these animals, and the greatest cleanliness might be secured under proper supervision, not only in the milking process and in the milk cans, but also in the making and storing of butter; and he contends that paying attention to all these points Government might make, in addition to the enormous indirect profit on the saving of valuable lives that are annually lost through outbreaks of enteric and typhoid fever, a direct gain on the actual cost of production and distribution of the milk.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE TRUE DEATH-RATES OF LONDON DISTRICTS DURING THE FOURTH QUARTER OF 1890.

In the accompanying table will be found summarised the vital and mortal statistics of the forty-one sanitary districts of the metropolis, based upon the Registrar-General's returns for the fourth or autumn quarter of 1890. The mortality figures in the table relate to the deaths of persons actually belonging to the respective sanitary districts, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary districts in which the patients had previously resided.

The 32,268 births registered in London during the three months ending December last were equal to an annual rate of 27.2 per 1,000 of the estimated population of the metropolis: This birth-rate showed a further marked decline from that recorded in the corresponding periods of recent years. The birth-rates in the various sanitary districts showed, as usual, wide variations, owing principally to the differences in the age and sex distribution of the population. In St. James Westminster, Kensington, St. George Hanover Square, London City, and St. Martin-in-the-Fields, the birth-rates were considerably below the average; while in St Luke's, Mile End Old Town, St. George-in-the-East, Whitechapel, and Fulham, where the population contains a large proportion of young married persons, the birth-rates showed a marked excess.

The 24,878 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 21.0 per 1,000, which exceeded that recorded in the corresponding period of any year since 1882, and was 1.0 per 1,000 above the mean rate in the fourth quarters of the ten years 1880-89. The lowest death-rates among the various sanitary districts during the last three months of 1890 were 14.2 in Kensington, 14.4 in St. George Hanover Square, 15.3 in Battersea, 16.6 in Lewisham (excluding Penge), 16.9 in Hackney, and 17.1 in Hampstead. In the other districts the death-rates ranged upwards to 28.6 in Whitechapel, 29.7 in St. George Southwark, 30.3 in St. Saviour Southwark and in Woolwich, 31.1 in Stepney, 36.0 in Holborn, and 38.0 in St. George-in-the-East. During the quarter under notice 2,988 deaths were referred to the principal zymotic diseases in London; of these, 1,034 resulted from measles, 506 from diarrhœa, 483 from diphtheria, 410 from whooping-cough, 290 from scarlet fever, 265 from different forms of "fever" (including 3 from typhus, 253 from enteric or typhoid fever, and 9 from simple and ill-defined forms of fever), and not one from small-pox. These 2,988 deaths were equal to an annual rate of 2.5 per 1,000, which corresponded with the mean rate in the corresponding periods of the preceding ten years 1880-89, but considerably exceeded the rate in the last quarter of 1889.

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Complete Distribution of Deaths occurring in Public Institutions, during the Fourth Quarter of 1890.

Sanitary Areas.	Estimated Population middle of 1890.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under 1 year of age to 1,000 Births.
LONDON	4,421,661	32,268	24,878	27.2	21.0	2.5	2,988	—	1,034	290	483	410	3	253	9	506	174
West Districts.																	
Paddington	113,245	696	528	22.9	17.4	1.4	42	—	3	2	21	6	—	4	—	6	145
Kensington	198,422	896	757	16.8	14.2	0.9	50	—	2	10	8	11	—	7	—	12	157
Hammersmith	103,000	682	566	24.7	20.5	3.5	96	—	39	2	18	14	—	6	—	17	166
Fulham	77,500	804	525	38.6	25.2	3.8	79	—	24	4	9	20	—	9	—	13	190
Chelsea	106,694	685	511	23.9	17.8	1.5	44	—	8	5	18	6	—	5	—	2	149
St. George, Hanover Square	87,862	417	340	17.7	14.4	0.9	21	—	1	1	4	7	—	3	1	4	141
Westminster	54,349	334	386	22.9	26.5	1.7	25	—	9	4	2	3	—	—	1	6	180
St. James, Westminster	26,940	111	132	15.3	18.2	1.7	12	—	4	1	—	1	—	2	—	4	234
North Districts.																	
Marylebone	149,226	1,042	848	26.0	21.2	1.8	72		6	4	11	22	—	10	1	18	148
Hampstead	59,537	391	273	24.7	17.1	1.9	31		2	3	9	5	—	8	—	4	140
St. Pancras	245,883	1,696	1,456	25.7	22.1	2.2	142		28	15	40	24	—	17		18	176
Islington	343,184	2,262	1,722	24.5	18.7	1.6	148		17	20	29	31	—	13		38	170
Hackney	250,078	1,710	1,134	25.5	16.9	2.1	140	—	53	19	19	18	—	12	2	17	151
Central Districts.																	
St. Giles	38,698	301	269	29.0	25.9	2.3	24		3	6	3	5	—	5		2	179
St. Martin-in-the-Fields	14,552	80	89	20.5	22.8	1.3	5	—	—	1	—	1		3		—	213
Strand	28,489	160	191	20.9	25.4	1.4	11		3	1		3		1	1	2	175
Holborn	29,395	216	284	27.4	36.0	3.8	30	—	9	1	9	3	—	3	—	5	231
Clerkenwell	71,402	513	457	26.8	23.8	2.4	46		4	9	5	5	—	5		18	177
St. Luke's	52,000	477	331	34.2	23.7	2.1	29	—	4	8	8	1	—	2	—	6	153
London City	35,636	169	241	17.7	25.5	0.6	6		1	2	1	—	—	—		2	180
East Districts.																	
Shoreditch	125,284	1,106	836	32.9	24.8	3.2	107		32	15	26	4	1	11	1	17	176
Bethnal Green	132,815	1,156	960	32.4	26.9	4.5	160		63	18	42	10		15		12	191
Whitechapel	96,446	703	510	39.4	28.6	4.1	73	—	22	6	25	7		6	—	7	186
St. George-in-the-East	46,055	462	470	37.4	38.0	8.0	74		36	5	16	2		1		14	281
Stepney	58,975	483	493	30.5	31.1	6.0	95	—	61	3	8	1	—	5	—	11	228
Mile End Old Town	117,353	1,063	724	33.7	23.0	3.0	95	—	16	12	12	5		7		13	186
Poplar	193,636	1,539	1,131	29.6	21.8	4.1	212		110	18	20	16		18		30	183
South Districts.																	
St. Saviour, Southwark	26,938	221	219	30.6	30.3	5.9	43		18	6	2	6		3		8	222
St. George, Southwark	60,404	496	481	30.6	29.7	3.7	60		11	5	5	21	—	4	—	11	252
Newington	125,456	988	791	29.3	23.5	3.2	108		50	13	10	7	1	9		18	180
St. Olave, Southwark	14,500	113	98	29.0	25.2	3.1	12	—	3	2		1	—	1		5	150
Bermondsey	90,817	798	561	32.7	23.0	2.8	61		12	12	3	23	—	4		10	159
Rotherhithe	45,068	332	252	27.4	20.8	3.0	36		6	5	2	12	—	1		10	211
Lambeth	294,261	2,206	1,601	27.9	20.3	2.3	182		49	19	34	34		10		36	151
Battersea	174,709	1,218	720	26.6	15.3	1.4	65	—	7	6	17	14	—	3	2	16	159
Wandsworth	133,542	1,039	659	29.0	18.4	1.8	65		24	2	8	8		9		14	146
Camberwell	276,585	1,811	1,366	24.4	18.4	2.6	194	—	113	10	14	21	—	15		21	193
Greenwich	162,697	1,356	927	31.0	21.2	3.2	139	—	53	11	14	12	—	10		39	176
Lewisham (excluding Penge)	69,952	415	312	33.7	16.6	1.9	36		12	1	4	6		3		10	157
Woolwich	37,326	333	304	33.2	30.3	6.1	61	—	51		3	4		1		2	255
Plumstead	82,750	725	417	32.6	18.8	2.4	54	—	32	3	4	4	1	2		8	143

The lowest zymotic death-rates during the three months under notice in the various sanitary districts were 0.6 in London City, 0.9 in Kensington and in St. George Hanover Square, 1.3 in St. Martin's-in-the-Fields, and 1.4 in Paddington, in Strand, and in Battersea. In the other districts the zymotic death-rates ranged upwards to 3.8 in Fulham and in Holborn, 4.1 in Whitechapel and in Poplar, 4.5 in Bethnal Green, 5.9 in St. Saviour Southwark, 6.0 in Stepney, 6.1 in Woolwich, and 8.0 in St. George-in-the-East. In the east group of sanitary districts the zymotic death-rate last quarter averaged 4.1 per 1,000, while in the rest of London it did not exceed 2.2 per 1,000. Compared with the preceding quarter the mortality from measles, scarlet-fever, diphtheria and "fever" showed an increase, while that from whooping-cough showed a decline.

Not one death from small-pox was recorded in London during the three months ending December last; during the whole of the past year only 3 fatal cases of this disease were registered in the metropolis, and none since May last. One small-pox patient was under treatment in the Metropolitan Asylum Hospitals during the three months ending December last. Measles showed the highest proportional fatality in Hammersmith, Bethnal Green, St. George-in-the-East, Stepney, Mile End Old Town, Poplar, St. Saviour Southwark, Newington, Camberwell, and Woolwich; scarlet fever in St. Giles, St. Luke's, Bethnal Green, St. Saviour Southwark, and Bermondsey; diphtheria in Paddington, Hammersmith, Chelsea, St. Pancras, Holborn, Shoreditch, Bethnal Green, Whitechapel, and St. George-in-the-East; "fever" in Fulham, Hampstead, Bethnal Green, and Poplar; and diarrhœa in Clerkenwell, St. George-in-the-East, and St. Saviour Southwark.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to registered births, was exceptionally high, and equal to 174 per 1,000, this rate considerably exceeded that recorded in the corresponding period of any of the preceding ten years, 1880-89, the nearest approach to so high a rate being 149 per 1,000 in the fourth quarter of 1888. Among the various sanitary districts the rates of infant mortality were lowest in Paddington, Chelsea, St. George Hanover Square, Marylebone, Hampstead, Wandsworth, and Plumstead; while they showed the largest excess in St. James Westminster, Holborn, St. George-in-the-East, Stepney, St. Saviour Southwark, St. George Southwark, and Woolwich.

OFFENSIVE TRADES.

At the recent Glamorgan Quarter Sessions an appeal of the Cardiff and South Wales Manure Company to set aside a conviction obtained by the Cardiff Rural Sanitary Authority against the company for carrying on a noxious trade without having been licensed, was heard. The appellant company's premises are situated in the immediate neighbourhood of Llandaff, and the business carried on is that of preparing the flesh of horses and other animals by subjecting them to processes of steaming or boiling, by which an artificial manure is manufactured. As is usual in such cases, the evidence as to the kind and amount of nuisance generated by the works was most conflicting, and in several instances absolutely irreconcilable.

The expert medical evidence for the respondents, the rural sanitary authority, was to the effect that the smell from the carcasses was most pungent, and created a feeling of sickness, vomiting, and diarrhœa in persons in the immediate neighbourhood. The works could not be carried on without becoming at times offensive and noxious, when they were positively injurious to health.

On behalf of the appellants, the medical evidence showed that the place was comparatively free from offensive odours, and the premises were capacious and very suitable for the purpose and the appliances excellent. The Court, however, upheld the conviction, on the ground that the trade was an offensive one within the scope and meaning of Section 112 of the Public Health Act, and was carried on without the consent of the sanitary authority. Whilst confirming the conviction, the Court stated that there was evidence that these works had been improved and good methods brought into operation, and the Court hoped and expected that, the right of the sanitary authority being now established, they would in their discretion grant their licence to the company as soon as they were satisfied that that could be done without prejudice to the health of the neighbourhood.

DUTIES OF MEDICAL OFFICERS OF HEALTH UNDER THE NOTIFICATION ACT.

A Medical Officer of Health to a Large District writes: In the British Medical Journal of January 24th it is editorially laid down, not by any means for the first time, that "a medical officer of health should not examine the patients of another practitioner unless he has previously obtained his consent to do so." If this deliverance is to be read with literally exact interpretation it does not, of course, affect those medical officers of health who are not engaged in ordinary practice; and in that case I am not concerned particularly to criticise it, though I think that even with that limitation it could not be successfully defended in any arena of discussion outside that of a medical journal. But if it be intended to assert that no medical officer of health has the right to examine the patients of another medical man without first obtaining his consent, then I have no hesitation in saying that this is a position which cannot be maintained even in *foro medicinæ*, for it is the statutory duty of a medical officer of health to make inquiry into the causes of any outbreak of infectious disease which may occur within his district. In most, if not in all, cases to do this satisfactorily involves an inspection of the patient. To limit the right to make such an inspection only to cases in which the previous consent of the medical attendant had been obtained would be to interfere seriously with the effective discharge of the duty, and, in some cases, to prevent it from being carried out altogether.

A medical attendant has clearly no exclusive claim to the sole purview of any patient whom he may happen to be attending, and it is not in the public interest that he should. If it be said that such a claim, though not maintainable outside the arena of the profession, should be recognised within it in the common interests of professional ethics, I reply that these interests do not require us to recognise such a claim. All that they require is that the medical officer of health shall not, unless imperatively compelled by duty otherwise, say or do anything whilst making his examination which can in any way reflect on the medical attendant, or weaken the confidence in him of the patient or his friends.

Beyond this it is impossible to go without the risk of sacrificing the public interests, which are paramount to those of the medical profession. Let me give an instance in illustration. I receive notice of a case of diphtheria in a distant part of my district. It is my duty to inquire into it with as little delay as possible, and it is practically impossible to write and obtain the consent of the medical attendant, assuming that he would be certain to give it, without involving a delay that would necessitate postponing the visit seriously. I accordingly visit the case, and find a child who three days after the date of the notification presents no evidence whatever of diphtheria, but has very enlarged tonsils, who has never been ordered to be confined to his bed by the medical attendant, by whom he has only been seen once at his own surgery, where he was supplied merely with a bottle of medicine. To my mind it is evident that if this case ever presented any justification for being designated diphtheria, the gentleman who formed this diagnosis had a very imperfect idea of the gravity of the affection which he was called on to treat, but it is clearly my duty not to intimate in any way to the patient or his friends what my opinion is, because their interests are not seriously affected by the concealment.

The problem becomes a little more difficult, however, when I consider what I am to say when I am asked, as I probably may be, by the members of my Sanitary Committee, What is my opinion as to the case in question, and what precautions have been taken to prevent the spread of infection from it? Am I to practise the absurdity of enforcing the same routine of isolation and disinfection which I should have adopted if I had considered the case to be one of a genuinely diphtheritic character?

Take another illustration which involves even greater difficulty. I receive notice of a case of "typhoid" fever, and on visiting it discover it to be one of well-marked enteric type, and am told by the friends that the medical attendant has told them not to be at all alarmed, as "typhoid fever is not infectious." What is my duty in this case? I do not know what may be the prescription of medical ethics in regard to it, but what I should do, and what I have frequently done, is to tell them that I have the misfortune to differ with their medical attendant on this point, and that it is my duty to inform them that I have had abundant experience of the fact that such a case as that in which they are interested may become the centre of very serious infection, and that I must deal with it accordingly.

I freely admit that it would be my duty also to communicate with the medical attendant, and to inform him as to the course I had been obliged to adopt, expressing my regret that our opinions in the matter should so seriously differ.

No; it is useless to blink the fact that a conscientious medical officer of health is often placed in a position of great difficulty by cases such as those which I have cited; and that he must be prepared to sometimes do his duty under conditions which may bring him into direct antagonism with members of his own profession. In so doing he will, from every motive both of propriety and good feeling, endeavour to minimise any difference of opinion which may exist between himself and any of his professional brethren, and to throw a veil over what he may consider to be their shortcomings. And in all cases he must be ready to justify the grounds of his opinions and actions in the same way as every medical practitioner must be prepared to justify his. But he must remember that it is his first duty to protect the public health, and that he has no right to allow the exercise of that duty to be trammelled in any way by artificial restrictions of medical etiquette.

THE COLLEGE OF STATE MEDICINE.—The following gentlemen, having been duly proposed and seconded, were elected Associates of the College, at a meeting of the Council held on January 22nd, 1891:

W. G. Barras, M.B., C.M.Glas., L.S.S.Dur.Univ., Govan, N.B.; R. Cattley, M.B., C.M.Edin., D.P.H.Camb., 59, Monkgate, York; A. Macindoe, D.P.P.Camb., Willoughbridge, Market Drayton; W. F. Menzies, B.Sc.Edin., County Asylum, Rainhill; H. C. Reid, M.B., C.M.Glas., D.P.H. Fac. P. and S.Glas., Coatbridge.

COUNTY COUNCILLORS AND SALARIED OFFICES.

MEMBER (Warwick), who is medical officer of health to an urban sanitary authority, receiving half his salary, therefore, from the County Council, inquires whether he is eligible for election as a County Councillor without resigning his office.

*** It is provided by the Municipal Corporations Act, 1882, that a person should be disqualified for being elected and for being a Councillor if and while he has, directly or indirectly, by himself or by his partner, any share or interest in any contract or employment with, by, or on behalf of the Council. This provision is incorporated in the Local Government Act, 1888, Section 75, and having regard to what our correspondent states as to salary, we are inclined to the opinion that the medical officer of health in question is not eligible for election as a County Councillor.

D.P.H. CAMBRIDGE.

M. C. M.—The examination in sanitary science of the University of Cambridge is open to registered practitioners of the age of 24 years at least, whether graduates of the University or not. Particulars may be obtained on application to Dr. Anningson, Barton Road, Cambridge.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, January 24th, 5,850 births and 4,816 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 10,010,426 persons. The annual rate of mortality in these towns, which had declined from 28.7 to 27.3 per 1,000 in the preceding three weeks, further fell to 25.1 during the week under notice. The rates in the several towns ranged from 13.8 in Hull, 15.9 in Bradford, 18.2 in Derby, and 20.8 in Leicester to 29.9 in Bolton, 31.6 in Wolverhampton, 38.8 in Preston, and 39.0 in Halifax. In the twenty-seven provincial towns the mean death-rate was 24.6 per 1,000, and was 1.1 below the rate recorded in London, which was 25.7 per 1,000. The 4,816 deaths registered during the week under notice in the twenty-eight towns included 404 which were referred to the principal zymotic diseases, against 485 and 404 in the preceding two weeks; of these, 133 resulted from measles, 115 from whooping-cough, 50 from diarrhœa, 44 from scarlet fever, 36 from diphtheria, 26 from "fever" (principally enteric), and not one from small-pox. These 404 deaths were equal to an annual rate of 2.1 per 1,000; in London the zymotic rate was 1.7, while it averaged 2.4 per 1,000 in the twenty-seven provincial towns, among which it ranged from 0.4 in Cardiff, 0.7 in Plymouth, 0.9 in Hull, and 1.0 in Huddersfield to 3.6 in Bolton, 4.0 in Manchester, 6.3 in Birkenhead, and 7.5 in Halifax. Measles showed the largest proportional fatality in Leeds, Birkenhead, Oldham, Brighton, Bolton, and Halifax; scarlet fever in Halifax; whooping-cough in Preston, Halifax, Newcastle-upon-Tyne, and Birkenhead; and "fever" in Wolverhampton and Birkenhead. Of the 36 deaths from diphtheria recorded during the week, 17 occurred in London, 3 in Manchester, 3 in Salford, 2 in Portsmouth, 2 in Leeds, 2 in Sheffield, and 2 in Newcastle-upon-Tyne. No death from small-pox was registered during the week, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, January 24th. These hospitals contained 1,396 scarlet fever patients on the same date, against numbers declining from 2,024 to 1,434 at the end of the preceding eleven weeks; 99 new cases were admitted during the week, against 89 and 106 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 9.8 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

IN eight of the principal Scotch towns 863 births and 651 deaths were registered during the week ending Saturday, January 24th. The annual rate of mortality in these towns, which had been 28.8 and 27.8 per 1,000 in the preceding two weeks, further declined to 24.9 during the week under notice, and was slightly below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Greenock and Dundee, and the highest in Glasgow and Paisley. The 651 deaths registered in these towns during the week under notice included 76 which were referred to the principal zymotic diseases, equal to an annual rate of 2.9 per 1,000, which exceeded by 0.8 the mean zymotic rate during the same period in the large English towns. The highest zymotic rates were recorded in Leith, Edinburgh, and Glasgow. The 317 deaths registered in Glasgow included 14 which were referred to scarlet fever, 10 to whooping-cough, 5 to measles, and 5 to diphtheria. Nine fatal cases of whooping-cough were recorded in Edinburgh, 1 in Dundee, and 3 in Leith. The death-rate from diseases of the respiratory organs in these towns was equal to 8.0 per 1,000, against 9.8 in London.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, January 17th, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 31.3 per 1,000. The lowest rates were recorded in Kilkenny and Dundalk, and the highest in Armagh and Londonderry. The death-rate from the principal zymotic diseases averaged 1.8 per 1,000. The 251 deaths registered in Dublin were equal to an annual rate of 37.1 per 1,000 (against 40.6 and 36.0 in the preceding two weeks), the rate for the same period being 29.2 in London and 20.6 in Edinburgh. The 251 deaths in Dublin included 9 which were referred to the principal zymotic diseases (equal to an annual rate of 1.3 per 1,000), of which 4 resulted from different forms of "fever," 2 from diphtheria, and 2 from whooping-cough.

OBITUARY.

EDWARD JOHN WARING, M.D., F.R.C.P., F.R.C.S., C.I.E.

WE record with great regret the death of Dr. Waring, at the age of 71. Few English practitioners have been more widely known throughout India than the subject of our notice, as the major part of a most industrious working life was spent by him in the study of Indian pharmacology, and the effort to alleviate the sufferings of the natives. Dr. Waring, who was descended from an old Shropshire family, was born at Tiverton, December 14th, 1819, being the sixth son of Captain Henry Waring, R.N. Of his brothers, several were well known in the world of letters; the eldest, George, of Trinity College, Cambridge, and Magdalen Hall, Oxford, was called by the late Professor Thorold Rogers: "the most learned man in England, perhaps in Europe." Another brother, Francis Robert Waring, was well known as an opponent of the theory of evolution; while a third, John Burley Waring, wrote some invaluable works in connection with architecture and ceramic art.

Dr. Waring passed his early life at Lyme Regis, where he obtained his first schooling; thence he went to Ilminster Grammar School. His medical career was commenced at Bristol, but afterwards he went to Charing Cross Hospital, and obtained his M.R.C.S. in 1842. In 1841 Dr. Waring acted as surgeon to a ship bound for Sierra Leone, and from thence went to Jamaica. Immediately after qualifying he returned to Jamaica, and practised there, at the same time undertaking the duties of medical officer of health. But in the following year he returned to England, to take service under the Emigration Commissioners, visiting Australia, the Cape of Good Hope, Calcutta, Trinidad, and the United States. In 1847 he married and settled in Uckfield, but, owing to heavy pecuniary losses, Dr. Waring had to re-enter professional life, and commence his career afresh. This he did in the service of the East India Company, in which he undertook the duties of assistant-surgeon in the Madras Establishment. Posted in charge of Mergni in the Tennasserim provinces, he remained all through the Burmese war, receiving a war medal. Few who are unacquainted with this district can understand what such a position meant, its grave responsibility, and its utter solitude as far as Europeans went, being 1,000 miles from Calcutta, and consisting of a contingent of less than ten Europeans, with a large gaol and body of Sepoys to look after.

While here time was found to bring out his first edition of *Practical Therapeutics*, a work which, published in London in 1854, rapidly achieved popularity, and ultimately ran through four English and one American edition. The last edition, published in 1886, when Dr. Waring's sight had become impaired, was issued in conjunction with Dr. Dudley Buxton, who had not only the benefit of Dr. Waring's ample preparations, but also his weighty counsel and critical acumen. So highly was this work esteemed, that a copy of it was attached to the headquarters of each regiment in the United States service. The difficulty of transport occasioned by the Burmese war caused the drug supplies of Mergni to run short, and this led Dr. Waring to search the native bazaars and the forests for substitutes—a task which proved the initiative to the valuable investigation which he eventually undertook into the properties and medicinal uses of the indigenous plants of India. An official report was published in Madras, 1855. In 1853 Dr. Waring became residency surgeon at Travancore, and here he pursued his botanical and pharmacological studies, publishing papers from time to time in the *Indian Annals of Medical Science*, and the *Madras Quarterly Journal of Medicine*. At this time he also studied, with the care and thoroughness which always characterised what he took in hand, the subject of hepatic abscess, and, collecting 300 cases, recorded his results in his

Inquiry into the Statistics and Pathology of Abscess in the Liver, a monograph which elicited a high encomium from Dr. Parkes.

In 1856 Dr. Waring was appointed Durbar Physician to His Highness the Maharajah of Travancore, a post the opportunities of which were utilised to prosecute an investigation into the etiology of elephantiasis. *Bazaar Medicine*, a notable work which won for its writer no small praise, was published in English and Tamil in 1860, and later translated into Malyalim and the Karen language of Burmah. This work, although less known in England than other of Dr. Waring's writings, has done a great amount of good in India by its influence over the practice of native doctors. About this time also Dr. Waring worked at a more elaborate undertaking, an *Encyclopædia Therapeutica*, a work which, although never completed, yet formed the groundwork of the *Bibliotheca Therapeutica* published by the New Sydenham Society, as well as being laid heavily under contribution by the editors of *Mayne's Lexicon*. Another work undertaken at Travancore was the establishment of a much-needed school for children of the Pulayar or slave caste. Failing health drove Dr. Waring in 1863 to return to England, where in the following year he took his F.R.C.S., and subsequently submitted himself to examination for the M.R.C.P., a diploma which he obtained, and which in 1871 was followed by the F.R.C.P.

In 1866 he graduated at St. Andrews. It was resolved in 1865 to issue an Indian Pharmacopœia, and Dr. Waring was made responsible editor, acting with a Committee composed of Sir J. Ranald Martin, C.B., F.R.S., President; Sir W. O. Shaughnessy Brooke, M.D., F.R.S.; Alexander Gibson, F.L.S.; Daniel Hanbury, F.R.S.; Dr. T. Thomson, F.R.S.; Dr. J. Forbes Watson, F.L.S., and Dr. R. Wight, F.R.S. This was published in 1868. In 1866 appeared his *Tropical Resident at Home*, and in 1867 he wrote strongly supporting the views first enunciated by Mr. A. Napper and Mr. Horace Swete, advocating "village hospitals." Under the title *Cottage Hospitals*, Dr. Waring showed the great importance of such institutions, and did much to popularise the idea which at that time was favoured in very many quarters. His useful work, the *Bibliotheca Therapeutica*, appeared under the auspices of the New Sydenham Society in 1878-79.

Dr. Waring occupied himself largely with philanthropic work; he was one of the original Committee of the London Medical Mission in St. Giles's, and took an active part in promoting its useful labours. He also, with characteristic thoughtfulness, wrote upon and worked for a "Spectacles" Mission, the functions of which are to supply gratuitously to the necessitous poor a pair of spectacles. Dr. Waring's own failing sight made him doubly tender with those poor life waifs who, though afflicted, had none of the resources of science to battle with advancing feebleness.

In 1887 Dr. Waring presented his splendid library to the Army Medical School at Netley. Sir Joseph Fayrer, in acknowledging this gift, said: "Dr. Waring is a great author and physician, and a man who has conferred infinite benefits on his profession. Such a valuable gift as this could scarcely be obtained elsewhere, for, on the subject of materia medica, it is unrivalled, and I know no man in London who has such a collection."

Dr. Waring's sight began to fail in 1884, and for a while he was blind, but happily the cataract was eventually successfully operated upon, and he again enjoyed the power of reading.

To his friends Dr. Waring's personal traits need no eulogium; his public career was one of exceptional brilliancy and utility, and although the decoration of C.I.E., which was accorded him in 1881 for his distinguished service, must be regarded as wholly inadequate, yet his was a nature which coveted not the honours of the State, and his reputation will rest upon the solid foundation of its own worth, and not upon the tardy recognition from those in high places, which too often befalls the labours of the scientist and philanthropist.

His Grace the Duke of Fife, K.T., President of the Hospital for Sick Children, Great Ormond Street, Bloomsbury, will take the chair at the annual dinner in aid of this hospital to be held on Wednesday, March 18th, at the Hôtel Métropole.

MEDICAL NEWS.

The Muzzling Order.—To a memorial from the Justices of the Peace in the Osgoldcross Division of Yorkshire for a repeal of the muzzling order in that division of West Yorkshire, Mr. Chaplin has replied that he fears a relaxation of the order just as it is completing its work would undo all the good that has been done. He points to a steady decrease of rabies in the county.

Honours to German Medical Men.—The German Emperor has conferred the Order of the Red Eagle (Third Class) on Surgeon-General Grasnick, Sub-Director of the Friedrich Wilhelm Medico-Chirurgical Institute, and Professor O. Fräntzel; the Order of the Crown (Second Class) on Professor August Hirsch, the author of the well known treatise on Medical Geography; and the Order of the Crown (Third Class) on Dr. Pistor.

Donations.—The Right Hon. Sir Massey Lopes, who a few years since gave a sum amounting to £4,000 to the South and East Cornwall Hospital, a portion of which amount was expended in erecting a Lopes Ward, has signified his intention of giving £5,000, now vested in Two and Three-quarters per cent. Consols, as an endowment fund towards the maintenance of that and another ward.—Mr. George Palmer, formerly M.P. for Reading, has presented £1,000 to the funds of the Royal Berks Hospital.

Baby Farming.—The woman Reeves, charged with the wilful neglect of eight children, was again brought before the magistrates at the Lambeth Police-court on January 23rd, and remanded. At the inquest held before Dr. Danford Thomas on the same day, on the body of the third child who has died of the eight removed from the house of Mrs. Reeves, the jury returned a verdict of manslaughter against the prisoner. The deputy coroner for the North-Eastern Division of Surrey has, it is reported, received information of another remarkable baby farming case from the authorities of the Lambeth Infirmary.

Charge of Manslaughter against a Midwife.—An inquest was recently held before Mr. Braxton Hicks, coroner for Mid-Surrey, as to the death of a woman who had died of puerperal fever. Detective-Inspector Shaw watched the case on behalf of the police authorities, it having been alleged that the deceased had met her death through the negligence of an uncertified midwife. The jury returned a verdict of manslaughter against the midwife, who was committed for trial on the coroner's warrant. As the case is still *sub judice*, it would be improper to make any comments on the evidence; the result will be awaited with much interest.

Infirmary Medical Superintendents' Society.—The usual monthly meeting of this society was held on Saturday, January 24th, at Camberwell Infirmary. Mr. Herbert Chabot exhibited two cases of joint disease in children, much improved under treatment; also a well-marked case of Duchenne's paralysis in a boy aged 11, and another of Jacksonian epilepsy. A specimen of aneurysm of the first part of the arch of the aorta, extending backwards into the posterior mediastinum and rupturing into the pericardium, was also shown. The members had an opportunity of inspecting the new block of infirmary buildings, erected on the circular system; and the remainder of the afternoon was occupied in discussing matters relating to the improvement of infirmary administration.

Deaths in the Profession Abroad.—Among the members of the profession in foreign countries who have recently died are Dr. J. E. Sanderet de Valonne (aged 79), Professor in the Medical School of Besançon, and Chief Physician to the Public Lunatic Asylum of the department of Doubs; Dr. Demetrius Koschlakow (aged 56), formerly Professor of Medicine in the Military Medical Academy of St. Petersburg and a laryngologist of some distinction; Dr. Garrigat, Member of the French Senate for the Dordogne department; Dr. G. Leopardi, Professor of Special Pathology in the Superior School of Medicine at Florence; and Dr. Warlomont, the well-known ophthalmologist of Brussels.

Leprosy at St. Kitts.—In the *Lazaretto*, No. 11, published at St. Kitts, Dr. Boon urges on the members of the Federal

Council of that island strong reasons for legislative measures being taken to segregate the lepers, quoting from recent medical literature some of the most striking cases of apparent contagion. He states that in the island there are perhaps four lepers to every 1,000 inhabitants, and asserts that a careful census carried out by the medical officers would demonstrate that St. Kitts and Nevis contain more lepers per 1,000 of the population than any other British possession. He also considers that the disease has increased in Antigua, and that there are no fewer than 300 lepers in the Leeward Islands. The present annual death-rate in St. Kitts is seven, and he considers that if segregation were properly carried out, it may be confidently anticipated that leprosy will practically disappear in one generation, or about thirty years.

Obstetrical Society of London.—The election of officers for 1891 will take place at the annual meeting on Wednesday next, February 4th. The following the balloting list recommended by the Council:—*President:* *J. Watt Black, M.A., M.D. *Vice-Presidents:* P. Boulton, M.D.; *T. C. S. Corry, M.D. (Belfast); T. C. Hayes, M.A., M.D.; Evan Jones (Aberdare); *W. A. Meredith, M.B., C.M.; *A. J. Tapson, M.B. *Treasurer:* G. E. Herman, M.B. *Chairman of the Board for the Examination of Midwives:* *F. H. Champneys, M.A., M.D. *Honorary Secretaries:* A. Doran; P. Horrocks, M.D. *Honorary Librarian:* W. Duncan, M.D. *Other Members of Council:* A. C. Butler-Smythe; *F. W. Coates, M.D. (Salisbury); *C. J. Cullingworth, M.D.; W. R. Dakin, M.D.; S. H. Davson, M.D.; *H. W. Freeman (Bath); *J. H. Galton, M.D.; H. Gervis, M.D.; *W. L. Heath, M.B.; *J. Johnston, M.D.; H. A. Lediard, M.D. (Carlisle); H. C. March, M.D. (Rochdale); T. C. Nesham, M.D. (Newcastle-on-Tyne); *G. R. T. Phillips; *J. H. Philpot, M.D.; J. B. Potter, M.D.; H. R. Spencer, M.D.; H. S. Webb (Welwyn). Those gentlemen to whose name an asterisk is prefixed were not on the Council, or did not fill the same office last year.

The Nurses' Co-operation.—As a result of the success which has attended private nursing institutions, especially such as are associated with some of the leading hospitals, it is hardly surprising that an association should have been formed for the purpose of securing to nurses a larger amount of their earnings than they can possibly lay claim to by the rules of these establishments. The wages of a nurse in a private institution range from £20 to £40 per annum, in proportion to her ability and length of service; but in addition to this, she is entitled to her board, washing, uniform, and travelling expenses, together with a comfortable home when out of work. When the nurse is continuously employed, as happens to be the case in the private institutions connected with hospitals, her earnings should amount to £80 or £90 a year, half or two-thirds of which would revert to the parent establishment, to be employed in any way the Committee thought fit. The co-operation referred to, which has been incorporated under the provisions of the Companies Act, does not profess to find a home for nurses, but only a registry office, at which they may enter their names after showing their credentials in the various branches of their art, together with their place of residence. Much may be said in favour of the scheme, and we should be glad to hear of its success, in spite of some obstacles it may have to surmount before it acquires a firm footing. Medical men will be chary of sending for nurses from a central establishment of which they know comparatively little, and would naturally send their applications to the institutions which have hitherto served them, and with which they may have had in former years closer relations, and on the character of whose nurses they can rely with complete confidence. It is a question also whether, by detaching themselves from private institutions, where their livelihood is certain, either in or out of employment, nurses will greatly benefit themselves. Still there are many who think otherwise, and who would risk the venture, provided they saw a probability of future independence. To such we would recommend the Co-operation Society, which has been launched under favourable auspices by a large committee of ladies and gentlemen well known for the interest they have always taken in promoting the welfare of nurses. The headquarters of the Association are at 8, New Cavendish St., Portland Place.

MEDICAL VACANCIES.

The following Vacancies are announced:

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238a, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and lights provided. Applications to the Secretary by February 7th.

CHELMSFORD UNION, Chelmsford.—Medical Officer and Public Vaccinator for the Sixth District of this Union. Salary, £48 per annum and extra fees. Applications to W. W. Duffield, Clerk, by February 7th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Physician to the Out-patient Department. Applications to A. C. Davis, Secretary, by February 2nd, of whom application forms can be obtained.

CHICHESTER INFIRMARY, Chichester.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, with not more than five testimonials, to Eugène E. Street, Secretary, by February 21st.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant. Salary, £50 for first year, and, if reappointed, £70 for second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by February 28th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence and allowance for washing provided, but no salary. Appointment for six months. Applications to the Secretary, T. Storrar Smith, by February 13th.

CITY OF LONDON LUNATIC ASYLUM, near Dartford, Kent.—Assistant Medical Officer, unmarried, not less than 25 years or more than 35 years of age. Salary, £150 per annum, with board, lodging, washing, and attendance. Applications addressed to the Visiting Committee to be sent to the Clerk, Henry F. Youle (of whom the forms of application can be obtained) by February 3rd.

COUNTY COUNCIL OF AYRSHIRE.—County Medical Officer; must not hold other appointments or engage in private practice, and must reside in Ayr. Salary, £450 per annum. Applications to Chas. G. Shaw, County Clerk, County Buildings, Ayr, by February 2nd.

COUNTY COUNCIL FOR THE COUNTY OF DERBY.—Medical Officer of Health for the Administrative County of Derby. Salary, £600 per annum, with £200 extra for travelling and other expenses. Applications to N. J. Hughes-Hallett, Deputy Clerk to the Council, 40, St. Mary's Gate, Derby, of whom forms of application, etc., can be obtained.

COUNTY OF DUMFRIES.—Medical Officer. Salary, £300 per annum. Applications to John Robson, County Clerk, Dumfries, by February 2nd, of whom further information can be obtained.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon; must possess surgical qualifications; no salary, but residence, board, and washing provided. Applications to J. D. M. Coghill, House-Governor, by January 31st. Election on February 6th.

HAMPTON WICK LOCAL BOARD.—Medical Officer of Health. Salary, £30 per annum. Appointment on February 2nd.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—Resident Medical Officer as House-Physician; unmarried. Salary, £60 per annum, with board and residence in the hospital. Applications to the Secretary, Adrian Hope, by February 10th.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Physician; Member or Fellow of Royal College of Physicians of London. Applications to the Secretary, Major W. Christie, by February 7th.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant-Physician; Member or Fellow of Royal College of Physicians of London. Applications to the Secretary, Major W. Christie, by February 7th.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon; double qualifications. Salary, £70 per annum, with board and residence in the institution. Applications to the Chairman, House Committee, by January 31st.

METROPOLITAN HOSPITAL, Kingsland Road, E.—Dental Surgeon. Applications to C. H. Byers, Secretary, by January 31st.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury.—Surgeon; must be F.R.C.S.Eng. Applications to B. Burford Rawlings, Secretary-Director, by February 5th.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant; qualified men or fourth-year students. Appointment for six months. Board, lodging, and washing. No salary. Applications, stating age, with testimonials, to E. M. Keely, Secretary, by February 14th.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant; qualified men or fourth-year students. Board, lodging, and washing. No salary. Applications to the Secretary, E. M. Keely, by February 14th.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford Street.—Apothecary. Salary, £100 per annum, with partial board. Must be M.R.C.S.Eng. and L.S.A., and unmarried. Applications to the Secretary by February 5th.

ST. GEORGE'S HOSPITAL, S.W.—Lecturer on Midwifery. Applications to the Dean by January 31st.

ST. MARK'S HOSPITAL FOR FISTULA, Etc., City Road, E.C.—Anæsthetist. Honorarium, £50 per annum. Applications to the Secretary, Arthur Leared, by February 7th.

SMALLBURGH UNION.—Medical Officer for the Smallburgh District of the said Union and for the Smallburgh Workhouse. Salary, £68 per annum for the District, and £30 for the Workhouse, with usual extra medical, vaccination, and registration fees. Must have double qualifications. Applications, with recent testimonials, to Fairfax Davies, Clerk, North Walsham, by January 31st.

SOUTHERN HOSPITAL, Clifford Street, Manchester.—House-Surgeon. Appointment for not less than six and not more than twelve months. Must reside near the hospital. Applications to Geo. Wm. Fox, 53, Princess Street, Manchester.

UNIVERSITY OF SYDNEY, N.S.W.—Demonstrator of Physiology. Salary, £350 per annum; £60 allowed for passage expenses to Sydney. Applications to the Agent-General for New South Wales, 9, Victoria Street, S. W. (of whom full particulars can be obtained), by January 31st.

WINCHCOMB UNION, Winchcomb.—Medical Officer for the No. 2 or Vale District of this Union. Salary, £65 per annum, with additional fees. Applications to J. H. Stephens, Clerk, by February 5th.

WORCESTER GENERAL INFIRMARY.—Physician. Applications to be sent addressed to the Executive Committee of the Worcester General Dispensary, under cover to the Secretary, Mr. W. Stallard, Worcester Chambers, Pierpoint Street, Worcester, by February 7th.

MEDICAL APPOINTMENTS.

BEASLEY, J. G., L.R.C.P.Edin., L.F.P.S.Glas., appointed Medical Officer of Health for the Rowley Regis Urban Sanitary District of the Dudley Union.

COOK, J. W., M.D.Aberd., M.R.C.S., reappointed Medical Officer of Health for the Tendring and Lexden and Winstree Rural Districts.

EVERSHED, Arthur, M.R.C.P.Lond., M.R.C.S., appointed Medical Adviser to the North London Railway.

FOX, J. A., L.R.C.P.Lond., L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.Glas., L.S.A.Lond.(1885), L.S.A.Lond.(1889), Med. Act, 1886, appointed Honorary Surgeon to the West Cornwall Infirmary and Dispensary, Penzance.

FULLER, G. E., M.D., appointed Medical Officer for the Cheswardine District of the Drayton Union.

HASLETT, W. J., M.R.C.S., L.R.C.P., appointed Resident Clinical Assistant to St. Luke's Hospital, *vice* Mr. W. R. Brunton.

HILL, J. S., M.B., C.M.Edin., appointed Medical Officer for the Fifth District of the St. Saviour's Union.

IREDALE, J., L.R.C.P., L.R.C.S.Edin., appointed Medical and Vaccination Officer for the Saltfleetby District of the Louth Union.

KELYNACK, T. N., M.B., Ch.B.(Vict.), appointed Pathological Registrar to the Manchester Royal Infirmary, *vice* R. B. Wild, M.D.Lond.

LAMBERT, F. W., L.R.C.P. and L.M.Edin., M.R.C.S.Eng., appointed Medical Officer of Health to the Farsley Urban Sanitary Authority.

LEACH, J. C., M.D.Durh., M.R.C.S., appointed Medical Officer for the Workhouse of the Sturminster Union.

MACADAM, Philip E. W., L.R.C.P.and S.Irel., appointed Clinical Assistant to the City Asylum, Birmingham, *vice* Mr. W. Clements.

MCCALL, A., M.B., C.M.Glas., appointed District Medical Officer for the Conisborough District of the Doncaster Union.

MACDONALD, David, M.B., C.M.Glas., appointed Medical Officer for the District of Stratherrick, Inverness.

MACKAY, William, L.R.C.P.Edin., appointed Medical Officer of Health for the Norton Urban Sanitary District of the Malton Union.

MACLAGAN, Wedderburn, M.D.Aberd., appointed Medical Officer of Health for the County of Forfar.

MCNAUGHTON, W. A., M.D.Edin., appointed Medical Officer for the County of Kincardine.

MEADOWS, R. T., M.B.Edin., C.M., appointed Medical Officer for the Borough of Saltash, *vice* Dr. Revel.

NUNN, P. W. G., L.R.C.P., M.R.C.S., appointed Medical Officer of Health for the Borough of Bournemouth, *vice* Dr. Kinsey Morgan.

PARKES, Louis C., M.D., D.P.H.Lond., appointed Lecturer on Public Health at St. George's Hospital.

PARKMAN, Thomas Wright, M.B., C.M., appointed Medical Officer to the Parish of Tongue, Sutherlandshire, *vice* James B. Cunningham, M.B., C.M.

RIGDEN, Brian, M.R.C.S., reappointed Assistant-Surgeon to the Canterbury Hospital.

RIGDEN, George, M.R.C.S., reappointed Surgeon to the Canterbury Hospital.

ROSS, Dr., appointed Medical Officer to the Monquhitter Parochial Board.

SANDERS, W. G. W., M.B., C.M.Edin., appointed Pathological Assistant Medical Officer to the County Asylum, Rainhill.

SKINNER, Ernest William, M.B., C.M.Edin., appointed Honorary Surgeon for the No. 3 District of the Rye Union.

SOLLY, Ernest, M.B.Lond., F.R.C.S., appointed Senior Resident Medical Officer at the Royal Free Hospital, *vice* Mr. E. C. Stabb, F.R.C.S.

SOMERSET, Edward, M.R.C.S., L.R.C.P., appointed Surgeon to the Carmarthen Infirmary, *vice* Hedley Hill, resigned.

SPENCER, Matthew Hy., M.A., M.B., C.M.Camb., appointed Resident House-Physician to the Seamen's Hospital, Greenwich.

STEPHENS, Richard J., M.R.C.S., L.S.A., appointed Assistant Medical Officer to the Wilts County Asylum.

SYKES, J. H., L.R.C.P., M.R.C.S., appointed Assistant Medical Officer at the Crumpsall Workhouse, and Resident Assistant Medical Officer at the Workhouse Receiving and Casual Wards, New Bridge Street, Manchester.

THOMPSON, M., L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer for the Puddletown District of the Dorchester Union.

TURNER, C. Byron, L.R.C.P., M.R.C.S., appointed Demonstrator of Anatomy at University College, London, *vice* G. B. M. White, F.R.C.S., resigned.

TURNER, Frederick, M.R.C.S., reappointed Medical Officer of Health for the Buxton Urban Sanitary District.

WILLIAMS, C. R., M.B., C.M.Edin., reappointed Medical Officer for the Second and Third Districts of the Ashby-de-la-Zouch Union.

WILLIAMS, J. D., M.D.Edin., appointed Assistant Medical Officer for the Workhouse of the Cardiff Union.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: On Conjunctival Diseases. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. McNeill Whistler: On Syphilis as it affects the Larynx.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Stephen Mackenzie: The Lettsomian Lectures on Anæmia, its Pathology, Symptoms, and Treatment. Lecture III.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 8 P.M.—Dr. Fredk. Silk: Clinical Observations on Bromide of Ethyl as an Anæsthetic in Dental Surgery, with recorded cases. Mr. Sewill: On the Etiology of Empyema of the Antrum. Mr. Charles White: On a New Method of Demonstrating Dental and Osseous Structures in Microscopical Specimens. Mr. Storer Bennett: On a Case of Alveolar Abscess of Three Years' Duration, caused by the Perforation of the Side of a Root. Mr. Ackery: On some Cases of Eruption of Teeth in Abnormal Positions. Short inaugural address by the President.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On Delusional Insanity, Moral Insanity. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On Affections of the Skin in the Tertiary Stage of Syphilis.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Professor Crookshank: Researches on the Morphology, Cultivation, and Products of the Tubercle Bacillus. Professor Crookshank and Dr. Phineas Abraham: Tubercular Guinea Pigs Treated by Koch's Method. Mr. Stephen Paget: Imperforate Rectum.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. C. Y. Biss: On the Diagnosis of Intrathoracic Aneurysms. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. P. Lawford: On Optic Neuritis.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown. Annual meeting.—Election of an Honorary Fellow. Election of Officers and Council. The President (Dr. Galabin) will deliver the Annual Address. Discussion on the Examination and Registration of Midwives.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Gowers. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Barlow: On the Clinical Aspect of Rickets. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Law: On Catarrh of the Middle Ear and Methods of Inflation.

HARVEIAN SOCIETY, 8.30 P.M.—Sir Edward H. Sieveking, M.D.—Falmouth as a Health Resort.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. C. Y. Biss: On the Treatment of Intrathoracic Aneurysms.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, in the Board Room, West London Hospital, 8 P.M.—Mr. Percy Dunn will show some pathological specimens. The following papers will be read: Dr. Clemow: Observations upon the Treatment of certain Cases of Fatty Heart. Mr. Rickard Lloyd: Practical Notes on the Administration of Ether and Chloroform. Dr. Alderson: A Case of Attempted Suicide by Chloroform.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstrations. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On the Different Forms of Alopecia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

MARRIAGES.

MOORE—REYNOLDS.—January 15th, at St. Peter's Church, Coton, by the Rev. Wm. Burleigh, B.A., assisted by the Rev. F. S. Trevor-Garrick, rector of the parish, F. Hone Moore, L.R.C.S.I., and L. and L.M.R.C.P.I., second son of the Rev. Thomas Moore, B.A., Rector and Rural Dean, Cootehill, co. Cavan, Ireland, to Ruth Eleanor, youngest daughter of Wm. Reynolds, of Coton, Cambridgeshire.

RANDLE—DAVIES.—On November 19th, 1890, at St. Paul's Church, Breadfruit, Lagos, West Africa, by the Honourable and Rev. James Johnson and the Venerable Archdeacon Johnson, John Randle, M.B., C.M. (Edin.), Assistant Colonial Surgeon, to Victoria Davies, daughter of Capt. J. P. L. Davies.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. 1.30; Dental, M. W. F., 9. Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. Wed. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30.; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance*—Medical, daily, exc. S., 2; Surgical, daily, 1.30, and 2; Obstetric, M. Th., 1.30; o.p. W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.* Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat Tu., 9; Skin, Tu, 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women) S., 9,

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30 Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic, F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of Rectum, males, W., 8.45; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45 o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electrotherapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, except W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, except S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological) Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30. *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30. *Operation Days.*—W. Th., 1.30; S. 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu., F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

ENQUIRER wishes to know the names and addresses of any asylums into which idiots are admitted during infancy. His patient could only pay a moderate charge.

DR. CECIL SHAW (Belfast) wishes to know if any member would kindly refer him to any sources of information as to extraordinary powers of sight, hearing, smelling, etc., especially among savage peoples.

SILK *v.* WOOLLEN UNDERCLOTHING.

"DOC" asks: Is it an ascertained and demonstrable fact that silk underclothing retains the odours given off from the human skin less than woollen underclothing? What is their relative value as conductors of heat, and therefore as preservatives of warmth?

MEDICINE BOYS AND THE INLAND REVENUE.

DRAX asks whether a male servant tax must be paid for a medicine boy only employed some hours daily.

*** The term "male servant" in the Act of Parliament imposing the duty does not include a person who has been *bonâ fide* engaged to serve his employer for a portion only of each day and does not reside in his employer's house (39 and 40 Vict., cap. 16, sec. 5). Therefore we are advised that no duty is payable in the case quoted by our correspondent.

ANSWERS.

BERTRAM ROGERS.—An article with the title "Disease in Fiction," by Dr. Nestor Tirard, was published in the *Nineteenth Century* for October, 1886.

NOTES, LETTERS, Etc.

EXTRAORDINARY EMACIATION.

DR. E. THURLOW PRIOR (Loddon, Norfolk) writes: I do not know how little it is possible for a woman to weigh, but this case appears to me to be slightly interesting: M. E., aged 44, height 5 feet 4 inches; been suffering for two or three years with cancer of uterus, with very profuse watery discharge. Died Saturday, January 3rd, 1891. Weighed Thursday, January 8th: Weight in all, 12 stone 4½ lbs.; weight of coffin, 8 stone 8lbs.; linen, etc., 7½ lbs.; leaving the extraordinary weight of 3 stone 3 lbs.

COPYING CAMERA FOR LANTERN SLIDES.

DR E. H. JACOB (Leeds) writes: Will you allow me to supplement my letter in the BRITISH MEDICAL JOURNAL of January 10th by the information that the copying camera and frame invented by Professors Barr and Stroud for the purpose of facilitating the copying of illustrations, etc., for lantern slide work can be obtained from Middlemiss, of Bradford, the price being £10, including camera and lens.

THE ENGLISH LANGUAGE.

BRYANT, the American poet and journalist, gave the following advice to a would-be writer. The remarks are as true now as ever.

"I observe that you have used several French expressions in your letter. I think if you will study the English language that you will find it capable of expressing all the ideas you may have. I have always found it so, and in all that I have written I do not recall an instance where I was tempted to use a foreign word, but that on searching I have found a better one in my own language. Be simple, unaffected; be honest in your speaking and writing. Never use a long word where a short one will do as well. Call a spade by its name, and not a well-

known instrument of manual labour; let a home be a home, and not a residence; a place, not a locality, and so on with the rest. When a short word will do you will always lose by a long one; you lose in clearness, you lose in honest expression of meaning, and in the estimation of all men who are capable of judging you lose in reputation for ability. The only true way to shine, even in this false world, is to be modest and unassuming. Falsehood may be a thick crust, but in the course of time Truth will find a place to break through. Elegance of language may not be in the power of all, but simplicity and straightforwardness are."

Insurance Companies' Fees.

A Hospital Surgeon writes: Will you allow me space in your columns to draw the attention of my fellow-practitioners to a matter that affects us all? It is the practice of certain insurance companies, notably the Sun, Life, Hand-in-Hand, Royal Exchange, Scottish Imperial, and City of Glasgow, to pay the examining doctor a fee of only half-a-guinea where the sum assured is below a certain figure. In these cases the examination is expected to be quite as thorough, and the answers to be written are as numerous and full, as where the ordinary fee of one guinea is paid. I cannot but consider that offices to which a half-guinea is of such moment are scarcely to be trusted as sound; and acting on this opinion I intend advising proposers for these offices to apply to others that as one condition of solvency pay a proper fee for a thorough examination. I advise others to do likewise.

A Winter Health Resort—Ajaccio.

A correspondent writes: The weather, in contrast to that experienced in England and throughout the Continent generally, continues to be delightful; in fact, on the average there is only one day in the fortnight on which invalids cannot go for their accustomed drive, and on New Year's Day it was absolutely hot walking quickly in ordinary English summer clothes. There have been several arrivals from Algiers on account of the cold there, and many visitors are expected towards the end of the month. A supply of lymph has been forwarded to Ajaccio from Berlin, for the benefit of those who wish to be treated by Koch's method for the cure of tuberculosis.

Creolin as an Antiseptic.

Dr. Spencer Smyth, F.R.C.S. (Bournemouth) writes: I have lately attended upon a man who had received a severe lacerated wound of the right hand, as also the right thigh, requiring the introduction of aseptic sutures, three in each wound, previous to which the wounds were freely irrigated with creolin in tepid water, which I regard as a valuable and safe antiseptic, and in those cases in which it has been had recourse to had not witnessed any toxic effects resulting therefrom. I have often advised creolin in a bath, which is cleansing and refreshing. No doubt liq. hydrarg. perchl. is the best antiseptic we at present possess, but in certain instances might be followed by mischievous results, especially when freely had recourse to, after which I prefer creolin, having regarded it as non-poisonous.

A Japanese Lung Disease.

Surgeon W. Eames, (H.M.S. *Leander*, Yokohama) writes: With reference to an article in the British Medical Journal of October 11th, 1890, entitled, "A Japanese Lung Disease," I would mention that the subject of endemic hæmoptysis is most interestingly dealt with by Dr. Patrick Manson in a paper published in Vol. I of the *Transactions of the Hong Kong Medical Society*. The researches of Dr. Manson into the life and behaviour of the distoma Ringeri (Cobbold), or distoma pulmonale (Baelz) as the parasite is named, are most graphically described by him, and he alludes to the fact that the intermediary host of this parasite is found in North Formosa and Japan, but not on the mainland of China, it being dependent apparently for its existence and well-being upon the characteristic volcanic soil of the two former regions.

I would refer Dr. Vincent to the above-mentioned interesting paper by so eminent an investigator in, and able writer on, helminthology as Dr. Manson, who in the same paper gives the details of a case of the disease contracted in Formosa, which came under his charge, and in which he alludes to the subject of inhalations in the treatment of the affection.

Treatment of Consumption.

Dr. F. Taylor Simson (Lavender Hill, S.W.) writes: In the British Medical Journal of November 8th, 1890, you notice a communication from some analytical chemists, in which they claim to have discovered a germicide for the tubercular bacillus. They now advertise iodide of gold as "the true germicide and virus neutraliser" in this connection, and attached to this somewhat sweeping title and to the remedy in question are their names in brackets. From this I gather they desire to brand the discovery as their own, or initiate a vested interest in the drug.

At the end of my original articles, published in the medical papers of this country in 1888, on the Treatment of Tubercular Phthisis by hydrarg. perchloridum, is the following passage: "I believe the persalts of some other metals (for example, gold) might be found to have as good a germicidal effect if preferred to the mercuric salt."

In view of this communication, an attempt to claim the use of gold in the treatment of tuberculosis as a separate invention would be an infringement on my discovery, and doubtless I have only to draw attention to the matter for the gentlemen in question to acknowledge they are about two years and a half too late.

I may mention that long ago I tried both the chloride and iodide of gold in the treatment of consumption, as well as the persalts of mercury and other metals, and I have been preparing a paper for some time to submit to you, wherein the results so obtained are mentioned, but which, through a family bereavement, I have not yet had time to finish.

Hypnotic Suggestion.

Mr. R. Arthur, M.B. (Wesleyan East End Medical Mission, 242, Cable Street, E.) writes: The following cases illustrate the power of suggestion as a sleep-producer and anodyne. All of them were patients whom I had frequently hypnotised before by the fixation method and suggestion, and had more or less relieved from intense pain and other symptoms. But in all the pain returned after a certain time, if the hypnosis and suggestion were discontinued, and I found it irksome to have to visit them every day or several times a week, not thinking it advisable to instruct the friends of the patients in the method of producing the hypnotic state. I was forced to have recourse to a plan which I thought would answer the purpose. I took to each of them a small quantity of "tincture of valerian," in a green bottle labelled "10 drops in water," and assured them that this would produce sleep similar to that I had brought about, and that on waking their pain would have disappeared, or at least be lulled. I then gave them "the drops," as they now term the tincture, and in all four cases the desired effect was produced. The patients passed at once into the hypnotic sleep. They were told to take it at night if they could not sleep, or during the day if the pain was very severe. On nearly every occasion sleep and relief from pain have been brought about. The cases are given in detail.

1. C. W., aged 53, locomotor ataxy of twelve years' duration, with almost continuous and excruciating pain. Hypnosis and suggestion relieved him greatly. Has had more pain since and have ceased to visit him, and if the pain is very severe the "drops" do not always produce sleep. As a rule they do, and he told me the other day that when 10 drops had failed to produce sleep, he increased the dose to 15, and slept at once. This patient sometimes takes 3vi of liq. morph. hydrochlor. in the day, but this does not relieve the pain.

2. Mrs. H., aged 43, scirrhus of mamma. On this patient the result never failed to follow, and she would sleep all night, or three or four hours during the day after taking the "drops." If she did not take them she generally passed sleepless, restless nights, even though she had a large dose of opium. The pain was also much relieved. This patient died a few days ago.

3. Mrs. S., aged 32, carcinoma uteri. She takes small doses of morphine, but if pushed, it induces extreme sickness and nausea. The "drops" generally make her sleep, and control the pain in a wonderful manner. At night, if the morphine fails to relieve her, she takes some "drops" and goes to sleep. She takes a few minutes to go to sleep, and during that time she says she feels the medicine "creeping all over her and lulling the pain."

4. E. D., aged 22, hysterical fits with hemiplegia of long standing and athetosis. In this patient sleep is produced immediately she shuts her eyes after taking the medicine, even during at attack, but as she visits me and is hypnotised by me personally, I am unable to judge what effect the indirect treatment has on her.

In conclusion, I would say that all these persons are from the poorer and uneducated class, and accustomed to be hypnotised, which probably accounts for the success of this innocent deception.

Dupuytren's Contraction of the Palmar Fascia treated by Hypnotism.

Mr. Arthur H. Rideal, M.B., C.M. (Southborough) writes: I fail to understand why the subject of hypnotism should have been brought into this case at all, as there is nothing to show that the same results would not have been produced by anæsthesia under chloroform. And again, Dr. Kingsbury has stated, but, as far as I can see, entirely failed to prove that this patient suffered from Dupuytren's contraction of the palmar fascia. In fact, the history of the case, as given by Dr. Kingsbury himself, points to the incorrectness of his diagnosis. He gives the following data: 1. Cramped position of fingers as caused by patient's occupation; 2, family history: father suffered in same way; 3, patient prone to subacute rheumatism. Added to this we have a copy of the photograph (No. 1), which certainly does not present any appearance whatever upon which to base the assumption that contraction of the palmar fascia existed. Here we have, most probably, a case of rheumatoid arthritis, and the treatment consisted not in hypnotism, but in breaking down the adhesions.

A Case of Childbirth in a Well.

Dr. F. L. Nicholls (Fullbourne) writes: Early in the morning (1 A.M.) of Sunday, December 21st, when the thermometer was many degrees below freezing point, a woman, aged 39, wife of a bricklayer, while in labour with her eleventh child (only one of whom is now alive), left the house, where she was alone in a room with a couple of young girls, and jumped down a well 20 feet deep, with but 2 feet of water at the bottom. Instead of at once calling the husband, who was in bed upstairs, these girls, who had fallen asleep, and only awoke on hearing the splash, ran off to the house where one of them lived, about a quarter of a mile distant, and roused her mother. A man then came back and awoke the husband, who at once got up and let himself down the well, where he fastened the chain round his wife and she was drawn up, but, on reaching nearly the top, the chain gave way and let her down again. Some time was then lost in fetching a rope, and she was then drawn out, having been, at the lowest calculation, forty minutes in the well. She was then taken into the house, where she was supported on a chair till about 3 o'clock in her wet clothes, before getting women to come and undress her. After sending her up the husband discovered a child floating in the water. It was not till 10 A.M. (nine hours after she went down the well) that I saw her. I found her on a mattress on the floor, very weak, but wonderfully better than anyone could have expected, and with the placenta, etc., still *in utero*, and this I had some difficulty in removing, having to insert my hand into the womb; when it contracted strongly on my withdrawing it, and with very little hæmorrhage. She has since made most satisfactory progress, and, in fact, has not had a bad symtom, not even after-pains, which is most unusual for a woman who has been confined eleven times. She was probably saturated with "liquor" at the time, as the midwife who saw her in the morning found her lying half on and half off the bed, smelling strongly of brandy, and, again, in the afternoon found her sitting with a jug of ale beside her, and in the evening, having lost her, after some search—amongst other places, looking down the well, as it appeared she had said something about jumping down—she was found in a public-house. Her system appears in this way to have been so anæsthetised as to have prevented much shock at the time, and also after-pains. The only marks after a jump of 20 feet, with only 2 feet of water to break her fall, being a small piece of skin off

one leg and few scratches on her hands. A *post-mortem* examination on the child proved it to have never breathed.

Santonin in Psilosis.

Dr. Charles Begg (Hankow, China) writes: I had the privilege—thanks to the courtesy of Dr. Wethered—of going carefully over the microscopic preparations in the case of psilosis recorded by Dr. Thin in the British Medical Journal of June 14th, 1890, and the great advantage of Dr. Wethered's guidance and explanation while doing so. In a paper published by me in the Chinese Customs Medical Reports, and in another read before the Medico-Chirurgical Society of Edinburgh on April 2nd, 1890, I gave the results of my treatment of this disease with yellow santonin, and from my clinical experience I argued out a theory of a probable pathology pointing to the disease being not, as it was regarded, a disease of the mucous membrane, but simply an interference with the function of absorption of the products of digestion, and all other lesions but secondary processes.

In considering Dr. Thin's case we must not lose sight of the fact that the specimens were taken from a patient who died from exhaustion due entirely to the ravages of the disease, and that therefore the appearances seen were the effects of the disease carried to a point incompatible with life. In thinking of the condition of the bowel of the patients we are called on to treat, we must think of these appearances as being considerably modified. It might be quite fair to argue that when destruction of the mucous membrane takes place the patient is very close to death, and *vice versâ*. To my mind the important part of the pathological report is the record of the mucoid-looking material found adhering to the free surface of the intestines, and containing micro-organisms. Dr. Thin seems to pass over its presence with hardly the attention it desires. In examining slide after slide it forced itself very prominently on our notice, and the underlying mischief seemed in direct ratio to its amount. Tracing it down the gut it was found that it was in excess just where absorption ought to be taking place, and who can doubt that it acted as a perfect preventative to all contact of the contents of the bowel with the absorbing surface? It was demonstrated that the digesting part of the mucous membrane was uninjured, and I am pleased to be able to quote Dr. Thin as allowing the secondary and fugitive nature of the changes seen in the mouth during life. This case has at last brought Dr. Thin to the opinion that although "nothing has been discovered in this or in any other case to account for the peculiar pathological changes described, their wide extent suggests some morbid agent acting from the free surface," etc.—an opinion I have now held for some years as the only way I could explain the results of the exhibition of santonin.

The questions we have now to settle are: What is this mucoid-like material? whence did it come? and what are the micro-organisms seen embedded in it?—most difficult problems, as all investigations regarding organisms in the intestinal canal must be. It is highly probable that the best work will be clinical, and I am encouraged to hope that in the light of this interesting *post-mortem* examination the profession will now be induced to turn its attention to the cure of psilosis by drugs, and no longer take refuge in prescribing change of climate and milk diet. To those interested I would refer them to my paper published in the *Edinburgh Medical Journal* for September, 1890, and it only seems necessary to add to the opinion I there express that this *post-mortem* examination would seem to point to an added mechanical factor in the process of interference with absorption. Speculation as to the origin of the mucoid coating is interesting, but we must not lose sight of the immense gain that has accrued by a clear demonstration that all the symptoms seen in our patients are but the result of a process acting from the free surface, and the chance so given us to put an end to it.

I may add that the last patient whose case I report in the paper above referred to is a gentleman in London, and he has given me permission to hand his address to any medical man desiring to see him. He was pronounced incurable, and had been a victim to this "process" for about nine years.

I would desire again to draw attention to the fact that I use yellow santonin dissolved in olive oil, regardless of the chemical quibble that the change in colour has no corresponding change in reaction. Clinically I find that the strength of the drug is in direct ratio to the intensity of the colour. The effect of the white crystals in psilosis appears *nil*. Exposure to bright sunlight will soon render any specimen of santonin fit to use.

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BOOKS, Etc., RECEIVED.

Studies of Old Casebooks. By Sir James Paget, Bart. London: Longmans, Green, and Co. 1891.

The Patient's Record for the Use of Doctors and Nurses. Compiled by Agnes S. Brennan. New York and London: G. P. Putnam's Sons. 1890.

Studies from the Physiological Laboratory of Owens College, Manchester. Edited by Professor William Stirling. Vol. I, price 10s. Published by the Council of the College. 1891.

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THE LETTSOMIAN LECTURES
ON
ANÆMIA:
ITS PATHOLOGY, SYMPTOMS, AND TREATMENT.

Delivered before the Medical Society of London.

By STEPHEN MACKENZIE, M.D., F.R.C.P.,
President of the Hunterian Society; Physician to, and Lecturer on Medicine at, the London Hospital.

Lecture III.

Scorbutic Anæmia.—Relapsing Pernicious Anæmia.—The Diagnosis of Anæmia.—The Treatment of Anæmia.—Of Defective Hæmogenesis.—Iron.—Of Excessive Hæmolysis.—Arsenic—Concluding Remarks.

Mr. President and Gentlemen,—I have already mentioned that there are cases of idiopathic anæmia which differ from cases of chlorosis and the general type of pernicious anæmia. To these I must now direct your attention; and first to cases of

Scorbutic Anæmia.—I have published[1] a case of a man, aged 18, who, one week before he came under observation, was attacked with headache and cough, followed by swelling of, and bleeding from, the gums. When admitted to the hospital, the gums were much swollen, bleeding, and ulcerated; petechial hæmorrhages existed nearly all over the body; no subcutaneous hæmorrhages or synovitis. Urine free from blood and albumen. Examination of the blood showed C. 51, H. 27, W. 0.52.[2] In the last two years he had had meat and potatoes every day, and green vegetables once a week. I was, nevertheless, inclined to regard the case as scorbutic at first, but in spite of all treatment, including antiscorbutics, he became more and more anæmic, but did not lose flesh; retinal hæmorrhages, more profuse than in any other case I have ever seen, developed, and ultimately general retinal œdema. The cutaneous hæmorrhages disappeared, but the gums remained spongy, and the bleeding from them considerable. Frequent and distressing vomiting set in, murmurs developed over the heart, and the pulse became exceedingly feeble. The urine contained a trace of albumen throughout after the first examination, but no œdema occurred. The red corpuscles sank to 13 per cent.; they varied much in size, some presenting cracks and fissures. The disease lasted a little over two months. The necropsy showed some thin hæmorrhagic extravasations beneath the pia mater; brain exceedingly white: lungs œdematous, with a few hæmorrhages. Numerous ecchymoses on surface of heart; muscle of left ventricle pale and mottled; liver and spleen anæmic; stomach very anæmic, ecchymosed; solitary glands, especially of large intestine, prominent; mucous membrane pigmented. Two small ulcers in large intestine, with deeply pigmented borders. Mesenteric glands mostly healthy, but several enlarged, and filled with calcareous matter. Micrococci were found in the capillaries of the kidneys, liver, and heart. They were only in small colonies, and there were no important changes in the tissues around them. It would, therefore, appear probable that they gained admission to the blood only shortly before death, increasing probably after death. The patient had suffered recently from primary syphilis, but no signs of visceral syphilis were found in the body. I have also recorded[3] another case somewhat resembling it, but running a more acute course. Dr. Gowers has recorded[4] two cases (one fatal) of a similar nature, in which the patients had plenty of vegetables, but had abstained more or less from animal food. He has suggested the very appropriate name of "scorbutic anæmia" for such cases.

I next wish briefly to relate a couple of cases which do not conform in all respects to the type which some recent writers have given of pernicious anæmia, particularly as regards the urine, and which show the marked tendency of this form to relapse.

Relapsing Pernicious Anæmia.—Case I.[5]—S. F., first admitted under my care on July 9th, 1884. He was an engineer, aged 39, employed sometimes on ships and sometimes on land on stationary engines. He never had ague or syphilis. In 1879 he went to work in the Severn Tunnel. There he suffered much from the defective ventilation and the fumes of dynamite used for blasting purposes. He stated that there were as many as fourteen deaths from these causes. After remaining there nine months he returned to Newport, where he did a great deal of "overtime" work, often working for four nights in succession, besides doing his day's work. In December, 1880, he noticed he was losing colour, and this was followed by loss of appetite, and some wasting. He went into the Newport Infirmary, and after three months' treatment was able to resume work. He had a succession of break-downs and recoveries from that time, and his case excited a great deal of interest; a number of doctors visited him on account of the peculiarity of his case, and he was not expected to recover. He was sent to me by Dr. W. F. Edwards. He was temperate in everything except work. His attacks appear to have come on rapidly, in varying circumstances, and, after lasting an indefinite period, to have comparatively rapidly passed off. To use his own words, "When I begin to get well I get well quickly."

On admission he complained of great weakness and depression. There was extreme pallor, and a faint yellow tint of the skin. His pulse was 96, tension not increased; systolic murmur over third left rib, conducted to apex; no dilatation, no retinal hæmorrhages, no œdema. His blood, on admission, showed C. 13, H. 20, W. 1.5. His urine had specific gravity 1021, and was of amber colour. His history of working in a tunnel led me to prescribe anthelmintics, and to examine the stools microscopically, but with negative results. He was troubled with constant nausea and occasional vomiting at first, but there was at no time diarrhœa. He was put on Blaud's pills, which he took for some time without benefit. Arsenic was then substituted at first in 4-minim doses, increased later to 6, three times a day. The improvement, as shown by the chart, was immediate and progressive from the time he took arsenic, and when discharged, on September 2nd, examination showed C. 95, H. 90, W. 0.94. His urine was examined every few days throughout his residence in the hospital. It was "straw" or "amber"-coloured, except on three occasions, when it was "orange." These were, when he was rapidly improving, C. 55, H. 33, W. 0.6. The average quantity was 65 ounces, and the specific gravity varied from 1010 to 1018. His temperature never exceeded one degree above the normal. He was admitted a second time in the early part of 1885, under Dr. Fenwick, and recovered under arsenic.

Third admission, November 14th, 1885. This relapse began with nausea, anorexia, and rapid loss of colour and strength two months before. He had vertigo, faintness, and palpitation on the least exertion. He had been under medical treatment six weeks, but the only result, he said, was constant diarrhœa the whole time. He had complete anorexia, discomfort after what he took, and looseness of the bowels. No *bruit* over heart, venous hum in neck. Defect of vision in right eye, with some atrophy of papilla. Loss of smell. No œdema. Blood on admission C. 20, H. 38, W. 1.9. It was later C. 25, H. 24, W. 0.96; and then steadily rose, when taking arsenic and iron, to C. 73, H. 86, W. 1.17. His urine, on admission, was of deep colour, 1018, alkaline; with this exception it was "amber" or "deep amber" on each occasion. It was deep amber most frequently when he was recovering. It contained a trace of albumen on four occasions. He left on January 12th, 1886, feeling well, and with a good colour. His temperature was 100° F. several times, and once rose to 102.5°. It will be observed that the recovery, as indicated by the condition of the blood (C. 73, H. 86, W. 1.17), was not so complete on this as on other occasions. This I attribute to arsenic not being used so freely. He took mist. ferri arsenicalis, which contains 5 minims of Fowler's solution, and pil. ferri co. three times a day.

Fourth admission, March 31st, 1887. This relapse had existed about one month. It was apparently induced by a cold,

[1] *Ophthal. Soc. Trans.*, vol. i, p. 51.

[2] For brevity the following signs are used: C. = red corpuscles per cent; H. = hæmoglobin per cent.; W. = worth or value of individual corpuscle.

[3] *Ophth. Soc. Trans.*, vol. ii, p. 34.

[4] *Medical Ophthalmoscopy*, 3rd ed., p. 246.

[5] Compiled from notes by Messrs. Owen and Kenneth Morell Mackenzie and Drs. Taylor and Robb.

following which he had the usual train of symptoms—nausea, anorexia, anæmia, and some wasting; he was very pale; there was anorexia, breathlessness and palpitation on the least exertion. No murmur. His blood, on admission, showed C. 45, H. 40, W. 0.88; on April 5th, C. 34, H. 45, W. 1.35. It improved under arsenic a little irregularly to C. 95, H. 80, W. 0.84. On the last two examinations the corpuscles exceeded the hæmoglobin. The urine averaged 56 ounces; the specific gravity varied from 1012 to 1020. The colour was "pale," "yellow," or "amber" on every occasion except one, when it was "dark sherry." This was when he was improving (C. 58, H. 65, W. 1.1). There were occasional traces of peptones and albumen; slight deposits at times of uric acid and phosphates, and indican was present twice. His temperature never exceeded 100° F. He was treated with Fowler's solution, beginning with 5 minims, and increasing gradually to 10 minims three times a day. He died at home in a later attack.

Fifth admission, May 31st, 1888. The attack had lasted one month, came on in the usual manner, and had the same general characters. He was at once put on arsenic, beginning with 5 minims and increasing to 12, three times a day. The corpuscles, which alone were measured, were 37.6 per cent., fell to 21 and 15 per cent. later, and only reached 41 per cent., when discharged on September 4th. He remained weak for one month and then became worse, and died in a week with delirium and vomiting.

Case II.[6]—I have another very similar case under my care at the present time—D. M., boiler maker, aged 48. He had increasing pallor, weakness, with loss of flesh for many months before admission on December 6th, 1889. There was great pallor, anorexia, and costiveness; pulse 84, small and soft; no murmur, but venous hum in neck. Hæmorrhages in both retinæ.

On admission, C. 30, H. 25, W. 0.83. He was put on arsenic, beginning with 5 minims, and increasing to 13 for a dose three times a day. He rapidly gained colour, strength, and flesh, and the retinal hæmorrhages, disappeared, and on discharge he had C. 82, H. 68, W. 0.82. His urine was amber, pale amber, and straw coloured throughout; its density varied from 1014 to 1028, and was always free from albumen. His temperature was never above 99° F. His weight increased from 9 stone to 10 stone 5½ lbs.

Second admission, November 28th, 1890. His appetite had been bad all through the summer, and he had consequently lost flesh. In the last five weeks appetite almost entirely left him, he became very pale and weak, and suffered from constipation and headache. He was very pale on admission, and his skin and conjunctivæ had a yellowish tint. First sound of heart feeble and distant, second reduplicated; dyspnœa on the least exertion; no hæmorrhages in retina; C. 46, H. 30, W. 0.65. He was put on arsenic solution, beginning with 5 minims and increased by degrees to 12 three times a day, with a morning saline aperient. He has steadily improved, and his blood on January 15th was C. 75, H. 60, W. 0.8. His urine has been examined daily. It has averaged 58 ounces, specific gravity from 1018 to 1030. It has never contained sugar, albumen, or bile pigment. Particular attention has been paid to its colour. It has been "amber," "yellow," or "pale straw" on most occasions, "darkish straw" or "pale brown" on several. It has never contained any excess of normal urobilin, nor any pathological urobilin, though examined daily for these. He has had one febrile attack, in which his temperature reached 102.5°, lasting two days.

These two cases present many points of interest, two only of which I must dwell upon. First, the character of the urine. In Case I it will be observed that it was always pale, except when he was recovering, that is, when the pathological process causing the anæmia was least active, at a time when he was taking arsenic. I believe I have observed the same effect in some other cases, the urine becoming dark when the patient was being treated by arsenic. Arsenic, as well known, is eliminated by the kidneys.

In Case II the urine has been examined most carefully daily by my house physician, Dr. David Brown, who is a very good chemist; and though it has been darker on some occasions than others, there has been no pathological urobilin, and no excess of normal urobilin.

[6] From notes by Messrs. Turrell, Lea, and Stanton.

The second point to which I must refer is the prognosis in such cases. In Case I, repeated recoveries under arsenic were followed by repeated relapses over a period of about nine or ten years, and at the earlier part of the illness he was given over as irrecoverable. Change of locality, change of occupation were tried without avail in warding off the fatal termination. Though Case II is now nearly convalescent, I have little doubt he will have a return of his disease with the same ending.

Dr. Hale White, in a paper in the forthcoming vol. 47 of *Guy's Hospital Reports*, of which he has allowed me to see a proof, has gone very carefully into the prognosis of cases of pernicious anæmia, and shown that though a small number of cases left Guy's Hospital relieved, several relapsed and died of the disease in the same hospital. Moreover, during the ten years 1879 to 1889, there were nine patients believed to be suffering from pernicious anæmia who recovered sufficiently to leave the hospital. Of these two are known to have died, and, from reasons given in the paper, there is a presumption that six more died. One case under Dr. Hale White's care recovered and remained well at the end of nearly four years. A previously published case of Dr. Pye-Smith's was well at the end of two years. These are the only two in which a real recovery can be stated to have occurred in Guy's Hospital since the time of Addison. Both were treated with arsenic. Dr. Tyrrell Brooks has recorded a case[7] of apparent recovery, but with a fatal relapse a year later. I can endorse Dr. Hale White's statement that a subsequent report of cases published as cured by arsenic is much to be desired.[8]

Diagnosis.—The diagnosis of anæmia presents no difficulty if we make this reservation that pallor is not always indicative of the presence of anæmia. The colour of the mucous membranes is a more trustworthy guide than that of the skin. In Bright's disease, for instance, patients look much more anæmic than is proved to be the case. Having established, by actual examination of the blood, that anæmia exists, we have next to determine on what this depends; in other words, whether it is a secondary and symptomatic, or a primary and idiopathic anæmia. To exclude the former we have to consider the history of the case, and to make a careful and complete physical examination. There are in this country two diseases of which anæmia is symptomatic, and in which the signs of local disease may be wanting for some time; these are tuberculosis and cancer. Anæmia may be one of the earliest indications of pulmonary and other forms of tuberculosis. It is usually, but not invariably, accompanied by wasting. The occurrence of anæmia and wasting in a young person should excite a suspicion of incipient tuberculous disease, and lead to repeated examination of the lungs and other organs. Wasting is not characteristic of chlorosis, but may accompany it, and be carried to an extreme degree, as in a case of chlorotic hysteria sent to me by Dr. Heywood Smith in 1882. The patient was emaciated to an extreme degree. When first seen she had C. 50, H. 30, W. 0.6; later, C. 48, H. 20, W. 0.42, and ultimately rose to C. 96, H. 60, W. 0.62. Her weight when she first came under my care was 4 stone 2 lbs., and it rose to 6 stone 7 lbs. She has remained well ever since, but has entire suppression of menses, and has become exceedingly stout. I was once present at a *post-mortem* examination of a case believed, during life, to be pernicious anæmia, but which was proved to be cancer of the stomach. In this case the diagnosis was rendered peculiarly difficult by the entire absence of gastric pain and vomiting. This case shows the caution necessary in diagnosis, and in accepting as pernicious anæmia cases not proved by necropsy. Whilst indeed it was necessary at one time to reject all cases not proved by *post-mortem* examination, so as to get a clear picture of the disease, yet we are not justified now in rejecting cases which have the characters I have described. It must be remembered that neither variations in the size, nor alterations in the shape of the red corpuscles is peculiar to idiopathic anæmia. Still the careful examination of the blood will go far towards the diagnosis of the variety of anæmia. Thus the reduction of the red corpuscles to, or

[7] Reprint from *Lancet*, 1887, vol. ii, 859.

[8] Laache, at the International Congress, 1890, narrated a case in which under arsenic rapid improvement took place, an increase of about 211,000 per cubic millimetre taking place daily, and the patient appeared to recover completely; after some months he relapsed and died.

below, 30 per cent., especially if the hæmoglobin is relatively high, is in favour of pernicious anæmia. The other diseases in which such great reduction in the number of corpuscles occurs are hæmorrhage, in which the corpuscles and hæmoglobin usually have their normal relationship, and the history of loss of blood is rarely wanting; and cancer, in which as in some cases I have mentioned the hæmoglobin is sometimes greatly below the corpuscular richness. In chlorosis the marked characteristic is the deficiency of hæmoglobin. It should be further remembered that retinal and other hæmorrhages, whilst characteristic of pernicious anæmia, are not pathognomonic of it. They indicate a severe degree of oligocythæmia—usually less than 50 per cent. of red corpuscles. A rough but serviceable guide to the recognition of this degree of anæmia is furnished by the colour of the nail bed of the fingers. As long as any pink colour can be seen, then it may be assumed that there is at least 50 per cent. of red corpuscles. When the pink colour entirely disappears from the nail bed, the corpuscles will be found to be below 50 per cent. The recognition of this degree of anæmia is a warning that the grave consequences of anæmia may be expected.

The Treatment of Anæmia.

The use of pathology is to guide us in the prevention and cure of disease, and treatment, to be scientific, must rest upon pathology. We have endeavoured to work out the pathology of anæmia, and have shown that anæmia depends upon either defective hæmogenesis or excessive hæmolysis, or upon the two combined. The principles of the treatment of anæmia must therefore follow upon these lines. It will be convenient to consider treatment under three heads—dietetic, hygienic, and medicinal.

In *defective hæmogenesis*, whether the anæmia is idiopathic or symptomatic, it is essential that the diet should be ample to supply the pabulum from which the corpuscles and their hæmoglobin are prepared. It must be remembered that the food of ordinary life, in sufficient quantities, contains all the elements, including iron, that are necessary for blood formation. We must be careful to see to the condition of the teeth that mastication may be properly performed. A good amount of meat is desirable—as much as the patient can comfortably and perfectly digest. A small amount of stimulants—especially red wines, such as burgundy, claret, or port; or malt liquors, such as stout or light bitter beer, is often of service. The hygiene consists in securing the patient as much light—especially direct sunshine—and fresh air as is possible. The bleaching effects of darkness are seen throughout organic life. Gentle exercise in the open air, or driving, when the strength permits, is of importance, but, in severe degrees of anæmia, absolute rest is imperative and of the greatest service. In less severe degrees of anæmia longer hours than usual in bed, and the recumbent position for some hours in the day time, to save the enfeebled heart, are important matters in practice. A morning tepid sponge bath should be used. Suitable and sufficient, but not excessive or tight, clothing should be worn. Anæmic persons are usually sensitive to cold.

We come now to the *medicinal* treatment. The following are the remedies which increase the rapidity of, or perfect, blood formation: Iron, phosphorus, potash, manganese, arsenic (?), hydrochloric acid (indirectly), and oxygen.

Iron is proved by every day clinical experience to be of the greatest value in anæmia, though objectors are still found to its being absorbed and acting on the blood. They believe that its good effects are due to its local tonic action on the stomach and intestine. That it is, in some part, absorbed has been proved by Rabuteau and many other observers. Much that is taken is undoubtedly not absorbed, and passes into the intestine, where it is converted into the sulphide or tannate, which cause the black stools of patients taking iron, and it is probable that much that is absorbed into the portal vein returns to the intestine with the bile. In the stomach and intestine, if not given in these forms, it becomes converted into a chloride or albuminate. It soon becomes incorporated with the red corpuscles, as it cannot be detected in the plasma elsewhere than in the portal system. I cannot refrain from quoting an interesting remark of Dr. Mitchell Bruce's:[9] "The action of iron on the blood is almost unique of its kind: First, because its specific action is exerted, not upon the plasma, but upon the red corpuscle, and on this alone, not on any other tissue or organ. Secondly, because the action appears to be nothing more than the combination of iron, as one of the constituent elements of the corpuscles with the others. In the case of no other metal can we speak so definitely of its *modus operandi*." It being accepted, as all clinical experience teaches, that iron does improve the character of the blood, we must next examine into how it accomplishes its effect. Systematic examinations of the blood in chloroties and other subjects of anæmia show that usually its immediate effect is to increase the number of corpuscles without a corresponding increase in the amount of hæmoglobin, so that the first result may be a lowering of the worth of the individual corpuscle. By degrees, however, the corpuscles become more deeply impregnated with hæmoglobin, and ultimately they reach their normal value. It would thus appear that the influence of iron is first to stimulate the production of new or young corpuscles, and only secondarily does it add to the amount of hæmoglobin in the corpuscles. The practical matter that concerns us most is the determination of the best manner of administering it. Probably all forms are useful, and possibly the form makes no difference if enough can be given. The bland and non-astringent forms are tolerated in larger doses and for a longer time than the astringent forms. It is, again, a question whether ferrous or ferric salts are the most useful as hæmatinics. This is, in a measure, answered in the preceding paragragh, and, speaking generally, my experience leads me to the conclusion that the ferrous salts are to be preferred.

A few words on the method of conducting an iron treatment will not be out of place. I would remark it is exceedingly rare for patients to be unable to take iron in some form when it is really needed. Next, the pill form is the most convenient in the usual way. It does not blacken the teeth, is tasteless, the dose is easily augmented without modification of the formula, and is proved by experience to be thoroughly efficient. In cases where there are reasons for not giving it in pill, albuminate of iron, dialysed iron, Griffith's mixture, or one of the scaly preparations may be employed. Where there is much gastric disturbance this must be treated at the same time, but is no bar to the administration of iron. When the tongue is coated, flabby, and indented by the teeth, it is my practice to give an alkali and bitter mixture between meals, and iron in pills immediately after or with food. We may combine the iron with the citrate or bicarbonate of potash, and give the two together, but it is not in this way so convenient to regulate and augment the dose of iron. Dr. Lauder Brunton recommends the astringent preparations of iron when the tongue is pale and flabby. Where constipation coexists, as it often does, there are several ways of dealing with it, dependent on its cause. Dietetic measures should always be employed; but failing these we may combine the iron with an aperient in the form of a mixture, as the sulphate of iron and sulphate of magnesium, or the iron may be combined in a pill with aloes and myrrh. My own plan is, however, usually to give a saline aperient in the morning on rising. One of the natural purgative waters may be employed, or a drachm (or thereabouts) each of sulphate of sodium and sulphate of magnesium (with or without a drachm of chloride of sodium) in half a tumblerful of warm water. My distinguished colleague and friend, Sir Andrew Clark,[10] has particularly emphasised the importance of aperients in the treatment of chlorosis, and states: "If in the treatment of this malady I were perforce limited to the employment of one sort of drug, the drug which I should choose for use would be an aperient." Nevertheless, he usually advises the employment of an acid or alkaline ferruginous cathartic mixture, or sulphate of iron in pill, and a saline aperient in the morning, as recommended above.

Fashion no doubt influences our choice of the particular preparation, and so one salt or combination of iron after another is for a time the popular medical remedy. The teaching of Niemeyer and the pushing of advertising pillmongers have made Blaud's pill the general favourite at the present time, and it is undoubtedly one of the most valuable. I have used this preparation for the last twenty years with excellent results. The slight pharmacological knowledge I possessed

[9] *Materia Medica and Therapeutics*, 4th ed., p. 85.

[10] *Lancet*, vol. ii, 1887, p. 105.

told me that the amount of carbonate of potassium was in excess, and for years I have prescribed the pills in the following formula: Ferri sulph. exsic. gr.ij; potas. carb. gr.j; glycerin. of tragacanth. q.s. Blaud's pill being so much in use, it is interesting to learn what we can about it. A good deal has been written on the exact condition of the iron in these pills. Mr. Martindale has been good enough to supply me with some interesting information. "The following formula represents the decomposition in making Blaud's pills:

$$K_2CO_3 + FeSO_4 = FeCO_3 + K_2SO_4.$$

By exposure in the moist condition $FeCO_3$ evolves CO_2, and absorbs oxygen, becoming converted into ferric oxide as ferric hydrate. Thus:

$$FeCO_3 - CO_2 = FeO$$
$$2FeO + O + H_2O = Fe_2O_2(OH)_2."$$

Mr. Martindale suggests that "instead of equal quantities of carbonate of potassium and sulphate of iron (crystals), about three of the former and five of the latter should be used, so as not to have an excess of the potash salts, which makes the pill become damp; or equal weights of dried sulphate of iron and carbonate of potassium nearly exactly neutralise each other. A five-grain Blaud's pill, according to the *Addendum* to the *British Pharmacopœia*, 1890, should contain about 1 grain of true carbonate of iron, as ferrous carbonate; but it is found that before the pills can be dried and coated, quite one-half of this has been converted into ferric oxide."

Of course it may be maintained that there is a great difference between pharmaceutical elegance and practical results, and that the excess of alkali in Blaud's pill, as prescribed by Niemeyer (modified from Blaud's original formula), increases their efficiency, if it gives the dispenser more trouble. I have not found, however, that the diminished quantity of alkali in any way impairs the utility of the pill. Potash is the principal base of the red corpuscles, and potash is found in the urine in excess in some forms of anæmia, so that the blood may be poor in it. The latter, however, is the case when the anæmia is hæmolytic, and when iron is, as a rule, not indicated; whilst in anæmia due to defective hæmogenesis there is no loss of potassium. Moreover, the potassium is so abundantly supplied by the food that the amount given in the pill is a mere drop in the ocean. Two other pill preparations containing iron deserve mention. The pil. ferri carb., *B.P.*, made with saccharated carbonate of iron and *syrup* instead of conf. rosæ, as suggested by Mr. Martindale, is an excellent one which I have been using lately. A 5-grain pill will contain 1½ grain of ferrous carbonate—three times as much as Blaud's pill—and is much more stable. Five grains of dried sulphate of iron made into a pill with syrup—a favourite of Dr. Ringer's—also contains three times as much iron as Blaud's pill.

In treating primary, especially chlorotic, anæmia, the best results appear to be obtained by pushing the iron in large doses, and it is on this account that the pill form is so convenient. We can begin with one pill three times a day, soon give two pills three times daily, and later in some cases give three pills for a dose. More than this is not usually necessary. No doubt much of this is squandered, not being absorbed from the digestive tract. Whether in these circumstances more is actually absorbed than when it is given in smaller doses, or whether it acts indirectly on the gastro-intestinal tract, as maintained by Buchheim, Kobert, and Reinl, is uncertain; but the fact that large doses act more promptly and efficiently is established by experience.

One more point of great importance which is often lost sight of. The iron treatment, in cases of chlorosis especially, should be persevered in for two or three months after the patient feels herself well, and often has a good colour. We have seen that the hæmoglobin remains deficient after the corpuscles have returned to about their normal number, and it is only slowly that the corpuscles arrive at their normal amount of hæmoglobin. Relapses in such cases are exceedingly common if the iron is prematurely discontinued. Laache, in a recent communication,[11] has emphasised this fact, and pointed out that Niemeyer's statement, that three boxes of 96 Blaud's pills suffice to cure the most obstinate chlorosis, is very misleading.

Phosphorus, in my experience, is of greatly less value than iron in chlorosis and other forms of defective hæmogenesis. It is, however, sometimes serviceable, as in cases recorded by Gowers[12] and others. When given it should be in pill made with ol. theobromæ, and recently prepared.[13] It has been maintained by some recent writers that dilute hydrochloric acid is more useful than iron (Zander). It may do good by increasing the digestive power, and thus enable the patient to gain more iron from the food. Manganese appears of doubtful value. Arsenic has been proved to be useful in some cases of chlorosis, but iron is usually much more efficacious. Oxygen, administered by inhalations, has been used in some cases with apparently good results, but I have no personal experience of this method of treatment. We occasionally meet with cases of chlorosis which improve time after time with iron and other remedies, but which ultimately die of this disease.

We now pass on to the treatment of *Hæmolytic Anæmia*. Here theoretical considerations suggest that animal food should be sparingly given, since it has been pointed out in the first lecture that it is asserted that a diet rich in animal food increases active destruction of red corpuscles. Dr. Hunter[14] has suggested a trial of a purely milk diet, or of a farinaceous and milk diet, and in the case in which he tried these, though the disease was in an advanced stage, a certain amount of improvement took place—the blood pigment disappeared from the urine, and the amount of aromatic sulphates was diminished. I shall certainly give a purely milk, and a farinaceous and milk, diet a trial. Alcohol does not, as a rule, benefit such cases, and, if given, weak spirit and water is the best form. As long as patients with pernicious anæmia have the strength, they should get into the open air and sunshine, but should not tax their powers by exercise. They should adopt the recumbent position as much as possible, so as to conserve their powers, and put as little tax as possible on the fatty and weakened heart. We must remember, however, whilst combating the hæmolysis, not to neglect hæmogenesis, which is often struggling to maintain the balance. Sitting in the open air and sunshine in suitable weather, and carriage exercise, are therefore to be encouraged, the patient, of course, being suitably clothed.

We come now to the medical treatment of pernicious and other forms of hæmolytic anæmia. Amongst the remedies which diminish blood destruction—*anti-hæmolytics*—may be enumerated arsenic, quinine, mercury, phosphorus, betanaphthol, iodoform, carbolic acid, sulpho-carbolates, menthol.

Arsenic.—Amongst the great gains we have had in the treatment of anæmia in recent years arsenic stands in the first position. We owe the suggestion of its employment to Dr. Byrom Bramwell,[15] who was the first to use it in pernicious anæmia in 1877. Since then abundant testimony has confirmed its value, and its action, if not specific, is at least very marked where tolerated. Various modes of administration have been adopted, but none is more efficient than Fowler's solution, in which form usually the maximum quantity can be exhibited. The dose, beginning with quite a small one—2 to 4 or 5 minims—freely diluted, and given with or directly after food, can be gradually increased until largish ones are tolerated. I believe the larger doses—10 to 15 minims three times a day—to be the most capable of producing good results. In some cases of pernicious anæmia arsenic is not well borne, though I cannot remember to have had such a case under my own care. In such circumstances I should certainly try its administration subcutaneously. It is not always successful even when tolerated. As regards its mode of action we have no certain knowledge. It was originally tried on account of its undoubted though somewhat capricious efficacy in Hodgkin's disease, which led to the inference that it exercised some, although unknown, action on the blood-forming organs. It has been suggested that it acts locally on the mucous membrane of the stomach and intestine (Hunter)—I presume as a germicide, preventing the development of ptomaines. Its well known action in malarial anæmia is probably due to its germicidal action on the plasmodium malariæ in the blood corpuscles. A new

[11] Sep-Abdr. aus d. *Wiener klin. Wochenschr.*, 1890, No. 38.

[12] *Practitioner*, July, 1878.

[13] The *Extra Pharmacopœia*, Martindale and Westcott. Sixth Edition 1890. P. 295.

[14] *Med. Soc. Trans.*, vol. xiii, p.

[15] *Edinburgh Med. Journ.*, November, 1877; and *Med. Times and Gaz.*, 1877 vol. ii, p. 431.

light has been thrown on its possible action by an interesting observation of Dr. Copeman's.

He writes [16] of pernicious anæmia: "When a drop of blood was removed from the finger and allowed to fall on a glass slide, then when the edge of the drop had dried somewhat a cover glass was gently placed upon it, crystals of hæmoglobin gradually formed in the film of blood in from ten to forty-eight hours without any further preparation. The only exception to this was in the case of patients who had been treated with arsenic for some days, after which crystals could not be obtained, although, if then the arsenic were discontinued for an equal length of time, they again put in an appearance."

It would appear from this important observation that arsenic exercises a direct influence upon the red corpuscles, lessening their vulnerability, which we have seen is one of the characteristics of anæmia, especially of hæmolytic origin. Arsenic has been shown to diminish the glycogenic function of the liver, and it is possible it may exercise some influence in restraining the hæmolytic function of this organ. In poisonous doses arsenic exercises a destructive influence on the red corpuscles, reducing the hæmoglobin and impairing its oxygenating powers. An interesting point in connection with the administration of arsenic is the fact that it sometimes produces bronzing or pigmentation of the skin. How this is brought about is a disputed point; but it is probable that it is by increasing the activity of the pigment-producing tissues. It is probable that the increase of colour of the urine in some cases of pernicious anæmia during the administration of arsenic is in some way connected with this action.

Quinine is sometimes useful in the pyrexial attacks of pernicious anæmia. Phosphorus has proved useful in one case recorded by Dr. Broadbent, but has failed to do good in others. The evidence regarding mercury is conflicting, but Keys has asserted it increases also the number of red corpuscles. Betanaphthol has been suggested by Dr. Hunter, and this drug and the other disinfectants I have named perhaps deserve a trial, but I have no personal experience of their employment in anæmia. Too often in pernicious and other forms of hæmolytic anæmia, all treatment is incapable of preventing the final issue in death. Arsenic may arrest the disease for a time, and in a few cases effect a cure, but more often, as we have seen, its effects are more transitory than is generally believed. Indeed, the position to-day is but little altered since Addison said of it, "The disease presented in every instance the same general character, pursued a similar course, and, with scarcely a single exception, was followed after a variable period by the same fatal result."

I had intended to have dealt with Transfusion in the treatment of anæmia, but my time is exhausted, and I must leave this undiscussed. This is the less to be regretted, as my own experience on the subject is small, and distinctly unfavourable. The literature is voluminous, and the matter a very complex one. Moreover, the subject has been very fully dealt with by M. Hayem, and quite recently by Dr. Hunter,[17] and the outcome of their experiments, and the general medical experience, is against the employment of transfusion, though cases of recovery from pernicious anæmia have been recorded after transfusion. Intraperitoneal and subcutaneous injections of blood have also been tried, especially on the Continent, but such treatment, even in the most skilful hands, has been shown by Cohnheim not to be free from great danger, fatal peritonitis having occurred in several cases after intraperitoneal injections.

But I must now bring my lecture to a close. I am deeply conscious of the imperfect manner in which I have accomplished my task. I feel that, in trying to cover so wide a field, I have dealt in a sketchy and imperfect manner with many parts of the subject.[18] Still, I cannot but believe that it is important that a survey of the whole subject of anæmia should be made, so as to fit the many and detailed observations of the numerous workers into one harmonious whole. The enormous amount of work that has been done in recent years, and the complexity of the subject, render the office a difficult one, requiring an abler exponent than myself.

In conclusion, I desire to express to you, Sir, and the Council of the Society, my sense of the honour conferred upon me in inviting me to deliver these Lettsomian Lectures, and also to thank the Fellows and gentlemen who have patiently listened to them.

[16] *St. Thomas's Hospital Reports*, vol. xviii, p. 103.

[17] Arris and Gale Lectures, BRITISH MEDICAL JOURNAL, 1889, vol. ii.

[18] I regret exceedingly that a very able and important paper by Dr. Edington, "Report on the Morphology and Development of the Blood," BRITISH MEDICAL JOURNAL, May 31st, 1890, has entirely escaped my observation until too late to deal with. It should be consulted by the reader.

ON THE TREATMENT OF PSOAS, ILIAC, AND OTHER LARGE TUBERCULOUS ABSCESSES BY HOT WATER FLUSHING WITHOUT DRAINAGE.

By ARTHUR E. BARKER, F.R.C.S.,
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HITHERTO the usual treatment of large tuberculous abscesses, whether connected with a diseased spine, with broken-down glands, or in the soft parts, has left much to be desired. Whether they were simply allowed to burst, or were opened and dressed antiseptically, or whether they were aspirated with or without subsequent injection of germicidal fluids, the results have often been far from satisfactory. Either the discharge, however sweet, has gone on for an indefinite time through open sinuses, or the abscess has become infected with saprophytic organisms, and only too often with acute septic processes.

Most of us must have always felt, in dealing with these large collections of curdy and often semisolid material, that the great difficulty was their complete evacuation. But I question whether many of us realised what complete evacuation really ought to involve until comparatively recently. Formerly, it simply meant the escape of as much of the liquid contents of such an abscess as would flow freely either through a limited opening or through an aspirator needle. But it is only lately that thorough evacuation of a tuberculous abscess has come to mean not only the removal of its fluid contents, but also of all solid and semisolid, caseous or calcareous, *débris*; and not only this, but of that lining of half organised exudation material which covers the whole inner surface of the abscess, formerly called the "pyogenic membrane." It is in this last structure, if left behind, that we probably have the greatest obstacle to the complete obliteration of simple tuberculous abscesses of soft parts when otherwise emptied by methods hitherto in vogue. So long as it remains behind, we leave the most active part of the tuberculous material undisturbed, and this is capable of continuing indefinitely the process which originally produced the fluid contents of the abscess. Outside of this material is found the firm wall of the cavity, which is nothing else than more or less perfectly organised fibrous tissue. This latter may be regarded as a natural barrier thrown out by the tissues around the tuberculous focus by plastic exudation, and tending to protect the system against the spread of the infective process. In everything that is done to a tuberculous abscess, this natural wall therefore must be respected as far as possible. Further, in evacuating such an abscess, we must guard the freshly-cut surfaces of the healthy tissues through which we have to cut in order to reach the tuberculous matter against inoculation with the latter in the course of its removal. If this precaution is not taken, our scar will often break down weeks after primary union has taken place, and the process of reinfection may again take place over the whole tract of the recently closed abscess cavity.

Now if we adopt this view of the nature of tuberculous abscesses, and the principles of eradication which should be applied to them, the question how to accomplish thorough evacuation forces itself upon us very urgently. It would serve no useful purpose here to review all the various methods of treating the abscesses in question now in practice, but I shall briefly sketch one which has yielded me excellent results of late years, indeed better than any I have ever had by other methods.

Having had considerable experience in the removal of tuberculous material from widely diseased hip-joints by hot

water flushings applied in a special way, and having seen case after case heal completely and permanently without any drainage, under one dressing, after such treatment, I have been encouraged to apply the same method to large tuberculous abscesses elsewhere. The results have exceeded expectation, and have encouraged to further trial.

The *modus operandi* is simply this: Take the case of a psoas abscess, in which the bone lesion is apparently stationary, or perhaps healing, but where a large collection is steadily, though slowly, advanced towards the skin of the thigh. In such a case a 2-inch incision is made through sound structures over the lower end of the swelling. Through this opening a hollow gouge is inserted, which is connected with a reservoir of hot water at 105° to 110° F. by a rubber tube some 6 feet long. This reservoir (a 3 gallon can) is raised about 5 feet above the operating table. When the water is now turned on it rushes through the long gouge to the fundus of the abscess with considerable force, and the reflux carries the contents of the cavity out by the incision. By gently scraping with the flushing scoop the more solid caseous matter is dislodged, the hot water carrying it clear of the cavity at once. Then the walls of the cavity are gently scraped in a methodical manner until the soft lining is loosened and carried away from every part of the abscess. In order so effect this thoroughly I have had these scoops made of varying length, so that the deeper parts can be reached. In the case of a psoas abscess they can be carried up under Poupart's ligament nearly, if not actually, to the spine. In using them all violence must be avoided, lest important structures should be torn, or lest the fibrous wall of the abscess should be broken through, and, finally, to avoid bleeding. With hot water the bleeding is but slight if the peeling be done cautiously.

When the water runs out clear after having been carried to all recesses of the cavity, the instrument is withdrawn. Then any excess of water is squeezed out, and if the deeper parts are accessible sponges are used to dry out the last traces of moisture. Then two or three ounces of fresh iodoform emulsion are poured into the deepest part of the abscess, and stitches are inserted in the edges of the incision. Before these are knotted all excess of emulsion should be squeezed out of the cavity. The knotting of the silk sutures then completes the procedure. As no drain tube is used at all, a simple dry dressing of salicylic wool is alone required, but it should be laid on in considerable quantity, so as to exert elastic pressure over the whole area of the abscess when bandaged. Such a dressing may be left on for about ten days, when it is time to remove the stitches, and the wound should then be firmly healed. A piece of salicylic wool secured by collodion at the edges should, however, be laid over it to keep it from chafing for a few days longer, and the elastic pressure should also be kept up.

Such a procedure is only demanded for the larger tuberculous collections, such as, for instance, psoas, iliac, and lumbar abscesses. Of course, for those which can be fairly isolated, no treatment is better than to dissect them cleanly out without rupturing them—a practice I am very partial to. This can be done in perhaps a much larger proportion of cases than is commonly supposed, even when the contents are fluid. Again, in the case of softening tuberculous glands, it is the proper thing to dissect round them and remove them entire, and wounds thus made ought to heal by first intention and without drainage. Some of the larger abscesses, such as those alluded to above, may also ultimately be cured by aspiration of their contents and injection of iodoform emulsion. But in my own experience of many such cases this requires considerable time, is uncertain, and is only to be achieved when the contents are very fluid. Where there is much solid matter which will not pass through the needle, I know no method so reliable and so speedy as that of mechanical hot water flushing. I have always called this "flushing," as it is something totally different to mere irrigation, which does not carry away the material one is anxious to have removed.

A few cases illustrating this method may now be quoted out of many such by way of illustration.

E. C., aged 13 years, a cripple from spinal caries for nine years, was admitted into University College Hospital on December 31st, 1889. Two years before there is said to have been a swelling in the groin, which subsided. On admission there was marked angular curvature in the dorsal region. There was also a swelling at the upper and inner part of the right thigh, and some fulness in the iliac fossa, with fluctuation between the two spots, due to a large psoas abscess.

On January 3rd, 1890, I attempted to aspirate the abscess, but the contents were too thick to flow through even a large needle. A short incision was therefore made in the skin over Scarpa's triangle, and a very large trochar was thrust through it into the abscess. But even through this the thick material only escaped slowly. The cavity was then washed out with carbolic solution, and filled with iodoform emulsion. Then the incision was closed with fine silk sutures without any drain tube, and covered with collodion and wool. On the twelfth day there was a little oozing along the stitches, and they were removed. The incision was quite healed. On the fifteenth day it was quite plain that the scar was infected with tubercle from the abscess at one or two small points, which appeared knotty. I therefore removed an oval piece of skin, including the scar and stitch punctures, by two curved incisions meeting above and below. The abscess was now carefully flushed with hot water and scraped as above, the flushing gouges being carried high up under Poupart's ligament into the abdominal part of the cavity. The latter was then dried, filled with iodoform emulsion, and closed with eight silk sutures without any drainage. The salicylic wool dressing was removed on the fifth day, and the stitches on the fourteenth. Primary union of the most complete kind was found. There was slight evidence of the presence of fluid in the abscess at the first dressing, but at the second it was disappearing. There was no pain or any bad symptom, and the patient left hospital on the twenty-eighth day after operation cured of the psoas abscess.

Writing on November 8th, 1890, Dr. Owen Fowler, of Thornton Heath, reports as follows: "I saw to-day the child you kindly operated on for me. She is very well, and has been ever since. All swelling has gone down round about the place of incision. She has no pain or tenderness anywhere, gets about as well as before the abscess began to form, and has certainly grown fatter. There never has been any discharge from the wound, which healed perfectly."

The microscopic examination of the piece of skin, including the scar of the first operation in this case was singularly interesting. Immediately on its removal it was hardened in spirit. Then sections were made by Mr. Raymond Johnson, our surgical registrar. These sections, now before me, show in the neighbourhood of the scar tissue a healthy papillary layer, and under this the fine-celled infiltration about the cicatrix. In the middle of the latter are typical tuberculous foci with their giant cells. Deeper down is some of the abscess wall in process of degeneration.

It is quite plain, then, both from the naked-eye appearances and microscopic characters, that the scar of the first incision was inoculated, either during or after evacuation, by the contents of the abscess. And as the foci were already softening about the stitch holes, it is probable that the whole wound would soon have broken down, and an open sinus would have resulted had I not excised the whole piece of skin. The danger of this in the case of a large psoas abscess need not be emphasised, to say nothing of the loss of time and discomfort to the patient. All this was prevented by the treatment employed, and the second scar was saved from inoculation by the thorough flushing.

W. A., aged 19, was admitted into Mr. B. Hill's ward in University College Hospital, on January 27th, 1890, suffering from curvature of the spine, for which he had been treated at St. George's Hospital in 1883. For the last six months before admission, a swelling had been forming in the left groin, which was now large and fluctuating, with a red patch of skin over it the size of a half-crown piece.

On January 22nd this abscess, which was typically tuberculous, was aspirated, and 22 ounces of the usual fluid was drawn off.

On February 5th Mr. Hill excised the red patch of skin by two curved incisions, and a large quantity of tuberculous fluid was evacuated. In addition to this, several ounces of tough, semisolid material, sufficient to fill two hands, was gouged out with my flushing gouges, through which hot boric solution was rushing. When all the numerous pockets of the abscess had been scraped and flushed, the cavity was sponged

out, and it was filled with iodoform emulsion. Then the incision was sutured with silk, without drainage, and a dressing of sal alembroth gauze and wool was applied over all.

On the 9th some discharge had escaped, and this dressing was removed. Primary union was found everywhere except the lower angle, where there was still some leakage of serum. On the 11th the stitches were removed. On the 13th the edges at the outer angle were pared and sutured. On the 21st these sutures were removed, as primary union had taken place. From this a sound union persisted, and the patient was discharged well, and without swelling, on March 1st. The maximum temperature before operation was 99°; after, 99.8°.

In this case boric solution was used, but the result was no better than with hot water: indeed, not quite so perfect. This, however, was Mr. Hill's first trial of this method, and some detail of dressing or pressure may have been overlooked. The amount of semisolid degenerated tuberculous tissue in this case was very striking, and it was quite evident, as Mr. Hill remarked at the time, that without some method of gouging and flushing, such as that employed, it could not have been dislodged adequately.

In addition to these two cases, which may be taken as types, I have had other private cases of extensive tuberculous abscesses in the neck, in which a similar operation has been followed by perfect union by first intention, and also without drainage. The resulting scar in each case has been almost imperceptible.

In both the first two cases it is probable that the bone lesion had healed. But, from what I have seen in the case of joints where the tuberculous process in the bones was still in progress, I should not despair of obtaining the same results with caries of the spine, by reaching up to the bone with the long flushing gouges which I have had made for the purpose. By means of these small sequestra might be dislodged, and the carious cavity be thoroughly cleansed. But, even if this were not to be done perfectly, the conditions of the abscess after flushing would be far more favourable to repair of the bone lesion than where the latter was bathed in broken down tuberculous *débris*. And should the abscess ultimately fill again a second flushing of the same kind could be undertaken. At all events, there can be no doubt that this mechanical scouring out of deep abscesses, by means of a large and continuous stream of fluid, enables the surgeon to attain his object with a minimum of scraping or other violence to the walls of the cavity. And, as the fluid employed is simply sterilised hot water, there is no limit to the amount which may be used.

My reasons for employing hot boiled water for some years past may, perhaps, be restated here with advantage, although already given fully in an original communication two years ago.[1]

In the first place one used often to see considerable shock and carbolic intoxication in former years when using carbolic solutions even to irrigate large cavities of the kind in question, and the same effect was to be expected from other strong chemical germicides. For this reason it was impossible to contemplate the employment of the latter under high pressure, and in such very large quantities as were necessary for flushing, and, indeed, such germicides would be uncalled-for; for, really, what was aimed at was simply a thorough mechanical evacuation of the abscess with as little violence as possible, and this could be done by any fluid provided only it was sterile. This end then appeared best secured by using a copious stream of hot water under considerable pressure. This I thought would tend to peel off shreds of degenerated tissue without damage to sound structures, and would carry all *débris* at once clear of the cavity. The hollow hydraulic scoop simply carried this hot water to every part of the cavity, and loosened by gentle scraping any material too firm to be dislodged by the stream. In the case of the hip, it was used to gouge away diseased bone from the acetabulum, and help out any sequestra or semisolid material present. In the case of the spine it is possible that the bone could be similarly treated with one of the longer scoops, but this I have not yet tried for want of a suitable case.

Now no germicide could safely be used by the gallon in this way for a large abscess. Again, hot boiled water, besides being sterile, has a tendency to check oozing of blood from granulating surfaces. Moreover, by its warmth it would tend to counteract shock, and this has been my experience with it. But after it had done its work, there was no reason why a limited amount of germicide should not be placed in the abscess to act upon any tuberculous foci accidentally left behind in it. For this reason the iodoform emulsion has always been used in these cases at the end of the operation, for I am one of the many who still believe in its beneficial effects in tuberculous troubles, all laboratory experiments to the contrary notwithstanding.

But to get rid of the drainage tube appeared to me to be very nearly the most important innovation of all. As long as an opening exists into a large abscess, so long must elaborate antiseptic dressings be employed. With a soundly closed external wound and a thoroughly cleaned cavity within, the processes of repair in the latter might be trusted to pursue their course to final obliteration with confidence. In extensive excision and arthrectomies of the knee, one has almost made it a rule to do without drainage. In excisions of the hip done by this method no drainage has been used. If these extensive wounds could be trusted to heal *per primam* and definitively, as has usually been the case, there appeared to be no reason why a psoas or iliac abscess should not do the same under allied conditions. The cases now recorded prove that drainage in properly treated cases may be dispensed with entirely without danger. In the earlier flushing cases I used the drain tube for a short time, but in the last never, and there has been every reason to conclude that the latter practice was the best.

[1] BRITISH MEDICAL JOURNAL, January 19th, 1889, p. 121.

DEATH OF A CHILD FROM HYDROPHOBIA TWO YEARS AND FOUR MONTHS AFTER BEING BITTEN BY A RABID DOG.

By W. G. SPENCER, M.S.,
Assistant-Surgeon to the Westminster Hospital.
[From the Brown Institution.]

THE patient was under the care of Dr. A. C. Crane and Dr. R. F. Starkie.

G. C., aged 5½ years, was bitten by a dog in Pimlico on August 25th, 1888. The dog, an adult Skye terrier, had been taken by its owner for a walk. The dog rushed wildly about, and became very hot. The owner observed that something must be the matter with the dog, and gave it water to drink. On the way home the dog attacked the child, to whom it was strange. The child either fell or was knocked down, and whilst on the ground the dog bit the child in the right popliteal space, which was bare.

A man who saw the accident, and had had some acquaintance with poisoned wounds in India, sucked the bite, and took the child home. It was taken immediately by its mother to Dr. Crane. He found two wounds, both caused by the same bite, on the right leg; one a deep punctured wound such as might be caused by the canine tooth over the insertion of the biceps tendon, and the other more superficial and nearer the middle line behind. He injected liq. hydrargyri perchloridi, *B.P.*, into the deepest parts, washed the surface with the same fluid, and then cauterised the wounds.

A boy applied to Dr. Crane on the same day who was said to have been bitten by the dog. There was a bruise on his leg, but the skin was not in the least broken. The owner, a man aged 80, came to Dr. Crane on August 27th, 1888. The dog had bitten his hand, and had entirely removed the skin from a surface as large as a sixpence, besides making some scratches and indentations. The bite had been inflicted half an hour before. The animal had been "strange in its manner," and, when he had tried to get it from under the bed, it bit his hand. The dog died in the night of August 27th-28th, 1888. Dr. Crane formed the opinion that the dog had died rabid. He took full notes at the time, and tried to get the carcass or a piece of the spinal cord sent to the Brown Institution, but his efforts were frustrated. The mother summoned the owner, who was fined £1 by the magistrate, and the man who had sucked the wound received a small pecuniary acknowledgment. The child's wounds healed in a few days. Dr. Crane treated the owner for several weeks with per-

chloride of mercury, but the mother refused similar treatment for the child.

The child continued well, except that Dr. Starkie treated it for some trivial ailment in August, 1890, and at times it had screaming fits when excited. Dr. Starkie was called to the child at 6 P.M. on December 24th, 1890. She was sitting up in bed, apparently quite cool and collected, complaining of slight difficulty in swallowing and pain in the right leg. There had been a drunken quarrel in the house on December 22nd, which had excited the child, since which time she had not been well. Dr. Starkie, thinking that this might be the cause of the complaint, prescribed potassium bromide. He was called to the child again at 11 P.M., because swallowing was more difficult. He asked the mother whether the child had ever been bitten by a dog, and then she recalled the incident of August, 1888, which she had until then forgotten. Dr. Starkie gave the child a teaspoonful of the bromide mixture to swallow. At first she said she could not, but after persuasion, taking the teaspoon in both hands, she threw the fluid into her mouth. Immediately she was seized with a paroxysm of dyspnœa, convulsions of all muscles, and retching. Frothy mucus came from the mouth. The pain was referred to the right leg along the outer side from the great trochanter to the ankle. One scar over the insertion of the biceps tendon was one-eighth of an inch in diameter and circular in shape; the other scar, less well marked, was nearer the centre of the popliteal space.

Between 12 and 1 A.M. on December 25th the child became so violently delirious that it required two men to keep her in bed. At 7 A.M. she became quieter and died at 8 A.M.

A *post-mortem* examination was made by Dr. Starkie at 4 P.M. on December 27th. He found the sinuses and superficial veins of the brain engorged, and the cortex slightly congested, but there was no sign of meningitis, tuberculous or cerebro-spinal. The spinal cord looked quite normal, and there was no increase of cerebro-spinal fluid. The heart contained an *ante-mortem* clot, the lungs were congested, but showed no signs of pneumonia. The stomach and larynx were not examined. The cicatrices were carefully noted, as before described, and there were no other scars on the body.

The medulla and a piece of the spinal cord were placed in glycerine and brought to the Brown Institution. I inoculated a rabbit on December 31st, and it continued well until January 18th, 1891. On that day it showed slight signs of paraplegia. On January 19th the paraplegia was complete, and it died on the 20th. The stomach was congested, and dotted with many small hæmorrhages; the larynx and pharynx were also congested. These parts have been preserved. Two other rabbits, inoculated at the same time, have since died, also with typical hæmorrhages in the stomach.

REMARKS.—The description of the case in detail is necessary because it exceeds the utmost limit—namely, two years—hitherto proved to have intervened between the bite and the onset of hydrophobia. The death of the child from hydrophobia has been proved. That the dog died of rabies is, I think, evident from its altered manner in rushing wildly about, and later on crouching in the dark, from the fact that it bit its owner, to whom it had been previously attached, and soon afterwards died. There was no evidence, neither before nor after death, to show that the child could have been inoculated with rabies in the meantime, and the occurrence in the limb bitten of pain as an early symptom confirms the conclusion that the hydrophobia was caused by the bite of a rabid dog two years and four months before. If, therefore, the rabies poison can lie dormant so long in a human being, why not also for a long time in the dog?

The protest against the withdrawal of the muzzling orders is supported by the whole weight of scientific opinion, but from the other side emotional arguments are brought to bear upon the Government and local authorities. The result of withdrawal will be a fresh collection of material for a future epidemic.

It would be foolish to suppose that rabies has disappeared. I have, during 1890, made inoculations for Professor Horsley, and six dogs were shown to have been rabid at the time of death; they came—one from Petersfield, Hants, two from Beverley, one from Melton Mowbray, one from Nottingham, and one from Dover, all since June, 1890. The last animal was reported by the veterinary surgeon to have run amuck for four miles round Dover, and is known to have bitten on November 3rd two persons, one horse, seven dogs, one cow, and two lambs. The horse died rabid on December 22nd, and one dog on December 28th; and yet there is an agitation in Dover to withdraw the muzzling order. Further, during 1890 the medullas and spinal cords of two children have been received, whom I have proved by inoculations to have died of hydrophobia. The case at Poole, from which the cord was sent to Professor Horsley by Dr. McNicol, also shows how children are exposed to the attacks of rabid animals. One day in September a strange black cat entered the room, and the child, a boy of 4½ years, followed it into the street to give it a piece of cake, when the animal bit his hand. The child died of hydrophobia on November 19th.

Thus rabies and hydrophobia have occurred in seven widely separated places within the triangle formed by Beverley, Poole, and Dover. These cases have all happened during the last nine months, and are only those from which material has been sent to the Brown Institution.

THE OPERATIONS FOR THE RADICAL CURE OF HERNIA IN CHILDREN, AND THEIR VALUE.

BY HENRY O'NEILL, M.D., M.Ch., Q.U.I.,
Visiting Surgeon to the Royal Hospital, Belfast.

IN considering the important subject of the operations for the radical cure of hernia in children, and their value, we should first consider the class of cases suitable for the operation.

To my mind, the most suitable cases for this operation are:—

1. The children of poor people who have not the means of buying trusses, and who have not the time to look properly after the daily application of the trusses when they are able to buy them, for unless a truss is properly fitted after the hernia has been reduced, it is worse than useless; it is dangerous, because the pad of the truss may bruise the intestine and cause peritonitis or enteritis.

2. In children where the hernia is so large that an ordinary truss is not sufficient to keep it reduced while the child is running about playing.

3. In most cases where a truss has been worn for at least twelve months without any improvement, but where the hernia is increasing in size.

4. In persons who are likely to become labourers, or artisans who may have heavy work to do.

5. In each case after herniotomy has been performed for the relief of strangulated hernia.

As regards the method to be employed, each case must be treated on its merits, and this cannot be decided until the sac has been exposed; then if the sac can be easily separated entire, and is congenital, I have found Macewen's method the best; if, on the other hand, the sac has been torn and the wound not easily closed by suture, Banks's method—ligaturing the sac close to the neck and cutting off the sac half-an-inch below the ligature, and suturing the upper end of the sac to the abdominal muscles above the internal abdominal ring—may be adopted; or Barker's method, where the sac is ligatured in two places and divided between the ligatures, the upper part sutured to the abdominal muscles (as in Banks's method), and the lower part being retained in the scrotum; or Ball's method, who twists the sac several times before ligaturing it close to the neck.

The conditions to be observed to ensure success are: (1) prepare the patient several days before operation by giving him a warm bath each day, keeping the bowels free with a mild purgative, giving milk food, and keeping him in bed. On the morning of the operation, thoroughly cleanse the skin of the injured region by washing the parts with soap and water, then turpentine, ether, rectified spirits of wine, and lastly, carbolic or creolin lotion (1 in 30). (2) Arrest all hæmorrhage (which is trifling) by forcipressure forceps (Spencer Wells's are good). (3) Drain the wound with decalcified chicken bone drainage tube. (4) Use chromicised catgut sutures for all the sutures and ligatures. (5) Bandage

the dressings (wood wool or absorbent wool) on firmly with india-rubber web bandage. (6) Dress the wound seldom, and only when the discharges stain the outer dressings, or when the temperature rises suddenly above 101.° (7) Give an opiate at night for two or three nights. (8) Give an anæsthetic during the first and second dressings to prevent the child from crying, and straining the abdominal walls.

I have had no deaths from this operation. I consider this operation only requires to be understood by surgeons to be generally adopted, and when the details of the operation are carefully carried out in suitable cases the results are most satisfactory.

The following short notes are given of four of my youngest cases, their ages varying from 2¾ years to 7 years. I have seen, or have had examined by other surgeons, all these cases, now over two years after operation, and find no return of the hernia. No truss was required by any of the patients, except in one case (the case of double hernia), where the cicatrix on the right side was weak soon after leaving hospital, and a truss was worn for a few months, but now the parts are quite firm, and there is no evidence of any return of the hernia.

J. C., aged 5, member of an orphanage in Belfast; healthy, except for a large right congenital inguino-scrotal hernia (intestinal). For a time a truss had been worn, but for the past six months the internal abdominal ring became so large that the hernia could not be kept reduced by this means. He was admitted to the Belfast Royal Hospital on January 31st, 1888. The hernia extended to the testicle, and measured 2¾ inches along its anterior surface from the internal abdominal ring downwards. It was easily reduced by taxis, but when the patient stood or coughed it descended immediately into the scrotum. In consultation with Professor T. Sinclair, we considered the case a suitable one for the radical cure. He was carefully prepared for operation by being given a warm bath each day for three day, keeping the bowels free by aloes and senna mixture, and keeping him in bed.

On February 6th, 1888, he was anæsthetised with chloroform by Dr. Powell, house-surgeon, and with the assistance of Professor T. Sinclair and Messrs. T. J. Mulholland and Jamison, my clinical pupils, the operation was performed as follows: The skin over the hernia and around was thoroughly cleaned with soap and water, turpentine, ether, rectified spirits of wine, and, lastly, carbolic lotion (1 in 30). An incision was then made through the skin, 2 inches long, in the direction of the hernia, and each layer of tissue divided on a director down to the sac. Any bleeding points were caught immediately with Wells's torsion forceps, and the hæmorrhage arrested by forcipressure. The hernia was now reduced into the abdomen, and retained there by the finger of an assistant pressed over the internal abdominal ring, and the sac was carefully separated from the spermatic cord and the surrounding fascia by my fingers and a director, the testicle being held steadily in the scrotum by an assistant; this permitted the separation of the sac from the cord more easily. The sac was drawn gently down, while the finger separated it from its surrounding tissues at the internal abdominal ring, and puckered by a needle and carbolised silk ligature drawn through it, and secured by drawing the ligature through the muscles above the internal abdominal ring and knotting them. By this arrangement the sac closes the inner opening of the inguinal canal. The conjoined tendon was sutured to Poupart's ligament, and the walls of the inguinal canal sutured by four carbolised silk sutures, the lowest sutures being sufficiently loose to permit of the spermatic cord lying in the canal without compression. Decalcified drainage tube was laid along the bottom of the wounds, the parts dusted over with iodoform, the skin wound closed with four silver sutures, and dressed with iodoform gauze and wood-wool wadding. The dressings were secured by an india-rubber web bandage.

Macewen's method of operating was followed, except in using carbolised silk for the suturing of the inguinal canal and silver wire for the skin wounds.

The temperature rose to 100° F. on the evening of the operation and on the evening of February 8th, but afterwards remained normal.

The wound was dressed every second day for fourteen days, then twice a week until the wound healed. The silver sutures were removed on the eleventh day. He made an uninterrupted recovery.

On July 10th, 1890, two years and a half after the operation, I, with Dr. W. A. Wheeler, again examined him, and found him a fine healthy boy. The cicatrix over the seat of the hernia was firm, and showed no sign of yielding. He required no truss since the operation.

A. N., aged 2¾ years, a healthy boy, had had a double inguinal hernia since birth; he was admitted to Belfast Royal Hospital on February 20th, 1888. The right inguino-scrotal hernia (intestinal) was the size of half a lemon, and measured 4 inches along its anterior border from the neck to its lowest part. The left hernia measured 2¾ inches along its anterior border, and was not so large as the right. A double truss had been worn for some months, but as it was not sufficient to keep the hernia reduced it was thrown aside. The hernia were reducible. The internal abdominal ring on each side was so wide as to permit the thumb to be passed quite easily through it, so the hernia were always down in the scrotum except when the patient was lying quietly on his back. With the mother's consent, it was arranged to perform the radical cure, and the patient was carefully prepared.

On February 27th chloroform was administered by Dr. Powell, house-surgeon, and assisted by Professor T. Sinclair and Messrs. Jamison and R. A. Robinson, clinical pupils. I operated on the right side by Macewen's method, as previously described. The case healed well. The highest temperature was 103° F. on the eleventh day from retained pus, which was set free, and the temperature fell to normal. Free suppuration occurred, and the patient left hospital quite healed on March 31st.

On April 5th the patient A. N. was readmitted to hospital. The cicatrix was quite firm; no return of the hernia on the right side. On April 12th he was operated on for the radical cure of the left hernia by Macewen's method. The wound healed well after suppurating. The highest temperature was 102° the day after operation. He left hospital on June 5th, the cicatrix being firm. After two months the right cicatrix showed signs of yielding, and a double truss was worn for several months. On July 3rd, 1890, I examined each cicatrix, and found them strong and firm, and showing no sign of a return of either hernia. No truss is now required.

D. H. (Belfast), aged 7 years, a strong healthy boy, parents living but poor, was admitted to the Belfast Royal Hospital on May 17th, 1888, suffering from a large right oblique inguinal hernia (intestinal) measuring 2½ inches along its anterior surface. The hernia being large and not easily retained by a truss, and the parents being poor and not able to properly attend to the boy, I considered it a proper case for operation by the radical cure.

On May 21st, with the assistance of Professor T. Sinclair, Dr. McQuitty, and Messrs. W. A. Storey and H. Carr, the patient was anæsthetised with chloroform and operated on for the radical cure of hernia by Macewen's method. The patient made an uninterrupted recovery, the highest temperature being 99°, and left hospital on June 28th—three weeks after operation—with the wound firmly healed.

July 13th, 1890 (2 years and 2 months after the operation).—He has since the operation gone to an industrial school, and was to-day carefully examined by the medical officer of the school, Dr. A. Dempsey, J.P., Belfast, who states: "The cicatrix is quite strong, and there is not the least appearance of a hernia." No truss was worn since the operation.

THE INDICATIONS FOR THE RADICAL CURE OF HERNIA IN CHILDREN.[1]

By R. W. PARKER, M.R.C.S.Eng.,
Surgeon to the East London Hospital for Children, Shadwell.

THE value and justifiability of an operation depend entirely on the danger or inconvenience of the disease or condition for the alleviation of which the operation is undertaken.

It will hardly be necessary to argue such a well-known fact

[1] Read in the Section of Diseases of Children at the Annual Meeting of the British Medical Association, held in Birmingham, July, 1890.

that a considerable number of cases of congenital hernia show no tendency to spontaneous cure, even when a suitable truss has been worn for long periods and the child has had every needful attention. Among the children of the poor the tendency to spontaneous cure is even smaller, owing to the want of the necessary care and attention.

I should recommend an operation for all cases of congenital hernia in which the hernia persists at 2 years of age and over especially so if the hernia be large and if other measures have been adequately tried and failed. I should not urge the operation very strongly if the hernia were small, and if other measures had not been adequately tried, provided that such measures were at once tried and persisted in, say for six months; but, if afterwards the hernia remained uncured, I should strongly recommend operation. In children of the working classes, who when grown up would have to work hard for their living, I have no sort of doubt that a radical operation is the right thing to recommend in all cases after 2 years of age, and in some large hernia even short of that age. Among the better classes a hernia is a grievous infliction; during school life a hernia makes participation in outdoor exercises more than usually dangerous: and a little later in life bars the entrance to many a career, which would otherwise be open, and for which the individual is in other respects well qualified.

The Listerian doctrine has brought about such a remarkable change in the results of surgical operation, has placed success on such a secure footing that it can now be relied upon almost with certainty, and has reduced mortality so much by demonstrating the real sources of danger, that an operative measure can now be recommended with much greater confidence than was the case even in the near past. Hence a greater confidence in recommending the radical cure of hernia in cases in which formerly the surgeon might reasonably have hesitated to do so.

The results of operations are already very satisfactory, and it can hardly be doubted that improvements in our procedures will continue, and so constantly reduce the minimum of danger which is still an element to be reckoned with, though hardly a substantial argument against operation in a considerable number of the total cases. I venture to hope that within a few years it will be quite an exception to meet with congenital hernia in adults, and that all such deformities will be treated during early childhood, while the tissues are healthy and in the best conditions to secure a perfect result.

As to the method of operating, probably every surgeon has his own method and prefers it to that of others. I incline to think that a method which is well adapted for adults with large scrotal hernia cannot be applied with equal fitness to a young child. Some of the methods described appear to me unnecessarily complicated: this may, however, be necessitated by the amount of the deformity and the distortion which the parts have undergone anatomically, and which are seldom or never seen in young children.

The operation I have practised now for many years is exceedingly simple. An incision about 2 inches long is made, the upper portion of which corresponds with the position of the external abdominal ring, and the sac is exposed: the latter is then cleared of its looser and more external layers. I do not dissect off all the adventitious structures of the sac, for the sac proper, peritoneum, in children is exceedingly thin and liable to tear; moreover, I think the result is firmer and less liable to relapse. Then, after getting the spermatic cord well out of the way, I pull down the sac as far as possible, and put in three or four stitches, drawing the neck of the sac firmly together, but not tight enough to strangle it. My object is to retain the silk ligatures permanently *in situ* or as long as possible; if they are drawn very tightly together the stitches are liable to cut their way out, and so lead to failure. The neck of the sac is now allowed to retract itself back within the external abdominal ring, after which the pillars of the latter are sewn together and the wound closed, being first well irrigated and all bleeding arrested.

I prefer silk which has been well boiled in carbolic lotion, 1 to 20 to any other material; the longer it remains unabsorbed the better, for thus we have the mechanical help which its presence gives until complete adhesion of the sac walls has been brought about.

ON THE TREATMENT OF CERTAIN CASES OF RECENT HERNIA BY ASPIRATION OF THE PROTRUDED GUT.

By JOHN HERN, M.D.Edin., F.R.C.S.Ed.,
Surgeon, Darlington Hospital.

On being called some years since to a case of recently strangulated hernia which I failed, under chloroform, to reduce by taxis, finding the tension in and distension of the protruded gut apparently the main obstacle to reduction, I emptied it by means of my hypodermic syringe, with the result that reduction was at once easily accomplished. I have since repeated the operation on thirty-two occasions, in twenty-eight of which reduction was readily accomplished, and in the remaining four three were, subsequent to aspiration, subjected to the usual operation (with one death from gangrenous gut), and one steadfastly preferred death to further operation, and succumbed on the tenth day. In neither of the three cases of herniotomy could any traces be found of the previous aspiration, due, I think, to two causes (1) the small size of the needle used—small hypodermic syringe: (2) the arrangement of the fibres (muscular) in the wall of the gut.

The class of cases which have appeared to me most suitable for the operation are (1) recent cases—36 to 48 hours or less; (2) where the patient or friends refuse to submit to herniotomy. The simple aspiration can be designated "doing a little something." The advantages claimed for this procedure are: –

1. It avoids the delay almost inseparable from the herniotomy, for example, gaining consent of friends, procuring adequate assistance, etc.

2. It avoids rough and heroic attempts at reduction by taxis by placing in the hands of the general practitioner a means of reduction easy of application, and requiring no extensive surgical skill for its performance, and, moreover, a proceeding which, by reducing the tension of the protrusion, lessens the danger of the taxis subsequently employed.

3. It avoids the risks of pyæmia and septicæmia, inseparable from all operations in which the skin is divided.

Let us consider in how far this operation is based on a consideration of the anatomical and pathological conditions present. We must remember that the internal abdominal ring, the inguinal canal, the external abdominal ring, the crural ring, the crural canal, and the saphenous opening in the fascia lata of the thigh are all bounded chiefly, if not solely, by aponeurotic structures, which have become thickened and resistant although the openings have all become dilated. The margins of these openings forced back and thickened offer a strong passive resistance, so that if the protrusion becomes distended in any way by fæces or flatus, the neck or narrow portion is so wedged into these fascial openings or canals that it becomes compressed, the venous circulation impeded (both arteries and veins are, of course, compressed, but the thicker coats of, and the greater force of circulation in, the former render them less affected by the pressure), the proportion between the protrusion and the opening or canal through which it has descended becomes so altered, that the hernia becomes irreducible. Now, seeing that (in recent cases, at any rate) it must be the distension of the protrusion which is the main obstacle to reduction, there having elapsed no time for the effusion of lymph or other inflammatory changes to occur, having failed to reduce by taxis, it appears to me to be a perfectly justifiable proceeding to at once empty the protrusion of whatever fluid or flatus it may contain, and, having thus lessened its bulk, to reduce by taxis.

CASE OF FATAL REVOLVER WOUND OF THE SKULL.

By PAUL SWAIN, F.R.C.S.,
Surgeon, South Devon and East Cornwall Hospital, Plymouth.

On Sunday evening, November 30th, 1890, J. C., aged 28, went up into his bedroom and, in a fit of alcoholic mania, shot himself with a revolver. He was found lying on the

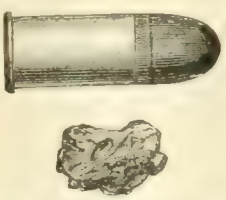
floor, somewhat dazed, but soon recovered consciousness. Mr. Carlyon, of Redruth, was immediately sent for. The man stated to him that he stood before the looking glass, and turning his head well round to the left, placed the muzzle of the revolver behind his right ear. He then fired and was aware of the fact that the bullet fell out of his mouth on to the dressing table. It was subsequently found by Mr. Carlyon on the floor of the room.

On examination it was discovered that he had shot himself through the right mastoid process; the wound of exit into the mouth was conjectured to be somewhere behind the soft palate. There was some considerable hæmorrhage both from the wound and also from the mouth.

On December 5th I saw this case in consultation with Mr. Carlyon. He was in bed, perfectly collected and apparently suffering but little distress, except from a somewhat troublesome cough, accompanied with blood-stained muco-purulent expectoration. His breathing was natural, his lungs were not affected, and he could swallow with but little pain. His tongue, which was very much coated was, on protrusion, strongly deflected to the right side. His sight was normal in both eyes, and his pupils active. He was a little deaf in his right ear. His upper extremities were not affected; but on getting him out of bed I found that he slightly dragged his right leg. His patellar reflex on that side was diminished, and on tickling the bottom of his right foot there was no response. Sensation was normal. On lifting the soft palate I found the wound of exit at the back of the pharynx, a little to the right of the median line, and surrounded with extensive ecchymosis. His temperature was 99.2° (having been subnormal the night before), and his pulse 123.

From this date Mr. Carlyon tells me he rapidly became worse. His temperature and pulse rose daily, and on the day of his death his temperature was 102.6°, and his pulse 163.

On December 4th he was attacked with acute congestion of his right lung. The deafness in the right ear increased. I append two drawings, one illustrating the original size and shape of the bullet, and the other the condition in which it was found. In the interstices of the lead a quantity of bony tissue was deposited. Unfortunately, no *post-mortem* examination could be obtained.



The probable course of the bullet was as follows:—Penetrating obliquely the posterior surface of the mastoid, it just missed the lateral sinus and, without entering the skull, it then passed between the jugular fossa and right condyle of the occipital bone, cutting the hypoglossal nerve at the anterior condyloid foramen, and injuring the pneumogastric and glosso-pharyngeal as they emerge from the anterior part of the jugular fossa. It then made its way forward under the basilar process of the occipital, emerging through the posterior wall of the pharynx, and probably in so doing bruised the upper part of the spinal cord on the right side, which would be somewhat exposed to injury by flexion and rotation of the head to the left.

Such a course and the injuries inflicted would account for the various symptoms noticed.

ON THE PREVENTION OF INFANTILE OPHTHALMIA.[1]

By KARL GROSSMANN, M.D., F.R.C.S.E.,
Ophthalmic Surgeon, Stanley Hospital, Liverpool.

If I were to discuss the treatment and the prevention of blenorrhœa neonatorum, I should have to repeat almost word for word what I said last year before the annual meeting at Leeds; and it will be less tiring and more expedient to distribute a reprint of my paper read on that occasion, and to make a sort of addendum to it. Not that our knowledge of the disease has undergone any great modification. That was scarcely possible, since its etiology and pathology are familiar enough to us all. Neither was there any urgent need to add to the remedies by which it may be treated. We have already a sufficient number at our disposal; and although we shall always be glad to add to our armamentarium such new names as pyoktanin, we need not forget that what we have had hitherto has proved itself thoroughly efficient.

The reason why I recur to this subject to-day is twofold. First, it is our duty to strive to prevent disease. The individual can do something to this end; but individual efforts are limited; and, to secure substantial results, combination will be needed and State enforcements of precautions. We know how the efforts of the Committee of the Ophthalmological Society on this subject collapsed, because the resolutions which were put forward were not adopted in proper quarters; and the matter ended there. Distribution of cards may have been very good as far as it went, but, even if carried out, would probably have fallen short of the desired effect.

The possibility of the prophylaxis of the disease rests chiefly with midwives, because confinements in those classes which yield the largest percentage of blindness from this cause, are principally attended by midwives and not by medical practitioners. It is, therefore, through the instrumentality of midwives that we must hope to banish this scourge. The present time is very favourable for considering what steps ought to be taken. Of course, legislation only can help here. In Saxony, where Professor Crédé was the first to point out and to prove by thousands of cases the possibility of effectually preventing infantile ophthalmia, the regulations for midwives treat fully on the matter. As far back as 1882 regulations were made and were further amplified in 1885. In Prussia less stringent rules exist, but the midwives are fully instructed as to the danger of the disease, and are directed what to do.

It was therefore a great satisfaction to me to see that quite recently the State of New York has legislated on the matter. Through the kindness of Dr. Swann Burnett, of Washington, who was with us last year at Leeds (and who personally has been instrumental in bringing about this law), I am enabled to give its text. It is short and decided, and runs thus:

"Section I. Should any midwife or nurse having charge of an infant in this State notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse so having charge of such infant to report the fact in writing within six hours to the health officer or some legally qualified practitioner of medicine of the city, town, or district in which the parents of the infant reside.

"Section II. Any failure to comply with the provisions of this Act shall be punished by a fine not to exceed one hundred dollars, or imprisonment not to exceed six months, or both.

"Section III. This Act shall take effect on the first of September, eighteen hundred and ninety."

Here, then, is a step in the right direction. I think it is all the more necessary for us to take some steps, as a Bill was recently brought before Parliament concerning midwives, and, though shelved for six months, is likely to be heard of again.

[1] Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Birmingham, July, 1890.

BLEPHAROCHEILOPLASTIC OPERATIONS.[1]

By ARTHUR BENSON, F.R.C.S.I.,
Assistant-Surgeon, St. Mark's Ophthalmic Hospital, Dublin.

Two years ago I brought before the Ophthalmological Section of the British Medical Association (Glasgow meeting) the subject of entropion and trichiasis, with special reference to the operative measures for their cure. I would not again venture to bring the subject forward in any form but that I have received so many letters from different ophthalmic surgeons asking for further information regarding the operation of transplanting mucous membrane from the mouth to the eyelids.

[1] Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association held in Birmingham, July, 1890.

In Ireland, where granular ophthalmia and consequently entropion and trichiasis are so common, we have such a large field for testing the value of any operation of the sort, that it is natural we should try various modifications in the details as well as in the larger features of the method. The operation, as at present performed at St. Mark's Ophthalmic Hospital, is what I purpose describing, and I shall not delay to mention the various modifications by which it reached its present form. It will be obvious to anyone who cares to compare the two that the details differ materially from those described by Van Millingen in the *Ophthalmic Review*, vol. vi, p. 309.

The operation is of necessity a somewhat tedious one, and simplicity of manipulation has always been our endeavour. "The St. Mark's Hospital operation" consists in: 1. Splitting the affected lid along the whole length of its free border with a small scalpel, or a broad cutting needle, or a Beer's knife. The incision must be made so that all the cilia, both normal and abnormal, are in the anterior or skin flap, and all the conjunctiva is in the posterior flap. The making of this incision is by far the most difficult and important part of the operation. It is best accomplished by using Knapp's modification of Snellen's clamp, and the larger the instrument that can be inserted into the palpebral aperture the better will be the result. By using this clamp all hæmorrhage is prevented during the operation, and the line of the incision can be accurately made so as to avoid the hair bulbs in the lid, and also the depth of the incision can be more easily estimated. The incision should run obliquely through the tarsus, and extend into the subcutaneous tissue of the lid, otherwise the wound does not gape freely and the transplanted flap is squeezed out of its place by the rigid lips of the incision.

Before considering the section complete it is advisable to use a pair of fairly fine-bladed scissors along the incision, so as to completely divide any remnants of the tarsus that escaped the scalpel. The splitting of the lid being now completed, the clamp is not removed, but a pledget of cotton wool, wet in boric lotion, is laid over it. Another large clamp is then taken and applied to the lip—upper or lower, according to taste—and screwed tightly down. The lip being then everted, two parallel incisions are made the full length of the incision in the lid, and from 3 to 5 millimetres, or even 6 millimetres, apart, if the deformity to be corrected is very great.

These incisions converge rapidly at each end, so as to leave pointed extremities to the flap, which is then dissected up with a pair of scissors. The worm-like flap of mucous membrane so obtained is then turned, with its submucous surface upwards, upon the operator's left hand, and the submucous fat and areolar tissue removed with the scissors.

While this is being done by the operator an assistant puts in a couple of sutures loosely into the lip wound, and then, removing the clamp, these are brought together. This is by no means essential, but facilitates the healing of the lip. Pressure is then kept up on the lip by the assistant, who uses a pledget of boric wool over the wound for the purpose.

When the flap is freed from its fat, etc., a fine waxed silk suture is passed through, close to its pointed extremity, from mucous to raw surface; the needle is then passed through the lid at the angle of the incision, from raw surface to lid border, and tied into position. By making a large knot on the suture a few inches from its end, the point of the flap can be drawn closely into the angle of the incision and kept in close apposition with it. Another similar suture is applied to the other end, and two, three, or four sutures are used to keep the edges of the flap in close apposition with the lips of the lid wound.

These sutures are not absolutely essential, but our experience shows that they do no harm whatever, and greatly add to the security of the flap in its proper position and the consequent certainty with which it lives in every part.

When the flap is fixed in position, with as many sutures as the operator cares to use (I generally apply six altogether), the clamp is unscrewed. The operation up to that had been practically bloodless, but the moment the clamp is removed a very brisk hæmorrhage ensues, which, but for the sutures, would undoubtedly displace the flap. Pledgets of cotton wadding, wet with boric lotion, applied over the lids, speedily cause the hæmorrhage to diminish, and soon to cease altogether.

At first we had apprehensions as to the consequences of leaving the clots that form about the wound, fearing they would interfere with the vitality of the transplanted flap; but here again experience proved our fears to be groundless. In no case (though I have seen some with very severe and long continued hæmorrhage) can I remember to have seen trouble from this cause.

When the bleeding has fairly well abated, a dressing of iodoform ointment on lint, and wet boric wool over it, is applied to the eye; a small portion of oiled silk and some dry cotton wool is placed over this, and the whole is kept in position by a light bandage. This dressing is reapplied night and morning. The sutures are removed after three or four days (or sooner if there is any reason for so doing), and soon after the sutures are removed the bandage is left off.

The changes in colour which the transplanted flap undergoes are remarkable. When first transplanted it is almost white and utterly bloodless. After twenty-four hours it turns a peculiar dark, almost black red, like an old blood clot, and in another twenty-four it becomes a bright, healthy-looking pink colour, which it retains for ever after.

The advantages of this operation over all that preceded it for the cure of entropion and trichiasis are too obvious, and have been too often stated to make any repetition of them by me necessary.

Our experience at St. Mark's Hospital is very large in the class of cases that require this operation, and I can state, without fear of contradiction, that no other operation has ever given us at all the same perfection and permanence of result as we have obtained by the blepharocheiloplastic operation.

TREATMENT OF CANCER OF THE UTERUS BY EXCAVATION AND CAUTERY.

By J. STUART NAIRNE, F.R.C.S.Ed.(Exam.),
Surgeon to the Glasgow Samaritan Hospital for Women.

In the summer of 1887, that is nearly three years and a half ago, I received a letter from Dr. Thomas Keith, recommending a lady patient to me with a "bad cervix." She had had excessive bleedings, there was fœtor with the discharge, and she had been attended by her own medical man, who had done all he could think of to cure her. She was 42 years of age, and in all other respects seemed a very healthy person. The disease was very readily diagnosed as cancer, a diagnosis which inspection afterwards confirmed.

Dr. Keith's straightforward, unhesitating advice at that time was to pull well down and cut off as high up as possible, and she would likely be saved "for a time." I have no idea how long "for a time" may be, but I know that cases such as this one was have usually a very short time indeed, and I have no doubt that the same knowledge as to the course of the disease was in Dr. Keith's mind when he wrote and that "for a time" meant problematically a short time. At any rate, the operation was done. But in addition to pulling well down, which in this case was no easy matter, and cutting off by the scissors as high up as possible, I applied most freely, a spectator said most barbarously, the actual cautery. I used a good substantial cautery, as thick as a poker. Times without number before that time and since that time, I have gone through the same process. It may be barbarous and it may be "monstrous bad surgery;" but to refer only to this one case, what is the report to-day? She has remained in perfect health ever since; I examined her about seven weeks ago, and there is not the slightest trace of disease about her. What could be done better in such a terrible disease? As a very pronounced advocate of this treatment in properly selected cases, and having for several years in succession laid a list of such cases before the meetings of the British Medical Association, I feel bound to defend the practice I follow, attacked as it has been in Dr. Keith's recent paper in the British Medical Journal. I do not think it is "monstrous bad surgery." It has good results, and therefore as far as it goes it is good surgery.

Let the cases be selected properly and the work done thoroughly, and the benefit to the sufferer will, I know, be sufficient to justify the treatment. Dr. Keith objects that the part cauterised cannot be clamped, and that the action of the

cautery, therefore, cannot be limited. Well, what of that? The part cannot be clamped, certainly not. If it could be clamped as readily as the pedicle of a tumour, we would make short work of the whole uterus. And that the action of the cautery cannot be limited is partly right and partly wrong. A rapid and strong application of a red hot iron will char effectually without the heat being conveyed very deeply, while a long continued application of a lesser degree of heat will convey deeper inflammatory action and destruction. Nothing but experience in the use of the cautery will enable a man to decide how he should use it in any given case.

As to vaginal hysterectomy, I quite agree with Dr. Keith that it is not a difficult operation—that it requires no special clamps, no special knowledge, in fact, if the uterus is movable and can be drawn down; and we are all well aware that this is often *not the case*. When the body of the uterus is implicated in such a manner as to involve enlargement, hyperplasia, showing a complete engorgement of the organ by malignant growth, who would think of doing anything else than hysterectomy, either by the vagina or by abdominal section? I do not think anyone would dream here of performing any partial operation of either excision or excavation with or without the use of the cautery. I must say again that in properly selected cases the removal of all the diseased tissues as far as possible, with the subsequent effectual application of the cautery, will show results in this terrible disease that not only justify the style, but form an argument for its adoption in preference to most or perhaps any other methods.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CASE OF LOCOMOTOR ATAXY TREATED BY HYPNOTIC SUGGESTION.

C. W., aged 53. Disease began about fifteen years ago, and was characterised chiefly by the intensity of the pains in the legs and abdomen. Patient attended the Queen Square Hospital for two years as an outpatient, and was five months in the Soho Hospital, but was not benefited. Eight years ago patient began to be unable to walk without assistance, and for nearly five years has been confined to bed. The legs are atrophied, and there is total anæsthesia below the knees. For the last twelve years he has had absolutely continuous and agonising pain—sometimes in the limbs, often in the abdomen and chest. His cries often disturbed his neighbours, and morphine in one-grain doses, repeated once or twice, has no effect on the pain. The bowels were obstinately constipated, requiring strong purgatives to move them, and he slept very badly.

I saw him first on October 28th, 1890, and, having in mind Dr. Lloyd Tuckey's now almost historic case, I determined to try and relieve him by hypnosis and suggestion. On the first attempts I failed to influence him, but, on November 5th, I hypnotised a woman before him, and again tried him. He passed into the third stage of Bernheim. I rubbed his legs where the pain then was, and suggested it should cease. Next day he reported that he had been freer from pain, and had slept better than he had done for years. Since then he has been hynotised daily, and has been quite free from pain, except for a few hours one day. He is simply amazed at the change in himself. The bowels have moved naturally since suggestions were made to that effect, and he sleeps very well at night. His appetite has improved, and he has sat several times in a chair by the fire—a thing he had not done for some years. He has lost the depressed feeling he used often to have.

I do not say this improvement will continue, as the disease is not checked, but the fact remains that the man says that for the last fortnight he has enjoyed life, while for many years previously his constant prayer had been for release by death.

I quote this case as one of the most instructive of the many cases I have treated with benefit by hypnotic suggestion.

East End Medical Mission. R. Arthur, M.A., M.B.

A CASE OF CAT ASTHMA.

It is a well-known fact that in some individuals asthmatic affections are induced by contact with various substances which to most people are harmless. Sufferers from hay fever and hay asthma are common enough, and many of us have met with persons in whom ipecacuanha excites paroxysms of dyspnœa. Cases of asthma induced by the presence of, or contact with, animals are not so often recognised and described, although in medical literature we meet with references to instances of the kind, the offending animals being sometimes horses, sometimes deer, dogs, cats, hares, rabbits, or guinea pigs. The following case is of interest as a typical case of cat asthma.

The patient is a man, aged between 30 and 40; there is no history of a family tendency to this or allied diseases. He believes that he first suffered from spasmodic asthma at the age of 14, and remembers being confined to bed in his boyhood for several weeks with almost constant dyspnœa and wheezing, attended by a doctor who gave him plenty of antimony, and with a favourite cat sleeping at the foot of the bed. Later on, he is said to have been subject to hay fever; at all events, he had violent attacks resembling that affection when he went to stay with relations in the country during the hay season; but it is a curious fact that his distinct recollection is that he never suffered when out of doors, but always in the house, and also that the people of that house were extremely fond of cats. Neither he nor his friends had at that time the least suspicion of the exciting cause of his malady, which has only been traced within the last few years.

The onset of an attack is usually heralded by violent sneezing, followed by excessive secretion from the nose, lachrymation, and itching of the conjunctivæ in the neighbourhood of the caruncles. My patient describes a curious symptom which has been noticed in other similar cases—a peculiar sensation of itching under the chin, and also great coldness of the hands and feet. The rapidity of invasion of these symptoms is very remarkable. The onset is almost as sudden and violent as it would be if he were exposed to an atmosphere laden with snuff; and he declares that very soon, with saturated pocket-handkerchief, irritated swollen eyelids, and cold damp extremities, he is reduced to a state of abject misery, physical and mental. A few minutes later, if he continues to be exposed to the influence, and sometimes even if he escapes from it, he experiences the familiar oppression of the chest, respiration becomes laboured, and accompanied by sibilant sounds in the bronchial tubes; and unless relief is afforded, all the symptoms of severe asthma supervene. Profuse diuresis is usual at this stage. As a general rule, the respiratory troubles disappear entirely after a sleep, always supposing the patient to be far removed from cats; but sometimes, after long exposure to their influence, he may suffer even for several days from slight oppression, with unusual secretion of bronchial mucus.

There are several varieties in the attacks; sometimes he only suffers from coryza without the asthma, and sometimes the presence of the enemy induces asthma without coryza; there are marked differences, too, in the intensity of the paroxysm in different attacks; but the above may be taken as a true and faithful account of the normal type. This disagreeable influence may be due to irritating particles thrown off by the fur. My patient, in common with all the similarly affected people of whom I have read, finds that to touch his eyelids with a hand that has just stroked a cat sets up violent irritation. The actual presence of the foe is not, however, necessary; he suffers, though not severely, when he is in a room commonly frequented by cats, though they may be absent at the time. The nearer he is to the animals, and the more numerous they are, the more severe are the symptoms. He believes that cats differ in the potency of their influence, and that the long-haired kinds are the most poisonous. The skin of a dead cat has no effect upon him. The larger members of the tribe excite his symptoms; he was lately driven from the lion house at the Zoological Gardens by violent sneezing.

Whatever it may be, the emanation that causes cat asthma is not a smell. It is the sensory nerves of the nasal passages, not the olfactory nerves, that are irritated, and from which the irritation is transmitted to the nerves supplying the bronchial muscles. My patient has always been fond of cats;

a concealed cat affects him quite as certainly as one that he can see.

It seems quite possible that similar cases may exist more frequently than we suppose. This man went through some twenty years of often-recurring discomfort, simply through ignorance of the avoidable cause of his trouble; now he need never have an attack unless he deliberately puts himself in the way of it.

Eastbourne. HENRY S. GABBETT, M.D.

ACCIDENTAL VACCINATION.

A FORTNIGHT since, a lad, aged 19, the son of a builder in this neighbourhood, came into my consulting room, complaining of a sore spot on the face and swollen glands in the neck. On examination a sore was found on the left malar eminence, about a third of an inch from the external angle of the eye. It was red, weeping, and had been vigorously scratched. I was a little puzzled at first, and told my patient to come next day, meanwhile to apply moist boracic lint. On the morrow he appeared with huge œdema of the eyelid of that side, completely closing the eye, the glands being very much enlarged and tender. On removing the lint the characteristic appearance of a rubbed vaccination sore made me ask him if he had been near a recently-vaccinated baby. He answered that nine days previously he had been nursing one that had been vaccinated then for a week. On closer questioning it seemed that most likely he had infected himself, not from the baby directly, but from a towel that had been used in drying it. The sore had gone through the usual appearances of a severe second vaccination, and is now healing under the bland influence of boracic lint. I tried after the first day, because of the itching, several antiseptic ointments—eucalyptus, carbolic, etc.—but they all seemed to cause more irritation, so I continued the boracic lint, which had also before proved itself the best application in my hands for inflamed vaccination sores.

Porchester Square, W. F. WILLIAM COCK, M.D.

CASE OF POISONING BY LIN. BELLADONNÆ, LAUDANUM, AND SP. CHLOROFORMI.

ON December 23rd, 1890, at 2 P.M., I was called to a man who was said to have "swallowed something at 11 o'clock, and who seemed to have been poisoned."

On arrival, I found a man, aged 33, sitting in a chair, with eyes staring, head rolling about, and evidently in pain. He was only partially conscious, but rousable. On looking round the room, I found an empty ounce and a half poison bottle which had contained lin. belladonnæ, and which had been left three parts full.

Emetics were administered, stimulants given with alkalies; but after a very little while swallowing became impossible, and at each attempt to give teaspoonful doses of brandy, etc., the man became very violent; his violence rendered any attempt at using the stomach pump dangerous, even if it were advisable, at any time. The emetics only caused retching. The man was got to bed, where he soon lapsed into unconsciousness, with stertorous breathing; he could be easily roused, but as easily lapsed again into his stupor. The symptoms pointed to poisoning, both by belladonna and opium, but the quantity of belladonna taken presented the gravest danger.

He remained in this unconscious condition till 9 P.M., having been roused frequently, and during which time attempts were frequently made to get him to swallow. Also attempts were made to inject brandy and ether, both subcutaneously and *per rectum*, but at each attempt he struggled violently, and the feat was impossible. At 9 o'clock a dog in the house barked, and the man suddenly returned to consciousness, but felt dazed. Complained of burning and dryness in his throat, and headache. His pupils were now widely dilated. Since that date he has gradually returned to his normal state, and now has only pain in swallowing hard solids, such as crust or toast.

On being questioned, he admits having mixed the lin. belladonnæ (more than half an ounce), two teaspoonfuls of laudanum, and some small quantity (amount unknown) of camphorated chloroform in a wine glass and drunk the mixture.

There seems to me to be only one explanation of his recovery, namely, the antagonistic character of the constituents of his mixture.

Upper Norwood. GEO. HENRY BIDEN, L.R.C.P.Lond.

THE DANGERS OF ANTIFEBRIN.

HAVING prescribed antifebrin in many cases of enteric fever, acute pneumonia, and tuberculosis, and having closely watched its action, I formed a very favourable opinion of its value as an antipyretic, and of its safety when carefully administered in suitable cases.

In most of my cases I ordered it in 5-grain doses, with 2 or 4 drachms of brandy. The temperature usually began to fall twenty minutes after exhibition, and reached its lowest limit (between 97.8° and 99° F.) in one or one and a half hour; it then began to rise, seldom attaining its former height before two and a half or three hours. I have never given more than four 5-grain doses in the twenty-four hours, and have obtained excellent results with only three. Its depressing action on the heart was reduced to a minimum by giving it with brandy, and neither cyanosis nor collapse occurred in any of my cases.

The hourly administration of the drug in small doses did not, in my hands, give satisfactory results; and as I found that the temperature was by it reduced to near the normal for three hours in 5-grain doses, such frequency of administration would manifestly be unnecessary. I have carefully avoided giving antifebrin in the later stages of enteric fever or other diseases when the heart showed signs of failure, or when evidence of deficient oxygenation of the blood existed.

J. ROSE, Surgeon Medical Staff.

ERRATUM.—In Mr. G. F. Hawkins-Ambler's remarks on this subject (BRITISH MEDICAL JOURNAL, January 24th, p. 172, thirteenth line of article, "4-grain doses every hour" should read "4-grain doses every fourth hour."

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GUY'S HOSPITAL.

STRANGULATED CONGENITAL HERNIA: REMARKABLE ABSENCE OF SYMPTOMS OF OBSTRUCTION: OPERATION.

(By W. ARBUTHNOT LANE, M.S., Assistant-Surgeon, Guy's Hospital, and Hospital for Sick Children.)

T. P., aged 15, a boy, was admitted on the evening of December 23rd, 1890. He stated that he had attacks of violent pain in a testicle on the right side, which was retained in the lower part of the inguinal canal. They arose from an injury in some cases, and in others from any sudden strain which for a moment expelled the testicle from the canal through the external ring. In these attacks the testicle was very tender and painful, and much swelling ensued rapidly, this extending into the scrotum. The pain and swelling subsided in a few days in each attack.

On the morning of the 23rd, the day on which he was admitted, while straining to pass a motion, he, as he thought, injured the testicle in the same way as before. As usual, within an hour or two pain and swelling ensued. Being away from his home, the landlady insisted on his coming to the hospital. On admission he was found to present a fluid swelling running from the external ring in the direction of the scrotum. It contained no solid substance, and was evidently the distended processus vaginalis which had preceded the testicle in its descent. There was some fulness and tenderness in the lower limit of the inguinal canal, and this portion was very painful and tender. There was no fulness about the outer portion of the canal. Though I believed that the condition was one of contusion of the testis and its consequent swelling and the effusion of fluid into the vaginalis and its extension, I urged upon the boy the advisability of having it explored, since the operation

could do him no harm, and it would absolutely exclude the possibility of a hernia. This the boy refused. He said that the attack differed in no manner from the previous attacks, and he assured me that in three days he would be all right again. He had not lost his appetite, and had enjoyed his food since the morning. He also took his milk with relish while in the hospital, and was not sick. He said he felt a slight feeling of nausea if the locality in which the testis was situated was pressed on. He had no griping pain in his abdomen or about the umbilicus. Leeches were therefore applied, followed with an ice-bag, and he was given some morphine to make him sleep.

On the morning he said the pain was much relieved, the swelling and tenderness having subsided very considerably. He did not feel sick, nor did he take his milk with any feeling of discomfort. I again urged him to let me operate, explaining to him that I could at all events prevent the recurrence of these attacks. In the afternoon we obtained his consent and that of his parent. The boy was placed under an anæsthetic, and an incision was made over the position of the testis and the vaginal sheath opened. To my surprise its contents consisted of a very bloody fluid. The testis was situated in the canal, but apparently it was not inflamed. On introducing the finger into the canal it was seen to be enormously dilated, the protrusion being backwards into the abdominal cavity. This had obviously resulted from frequent distension of the processus vaginalis. As no gut could be felt in this way, the inguinal canal was laid freely open, when a small knuckle of bowel, very intensely injected and covered by adherent layers of clot was found in the position of the displaced internal ring. With some difficulty a very tight cartilaginous constriction in the peritoneal neck of the sac was divided and the gut returned. It seemed to be in a recoverable condition. The testis was fixed in the scrotum and the wound closed. The lad made an uninterrupted recovery.

I am putting the case on record, since it illustrates very well the rule which we should always adopt in these cases, namely, that when there is the slightest doubt, operate. No harm can be done by the operation, even if strangulated bowel or omentum is not found, while should the operation not be performed, and definite symptoms result when perhaps too late, the surgeon will certainly blame himself very much.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, FEBRUARY 3RD, 1891.

W. H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Lupus Carcinoma.—Mr. SOLLY showed, for Mr. JAMES BERRY, a case of carcinoma following lupus of the face. The patient was a man aged 45, in whom lupus had commenced when 15 years old. From this he completely recovered, but the skin of the face at the spot always remained red. The carcinoma started two months ago in the area formerly the seat of lupus.

Morphology, Cultivation, and Toxic Products of the Tubercle Bacillus.—Professor CROOKSHANK gave a demonstration of tuberculosis under thirty-four microscopes—including twenty-three $\frac{1}{12}$th oil immersion objectives—to illustrate his paper. The preparations were tubercle bacillus in sputum and pus from different cases in man, in pure cultivation, in glycerine, agar-agar, glycerine broth, broth without glycerine, and glycerine milk; in cream from a tuberculous cow; in liver of fowl; in lung of guinea-fowl; in lung of ostrich; in lung of rabbit; from tuberculous udder; in miliary tubercle in a calf inoculated with human tuberculous sputum; in lung of horse; in spleen of tuberculous guinea-pig; several preparations illustrating the tubercle bacilli and "phagocytes" from frogs inoculated with pure cultivations; lastly, microscopical preparations of the crystals obtained from the extract of cultures and of tuberculous tissue. More than sixty cultivations were exhibited of the tubercle bacillus; on glycerine agar-agar inoculated April 17th, June 28th, July 22nd, September 15th, October 15th, December 8th, 1890, January 14th, 1891; in glycerine broth, broth with glycerine, broth without glycerine, with alkali and glycerine milk, November 11th, 1890; glycerine broth, November 13th and November 28th, 1890; and filtrates prepared December 5th and December 9th, 1890. Chemical tests applied to the extract of glycerine cultures and Koch's own liquid were also demonstrated. After referring to the researches commenced in 1888 on the morphology of the bacillus in different cases in man and in tuberculosis in different animals, Professor Crookshank gave the steps by which he was led to cultivate the bacillus, and to confirm and extend the researches of Nocard and Roux. The macroscopical and microscopical characters of cultivations in different media were fully described and illustrated by diagrams and drawings, and by photographs projected on the screen. Stimulated by Koch's announcement at the International Medical Congress, Professor Crookshank cultivated the bacillus in liquid media, and later prepared cultures in milk, from which the bacilli were separated by filtration through porcelain. Before giving the details of these experiments, Professor Crookshank gave a detailed historical sketch of the researches on ptomaines, toxines, and albumoses. Special stress was laid upon the more recent work of Wooldridge, Hankin, and Martin. Professor Crookshank then described his own experiments. Having obtained by December 5th several batches of cultures in glycerine broth, the next step was the separation of the bacilli by filtration. The filtrate was perfectly transparent, alkaline in reaction, and yellowish-brown in colour. The filtrate was evaporated over sulphuric acid in a vacuum, and at a low temperature. This proved to be a very tedious process, occupying from December 8th to January 12th. The filtrate was then reduced to a brownish viscous residue, consisting principally of the glycerine in the original culture fluid. This extract proved to be extremely toxic. Two minims of the diluted extract produced in a guinea-pig rapid fall of temperature, erect coat, periodic irregularity of the heart's action, irregular muscular spasms, loss of control over the extremities, and death ensued. Details of the separation and effects of pure material were promised later in a joint paper with Mr. Herroun. The following tests applied to the original filtrate gave these reactions: Phosphotungstic acid, a copious white precipitate; potassic bismuthic iodide, a distinct orange-yellow; potassic ferricyanide, after standing a few minutes, a beautiful blue on the addition of ferric chloride; iodine in iodide of potassium, precipitate after some hours. The precipitate contained extremely characteristic crystals. Phosphomolybdic acid gave a yellowish precipitate and a blue colour on the addition of ammonia, which disappeared on boiling. Professor Crookshank concluded that the tubercle bacillus probably produced a complex proteid poison, in which, as in anthrax (Martin), the alkaloid of tubercle or tuberculine was in a nascent condition. According to different stages of cultivation, there would be a complex proteid substance, or this substance with free ptomaine or ptomaine alone. Another line of inquiry was to obtain an extract from the tuberculous glands of cows suffering from *perlsucht*. Further details of the preparation were given. The filtrate gave similar reactions to extracts of artificial cultivations of the bacillus. The chemical reactions in liquid supplied by Koch were as follows: Alcohol added in excess, a turbidity; phosphotungstic acid, a white precipitate; potassic bismuthic iodide, slight orange precipitate; potassic ferricyanide, after standing a few minutes, gives the Prussian blue test on the addition of ferric chloride; iodine in iodide of potassium, after standing, an amorphous precipitate; phosphomolybdic acid, a yellow precipitate, blue colour on addition of ammonia, which disappeared on boiling. Koch had not yet published the chemical and physiological properties, and the exact mode of preparation and determination of the dose of his liquid; and Professor Crookshank concluded by cautioning anyone against making the details of his purely pathological investigation a basis for the preparation of a liquid intended for experiments on the human subject, and instanced the toxic effects on the guinea-pig of the extract of glycerine cultures.

Tuberculous Guinea-pigs under Koch's Treatment.—Drs. ABRAHAM and CROOKSHANK made a joint communication on the effect of Koch's treatment on tuberculous guinea-pigs with liquid received by Dr. Abraham direct from Berlin. Two tuberculous guinea-pigs had received six injections since January 7th in centigramme doses. Similar doses were, at the

same time, administered to a healthy guinea-pig. As further control observations, two guinea-pigs in the same stage of tuberculosis were carefully examined, both macroscopically and microscopically, after death, as a guide to the condition of the arterial organs in the cases selected for treatment. The lymphatic glands were caseous and contained bacilli. There were deposits in the spleen, which also contained bacilli. The cases selected for treatment were therefore undoubtedly tuberculous without the disease being too far advanced. There were well-marked chains of tuberculous glands, but the animals were, nevertheless, active and well nourished. The first injection caused considerable constitutional disturbance, rise of temperature, tenderness and great swelling of the diseased glands, and redness of the surrounding skin. The second and subsequent injections produced a rise of temperature and tenderness, but no sudden glandular swelling. In one guinea-pig the glands had steadily increased in size; in the other there had been but little change since the first injection. The temperature "reaction" was most marked in the former after the fourth injection, when it reached 107.4° F. in two hours. With exception of a very slight rise in temperature, the healthy guinea-pig was not affected by the injection. So far, these cases showed that in tuberculous guinea-pigs Dr. Koch's fluid, in centigramme doses, produced similar phenomena to those observed in the human tuberculous subject. Whether the fluid would arrest the progress of the disease remained to be seen. The average life of tuberculous guinea-pigs was about sixty days. A cow suspected of being tuberculous was injected on two occasions with doses of 2 and 3 centigrammes. The temperature taken hourly remained normal, but increased cough was observed for some hours afterwards. The case was still under observation. The authors promised to continue to extend their observations, and to place the results before the Society at a future meeting.—Dr. Phineas Abraham stated that in consequence of the alarmist reports as to the dissemination of bacilli in patients under the "Koch" treatment, he had within the last week examined the blood of the two guinea-pigs before and during reaction. He had also examined the blood of ten human patients now undergoing the treatment, in some cases before and also during and after the reaction. They included five cases of lupus, two of phthisis, two of strumous joints, and one of leprosy. In no single instance had he been as yet able to detect any bacilli. He considered, therefore, that if any such metastasis took place, as was indicated by Dr. Liebmann's observations, it was certainly not of common occurrence.—Dr. Grün asked if there were any changes to be seen in the tubercle bacilli in the guinea-pigs after the injection of Koch's fluid. Dr. Abraham replied in the negative.—Dr. Sidney Martin thought that the question of cultivating media was an important one. The idea was now given up that any pathogenic bacilli acted mechanically. Their effects were due to their forming products which were poisonous. These poisons had not yet been sufficiently studied. One reason for this was that media, from which it was difficult to separate these products had been used for cultivations, and so the products had not been obtained in large quantities. It must be remembered that the proportions of salts, etc., in broth and in gelatine were quite different to those found in the body, and the same was true of glycerine agar-agar. If the bacilli were started in alkali albumen with the same proportion of salts as were found in serum, their growth would be as luxuriant as in glycerine agar-agar or any other medium. Alkali albumen was, media of which it was possible to sterilise, the one which had the nearest resemblance to the body structures. The opinion was growing that the bacilli manufactured their poisons from proteid substances, fats and carbohydrates being reacted on. He suggested that it was probable that we were on the road to form generalisations about the products formed by pathogenic organisms. Proteids were the precursors of the bodies formed by bacteria, and as by ordinary digestion albumoses were formed from proteids, and then by further processes pepto-toxin could be obtained, a basic body with a definite formula, so might the pathogenic bacteria produce alkaloid bodies from proteids. He had shown that the anthrax bacillus formed a specific alkaloid, which on injection produced all the symptoms of splenic fever, and it might be found that all virulent organisms formed alkaloidal poisons. Professor Crookshank had suggested that tubercle bacilli produced an alkaloid, but the reactions which he had shown were not to his (the speaker's) mind sufficient to settle this. In order to be certain that an alkaloid was present, it was necessary to isolate it, and then to form definite salts with it. It was possible that slowly-growing organisms never got further than forming proteid poisons. The action of these bodies in producing the lesion of their respective diseases should be carefully studied, and all the albumoses were of interest in this respect. Anthrax albumose produced fever, but so also did the peptic albumose formed in ordinary digestion. The fever produced by the injection of Koch's fluid into animals was exactly similar to that produced by the injection of a large dose of ordinary peptic albumose. He was at present of opinion that an organism could not produce a proteid poison sufficiently powerful or in sufficient quantity to produce death, and that if such a result occurred, it must be due to the presence of an alkaloid. He hoped that Professor Crookshank would succeed in separating an alkaloid from the cultivations of tubercle bacilli. —Dr. Woodhead felt that there was another side to Professor Crookshank's paper than the one Dr. Sidney Martin had been considering. In a complete study of the tubercle bacillus it was necessary to try and trace its morphological place in the bacteriological kingdom, to trace its life-history both within and without the body, to study both its parasitic and saprophytic aspects, as this was necessary in order to determine its position as a cause of disease. The study of this question from a chemical point of view was extremely important, particularly at the present time, and it was a side which was but too often left out of account by bacteriologists.—Dr. Job Collins, after referring to the classical experiences of Buchner with bacillus subtilis and bacillus anthracis, thought that the position with regard to bacteria would become considerably modified, and it might be that their action was comparable to the unorganised ferments of the body. Professor Crookshank's paper would lead to more attention being paid to the chemico-physical results of the presence of bacteria than merely to their morphological aspects.—Mr. Spencer asked Dr. Crookshank what his experience had been in the cultivation of bacilli at other than the body temperature, and referred to Dr. Crookshank's microscopical slides, which showed phagocytes of frog's lymph devouring tubercle bacilli. —Dr. W. Hunter said that, in his excellent historical review, Dr. Crookshank had done well to draw a sharp line between the researches on alkaloids and proteid bodies. The former had been chiefly studied in the Italian, French, and German schools, but the latter were essentially of British origin and study. The late Dr. Wooldridge had been the first to follow this line, but owing to his unfortunate nomenclature and the difficulties that a few years ago beset the subject, his results had not been so widely appreciated as their intrinsic value deserved. Mr. Hankin and Dr. Martin had however, since then conclusively established their importance in the symptomatology of disease and in explanation of their relation to immunity. Brieger and Fraenkel had since described a series of bodies derived from bacterial cultures, to which they had attached the name of toxalbumins. Professor Crookshank's experiments with his extract were interesting. Its injection had at first produced a marked lowering of temperature, and he had observed the same fact in cases, particularly those progressing favourably, treated with Koch's fluid. With reference to the question of the production of immunity, these so-called toxalbumins had the power, as shown by injections of Koch's fluid, of inciting the cells round caseous foci to an activity of which they had previously been incapable. In the lung from a patient who had died whilst under treatment by injections of Koch's fluid he had seen intense cellular infiltration, which had evidently been actively engaged in causing the absorption of caseous foci. They might therefore be able to strengthen the natural properties of the cells in combating the poison. However important the tubercle bacilli might be in the production of the disease, it must not be forgotten that it was the inherent weakness of the cells which allowed the body to be attacked by them, and in order to attain successful treatment it would be necessary to so raise the tone of the cells that they should be able to resist the disease.—Professor Crookshank said he had already come to the conclusion that the small amount of toxic substance produced was due to the fact that the usual media were not rich enough in pro-

teids, and he had already begun to use alkali albumen, as Dr. Martin had suggested. He had also gone somewhat further in isolating his extract than he had indicated in his paper. In answer to Mr. Spencer, he referred to Sir Hugh Beevor's recent paper before the Society, in which he had described the growth of tubercle bacilli at ordinary temperatures. He had injected cultivations of tubercle bacilli into the dorsal lymph sacs of frogs, and on examining the blood later phagocytes could be observed taking in the bacilli. But which were going to win—bacilli or phagocytes—he did not yet know. In carrying on researches such as he was pursuing the chief requisites were carefully-prepared media, a good incubator, and a thoroughly reliable trained assistant.

Card Specimen.—Dr. E. Perry: Tuberculosis of Thyroid Gland.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, January 29th, 1891.

Henry Power, M.B., F.R.C.S., President, in the Chair.

Note on an Unusual Result of Cataract Extraction.—Dr. Berry (Edinburgh) gave an account of a patient, a female, aged 72, upon whom he operated. The extraction was performed on November 27th about midday, and just at the termination of the operation an escape of decidedly fluid vitreous took place. About twelve hours later pain began, and was followed by vomiting. At 11.30 next day the dressing was removed, and was found soaked with blood; the eyeball was distended with blood. Shortly afterwards the patient had an epileptic seizure, followed within the next three hours by two more. No further fits occurred; the patient had never previously suffered from them. Dr. Berry brought the case before the Society in reference to the relation between the intraocular hæmorrhage and the epileptic attacks. He ventured to suggest in explanation that the pressure of the blood in the eyeball caused an irritation of the intraocular sensory nerve filaments, resulting first in sickness and afterwards in a more marked nerve explosion.—Mr. Critchett spoke of a case of intraocular hæmorrhage coming on apparently six or eight hours after extraction of cataract, and probably induced by the reduction of tension from gradual leakage of abnormally thin vitreous.—Mr. Eales mentioned a somewhat similar case, in which the vomiting following a general anæsthetic appeared to be cause of the bleeding.—The President cited an incident in his own experience in which an epileptic seizure occurred in a patient during the operation for cataract. He was able to complete the section, and then waited till the fit had passed off to finish the operation.

On some Points with Reference to the Connection between Accommodation and Convergence.—Dr. Berry read this paper, in which, after admitting that the ordinary rough tests for latent deviations of the eyes afforded valuable though not very accurate information, he described the methods he had adopted for measuring these latent deviations, and ascertaining the relation between accommodation and convergence. For these tests, the results of which were given in metre angles and dioptres, he was indebted to Dr. Ernest Maddox. The experiments of Donders and Nagel had shown, in reference to the curves of relative accommodation and relative convergence, that the amount of dissociation between accommodation and convergence was subject to individual differences, could be increased by practice, and differed for varying degrees of accommodation or convergence. The amplitude of relative accommodation or convergence was greatest at the reading distance and beyond it. If the latent position of the eyes were tested, it was found that the relative divergence almost always increased with the nearness of the object of fixation. From the examination of 120 persons in reference to the latent position of the eyes in distant fixation, he had found that in emmetropia a large proportion had either perfect or nearly perfect parallelism; in myopia perfect parallelism was less frequent, and the degree of latent divergence or convergence was higher; in hypermetropia also parallelism was less frequent than in emmetropia, and latent convergence was more frequent and more considerable than latent divergence. From the examination of even this limited number of cases it became evident that in emmetropia, and still more strikingly in ametropia, there was no necessarily intimate relation between accommodation and convergence. In ametropes tested with and without correction this was very manifest. Dr. Berry showed diagrams giving the curves of relative accommodation and convergence (expressed in metre angles and dioptres) in the different conditions of refraction, and illustrated his remarks by examples from the patients he had examined.—Messrs. Hartridge and Adams Frost interrogated the reader of the paper in reference to the visual acuity and the age of patients examined, and spoke of the value of Maddox's test as showing that latent deviation was much more common than was generally supposed.

Miner's Nystagmus among the South Wales Colliers.—Mr. Tatham Thompson, who read this paper, first called attention to the uncertainty existing as to the causation of the disease. The two most commonly accepted causes were: First, persistent strain of ocular muscles, especially in those miners who worked lying on their sides; secondly, insufficient stimulation of retina from imperfect illumination. After calling attention to the statement so frequently made that nystagmus only occurred in those engaged in the process of "holing," where the miner lay on his side with the eyes directed obliquely upward, Mr. Thompson said that in the South Wales district there were special opportunities of judging between these two points of "position" or "illumination." The coal worked there was of two kinds—"house coal" and "steam coal." As a rule miners engaged in cutting "house coal" worked in their "seams" with very little head room, some "holing," the majority working "long wall." Safety lamps were the exception. On the other hand, the "steam coal" miner had, as a rule, six to eight feet of head room, the seams being thick; no "holing," all "long wall" work, which was done principally standing, but with much poorer illumination, owing to the necessity of using safety-lamps. It was pointed out that in the former group there were all the conditions which, according to the supporters of the "ocular muscle strain" theory, should induce nystagmus. As a matter of fact, the disease was extremely rare among the "house coal" workers, except in a few cases where safety lamps were used; whilst it was very frequently met with amongst the "steam coal" miners. Mr. Thompson had collected evidence from colliery surgeons, engineers, managers, and workmen from all parts of the district, and held that the general consensus of opinion pointed emphatically to the imperfect illumination being a potent, if not the essential, factor in the causation. Several of the medical men, whose experience on the subject he had sought, had been for years in districts where "house coal" had been worked and "holing" practised, but who, until the "striking" of the "steam coal" and the introduction of the safety lamp, had never seen miner's nystagmus. Cases were quoted where those suffering from the disease on using the safety lamps had been relieved on going back to work with the naked light. The absence of nystagmus amongst the "labourers" and "haulyers" was explained by the fact that their occupation was much more varied, as a rule with better illumination, and that much of their work was done by "feel," there being nothing like the necessity for continued strain of vision in semi-darkness. The symptoms shown were usually "dazzling," difficulty in fixation, and hemeralopia, but the writer had very rarely found vertigo, vomiting, or incoordinate movements of the extremities. In trying to induce nystagmus, attempted fixation of vision in a dark room had been found quite as effective as the oblique upward vision with the head flexed. The relation of miner's nystagmus to that induced by corneal and lenticular opacities and congenital deficiencies was considered, and the influence of imperfect stimulation of retina in both cases pointed out. Mr. Tatham Thompson went on to point out that errors of refraction, and especially hypermetropia and hypermetropic astigmatism, were very commonly met with in those suffering from miner's nystagmus; it was exceptional to find it in the emmetrope. He suggested an inquiry in this direction as likely to prove of value. His opinion had been strongly corroborated by the evidence of Mr. G. A. Brown, of Tredegar, who had some years ago found hypermetropia to be a very constant accompaniment of nystagmus. In conclusion, he said: "I would submit that I have brought reasonable evidence to show that visual strain, with insufficient illumination, is, at any rate, as great a factor in the causation as strain

of the ocular muscles; that the disease is by no means confined to those whose work is done lying down, and that errors of refraction, especially hypermetropia and hypermetropic astigmatism, are predisposing causes."—Mr. SNELL (Sheffield) said that a knowledge of the working of a coal mine was very essential to the proper understanding of miner's nystagmus. He had at different times been put to some trouble by statements which on investigation proved groundless. The reader of the paper did not appear to have proved the correctness of his assertions as to the men's attitudes in the pits he mentioned, by observations made while the men were actually at work. This was to be regretted as it was important. Opinions were of no use for the elucidation of the question: facts were required. Mr. Snell referred to his own investigations, extending over many years, during which time he had endeavoured by every possible means to acquire an intimate knowledge of the manner in which miners worked. He estimated that at least five hundred cases of nystagmus had been under his treatment, and he had notes of over one hundred cases. His remarks were based on facts thus obtained. It was impossible to regard imperfect illumination (safety lamp) as the chief factor in causation, because cases occurred in miners using naked lights. He mentioned cases of his own, and referred to the observations of others. The influence could only be secondary. The prime cause lay in the attitude assumed by the miners throwing their heads and eyes obliquely. "Holers" were the class prone to the disorder. They formed only a small proportion of the total workers in a pit, and it seemed to follow naturally that there was something specially prejudicial in their work. He alluded to different facts supporting his contention, and said that the results of treatment were distinctly corroborative. Men over and over again recovered without leaving the pit if they changed their work, but became speedily worse if they returned to their old occupation. He referred to cases like this, and concluded by saying that his later observations were decidedly corroborative of his published ones.

Living and Card Specimens.—Mr. HARTRIDGE: (1) Chronic Glaucoma with Hæmorrhage in the Cup; (2) Models for demonstrating Errors of Refraction.—Mr. WRAY: Binasal Hemianopsia.—Mr. DOYNE: Case of Paralysis of Right Sixth and First Division of Right Fifth Nerves, with Partial Optic Atrophy.—Mr. JULER: Congenital Buphthalmus.—Mr. CRITCHETT: Conical Cornea treated by Cauterisation without Perforation.—Mr. LANG: Absolute Glaucoma with Extensive Retinal Hæmorrhage.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

FRIDAY, JANUARY 16TH, 1891.

E. H. BENNETT, M.D., President, in the Chair.

Fibro-glandular Hyperplasia of Prostate.—Mr. PATTESON showed portions of an enlarged prostate removed by suprapubic cystotomy by Mr. Tobin, in St. Vincent's Hospital, from a patient, aged 60. On opening the bladder, three large, hard outgrowths from the median portion of the prostate were found, completely blocking the urinary outlet. They were situated close together on broad bases of attachment. They were removed with a wire *écraseur*, and the patient made an excellent recovery. The parts removed were irregular in shape, the largest almost round, its transverse measurements being 3.5 × 3 centimetre, the next largest more quadrilateral in shape, 4 × 3.2 × 1.5 centimetre. The three together weighed, at time of removal, 10 drachms. The surfaces were for the most part smooth, in spots somewhat irregular and nodular. They showed a firm surface on section. Microscopic examination showed a marked increase in the number and size of the glandular acini, the growth in parts bearing a striking resemblance to the earlier stages of ovarian adenocystomata. Having regard to the excessive glandular formation shown in many parts, quite out of proportion to the growth of the fibro-muscular stroma, it seemed justifiable to class the tumour as a fibro-glandular hyperplasia of the gland, constituting the "prostatic adenoma" of some pathologists.

Encephaloid Carcinoma of Skin of Thigh with Lymphatic Infiltration.—Dr. M'WEENEY exhibited naked-eye specimens and microscopic slides which appeared to him to exemplify this unusual condition. The tumour had been removed by Mr. P. J. Hayes, at the Mater Misericordiæ Hospital, from a woman, aged about 45. It occupied a point about 6 inches below Poupart's ligament, on the antero-external aspect of the right thigh. It had been first noticed about six months before removal. At the time of operation it was circular in outline, about the size of a hen's egg. Microscopically it presented none of the characters of an epithelioma, in the usual acceptation of the term. The entire structure bore a close resemblance to rapidly growing encephaloid, such as was occasionally to be met with in sections from the periphery of acute carcinoma of the mammary gland. No trace of any typical structure was to be found which might serve as a guide to the starting point of the proliferative mass. The lymph glands examined presented the same appearances; in the central parts of the sections the atrophic remains of the lymphoid tissue were still to be seen. As regards the lymphatic vessels, the remarkable hypertrophy (the calibre equalled that of thick whip-cord) was found on microscopic examination to be due, not as was at first expected, to carcinomatous infiltration, but simply to chronic fibrous induration of remarkable density and cellular sparseness. Dr. M'Weeney exhibited a section, stained by Russell's method, with a view to the demonstration of the fuchsin bodies, lately described by that observer. Numerous granules, corresponding in size and general appearance with those in question, were found, but the colour reaction had not been successful, as they had, without exception, taken on the iodine-green coloration.—The PRESIDENT said the appearances of the tumour were certainly not that of an ordinary, or indeed any, epithelioma of the skin. He asked for some clinical details of the case.

Enterolith.—Mr. MYLES showed an enterolith, and gave details of a case in which symptoms of complete intestinal obstruction were produced by it. The patient was a lady, aged 65, who had suffered fifteen years before from hepatic colic, and since then from chronic constipation. This culminated in an attack of complete obstruction, necessitating relief by operation. Mr. Myles performed laparotomy, and found the gut completely blocked by the calculus lodged in the ileum, the part above distended and that below completely collapsed, the calculus fixed and immovable. Mr. Myles then discussed the possible origin of the calculus and the different ways in which it might have acted so as to cause complete obstruction.—The PRESIDENT regretted that a section had not been made of the calculus, as such would have at once answered the question of its origin.

Marjolin's Ulcer.—Mr. J. K. BARTON exhibited a specimen of Marjolin's ulcer.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, DECEMBER 4TH, 1890.

E. MACKEY, M.D., President, in the Chair.

Case.—Mr. CRESSWELL BABER showed a girl, aged 14, with large tumour of the right tonsil, with ulceration on the right faucial pillar. Several pieces had been removed from the right tonsil, and had grown again. There were enlarged glands in the axillæ and groins, and also over the tonsil. The left tonsil had become enlarged again after excision. The diagnosis was made of lymphosarcoma, but had not yet been confirmed by microscopic examination.

Hæmatocele of Broad Ligament.—Mr. GEORGE MORGAN read notes of a case of hæmatocele of the broad ligament in an unmarried lady, aged 35. The symptoms commenced on May 15th, and were first chiefly abdominal, and not localised to the pelvis. On May 22nd pelvic pain and tenderness appeared, but no tumour. On May 23rd menses appeared. On May 27th retention of urine appeared, increased pain, and well-defined tumour running across the pelvis, and filling up both fossæ. Vaginal examination revealed elastic swelling bulging downwards, the cervix was jammed against the pubes, pulse 100, temperature normal. As there was no fever or collapse, she was treated with small doses of opium, catheterisation, and enemata of glycerine. Subsequently, to relieve distension, a rectal tube was passed daily with much benefit. On June 13th the swelling began to diminish slightly, and there had been no symptoms of fever or suppuration, the temperature remaining normal, except on May 30th, when it reached

100°, and on July 13th the swelling could hardly be made out above the pubes. From this time recovery was uninterrupted, menses appeared on August 3rd, and again on August 28th. When last seen the uterus was still somewhat fixed. Although unmarried, she had acknowledged sexual intercourse. Mr. Morgan suggested that the cause might have been sexual excitement.—After remarks by the PRESIDENT, Mr. SANDERSON pointed out the possibility of the hæmorrhage being due either to rupture of a varicose broad ligament vein, or of an early tubal pregnancy.

Migraine.—Dr. BLACK read a paper on migraine and other forms of headache, which was discussed by the PRESIDENT, Dr. MENZIES, Mr. RICHARDSON, Dr. RICHARDSON, Dr. PALEY, and Mr. SANDERSON.

Koch's Treatment of Tuberculosis.—Dr. A. RICHARDSON read notes from Berlin on Koch's treatment. He described cases of lupus, tuberculous joint disease, and phthisis, and showed temperature charts illustrating the effects of injection of Koch's lymph, and showed the syringe.—The discussion was adjourned until the next meeting.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, JANUARY 14TH, 1891.

M. A. MESSITER, M.R.C.S., President, in the Chair.

Subconjunctival Dislocation of Lens.—Mr. WOOD WHITE showed a man who some weeks before had received a violent blow on the left eye, resulting in almost complete blindness. The iris was torn from its ciliary border for about one-third of its circumference. The vitreous was so opaque that no details of the fundus could be seen, and the lens was lying between the conjunctiva and the sclerotic, near the upper and outer corneal margin.

Lupus of Palate and Larynx.—Mr. BARLING showed a woman, aged 25, with lupus of the palate and larynx without skin lupus. The disease had commenced in the pharynx five years before, and extended upwards and downwards. When exhibited there was in the oro-pharynx and on the soft palate complete cicatrisation, on the hard palate ulceration involving the mucous membrane of the anterior third, the ulceration having no tendency to perforate, its area having extended but little during the previous two years and its base being covered with coarse granulations; the upper gums of the incisors and canines were red, swollen, papillary, and in places slightly ulcerated. The epiglottis was extensively destroyed, the upper margin presenting an irregularly excavated condition, with some thickening, whilst the colour was for the most part a curious glistening white. Over the inter-arytenoid fold was an ill-defined, somewhat warty thickening, but no ulceration could be seen. The patient was married and had one healthy child. There was no evidence of acquired or of congenital syphilis, and mercury and iodide of potassium had no effect on the lupus. Locally lactic acid had been applied up to a strength of 75 per cent., but without effecting improvement, so it was proposed to try the effect of injecting Koch's fluid. Mr. Barling pointed out the advisability of being prepared to intubate in such a case instead of doing tracheotomy, should injection produce much stenosis of the larynx.

Specimens.—Dr. MALINS showed (1) a Fibroid Tumour of the broad ligament weighing 9½ ozs., with microscopic sections made by Dr. Ratcliff, establishing its structure. The patient was a widow, aged 40, multipara. The tumour was enucleated by abdominal section, the edges of the capsule being sewn to the wound. She recovered without an untoward symptom; (2) a Fibroid Tumour weighing 2½ lbs., enucleated *per vaginam* from a woman, aged 51, presenting in the anterior part of the uterus into the vagina. The tumour was delivered by midwifery forceps from the vagina, the perineum torn and stitched up again. The patient did remarkably well.—Mr. THOMAS showed a number of Calculi which he had removed from the same patient by four operations. The first operation was in January, 1887, when a phosphatic stone, weighing 604 grains, was removed from the bladder. In the following April three small calculi, weighing 30 grains, were removed by nephrolithotomy from the right kidney. In May, 1889, a calculus weighing 423 grains, and in December, 1890, three more, having an aggregate weight of 500 grains. The first was almost a pure phosphatic stone, but in the others were layers of uric acid. The suprapubic operation was done three times, and it was interesting to observe that the condition of the bladder was not affected by the numerous operations, no cicatricial change being apparent at the last operation in the vesical wall, though there was a large surface cicatrix, as only partial suturing had been employed.

Treatment of Club-Foot.—Mr. THOMAS read a paper entitled "Modifications in the Treatment of Club-Foot." He discussed the treatment by forcible manipulation, tenotomy with immediate extension, plaster-of-paris, tarsectomy, including excision of the cuboid, astragalus, or removal of a wedge; syndesmotomy, shortening of tendons, and removal of redundant skin. The paper was illustrated by the exhibition of a number of cases, including a tarsectomy four years and a half after operation. A case in which Syme's amputation had been performed on one foot and tarsectomy on the other for severe talipes, and other cases showing the improvement according to the mode of treatment and length of time.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, JANUARY 21ST, 1891.

C. HAYDON WHITE, L.R.C.P.LOND, M.R.C.S., President, in the Chair.

Case.—Mr. BELCHER showed a case of Erythema Iridis in a man, aged 40.

Cancer of the Breast.—Mr. HATHERLY read notes of some cases of cancer of the breast which had occurred in his practice. He accepted unreservedly the doctrine of a precancerous or local stage of cancer, and dwelt upon the difficulty of recognising with any certainty the exact period when a non-malignant growth might become malignant. Even the microscope was of little assistance, as the cell degeneration characteristic of cancer was not a sudden but a gradual process, the same specimen often showing cells varying within wide limits as to the degree of degeneration. He referred to Mr. Jonathan Hutchinson's doctrine that cancer was not due to any special material introduced from without, but that it was simply a modification of that which occurred in chronic inflammation. Mr. Hatherly was strongly in favour of early operation, even in cases where there might be some doubt as to the diagnosis; in doubtful cases, the patient should have the benefit of the doubt, otherwise the most favourable period for operation would be allowed to slip, and an early return of the disease would be highly probable. He advocated free removal, and thought too much attention was paid to union by first intention. In one case in which he had amputated the breast in a rather advanced case, union took place by first intention, but there was ominous induration of the scar within a fortnight after the wound had healed. A second operation was performed, and the whole scar was freely excised; the edges of the wound were nearly four inches apart; healing by granulation was rapid, and the patient had no return of the disease for several months. He attached the greatest importance to any brawny condition of the skin, and thought it even of more unfavourable import than induration of the axillary glands. He gave notes of cases in support of his view of the necessity of free excision, and thought that in the large majority of cases, however little advanced they were, the most promising course was to remove the whole gland. In dealing with malignant disease, conservative surgery was a mistake.—The PRESIDENT called attention to the importance of excising new growths widely, and condemned cheeseparing with a view to obtain rapid healing and neat cicatrix.—Dr. CATTLE quoted a case in which a tumour, after twenty years of imperceptible growth, had assumed malignant characters, and caused the patient's death. He thought such changes in the character of new growths occurred at a period of life when there was a general tendency to degenerative changes.—Messrs. BLURTON and WRAY made remarks.

Specimen.—Dr. CATTLE showed for Mr. CHICKEN a Cystic Sarcoma of the Testis removed by castration from a man, aged 20. The diagnosis from hydrocele, hæmatocele, and encephaloid was discussed. Dr. Cattle showed a microscopic section from the tumour.

Tuberculosis in Cattle.—Dr. BOOBBYER exhibited the lungs, heart, liver, spleen, and some lymphatic glands from a cow which had recently been seized, slaughtered, and destroyed by the town authorities after exposure for sale at the fat stock market of the borough. He pointed out the very extensive

infiltration of tuberculous matter, and comparatively small amount of necrotic action. All the internal organs, excepting the heart, were more or less invaded. The left lung was affected in almost every part with miliary tubercle, and the liver was thickly studded with deposits of various sizes—some as large as oranges. He said the physical signs and special symptoms in so pronounced a case as this almost necessarily implied a guilty knowledge on the part of the vendors, though the magistrates before whom the case was taken declined to accept this view. The general emaciation, arched back, retracted abdomen, and staring coat, together with the frequent cough, jerky respiration from pleuritic adhesions, and continuous diarrhœa, were indications which could not well be mistaken. Dr. Boobbyer briefly drew attention to the experiments of Toussaint, Bouley, Chauveau, Cornil, Arloing, Nocard, Peuch, Perlach, Johne, and others, with the flesh or juices of tuberculous animals upon others in a previously healthy condition, both artificial injection and natural ingestion being used, which all went to show that great risk of infection attended the use of the flesh of tuberculous animals as food. Dr. Boobbyer described the attitude of the home and some Continental governments and local authorities with respect to the very important question of how far tuberculous disease in animals ought to be considered to render them unfit for food, and said the Sheriff of Glasgow probably erred, if he erred at all, in the right direction when he decided that the simple presence of the disease, however slight its development, was in itself a sufficient disqualification.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, JANUARY 29TH, 1891.

W. DALE JAMES, M.R.C.S., President, in the Chair.

Rupture of Heart.—Dr. KEELING related the particulars of a death from rupture of the heart. The patient, a man aged 67, lived for thirty hours after the commencement of the seizure. At the *post-mortem* examination the pericardium was found full of loosely clotted blood, and there was a vertical rent about 1 inch in length in the anterior wall of the left ventricle, close to the septum. On the inside the wall of the ventricle was bulged and thin at the point corresponding to the laceration. The substance of the heart was much softened by fatty degeneration, and a thrombus was found in the chief branch of the left coronary artery, a short distance above the point where the heart had given way.—Microscopic sections by Dr. ARTHUR HALL, showing fatty degeneration of the cardiac muscular fibres, were exhibited.—The PRESIDENT and Dr. BURGESS made remarks.

Tubercle of Cerebellum.—Dr. GWYNNE showed a tuberculous tumour from the middle lobe of the cerebellum of a boy, aged 5 years, who was admitted into the Children's Hospital, and died four days afterwards. The first symptoms dated from six months previous to admission, and of these pain in the occipital region and inflammation of the eyes, with photophobia, were the most prominent. After a time co-ordination of movements was lost in both arms and legs. Without support he was unable to feed himself or to walk, the tendency always being to fall backwards. The next symptom that showed itself was internal strabismus, affecting first one eye and then the other, or both together, no one form being permanent. After admission the speech became affected, and the patient was unable to make himself understood. Deglutition became difficult, and eventually impossible. At the same time right facial palsy supervened. The patient gradually became comatose, and died five days after admission. The *post-mortem* examination disclosed a tumour about the size of a large walnut, occupying the upper portion of the vermiform process of the cerebellum. The fourth ventricle contained about 4 ounces of fluid. The tumour was examined microscopically, and found to present the usual appearances of tuberculous tumours. Sections were shown. Mr. JAMES, Dr. SIDNEY ROBERTS, Dr. PORTER, and Dr. BURGESS joined in the discussion which followed.

Surgery of the Vermiform Appendix.—Mr. ARTHUR JACKSON read a paper on the surgery of the appendix vermiformis. After alluding to the important part which appendicitis played in causing abscesses in the right iliac region, and the researches of Dupuytren and Leudet many years ago he referred to the differences of opinion which existed as to the anatomical relations and position of the process, expressing his opinion that the appendix was not always surrounded by peritoneum. The cases were divided for clinical purposes into four classes: (1) Inflammation about the appendix, probably due to adhesions, and without apparent suppuration; (2) acute inflammation due to perforation, and often accompanied by general peritonitis; (3) chronic inflammation followed by perforation; (4) those cases in which inflammation occurred behind, the process being embedded in the back of the abdomen. Palliative treatment was advocated in the first class of cases, operative treatment in the second and third, while the fourth might be treated variously.—Mr. JAMES, Mr. WRENCH, Dr. KEELING, Mr. W. F. FAVELL, and Mr. R. J. PYE-SMITH took part in the discussion.

REVIEWS AND NOTICES.

TRAITÉ D'ANATOMIE HUMAINE. Anatomie descriptive, Histologie, Développement. Par L. TESTUT, Professor d'Anatomie à la Faculté de Médecine de Lyon. Avec la collaboration (pour l'Histologie et l'Embryologie) de MM. FERRÉ et VIALLETON. Tome I: Ostéologie, Arthrologie, Myologie. Tome II: 1er Fascicule: Angéiologie.

THE growing tendency of modern anatomists is to regard human anatomy in the light of the kindred sciences of morphology and embryology. Professor TESTUT'S treatise is written to meet the demand for a textbook written on the above principles that can safely be placed in the hands of students. Throughout the book there is a continuous undercurrent of reference to the ontogeny and phylogeny of the parts described whereby the student is brought more fully to comprehend the morphological significance of the organ or structure under consideration. Calmness of judgment and avoidance of speculation are everywhere apparent, and the requirements of the student who is to become the future practitioner never lost sight of. Professor Testut never hesitates to leave the domain of pure description in order to give to his descriptions their true morphological meaning. In his descriptions of the ligamentum teres, the pyramidalis, the anconeus sextus, and the double insertion of the tibialis anticus, among others, we have brought side by side the description and the philosophy of each.

Although by means such as these the student is brought to regard human anatomy as a science, he is also continually reminded by the sections treating on variations that it is not an exact science, but is, as has been said, a study of averages. A feature of the work is the illustrations, and herein the requirements of students are carefully considered. The explicit and diagrammatic method of explaining such difficult matters as ossification and the musculature of the heart is especially noticeable, as is also the method of portraying muscular attachments. On the one hand we have an artistic drawing of the bone described, and on the other an outline key, with the linear boundaries of the attachments boldly marked in red. This method is far preferable to that of defacing excellent drawings with thick red lines, and has, moreover, an advantage from an educational point of view. The tinting of several of the illustrations lends great clearness, and the plates illustrating arthrology are especially lucid.

MANUAL OF SURGICAL ANATOMY. By ALFRED W. HUGHES. Edinburgh: E. and S. Livingstone. 1890.

THIS is a small work, consisting of nearly two hundred pages, and illustrated with a fair number of semi-diagrammatic figures. It has been prepared, we gather from the preface, for the use of a class because their time is too short to allow them to use the larger works. Further, by a process of exclusion, surgical anatomy which may be disregarded by candidates for the ordinary surgical qualifications has been separated. The author likens his method of literary composition to the struggle for existence in which the fittest survive. The struggle seems to us to belong to another class, namely, that of obtaining in the shortest possible time, and with the smallest amount of knowledge, a licence to practise. The author has also aimed at including that amount of anatomy

which, while requisite for the practice of surgery, is not contained in the works on surgery usually read by students. At the same time, we note that a great deal of surgery which is contained in books on surgery is included. This is done, as in all books of this class, in such a way as to give no idea of the relative importance of the different diseases or injuries. We can easily imagine a student who has used this guide cheerfully diagnosing intracapsular fracture of the neck of the humerus, and yet not knowing how to mark the beginning and end of the musculo-spiral nerve—or, for that matter, of any other nerve in the body, as their beginnings and endings are systematically ignored. Indeed, under every heading the omissions are so many and so important that we wonder what examination there can be for which such a booklet as this could suffice. Such information as is given is in the main correct, but quite inadequate for anyone who wishes to acquire such a knowledge of surgical anatomy as would fit him to take a place amongst educated medical men.

A System of Oral Surgery. By James E. Garretson, A.M., M.D., D.D.S. Philadelphia: J. B. Lippincott Co. 1890.

This very large book would be greatly increased in value were it divided into two or even three volumes, one of which would then be sufficiently large to be handled with comfort by a reader. The book includes not only operative and mechanical dentistry, but also the surgery of the mouth and neighbouring structures. It is manifestly impossible for an author to do real justice in one book, even though that book may contain 1,364 pages, to the whole art and science of dental surgery, and in addition treat in an exhaustive manner of the following subjects: descriptive and surgical anatomy of the head, the muscles of expression and mastication, the arteries and veins of the facial region, the lymphatic vessels and glands of the head, the facial nerve, the tonsil gland, bronchotomy, the tongue and its diseases, the uvula and its diseases, hygromata of the neck, diseases of the pharynx, the nose and its diseases, the diseases of the face, lupus, the operations on the lips and cheek, the ligation of arteries, the exsections of the maxillary bones, nerve lesions and their treatment by section, nerve lesions and their treatment by stretching, medical diagnosis, anæsthetics, inflammation, erysipelas, antiseptics.

For the dentist, too much space is occupied by chapters on general surgery; for the surgeon, far too much space is occupied by chapters on dentistry. The illustrations are numerous, and with a few exceptions are familiar in Gray's *Anatomy* or White's *Catalogue of Dental Instruments*. The book appears to have been carefully compiled, and much time must have been expended upon it; but many of the sentences are involved and difficult to understand, making the reading of the book a serious undertaking.

NOTES ON BOOKS.

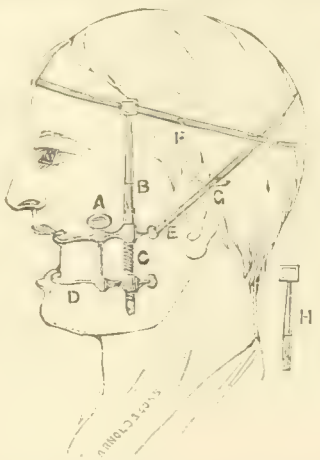
A Story told to a Child. By Francis Vacher. (London: Simpkin, Marshall, and Co. 1891.)—A good story enough, and a well written one to boot, but why "told to a child"? Two English travellers in the Hartz mountains—a gentleman and his wife—by accident put up at an inn in a lonely place where was hiding the notorious robber chieftain, Adelbert Ferdinand Boberfeld Burmeister. The terror inspired by his name had an injurious effect on the lady, who was "just then in a condition when any feeling of alarm was likely to be specially perilous." This, in a story told to a child, might have been omitted or better expressed. How, after travelling for many miles in the company of the robber, without suspecting it, the lady was brought to bed of "a fine bouncing boy" is very well told, though in a manner which could not fail to set a sharp-witted boy to work speculating on the whence and the how. By the way, it must be a good while ago since robber chieftains haunted the Hartz mountains, yet Dr. Vacher quotes Andersen's *Fairy Tales* and speaks of Francatelli's *Cookery!*

Illustrated Lectures on Nursing and Hygiene. By R. Lawton Roberts, M.D.(Lond.), D.P.H.(Camb.). (London: H. K. Lewis. 1890.)—This book, which consists of eight lectures on what may be aptly termed the hygiene of the sick-room, has been issued as a companion volume to the same author's treatise on ambulance work, and is arranged on the plan of the syllabus of the advanced nursing course of the St. John Ambulance Association. The book contains much practical information, and illustrations which will be prized by the amateur and the trained nurse. Dr. Roberts is quite sensible of the want of practical instruction in nursing the sick, which must necessarily be the case among the St. John Ambulance pupils. The lectures on warming and ventilation, and on food and drink, are excellent. They are conceived in a true scientific spirit, plain and popular, and contain within small compass what every one ought to learn. Other matters, relating to contagious fevers and disinfection, observation of the sick, details of nursing, together with numerous illustrations of sick room appliances, are the more exclusive province of the nurse, though the amateur cannot fail to gain by their perusal. Dr. Roberts, by his interspersed quotations, does full justice to the ladies who have preceded him in writing books for nurses of a like character to his own, especially Miss Nightingale, Miss Lückes, and Mrs. Dacre Craven, and by his scientific rendering of homely problems, has produced a book of great value to the nursing world, as well as to the family circle.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SELF-RETAINING SCREW GAG.

The surgical gag has evoked a good deal of ingenuity on the part of operators, and though there are several in use which answer the purpose sufficiently, all, so far as I know, have what appear to me two main disadvantages. These are that they require a hand for the purpose of retaining them in position, and the teeth plates either do not grip sufficiently, or, if they do so, are fixed. I am aware that there are gags like the primordial cork, which are introduced into the mouth, but these are not now generally employed for prolonged operations. The obvious disadvantage of not having all hands available,



when these are scarce, need not be dwelt upon, nor need one speak of the uselessness of a gag which does not grip the teeth, and then retain itself in position. To do this, however, safely, and that a gag so fixed should not play the part of the dentist's "key," it is necessary that the arm fixing the lower jaw should be movable, and yet retentive of its hold, because the lateral movements of the lower jaw may occur inconveniently and powerfully in a restive or imperfectly anæsthetised patient.

Having experienced all these inconveniences in throat oper-

ations, I have asked Messrs. Arnold and Sons, of West Smithfield, to construct a gag of the following description, which satisfies my requirements:

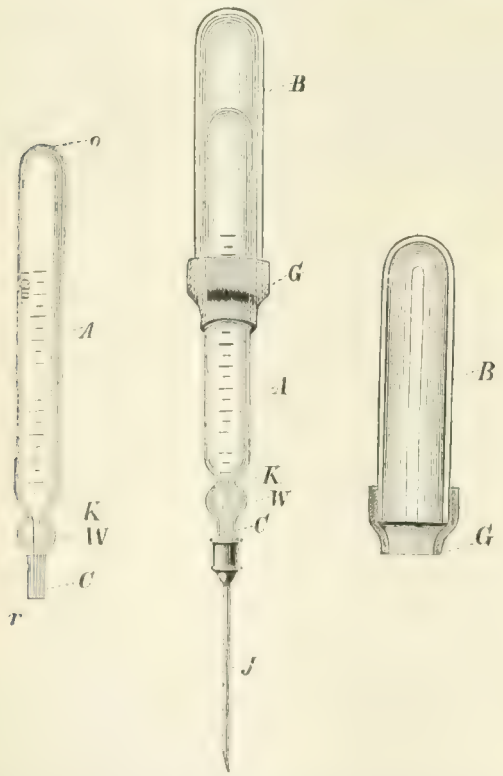
Two arms (D) run upon a screw (C), which is capable of being worked from either end by the key (B). The gag is thus applicable to either side of the head. The key, of which a separate illustration (H) is given, has a suitable mechanism for securing it to the end of the screw, thus enabling the whole apparatus to be retained in position by tapes F and G, applied through the handle of the key, and finally secured through the ring E. In order that a clenching of the jaws may not prevent the action of the screw, which would otherwise take place, a smooth steel rod (A) is run through the levers (D), and relieves any such strain upon the screw. When, however, the gape is rendered sufficiently wide, the rod A is removed, and the lower lever becomes as mobile, laterally, as the jaw to which it is attached, and from which it is prevented from detaching itself by a well-made tooth rest. In the case of a willing and conscious patient, there is, of course, no necessity for the rod A, as the mouth is willingly opened to the required extent, and the screw worked without hindrance.

ALEXANDER MORISON, M.D., F.R.C.P.E.

Green Lanes, N.

A CONVENIENT SYRINGE FOR THE ADMINISTRATION OF DR. KOCH'S FLUID.

I WISH to draw attention to a syringe for hypodermic injections which for ingenuity, simplicity, and ease of being kept aseptic beats anything of the kind known to me. It was invented by Dr. Stroschein for bacteriological purposes, and is particularly adapted for the injection of Koch's lymph, as the fluid comes in contact with nothing but glass easily cleansed, in addition, of course, to the inside of the injecting needle. The accompanying drawing will best explain its construction.



The glass tube A, which has at its upper globular end a very small hole (*o*), is graduated in its lower two-thirds, holding a cubic centimetre of fluid, each division representing practically a decigramme; it ends in a nozzle (KWC), which receives the usual exactly fitting injecting needle. A cylinder (B) of thick glass, globular at its upper closed end, and quite open at its lower end, allows A, when inserted, to slide easily up and down. A band, $\frac{3}{4}$ of an inch wide, of thick stiff india-rubber (G) is stretched partly over the end of B, allowing A to be pushed through its projecting part into B in such a way that no air can pass along its outer walls into B, while at the same time it can easily be moved up and down. If A is held into a fluid whilst B is slowly drawn upwards, gliding along the walls of A, the air of the inner tube is sucked through the hole (*o*) into the outer tube, and replaced by the fluid, which, by the same action reversed, is again expelled.

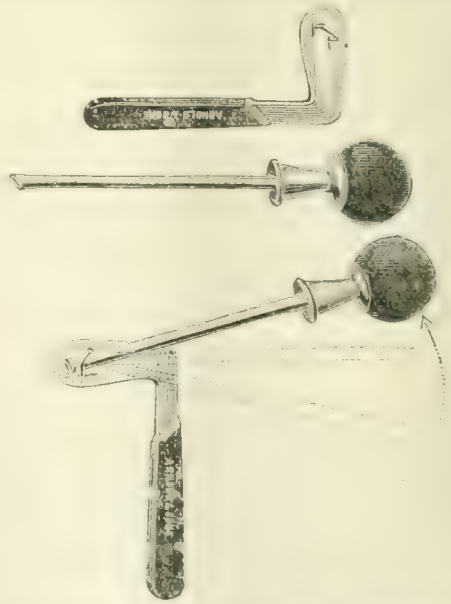
I have used Koch's excellent syringe almost daily for more than five weeks, and have been satisfied with it until I became acquainted with Dr. Stroschein's, which leaves nothing to be desired. The useful little instrument is manufactured by Messrs. Christ. Kob and Co., Stützerbach, Thuringia, and costs with one needle, but without case, 2s. 6d., or with the necessary case, 4s.

E. GUMPERT, M.D.,

Consulting Physician Clinical Hospital, Manchester.

AN IMPROVED INSUFFLATOR WITH ADJUSTABLE TONGUE DEPRESSOR.

THE original insufflator of Dr. Osborne has two great disadvantages—one, that the powder has to be blown into the patient's mouth by the operator, an unpleasant and, in certain cases—for example, diphtheria—a risky thing to do. The "improved Osborne insufflator" introduced to the profession by Dr. Alexander Duke in the BRITISH MEDICAL JOURNAL of November 15th does away with this danger and unpleasantness by replacing the use of the operator's mouth by an india-rubber ball; but in both of these the left hand of the operator, whilst holding such instrument, gets into the line of vision, so, at my suggestion, Messrs. Arnold and Sons, of West Smithfield, have made for me the insufflator which is depicted in the engraving, and which, by a species of evolution which it has gone through, is, I think, as perfect as such an instrument can possibly be. The tongue-depressing part is separate from the insufflator proper, which runs through a a metal loop or bridge on the upper surface of the depressor, and (there being plenty of "play") by the slightest movement of the hand the powder can be ejected to all points of the fauces. Moreover, the handle of the depressor (which is of roughened ebony) being made at right angles, not only is it more "handy" to hold, but and this is its especial advantage the left hand is well out of the line of vision. Again, the tongue depressor can be used as a separate instrument for ordinary inspection of the fauces.



Leicester. W. L'HEUREUX BLENKARNE.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, FEBRUARY 7TH, 1891.

THE NEW SCHEME OF THE UNIVERSITY OF LONDON.

ONE more important step has been taken in the long negotiations for the reconstruction of the present system of university instruction and examination in London. On Wednesday last the new revised scheme of the Senate of the University of London was, we understand, ordered to be printed and forwarded to the bodies interested. The scheme is to be understood as that upon which the University is prepared to ask that a new charter should be framed, and as such it will be submitted to the Privy Council at an early date.

The new scheme would appear to follow the general lines of its predecessors, but differs from them in certain important respects which nearly affect the interests of the medical schools. It will be interesting to trace the differences and to indicate especially the provisions of the scheme affecting the Medical Faculty.

It will be found, in the first place, that it is proposed to strengthen the representation of the medical corporations on the Senate. In addition to the Presidents of the Royal Colleges of Physicians and Surgeons, each of these Colleges is to be represented by a Fellow elected by the College. In the second place, the status of the Provincial Colleges and medical schools is to be recognised. The Provincial Colleges are to have four representatives on the Senate, and the "provincial faculties acting conjointly" a like number. This is an entirely new departure for the University, and its wisdom will undoubtedly be much canvassed. To the medical profession, however, accustomed to see representative men from the extra-metropolitan medical schools sitting on the governing bodies of the metropolitan medical corporations, the proposal will not appear to be without a well-established precedent.

Ever since the proposal to create "Standing Committees" in the several faculties was first made, it has been seen that these bodies would have a very important share in determining the future policy of the University. Through the Medical Standing Committee all the business of the University with the medical schools would probably be conducted, and it would have the general conduct of the arrangements for the examination of medical undergraduates. It will be proposed that this Committee should consist of the four representatives of the Royal Colleges, five elected by the London Faculty of Medicine, one by the Provincial Colleges, and nine elected by the Senate.

The tradition of the University as to Constituent Colleges would be followed under the new scheme by the recognition of Provincial Colleges. The London Constituent Colleges would be University and King's Colleges, the nine other medical schools, and the London School of Medicine for Women. The Provincial Constituent Colleges would include all institutions of similar rank to the Metropolitan Colleges which would be desirous of admission. The proposed provisions as to the Faculties and Boards of Studies do not appear to be very clearly expressed; if it is contemplated to have each Faculty and each Board in duplicate, London and provincial, the arrangement would seem to be unnecessarily cumbersome.

As to the conditions under which degrees of Medicine will be granted, the new scheme is elastic. It is proposed, we understand, to give the Senate power to enter into arrangements with the Royal Colleges for conducting examinations in anatomy, physiology, medicine, surgery, and midwifery for the pass M.B. degree by a Board of Examiners, consisting of examiners appointed by the University and examiners appointed by the Colleges, that is to say, practically by the Conjoint Board. These examiners would act jointly in recommending candidates for degrees, but the University proposes to retain the right to examine candidates who do not aspire to obtain the diplomas of the Colleges. As to those candidates who do aspire to take both diplomas and degrees, their examinations would be held in combination with the examinations of the Conjoint Board. In order to carry out the arrangements for these combined examinations, it is proposed to appoint a Joint Committee consisting of members nominated in equal numbers by the Standing Committee for the faculty of Medicine and a Committee to be appointed by the Royal Colleges.

The new scheme will require, and will doubtless receive, very careful consideration at the hands of the medical corporations and schools, and is worthy of the serious study of all members of the medical profession who retain their interest in medical education. The scheme certainly seems to meet in an equitable spirit many of the objections which were urged against earlier drafts.

THE LONDON WATER SUPPLY.

THE difficulties which surround the problem of supplying London with an adequate water supply are greater by far than some suppose. The largest provincial cities have, within practicable distances, sources that the metropolis does not enjoy. Such are the lakes in mountainous districts, which yield a water purer than that of rivers, and one freer from inorganic matters than those of wells; they can impound upland streams before they have become fouled, and they may collect in artificial lakes or reservoirs the rainfall over wide tracts of uncultivated and uninhabited moorlands.

Wells—from which it is suggested that an adequate supply might be obtained—are not free from risks of contamination if, like those of the Lambeth Company, they are fed from the ground water. That company, beyond its share of the Thames water, has a collecting ground of some 10,000 acres of Bagshot sands, but though these and the like tertiary beds yield for the most part waters of great purity and of less hardness than those from the chalk, when they are overlaid, as on the borders of Middlesex and Hertfordshire and in Berkshire, by the denser clays of the London basin, their pervious character renders

them extremely liable to pollution where, as in the case of the Lambeth Company's wells, they are superficial; and the prevalence of enteric fever in such an area would be fraught with danger. The Kent Company depends solely on deep wells in the chalk, and its water is alone beyond suspicion, though its great hardness is an objectionable feature. But the wells sunk by the New River Company along the line of junction of the tertiaries and the chalk, and those of the Colne Valley Company at Watford and Rickmansworth are in every way unimpeachable. In an extension of these borings in a long series extending westwards to Reading and Basingstoke, and then eastwards by Guildford, Leatherhead, etc., where tertiaries and chalk alternate, onwards towards Rochester, the only satisfactory solution of the problem seems to lie.

One advantage of the unification of the water authorities would be that, by an admixture of the excessively hard waters from the lower chalk with those of the Reading, Woolwich, and similar beds, the cost of softening would be to a great extent avoided, and a uniform water of absolute purity and only moderate hardness be obtained.

At present the Kent Company draws about 10,000,000 gallons daily from ten deep wells in the chalk. The New River obtains not more than 5,000,000 gallons from the deep wells, and about 20,000,000 from the Lee. The East London pumps 35,000,000 from the Lee, the quantity being unrestricted by the Act, but limited by the necessities of the navigation. They have the power of drawing 10,000,000 from the Thames at Sunbury, but, though they frequently abstain from exercising this right, in dry seasons—as the Jubilee year they avail themselves of it to the full, and even then find the combined supply inadequate to the requirements of their densely-populated district. The other five companies are permitted to pump 20,000,000 gallons each daily from the Thames, and the Southwark and Vauxhall does so to the full extent, the others taking, on an average, from 10,000,000 to 15,000,000 daily, the 15,000,000 of the Lambeth Company including, however, the subsoil drainage of the area occupied by the Bagshot sands. It thus appears that the daily demands of the metropolis now exceed 150,000,000 gallons, of which not more than 20,000,000 are drawn from deep wells. In view of the further growth of London, a daily supply of 240,000,000 gallons must be provided for by any scheme which aims at finality, that is, 100,000,000 gallons more than the present delivery, to meet which, under existing arrangements, only 50,000,000 are available from the Thames; while the Lee is incapable of furnishing any more than the present supply. Supposing that the two rivers be condemned, 15,000,000 gallons only will be left, and an immediate addition of 130,000,000, capable of extension to 225,000,000 gallons, will have to be made.

When we reflect that Glasgow takes 40,000,000 from Loch Katrine, and that Manchester and Liverpool each find 20,000,000 sufficient for their wants, the magnitude of the problem will be better imagined. A double service of a pure and an inferior water for domestic use would in practice be found, it is to be feared, unworkable; but it might be possible to use the present service of river water for public and trade purposes, such as flushing the sewers, street watering, extinguishing fires, supplying public baths and washhouses, for steam engines of all kinds, and the numerous manufacturing and industrial processes which absorb a large proportion of the water supply of our great towns; in some—as Greenock, where the employment of meters enables the distinction to be made—more than the half.

It is certain that the severe and rapidly-increasing drain on the great chalk reservoir is becoming a most serious matter to the neighbourhood of London, and this side of the question demands attention at an early date.

THE PERITONEUM IN ABDOMINAL SECTION.

A series of experiments reported in a recent number of the *Centralblatt für Gynäkologie* by Dr. Kelterborn, of Dorpat, will prove of value to all who are interested in abdominal surgery. His conclusions differ from those of Sänger and von Dembowsky. The former maintains that a single raw surface formed by stripping off peritoneum is sufficient for the development of an adhesion, whilst two such surfaces in apposition must surely unite. Sänger further holds that no endothelium is formed anew to cover the peritoneal defect, so that an adhesion is unavoidable. Von Dembowsky finds that ligatures, stumps, and cauterised surfaces usually cause peritoneal adhesions, whilst iodoform, coagula, irritating and antiseptic fluids, and slight bruises and incisions of the peritoneum do not cause adhesions when that serous membrane is healthy.

Dr. Kelterborn made eighteen abdominal sections: cats were chosen in all but two cases. The subjects were prepared for the operation just as in cases of ovariotomy; care was taken to allow nothing to irritate the alimentary canal, and a laxative was given before the operation, which was always performed under chloroform. Diet was carefully restricted for several days after the abdominal section, as it was found, in some of the earlier cases, that free feeding had a very prejudicial effect upon the abdominal wound. The abdominal sutures were always applied after Sir Spencer Wells's plan. Each suture was threaded to two needles, and each needle introduced from within outwards, through the peritoneum and the whole thickness of the abdominal wall close to the edge of the wound: the rectus muscle was also included. Dr. Kelterborn paid particular attention to the effects of the cautery. Contrary to the experiences of Maslovsky, Spiegelberg, and Waldeyer (all these three names are familiar to readers of Wells's standard work), he found that cauterised surfaces of healthy peritoneum, even when of some extent, tended to heal completely, that is to say, the burnt spot was ultimately covered over with a new layer of endothelium. This was the case whether the parietal peritoneum or the serous investments of the intestines, stomach, bladder, or liver were cauterised. No adhesions formed, and the sites of cauterisation were found smooth and shiny. But when more than the serous coat was burnt, especially when the vessels of the intestine were damaged by the cautery, bad results, such as suppuration, often occurred. Pieces of the serosa of the bowels, about one-third by one-sixth of an inch, and of parietal peritoneum, about one inch broad by one-sixth, were scraped off with a sharp curette or dissected away. The results were uniform, no adhesions formed. The subjects were killed about the end of the third week.

Dr. Kelterborn notes that in healthy women plenty of ripe follicles burst on the surface of the ovary, leaving large scars, yet no adhesions are formed with the intestines or tube. He

thinks that in adhesive perimetritis the surface of the ovary is first infected from the tube, and then, and not otherwise, rupture of a follicle becomes a source of adhesions. Dr. Kelterborn found that ligatured pedicles and pieces of parietal peritoneum, transfixed by a needle and ligatured (as when a parietal vessel is secured during an ovariotomy) do not tend to adhere to anything in healthy subjects, not even to the sharp anterior border of the liver, as von Dembowsky believed.

It is interesting to learn that adhesions of the omentum to the middle line often occurred in the simplest cases, even where there was no reaction after operation. The adhesions were limited to the site of suture tracks, and were as frequent when disinfected silk was used as when silk sutures simply cleaned were employed. Dr. Kelterborn had good reason to believe that these omental adhesions were greatly promoted by the effects of air left behind within the peritoneal cavity after operation. The air pushed the omentum against the abdominal wall. When we remember that a human patient lies on her back after ovariotomy, it is evident that in her case physical laws greatly favour this unfavourable influence of air on the omentum. Dr. Kelterborn found that air confined in the peritoneum escaped through the wound between the sutures, and formed bubbles under the closely applied photoxylin dressings.

Dr. Kelterborn concludes that neither the removal of small pieces of peritoneum nor cauterisation of that serous membrane causes adhesions in healthy subjects. Ligatures within the peritoneal cavity do not for the most part set up adhesions, but tend to become encapsuled. Peritoneal adhesions after abdominal section, where the peritoneum is previously healthy, are to be traced to infection. This is seen in adhesive perimetritis, the source of infection being derived, as has already been observed, from the Fallopian tubes, and after operations where sepsis has been introduced from without.

The original memoir deserves careful study. If Dr. Kelterborn's experiments be not misleading, we can well understand how it is that patients so frequently recover, without any dangerous complications, after the removal of abdominal tumours where numerous adhesions have been broken down. The removal of all sources of sepsis, the true source, it would appear, of adhesive peritonitis, is so well effected by recent improvements in operating, that one of the most formidable consequences of abdominal sections is now rarely seen. On the other hand, these researches only confirm the experience of operators, that damage to intestine involving the muscular wall and vessels involves grave peril. The adjacent portions of serous coat should be sewn over the raw surface.

THE PLACE OF PHYSICAL EDUCATION.

II.

A previous article in the British Medical Journal (January 17th, p. 135) on this subject was chiefly devoted to a discussion of the place which ought to be assigned to physical education in the class of schools commonly called public schools. The remarks there made apply, with but few and obvious exceptions, to girls' schools, where, indeed, the present need of more efficient and systematic physical training is much greater than in those for boys. Some form of regular attire, as little calculated to restrain the movements of the growing trunk and thorax as is that recommended for their brothers, and footgear as little likely to deform the feet, are equally required by girls. The most external garment or frock will concede all that is fairly demanded by appearance. Gymnastics, duly regulated and supervised, are useful for all.

As regards games proper—and their full quota of open-air exercise must be allowed to girls—the popular lawn tennis is not without its dangers, especially when engaged in too frequently or for too long at a time. Cricket has lately been recommended as a useful substitute; it is not ungraceful, it engages a larger number of players at a time, and, if played with a ball lighter and softer than the regulation pattern, it is practically free from danger. A form of soft-ball fives and racquets, again, are excellent and unobjectionable games. Of course, as in the case of boys, the physical training as a whole should be under regular medical supervision; and equal care must be exercised in apportioning a due share of appropriate exercise to the more weakly and to the really delicate.

The ordinary Board School offers problems of a somewhat different character. There can, however, be no compunction in urging that, if a locality compels and makes provision for the mental education of its children, it must not at the same time ignore the equally cogent necessities of their physical training. In every School Board district, for instance, there ought to be a sufficiently commodious swimming bath, and no child should be allowed to pass a certain standard without producing a certificate from a competent instructor that he or she has learnt to swim.

Drilling and certain forms at least of "free" gymnastic exercises should be compulsory on every child—though here, again, the need for the careful supervision and classification of individuals is even greater than that which exists in schools of a somewhat higher status. Since the regulation and enforcing of games, etc., is for the most part outside the sphere of the school officials' ordinary duties, it is the more important to provide for a due share of physical training within what are termed school hours. The periods of mental work should be regularly interrupted by times of combined exercise and recreation of a definite kind and in definite order. This would have the advantage, amongst others, of preventing the younger children from being compelled to assume for long together an unnatural and constrained posture of both body and mind. And proficiency in certain physical exercises should hold an important position in the examination for each standard.

It goes without saying that in no case should there be inflicted upon any child any form of punishment which encroaches upon the period of recreation or of rest with work of the same kind as that with which the "school" hours are legitimately occupied. It is true that an unreasonable form of modern sentiment has done much to thrust upon school authorities the adoption of punitive measures which are mental rather than corporeal in their nature; and it is high time that the far-reaching evils of these methods were recognised. At all events, those who realise all that education truly means and really implies, will not admit that there is more degradation in being subjected to even severe, yet temporary, bodily pain or inconvenience, than in being made to suffer some impairment or deterioration, however slight (but not less certain because its full effects may be postponed), of intellectual vigour or capacity.

Finally, it must not be forgotten that the child's education,

which it is the special business of schools to carry on, is begun in its mother's arms. Physical training, nowadays, is taking its recognised place in the nursery; but it is not yet allowed its due position in the smaller schools for young children. Here, however, is one of its most useful fields. Here is laid the foundation of that education upon which the training of later years will either rise or fail; it is in such schools, emphatically, that most may be done for the future man or woman; and it is in these schools, unfortunately, that the child readily acquires the habits and even the vices which he carries on, to hamper the efficiency and impair the reputation of larger and more ambitious institutions.

Dr. W. D. Dakin has been elected Obstetric Physician and Lecturer on Midwifery at St. George's Hospital, in the place of Dr. Champneys, who has recently migrated to St. Bartholomew's Hospital.

The London County Council has decided to nominate delegates to the International Congress of Hygiene, and will afford facilities to its members for inspecting any works under the control of the Council.

Professor von Helmholtz, of Berlin, will, as already mentioned, attain the age of 70 on August 30th. A Committee, which includes Professors Virchow and Dubois-Reymond, has been formed to decide in what way the event may be most fitly celebrated.

On Monday evening next Dr. Douglas Powell will read a paper on Angina Pectoris at the Medical Society of London. The discussion thereon is likely to be of considerable interest and importance, and many London and provincial physicians are expected to take part in it.

Professor Victor Horsley and Mr. Francis Gotch, M.A., Oxon., Demonstrator of Physiology in the University of Oxford, have been appointed Croonian Lecturers to the Royal Society for the present year. They have chosen as their subject "The Mammalian Nervous System: Its Functions and their Localisation as determined by an Electrical Method." The lecture will be given on Thursday, February 26th.

FAILURES AT NETLEY.

Although not publicly mentioned, it was, we believe, generally known among those who were present at the recent distribution of prizes at Netley, that two surgeons who had been attending the army medical school during the session just concluded had failed to obtain recommendations for commissions in the medical service; and that the case of a third surgeon, who had qualified professionally, but who was particularly deficient in general education, had been submitted for the consideration and decision of the military authorities in London.

HOSPITAL FOR VIENNA STUDENTS.

A hospital for sick students of all nationalities was recently opened at Vienna by the Emperor. Professor Schrötter delivered an address, in the name of the Society for the Care of Sick Students, in which he expressed the satisfaction felt by the Society in having at last, after thirty years of work, a home of its own for the reception of students overtaken by illness. The hospital has accommodation for 37 patients, 8 beds being set apart for surgical cases, and 9, in a separate block, for infectious cases. Dr. Reitenfacher will have charge of the medical and Professor von Dittel of the surgical section; dermatological cases will be under the care of Professor Lang.

A MEMORIAL TO PIROGOFF.

Subscriptions are being raised throughout Russia for the erection of a suitable memorial to the late Professor Pirogoff. During the Congress of Russian Medical Men recently held at Moscow, a sketch of the proposed memorial by the Russian Academician, Mr. Sherwood, was exhibited in the hall of the University. The great surgeon is represented as seated on a chair, with a skull in his hand and an open book at his feet. The sides of the pedestal are adorned with crowns of laurel, and on the front of it is the inscription in Russian, "To Nicolai Iwanowitsch Pirogow, the Thinker-Surgeon. 1810-1881."

THE LEPROSY COMMISSION IN INDIA.

The members of the Leprosy Commission in India have pursued their inquiries in the following places:—Bombay, Poonah, Belgaum, Hyderabad, Madras, Trichinopoly, Tanjore, Madura, Calicut, and Bangalore. Some hundreds of cases have been personally studied, and the work of the Commission has been greatly facilitated by the assistance given by the civil surgeons in the various districts, who have collected a considerable number of lepers for examination. The Commissioners, after reassembling in Calcutta, have again separated. Dr. Rake and Surgeon-Major Thomson have gone from Madras to Rangoon to conduct inquiries in Burmah. Dr. Buckmaster, Dr. Kanthack, and Surgeon-Major Barclay left Madras for Bombay, and these gentlemen, after working through the provinces, will rejoin their colleagues in Calcutta at the beginning of March.

THE DUKE OF CONNAUGHT AT NETLEY.

Certain remarks made by the Duke of Connaught at the presentation of prizes at Netley appear to have been interpreted as an expression of opinion on his part against the desirability of fusing medical officers of the army with the combatant ranks. It should be clearly understood that it is no wish of the Medical Department to be so merged. What they do contend is that an honourable profession should have an honourable position accorded to it, and until this is done they cannot be in a position to give executive officers, to use the words of His Royal Highness, that support and advice so necessary to the efficiency and well being of the army. This can only be brought about by their having a clearly defined status carrying weight, and all the privileges of that status within their own province.

THE GULL STUDENTSHIP IN PATHOLOGY.

Sir William Cameron Gull has founded a Gull Studentship in Pathology at the Medical School of Guy's Hospital, with which his father, Sir William Withey Gull, was so long and so honourably connected. The studentship will be of the yearly value of £125, with a further allowance of £25 for apparatus. The appointment will be tenable for three years and may be renewed for two years more. The student will not be selected by examination, and the appointment will be open, though preference will be given to a suitable candidate from Guy's Hospital. The foundation will worthily commemorate the late Sir William Gull's love for pathological studies, as well as his long tenure of office as physician to Guy's Hospital.

KAVANAGH OF BORRIS.

The biography of the late Mr. Kavanagh of Borris will be published shortly, and the book will have a double interest for the medical profession because it is the work of Mrs. Steele, the wife of Dr. Peddie Steele, of Florence, and because it describes the life and labours of a man who suffered from grievous deformity. Mr. Kavanagh was born without arms or legs, all four extremities having been amputated *in utero*, or having failed to develop. But with the stumps that remained to him—which gave him the appearance of the torso of Theseus in the Vatican Museum—he trained himself to do

nearly everything that a fully-developed man could do. There was no enterprise he did not face, no risks he did not incur. In his efforts to overcome his physical defects he went through a process of self-discipline which invigorated and ennobled his character; and, indeed, as his biographer says, "his physical imperfections crowned his moral completeness." Mr. Kavanagh was entirely free from the moroseness and jealousy that so often accompany bodily deformity, and was beloved and esteemed by all who were brought into contact with him. He was a useful member of the House of Commons, and a popular Irish landlord. The story of his life abounds in interest and instructive lessons.

THE FIRST ADMINISTRATION OF ETHER.

Dr. George Jewett has written an interesting note to the *Boston Medical and Surgical Journal* containing a curious account of an incident which might have had the effect of very much retarding the general adoption of anæsthesia for surgical operations. The first surgical operation under the influence of ether performed in public was, he states, by Dr. John C. Warren, on October 16th, 1846. The ether was administered by Dr. W. T. G. Morton, dentist, and the patient was a middle aged woman who had a malignant tumour of the left upper maxilla. The ether was administered from a bulbous glass instrument, in which was a sponge containing the ether. There were two valves; one of them was intended to admit fresh air, the other was supposed to allow the escape of expired air. As the operation proceeded the patient grew livid, there was cyanosis, respiration was shallow and feeble, death seemed imminent. The operation being completed, under the influence of cold water and fresh air the patient revived, having suffered nothing from the hands of the surgeon. A careful examination of the instruments revealed the fact that the valve for the admission of fresh air had ceased to act, and the patient had been asphyxiated.

THE ST. PETERSBURG MILITARY MEDICAL ACADEMY.

The University of St. Petersburg has no medical faculty, its place being supplied by the Military Medical Academy, which is nominally at least an independent body. It is, in fact, a living instance of a fully constituted medical university, teaching and conferring degrees, and enjoying all the rights and privileges appertaining to such a position. The academy might justify its existence as a "medical university" by the historical precedent of Salerno, but a more solid argument in its favour (if one were needed) is the fact that the other day it celebrated the 88th anniversary of its foundation. An idea of the fulness of its equipment may be gained from the following statistics:—Last year the teaching staff comprised 17 ordinary, 10 extraordinary, and 7 assistant professors, 2 laboratory assistants, 8 prosectors, 5 assistants to different chairs, and 12 *Privat-docenten*. Among the professors were such men as Botkin, Dobroslawin, and Wenzel Gruber, to mention only the names of dead teachers. The number of students was 872, on 77 of whom the Academy conferred the degree of doctor of medicine. In addition to this, 138 obtained the diploma of "medical practitioner." The honorary membership of the Academy was conferred on Prince Alexander of Oldenburg, Adjutant-General Wannowski, Minister for War, and on several other persons of scientific or professional distinction.

POPULAR PATHOLOGY.

New remedies for diseases hitherto supposed to be incurable are being announced with bewildering rapidity. From Vienna we hear of an alleged remedy for cancer; from France come two new remedies for tuberculosis. Professor Richet, of Paris, has commenced the treatment of cases of chronic tuberculosis by a novel method, founded upon the experiments on the blood of dogs which he has been making for several years, and to which reference has been made from time to time. His initial observation was that rabbits, naturally very susceptible to the staphylococcus pyosepticus, could be rendered immune by the injection of the blood of a dog into the peritoneal cavity, the dog being an animal naturally immune to the disease. He then experimented with tubercle, from which dogs are little, if at all, liable to suffer, and found that the injection of dog's blood into the peritoneal cavity of rabbits certainly delayed in a most remarkable manner the development of tuberculosis. On January 24th, M. Richet commenced the application of this new method to the human being, using for this purpose serum of dog's blood obtained with aseptic precautions, and ascertained to be sterile. Certain Nancy physicians, starting from general considerations of the same nature as those which actuated Professor Richet to employ dog's blood, have been induced to commence experiments with goat's blood. The feverish haste with which every discovery or half discovery in medicine is now being given to the world is very much to be regretted, in the interests alike of the profession and of the general public. The unusual interest excited in the daily press by Dr. Koch's discovery has no doubt stimulated the enterprise of "our own correspondent" to obtain information as to researches carried on in scientific laboratories. But sometimes his zeal exceeds his knowledge. This is particularly well illustrated by telegrams from Berlin which appear in the *Times* and other London papers of February 5th. The telegrams purport to reveal to the world some remarkable discoveries made by Mr. E. H. Hankin. Most of the facts stated, however, are already well known to pathologists, and were published by Mr. Hankin in a paper noted in the British Medical Journal of May 31st, 1890.

RESULTS OF TOTAL EXTIRPATION OF THE UTERUS.

All who read of cases of this very severe operation must feel surprised how frequently it succeeds, according to reports. Those who witness its performance, however, must wonder how the contents of the abdomen nearest to the vaginal wound escape various obvious complications during convalescence. Some operators apply no sutures to the wound, and as the omentum already gives trouble during the operation, even coming down freely into the vagina when the patient strains, the observer may conclude that the same accident may occur later on. Professor Leopold described a case of yielding of the vaginal cicatrix at a recent meeting of the Gynæcological Society of Dresden.[1] Four months after total extirpation, the patient returned to hospital. A small coil of intestine was found in the vagina. The gut was reduced and held in place by a plug of iodoform gauze. On the following day the edges of the vaginal wound were pared and closed with a few silk sutures. The patient fared badly for a few days, as the coil had lain in a vagina which had not been kept clean. Ice and opium had to be given. At length she recovered and left hospital quite well, with a sound vaginal cicatrix. Accidents to the cicatrix may be due to careless digital examination, or clumsy use of the speculum during convalescence. Of course, the scar is apt to break down if malignant disease recur in its substance; this change had not occurred in Professor Leopold's case. Possibly the single suture, usually applied to the vaginal wound in the Dresden Hospital, was not sufficient to allow of the development of a good scar. Professor Leopold admitted that this might have been the case, but felt very uncertain; for he noted that the total number of vaginal extirpations of the uterus performed in the same "Clinic" amounted to no fewer than 160. The wound, it would appear, was invariably closed by a single suture passed through its middle part. In no other instance had bowel found its way into the vagina, nor had even simple yielding of the cicatrix been observed.

[1] *Centralbl. f. Gynäk.*, January 24th, 1891.

EFFICIENT RESPIRATORS.

Protection of workpeople from the injurious effect of particles of various sorts of dust encountered in many kinds of labour is often only to be effectually accomplished by means of respirators which cover both mouth and nose. The selection of efficient respirators appears hitherto to have been conducted on happy-go-lucky principles, the tendency of employers being to choose the cheapest; that of the workers, if they have any choice at all in the matter, to select that which incommodes them the least. An ideal respirator is one which will prevent the greatest amount of dust from passing into the respiratory passages with the minimum of hindrance to respiratory movements. Other minor points to be considered are the weight of the respirator, the manner of fastening it to the head, the size of the mask, and so forth; but the more important questions—namely, the capabilities of the respirator for filtering the air and the amount of resistance to inspiration which it produces—have been the subject of an investigation by Dr. Hugo Michaelis, of Berlin. Dr. Michaelis described his experiments before the International Medical Congress, and has now published an account of them in the *Zeitschrift für Hygiene*, Band. ix, p. 389. An air bag is alternately filled and emptied by means of a motor at a rate of 20 per second, the amount of air entering the bag—which imitates the lungs—being 500 cubic centimetres at each inspiration, an amount approximately equal to the tidal air. The tube leading from the bag passes into a closed cavity filled with dust-laden air, the dust being kept in motion by a fan, and the amount of dust allowed to enter is carefully measured. The end of the tube is closed with the respirator under investigation, and between it and the lung is a flask containing water which collects any dust which escapes the filtering action of the respirator. At the end of a certain number of respirations, the dust in the water is collected and weighed, and its proportion to the dust in the original air is thus ascertained. The second point investigated, namely, the amount of hindrance to respiration, is ascertained by placing the tube representing the air passages into connection with a manometer by means of a T-piece. The pressure in the manometer is recorded graphically, and comparisons instituted between what occurs when the respirator is in position with that when the respirator is not present. With this method there should no longer be any difficulty in deciding on a choice of respirators, as by this means actual and accurate measurements of the two most important factors in that choice are now possible. Dr. Michaelis has done no more at present than give us his method.

FEEBLE-MINDED, EPILEPTIC, DEFORMED, AND CRIPPLED CHILDREN.

At the Council meeting of the British Medical Association, at Glasgow, in 1888, a committee was appointed to conduct observations in schools as to the average condition of development and brain power of children, a method of observations was agreed upon, and a statistical report of 5,000 children was eventually prepared by Dr. Francis Warner. Evidence was then produced before the Royal Commission on the "Blind, Deaf, and Dumb, etc.," and as a result of this a recommendation was made that special instruction should be provided for the feeble and exceptional children; the means of carrying out this recommendation is now under the consideration of the London School Board. Various charitable societies whose work lies among pauper children, those with criminal tendency, the crippled, epileptic, etc., then desired to know more of the condition of our child population, and an influential committee has been formed by the Charity Organisation Society to carry on this investigation among 50,000 children in various schools. An appeal for the necessary funds has been published in the *Times*, signed by Lord Egerton of Tatton; Mr. J. A. Diggle, Chairman of the London School Board; Mr. Wyndham Holgate; Mr. Timothy Holmes, and various members of the medical profession, the School Board, etc. The subscription list starts with £100 contributed by the British Medical Association, and it is hoped that so important a public scientific inquiry will be liberally supported. All educational work, as well as provision for the care of destitute children, should be founded upon individual requirements; many conditions of mental and moral defect depend upon physical causes which can be investigated by scientific methods, and it is highly desirable that an accurate statistical report should be prepared of the physical condition of children seen under various conditions. The committee have arranged their mode of work, and the visitation of schools has commenced; it is hoped that some results may be put before the International Congress of Hygiene and Demography, in August, and information obtained as to what is being done in this line of scientific inquiry in other countries. The public is now greatly interested in the condition of the less favoured classes: and, apart from philanthropic feeling, it is most important to know how conditions of development in the race are advancing or varying, as well as to determine if possible the causes at work in moulding it, and the best means to be taken to effect desirable results. It might be well if a fraction of the large sums now spent in attempting to bring about social results were spent in inquiry as to their causation and as to the actual state of things existing. We hope the work of this committee may throw light upon some important social problems, and meet with cordial public support.

THE REPRESENTATION OF THE MEDICAL STAFF ON HOSPITAL BOARDS.

The representation of the medical staff on the Managing Committee of the German Hospital again occupied the attention of the annual Court of Governors on January 30th. It may be remembered that a year ago a proposal that two delegates should be elected annually by the active honorary medical staff from their number to act on the Committee was carried by a small majority at the annual Court. On a general poll of governors being taken, however, the proposed alteration in the rules was rejected by a very large majority. As will be seen by the report in another column, the Committee this year proposed that the senior honorary physician and senior honorary surgeon should be *ex officio* members of the Managing Committee. This proposal was very strongly opposed by two members of the staff, who desired that the two delegates should be elected in rotation according to seniority by the medical staff every three years. Upon the rejection of their amendment by the meeting, the two surgeons indicated tendered their resignations. While it is well that the Managing Committee should have recognised the obvious justice of giving to the medical staff a voice in the management of the institution, which could not exist but for their co-operation, yet it is greatly to be regretted that the manner in which this act of justice has been rendered should have entailed upon the hospital the loss of the services of Dr. Lichtenberg, the senior surgeon, and Dr. Tuchmann. Experience has shown that those hospitals are the most useful and the most successful in which full and free representation is accorded to the medical staff on the executive body, and it appears to be more in accordance with precedent and the spirit of the age that in the choice of representatives the elective principle should be recognised.

KOCH'S TREATMENT: EXPERIMENTS ON CATTLE.

The experiments recorded in the Supplement to the British Medical Journal of January 24th (Abstract No. 89) afford subject matter for very careful consideration. In three cows in which tuberculosis was undoubtedly present, as determined by physical examination and by the presence of bacilli in the bronchial mucus and in the milk and by the changes in the lymphatic glands, "reaction" was obtained in proportion to the amount of fluid injected, whilst in healthy control animals no rise of temperature was noticed. It is evident from this that whatever may be the ultimate result of treatment by Koch's fluid we have in it an agent that may prove

of the greatest value in helping to form a diagnosis of tuberculous disease in cattle, and we have here an indication of the lines on which, for a time at any rate, much of the experimentation with Koch's lymph must be carried on. Some physicians and surgeons have been so unfortunate in the selection of their cases that they have already resolved that until more is known of the action of the remedy on the human subject they will be very chary indeed of using it as a therapeutic agent. The veterinary surgeons, however, will scarcely be deterred by such considerations. It is often an exceedingly difficult matter to determine whether a cow is tuberculous or not, and if these experiments are to be relied on, all that is necessary to obtain confirmation of the diagnosis is to inject some of the fluid. We can scarcely look forward to this being used as a method of treatment for the disease in cattle (except in the case of pedigree animals), but in the hands of veterinary surgeons it will prove an instrument of precision of the very highest value. It will enable them to state in all doubtful cases what animals should be condemned as tuberculous and which should be allowed to remain in the cow-house without danger of infection to the other cattle. These experiments certainly open up a most important and fruitful branch of research to the veterinary profession. And it will at once suggest itself that the consideration of this question might with advantage occupy the attention of the Royal Commission on Tuberculosis now sitting.

A MODERN WITCHES' CAULDRON.

While the maxim of the philosophical physician is that of Molière, *Je prends mon bien où je le trouve*, the homœopath's principle appears to be that of the mediæval Popes, that all undiscovered scientific territory belongs, by the eternal fitness of things, to him. This mental attitude has the advantage that, whatever therapeutic records leap to light, he at least shall not be shamed. Thus, if an extract, say, of tubercle bacilli is proved to have some therapeutic virtue, we are forthwith reminded that certain enterprising chemists have on hand a supply of some trillionth dilution of phthisical sputum, which, if not quite the same thing, is near enough for the "average sensual man." We are not surprised that the homœopaths should claim to have anticipated Koch; the only wonder is that they have not yet charged him with having stolen his therapeutic thunder from them. They even admit that the illustrious bacteriologist "has made an improvement on the old method of preserving *tuberculinum*," that being the name of the elixir in question. But if *tuberculinum* has "physiological and chemical characters very closely resembling those described by Dr. Koch as belonging to his preparation" it is surely a pity that a knowledge of its existence should till now have been one of the *secreta* of the Hahnemannian College. As Sir Toby Belch says, "Wherefore are these things hid?" We are further assured that "the homœopathic materia medica contains many remedies of the same class which are designated 'nosodes.'" This is one of the esoteric mysteries of the "system" which is not often alluded to by the saner among the faithful. Chance has, however, brought in our way an account of the price list of a homœopathic drug vendor in New York, given by Professor Reyburn, of Washington. From it some idea of the true inwardness of the aforesaid "nosodes" may be obtained. The contents of homœopathic gallipots would seem to be more gruesome than those of the witches' cauldron in *Macbeth*, and to be more fitted for the treatment of dyspeptic ghouls than of human beings. Among other pharmaceutical delicacies "in high potencies" an afflicted public finds the following: *Adenia*, an extract or trituration from the "glands of a person suffering with Hodgkin's disease," renal albumen (*au naturel* apparently); *anthracin*, or "pus from a carbuncle;" *bubon syphilitica*, or "pus from syphilitic buboes," besides a dainty preparation of the "chancre of syphilis;" *hippozinine*, which may be described as an extract of glanders; *lyssin*, which is supposed to contain the active principle of hydrophobia, etc. For the victims of malignant disease there are decoctions of four varieties of cancer—breast, uterus, bowel, and face—to choose from; while those whose mucous membranes are troublesome can comfort themselves with the products of any particular catarrh—nasal, intestinal, or vesical—to which they may be subject. *Osteonecrosin*, an extract from necrosed bone, and pus from abscess of the rectum, etc., are also strongly recommended *pro re natâ*. After this appetising bill of fare, such unconsidered trifles as "Blatta Americana, or American cockroach," "Blatta Orientalis, or East Indian cockroach;" "crusta lactea, commonly called 'milk crust,' and found on the heads of sickly or uncleanly babies;" "*testiculo muliebris sinista (sic)*," which appears to be a trituration of the left ovary of a woman, *pediculi capitis, corporis* and *pubis*, *acarus scabies (sic)*, etc., are scarcely worth mentioning. One preparation called *lachryma filia* (the compiler of this savoury catalogue evidently resembled Shakespeare in having small Latin), and defined as "tears from a young girl in great grief and suffering," reminds us of Baltazar Claës in Balzac's *Recherche de l'Absolu*, who analysed his wife's tears. Among other curious remedies we notice "*flavus irides*, or the yellow ray of the spectrum," "*rubrum irides*, or the red ray of the spectrum," "*cerulia irides*, or the blue ray of the spectrum," in which, among other things, the openmindedness of the compiler as to the gender of his adjectives is worthy of notice. Preparations of *electricitas* and *galvanismus* show that Count Mattei is not the only philanthropist who can bottle lightning and dispense it to suffering humanity—for a consideration. May we, before concluding, draw the attention of the author of the edifying work from which we have been quoting to an obvious misprint? Among the many rare and precious ingredients of his pharmacopœia we notice "*luna* or moonlight;" this should clearly be "moonshine." We have no difficulty in believing that a large supply of that particular article is kept in stock.

EMPYEMA OF THE ANTRUM.

At the meeting of the Odontological Society on February 2nd, Mr. Henry Sewill read a paper on Empyema of the Antrum. He said that Dr. Felix Semon, in a carefully-prepared paper in 1889 had shown that the cause of suppuration within the antrum in a vast majority of cases must be sought in dental disease. Mr. Christopher Heath upheld this view, and Mr. Sewill said that in every one of the cases which he had seen there was a history of dental disease, often clearly associated with the mischief in the antrum. The pathological conditions of the teeth which seemed capable of exciting empyema of the antrum were such as caused direct purulent or septic infection, namely, (1) inflammation followed by gangrene of the entire pulp, or of at least one root of a molar; and (2) suppuration around the apex of a root (periodontitis). Frequently, on extraction of the tooth, Mr. Sewill had found, besides such conditions, an opening, often very minute, from the alveolus into the antrum. In a case seen lately by Dr. Semon, Mr. Sewill, and Mr. England, a carious bicuspid seemed not to be sufficiently diseased to form an efficient cause of empyema; but it was extracted in order to open the antrum. Examination showed that a portion of recent pulp occupied the upper portion of the canal; the external surface of the root exhibited but slight signs of inflammatory activity. A communication, however, between the alveolus and the antrum, admitting a bristle-wire probe, was found. This opening being enlarged, the diagnosis was confirmed, and a large accumulation of fœtid, inspissated pus was washed out by the syringe through the nose. The case then rapidly improved. Before being forgotten, however, it should lead surgeons and dentists to insist upon the necessity of extracting teeth in every case of empyema in which they might be suspected as sharing in its causation. Mr. Sewill pointed out a danger in the fashionable quackery of the day (as he styled it)—so-called crown bar and bridge work—in which diseased roots were often sealed and so shut in that exudations could

only find vent by burrowing towards the maxillary cavity. Antral empyema seemed to be much more common than was usually supposed. Many patients suffered for years before the true nature of their malady was suspected. He mentioned the case of a young lady who had suffered for ten years, and that of a gentleman who for many months had been put to great pain by treatment wrongly directed to the nasal cavities. It was the exception to meet with a case in which an early diagnosis had been made. Probably, however, few minor surgical diseases gave rise to more distress. The pain was often considerable, whilst the patient was perpetually conscious of a noisome odour, and was troubled by a fœtid discharge occurring at intervals from one nostril. These symptoms further produced great depression and injured the general health; further, the condition was probably one of the not rare causes of pyæmia.

THE TUBERCULOUS POISON.

At the last meeting of the Pathological Society, Professor Crookshank demonstrated a series of excellent specimens and pure cultures on various nutrient media. Professor Crookshank, following the lines sketched by Wooldridge, Hankin,[1] and Sidney Martin,[2] informed the meeting that he had commenced the investigation of the scientific poisons formed by the bacillus in pure cultures and in the tissues. He has not yet been able to isolate any very definite substances, the materials that he has obtained being evidently, as Dr. Sidney Martin pointed out, of a somewhat mixed nature, hence the experimental part of the paper lost very much of its value, and it was impossible to determine what were the exact materials with which the rise of temperature recorded as taking place in guinea-pigs was determined. The separation of even some of the products of micro-organisms growing on suitable substances is at all times a difficult and a tedious process, and no observer can congratulate himself on having separated any specific toxine or ptomaine of an alkaloidal or basal nature until he has succeeded by fractional evaporation and by fractional crystal formation in obtaining them as salts of some of the heavy metals. No substance that remains fluid or that has not been thoroughly purified from all traces of fatty and ethereal matters can be looked upon as a final product with which experiments of any permanent value can be made. Dr. Martin, referring to the methods of cultivation that had been described by Professor Crookshank, pointed out that the poisonous ptomaines which had hitherto been described could only be formed by bacteria when they had sufficient albumen supplied, and he therefore objected to a too free use of glycerine, agar, and substances of that nature for the cultivation of micro-organisms, especially where it was proposed to investigate their toxic properties. In the meantime it is to be hoped that Professor Koch will at an early date publish some of the details of his experiments, and until he has spoken he alone is entitled to what credit is up to the present to be got out of his discoveries. Others, however, should be making experiments by means of which Professor Koch's statements may be compared and tested. No one can be in any way trammelled by anything that he has said, but until he has published his results it will be a rather difficult matter for anyone to confirm or criticise his deductions or his theories, both of which we have before us, although the facts from which the deductions are made and the bases on which the theories are founded are as yet unknown except to Koch and his more favoured pupils.

METHYL VIOLET IN THE TREATMENT OF MALIGNANT GROWTHS.

At a meeting of the Vienna Imperial Royal Society of Physicians on January 30th, Professor von Mosetig reported some remarkable results which he had obtained by parenchymatous injections of methyl violet (pyoctanin) in cases of malignant growth. Starting from the idea that if the nuclei of the cells of the neoplasm could be destroyed its development would be checked, and bearing in mind the affinity which the nuclei exhibit for aniline dyes, he tried, as far back as 1883, the effect of injecting trichlorate of aniline into a round-celled sarcoma of the thigh as large as an orange. That substance was chosen as being an aniline preparation free from arsenic. Professor von Mosetig injected, first, 1 gramme, then 2 grammes of a 1 per cent. solution. The injection caused no discomfort or inconvenience beyond a blue discoloration of the skin, which showed itself one hour after the injection. Under this treatment the tumour steadily diminished in size, and Dr. von Mosetig, wishing to expedite matters, injected 4 grammes. The result was alarming, as in an hour and a half the patient became blue, vomited, and lost consciousness, while the breathing was of the Cheyne-Stokes type. After artificial respiration had been kept up for three hours the man recovered. Injections of 2 grammes were continued, and in eight weeks the tumour had shrunk to the size of a walnut, an ulcerated portion had cicatrised, and the patient was discharged cured. A year later he died of pneumonia, there having been no recurrence of the sarcoma. Trichlorate of aniline was tried in three other cases, but had to be abandoned on account of its disagreeable secondary effects. When pyoctanin was introduced into practical therapeutics by Stilling, Professor von Mosetig at once proceeded to try it in malignant growths. At the meeting referred to he was able to show several cases in which the results had been most satisfactory. Among these was a woman, aged 66, with a large tumour of the lower jaw which prevented her from swallowing, and caused great suffering from constant salivation, etc. After 35 injections of 6 grammes of a 1 in 500, and afterwards 1 in 300, solution of methyl violet, the tumour was so much reduced, without ulceration, that the patient could eat with comfort. In a man, aged 58, with a cystosarcoma of the chest wall measuring 13 centimetres in width by 8 in length, after 12 injections of 6 grammes of a 1 in 300 solution of pyoctanin, the measurements of the tumour were reduced to 10 by 6 centimetres. In two cases of adenocarcinoma of the neck, the same treatment proved so effectual that the patients considered themselves cured. Another case was that of a woman, aged 60, with papilloma of the bladder (diagnosis confirmed by microscopic examination), who was so weakened and anæmic that Dr. von Mosetig was unwilling to try the remedy. Yielding to her entreaties, however, he injected 20 grammes of a 1 in 1,000 solution into the bladder, repeating this every two days. After 10 injections there was notable improvement, the hæmaturia had ceased, and there was little or no pain. Professor von Mosetig also cited the case of a man aged 60 with an enormous sarcoma of the pelvis, which caused acute pain and interfered with defecation. Colotomy had been performed in September (1890), and the tumour continued to grow till in November it reached the umbilicus. After 16 injections of 6 grammes of a 1 in 500 solution into different parts of the mass, it had shrunk to one-half its former size. At the date of report the bowels could be emptied comfortably, and the patient was able to go out walking for two hours a day and to attend to his affairs.

[1] BRITISH MEDICAL JOURNAL, vol. i, 1890, p. 1080.
[2] *Ibid.*, vol. i, 1890, p. 1261.

SCOTLAND.

SCOTTISH UNIVERSITIES COMMISSION.

THE forty-fourth meeting of this Commission was held on Monday, February 2nd. The Commissioners present were Lord Kinnear, the Earl of Elgin, Sir Charles Dalrymple, Bart., M.P.; Sir Arthur Mitchell, K.C.B.; Lord Kyllachy, Dr. Patrick Heron Watson, Professor Butcher, and Mr. Fuller. Drs. G. W. Balfour and Keiller, as examiners in medicine for

the University of St. Andrews, and Professor Paterson and Dr. Sinclair, as representatives of University College, Dundee, attended and gave evidence with reference to graduation in medicine.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Mr. Lawson Tait delivered his opening address as Honorary President of this Society on February 3rd, and received a warm welcome in the Hall of the Philosophical Society from a lay and representative audience. "Exploratory and Confirmatory Incisions" was the subject of his discourse, and on this topic he delivered an interesting and characteristically vigorous address.

GLASGOW HOSPITAL FOR DISEASES PECULIAR TO WOMEN.

The new premises acquired for this institution at Elmbank Crescent, which have been occupied now for some time, were formally opened by the Countess of Aberdeen on January 30th. Lady Aberdeen made a brief speech in commendation of the work of the institution. It was mentioned that last year there were 3,438 consultations in the outdoor department, and 106 operations had been performed with one death.

POPULAR LECTURES ON ANATOMY IN ABERDEEN.

On January 31st. Dr. Reid, Professor of Anatomy, delivered at Marischal College the first of a series of popular lectures on anatomy, free to the general public. There was a very large attendance, including a considerable number of ladies; and the lecturer's remarks, which were fully illustrated by numerous models, diagrams, and specimens, were followed with the closest attention, and were frequently applauded. Dr. Reid has had a large experience as a popular lecturer in the Poplar district in London in connection with the London Society for the Extension of University Teaching, and he very readily complied with the general request to give some public lectures in Aberdeen. It is hoped that his example will be followed by his colleagues. Similar courses of lectures were delivered by Emeritus Professor Struthers many years ago.

PUBLIC HEALTH APPOINTMENTS UNDER THE SCOTCH LOCAL GOVERNMENT ACT.

In addition to those already reported in the columns of the British Medical Journal, the following county appointments under the Local Government (Scotland) Act have been made: *County Medical Officers:* Forfarshire, Dr. A. McLagan Wedderburn, salary £200 and travelling expenses; Invernessshire, Dr. Ogilvie Grant, salary £300 and travelling expenses; Caithness-shire, Dr. Brock, salary £350; Kincardineshire, Dr. W. A. MacNaughton, salary £300; Perthshire, Dr. Graham, salary £200 and allowance for travelling expenses. *County Sanitary Inspectors:* Forfarshire, Mr. T. Anderson, salary £250; Banffshire, Mr. J. McIntosh, salary £105 and £25 for expenses; Peeblesshire, Mr. R. S. Anderson; Kincardineshire, Mr. John Graham, salary £150; Caithness-shire, Mr. Robertson; Perthshire, Mr. George McKay, salary £300; Aberdeenshire, Mr. Watson.

IRELAND.

Sir John Banks, K.C.B., Physician to the Queen in Ireland, has been sworn in as High Sheriff of the County Monaghan.

The present year being the centenary of the foundation of the Royal Hospital, Belfast, the Board of Management has decided to have a centennial bazaar in the month of October, 1891. Preliminary steps are already being taken with this object.

At the annual meeting of the Samaritan Hospital, Belfast, references were made to the serious illness of Dr. McMordie, which has for some time deprived the hospital of his services. His place has been supplied by Dr. St. Clair Boyd.

MERCER'S HOSPITAL.

The appointment of Dr. Auchinleck as a physician to the Mercer's Hospital has recently been the subject of proceedings before the judges of the Queen's Bench Division, Dublin. A heavy bar was engaged. The relators are Drs. F. A. Nixon and M. A. Ward, two of the surgeons, who dispute the election. Dr. Auchinleck was appointed by the General Board of Governors, consisting of the laymen and medical officers co-opted as Governors, and the question raised was whether the right of election belonged to that board, or to the medical board only. The argument in favour of making the conditional order for a *quo warranto* absolute have now been concluded. Judgment has been deferred.

BELFAST SOCIETY FOR THE EXTENSION OF UNIVERSITY TEACHING.

During the earlier part of the winter this society conducted six very successful courses of lectures. Sir Robert Ball, F.R.S., Royal Astronomer of Ireland, gave a course upon Astronomy, which was very largely attended. Professor Letts gave two courses on Chemistry, and Mr. S. J. McMullan, M.A., gave three courses on English Literature. The interest in all the classes was very well maintained. The results of the examinations held at the conclusion of the various courses have just been announced. During the present spring term three courses of lectures are proceeding under the auspices of the society. Mr. McMullan is again conducting two courses upon Literature, and Mr. Thomas Harrison, B.L., late Barrington Lecturer of Political Economy, is giving a course upon Work and Wages.

QUEEN'S COLLEGE, BELFAST: NEW SCHOLARSHIP.

The Royal Commissioners for the Exhibition of 1851 have placed the nomination of a new scholarship at the disposal of the Queen's College, Belfast. The scholarship is of the value of £150 per annum, and is tenable for two or, under special conditions, for three years. It is limited to those branches of science, such as physics, mechanics, and chemistry, the extension of which is specially important for our national industries. The holder of the scholarship must be a student of not less than three years' standing, and he must give an undertaking that he will wholly devote himself to the object of the scholarship, and will not hold any office of emolument during its continuance. Intending candidates are requested to communicate with the Registrar, Queen's College, Belfast, not later than March 1st next.

MONKSTOWN HOSPITAL, CO. DUBLIN.

A new wing was formally opened last week, the meeting being presided over by Mr. Croly, President of the College of Surgeons and consulting surgeon to the hospital. About £3,185 has already been contributed, leaving only £262 due. Mr. Croly said that the observation wards, which had been erected at his suggestion, were desirable in the case of a patient being admitted whose symptoms might point to fever, scarlatina, diphtheria, or any dangerous infectious ailment, and who would be placed in one of those wards. His temperature would be watched, and if the feverish symptoms were not confirmed, his friends would be glad to learn that he had only had a feverish cold; but, on the contrary, if the disease proved infectious, there were plenty of places where the patient could be sent. The hospital was, he said, conducted on the principle of St. Thomas's, with detached wings, so that an epidemic occurring in one wing could not spread to another.

MIDWIVES REGISTRATION BILL.

WE print below the full text of this Bill in its present amended form, as it was ordered to be printed by the House of Commons on November 28th, 1890.

Copies of the Bill were sent on October 6th, 1890, to all the Branches of the Association by the Chairman of the Parliamentary Bills Committee, with a request that he should be favoured with the opinion of the Branches upon the general principles and the several clauses of the Bill. A considerable number of Branches have responded, and communications from them were brought before the Parliamentary Bills Committee at its last meeting, and were immediately referred to a Special Committee, which met on February 4th.

The general principle of the Bill was approved by the Aberdeen, Banff, and Kincardine Branch, the Birmingham and Midland Counties Branch, the North of Ireland Branch, the Gloucestershire Branch, the Oxford Branch, the Shropshire and Mid-Wales Branch, the South-Eastern Branch, the South-Western Branch, the Staffordshire Branch, the Stirling, Kinross, and Clackmannan Branch. All these Branches, however, with three exceptions, considered that the clauses of the Bill required amendment. The Council of the Cambridgeshire and Huntingdonshire Branch objected to the Bill in its present form. The Dublin Branch also disapproved of the Bill in its present form, and suggested that the Government should be urged to refer the matter to a Select Committee. The Yorkshire Branch considered that legislation was undesirable and entirely unnecessary. The Metropolitan Counties Branch, the Midland Branch, and the Worcestershire and Herefordshire Branch considered that the question should be left entirely in the hands of the Parliamentary Bills Committee. The last-named Branch suggested one amendment. The amendments suggested will be found in the footnotes appended to the various clauses and subsections.

A BILL TO PROVIDE FOR THE REGISTRATION OF MIDWIVES.

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title.*—This Act may for all purposes be cited as the Midwives Act, 1891.

2. *Rules respecting Examination of Midwives.*—(1.)[1] For the purpose of the examination of women desiring to act as midwives, the General Council shall, as soon as may be after the *passing of this Act*, cause to be framed and approve rules regulating the conditions of admission to examinations and the course of study to be pursued previous to examination, the qualification of examiners, the method and periods and the subjects of such examinations, and the general standard to be attained by women passing the examinations, with a view to secure the possession of adequate knowledge and practical skill by all women who pass those examinations.

(2.)[2] The General Council shall submit the rules approved by them to the Privy Council for confirmation.

(3.) A draft of the rules shall, at least one month before they are considered by the Privy Council, be published in such manner as the Privy Council may direct as sufficient to give information thereof to all persons interested, and the Privy Council, after taking into consideration any representations made to them in writing during one month after such publication, may confirm the rules, either with or without modifications or additions.

(4.) The rules when so confirmed shall be forthwith officially published under the superintendence of Her Majesty's Stationery Office.

(5.) If the General Council fail to make such rules as the Privy Council can confirm before the *last day of June one thousand eight hundred and ninety-one*, the Privy Council shall forthwith cause rules to be framed for the purposes in this section mentioned, and such rules shall take effect as if they had been made by the General Council and confirmed by the Privy Council.

(6.) New rules may be made by the General Council and confirmed by the Privy Council in like manner as original rules, and if the General Council, within a reasonable time after they are so required by the Privy Council, fail to make any new rules to the satisfaction of the Privy Council, the Privy Council may cause new rules to be framed, and those rules shall have effect as if they had been made by the General Council and confirmed by the Privy Council.

3. *Examination and Registration of Midwives by County Council.*—(1.)[3] After rules for the examination of midwives, made under this Act, have been officially published, every county council shall provide for the execution of this Act within their county, and for that purpose shall—

(*a.*)[4] Appoint a sufficient number of competent examiners, to be approved by the Privy Council, and provide for the examination, in the prescribed manner, and in accordance with the said rules, of women desiring to act as midwives; and

(*b.*) Grant to every woman who passes the examination in accordance with the standard fixed by such rules the prescribed certificate that she is entitled to be registered as a midwife, and that certificate shall entitle her to be registered in the midwives' register of any county in which she is or is about to be ordinarily resident or acting as a midwife; and

(*c.*) Keep a record of the midwives to whom any such certificate is granted, and a register of midwives ordinarily resident or acting as midwives in the county who hold certificates granted under this Act by that or any other county council, or are otherwise entitled to be registered under the provisions of this Act.

(2.)[5] The said provision for the examination of midwives shall enable women to be examined at such places in the county as seem expedient to the county council for the purpose of enabling persons to be examined within a reasonable distance from the place where they reside: Provided that no woman shall have any right to claim to be examined until after she has first produced a certificate from a registered medical practitioner practising in the district in which she is herself resident that she is of good conduct and in good health.

(3.) The said record and register shall respectively be kept in such manner and form as may be prescribed by regulations of the Privy Council, and those regulations shall provide for an entry in a separate column of the register, opposite the name of each person, of words indicating the qualification entitling such persons to be registered and any other special diploma or certificate which is held by such person, and which the Privy Council may by order specify as being sufficient for registration.

(4.) Every county council shall give the prescribed public notice of the establishment of a midwives' register, and of the provisions made for the examination and registration of midwives.

(5.) If in the opinion of the Privy Council any county council fail to make adequate provision for the holding of examinations in accordance with this Act, the Privy Council may take such steps by appointing examiners and otherwise as may appear to them necessary to secure the due conduct of such examinations, and any expenses from time to time certified by the Privy Council to have been incurred through the exercise of this power shall be defrayed in like manner as expenses incurred by the county council in the execution of this Act.

(6.) Any two or more county councils may, with the consent of the Privy Council, combine together for the purposes of holding examinations and of keeping a register under this Act, or for either of those purposes.

4. *Regulations by Privy Council.*—The Privy Council shall make regulations for carrying this Act into effect, and in particular for the following purposes or any of them; that is to say,

(*a.*) Providing for and enforcing the supervision of the examinations under this Act, and the presence thereat of persons appointed in manner provided by such regulations, for the purpose of securing that a uniform standard of knowledge and skill may be required from all persons to whom certificates are granted under this Act:

(*b.*) Providing for erasing from the midwives' register the names of women who are dead or have ceased to act as midwives, and for erasing the names of women or suspending, subject to the prescribed right of appeal to the Privy Council, any women

[1] The Council of the Cambridgeshire and Huntingdonshire Branch of the British Medical Association is of opinion that sufficient provision is not made in the proposed Bill for the proper education of midwives, or sufficient security for the competence of those midwives now in practice, who will be entitled to apply for registration, and consequently acquire a legal status under the Bill, if passed into law in the present form.

[2] The Birmingham and Midland Counties Branch adopted the following resolution: "We are of opinion that Clause 2, Sections 2 and 3, do not give sufficient opportunity to the medical profession to make representations in regard to the proposed rules regulating the conditions of admission to examination, etc., and consider that an opportunity should be afforded by the General Medical Council for the consideration of the rules by members of the medical profession before they are finally published by the Medical Council, as we believe that representations from medical men or corporations would be better appreciated by the General Medical Council than by the Privy Council. We consider, therefore, that Clause 2, Section 2, should read—that 'the General Medical Council shall publish the draft rules drawn up by them for the information of all persons interested; and, after the consideration of any representations made to them in writing during two months after publication, shall submit the rules finally approved by them to the Privy Council for confirmation.'"

The Worcestershire and Herefordshire Branch is of opinion that the new rules should be under the consideration of the profession generally for at least two months before confirmation by the Privy Council, instead of one month, as suggested by the Bill, Clause 3, line 21.

[3] The Birmingham and Midland Counties Branch do not approve the proposal of Clause 3, that the execution of the Act (*a*) by examining midwives, (*b*) by granting certificates, and (*c*) by keeping a register, should be delegated to the County Councils; being of opinion that the proper authority to make provision for the examination and registration of midwives is the General Medical Council. This affects also Clauses 7, 10, and 13.

[4] The Reading and Upper Thames Branch says: The appointment of examiners by the County Council seems an anomaly. No uniformity as to standard of examination is secured. It was suggested that the examinations might be conducted on the same principle as the Science and Art examinations.

[5] Four members of the Committee of the Birmingham and Midland Counties Branch are of opinion that in addition to the certificate prescribed by the Bill (Clause 3, Section 2), another certificate of good conduct, not necessarily from a medical man, should be furnished.

The Reading and Upper Thames Branch suggest the following alterations: There should be at least two. There should most certainly be a certificate of character and good conduct in the case of existing midwives before their admission to the register.

The Staffordshire Branch makes the following suggestion: To have certificate from registered *two* practitioners so as to avoid collusion.

from acting as midwives who have been convicted of offences, or have been guilty of infamous or disgraceful conduct in relation to their duties as midwives, or of gross incompetence, or of any breach of the regulations under this Act respecting such duties, or of repeated drunkenness, and for the endorsement of any order of suspension on the certificate of registration of the women suspended, and for the publication of the fact of the removal of the name of any woman from the register, or of the suspension of any women, and for the restoration of any women who may have been struck off the register, or who may have been suspended:

(*c.*) Providing for the issue to every registered midwife of a certificate of registration, and requiring every registered midwife to produce her certificate on demand to the prescribed persons:

(*d.*) Regulating any matter directed by this Act to be prescribed.

And the Privy Council may attach to the breach of any such regulations such fines, not exceeding in any case *forty shillings* to be recovered on summary jurisdiction, as they may think necessary.

5.[6] *Registration.*—From and after the *first day of January one thousand eight hundred and ninety-two* a person shall not be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description, implying that she is registered under this Act, or is specially qualified to act as a midwife, unless she be registered under this Act.

Any person who, after the *first day of January, one thousand eight hundred and ninety-two*, not being registered under this Act, shall take or use the name of midwife, or any other such name, title, addition, or description as aforesaid, shall be liable, on summary conviction, to a fine not exceeding *five pounds*; provided that nothing in this section shall apply to legally qualified medical practitioners.

6.[7] *Privileges of Registration.*—A woman registered under this Act shall be entitled to act as a midwife in the United Kingdom. From and after the *first day of January one thousand eight hundred and ninety-two* no woman shall be entitled to recover any fee or charge in any court for attendance or services rendered as a midwife unless such woman is registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as a midwife in cases of natural labour only, in accordance with the prescribed regulations.

7. Fees and Expenses.—(1.) The county council may charge the prescribed fees in respect of the examination, certificate, and registration of any person, the inspection of the record or register, and other matters, so that the total of the fees charged in respect of the examination and certificate does not exceed *forty shillings*, and so that the fee does not exceed in respect of the registration of any person *five shillings*, and in respect of the inspection of the record or register, or any other matter, *one shilling*.

(2.) The fees received by a county council under this Act shall be carried to the county fund; and all expenses incurred by a county council in the execution of this Act shall be defrayed out of the county fund as general expenses.

8.[8] *Provision as to Scottish, Irish, and as to Colonial and Foreign Midwives.*—A woman who has obtained in Scotland or Ireland, or in any British possession, or in any foreign country, any licence or other authority to act as a midwife, may, under such restrictions as may be prescribed for the purpose of securing a sufficient guarantee of good character and good health, and the requisite knowledge and skill, be registered in a midwives' register in the prescribed manner.

9.[9] *Provision for Existing Midwives.*—(1.) Every woman who at the *passing of this Act* is bonâ fide acting as midwife, or has served as a pupil midwife in some hospital or other public institution, and claims to be registered before the expiration of eighteen months after the passing of this Act, and produces the prescribed evidence of her title to be so registered, shall be entered in a midwives' register, and any such woman shall be entitled at any time thereafter to present herself for examination under this Act, at such reduced rate of fee as the Privy Council may prescribe.

(2.) The fee for the registration of any such person shall not exceed *two shillings and sixpence*.

10.—(1.) *Power to Privy Council to establish a general register of midwives.*—The Privy Council may provide by their regulations for the keeping and the publication from time to time of a general register of midwives, and either for the transmission by the registrar of every county register to the registrar of the general register of the names of all midwives registered in the county register and the payment by the county council of the prescribed portion of the registration fees towards the expenses of the general register, or for the discontinuance of the county registers and the registration in the general register of all persons entitled to be registered as midwives, and the keeping of such local registers and registration offices as appear to the Privy Council requisite.

(2.) If the sums received on account of registration fees and by the sale of the general register do not suffice to defray the expenses of keeping, printing, and publishing that register, the deficiency shall be charged in the prescribed proportions on the county funds of the several counties, and every sum certified by the Privy Council to be so charged on any county fund shall be paid by the county council to, or to the order of, the Privy Council on demand.

(3.)[10] The provisions of this Act relating to the erasure and suspension of names shall apply to the general register in like manner as to the county registers, and a midwife shall have the like right to be registered in the general register, and that registration shall have the like effect as if the general register were a county register.

11. Notice of Death of Midwives.—Every registrar of deaths in England and Wales, on receiving notice of the death of any woman on any county midwives' register, shall forthwith transmit by post to the registrar under this Act a certificate under his hand of such death; and on receipt of such certificate, the registrar shall erase the name of such woman from the register of midwives, and shall transmit to the said registrar of deaths the cost of such certificate and transmission.

12. Supplemental Provision as to Register.—A midwives' register shall be deemed to be in proper custody when in the custody of the officer appointed to keep the same (in the Act referred to as the registrar), and shall be of such a public nature as to be admissible in evidence on its mere production from that custody.

13.[11] *Publication of Register.*—Every county council shall, in every year, cause the register kept by them under this Act to be printed, published, and sold, and a copy of such register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act: Provided always, that in the case of any woman whose name does not appear in such copy, a certified copy under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

14. Penalty on obtaining Registration by False Representation.—Any woman who wilfully procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person aiding and assisting her therein, shall be deemed guilty of a misdemeanour, and shall, on conviction thereof, be liable to a fine not exceeding *twenty pounds*, or to be imprisoned with or without hard labour for any term not exceeding *three months*.

15. Penalty for Wilful Falsification of Register.—Any registrar who wilfully makes or causes to be made any falsification in any matter relating to the register of midwives shall be deemed guilty of a misdemeanour, and shall be liable to a fine not exceeding *fifty pounds*, or to be imprisoned with or without hard labour for any term not exceeding *twelve months*.

16.[12] *Prosecution of Offences.*—(1.) Any offence under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered in manner provided by the Summary Jurisdiction Acts.

(2.) A prosecution for an offence under this Act shall not be instituted by a private person except with the consent of the Attorney-General or of a county council, but may be instituted by a county council, or the council of a municipal borough, or by any board of guardians.

17. Appeal.—Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

18. Exercise of Powers by Privy Council.—(1.) All powers vested in the Privy Council by this Act may be exercised by an order of any two or more of the Privy Council.

(2.) Any order may be made conditionally or unconditionally, and may contain such terms and directions as to the Privy Council seem just.

19. Definitions.—In this Act—

The expression "General Council" means the General Council of Medical Education and Registration of the United Kingdom, established under the Medical Acts.

The expression "Medical Acts" means the Medical Act, 1858, and the Acts amending the same.

The expression "midwives' register" means a register of midwives kept in pursuance of this Act.

The expression "county" means an administrative county within the meaning of the Local Government Act, 1888, and includes a county borough.

[10] See footnote to Clause 3.

[11] See footnote to Clause 3.

[12] The Birmingham and Midland Counties Branch consider that Clause 16, Section 2, will render it practically impossible to prosecute for offences under the Act, and requires amendment.

The Staffordshire Branch makes the following suggestion:—To add "or other local authority." Medical Council ought to prosecute.

[6] The Staffordshire Branch suggests the following alterations: To make it clear that no one (whether called midwife or not) shall practise *for gain* unless registered. A nurse might practise so long as she did not style herself a midwife.

[7] The Birmingham and Midland Counties Branch is of opinion that no Midwives Registration Bill will be satisfactory which does not expressly state that no midwife shall give certificates of stillbirth.

The Reading and Upper Thames Branch considers that some such provision for legally qualified medical practitioners as is provided in Clause 5 should also be added to Clause 6, and adds: The Bill does not define what is a normal labour.

The Staffordshire Branch makes the following suggestion: Clause 6.—Define a midwife clearly. Define natural labour.

[8] The Staffordshire Branch suggests not to admit any foreign licence of any kind; especially expunge the loose words "or other authority." See also footnote to Clause 3.

[9] The Birmingham and Midland Counties Branch says: While fully of the opinion that every woman actually engaged in the practice of midwifery at the time of the passing of the Act should be entitled to be registered, we consider that Clause 9, Section 1, does not afford sufficient protection against the admission of improper persons to the register; in order to do so, the term "*bonâ fide* midwife" should be defined in the Bill; and we suggest as a definition "a woman who has been engaged in practice two years, or who has attended at least twenty labours."

The Gloucestershire Branch thought that the clause which provides for the registration of persons already practising as midwives might in some way be amended so as to secure more completely that unsuitable and insufficiently experienced persons might be excluded from the register.

The Staffordshire Branch suggests: Limit period to *six* months; evidence of title needs clearer definition and restriction. If once registered, no woman will trouble about any examination.

The expression "county council" and "county fund" mean respectively in reference to a county borough, the council of the borough, and the borough fund.

20. Extent of Act.—Save as in this Act expressly provided, this Act shall not extend to Scotland or Ireland.[13]

A MEETING of the Subcommittee of the Parliamentary Bills Committee, appointed to consider the Midwives Registration Bill, was held at the offices of the Association, on February 4th, when the following members were present: Mr. S. SIBLEY (in the chair), Dr. Bridgwater, Mr. Wickham Barnes, Mr. Galton, Dr. Grigg, Dr. C. Holman, Mr. Wallace. Dr. Aveling was present by invitation. Dr. Rentoul telegraphed expressing his inability to attend.

The following legal opinion was read by Mr. Costelloe:—

I have carefully considered the printed copy of Dr. Commins's opinion,[14] in connection with the criticisms of the Bill that have appeared in the medical press, and the proceedings of the Branches of the Association and of the Parliamentary Bills Committee, and I am of opinion as follows:—

First, as to the opinion of Dr. Commins, it is to be observed that paragraphs 1, 2, 3, 9, and 10, involve the theory (which was, I presume, suggested by the case submitted to counsel) that the certificate proposed to be issued under the new Bill will be a medical diploma, as defined in the Medical Act, 1886, and that as a consequence of this the possession of the said certificate will give privileges identical with or similar to those conferred on "registered medical practitioners" by the Medical Acts.

In Section 27, however, of the Act of 1886, the definitions therein contained are expressly declared to refer only to that Act, and to be subject to the context in which the terms defined may appear. I am, therefore, of opinion that the words "diploma" and "medical diploma," in the said section relate, and are defined with special reference, to the qualifications of colonial and foreign practitioners which were dealt with by that Act. If a midwife registered under the new Bill held herself out to be the holder of a "medical diploma," as suggested by Dr. Commins's first answer, and defended it by alleging her certificate and the terms of the said Section 27, her contention, in my opinion, would fail. Similarly, as to the ninth and tenth of Dr. Commins's answers, I am of opinion that Section 27 must be read with Section 3 of the same Act, and from their joint effect it is clear that a "medical corporation" for the purposes of that Act includes those bodies only that are competent to grant "diplomas conferring the rights of registration under the Medical Acts." The certificate proposed to be issued under the new Bill would not fulfil these conditions, and there would be no power enabling any county council to combine with medical corporations so as to give any person a title to be a "registered medical practitioner" under the Medical Acts. I may add that in any case the county councils themselves would be debarred from entering on any such extraordinary course by the effect of the Local Government Act, 1888.

As to paragraphs 2 and 3 of Dr. Commins's opinion, it follows from the above that it would be contrary to the rule established in Section 40 of the Medical Act of 1858 if a midwife registered under the new Bill sought to use any such description of herself as would lead it to be supposed that she was a "registered medical practitioner" under the Medical Acts, or a "legally qualified assistant" to a registered medical practitioner, inasmuch as any such holding out would imply the possession of a qualification under the Medical Acts. A "registered midwife" using any deceptive mode of advertisement would therefore be liable to prosecution.

As to the other paragraphs of Dr. Commins's opinion, it appears to me that some are distinctly erroneous, by reason of certain careful provisions in the Bill to which his attention was probably not directed; and that others refer to matters outside the general scope of the Bill itself. To take the latter first, I observe on paragraphs 6 and 7 that it was not intended when the Bill was drafted to make it a penal offence for unregistered women to assist in natural labours as they now do, with or without payment; but it was intended practically to prevent any persons not registered from holding themselves out to the public in future as capable or qualified midwives, and this seems to me to be amply provided for by Clause 5 of the Bill.

As to paragraphs 4 and 8, I am of opinion that it would be illegal for a registered midwife to conduct "abnormal labours," or to "vaccinate" or "treat the complaints of women and children" or "prescribe medicines," "use forceps" or "perform other operations" which may reasonably be held to pass beyond the words of Clause 6 as to "acting as a midwife in natural labours only." I notice that the expediency of defining "natural labour" was discussed by the Parliamentary Bills Committee and the draftsmen last year with great fulness, and it was the general feeling that an attempt to do so would rather increase than diminish the difficulties. If, however, it is the opinion of experts that such a definition can be framed as would not be open to objection, it can be inserted by way of amendment in the Definition Clause. As the Bill now stands it would be open to the Privy Council to embody a proper definition in the regulations provided for by the Bill.

As to the remaining paragraph (5) of Dr. Commins's opinion, I am of opinion that under the Bill it would be highly improper for a registered midwife to entrust her cases to another person not a registered midwife; if, however, there is any doubt on the subject, the Privy Council could provide against it in their regulations. In fact, both with regard to this and the other matters raised in the 2nd, 3rd, 4th, and 8th paragraphs of Dr. Commins's opinion, concerning the scope and nature of the legal action of a midwife registered under the new Bill, it is to be remembered that Clauses 6, 4, and 16 empower the Privy Council to make regulations as to the way in which a registered midwife is to carry on her calling, and attach ample penalties, including suspension and erasure from the register, for any breach of such rules. It is quite understood that these rules will not be framed without ample discussion in the profession.

Secondly, with regard to the suggestions of the Branches of the Association, and the other criticisms of the Bill, I observe that objection is chiefly taken as to the registration of women already acting as *bonâ fide* midwives. It is to be noticed that this *de facto* qualification is to be distinguished clearly in the register, and that (by Clause 3) these women are encouraged to submit themselves to examination. They will in any case be at once subject to the Privy Council regulations, and can therefore be prosecuted for malpractices. Moreover it is provided (by Clause 9) that those who desire to be registered are to "produce the prescribed evidence of their title," etc.; these words when read in connection with Clause 4 empower the Privy Council to specify the amount and nature of the evidence of *bonâ fide* practice which shall be considered as the minimum, so that the suggestion of the Birmingham Branch as to the definition of the class to be admitted would more conveniently be dealt with when these regulations come to be framed. There appears to be no objection to requiring certificates from more than one registered medical practitioner, but the suggestion of the Yorkshire Branch as to reviving Clause 30 of the Draft Bill of 1882 is one of the points on which it was last year considered dangerous to go too far in advance of public opinion. I see no reason for the retention of the limitation upon the right of private persons to prosecute under the Bill: a similar restriction was enacted in the Dentists Act, but it was expressly abolished in 1886. As to the administration by county councils, this was a compromise forced upon those in charge of the Bill for administrative reasons, it appearing to be impossible to substitute any other authority—medical or administrative—to whom the duties could be practically transferred.

There need be no difficulty in clearing up by reasonable amendments and definitions the majority of the points mooted in Dr. Commins's opinion, and I will be glad to suggest words, if I am instructed, as to the points of which it is deemed necessary to take account. I think it is desirable that the Bill should be described simply as the "Midwives Bill," but I can see no reason for the apprehensions that have apparently arisen in some quarters as to the possibility that it may create a new class of "registered practitioners." It seems abundantly clear that the practical effect of the Bill would be to diminish greatly the number of women attending midwifery cases for payment, and to get rid as quickly as possible of those persons whose intervention is now a source of grave danger to life.

33, Chancery Lane, January 30th. B. F. C. COSTELLOE.

After some general discussion, the Committee proceeded to consider the Bill, clause by clause, together with the amendments suggested by the various Branches. The following were the alterations suggested:

Title. That the title should run: "Midwives Bill, a Bill to Provide as to the Education and Control of Midwives."

Clause 2, Section 3, to substitute two months for one month.

Clause 3, Section 1, paragraph *a*, to run as follows: "To appoint a sufficient number of competent examiners to be approved by the General Medical Council, or failing them the Privy Council," etc. Section 2, the proviso to run: "provided that no woman shall have any right to claim to be examined until after she has first produced two certificates, one at least being from a registered medical practitioner practising in the district," etc.

Clause 4, paragraph *c*, to add the words: "and to return her certificate in case of removal, or of suspension if required."

Clauses 5, 6, 7, and 8, were also considered, and the Committee adjourned until Monday, February 8th.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following petition has been addressed to the House of Commons by the Royal College of Surgeons in Ireland:—

[13] Copies of the Bill may be obtained from Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C.; Adam and Charles Black, 6, North Bridge, Edinburgh; or Hodges, Figgis, and Co., 104, Grafton Street, Dublin. Price 1½d.

[14] For convenience of reference this opinion, which was published in the BRITISH MEDICAL JOURNAL, January 31st, p. 252, is here appended:—

1. If the Midwives Registration Bill become law, a registered midwife, who has been granted a "certificate" by a County Council, will possess a "medical diploma," as defined by Section 27 of the Medical Act of 1886. 2. A registered midwife will also be able to style herself "midwifery practitioner." 3. A registered medical practitioner will have power to employ a midwife as his legally qualified assistant in midwifery. 4. It will not prevent a midwife from prescribing medicines, using forceps, turning, or performing other midwifery operations; vaccinating and treating complaints of women and children. 5. It does not make it illegal for a midwife to employ an unqualified assistant. 6. It does not make it illegal for a woman who is not educated and registered to practise midwifery. 7. It does not make it illegal for a midwife, who has been removed from the register, to practise midwifery. 8. It does not make it illegal for a registered midwife to conduct abnormal labours, and to ask and accept fees for so doing. 9. According to the definition of the expression "medical corporation," as defined in Section 27 of the Medical Act of 1886, "County Councils" will claim, and may be allowed to be, "medical corporations." 10. This being so, a "medical corporation," granting diplomas in medicine and surgery, would, by Section 3 of the Medical Act of 1886, have the right to combine with County Councils, and to recognise their diploma as granted to practise midwifery, and to register it, along with the medical and surgical diplomas, in the *Medical Register*."

The Petition of the President, Vice-President, and Council of the Royal College of Surgeons in Ireland

HUMBLY SHEWETH—

That your Petitioners, representing the Fellows and Licentiates of the Royal College of Surgeons in Ireland, have carefully considered the Midwives Registration Bill now standing for a second reading in your Honourable House, and are of opinion that, while it is doubtful that its provisions would be of obvious benefit to any class of the community, it is certain that their enactment in their present form would be attended with grave danger to the public welfare.

That your Petitioners are of opinion that the evils which are alleged to exist, and to justify the enactments of a Midwives Registration Bill arise from the fact that, in England, no adequate provision has been made for the education of a sufficient number of properly educated women to supply the wants of the public, and your Petitioners submit that, if such provision were made, this Bill would be as unnecessary in that division of the kingdom, as it is admitted to be in Scotland and Ireland.

That your Petitioners submit that, if it be considered necessary to admit to the midwives' register persons who seek registration on the ground that they have been in *bonâ fide* practice before the passing of this Bill, they should be required to present satisfactory proof that they have been actually engaged in such practice, and should also pass such examination as may, under the circumstances, be considered sufficient by the General Medical Council.

That the limitation of the practice of registered midwives to cases of natural labour, as proposed by the sixth clause of the said Bill, is, in the opinion of your Petitioners, quite impracticable, and, therefore, the greater necessity arises for ensuring that the registered midwife shall be capable of recognising the presence of complications requiring skilled assistance.

That, in the opinion of your Petitioners, the vesting of the examination of midwives in a large number of county councils, as proposed by the Bill, is very undesirable, as tending to complicate the keeping of the registers, and to cause a great variation in the standard of education required in the various counties.

That your Petitioners submit that any woman who has obtained in Scotland or Ireland a licence granted by any medical authority or by any lying-in hospital or maternity recognised as a teaching institution by such medical authority, should be admitted to registration as a midwife on producing such licence, and on presenting such evidence of good character and good health as shall be necessary for such registration.

That your Petitioners further submit that if your Honourable House shall consider it necessary to make legislative provision for the registration of midwives, the whole subject of the method of doing so, and of the guarantees for competency to be required, should be submitted for consideration to a Select Committee of your Honourable House with power to take evidence thereon.

And your Petitioners will ever pray, etc.

Signed { HENRY GRAY CROLY, F.R.C.S.I., President.
WILLIAM CARTE, F.R.C.S.I., Vice-President.
WILLIAM COLLES, F.R.C.S.I., Secretary.

OBSTETRICAL SOCIETY OF LONDON.

AT the annual meeting of the Obstetrical Society on February 4th, Dr. GALABIN, President, in the chair, a discussion took place on the Midwives Registration Bill.

The PRESIDENT, in the course of his annual address, in referring to Mr. Pease's Bill for the examination and registration of midwives, said the Council, having been asked by the promoters of the measure for advice, had spent a considerable time in considering the provisions of the Bill. The view taken by the Council was that the prime necessity was to obtain efficient examining boards, and so to secure that none but well instructed midwives should be passed and placed on the register. It was very doubtful whether Parliament would consider it equitable to exact from midwives a longer period of study than was required from medical students in the subject of midwifery, but the period of study was somewhat diminished in importance if the examination standard was above suspicion. It was also thought that the election of examiners by the county councils was not the best possible method because their selection might be influenced by local or general politics. Besides, the number of examining boards would be so great that it would be difficult to maintain an equal standard of efficiency. The Council suggested that a strong central examining board should be established in London to which questions could be referred by the local boards, and that the number of local boards in England and Wales should be limited to ten or twelve. They also advised that a central register should be kept. Most of these suggestions were adopted by the committee in charge of the Bill, but the draft was again transformed when the Bill was taken up for a while by the Government. As the Bill now stood it was in need of amendment. The clause admitting to the register all midwives now in practice was objectionable. The Bill also left various points indefinite, to be decided by the General Medical Council or the Privy Council: these points might with advantage be defined in the Bill itself. Some of the objections made to the Bill were fallacious. It did not seek to legalise the practice of midwifery by women, for that had been legal from time immemorial, and Parliament would never make it otherwise. On the other hand, public registration would give midwives a legal status, and it was important that they should not be allowed to go beyond their proper functions as midwives, namely, to attend normal labour only. A well-regulated registration of midwives would diminish rather than increase the danger that midwives would become an inferior class of female medical practitioners. In conclusion, the President invited discussion on the subject.

Dr. ROBERT BARNES drew attention to a memorandum circulated by the Council, the first paragraph of which, he said, contained one of the most extraordinary assertions ever put into a public document. It stated that "the Obstetrical Society of London was the first in promoting the education of midwives." In France and Germany midwives had been trained, educated, and diplomatised for more than a century, and even in London, at the British Lying-in Hospital, for more than 100 years; and nearly 100 years before the Obstetrical Society was instituted midwives were carefully taught by lectures and demonstrations, and diplomas were conferred upon them, testifying to their skill and capacity for practice. The same thing was done by the Royal Maternity Charity. He believed that the Midwives Bill now before Parliament was actually abandoned in deference to the opposing voice of the large body of the profession. That was an opposition in which he did not at all share, for he thought the principle of registration and examination was good and sound, and ought in some form or other to be carried out. That the Bill was full of faults was certain, but it was so opposed by the great mass of active members of the profession that there seemed no hope of passing it. He could state from tolerably accurate information that the members of Parliament who had backed the Bill had withdrawn their names, and the Bill was actually abandoned. Probably there would be a motion to appoint a Commission to examine into the subject, but whether it would come to anything he was unable to say. He would suggest that the whole subject should be referred back to the Council for consideration.

Dr. AVELING said the history of recent legislation in this matter commenced with a Bill introduced into the House of Lords by the Duke of Gordon in 1878. In 1882, the British Medical Association drafted a Bill for the registration of midwives, but that Bill was never submitted to Parliament. In 1890 the Midwives' Institute drafted a Bill giving a midwife legal power to practise midwifery and to recover fees. It was needless to say such a Bill would receive the entire opposition of the profession, and the Bill was amended by a Select Committee. That amended Bill was still alive, though Dr. Barnes said it was dead. The details were left by the Bill to the decision of the Privy Council, and that was a very wise thing to do, because if details were given in the Bill it would be putting on a strait jacket which could never be removed except by a fresh Act of Parliament. It was better to make the provisions general and allow a responsible body to provide the

details. With reference to the admission of women at present in practice to the register, the Bill provided that the Privy Council would have power to determine what right all *bonâ-fide* midwives should have to be registered. That would give the power to exclude women who were not suitable to receive the licence. It was argued that registered midwives would compete with medical men. Midwives' fees ranged from 2s. 6d. to 10s., and he wished to know where members of the profession were who received such fees, and why they had never come forward to oppose the Bill. None of the gentlemen who had taken prominent part in the opposition were in receipt of any such fees, and he believed the class of men who received such fees was exceedingly small. The Bill was being further amended. It would provide a uniform system of education, examination, certification, and registration. The certificates received by midwives at present were exceedingly unsatisfactory, though the one granted by the Obstetrical Society could not, he thought, be found fault with. He moved: "That the Fellows approve the policy pursued by this Society for the last twenty years relating to midwives, and respectfully request the Council to continue their efforts to obtain for these women suitable education and legal registration."

Dr. CLEVELAND said the two objections raised by the opponents of the Bill were that it would be impossible to provide such efficient midwives as were required, and that it would be injurious to practitioners. If the second objection could be got over, he thought the first would vanish. The most vital objection was that it would be in some way injurious to members of the profession. Midwives would not only practise midwifery, but would prescribe for patients, and do a good deal of injury. If that objection could be got over, there would be no difficulty in providing that midwives should be made efficient for the duties they had to perform.

Dr. WALTER GRIFFITH seconded the motion proposed by Dr. Aveling, and in doing so said the Bill would need a great deal of discussion before it could be properly got into shape, but as to the principle of the restriction and proper education of midwives there could be no two opinions.

Dr. LEITH NAPIER wished to propose a course which would lead to more living vital action than that which had been proposed by Dr. Aveling. The matter had been in the hands of the Council, and the Council had bestowed a great amount of time and care in preparing a Bill which had been treated, he thought, extremely badly by the politicians who rejected it. At a meeting of the College of Physicians held recently, a Committee of four Fellows of the College was nominated by the President to consider the Bill. What he would suggest was that four Fellows of the Society should be recommended to the Council to confer with the four Fellows nominated by the President of the College of Physicians, and that those gentlemen should be deputed to take charge of the Bill, and to carry out the principle of the registration of midwives in the best way that might occur to them.

Dr. LOVELL DRAGE protested against the idea that the Government was bound to accept the decision of the Council in such a matter as this. The Society was entirely ignorant as to the lines upon which the Council were going to legislate, and until they had information on that point he did not see what they were to discuss.

The PRESIDENT, in reply to Dr. BARNES, said the paragraph he referred to was perhaps rather vague. It was not meant that the Obstetrical Society was the first to educate midwives, but it was the first official body in the country which took active steps in the general promotion of their education by public measures. The great question to be decided in the first instance was not the provisions of any particular Bill, but simply the general principle for which the Society had contended. He thought it a good thing that there should be a measure enacted by Parliament for the examination and registration of midwives, so that the poor might know who were qualified to act in that capacity and who were not.

Dr. AVELING said it was not the fact, as stated by Dr. Barnes, that the majority of the profession were against the Bill. The question had been tested by the British Medical Association; every Branch had been communicated with, and the result had been that the members for the Bill were, in round numbers, 4,000, and those against it 700.

Dr. DES VŒUX said he was present on Saturday week at a meeting convened in the neighbourhood of Westminster. Notices of the meeting were sent to practitioners in Westminster, Pimlico, Belgravia, and Chelsea. The number of gentlemen attending the meeting on that Saturday afternoon, including the reporter, was fourteen. The account of the meeting was given prominence in the *Lancet*, but the numbers, except those in opposition to the Bill, were kept in the background. It was stated that those in opposition to the motion were 3, but it was not stated that it had only 7 supporters. He mentioned that as showing that practitioners in his neighbourhood could not be said to take much interest in the Bill.

Dr. CRAWFORD said the meeting referred to was called at very short notice. The number of names entered in the book as being present was seventeen.

Dr. JAMES OLIVER said this was a question which required much more discussion than it had received, and upon which the opinion of the general practitioners should be taken.

The motion was then put and carried.

Dr. LEITH NAPIER moved: "That the names of four Fellows of the Society should be presented to the Council to be recommended as a committee to confer with a committee appointed by the College of Physicians to take such action as will seem to them good to promote the registration of midwives."

Dr. CULLINGWORTH seconded the motion. He thought it desirable that there should be such a conference. The Committee at the College of Physicians was, in the first instance, proposed to consist entirely of obstetricians; then one of the nominated Fellows rose, and suggested that it would be very desirable to have some general physicians upon the Committee, whereupon the names of the original subcommittee were altered, and only one obstetrician remained, three general physicians being substituted. That, he ventured to say, was not a body with the necessary knowledge of obstetrical matters to consider this Bill. He, therefore, thought it would be of advantage if the Society appointed a committee consisting of men who were more conversant with the subject to confer with the Committee appointed by the College of Physicians.

Dr. LOVELL DRAGE said it was not altogether a desirable thing that they should appoint four people to confer with the College of Physicians, because they would be running the risk of the College of Physicians saying that they had already appointed men qualified to give an unbiassed judgment on the Bill, and they did not wish to be biassed by the co-operation of members of a Council which had already expressed itself very strongly in one particular way. If the College of Physicians were to be assisted, they should at all events be assisted as much by one party as by the other; and if it was right to appoint four members who were avowedly in favour of some abstract principle, the nature of which they did not yet know, there was equally the right of other people who opposed that principle to appoint their representatives, and ask the College to confer with them.

Dr. LEITH NAPIER said his motion was not that four members of the Council should be appointed, but that the Society should recommend four of the Fellows to the Council for election as representing them.

Dr. CHAMPNEYS hoped that no motion of this kind would be passed. He thought that the Obstetrical Society would be greatly hampered in its action if it was associated with men who had very little knowledge of the subject. The committee of the College of Physicians would probably decline their assistance, but even if they were admitted to conference their views would be nullified by being mixed up with those, three at any rate out of four, people who probably never till that moment had taken the slightest interest in the question. The motion which they had passed was one of confidence in the executive so far, and to tie their hands in the way now proposed might be against the best interests of the Bill, or of whatever subsequent Bill might come forward.

Dr. DRAGE said the College of Physicians examined in midwifery, and therefore might be supposed to know something about it.

Dr. BARNES said Dr. Farquharson, who was on the Committee, had certainly given some attention to the matter. Another member of the Committee was Dr. Priestley, who might be supposed to know something about it.

Dr. NAPIER said with the exception of Dr. Priestley, there

was no gentleman on the Committee of the College who knew the least thing about midwives. He did not fancy any one of these three gentlemen ever saw a midwife in his life.

Dr. OLIVER thought they would get a better opinion from four men who practised medicine purely and simply than from men who were likely to look at the thing from a biassed point of view.

Dr. JOHN WILLIAMS urged that it would be very undesirable for the Society to join any other body in a question of this kind.

Dr. CLEVELAND agreed that such a step would only hamper the action of their own Society.

Dr. GRIFFITH hoped that if the Council took any action in the matter they would give the members an early opportunity of knowing what had been done, and not keep it till another annual meeting.

Dr. MACNAUGHTON JONES warmly supported the suggestion just made. It was a matter of the gravest importance that the Fellows of that Society, whose views might be looked upon by the public and the profession as being represented by the Council, but who might not as a body agree with the Council, should be made aware of any important step that was taken, and certainly at shorter intervals of time than had been the case in recent years with regard to the Midwives Bill. Personally, while believing in the benefit of legislation, he entirely disagreed with the present Bill, and he was afraid that the fact of their approving of legislation in the matter might be taken as showing that they were supporting an obnoxious Bill. He was entirely in agreement with Dr. Champneys that the Society should act independently of any body whatever. He hardly agreed with the delegation of their rights to any four Fellows or any four members of the Council, believing, as he did, that in a large number of Fellows there was greater security. He hoped that any decision of the Council would be brought before the general body of Fellows before any final action was taken.

Dr. NAPIER said after the discussion that had taken place he was quite willing to withdraw his motion.

The motion was then withdrawn, and the Society adjourned.

VIRCHOW TESTIMONIAL FUND.

A MEETING of the Committee of the above-named Fund was held on Friday, January 30th, at Sir Andrew Clark's house. In the unavoidable absence of Sir Andrew Clark, the chair was taken by Sir JAMES PAGET. After a report of the preliminary proceedings, and letters from members expressing regret at their inability to attend had been read by the Honorary Secretaries, it was unanimously resolved that Sir James Paget be asked to take the Chairmanship of the Fund, and subsequently Dr. Lauder Brunton was elected Hon. Treasurer, and the Secretaries were confirmed in their office.

The subjoined appeal to the profession was then considered, and ordered to be issued.

VIRCHOW TESTIMONIAL FUND.

On October 13th, 1891, Professor Rudolph Virchow celebrates his 70th birthday. His pupils and admirers intend to commemorate this occasion by presenting him with a testimonial in recognition of his splendid services to medical science. A large and representative committee has already been formed in Germany with the view of collecting the necessary contributions, but it has been felt that this ought essentially to be an international movement, inasmuch as Professor Virchow's followers are not of one nation, but of all.

In accordance with this view the undersigned have formed themselves into a committee, in order to give Professor Virchow's British admirers the opportunity of testifying to the gratitude which every member of the profession feels towards the man whose work on "Cellular Pathology" has so vastly contributed towards the advance of modern medical science, and may fairly be said to have made every member of the profession his pupil.

The form in which the universal feeling of gratitude is to find expression has been decided upon by the original German Committee. A large gold portrait medal is to be presented to Professor Virchow himself, and bronze replicas of the same to members of his family and to some scientific institutions. The surplus—which, no doubt, will be large—is to be handed over to Professor Virchow for the furtherance, subject to his decision, of scientific work.

To carry out this project the undersigned cordially invite the co-operation of the profession in the United Kingdom. Subscriptions, which are not to exceed two guineas, may be sent to the Honorary Treasurer, Dr. Lauder Brunton, 10, Stratford Place, London, W., and will be duly acknowledged in the medical journals. Cheques to be made payable to the "Virchow Testimonial Fund," and to be crossed.

(Signed) JAMES PAGET, Chairman.
LAUDER BRUNTON, Honorary Treasurer.
FELIX SEMON, } Honorary
VICTOR HORSLEY, } Secretaries.

List of Committee of Virchow Testimonial Fund.

Henry W. Acland (Oxford)
Th. Clifford Allbutt
John Banks (Dublin)
W. Mitchell Banks (Liverpool)
H. G. Barling (Birmingham)
A. Barron, M.B. (Liverpool)
J. S. Bristowe, M.D.
W. H. Broadbent
T. Lauder Brunton (*Treasurer*)
Th. Bryant
H. T. Butlin
J. Chiene (Edinburgh)
Andrew Clark
J. Coats (Glasgow)
S. Coupland
J. Dreschfeld (Manchester)
Dyce Duckworth
John Evans
Joseph Fayrer
D. Ferrier
W. H. Flower
M. Foster (Cambridge)
W. T. Gairdner (Glasgow)
Alfred Garrod
W. S. Greenfield (Edinburgh)
F. de Havilland Hall
D. J. Hamilton (Aberdeen)
T. Holmes
G. M. Humphry (Cambridge)
J. Hutchinson
J. Hughlings Jackson
William Jenner
George Johnson
Joseph Lister
William Mac Cormac
Th. Oliver (Newcastle-on-Tyne)
W. M. Ord
Richard Quain
George Paget (Cambridge)
James Paget (*Chairman*)
F. W. Pavy
George Porter (Dublin)
R. Douglas Powell
J. Russell Reynolds
William Roberts
Ch. S. Roy (Cambridge)
T. Burdon Sanderson (Oxford)
E. A. Schäfer
S. G. Shattock
John Simon
A. R. Simpson (Edinburgh)
E. M. Skerritt (Clifton, Bristol)
Th. Grainger Stewart (Edinburgh)
William Stokes (Dublin)
Octavius Sturges
Th. Pridgin Teale (Leeds)
William Turner (Edinburgh)
Hermann Weber
Spencer Wells
C. G. Wheelhouse (Leeds)
Samuel Wilks
A. H. Young (Manchester)

The following contributions have already been promised:—

	£	s.	d.
Sir James Paget, Bart.	2	2	0
Sir Richard Quain, Bart.	2	2	0
Sir Joseph Fayrer, K.C.S.I.	2	2	0
Clifford Allbutt, M.D., F.R.S.	2	2	0
Sydney Coupland, M.D., F.R.C.P.	1	1	0
William Ord, M.D., F.R.C.P.	2	2	0
Seymour Sharkey, M.D., F.R.C.P.	1	1	0
J. Russell Reynolds, M.D., F.R.S.	2	2	0
F. W. Pavy, M.D., F.R.C.P.	2	2	0
Hermann Weber, M.D., F.R.C.P.	2	2	0
T. Lauder Brunton, M.D., F.R.S.	2	2	0
H. T. Butlin, F.R.C.S.	1	1	0
Victor Horsley, F.R.S.	2	2	0
Felix Semon, M.D., F.R.C.P.	2	2	0

THE GERMAN HOSPITAL.

BARON VON DEICHMANN presided, on January 30th, at the Cannon Street Hotel, over the annual general court of the governors of this institution. The forty-fifth annual report stated that 1,492 in-patients were admitted during the year, of which 271 were cases of accidents; 361 were admitted to the convalescent home; 16,707 out-patients were treated at the hospital, together with 2,790 accident cases; 4,726 were treated at the eastern dispensary, 1,381 at the western dispensary, and there were 1,024 dental cases, making a total of 26,624 persons treated as out-patients.

The report having been adopted and votes of thanks passed to the various officers, Mr. A. J. ALLEN rose for the purpose of moving an addition to Rule XV, the italics representing the proposed addition: "The Committee shall consist of ex-officio members, namely, the President, Vice-Presidents, Treasurer, Sub-Treasurer, Chaplain, Honorary Secretaries, *the Senior Honorary Physician and Senior Honorary Surgeon of the Hospital*, and of eighteen governors elected at the annual general court, with privilege of filling up any vacancy that may occur in the number of the latter during the current year." Mr. Allen stated that the alteration, which was an important one, was made on account of the considerable support given last year to the suggested addition of members of the medical staff to the committee. The proposition had been submitted to the medical board, and five of the seven members were in favour of it. If the arrangement did not work it could be altered.

Mr. J. HASSLACHER seconded the resolution.

Dr. LICHTENBERG (Senior Surgeon) moved the following amendment: "That instead of the words 'Senior Hon. Physician and Senior Hon. Surgeon of the Hospital,' the words: 'and likewise of a full Physician and full Surgeon of the Hospital (not *ex-officio*) to be elected by rotation, according to seniority every three years,' should be inserted." He said he did not object to the Senior Physician and Surgeon being on the Committee *pro tem.*, but he must oppose a system by which medical officers once elected should remain

on the Committee for the remainder of their official lives. That would mean that for fifteen, twenty, or even more years, the proposal would throw much extra work on the senior members. The rule would become a dead letter, for no man in the position of a senior medical officer could continue year after year to give the necessary time. But it would be fortunate if only that negative result were produced, for there might also be positive mischief. One of the seniors might relax his efforts, while the other might use the advantages so afforded him for his own purposes, against the wish of his other colleagues. He had lately had interviews with several high authorities of the medical profession, and they all pronounced against the Committee's proposal, but spoke in favourable terms of the amendment, which gave a larger number of the medical officers the opportunity of becoming better acquainted with the actual management of the hospital. The seven members of the staff requested the Committee to allow them to nominate two delegates as members of the Committee. That proposal was unanimously rejected by the Committee, who suggested instead the present resolution. In a letter of November 25th the Board stated that it could not support the proposal of the Committee, nor could any one of them, in the event of its being passed by the general court, accept such an election. The Committee would not alter its opinion, and asked the Board to retract the letter in question. In order to be conciliatory, the Board next suggested the election by rotation, but was once more defeated. Soon after four members retracted the letter of November 25th, and expressed their willingness to abide by the decision of the Committee. He still objected to the proposal on principle, and as were it passed he should become a member of the Committee, he would feel obliged to resign.

Dr. TUCHMANN seconded the amendment. He said he was certain that the proposal of the Committee was distasteful to all his colleagues, while he also should feel forced to resign should it be agreed to by the Court. The Committee forgot that the staff was doing as much good work as the Committee itself, and without pay. The Committee had not met them with any consideration or kindness. He hoped the meeting would not submit the hospital to the consequences of that proposal. He remembered how last year Baron Schröder emphatically called upon the subscribers not to support the proposal of the medical staff because the members were to be elected for life, and yet the Committee now came proposing to carry out a scheme against which they last year felt so strongly as to hold a poll. No wonder the subscribers had fallen off. It was that falling off of funds which brought pressure upon the Committee to yield, but it did so in such a manner that its proposal would become futile.

The discussion was continued by Dr. HESS, Mr. PRIDHAM, and Mr. SONNENTHAL, who spoke in favour of the amendment, and Dr. WEBER and Messrs. DOMEYER and GÜLICH spoke in favour of the Committee's proposal.

Dr. TUCHMANN wished to reply, but the CHAIRMAN ruled him out of order as he had already spoken, unless he wished to withdraw his threat to resign. Dr. TUCHMANN repudiated the use of the word "threat," and at the same time refused either to withdraw the amendment or to alter his determination to resign should it be rejected.

The amendment was then put to the meeting and declared to be lost, 58 voting for it and 103 against.

The original resolution was then put and carried, whereupon

Dr. LICHTENBERG said that on behalf of himself and Dr. Tuchmann he wished to tender their resignation from the medical staff, the formal written notice of which would be sent in next day.

The proceedings then terminated with a vote of thanks to the Chairman.

PRESENTATION. At the conclusion of the "Advanced" or Nursing Course of Lectures (St. John Ambulance Association) given at Looe, Cornwall, the members of the class presented Dr. William Hammond, of Liskeard, with a handsome and well-fitted walnut writing case, and also a Russia leather blotting-book, in acknowledgment of his trouble in coming to lecture on First Aid, as well as Advanced Nursing.

THE HOSPITALS COMMITTEE.

St. Thomas's Hospital: Evidence of the Receiver, the Steward, the Dean of the Medical School, the Treasurer, a Nurse, and the Matron.

THE inquiry was resumed on February 2nd, Lord SANDHURST presiding.

Mr. ROBERT BRASS, the Receiver of St. Thomas's Hospital, was the first witness. He stated that he received a salary of £600 a year and lived outside the hospital. He had no commission either on rents collected or on appeals. He was appointed by the general Court of Governors. The treasurer and four almoners—governors—formed a court, which met once a week. Two was a quorum. The hospital had property in London, and in Cambridgeshire, Middlesex, Berkshire, Essex, Hampshire, Hertfordshire, Kent, Derbyshire, Yorkshire, and Wiltshire. The income from the country estates last year amounted to £14,481. The estates were managed by a land surveyor and by local agents. He was responsible accountant as well as receiver. To all intents and purposes St. Thomas's was a free hospital. Although there were about 340 governors, it did not follow that cases presented upon their letters would be admitted. Anyone applying casually, if it was a bad case, would certainly have the preference. In St. Thomas's Home were two wards occupied by paying patients, and the receipts from them amounted to £5,600 in 1890. At least 60 beds were unoccupied for want of funds. There were two wards entirely unoccupied. The object of having paying beds was primarily to get funds. The nearest hospital on that side of the river was Guy's. Last year the hospital paid £2,380 in rates. From the London property, the Witness said that the total receipts were £31,655, which comprised £11,980 from Southwark, £11,133 from the City, £7,146 from Hackney and Clapton, and £1,468 from Wapping. During the last ten years the receipts from the London estates had increased, but from the country estates they had decreased. The total gross receipts were £67,000, and the net sum received £40,000.

Lord LAUDERDALE: So that you spent £27,000 in order to receive the £40,000?

Lord THRING said he should like to ask some questions as to the building and repairs connected with the hospital, and the Witness was requested to submit a statement giving details of the expenditure in connection with the administration of the institution.

In answer to further questions, the Witness stated that there was no ground-rent to pay at St. Thomas's, as the property was freehold. It was bought when the site was fixed for the new hospital, which he thought was about thirty years ago.

Mr. F. WALKER (the Steward of the hospital) said he had occupied that position for forty years, and had been forty-seven years connected with the hospital. He had previously been ten years connected with the Stock Exchange. He was a salaried officer, receiving £555 a year and residence. He had the general management of the hospital over all the officers, and kept account of all the patients when admitted, their names, residence, the nature of their disease, and the result of their treatment. He was responsible to the treasurer, who was a resident officer. The out-patient department was free. There was a restriction upon the numbers, however. Whilst all the surgical cases were attended to, some of the medical cases which were deemed not to require attention were sent away. About 25,000 new out-patients were attended to last year, and the number of attendances was 147,546. There were also about 2,000 extern maternity cases. Those cases were confined to a radius of a mile from the hospital. The present hospital was opened in September, 1871. Previous to that, they were for nine years at Surrey Gardens. Before that they were at London Bridge, but were moved off in 1862, the site being required by the South-Eastern Railway. To complete the work on the present site, the authorities had to borrow £100,000, and that sum was now being paid off. There were now ninety vacant beds in the hospital. The paying beds really did pay, because there was no rent to pay and no taxes, and the two officers who worked it did so without remuneration.

The CHAIRMAN: What amount would you require to be able to fill your beds?—We should want £6,000 or £7,000 a year more to keep them going.

How many beds have you?—Five hundred and sixty-nine; that includes the paying department and the empty wards. There are 436 occupied beds, not including the paying patients.

Your income is about £40,000.—For hospital purposes I think it is only about £30,000. The authorities, he added, had not applied to the metropolitan Hospital Sunday Fund for an award, although short of funds, because it was thought that, being an endowed hospital, an application for a grant would not be entertained. With regard to the establishment and constitution of the hospital, Mr. WALKER stated that there was a Grand Committee, which met monthly, or oftener if required. There was a resident physician and a resident surgeon. On the medical side there were four house-physicians and a large number of clinical clerks, and on the surgical side there were four house-surgeons and a large number of dressers. The whole of the visiting staff were paid, but they only received small fees.

Have you a committee composed of the medical staff and governors?—To the House Committee three or four of the medical staff were summoned when necessary.

Do you take cases of diphtheria?—Yes; all cases. There were 88 last year. They are provided for in a separate ward in the infectious block. Two nurses went through slight attacks. Cases were occasionally taken in which developed scarlet fever, but such cases were sent to the special hospitals, if it were known when application was made. The nurses certainly caught the diphtheria from attending the patients.

Do you have to turn many patients away from the door because the hospital is full?—Yes; we could fill the hospital if it were double the size. Many good cases are sent away.

Are you of opinion that the medical relief of the sick poor is lamentably deficient on that side of London?—Yes; the population has enormously increased there.

As to the food supply, the Witness stated that there was a great kitchen for the patients for the whole of the blocks of the hospital, and there were separate kitchens for the medical officers, for the nurses, and for the paying patients at St. Thomas's Home. He was responsible for the quality of the food, and complaints as to the food both for the patients and officials would come to him. There were, he added, two chaplains at the hospital—one resident and one non-resident. The salary of the former was £275 and a house, and that of the latter was £150, and he had also the Vicarage of St. Thomas. There was no convalescent home, but from a Samaritan fund the hospital sent patients to various convalescent homes.

The CHAIRMAN: Do you not think that St. Thomas's, by appealing to the public, might get £6,000 or £7,000 a year?—We might; but we have never tried.

Lord MONKSWELL: Do you know of any poor persons sent away from your hospital not being able to obtain admission at any other hospital or infirmary?—Yes; there have been cases.

WILLIAM M. ORD, M.D., F.R.C.P., said he was physician of St. Thomas's, and had been for twelve years Dean of the Medical School.

The CHAIRMAN: It has been suggested that there should be one central university of medical education, with of course instruction at the bedside. Would you prefer that, or would you prefer the general hospitals should have their own schools?—I think it would be very much better that the large general hospitals should have their own schools—that applied particularly to the study of practical medicine and surgery. He thought it better that the large schools should carry out instruction in all subjects, but as things advanced the smaller ones should be grouped for the earlier subjects—in fact, taking it altogether, he would not be sorry to see the whole of the teaching of the earlier subjects taken from the hospital schools and relegated to some central body. A greater uniformity of study would thus be obtained. The present number of students at St. Thomas's was nearly 400. There had been a great increase during the last few years. For the whole curriculum the students paid 125 guineas. The students' fees produced last year between £8,000 and £9,000.

In what way do you arrange the payment of lecturers and teachers?—In the first place, the whole amount received from fees is carefully stated, and from that is deducted the amount due for expenses, and then there is a division of profits, so to speak, in the proportion of two parts for the lectures and one part for the teaching in the wards. The third part is divided in a certain ratio, and the teaching is divided into shares calculated upon a basis of the actual hours and amount of work done by each person. The witness stated that out of £8,500, the expenses amounted to about £3,000. The schools attached to the hospital did not increase the expenses of the hospitals, for, on the contrary, the work now done by the unpaid officers would have to be paid for.

In answer to a question from the CHAIRMAN, the WITNESS said he should not like to be taken as advocating the establishment of a central school, although there might be many advantages in it.

Is there at St. Thomas's any restriction or necessity of gentlemen applying for medical appointments having the degrees of the London Colleges of Physicians and Surgeons?—For the staff proper anyone wishing to be either a physician or surgeon, or assistant-physician or assistant-surgeon, being a surgeon he must be a Fellow (F.R.C.S.), or being a physician he must be a Member or Fellow of the College of Physicians.

Have you known of any first-rate men being kept out of an appointment to a hospital because of not having such a qualification?—No. I can see no justification of a man not having it.

In reference to the question of out-patients, Dr. ORD said there was certainly no abuse in their treatment at St. Thomas's. He was in favour of out-patient departments. Of course, he knew it was said by some economists that out-patient departments were demoralising. It would, no doubt, be possible to increase the value, both for the general public and the hospitals, of the out-patient departments if there were some sort of relation between hospitals and other institutions around them.

The CHAIRMAN: To what institutions do you refer?—Provident dispensaries. The Witness further stated that whilst in the north of London the hospital accommodation was more than was required; in the south of London it was very inadequate.

Asked to give his opinion as to the value of general as compared with special hospitals, the WITNESS said that certain special hospitals, such as ophthalmic hospitals, were a necessity and of great value. He did not, however, at all approve of cancer or consumption hospitals, and special institutions for them were unnecessary, as the patients could be equally well treated in general hospitals.

The CHAIRMAN: Do you mean that as a result of the multiplicity of special hospitals the administration must be more costly than in the general hospitals?—Yes. I think some of them are unjustifiable—they are more or less parasitic.

Would you recommend that a board should sanction the erection of a hospital, or direct where it should be placed?—I am not prepared to answer that. It is a very large question. I should not like to give an opinion.

The WITNESS then said that as to the admission of students to Poor-law infirmaries for instruction, he should certainly favour it, for at present he considered there was a great amount of valuable material wasted in that direction, which could be utilised for educational purposes.

The Committee then adjourned.

On Thursday the first witness called was Mr. JAMES GADSTONE WAINWRIGHT, who stated that on March 25th he was appointed treasurer of St. Thomas's Hospital, having previously been engaged in connection with the North Surrey District Schools. He was first associated with the hospital in 1865, and became an almoner in 1873. The Committee of Almoners and treasurer were the executive of the hospital. He was an entirely honorary officer, and resided in the hospital. His powers as treasurer were that, as superior officer, he had the control of all the other officers in every department, and in case of complaint or discovery of any abuse, he had the power to correct the same, and, if necessary, submit the circumstances to the almoners or the Grand Court. He might suspend the offender if necessary. Further, he had to report the receipt of all legacies and benefactions.

The CHAIRMAN: You have supreme authority in the hospital?—Yes, in the absence of the almoners and the court. The appointments which he was authorised to make were

those of the sisters, nurses, and other servants. The agents were under his control, and the rents of the estates came to his office. The full Court of Governors was the highest authority; they met quarterly, and 13 formed a quorum. Everything was reported to and confirmed by them. The Grand Committee had control of the estates, and 5 formed a quorum. Any minute of misconduct of a medical officer or a nurse would be referred to Committee. The number of beds now occupied was only 359. There were 42 besides reserved for paying patients in St. Thomas's Home. The minimum payment was 9s. In addition to the Home, there were some paying patients in the wards. That was done under the Charity Commissioners' scheme, and they were called the poor paying patients. Last year about £220 was received from that source.

The CHAIRMAN: The object of receiving payment from these patients is to provide funds for the hospital?—Yes.

The WITNESS added, that from St. Thomas's Home they received about £5,000 a year. The amount of profit received from it last year was about £600.

If you had plenty of money, all these beds would be open free?—Yes; that was the original intention.

Could you fill the beds if you had the money?—Yes.

So that there is a lamentable want of accommodation for the sick poor?—Yes; I suppose there is, looking at it in that light.

The WITNESS further stated that there was a large out-patient department. There was no inquiry office. It would be very expensive. The question had often been discussed, but no definite conclusion had been arrived at. He often spent a good deal of time in looking after the out-patients, and made inquiries where he considered necessary.

Have you any reason for saying that an inquiry officer would be useless?—No; not useless; but I do not think any unfair advantage is taken of that department.

Lord CATHCART: Your fundamental principle was to receive entirely free patients?—Quite so.

When you introduced the principle of paying patients, which is said to have ousted the poor, on whose permission did you act?—The Charity Commissioners. The diminished income of the hospital was, Witness continued, due chiefly to the agricultural depression.

That would not account for it all. There are large sums to pay for interest for the money borrowed. What was that borrowed for?—For the building of the hospital. His experience was, he said, that the hospital was not on too extended a scale. Some years ago the authorities had appealed to the public for £20,000. The response from the public was very small; the whole amount was obtained, but nearly all from the active friends of the institution.

Was it, do you think, because the public have no confidence in your management that they did not come forward?—That I cannot answer.

In answer to Lord THRING, Mr. WAINWRIGHT stated that he was frequently making inquiries with the view to economising.

Is not the work of house-surgeon rather heavy; is he not kept an excessive number of hours out of bed?—I think not. He is resident, but he is not actually employed too many hours, and could not be considered overworked. He is not on the strain the whole of the time.

The CHAIRMAN: Would it not be better to appeal to the public to make up your deficit?—We might do so.

What is there against it?—I do not know that there is anything except the small chance of getting it.

Do you not think that in hospitals there should always be one person on the spot who should have paramount authority?—I cannot conceive such an institution without a responsible head.

Lord CATHCART: If all your beds and wards were filled up, would that not bring down the established charges?—Yes, it would.

Mr. ROBERT BRASS, the receiver of St. Thomas's Hospital, was then recalled, and explained at length the details of the income and expenditure connected with the estate and other departments of the institution, stating that in regard to the borrowed £100,000, they were paying £3,300 off the principal and £175 as interest. He hoped that the saving would go towards opening other wards.

Lord CATHCART: With the loss of the law-suit about the rates you suffered a great loss of income—about £2,300 a year?—Yes, about that.

If you had foreseen that loss you would not have indulged in so much building?—No, we should not.

Miss ENTWISTLE, late nurse of St. Thomas's Hospital, then stated that she commenced training in 1883, and that lasted for fourteen months. Altogether the work of the nurses there was too long and too exacting. Those with long leave had to work seventy-nine hours, and others seventy-three hours. They had three weeks' holiday in the year. All had to work longer than they should. They were called up at night in the event of operations, notwithstanding being kept up until after 10.35 if there was a prospect of an operation taking place. The whole responsibility of what happened in the ward during the day or night was on the shoulders of the sisters. The staff sisters had also to work from seventy-nine to seventy-three hours. They had only a fortnight's holiday in the year.

The CHAIRMAN: Are these the present arrangements, or have there been any alterations?—I do not know that there have been any alterations. The Witness proceeded to explain the details as to the hours and nature of the work of the nurses, and was then asked,

If there were no complaints made to the authorities of the hospital, would they be in a position to know that there was any cause of complaint?—The nurses considered themselves very well off as compared with those at other hospitals. Their lodgings and food are very much better. But at the same time although they are all selected, strong, healthy young women, a great number of them break down. There is too much untrained labour. The staff nurses have often to do a number of things which they should not, and that was because of the inexperienced probationers. I should like to see in the wards, with from ten to twenty-four beds, two staff nurses and three probationers. The nurses should have more holidays and more rest.

Do you complain of the food?—That is quite as good as you could expect. It is very good and wholesome food.

In fact your complaint is that if possible there should be more nurses?—Yes, and more trained nurses.

Lord LAUDERDALE: Which of the three classes—probationers, staff-nurses, or sisters—suffered the most?—I think the trained nurses.

Lord SAYE AND SELE: There are two chaplains in the hospital; are they at all times accessible to administer consolation to the patients at the bedside?—Yes.

In reply to Lord MONKSWELL, the Witness said that the sisters worked more than the average of seventy-six hours a week; and in answer to Lord CATHCART, stated that the clergy, both of the Church of England and the Roman Catholic Church, who visited the hospital, were very kind indeed to the patients.

The CHAIRMAN: Then I understand that you speak very well on the whole of St. Thomas's Hospital as to accommodation, except that you consider the work is more arduous than women should be called upon to perform?—Yes.

Miss GORDON, matron of St. Thomas's Hospital, said she had had previous experience as a matron at Leeds. She was trained at St. Thomas's. There was a staff of 115 nurses. The question of the dinner hour was now under consideration, in view of the sister of the ward and the trained nurses being away at the same time. They were sometimes so pushed for nurses that they had to send out. That was only in exceptional times. The nurses had a good deal of extra time to themselves. They had two hours off every day, and every week from half-past one to six for recreation. The sisters received from £35 to £50 a year; the sister superintendent received £60; and she (Miss Gordon) received £300 a year and a month's holiday.

Lord THRING: Do any of the nurses break down?—Some of the probationers do; and they go away if they are not strong enough. She thought that the nurses at St. Thomas's were not overworked.

Lord KIMBERLEY: It is the survival of the fittest: those who are not fit go away.

The CHAIRMAN: Before being admitted probationers are they examined?—Yes, they are all medically examined.

In answer to Lord MONKSWELL, the Witness stated that,

reckoning the hours the nurses had off on Sundays, their average hours would not be more than sixty hours a week.

Lord CATHCART: Taking the average work of the nurses at Leeds and at St. Thomas's, which had the harder work?—Oh the Leeds nurse, much harder.

Dr. SEYMOUR SHARKEY, physician to the hospital, gave evidence in explanation of the procedure adopted in regard to both medical and surgical cases. Returns were, he said, carefully kept, and by them could be ascertained the number of new cases in each department, and also how long they were treated. The number of new cases last year, who applied for out-patient relief was 51 a day. After a long experience of St. Thomas's out-patient department, he did not believe that it was seriously abused in any way in regard to the financial position of the persons who attended. They all seemed to be persons who could very ill afford to pay for medical attendance for any length of time.

The CHAIRMAN: Do you find the same remark applies to the in-patient department?—I have been there only since October, but I have not seen anything to the contrary. Owing, he added, to the limiting of the number of out-patients, there were about fourteen a day who were refused, and had to go away.

Your system, you think, keeps down the number, so as not to necessitate any inquiry?—In every way it answers the purpose very well indeed.

The Committee then adjourned.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, February 19th, at 8.30 P.M. Dr. Hadden will give a clinical demonstration of several very interesting cases of Diseases of the Nervous System.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, N.E.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.—A joint meeting of the above Branches will be held at the Swan Hotel, Stafford, on Thursday, February 26th, at 3.30 P.M.—GEO. REID, M.D., Stafford.

NORTH OF IRELAND BRANCH.

THE winter meeting of this Branch was held in the Royal Hospital, Belfast, on Thursday, January 29th, when there was a very large attendance of members. The chair was occupied at first by Dr. GRAY (Castlewellan), and afterwards by the President, Dr. W. A. MCKEOWN.

The Midwives Registration Bill.—Dr. BYERS moved and Dr. MEHARRY seconded the following resolution: "That the North of Ireland Branch of the British Medical Association approves the principle of the Midwives Registration Bill, namely, the compulsory registration of midwives after due examination." To this Dr. SIMPSON proposed and Dr. N. J. MCDONNELL seconded an amendment to the effect that the Branch should take no action in the matter.—The amendment, on being put to the meeting, was lost, whereupon the original motion was passed, only two or three members voting against it.

Election of Office-bearers.—The following resolution, of which notice had been given, was moved by Dr. J. A. LINDSAY, seconded by Dr. CALWELL, and passed: "That the election of office-bearers of the Branch shall take place as heretofore at the July meeting; but that the new Council shall assume office and the incoming President deliver his address at the October meeting, and that the annual dinner be held regularly on the evening of the October meeting."

New Members.—Dr. James Browne and Dr. T. A. Davidson, of Belfast, and Dr. W. Robinson McMaster, of Carrickmore, co. Tyrone, were elected members of the Branch.

Koch's Treatment.—Dr. RICHARD PARDON read notes of four cases of lupus, one of pulmonary, and one of laryngeal phthisis treated by Koch's inoculation fluid. Three of the lupus patients, with their photographs before and during treatment, and temperature charts, were shown.—Dr. HOWARD SINCLAIR showed cases of phthisis and lupus under treatment by Koch's method.—Dr. CECIL SHAW gave an account of a case of laryngeal phthisis treated in the same way.—A discussion followed, in which Dr. AGNEW (Lurgan), Dr. FULTON (Saintfield), Dr. O'NEILL, Dr. J. A. LINDSAY, Dr. SIMPSON, and Dr. MEHARRY took part.

Cranial Surgery.—Dr. O'NEILL exhibited four patients whom he had trephined for depressed fracture of the skull, and gave a short account of the cases. He showed a new form of trephine.

Abdominal Surgery.—Dr. BYERS showed the following tumours successfully removed by abdominal section: (*a*) a multilocular cystic tumour developed in the parenchyma of the ovary, with a commencing simple broad ligament cyst; (*b*) a universally adherent suppurating cyst of the broad ligament, and a suppurating cystic tumour of the ovary. Both patients made good recoveries.

GLASGOW AND WEST OF SCOTLAND BRANCH.

THE annual meeting of this Branch was held on January 23rd in the Victoria Infirmary, Glasgow, under the Presidency of Dr. W. HALDANE, Bridge of Allan.

Cases.—The physicians of the infirmary, Drs. DUNCAN and NAPIER, and the surgeons, Drs. MAYLARD and PARRY, brought a number of interesting cases before the meeting. Hysterical Paraplegia in which hypnotism was tried, Apparatus for the Administration of Oxygen, and Koch's Method were Dr. Duncan's subjects. Dr. Napier showed a Series of Cases treated with Koch's Lymph, and a case showing symptoms of Poisoning by Chromate of Potassium. A case of Staphylorrhaphy where great improvement of speech followed from special tuition. Two Calculi weighing 3½ ounces successfully removed from the bladder of a man aged 77 by suprapubic operation, and a case of Ulcer of twenty years' duration successfully treated by massage were shown by Mr. Maylard. Dr. Parry showed a case of Paraplegia in which recovery followed trephining of spine and evacuation of a carious abscess, some cases of Excision, a case of Talipes Valgus, and various forms of Spinal Supports.

Dinner.—The members of the Branch afterwards dined together.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE ninety-fourth general meeting of this Branch was held in the Royal Society's Room, Sydney, on Friday, December 5th, 1890, Mr. G. T. HANKINS, President, in the Chair. The following gentlemen were present: Drs. Fiaschi, Jenkins, Thomas Clay, W. J. O'Reilly, Newmarch, Hodgson, West, Rennie, W. F. Quaife, Crago, Megginson, Paton, Kyngdon, Clubbe, Bowman, Graham, Worrall, and Martin. Dr. Goode was also present as a visitor.

New Members.—The following were elected members: Drs. Paton, Mills, and Hinder.

Minutes. The minutes of the previous meeting were read and confirmed.

Communications.—Dr. CLAY read notes of a case, and exhibited a specimen of Hydatidiform Degeneration of the Ovary. Drs. CRAGO, WORRALL, and HODGSON discussed the case.—Dr. THOMAS (of Manly), and Drs. CRAGO, GOODE, and NEWMARCH read notes on cases of Intussusception.—A lengthy discussion took place in connection with these papers, in which Drs. WORRALL, HODGSON, CLAY, FIASCHI, KYNGDON, CLUBBE, and HANKINS took part.—Drs. GOODE, CRAGO, and THOMAS replied.

Next Meeting.—The PRESIDENT announced that the next meeting of the Branch would be held in March, 1891.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

THE quarterly meeting of the Isle of Wight District was held at Daish's Hotel, Shanklin, on Thursday, January 29th, Mr. W. E. GREEN, President-elect, in the chair. Owing to the inclement weather there was a very small attendance of members at the meeting.

Piperazidine Hydrochloride.—Dr. ROBERTSON read a paper on this subject. He said the success attending the rectal or

hypodermic injection of the aqueous extract obtained by maceration from the testicles of young animals, as recorded by Brown-Séquard and others in the treatment of senile and other forms of debility, had been of so striking a character that the introduction of Ladenburg's synthetical spermine into more common use was a matter of course. This had, no doubt, led to Schering, of Berlin, taking up its manufacture, as already noted in the BRITISH MEDICAL JOURNAL, vol. ii, 1890, p. 1270. It remained to be seen whether this preparation would prove as serviceable as the aqueous testicular extract was said to be. After referring to the results obtained by Brown-Séquard, Mairet of Montpellier, Variot, and Tarchanow, the dose of the synthetical spermine salt (piperazidine hydrochloride) was given as from 5 to 25 grains. If a dose of 5 grains were given by the mouth, within five minutes a slight sensation of fulness in the head was felt. With a dose of 15 grains this sensation had been noted within two minutes after its ingestion, and its duration had been five or six hours. After this dose (15 grains) the sphygmograph recorded an alteration in the character of the pulse one minute after ingestion, consisting in an increase in the height of the primary wave, greater development of the tidal and dicrotic waves, and slowing of the pulse. There was a feeling of augmented "tenseness" of the body generally. There might be slightly increased appetite and greater cheerfulness. Sleep appeared to be promoted, and sometimes stimulation of sexual centres would appear to occur. The effect of increased frequency of doses appeared to be an increased flow of urine and a diminished effect in other respects; and it might be that when diuresis was set up the drug was excreted more rapidly than when it was administered short of that point. These results were obtained in two phthisical men under his own care, one of whom had taken so far 15 grammes (230 grains), and the other 5 grammes. Uspenski[1] found that in phthisis the temperature was also regulated by the use of the testicular extract. In the second of these cases there had been an unstable temperature for two or three months, the record at 7 P.M. being usually above 100°, sometimes as high as 102.4°, and until the night before the use of the drug, when it was 99.4°, it had not been below 100°. For some time 99° had been the highest record since using the piperazidine salt. These results were so far a good deal short of the results obtained by using the testicular extract, but they were similar in kind, and they corresponded in kind, also, to Tarchanow's observations of the effects of the salt of physiological spermine.

Priapism. Dr. GROVES gave a short account of a case of obstinate nocturnal priapism which had so far resisted all treatment. The patient was one with strong neurotic tendencies, whose nutrition was difficult to maintain satisfactorily, and who, after abandoning treatment for a time, invariably developed symptoms of a nervous character.

Annual Meeting. It was decided to hold the annual meeting at Sandown in April next.

List of Members: Correction.—Page 6, Border Counties Branch:—*Officers and Council.* The following are the officers and council elected for the current year. *President:* E. Ablett (Whitehaven). *President-Elect:* J. Crerar (Maryport). *Representative on the Council of the Association and on the Parliamentary Bills Committee:* H. Barnes (Carlisle). *Secretary and Treasurer:* J. Altham (Penrith). *Council:* J. Hadden (Canonbie), J. A. Campbell (Carlisle), A. Thomson (Dumfries), D. G. P. Thomson (Penrith), J. R. Hamilton (Hawick), W. Douie (Carlisle), T. Jackson (Whitehaven), H. J. B. Lorraine (Hawick), A. Macdonald (Kirkoswald).

[1] SUPPLEMENT to the BRITISH MEDICAL JOURNAL, January 10th, 1891.

A SON of the late Dr. Franz von Rinecker, Professor of Psychiatry in the University of Würzburg, recently gave a sum of money to that seat of learning for the foundation of a prize to be awarded every three years in memory of his father. The prize, which is of the value of 10,000 marks, together with a gold or silver medal, is to be given to the author of the most important discovery during the previous three years. It has been awarded for the first time to Professor Koch.

PROCEEDINGS OF THE COUNCIL.

AT a meeting of the Council, held at the offices of the Association, 429, Strand, London, W.C., on Wednesday, January 14th, 1891:—

Present:

Dr. W. WITHERS MOORE, President of the Council, in the chair.
Dr. W. F. WADE, Birmingham, President.
Dr. J. R. THOMSON, Bournemouth, President-Elect.
Mr. H. T. BUTLIN, Treasurer.

Dr. B. ANNINGSON, Cambridge.
Dr. T. BRIDGWATER, LL.D., Harrow-on-the-Hill.
Dr. J. S. BRISTOWE, F.R.S., London.
Dr. J. S. CAMERON, Leeds.
Dr. ALFRED CARPENTER, Croydon.
Dr. W. CARTER, Liverpool.
Surg.-Gen. W. R. CORNISH, F.R.C.S., London.
Dr. J. WARD CUSINS, Portsmouth.
Dr. G. W. CROWE, Worcester.
Dr. J. L. H. DOWN, London.
Mr. GEORGE EASTES, M.B., London.
Sir B. WALTER FOSTER, Birmingham.
Dr. J. H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. H. HANDFORD, Nottingham.
Mr. J. D. HARRIES, Shrewsbury.
Mr. J. H. HEMMING, Kimbolton.
Dr. C. HOLMAN, Reigate.
Mr. T. VINCENT JACKSON, Wolverhampton.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Mr. JORDAN LLOYD, Birmingham.
Mr. C. MACNAMARA, London.
Mr. F. NEEDHAM, Gloucester.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. C. PARSONS, Dover.
Dr. R. SAUNDBY, Birmingham.
Mr. S. W. SIBLEY, London.
Dr. E. T. SLADE-KING, Ilfracombe.
Mr. NOBLE SMITH, London.
Mr. T. SYMPSON, Lincoln.
Dr. T. W. TREND, Southampton.
Mr. F. WALLACE, Upper Clapton.
Mr. A. WINKFIELD, Oxford.

The minutes of the last meeting having been printed and circulated amongst the members of the Council, and no objection having been taken, were signed as correct.

The President of Council introduced as new members of the Council Dr. Slade-King, a representative of the South-Western Branch, and Dr. Harris, a representative of the Shropshire and Mid-Wales Branch.

Read letters of apology for non-attendance at Council meeting from Dr. H. Barnes, Dr. G. B. Barron, Mr. T. W. Crosse, Professor W. T. Gairdner, Dr. C. E. Glascott, Dr. O. Grant, Mr. Jones Morris, Dr. A. Sheen, Dr. E. Markham Skerritt, Mr. Lawson Tait (whose motion was postponed in consequence), Mr. J. Taylor, Dr. A. R. Urquhart, Mr. C. G. Wheelhouse, Dr. G. E. Williamson, Mr. F. Bateman, and Dr. T. W. Grimshaw.

Resolved: That the Council of the British Medical Association desire to record their sense of the loss which they have sustained by the death of their Senior Vice-President and Gold Medallist, Dr. Edward Waters, of Chester, and to express their deep sympathy with Mrs. Waters and the family on their bereavement. Dr. Edward Waters as a member of the Council for upwards of twenty years showed his geniality and warmth of heart, his determination to succeed in the cause of medical reform, his unselfish sacrifices of time and money to the object he had in view. These qualities endear his memory not only to his colleagues on the Council and the members of the Association, but also to the whole profession.

Resolved: That the Council desire on behalf of themselves and the other members of the British Medical Association to express their deep sympathy in the great loss which Dr. Strange's family has sustained in the death of that accomplished physician who so ably presided over the Jubilee Meeting of the Association at Worcester, and who has for many years given devoted service to the Association, and rendered most able assistance in the work of the Council.

Read letter from Surgeon-Major Barrow, reporting the formation of a Branch at Hong Kong, and proposed by-laws.

Resolved: That the Council of the British Medical Association have pleasure in recognising the Hong Kong Branch, and approving the by-laws, and they tender their thanks to Surgeon-Major F. E. Barrow and others, whose efforts have

proved so successful in raising a Branch in so important a centre.

Read letter from Deputy Surgeon-General Sibthorpe, and proposed by-laws of new Branch at Burmah.

Resolved: That the Council of the British Medical Association records with much pleasure their recognition of a Branch of Burmah and approval of by-laws, and they desire to express the pleasure with which they acknowledge the zeal and successful energy which Deputy Surgeon-General Sibthorpe has again assisted in the formation of a new Branch, and their warm thanks to him and others for their efficient help in the formation of the Branch, and trust it will prove a mutual benefit.

Read letter from Dr. Robert Cuffe, of Scarborough, acknowledging on behalf of the members of Scarborough the resolution of Council of October 15th last.

Resolved: That Dr. Lauder Brunton, F.R.S., be requested to give the Address in Medicine.

Resolved: That Mr. John Chiene, of the University of Edinburgh, be requested to give the Address in Surgery.

Resolved: That Dr. Seaton be requested to give the Address in Public Medicine.

Read minutes of Arrangement Committee.

Resolved: That the minutes of the Arangement Committee of the January 13th be received and adopted, and the recommendations contained therein be carried into effect.

Resolved: That the 118 candidates, whose names appear on the circular convening the meeting, be and they are hereby elected members of the Association.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Premises and Library Committee of January 13th be received and approved, and the recommendations contained therein carried into effect.

SPECIAL CORRESPONDENCE.

BERLIN.

Discussion on Koch's Treatment at the Berlin Medical Society.—The State and Koch's Fluid.—Departure of Dr. Koch for Egypt.—A Convalescent Home for Koch Patients.

At the meeting of the Berliner Medizinische Gesellschaft on January 28th, the demonstrations in connection with Koch's remedy were resumed by Dr. A. Fraenkel, who exhibited two microscopic specimens taken from a case of tuberculosis of the tongue. One of the specimens came from the border of the ulceration, and an enormous infiltration of bacilli was to be observed. The second specimen was obtained by the excision of a miliary nodule at a distance of three-fourths of a centimetre from the ulceration. In it were giant cells, epithelioid cells, and likewise bacilli, though only in small number. Professor Virchow exhibited a great many specimens obtained *post mortem*, and took occasion to deny most emphatically the statement that had appeared in the daily papers to the effect that his views on the action of Koch's remedy had undergone any modification. Dr. Lassar exhibited a girl, aged 13, in whom a tuberculous affection of the thigh of two years' standing had been completely cured by treatment (begun in December) with Koch's remedy. Dr. Th. S. Flatau reported the further development of a case of tuberculosis of the larynx—a man, aged 30, whom he had described as steadily improving under the treatment as late as the beginning of January. The last (eighteenth) injection given was on January 20th, and since that time the patient had become alarmingly worse, both as regards local symptoms and general condition. On January 23rd, opaque miliary nodules were observed, and the larynx was to a great extent covered with miliary and submiliary nodules. In fact, the case presents a picture *in vivo* similar to that shown on the dissecting table by Professor Virchow. The discussion on Professor B. Fraenkel's address was resumed by Dr. Fürbringer, Medical Director of the Friedrichshain Hospital. He began by saying that since his last report six weeks before, he had been obliged to give up the treatment in twelve cases. None of these were in a very advanced stage of disease, but all were marked by a certain acuteness of the tuberculous phenomena. "I do not hesitate to affirm," said Dr. Fürbringer, "that the more acutely febrile the lung tuberculosis, the more hectic the curve; in a word, the more acute the whole progress of the disease, the more unsuitable—indeed, contraindicated—is the treatment by Koch's injections. In my opinion, the hectic curve is of more weight than the duration and extent of infiltration in the lung. It is true that in isolated cases we may succeed by the injections in bringing down the curve to a subfebrile, even normal, one; but if we see no sign of such improvement in the course of the fourth week at latest, we must, I think, give up all hope of amelioration by the remedy. On the other hand, decided therapeutic effects may be obtained even where there is extensive infiltration, and the sputum is rich in bacilli—if only the strength has been tolerably maintained, and there is an absence of fever." Dr. Fürbringer proceeded to classify his cases, and was able to report one of cure ("provisional cure," as he calls it, as for the present one cannot be certain that it will not relapse), making the third case under his charge cured by the treatment. Fifteen of his cases showed "extraordinary improvement," both as to local and general symptoms, with increase of weight, etc. These were in the first and second stages of the disease. Ten cases showed little or no improvement; seven ended fatally. As regards *post-mortem* examinations, Dr. Fürbringer found extensive miliary tuberculosis in some cases, and in others none at all. He hesitates to draw the same conclusions as Virchow, though he thinks many facts speak in their favour. However, he agrees with Virchow that miliary and submiliary tubercle often remains entirely uninfluenced by Koch's remedy, and, formulating the thesis quoted above from an anatomical point of view, he said: "The more fresh tuberculous tissue is produced in a given time, the more ineffectual is Koch's remedy." In conclusion, Dr. Fürbringer strongly advised small doses and longer intervals between the injections. Dr. Paul Guttmann spoke on the article published by Dr. Liebman, of Trieste, reported in the British Medical Journal of January 31st, in which it had been stated that tubercle bacilli had been found in the blood of patients treated with the lymph. Dr. Guttmann and Professor Ehrlich had together examined blood taken from twenty-eight patients under treatment, under exactly the same conditions as described by Dr. Liebman. The preparations had been submitted to as many as four other observers, and the result was that not a single tubercle bacillus could be found. Dr. Guttmann, in reporting on his cases in the Moabit Hospital, said that he, too, was decidedly of opinion that only cases in the initial stage—infiltration of the apex—should be subjected to the treatment. He gave the following statistics: of 164 cases—all under treatment for longer than three weeks, amongst which were many in an advanced stage—63 are decidedly improved—that is, 38 per cent. Of these 164 cases 51 were in the initial stage, and of these 51, 41—that is, 76 per cent.—are decidedly improved.

It is said that though the State does not intend to monopolise the manufacture of Koch's fluid, there is to be State supervision and control. The manufacture of the fluid will be freely permitted, but chemists will only be allowed to sell fluid that has been examined, found effective, and marked with a stamp by the State authorities.

Professor Koch has left Berlin for Egypt. He started on Sunday, and passed through Vienna on Monday.

A convalescent hospital is being built at Malchow, near Berlin, for the reception of Koch patients. The plan is the usual one—one-storey wings and a central building containing the offices, etc.

LIVERPOOL.

Royal Infirmary: Annual Meeting.—The Lock Hospital.—The Stanley Hospital.

The annual meeting of the Royal Infirmary took place on January 31st. It appears from the report that the entire cost of the new infirmary was £170,000, of which £40,000 was spent in acquiring ground to enlarge the original site. The whole amount has been subscribed, so that the institution has entered on its new career free from debt. The annual in-

come from subscriptions, donations, and investments is quite inadequate to maintain the institution on the present scale. The new building, which has now been in use for some months, has been found fully to realise the expectations formed of it. The large and airy wards have been kept at a uniform warm temperature, in spite of the severe test of a winter of exceptional severity.

The Lock Hospital, which was diverted from its proper use to provide part of the temporary buildings that were used during the construction of the new infirmary, has not yet been reopened. Such a hospital is urgently required in a seafaring community such as this, and affords exceptional facility for instructing the senior students in an important class of diseases.

The Stanley Hospital, which was placed out of debt by the proceeds of the Fancy Fair held in 1889, when it also had some £1,200 placed to its credit for carrying out certain improvements urgently needed, has again relapsed into debt. This institution is situated in the north end of the city, in the neighbourhood of great docks, extensive workshops, and warehouses. The calls upon its resources have steadily increased during the twenty-four years of its existence in consequence of the rapid growth of the north end during that time. It is, moreover, the only general hospital in Liverpool that has an organised medical, surgical, and ophthalmic outpatient department. The cases that require admission greatly exceed the accommodation available, and many deserving and suitable cases have to be turned away. During the last few days a fund has been formed, which, if carried on with the same liberality with which it has been started, may effect something in the direction of placing the finances on a better footing.

MANCHESTER.

Manchester Medico-Ethical Society.—Manchester Aberdeen University Club Annual Dinner.—Death under Chloroform.

In their report presented to the members at the annual meeting of this Society the Committee stated that nine new members had been elected, four had resigned, and one had been removed by death during the year, leaving at present a total of 145 members. The most important medico-ethical questions of the day had been discussed, and practical effect given to some of the resolutions passed. The following office bearers were elected at the meeting:—*President*, Henry Ashby, M.D.; *Vice-Presidents*, W. Walter, M.D., A. M. Edge, M.D., J. F. Tatham, M.D., A. Hodkinson, M.B.; *Treasurer*, D. Lloyd Roberts, M.D.; *Secretaries*, F. H. Collins, M.D., and F. M. Pierce, M.D.; *Committee*, A. Bailey, H. W. Boddy, M.D., J. Broadbent, A. Donald, M.D., J. Ferguson, J. Foster, A. Godson, M.D., T. Harris, M.D., C. F. Kitchen, J. A. Palanque, C. G. Skinner, M.D., F. H. Tinker.

The annual dinner of the graduates of Aberdeen University residing in or near Manchester was held on January 30th, in the Queen's Hotel, Manchester, Professor James Ross being in the chair. Over forty graduates—chiefly medical—attended the dinner, and the guest of the club on this occasion was Dr. Stephen Mackenzie, of London. Dr. Griffith resigned the office of secretary, and Dr. Wm. Milligan was appointed his successor.

The deputy city coroner held an inquest on Friday last on the body of a young woman aged 20. The young woman was suffering from some obscure affection, and it was considered advisable to administer chloroform to her in order to make a complete examination of her case. While the medical attendants were administering chloroform, and before the anæsthetic stage was reached, the pulse became weak, and the patient suddenly expired. The jury found that death resulted from the effects of chloroform administered with the object of making a necessary surgical examination.

LEEDS.

The Pollution of the River Aire.—National Registration of Plumbers.

On January 28th, a conference took place at the Bradford Town Hall between representatives of the Leeds and Bradford Corporations respecting the proposed Aire Conservancy Board. Alderman Ward (Chairman of the Sanitary Committee) and twelve other members of the Leeds Corporation, with Sir George Morrison (Town Clerk) attended on behalf of the Leeds authorities, and the Bradford Corporation was represented by the Mayor (Mr. E. H. Hammond), Mr. R. Pratt (Chairman of the Street and Drainage Committee), and other members of the Town Council, with Mr. W. T. McGowen (the Town Clerk). The object of the conference was to take steps to induce the Local Government Board to consent to the establishment of a Conservancy Board to deal especially with the purification of the River Aire, it being desirable that a board should be formed to deal with the Aire apart from the Calder. A joint Board, it was urged, could not deal satisfactorily with the difficulties of the situation, and complications would ensue which would be disadvantageous to the authorities concerned. The conference of Aire authorities came to the conclusion that an amicable arrangement, satisfactory to all parties, could be arrived at, and that, while not desirous of in any way interfering with the arrangements of the Calder authorities, it would be advisable that each river should be under separate control. The Conference decided to take steps to secure an interview with the Local Government Board authorities, in order that their views might be clearly stated before them.

A public meeting, convened by the Leeds District Council, in connection with the movement for the national registration of plumbers was largely attended by master plumbers, journeymen, and apprentices. Mr. J. W. Connon, president, was in the chair. The annual report stated that the District Registration Committee had considered 370 applications for registration from all parts of the county, and the result had been the registration of 160 master plumbers and 171 operatives. Through the kindness of the Council of the Leeds School of Science and Technology a class has been formed for instruction in the theory and practice of plumbing. The pupils in the first session numbered 74. Of these, 45 presented themselves for examination by the City and Guild London Institution. Twenty-one were successful in passing the examination, and 4 entitled themselves to receive special prizes. The class in its second session had again 74 pupils on the register, with an average attendance of 60. In the examination of apprentices the passes were 48 per cent., the average throughout the country being only 44 per cent. Dr. Cameron, medical officer of health, mentioned that in the last fourteen weeks of 1890 the Leeds sanitary inspectors visited 443 houses in connection with scarlet fever, typhoid fever, diarrhœa, and pneumonia cases, and 334 of these houses were found to be structurally in an insanitary condition. He could not wonder that the death-rate remained what it was.

BIRMINGHAM.

Rebuilding of the General Hospital.

In connection with the scheme for rebuilding the General Hospital a large and enthusiastic meeting was held in the Town Hall on January 29th, under the presidency of the Mayor, amongst those present being Lord Leigh, Lord Lieutenant of Warwickshire; the Right Hon. Joseph Chamberlain, M.P.; Mr. P. A. Muntz, M.P.; Mr. J. C. Holder, and a large number of the clergy and representatives of the great commercial firms. Although this is the first public appeal for funds, a magnificent list of promised donations was read out, amounting in all to over £75,000, leaving only some £20,000 more to be subscribed to meet the requirements of the project. In this list were donations of £5,000 each from Mr. Holder, Mr. Jaffray, Messrs. G. and R. Tangye, and Mr. Alston Smith Ryland.

Mr. Chamberlain, in a most admirable speech, proposed the first and most important resolution, which was carried by acclamation. It was as follows: "That the present hospital is inadequate to the requirements of the city on account of its sanitary arrangements, site, and surroundings, and that it is therefore desirable to rebuild the hospital on the site in St. Mary's Square approved of by the governors." Mr. Chamberlain reminded his audience that about thirty years ago he urged that the hospital should be rebuilt on a new site; it appeared, however, that he was rather before his time. He then alluded to the splendid example of Mr. Holder in giving his magnificent donation, and to the enthusiasm with

which, as chairman of committee, he had pressed forward this scheme of rebuilding. He pointed out that although a large sum had been promised it had been given by only 320 persons out of a population of half a million, and appealed for further help from the mass of the inhabitants, and especially from those limited liability companies which had taken the place of private firms, and which should take over the moral responsibilities and obligations of those private firms. Apart from its functions as a great charity, he reminded the meeting of the value of the hospital as a great school of medicine, where experience and practice were obtained, by which alone the high standard of the healing profession can be maintained in our midst. He said: "In that capacity it appeals to the self-interest of every one of us, be he rich or poor, because it is of the utmost importance that there should always be an opportunity for securing this experience in the widest possible form in order that we may be assured of the greatest skill whenever we had need of it." This resolution was supported by Dr. Wade and Mr Pemberton. Amongst the other speakers were Dr. R. W. Dale, Mr. Councillor Ball, Lord Leigh, and Mr. P. A. Muntz, M.P.

CORRESPONDENCE.

OPERATIVE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

SIR,—The recent discussions on the diseases of the uterine appendages at the Medical Society and elsewhere have brought this subject prominently before the profession.

Affections of the uterine appendages are nothing new; they are comprised under the name pelvic peritonitis or perimetritis; and since the writings of Bernutz in 1860-62 it has been well known, though not till lately current, that in a large number the route and sometimes the focus of infection has been the tubes.

A change in nomenclature has arisen, for words ending in "salpinx" have displaced the older and more general names. Yet further changes have arisen in practice in some quarters, in that these affections have become the objects of innumerable operations. Now perimetritis is probably the very commonest of all the serious diseases of women. It is also perfectly certain that the great majority of cases get quite well without any operation. We are far from denying that exceptional cases call for surgical procedures, or that cases of prolonged suppuration in the pelvis are properly treated by the application to them of ordinary surgical principles. But this wholesale resort to a mutilating operation, advocated by several speakers at these discussions, calls for serious consideration by the profession. We have both been in charge for many years of the obstetric and gynæcological departments of two of the great general hospitals of London, besides private practice. During that time thousands of patients have passed through our hands, and a very large number of cases of pelvic inflammation. We have on the rarest possible occasions resorted to removal of the appendages, and never unless life seemed to be threatened or the health had been greatly impaired for many months. We never have sent patients away after a course of Epsom salts, "and when this drug fails have folded our hands, and expressed the deepest sympathy with the sufferer." On the contrary, our patients have generally got well by the use of patience on their part and on ours. If, after a long course of patient treatment, it has seemed to us imperative to operate, we have been ready to do so, and have done so in rare instances. Without patience, many women, who have had matting of the pelvic organs for months, but who have perfectly recovered and have borne children, would have had their uterine appendages removed.

Statistics on matters of this kind are often given in a manner which does not bring out important points. For instance, in the discussion at the Medical Society, it would have been interesting to know (1) the total number of women seen during the period embraced by the table, and (2) the total number of cases of perimetritis or pelvic inflammation among them. Statistics without these facts may give information as to the chances of the operation; those indicated would give the chance of being operated upon.

A plea for patience is to be found in the declaration of the operators that "the full benefits of the operation are not usually felt for months or years after." If the operator would exercise this patience before the operation there might be the less need for its exercise by the patient after the operation. To operate after a "couple of months" is in our opinion quite unjustifiable in chronic cases, or in any except those of peril to life. To remove the ovaries in cases of congenital ill-development with dysmenorrhœa and sterility and anteflexion of the uterus is a proceeding we have never seen necessary to recommend.

Death from disease of the appendages is of extreme rarity, but the mortality after the operation is considerable. It is inconceivable to us that this amount of operating is justifiable, and we beg to protest in the strongest manner against it.

This particular operation has already furnished material for legal proceedings in a well known case. It is conceivable that it might form the object of legislation. We cannot think that the good sense of the profession can fail to be roused against it. The sooner the better. There are several other questions requiring an answer, some of which have been referred to by others; for instance, what were the results in the unreported cases? what are the dates of the reported cases? what were the results in general surgery at the Waterloo Bridge Road Hospital during the time of the unreported cases? These are questions concerning the authorities of that hospital. But we prefer to keep to our point, and to repeat our protest against the removal of the appendages whenever a tumour of them is found accompanied by pain and hæmorrhage; or a dilated tube; or affections of the tubes with tender or even enlarged ovaries, after treatment has been tried for a couple of months; or when a woman suffers from pelvic pain, dysmenorrhœa, or dyspareunia, after one or more attacks of pelvic inflammation; or in cases of ill-developed ovaries with anteflexion and dysmenorrhœa; or in cases of cardiac dyspnœa; or of tubercular disease of the tubes associated with similar disease of other organs; or in neurotic women without disease of the appendages. We protest against the view that any one of the above conditions diagnosed before, or discovered during or after, an operation, is in itself a justification for the removal of the uterine appendages; and such practice is in our opinion highly injurious to women and to the profession. In no other department of surgery is inflammation of an organ considered to justify its removal.—We are, etc.,

JOHN WILLIAMS.
F. H. CHAMPNEYS.

SIR,—Owing to indisposition, I was unfortunately prevented from taking part in the discussion at the Medical Society on January 26th. I am particularly interested in the subject discussed, inasmuch as for many years I have been of opinion that a great deal too much has been done in the way of opening women's abdomens and "eviscerating" their pelves. Judging from the number of operations for removal of the uterine appendages, exclusive of those for bleeding fibroids, which have been reported or have otherwise come to light, it would seem that disease of the ovaries and tubes must either be enormously on the increase, or else organs are frequently removed in cases which do not warrant such extreme measures.

It appears to me that the time has arrived when the profession should make some effort to lessen the number of spaying operations on women. If this unlimited mutilation of women be permitted to go on unheeded and without protest, discredit will assuredly fall on abdominal surgery and on those who practise in this particular branch. The matter rests entirely with the leaders of the profession. If they will speak out boldly and condemn such reckless and unscientific surgery, many lives will be saved and much good will ensue. But if they decline to move in the matter, not only will they be guilty of culpable negligence, but they will also be looked upon as acquiescing in what has become little short of a public scandal.—I am, etc.,

Brook Street, W. ALBERT C. BUTLER-SMYTHE.

SIR,—In the discussion on the above subject held lately at the Medical Society of London, the account of which is published in the BRITISH MEDICAL JOURNAL of January 31st, Mr. Knowsley Thornton is reported to have said that "the diseases for which ovariotomy was performed always killed

if not relieved by operation." It might be of interest to him to hear of the exception which (?) proves the rule in the person of a woman who was lately under my care with an enormous ovarian cyst diagnosed as such by two other practitioners as well as myself—which she had been conscious of having in a less degree for more than twenty years, and who died a month ago, after an acute attack of bronchitis, aged 84. The tumour had enlarged very much lately, and for the last few months her abdomen was considerably larger than that of a pregnant woman at term, and fluctuation could be easily felt through the abdomen, although when she first came under my care two years ago she presented just the appearance of a woman in the ninth month of pregnancy. The only inconvenience that she suffered from it was neuralgia apparently in some of the ligaments of the uterus, especially in the left side of the abdomen, and she was fairly well nourished up to the last. She had had several children, the youngest of whom is now grown up.

She had repeatedly refused to be operated upon, although I suppose of late years, perhaps, aspiration through the abdominal wall would be the only thing that would be likely to give her even temporary relief; but even that she—perhaps wisely—refused.—I am, etc.,

Munslow, Salop. E. B. Ormerod, M.R.C.S.

PRACTICAL CURE OR DISASTROUS FAILURE?

Sir,—If Sir Spencer Wells would confine his criticism of those with whom he does not agree to open-air statements, such as are contained in his letter in the British Medical Journal of January 31st, they would be easily met. As they stand they consist of a series of mutilations (of Dr. Ross's pamphlet and of my own statements), and of a series of assertions based on the inaccurate memory of the patient, most of them being wholly irrelevant to the issue. Her conclusion that her case is a "decided failure" will be altered by the lapse of time and the removal of the hæmatocele which she now suffers from. She had one last May: I tapped it, and she was "all right" for five months. Such hæmatoceles interrupt the convalescence of such cases, as everybody knows who has had any experience of them. That the patient will recover and be an absolute cure in course of time is a conclusion that I am quite certain about. I can demonstrate the probability by many parallel cases. But it will serve no good purpose for your columns to be filled by reiterated assertions and contradictions between Sir Spencer Wells and myself. I have a mass of letters, telegrams, and notes about the case which may or may not establish Sir Spencer Wells's statements. I fear they will not.

Recognising the importance of the discrepancies between his statements and mine, the Gynæcological Society has appointed a committee of investigation, at the instance of the ex-President, who for many years has been a colleague of Sir Spencer Wells, and who certainly is no partisan of mine. I took no part in the selection of the committee, and Sir Spencer Wells can therefore have no possible objection to submitting his statement of the case and his proofs to this committee. This I now challenge him to do, as I shall do mine. If I have made a mistake in it or misrepresented any point on which the evidence is against me, I must make an apology to the Gynæcological Society and to Sir Spencer Wells. He, in his turn, will surely not refuse to do as much.

Meantime, let me point out that Sir Spencer Wells has not made the slightest attempt to justify the conclusions he indicates that this was a case of neurotic ailment, and not one of incurable pyosalpinx. Even if his own estimate were correct, if the case were a mere neurotic, why did he amputate the cervix in 1879? If the poor woman were suffering then from suppuration of the Fallopian tubes—and I think the evidence in my possession will prove that she was—a more unjustifiable operation, a more "deplorable and disastrous failure," a more "discreditable" result—to use Sir Spencer Wells's own words—cannot well be imagined.

In any case Sir Spencer Wells, and he alone, was answerable for the operation which I performed in 1888, and this is proved by a series of telegrams which I have carefully preserved. I publish the last of them: "Mrs. M. is very ill, and in my opinion case is urgent. Wells has been communicated with, and declines to advise. We have decided to operate this afternoon unless you come, in which case it shall be deferred till your arrival." If an operation in this case was unnecessary in Sir Spencer Wells's opinion, why did he not intervene to stop it, as he could have done?—I am, etc.,

Birmingham. Lawson Tait.

THE GENERAL PRACTITIONER AND HOSPITAL ABUSES.

Sir,—For many years past general practitioners in London have been loud in their complaints as to abuses in connection with the management of our medical charities, especially in regard to the out-patient departments. At length a Special Committee of the House of Lords has been appointed to inquire into the subject, but, strange to say, now that general practitioners have the opportunity to make their grievances known, they, for the most part, treat the question with great indifference. True, a few general practitioners have given evidence before the Committee, but it is to be feared that their personal views will have very little weight as against those of the officials and the eminent physicians and surgeons attached to the hospitals, all of whom deprecate the slightest approach to State interference with our medical charities.

I would suggest that a committee of general practitioners, representative of every district in the metropolis, be at once formed to prepare such evidence as may be thought desirable, as also suggestions for reform, and appoint delegates to lay the same before the Lords' Committee now sitting. Now is the time for general practitioners to speak, or we may as well for ever hold our tongues.

Should any of your readers wish to join the proposed committee, I shall be glad if they will communicate with me as early as possible.—I am, etc.,

George Brown, M.R.C.S.

29, Threadneedle Street, E.C.

THE MIDWIVES REGISTRATION BILL.

Sir,—It is always a pleasure to correct an error. In the letter, for which I am mainly responsible, as Senior Secretary of the Manchester Medico-Ethical Association, addressed by this Association to the members of Parliament of Lancashire and Cheshire, a printer's error has crept in, to which Dr. Farquharson very rightly draws attention, namely, that the words "Royal College of Physicians, England," should read "Royal College of Physicians, Ireland"!

Dr. Farquharson refers to another portion of our letter, namely, "That the General Medical Council has declined to support the Bill," as being an incorrect and misleading way of describing their action. The resolution passed by the General Medical Council says: "The Council would not be able to discharge, and therefore would not be prepared to undertake, any of the duties of detail, as to registration of midwives, or as to the local arrangements for licensing and controlling them." Again, Mr. Marshall, when President of the Council, said, "Benefits of this kind have a tendency to spread or overflow into other channels than those at first contemplated." Again, Sir W. Foster, a member of the Council, and a most influential one too, has not hesitated to withdraw his name from the back of the Bill.

It appears that the Royal College of Physicians, England, have at last awoke to its responsibility in this matter. Will Dr. Farquharson lay both sides of the case before the College, and neither by jot or tittle depart from a fair judicial position in his explanation of the literature with which he has been flooded in opposition to this scheme?

It is quite time the supporters of this worse than useless Bill did speak out the faith that is in them. One cannot bring oneself to think, even for a moment, that such a man as Dr. Farquharson would intentionally lead the public astray, or from any personal motive or feeling of self-pride be induced to open a back door to our noble profession, but one is driven to the conclusion that he is absolutely wrong in his judgment, and that, never having had the opportunity of realising what midwifery practice amongst a crowded poor population really is, he has failed to grasp the enormity of the crime it would be to cast poor helpless improvident women and their infant progeny into the power of uneducated women when skilled men, trained in the art and science of obstetrics, are at hand and ready to render all the assistance required.

Are we to drift back to the obstetric darkness of the Middle Ages, when the whole midwifery practice was in the hands of women? No improvement in obstetric science was heard of until women became the assistants and not the principals in midwifery practice.

One can readily grant that in thickly populated districts an increase in the numbers of midwives might be beneficial, but the supply in these districts would only be equal to the demand, and only the number which the district could support would be forthcoming without any guarantee of their ability. It is not the rich and well-to-do classes which would fall into the hands of Dr. Farquharson's midwives, it would be the poor working classes, to whom a rapid and complete recovery from the puerperal condition is absolutely necessary.—I am, etc.,

Manchester. F. H. COLLINS.

SIR,—I have no wish to be unfair to Dr. Rentoul, but in speaking of the amount of practice in midwifery to be required of medical students, the writer of a leader in the BRITISH MEDICAL JOURNAL of December 6th says: "Petitions from Dr. Rentoul and certain other practitioners requested that the number might be raised to fifty." If I have been misled I beg to apologise, and regret I neglected the good adage, "Verify your references."—I am, etc.,

Upper Wimpole Street. JAMES H. AVELING.

*** The phrase as it appears in the petition entered on the *Minutes* of the General Medical Council is as follows: "Your petitioners request the Council to recommend to the examining bodies that each student ... be present at fifty cases of labour, and personally conduct thirty of these."—*Minutes*, Vol. xxvii. p. 171.

SIR,—Whether we agree with Dr. Rentoul or not, we should, I think, give him credit for the manner in which he has devoted time and money to exposing and attempting to remedy abuses, and to opposing what he conscientiously believes to be mistaken legislation. I do not think that Dr. Rentoul has yet discovered the panacea for all the ills that the profession is heir to, but I am heartily with him in his opposition to the Midwives Registration Bill. If the Bill promised to abolish, or even to mitigate, the "horrors of midwives' midwifery," it should, in the cause of humanity, be welcomed, however great its incidental drawbacks. But it promises nothing of the kind. All it proposes is to impose a fine not exceeding £5 on "any person who takes or uses the name of midwife or any title or description as aforesaid," and to prevent the recovery of fees by an unregistered person. In effect, the ignorant and, may be, drunken female, who is employed by a poor woman because she is cheap, will be able to continue to pursue her mischievous calling, so long as she does not inscribe her name as a midwife on a brass plate or print it on her cards. (I do not think she could recover fees under the present law).

I maintain, therefore, that the Bill will not reach the class it is professedly designed to help—the very poor. Its only effect will be to create a new class of imperfectly educated women to compete with the struggling practitioner, whose pocket does not allow him to despise what has been called "unremunerative midwifery." Dr. Aveling thinks that medical men will be sent for more frequently. This is very doubtful. We must bear in mind that we shall have to deal with a class of women whose scientific training will, in nine cases out of ten in all probability, have been limited to that necessary to enable her to pass the registration examination. If I know anything of human nature, their "little and dangerous" knowledge will tempt them only too often to try and manage their cases by themselves. The result will be dangerous, or even fatal delay. If I am right in this the public will suffer doubly; for what sort of an obstetrician, I may ask, and how fitted to act in emergencies will that medical man be, from whom we have taken the clinical material for maturing his experience and the opportunities for keeping his hand in, which he now derives from his frequent attendances upon so-called "natural" labours, with their infinite variations from the theoretical normal?

The Bill is, I think, open to much criticism in its details, and I think unnecessarily complicated. I shudder to think what will the effects of the nineteen times "nineteen portals" that it is proposed to throw open under the happy auspices of the County Councils. Speaking with the weight of more than twenty-five years' experience—but disinterestedly, as I have retired from general practice—I venture to appeal most earnestly to the promoters of the Bill not to press it on during the present session of Parliament until they, and the members of the profession generally who appear to be so divided as to its merits, may have had more time to consider it.—I am, etc.,

St. Leonards-on-Sea. C. H. ALLFREY.

SIR,—I should like to draw the attention of the profession, and also the framers of this Bill, to a footnote in *Lumley's Medical Officers' Handbook* explanatory of Article 199 in the Act of Parliament for defining the "duties" of qualified medical men acting as district medical officers of Unions; and be it remembered the patients referred to are paupers, that is, those lowest in the scale of patients that this Article is framed to safeguard against possible error of educated men. The Article runs thus:

"Article 199. Every medical officer shall be bound to attend personally, as far as may be practicable, the poor persons entrusted to his care, and shall be responsible for the attendance on them." And the footnote which amplifies and explains this goes on to say:

"In the particular case of women in childbirth, they (that is, the Commissioners) think it incumbent on the medical officer to be extremely cautious, and they remark that in such cases if he cannot attend himself he should send his appointed substitute rather than his assistant or apprentice."

This was framed when it was more the custom to have unqualified assistants than now, and to ensure attendance of a legally qualified man rather than an unqualified assistant who, though many of them had served a greater or less time at hospital and had had large experience in midwifery beside hospital training, had not taken their diplomas. They were certainly a far safer class to entrust a midwifery case to than the best qualified midwife with no anatomical, surgical, or medical training, or, at best, a very fragmentary one.

It was this Article that causes me always to keep a doubly qualified assistant registered, and, in fact, fully qualified for an appointment under this Act, and always to appoint him as my legal substitute, so that the cases under my charge should have the full protection of the law as they have a just right to expect.

Why do we want midwives? When I first took office as a district medical officer one of my Union appointments was worth nearly £100 a year, as so many midwifery orders were given; after a time these were discontinued, and the class of patients I used to get 15s. a case for used to engage me, and rarely paid, or at so long a time that it was not worth while to bother about it in many cases. This is the case, I dare say, in many districts, and so medical men, perhaps, fight shy of this class of case who will gladly use their services but are too poor or unwilling to pay for them.

The amount of charity done by medical men, even under these disadvantageous circumstances, is enormous, and the public are not aware how much of their charity is dispensed out of the scanty purses and worn bodies of the medical men of this country, who uncomplainingly get up out of their beds to succour poor people who have no shadow of legal claim to what they ask for, and who have not the slightest intention of paying for it. There is not the least reason in country districts for the working of this Bill, for medical men will gladly attend, or cause to be attended safely, all these cases if they were assured the fee of 15s., or, at outside, 21s., was safe. Not an unreasonable charge for taking a horse out in the middle of the night, and after-visiting! Even then the service is a charity, but medical men are willing to do that sort of charity where they see the recipients make some effort to do their best to remunerate them, as in the case of clubs.

If the charitable in districts where there are many poor were to form lying-in clubs, and subscribe so much to a fund and help the applicants (who are to pay half the fee) with the other half, and issue orders for attendance on the women to the medical men, and on his sending in his vouchers pay him his fees at end of the year, all need of midwives would cease. This is done by charitable people in one parish near me. A woman applies for an order on the medical man for attend-

ance in her expected confinement, and pays 7s. 6d., the trustees of the fund find the other 7s. 6d., and when she is laid up, if she requires it, lend her a bag of requisites for the baby for the month, besides giving her so much tea, and material for gruel, etc., and generally look after her, and it works well for all parties concerned. The medical men feel kindly disposed to their patients, for they know they do not intend to cheat them, and the difficulty is satisfactorily overcome.—I am, etc.,

Colchester. H. D. PALMER.

SIR,—I have read with much interest the recent correspondence on this subject, and am surprised at the apathy shown by the great bulk of general practitioners, as they will undoubtedly be sufferers if the Bill is allowed to become law. There may be a few instances where "poor" women cannot afford to pay the medical man's fee, but they are comparatively rare. The great majority of "poor" women have ample time to save up the fee, and do so. It is, unfortunately, only too true that men with practices in poor neighbourhoods and many young beginners snap at the fee, but it must not be forgotten that they have had to spend at least four years in the acquisition of their professional knowledge and the attainment of their diplomas, and then, after paying the monstrous sum of £5 5s. for registration, they will find themselves (if this Bill is allowed to become law), with regard to midwifery, on an equality with a woman whose knowledge, education, and training are practically *nil*, and whose chief qualification consists in the fact that she has a "certificate" to show that she has attended a certain number of cases and has her name on the register. If this new order of midwives is allowed to come into existence, what, I would ask, is to become of the "family doctor," whose advice, up to the present, has been sought in cases of sickness and slight ailments? I am afraid his position will soon be assailed by these midwives, for, as we have seen, they will have the power to visit and prescribe. It is notorious that, as a body, our profession is careless as to its own interests, but it is high time that all those who have sons or relatives destined for the medical profession see to it, that such measures as these do not go unchallenged.—I am, etc.,

Mossley, Lancashire. G. T. SCHOFIELD.

SIR,—I believe that the advocacy of the supporters of the Midwives Bill has done, and will do, almost as much to promote the ruin of that measure as the vigorous strictures of its opponents; but of all the injudicious attempts to defend the Bill, none equals the unfair attack which the new President of the British Gynæcological Society makes upon his own profession, apparently seeking to exalt midwives by casting the most serious aspersions on the mass of the medical profession.

According to the report published in the BRITISH MEDICAL JOURNAL of January 31st, the President of the Gynæcological Society actually tried to prove that more harm is done by doctors, owing to their reckless use of forceps, etc., than by ignorant midwives, and that, therefore, poor women will be safer in the hands of midwives than in those of cheap doctors. It is hard enough to take away from us our practice among the poor, badly paid as it necessarily is, and to give it to midwives, but it is adding insult to injury to tell us that it must be done because the midwives are so much more competent than we. He says our incompetence arises from "*trop de science.*" Those three cases which the General Medical Council insists on medical students attending must be responsible for this disastrous excess of erudition. To speak seriously, it is quite true that doctors are not always properly trained in midwifery. We have called the attention of the General Medical Council to the fact; but Dr. Grigg's accusation appears to me unjustifiable in the extreme.—I am, etc.,

Highgate, N. HUGH WOODS, M.D.

SIR,—Considering the vital importance of the above subject to the rank and file of the profession, I expected to see more correspondence on this subject from the general practitioner's point of view. As one who has seen much of the people who call themselves midwives about the East End and some of the country places, and who has been obliged to work with them, I do earnestly hope the more prominent members of our profession will oppose the section that contemplates placing all existing midwives on an authorised Register without examination or inquiry of any kind. A large number of them are dirty, drunken, ignorant charwomen. Is it possible that these practitioners (?) are to be actually encouraged to practise by Act of Parliament? Why, the result would be nothing short of a calamity.

I would be glad if some better pens than mine would come forward and add their testimony to this subject, for it is one that personally concerns the "mass" of the profession much more than the class represented by Drs. Aveling and L. Atthill.—I am, etc., GENERAL PRACTITIONER.

A SUGGESTED TREATMENT OF TUBERCULOSIS.

SIR,—In the BRITISH MEDICAL JOURNAL of January 24th, under the above heading, Dr. Broadbent communicates from Dr. Lawrence, of Chepstow, two very interesting cases of recovery from phthisis. The patients were young men in the last stage of pulmonary consumption, and both made a complete and permanent recovery after a severe attack of smallpox with high fever. A similar instance is on record of recovery from phthisis after an attack of erysipelas with a high range of temperature.

The problem presented by such occurrences is of great interest. Dr. Lawrence supports several hypotheses, to one only of which I will refer, since we already possess evidence bearing upon it. He says: "Did the high temperature kill the bacilli, or cause their exit .....? Would it not be possible to produce such a temperature as would destroy the bacilli?"

It is well known that a method of treatment founded upon the supposed influence of heat upon the tubercle bacillus has been advocated. In 1888, on the ground that a temperature of 41° C. (105.7 F.) killed the bacillus outside the body, and that it was adversely affected by one of 38° C. (105.5 F.), Dr. Weigert devised an apparatus for the treatment of phthisis by the inhalation of hot air, with the view of raising the temperature of the lung tissue, and reported great improvement from its use in certain cases.

The reputation of this method has been short-lived. The evidence against it, given in my article on the "Diseases of the Lungs and Organs of Respiration" in the forthcoming volume of *Cassell's Year-Book of Treatment* may be summed up as follows:—(*a*) As a matter of fact, the results are not favourable; (*b*) the inhalation of the hottest air that can be borne (at 300° F., 400° F., or, according to Schrwald, even 662° F.) does not materially raise the temperature of the lung tissue; (*c*) the statement that a temperature of 100.5° F. retards the growth of the bacillus does not accord with the known liability to tuberculosis of rabbits, guinea pigs, and pigeons and fowls, in which the normal temperature ranges from 102.5° F. to 108° F. Koch also states that the reaction caused by the injection of his fluid does not destroy the bacilli, even though the temperature may exceed 105° F.—I am, etc., E. MARKHAM SKERRITT, M.D.Lond., F.R.C.P.

Clifton, Bristol.

SIR,—The letters of Drs. Broadbent and Lawrence in the BRITISH MEDICAL JOURNAL of January 24th, under the heading of "A Suggested Treatment of Tuberculosis," have forcibly recalled to my mind a case occurring in my own practice in the country, five years ago, which seems to me worth recording at a time when so much interest is being paid to tuberculous affections.

The facts were briefly these:—A servant girl, aged 16, had a cough for a year, was losing flesh, became too ill to continue in service, came home to her parents, and was placed under my care. I found dulness over the apex of the left lung, and mucous *râles*, but no signs of an abscess cavity. I gave her arsenic in moderate doses for a month, at the end of which time she was seized with rheumatic fever, which lasted several weeks. Soon after the rheumatic fever commenced I was surprised to find that the cough, which previously had been very troublesome, had ceased entirely, and the dulness was diminished. After the attack of rheumatic fever was at an end, I found the dulness of the lung had cleared up, and there was no return

of the cough. For several months afterwards I made inquiries, and each time received the same answer—that she was apparently quite well. I mentioned the case to many of my medical friends, but only one of them seemed to have heard or read of anything directly bearing on the subject. He could not give me any references, but said he had met somewhere with the idea that patients who had suffered from rheumatic fever seldom died of phthisis.—I am, etc.,

London. ALFRED EDDOWES.

SIR,—Reading the very interesting communication of Drs. Broadbent and Lawrence brought to my mind the case of a soldier who was being brought forward for invaliding, as no longer fit for duty on account of most extensive tuberculous disease of the glands of the neck. The glands were greatly enlarged, some of them suppurating, and there were several deep sinuses. The man got a severe attack of erysipelas, and in a few weeks the sinuses were all healed, and the tumefaction of the glands had disappeared, though the affection had previously lasted and resisted all treatment for months. Somewhat similar cases have been noticed by other surgeons with whom I have spoken on the subject, though little, if any, notice has been taken of them in books. A similar phenomenon occurs in lupus. It seems to me that the intensity of the mere inflammation is not sufficient to account for this, and that the erysipelatous bacillus is antagonistic to the tuberculous. Of course, it suggested itself to my mind, as it probably has to others, that tuberculous glands and lupus might be cured by erysipelatous inoculation, but that the remedy would be too heroic. Is there not here also a field for bacteriologists? and is it not possible that, by beginning with attenuated erysipelatous virus, a safe cure may be found?

In this connection, I may mention that I saw several cases of obstinate ulceration of the throat get well almost immediately on the patient's being attacked by influenza during the last epidemic of that disease.—I am, etc.,

Dublin. W. H. MCNAMARA, Surgeon-Major M.S.

SIR,—Under the above heading Dr. Broadbent communicated a letter from Dr. A. G. Lawrence in the BRITISH MEDICAL JOURNAL of January 24th.

Apropos of the subject, it is interesting to note that a book published in 1865, edited by Sir John Fife, M.D., F.R.C.S., from writings of Mr. Urquhart entitled "Heat a Mode of Cure," deals rather fully with the treatment of consumption by the Turkish bath. In his writings Mr. Urquhart enumerates several professional men who were favourable to the "bath," including Dr. Thudichum, Dr. Leared, Dr. Richardson, and the late Sir Erasmus Wilson.

Dr. Arthur Leared, Physician to the Infirmary for Diseases of Chest,[1] gives several cases treated by heat at the bath, which Urquhart quotes *verbatim*. Dr. Leared, it appears, thought favourably of it, and I give briefly his opinion: Cough, decidedly benefited; dyspnœa, diminished; hæmoptysis, stopped during continuance of treatment; night sweats, of these he says "The direct action of the bath has been more strongly shown in removing night sweats than in any other symptom"; debility and weight, former lessened, latter increased (though one case lost 524 pounds in two years—that is, 2 pounds per bath—yet gained on the whole).

Dr. Lawrence, after asking whether in his cases the small-pox bacilli overcame the tubercle bacilli, or the phagocytes became stimulated so as to effect this, or the high temperature caused their death, concludes by asking, "Would it not be possible to produce such a temperature as would destroy the bacilli?" In connection with this the foregoing is interesting, as showing what has been done, although not explaining the mode of action. Inhalation of hot air, I believe, has given way after some trial, but there seems no reason why heat in the form of the Turkish bath should not be tried, and as I know from personal experience that a temperature of from 260° F. to 285° F. can be borne for two hours at a time with comfort daily for forty-eight consecutive days with benefit, in other forms of debility, it seems probable that it may be so in consumption.

[1] *Lancet*, November and December, 1863.

If heat be capable of killing the bacilli, surely so prolonged an exposure to heat, which must penetrate every vesicle of the lungs not already filled with products of inflammation (although the temperature would doubtless be modified before reaching them), would affect those bacilli within reach, and the stimulating effect of the heat would tend to remove the consolidated tissue, thereby exposing fresh bacilli, as I have seen inflammatory effusion into joints, etc., removed by its aid.

With regard to the popular delusion that the bath is weakening, I may say I have known several gentlemen to have two and even three baths a day for a month, improving in strength, and putting on flesh meanwhile, though losing two pounds at each bath—this mostly water, of course.—I am, etc.,

Ramsey. HARDING H. TOMKINS.

SIR,—The interesting and suggestive letter in the BRITISH MEDICAL JOURNAL of January 24th by Dr. Lawrence on a possible antagonism between the bacilli of small-pox and tuberculosis may perhaps call to mind similar phenomena in the surgical branch of tuberculosis. There are many surgeons who must have noticed the sudden amelioration of local symptoms—healing of sinuses, etc., in chronic tuberculous conditions of bones, joints, and glands after a sharp attack of simple erysipelas. In the pre-Listerian days at the Royal Seabathing Infirmary, and elsewhere, I have, on several occasions, observed this phenomenon, and even in later times one has looked on a brief erysipelatous attack with a pious hope that out of evil good might come.

Till recently, it seemed to me that the good old theory of extensive counter-irritation might account for the rapid and oft-times permanent improvement in these cases. Perhaps it may be proved by bacteriologists that this theory is not sufficient, but that an army of phagocytes is developed by the new disease, which invades the feeding grounds of the old tuberculous bacilli and destroys them. In the days that are coming we may be able to catch and tame the germs of diseases that are now a terror to us, and, engaging them as allies, strengthen our hands in dealing with foes that will not yield to general treatment, our old-fashioned drugs, and the surgeon's knife.

Perhaps this note may recall to the mind of some bacteriologist the phenomenon to which I have called attention, and suggest another by-path for experimental investigation.—I am, etc.,

Margate. BERTRAM THORNTON.

SIR,—A short time ago a young gentleman under my care for rapidly-advancing phthisis acquired acute rheumatism. This, under our modern treatment, rapidly subsided, but the temperature, which before the intercurrent disorder had ranged high, remained almost normal for some time, and there was marked quiescence in the pulmonary mischief; in fact, there was no considerable reassertion of its vigour afterwards. But tuberculous meningitis supervened, to which the poor fellow succumbed. Would that the issue had been as favourable as in the interesting cases related by Dr. Lawrence and alluded to by Dr. Broadbent. I am more inclined to believe in the salutary antagonism between the rheumatic fever germs and the tuberculous bacilli, as the cause of the amendment, than in the mere range of temperature. Wide, indeed, is the field of research which such cases seem to open up, and it only wants diligent cultivation to yield a more fruitful result. And, if I may be permitted to go beyond the subject matter which called forth this letter, I would urge that the time has come when the Government should realise its duty to the profession and the people. A Royal Academy of Medicine should be founded, in which every branch of medical research ought to be represented. Shall Great Britain—the pioneer in all the great scientific discoveries of our times—be left behind in the race? Shall our fading and faded laurels suffice, and we strive to obtain no others? All that is wanted is the opportunity, and then men will come forward and spend their lives in the elucidation of the obscure and obstinate phenomena which all bacteriological diseases present. From my student days I believed phthisis was a germ disease, and that cancer occupied a similar posi-

tion. Struggling young men cannot afford microscopes and expensive apparatus for original research. Let the Government furnish the means, and there will be no lack of workers. Phthisis and cancer must yet be mastered. And can we doubt that pernicious anæmia, leucocythæmia, lymphadenoma, and their congeners, as well as many less important affections—as psoriasis, erythema nodosum, herpes, etc.—belong to the germ diseases; and that a thorough understanding of even one of them would throw a flood of light over the rest?

The Government ought to endow such an institution as I have indicated, and to foster its relations with medical science and honour its professors, and then I am sure that this century would see, even in the few years left to it, such a revolution in our art as would eclipse all the marvellous triumphs it has ever won in the Victorian age.

Bath. THOMAS COLE, M.D.Lond., F.R.C.P.

CORONERS' INQUESTS.

SIR, I have been shown Mr. Wood's letter in the BRITISH MEDICAL JOURNAL of January 17th, and shall be glad if you will allow me to give my version of the matters referred to.

In the first case mentioned by Mr. Wood, my officer reported to me that that gentleman said he could not state the probable cause of death, and was surprised at death having taken place. I decided to hold an inquest, and instructed my officer to see Mr. Wood again, and inform him that if he could give any useful evidence which would guide the jury to a verdict, I should be glad for him to attend as a witness, but if he could not throw any light upon the matter I need not trouble him. It now appears that he was aware of the probable cause of death but refused to state it. It is apparent from Mr. Wood's letter that the jury arrived at a correct decision without his assistance.

The second case referred to by Mr. Wood I am quite unable to identify, but it is very unusual for me to adopt the course indicated by him without some strong reason, and in the case mentioned I can only think that there was some previous illness to account for death, or some other good cause for a medical man not being called in by me; in cases of children found dead in bed without previous illness, it is my rule to have a *post-mortem* examination, and this frequently discloses death from suffocation; it is well known that I have devoted much attention to these cases, and have had special care taken with them.

I believe that Mr. Wood has recently settled in Nottingham, and I have not yet had the pleasure of meeting him at an inquest, but if he will make inquiry amongst his professional brethren, I think he will be told that it is my almost invariable practice not to make use of a medical man's opinion as to the cause of death without requesting his attendance and paying him a fee; the only two rare exceptions to this rule are, where the practitioner does not wish to attend the inquest and concurs in his opinion being reported to the jury; and secondly, where a certificate is (as I think improperly) given in a case of death from violence or other unnatural cause.

My rule is so well known amongst medical men here that I think there is scarcely one of the older practitioners who hesitates, for fear of not being called as a witness, to inform my officer of the probable cause of death, and I gladly acknowledge not only their courtesy in this respect, but also the benefit arising from it.

Whilst upon this subject let me say a word with regard to the relationship between coroners and medical men generally. There ought to be a more cordial feeling, more trust in each other, and more co-operation between them than I believe exists in some localities, and the administration of justice would then be better effected.

I have been repeatedly told that some coroners are in the habit of sending their officers to medical men, obtaining opinions from them and making use of those opinions without payment of the fee. I cannot for one moment defend this practice, but I have personally felt the result of it in the occasional refusal of newcomers to give information. In one case I held an inquest upon a man who had died suddenly without medical attendance, but the surgeon who was acting as a *locum tenens* had seen the body after death; from the report made to me I treated the case as one of sudden but natural death, not summoning the medical gentleman who had seen the body after death and professed to my officer his inability to suggest the cause of death. At the inquest I found what had been unknown to me before, namely, that the deceased had been assaulted in a public-house; the jury thereupon required a *post-mortem* examination, and an adjournment was necessary. I then saw the medical man in question, and informed him of the alleged assault. He replied that he had been well aware of that, and, on my asking him why he had not mentioned it to my officer, who had been ignorant of it, he stated that he had not volunteered information on account of the practice of some coroners above alluded to. If I had known of the assault in the first instance I should have directed a *post-mortem* examination: as it was, the jury had to meet twice, and I had two journeys instead of one, several miles from home.

Payment to a doctor is, or ought to be, a matter of absolute indifference to a coroner, and, therefore, the former should not withhold information required in the interests of justice.—I am, etc.,

ARTHUR BROWNE.

Nottingham. Deputy Coroner for Nottingham.

MEDICO-LEGAL AND MEDICO-ETHICAL.

WE may remind some of our correspondents who urgently ask for immediate replies to their inquiries that the questions submitted frequently involve points not always governed by general principles, and requiring the gravest consideration. It is, therefore, impossible in many cases to give a reply in time for the next issue of the BRITISH MEDICAL JOURNAL.

A NEW USE FOR A THESIS

A MEMBER.—An unbiassed consideration of the points involved in the correspondence which has passed between Mr. H. and Dr. J. leaves no doubt upon our mind that, however little the latter may have intended to act wrongly, he has nevertheless committed something more than an indiscretion; and, although in forwarding a copy of his graduation thesis to the practitioners in the district he infringed no medico-ethical rule, it would, in our opinion, have been a wiser course to have refrained therefrom. In transmitting a copy, however—the statement that such was strictly limited to his *bonâ-fide* patients being, we have reason to know, inaccurate—to "the leading non-medical people," he not only evinced a disregard of professional tradition, but the act appears tantamount to soliciting practice by an expedient contrary to the rule and custom of the profession, and subjects him, we apprehend, to the disciplinary laws of his university. Nevertheless, we are not inclined in the present instance to suggest that any harsh proceeding be taken by the local practitioners, but simply that his attention be drawn to the opinion herein expressed.

A FORGETFUL *LOCUM TENENS*.

MEMBER writes: A club patient sends word at 10 A.M. to be visited. My *locum tenens* forgets to go. Two more messages arrive while he is on his rounds, but he does not know of them until his return, when he finds a note asking him to visit the patient. He goes, but finds they have called in Dr. A., and the patient has Dr. A. to treat him until he is well. 1. Who is responsible for payment of Dr. A.'s first visit? 2. Who should pay for the rest of Dr. A.'s attendance?

*** 1. There cannot, we opine, be any reasonable doubt that, in view of the admitted neglect of the *locum tenens* to make the required call, his principal may fairly be held responsible for Dr. A.'s first visit fee, who should, however, in our opinion, have retired from the case on the arrival of the club doctor or his legally qualified assistant.

2. With regard to the second query, if the *locum tenens* in question tendered on behalf of his principal the necessary professional attendance on the patient, we consider that he did all he could legitimately be called upon to do, and therefore that it would be unreasonable and unjust to expect him (the principal) to pay for Dr. A.'s subsequent attendance.

Our correspondent will do well to refer to the authorised rules of the club relative to the duties of the medical officer.

UNQUALIFIED PRACTICE.

A MEDICAL STUDENT, writing from New York, encloses an extract from an English provincial newspaper, containing a column of advertisements of quack medicines of the usual kind, and suggests that it is a proper case for interference by the Society of Apothecaries.

*** The Society of Apothecaries can only take proceedings in cases of unqualified practice, and this the Society, we are informed, is always willing to do in suitable cases, on proper evidence being forthcoming.

THE TITLE OF "DR." AND UNQUALIFIED PRACTITIONERS.

R. S.—Unless the person referred to is a duly-qualified medical practitioner, he has, we think, no right to assume the title of "Dr.," it being provided by Section 40 of the Medical Act, 1858, that any person who wilfully and falsely uses any title or description implying that he is recognised by law as a physician, doctor of medicine, practitioner in

medicine, etc.....may, on a summary conviction for such offence, be fined a sum not exceeding £20. There must be unequivocal evidence that the person in question wilfully and falsely used the title. Proceedings may be taken by information on complaint being laid before a magistrate.

PUBLIC HYPNOTIC DEMONSTRATIONS.

At the annual meeting of the British Medical Association in Birmingham last year the question of giving public demonstrations of hypnotism before lay audiences was discussed before a large and influential gathering of the profession in the Section of Psychology. After a long and careful consideration of the subject the following resolution was proposed by Professor Gairdner, of Glasgow, seconded by Dr. Eddison, of Leeds: "That this Section protests in the strongest manner against the public exhibition before unscientific and miscellaneous audiences, and for the purposes of gain or amusement, of the phenomena of hypnotism, a practice which, in the opinion of this meeting, is antagonistic to public morality." This resolution was passed unanimously, and a committee was appointed to investigate the phenomena of hypnotism and report to the Association upon its value as a therapeutic agent. This was a laudable endeavour to take hypnotism off the hands of showmen. That such exhibitions are to be condemned we believe to be the unanimous opinion of the medical profession. Our belief has, however, received a severe shock after perusing a card of invitation received by one of our lay contemporaries. The card ran as follows:—

"To be given up at the door.
THE MEISTERSINGER'S CLUB,
63, St. James' Street, S.W.,
On Sunday, February 1st, 1891,
at 11 P.M.,
The pleasure of your company is requested
at a Hypnotic Demonstration
by
Dr. VORES,
who has recently been practising with
Dr. Luys and Professor Charcot in Paris.
To the Editor..... (Music.)"

The "Dr. Vores" is stated to hold the qualification of M.R.C.S.Eng. If so, it appears most desirable that the Council of that body should express an opinion on the propriety of such exhibitions before a general audience.

AN IMPERFECT AGREEMENT.

The Pariah.—From the tenour of our correspondent's interrogatory communication it is evident that a serious omission—in fact, a blunder—has been committed in drafting and settling the deed of transfer alluded to, which, we apprehend, he must have omitted to refer to his own solicitor for consideration and approval. In the absence of the document in question we are not in a position to advise, but would strongly recommend him to submit it to an able equity lawyer, and be guided by his advice.

NAVAL AND MILITARY MEDICAL SERVICES.

ON THE PRESENT METHOD OF RECRUITING THE ANGLO-INDIAN ARMY.

By Surgeon-General Sir WILLIAM MOORE, K.C.I.E.,
Honorary Physician to the Queen.

I.

Up to the year 1820 European soldiers in India disappeared at the rate of 80 per mille annually. Then there was a considerable reduction of the death-rate, until for the ten years ending 1856, it only averaged 58 per mille. But in those days men were not invalided home with the liberality which now obtains. And when ordered for change they had to wait perhaps months for a ship going round the Cape, for there were no Indian troopers, and the Suez Canal was not constructed. Yet invaliding at this period raised the total loss to the service to 69 per mille. From 1856 to 1868 the death-rate decreased, but the invaliding list rose from nearly 25 per mille in the first year of the period to 49.04 per mille in 1866. In 1869 the death-rate was 42 per mille, but 16.46 was due to epidemic cholera, and the invaliding reached 53.98, the total loss being almost 96.

In the "Report of the Sanitary Commissioner with the Government of India for 1870," it was lamented that "the loss by invaliding has been for some years steadily increasing." Up to this period it may be asserted that the mortality of Anglo-Indian soldiers was reduced principally by an increase of invaliding. For as the death-rate decreased the invaliding list rose. But as the sanitary measures which had been adopted exerted influence, more recent statistics show better. For the ten years including 1870 and 1879, the death-rate averaged 19.34 per mille, and the invaliding 43. For the next nine years ending 1888, the average mortality was 16.03 per mille, and the invaliding rate 34.

Notwithstanding the present improved and favourable condition of matters, I believe sickness and mortality might be still much reduced. The principal argument in favour of the prevailing military short service system is, that it supplies a reserve of trained men (or, rather, of men who were once trained) for any emergency. But it is a costly system, and every man passed into the reserve is replaced (if recruits are forthcoming) by a youth, necessarily undeveloped, and often weedy. The fully-trained, grown, and disciplined soldier gives place to an immature stripling, who frequently, and especially if sent to the tropics, breaks down before even physical development is perfected. For this does not occur till between the ages of 24 and 25, when the final coalescence of the several pieces forming a bone takes place. At the present time it is believed there are hundreds of lads less than 19 years of age, and nearly 10,000 soldiers between the ages of 19 and 23, serving in India. And this, notwithstanding that Section 18, paragraph 14, of the Queen's Regulations for the Army provides that no one less than 20 years of age should be sent to the tropics. When Deputy Surgeon-General of the Presidency and Aden Division of the Army of Bombay, I was obliged to weed out at Bombay a large number of young soldiers from regiments sent for immediate service in Afghanistan—young soldiers who were unable to bear the passage through the Red Sea at an unfavourable period of the year, and who arrived in India utterly unfitted for the toils of an Afghan campaign. And this is not exceptional experience, other administrative medical officers having been compelled to do the same. Again, the short service system does not appear successful as regards the maintenance of the strength of the Army. For there is, we were recently informed at the "Statistical Society," the alarming difference of 5,000 men between the number of soldiers sanctioned and the actual number with the colours. It is, however, of the Anglo-Indian Army I am writing. The same authority also told us that reliefs for India cannot be found in requisite numbers.

If a return of the actual number of years a soldier now serves in India were called for, it would be at once apparent how short the average period of service there now is. Short service for the cavalry and infantry of the line consists of seven years with the colours and five in the reserve, which may be converted into eight years with the colours and four in the reserve if the period of service with the colours expires while the man is serving abroad. But for the engineers, foot guards, army service corps, and medical staff corps, the periods are only three years with the colours. Now very few men are sent to India until at least they have been some months in the ranks. The Army Regulations expressly, and very properly, forbid men being sent out until they are thoroughly drilled. Then a man may have to wait for the next trooping season. When a regiment goes out, a considerable proportion of the men are drawing towards the termination of their short service period, when they can claim release from the colours. Again, when a regiment comes home—notwithstanding offers made to the men of transfer to other corps in India—the regiment always brings home many men who have only been a short period in the tropics. It is true that a soldier, enlisted for short service, is permitted, after three years, to extend his service with the colours to twelve years. But very few do so under the inducements held out in India. A soldier likes change; and when in India, unless special advantages are offered him for staying there, the soldier is always ready for the voyage to Europe, and, as a rule, if he extends his service he does so at home.

It has long been an article of faith that length of residence in the tropics and age increases mortality. The old idea of climatisation by a "seasoning fever" is now regarded as erroneous. All this is no doubt true to a certain extent. But increased sickness is not progressive from youth to advanced life, but greatest at both these periods. And although there is no seasoning fever, changes do occur in the system of the European translated to the tropics. There is diminished pulmonary and renal action, and increased cutaneous and hepatic action. Thus the individual becomes more or less acclimatised to heat; and heat, which renders a person so liable to chill, is one of the principal causes of disease in India.

Although we have recently heard so much of the mortality and sickness of young soldiers in India, especially from enteric fever, there is evidence to show that sickness and mortality among young soldiers was always high. Statistics of former years were not so elaborate as they are now. But it is on record that in the old Company's European army the mortality was 56.0 per mille under 25 years of age, during the next decennial period 48.0 per mille, afterwards gradually rising to 61.0. Systematic sanitary reports on the Anglo-Indian army date only from 1865. In these earlier reports it is remarked that "the mortality during the first years of residence is higher than for some time subsequently." Also that "from two to five years of service is the time at which the largest number of men break down." Also, "the mortality of newly arrived regiments has been double that of old regiments in the same station." In the Report for 1870 it is remarked that "one-third of all the invalids of the last six years were men of less than three years' Indian service." The sickness and mortality of young soldiers has attracted more attention of recent years, because it has increased in consequence of the number of young men in the ranks. In 1888 no fewer than 76 per cent. of soldiers serving in India were of not more than five years' service in the army, and of less in the Indian army. It is, however, a mistake to suppose that the mortality of young soldiers goes on increasing during middle life, although it is augmented after this period. And it is a mistake to attribute the mortality solely, or even mainly, to enteric fever. The term enteric fever first appears in the report on the Anglo-Indian army for 1870, where it is remarked that "the fevers which occur among European soldiers have hitherto been spoken of as if they all belonged to one great class, known as malarious, and although the great mass were undoubtedly of this class, there is evidence to show that not a few were cases of enteric or typhoid fever. In nearly every instance the sufferers were young men new to the country."

After this enteric fever appears regularly and prominently in the Sanitary Commissioner's reports as a cause of sickness and mortality. Now during the years from 1859 inclusive to 1870, the mortality from fever averaged annually 3.8 per mille, being highest, 6.58 in 1859; and lowest, 2.63 in 1867. And as enteric fever assumes a prominence as a cause of death, the mortality from other fevers dwindles. Thus from 1870 to 1879 the average annual mortality from enteric fever was 2.28 per 1,000, and from other fevers 1.74. From 1880 to 1886, inclusive, enteric mortality averaged 3.45; other fevers, 0.94. Practically, there is not any great excess of mortality from fevers taken as a class. And what little excess there is, some 0.50 per mille, may be explained by the increase of the number of youths in the service. Figures bearing on this subject are significant of a change of nomenclature. I have ventured to express my views elsewhere, that the fevers which now prevail in India are the fevers which always prevailed; that the presumed frequency of enteric fevers in India depends in a great measure on the impression which has been made on medical officers that it is frequent; and that fevers with bowel lesions may present, and not be enteric fever. Or as the Committee,[1] appointed by the Indian Government in 1888 to investigate the matter, state it: "fever with catarrhal follicular inflammation and ulceration of the intestines may present, being an enteric fever, but not enteric fever." The presumed excess of enteric fever in India appears to be more due to change of fashion in diagnosis than to actual increase of disease. When we find such an order as was issued to the medical officers of the first Suakin expedition—that all diseases with elevated temperature should be regarded provisionally as enteric fever—there is less surprise that enteric fever has so increased.

[1] Surgeon-General Sir B. Simpson, Surgeon-General Thompson, Deputy Surgeon-General Richardson, Brigade-Surgeon D. Cunningham.

THE ARMY MEDICAL SCHOOL AT NETLEY.

The distribution of prizes to the successful students of the Army Medical School at Netley at the close of the winter session was made on February 2nd in the Lecture Theatre of the Royal Victoria Hospital by the Duke of Connaught, General Commanding the Southern District. The Duke inspected the whole of the hospital arrangements, and was then entertained at mess by the medical staff.

The proceedings in the lecture theatre of the school commenced about 3.30. The benches were occupied not only by the surgeons on probation who had been in attendance during the session, but also by a large number of officers and visitors. Conspicuous among the audience were a number of the nursing sisters in their distinctive uniforms. Sir Thomas Longmore, after obtaining the Duke's permission, read a brief summary of the results of the session, and the surgeons who had gained prizes being called to the front, the Duke delivered the prizes to them, with a few words of congratulation to each recipient. The results of the examinations were announced as follows:—

British Medical Service.—The following is a list of surgeons on probation of the Medical Staff of the British army who were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—February 2nd, 1891.—T. B. Beach (gained the Herbert Prize of £20, with the Montefiore Medal and prize of 20 guineas), 5,927 marks; E. E. Powell, 5,460 marks; C. W. R. Healey, 5,325 marks; J. W. Jennings, 5,265 marks; E. M'K. Williams, 5,197 marks; H. E. Dowse, 5,183 marks; J. C. Connor, 5,118 marks; J. E. Carter, 5,106 marks; F. W. Hardy, 5,102 marks; J. T. Clapham, 5,035 marks; W. Ap. S. J. Graham, 4,995 marks; D. D. Shanahan, 4,975 marks; C. W. H. Whitestone, 4,940 marks; A. Pearse, 4,880 marks; C. D'Alton, 4,643 marks; H. D. Mason, 4,640 marks.

Indian Medical Service.—J. M. Crawford (gained the prize in clinical medicine presented by Surgeon-General W. C. Maclean, C.B., with the De Chaumont Prize in Hygiene and the Montefiore second prize), 6,100 marks; J. W. Wolfe (gained the Martin Memorial Gold Medal), 5,735 marks; B. J. Singh, 5,655 marks; E. G. R. Whitcombe, 5,655 marks; H. R. C. Barber, 5,645 marks; C. H. James, 5,638 marks; F. O'Kinealy (gained the prize in Pathology presented by Sir William Aitken, F.R.S.), 5,580 marks; C. C. Cassidy, 5,540 marks; F. E. Murray, 5,520 marks; A. W. T. Buist-Sparks, 5,500 marks; H. J. Younger, 5,490 marks; B. D. Basu, 5,160 marks.

The Duke of Connaught, in the course of his address to the students after the distribution of prizes, mentioned that the only time he had had the high distinction of being commanded by her Majesty to present the Victoria Cross was to Surgeon Crimmin, of the Bombay Medical Staff Corps. He mentioned this fact to show them that the highest distinctions in the army were open to all of them. They might rest assured that all the officers of the army knew how to respect the medical officers. It depended on themselves whether they would keep up a high professional standard. They were representatives of a profession for which the army naturally had the highest regard—one which was of the greatest importance to the efficiency and well-being of the army, and without which the best organised troops could do little. He hoped they would always remember that they had to set before themselves a high ideal, a high standard. They had to remember that they were officers, that they were gentlemen, and that they were medical officers to whom the executive officers of the army would look for support and advice. He wished them all every success and honour in the profession they had joined.

Director-General Mackinnon moved a vote of thanks to His Royal Highness.

Sir Joseph Fayrer seconded the proposed vote, remarking that it was not only for his presence on the occasion that thanks were due to the Duke of Connaught, but more especially were they due for the very grateful and graceful terms in which His Royal Highness had expressed his appreciation of the medical service of the army to which so many of those present belonged.

After the ceremony in the theatre was concluded, the Duke of Connaught honoured the Principal Medical Officer and Mrs. Madden by joining in afternoon tea at their quarters. The Duke re-embarked on the royal yacht for return to Osborne about six o'clock.

INDIAN PAY.

Medical Staff would be glad if some of his brother officers would inform him what the pay is in India for a surgeon of eight years' service, and if it would support a *ménage* of a wife and two children in fair comfort.

*** The pay is Rs.433 to 2 per mensem. We can hardly venture to answer the latter part of the question, so much depends upon the scale of living adopted, whether the officer is much moved about, etc.; but we would judge the pay is none too large under any circumstances.

CANDIDATES.

Observer implores intending candidates not to come forward for the Medical Staff until existing grievances are redressed. They little know

what they will have to endure when once they have taken the Queen's shilling. Long foreign service; undefined position; constant and expensive movements; inadequate private and sick leave, are among the difficulties they will have to face. The authorities are mere opportunists, and will redress no grievances, however crying, if they can stave off the necessity by periodically catching a few candidates.

THE NAVY.

STAFF-SURGEON HERBERT MACKAY ELLIS is promoted to the rank of Fleet-Surgeon, January 26th. His previous commissions are dated: Surgeon, September 30th, 1875; Staff-Surgeon, November 18th, 1882. He served with the battalion of Royal Marine Artillery throughout the campaign in Egypt in 1882, being present at the engagements at Kassasin on August 28th and September 9th, and at the battle of Tel-el-Kebir (mentioned in despatches, promoted Staff-Surgeon, medal with clasp, and Egyptian bronze star).

Staff-Surgeon W. B. DREW is appointed to the *Collingwood*, January 30th.

THE MEDICAL STAFF.

SURGEON-MAJOR JOHN JOSEPH CREAN has quitted the service on retired pay. His commissions bear date: Assistant-Surgeon, October 1st, 1868; Surgeon, March 1st, 1873; and Surgeon-Major, May 1st, 1881. He served in the campaign in the Soudan in 1885, receiving the Egyptian medal with clasp and the Khedive's bronze star.

Sergeant-Major RICHARD ADAMS, of the Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Captain J. D. Marshall, retired.

Sergeant-Major JAMES HIRST, Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Lieutenant G. Fowles, deceased.

Surgeon-Major G. D. BOURKE, serving in the Madras Command, is, on return from England, appointed to the medical charge of the station hospital at Secunderabad.

Surgeon R. O. CUSACK, doing duty in the Secunderabad District, Madras, is directed to do duty in the Myingyan and Mandalay District.

Surgeon-Major K. S. WALLIS, Surgeon R. J. COPELAND, M.B., and Surgeon J. GIRVIN are brought on the strength of the British forces in the Bombay Command from December 26th, the date of their arrival at Bombay.

INDIAN MEDICAL SERVICE.

SURGEON J. GARVIE, Bengal Establishment, is appointed to the officiating medical charge of the 11th Sikhs, vice Surgeon A. BUCHANAN.

The services of Surgeon H. J. DYSON, Bengal Establishment, which were placed temporarily at the disposal of the Government of the Punjab, are placed permanently at the disposal of that government.

The services of Surgeon C. MACTAGGART, M.B., Bengal Establishment, which were placed temporarily at the disposal of the Government of the North-West Provinces and Oude, are placed permanently at the disposal of that government.

Surgeon F. J. DRURY, Bengal Establishment, is appointed to act as Civil Surgeon of Balasore, during the absence on deputation of Surgeon-Major J. M. ZORAB.

Surgeon A. MILNE, Bombay Establishment, is appointed to officiate as Deputy Assay Master, Calcutta, vice Surgeon-Major H. P. YELD, who has been granted furlough for one year and four months.

Surg. A. J. HEATH, M.B., is brought on the strength of the Bombay Establishment from December 26th, the date of his arrival at Bombay.

In reference to a paragraph in our issue of January 24th, announcing the retirement of Surgeon-Major WILLIAM DUNCAN, M.B., of the Bengal Establishment, we are asked to say that in addition to the services there enumerated, he was on field service in Burmah in 1887-88, receiving a medal with clasp, and with the Chin-Lushai Expeditionary Force in 1889-90, for which an additional clasp has just been announced.

MILITIA MEDICAL STAFF.

SURGEON-MAJOR W. S. LOVE, 4th Brigade Royal Inniskilling Fusiliers (formerly the Royal Tyrone Militia), has resigned his commission, with permission to retain his rank and uniform.

THE VOLUNTEERS.

MR. JOHN HAMMERTON EDWARDS, M.D., is appointed Acting Surgeon to the 1st Surrey (South London) Rifles.

Surgeon H. R. H. BIGG, 16th Middlesex (London Irish), has resigned his commission, which was dated November 2nd, 1886. Acting-Surgeon J. H. GRIFFIN, of the same corps, is promoted to be Surgeon from February 4th.

OBITUARY.

WILLIAM ORLANDO MARKHAM, M.D.EDIN., F.R.C.P. LOND., F.R.C.P.I.(HON.).

DR. MARKHAM, whose death we announced last week, was born in 1818. He was the son of Charles Markham, formerly Clerk of the Peace for the county of Northampton. He received his professional education in Edinburgh, Paris, and Heidelberg.

In 1840, when he graduated M.D. in the University of Edinburgh, he obtained a gold medal for his thesis on the Surgical Practice of Paris, illustrated by Cases. After taking his degree he resided for a time at Roehampton. On leaving there he became house-surgeon to the York Road Lying-in Hospital, the staff being Drs. Ferguson, Locock, and Rigby. Soon after this he was elected physician to the old Blenheim Street Dispensary; this he resigned on his election to the Western General Dispensary, New Road. At this time he was a very assiduous student in the medical wards of Charing Cross Hospital, his old friend, John Avery, being then surgeon to that institution.

Having become a Member of the Royal College of Physicians, he was elected a Fellow in 1854, and in 1864 he gave the Gulstonian Lectures, taking as his subject "Bleeding and Change of Type in Diseases." In these lectures the author uses arguments from which, as he says, "may be derived a rational estimate of the uses and effects and right application of venesection in disease;" and in the preface he publishes a most interesting letter from Sir Thomas Watson, in which that great physician, with characteristic candour, says "a careful survey of the facts and arguments on both sides of late, respecting the alleged change of type, compels me to suspect that my previous opinion was a mistaken one."

At the opening of St. Mary's Hospital in 1851 Dr. Markham was appointed one of the assistant-physicians, and, in May, 1857 he became full physician, which office he resigned in December, 1867, because, as he said, "I find that my present engagements will not enable me properly to perform the duties of the office." In 1854 he was appointed Lecturer on Pathology in St. Mary's Hospital Medical School, and, from 1857 to 1860, he combined with this the Lectureship of Physiology.

During the period from January 1861 to August 1866, Dr. Markham was the editor of the BRITISH MEDICAL JOURNAL, an office which he resigned on his being appointed, in August, 1866, by Mr. Gathorne Hardy (now Lord Cranbrooke) a Poor-law inspector and medical adviser to the Poor-law Board.

On June 3rd, 1867, an address was presented to Dr. Markham on his retirement from the Editorship of this JOURNAL. The address, which was signed by about 1,500 members of the Association—a number which at that date constituted a large proportion of the total membership—was presented at a dinner at Willis's Rooms. Sir Thomas Watson, who made the presentation, not only drew up the address, but himself inscribed it on the first page of the album which contained the names of the subscribers:—

"DEAR SIR,—We, the undersigned, are desirous of offering to you, upon your retirement from the Editorship of the BRITISH MEDICAL JOURNAL, the expression of our sincere admiration of the manner in which, for a period of six years, you have exercised the duties of that difficult and invidious office. Throughout your whole conduct of the JOURNAL we recognise plain-spoken candour, and a most independent, truthful, and impartial spirit, in your dealings with the writings and the acts, as well of your personal friends as of your professed opponents. We acknowledge and thankfully appreciate your zealous maintenance of the social dignity and the scientific position of the medical profession, and your constant and stern reprobation of quackery, and of the sanction or support of it by any members of our body.

"In heartily bidding you an official farewell, we pray for your health and happiness, as we confidently anticipate your faithful service in the new and important office to which you have recently been called."

Dr. Markham made an eloquent and admirable reply. A full report of these interesting proceedings will be found in the BRITISH MEDICAL JOURNAL of June 15th, 1867, p. 691.

Dr. Markham entered upon his laborious and anxious duties of Poor-law inspector with characteristic zeal and ability, but with too little regard for his own health and comfort, and the result was that after rather more than four years of zealous labour his failing strength compelled him to resign his appointment in November, 1870. The following year he left London, and continued to reside in the comfortable house, with ample grounds, which he had purchased some years before, in Nightingale Lane, Clapham Common. There, although he had every comfort and aid which ample means and the devotion of his family could supply, the symptoms which are usually associated with lateral sclerosis were gradually developed. In spite of his failing nervous and muscular power, he continued to take an active interest in all that concerned the profession, and when visited by his old friends he always appeared bright and cheerful, and seemed to be scarcely conscious of his failing powers.

On December 26th, 1890, he suddenly became aphasic, without hemiplegia. The aphasia continued and was succeeded

by paroxysmal attacks of rapid and irregular breathing—Cheyne-Stokes respiration. He gradually lost strength, and at length passed away on January 23rd, having retained consciousness until within a few hours of his death.

Before his health gave way, few members of the profession displayed greater mental and bodily vigour, or worked more energetically than Dr. Markham. In January, 1866, he was appointed by the College of Physicians as their representative on the Admiralty Committee, to investigate the rank and position of the medical officers of the army and navy, and in the following March he received a vote of thanks from the College for the manner in which he had represented them on that Committee. At the meeting of the Association at Canterbury in 1861 he delivered the address in Medicine; and was President of the Metropolitan Counties Branch of the British Medical Association in 1867-68.

In 1866 he was elected a member of the Athenæum Club, and in 1867 he received the Honorary Fellowship of the Royal College of Physicians of Ireland. In the same year he was asked to become a candidate for the representation of the University of Edinburgh, in Parliament: but he declined the invitation, as his then chief, Lord Devon, considered that a seat in Parliament would be incompatible with his position as Poor-law inspector.

In 1853 Dr. Markham published an excellent translation of Dr. F. Skoda's treatise on *Auscultation and Percussion*, and in 1863 he translated for the New Sydenham Society Drs. Neubauer and Vogel's *Guide to the Analysis of the Urine*.

In 1856, the first edition of his admirable book on *Diseases of the Heart* was published. In this work he clearly describes the murmur and the vibratile thrill resulting from mitral stenosis, and says "the impulse appears to follow immediately upon the cessation of the murmur, or, rather, it seems to be its conclusion, and to wind it up, as it were." And he quotes Corvisart, Hamernjk, Skoda, and Professor Jacksch, of Prague, in confirmation of his description of the physical signs of mitral obstruction (pp. 209-10 and note). A second edition of his work on *Diseases of the Heart* was published in 1860.

In 1866, an essay, entitled, "Experiments and Operations upon Living Animals," to which a prize was awarded by the Royal Society for the Prevention of Cruelty to Animals was published by the Society. The conditions under which Dr. Markham states that experiments upon living animals are justifiable are such as we believe would be accepted as reasonable by English physiologists; and that the essay should have met the approval of the Society in question affords remarkable evidence of the judicial fairness of the author. Dr. Markham contributed two interesting papers to the *Medico-Chirurgical Transactions*, in the 40th volume, "A Case of Disease of the Heart with Great Dilatation of the Auricles, Consequent on Constriction of the Mitral Orifice;" and in the 44th volume a paper "On the Causes of Closure of the Valves of the Heart." In this paper, which we believe has never been fully appreciated, the author maintains that the layer of yellow elastic tissue on the auricular surface of the auriculo-ventricular valves, which has been put on the stretch by the auricular systole, then tends to contract and bring the free margins of the valve into contact; while the same kind of elastic tissue on the ventricular surface of the semilunar valves assists to draw the valves away from the arterial walls, and so to put them into a position for being readily brought together when the ventricular systole ceases.

Dr. Markham was a fluent speaker and a trenchant writer on occasion, especially when he wished to unmask anything like quackery or humbug in the profession. He was a staunch friend, a genial and pleasant companion, and a man of a cultivated and philosophical mind.

We cannot conclude this imperfect notice of a distinguished career without expressing regret, which will be shared by many of our readers, that failure of health should for a period of twenty years have deprived the profession and the public of the services of a physician remarkable alike for intellectual ability and originality, and for unswerving truthfulness and integrity.

NICOLAS GUTIERREZ, M.D.,

Formerly Rector of the University of Havana.

In Dr. Nicolas Gutierrez, who died on December 31st, 1890, at a very advanced age, the medical profession in Cuba has lost one who was for many years its most prominent member, and who laboured strenuously to advance its interests and to further the progress of medical science. He entered on the practice of his profession so far back as 1821, and in 1833 he acquired a considerable reputation by a report (drawn up in conjunction with Dr. Abreu) on the cholera epidemic, which was then raging in Cuba. In 1835 he was appointed Professor of Pathology in the University of Havana, and, three years later, Surgeon-in-Chief to the Military Hospital, where he instituted a course of clinical surgery, the first of the kind in Cuba. He also was instrumental in the establishment of courses of operations on the dead body and practical midwifery, and was an ardent and enlightened reformer of medical training in all directions. He may also be called the founder of medical journalism in Cuba, having, in 1840, commenced the publication of the *Repertorio Medico*, the first professional periodical which appeared in the island. He was also the founder of the Academia de Ciencias, which held its first sitting in 1861.

Dr. Gutierrez found time likewise to take a leading part in the sanitary betterment of Cuba, and in much other public work, in which he was always on the side of progress and reform. In 1879 he was appointed Rector of the University of Havana, an office which he held to the great advantage of that seat of learning for several years.

Dr. Gutierrez was Honorary Physician to the King of Spain, and among many other distinctions conferred on him was that of the Cross of Charles III.

KARL REYHER, M.D.,

St. Petersburg.

Karl Reyher, a distinguished Russian surgeon, who met his death under tragical circumstances on January 11th, was born at Riga in 1846. After studying medicine for five years in the University of Dorpat, he joined the 9th Army Corps of the Third German Army as surgeon on the breaking out of the Franco-German war in 1870. In 1871 he returned to Dorpat, where he was appointed assistant to Dr. von Bergmann, at that time Professor of Surgery in that University. In 1872 he took his M.D. degree, and became *Privat-docent* in Surgery. In 1873, at the request of Professor von Bergmann, Reyher went to Edinburgh to make a thorough study of the antiseptic method under Lister, returning to Dorpat in 1874 in a state of great enthusiasm to impart to his chief the valuable lessons he had learnt. Reyher did good surgical service both in the Servian and in the Turkish campaigns, afterwards publishing the results of his experience in the form of a paper on the antiseptic treatment of wounds in war, which appeared in *Volkmann's Sammlung klin. Vorträge* (Nos. 142, 143). After the Russo-Turkish war he migrated from Dorpat to St. Petersburg, where he was appointed Surgeon to the Nicolai Military Hospital, the Hospital of the Red Cross, and several other public institutions. He attained a leading position in the professional and social life of the Russian capital, and was universally esteemed for his indefatigable energy, his extraordinary manual dexterity, and his eager zeal in the pursuit of scientific knowledge. He contributed papers on extirpation of the larynx, the treatment of inflammatory affections of the knee-joint, etc., to various periodicals.

LOUIS PIACHAUD, M.D.,

Geneva.

Louis Piachaud, a well known Swiss surgeon, died on December 21st, at the age of 66. He was born at Geneva in 1824, and after studying in Paris under Valleix, Gosselin, Giraldès, Richet, and Velpeau, took the degree of M.D. in that faculty in 1852. On returning to Switzerland he speedily acquired a high professional reputation. He was chief surgeon to the Cantonal Hospital at Geneva, and he was three times chosen President of the Geneva Medical Society. In 1862 he was elected a corresponding member of the Paris Société de Chirurgie, and in 1877 he took a prominent part in the organisation of the International Medical Congress. He was a member of the Swiss Alpine Club, and in 1864 made a successful ascent of Mont Blanc, in the the course of which he made some interesting physiological observations on himself, of which an account was published in the *Bibliothèque Universelle* for 1865.

Piachaud contributed largely to medical literature, his principal papers being one on Fractures of the Leg, based on 128 cases treated by himself (*Bull. de la Soc. Méd. de la Suisse Rom.*, 1870); Cæsarean Section (*Arch. Gén. Méd.*, 1855); Naso-Pharyngeal Polypi (*Gaz. d. Hôp.*, 1863), etc. He published a little book (*En attendant le Médecin*, 1860) of instructions to the lay public in cases of illness before the arrival of the medical practitioner; a second edition appeared in 1871.

HECTOR McCOLL, L.F.P.S.GLASG.

MR. HECTOR MCCOLL, of Tobermory, in Argyleshire, died in the closing week of January, at the age of 91 years. A student of Glasgow University and Anderson's College, he obtained the qualification of the Glasgow Faculty as long ago as 1829, and from that time till 1880, when he retired from practice, he carried on his work in Mull and the neighbouring islands of the West of Scotland. He was endowed with a most retentive memory, and his long and intimate acquaintance with the people made him a perfect storehouse of knowledge of Mull folklore and of the history of the old families of the island. During the visit of the Queen and the Prince Consort to Mull in 1842, Mr. McColl, at the request of the Duke of Argyll, attended the Royal party, and supplied the Prince with information regarding the habits and condition of the islanders. During the distress in 1847 he superintended the distribution of the aid granted by the Government—a position for which he was well fitted, held as he was in high esteem by all classes of the community.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, February 2nd.

Custody of Children Bill.—The LORD CHANCELLOR moved the second reading of this Bill. The Bill had previously passed the House of Lords, but it had reached the Lower House too late in the session for consideration. There was abundant evidence that the common law right of parental control had been abused for the purpose of gain, and that abandoned parents had insisted for their own selfish reasons on taking their children from institutions where they were being well cared for and brought up as useful citizens. The Bill simply gave to the children of the poor the same kind of protection which the Court of Chancery extended to the children of the rich.—Lord THRING and Lord HERSCHELL supported the Bill, which was read a second time and referred to a Committee of the whole House.

Tuesday, February 3rd.

Amendment of the Factory and Workshops Act.—The Earl of DUNRAVEN introduced a Bill to amend the Factory and Workshops Act, and the Bill was read a first time.

HOUSE OF COMMONS.—Thursday, January 29th.

Dr. Koch.—Colonel NOLAN asked the First Lord of the Treasury whether Her Majesty's Government would consider the propriety of communicating with other civilised Governments to ascertain whether the latter would join in conferring a reasonable pecuniary reward on Dr. Koch for the eminent services he had rendered to humanity. Mr. W. H. SMITH said without in the slightest degree depreciating the very great services to humanity which had been rendered by Dr. Koch, it must be admitted he did not stand alone as "a learned, patient, and laborious investigator of the resources of nature for the benefit of mankind." His great reward was the evident appreciation of the value of his work by his own profession in all parts of the world, and the sense of the benefits he had conferred upon his fellow-creatures. He did not think any action of Her Majesty's Government could really add to the satisfaction Dr. Koch must feel at the reception given by the civilised world to his discovery, and perhaps he might be excused for hesitating to add a new function to the responsibilities of Government.

Friday, January 30th.

Water Supply of the Metropolis.—Mr. LAWSON asked what course the Government proposed to take with respect to the public and private Bills affecting the water supply of the metropolis.—Mr. W. H. SMITH said he thought it would be expedient, when they had been read a second time, to refer them to a strong hybrid Committee, or to a joint Committee of both Houses.

Metropolis Water Supply Bill.—On the motion of Sir A. BORTHWICK, leave was granted to introduce this Bill, which was subsequently read a first time.

Tuesday, February 3rd.

Metropolitan Water Companies Bill.—In reply to Mr. CAUSTON, Mr. W. H. SMITH said it was impossible for the Government to give facilities for the passing of the Metropolitan Water Companies Charges Bill, which contained provisions to prevent the companies from raising their rates through the quinquennial revaluation of charges, in prospect of the early purchase by the public. If the various water Bills were referred to a Committee, the Committee would have full powers to consider the terms and conditions on which the undertakings of the companies were to be acquired.

UNIVERSITIES AND COLLEGES.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Diploma of Public Health. The following are the names of the nineteen candidates who are recommended by the Examiners for the Diploma:

J. F. Braga, L.S.A., King's College and Edinburgh; W. H. Brodie, M.D.Edin., Edinburgh; H. Cropley, F.R.C.S., London; S. R. Dyer, M.D.Brussels, L.R.C.P., M.R.C.S., Middlesex; O. Field, M.D.Edin., L.R.C.P., M.R.C.S., Edinburgh; R. H. Firth, F.R.C.S., University College; G. H. Hart, M.R.C.S., L.R.C.P.Edin., Birmingham; G. E. Haslip, M.D.Brussels, L.R.C.P., M.R.C.S., London; F. Hichens, M.D.Lond., M.R.C.S., London; J. Holroyde, M.R.C.S., London; E. Hussey, M.D.Durh., L.R.C.P. & S.Edin., Sheffield, Edinburgh, and Charing Cross; H. R. Kenwood, M.B.Edin., L.R.C.P., London; F. W. D. McGachen, L.F.P.S.Glasg., London; C. Mallins, M.D.Dubl., Dublin; J. Norton, M.D.Durh., M.R.C.S., Westminster; W. Roughton, L.R.C.P., M.R.C.S., St. Bartholomew's; A. W. Stirling, M.D. Edin., Edinburgh and University College; W. S. Tebb, M.D.Camb., L.R.C.P., M.R.C.S., St. Thomas's and Cambridge; L. Wilde, M.D. Durh., L.R.C.P., M.R.C.S., St. Thomas's.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen, having conformed to the by-laws and regulations and passed the required examinations, were, at a meeting of the College on January 29th, admitted Licentiates:—

W. B. Addison, St. Bartholomew's and Cambridge
*M. Adler, Guy's and St. George's
J. E. F. André, St. Thomas's
R. F. E. Austin, Bristol
A. K. Barrett, St. Mary's
F. W. Begbie, St. Bartholomew's
C. J. Blakeman, St. Thomas's
H. F. S. Blucke, Charing Cross
C. S. Bowker, Middlesex
*E. T. A. Boyton, St. Bartholomew's
*W. C. Burt, Guy's
W. F. Chambers, University College
*G. W. Chapman, St. Thomas's
A. R. Chater, St. Mary's
W. A. Clark, St. Bartholomew's
H. Clift, St. Bartholomew's
T. S. Coombe, Guy's
C. A. Coventon, St. Bartholomew's
A. R. Cowell, St. Thomas's
R. Crosskey, St. Thomas's
H. J. Curtis, University College
W. P. T. Daniel, St. Mary's
M. Dobbs, Charing Cross
J. H. Dow, Manchester
E. C. Drake, St. Bartholomew's
L. W. Dryland, St. Bartholomew's
*S. U. Duer, Middlesex
P. J. Duffy, University College
P. Evans, University College
W. G. R. Farquharson, St. Mary's
F. A. Field, St. Bartholomew's
T. A. M. Forde, St. Thomas's
*F. W. Foster, Guy's
R. S. Freeland, Guy's
L. P. Gamgee, Birmingham
H. Gordon, Manchester
M. Grabham, St. Thomas's
J. H. P. Graham, St. Bartholomew's
C. A. Green, Birmingham
P. A. Green, London
R. E. Greenwood, University Col.
G. H. Griffiths, Liverpool
*J. S. Griffiths, Bristol
J. Grimshaw, London
W. G. Gyton, Manchester
*S. Hawarden, Manchester
*F. Haydon, Westminster
T. H. Haydon, St. Thomas's and Cambridge
C. H. Hemming, London
J. G. Hewitson, University College
F. R. Hird, Leeds
*E. B. Holland, Middlesex
*A. W. Howard, University College
T. H. Kellock, St. Thomas's
A. Kidd, Middlesex
T. A. O. Langston, St. Bartholomew's
H. D. Levick, St. Thomas's
F. Lewis, St. Mary's
C. P. Lovell, St. Thomas's
V. W. Low, St. Mary's
J. W. Mactavish, St. Thomas's
E. E. Manwaring, St. Barth.
N. Marder, St. Bartholomew's
E. W. G. Masterman, St. Barth.
J. B. Mayor, Manchester
Y. H. Mills, London
*J. More, St. Bartholomew's
E. H. G. Morris, Cambridge and St. Thomas's
J. J. N. Morris, King's College
T. E. Mulvany, London
R. H. Norgate, Bristol
A. J. Nyulasy, Melbourne
S. A. Ord-Mackenzie, University Col.
H. L. Penny, London
G. Pernet, University College
T. M. J. Powell, St. Bartholomew's
E. L. Pritchard, King's College
*E. M. Quinby, Liverpool and St. Barth.
H. Recks, St. Bartholomew's
A. E. Reynolds, University College
L. Rogers, St. Mary's
J. M. Rogers-Tillstone, St. Barth.
R. M. Ronaldson, Edinburgh and Charing Cross
J. C. Round, St. Thomas's
R. G. Rows, University College
H. B. Rygate, Guy's
D. W. Samways, Guy's
A. W. Senior, Manchester
R. W. Senior, King's College
*E. D. Shirtliff, St. Thomas's
*H. Smith, King's College
C. E. Soulby, Middlesex
J. Stalker, Leeds
R. Stephens, St. Bartholomew's
A. W. Sturdee, London
W. H. Sturge, London
T. C. Summers, London
A. H. Thompson, Camb. and London
*W. Twyford, Manchester
E. J. C. Tyler, St. Thomas's
*J. A. Ward, Guy's
J. A. Waring, University College
*S. Weldon, St. George's
A. Whitfield, King's College
J. P. Wightman, St. Bartholomew's
J. H. Wilks, St. Bartholomew's
T. Willey, St. Bartholomew's
D. J. Williams, Middlesex
W. Winslow, Guy's
C. Wyman, St. Thomas's and Camb.
J. Young, Guy's.

* Candidates who have not presented themselves under the regulations of the Examining Board.

THE Brighton Town Council have adopted the Infectious Diseases (Notification) Act, which will come into operation in the borough on March 1st.

AT a meeting of the Council of the Hospital Sunday Fund, on February 3rd, a donation of £500 from "E. A. H.," and one of £100 from Mr. Ludwig Mond, were announced.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ZYMOTIC MORTALITY IN LONDON.

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during each week of the fourth quarter of 1890. The fluctuations of each disease during the period under review, and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-pox. Not a single death from this disease was registered in London during the last three months of 1890, the average number in the corresponding periods of the preceding ten years, 1880-89, having been 103. During the whole of last year only 3 fatal cases of small-pox were registered in London. One small-pox patient was admitted to the Metropolitan Asylums Hospitals during last quarter, and no patient remained under treatment at the end of December last.

Measles.—The deaths referred to measles, which had increased from 218 to 937 in the preceding five quarters, further rose to 1,034 during the fourteen weeks ending January 3rd last, and exceeded by 305, or more than 40 per cent., the corrected average number. Among the various sanitary areas of the metropolis the highest proportional fatality of measles was recorded in Hammersmith, Bethnal Green, St. George-in-the-East, Stepney, Mile End Old Town, Poplar, St. Saviour Southwark, Newington, Camberwell, and Woolwich.

Scarlet Fever.—The fatal cases of this disease, which had been 167 and 227 in the preceding two quarters, further rose to 296 during the period under notice, but were little more than half the average number in the corresponding quarters of the previous ten years. The number of scarlet fever patients in the Metropolitan Asylum Hospitals, and in the London Fever Hospital, which had been 1,083, 1,247, and 1,681 at the end of the first three quarters of 1890, was 1,593 at the end of December last. The number of cases admitted to these hospitals, which had risen from 1,082 to 2,162 in the preceding three quarters, further increased to 2,419 during the last three months of 1890. Among the various sanitary areas the mortality from scarlet fever was highest in St. Giles, St. Luke's, Bethnal Green, St. Saviour Southwark, and Bermondsey.

Diphtheria.—The deaths referred to diphtheria in London, which had been 227 and 308 in the preceding two quarters, further rose to 494 during the three months under notice, and

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE THIRD QUARTER OF 1890.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the preceding ten years, 1880-89, corrected for increase of population.

exceeded by 153, or nearly 50 per cent., the corrected average quarterly number. The weekly deaths showed an excess almost throughout the quarter. The number of cases of diphtheria admitted into the Metropolitan Asylum Hospitals, which had been 185, 211, and 303 in the first three quarters of last year, further rose to 369 during the three months ending December, and 159 patients remained under treatment at the end of the year. Among the various sanitary districts diphtheria was proportionally most fatally prevalent in Paddington, Hammersmith, Chelsea, Pancras, Holborn, St. Luke's, Shoreditch, Bethnal Green, Whitechapel, and St. George-in-the-East.

Whooping-Cough.—The fatal cases of whooping-cough, which had declined from 1,227 to 588 in the preceding three quarters, further fell to 410 during the last three months of 1890, and were 121, or nearly 25 per cent., below the corrected average number. Among the various sanitary areas this disease showed the highest proportional fatality in Fulham, St. George Southwark, Bermondsey, and Rotherhithe.

Fever.—Under this heading are included deaths from typhus, typhoid fever, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 92 and 175 in the preceding two quarters, further rose to 277 during the period under notice, but were 68, or 20 per cent., below the average, although they exceeded the number in the corresponding period of either of the preceding two years. Of these 277 deaths from "fever," 3 were referred to typhus, 265 to enteric fever, and 9 to simple and ill-defined fever. The Metropolitan Asylum Hospitals contained 151 cases of enteric fever at the end of December, against 51 and 140 at the end of the preceding two quarters; and 274 new cases were admitted during the last three months of 1890, against 80 and 204 in the previous two quarters. Among the various sanitary areas "fever" was proportionally most prevalent in Fulham, Hampstead, St. Giles, Bethnal Green, and Poplar.

Diarrhœa.—During the period under notice 508 deaths resulted from diarrhœa, exceeding the corrected average by 176, or more than 50 per cent. Among the various sanitary areas this disease showed the highest proportional fatality in Clerkenwell, St. George-in-the-East, Stepney, St. Saviour Southwark, St. Olave Southwark, Rotherhithe, and Greenwich.

In conclusion, it may be stated that during the fourth quarter of 1890 the 3,019 deaths referred to these principal zymotic diseases very slightly exceeded the average number in the corresponding periods of the preceding ten years, 1880-89. The mortality from measles, diphtheria, and diarrhœa showed a marked excess, whilst those of each of the other zymotic diseases was considerably below the average.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

The Registrar-General has just issued his quarterly return relating to the births and deaths registered in England and Wales during the fourth or autumn quarter of 1890, and to the marriages in the three months ending September last. The marriage-rate exceeded that recorded in the corresponding quarter of any year since 1883, and was considerably above the mean rate in the third quarters of the preceding ten years 1880-89. The mean temperature of the air last quarter at the Royal Observatory, Greenwich, was 40.8°, and was considerably below the average; it was slightly below the average in October, showed a slight excess in November, and was considerably below the average in December. The rainfall during the quarter amounted to 3.4 inches, and was less than half the average.

The births registered in England and Wales during the three months ending December last were 205,706, equal to an annual rate of 27.8 per 1,000 of the population, estimated by the Registrar-General to be nearly twenty-nine and a half millions of persons. This birth-rate was the lowest ever recorded in the last quarter of the year, and as much as 12 per cent. below the mean rate in the corresponding quarters of the preceding ten years. The birth-rate in the several counties during the quarter under notice ranged from 18.7 in Rutlandshire, 21.4 in North Wales, and 22.4 in Sussex to 32.5 in Northumberland, 32.7 in Durham, and 33.1 in Monmouthshire. In the twenty-eight large English towns for which the Registrar-General publishes weekly returns, the birth-rate last quarter averaged 28.0 per 1,000, and was only slightly above the general English rate. In London the birth-rate was 27.2 per 1,000, while in the twenty-seven provincial towns it averaged 28.7, and ranged from 21.4 in Brighton and in Huddersfield, and 22.4 in Nottingham to 36.5 in Cardiff and 39.3 in Newcastle-upon-Tyne. The births registered in England and Wales during the quarter under notice exceeded the deaths by 58,280; this represents the natural increase of the population during that period.

From returns issued by the Board of Trade, it appears that 61,691 emigrants (including 18,229 foreigners) embarked from the various ports of the United Kingdom at which emigration offices are stationed: of these, 31,026 were English, 4,126 Scotch, and 8,122 Irish. The proportion of British emigrants to a million of the respective populations of the three divisions of the United Kingdom were 1,055 from England, 1,001 from Scotland, and 1,728 from Ireland. The proportion of emigrants from England and Scotland showed a considerable decline from the average proportions in the December quarters of recent years, while the proportion of Irish emigrants corresponded with the average.

During the fourth quarter of 1890 the deaths of 147,426 persons were registered in England and Wales, equal to an annual rate of 19.9 per 1,000 of the estimated population. This rate was 1.0 per 1,000 above the mean rate in corresponding quarters of the preceding ten years, and exceeded the death-rate in any December quarter since 1884. Among the urban population of the country, estimated at more than nineteen millions of persons, the rate of mortality during the quarter under notice was equal to 21.2 per 1,000; in the remaining and chiefly rural population of more than ten and a quarter millions, the rate was 17.5 per 1,000. The urban rate was 1.2, and the rural rate 0.7 per 1,000 above the mean rate in the fourth quarters of the preceding nine years. Among the twenty-eight large English towns the mean death-rate was 22.1 per 1,000; in London the rate was 21.3, while in the twenty-seven provincial towns it averaged 22.7 per 1,000, and ranged from 16.5 in Derby, 17.8 in Nottingham, and 17.9 in Hull, to 25.9 in Bolton, 31.4 in Manchester, and 31.7 in Preston.

The 147,426 deaths registered in England and Wales during the three months ending December last included 4,929 from measles, 4,110 from diarrhœa, 2,303 from whooping-cough, 2,038 from scarlet fever, 2,007 from "fever" (including typhus, typhoid, and simple fever), 1,678 from diphtheria, and only one from small-pox; in all, 17,066 deaths were referred to these principal zymotic diseases, equal to an annual rate of 2.30 per 1,000, against an average rate of 2.18 in the preceding ten corresponding quarters. The mortality from measles, diarrhœa, and diphtheria showed an excess, while that from each of the other zymotic diseases was below the average. Only one death from small-pox was registered during the quarter, making but 15 during the whole of the year. In the Metropolitan Asylum Hospitals only one small-pox patient was under treatment during last quarter.

The rate of infant mortality, or the proportion of deaths under one year of age to registered births, was equal to 170 per 1,000, and exceeded by 30 per 1,000 the mean proportion in the December quarters of the preceding ten years, 1880-89. In London the rate of infant mortality was 175 per 1,000, while it averaged 201 in the twenty-seven provincial towns, among which it ranged from 147 in Portsmouth, 154 in Derby, and 158 in Hull to 228 in Halifax, 248 in Oldham, 249 in Blackburn, and 286 in Preston.

AN EXTEMPORISED DISINFECTOR.

Sir,—A note on a simple form of disinfector in use here will be of interest in connection with the leading article published in the British Medical Journal of January 17th.

A case of scarlet fever occurred which rendered it necessary that we should possess some means of practical disinfection. Reference to the discussion on this subject at the recent annual meeting at Leeds made it clear that steam at low pressure gave unequivocal and satisfactory results. We, therefore, connected a large wine cask with the steam boiler in such a manner that the dry steam entered at the upper part and escaped at the bottom. A gauge registered the pressure at about 3 lbs., and a thermometer inserted into the outlet pipe showed a minimum temperature of 212°. In order that the

penetrating quality of the steam under these circumstances might be tested, a tightly rolled blanket was placed in the barrel. In twenty minutes it was removed, and the minimum thermometer, which had been wrapped in the innermost folds of the blanket, was found to have stood at 212°. The apparatus stands in the open air at a distance from the boiler, and it was, therefore, necessary to dry the steam by providing a U-tube of calculated length to maintain the pressure of steam by a column of condensed water, and to act as a safety valve.

The practical result of the employment of this inexpensive and easily provided apparatus was that the threatened epidemic did not extend, and that the articles disinfected suffered very little harm. For instance, a yellow covered novel showed only slight blisters on the boards after twenty minutes in the steam. The chemical disinfectant used was creolin.



The accompanying drawing shows the disinfector ready for use—S, pipe conducting steam to cask; E, escape pipe; T, thermometer. I am, etc.,

A. R. URQUHART, M.D.

James Murray's Royal Asylum, Perth.

MEDICAL OFFICERS OF WORKHOUSES.

LEX writes to ask if it is compulsory for the medical officer of a workhouse to reside in the district (*sic*) in which the workhouse is; and if not, what distance away is allowed.

*** It is not necessary for a workhouse medical officer to reside in the Poor-law medical district in which the workhouse is; but it is, of course, expected that he should reside within easy reach. We are not aware that an actual distance for residence has been fixed.

THE CUBIC CAPACITY OF W.C.'S.

DR. R. JONES, D.S.Sc. Victoria University (Leigh, Lancs.), writes: The notice of Surgeon-Major McNamara's "new water-closet" brings strongly to mind my thoughts on the subject a few months ago. Being at that time studying sanitary subjects, I devised a similar plan, which I rejected on account of its unsightliness. There is one point about water-closets on which authorities are silent, and that is the cubic capacity of the room where the closet is fixed. I had a little discussion on the matter with one of my examiners for the diploma in sanitary science, and although I differed from his views, I naturally was backward in supporting my own opinion. The examiner said that it was best to have a small closet, and not more than 8 feet or so high, on account of the difficulty of dusting and keeping a lofty room clean. A little thought will, however, show that this view is wrong. The usual sojourn in such necessary apartments is probably not less than ten minutes, and at times is more. The necessity of ventilation is well known and generally provided for more or less efficiently, but during the temporary occupancy this is often interfered with, and if the sole means of ventilation be a window, it is disgusting to think of the abominations people breathe into their lungs whilst shut up in a cabinet perhaps not containing more air space than 100 cubic feet. So far from having small closets, the necessity for cubic space is quite as great as in any other room. Very few closets are quite (as they ought to be) odourless. In private houses the practice of having the water-closet in the bathroom, if this be a roomy one, is in my opinion a good one, as any effluvium is diluted. It is quite true that cubic capacity, as laid down by Parkes, cannot take the place of efficient ventilation for living or sleeping rooms; yet for such temporary dwelling places it has a great importance. Without attempting to fix any special limit, I think that a minimum of 500 feet ought to be aimed at. I have consulted the usual textbooks, but they make no mention of this important point.

WORKHOUSE MILK.

ANALYSIS, who is a workhouse medical officer, wishes to know if it is his duty to analyse the milk supplied to the workhouse if ordered to do so by the guardians, and as he feels he cannot do it himself, whether he ought to apply to the guardians for a fee for getting it done.

*** We do not consider it to be a duty of the workhouse medical officer to make any such analyses, and if, in consequence of an order of the guardians, he employs a skilled analyst, we believe he could claim a proper fee for the work.

CERTIFICATION OF PAUPER LUNATICS.

W. V. M., medical officer of No. 1 district in a country union, writes to ask if the medical officer of No. 4, an adjoining district, can certify to the lunacy of patients residing in No. 1 district.

*** The medical officer of any district can certify to the lunacy of patients residing either in his own district or any other, if called upon to do so by the magistrate who acts in the case. Some magistrates prefer not calling on the medical officer of the district in which the patient resides to perform this duty, and in such cases the medical officer, as he does not certify, cannot of course claim any fee.

DUTIES OF MEDICAL OFFICERS OF HEALTH UNDER THE NOTIFICATION ACT.

H. writes: Who made the "Medical Officer of Health to a large District" (who writes in the BRITISH MEDICAL JOURNAL of January 31st) a ruler and a judge over the equally qualified certifying practitioner, or over the framers of the Act, by which he is, in "protecting the public health," directed to receive the certificate?

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 10,010,426 persons, 6,215 births and 4,284 deaths were registered during the week ending Saturday, January 31st. The annual rate of mortality in these towns, which had declined from 28.7 to 25.1 per 1,000 in the preceding four weeks, further fell to 22.3 during the week under notice. The rates in the several towns ranged from 13.2 in Nottingham, 13.6 in Derby, 16.1 in Hull, and 18.0 in Portsmouth to 27.0 in Salford, 27.9 in Manchester, 29.5 in Halifax, and 32.9 in Preston. In the twenty-seven provincial towns the mean death-rate was 22.5 per 1,000, and slightly exceeded the rate recorded in London, which was 22.1 per 1,000. The 4,284 deaths registered during the week under notice in the twenty-eight towns included 379 which were referred to the principal zymotic diseases, against 404 in each of the preceding two weeks; of these, 113 resulted from whooping-cough, 93 from measles, 45 from scarlet fever, 45 from diphtheria, 43 from diarrhœa, 40 from "fever" (principally enteric), and not one from small-pox. These 379 deaths were equal to an annual rate of 2.0 per 1,000; in London the zymotic rate was 1.8, while it averaged 2.2 per 1,000 in the twenty-seven provincial towns, among which it ranged from 0.0 in Plymouth and in Wolverhampton, and 0.4 in Brighton and in Portsmouth to 3.9 in Salford, 4.4 in Manchester, 4.7 in Bristol, and 7.0 in Preston. Measles showed the highest proportional fatality in Birkenhead, Manchester, Bristol, Oldham, and Preston; scarlet fever in Preston; whooping-cough in Birmingham, Salford, and Huddersfield; and "fever" in Birkenhead. Of the 45 deaths from diphtheria recorded during the week, 25 occurred in London, 5 in Salford, 3 in Manchester, 2 in Preston, and 2 in Birmingham. No death from small-pox was registered during the week, either in London or in any of the twenty-seven provincial towns; and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, January 31st. These hospitals contained 1,343 scarlet fever patients on the same date, against numbers steadily declining from 2,024 to 1,396 at the end of the preceding twelve weeks; 93 new cases were admitted during the week, against 106 and 99 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 7.1 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, January 31st, 853 births and 690 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 28.8 to 24.9 per 1,000 in the preceding three weeks, rose again to 26.4 during the week under notice, and was 4.1 per 1,000 above the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Greenock and Aberdeen, and the highest in Paisley and Glasgow. The 690 deaths registered in these towns during the week under notice included 65 which were referred to the principal zymotic diseases, equal to an annual rate of 2.5 per 1,000, which exceeded by 0.5 the mean zymotic rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Edinburgh, Paisley, and Glasgow. The 361 deaths registered in Glasgow included 22 which were referred to whooping-cough, 6 to measles, and 6 to scarlet fever. Four fatal cases of whooping-cough were recorded in Edinburgh, and 2 of diphtheria in Greenock and in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 7.1 per 1,000, against 7.1 in London.

HEALTH OF IRISH TOWNS.

IN the sixteen principal town districts of Ireland the deaths registered during the week ending Saturday, January 24th, were equal to an annual

rate of 34.2 per 1,000. The lowest rates were recorded in Kilkenny and Armagh, and the highest in Waterford and Lurgan. The death-rate from the principal zymotic diseases averaged 1.7 per 1,000. The 260 deaths in Dublin were equal to an annual rate of 38.4 per 1,000 (against 36.0 and 37.1 in the preceding two weeks), the rate for the same period being 25.7 in London and 19.7 in Edinburgh. The 260 deaths in Dublin included 8 which were referred to the principal zymotic diseases (equal to an annual rate of 1.2 per 1,000), of which 5 resulted from different forms of "fever," 2 from diarrhœa, and 1 from whooping-cough.

BRISTOL (Population, 229,361).—*Typhus Cases: Retrospective Statistics: Influenza.*—The death-rate of this city for 1889 (17.5 per 1,000) was but little above that of the previous year, the lowest ever recorded. Bristol stands well amongst the large towns, no other town with a population of 200,000 having so good a zymotic rate, only one having a better rate of infantile mortality, and two (Nottingham and London) having a more favourable general rate. The most prevalent diseases in 1889 were measles and whooping cough. Enteric fever showed a slight increase. For the first time in five years typhus fever made its appearance. The outbreak was small and confined to one locality, and everything pointed to the introduction of infection from outside the city. Two cases belonged to the first quarter of 1890, but as to a third case, reported on June 10th last, Dr. Davies had doubts as to its authenticity. A feature of the report for 1889, which is of some interest and considerable importance, is the table showing the prevalence of zymotic diseases during the last thirty-four years. A chart is also given which shows graphically the yearly variations of these diseases and their epidemic and inter-epidemic rises and falls. It is noticeable that influenza had a place in the returns up to the year 1880, when two deaths were recorded; but the total of deaths from that disease was only 102, whereas during the epidemic of 1890 no fewer than 48 deaths were either primarily or secondarily caused by it. The fatality from diseases of the lungs, brain, and heart increased enormously at the same time, and the death-rate was higher than has been recorded for any quarter during the past fifteen years. Dr. Davies points to the large number of deaths annually registered from phthisis, and thinks that some effort should be made to control the spread of that disease. He announces that he will be glad to undertake disinfection of clothes, bedding, and rooms in phthisical cases upon application by the medical attendants.

BEDFORD URBAN AND RURAL (Population, 26,338 and 22,858).—*Enteric Fever and Diphtheria spread by Careless Personal Intercommunication.*—Dr. C. E. Prior is able to give very satisfactory statistics in his reports for 1889. The public health was uniformly good, except for some prevalence of enteric fever in the rural district, and the persistence of diphtheria in certain localities. Dr. Prior discusses these subjects at some length, giving details of cases and the steps taken to control the spread of infection. He is of opinion that personal contagion was the main factor in the outbreak at Felmersham, and he gives several reasons in support of this belief. There was no community of either milk or water amongst those attacked; several cases occurred in one family and in succession; and contagion could be traced through four generations in two families. The respective death-rates of the two districts—13.3 and 17.5 per 1,000—show a slight increase upon the returns of 1888. Good and constant sanitary work appears to be in progress, but some of the rural localities are still in need of better supplies of water.

SALFORD (Population, 312,030).—*Use of Disease-Charts: Scarlet Fever and Diphtheria Epidemic: Outbreak of Enteric Fever: Hospital: Insanitary Dwellings.*—Mr. Paget's first annual report is a very careful and interesting production, and contains tables of statistics, maps and charts, which are most valuable for reference, and show readily the varying sanitary condition of the different localities. The year 1889 was marked by an exceptional prevalence of scarlet fever and diphtheria. These diseases spread all over the borough, and, together with a special outbreak of typhoid fever in the Regent Road district, had the effect of increasing the miasmatic death-rate beyond the average of the previous five years. During the year, 1,283 cases of scarlet fever were notified to the Health Department, as against 1,128 cases in 1888, 1,427 in 1887, and 1,536 in 1886. The deaths numbered 184. This disease, which apparently had become endemic in the borough, was most prevalent during the autumn, and was co-incident with a sharp epidemic of diphtheria. The fact that the disease spread with alarming rapidity in the most crowded parts of the borough, is suggestive of careless communication between the sick and the healthy. This intercourse was encouraged by the mildness of the disease in the summer months. Of diphtheria, 691 cases were notified during the year, as against 175 in 1888, 83 in 1887, and 41 in 1886. Mr. Paget's inquiries lead him to think that the prevalence of "sore throat" in the Pendleton and Weaste districts had been steadily on the increase during the last few years, and that, while many of these cases gave rise at the time to a suspicion that they might be diphtheritic, there was about the majority of them an insufficiency of marked symptoms which prevented their being notified as cases of true diphtheria. It is hoped that the rigorous disinfection to which infected clothing and premises are subjected may overcome the prevalence of the disease in the borough. Only three cases of typhus occurred during the year. The question of hospital accommodation has been satisfactorily settled, and important action is being taken to deal with insanitary dwellings. The death-rate of Salford for 1889 was about 25 per 1,000.

BACUP (Population, 25,600.)—*Satisfactory Vital Statistics: Lead Poisoning by certain Soft Waters.*—It appears from Dr. John Brown's annual report that there was not an abnormal amount of infectious disease during 1889, though whooping cough was more prevalent than it has been for some years past. The borough was free from typhoid fever until November. Diphtheria and small-pox were entirely absent, and the attacks of measles were very few and slight. There were fewer deaths registered from all causes than in any of the past eleven years, and the death-rate, 17.0 per 1,000, is the lowest hitherto recorded. The infantile death-rate was, however, higher than the average, the chief causes of the mortality being bronchitis, pneumonia, and the prevailing zymotics. Plumbism is reported to have been less common, and it is, so far, satisfactory to find that the endeavours of the Health Committee to get lead service pipes replaced by iron ones have been attended with success. Dr. Brown points out that there are no by-laws which deal with this matter; and, as lead poisoning has occurred in some thirty towns and villages in Lancashire and Yorkshire alone, it is evident that the subject ought to be dealt with so as to reduce its dangers to a minimum. Such a comprehensive investigation has now been undertaken by the medical department of the Local Government Board. It is a matter of more than local importance.

BOURNEMOUTH (Population, 36,375).—*Low Death-rate: Diphtheria and Milk: Mortality from Consumption.*—This favourite health resort showed a very satisfactory record of health at the close of 1889, the death-rate having been only 10.5 per 1,000. Dr. Kinsey-Morgan states that the amount of infectious sickness last year was very trifling when the constant influx of visitors is considered; and the fatality was correspondingly small. Only 16 deaths were returned as due to zymotic diseases. Some interest attaches to some cases of diphtheria, which were undoubtedly connected with a particular milk supply; and, in this connection, Dr. Kinsey-Morgan urges the importance of guarding against all risks of contamination of milk by germs of disease. By far the largest proportion of deaths was due to chest affections. These amounted to 182, of which number 117 were attributable to pulmonary consumption. The proportion of deaths from consumption of the lungs alone was 3.21 per 1,000 per annum. Sanitary matters are well attended to at Bournemouth, and every effort is made to maintain the good conditions which are essential in so popular a health resort.

BRADFORD (Population, 240,515).—*Influenza.*—The very high death-rate recorded in this borough for the first quarter of 1890, 25.3 per 1,000, could not be attributed to the so-called preventible causes, the rate from which was only 0.9 per 1,000. Dr. MacLintock's report shows that there can be no doubt

but that the influenza epidemic injuriously affected a large proportion of the population and indirectly greatly increased the number of deaths, especially from pneumonia, bronchitis, and pleurisy, which were the most common of the maladies following in its train. Among the less fatal consequences were gastric troubles, and nervous depression, occasionally accompanied by neuralgia. In a large percentage of cases convalescence was greatly prolonged. The epidemic practically began and ended with the first quarter, and reached its greatest height towards the end of January. It is extremely difficult to form an idea of the number affected throughout the whole quarter, yet as a rough estimate it may be taken that something like from 10 to 12 per cent. of the entire population suffered. The deaths from consumption were also more than usually numerous. The death-rate for the second quarter ending June 28th was not above the average for that quarter.

River Tyne Port.—*Sickness among Seamen: Overcrowding on Board Vessels: Filthy Cattle Ships.*—Mr. H. E. Armstrong has made a new departure in his annual report for 1889, by giving particulars as to the amount of general sickness which prevails among seamen on board ships visiting the port. This has a practical interest in relation to the character and amount of the accommodation provided, and the exposure, etc., to which the men are subjected in the discharge of their duty. The space required under the Merchant Shipping Act is 72 cubic feet per person. As Mr. Armstrong remarks: "Anyone who considers what a very small amount of room this represents, namely, 6 feet by 3 feet by 4 feet, or not much more than that of a full-sized coffin, must see that it is utterly insufficient for the requirements of health, even in rooms above ground, where ample means of ventilation are provided. Among the ailments from which seamen suffered, no less than over 15 per cent were cases of consumption, colds, and disease of the lungs—a result not surprising under the circumstances." There is much room for improvement, or rather for reform, of accepted standards in regard to this matter. Cattle ships appear to enter this port sometimes in a filthy state, after having landed American cattle elsewhere. The Tyne sanitary officers secure the cleansing of such vessels, but undoubtedly the necessary cleansing and disinfection should have been done at the port of debarkation of the cattle. Sanitary administration in this port is carried on with commendable zeal in every department.

Bilston (Population, 23,000).—*High General Death-Rate and Infant Mortality: Defective Dwellings of the Poor: Consumption and its Causes.*—Dr. T. Ridley Bailey reports an increased death-rate for 1889, which amounted to 22.5 per 1,000. About one-third of the total deaths were in children under 1 year of age, and more than half in children under 5 years. This is equivalent to an annual rate in children under 1 year, which is considerably above the average of infantile mortality for the whole of England and Wales. The deaths registered from diseases of the respiratory system were 109, as compared with 116 in the preceding year, 60 being children under 5 years of age. In 10 cases of death inquests were held by the district coroner, and in no fewer than 30 cases the certificate was not given by any properly qualified medical practitioner. The number of deaths from consumption was 24; and the total zymotic death-rate was 1.95 per 1,000 of population. Referring to the large mortality from consumption, Dr. Bailey attributes it in great measure to overcrowding and insufficient ventilation in the homes of the poorer inhabitants of the town. He points out that the breath and expectoration of patients are probably capable of conveying the disease to healthy persons, and he recommends that the patients when confined to the house should be isolated as far as possible in a well-ventilated, airy apartment; that the expectoration, which should be received into vessels that can be easily kept clean and disinfected, should be frequently destroyed; that pieces of linen rather than handkerchiefs should be used, as they can be readily burnt; and that all milk should be boiled before being used, in case the cows have been affected with tuberculous disease.

Bootle-cum-Linacre (Population, 52,000).—*Measles and Diarrhœa Prevalent: Small-pox Outbreak: High Infantile Mortality.*—That the year 1889 was a healthy one in Bootle is evident from Mr. R. Sprakeling's report, for the death-rate, 17 per 1,000, was but slightly in excess of that of 1888, the most favourable on record. There was, nevertheless, an increase in the zymotic mortality, for which measles and diarrhœa were mainly responsible. Scarlatina and typhoid fever showed a decrease. The necessity for revaccination is shown by the history of small-pox during the year. A very mild case was admitted to hospital, and the disease was thence communicated to the nurse and to a ward's maid, the former of whom, though showing good vaccination marks, contracted the disease in confluent form and died. Several cases of typhus had also to be dealt with in the hospital, but the majority of these cases were from outlying districts. Three deaths, however, had to be credited to the borough. The large amount of infantile diarrhœa, which characterises Bootle in the summer and autumn, makes Mr. Sprakeling specially urgent for effective and frequent flushing of the sewers, and he thinks also that the establishment of a *crèche* might help to diminish the mortality. When it is noted that half the total deaths are of children under 5, and that 16.5 per cent. of the births die during the first year of life, it is only too evident that his urgency is well founded.

Bolton (Population, 114,670).—*High Death-rate: Scarlet Fever: Diphtheria, Small-pox: Retirement of the Health Officer.*—The annual mortality shown in Mr. Sergeant's report for 1889 was equal to 22.0 per 1,000, as compared with 21.6 in the preceding year. This is higher than the average of the past ten years, and renders the position of Bolton, among the large towns, less satisfactory than usual. The addition to the death-roll was chiefly attributable to fatalities from zymotic diseases, which showed an excess equal to 1.5 per 1,000. The amount of infectious sickness was unusually high, chiefly owing to the extensive prevalence of scarlet fever. Of those attacked with infectious disease, 8.3 per cent. died—a low percentage, but slightly higher than in 1888. The scarlet fever which prevailed was of a mild character; and, of the 1,256 persons attacked, 65, or about 5 per cent., succumbed to the disease. The mortality from fever was equal to 21 per cent. of the cases notified, while a third of the diphtheritic attacks had a fatal termination. Small-pox twice made its appearance, but caused no death, nor was there any fatal case of typhus fever. Diphtheria occasioned 29 deaths, as against 7 for the year preceding, and an average of 4.7 for the past decennium. The town has hitherto been comparatively free from this disease, but at the present time the tendency is to increase, and the greatest care will be required to ascertain the origin of the diphtheritic poison. An outbreak which occurred in Radcliffe Road illustrated how the disease might be contracted. The first patient attacked was a worker at a bleach works, who was seized with illness while working in an atmosphere laden with impurities given off from offensive river water used for driving power; and subsequent cases after the disease became existent in the neighbourhood, were due to direct infection. This is Dr. Sergeant's last report as health officer of Bolton, as he has been appointed medical officer of health to the County Council. During the sixteen years he has been health officer at Bolton he has done much good work, and the inhabitants of that town owe much to his efforts.

Hackney (Population, 246,114).—*Decreasing Death-rate: Low Infantile Mortality: Prevalence of Diphtheria: Diphtheria Caught from a Cat.*—The number of deaths in this metropolitan district during 1889 was the smallest recorded since 1880, and, whether the increase of population be accurately calculated or not, it is evident that the death-rate is much lower than formerly. Dr. J. W. Tripe calculated the death-rate for 1889 at 13.6 per 1,000, whilst the rate for the whole of London was 17.5 per 1,000. Zymotic diseases gave a rate of 1.63 per 1,000. As a proof of the healthiness of the locality, Dr. Tripe draws attention to the low infantile mortality. Since 1879 the death-rate has fallen 5.2 per 1,000, in spite of the increasing density of population, and Dr. Tripe fairly claims a large proportion of this improvement as a result of the active sanitary work that has been carried on for years past. The comparative absence of infectious diseases

was the cause of the marked reduction reported in 1889, diphtheria being the only disease of this class which has shown any increase in prevalence. Dr. Tripe discusses briefly the high mortality from this cause and the measures taken to trace out the sources of infection and to deal with insanitary conditions. He instances a noteworthy case in which the disease was without much doubt communicated by a cat. A girl, aged 13 years, took into the house, on April 13th, a stray cat which was affected with running at the mouth and nose, and which she nursed until it died on the 14th. On the 16th she sickened with sore throat, and died on the 22nd of the month. The medical certificate of death being "Diphtheria, 7 days." There was not any sanitary defect in the house, or any case in the neighbourhood, or at the school she attended.

Jarrow (Population, 31,000).—*Measles Epidemic.*—In comparing the death-rate of Jarrow with the mean death-rate of England and Wales, and of other towns, it is necessary to take into account the very large fact that Jarrow must be regarded as a purely working-class and non-residential town. This alone implies considerable sanitary disabilities, as a large proportion of the population of Jarrow is composed of a migratory class, who of necessity acquire habits of carelessness in sanitary matters. Dr. Campbell Munro, therefore, considers it in some degree satisfactory that, in spite of an epidemic prevalence of measles, a hot early summer, with its sequent high death-rate from diarrhœa, and the untoward climatic conditions of the later part of the year, the gross death-rate of 1889 did not rise above 21.2 per 1,000 of the population. Everything possible was done to combat these adverse conditions. School closing was resorted to in the case of measles; the condition of the privy middens was subjected to the strictest investigation, and the hospital was opened free of charge for the reception of all cases of infectious disease requiring isolation. The zymotic death-rate amounted to 3.6 per 1,000.

Wallasey, including New Brighton (Population, 33,000).—The statistics given by Dr. Craigmile for 1889 do not compare favourably with those for 1888, which was an exceptionally healthy year, but they are better than those for 1887. The fluctuations amongst the zymotic diseases are mainly responsible for these variations, and the sanitary condition of the district need not be called into question. Dr. Craigmile admits, however, that the typhoid mortality is too large, and considers very closely the distribution and causes of the disease. He reiterates his opinion that the cases are always associated with sanitary defects, and have therefore been probably caused by them. Scarlatina and whooping-cough were more than usually fatal. Amongst the remaining classes of disease there was a considerable increase under constitutional and developmental, but a slight decrease under local, diseases, the latter being the class under which by far the greatest number of deaths always occurs. The general death-rate amounted to 16.0 per 1,000.

Walthamstow (Population, 44,000).—*Low Death-rate: Isolation Hospital required.*—There is not much to be gathered from Mr. St. Clair Shadwell's annual report for 1889 beyond the fact of a very low death-rate and a favourable zymotic rate. It is noteworthy that the epidemics of the year were entirely different from those of 1888; whooping-cough and diphtheria, then so fatal, seem to have spent their force and caused few deaths in 1889, whilst their places on the death-roll were taken by scarlet fever and measles. The general rate amounted to 13.5 per 1,000, and the zymotic rate to 2.18, both being much below the average. A hospital for infectious cases is greatly needed for the district.

Warrington (Population, 49,000).—*Epidemic of Measles: Increase of Diphtheria and Croup.*—Judging by the increased death-rate which Mr. J. H. Gornall reports for 1889, the year was not altogether favourable to the public health of this district; and this is further borne out by the heavier infantile mortality recorded, and a slightly increased zymotic rate. An extensive prevalence of measles was responsible for these last-named items, yet the fatality was less than in the former epidemic years—1882, 1884, and 1887. There is nothing in the incidence of the other infectious diseases to call for remark. A summary of cases of fever is interesting as showing the source of infection and the association of dirt and insanitary surroundings with the cases of sickness. Diphtheria caused 8 deaths against 5 in 1888, and there was concurrently a considerable increase in cases of croup.

Hanley (Population, 56,587).—*Measles Epidemic.*—An epidemic of measles had a serious effect upon the statistics of both 1888 and 1889, no fewer than 174 and 107 deaths respectively being registered from this disease. The death-rate was thereby kept high. Dr. Swift Walker states, however, that the 1889 death-rate—19.6 per 1,000—showed a decline of 1.1 from the rate of the preceding year, and was below the decennial average. There was also a consequent decline in the rates of zymotic and infantile mortality. Of the total deaths in 1889 as many as 3.1 per cent. were "uncertified."

Lytham (Population, 4,573).—An average death-rate of 13.9 per 1,000, extending over nine years, marks this district as a healthy one, and the average zymotic rate, 0.9 per 1,000, strengthens this opinion. Mr. Eason's report for 1889 shows a death-rate of 13.5, while for the second year in succession only one death was recorded from zymotic disease, namely, a case of diphtheria. Fourteen deaths were due to diseases of the respiratory organs, a higher ratio than usual. Nine deaths were registered as from phthisis. The health officer has to recommend some improvement of the water supply.

HOSPITAL AND DISPENSARY MANAGEMENT.

Ulster Hospital, Belfast.—The report read at the annual meeting of this institution was satisfactory. In the children's department 209 cases were treated during the year, with 3 deaths. In the extern department there were 2,358 new cases treated, with a total attendance of 4,118. In the women's department 64 cases were treated during the year, and in the extern gynæcological department 265 new cases were treated, with a total of 929 attendances. The mortality after operation was very small, and in no case was there serious surgical fever. The inadequacy of the present building has long been apparent, and the Committee have determined to erect new premises, and a special Committee has been appointed for the purpose. It is proposed to hold a bazaar in the month of December of this year.

Belfast Hospital for Sick Children.—The medical report presented to the annual meeting of this institution showed that during 1890, 371 patients were admitted to the hospital, of whom 193 were medical and 178 surgical. There were also 15 eye and ear cases. During the same period there were 8,536 cases treated in the extern department. In the eye and ear department there were 356 extern cases, and in the dental department 682 cases. Since the last annual meeting the hospital has been recognised as a teaching institution by the senate of the Royal University, and a large number of senior students have received instruction in the wards. The Queen Victoria Convalescent Home, opened during the year, proved a most valuable and welcome addition to the resources of the institution. During the year Dr. St. Clair Boyd had resigned the position of assistant surgeon, and had been succeeded by Dr. John Campbell.

Hospital for Consumption and Diseases of the Chest, Belfast.—The annual report of this institution states that intern patients had been received for the first time during the past year, the new intern department having been inaugurated by the Countess of Shaftesbury on October 3rd, 1890. Since that time 17 cases had been admitted. In the extern department 865 new cases had attended, making a total out-patient attendance of 3,369. With the inauguration of the new intern department, the following additions had been made to the staff, namely, Surgeon Fagan, F.R.C.S.I., Consulting Surgeon; Dr. H. L. McKisack, Visiting Surgeon; Dr. Cecil Shaw, Laryngeal Surgeon.

Glasgow Royal Infirmary.—The annual report of the Glasgow Royal Infirmary has just been issued. It shows a total of 42,818 cases dealt with during the year, a

decrease of 1,299 on the preceding year. Of this total, 5,333 were indoor patients, and 37,585 were dealt with at the dispensary. This latter number includes all attendances, and this year, for the first time, the number of first attendances is stated. That number reaches 25,857, or 69.8 per cent. of the whole. Of the indoor patients 474 died. If the number who died within forty-eight hours of admission (namely, 110) be deducted, the mortality is 8.8 per cent., 1 per cent. less than the previous year. The average number daily resident in hospital was 562.53; and the average residence was 37 days. The highest number in the house at one time was 599, and the lowest 483; but the accommodation, as a rule, is taxed to the utmost, and at present 200 applicants are waiting admission. A convalescent home, connected with the hospital, would greatly relieve the strain, by accommodating patients not yet fit to return home, but no longer needing hospital treatment. The average cost of each patient treated to a conclusion was £5 0s. 5d., and the cost of each fully-occupied bed £47 10s. 4¾d. The resident staff numbers 201, of whom 114 are connected with the nursing staff. The total ordinary expenditure was £26,777 9s. 4d., an excess of nearly £6,600 over the ordinary income; but in legacies £14,353 had been left to the infirmary during the year, and, after deducting the deficit, £8,144 had been added to the stock account.

Lenzie Convalescent Home, Glasgow.—During the past year 1,474 patients have had the benefit of this institution, the average stay being 18 days. In the eighteen years of the existence of the home between 23,000 and 24,000 persons have passed through it. The expenditure during last year has been a little under £2,000, a total cost of £1 5s. 3¾d. per patient; and the income has exceeded the expenditure by over £200. The managers are expending a sum of about £3,000 in building a dining hall, which will also be available for meetings and recreation, and additional bedroom and lavatory accommodation. A notable fact concerning the annual subscriptions is the yearly increasing amount received from *employés* in public works.

INDIA AND THE COLONIES.

INDIA.

A Health Society in Madras.—A society, similar to the Calcutta Health Society, has been formed at Madras. At a public meeting held on October 27th, under the presidency of Sir Charles Lawson, the Calcutta rules were adopted with some amendments, and 62 European and native gentlemen were enrolled as members. It is proposed to ask the Governor to be the president. The council nominated includes several of the leading citizens of Madras and a considerable proportion of medical men, among whom may be mentioned Surgeon-General de Fabeck.

Leper Asylums in India.—A home for lepers was opened at Matunga (Bombay) on November 27th, 1890, when forty-nine vagrant lepers were collected by the police and conveyed to the asylum in carts provided for the purpose by the municipal authorities. The home is intended to serve as a temporary refuge till the permanent asylum at Trombay which has been liberally endowed by Sir Dinshaw Manockjee Petit, Bart. is ready. The inmates of the temporary home will be clothed and fed at the expense of the Government and the municipality. It is proposed gradually to induce the lepers in the different districts of Bombay to submit themselves to control. By the exertions of Mr. Acworth, Municipal Commissioner, and the other members of the Lepers Committee, a sum of Rs.57,000 has been collected for the maintenance of the Matunga Asylum. Dr. N. H. Chowksey, a distinguished graduate of the Grant Medical College, has been appointed Medical Superintendent of the new asylum. The Rev. W. J. Richards, missionary at Alleppy, a town of some 35,000 inhabitants, where there are numbers of lepers, has for some time been collecting money for the establishment of a leper asylum there. A total sum of Rs.2,105, including donations from the Maharajah of Travancore amounting to Rs. 800, has now been raised, of which Rs.1,565 has been spent in purchasing a site and building an asylum, consisting of a block containing six rooms, with accommodation for twelve patients. It is intended to admit only male sufferers at present. Since the asylum was built there have been many applications for admission.

MEDICAL NEWS.

MM. Charles Richet, editor of the *Revue Scientifique*, and Malassez, of the Collége de France, have been elected Presidents of the Paris Société de Biologie for 1891.

The Philadelphia *Medical Times and Register* states that the phthisical patients in the Philadelphia Hospital have refused to submit to the Koch treatment.

Successful Vaccination.—Mr. T. P. Thomson, M.B. and C.M., Public Vaccinator of the Alberbury District of the Atcham Union, has been awarded the grant for successful vaccination for the third time.

London School of Medicine for Women.—With the object of improving the Materia Medica Museum at the London School of Medicine for Women, a friend who wishes to be anonymous has given £100.

We have received from Herr J. Casper, 14, Behren Strasse, Berlin, W., a lithograph after W. Hoffmann's portrait of Professor Robert Koch. The reproduction, which measures 14 by 21 inches, is strikingly like the Professor, and possesses considerable artistic merit.

The University of Moscow.—On January 24th, the University of Moscow entered on the 137th year of its existence. The total number of students on the first day of the present year was 3,473, of whom 1,180 were students of medicine. The teaching staff numbers 94 persons. Of these 37 (15 ordinary, and 14 extraordinary, professors, with 8 prosectors) belong to the medical faculty.

Honours to Medical Men in Russia.—The Emperor of Russia has presented a gold snuff box, marked with his own initials and adorned with the Imperial Crown worked in diamonds, to Professor Krassowski, Physician Accoucheur to the Imperial family. The Order of St. Stanislaus (second class) has been conferred on Dr. Rauber, Professor of Anatomy in the University of Dorpat.

The Petitions Committee of the German Reichstag reported, on January 21st, on a petition which had been presented by the General Association of German Women, praying for the admission of women to medical study, and to legal qualification as practitioners. The petition was, after some discussion, declared to relate to a matter with which the Reichstag was unprepared to deal, and the assembly thereupon passed to the order of the day.

Hygiene in Philadelphia.—Mr. Henry C. Lea, of Philadelphia, has given a sum of 50,000 dollars to the University of Pennsylvania for the erection of a hygienic laboratory. The plans have been revised by Dr. John S. Billings, who has embodied in them the results of his observations during a scientific tour in Europe. The institution will, it is stated, be the finest of the kind in the world—till some other American millionaire builds a grander, or at least a bigger, Temple of Hygiene somewhere else. It is to be provided with lecture rooms, museums, bacteriological and photographic rooms, a crematory, a separate building for the rabbits, guinea-pigs, and other animals used for experiments.

Presentation.—Dr. George Burn, who has been for many years medical practitioner in Latheron, Caithness, was recently presented with some handsome pieces of silver plate by his patients and friends. Amongst the contributors were the Duke of Portland, Mr. W. Thomson Sinclair of Treswick, Major Stocks of Latheronwheel, and Major Clarence Sinclair of Ulbster. The plate consists of an elegant centre piece bearing the figure of Æsculapius, and two beautifully chased bowls. At the banquet Rev. J. Matheson acted as chairman, and Mr. J. Mowat as croupier. After the usual loyal toasts Mr. A. Mowat, banker, proposed the health of Dr. Burn in highly eulogistic terms, and made the presentation, to which Dr. Burn suitably replied.

DR. ROBERTS BARTHOLOW.—Dr. Bartholow, whose retirement from the Chair of Therapeutics in Jefferson Medical College has been generally attributed, in the American medical press, to ill-health from overwork, has written a letter, which is published in the *American Practitioner and News*, in which he protests emphatically that he is "not broken down either mentally or physically," and that he never was in a condition better fitted to discharge his professional duties or his professional work.

QUEEN VICTORIA JUBILEE INSTITUTE FOR NURSES.—The Queen has appointed the Princess Louise (Marchioness of Lorne) to be President and Miss Guthrie Wright Honorary Secretary of the Scotch Branch. The following nursing associations have been affiliated to the Institute: Liverpool, Haggerston and Hoxton, Chelsea, Hammersmith, Hampstead, Kensington, Newington and Walworth, Bolton (Lancashire), Westminster, Manchester, Worcester, Camberwell, Bangor, Glasgow, East London, Coventry, and the Rural District Nursing Association. Ninety-four nurses whose names Her Majesty has approved of have been entered on the Roll of Queen's Nurses.

BURIAL REFORM.—A meeting of the Burial, and Funeral Mourning Reform Association was held last week at the Church House, Westminster, under the presidency of Professor Flower, when the following resolutions were carried:—Proposed by Sir Joseph Fayrer: "That the true principle for the disposal of the dead body lies in providing against its becoming injurious to the living, and that the body, when buried, should be inclosed in some readily-perishable material, and laid in suitable and sufficient earth." Proposed by General Lowry: "That this meeting calls attention to the evils attendant upon the excessive insurance of the lives of infants, to which this society has in former years called attention. Such sums as £10, £15, and £20, and even more, for which children's lives are sometimes insured, are beyond what is required for one single funeral. It ought to be sufficient for parents to insure the moderate cost of a simple funeral with its concomitant expenses." On the motion of Mr. Lefevre it was resolved to present a petition to Parliament for a Select Committee on cemeteries and burying grounds, and the various abuses that had gathered round the disposal of the dead.

ST. JOHN AMBULANCE ASSOCIATION TRAINING FOR ASYLUM ATTENDANTS.—On Friday, January 30th, the Mayor of Lancaster distributed the certificates and medallions which had been gained by members of the staff of the Royal Albert Asylum. In a report read by Dr. Shuttleworth (Medical Superintendent) it was stated that lectures on "First Aid" had been given by himself and his colleague (Dr. Telgood Smith) to 19 women and 11 men, of whom 16 women and 10 men entered for examinations, which were conducted by Surgeon-Major Hutton, chief examiner of the Association. Ten women and 6 men had obtained certificates for first examination in first aid; 6 women, vouchers for re-examination; and 3 men were entitled to the medallion of the Association, having passed their third examination. The Mayor remarked on the value of instruction in ambulance work for policemen, railway *employés*, and others, who, like the staff of the asylum, had the care of large numbers of feeble persons specially liable to accident; and complimented the medical officers on the large percentage of passes attained by their pupils. At the Royal Albert Asylum, ambulance classes have been annually held since the winter of 1885, and over 80 of the staff have gained first aid certificates, and 25 of these have had medallions awarded to them after three examinations in consecutive years.

MEDICAL VACANCIES.

The following Vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—House-Physician. Salary, £65 per annum, with board, lodging and washing in the hospital. Applications to John Bonnett, Secretary, 23, St. Andrew's Street, Cambridge, by March 10th.

BANBURY UNION.—Medical Officer for the Cropredy District of the Union. Salary, £90 per annum. Will also be appointed Vaccination Officer. Applications to William W. Heming, Clerk to the Guardians, Banbury, by February 11th.

BROWN ANIMAL SANATORY INSTITUTION.—Professor-Superintendent. Salary, £250 per annum. Application by March 2nd to the Registrar of the University of London, Burlington Gardens, W., from whom full information respecting duties, etc., can be obtained.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and lights provided. Applications to the Secretary by February 7th.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser, unmarried. Salary, £100 per annum, with board and residence. Applications, on printed forms to be obtained to William Appleton, Clerk to the Managers. Clerks' Office, Cleveland Street, W., by February 14th.

CHELMSFORD UNION, Chelmsford.—Medical Officer and Public Vaccinator for the Sixth District of this Union. Salary, £48 per annum and extra fees. Applications to W. W. Duffield, Clerk, by February 7th.

CHICHESTER INFIRMARY, Chichester.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, with not more than five testimonials, to Eugène E. Street, Secretary, by February 21st.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant. Salary, £50 for first year, and, if reappointed, £70 for second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by February 28th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence and allowance for washing provided, but no salary. Appointment for six months. Applications to the Secretary, T. Storrar Smith, by February 13th.

COUNTY COUNCIL FOR THE COUNTY OF DERBY.—Medical Officer of Health for the Administrative County of Derby. Salary, £600 per annum, with £200 extra for travelling and other expenses. Applications to N. J. Hughes-Hallett, Deputy Clerk to the Council, 40, St. Mary's Gate, Derby, of whom forms of application, etc., can be obtained.

COUNTY DONEGAL INFIRMARY.—House-Surgeon and Registrar. Salary, £60 per annum, with apartments and rations. Applications to Rev. J. S. McClintock, Honorary Secretary, Lifford, before March 1st.

COUNTY OF FIFE.—County Medical Officer for Counties of Fife and Clackmannan, to act also as Medical Officer under Public Health Acts for the four districts of the County of Fife, and for the County of Clackmannan. Salary for the combined offices, £600 per annum, with travelling expenses. Applications with ten copies of testimonials, to William D. Patrick, County Clerk, Cupar, Fife, by February 9th.

COUNTY OF LANARK.—Medical Officer, under 45 years of age, must reside in or near Hamilton or Uddinston. Salary, £700 per annum, with travelling expenses and allowance for a clerk and office. Applications to W. Alston Dykes, County Clerk, Hamilton, by February 14th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House-Surgeon, unmarried, double qualifications. Salary, £100 per annum, with board and residence in the house. Applications to William Clark, Honorary Secretary, by February 19th. Election on March 3rd.

DORSET COUNTY HOSPITAL, Dorchester.—House-Surgeon. Salary, £70 per annum, with board and residence in the hospital. Applications to the Chairman of the Committee by February 11th.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare, Ipswich.—Assistant House-Surgeon, unmarried, double qualifications. Salary, £20 per annum, with board, lodging, and washing. Applications to T. Edgar Mayhew, Secretary, by February 11th.

EDENDERRY UNION (Edenderry Dispensary).—Medical Officer. Salary, £145 per annum, and the usual fees. Applications to Garrett Tyrrell, Esq., Monasteroris, Honorary Secretary. Election on February 14th.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY.—Honorary Physician-Accoucheur. Applications to J. Lewis, Secretary, 17, Bartlett's Buildings, Holborn, E.C., by February 9th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—Resident Medical Officer as House-Physician; unmarried. Salary, £60 per annum, with board and residence in the hospital. Applications to the Secretary, Adrian Hope, by February 10th.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Physician; Member or Fellow of Royal College of Physicians of London. Applications to the Secretary, Major W. Christie, by February 7th.

LONDON FEVER HOSPITAL, Liverpool Road, N.—Assistant-Physician; Member or Fellow of Royal College of Physicians of London. Applications to the Secretary, Major W. Christie, by February 7th.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Clinical Clerk for four months. No salary, board, lodging and washing provided. Applications to the Resident Medical Officer.

NEWCASTLE-ON-TYNE DISPENSARY.—Resident Medical Officer. Salary, £250 per annum, with furnished residence, double qualifications. Applications to the Honorary Secretary, Neison Street, Newcastle-on-Tyne, by February 19th.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant; qualified men or fourth-year students. Appointment for six months. Board, lodging, and washing. No salary. Applications, stating age, with testimonials, to E. M. Keely, Secretary, by February 14th.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant; qualified men or fourth-year students. Board, lodging, and washing. No salary. Applications to the Secretary, E. M. Keely, by February 14th.

QUEEN'S COLLEGE, Cork.—Lecturers in the following subjects:—Psychological Medicine, Pathology, Ophthalmology, Hygiene, Otology. Applications not later than February 13th, to the Registrar, Alexander Jack.

ROYAL ACADEMY OF ARTS.—Professor of Anatomy; professorship tenable for five years, the holder being eligible for re-election. Applications, with not more than four testimonials, to the Secretary, by February 21st.

ST. MARK'S HOSPITAL FOR FISTULA, Etc., City Road, E.C.—Anæsthetist. Honorarium, £50 per annum. Applications to the Secretary, Arthur Leared, by February 7th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications to the Honorary Secretary, by February 14th.

SOUTHERN HOSPITAL, Clifford Street, Manchester.—House-Surgeon. Appointment for not less than six and not more than twelve months. Must reside near the hospital. Applications to Geo. Wm. Fox, 53, Princess Street, Manchester.

UNIVERSITY OF GLASGOW.—Six Examiners in Medicine. Annual fee, £10. Appointment for four years. Applications, with twenty printed copies of testimonials, to the Secretary of the Court, Alan S. Clapperton, 91, West Regent Street, Glasgow, by February 21st.

WORCESTER GENERAL INFIRMARY.—Physician. Applications to be sent addressed to the Executive Committee of the Worcester General Dispensary, under cover to the Secretary, Mr. W. Stallard, Worcester Chambers, Pierpoint Street, Worcester, by February 7th.

MEDICAL APPOINTMENTS.

ABBOTT, Charles Edward, L.R.C.P.I., M.R.C.S., reappointed Medical Officer of Health for the Braintree Urban and Rural Sanitary Districts for one year.

AGNEW, Edward Dalton, M.R.C.S., L.R.C.P., L.S.A., appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator to the Hollingbury District of the Bishop Stortford Union, *vice* Henry Cribb, L.R.C.P., deceased.

ANDREW, Mr. Henry, appointed Assistant Surgeon to the Devon and Exeter Hospital.

BALE, William, M.R.C.S., L.S.A., reappointed Medical Officer for the Heaton-Norris District of the Stockport Union.

BENNETT, F. J., M.R.C.S., L.D.S.Eng., appointed additional Assistant Surgeon to the Dental Hospital of London.

CARLINE, William Arthur, M.D.Aberd., M.R.C.S.Eng., appointed Surgeon to the Lincoln County Hospital, *vice* Dr. Wilkinson, resigned.

COLYER, James Frank, L.R.C.P., M.R.C.S., L.D.S.Eng., appointed additional Assistant Surgeon to the Dental Hospital of London.

COOKE, William Conway, L.R.C.P., L.M.Edin., M.R.C.S.Eng., appointed Medical Officer of Health for the Urban Sanitary District of Bognor.

DAKEYNE, Thomas Edward, L.R.C.P., L.M.Edin., M.R.C.S.Eng., appointed Medical Officer for the Leekfrith District of the Leek Union.

DAKIN, W. Radford, M.D.Lond., M.R.C.S.Eng., appointed Obstetric Physician to St. George's Hospital, *vice* Dr. Champneys.

FINLAY, David W., B.A., M.D., C.M., F.R.C.P.Lond., appointed Assistant Examiner in Medical Jurisprudence to the University of Glasgow, *vice* Dr. A. W. Macfarlane.

FRANEY, Edward, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health for the Banbury Rural District.

GAILEY, John Alexander, M.D.Edin., appointed Medical Officer for the Norton and Endon Districts of the Leek Union.

GIBBES, Dr. Heneage, appointed Consulting Pathologist to the Detroit Hospital, Detroit, U.S.A.

HART, David Berry, M.D., F.R.C.P.Edin., appointed Medical Officer to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

HASLETT, W. J., M.R.C.S., L.R.C.P.Lond., appointed Resident Clinical Assistant to St. Luke's Hospital for Lunatics, London, E.C.

HUGHES, A. E. Prest, M.R.C.S., L.R.C.P., appointed Visiting Medical Assistant to the Newcastle-on-Tyne Dispensary, *vice* J. P. Philip.

LAWRENCE, Laurie Asher, F.R.C.S., appointed House-Surgeon to the Western General Dispensary, Marylebone Road, *vice* C. G. Brodie, F.R.C.S.Eng., resigned.

MARSHALL, George Balfour, M.B., C.M.Edin., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

PEARSE, Thomas Frederick, M.D., F.R.C.S., M.R.C.P., appointed Medical Examiner for the Gresham Assurance Society at Southsea.

RILOT, Charles Frederick, L.R.C.P., M.R.C.S., L.D.S.Eng., appointed additional Assistant Surgeon to the Dental Hospital of London.

SEARLE, George Clement, M.R.C.S., L.S.A., reappointed Medical Officer of Health for Brixham.

SENHOUSE, L. S., M.B., C.M.Edin., appointed Assistant House-Surgeon to the Royal Albert Hospital, Devonport, *vice* Mr. H. Frazer Bulger Michael Joseph, L.M.Dub., appointed Assistant Surgeon to the Richmond Hospital, Dublin.

SHARPE, W. C., M.B., C.M.Edin., appointed Junior Physician (Resident) to Smedley's Hydropathic Establishment, Matlock Bridge, *vice* C. J. Whitby, resigned.

SHAW, Cecil Edward, M.A., M.D., M.Ch., appointed Honorary Laryngeal Surgeon to the Hospital for Consumption, Belfast.

SHIELDS, George, M.B., C.M.Edin., appointed Medical Officer for the First Division of the Greystoke District of the Penrith Union.

SMEETH, Henry George, M.D.Dub., B.Ch., appointed Medical Officer for the Heaton Norton District of the Stockport Union.

SOMERVILLE, Archibald, M.D., F.R.C.S.Edin., appointed Medical Officer for the Longnor District of the Leek Union.

SOULBY, C. Ernest, L.R.C.P.Lond., M.R.C.S., L.S.A., appointed House-Surgeon, Middlesex Hospital.

THOMAS, Robert Stanley, M.A., M.B., B.C.Cantab., appointed House-Surgeon to the Middlesex Hospital.

THOMSON, W. Tweeddale, M.B. C.M., appointed House-Surgeon to the Carlisle Dispensary, *vice* C. W. Graham, L.R.C.P.Eng., resigned.

TIDMARSH, J. M., L. & L.M.R.C.P., L.R.C.S.I., appointed Medical Officer to the Luton (Beds.) Post Office.

WATSON, George W., L.D.S.(Edin.), appointed Dental Surgeon to the Eye Ear, and Throat Infirmary of Edinburgh.

WHITBY, Charles J., B.A., M.B.Cantab., appointed Resident Physician to the West of England Hydropathic Establishment, Limpley Stoke, Bath.

WOODHOUSE, A. Clayton, M.R.C.S., L.D.S.Eng., appointed additional Assistant Surgeon to the Dental Hospital of London.

WOODRUFF, W. H., L.D.S.Eng., appointed additional Assistant Surgeon to the Dental Hospital of London.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: On Cataract. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Woakes: On Tinnitus and Vertigo.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Douglas Powell will open a discussion on Angina Pectoris.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Mr. J. B. Sutton: On the Value of Comparative Pathology to Philosophical Surgery. Lecture I.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Sir George Murray Humphry, F.R.S.: On Macrodactyly and some other Forms of Congenital Overgrowth, and their Relation to Tumours. Mr. R. Barwell: On Rachilysis, its Object and its Method.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On General Paralysis of the Insane. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On the Various Forms of Malignant Disease of the Skin.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. R. Maguire: On the Diagnostic Indications of the Sputum, with Demonstrations. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: On Choroiditis.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Mr. J. B. Sutton: On the Value of Comparative Pathology to Philosophical Surgery. Lecture II.

HUNTERIAN SOCIETY, 7.30 P.M.—Annual Meeting. 8 P.M. Dr. Fletcher Beach: Annual Oration.

THE SANITARY INSTITUTE, Parkes Museum, 8 P.M.—Dr. Louis Parkes: On Model Dwellings in London, and Overcrowding on Space. The paper will be followed by a discussion.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Mr. Victor Horsley: On the Surgery of the Nervous System. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Mr. B. Pitts: Selected Surgical Cases. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. McNeill Whistler: On Phthisis as it affects the Larynx.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Dr. R. T. Smith and Dr. Fancourt Barnes: Specimens. Dr. Bennington: Drawings illustrating Anatomical Peculiarities of a Symelian Fœtus, with Notes.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. R. Maguire: On the Diagnostic Indications of the Sputum, with Demonstrations.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Mr. J. B. Sutton: On the Value of Comparative Pathology to Philosophical Surgery. Lecture III.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Hale White and Mr. W. A. Lane: A Case of Stricture of the Pylorus following upon Hydrochloric Acid Poisoning, in which a modified Loreta's Operation was performed. Mr. H. W. Allingham: A Case of Removal of Suppurating Vermiform Appendix. Mr. J. Bland Sutton: Four Cases of Excision of the Vermiform Appendix. Mr. Andrew Clarke: Two Cases in which the Vermiform Appendix was excised.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On Seborrhœa and Allied Affections.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

PIDCOCK.—On January 17th, 1891, at 70, Fitzjohn's Avenue, Hampstead, N.W., the wife of G. Douglas Pidcock, M.A. and M.D.(Camb.), M.R.C.P. (Lond.), of a son.

SHEARER.—At Bareilly, North-West Provinces, India, on December 26th, 1890, the wife of Surgeon J. Shearer, M.A., M.B., C.M., 27th Punjab Infantry, of a son.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

AN ANXIOUS ONE writes: A man, aged 60, afflicted with a small inguinal hernia, suffers a great deal of annoyance from wearing a truss. Would it be prudent to operate, and what would be the probable duration of the case for a radical cure?

AMENORRHŒA.

COUNTRY SURGEON asks for hints in the treatment of the following case: Mrs. E., aged 21, married; menstruation first appeared at the age of 17, fairly regular as to time and quantity for two and a half years, when she married—since then, total suppression.

She first came under treatment in February, 1890; had not seen anything for about six months; careful examination failed to reveal any abnormal condition except slight narrowing of cervical canal with rather a small pointed cervix; sound passed rather more than 2½ inches.

The patient felt no inconvenience whatever, her bodily health being perfect; all other functions well and regularly performed. In appearance she is tall, rather slim, good colour, not plethoric.

I have carried out the usual treatment, namely, various forms of iron, aloes, hip baths, and change of air, but have not applied local irritation. Nothing so far has had the least effect, only that during the last two or three months she has gained five or six pounds in weight. The patient's husband is a mariner, and she has long periods of sexual rest.

ANSWERS.

W. A. L. D.—Professor Stirling's *Outlines of Practical Histology*, or Professor Schäfer's *Essentials of Histology*, would probably meet the requirements of our correspondent.

"BACTERIOLOGICAL TECHNOLOGY."

C. H. C. and J. D. H.—The address of Messrs. Wood and Co. is 56, Lafayette Place, New York. The book might probably be obtained of Mr. H. K. Lewis, 136, Gower Street, W.C., or of Mr. Young J. Pentland, of Edinburgh, booksellers and publishers.

PROFESSOR CORNIL ON KOCH'S TREATMENT.

DR. WILLIAM OGLE (Derby).—Abstracts of Professor Cornil's lectures on the Koch treatment appeared in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of December 20th, 1890 (p. 94); December 27th, 1890 (p. 97); January 3rd, 1891 (p. 4). The lectures were published in full in the *Semaine Médicale* (December 10th, 17th, and 24th).

GERMAN AND FRENCH MEDICAL JOURNALS.

DURSLEY. As regards German journals, the *Berliner klinische Wochenschrift*, or the *Deutsche medicinische Wochenschrift*, would probably answer your purpose. The former is edited by Professor Ewald and published by August Hirschwald, 68, Unter den Linden, Berlin, N.W.; the subscription is six shillings for three months. The latter is edited by Dr. S. Guttmann, and published by George Thieme, Berlin; the subscription is also six shillings a quarter. In French, the *Semaine Médicale* may be recommended. The foreign subscription rate (including postage) is ten francs yearly. The office of the journal is at 18, Rue de l'Abbé-de-l'Epée, Paris. For German, the *German-English Dictionary of Medical Terms*, by Mr. Frederick Treves and Mr. Hugo Lang (Churchill) is useful. For French there is nothing to compare with Littré's *Dictionnaire de Médecine* (J. B. Baillière et Fils), which also includes copious glossaries of medical terms in Latin, Greek, German, English, Spanish, and Italian.

NOTES, LETTERS, Etc.

TAPPING IN HYDROCEPHALUS.

DR. WAYLAND C. CHAFFEY (Brighton) writes: With reference to my account of tapping the ventricles in a case of hydrocephalus, the operation was performed by my colleague, Mr. Leigh, with Dr. Roberts's trocar and cannula. The latter was allowed to remain *in situ* after the withdrawal of the trocar.

SALUBRIOUS ANNAN.

DR. R. BAILLIE MACBEAN, Medical Officer for Annan, writes to call attention to the low death-rate of that burgh for the last year: it was 16.636 per mille, the number of deaths being 56. The burgh, he adds, is supplied with an excellent system of drainage and water, besides being admirably situated at the mouth of the Annan river, and fully open to breezes from the sea, while the town itself stands well above the river and has an excellent fall for its drainage, all of which circumstances go to make it one of the most salubrious of towns.

THE HISTORY OF MEDICINE.

A MEMBER writes: In your interesting review of *Outlines of the History of Medicine and of the Medical Profession* in the BRITISH MEDICAL JOURNAL of January 24th, you remark that the writing of such a history is quite unknown among the English speaking races. The late Mr. Gamgee, of Birmingham, told me a short time before his premature and lamented death, that it was his intention to write such a work, and that he had been for long engaged in collecting materials for the same. Those best acquainted with him will remember how very extensive his knowledge of medical history was, and how well fitted he was for undertaking such a work. Surely among our many men of "culture" in the medical profession, there is at least one who is able and willing to take up this interesting and important subject.

TREATMENT OF TUBERCULOSIS.

A CORRESPONDENT writes: Dr. Heneage Gibbes, who was appointed Professor of Pathology at the Ann Arbor University, Michigan, in January, 1888, has been working in conjunction with Dr. Shirley, of Detroit, at the pathology and treatment of tuberculosis. Their idea is not to destroy the bacilli but to form a chemical combination with the poison, whatever it may be, and render it inert. They commenced with iodoform and after trying various other substances they are now employing iodine in combination with the iodides of gold and sodium, administered hypodermically. Dr. Gibbes has recently been appointed Consulting Pathologist to the Detroit Hospital. This will give him further opportunities of carrying out his experiments, which up to the present have been most successful. Whether this mode of treatment will be found to be of permanent benefit time alone will decide.

CANADIAN STOVES.

DR. GEORGE C. STEPHEN (Sutherland Avenue, W.) writes: At a time when we hear so much about the ill effects of the smoke-laden atmosphere of the metropolis, and the distress caused by the recent cold weather, it may not be out of place, I trust, for me to draw the attention of members of the profession to a method of heating which is both economical and hygienic. During the whole of last winter I was able to keep the passages and rooms of my house comfortably warm (65° F.) by means of a Canadian stove, burning anthracite coal, of which I consumed 2½ tons during the winter. The stove requires very little attention beyond replenishing the reservoir with coal twice a day. I had the fire lighted in November and only allowed it to go out a day or two before Christmas, as I was going out of town for a short holiday.

There being such thorough combustion no particles of half-consumed carbon are added to the already overburdened atmosphere of London, and if these stoves were used generally we should soon, I am sure, eliminate one of the most distressing properties of the London fog. The cost of the apparatus, including freight from Canada and fixing in its place, would be from £10 to £14 according to size, ornamentation, etc. Bearing in mind your caution, published a few weeks back, as to the length of articles of this sort I will not trespass further on your valuable space; should any members of the profession wish to see for themselves the practical working of this self-feeding stove I shall be most happy to give them any information in my power.

MIDWIFERY NOTES.

DR. T. TINLEY (Whitby) writes: The following cases are, I think, rather unusual, and may therefore be of interest to others.

I was asked to see Mrs. P. on the morning of July 6th, as her labour was said to have begun (she was not expecting to be confined until near the end of the month). She was complaining of great pain in the back and body, and the pain was very frequent. I examined her, and found there was no dilatation whatever of the os (she was a primipara, and the vagina was only large enough to admit the index finger). I saw her again later in the day, and found she had been in pain almost continuously the whole day; there was still no dilatation. I prescribed 20 grains each of chloral and bromide of potassium. She scarcely slept at all, and the pain was just as continuous. Later in the day she was a little eased; the bowels acted twice. I gave her chloral and bromide every two hours; still she did not sleep, neither did she get relief from pain. I afterwards gave her opium, which to some extent relieved the pain; still no dilatation. Cleared the bowels thoroughly by an enema. This state of things went on, the pain varying in severity, until the evening of the 11th, when I found the os dilated to about the size of a five-shilling piece, but the pains were unsatisfactory, and there was now about an hour between them; the parts had relaxed considerably. I therefore determined to rupture the membranes, thinking this might increase the frequency of the pains, but it did not. She passed a very quiet night, and there was very little pain, but there had been very much sickness. (12th). The os was about half dilated, and as she began to look worn, and the discharge was offensive, leading one to believe the child was dead, I thought it best to give her chloroform and deliver. The os was now very dilatable. I delivered with some difficulty, owing

to the yielding condition of the head. It was a female child of quite average size, very much decomposed—so much so, that it must have been dead three weeks or a month. The chloroform was stopped, and as she made an expulsive effort I thought the placenta was about to be thrown off; but on examination, I found another bag of membranes protruding, which I ruptured, and after giving her a little more chloroform, I delivered the second child with the forceps. It was a fine, healthy, vigorous girl, which cried lustily directly she was born. The perineum was much stretched with the second delivery, but I did what I do in most cases when I fear rupture—I incised the upper edge of the perineum, so that if rupture does take place, it does not go through the sphincter. The mother never had a bad symptom.

Similar cases to the above have, no doubt, occurred, but it must, I think, be very unusual to find one child so much decomposed and another so healthy occupying the same tenement.

Some two or three years since, I attended a lady who was delivered at full term of a boy, and on removing the placenta—a large one—I found one side had undergone calcareous degeneration. When examining this, I found in the calcified portion of the placenta a small mummified fœtus, quite perfect—so much so, that the sex, that of a boy, was quite distinguishable, showing it to be at least a three, if not a four, months' fœtus.

Much has been written lately in the BRITISH MEDICAL JOURNAL about the administration of ergot. As my experience extends to between three and four thousand cases, I may be pardoned for occupying space. Since I commenced practice, I have always used it: at first sparingly, but gradually more frequently, until now I give it, I should think, in nine out of every twelve cases, that is excepting primiparæ. In my earlier days I everlastingly had cases of *post-partum* hæmorrhage; such is now quite an exceptional thing. If I have any suspicion, either from previous experience of the patient, or inefficiency of pains, I always give a dose before the birth of the child and the preparation I have used for years is Richardson's liquor secalis ammon. I believe I have tried almost every other, English and otherwise, but I have found no other preparation so certain in its action; the ammonia it contains is useful in reviving the patient after her trouble is over.

I well remember a lecturer on midwifery saying, "If you give ergot, and the child is not born within an hour, you are sure to have either a dead child, or one in an asphyxiated condition." My experience has not proved this. Others I have heard say, "Ergot causes irregular or hour-glass contraction." I am quite sure I have had fewer cases of hourglass contraction since I used ergot extensively than I had in my earlier years of practice. When administered in suitable cases, namely, with a dilated or dilatable os, a natural presentation, and only efficient pains required, it is a valuable help, and not only a valuable help to the birth of the child, but as a means of preventing hæmorrhage afterwards.

COMMUNICATIONS, LETTERS, ETC., have been received from:

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REMARKS
ON
THE TREATMENT OF UTERINE TUMOURS BY ELECTRICITY: ITS EFFECT ON SMALL TUMOURS.

By THOMAS KEITH, M.D., LL.D.Ed.

My son and I have already published in detail every case of uterine fibrous tumour which, to the end of 1888, was treated by us after Dr. Apostoli's method. No classification of these cases was attempted. We could not tell if the results obtained were permanent, and we knew well that many would draw different conclusions from ourselves. These rough notes, given as they were taken at the time, were intended for the information of those who had taken up this treatment later than we had done, and in the hope of enabling some to avoid the rocks on which we had split. One's early work in any new direction is almost certainly imperfect, and had we to do those same cases over again, doubtless more satisfactory results would be shown. Now, we have two more years' experience to guide us, and we have a better idea than before of what this electrical treatment consists. The criticisms with which Apostoli's treatment has been so generally received give us now no concern. It is a good and right treatment, and must in time be recognised as such. We know some things that it cannot do, we know better what it can do. We are disappointed that it seems to have broken down in so many hands—at least, we judge this to be so from the number of patients who have come to us more or less imperfectly treated. So far as we can make out, the fault was on the side of the operator. In some, the want of tenderness of manipulation in the introduction of the internal electrode, or an amount of unnecessary pain caused by the current, or the sloughing of large pieces of skin of the abdominal wall from imperfection of the external electrode—a thing that cannot happen if Dr. Apostoli's directions be followed—appear to be the chief causes of an interrupted treatment. Delicacy of manipulation, perseverance, and a knowledge of electricity are essential in carrying out this treatment with any hope of success or improvement to ourselves, or comfort to the patient. Progress here must be slow, and though it has on the whole been slow, we are not dissatisfied. We have reason to believe that the patients thus treated are also satisfied with the efforts made to save them from an operation that either risks their lives, or leaves them with a mutilation, abhorrent to a woman, and, besides, does not always cure them.

The great proportion of our early cases were in hospital or dispensary practice. It seemed impossible to hurt these women in any way. They might be seen, a dozen or more, standing outside in cold wintry weather long before the dispensary door was opened. The treatment was then carried on by my son, and the current was given to as many as twenty in an afternoon, and in as strong doses as could be borne. In some, the tumours were punctured. There was no place for these women to lie down in. They dressed, and went their way out again into the cold, and no harm was ever done. It was another thing altogether when we came to treat the luxuriously living, gouty, neurotic women of the south. It did not take long to teach us that these required more care. They bore the current far less well, and complained more readily of pain. As a rule, smaller doses had to be given at the expense of a longer treatment. In not a single instance did one of them discontinue the treatment of herself, never till they were told to stop; yet these same women bear operations marvellously well. I have never had better results after severe operations, nor have I ever had to do with more pleasant patients.

Generally speaking, the fibroids we have had to treat from the first—and more especially those of the last two years—were cases of large old-standing tumours, the fag ends of every one's work; cases in which everything had been already tried to stop the bleedings, frequent curettings, years of ergot taking, and of every sort of drug and treatment year after year, as well as endless and useless visits to Kreuznach, to those who could afford it. One lady told us that her various visits there had cost her upwards of £700, and for all the benefit she had got she might as well have remained at home; the tumour and hæmorrhages went on as before in an increasing ratio. She had just been ordered to go back again, but rebelled. Not a few were brought to us after having spent years in bed, and who were almost dead from hæmorrhage. Of these, we have tried every one; not a single case was sent away, though in two the treatment could not be carried out. In one, after three slight treatments, in a patient of Dr. Ransford's; in another, after a recurrence of phlegmasia dolens and inflammatory attacks in the tumour, such as she had several times had before, we soon found that we had undertaken no light task. These feeble ones were necessarily treated in bed, and never have cases given such anxiety, for the weaker the patient by repeated attacks of bleeding and pain the greater is the fear that the current may rouse again old inflammatory attacks, which every case of old fibroid is subject to. Sometimes, also, in the very weak patients the immediate effect is to increase the loss, but this tendency soon passes away. The condition of some of these was such that no surgeon would dream of operating on them in any way. Then these bad cases do not, as a rule, bear large doses of electricity, and the treatment comes to be a very tedious one. The only quite hopeless cases seem to be those in which hydrorrhœa exists to a great degree. There is improvement up to a certain point, but it is not permanent. These are puzzling cases, for sometimes the clear fluid comes in an incredible amount. The discharge must come from the uterus, and it comes sometimes in quite small tumours. It may be analogous to the serous fluid that is sometimes poured out into the abdomen from the surface of a fibroid. Many years ago I had to do with an extreme case of this kind. Every three weeks, six gallons of watery fluid were removed by puncture of the abdomen, leaving a small fibroid not greater than two or three pounds. The removal of this was urged as strongly as I could, but the friends would not accept the risk. After forty-four tappings, all of a sudden the tumour held and did not part with its fluid as before, no doubt on account of some osmotic change. This was at once followed by a rapid increase of the tumour itself, till in the course of ten or twelve months the small tumour of a few pounds reached the enormous weight of two hundred. Fortunately, such extreme cases are rare. Dr. Apostoli also complains that he can make little of them.

No fewer than one-half of the cases of fibroid we have seen during the last two years were advised to have no treatment whatever, simply because there was no prominent symptom to warrant any interference. These were more or less in good health, and they can always fall back upon this treatment, if need be, in the future. Some of them had been already advised to submit to hysterectomy, and it was the dread of operation that led to inquiries if there were no way of escape from this. These women had good health, with moderate or small tumours, and with moderate or no loss to speak of at the periods. Not a few had been seriously told that if they wished to live their ovaries must be removed, and that without delay. Most women will rather do anything than submit to such an operation, but if their fears be acted on, and they are told that they have a tumour which will soon shorten their days, we cannot wonder at the number of these operations. The indiscriminate removal of the ovaries for small fibroids (not to speak of cases of pelvic pain or dysmenorrhœa) that is recommended to patients and the brutal haste with which operation follows, is now a professional scandal, to say the least of it. No other treatment—no short delay even to see what Nature and rest may do—is allowed. Some eight or ten months ago a lady, whose hæmorrhages were stopped and whose general health had been made well by Apostoli's treatment, consulted me about a young niece, who had had much pain at her periods; fearing that she might have a tumour and become an invalid like what she herself once had been, she took advice about her, and was told that there was no use trying anything: that an operation only would do any good. She had once got the same advice herself, and could not believe that such an extreme measure

could be so soon necessary. I advised her to put the child, for she was little more, to bed, keep her warm and give her hot poultices over the abdomen. The periods have since been almost painless. I have already stated that no part of my work do I now regret so much as that in which I removed so many ovaries for small bleeding tumours, before I became acquainted with Dr. Apostoli's treatment: at that time operation in the bad cases was all we had to fall back upon. Now it is different, and all I plead for is that this new treatment by electricity be tried first before having recourse either to hysterectomy or the removal of the ovaries.

The result of experience amounts to this: During the last three years and a half I have got along without a single hysterectomy in soft or solid fibroids. I have operated three times for large fibro-cystic tumours, one of 38 lbs., one of 70 lbs., and another of 76 lbs. The last operation is, to me, never to be forgotten, for it was the last time I saw my old friend, Dr. Duncan. The patient was the wife of an old medical friend of his. She had an attack of acute mania. She did well till the eighth day, when she refused all food, insisting that the nurse put poison into it. In a day or two she was acutely insane; fortunately the wound was quite healed. She left London thirty-two days after operation, and in three months was quite herself again. In another of these bad cases operation was declined by two surgeons who are greatly adverse to Apostoli's treatment, but are great advocates for hysterectomy. In two cases only have I removed ovaries for small bleeding tumours. In one, electricity had been carefully tried before I saw her, but though the fibroid was reduced, and the loss at the period was lessened, a bad pain from which she had long suffered, and for which she had had the coccyx removed some years before, was in no way relieved. Indeed, her suffering was rather aggravated by this operation. She was a complete wreck. I opened the abdomen, and after some trouble found that the left ovary was lying between the folds of the broad ligament, and enlarged to the size of a hen's egg. This was the cause of the pain, and since its removal her strength is gradually coming back to her. In the other, there was such evidence of the presence of two small ovarian tumours, that I advised operation without any preliminary electrical treatment.

The drawback to this treatment—its tediousness—remains much as before, and the mistake of allowing patients to go away too soon is still, every now and then, repeated. High intensities, with positive or negative puncture—methods which we much prefer—are the only ways by which the time of treatment may be shortened. Some nervous patients bear only a small amount of current, and in these, as a rule, the treatment must be prolonged before any permanent relief can follow. After all, it is only a matter of time; the good result comes all the same, though after longer patience. The treatment may be shortened by giving an anæsthetic. In only one instance, however, has it been necessary to do this, and it may be well to give a brief account of the case, for it shows what can be done when there is a necessity for it.

In December, 1889, Dr. Roose took me to see an unmarried lady, aged 40, as he was getting very anxious, and had already obtained every possible help and opinion for her. The old treatment of every kind was persevered in, and it signally failed to check a hæmorrhage that was bringing his patient and friend to the point of death. The periods for many years were profuse, and during the last seven months these had become most alarming. Now 90 to 110 large thick diapers were used every period, one-half of these being quite soaked. In addition to this there were gushes of blood which these failed to absorb. She was in bed, the state of the heart preventing almost any movement. The pulse was rapid and feeble, and so nervous had she become that she could not in any way be examined or even touched without an anæsthetic. The nurse could not even give a simple enema. The tumour felt soft, and extended three inches above the pubes. The cervix was almost beyond reach of the finger, so far back was it. The sound passed five inches and a half. It could be turned round and round inside the cavity with the greatest ease, disclosing a large, thin-walled, soft, flabby uterus, on which I would be very unwilling to use a curette.

Ether and chloroform agreed equally badly; every time it became more and more difficult to get her under the influence of the anæsthetic. This was not accomplished under half-an-hour, and on the thirteenth application we were compelled to give up the treatment, Dr. Roose very wisely declining the responsibility of continuing the anæsthetic. The first dose given was 75 milliampères, the next 160, and the rest from 250 to 300. The treatment was given twice a week, and, as she was almost always losing blood, it was continued right on through the period. She was rarely dry, and we were anxious not to lose time, for we were all afraid that another bad hæmorrhage might be fatal to her. Even after such strong doses little or no pain was complained of. The uterine cavity now measured little more than four inches; the sound could no longer be turned round inside; the cervix was easily reached, while the tumour could scarcely be felt above the pubes.

She improved in strength and went to the country. She and her friends were warned that we had never seen such a severe case permanently cured by such a small number of applications, and that the improvement might be only temporary. After this short treatment the first period was easier than it had been for a long time, only 30 diapers being used instead of 100, the second 20, and the third only 13, scarcely any of them being soaked. After these three times she began to go back, and at Roehampton, in August, there was a hæmorrhage. This pulled her down badly, and to some extent brought back the old symptoms. Within the last few weeks the treatment has been resumed; but instead of having it done in her own bed, under an anæsthetic, her physical condition has so much improved that now she comes to the house for treatment, and drives home immediately after. That she will get perfectly well I have no doubt, though the treatment will be long.

Till quite recently we have seen few cases of small tumours whose symptoms were so bad as to need treatment. Nearly all were old, hopeless-looking tumours, one larger than another. As the benefits arising from this treatment are being made better known by those who have themselves been made well by it, there is no doubt that within the last twelve or eighteen months an increasing number of small tumours have been seen. I take of these the seven earliest cases, who have probably had treatment enough to prevent a return of old symptoms or renewed growth of the tumour. It is too early to give any account of a number of others at present under treatment or in whom it has recently been suspended.

Case I. *Small Bleeding Fibroid: Profuse and Painful Menstruation Cured by Electricity.*—In the beginning of 1888 Miss W., aged 48, consulted me by letter on account of hæmorrhage from a uterine fibroid from which she suffered, and which had completely broken down her health. Menstruation had always been too much, though only of late had alarm been taken. I gave her what comfort could be given in a letter, and told her that in any case she could not now be far from the end of her troubles. She got so much worse after this that she consulted a surgeon, who strongly advised the removal of the ovaries. Alarmed at the prospect of operation, she saw Sir Spencer Wells, who decidedly forbade any interference at her age. He had every hope that Nature would cure her at no distant date, though in the event of her getting much worse he would advise some treatment by electricity, which would almost certainly stop the bleedings, or, at any rate, carry her over in safety through the menopause. Much encouraged by this opinion, she worked on some months longer, having derived much benefit from the treatment of Dr. Fitzgerald, of Folkestone. Towards the end of the year the bleedings became most alarming, and were accompanied by much pain. From the beginning of September the period went on, in great excess, for nine weeks. After a short interval it began anew, and was going on for the eighth week, when she sent for me in the middle of January, 1889. By this time she had withdrawn, one by one, from various schemes in which she was interested, and was reduced to a condition of complete uselessness, which was intolerable to her. She could scarcely go up a short easy stair, and that only after several rests by the way. The treatment had to be carried on at her own home, for she was unable to go out.

On account of a severe illness I did not see this lady for six months, and was glad to find her then quite well. The treatment was entirely carried on by Mr. Skene Keith, with a rapid and successful result. The tumour, which reached within 2½ inches of the umbilicus, could no longer be felt in

the abdomen, and the pelvic portion was quite small. The os uteri, which at the beginning of the treatment reached within an inch of the vulva and admitted the point of the finger, was now high in the pelvis and was closed. The periods were regular and normal in amount, and she was able to do anything. The treatment consisted of twenty-four applications, the dose, on an average, being 200 milliampères. When last seen she was well in every way, and there was so little period that she thought it was about to pass away.

In this case, it may be argued that time might have done all this; but time does not reduce menstruation from years of hæmorrhage to a normal amount, for months before it begins to show signs of ceasing. Besides, what possible justification could there be for the removal of the ovaries at her age?

Case II. *Small Uterine Fibroid: Painful and Profuse Menstruation: Disappearance of Tumour under Electrical Treatment.*—Miss B., aged 43, had her first bad hæmorrhage four years and a half ago, after a long walk, towards the end of the period. Generally this lasted five days, and was very profuse from the beginning. Ordinary diapers were of no use to her, and instead she had got into the habit of using large bath towels folded; of these she never required fewer than nine. She had been treated by electricity in Liverpool. The tumour spread into the pelvis on each side, and the top of it was 3 inches above the pubes. The sound passed 4½ inches. The patient was a tall big woman, and of the softest type imaginable. She had palpitation and various nervous symptoms that were increasing upon her; the slightest exertion or movement was a burden to her.

Treatment was commenced on October 9th, 1889, and closed on January 9th. She was at a disadvantage for a successful treatment, in so far that she had gone to live in the north of London, about five miles away from us. Her circumstances did not allow of her driving, and she had to come partly by train, partly by omnibus, and partly on foot. Frequent colds and chills were thus got, and there was much time lost. She bore the current well, as the phlegmatic ones generally do, the average dose being 200 milliampères, and the time eight to ten minutes. Twenty-nine applications were made, for though the tumour was small, it had a habit of bleeding in the most determined way.

At the end of four months she looked better and felt stronger. She was warned not to be disappointed if her strength took a long time in coming back. During the spring and summer progress was slow, and she was advised to come back in autumn for some more treatment. She came in October, and by that time had decidedly improved. She was better in every way, and now never used more than four bath towels, instead of never less than nine. There was no palpitation, and she can dress herself after treatment, which she was not able to do last year from simple exhaustion. There was now no longer any abdominal tumour, and there was no growth in the pelvis—simply a large uterus which admits the sound 3½ inches. Eleven other applications were given, the tonic effect of the treatment being very marked. Her strength has improved every day, and walking is now a pleasure. Practically she is quite well, and I have been written to about the propriety of her getting married.

Case III. *Fibroid Uterus: almost Continuous Menstruation: Electricity: Disappearance of Growth.*—Miss W., aged 24, was brought by Dr. St. Clair Thomson. Periods began at 14, and have always been copious. By degrees the intervals became shorter and the quantity greater. For four years menstruation has come every three weeks. The last went on for twenty-one days without any interval: now she never is quite dry, or at least is so very rarely, and that never for more than two or three days. She is thin, though her general appearance is good, considering the almost constant drain upon her. She has no pain, and can walk fairly well. In a word, her only complaint is the long continuance of the period, and its uncertainty as to quantity, the least excitement increasing the flow, sometimes with violence. She cannot go out with a light dress, cannot go to a theatre or concert, or out to dinner, or any evening amusement, or play tennis in summer. She is debarred from the pleasures of young people, and on the very few occasions she has ventured out in a light dress it was almost always soaked through before she got home again.

Remedies have been tried without making any change in this condition. The uterus is large and somewhat fixed; the cervix is very large: the os admits the point of the finger; the probe passes with difficulty 3½ inches, and would probably go farther if the uterus were not so fixed; there is no growth inside the cavity. The treatment lasted six weeks, and twenty applications were made. The current was well borne, and in a good dose. Instead of at most three days' respite, the first interval was three weeks, the longest for the last four years. The period lasted four days and was quite moderate, and as the next was also normal, no further treatment was advised. The uterus was now soft and movable; there was no longer any open cervix; the os was small and closed, the cervix half the size. The uterine cavity was scarcely above 2½ inches in length. We began the treatment on a fibroid uterus probably slowly increasing, for the disturbing symptoms were slowly getting worse. The treatment left a healthy organ. When last seen she had gained flesh and was in perfect health. The periods were normal as to time, and lasted only three days. In August, while living in a very relaxing place, there was a tendency to recurrence of the hæmorrhage; accordingly she left the place, and has been quite well since she came back to London.

Case IV. *Small Uterine Fibroid: Unusual Amount of Pain, with Suspicion of Ovarian and Tubal Disease: Disappearance of Tumour under Electricity.*—Mrs. M., aged 40, came in the beginning of June, 1889, complaining of almost constant pelvic pain, especially over the situation of the right ovary. There had always been more or less of premenstrual pain, but for the last year this had got much worse; in fact, she had all the symptoms generally connected with disease of the ovary or tubes. This long continued pain was slowly but surely being followed by the inevitable neurosis. She was nervous, excitable, and irritable, and the general health was giving way. She had had a great amount both of local and general treatment, all proving unavailing. The removal of the ovaries was at last urged upon her, and it was to have this point settled that she came from Dublin. She was almost "off her head" with excitement about the proposed operation, which she was anxious to avoid.

Manipulation was well borne, much better than one could have expected. The enlarged uterus was easily felt above the pubes. The sound passed four inches into a broad cavity. Pain was greatest over the right ovary. The persistent back pain was felt over the upper part of the sacrum; this pain was always increased during the night. The uterus felt the size of about two closed fists; it had little movement. At first I was almost inclined to advise operation as the most rapid way out of her many troubles, for, with pain over the right ovary and the manifest enlargement of the left, there might be a risk that the current would set up irritation in the appendages. As operation was, however, a terror to her, it was agreed to try what electricity might do. She quite understood that this treatment was merely experimental, and that it would be discontinued if pain were caused by it. By the end of August the treatment was finished. She bore it much better than one would have expected from her extremely nervous condition. Here, again, the tonic effect of the electricity was well marked. All nervousness had passed away, and she was able to sleep without drugs, which she had not done for a long time. She took her food better, and became happy and hopeful as the dread of an operation ceased to torment her. By the time she returned home pain had almost disappeared. There was some enlargement of the right ovary, but no tenderness or pain. The uterine tumour had disappeared. There was nothing left but a somewhat enlarged uterus, into which the probe passed 3 instead of 4 inches. The uterus was free and movable. All premenstrual pain had disappeared. The discharge was natural in amount, and less than before. In March, 1890, there was still improvement going on; the uterus was in every way normal, and the general health was good. In August last her daughter called to say that her mother was in perfect health, and was able to do anything. All nervous symptoms had disappeared, and she was entirely free from pain of any kind.

Case V. *Fibroid Tumour in Posterior Wall of Uterus: Profuse Menstruation: Disappearance of Tumour under Electricity.*—Miss T., aged 27, was brought by her two brothers—both medical men—who had got to the end of their resources in

attempting to cure, by medical treatment, a profuse menstruation, and restore the general health. The idea of operation was repulsive, in the view of a prospective marriage, which had hitherto been delayed and which her feeble health forbade. The young lady had been ill for about four years with great menstrual losses. At first the loss was almost continuous, then it came chiefly at the periods, the blood coming away in gushes. There was little pain complained of, but much misery before, during, and after the period. She was thin, and her appearance gave the impression of broken-down health. Naturally very active and full of work, she was now depressed on account of her inability to do almost anything. The cervix was behind the pubes, the cavity of the uterus being pushed forward by a fibroid mass in the posterior wall, nearly filling the pouch of Douglas. Treatment was begun in the end of June, 1889; continued during July and part of August, resumed in October, and completed in the end of November. In all, thirty-nine applications were made. In this case we were not hurried, and it was arranged that she should continue the treatment so long as was thought necessary. Strong doses could not be borne, hence the large number of applications. There was improvement almost from the beginning; by the end of the treatment her appearance was much better; she had gained weight and looked much younger. The hæmorrhages had ceased, and the periods had become normal. The tumour in the back wall of the uterus slowly diminished, and when she left it had entirely disappeared. She married in March, 1890, and when last seen was in perfect health.

Case vi.—*Small Uterine Fibroid with Profuse Hæmorrhages: Enlargement of Ovary: Disappearance of Tumour under Electricity.*—Mrs. G., aged 28, was first seen in June, 1889, in consultation with Dr. Stanley Smith. Since the birth of her fourth and last child, four years and a half ago, she has never been well; always in bad health. There has been much pelvic pain and several acute attacks in the right ovary or in its neighbourhood. The menstrual losses have also been in excess. A medical friend who knew her in India, told me that he could not have believed that any one could have had such losses and have lived through them. They more resembled regular floodings that he had seen after confinements, and these were repeated every month. The bleedings came in great gushes, and never lasted over a week. For a time she made up strength so far in the intervals, but now she was less and less able to bear them. She had just returned from India, and placed herself in Dr. Stanley Smith's care; and he, judging from the quantity of blood lost, and the way it came, very properly, in the first instance, dilated the cervix and examined the cavity of the uterus to ascertain if there were not some polypus or intrauterine growth to account for these symptoms. At this time, what with having the children to look after, and one thing or another, she had great difficulty in taking almost any care of herself, and many duties devolved upon her for which she was hardly able. Unfortunately one of those acute attacks with pelvic pain came on soon after. She was very ill when I saw her, and it was not easy to make an exact diagnosis. There was evidently a small uterine fibroid, but so much general fulness and tenderness that its exact size could not be defined. To the right of the uterus—the size of a hen's egg or a little larger—was a tender swelling, which seemed to be the right ovary; the one that had inflamed on former occasions. The uterus was fixed and the tenderness of the pelvic contents was unusual. This attack confined her to bed for nearly two months. At the end of this time the right ovary was distinctly enlarged, though smaller than it was when I first saw here. The uterus was now easily defined as an abdominal tumour. She was very thin, looked small, and was miserably ill. The profuse menstruation continued, and every period sent her further downwards. Her husband, who was in the army, was ordered to the Cape. She was left behind, in the hope that she might be able to join him by the end of the year. By the beginning of October she seemed strong enough to begin the electrical treatment. This was undertaken on the condition that it would be suspended should irritation in the appendages be set up, which there seemed good reason to fear.

The uterine cavity was 4½ inches, and there was a distinct uterine fibroid. She was unable to bear very strong doses, but the good effect of the treatment was at once seen. The first period was much better. It commenced on November 17th, and she was strong enough to return for treatment on the 24th—a great change for her. By the 8th December there was less pain, and she was able to walk better; the swelling of the right ovary and surrounding parts was diminished, and the uterus was free. The next period was also much less in quantity. By the time she had to leave for the Cape only twenty-one applications had been made. There was a doubt if she had had enough, considering the formidable bleedings that had gone on for so long. She was, however, so much better in every way that she was advised to go. She could now walk well, was almost free from pain, and had gained flesh, while the tumour was certainly smaller. For some months she remained well, but the climate was too much for her, and she could not endure the heat. After fighting on as long as possible she was obliged to come home in November last, when I saw her again, after an absence of eleven months. She was very thin, and had fallen off very much in appearance. There had been no bleeding since the treatment was stopped. Menstruation lasted only three days, and was, if anything, scanty. There was still some thickening in the right broad ligament, but it was impossible to say what it exactly was. Certainly no enlarged ovary could be detected, and there was not any tenderness. The uterine tumour had entirely disappeared. The uterus was quite small—slightly anteverted—the os was closed and small, and the uterine cavity barely normal. She was suffering simply from the effects of the Cape climate, which to some seems to be a most irritating one. In three weeks she looked a different woman. The cold weather here set her up at once. In three weeks she gained 8 lbs., could walk any distance, and was in perfect health.

Case vii. *Long-continued Bleeding Fibroid; Cure by Electricity.*—An unmarried lady, aged 39, was brought in July, 1889, by Dr. Coleman, of Wolverhampton. From its commencement her menstruation had never been right. There was always too much pain and too much loss. When 18 she was far from well, and was taken to London. She was there advised to take a complete rest for two years in bed. This she did, but with no benefit; and, as there did not seem to be much prospect of improvement, a marriage engagement was broken off by medical advice. Every possible advice was got for her; everything was tried in its turn and failed. For the next eighteen years there is not much to relate; she did not get much worse till two years ago. A woman of great strength of character, she made the best of her life, such as it was, and she strove against her continued bad health, doing her best to discharge the many duties that had, by circumstances, devolved upon her, and often trying to do more than she was able. During the periods, which came every three weeks, she was forced to keep quiet, and, though feeling ill and miserable all the time, she did not take to bed till two years ago, when she could keep up no longer. In May, 1889, she became worse, and soon after saw Dr. Coleman, who found a small uterine fibroid. About the end of June she was taken by a nurse, to whom she had spoken about the tumour, to Mr. Lawson Tait, of Birmingham. The diagnosis, given in writing, was that there was a uterine tumour of about 7 lbs., rapidly growing, and fatal to life at no distant date. Having heard of someone made well by Dr. Apostoli's treatment, she asked about this way of treatment, and was told that in her case electricity was useless; could do no more for her than if it were passed through a stone wall: that it was a dangerous and painful process, and that the puncturing needles might do harm, and that, after five weeks' treatment by electricity, it might be impossible to operate, on account of the mischief it might have done. Frightened by such strong statements, she went so far as almost to consent to come on the following week for operation, should her friends agree to this. She saw the room in the private hospital that she would have, and arranged about the fee. In spite of all this, the lady, on her way home, made up her mind not to run the risk of operation, for her life was a valuable one to two aged relatives of whom she took care, and who, with advancing years, were every day more and more dependent upon her. Thus Dr. Coleman was asked to accompany her to see us. The patient was stout, the abdominal wall very thick, and there was much general distension from flatus. The cervix was low in the pelvis, and a small uterine fibroid reached

to within two or three inches of the umbilicus. Neither Dr. Coleman, my son, nor myself estimated the weight of the tumour at more than 2 lbs. The sound passed four inches into the uterine cavity.

Dr. Apostoli's treatment was agreed to, after having her position fairly laid before her. I told her that the tumour was probably of old standing, that it was a simple growth, that but for the hæmorrhages at the periods it was harmless, that it almost certainly would not of itself shorten her days by a single hour, that we did not consider her very ill, and that any treatment—far less a dangerous operation—was hardly necessary, and, for that matter, she might, if she were so inclined, work on to the change of life without any treatment at all, as many a one much worse than she was had often to do. She had, however, got into such a state of agitation, from the opinion given two or three days before, that she might not live for twelve months, that she would not be satisfied if something were not tried for her now. So, with Dr. Coleman's full approval she remained, and the treatment was commenced without delay. And it was not for some time that she got reconciled to it. Indeed, there seemed to be a hankering after operation, and she seemed to have a fear that, after all, she might be losing time in going on with a comparatively untried treatment. About the tenth application there happened a circumstance that settled all her doubts and put her fears to rest once and for all. She heard of the death of a lady whom she had met one day at luncheon in London since the commencement of her treatment. This lady also had a uterine fibroid, which did not apparently cause her much trouble. She seemed in good health. She told our patient that the lump was a bother to her, and that, instead of taking her annual holiday at the seaside, she thought of getting her tumour removed. She spoke quite lightly of the risk. She went. It was her last holiday!

After this, the treatment went on more quietly, and was interrupted by the autumn holidays, by which time she had got thirteen applications. Her nervousness and agitation prevented her bearing strong doses of the current; the average was only 88 milliampères. The treatment was resumed on October 3rd, and other seventeen applications were made, the dose increasing to an average of 135 milliampères. Till the twentieth application she felt no benefit or improvement in herself. The good of the treatment was now felt. The tumour got smaller, and the os was high in the pelvis.

After her return home, improvement went on slowly. On February 6th, 1890, she writes that the last period came on after an interval of four weeks, and lasted for three days. It was described as the most moderate and free from pain of any during the last twenty years. Before the treatment, corsets of 34 inches were worn, now 28 inches fit very loosely. This is due to improvement in her general condition and diminution of flatulence, rather than to decrease in the size of the tumour, which was not nearly large enough to account for the improvement in the figure.

Later on, she writes: "There is no doubt whatever that the electrical treatment has been perfectly successful in my case, and I have to thank you for my present good health; for though you did not think me very ill when I came to you, the difference between then and now is indescribable. I was always in discomfort, and often in pain; now I am perfectly well, and unconscious of possessing a body."

June 22nd, 1890. "I have had nothing to do but enjoy myself, which I have done thoroughly. I feel so well and strong; it is such a change. Formerly I was always (for twenty years) so ill every three weeks that it spoiled everything; now I have no trouble at all. It is wonderful."

This lady continues well.

Thus in five of these cases the uterine fibroid entirely disappeared without the slightest inconvenience to the patient. In every case small though the tumours were—all the ordinary treatment, however long persevered in, entirely failed to arrest hæmorrhage or to limit growth. Time seems necessary to complete the process that the current has set a-going; just as in Nature's cure at the menopause, the change is generally a slow one. After the treatment is stopped, there may in some cases be no apparent benefit, and the amount of good obtained may not be quite known for several months. Thus a young lady, a patient of Dr. Lett, of Wakefield, called on me a few weeks ago. We had not heard of her for nearly a year, and we were afraid that she had fallen back, though there had been a considerable amount of improvement, and we looked upon her as one of the doubtful ones. She was, however, in perfect health. When the treatment was commenced, it would have been no easy matter to pick out a more bloodless face anywhere; the tumour filled the abdomen, and the hæmorrhages had gone on for a number of years. She had got fatter all over the body, yet her girth was less by seven inches than it was a year ago. Improvement in health and diminution of the tumour were still going on. Instead of using not fewer than seventy diapers at the periods, and keeping in bed, she now never requires more than thirty—still far too many. She is perfectly satisfied. She is now entirely free from pain and sickness, and never needs morphine, as she used to do. She does not think that she could possibly be in better health.

What the principle of the process may be that causes the absorption or diminution of the bulk of a uterine fibroid, I know not. In these cases it is certainly not that of electrolysis. I rather think that it must be looked for in some form of electrical osmosis.

The removal of the ovaries had been recommended in all these cases, and in some this was pressed upon the patient. No alternative was offered. The very name of Apostoli seemed to act as a red rag upon some. The treatment was invariably condemned as useless, and was generally spoken of as quackery. Not a month ago it was said to be moribund by one of the London medical journals; while one of the best surgeons in London—one from whom a fair criticism of Apostoli's work might have been expected—says that it is an utter and complete failure. All this by those who know nothing about it, and who will not take the trouble to try it. So far as I can remember, the only new medical treatment that was at once accepted by all the profession—and that, too, long before anyone knew what it was—is that for tuberculosis by Dr. Koch. Perhaps Dr. Koch's turn may be to come.

The treatment of a simple case of small bleeding fibroid in a fairly healthy woman is an easy matter, compared to the successful management of that of one whose life is at the lowest, whose nervous system is so wrecked by suffering that it resents acutely a degree of pain that in ordinary health could be borne without complaint. In these feeble-hearted, bloodless ones Dr. Apostoli's treatment is carried on with difficulty, and with interruptions. Such subjects have till now formed the majority of the cases we have had to treat. When the time comes—and come it must—when nine-tenths will be treated at an early stage, treatment will be comparatively easy, and cure will be almost always certain. There may then still be a place for hysterectomy; there will be little or none for the removal of ovaries; and gynæcologists will be ashamed to publish long lists of cases where scores of ovaries are acknowledged to have been removed for simple painful menstruation that they could not, or had not, tried to cure in other ways.

The surgical treatment of uterine myoma goes on as before, and the tendency among operators—judging, at least, from what one hears—is to perform hysterectomy at a much earlier stage than has till lately been the practice. A friend of mine who was present at a hysterectomy in one of the London special hospitals a few weeks ago, heard an American surgeon indignantly remark, after the operation was over, that such an operation performed for the removal of a tumour two or three pounds in weight, in a woman 51 years of age, who had only shown symptoms for a few weeks—as he gathered from the medical man who sent in the case—was a "shame." I quite agree with him. To my way of looking at things, this is even more unjustifiable than the removal of large tumours, for which there may be some excuse. If it were necessary to remove small uterine fibroids, I think it could be undertaken with a mortality of 2 or 3 per cent., provided the method was intraperitoneal. Speaking as a surgeon, I sometimes almost regret that Dr. Apostoli's treatment came when it did, just as I seemed to be on the point of attaining to a perfect intraperitoneal method, and that was simply by removing the whole of the organ and stitching up the opening. What the present mortality of hysterectomy is I know not, for no one, save myself, has published details of cases. When these are published I would decline to accept any results, unless the weight of the tumour removed be given, along with the amount and

degree of adhesion. Hysterectomy for large, old, fibrous tumour in a broken-down woman is one thing; hysterectomy for a small tumour in a patient in fair health is quite another. The long lists of cases of operation which have been given for some years back by certain operators seemed to be framed for the purpose of giving as little information as possible.

It will be noted that in several of the cases already narrated, where there was evident enlargement of the ovary, treatment was undertaken on the understanding that it would be discontinued should irritation of the appendages be set up by it. So far was this from being the case, that not only the fibroid disappeared, but also the enlargement of the ovary or ovaries.

There has been no mistake in diagnosis since we began this treatment. By a little care, some thinking, and by not being in a hurry to make up one's mind, difficulties soon pass away, and a correct diagnosis can almost always be arrived at. To some the difficulty in diagnosing pelvic tumours seems to be great, and no doubt at first there is considerable difficulty. The rule for guidance is - and it was one that my old master, James Syme, of whom, in common with many, I ever think with great affection, used often to insist upon—that if we be in great doubt the right thing is to wait and examine the case again and again after an interval.

That a correct diagnosis be made is of the greatest importance to the patient. About two years and a half ago, a patient came from the North to have Apostoli's treatment, as a small fibroid had been diagnosed. She was seen by my son, who found the uterus normal, but both ovaries, or ovaries and tubes, were enlarged. Both swellings were about the size of walnuts, the left close to the uterus, and more like a dilated tube. She was very anxious for electrical treatment, but was warned in the strongest terms against it. It was an ordinary case of diseased appendages, but the patient was in good health, was able to take care of herself, and had, so far, had hardly any trouble. She was not ill enough to advise the removal of the appendages, though she was told that only would cure her, and that probably some day she would require an operation. This advice was not taken. She had a hankering after electricity; returned home and had it for a long time. Nothing more was heard of her till nearly two years after, when she returned a perfect wreck, and half dead after the journey. The pulse was quick, there was a high temperature, and occasional rigors. She said she did not know what pain or illness meant till shortly after this treatment was begun. The left swelling was a pyosalpinx, and contained more than a pint of putrid pus.

As progress goes on, the tendency to use the knife becomes ess and less. Lithotomy has in a great measure given place to lithotrity; aneurysms are cured by rest and position; amputations for diseased joints get fewer every year; nævi of all kinds—cavernous angiomas and some forms of goitre—are now easily cured by electricity. Aneurysm of the innominata has lately been practically cured without operation by Dr. John Duncan, of Edinburgh, and he is only waiting for another case to improve upon the new departure that has already succeeded so well. Surely it is our duty to try to make fibroid patients well by a simple, safe, and practically painless process, rather than subject them to the cruel ordeal of an operation that was lately described as being the nearest thing to a *post-mortem* examination.

Dr. Apostoli's treatment is only in its infancy, except, perhaps, in Apostoli's hands, and so at this early stage we can only speak in general terms of its capabilities and powers. In the meantime, I think that it may be said that it need not be tried in cases of fibrocystic tumours of the uterus. In cases of excessive uterine hydrorrhœa it seems, so far as we know at present, to fail to give permanent relief. The best results are seen in cases of small bleeding tumours. In old, large, hæmorrhagic tumours the treatment is longer than in small growths.

This treatment *almost always* relieves pain. It *almost always* brings about diminution of the tumour -sometimes rapidly. It *almost always* stops hæmorrhage—sometimes rapidly.

The results are *almost always* permanent, and the growth of the tumour, if it be not lessened, is stopped. The general health is immensely improved. By *almost always* I mean nineteen cases out of every twenty.

ABSTRACT OF

THE ERASMUS WILSON LECTURES

ON

THE VALUE OF COMPARATIVE PATHOLOGY TO PHILOSOPHICAL SURGERY.

Delivered at the Royal College of Surgeons, February, 1891.

By J. BLAND SUTTON, F.R.C.S.,
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Lecture I.

Cephalhæmatoma.—Imperforate Ileum.—Supernumerary Legs.

In this course of lectures I propose to illustrate briefly th manner in which comparative pathology may serve to indicate errors which arise when conclusions are drawn from facts purely anthropological; also to demonstrate the way in which, as surgeons, we may become more philosophical by adopting broader conceptions of disease.

In November, 1887, Mr. Treves exhibited to the Clinical Society a lad with a large swelling on the head. He is described in the *Transactions* as a "case of cephalhæmatoma with extensive ossification of the cyst-wall." The boy was eleven years of age, and in perfect health. The swelling was strictly limited to the right parietal bone, and covered with hairy scalp. The central parts were soft, fluctuating, and the seat of feeble pulsation, but the periphery seemed to consist of a crater of hard bone firmly adherent to the skull. At the age of four months this boy fell, his head striking the floor; a bump formed, persisted, and increased in size as the boy grew. Upon these facts Treves came to the not unreasonable conclusion that the tumour was primarily a subpericranial cephalhæmatoma, a considerable portion of the wall having subsequently ossified. (Fig. 1).

In February, 1888, this lad was exhibited to the Society by Mr. Silcock, as an example of traumatic meningocele. A committee reported on the case to the effect that the tumour was probably a cephalhydrocele, "that is, a pulsatile tumour containing cerebro-spinal fluid communicating with the interior of the skull by an abnormal opening."



Fig. 1.—Boy with an old cephalhæmatoma over he right parietal bone (After Silcock.)

Thus vol. xxi of the *Transactions of the Clinical Society* contains a case twice exhibited by competent surgeons, each holding a widely different opinion as to its nature. It has long been known that a cephalhæmatoma (a collection of blood, extravasated in consequence of injury, between the

vault of the skull and pericranium) may ossify around the edges and give rise to the notion of a depressed fracture. This is due, as Virchow points out, to the fact that the pericranium, which forms the limiting capsule of the swelling, is a bone-forming membrane, and, though separated from the vault of the skull by blood, still pursues its bone-forming function. Another remarkable character of these cephalhæmatomata is the great length of time the blood will remain fluid within them.

In 1889 a monkey (*Cebus monachus*) was deposited in the Zoological Gardens. On the top of its skull was a large rounded tumour, nearly as large as its head. The tumour was soft and fluctuating at the top, and a feeble pulsation could be felt. The part near the skull was extremely hard and felt like bone. The monkey was in excellent health and spirits, in no way encumbered by its burden. It continued in this way for many weeks, and the tumour did not increase in size, but the hardening of the walls became more extensive.



Fig. 2.—A monkey (*Cebus monachus*) with a huge cephalhæmatoma.

Some months later the monkey was evidently in a bad way, emaciated, in pain, and suffering from thirst and fever. The tumour had not increased in size, but the hardening now involved the greater part of the walls of the tumour, the summit still remaining soft. As the animal seemed to be in great suffering, it was killed by means of chloroform. The tumour was filled with fluid blood; the walls were formed by the pericranium, the greater portion of which had ossified: it was, in fact, an old cephalhæmatoma. The pressure of the fluid had induced thinning of that portion of the skull which formed the floor of the hæmatoma.

The specimen is interesting as showing the length of time blood may remain fluid when extravasated. The monkey lived in the Zoological Gardens seven months, and the tumour was present when it entered the menagerie. It is also valuable—at least so it seems to me—for the light it sheds on Treves's case, and indicates that the tumour in the boy was, as Treves believed, a cephalhæmatoma with the walls extensively ossified. The skull is also of interest to the anatomist. The sutures of the skull are frequently occupied by adventitious ossicles termed "Wormian bones:" the margins of such ossicles are serrated like the edges of the frontal and parietal bones, and they are particularly numerous in the skulls of hydrocephalic children. The walls of the hæmatoma on the monkey's skull also contain Wormian bones which articulate with each other by serrated and bevelled edges. In the case of the monkey and in hydrocephalic crania we have a largely extended bone-forming membrane in which the process of ossification was interfered with by rhythmical pulsation, for it has already been mentioned that the tumour pulsated feebly. I am of opinion that the continued pulsation to which the vault of the skull is subject during the completion of the ossifying process explains the serration of the edges of the bones, and as this movement is strongest at the vault, so the dentations are deeper and more complicated at the vault than at the sides and base. The presence of Wormian bones in hydrocephalic crania is due to the abnormal extension on the dura, consequent on the distension of the ventricles with fluid.

Imperforate Ileum.—There are few structures in our bodies more capable of exciting philosophical speculations than the yolk sac and its duct. This organ in man may be regarded as vestigial, for its duties have been abrogated in part by the allantois, but more completely by the placenta. In the human embryo, it is the function of the allantois to convey the blood vessels which it receives from the developing aorta and distribute them to that portion of the chorionic villi destined to form the fœtal portion of the placenta.



Fig. 3.—The skull of *Cebus monachus*, showing the bony walls of the cephalhæmatoma and a group of Wormian bones.

In some sharks the yolk sac is covered with vascular villous tufts, which fit into depressions of the oviducts resembling the interlocking of the chorionic villi in the uterine decidua. Even in some mammals—for example, the guinea-pig—the yolk sac enters into vascular connection with the uterine mucous membrane. There are abundant and good reasons for Balfour's conclusion that placental mammals are descendants of forms the embryos of which had large yolk sacs, but the yolk has become reduced in quantity owing to the nutriment received from the maternal tissues by means of the vascular connections of the yolk sac with the uterine wall. Subsequently this function of the yolk sac became limited by the allantois and gradual evolution of the placenta, and finally, so far as man is concerned, abolished; so that in him it may be considered vestigial, if not useless, and, like vestigial structures in general, it is liable to many vagaries.

As the gut develops, the part last in connection with the vitello-intestinal duct, as the stalk of the yolk sac is called, is the ileum at a spot, in the adult, between 12 and 36 inches from the ileo-cæcal valve. It is usual for this duct to disappear without leaving any trace. In chicks a short nipple-like process can nearly always be detected, but it soon ceases to communicate with the interior of the intestine. In man the duct occasionally grows *pari passu* with the gut. In its most complete form of persistence the duct may open at the umbilicus, fæces and mucus escaping externally; its mucous membrane is structurally identical with that of the small intestine, and possesses Lieberkühn's follicles and Peyer's patches. This condition is rare; more commonly it exists as a nipple-like prominence standing out from the free border or the side of the ileum. It may be 1, 2, or 3 inches in length; in

exceptional specimens it has been found 8 and even 10 inches long. The free extremity is usually rounded like the bottom of a test tube; not infrequently it is hammer-shaped, due to secondary sacculation. Occasionally it is distended into a cyst holding 3 or 4 ounces of fluid. The duct is sometimes represented as a fibrous cord, or partly as a tube ending in an impervious cord. In nearly all examples it is provided with a distinct mesentery and supplied by a single artery derived from the ileo-colic trunk. It is not necessary for me to dwell on the dangers which may be in store for an individual with a long persistent vitello-intestinal duct adherent to the umbilicus. Any unusual movement or tumult of the intestines may cause a segment of gut to be hitched over the duct and

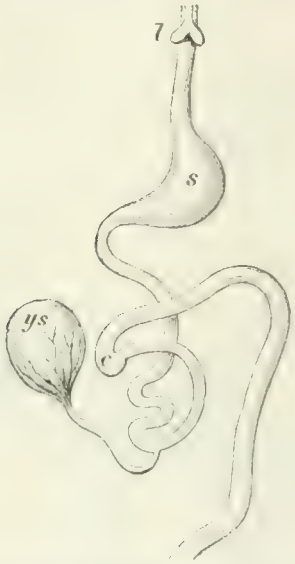


Fig. 4.—A diagram showing the relation of the yolk sac and its duct to the ileum. *l*, rudimentary lung; *ys*, yolk sac; *c*, cæcum.

induce fatal strangulation. In rare instances a knuckle of gut may be forced through the mesentery of the duct, and lead to a fatal result. These are events well known to you, they are merely mentioned to make my story continuous.

The dangers thus briefly reviewed arise from abnormal persistence of the duct; we will now consider the reverse condi-

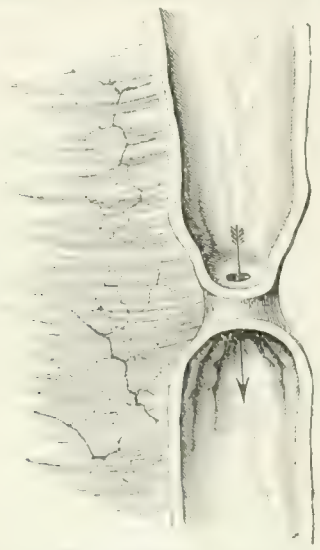


Fig. 5.—Septate ileum.

tion. Normally, the obliteration of the duct is arrested at the spot where it becomes continuous with the ileum, and the process of obsolescence is so complete that the most critical eye fails to detect any evidence of its former existence. Occasionally the obliterating process exceeds normal limits, and involves the wall of the gut, giving rise to a shallow furrow. This furrow corresponds to a diaphragm, with a central perforation, on the inner aspect of the gut. This furrow may be even more pronounced, the ileum being separated into a

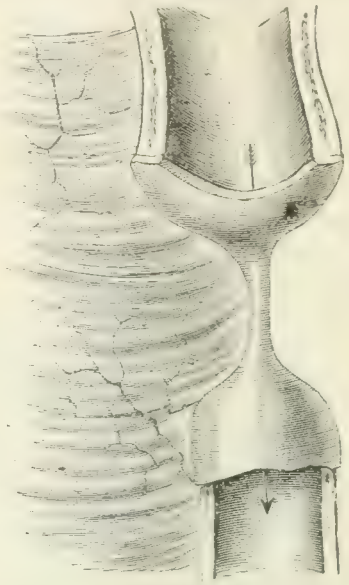


Fig. 6.—Congenital constriction of the ileum (semi-diagrammatic).

proximal, large and dilated portion, and a narrower distal part united by a slender pervious isthmus, in some specimens so small as to admit nothing larger in diameter than a crow-quill. A much rarer condition is to find the ileum divided into two parts, each ending in a *cul-de-sac*. The



Fig. 7.—Imperforate ileum. P, proximal, D, distal ends.

separation between the two ends varies greatly; they may lie side by side, or the interval measures 2 inches or more. In a few recorded examples, the whole of the intestine on the distal side of the interruption was represented as a narrow rod of tissue, with a minute—almost capillary—channel as far as the anus. This almost impervious condition occasionally stops at the ileo-cæcal valve, the large gut being of usual dimensions. To this condition I have applied the term "im-

perforate ileum."[1] On one occasion I saw, in consultation with Dr. Theodore Maxwell, a newborn infant in whom I diagnosed the existence of this malformation, and acting upon this suspicion I performed abdominal section, and found the ileum completely interrupted as represented in Fig. 7.

Imperforate ileum, like analogous conditions of the pharynx and duodenum, is incompatible with life, but the lesser degrees of constriction may not inconvenience the individual at first, but later in life give rise to chronic obstruction, and even induce death directly or indirectly.[2]

Since writing the original account of imperforate ileum, and attributing it to excessive coalescence in connection with the intra-abdominal section of the vitello-intestinal duct, the following additional evidence has come to hand. In August, 1890, I removed from an adult man a portion of the ileum with a vitello-intestinal duct which extended to the umbilicus. The duct measured ten centimetres; the half attached to the umbilicus was an impervious cord; the portion connected with the ileum was a narrow, hollow stalk, arising from the side of the ileum near its attachment to the mesentery. This duct had caused the man's death by strangling a coil of jejunum. On examining the interior of the ileum, a



Fig. 8.—Persistent vitello-intestinal duct with valve.

thick valve of mucous membrane was detected, forming a prominent shelf, and slightly obscuring the wide orifice by which the duct communicated with the intestine. This valve was three times wider than the adjacent valvulæ conniventes. A few days later Mr. Kenneth Lawson obtained for me from a fœtus a portion of the ileum with a persistent vitello-intestinal duct. Within the bowel, immediately above the orifice by which duct and gut communicated, the ileum presented a circular diaphragm with a central perforation (Fig. 9), at once recalling the specimen sketched in Fig. 5.

These examples complete the chain of evidence by which I would seek to attribute imperforate ileum to excessive coalescence of the duct of the yolk sac. It is a striking and suggestive fact that in septate and imperforate pharynx the valve or *cul-de-sac* lies above the spot where the lung diverticulum left the foregut, and in septate and imperforate duodenum the occlusion is situated immediately above the papilla of the bile duct; this indicates the spot at which the hepatic diverticulum originally budded out from the embryonic alimentary canal.

[1] *International Journal of Medical Sciences*, November, 1889.

[2] For some interesting cases illustrating the clinical effects of this congenital narrowing see Leopold Hudson, *Trans. Path. Soc.*, vol. xl, p. 98.

Sacro-coccygeal tumours illustrate the necessity of studying pathology in a comprehensive manner. The sacral and coccygeal regions of the spine are very frequently the seats of congenital tumours, often of large size, and it was the fashion to include them under one heading as congenital sacro-coccygeal tumours until the appearance of Braune's classical essay, *Die Doppelbildungen und angeborenen Geschwülste der Kreuzbeingegend*, 1862. In this admirable piece of work Braune showed clearly enough that some of them were spina bifida sacs; others belonged to the class now known as teratomata; some he called lipomata, and a few of the largest congenital cystic sarcomata. Embryology has advanced by leaps and bounds since 1862, and with its aid I have made an extended study of these tumours, and endeavoured to show that four distinct varieties belong to this region; they are (1) spina bifida cysts, (2) dermoids, (3) thyroid-dermoids, and (4) teratomata.

1. *Spina Bifida.*—The sac of a spina bifida gives rise to little difficulty when situated over the upper part of the sacrum, but when the tumour is due to the hernia of spinal membranes through the hiatus sacralis the determination of its nature is not so easy. The difficulty is still further increased when the channel of communication is obliterated. After

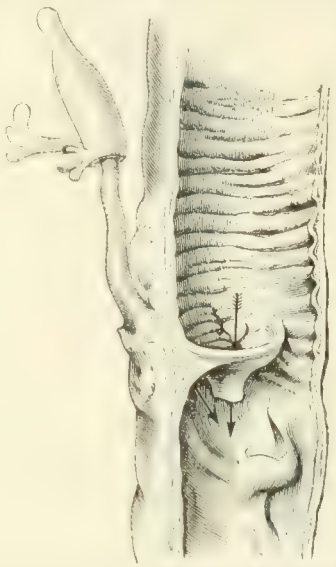


Fig. 9.—Septate ileum and persistent vitello-intestinal duct.

death or removal there is no difficulty, as such tumours nearly always contain a central cavity lined with dura mater. Spina bifida sacs in this region are especially prone to have a thick layer of fat. Should a rash surgeon mistake them for lipomata—and this has happened—the dissection leads him down to the spinal membranes, and the hazard of this enterprise is easily appreciated. The great thickness of fat overlying a sacral spina bifida is illustrated in Fig. 10.

2. *Dermoids.*—It is by no means uncommon to find near the tip of the coccyx in the middle line a recess in the skin, sometimes half an inch deep, known as the "post-anal dimple." Such dimples occur in the line of the sacral spines, or even higher. Often they are associated with spina bifida. These dimples are lined with skin continuous with that on the back, and beset with hairs and glands. These recesses are due to imperfect coalescence of the medullary folds which grow up to form the dorsal half of the trunk. It requires little acumen to see that if the orifices of such recesses become closed during intrauterine life and the deeper parts fail to obliterate, the accumulation of hair and sebum will slowly distend it into a cyst or tumour. These I have termed sequestration dermoids. They sometimes attain a large size. It is clear that it would be difficult to distinguish between such a tumour and one the result of spina bifida. That dermoids may arise in this manner is shown by a study of the peculiar interdigital pouch of sheep, which is worthy a few minutes' consideration, for it may be used as a physio-

logical type of sequestration dermoids in general. Many works on anatomy describe it as a gland; but the most superficial examination will serve to show that it is not a gland but a cutaneous recess, hence it is described in good veterinary works as the interdigital pouch. The sheep's functional toes are webbed almost to the nail, and in its ancestors were doubtless separable, as in pentadactyl mammals. When the third and fourth digits hypertrophied and the others underwent suppression, the interdigital space

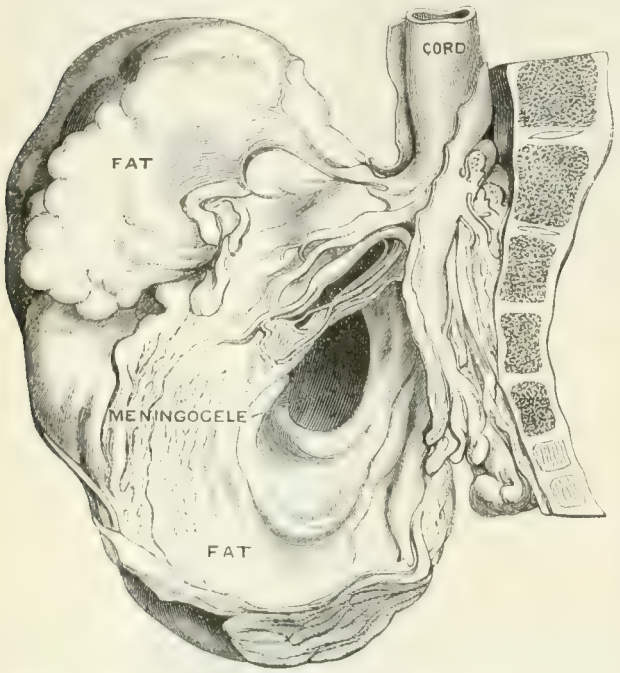


Fig. 10.—A sacral spina bifida with a very thick layer of rich yellow fat (Museum Royal College of Surgeons).

became narrowed, until all that remained of the cleft was this pouch. Its general characters are shown in Fig. 11. It lies between the digits, and all the dissection required to exp se it is to separate the digits with a sharp knife, keeping c se to the phalanges of one or other side. In adult shee it is always full of shed hairs and grit. Sometimes its orifice is occluded and it becomes a retention cyst; suppuration follows, much to the sheep's discomfort. We have in this pouch



Fig. 11.—The median aspect of a sheep's digit, showing the interdigital pouch.

an excellent example of the mode by which sequestration dermoids arise.

3. *Thyroid Dermoids.*—This group is so fully considered in my lectures on Dermoids, that I shall not discuss them further on this occasion, but pass on to the fourth group.

4. *Teratomata.*—This is an extremely interesting group, containing several strange and remarkable forms. I propose to describe four specimens, and then discuss the principles involved in their production.

The first is a woman, Louise L., known as the *dame à quatre jambes*, described recently by M. Ed. Bugnion.[3] She has a pair of supernumerary hind limbs attached to the pubic symphysis, as represented in Fig. 12. She married at the



Fig. 12.—Louise L., *dame à quatre jambes* (after Ed. Bugnion).

age of 14 years and 9 months, and is the mother of two well formed children. The autosite cannot initiate any movement in the accessory legs, although she can readily localise the prick of a pin made upon any part of the parasite; she is also uncomfortable when the parasite is cold. A fact of some interest is the existence of a furrow between the buttocks belonging to the supernumerary legs. In this furrow is an imperforate fossa representing the anus of the parasite; it is situated about 12 centimetres from the vulva of the autosite. I draw particular attention to this, as it is of some importance.

The next variety is illustrated by Jean Battiste dos Santos, of Portugal. This case, when a child, is described by Mr. W. Acton, in the *Medico-Chirurgical Transactions*, vol. xxix. The man was described by Ernest Hart, in the *Lancet*, 1865, to which careful description I must refer you for full details. For my present purpose the facts of interest are these: The

[3] *Revue Médicale de la Suisse Romande*, June 20th, 1889.

child has a median unpaired leg projecting from the pubes and situated between the normal legs. The distal extremity

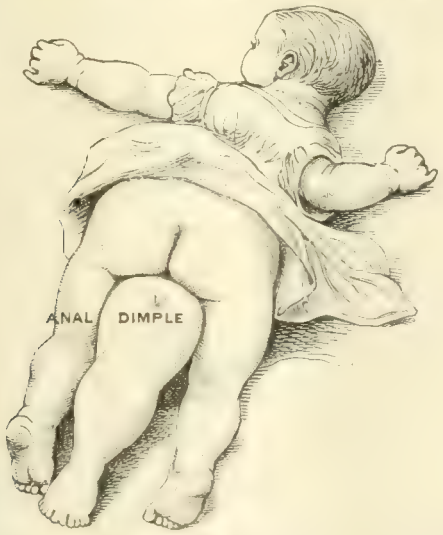


Fig. 13.—Jean Battiste dos Santos at the age of 6 months.

is furnished with nine separate digits, but the median one consists of two coalesced big toes. On the part of this leg corresponding to the buttock is a dimple representing the imperforate anus of the parasite, and what is more interesting, the child has two separate and, as determined later in life, functional penes. We have no evidence that he has more than one pair of testes, a point which it is hoped will some day be clearly established, as it will be valuable evidence in connection with the origin of these malformations.

The third variety is illustrated in the girl sketched in Fig. 14. Over the lower end and posterior aspect of the sa-

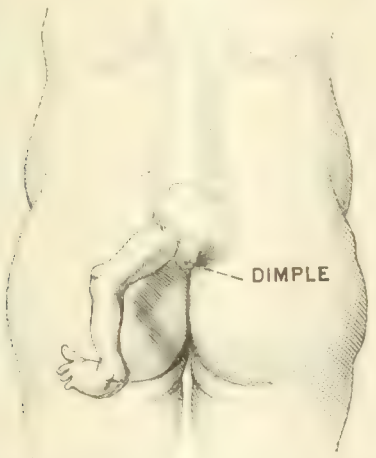


Fig. 14.—A sacral teratoma with supernumerary leg.

crum is an irregular lobulated tumour, with a depression indicating an imperforate ano-genital orifice. Projecting from the left side of this mass is an ill-shaped leg, the foot of which is in the position of talipes equino-varus and furnished with three toes.

If the leg be removed from the preceding specimen, we should have an example of the fourth variety of sacral teratoma. As a type, we may select the tumour removed from the sacro-coccygeal region of a female child, a few days old, by Mr. Treves.[1] The mass measured in length 2 inches and 1½ inch in width. It had five nipple-like processes of skin, resembling rudimentary digits. On section it contained an irregular piece of bone, numerous cysts lined with columnar and cubical epithelium; it also contained a piece of intestine with villi and crypts of Lieberkühn.

[1] *Trans. Path. Soc.*, vol. xxxiii, p. 285.



Fig. 15.—A sacro-coccygeal teratoma. *g*, The pedicle; *c*, processes of skin resembling digits; *d*, a piece of intestine, and *e*, a slit through which it protruded.

The remarkable conditions illustrated by the four specimens just described are examples of dichotomy affecting the posterior extremity of the axis of the trunk. When dichotomy affects the cephalic portion of the trunk we get reduplication, wholly or in part, of the head, and when extensive, reduplication of the anterior pair of limbs. It naturally follows in posterior cleavage that the pelvic girdle and associated limbs are reduplicated, as well as the nether extremity of the gut and I have been careful to point out that in three at least of my type cases a dimple, representing an imperforate anus, was detected



Fig. 16.—A chick with supernumerary legs.

Perfect examples have two pairs of legs, but one pair is functionless, and usually hangs suspended from the pubes, supported by an osseous element representing the suppressed halves of two pelves, for, as Cleland points out, the functional legs belong to different pelves. The right leg belongs to the right half of one pelvis and the left leg to the left half of a left pelvis; the adjacent halves of the two pelves undergo suppression. In less perfect specimens one of the median limbs becomes wholly, or in part, suppressed, as in the case of dos Santos. In the third specimen one leg is entirely suppressed; and in the fourth no limb is separately represented, but only a conglomeration of formed tissues, which receives the name of congenital sacral tumour. There are other varieties produced by the behaviour of persistent legs, but

my intention is merely to select a few types to make my meaning clear.

The subject is one of great interest, and requires closer investigation. For instance, in some specimens the accessory legs hang from near the pubic arch, they are ventral in position; in another case the parts are displaced dorsally. These two positions are illustrated by the chicks, figs. 16 and 17.



Fig. 17.—A chick with supernumerary legs and reduplicated anus, A A.

So long as sacral teratomata were studied in man alone they were regarded as mysterious or curious. Comparative pathology throws much valuable light on this obscurity. When we find a series of malformations running through all the more important groups of animals from lobsters, worms, star-fish, fish, amphibian reptiles, birds, and mammals up to man, we may feel certain that some common cause underlies their production.

Looking broadly at the group of congenital sacro-coccygeal tumours, it would be idle to deny that a knowledge of their pathology is of the utmost service, even to those surgeons who boast that they are "eminently practical," and affect to despise the scientific side of our art. It would be presumptuous of me to indicate to you the way in which a proper discrimination of these tumours is of the highest importance as a prelude to any form of treatment. It is on account of the absence of a full knowledge of their nature that so many disasters happen when tumours belonging to this group are submitted to operation.

In conclusion, let me strongly urge that more attention be given to these conditions. Such studies cannot fail to make surgeons more philosophical by inducing us to reflect upon matters which at first sight seem outside the range of what are called the practicalities of our daily toil, and which it is too much the fashion to regard as the ultimate aim of surgery.

THE RECIPROCAL EFFECTS OF PREGNANCY AND PARTURITION UPON THE OPERATION OF SHORTENING THE ROUND LIGAMENTS OF THE UTERUS.

By WILLIAM ALEXANDER, M.D., F.R.C.S.,
Surgeon to the Royal Southern and Workhouse Hospitals, Liverpool.

THE operation of shortening the round ligaments (*a*) for backward displacements that are suitable for this mode of treatment, and (*b*) for cases of procidentia and prolapse, where either this operation alone is sufficient, or where the perineum has also to be restored, is now becoming more and more recognised as a valuable resource of surgery; and nearly every week testimony to its value appears, not only in my own practice, but in reports in the medical journals, especially of France and America. I now perform it about a score of times annually, and with as much confidence in its efficacy as I have in the performance of any other well-recognised surgical operation. I hope soon to give the profession more details of the general results of my growing experience on all points in connection with this method of treatment. Upon two points, however, I think the result of my experience should be given at the present time, and these are—first, the effects of the operation upon subsequent pregnancies and parturitions; and, secondly, the effects of subsequent pregnancy and parturition upon the position of the womb.

Most medical men seem to come spontaneously to the following conclusions: (1) that shortening the round ligaments will prevent the usual course of pregnancy, causing it to terminate in abortion; and (2) that, should pregnancy by any means chance to go to term, and parturition take place, the round ligaments will be so stretched that the old displacement will recur.

These erroneous ideas are, we admit, very natural, especially when we consider the extremely hazy conclusions given in our textbooks as to the mechanism by which the uterus is maintained in its position, both in healthy women who have no displacements, and also in patients whose round ligaments have been shortened. We do not seem to clearly recognise the reason why the uterus should stay where it usually does stay in a healthy woman, and each writer has his favourite cause amongst the many assigned causes. As to the round ligament operation, it is generally assumed that after it the uterus is suspended by the shortened ligaments, that these shortened ligaments have ever after to bear this, which is to them an enormous, weight, or the operation will fail, whereas in reality the operation only places and keeps the uterus in such a position that the forces that usually support the uterus can act upon it with the customary efficacy. Except for a slight and only occasionally exercised check action, the round ligaments after operation are usually passive.

These questions have been already discussed by the writer in his work on shortening of the round ligaments, and in different papers on the same subject in various journals, and it would make this paper too long to refer to them here, especially as they are not necessary to the full consideration of the proper subject of this paper.

To return to the main question, it may be said at once that, judging from the writer's experience, the following propositions are true: (1) that the occurrence of pregnancy is favoured in cases of retroflexion and retroversion by the operation of shortening the round ligaments, and that when pregnancy occurs, it proceeds and terminates naturally; (2) that in backward displacements the displacement does not tend to recur after parturition, whilst in cases where the round ligaments have been shortened for procidentia or prolapse, the return of this displacement will largely depend on the amount of destruction of the perineum by the passage of the child.

The proof of these two propositions is of a twofold character: *a*, theoretical considerations; *b*, actual results of operation.

Theoretical Considerations.—It is assumed by many that during pregnancy the round ligaments stretch in proportion to the ascent of the pregnant uterus, and that either pregnancy will be interfered with by the shortened ligaments, or if they stretch so as not to interfere with pregnancy, the woman will, after delivery, have her ligaments as long as ever, and that consequently the displacement will recur.

In these assumptions there are several probable fallacies. It is not yet proved that the round ligaments stretch to any large extent during pregnancy. In the unimpregnated uterus these ligaments run from the internal abdominal ring backwards, and inwards, and downwards, into the pelvic cavity. Without being stretched at all these ligaments will allow the uterus to be raised, in the cadaver, a considerable extent into the abdominal cavity, provided all the other attachments of the uterus are cut through. The uterus and two round ligaments might be compared to the handle of a bucket that

drops into the pelvis in the unimpregnated state, and rises into the abdomen during the impregnated condition.

The normal length would not, however, allow the impregnated uterus to rise into the abdomen as high as it usually does were the unshortened and unstretched round ligaments to maintain the relative uterine attachments at the end of pregnancy that they do in the unimpregnated state, much less would the shortened ligaments allow of such elevation without considerable stretching. Another question must now be dealt with, and that is the way in which the uterus enlarges during pregnancy. We generally consider the enlargement as taking place equally in all directions, but this is probably rarely the case. I first noticed this in my studies in the *post-mortem* room, where in an acutely retroflexed uterus, found accidentally at a necropsy, the fundus was extremely developed, and the round ligaments attached so far forwards that they had practically no control over the retroflexed part. (Hence arose the necessity for the stem pessary in such cases, after operation, until complete involution of the fundus has taken place.) In the few examples of impregnated uteri that I have seen *post mortem* the same phenomena occurred to a variable extent. In the case of a ruptured uterus removed by me lately from the living, the large fundus uteri appeared high and clear above the appendages, all of which seemed to have their attachments low down on the body of the uterus. The uterus, therefore, in my opinion grows away from the round ligaments, and in the direction of least resistance.

In connection with this question I have looked up some of the recent works on obstetrics. In the American *System* of gynæcology and obstetrics,[1] Dr. W. W. Jaggard says: "The round ligaments grow in length to a degree in correspondence with the ascent of the uterus, and become fourfold thicker. The increase in volume is due chiefly to hypertrophic and hyperplastic changes in the non-striated muscular elements of the upper third, and in the voluntary muscular fibres derived from the deep abdominal muscles for the lower two-thirds. *On account of the relatively greater development of the posterior uterine wall, the origin of these ligaments is apparently moved forward to a point at the junction of the anterior fifth with the posterior four-fifths of the antero-posterior diameter.* Their course at term is from the navel obliquely downward and outward to the inguinal ring. Owing to the axial rotation of the uterus, the left ligament is especially prominent.....At term the tubes seem to originate no longer in the angles of the uterus, but correspond to the middle third of the lateral surfaces." The italics are mine.

Further on, at page 462, Dr. Jaggard refers to the facility with which the uterine cavity will increase at the expense of whatever part of the uterine wall offers the least resistance. Writing of spontaneous rectification in cases of retroflexion of the gravid uterus, the following words occur: "In certain cases the process of spontaneous rectification is extraordinarily protracted. The anterior uterine wall grows upward into the pelvis major, until larger and larger portions of the uterus and fœtus are contained within the abdominal cavity."

In other words the broad ligaments, round ligaments, adhesions, etc., are always partially left behind by the expanding uterus, and can be left still further behind should necessity arise through special shortness of the ligaments, strong adhesions, etc. *Post-partum* involution of the uterus tends to restore the position of parts to that which existed before pregnancy.

Hence I hold, theoretically, that in pregnancy the shortened round ligaments are not much strained because: 1. The distance from the internal ring to the site of their attachment to the uterus is probably not greater than in the pregnant and unimpregnated uterus. 2. That any strain during pregnancy upon the shortened ligaments does not so much produce stretching of these ligaments as development of the uterine cavity in a direction that does not increase the strain, and consequently the attachment of the ligaments apparently to a part of the body of the uterus much nearer the cervix than usually occurs. 3. That any stretching of the ligaments that may occur is probably rectified by *post-partum* shortening, and that both uterus and ligaments reassume, if involution has been natural and complete, as nearly as possible the condition that existed before pregnancy took place.

[1] *Obstetrics*, vol. i, p. 340.

Such are the theoretical explanations of the undoubted fact that pregnancy and parturition are not necessarily, or hardly ever, interfered with by the operation of shortening the round ligaments.

At first the operation was performed on elderly women, or on those not likely, for various reasons that need not be more definitely stated, to have children. Very early in the operative history of my treatment of these cases, pregnancy occurred, and resolved my own doubts upon the matter.

Case I.—Mrs. B., aged 24. Retroversion after the birth of a child three years previously; uterine troubles, cessation of menses a year ago; epilepsy, dysmenorrhœa, etc. This patient was admitted into hospital to be treated for a severe burn sustained during a fit. The epilepsy occurred in connection with the menstrual periods, hence a vaginal examination, and the discovery of the displacement. The round ligaments were shortened on March 16th, 1881, and the fits soon after ceased. During the summer of 1882 she became pregnant, and was delivered, in the early part of 1883, of a child. She was attended by a midwife, and nothing special was observed either in the pregnancy or parturition by the mother or the midwife. I was able to exhibit this patient to members of the British Medical Association in 1883, where several gynæcologists verified my statement that the uterus was in excellent position. Since that time another child has been born, and with the same immunity from displacement.

Case II.—Mrs. G., aged 38, consulted me in the beginning of 1887 for pelvic pains, dragging, and general discomfort. She had been married seventeen years, and had had no children; menstruation regular, but scanty and painful. An examination showed a retroflexion that could without much difficulty be reduced by the sound. After consultation with Dr. Grimsdale, the operation of shortening the round ligaments was recommended. The operation was performed on January 7th, 1887, and both it and the after-treatment was quite uneventful and successful, from surgical, anatomical, or therapeutical points of view. She became pregnant in July, 1888, and her pregnancy was only marked by the fear that possessed her lest a miscarriage should take place. No symptoms of any such thing ever threatened, and her mind became much easier after the seventh month had passed. On August 8th, 1889, I attended her in her confinement, and she was safely delivered of a girl. The pains were very sluggish in the second stage, and the short forceps were employed at the last. She recovered without any bad symptoms. The child is now quite strong and healthy, and the uterus is in excellent position. The operation in this case reached the highest point of success possible to it, and I think the satisfactory results may all be fairly ascribed to it.

Case III.—Mrs. P., aged 36, was recommended to me as a suitable case for my operation by Dr. Grimsdale. She suffered from the usual effects of an acute retroflexion, dragging pains, weariness, leucorrhœa, dysmenorrhœa, and sterility for four years, her symptoms dating from the birth of a child at that time. The operation was performed on January 24th, 1886. The operation proceeded satisfactorily, but convalescence was retarded by one of the buried stitches keeping up a small fistulous opening that was only cured by removal of the stitch. On July 10th, 1888, the ordinary medical attendant of the lady informed me that she was pregnant. He said: "She is very large, and complains, especially when tired, of sharp pains on each side where the incisions were made..... Her health is first rate in every way, and the operation seems in her case to have been a complete success." On August 8th he wrote: "You will be glad to hear Mrs. P. is well over her trouble, and has a very fine boy. She had a rather hard labour, and very considerable, though not alarming, hæmorrhage afterwards." The convalescence was watched with great care by Dr. Stoney, and was quite satisfactory. On July 10th, 1889, I received a letter from the patient herself, in which she said, "I have not been so well for years."

Case IV.—Mrs. S., aged 28, suffered from the usual symptoms of retroflexion since the birth of her last child three years ago. Her mind was much upset with the severity and worry of her pelvic troubles. She was operated upon on November 29th, 1886, and delivered of a child on February 1st, 1888. On January 4th, 1888, she wrote: "I have been feeling far from well this

few weeks, having the false labour pains. I thought I would send you a line to see if it is right for it to be so." No other symptom occurred, and a daughter was born on the date above mentioned. I have seen this lady several times since, and the womb remains in excellent position.

Case v.—Mrs. D., aged 32, had her last confinement on October, 1883. Since that time she had suffered from the following symptoms, described to me by Dr. Paton, who has attended her for years: "Nervous symptoms, flashing hot pains in legs, weak dull pain in back, general debility of a pronounced type. The burning pains in the legs were at times very severe, and she had frequent hysterical attacks." Some dysmenorrhœa, leucorrhœal discharge at times, and a distinct retroflexion complete the outlines of the picture. The operation was performed on February, 1888, and she was delivered of a son in April, 1889. Dr. Paton concludes his letter to me about her by saying: "Since the operation she has been much stronger, and nearly free from nervous symptoms."

Case vi.—Mrs. R., aged 28, admitted into the Royal Southern Hospital on October 1st, 1888. She is the mother of two children, the youngest 4 years of age. Since the birth of this child she has suffered more or less from backache, pelvic pain, and discharge from the uterus. At first she was treated for ulcerated womb, then a Hodge's pessary was worn for six months, and afterwards a ring pessary for another six months. Finally a lacerated cervix was operated on nine months ago without relief. Patient very thin, anxious, and nervous. She suffered from acute retroflexion, ulceration of os, with a prolapsed enlarged ovary. She was operated upon on October 1st, 1888. The wound healed by the first intention, and the patient was discharged in six weeks looking plump and bright. She came occasionally to show herself afterwards, and at the beginning of the present year she came complaining of pains in her side. She was then far advanced in pregnancy, and at the end of March she was delivered of a daughter. I heard casually that she had had a miscarriage previously, caused by a doctor passing a sound to ascertain if the uterus was in position. If this was so, pregnancy must have occurred very soon after the operation in this case. I have not been able to verify the position of the uterus in this case.

Case vii. Mrs. B., aged 32, mother of one child, was admitted into the Royal Southern Hospital on September 11th, 1888, suffering from prolapse, the cervix protruding from the vulva. Much dragging and some pain accompanied the displacement. The round ligaments were shortened, and the perineum restored on September 13th, 1888. The after-course of the case was satisfactory, and the woman was confined on March 20th, 1890. The labour proceeded satisfactorily, except that the perineum was very much lacerated, and was not stitched up. A midwife only attended her. She came to me three months afterwards complaining of dragging pain. Her perineum had almost disappeared. I inserted a small ring, and I heard the other day that she was quite comfortable.

These cases only include those that have casually come under my observation. I have heard of several others, but have been unable to follow them up. I think these prove practically the propositions before mentioned.

CASE OF PUS IN THE PERICARDIUM TREATED BY INCISION AND DRAINAGE.[1]

By HERMANN BRONNER, M.D.

E. S., aged 11, a healthy girl, who had up to the time enjoyed perfect health, awoke ill on February 15th, 1890, during the prevalence of the influenza epidemic. Her temperature was 101.5°, pulse 100. She vomited, her tongue was bad, and, as her illness was attributed to unsuitable food on the day previous, three gr. ij doses of calomel were given, acting promptly. In the afternoon there was much pain in the region of the cæcum, which was tender to pressure. Ice bags were applied all night, with a view to the possibility of typhlitis. On the following morning the temperature, which had risen to 102° in the evening, fell to 100°, and the child seemed much better, all pain having disappeared. In the evening, however, the temperature rose to 104°, pulse to 122, respirations to 24. On the three following days the child was very ill, temperature, pulse, and respirations remaining unchanged, but absolutely no symptom pointing to the nature of the illness (no pain, no cough) could be discovered, despite the most careful examination by myself and Dr. Major, who subsequently saw the child in consultation with me. On the evening of the fifth day a small area of tubular breathing was discovered under the angle of the right scapula, but no crepitation. On the sixth day this area of tubular breathing was slightly larger, there was slight impairment of percussion note; no crepitation, no expectoration or even cough. On the seventh day crepitation of a rather coarse character was heard over the base of the right lung, dulness was more marked; tubular breathing was absent at times, at times distinct. On the ninth and tenth days respirations rose from 24-26 to 44-54. The temperature, which had always remained high (104° in the evening), fell to 100.2° after sponging on the morning of the ninth day, and we hoped for the crisis. But it rose again in the evening to 104°, and, as the child seemed much worse, antifebrin gr. vijss were given, antipyrin having previously caused violent sickness. Temperature fell to 96°, with great perspiration, the child seeming much collapsed. At noon the thermometer again showed 104°. An ominous pallor now set in; there was great restlessness, tremor of hands and head, the lips were parched and pale, and we feared the worst. Antipyrin gr. xv was then given by the rectum. The effect was very marked. The temperature fell to 98.2°, rising to 101° again in the evening, measuring 100° at 2 A.M. The tremor and restlessness disappeared, the child felt comfortable, and slept for some hours, the first time for several nights. Still no crisis set in. Temperature rose to 102° at noon, the tremor, pallor, and restlessness returning. Antipyrin gr. xx was again given by the rectum, with the same marked beneficial effect. For the following six days, as soon as the temperature rose to 102°, being taken every half-hour, gr. xx antipyrin were given by the bowel, the temperature thus being kept below 100° for the greater part of the twenty-four hours. The dose was only required twice, at the most three times, in the twenty-four hours.

On the morning of the eleventh day there was typical crepitatio redux all over the area of the lower lobe of the right lung Still no crisis set in. This was accounted for by the appearance of pneumonic symptoms over the apex of the left lung on the twelfth day. The pneumonic process then crept slowly through the apex to the front, the cardinal symptoms being still more irregular than they had been on the right side, crepitation especially being of a very coarse character. Dulness extended in front not lower than the second intercostal space, behind half way down the scapula.

On the right side, in the meanwhile, whilst crepitation was diminishing, the dulness gradually became more marked, and it became evident that there was pus forming in the right pleura. This was confirmed by aspiration on March 4th, the sixteenth day of illness, and on March 7th, Mr. Meade, who had seen the child together with Dr. Major during the previous week, made an incision in the sixth intercostal space, behind the axillary line. A pint and a half of sweet pus was withdrawn, and two drainage tubes were inserted side by side, at the suggestion of Dr. Major, for the purpose of eventual irrigation. As three days after the operation the temperature did not go down, the cavity was washed out daily with 5 per cent. boric acid solution, until the fluid ran off clear through the free tube. After three irrigations the temperature went down to 97.8° in the morning, and 99.8° in the evening, and remained so for the next eight days, during which irrigations were not continued.

Still pulse and respirations did not diminish, measuring 140 and 45 respectively. There was clearly still some mischief at work, which Dr. Major and myself vainly tried to discover. An aspirating needle was passed into the seventh intercostal space in the right scapular line, in the hope of finding encysted pus, but in vain. Respirations grew more frequent, necessitating raised position in bed. On March 18th, Dr. Major noticed a slight increase of the area of dulness over the heart and faintness of the heart sounds, and mooted the possibility of fluid in the pericardium. In the course of the following two days dyspnœa increased very

[1] Abstract of a paper read before the Bradford Medico-Chirurgical Society.

markedly, and the increase of the area of dulness over the pericardium became unmistakable.

On the morning of March 20th the child woke up with severe dyspnœa lasting a quarter of an hour. The pulse was scarcely to be felt. Dr. Major advised speedy aspiration of the pericardial fluid and incision with subsequent drainage in case the fluid should be pus, which in all probability it would be. In the afternoon Mr. Pridgin Teale saw the child with Dr. Major and myself, and confirmed the presence of fluid in the pericardium. Dr. Major also pointed out a slight area of dulness high up in the left axilla, and separated from the pericardial dulness by a zone of clear lung sound. It was decided to pass an aspirating needle iuto the area of pericardial dulness first, and in case this revealed pus to incise and drain.

After the opening into the right pleura had been closed as a matter of precaution, the child was chloroformed, the pulse going down from 160 to 60, and becoming full and bounding. A trochar was passed through the fourth intercostal space, 1 inch to the left of the sternum, in order to avoid the internal mammary artery. Pus appeared. Mr. Teale then made an incision outwards, using the trocar as a director, and carefully watching for any indication of the heart touching the point of the knife. Nearly two pints of sweet, thick pus slowly escaped through the opening. The apex of the heart could afterwards be felt beating against the tip of the little finger inserted into the opening. A short drainage tube was left in the wound and sublimate gauze pads used as a dressing. At no time during the operation were any ill effects of any kind noticed on the heart's action.

The relief afforded by the operation was very great. The child, which before had been sitting bolt upright, could now lie flat on its back, and slept in this position. The temperature, however, which for over eight days had been below 100°, rose to 102° in the evening.

On the following morning, March 21st, after a good night, the temperature was 100°, but pulse and respiration had not diminished, as we had hoped, measuring 148 and 52. In the evening the temperature rose to 102°. There had been much discharge from the wound and the tube had slipped out. It was replaced and held in its place by a bandage of wide-meshed sublimate gauze passed over the tube and round the body before the absorbent pads were put on. An attempt was made to form a valve by suspending a piece of oiled silk over the tube and pressing it against it; but it was never very successful, air being frequently drawn in.

On March 22nd, as the temperature, pulse, and respiration had not diminished, gr. x iodoform, suspended in previously sterilised glycerine and water (Billroth's formula ℞ iodoform gr. 50, glycerine ♏ 80, pulv. acaciæ gr. viij, aq. dest. ad ℥ j) were injected into the pericardial cavity through the drainage tube. The injection and the process of dressing caused no discomfort or ill effect whatever and did not influence the pulse in the least.

The iodoform injection was repeated on the two following days. Things remained unchanged, except that a troublesome and painful cough set in, necessitating the administration of morphine gr. $\frac{1}{6}$. Readjustment and shortening of the pericardial tube did not affect the cough in the slightest.

On March 25th the child was peculiarly drowsy, and iodoform was not injected during the daily dressing, but as the urine was found free from iodine, iodoform gr. v was on the 26th, injected into pericardium and right pleura, which still discharged much.

In the night of March 27th there was much delirium, the only time during the whole illness. Although no iodoform had been injected on the 27th as a precaution, there were traces of iodine in the urine on the 28th, and it was therefore not considered safe to continue the iodoform injections.

The troublesome cough continued, necessitating the almost constant use of morphine (gr. $\frac{1}{6}$) to procure sleep. There was pain above the left nipple during coughing. Pulse and respiration remained the same, averaging 150 and 45. The temperature rose to 102° and a little above every evening. On March 29th it rose to 104° with much perspiration, but without rigors. During sleep respiration was very irregular and often intermittent, seriously alarming the attendants at times. Cheyne-Stokes breathing was not present. Champagne and small doses of quinine were now given.

As no improvement whatever took place it was decided on March 31st, the eleventh day after operation, to syringe out the pericardial cavity, although the pus had always been sweet. It was with some degree of diffidence that we ventured on this step without previous experience to fall back upon, as the pulse had become very weak and was at times slightly irregular. Two tubes were inserted side by side to give free egress to the fluid and to prevent any pressure on the heart. A 5 per cent. boric acid solution of 100° was run through with a douche, pressure being kept at a minimum, until the fluid ran off clear through the free tube, which it did in jets synchronous with the beat of the heart. There was no ill effect whatever on the pulse, nor did the daily repetition ever seem to have any ill effects whatever. The child used to sit up during the dressing, lending a helping hand and chatting and joking. Only once, on April 3rd, when ♏ j of carbolic acid had been added to ℥ j boric solution, did the child feel faint and queer, complaining of discomfort. Carbolic was in consequence not tried again.

Pulse and temperature were, however, not in the least influenced by the daily irrigation of the pericardium and right pleura. Respiration grew more frequent, reaching as much as 72, but without dyspnœa. The cough was very troublesome, bringing up very little tough yellow expectoration, which contained no bacilli Kochii. The pulse began to show signs of great weakess. Sphygmographic tracings showed it to be dicrotic or hyperdicrotic, indicating very low arterial tension, and a pulsus alternans or bigeminus indicating weakness of the heart's action. No cause whatever could be discovered for the persistence of high temperature and rapid pulse, despite frequent examination by Dr. Major and myself. There was no evidence of accumulation of pus or of breaking down of lung tissue. There were never any murmurs heard over the heart valves.

The syringing with 5 per cent. boric acid was continued daily, without any ill effects on the pulse, until April 10th. The quantity of pus discharged had considerably diminished, but still went through the bandages in twenty-four hours; it was still thick, yellow, and sweet. The pulse gradually became weaker. Strophanthus, camphor, tokay, and champagne were exhibited without appreciable effect.

On April 10th the child was very sick and perspired freely. On the following day it was remarkably stronger, ate heartily, and played in bed. On the 12th it was again very much weaker. The pulse could only be counted with the aid of the sphygmograph, counting 150 to 160. Great care was now necessary during the daily dressings, irrigation being carried out in the recumbent position and twice having to be discontinued on account of faintness.

On April 14th, tinct. digitalis ♏ v was tried, but the child, which had already been rather sick in the night, became more so, and it was not tried again that day.

On April 15th, digitalis was again given in ♏ v doses, but the second dose again caused sickness. At 2 P.M. the child suddenly screamed out with pain, localised to the left of the navel. I found her in great agony, praying to be relieved, and pulseless. The pulse recovered a little under ether and camphor subcutaneously, but the child sank fast and died shortly in the act of vomiting, on the sixtieth day of illness and the twenty-sixth after the incision into the pericardium. Unfortunately, a *post-mortem* could not be made, but a bent sound penetrated underneath the heart, so that its point would correspond with the third intercostal space on the right of the sternum. Towards the base of the heart it seemed to enter into soft granulations, which had, however, not obliterated much of the pericardial sac, and the sound was passed easily round the heart above and below. It was not found possible to pass it into an opening communicating with the pericardium.

As to the etiology of this case, I have no doubt whatever in attributing it to the poison of the influenza epidemic, which was everywhere marked by frequent complications with pneumonia and empyema. The course of the pneumonia was also a very irregular one as regards the physical signs, an experience, I believe, also made frequently during the course of the epidemic. It tallies remarkably with the description Ribbert, of Bonn, gives of a class of pneumonia which he designates as streptococcus pneumonia, characterised by great irregularity of the percutory and auscultatory

symptoms, by a tendency to spread, and by irregular, liquescent infiltration of the lung tissue as presented at the *post-mortem* examination.

The localisation of pain in the region of the cæcum at the commencement struck me all the more forcibly at the time, as I had just seen another case of empyema of the right side, also due to influenza, which commenced almost exactly in the same way, except that the pain in the abdomen was much more intense, causing the muscles to contract in a tetanic manner; it was not until after twenty-four hours that thoracic symptoms appeared.

The difficulties of diagnosis in this case were unusually great—in fact they were never quite surmounted. It was only on the evening of the fifth day that the first indication of the nature of the illness presented itself. Then the empyema of the right side presented some difficulties following so rapidly on the pneumonia of the base, and being partly masked by this. After the empyema had been operated on and temperature reduced, pulse and respiration did not follow suit, the dyspnœa increased, without discernible cause at first, until the pericardial effusion was discovered. It was then found that the pericardium contained nearly two pints of thick pus, although there had been no pyrexia of any account for over eight days, and although there had never before been any symptoms pointing to an acute inflammation of the pericardium, in particular no delirium, no pain over the region of the heart. After this accumulation of pus had been emptied the temperature rose to 102°, and remained as high every consecutive evening without any cause being found for this.

How were we to account for the presence of pus in the pericardium, and how long had it been there? Evidently some time, and we looked upon it at first as the result of purulent pericarditis of a septic nature caused by the same poison as the pneumonia and empyema, and which had run its course with symptoms sufficiently indefinite to be masked by those of the initial pneumonia. When, however, despite all surgical interference, temperature did not come down, the suggestion presented itself that it might possibly have been a case of empyema of the left side, breaking through into the pericardium, and draining through this cavity. The presence of an area of dulness in the axilla, separated from the pericardial dulness by a zone of clear lung sound and which disappeared after evacuation of the pus, would seem to support this view, although not absolutely so, as I find Eichhorst quotes as a symptom of pericardial effusion slight impairment of the percussion note in the first and second intercostal spaces often preceding all other symptoms of pericarditis. The assumption of a collection of pus behind the pericardium, draining into it, becoming septic by the incision and inaccessible to the antiseptic washing, might explain the persistency of the pyrexia. No accumulation of pus could, however, ever be detected by percussion, and there was no *post-mortem* examination to clear up the doubt. Again, the pyrexia might have been of a septic nature caused by endocarditis giving rise to no symptomatic murmurs. But why should the temperature have risen just on the evening of operation had this been the case?

Gangrene of the orifice of the urethra was another interesting feature of the case. It was discovered quite accidentally by the nurse on the day following the incision into the pericardium, never having caused any trouble whatever. There was a black, dry, offensive ring round the urethra, the urine passing freely through its centre without pain. It fell off on the day preceding death. The child only once or twice wetted its bed towards the end of its life. I am strongly of the opinion that it was due to the use of antipyrin. I remember two cases of typhoid in women who were taking gr. xxx doses of antipyrin, where diphtheritic inflammation of the orifice of the urethra was present. Possibly it may only be caused in cases in themselves tending towards such an occurrence; but I remember a lady patient who was taking antipyrin for rheumatic pains complaining of severe pain during micturition for two days, which ceased when the antipyrin was discontinued, and which never returned afterwards. Naphthalin, I believe, also causes pain on micturition, and Mr. Humphreys, of the Bradford Fever Hospital, mentions two cases where beta-naphthol gave rise to similar trouble.

The antipyrin also caused vomiting when given by the mouth, which was obviated by its administration by the rectum. Otherwise it acted very beneficially indeed, the effect being more evident at the bedside than it is possible to describe. It did not seem possible at the time that the child could have lived had we not been successful in lowering the temperature. Antifebrin caused a distinct collapse with perspiration, and did not give the same marked sense of comfort as the antipyrin. The consideration that antifebrin in some way alters the composition of the hæmoglobin—as indicated by the blue appearance of patients taking it—was another reason for preferring antipyrin in this critical case, although even very large doses in healthy persons do not seem to necessarily have a permanently injurious effect. A case is on record in which a student took 28 grammes, or nearly an ounce, and recovered after three days, whilst again doses of gr. vijss would seem to have had very marked ill effects in rare cases.

With regard to the operation little need be said. Removal of the fluid from the pericardium was absolutely indicated, and when this proved to be pus there was no chance of recovery except by making a free incision and draining. The incision was made in the fourth intercostal space, beyond the mammary artery, and, to use the words of Mr. Pridgin Teale, "the heart never seemed to come near either the trochar or the scalpel." It would only be in cases of old standing, in which adhesions of the pericardium might have formed, that one need fear injury to the heart. It would also seem that rapid evacuation of the contents of the sac may be followed by sudden death.

The admission of air into the pericardial sac, the irrigation with boric acid, carried out as it was with all precautions, never seemed to affect the heart's action in the least, and this case will, without doubt, go to prove that the dangers of surgical interference with the pericardium are no counter-indication, where it is for any reason indicated. In this respect it corroborates the two successful cases I have been able to find recorded. Rosenstein, of Leyden,[2] incised and drained the pericardium of a boy of 10 years. The wound was closed on the nineteenth day, and perfect recovery took place, the heart being left very little, if at all, hypertrophied, and presenting no signs of pericardial adhesions. West[3] was also successful in a case of a boy, aged 16, the patient having perfectly recovered in five weeks.

The rapidity with which these two cases, particularly Rosenstein's, recovered is very striking. It would hardly seem possible that in this time the pericardial sac could be obliterated by granulations gradually creeping over the heart from the base, as one might expect by analogy with the pleural cavity under similar conditions. In the case I have recorded there was certainly no obliteration of the pericardial sac of any extent after twenty-six days, nor did the pus diminish in quantity or thickness sufficiently to warrant the withdrawal of the drainage tube. The absence of a *post-mortem* examination is all the more deplorable, as it might have explained this, and given some idea as to the mode and rapidity in which one could expect a case of this sort to heal up.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE PRESCRIPTION OF IRON IN ANÆMIA.

In his interesting articles on Anæmia, Dr. Stephen Mackenzie discusses with some care and anxiety the proportions of alkali to be combined with sulphate of iron in Blaud's pill. Let me assure Dr. Mackenzie and your readers that these proportions are of no importance whatever, and that the alkali may be omitted without therapeutical loss and with much practical convenience.

For the last five years of my practice I ceased entirely to use the alkali, and my results were equally good. The mistakes and failures in treating adolescent and chlorotic anæmias are often due to the prevailing economy in the use

[2] *Berliner klinische Wochenschrift*, 1881.

[3] *Medico-Chirurgical Transactions*, referred to in the BRITISH MEDICAL JOURNAL of 1883.

of the iron. With five, or even ten, grain doses of citrate of iron little real progress may be made in many cases. No form of iron is so efficient as the sulphate, of which gr. j thrice daily is to be given for a week, then two grain doses for ten days, and so on till nine, or even twelve, grains are taken in the day. The drug should be gradually reduced in like manner, and the course should never be less than three months in duration, or relapses may occur. In obstinate cases the addition of $\frac{1}{30}$ gr. of strychnine, or $\frac{1}{4}$ gr. of phosphide of zinc are invaluable aids. Most patients require the inclusion of gr. $\frac{1}{2}$ to $\frac{3}{4}$ of extract of aloes to prevent the constipating effect of the sulphate, but Dr. Mackenzie rightly denies that constipation is the cause of chlorosis, or even generally coincident with it. This error is due to reasoning from an insufficient number of careful records.

Iron pills should be carefully made from the dried sulphate and not with gums, which by hardening make the pills insoluble. In any case it is better to order the pills to be freshly made every week, if not even more frequently. Patients who are unable to take pills are best treated with the saccharated carbonate of iron, of which three or four large teaspoonfuls may be given in the day.

Athenæum Club. T. Clifford Allbutt.

ON THE OCCURRENCE OF "ANILINE BODIES" IN MICROSCOPIC SECTIONS.

I have carefully read the papers by Dr. Russell and Dr. Edington in the British Medical Journal for December 13th, 1890, and January 17th, 1891, respectively. My attention was thereby directed to certain appearances I noticed in some sections recently under examination. To these appearances I give the old name of "aniline bodies," as they are shown by the use of more than one aniline colour. These remarks, unless otherwise stated, refer to sections made through the wall of the pharynx of a boy who died of tuberculosis. I stained sections of this tissue by Ehrlich's method of demonstrating the tubercle bacillus. This, indeed, I found; but was surprised to find also deeply-stained, globular, refractive bodies sparsely scattered through the tissue, more especially in the deeper layers. I drew the attention of a microscopic friend to these bodies, who said, "Oh, these are aniline bodies; if you use carbolised solutions you will not get them." It is very difficult to get clear solutions of aniline oil, even by repeated filtering; they are slightly opaque from presence of microscopic globules; this objection does not apply to solutions of carbolic acid which look perfectly transparent. Accordingly, I set to work, carefully following Dr. Russell's directions to the minutest detail, in the preparation of sections. I soon found "fuchsine bodies," neither very large nor very numerous, the largest, perhaps, measuring a little more than half the diameter of a red blood-disc. They occurred generally in the deeper layers of the pharynx, in the nucleated connective tissue between the muscles, sometimes appearing to lie in or on the cut end of a muscular bundle. I very rarely saw them within a cell, though once I saw a fusiform group of globules bounded by something like a cell-wall, within which was a nucleus scarcely stained. Sometimes the globule was surrounded by a clear vacuole concentric with it. Sometimes a fuchsine body would not occur for many microscopic fields; when they were found they were hardly ever single, but arranged in lines or groups of half a dozen or less. The appearances often strikingly resembled those depicted in Dr. Russell's coloured plate, but on a smaller scale. I may mention that all the stains were filtered, and that nothing was considered a "fuchsine body" that was not circular, or did not stand out with a clearly defined margin and homogeneous red structure. The fuchsine was turned out of everything except "fuchsine bodies," tubercle bacilli, and red blood corpuscles; the latter formed beautiful objects, looking like crumpled yellow discs with a narrow red rim. A second slide by Dr. Russell's method showed similar results. In a third I did not find the globules, and in a fourth too much fuchsine remained in the specimen for differentiation.

Curiously enough, in using Gram's method, my experience so far coincides with Dr. Russell's in that with it I obtained the most striking results. Not only were "aniline bodies" (purple) more numerous and larger, but they appeared to show an internal structure and mutual relations one with another. I saw at least one larger than a red blood disc, many about the same size, and innumerable lesser ones. The typical ones were perfectly circular, with a well-defined margin. Most of the appearances depicted in Dr. Russell's Fig. 10 were well simulated. This especially applies to the internal structure, in which a process of segmentation appeared to be going on. Again, a broken granular sphere was often surrounded by a group of granules, as if it had shed its contents. And, again, a large individual and a small would be seen lying in contact suggesting gemmation. I did not, however, find a chain united by filaments. Viewed under low powers, $\frac{2}{3}$ and $\frac{1}{5}$, these appearances might easily be mistaken for true histological elements; but on using a $\frac{1}{12}$ (in which case the least turn of the screw alters the focus) my suspicion was excited; for when the "aniline bodies" were in focus the tissue elements were *out*, and *vice versâ*.

I then went on to other trials with the same and other tissues. I found no "aniline bodies" on using logwood and eosine. I tried Gram's methyl-violet dissolved in pure water, but the result was inconclusive, as I did not sufficiently decolorise to get a good after-stain. In a sarcoma of testicle (Russell's method) I found no "aniline bodies." In a section of lung, stained methyl-violet-aniline, nitric acid, a few very opaque globules, evidently foreign. Lung, Ehrlich's method, no globules. A cover-glass preparation of urine, carelessly stained, globular and amorphous deposits, many of the former granular. Finally, I dropped ordinary methyl-violet-aniline solution filtered on a cover glass, and allowed it to dry. Under the microscope numerous globules were seen, either single, or two partially fused together; or, again, united by a narrow isthmus. Russell's fuchsine, similarly treated, gave like results.

I have tried, as far as possible, to describe what I found in my specimens, and do not feel competent to draw inferences from such scanty data. But I think I shall be justified in saying that it will behove all who wish to test the validity of Dr. Russell's views on the pathology of cancer, when using the methods he expressly recommends, to be on their guard lest they mistake coloured globules—whether droplets of aniline oil, degenerated protoplasm, or *tertium quid*, I know not—for pathogenic fungus.

Nottingham. C. H. Cattle, M.D.Lond., M.R.C.P.

THE TREATMENT OF DIPHTHERIA.

In a note upon the treatment of diphtheria, which appeared in the British Medical Journal of January 24th, Dr. Knapp considered that the success of his procedure depended upon the antiseptic properties of a mixture containing iron, soda, and iodine. Without wishing for one moment to doubt the accuracy of his conclusions, I would venture to suggest that the remarkable efficacy of the remedy was due rather to the iron which it contained than to its salicine or iodine components.

The perchloride of iron has always enjoyed a high reputation as an empiric remedy for diphtheria, and it is now several years since its introduction into the London Hospital in a modified form led to a very considerable reduction in the mortality attending the disease. In the method to which I allude the mode of administration of the drug was modified in two important particulars—not only was the dose augmented and repeated every hour, but, at the same time, a few grains of chlorate of potash were added to the solution, with the view of encouraging the formation of the strongly antiseptic gas (euchlorine), which would dissolve in the mixture and exert a local action upon the seat of the disease. The formula runs as follows: Ferri perchlor., ℥vj; pot. chlor., g. xl; glycerini, ℥iv; aquæ, ad ℥viij; M.

Whether the suppositious chemical action really takes place or not is uncertain, but no one who has had occasion to use the prescription in cases of diphtheria will deny that its effect upon the course of the disease is extraordinary. The mixture is administered every hour, day and night, the patient allowing the medicine to remain for a few seconds in contact with the throat before swallowing it, and refraining from drinking any fluid for at least ten minutes after the dose has been taken. For the rest, the treatment consists in the free exhibition of stimulants and of a highly nutritious diet. Sprays of sulphurous acid, quinine, antipyrin, and salicylate of soda appear to exert no influence whatever upon the course of the malady.

Under this system of treatment the course of events is fairly uniform; the membrane ceases to spread after the

lapse of a few hours, and has usually disappeared by the end of the second day. When this result has been effected, the medicine must be cautiously reduced in amount and in frequency of administration, but in no case should it be abruptly discontinued, since it has happened that in such cases the membrane has reappeared at the moment that the disease was supposed to have received its final dismissal.

I have before me the notes of twenty-two adult cases treated in this manner; of these twenty recovered and two died; seven of the successful cases suffered from subsequent paralysis. I might also remark that in one case, where tracheotomy was performed on account of laryngeal implication, the patient's life was undoubtedly saved by the persevering and energetic action of the house-physician, Dr. Daniells, who himself hourly applied the mixture to the diseased mucous membrane.

Persons suffering from diphtheria appear to be exceedingly tolerant of iron, as in no case was colic or constipation complained of, and in only three instances did vomiting ensue at the commencement of the treatment. In cases of infants the remedy is practically useless, the cases generally dying of exhaustion before the medicine has had time to take effect.

From the numerous facts at our disposal there can be no doubt that the administration of certain preparations of iron in large and repeated doses is capable of exerting a material influence upon the course of the disease; and it behoves us to determine by more extended trial the true value of its various antiseptic combinations in the treatment of so fatal a malady as diphtheria.

W. Soltau Fenwick, M.D., B.S.Lond., M.D.Strass.
Harley Street, W.

DEATH UNDER CHLOROFORM.

As deaths from anæsthetics are always of some interest, the following case may be worthy of record:

On December 7th, after consultation with Drs. Berry and Watson, of Queenstown, Dr. Murray made an exploratory incision over the right hypochondrium of a lad, aged 17 years. Chloroform was administered on a small wire and lint mask by Dr. Watson, and was measured by a drop bottle. The total quantity used from first to last was 6 drachms.

Soon after the administration was begun there was a marked diminution in the number of pulse beats. Gradually, however, the pulse became stronger and the breathing regular. In about twenty minutes the lad's face suddenly became pallid, the pulse stopped at the wrist, and the breathing became irregular and gasping. Respiration continued spasmodically for fully a minute afterwards, and then ceased entirely. At once artificial respiration by Sylvester's method was begun and continued for over half an hour. Ether hypodermically, inhalation of nitrite of amyl, and the electric current were tried, but without success.

Death seemed to have been instantaneous from reflex paralysis of the heart. His heart had been auscultated previously by several medical men and by the anæsthetist prior to the administration, and nothing abnormal had been detected. For six months the lad had suffered from obscure attacks of colic, for which he had at intervals increasing doses of morphine administered hypodermically. No *post-mortem* examination was allowed.

John K. Murray.
Wm. B. Berry.
L. Watson.

Whittlesea, Cape Colony.

SOL. HYDRARG. PERCHLOR. IN CANCRUM ORIS.

In the British Medical Journal of January 3rd, Dr. Coward calls attention to the value of hydrarg. perchlor. in diphtheria. May not the action of the drug in this disease depend on its germicide properties, diphtheria having recently been found to be due to the presence of a bacillus? There is another serious affection which I have seen much benefited by the use of this drug. I allude to cancrum oris. Within the last few weeks two cases of this severe affection have been under treatment in this infirmary. In one case the right cheek was extensively ulcerated, and, what I believe to be rare, the tongue was also involved, the right half being one mass of gangrenous ulceration. The discharge was intensely fœtid, pouring from the mouth as the child lay in bed. In both these cases sol. hydrarg. perchlor., 1 in 1,000, was used to swab over the ulcerated surfaces, of course taking all due precautions. The effect was almost magical. In a fortnight both children (they were brother and sister) were perfectly well, a slight scar on the tongue alone remaining. Good living, tonics, etc., undoubtedly assisted these cures. These children infected each other, the elder being first attacked.

That there is a microbe in cancrum oris as well as in diphtheria, etc., is, probably, only a question of time to prove. If this be so, then the value of such a powerful germicide as the hydrarg. perchlor. in such cases must be evident.

The thanks of the profession are due to Dr. Coward for suggesting this treatment for diphtheria. I believe that if only a fair trial is given to this drug, whatever may be its *modus operandi*, the results will not be disappointing.

Edmund Rundle, F.R.C.S.I.,
Res. Surgeon, Royal Cornwall Infirmary.

MALARIAL CIRRHOSIS OF THE LIVER.

From the scant notice that this condition of liver receives in our textbooks, one surmises that it is a disease not frequently met with at home.

A case that came under my observation agreed rather with Dr. Cullingworth's experience in some of its clinical features than with those tabulated by Dr. Saundby. The main features were these: Only three months' exposure to malarial infection; well marked ascites, and anasarca of legs; relieved by tappings; jaundice present but slight; liver diminished and contracted very much in size (verified). All other causes were carefully eliminated before arriving at the diagnosis. Duration of disease only two years.

Ilkley-in-Wharfedale. A. H. Bampton, M.Ch., M.D.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GUY'S HOSPITAL.

RUPTURE OF ISCHIO-RECTAL ABSCESS INTO SUBPERITONEAL AREOLAR TISSUE: DEATH.

(By W. Arbuthnot Lane, M.S., Assistant-Surgeon, Guy's Hospital, and Hospital for Sick Children.)

E. W., a woman, aged 45, was admitted on August 15th, 1890. For eight months she had been engaged in nursing her husband, who died of phthisis, and since his death a month before she had been completely prostrated. At frequent intervals during that month she had suffered from violent attacks of vomiting. On August 9th she felt so bad that she called in Dr. Herron, who found an abscess forming in the ischio-rectal fossa. This the patient would not have opened, but preferred that it should burst spontaneously.

On August 13th she fell down on trying to get out of bed, and within an hour she became much worse. When Dr. Herron saw her a short time after the accident he found that the swelling in the ischio-rectal fossa had almost completely disappeared, and that she had developed great pain, tenderness, and swelling commencing in the lower part of the abdomen and spreading upwards. He urged her to go into Guy's Hospital, as he considered it was not unlikely that the abscess had suddenly extended upwards, either beneath or into the peritoneal cavity. This she consented to do on the 15th. She was then in an extremely feeble condition, vomiting small quantities of bile-stained fluid at intervals. Her abdomen was uniformly distended and very tender, especially in its lower half. The wall did not move during respiration. A finger in the rectum could discern nothing beyond an induration in the ischio-rectal fossa, evidently the wall of the abscess previously observed. There was no redness of any portion of the abdominal wall. The patient appeared to have a peritonitis, which affected chiefly the lower half of the abdominal cavity. Hoping that the condition might be remediable, an incision was made in the middle line through the skin and aponeurosis below the umbilicus. A large collection of very foul-smelling pus was found extending over the outer surface of the peritoneal covering of the lower half

of the abdomen. On introducing the hand a finger could be passed through an opening in about the centre of the left levator ani into the abscess cavity in the ischio-rectal fossa. The whole pus-containing area was thoroughly irrigated with a dilute perchloride lotion, and the patient was given such stimulants as were thought advisable, with quinine, etc. In spite of this treatment, she sank on the following day.

At the *post-mortem* examination the conditions found did not differ from those already described; a small quantity of fluid pus was found in Douglas's pouch, but beyond this there was no other evidence of peritonitis. It seemed highly probable that this pus had escaped into the peritoneal cavity when the abdomen was opened at the necropsy.

This case is of sufficient rarity to put on record, as though abscesses in the ischio-rectal fossæ are unfortunately very common, I do not remember hearing of one which took such a disastrous course as did this one. It seems, therefore, highly probable that if it had not been for the injury—a direct blow upon the floor of the ischio-rectal fossa—this abscess would have opened in the usual manner.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 10TH, 1891.

TIMOTHY HOLMES, M.A.Cantab., President, in the Chair.

On Macrodactyly and some other Forms of Congenital Overgrowth and their Relation to Tumours.—Sir G. M. HUMPHRY gave an account of six specimens and casts of this affection in the museum of the University of Cambridge, and of nineteen cases published in various journals. The affection, he said, consisted in an overgrowth of all the tissues of the part—bones, ligaments, tendons, skin, and more particularly of the fat and connective tissues—these tissues usually presenting their normal characters. The overgrowth continued to proceed after birth, often at a rate exceeding that of the rest of the body, so as to call for removal of the part. The hands and the feet were about equally liable, and the digits on the radial and tibial sides more than the others. In some cases the overgrowth showed tendency to spread, more particularly along the sole. Now and then it was symmetrical, and occasionally it was associated with fatty growths in other parts. Reference was made to congenital overgrowths of like nature in lips, tongue, and face; and an analogy was drawn between these examples of intrauterine insubordination to the laws of development and growth and the growths or "tumours" of later life, all or nearly all of which—simple and malignant—were referable to an abnormal overgrowth of the normally existing tissues rather than to a starting into activity of latent embryonic germs.—Mr. ROGER WILLIAMS agreed with the author that abnormal changes in growth or development were not confined to the intrauterine period, but extended through the whole term of life. They were subject to an integrating force comparable to the force by which crystalline bodies retained their form. Congenital abnormalities and tumours might be attributed to some disturbance of this integrating force. In hypertrophy of the breast the particular form assumed, glandular or fibrous, depended on the period of life at which the change set in. He referred also to Cohnheim's theory of the origin of tumours.—Mr. MARMADUKE SHEILD showed a young man, the subject of flat foot and enlarged great toes, with excessive sweating of feet, as possibly allied to the conditions which Sir George Humphry had brought forward in his paper. He had seen a good many examples of this condition amongst young adults, and found that they nearly all had enlarged bulbous digits, with enormous metatarso-phalangeal joints. The condition had, in the case he was showing, given rise to so much inconvenience, that he had excised the joint with great benefit to the patient. He asked Sir George Humphry if he could throw any light on the condition of molluscum contagiosum, and referred to the late "elephant" man of the London Hospital, who, besides the condition of the skin, had also had several bony hyperostoses.—Mr. MACNAMARA read the notes of the case of a Welsh girl, aged 24, who had some years ago been under his care in the Westminster Hospital. There were not only large masses of hypertrophied skin on the feet and hands, particularly on the right foot, but also an epulis, and a fibrous tumour of the sclerotic. The deformities of the hands were similar to those found in some of Sir George Humphry's cases. He mentioned this case as it bore out, he thought, in a very remarkable way the contention of Sir George Humphry, as there were combined in one body three different kinds of overgrowth—tumour of sclerotic, epulis of jaw, and hypertrophies of the skin (so excessive that the case was sent to the hospital as a case of elephantiasis).—Dr. ROBERT LEE could not agree with Sir George Humphry's contention that tumours were congenital deformities. He referred to a girl one of whose arms was congenitally hypertrophied. At the age of 17 this limb began to grow very rapidly. It was amputated about two inches below the shoulder and an inch and a half above the hypertrophied parts. On dissection there was found to be a large cyst in connection with the radial nerve, and, on tracing the nerve up, it was found to be diseased higher up than the point at which the arm had been amputated. The diseased portion left in the stump was accordingly removed. This case, in which tumour formation had occurred in a congenitally hypertrophied limb, and which, he thought, was only a coincidence—a tumour starting in hypertrophied tissues just as in ordinary tissues—would be opposed to Sir George Humphry's contention. If it was the author's wish to upset the theory of included embryonic elements as the cause of tumours a theory which he (the speaker) thought had been given up by most people, there was no need for Sir George Humphry to set up another theory in its place.—Sir GEORGE HUMPHRY, in reply to Mr. Roger Williams, said that he had not undertaken to bring forward all the different kinds of growth found in those portions of the body of which he had been treating. Although he had seen many cases of hypertrophied mammary glands, he had never come across a case in which there had been hypertrophy from birth. In Mr. Sheild's case he thought the great toe was placed at a great disadvantage in cases of flat foot from the lengthening out of the inner side of the foot. Cases of molluscum fibrosum were instances of localised hypertrophies similar to multiple fatty tumours. In answer to Dr. Lee, he had not stated that congenital overgrowths were tumours, but that there was such a gradation between them and malignant growths through nævi, warts, and polypi, that they might all fairly be considered as cases of insubordination to the normal laws of growth. It was by tracing the laws of disease that it was possible to bring into relation conditions apparently dissimilar. He could not agree with Dr. Lee that the theory of included embryonic elements had been given up. It was because he felt that the theory was at the present time too much in the ascendant that he had written his paper to show that it was possible to attribute the formation of tumours to another cause.

MEDICAL SOCIETY OF LONDON.

MONDAY, FEBRUARY 9TH, 1891.

J. KNOWSLEY THORNTON, M.B., President, in the Chair.

Angina Pectoris.—Dr. DOUGLAS POWELL opened a discussion on the subject of angina pectoris, and urged that the subject should be considered on a broader basis. He said it was not such a simple malady as was supposed. The characteristic symptoms ranged between the wide limits of remediable functional disorder on the one hand, and fatal organic lesion of the cardio-vascular system on the other. He mentioned the case of a lady, aged 45, of neurotic temperament, who had complained of too forcible cardiac action for some years previously. There was a history of rheumatic fever fifteen years before, and five years ago, when riding hard across country, she was seized with severe cardiac pain and distress, and marked interference with respiration. These symptoms recurred on subsequent occasions. The pulse was small and cord-like, and of high tension. On using hard pressure with one finger the pulse was felt almost, if not quite as well, by a second finger placed further along the vessel, this phenomenon being evidently due to a back wave from the periphery. The heart's action was somewhat laboured, intermitting twice in the minute; the first sound was muffled, but there was no distinct murmur. He regarded this as a case of angina of the first degree, or one of vasomotor angina. He observed that

one noticeable feature in this variety of the disease was the extreme restlessness of the patient, who often felt chilly and in need of exercise. In regard to this vasomotor form of angina, he remarked that it was of comparatively recent discovery, and the prognosis in such cases must necessarily depend largely upon the actual condition of the heart. He regarded the vasomotor disturbance as an essential factor in the majority of cases of angina pectoris, just as bronchial hyperæsthesia was in cases of asthma. He believed it to be possible for the heart to succumb to these attacks without itself being affected with any obvious lesion. He referred to the case of a medical man, aged 30, who consulted him on account of paroxysms of præcordial pain. On examination, there was no evidence of enlargement or disease of the heart, and he regarded it as an example of pure vasomotor angina. A six months' rest from work left him apparently sound in all respects. He referred to another case in a gentleman, aged 68, in whom a marked improvement in the general condition occurred after an attack of gouty eczema. He remarked on the rarity of a fatal issue in these cases, the attacks if unrelieved by art usually coming to a natural end, probably through the action of the depressor nerve of the heart, and possibly some analogous mechanism of the small vessels under the stimulus of pressure inhibiting and controlling cardiac and vasomotor spasm. He agreed with Dr. Broadbent's suggestion that some cases of fatal cramp whilst bathing were probably due to sudden oppression of heart from contraction of systemic arterioles—in fact, to vasomotor angina of an intense kind associated, perhaps, with a fatigued heart. Though physiologists maintained that when systemic arterioles were contracted by cold the visceral were dilated and *vice versâ*, yet it was highly probable that under certain conditions of chill and emotion the whole arterial system might undergo contraction. He quoted cases which seemed to show that the right side of the heart had borne the brunt of the anginal attack. The cardiac distress and rigid arteries of uræmia might, he said, almost be described as chronic persistent angina, though it was with the so-called cases of cardiac asthma in uræmia that the analogy with vasomotor angina was most obvious. He then passed on to discuss angina pectoris gravior, in which the vasomotor disturbance is associated with degenerative cardiac disease. He criticised the view that the disease was necessarily caused by or associated with disease of the coronary arteries. The prognosis in the first group was comparatively favourable, the probability being that death would ensue from some other cause, such as cerebral hæmorrhage, while in the last group an almost certainly fatal result might be anticipated within a short period. Both for prognosis and treatment it was important to make out the precise condition of the heart in respect of size, position, and power. For the treatment of these two varieties, nitrite of amyl and nitroglycerine were of great value, but far more so in the graver cardiac cases. In the first group they required to be associated with nervine tonics and sedatives, while in the second group carminatives and stimulants were of special value. He compared the pain in cases of sudden death from angina to that associated with embolic gangrene in the limbs. In conclusion he described a syncopal variety of angina rarely met with except in persons over 65, and then usually associated with gout. He suggested that undue acidity of the blood might be concerned in its causation. The attacks were often associated with dyspepsia, and the treatment indicated was careful feeding and gentle exercise. In conclusion he said he regarded angina as a disturbed innervation of the heart and vessels associated with more or less intense cardiac distress and pain, and a general prostration of the forces, always producing anxiety, and often amounting to a sense of impending death. He grouped the varieties as angina pectoris vasomotoria, angina pectoris gravior, primary cardiac angina, and syncopal angina; the first two forms bearing a remarkable resemblance to the respiratory analogue asthma. Dr. W. M. Ord insisted on the remarkable parallel between the symptoms of asthma and angina pectoris. He pointed out that the term asthma formerly comprehended a great many varieties of difficulty of breathing, and statisticians had shown that in times past asthma was a very fatal disease, according to the returns, any reduction in this respect being probably due to better diagnosis. With regard, however, to angina, the condition was rather different; at present people would have a larger range for angina than formerly, especially if they adopted Dr. Powell's conclusions. The old limited definition to which he alluded would certainly have to be extended to a large number of cases in which one or two only of the constituent typical symptoms of the disease, as first described, would be present. Such cases might, perhaps, be termed anginous, if not anginal. He pointed out that these anginous attacks usually came on in the daytime, and the prognosis was notably aggravated when they supervened at night. He compared the two classes of cases, one in which the patient had angina on exertion as the consequence of sudden arterial tension caused thereby, and the other in which the attack occurred independently of muscular exertion, and in these he thought the mechanism was probably nervous, either emotionally or by reflex. He had seen illustrations of both classes. He insisted on the importance of dyspepsia as a factor in bringing about the attacks, and observed that if he were restricted to one remedy in the treatment of angina he would prefer sulphate of magnesia to nitroglycerine, in order to secure a regular action of the bowels. He mentioned the frequent coincidence of glycosuria with angina, which he thought authorised the inference that the visceral blood vessels were dilated, and not contracted, as the author seemed to suppose, along with the superficial vessels. He said that the connection of gout with angina ought not to be forgotten, it being a neurosis, and involving, as it did, changes in the chemical constitution of the tissues. Treatment directed to the gout often relieved the angina. He insisted upon the fact that no sensations of an anginous type were to be treated lightly, and the patient or his friends ought always to be warned of the danger.—Dr. W. H. Broadbent said he had been unable to make up his mind as to the condition of the heart during the paroxysms. Sometimes the pulse was irregular and small, sometimes there was high arterial tension, at other times not; while occasionally the pulse was practically unaffected throughout an attack even of great violence. The central fact, after all, in attacks of angina was that the heart was over-wrought, either by peripheral resistance or on account of intrinsic failure. That fact fitted in very well with the author's classification. It was especially in those cases due to weakness of the heart that the great danger lay. He pointed out that vasomotor resistance alone would not be sufficient to determine an attack. The proportion of cases of high arterial tension without angina pectoris was very much greater than the proportion of fatal cases of angina in which there was no disease of the coronary arteries. He presumed that disease of the coronary arteries acted by causing degeneration of the cardiac muscular fibres. In bed and during sleep there was the upward pressure of the abdominal viscera and the curious running down of the cardiac powers to account for the supervention of the attacks. He pointed out that muscular exercise lowered very rapidly the resistance of the peripheral circulation. The effects of exercise were exerted principally on the right side of the heart. With reference to the neurotic theory, he pointed that the vast majority of anginal cases occurred in the non-neurotic sex, it being extremely rare in women. They ought, therefore, to beware of attaching too much importance to an unexplained neurosis. The occurrence of angina in gouty people he ascribed to its association with high arterial tension. He had also noted the existence of a myocarditis in patients suffering from glycosuria, associated with high arterial tension, and this was usually followed by marked anginal paroxysms. He remarked on the fact that angina was seldom or never associated with mitral lesions, and anginal symptoms usually subsided on the supervention of a mitral lesion in a person subject to anginal attacks. His own experience seemed to show that the gravest cases of angina were those in which the least explanation could be found to account for the symptoms.—The continuation of the discussion was postponed until Monday, February 23rd (instead of Monday, February 16th), in consequence of the unavoidable absence of Dr. Douglas Powell. The discussion will be reopened by Sir Walter Foster, M.P.

The anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Metropole, on March 7th.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Friday, January 30th, 1891.

Samuel Gordon, M.D., President of the Academy, in the Chair.

Koch's Treatment in Tuberculosis.—Dr. M. A. Boyd read a paper on a series of cases of phthisis in various stages under treatment in his wards at the Mater Misericordiæ Hospital by Koch's method. He grouped his series, consisting of over twenty selected ones, into (1) early phthisis with broncho-pneumonia without softening; (2) early phthisis with broncho-pneumonia and softening; (3) advancing phthisis with formation of cavities: (4) chronic phthisis with cavities and fibrosis, and secondary engagement of pleura, bowels, or larynx. He pointed out, from his observation of his cases extending over a month or six weeks' treatment, that broncho-pneumonia, as in the first group, was increased by the injections of the lymph, mainly owing to there being no outlet for the tissue injured or destroyed by the injections. The second group were the cases in which distinct improvement, amounting to what might be called a cure, took place. Of those in the third group, some were indifferently benefited, and others rendered worse, increased consolidation and cavities, with profuse suppuration and hectic rapidly occurring. In the fourth group no effect was produced in many of the cases, either on the temperature or lung, and he regarded them as the most hopeless cases for treatment by this method.—Dr. J. W. Moore related a series of six cases of pulmonary disease treated by Koch's method, of which the following is a summary: 1. Tuberculous phthisis; thirteen injections (six of 8 milligrammes each, and seven of 10 milligrammes each); marked improvement. Patient: a woman, aged 23, single. 2. Tuberculous phthisis affecting the left apex; twelve injections (seven of 8 milligrammes each, five of 10 milligrammes each); marked improvement. Patient: a man, aged 26, single. 3. Advanced pulmonary tuberculosis; extreme reaction after one small dose (3 milligrammes); treatment discontinued as unsuitable. 4. Non-tuberculous chronic pneumonia; no bacilli in sputum; no reaction with Koch's fluid (5 milligrammes). 5. Tuberculosis of lungs; second stage; hæmoptysis after a small dose; treatment discontinued. Patient: a man, aged 24, single. 6. Tuberculous phthisis: early stage; seven injections. Patient: a man, aged 21, single, improving. Dr. Moore concluded that the diagnostic efficacy of the remedy was undoubted, but use in advanced phthisis was inadmissible. In early pulmonary tuberculosis, however, there was reason to believe that its use was beneficial.—Dr. C. J. Nixon said that in his own experience the results of Koch's treatment had not been satisfactory, and the results recorded by such observers as Drs. Feilchenfeld and Theodore Williams did not appear to support Koch's expectations. Dr. Nixon referred at length to the objections that might be urged against the principle upon which Koch based the idea of his treatment first, in the uncertainty attending the results of experiments on animals in their application to man; secondly, in the fact that whilst the products of bacillary culture had been only applied in the case of acute infectious diseases, where predisposing causes were not such as would be likely to affect the course of the disease. In phthisis the case was quite different. Various circumstances had to be taken into account, which modified not only the invasion, but the progress of tuberculous disease, such as hereditary taint, defective assimilation, diminished vital power of resistance to morbid influences; so that if by the remedy tuberculous tissue was got rid of, the constitutional taint would not in any way be affected by the remedy. The special dangers in connection with the treatment of pulmonary tuberculosis appeared to be the danger of secondary infection of portions of the lung not primarily attacked, as well as the danger of metastasis. Dr. Nixon expressed a strong opinion that this method of treatment should be subjected to careful observation in an institute established by the State, and on patients who voluntarily submitted to it; and, further, that it should be tried in cases of tuberculosis in animals, notably bovine tuberculosis.—Dr. Lentaigne said he had now twenty-seven patients treated or undergoing treatment, and his experience had been highly encouraging. He could assert with confidence that—at any rate so far—not one of the cases he had treated was in any way the worse for the injections, while the great majority were undoubtedly improved, and in some the improvement was very great. His cases had been mostly of surgical tuberculosis, but, if the attacks which had been made were valid, they ought to apply to surgical tuberculosis, to some extent at any rate. Now, amongst the twenty-seven cases treated, there was not the slightest reason for suspecting that any new or fresh tuberculosis had been caused, or had resulted from the injections. On the contrary, the evidence he had, so far tended altogether the other way. He thought the lesson that should be derived from Professor Virchow's paper, which had naturally been so much quoted that evening, was that unsuitable cases should not be submitted to the treatment while it was still under investigation. He combined continuous inhalations of creasote with the injections in cases of lung tuberculosis, in the hope that he might thereby lessen in some way the septic conditions. He also thought surgical treatment should always be used, if possible, to hasten the expulsion of the necrotic tissue.—Dr. Joseph Redmond stated that cases injected with Koch's lymph under his care were showing signs of improvement. There was one grave objection, however, to Koch's lymph—that it did not destroy the bacilli. He therefore suggested that hypodermic injections of chlorocyanide of gold and perchloride of mercury should be administered on alternate days, as it was said that 1 part of the chlorocyanide of gold in 3,000,000 was sufficient to destroy the tubercle bacillus.—Dr. O'Carroll stated that he had eight cases of tubercle of lungs under Koch's treatment. Two of these ran counter to the generally accepted view as to the diagnostic value of the remedy. The first was a man who showed large numbers of bacilli in his sputum, who had never reacted to any appreciable extent; the second, a man who gave a history and showed signs from which one would diagnose only right inferior lobar pneumonia, in whom the sputum, frequently examined, showed no bacilli, and who yet gave well-marked reactions.—Dr. M'Weeney had had occasion to examine a very large number of specimens of sputum obtained at various periods from each of the many patients under treatment by Koch's method for the last two months at the Mater Misericordiæ Hospital. His results were as follows: 1. An increased, sometimes a greatly increased, number of bacilli, where before the injection only a few could be found. 2. The bacilli seemed frequently to possess a tendency to occur in groups and solid masses. These aggregations were very seldom to be seen in cases that had not been treated by the lymph, but in these they were of comparatively frequent occurrence. 3. The bacilli sometimes exhibited marked signs of degeneration. Every stage was seen, from a somewhat increased number of lacunæ in the bacillus to an appearance where each individual organism looked like a chain of cocci, and these became agglomerated into irregular heaps, containing the remains, in some instances, of several hundreds of bacilli.—Dr. Boyd, Dr. J. W. Moore, and Dr. C. J. Nixon replied.

Section of Surgery.

Friday, January 23rd, 1891.

H. G. Croly, President of the Royal College of Surgeons in Ireland, in the Chair.

Koch's Method in Surgical Tuberculosis.—Mr. F. A. Nixon read a paper on this subject. He directed attention to the temperature charts, when not only did the temperature fall after the injection, but having become normal it fell again slightly before reaction commenced; also to the condition of the urine, the specific gravity of which increased from 1016 to 1023, with an excess of urates and ropy mucus. The effect of the injection upon the enlarged glands in the neck in a case of lupus was negative. The cases in which there was exit for the discharge, such as lupus of the nose, pharynx, diseased bone, etc., were the most favourable for the method of treatment, but it was dangerous when the discharges were pent up in an unyielding bony case, such as the cavity of the skull, or even the thorax. In tuberculous disease of the abdominal cavity he would adopt the treatment by incision and flushing in preference to Koch's method.—Professor Bennett had injected fifteen patients since December 18th, 1890. Of these, eleven reacted to the remedy without accident, and

with marked improvement in many. One—a case of subcutaneous lupus—had been cured, and a case of resection of the elbow, in which recurrence of disease occurred, had been rescued from amputation. In the four cases which did not react the disease was in three proved to be non-tuberculous; in one the proof was by *post-mortem* examination. In three cases he had refused the treatment as dangerous, and two refused his offer through fear.—Mr. MYLES had treated six cases in the Richmond Hospital. Two were cases of lupus, two of bone disease, one of glandular swelling, and one of congenital syphilis. One of the joint cases was operated on first and treated with the lymph afterwards, the result being, on the whole, encouraging. The other case was first injected, and then the knee-joint excised. Mr. Myles described in detail the appearance of the diseased foci in the knee as modified by the injection, showing that the vascularity of the parts was greatly increased, the amount of necrotic tissue much greater than usual, while there was evidence of fresh activity in the tuberculous processes; pointing out that the appearance seen in the knee corresponded closely with those described by Professor Virchow in the lungs and viscera of patients dying after injections. He then discussed the propriety of operating before or after injection, pointing out that after the injection the diseased foci were the centres of acute inflammatory processes, and that operation at such time was not only uniformly unfavourable, but was also likely to lead to the development of general tuberculosis; while, on the other hand, if surgery first provided a free outlet, then the necrotic tissues could be readily cast off and the dangers of subsequent absorption avoided. Mr. Myles mentioned that in one of his cases—one of undoubted congenital syphilis—the characteristic reaction occurred.—Mr. KENDAL FRANKS, dealing with the diagnostic power of Koch's lymph, said two objections to this had been raised: 1, it was stated that healthy individuals sometimes reacted perfectly; and, 2, that some undoubted cases of tuberculosis did not react. These cases, at any rate, were exceptional. As to the first objection, he would say that it was sometimes impossible to detect by examination a small tuberculous focus hidden away in some corner of the body, but which would be brought to light by the lymph, and thus a seemingly healthy person would react. To the second objection it was not possible at present to reply, but it would probably be shown hereafter that certain conditions of the constitution, such as infection with syphilis, might have a very modifying effect on the action of the lymph. He mentioned four illustrative cases. In conclusion, he said he had employed the method in over 20 cases, and had administered 173 injections up to date. He had seen no untoward effects, and the results so far were very encouraging, and sometimes very remarkable.—Sir WILLIAM STOKES gave details of fifteen cases he had treated by Koch's method during the past six weeks; of these, seven were of pulmonary phthisis, and the remaining eight of other forms of tuberculous disease. Among the latter there were three cases of glandular enlargement, two cases of tuberculous disease of the knee-joint, one of the ankle-joint, two cases of lupus, and one of phthisis laryngea. In the majority of the phthisical cases the effects of the treatment were considered satisfactory and encouraging. There was complete cessation of night sweats, alteration in the expectoration (which, as a rule, lost its nummular character and became watery and frothy), and a very great increase in the number of tubercle bacilli during and immediately subsequent to the periods of reaction. In three of the cases a material increase in the patients' weight occurred, and in two of the cases a sensible decrease in the cough. In one of the cases of glandular enlargement the results were very striking. He believed that Professor Virchow's unfavourable estimate was due to what he and others in Berlin had observed, namely, the indiscriminate way the remedy was employed. No selection of suitable cases was made, and under these circumstances it was surprising that the number of *post-mortem* examinations of cases that died while undergoing the treatment was not far in excess of the number mentioned in Professor Virchow's paper.—Sir WILLIAM STOKES stated that in some respects his experience of the treatment was disappointing, as he had not seen a single case in which the result was perfectly satisfactory; but he observed that it should be remembered that the treatment was in its infancy.—Dr. H. C. TWEEDY contended that there were certain limitations to the use of this method. It was admissible in cases where the structures killed by the injection of the lymph could be easily eliminated: but under other circumstances it should be used with the greatest caution. It might be advisable to supplement Koch's method by the external application of antiseptics with the view of destroying the bacilli.—Mr. TOBIN referred to some joint cases under treatment by rest—such rest as was afforded by plaster-of-paris bandages to joints of the upper extremity, and by Thomas splints to those of the lower, by exercise in the open, by cod-liver oil, and by Koch's lymph. These cases had reacted in the usual way to the injections, but it yet remained to be seen whether the cure would be made shorter or more permanent by this additional treatment. As yet there was nothing in their condition to warrant any forecast. A case of lupus forty-six days under treatment, shown previous to the meeting, was referred to. The patient, a boy 12 years of age, had ceased to react to 10 milligrammes of a 1 per cent. solution. He looked quite as badly as he did previous to the treatment; but, judging from other cases, it was expected a cure would be reached at a later date.—Dr. MELDON had now inoculated the lymph ninety times on seventeen patients. Ten of these were cases of pulmonary phthisis, all having bacilli in the sputum. In every case reaction was well marked, but in only two could he see any improvement. One had increased 2 lbs. and the other 3 lbs. in weight. The bacilli had not decreased in a single case. To one of these cases alone he would direct attention. Since the early part of December, 1890, he had injected this patient ten times with from 1 to 12 milligrammes. His condition was now just as it was before the treatment was commenced, and Professor Scott recently examined the sputum and certified that it contained abundant tuberculous bacilli. The only case in which he could definitely state that he had seen any substantial improvement had been a case of lupus.—Mr. THORNLEY STOKER gave details of six cases of lupus, three of joint disease, two of glandular disease, and one of bone necrosis in which he had employed the treatment since December 6th, 1890. The general results were most satisfactory. All the lupus cases were much improved, and several appeared almost recovered. The joint diseases were improving, and one of the cases of this class and that of necrosis seemed recovered. The glandular enlargements had made the most remarkable improvement, and one of them seemed well. Two remarkable eye reactions were recorded in cases where the treatment was used for facial lupus—one a breaking down of the cicatrices of old corneal ulcers, the other the clearing of corneal opacity, the result of old tuberculous corneitis. The result of Mr. Thornley Stoker's observation was that very large doses of lymph need not be used: that it was a most dangerous as well as a most useful agent: that its diagnostic value was immense: that in surgical cases it would generally require to be supplemented by operation; that our knowledge concerning it was in such an embryonic state that observation and careful record were emphatically called for; and that at present it would be most unwise to dogmatise about it in any way.

SATURDAY, JANUARY 24TH, 1891.

Dr. LENTAIGNE said his experience so far had led him to hope that the treatment would be of great value in early tuberculosis, and also when the disease was limited in extent; where the disease was extensive an outlet would have to be found for the necrotic tissues. He found that when the tuberculosis was inside the skull the treatment, as at present used, would be of no use, or more probably actually injurious.

Mr. M'ARDLE said that if the cases exhibited represented the bright side of the picture, he could not take it as indicating a brilliant future for this treatment. He thought it time to in some way stay the indiscriminate use of this material, if the writers of papers on this subject could only show such results as were represented by the following expressions:—Mr. Nixon saw no cure; Mr. Bennett, of eleven cases, saw only one of subcutaneous lupus cured; Mr. Myles saw no cure, but detailed a case in which great general debility and anæmia followed operation in a case which had been injected; Mr. Franks cured a cough by injection, but did not know what disease caused it; Sir W. Stokes saw no case he could regard as a perfectly satisfactory result; Dr. Tweedy showed

its diagnostic value, but mentioned no cure: Mr. Tobin could not say that his case of lupus had improved after six weeks' treatment; Dr. Meldon saw one case of lupus improved; Dr. Barton had a case of tarsal tuberculosis, apparently cured; Mr. Stoker detailed some cases which were improved, some supposed to be cured; Dr. Lentaigne said one case of twenty-three seemed to have been completely cured. Now this did not seem to him to be a result comparable with that obtained by ordinary surgical treatment in such cases. As a diagnostic agent he thought the lymph useful, and he mentioned one or two illustrative cases. Finally he said he had not yet seen a cure in the practice of anyone, while he had seen many instances of disease arising from the injection.—Mr. WILLIAM THOMSON thought the profession had been rather swept away by outside enthusiasm, and had allowed themselves to have greater expectations of good results than were yet justified. But the sceptics who asked for cures in a few weeks after treatment did not apply the same rule to other forms of treatment; and he thought it unreasonable that such a demand should be made in the case of Koch's lymph. Koch himself had certainly been more modest in his claims than others had been for him. He (the speaker) had no doubt the lymph was of great diagnostic value. He believed they were on the right track, and however deficient the treatment might be at present, it was probable that important developments would follow.—Mr. F. ALCOCK NIXON and Mr. KENDAL FRANKS replied.

REVIEWS AND NOTICES.

DEFECTS IN THE WORKING OF THE LUNACY ACT, 1890. By R. PERCY SMITH, M.D., F.R.C.P., Resident Physician, Bethlem Royal Hospital. London: Churchill.

DR. PERCY SMITH, the Medical Superintendent of Bethlem Royal Hospital, brought before the meeting of the Medico-Psychological Association, in November, a paper entitled *Defects in the Working of the Lunacy Act, 1890*. It was a careful summary of the difficulties he had experienced in carrying out the provisions of the Act, and these were so numerous and striking that the Association passed a resolution to the effect that the paper should be reprinted and circulated among the magistrates of the metropolitan area, and others, in order that the evils complained of might be to some extent mitigated by the exercise of more care on the part of individual magistrates in filling up and signing the necessary orders for the admission of patients into asylums.

It is only those who have been brought face to face with the working details of the Act who can fully appreciate the overwhelming amount of mere clerical work which the admission and care of each case now entails, and when to this is added the slipshod manner in which the magistrates perform their duties as pointed out by Dr. Percy Smith, it makes the life of an asylum physician almost unbearable.

One of the chief difficulties complained of is undoubtedly the special appointment of so few justices to act as the "judicial authority" for the admission of patients. We can see no reason why this difficulty should not be at once swept away, and this could easily be done by giving every magistrate the power to sign admission orders. In addition to this judicial authority we would suggest that the power of a magistrate to sign admission orders should not be confined to this or that district, but that a person applying to any magistrate for an order should be able to obtain it whether the unfortunate patient happens to reside in his particular district or not. Could anything be more anomalous than a justice refusing to sign an order because a patient who may live in the next street happens to be living out of his district? In the City of London we are given to understand the magistrates have been appointed *en bloc* the "judicial authority," and what we wish to see is this plan extended to the County of London without limiting the jurisdiction of individual magistrates by the useless splitting up of the county into districts.

We have no wish at present to cavil with the principles and the provisions of this Act, which we look upon as being on its trial. Let a reasonable time be allowed to pass, and thus help to smooth away those difficulties which at present exist, and if after fair trial they are found to be impracticable, we have no doubt they can be got rid of.

Meanwhile it is to be hoped that the specially appointed justices will make an effort to become better acquainted with the important duties they have undertaken to perform. Dr. Percy Smith has done well to expose the harsh treatment to which the friends of patients have been subjected in consequence of the ignorance of the requirements of the Act displayed by the specially appointed justices, and we trust the publicity given to the subject will be the means of calling their attention to the pain they may have unwittingly caused the families of these afflicted ones, to say nothing of the injury to the patients themselves by vexatious and unnecessary delay in procuring admission orders which by the Act it is their duty to sign.

NOTES ON BOOKS.

The Royal London Ophthalmic Hospital Reports. Vol. XIII, Part I. (London: J. and A. Churchill.)—The editor of these well-known *Reports*, Mr. Marcus Gunn, may be congratulated both on the regularity with which they now appear, and on the excellence of the material they contain. In the present number there is a considerable amount of theoretical, pathological, and clinical matter. It commences with a paper by Dr. George Berry pointing out some defects in the theories of colour perception at present held. The paper is a suggestive one, but it is to be looked upon rather as a plea for a reconsideration of the whole subject than as affording a basis for any more satisfactory theory. A statistical paper on the prognosis in cases of glioma retinæ by Messrs. Lawford and Treacher Collins follows, to which we hope to refer more fully in a separate article. Mr. Tatham Thompson's contribution to the subject of artificial maturation of cataract (Förster's method) will be valuable in conjunction with other papers on the subject, but is not full enough to be of much use alone; it contains, however, an account of a case in which a considerable clearing up of a cataractous lens occurred. This in a non-diabetic cataract is, as far as we are aware, a unique occurrence. Mr. Treacher Collins also contributes a most valuable paper on intraocular cysts, founded on nine pathological specimens—a detailed review of this would be out of place here, but it will be extremely valuable for reference—and another on abnormalities of the zonule of Zinn: and Mr. Lang supplements his former papers on division of anterior synechiæ.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A TONGUE DEPRESSING INSUFFLATOR.

DR. ALEXANDER DUKE (Dublin) writes: With reference to the paragraph appearing under the above heading in the BRITISH MEDICAL JOURNAL of January 31st, I beg to say that having noticed the very obvious defects in Dr. Osborne's throat insufflator, I was the first to design the improvements now claimed by him, and carried out for me by Messrs. Arnold and Sons, London. On seeing my modification of his instrument, which I published under the heading of Improved Osborne's Insufflator, his agent was instructed to take proceedings against the Messrs. Arnold, for the sale of the instrument as improved by me. And they at once gave up selling it, though (as far as I can see) the original, not being patented in Great Britain, the selling of the improved instrument by Messrs. Arnold was quite justifiable.

As Dr. Osborne has now evidently imitated my improvement, and has not acknowledged my claim for priority, I hope you will kindly publish this letter in the next issue of the BRITISH MEDICAL JOURNAL.

WIGAN MEDICAL SOCIETY.—The following office-bearers have been elected for 1891:—*President:* Mr. C. M. Brady, L.R.C.S.I. *Committee:* Messrs. M. Benson, G. H. Monks, jun., W. C. Barnish, J. B. Stuart, J. A. Marsden, M. Hannan. *Treasurer:* Mr. G. H. Monks, jun., L.R.C.P. and S.Edin. *Honorary Secretary:* Mr. William Berry, F.R.C.S.I.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, FEBRUARY 14th, 1891.

MR. STANHOPE AND THE ARMY MEDICAL STAFF.

We are enabled to lay before the profession to-day the promised statement by the Secretary of State for War as to the steps he is prepared to take to meet the well-founded dissatisfaction which has for some years existed in the Army Medical Staff with reference to rank and titles.

In accordance with the undertaking given by Mr. Stanhope in the House of Commons, the statement takes the form of a letter addressed to Sir Andrew Clark, who, as President of the Royal College of Physicians, headed the deputation from the medical corporations which waited upon the Secretary of State for War last July. Sir Andrew Clark has since been in communication with Mr. Stanhope; and we are enabled to give completeness to the narrative by reproducing the letter in which, at Mr. Stanhope's request, Sir Andrew Clark makes a statement of the grievances of the department and of the remedies which he would suggest. It is in reply to this communication that Mr. Stanhope has written the important letter, which will be read with so much interest by our brethren of the Army Medical Service.

Medical officers of the army will learn with satisfaction that with regard to sick leave they are for the future to be put on the same footing as other departmental and regimental officers. On the other hand, Mr. Stanhope declines to carry out the recommendation of Lord Camperdown's Committee as to the term of foreign service; this refusal appears to be due to the misapprehension that the alteration would involve a considerable extra annual outlay. So far from this being the case, the alteration would not necessarily lead to any extra expenditure; whereas the maintenance of the present arbitrary system, involving an increase from five to six years of service in trying climates, will, in the opinion of those most competent to judge, result in a serious addition to the non-effective list by invaliding, and to a larger number of deaths.

But, as Mr. Stanhope frankly admits, the question of rank is the main grievance, and to this section of his letter every reader will turn with the greatest interest. Upon the satisfactory settlement of this point the whole question hinges, and if it were once fairly met all the discontent, heart-burnings, and agitation which have for years distracted the department would be set at rest. Mr. Stanhope is willing to grant "the composite titles recommended by Lord Camperdown's Commission." It is to be feared that the tardy concession of a somewhat ambiguous privilege will not satisfy the majority of the army medical officers. Opinion has matured and developed since that report was issued, and the almost unanimous voice of the department has now declared that nothing less than definite substantive rank will meet the exigencies of the position. This, as we have often pointed out, can be secured, and all friction removed, by the establishment of a Royal Medical Corps, based on the analogy of the Royal Engineers.

In order that the question should be clearly understood, it must always be borne in mind that rank and title are not synonymous or convertible terms. Title is an honorary designation; rank is a military status with certain rights and privileges attached thereto. It is probable that much stress will be laid, by those opposed to further concessions, on the concluding paragraph of Sir Andrew Clark's letter; and particular attention may be directed to the explanatory footnote which, in supplying the letter for publication, he has requested us to append to it. The distinction between rank and title must be constantly kept in mind; a failure to appreciate its importance has led many to object to the granting of substantive rank on the ground that it would entitle medical officers to exercise general military command. Medical officers do not ask for any command beyond that already exercised by them; even were any medical officer foolish enough to make such a claim, it would not be difficult to show that in the Queen's regulations and the Pay Warrant the principle of *limited* command is fully recognised in the case of officers now holding substantive rank.

It must be reluctantly confessed that Mr. Stanhope's long-expected statement does not remove the just grievances of the army medical officers; for, while he concedes composite titles, he makes no statement as to the nature of the rank which will be associated with these titles. This, as has been said above, is to omit the essential point in the whole question, and Mr. Stanhope's reply therefore cannot be accepted as final. The Parliamentary Bills Committee of the Association, which was the first to put its hand to the plough, will not look back; and Sir Andrew Clark—who has acted with so much tact and ability as a representative not only of the Royal College of Physicians, but of the profession at large—will, we have reason to believe, shortly address a further letter to the Secretary of State for War. It is to be hoped that Mr. Stanhope may yet see his way to allay further agitation, may yet fulfil the wishes of the medical profession, and, in the words of the President of the Royal College of Physicians, render the incorporation of the medical officers of the army "organic, homogeneous, and complete."

THE VALUE OF DEATH-RATES.

It is not without interest to note that while the value of local death-rates is often called in question in the case of towns which are debited with high rates of mortality, serious objection is scarcely ever made to the trustworthiness of the phenomenally low rates that are claimed and extensively advertised by competing watering places. It is now more than sixteen years since the national system of mortality statistics, organised by the late Dr. William Farr, was violently attacked by Dr. Syson, at that time medical officer of health for Salford, which was suffering from an excessively high death-rate. Dr. Letheby supported Dr. Syson's attack, but was un-

doubtedly worsted in the controversy that ensued, and among the many eminent medical officers of health who have since attained prominence in public hygiene there have been but few who have been disciples of Dr. Letheby, as regards his statistical fallacies. Among journalists, however, are constantly to be found writers who, obviously without any special knowledge of vital statistics, write recklessly on the subject, make wonderful discoveries of exploded fallacies, and denounce the whole official system of statistics dealing with population, births, deaths, and marriages, as "not only defective, but absolutely misleading." This is the conclusion of a smart and ready writer in a recent issue of the *Manchester City News* under the heading "More about the Death-rate Calculations." The article has special reference to the abnormally high death-rate in Manchester, which has recently, and fortunately, attracted so much local and general attention. The tone of assurance in which the most reckless and unfounded assertions are made, in a manner which exposes the author's shallow acquaintance with his subject, would be amusing, but that the uninitiated reader must run the risk of accepting the assertions as trustworthy. It is quite unnecessary in these columns systematically to refute fallacies which have long since been exposed and abandoned by all students of vital statistics. It may, however, be worth while to touch briefly on one or two points in the long list of charges made against the national system of vital statistics. It is asserted that at the last census in Manchester "whole streets were left out of computation"; this assertion is made on the authority of "having been informed on more than one occasion." When the census was taken in 1881, much local dissatisfaction was felt at its result, because it was shown that the population within the arbitrary boundaries of the city had actually declined between 1871 and 1881. Such dissatisfaction is very general in America after each census, but, fortunately, it is rare in England, and we have good ground for believing that no definite charge was ever made of a defective census in Manchester. Such a charge could easily be met if the names of the omitted streets were forwarded to the census authorities. While it was true, however, that the population of the Manchester that existed in 1881 had declined, it is not true that the population of the Manchester as enlarged in 1885 had declined between 1871 and 1881. Therefore the writer in question is quite incorrect in asserting that the Registrar-General estimates the population of Manchester in 1890 to be 8,536 less than it was in 1881.

It is, moreover, objected to as fatal to the trustworthiness of the calculated death-rate of Manchester that it is based upon the resident population instead of upon the day population. It is probably—indeed, certainly—true that the day population of all busy town centres very far exceeds the night population; but it is obvious that the day immigrants into a town most exceptionally die there; and it is equally obvious that for all useful statistical purposes they must be counted as population where they reside and where they contribute to the birth, death, and marriage registers.

The author seems especially aggrieved that Moss Side should be excluded from the municipal boundaries of Manchester (which is more a political than a statistical grievance), because "during half at least of the natural day Manchester is accountable for the death-rate of half of the 1881 population of Moss Side." This assertion ignores the fact that if the residents of Moss Side are taken ill, they stay at home instead of coming into Manchester. Yet this is the main ground of surprise to the writer of this article, "that statistics should be published which are not only defective, but absolutely misleading." Having satisfied himself that both population and death figures are illusory, he may be excused for concluding that the death-rate in Manchester might as well be calculated upon the "Clearing House Returns." We may be excused for not being able to follow the method by which the author in some mysterious way reduces the death-rate of Manchester to 11½ per 1,000, as it is possible that he is not serious in his proposal to assume that the local death-rate of Manchester Parliamentary voters is a fair test of the death-rate of the city population. It is, however, seriously asserted that the Manchester deaths are drawn from a population of from "one to two millions," and are debited to the local resident population of "a fourth only of that number." No doubt a considerable number of deaths of non-residents occur in the Manchester hospitals, as is the case in all large towns; but it is equally a fact that the population of all large towns includes a very large proportion of domestic servants, shop assistants, and others, who, although counted in the population, return to suburban places when health fails. These supposed fallacies may be new difficulties to the author of the article in question, but to the initiated they now present no insuperable difficulties to the right use of death-rates. All well-instructed medical officers of health are now able to draw sound and valuable deductions from these much abused mortality statistics, which are constantly helping on the marked improvement of public health of which this country is justly proud. Manchester mortality statistics may be safely left in the hands of Dr. Tatham, the able city medical officer of health, who knows too well that the high death-rate of the city reflects with approximate accuracy its insanitary condition.

THE CLASSIFICATION OF DISEASE.

II.

In a previous article we indicated some of the errors into which nosologists were led in the attempt to apply a Linnæan system to the classification of disease. It cannot be waste time to study the errors of our predecessors, more especially as this classificatory craze has had such a vast influence on the medical science of the past as to still send odd sounds and echoes into the scientific jargon of to-day, and in its own day and generation it nearly killed medicine as a science. Its authors looked upon their classification not as a means to an end, but as an end itself, and sought therein in combination with equally artificial systems of therapeutics for the cure of their patients. In their elaborate nomenclature they recognised a reality. "Tell me the name of your disease," was their motto, "and I will tell you its remedy."[1] Under the guidance of these men medicine bade fair to become a mere rule of thumb. With the advent of the clinicians under Laennec, classification fell into the background, and such intentionally illogical systems or divisions of diseases were introduced as seemed most useful for the purposes of the observer, so that at the present moment, as a modern writer[2] has pointed out, our nomenclature is based in one class of disease on a prominent symptom, for example, small-pox; in another on a very obvious

[1] Graves's *Clinical Medicine*, 1843, p. 20.
[2] Dr. Harry Campbell, *The Causation of Disease*, 1889, p. 27.

malenvironment, for example, tapeworm, sunstroke: and in a third on the name of a discoverer, for example, Bright's disease, Addison's disease. And in our systematic works, while large classes of disease are partitioned off according to the organs they affect, others are placed under the titles of their obvious cause, for example, parasitic diseases; then again fevers and tubercle will make other divisions, and so on, with no guiding or directing, or logical system whatever.

And the question occurs here, Were our predecessors so hopelessly mistaken that we can gain nothing from their endeavours? Their inherent error was, no doubt, the comparison of the results of morbid processes with those of natural salutary development, and their consequent attempt to marshal the former on the lines of the latter. Yet since all organic entities are in their distinctions the result of a prolonged environmental alteration of structure (assisted by heredity and the survival of the fittest, factors with which we need not deal here), and diseases are really, as Dr. Harry Campbell points out, the interaction between normal structure and malenvironment, it seems that the only difference between normal structures and diseased ones is that in the former a long process of environmental moulding has fitted the structure for its surroundings, while in the latter an environment, absolutely incompatible with the wellbeing of the structure, is brought so rapidly into relation with it as to preclude anything more than an abortive attempt of the structure to become so altered as to be fitted for its environment. But still just as in normal structure the effect of varying environment upon tissue is the formation of differing species, so in a sense the effect of varying disease environment upon tissue is the production of different temporary species, and these might be taken as the basis of a system of classification somewhat on the old lines. For instance, taking the normal structure of the iris as one species (as if this kind of muscular tissue were a separate entity), then it is evident that iritis, the alteration of the same tissue by its interaction with a malenvironment, might be taken as forming another, and so on. But this, like the old pathological method of classification, which in effect it would be, could produce little advance in our science, or increase of our knowledge, and a natural history classification on these lines must be abandoned.

For the present the most rational system of classification appears to be one which would take rather the environmental causation of disease as its primary groundwork of arrangement, and the effect of environment upon structure as a merely secondary matter, arranging such diseases as lend themselves to it in this manner, and patiently leaving those which do not, until the increase of our knowledge concerning their causation shall render them capable of like treatment.

We could then, for instance, have as one group all those diseases produced by an inorganic malenvironment (which would include all forms of alcohol-produced disease, and possibly rheumatism and gout); as another group, those produced by an organic malenvironment, which might be further subdivided into those caused by a macroscopic organic malenvironment, and a microscopic, the former including the parasitic diseases, the latter the fevers, pneumonia, tuberculous disease in all its forms, and possibly syphilis in a word, all those complaints which have a microzymatous causation.

If it had no other advantage, it would call the attention of students to the fact that "fever" and "consumption" belong to the same class of diseases, and it would help, by a newer nomenclature and classification, to tear off those fetters and bandages of the old ones, which even after sixty years tie the hands and blind the eyes of some of the best men of the newer generation.

At all events, if this suggestion be counted only an idle one, the consideration of the classification of disease is a fruitful occupation if it leads us to ask once again what is disease; and wherein diseases differ from the species of the natural kingdoms; and, finally, if it supply a most fruitful subject for the most important inquiry of all—namely, if our present system or want of system does not rather resemble Spencer's illustration of a child's arrangement of its books by their sizes and colours than the fashion of a well-arranged library, that is, a system which shall fulfil the second and the higher requirement of classification which that philosopher gives us—namely, the organisation of our knowledge?

DR. FELIX SEMON, Assistant Physician for Diseases of the Throat at St. Thomas's Hospital, has been granted the title of Physician.

DR. CHON-YUANYEH and Dr. Cheng-bhi-Piao have been sent to Berlin by the Chinese Government to study Professor Koch's treatment of tuberculosis.

A MEETING of the Royal College of Physicians has been summoned for Wednesday next, when it is expected that the revised scheme of the University of London will be considered.

PROFESSOR C. B. PLOWRIGHT will deliver three lectures next week (Monday, Wednesday, and Friday, at 5 P.M.) at the College of Surgeons, on "Parasitic Fungi in Relation to Plant Disease."

IN consequence of the unavoidable absence from England of Dr. Douglas Powell, the adjourned discussion on "Angina Pectoris" will not take place on Monday next, but will be resumed on Monday, February 23rd, when the debate will be opened by Sir Walter Foster, M.P. Monday next will be a clinical evening.

THE fifth annual meeting of the German Anatomical Society will be held at Munich from May 18th to 20th. Professors von Kupffer and Rüdinger, of Munich, form the local committee. Discussions on Cell Division and on the Development of the Cranial Nerves will be introduced by Professor W. Flemming and Professor von Kupffer respectively.

THE annual meeting of the Obstetrical Society of London on February 4th was remarkable in several respects. Eighty-five persons were present, including eleven visitors. When the President, Dr. Galabin, began an obituary notice of the late Dr. Matthews Duncan in the course of his annual address, the Society rose, and remained standing till the speaker had concluded his observations on the life, work, and character of the great obstetrician.

THE *London Gazette* for February 6th contains the official announcement that the Queen has been pleased to direct Letters Patent to be passed under the Great Seal, granting the dignity of a baronet of the United Kingdom of Great Britain and Ireland unto Richard Quain, of Harley Street, in the County of London, and of Carrigoon, Mallow, in the County of Cork, Esq., M.D., one of the Physicians-Extra-

ordinary to Her Majesty, and the heirs male of his body lawfully begotten.

PROFESSOR VON BERGMANN.

We are pleased to state that Professor von Bergmann has now almost recovered from the effects of a wound in the right hand, which he sustained some time ago in the discharge of his professional duties. Great inflammation ensued, and repeated free incisions had to be made. The distinguished surgeon's strength had become much reduced by the continued pain and suppuration, but it is now expected that he will soon be able to resume work.

PROFESSOR MARTIN'S STATISTICS.

The *Berliner klinische Wochenschrift* publishes a report of Professor A. Martin's gynæcological and obstetric work, from which it appears that during 1890 the total number of patients treated in his private hospital was 634, and in the gynæcological clinic 2,504. Of 1,222 cases in which operations were performed, 23 died—9 from septic infection, 9 from acute or chronic anæmia, 4 from kinking of the intestine, and 1 from pneumonia. In the obstetric policlinic 702 cases were treated; in 350 labour was normal, and in 352 abortion or premature birth occurred. Of the 702 mothers, 2 died. Of the children, 36 were stillborn. Professor Martin's clinical staff consisted of four paid and two unpaid assistants, with three volunteers, the latter being appointed every three months. The practice was followed by 52 students and more than 150 doctors, the latter being mostly foreigners.

UNQUALIFIED ASSISTANTS.

The subject of unqualified practice is at all times one of grave concern to members of the medical profession, and the attention of the public will, we think, be awakened by the remarks of the coroner in some recent inquiries at Manchester as reported in the *Manchester Courier*. The coroner is reported to have characterised this unqualified practice as most reprehensible, and to have expressed the opinion that there was a great deal of it going on, and that it was simply a swindle on the poor. In one of the inquiries referred to, it appeared that the deceased had been attended in her last illness by an unqualified assistant to a medical man; and although it was not suggested that the deceased had been improperly treated, we are naturally led to consider the subject of the employment of unqualified assistants generally. There is no doubt that, according to law, the duties of such an *employé* should be confined to his master's house; he should be merely the ministering hand under the directing brain of the qualified man, acting only under his direct personal supervision. To such an extent only can the employer legally recover his charges for services rendered. If this rule were stringently observed, we should hear less of cases of unqualified assistants who (having attained the confidence of their employer's patients) commence to practise on their own account, in some cases, we are sorry to say, under the alleged cover of a qualified man. This kind of unqualified practice could scarcely happen if greater care were exercised to confine the employment of an unqualified assistant within its legal limits.

PHOTOGRAPHY OF COLOURS.

M. Lippmann, of the French Institute, claims to have at last overcome the difficulty, which has baffled so many previous experimenters, of not only reproducing, but fixing, all the colours of the spectrum by photography. In a brief description of the process which he gives in the *Revue Scientifique*, he states that, in order to photograph colours, two essential conditions must be fulfilled: (1) the sensitive plate must be continuous, that is to say, the sensitive substance must be spread in a state of almost infinite division in a transparent vehicle, such as gelatine, albumen, or collodion; and (2) the sensitive plate must be placed on the back of a reflecting surface. For this purpose it is fixed during exposure in a carrier, containing mercury, which forms a plane mirror in contact with the sensitive plate. After exposure, the photograph is developed, fixed, and washed in the ordinary way with hyposulphite of soda or cyanide of potassium. The plate is dry when exposed, and the colours appear when it becomes dry again. M. Lippmann says that luminous vibrations of every kind are thus inscribed and then reproduced in much the same way as sound waves are by the phonograph. He adds that the colours do not fade even on prolonged exposure to sunlight or to the concentrated rays of a powerful electric light. M. Lippmann's discovery may lead to highly interesting and important applications in the domain of biology and pathology.

THE FUTURE OF THE MIDWIVES BILL.

We have been asked to state that Dr. Barnes has been misinformed as to the present position of the Midwives Bill. It has not been abandoned, nor have "the members of Parliament who have backed" it, "withdrawn their names." On the contrary, those in charge of the Bill hope to press it forward at the earliest possible opportunity, and to affirm the principles of education, registration, and examination, by a second reading. If this formal stage be passed, the proposal will then be made, and we understand agreed to by the Government, that the Bill should be referred to a Select Committee before which all objections can be freely heard, and matters of detail threshed out. In this way it is hoped that some agreement may be arrived at between the rival camps of hostile opinion, and improvements effected in a measure which even its warmest friends have never asserted to be perfect. A meeting of the Committee of the Royal College of Physicians will be held early next week, and we are enabled to announce that Dr. Playfair and Dr. Champneys have agreed to become additional members of the Committee. Lord Cranbrook, as Lord President of the Council, will receive a deputation of members of the medical profession at the Privy Council Office, Whitehall, to-day (Friday) on the subject of the Midwives Bill. The Council of the College of Surgeons, Ireland, have appointed the President, Mr. H. G. Croly, and the Secretary, Dr. Jacob, to join the deputation: Dr. Macnaughton Jones will represent the Royal University. The following resolution has been passed by the Board of the Medical Department of the Yorkshire College: "The Board considers that there is great need for improvement in the education of midwives, and recognises the necessity for legislation in order to provide for their efficient training, their examination, registration, and subsequent supervision. It does not, however, approve of the Midwives Registration Bill now before Parliament, which it believes to be imperfect in detail, and is of opinion that it would be inexpedient to pass it in its present form." We are informed that on January 23rd the Council of the London School of Medicine for Women passed a resolution stating that it does not approve of the Midwives Registration Bill.

THE SALE OF LAUDANUM.

The present unsatisfactory state of the law with regard to the sale of poisons has been repeatedly alluded to in these columns as an increasing source of danger to public health, and this opinion is only too frequently emphasised by the verdicts of coroners' juries. Another instance was afforded by a case reported in the *Liverpool Post* of January 23rd. A widow, aged 57, of intemperate habits, had been accustomed to take a few drops of laudanum after indulging in drink—a custom that was finally the direct cause of her death. At the inquest the daughter of the deceased stated, according to the report before us, that she had, upon the last occasion, followed her mother into a chemist's shop and warned the salesman not to supply the woman with anything, as she was under the influence of drink. The warning was,

however, disregarded, and, as the daughter failed to gain possession subsequently of the half ounce of laudanum supplied, the deceased appears to have drunk the whole dose, with fatal consequences. When applied to under these circumstances, the chemist professed himself incapable of profering advice, and could only reiterate that he was at liberty to sell half an ounce of laudanum if he labelled it. The truth of these statements was substantially admitted by Samuel Evans, registered chemist and manager of Mr. Allan's (chemist) shop, who explained that he could not perceive that the buyer had been drinking, and that when asked for advice he was very much put about or had lost presence of mind. Dr. Owen Brown having testified that the woman died from laudanum poisoning, the jury returned the verdict "Died from poison, but how administered there was no evidence to show," with the rider: "We consider that the chemist's assistant should have exercised more judgment in selling the laudanum." Though it may be admitted that the majority of chemists would never be guilty of such neglect, nevertheless, some amendment of the law relating to the sale of poisons, in the direction of making the seller to a greater extent responsible, seems desirable.

A NEW ARGUMENT AGAINST VACCINATION.

Anti-vaccinators are not expected to be consistent in anything except their opposition to vaccination, and in that only so far as it is supposed to affect the welfare of their children and others outside the charmed circle of their own personality. We are tolerably familiar with the stock arguments against a practice to which our own race now owes the preservation of so many lives, and not a little of that physical attractiveness which small-pox can do much to mar. A pleasurable novelty, therefore, attends the startling plea which was advanced the other day by a recalcitrant father at Plumstead, who courageously based his objections to a compliance with the law, upon the grounds that "it was well known that bulls go mad every seven years, and that the cows make them mad; that these same cows are used for vaccinating children; and that the children go mad." This is a sort of physiological rule-of-three; and the fourth term may be appropriately found in a further assertion—thrown out as a sort of almost needless clinching of the argument, out of mere fulness of knowledge—that "the mad houses are full of vaccinated children." "What," asked the perplexed vaccination officer pathetically, "what is the use of arguing with a man like that?" What, indeed! The magistrate appeared to think that, on the whole, the most satisfactory answer was to be found in the wife's promise to have her child vaccinated within a fortnight, and adjourned the case for its fulfilment. Still, whatever the result of this particular skirmish, the husband may always claim that his contention is certainly more original than, and at least as logical as, the bulk of those which, despite their frequent repetition, are so often dinned into our ears by orators far above the social status of a bricklayer. The episode is another interesting example of the way in which the wildest statements acquire by quotation the dignity of facts, and may thus come to serve as the undoubtable material of a creed. The process is one capable of many ingenious applications.

FELIXSTOWE.

Felixstowe is a seaside place in which Londoners may well take considerable interest. It can be easily and economically reached, has a good beach, and possesses certain advantages in the matter of climate which might give it a distinct place among East Coast watering places. It has grown within the last decade from a hamlet into a town of three or four thousand inhabitants, and this population is annually swelled by a large influx of summer visitors. As a necessary consequence, the sanitary arrangements of the hamlet are utterly inadequate for the town, and the Local Board unfortunately appears to be disposed to temporise with evils which need to be dealt with at once. A water supply was obtained a few years ago, but there is no infectious disease hospital and no sewerage system. So dilatory, indeed, have the sanitary guardians of this health resort been that the Infectious Disease Notification Act was only adopted last week, and as yet the system of registration of lodgings has not been put in force. Walton, a village now almost continuous with Felixstowe, is, to quote the words of the medical officer of health, "the type of an insanitary village. The houses, as a rule, are crowded, the water supply is entirely from surface wells, and easy of contamination; and while the privies are over deep pits constantly wet, provision for drainage of slop water is scarcely to be met with." It is not surprising, therefore, to be told that epidemics frequently break out at Walton, though hitherto Felixstowe has escaped almost scatheless. A system of drainage is the most pressing need; there is happily nobody so foolish as to suggest turning the sewage into the sea. There is no great difficulty in the way of working out a sewage scheme; it would probably be necessary to pump the affluent to some convenient point at the back of Felixstowe, and between it and Walton. At this point it could either be treated by some good precipitation process, and the effluent sent into the River Deben, or it could be delivered by gravitation on to a sewage farm; for the latter arrangement the existence of low-lying ground in the estuary appears to afford special facilities. From inquiries which we have made, it would appear that such a scheme could be carried out at the present time at a very moderate cost.

"THOKA-LOSI."

It may be remembered that a short account of an extraordinary mutilation practised by certain aboriginal tribes of the northern parts of Australia was published in the British Medical Journal last year. Dr. Bolton G. Corney, chief medical officer of Fiji, has described in the *Transactions* of the Australasian Association for the Advancement of Science for 1890, a similar mutilation practised by Fijians, especially in the central and western provinces, where the admixture with the Tongan race is least. A bougie made from the twig of the tree called by the natives *losilosi* is passed down the urethra as far as the membranous portion, and an incision about an inch in length is made down upon it with a rude knife formed from a sharp shell, a slip of bamboo, or, where such a civilised implement can be obtained, with a piece of broken glass bottle. The operation is called thoka-losi—losi-piercing. It does not appear to be performed as a religious rite, and Dr. Corney does not believe that it is intended to render the man sterile, which has been asserted to be the object of the Australian mutilation. On the contrary, it would seem to be used merely as a method of treating such painful affections as rheumatism, catarrhal fever, pneumonia, and pleurisy, under the idea that, by incising a dependent portion of the trunk, relief will be given to the accumulation of blood which is supposed to have occurred. This view appears to be confirmed by the existence of another form of mutilation termed *tarya-ngalengale*: it consists in incising the urethra from the meatus to a point just behind the frænum preputii, severing the artery; after this, as much as half-a-pint of blood may be lost, so that the operation is evidently a primitive kind of venesection. Dr. Corney states that after the graver mutilation produced by thoka-losi the wound soon heals, and perineal fissure seldom or never results.

TWO "NON-COMBATANTS" AT THE MUTINY OF VELLORE.

His Royal Highness the Duke of Connaught, in the graceful speech he made at Netley at the presentation of prizes at the close of the winter session, referred to the fact that, by the Queen's command, it had been his pleasing duty to present the Victoria Cross to a medical officer of the Bombay Staff.

We have before us two interesting volumes, published so far back as the year 1829, entitled *Twelve Years' Military Adventure in Three Quarters of the Globe.* The author of this work was Captain Blakiston, of the Madras Engineers, who saw important service under Wellington in India, afterwards at the taking of Bourbon, Isle of France; and, under Sir Samuel Auchmuty, at the capture of Java; and finally, again under Wellington, in Spain. The author gives an interesting account of the mutiny at Vellore, in which, on a small scale, some of the worst features of the Sepoy mutiny of the Bengal army were foreshadowed. This serious affair took place on the morning of July 10th, 1806. At page 291, vol. i. the author relates that some of the officers of the 69th Regiment—one of whom had displayed great courage in rallying the men—"withdrew with some of the soldiers to the hill-fort, which was at the opposite end of the pettah or town." Captain Blakiston adds: "Happily, however, they could not persuade many of the men to accompany them. Nearly a hundred of the 69th who, after leaving the barracks, had behaved with great spirit, preferred remaining with two assistant-surgeons. These two gallant young men—Jones and Dean—whose names deserve a less perishable record than mine, leaving a party to keep possession of the gateway, boldly pushed forward along the ramparts with about sixty men, and after some hard fighting gained the flag-staff, from which they pulled down the rebellious standard." The mutiny was, as is well known, suppressed and the mutineers punished with exemplary severity by the famous Colonel Rollo Gillespie, of the 19th Dragoons. At page 301 Captain Blakiston says: "Next to him I think those two assistant-surgeons, whom I have already mentioned, deserve the largest share of praise, for had it not been for them the fort would have been abandoned to the mutineers long before Colonel Gillespie came up. As it was, they did not receive the credit due to them for their services"—which he explains by saying that Gillespie was not an eye-witness of the manner in which they fought their way to the flag-staff. And so it was that this gallant bit of "non-combatant" service went without notice or reward. We are glad of the chance to lay this our "poor garland" on the graves of Assistant-Surgeons Jones and Dean:

> Ah! my son,
> Thou dost not know what perils and injustice
> Await the poor men's valour.

MINERS' NYSTAGMUS.

At the last meeting of the Ophthalmological Society, a most interesting paper was read by Mr. Tatham Thompson, of Cardiff, reported on p. 287. There has long been a rooted conviction among miners that the Davy safety-lamp is responsible for this affection; but the safety lamp is not a favourite among pitmen, and there is a natural disposition to make it the scapegoat for everything. Mr. Simeon Snell, of Sheffield, has devoted considerable time to this subject, going down coal-pits, watching men at their work, and examining a large number of miners. He embodies the results of these labours in a most exhaustive paper, which he read before the Ophthalmological Society in 1884[1]. He attributes the nystagmus not to defective illumination, but to the position assumed by the miner in getting coal, the essential element in this being that the eyes are directed obliquely upwards. The arguments advanced in favour of this theory were that nystagmus only occurs in those whose work compels them to assume this position; that after recovery the symptom reappears very often on the patient placing himself in that position. It was also mentioned that nystagmus was unknown in a Durham pit in which, although the seams were very low, the coalgetters did not lie on their sides, but sat on low stools and worked straight forwards. We shall refer to this mine again. Objections were raised to Mr. Snell's theory at the meeting by several speakers, and numerous other modes of accounting for the production of nystagmus were referred to, but it may be said that up to the present two theories only have held their ground—that which attributes the symptom to the position of the eyes, and that which attributes it to defective illumination. In discussing a question of this kind it should be borne in mind that a practical knowledge of the working of a pit is important, and that the work is very different in different coal fields, and that the conditions may differ widely even in adjacent pits. Mr. Tatham Thompson does not appear actually to have studied the workings, but this disadvantage is counteracted by the fact that the South Wales coal fields are peculiarly adapted for affording evidence on this question, from the fact that they contain two distinct varieties of coal, which are worked under very different conditions. The house coal is found in low seams, and the men work lying on their sides, as described by Mr. Snell, but naked candles are used. The steam coal, on the other hand, is found in thicker seams, so that the men can work upright, and they never work on their sides; but in these pits the safety lamp is used. So that we have here a complete separation of the two sets of conditions which have each been blamed for causing the nystagmus. According to Mr. Thompson, the affection is unknown in the pits in which naked lights are used, but it occurs in those in which the Davy lamp is used. Moreover, it is said that men who have worked for years in the naked-light pits and in the position described without suffering, have developed nystagmus on being transferred to the other pits, with improved position, but with the safety lamp. It appears further, on reference to Mr. Snell's original paper, that the Durham pit in which the absence of nystagmus was attributed to the better working position, was one in which naked lights were used. The paper was read late in the meeting. Mr. Snell's reply was therefore somewhat hurried, and it is quite possible that he may be able to add further facts in support of the theory to which he still adheres; but as the evidence stands at present, it would seem to point to a verdict of guilty against the safety lamp. Mr. Snell's argument that if the defective illumination were the cause, other men in the pits besides the actual coal-getters would suffer, is not conclusive; for it may be the chief, but not the sole factor; to work the pick the man has to fix his gaze on the surface of the coal, and it is quite likely that this attempt at fixation is one factor in the case. The return of the nystagmus when the working position is assumed is a very interesting point, which requires explanation; but it is quite possible that an association of ideas in the mind of the patient has something to do with this. With regard to the alleged contributory causes—as anæmia and hypermetropia—they are such common conditions, the former especially, among miners, that it is very doubtful how much significance should be attached to them.

[1] *Trans. Oph. Soc.*, vol. iv.

TUBERCLE BACILLI IN THE BLOOD.

Mr. Gilbert Barling, M.B., F.R.C.S., and Dr. T. Stacey Wilson, M.B., C.M., M.R.C.P., send the following note from the Birmingham General Hospital with reference to the statement[1] made by Dr. Liebman, of Trieste, that tubercle bacilli had been found in the blood of patients with tuberculosis who had been treated by Koch's remedy. If the observation be correct, either such patients should be the subject of general tuberculosis, or else immunity has been obtained by the injection of the fluid, or perhaps a third condition is possible, namely, that the bacilli in the blood are too degenerate either to cause harm or to multiply. Drs. Guttman, Ehrlich, and Ewald have already reported that numerous observations made on phthisical patients under their care have failed constantly to demonstrate the presence of tubercle bacilli in the blood. Our observations have been few in number, but having been made conjointly and with some persistence, we venture, in view of the importance of

[1] British Medical Journal, January 31st, 1891, p. 246.

the matter, to make a preliminary statement. We have examined the blood of three cases of phthisis and one of lupus. In two of the cases of phthisis and in the lupus case the examination gave a negative result, and, therefore, calls for no further comment. The third phthisical patient was a girl, aged 17, with extensive tuberculosis of the upper lobe of the right lung and of the right tarsal joints, also of the left wrist, and, to a slight extent, of the larynx. Under treatment by injection the larynx improved and also the wrist, while the lung condition remained about the same; the foot, however, suppurated so much and became so painful that it was amputated, the injections being suspended for ten days. Towards the end of this time the lung showed signs of rapid breaking down. When the injections were resumed some blood was taken from the finger during the first reaction; four cover-glass preparations were made, and stained by the Zehl-Neilsen method. In one of these we found two undoubted tubercle bacilli, but we could not identify any in the other preparations. At this time the sputa contained an enormous number of tubercle bacilli, and it may be mentioned that a scraping of synovial membrane from the amputated foot also showed a large number of them. On two subsequent occasions cover-glass preparations from the blood of this patient were examined with a negative result, and on one of these occasions blood was taken for cultivation on serum, but it is yet too early for any naked-eye change to have made its appearance. It is worth mentioning in this connection that this patient's general condition, as well as that of the lung, has improved since the injections were recommenced.

THE TYPHOID EPIDEMIC AT FLORENCE.

From what purports to be an "authentic" account of the epidemic of typhoid fever at Florence, it appears that the outbreak began in the early part of December, and reached its height towards the end of that month and the beginning of January. From December 1st to January 23rd the number of cases recorded was 1,342, with 174 deaths. The origin of the epidemic is officially attributed not to contamination of the wells or cisterns, but to occasional fouling of the canal which supplies a part of the city with what is known as the Monte Reggi water. This water comes from the Mugnone torrent, and it passes through a district in which several cases of typhoid fever had occurred. As to how these arose, no official theory seems to be forthcoming. In the San Giorgio Barracks, which are supplied with Monte Reggi water, forty men were attacked on one day, while in the Engineers' barracks in the western quarter of Florence, only one man has suffered. The waters of the Mugnone have now been diverted from the conduits, and since then, it is stated, no fresh cases have occurred, except such as were already in the incubation stage before the infected water supply was cut off. The part of Florence where foreign visitors usually reside is said to have been quite untouched by the epidemic. This statement will no doubt tend to reassure the minds of intending travellers, who have not unnaturally been alarmed by the accounts of the visitation which had reached this country. As to the causes of outbreak, it seems doubtful whether the whole blame should be laid to the Monte Reggi water. From what has appeared in Italian medical journals and from information furnished us by persons in a position to know the exact state of things, it is impossible to doubt that the wells of Florence were in a highly dangerous condition. The authorities practically admitted this by ordering them to be closed, and directing that only boiled water should be used for drinking purposes. As many of the houses have no fireplace, it was impossible for the people to comply with this salutary regulation. The authorities therefore established stations in various parts, where boiled water was supplied to those applying for it. Indeed, the resolute way in which the authorities grappled with the difficulties of the situation deserves the highest commendation.

DAMAGE TO THE ARMS AT BIRTH.

Most people have heard of the advice of the French obstetrician as to the dangers of shaking hands with a fœtus. Not long ago a Frenchman successfully sued an accoucheur for having maimed him at birth. Dr. Jules Comby's interesting notes on obstetrical paralysis in the newborn will be of interest alike to the obstetrician, the neurologist, and the medical jurist. The notes are published in the *Bulletins de la Société Médicale des Hôpitaux de Paris* for January 29th. In the first case there was paralysis of the left arm and œdema of all four extremities. The shoulder had presented, turning was necessary, and the mother died. It will interest certain of our readers to learn that this and the next case were conducted by a midwife. Faradisation cured both the paralysis and the œdema. In the second case the shoulder had also presented, turning had been performed, and the left arm was paralysed, but there was no œdema. Faradisation proved of little value: the patient, however, was several weeks old when the treatment was commenced, whilst the first was only 11 days old. The third case was grave. The child was 6 months old when observed by Dr. Comby, and suffered from total paralysis of both arms. The breech had presented, the mother's pelvis was contracted through rickets, and the child required firm traction before it was delivered. Born asphyxiated it was not revived without great difficulty. The arms hung limp and cold from the first. The child grew and flourished, but no treatment was of avail for the paralysis; at thirteen months the child looked very healthy, but the arms hung down, perfectly insensitive even to needles. Faradisation was not commenced till the sixth month, no doubt far too late. Dr. Roullaud has already worked out the mechanism of obstetrical paralyses at birth. Spontaneous paralysis may occur through the clavicles being pushed inwards during the passage of a broad-shouldered fœtus through a narrow pelvis. The fifth and sixth cervical nerves are thus compressed. The forceps may directly contuse the brachial plexus; the finger or blunt-hook applied to the axilla to disengage the shoulders may press in the clavicle and damage the cervical nerves. These nerves have been damaged, at least in one case traced into adult life, by constriction of the child's neck by a coil of umbilical cord. The forking of the fingers over the nape—a well known manœuvre in breech cases—may cause paralysis by direct damage to Erb's point. Pressure on the shoulders and direct traction on the arms may cause damage to the whole cervical or brachial plexus. Still graver results may follow clumsy handling of the arms, shoulders, or neck of a fœtus. Thus, the branch between the sympathetic and the first dorsal nerve has been injured, the effects being seen even in the pupils. Again, a child may be maimed for life by manipulation of its arms at birth; nor must it be forgotten that convulsion of the limb has followed an apparently moderate degree of traction.

SCOTLAND.

EDINBURGH ROYAL INFIRMARY: ADMISSION OF WOMEN STUDENTS.

At a meeting of the managers of the Royal Infirmary held on Monday last, it was agreed to admit women students of medicine to the wards for clinical instruction. It was further agreed to remit to the medical and surgical staff to give effect to this resolution. The regulations laid down by the managers are these: 1. Ward visits and clinical lectures shall be given to female students separately from those given to male students. 2. Mixed clinics may be allowed (if the lecturers so wish) on special subjects—for example, diseases of the eye, ear, throat, and skin. 3. Under no circumstances whatever shall any ward be used twice in the same day for clinical instruction. 4. As far as possible, no interference shall be attempted with ward clinics and lectures already arranged

for male students. 5. At present, or till their numbers exceed thirty, the women students shall keep together in one unit for clinical instruction, thus requiring only one ward or theatre for their instruction at any one time. 6. All women students, before receiving their hospital tickets, must sign a declaration that they will conform to the special rules made by the managers for their instruction. This resolution of the managers has been received with fairly general approval, with the exception of the sixth clause of the regulations, which seems perfectly unnecessary.

ROYAL SOCIETY OF EDINBURGH.

Professor Sir Douglas Maclagan presided at the fifth meeting of the Royal Society of Edinburgh held on Monday evening, at which Professor Rutherford delivered an address on "The Sense of Hearing." He expounded the nature of sound, the simple and compound vibrations affecting the ear, the mode of analysis of these by means of a resonator, the structure of the ear, and the anatomical reasons against the acceptance of the theory of sound sensation as given by Helmholtz. The address occupied nearly two hours in delivery, and at its close a special vote of thanks was, on the motion of Sir William Turner, accorded to Professor Rutherford.

SCOTTISH UNIVERSITIES COMMISSION.

The forty-fifth meeting of the Scottish Universities Commission was held on Monday last. The Commissioners present were Lord Kinnear (chairman), Lord Sandford, Sir Arthur Mitchell, Lord Kyllachy, Dr. Heron Watson, Professor Butcher, and Mr. Fuller. Evidence with regard to graduation in medicine was heard from the Royal College of Physicians, Edinburgh, as represented by Dr. Batty Tuke and Dr. George Gibson; from the Royal College of Surgeons, Edinburgh, as represented by the President, Dr. John Duncan; the Vice-president, Dr. Joseph Bell; and the Secretary, Mr. Francis Cadell.

KOCH'S TREATMENT AT ABERDEEN.

A meeting of the Aberdeen Medico-Chirurgical Society was held on February 5th, the President, Dr. Garden, in the chair. Professor Smith-Shand read a paper, and submitted illustrative diagrams, temperature charts, and photographs on the cases treated with Koch's lymph in his wards at the Royal Infirmary. His observations, especially on lupus cases, were similar to those already reported, and in cases of tuberculosis of the lungs he expressed himself as being so far satisfied. He was cautious in expressing any opinion on the ultimate value of the drug. He was, however, hopeful of its value in the treatment of lupus, and promised further contributions to the Society on the same subject. Dr. Blaikie Smith and Dr. Macgregor contributed notes on a few cases. The discussion which followed was more of the nature of an inquiry than a criticism of the cases. As showing the interest taken in the remedy, there has not for many a day been so large an attendance of members.

THE POLLUTION OF LOCH LONG.

Definite steps have at last been taken to test the right of the Clyde Navigation Trustees to deposit the dredgings of their river at the mouth of Loch Long to the pollution of the foreshores of neighbouring watering-places, and the serious injury of some of the most beautiful of the Clyde summer resorts. The Lord Advocate for Scotland, on behalf of the Commissioners of Woods and Forests and the Board of Trade, has raised a summons in the Court of Session against the trustees, to have them interdicted from further depositing of dredging in the loch. On the summons it is stated that prior to 1862 the dredgings from the river were deposited on the most convenient banks of the river, but that in that year leave was granted the trustees by the Crown, to whom such narrow seas as Loch Long belong, to deposit dredgings, due to the removal of two banks off Greenock, in Loch Long on a site to be pointed out by the Lords of the Admiralty. The dredging of these banks has long since been completed, but the trustees have not ceased the deposit. The Crown, therefore, called on them to desist, and as they insist upon their right to continue, the summons has been raised.

EXCESSIVE MORTALITY AT PAISLEY.

Paisley enjoys the unhappy distinction of having the highest death-rate for January of the eight principal towns of Scotland. For that month the rate was 36.3 per 1,000, the total deaths in the town being 199. For the same month last year the rate was 22.4. Of the deaths it is to be noted, however, that seventy were of persons of 60 years of age and upwards; and a further qualifying circumstance is that forty-five deaths occurred during the month in the Burgh and Abbey Poorhouses and in the infirmary, which embrace a population of 900. This amounts to 22.5 per cent. of the whole death-rate. At present the town is threatened with an epidemic of measles, from which four deaths have already occurred. Meanwhile, the sanitary staff is being reorganised, and is expected soon to be in a condition to combat such attacks more effectively than formerly.

IRELAND.

Mr. Thomas Cairnes, J.P., of Drogheda, has offered a sum of £5,000 for providing artisans' dwellings for that town.

Dr. H. W. Byrne has been elected medical officer of the Canal Street Dispensary District in succession to his father, Dr. J. A. Byrne, whose death we announced two weeks ago.

Dr. Koch's treatment for tuberculosis is now being largely tried in the Belfast hospitals. As elsewhere, the results in lupus have been very striking, while great divergence of view exists as to its utility in pulmonary cases.

At a meeting of the Board of the National Lying-In Hospital, Dublin, on Thursday, February 5th, Dr. More Madden, obstetric physician and gynæcologist, Mater Misericordiæ Hospital, was appointed one of the Masters of the hospital.

A LIBEL CASE.

In the Queen's Bench, Dublin, a jury was engaged for two days last week in hearing a case in which Dr. Dennehy, of Lismore, sought to recover £2,000 from a Mr. J. Daly for libel. The persons in conflict are respectively the medical officer of the dispensary, and a member of the committee. The alleged libel consisted in statements made by the defendant as to the way in which the plaintiff discharged his duties in certain specified instances. The defendant claimed that he was privileged, and that he had no malice against the plaintiff; and the jury found to this effect.

SANITARY PLUMBING.

At the first annual public meeting of the Ulster District Council for the National Registration of Plumbers, held at Belfast on February 7th, under the presidency of the Mayor, a resolution was passed to the effect that the meeting believed the time has arrived when they can urge upon architects and the public generally to give a preference to registered plumbers.

Presentation.—On Monday evening the members of the St. John Ambulance Class, formed under the auspices of the London and North-Western, Lancashire and Yorkshire, and Oldham, Ashton, and Guidebridge Railway Companies, met at Glodwick Road Station, Oldham, for the purpose of presenting the lecturer, Dr. M. Howard, with an illuminated address.

THE ARMY MEDICAL STAFF.

Correspondence between Sir Andrew Clark and the Secretary of State for War.[1]

Dear Mr. Stanhope,—1. Since I had the honour of conferring with you at the War Office a few weeks ago, concerning the complaints of the army medical officers, I have made a fresh inquiry into the subject, and now proceed to lay before you, in the fewest words and in the broadest manner, the results of it.

2. Although I have had many conversations and much correspondence with military and with medical officers upon the subject, no one has been privy to my purpose of addressing you, and I alone am responsible for all that follows. And I think I may venture to say, for what follows, that it is not submitted in support of either party to the discussion, but with an unaffected desire to help in bringing about such a settlement of the question as should be at once just, wise, and practicable.

3. There exists a widespread dissatisfaction among the medical officers of the army as to their present position and privileges; and it appears to be widening and deepening on account of the injustice with which they consider that they have been treated by the Horse Guards and the Government.

4. A few distinguished combatant officers, and a still fewer number of medical officers in high position, allege that there are no adequate grounds for this dissatisfaction; but the great majority of the former, and almost all of the latter class of officers, acknowledge that the medical department is in an anomalous, unsatisfactory, and dangerous condition, and aver that some radical reconstitution of it is essential to the safety and success of the army in any times of important expeditions and of war.

5. This dissatisfaction began about the time of the Crimean war, when in consequence of the disasters which occurred during that campaign, and the sweep and strength of public opinion concerning them, new duties and responsibilities were imposed upon medical officers. It was hoped thereby that they would be no longer mere ministers to sickness, but preventers of disease. Since then there has been continual friction between the combatant and the medical officers: frequently recurring unsuccessful efforts to allay grievances and to bring about harmonious and efficient co-operation in work; occasional failures in the achievement of practicable aims; avoidance of the medical service by the highest class of men; and a state of chronic and perilous dissatisfaction throughout the department—smarting under the injustice from which it has suffered and the indignities to which it considers that it has been exposed.

6. It appears probable that the executive opposition to the claims of the medical officers arises naturally, but not excusably, out of the nature of some of the duties now required of the medical department. The medical officer has not merely to obey the instructions and discharge routine duties imposed upon him by the authorities, but in the fulfilment of his highest functions to the State, in his responsibility for the life, health, and efficiency of the soldier, for the safety and wellbeing of expeditions, and for the due protection and preservation of armies in the field, he has to initiate proceedings, he has to search out defects, he has to inquire into the existence of causes of disease, he has even to question the propriety of strategical arrangements, and so appear to encroach upon the heretofore supreme and not-to-be-questioned authority of the combatant officer.

But experience shows that our safety and our success in war, however much they may depend upon arms of precision and competent commanders, depend still more upon the hearty and efficient discharge of those duties which keep the army free from disease, and the soldier in health and strength. It would seem, therefore, necessary that officers entrusted with important duties should, in the discharge of them, be fully protected from the direct or indirect intimidation which arises out of irrational or ignorant opposition.

7. Among the grounds of the prevailing dissatisfaction are, setting aside the smaller ones which occur in the intercourse of daily life but are not without their sting, the refusal to medical officers of the Court privileges, their just place on judicial inquiries, the social consideration due to their position, the subsidies granted to the messes of combatant officers, the dress distinctions, the proportion of rewards and honours, the limitations of foreign service, the definite rank, the conditions of sick leave granted to combatant officers.

8. It is alleged that the one necessary and sufficient cure for this dissatisfaction is the transformation of the whole medical department into a Royal Army Medical Corps, the grant of definite substantive rank to its officers, and its homogeneous incorporation into the general army on the lines of the Royal Engineers, who in an earlier stage of their development occupied a position similar to that which the army medical officers now occupy.

9. To this remedy of complete incorporation and substantive rank only a few objections appear to be made, and they are easily answered.

a. The remedy is declared to be contrary to military instincts, and is, therefore, strongly disliked. This was the argument used against the incorporation of the engineers and against the incorporation of the medical officers of the armies of foreign nations. Experience is the only way of testing the strength of this argument, and the testimony of experience is uniform and conclusive. Every instance of the incorporation of medical officers has proved successful. Since the grant of substantive rank and title, friction has ceased, jealousies have subsided, and concurrent harmonious and efficient action has followed.

b. It is alleged that the grant of military title to non-combatant officers is an unwarrantable innovation, which is undeserved, and likely to bring about confusion. This argument is based on the assumption that military title implies the duty of fighting. But that this is an inaccurate statement, and that the holding of military title is not an innovation is conclusively proved by the fact that numerous non-fighting officers in the discharge of judicial, transport, supply, and store duties hold military titles. No confusion has been hitherto traced to the possession of military title and rank by non-combatant officers.

c. Seeing that medical officers are a well-educated body of persons, have numerous military responsibilities; that, with the exception of fighting, they have almost every other military duty to perform in their own corps; that they are exposed to greater perils to health and life than combatant officers; that their proportion of sickness, unfitness for service, and deaths is greater than that of any other class, and that the only two officers who, within the last two years, have been decorated with the Victoria Cross were medical officers, it is impossible, with any show of justice, to maintain the statement that medical officers are unworthy of military title and rank.

d. It is held by a very few distinguished generals that the medical officers have no right to a title which can in no way belong to them; and that the medical title conferred upon them by the State is, and ought to be, sufficient for their proper place and work.

To this it is replied that medical officers have more numerous and important military duties to perform than riding masters, school inspectors, and officers of the Pay and Store Departments, who are invested with military rank and titles.

As respects the sufficiency of the medical designation, I find a general consensus of opinion to the effect that it is not sufficient to confer upon the medical officer the freedom, independence, privileges, and authority necessary to the efficient and satisfactory discharge of his duties.

Reviewing these observations, I conclude that, in order to prevent the spread of dissatisfaction, and the continuance of what exists, in an important arm of the service—reviewing these and other observations which I have made, I am of opinion, in order to allay the dissatisfaction which exists among the army medical officers, to prevent the medical schools' systematic agitation against the military service, to avert a dearth of candidates, to bring about a healthy condition of the whole medical department, it would be wise, as well as just, to attempt a final settlement of the question. I am further of opinion that such a settlement can be made only in one of two ways: Either by placing the Medical on the same general footing as the Chaplains' Department and doing away entirely with all question of rank, or else by form-

[1] Sir Andrew Clark's letter is printed from his first draft, and any slight verbal discrepancies between the text here given and that forwarded to Mr. Stanhope, are attributable to this cause.

ing the Medical Department into a Royal Army Medical Corps and according substantive rank and title to its officers. This would be received; but I infer, from what I have heard, that what would be received with unqualified satisfaction would be—

1. Formation of a Royal Army Medical Corps.
2. Grant of substantive rank and title.
3. Rank of lieutenant for first three years of service.
4. Return to former periods of service abroad, namely, five years and three years, instead of six years and four years.
5. The same privileges as combatant officers with respect to sick furlough.

Finally, in respect of titles, I am myself of opinion that the compound titles[2] suggested by the Camperdown Committee should be accepted by the medical officers if it should not seem to you desirable to make their incorporation organic, homogeneous and complete.—I am, dear Mr. Stanhope, yours sincerely, ANDREW CLARK.

February 2nd, 1891.

DEAR SIR ANDREW CLARK,—The question which you and your colleagues so ably brought before us of the status of the officers of the Army Medical Staff has received my most careful consideration. I have also had the advantage of a letter from yourself, setting forth in detail your view of the grievances of these officers. I gather that they are as follows:—

1. Undue length of foreign service. 2. Conditions of sick leave. 3. Proportion of rewards and honours. 4. Court privileges. 5. Dress distinctions. 6. Social consideration. 7. Mess subsidies. 8. Rank.

As to 1. The only way of increasing the home service of medical officers is to increase the numbers employed at home, and this could only be done by employing them on duties which would take up a very small portion of their time, and in which they would gain no experience, and therefore undoubtedly deteriorate in their professional knowledge. An increase of establishment sufficiently appreciable to affect the length of home service would cost £27,000 a year. For these reasons I am not able to accept this proposal.

2. I am happy on this point to be able to meet their wishes.

3. I am quite sure that the Commander-in-Chief is always glad to give favourable consideration to any recommendation made in favour of these officers for rewards for distinguished service; such rewards, however, can hardly be made a matter of proportion. In such cases it must necessarily depend on the opportunities which officers—whether combatant or medical—have of distinguishing themselves.

4. I cannot learn what this grievance is, but I will consult with the Lord Chamberlain, who, I am quite sure, will remedy any proved grievance which may exist.

5. I have been quite unable to discover what this grievance consists of. I may say that neither on this point nor as regards 4 have I had any complaint.

6. So far as regulations can go these officers are put on an equality with their combatant brethren; but social consideration is a matter not to be controlled by regulation, and must be left to the good sense and good feeling of the officers of Her Majesty's service, both combatant and non-combatant.

7. I do not understand what this grievance is. Medical officers were at one time commissioned to regiments. They were then, of course, members of the mess. Later they were attached to regiments; they were then also treated as members of the mess, but they objected that, as many of them were married, it was a hardship to have to pay mess and band subscriptions to a regiment with which they were only temporarily connected. To meet this objection, they were relieved of the responsibilities of membership; and now, if they use a mess, they do so as honorary members, and as such are free from mess and band subscriptions. I do not see what more is required.

8. This, I take it, is the main grievance. The question is a difficult one, and in some respects its difficulties seem to be hardly appreciated by these officers. It must not be forgotten that the essence of a combatant military commission is the power to command; and to do what is suggested—namely, "to incorporate the medical staff into the general army and to give its officers substantive rank and military titles," which, as you rightly say, is done in the case of the Royal Engineers—would have the effect of placing a medical officer in military command over troops in the field whenever one might happen to be the senior officer present. This I know you do not advocate.

Medical officers have already, in the terms of their commission, "command over junior officers and subordinates employed in the medical staff, and over all officers and soldiers attached thereto, and over all patients in military hospitals." I do not think, and in this I gather that you agree, that they should have more than this.

The question of the presidency of courts-martial is involved in that of command; and I do not think it expedient or possible to extend the scope of the medical officers' commissions in this respect. They now hold courts-martial on the soldiers of the Medical Staff Corps.

The presidency of boards must, I think, follow the same consideration; and I should point out that, owing to the advanced rank in which medical officers enter the army, and the rapidity with which they attain the higher grades, they would almost invariably supersede combatant officers, who would be junior to them in rank though far senior to them in service.

Possibly with the view of meeting some of the difficulties I have indicated, you advocate that these officers whom you speak of as belonging to the Army Medical Department should be made officers of a corps like the Royal Engineers.

There is, however, now no Army Medical Department, the officers belong to the Army Medical Staff, and they command (*inter alia*) the men of the Army Medical Corps. From this position they derive considerable advantage. But if they are to become officers of the corps, and to be commissioned to it, they must accept the position of all other corps or regimental officers, and draw only regimental allowances. This will entail upon them considerable pecuniary loss and other disadvantages.

A further question would also arise as to their initial rank. An officer in the Royal Engineers, to which corps they wish to assimilate themselves, is promoted to be Captain after eleven years' service. I hardly think these officers would like to be put on such a footing.

The considerations above mentioned do not, however, exclude the adoption of the other alternative mentioned by you, and I am glad to be able to come to the conclusion that I should be justified in advising Her Majesty to confer upon medical officers the composite titles recommended by Lord Camperdown's Commission, and I trust that this concession will finally put an end to the regrettable agitation which has, in my opinion, obscured the true bearings of this important matter.

Believe me,
Yours very faithfully,
(Signed) EDWARD STANHOPE.

[2] Sir Andrew Clark requests us to append to this sentence the following explanatory note:—That is as distinct from substantive rank, which must necessarily accompany them, and of which rank they are to be the guarantee and expression.

THE VIRCHOW TESTIMONIAL FUND.

THE appeal which we published last week from the English Committee of the Virchow Testimonial Fund cannot fail to meet with a favourable reception from the profession. It is a good custom—more prevalent in Germany than in this country—to honour a great man while he is amongst us, while he can receive and enjoy a tribute of praise, not waiting till the only form of homage possible is some monument which he can never see or words of praise which can never reach his ear. Professor Virchow has achieved a position in which he can be spoken of without that reserve which is necessarily felt in estimating contemporary eminence. He has attained the dignity of a classic. His claims to contemporary recognition and hereafter to a niche in the temple of fame are many, and need not be based solely on the *Cellular Pathology*, to which the Committee have rightly referred in their appeal. More massive and perhaps more enduring memorials are to be found in the priceless volume of *Collected Memoirs*, and in what has been well called his truly marvellous work on tumours—not to speak of a multitude of other papers. All these are the records of the patient ungrudging labour of a genuine pioneer in science.

And again; the value of such a life to scientific progress is not to be measured by the number or value of any definite

contributions or discourses. A great part of Virchow's work will escape oblivion, and even many of his theories (those unstable products!) remain unshaken: but even if all his original positions had to be abandoned or left behind in the advance of science to new fields and to points of view giving a wider range, the benefit of the impulse which he has given to scientific medicine would still endure. His methods are his greatest contribution to science. They have become generalised, first through his brilliant band of pupils, embracing most of the great names in German pathology of the succeeding generation, and then through their pupils and books into wider and wider circles till they are the common property of every medical school and laboratory throughout the civilised world. With rare felicity he has employed the three chief means by which a scientific man can become influential, namely—by laborious researches into facts; by a brilliant sketch of the aspect of the field of inquiry at a particular time; and by imbuing with his own spirit a number of ardent investigators.

It would not be right that the recognition of such a man should be left to his own countrymen; and an additional claim to honour from the medical profession in other countries is that Virchow has always shown strong cosmopolitan sympathies in matters of science. Perhaps no German pathologist or physician has displayed more of that virtue which we may call intellectual hospitality or the friendly reception of foreign ideas. In all his writings we find the labours of English and other foreign observers quoted and recognised with an entire absence of national prejudice; and he has always followed with sympathy the progress of scientific medicine in this country.

There can be no doubt that this appeal will be warmly supported by the numerous British physicians and surgeons who have been under Virchow's immediate influence; but it interests a wider circle, since, as the Committee well remark, every member of the profession may fairly be said to have been his pupil. Moreover, the indirect destination of the fund is one which will command general approval, since, after providing for a memorial medal, scientific research is to be the residuary legatee. We wish all success to Sir James Paget and his influential Committee, and hope that the response of the profession in this country will be one worthy of itself and of the object to which it is invited to contribute. Dr. Lauder Brunton, 10, Stratford Place, W., is the Treasurer of the Fund.

The following additional subscriptions to this fund have been received during the past week:—

	£	s.	d.		£	s.	d.
Sir William Jenner, Bart....	2	2	0	Bilton Pollard, M.D.	1	1	0
Sir William Bowman, Bart.	2	2	0	Paul E. Karkeek, M.R.C.S....	0	10	6
Sir William Roberts, M.D....	2	2	0	Heinrich Port, M.D.	2	2	0
William Gairdner, M.D.	2	2	0	A. Barron, M.B., M.R.C.S....	2	2	0
Angel Money, M.D.	1	1	0	W. Ewart, M.D.	2	2	0
Adolf Bronner, M.D	1	1	0	E. Clifford Beale, M.B.	1	1	0

MIDWIVES BILL.

A SECOND meeting of the Subcommittee of the Parliamentary Bills Committee appointed to consider in detail the Midwives Bill met at the offices of the Association on February 9th, when the following members were present: Mr. SIBLEY (in the chair), Dr. Grigg, Mr. Galton, Dr. Holman, Dr. Aveling and Mr. B. F. C. Costelloe were present by invitation.

The minutes of the last meeting were read and confirmed. A letter was read from Dr. Rentoul (Liverpool).

The various suggestions of the Branches were considered, and the following alterations were recommended:

Clause 3, Subsection 2, lines 41 and 42, omit the words "practising in the district in which she is herself resident."

Clauses 4 (as modified), and 5, 6, and 7 were approved.

Mr. COSTELLOE said he was asked at the last meeting, on Clause 6, to consider the question whether a registered midwife could certify the cause of death, and the following was his opinion:

"Referring to the 18th Section of the Registration of Births and Deaths Act, 1874, as to the birth of stillborn children, it was clear that the certificate required by that section must be signed by the registered practitioner who was in attendance at the birth, or who has examined the body of such child. It was clear, therefore, that midwives, if registered under this Bill, would have no power to give a legal certificate that the child was not born alive."

It was decided to communicate a copy of counsel's opinion to the Birmingham and Midland Counties Branch.

In Clause 8, line 11, it was recommended to omit the words "and good health;" to make this Subsection 1 of the clause, and to add the following new paragraph as Subsection 2 of Clause 8:

"It shall be lawful for the Privy Council to admit to the Register without examination, within twelve months after the passing of the Act, any woman who has obtained a diploma to act as a midwife from any such societies, hospitals, or institutions granting diplomas as the Privy Council may approve."

Clause 9, lines 15 and 16, to omit the words "or has served as a pupil midwife in some hospital or other public institution;" and in line 17 of this clause to substitute the word "twelve" for "eighteen."

Clauses 10, 11, 12, 13, and 14 were approved.

Clause 15, page 7, line 3, substitute the word "six" for "twelve."

Clause 16, omit Subsection 2 in its entirety.

Clause 19, line 26, omit the words "Medical Acts;" and on line 27 omit the words "The expression Medical Acts means the."

Dr. HOLMAN proposed, and it was agreed to:

"That the Bill as amended be now printed, and that a meeting of the Parliamentary Bills Committee be called as soon as may be, and the Bill submitted to them; and that those Branches whose observations and amendments had been accepted be communicated with."

It was decided to summon a meeting of the Parliamentary Bills Committee for February 16th, at 4.30.

TEACHING UNIVERSITY FOR LONDON.

WE have received the following correspondence for publication:—

Society of Apothecaries, Blackfriars, London, E.C.,
December 9th, 1890.

SIR,—At the suggestion of the Lord President of the Council—who states that he has no official knowledge of the scheme referred to in the letter addressed to him by the Master of the Society, of which I enclose a copy—I am instructed to send you such copy, and to ask you to be so good as to lay same before the Senate of the University of London, or other the body delegated by the University of London, to deal with the scheme for a Teaching University for London.

I am further instructed to state that the views of the Society on the subject are so fully embodied in that letter that it seemed the simplest and most convenient course to furnish you with a copy of it rather than to restate the whole matter, practically in the same words, to the University of London.—I am, Sir, your most obedient Servant,

JAMES R. UPTON, Clerk to the Society.

The Registrar of the University of London.

[*Copy.*]

Society of Apothecaries, Blackfriars, London, E.C.,
November 18th, 1890.

MY LORD,—The attention of the Society of Apothecaries of London has been drawn to the scheme for a Teaching University for London prepared by the University of London. Such scheme, so far as it excludes the Society from representation on the Senate, and also apparently from taking any part in the teaching or examining functions of the proposed University, appears to be defective for the reasons which I am desired to lay before your Lordship.

If you will refer to page XXII of the Appendix to the Report of the Royal Commission made in 1889, you will find a very accurate summary of the petition presented by the Society against the grant of the Charter sought for by the Royal Colleges of Physicians and Surgeons.

The facts therein stated are the main grounds on which, without again repeating them, the Society contends that a very strong case is made in its favour for presentation both in the Senate and the other departments of the Teaching University.

The Society is aware that the report of the Commissioners

does not specially assign a representative to the Society on the Senate of the proposed university, but it is urged that such report did not profess to lay down any hard or fast lines on which the Senate should be framed: and, further, that the University of London has itself departed from the suggestions of the Commissioners by increasing the number of proposed members of that body.

The very fact that the University of London feels itself at liberty to alter the scheme of the Commissioners in this respect gives the Society the opportunity of pressing its claim that the scheme should be still further amended by giving representation to the Society. The Society feels that it has been placed somewhat at a disadvantage by what occurred before the Royal Commission. The origin of that Commission was mainly the consideration of the petition for a charter for a medical university presented by the two Royal Colleges of Physicians and Surgeons. The whole weight of the Society's petition and evidence was directed against such charter being granted, and in that respect it entirely succeeded.

But it was not specially invited to give its views—and never, in fact, did give its views—in any way on the constitution or function of a general teaching university for London. Had it done so it would doubtless have been able to show effectively that a very close analogy exists between the position held by the Incorporated Law Society (to whom the report of the Commissioners has assigned representation) as regards the law, and that of the Society as regards medicine. The solicitor may be termed the "general practitioner" of the law, and if the body which represents him is to be entitled to representation and to all the advantages arising therefrom, there would seem to be the strongest reason for placing the Society of Apothecaries of London in an equally good position.

Lastly, if the Senate, or committees formed out of the Senate as suggested by the report of the Commissioners, are to elect the examining boards for the various faculties, the exclusion of the Society from the Senate of the proposed university seems still more difficult to understand. The Society urges with confidence that a teaching or examining board in the medical faculty from which any influence of the Society is to be absolutely and altogether excluded would be imperfect, unpractical, and wanting in that liberal and broad basis which is essential to its efficiency.—I have the honour to be your Lordship's very obedient Servant,

EDWIN CHABOT, Master.

To the Lord President of the Council.

University of London, Burlington Gardens, W.,
December 10th, 1890.

SIR,—I beg to acknowledge the receipt of your letter of the 9th instant, with copy of a letter addressed by your Society to the Lord President of the Council, and I will submit these communications to the Senate in due course.—I am, yours faithfully,

ARTHUR MILMAN.

To the Clerk, Society of Apothecaries.

THE HOSPITALS COMMITTEE.

St. George's Hospital: Evidence of Secretary, Dr. Whipham, and Dr. Owen.—St. Thomas's Hospital (Out-patient Department): Evidence of Mr. Clutton.—The Middlesex Hospital: The Secretary, Resident Medical Officer, and Dean.

THE Lords Committee resumed their inquiries last Monday, Lord SANDHURST in the chair, and the first Witness called was—

Mr. CHARLES TODD, who stated that he had been twenty years secretary of St. George's Hospital, and before that time he was assistant secretary. He resided in the hospital, and had a salary of £400 a year. The hospital was established in 1733, and it was practically a free institution. The needs of the patients governed admission to the hospital. There were no paying beds. There was a maximum of 356 beds, and the average number occupied was 335. Practically there was not much use in governors' letters nowadays. If the cases for admission were equally urgent, those having the governors' letters would have the preference. Of the in-patients admitted last year, 15 per cent. were servants, but 6 per cent. of these were out of situation, so that only 9 per cent. of the servants were in situations, and they would be eligible at any hospital. Persons admitted to the hospital belonged to the working classes. They came from Battersea, Wandsworth, Fulham, Walham Green, Putney, Kensington, Hammersmith, Chiswick, and other districts, where the population was increasing enormously.

The CHAIRMAN: Have you had any complaints as to the crowded state of your wards?—Some of the medical staff would like to see a few beds taken out of some of the wards so as to make the cubic feet greater. Those are chiefly medical wards. The matter was under consideration. A great many patients were admitted who were destitute, and relief was given to many patients and also to the wives and families whilst patients were in the hospital. This relief came from the Samaritan Fund. A great proportion of the patients could not afford to pay for medical treatment. They had constantly to send away patients because there were no beds vacant for them.

The CHAIRMAN: If there were any organisation of the various charities one with another would that difficulty be met?—It might be; but I do not think it would, because I have frequently sent patients to Westminster and St. Thomas's because we have not room for them, and the patients have come back to us.

As far as your district is concerned, would you then think the accommodation for the relief of the sick poor is lamentably deficient?—Yes; and that, I think, applies to other districts.

The WITNESS, then examined as to the financial affairs of the hospital, stated that the ordinary expenditure last year was £27,364, and extraordinary expenditure £950. The funds came from subscriptions, donations, dividends, and a large sum from legacies. The hospital possessed a few houses in London from which the rents were £1,056. The annual subscriptions last year were £6,644; the donations, £1,754; a donation of £1,000 of stock transferred to the charity; and the legacies amounted to £27,781, but that was quite exceptional, the average of legacies being about £5,000. The medical committee was composed of all the physicians and surgeons. Very few complaints had been made as to the food. The system of nursing was similar to that at other hospitals. During the last ten years there had been a considerable improvement in regard to nurses and nursing. There were wardmaids in every ward. There was no nursing institution to provide private nurses. They only trained nurses for their wards.

The CHAIRMAN: Is the necessity for pensions for nurses becoming less and less every year because they stop a shorter time?—Yes.

Are the medical staff paid?—None are paid, with the exception of the juniors and the resident medical officer, and an obstetric physician. None of the senior physicians are paid. There were, he continued, a large number of lying-in cases attended outside the hospital last year; the number was 392. They were treated by extern clerks under supervision; those were young men, pupils of the hospital. If there were cases of misconduct or carelessness on their part they would go before the board. The idea of transplanting the hospital into the country had not been entertained seriously.

In answer to Lord CATHCART, with reference to the previous evidence of Mr. Brodhurst to the effect that the connection of medical schools entailed a very large extra expense out of the funds of the charity, the WITNESS said that his experience was to the contrary, and that the expense was incurred quite as much for the hospital as for the medical school. Naturally the best possible treatment was given to the patients, but all the instruments required had to be sanctioned by the board. The Hamiltonian Society for male nurses was a good and very necessary institution.

In answer to the Earl of ARRAN, the WITNESS stated that the resident medical officer and the superintendent of nurses went round the ward every day.

Lord THRING: Do you not relieve the poor-rates by taking a good many pauper patients?—Yes.

Lord LAUDERDALE: What is the amount of money you have invested from which you derive interest?—The capital sum is £441,000, and the dividends amounted last year to £12,642, and the difference between that and the expenditure was derived from subscriptions, donations, and legacies. The whole of the £20,000 legacy was last year invested.

The WITNESS, replying to the CHAIRMAN, stated that whilst

in past years the hospital appealed to the public for funds, since they had received the two large donations of £100,000 each, it was felt that there was not the same necessity to appeal. They might now be considered in extremely good circumstances. Their most reliable source of income was annual subscriptions and donations. He did not think the charity was at all abused.

Lord THRING: If you take in accidents from the park they are placed in a different category?—Quite.

And they generally make a donation?—Yes; generally they are very liberal.

Mr. H. H. CLUTTON, Senior Assistant Surgeon of St. Thomas's Hospital, next stated that on his side the out-patient department was not crowded. The number each surgeon had to see was limited. The trivial cases beyond that number were seen by the house-surgeon. On the surgical side every case was seen. They were not so much within the province of the general practitioner as the medical cases. Personally, from the point of view of trouble, he would not like to see the out-patient department used for consultative purposes more than at present. They took up a great deal of time, but were very often the best cases they had to deal with.

The CHAIRMAN:—But is not that good for medical teaching purposes?—Yes. The pressure, he added, on the surgical side was not so great as on the medical side, and the applicants were fewer in number. Casualties could be treated more than once on the surgical side. The cases were sifted and told off by the assistant-surgeon. Each letter, which was supposed to last six weeks, was renewed until the case was cured.

You are not in favour of the out-patient department being done away with?—Certainly not. I believe the general practitioners, who make a great deal more use of it than is generally imagined, would object to its abolition. I do not deny that the out-patient department may starve the poor outside practitioner in certain cases, but there is more outery, I think, than is justified. You might get a good deal of evidence in favour of the out-patient department from outside practitioners.

Lord CATHCART: I take it from you that the poor practitioner is more frightened than hurt?—That is my view of it. It was only in comparatively recent years that the out-patient room had, he said, been used so much for teaching purposes.

In answer to Lord MONKSWELL, the WITNESS stated that it was much better that the large medical schools should be attached to the hospitals, as the education would be much better than could be obtained at a large central establishment.

Dr. WHIPHAM, the Dean of the medical school at St. George's, said that the number of students was about 140. The fee paid by students who entered for the whole curriculum was £120. There were also lower fees for those who had had a certain amount of scientific work previously. There were also special fees for those who entered for special purposes. The whole of those fees made up the income of the schools, which was about £4,500 a year. That had nothing to do with the hospital. Out of those fees the lectures and expenses were paid. That was generally about £2,000.

Do you approve of schools attached to hospitals?—Yes, to a certain extent. The actual practical part of the profession must be taught at the hospitals, but the scientific part—such as physiology should be taught at a central school. There was a certain restriction as to the appointment of officers on the staff of the hospital. A surgeon must be a F.R.C.S., and a physician a Member of the College of Physicians, before he could be appointed.

Do you think any good men are excluded by that sort or system of protection?—No.

Lord THRING: May not a man be a very good practical doctor without being able to pass an examination?—Yes.

And therefore you may lose eminent doctors by requiring the specific qualification?

Further answering the CHAIRMAN, the WITNESS stated that the out-patient department of St. George's had always been very crowded. The class of persons who were out-patients were not in such a condition as to be able to pay fees to medical men. If not attended at the out-patient department, they would have to go to the Poor Law. He did not agree with a previous witness, who said that there would be no hardship upon the public if the out-patient departments were abolished. He did not consider the operation of the out-patient department was hard upon the outside practitioners, who frequently sent cases to the hospital.

Dr. ISAMBARD OWEN, Senior Assistant-Physician of St. George's, next gave supplementary evidence as to the students' fees, and stated that, after the general expenses of the schools were paid, the residue was divided among the lecturers and teachers. They were paid by a fixed salary, and the residue was divided among the lecturers according to a fixed percentage. At present no one at St. George's would get more than £100 a year at the school, and the minimum might be about £30. There were no letters of recommendation required for the out-patient department. Anyone might apply. Selection was made almost entirely on medical grounds. Those who received tickets were the fifteen who appeared to be most severely ill, and the medical officer would exclude any who appeared not to be fit subjects to receive charity. Inquiries were made into the circumstances of the patients. If any case was urgent it would receive first treatment. If there was any doubt as to the eligibility of the patient so far as social circumstances were concerned, the matter would be referred to the Charity Organisation Society.

Lord ZOUCHE: What are the most common cases treated at St. George's?—Chronic coughs are perhaps the commonest cases in all medical out-patient departments.

In reply to Lord MONKSWELL, the WITNESS stated that some subjects might be taught at provincial colleges with greater success than at any crowded central institution in London. The classes would be smaller in the provincial centres, and the men would come more in contact with their teachers. In a central teaching university in London it would be difficult to provide rudimentary hospital practice for a man attending it. Students should attend hospitals from their earlier days.

The Committee adjourned till Thursday.

AT the meeting of the Committee on Thursday, Mr. ROBERT BRASS (the receiver of St. Thomas's Hospital) was recalled, and made a few supplemental statements as to the estate accounts of the hospital.

Mr. CLARE-MELHADO, Secretary of the Middlesex Hospital, was examined by Lord KIMBERLEY, at the request of the CHAIRMAN, who is Chairman of the Committee of the Hospital. The WITNESS stated that he received a salary of £300, with board and residence. He was responsible to the weekly board and the committee of governors, and had the control of every department. The hospital was founded in 1745, and had 307 beds. The average number of occupied beds was between 250 and 260. There were 290 beds devoted to medical and surgical, and 34 to cancer cases. Subject to the approval of the weekly board, he had power over the staff to the extent of suspending the servants or officers. That control did not extend to the nursing establishment, the nurses and female servants being under the lady superintendent of nursing. With the exception of scarlet fever and infectious diseases, all cases were taken into the hospital. The weekly board and the treasurer managed the finances. The Funds were derived from dividends, annual subscriptions, donations, rents, grants from the Hospital Sunday and Hospital Saturday Funds, and legacies. In 1890 there was derived from dividends £6,367, £2,851 from annual subscriptions, £6,538 from donations, £234 from almsboxes, £2,083 from the Hospital Sunday Fund, £411 from the Hospital Saturday Fund, £195 from rents, and £196 from incidental receipts. The sum total of the income was £20,634, but the average income was from £15,000 to £16,000. The disbursements for 1890 amounted in the gross to £27,117, which included an extraordinary expenditure of £2,584. The average expenditure was about £23,000. There was an extraordinary expenditure nearly every year for buildings or improvements of some sort. The hospital was practically free. Last year there were 3,109 in-patients and 38,000 out-patients. In-patients were seen by an admitting officer, who dealt with the cases, and he referred them to the medical officer, who admitted all patients to the hospital at a certain hour. When there was an excess of applicants the most urgent cases were selected. Paying patients were not received. The out-

patients also see the same officer. The Medical Committee met every week, and sent up its recommendations to the weekly board. The nursing department was under the sole charge of the lady superintendent; under her was a night superintendent, who took duty at night. There were nine sisters, one to each floor; fifty staff nurses, twelve nurse probationers, fifteen lady probationers, and special nurses and male attendants from the outside were employed when required. The matron received £130 a year, with board and residence, and the sisters received £30 and uniform, with board and lodging, and they were entitled to gratuities and a pension after having served a certain period. The staff nurses commenced as probationers, and received for their first year £12. The lady superintendent engaged nurses subject to the approval of the weekly board. She could suspend but not dismiss. A nursing committee had been recently appointed. There had not been many complaints from the nurses. The matron went round the wards every day and saw every patient. She had from a month to five weeks' holiday. The sisters went on duty at 8 A.M. and left at 11 P.M., but were actually on duty about eleven hours. They had three weeks' holiday in the year. The staff nurses went on duty at 7.30 A.M. and remained until 9 P.M., but their actual work was about ten hours. They had sixteen days' holiday. The nurses did sweeping and dusting, but the ward maids did the more menial work. In case of emergency at night the sister would be summoned at once. The Witness added that there was a nursing institution in connection with the hospital, and nurses were sent out to the public who required trained nurses. They must have served two years. The institution was presided over by a sister, who was entirely engaged on that work. There was a profit derived from the institution, but it did not go to the funds of the hospital, but to the funds for building the institution.

The CHAIRMAN: With regard to the medical committee, there is no medical member on the weekly board?—Yes, that is so.

But, supposing a question arises in which a medical opinion might be worked out to a useful end, a subcommittee is appointed?—Yes; they would nominate delegates from the medical committee to meet the weekly board.

In answer to LORD KIMBERLEY, the WITNESS stated that, to obtain an appointment at the hospital, medical officers must belong to the Colleges of Physicians or Surgeons.

The CHAIRMAN: Have you known of any physician or surgeon excluded for not having the London qualification?—They would not be eligible to become candidates. The WITNESS further stated that £47,000 had been left for cancer wards. That sum could not be touched for any other purpose. It was a separate fund, towards which, however, legacies were left from time to time. The fund was not sufficient to maintain the cancer ward. The gross amount of the capital of the hospital was £252,786. The annual cost per occupied bed was £87 12s. 0½d. He estimated the cost of the out-patient department at £2,620 a year. It was impossible to take the cost of a patient except by estimate. The cost per bed at the Middlesex was larger than at St. George's. But the cancer beds added materially to the cost, probably half as much again. He thought that all the hospitals should, if practicable, render their accounts on the same basis. A central board of control of hospitals would be advantageous.

Mr. EDWARD FARDON, the Resident Medical Officer of Middlesex Hospital, stated that he received a salary of £200 a year, with board and lodging. He had the general medical supervision over the hospital so far as the sanitary arrangements were concerned. He was responsible for all the admissions to the hospital, and exercised general authority over the house-physicians in regard to their work in the wards, and kept a general supervision over the wards. He had been in that position for twelve years. In giving particulars of the relation of the hospital as to its situation with regard to the special and other general hospitals and infirmaries within a radius of a mile of the Middlesex, he stated that there were eight general and twenty-six special hospitals. Including Middlesex Hospital, the number of beds those institutions provided was a total of 2,050.

The CHAIRMAN: Then there are thirty-four hospitals within a radius of a mile?—Yes; in addition to that there are a number of dispensaries and the Poor-law infirmaries.

With all this enormous amount of accommodation for the sick and assistance for the out-patient department, do you have to send away persons because you have no room for them?—Yes; the out-patient department is crowded. He did not think that an inquiry officer would be worth his pay, as he did not consider it possible for any one man with the enormous out-patient department of the hospital to make sufficient inquiries. The out-patient department he did not think was abused. The out-patient department was valuable for teaching purposes. It might be extended for consultative purposes.

The WITNESS, in answer to Lord KIMBERLEY, stated that, so far as instruction was required, it would be better if only a limited number of patients were admitted. The surplus cases over those necessary for instruction were only defensible on the ground of charity. Mr. Fardon continued that he was of opinion that there was no need for special hospitals to treat cancer patients. It was most desirable that there should be associated with every general hospital special departments. A certain number of midwifery cases were attended to outside the hospital by students, who, in their first few cases, were accompanied by an experienced medical man.

Mr. A. P. GOULD, the Dean of the School of Middlesex Hospital, in answer to Lord KIMBERLEY, stated that during the last twelve months there were 127 new students' entries, of whom 55 were general students, 7 dental students, and 66 occasional students. There were from 250 to 300 students in attendance at any one time. The payment for the full medical curriculum was £100 in one sum, or £125 if paid in instalments. The curriculum lasted for four years. The fees more than covered the whole expenses. The receipts were about £5,000, and the expenditure £2,000, so that there had been about £3,000 for division amongst the teachers. That was divided into 600 shares, the minimum being 10 guineas, and the maximum might be about £350.

Would you dissociate from the medical schools any portion of the teaching to a central body?—I think we could improve medical education in two or three directions. If, besides their ordinary education, students were grounded in chemistry, physics, and a little biology, and were familiarised with scientific methods, the whole medical curriculum would be improved. That might be done if the General Medical Council insisted upon chemistry and physics being a necessary part of the preliminary certificates. He did not consider that the out-patient department was abused to any large extent. There was a small out-patient department connected with the cancer ward; in the ward were twenty-six female and eight male beds. Patients suffering from cancer had to fill up certain forms, and were then put on a rota and were sent for as vacancies occurred. The cancer ward was, in fact, an asylum. He thought that special departments of general hospitals were better than special hospitals. Speaking generally, the special hospitals had not been so useful to medical education as special wards in general hospitals. There were some advantages in large children's hospitals, as the medical staff in such institutions obtained a wider experience as to the treatment of children.

The Committee then adjourned.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held, by the kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, February 19th, at 8.30 P.M. Dr. Hadden will give a clinical demonstration of several very interesting cases of Diseases of the Nervous System.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, N.E.

STAFFORDSHIRE, AND SHROPSHIRE, AND MID-WALES BRANCHES.—A joint meeting of the above Branches will be held at the Swan Hotel, Stafford, on Thursday, February 26th, at 3.30 P.M.—GEO. REID, M.D., Stafford.

YORKSHIRE BRANCH.—A meeting of the above Branch will be held at the Beckett Hospital, Barnsley, on Thursday, February 26th, at 3 P.M. Members intending to read papers are requested to communicate at once with ARTHUR JACKSON, Secretary, Sheffield.

BOMBAY BRANCH.

A MEETING of the Bombay Branch was held on December 19th, 1890. Present: Drs. Maconachie, Banks, Weir, Mayer, and Pechey Phipson, with Dr. Collie, hon. secretary.

New Member.—Assistant-Surgeon Shunturam Venayek Kantak was elected member of the Association.

Epithelioma of Cornea.—Brigade-Surgeon MACONACHIE showed a case of epithelioma of the cornea in a woman aged about 30.

Leprosy in a European Child.—Surgeon COLLIE showed a case of leprosy in a European child aged 12½. The disease began as swellings of a purplish colour on the forefingers of both hands in November, 1889. These were first thought to be chilblains. In about six weeks, oblong dusky-coloured patches appeared over the ulna above each wrist. About the end of December patches appeared on both cheeks and the centre of the forehead. Two patches next appeared over each patella. The ears became dusky red about April. On admission to hospital there were nodular swellings the size of hazel nuts on the dorsal surface of the first phalanges of the fore and middle fingers of both hands, and oblong patches of a dusky hue, 3 inches by 1½ inch, above the wrist over the ulna on each forearm; these were raised considerable above the surrounding surface, and the left was markedly pitted. There were patches on both cheeks, nose, and forehead similar to those on the arms. Those over the patella were not so marked. The ears were swollen and dusky, and the mouth showed a tendency to a leonine expression. The ulnar nerves were thickened and tender, and inflammatory attacks recurred along the humeral portion of the nerves every two or three weeks, accompanied by fever and severe pain lasting two or three days. Anæsthesia was present in the affected areas. The lesions were remarkably symmetrical. The family history was good, except that there was a doubtful syphilitic taint on the father's side. There were children, older and younger, healthy: mother and all relatives healthy: no history of contact with affected servants or children. The patient was placed on antisyphilitic treatment, and improved markedly up to a certain point. The case being considered of a somewhat doubtful nature, the patient was shown to the members of the Leprosy Commission. Dr. Rake, with his great Trinidad experience, said the diagnosis could only be settled by microscopic examination; serum taken from the nodes on the fingers revealed the characteristic bacteria of leprosy.

Restoration after Chloroform Asphyxia.—Two cases of chloroform asphyxia treated successfully by prolonged artificial respiration were reported by Surgeon-Major BARTHOLOMEUZ, Civil Surgeon, Ahmedabad. (*a*) A patient, aged 31, thin and emaciated, had suffered eight years from vesical calculus. He was operated on, and the stone, weighing 5 ounces, extracted, when it was observed that respiration had ceased. Ether hypodermically and the usual remedies were used without effect, and artificial respiration (Sylvester's) continued for three hours before the patient took a long breath: the heart's action, though feeble, had not ceased. Six drachms had been given. (*b*) A patient, aged eighteen, had had five drachms given prior to enucleation. After the operation the breathing was observed to have ceased, and the patient could not be roused. Artificial respiration was carried on for one hour, and, on again giving a galvanic shock, the patient recovered consciousness.—Drs. PECHEY PHIPSON, BANKS, MACONACHIE, MEYER, and COLLIE cited instances in their experience of prolonged chloroform asphyxia.—Dr. MEYER mentioned that experimental physiology showed there was a danger of inducing "delirium of the heart" by prolonged use of electricity, and thereby superadding a serious complication which might in itself prove fatal. Frequently patients did not breathe for some time after artificial respiration, because the lungs had had such a large quantity of air thrown in as to do away with the physiological reflex stimulus to the respiratory centre.

Specimens.—Dr. MEYER showed a number of Microscopic specimens of the Microbes of different diseases.

OXFORD AND DISTRICT BRANCH.

A GENERAL meeting of the Branch was held on January 30th in the Radcliffe Infirmary, Oxford. Mr. H. P. MALLAM, the President, was in the chair, and twenty-five members and two visitors were present.

New Members.—R. G. Lynam, M.B., and W. Dingan, M.B., were elected members of the Branch. C. M. Hendricks, M.B. (Bicester), W. Turrell, M.B. (Oxford), and J. H. Prall, M.R.C.S. (Bampton), were proposed as members of the Association and Branch; and T. H. Hill, M.R.C.S. (Oxford), as a member of the Branch.

Koch's Treatment.—Dr. COLLIER and Dr. BROOKS gave an account of Koch's treatment for tuberculous diseases. Cases were shown, and an interesting discussion ensued.

BATH AND BRISTOL BRANCH.

THE third ordinary meeting of the session was held at the Museum and Library, Bristol, on January 28th, A. B. BRABAZON, M.D., President, in the chair. There were also present forty-three members and two visitors.

Members.—The following gentlemen were elected members: W. T. Maddison, M.D., Bristol; C. Hemming, M.D., Limpley Stoke.

Communications.—Mr. NELSON C. DOBSON read a paper on a Series of Twenty-Five Abdominal Operations, which was discussed by Dr. SWAYNE, Mr. GREIG SMITH, Dr. MARKHAM SKERRITT, and Dr. MICHELL CLARKE.—Dr. WILDING reported a case of Aneurysm of the Arch of the Aorta opening into the Trachea, and showed the specimen. Observations upon this communication were made by Dr. MARKHAM SKERRITT, Mr. MORTON, Dr. MICHELL CLARKE, Dr. GOODRIDGE, and Dr. SWAYNE.—Mr. J. P. BUSH read a paper on a case of Intussusception treated by Operation, which led to remarks by Mr. A. W. PRICHARD, Dr. SHAW, Dr. ELLIOTT, and Mr. GREIG SMITH.—Mr. C. F. MORTON exhibited specimens of blood taken from patients under treatment by Koch's method in the Bristol General Hospital, showing the presence of numerous large non-nucleated masses of protoplasm after the injections.

List of Members: Correction in Army and Navy List, page 35.—The word "dead" was inserted by mistake after the name of Surgeon H. C. L. Arnim, I.M.S., Shikapur, Sind. We much regret the error.

SPECIAL CORRESPONDENCE.

BERLIN.

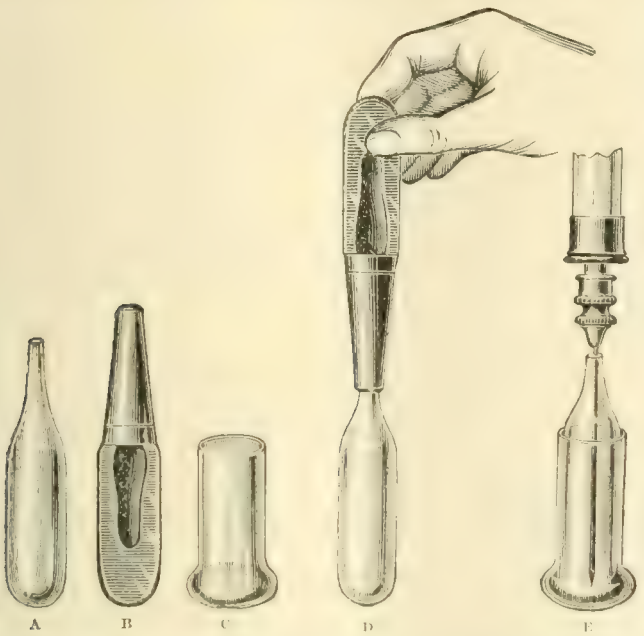
Name of Koch's Fluid.—Method of Dispensing it.

THE new supply of Koch's lymph is sent out in bottles labelled "Tuberculin, Dr. Libbertz," so that, after having had all sorts of names, such as "Kochin," "Koch's fluid," etc., bestowed on it by amateur godfathers, the lymph may now be considered officially christened: not that the name itself is new—in No. 1,571 of the BRITISH MEDICAL JOURNAL, on page 299, a homœopathic "remedy" is spoken of—a dilution of phthisical sputum, which is called "tuberculinum."

In No. 11 of the *Pharmazeutische Zeitung* Herr F. Lutze (Dr. Kade's Oranien-Apotheke, Berlin) makes some practical proposals to assist the dispensing of Koch's tuberculin. The dilution of tuberculin in accordance with the directions given on the bottles offers no difficulties where a large number of injections are made every day—for example, in hospitals where a comparatively large quantity of tuberculin is diluted at one time, and used up in a comparatively short space of time; but the general practitioner, who can only now and then make use of the liquid, and who must be economical of the expensive substance, is in a more difficult position. It is very rare for medical men to have to manipulate such minute quantities, and in most cases he will have to apply to a chemist to dispense the dilution for him. In view of this difficulty Herr Lutze has turned his thoughts towards finding a really practical method of dispensing tuberculin, which would place it within the reach of every general practitioner. He proposes to prepare tuberculin in exactly the doses used in practice, that is, beginning with 1 milligramme and increasing to 1 decigramme, each dose being dissolved in water and enclosed in a glass tube closed at the end by fusion. Herr Lutze has for years made use of this method for the preservation of sterilised subcutaneous injections, though he does not

state with absolute certainty that tuberculin thus stored will keep, his experience with substances as easily decomposed has been so favourable that there seems no reason to doubt it.

Herr Lutze has arranged a small case to contain the syringe, two glasses of absolute alcohol for sterilising the point, twenty glass tubes (Fig. A) closed at the end by fusion, and containing



from 1 milligramme to 1 decigramme of tuberculin. Each dose is dissolved in 0.5 cubic centimetres of water, and the different doses are distinguished by coloured labels, the milligramme dose being labelled in white, the centigramme doses in red, and the decigramme doses in green.

There is also in the case a little metal instrument (Fig. B) for breaking off the point of the tube, and a small glass stand (Fig. C) for the reception of the tube when open. Fig. D shows the mode of breaking off the end of the tube, and Fig. E the mode of filling the syringe.

MANCHESTER.

Ambulance Work.—Hospital Sunday.—Manchester Medico-Ethical Society and its Programme of Work.—Diphtheria in Salford.—Experiments with Sewage in Salford.—Victoria University Extension Lectures.—British Dental Association Meeting.

Instruction in ambulance work has been carried on very vigorously amongst the members of the City Police Force during the past winter. Last week the Mayor presided at a meeting at which over 60 certificates were awarded to members of the force who had passed a satisfactory examination in ambulance work. Already over 380 members of the City Police Force hold certificates of the Ambulance Society.

Last Sunday was Hospital Sunday. In the year 1890 the sum received was £4,617, and on Hospital Saturday £3,657. Since the beginning of the movement the two collections, up to 1890, have realised a total of £154,700. It is hoped that this year a large sum will be forthcoming.

The Manchester Medico-Ethical Society, during the ensuing year, will take into consideration the causes of the high death-rate of Manchester as the chief portion of its programme. Dr. Ashby (President) will discuss "Infant Mortality;" Dr. Wahltuch, "The Disposal of the Dead by Cremation;" Dr. Meacham, "The Influence of the Drink Traffic upon the Death-rate;" Dr. Thomas Harris, "Unhealthy Dwellings Causing Consumption;" Dr. Tatham (medical officer of health), "The Laws and By-laws Regulating the Sanitary Arrangements of the City." In addition, the secretaries are organising a volunteer lecturing staff, composed of members of the association, which will be placed at the disposal of all sanitary organisations requiring skilled lecturers.

The medical officer of Salford has recently been called on to investigate the causes of an outbreak of diphtheria in that borough. The origin of the outbreak cannot be exactly determined, but there seems to be good ground for believing that the epidemic commenced in the last quarter of the year 1887, and spread by reason that a large number of the cases of the disease were of so mild a type as to escape recognition of their true nature, and that they were therefore allowed to pass on to convalescence without precautionary measures having been adopted to prevent their serving to spread the disease.

A very important series of experiments on the treatment of sewage have been carried on for the last few months by the Salford Corporation. The main features that should influence the choice of a process are, first, that the effluent or treated sewage which has to pass into the Ship Canal should be so purified that no nuisance will arise from after-decomposition, that the sludge produced should not exceed half the weight of the sludge produced by the lime process, that the efficacy of the process should be permanent, and that the working expenses and capital cost of the process should not be disproportionate to the result to be obtained. The sewage to be dealt with contains a large amount of manufacturing refuse from chemical and paper works.

A conference of the managers and secretaries of the Victoria University Extension Lectures was held in Owens College on February 7th, the Vice-Chancellor presiding. The question of applying for monetary aid from the County Council was discussed, and it was stated that the County Council of Lancashire had already been approached on the subject. It seems that the County Councils of Devonshire and of London have already granted or recommended the granting of an annual subsidy for University Extension Lecture purposes. It was ultimately unanimously resolved that all the centres should apply for aid through the Victoria University, not necessarily on their own behalf, but to secure a fund to be administered according to the necessities of the centres.

A meeting of the members of the Midland Branch of the British Dental Association was held in Manchester on February 7th. About seventy members and visitors were present. Mr. G. Brunton (Leeds), President, occupied the chair. The Honorary Secretary (Mr. I. Renshaw, Rochdale) read a report from the subcommittee on registration showing that, since the last meeting, a case of fraudulent registration had been submitted to the General Medical Council of Great Britain, in consequence of which the Council had resolved to place in abeyance Clause 37 of the Dentists Act. Dr. Waite (Liverpool) afterwards addressed the meeting, and urged the claim of the dental profession to be represented on the General Medical Council.

LIVERPOOL.

Hypnotism.—Intended Reopening of the Lock Hospital.

In response to an invitation from the Medical Institution, Dr. G. C. Kingsbury, of Blackpool, lately read before the Society an address on Hypnotism and some of its Opponents. It was an earnest plea for the thorough and unprejudiced investigation of the claims of hypnotism as a remedial agent, and dealt largely with the objections commonly urged against its employment in medicine. The lecturer regarded it as a hopeful sign that bodies of scientific men—the British Medical Association in particular—were willing to give a patient investigation of the subject. It had not always been so. The objections at present urged against the employment of hypnotism were as follows: That it was injurious to health and morals; that it was only applicable to neurotic subjects; that it might lead to insanity; that it allowed the operator to acquire undue influence over the subject; and finally, that it was of no value. Dr. Kingsbury showed that all the objections except the last were without any reliable evidence in their support, that they were mostly advanced by those who had no practical knowledge of the subject, and that at most they were no stronger objections than might be and had been urged against many

other therapeutic agents of undoubted value and in daily use. With regard to the last objection—that hypnotism was of no value—this was the question for the profession to decide. So far as statistics went, they were eminently favourable, and within the last few years its employment had been taken up by medical men throughout the civilised world. So far as the lecturer himself was concerned, he was still a student of hypnotism; all he desired was that the subject should receive a full investigation, and if its claims were proved to be unfounded he would be the first to give it up.

At a meeting of the Committee of the Royal Infirmary, held on February 5th, it was resolved that the Lock Hospital—which is and always has been part of the institution—should be reopened at an early date. This decision is highly satisfactory from all points of view, and the committee are to be congratulated on having arrived at it.

LEEDS.

Hypnotism.—Koch's Treatment.—Leeds Workpeople's Hospital Fund.—Pink-Eye.—Health of Leeds.

A LARGELY-ATTENDED meeting of the Leeds and West Riding Medico-Chirurgical Society was held on Friday, February 6th. The principal events of the evening were the reading of a paper by Dr. J. Milne Bramwell, of Goole, and the demonstration of some hypnotic phenomena. Dr. Bramwell showed the beneficial effect of hypnotism in a number of cases: more especially was a good result made evident in a case of functional aphonia which had failed to yield to ordinary means of treatment.

At the same meeting Mr. Edward Atkinson showed a number of cases of lupus under treatment by Koch's lymph in the infirmary. The cases seemed to be progressing satisfactorily, but they were seen at too early a stage to be pronounced absolutely cured.

The annual meeting of the general committee of the Leeds Workpeople's Hospital Fund was held in the large board room at the General Infirmary on Saturday night, February 7th. Alderman F. R. Spark presided. Councillor Wilson read the annual report of the Executive Committee, which congratulated the workers and subscribers on having maintained the high position of the movement. During the year 1886, under the old arrangement, the sum of £1,884 was received from the workpeople of the borough, whilst under the new method the sum at once rose to £3,694 14s. 11d., and in 1890 amounted to £5,261 14s. 1d. The total for the four years 1887-90 was £18,452 14s. 5d.

For some weeks past the malady known as "pink-eye" has been producing serious consequences among draught horses in Leeds. Very few stables in the town where many light or heavy cart and dray horses are quartered have escaped the epidemic, which has spread more rapidly and wrought more mischief than any former epizootic of influenza that has affected the equine stock of Leeds.

Taken altogether, there has been a marked recovery in the death-rates for the principal Yorkshire towns in the past week, the rate for Leeds falling from 24.5 to 21.3. Measles fell from 14 fatal cases in the previous week to 8 in the past one. Two deaths were again referred to scarlet fever, but fever of other types rose from 3 to 5.

SHEFFIELD.

Workmen and the Rotherham Hospital.—A Profitable Frost.—Proposed Medico-Ethical Society.—Mexboro Cottage Hospital.

THE report presented to the governors at the recent annual meeting of the Rotherham Hospital was of a very satisfactory character. The number of patients who had received the benefit of the institution was 4,708. Compared with the previous year—which was referred to as an exceptionally heavy one—the in-patients had numbered just 1 more and the out-patients had diminished by 678; this diminution, it is interesting to observe, was attributed to the fact that the working and poorer classes, having shared in better trade, had relieved the institution of a pressure unavoidable in unfortunate years. The workmen also, whilst making fewer demands on the institution, had increased their contributions in the most praiseworthy manner by a substantial addition. The total income was sufficient after meeting expenses to carry forward a small balance. A Convalescent Fund for sending patients to the seaside has been started, and found during the past year to have been of great service.

It is an ill wind that blows no one any good, and a gentleman, Mr. B. Wake, who has shown his interest in the Public Hospital in many practical ways, taking advantage of the late continued frost, made a small charge for the privilege of skating on his pond, and he presented the sum realised—over £37—to the Convalescent Fund at the Hospital.

From a paragraph in a local paper, it would seem that the formation of a medico-ethical society is in contemplation. For the present it has not, however, come under the notice of the profession generally, nor, indeed, of those who are usually in the front of any professional movement. Medical ethics and the relation of practitioners to each other are subjects that need careful handling: but it is not unlikely that the formation of such a society would exert some influence for good.

It has been proposed to make an extension of the Montagu Cottage Hospital at Mexboro, in memory of the late Mr. J. Montagu. The idea having been brought under the notice of the deceased gentleman's brother, Mr. Andrew Montagu, of Ingmanthorpe Hall, York, he has generously consented to defray the entire expenses.

CORRESPONDENCE.

ON THE OPERATIVE TREATMENT OF DISEASE OF THE UTERINE APPENDAGES.

SIR,—Holding such strong opinions on the above subject, as apparently Drs. Williams and Champneys do, if we may judge from their joint letter which was published in the BRITISH MEDICAL JOURNAL of February 7th, it must be a matter of surprise to the profession generally as well as to me, that neither of them took the trouble to attend and express those opinions either at the debate held recently at the Obstetrical Society on Dr. Playfair's paper; or that at the Medical Society on the papers of Mr. Doran and myself.

Now, it is clear that if the views expressed in that letter be correct, all those who operate, except on the rarest possible occasions, on the diseases we are considering, resort to a practice which is (in your correspondents' words) "highly injurious to women and to the profession." As these operations are performed at several of the large London hospitals, as well as at others throughout the United Kingdom, by men who also have thousands of patients pass through their hands, do your correspondents mean to assert that the obstetric physicians and the surgeons at those hospitals are less anxious than they to promote the welfare of their patients and to maintain the honour and dignity of the profession?

It passes my understanding how anyone can cure, or profess to cure, except by operation, patients with their Fallopian tubes full of pus or distended with serum, or those in whom after recurrent attacks of pelvic peritonitis, the ovaries and tubes are matted to the other pelvic organs by old adhesions; or how the conditions just mentioned can alter (except for the worse) even with years of rest and patience, which most of the women suffering in this way are absolutely unable to take. I feel certain that those who operate on these cases, as well as those who are witnesses of the operations, are of the same opinion.

The last sentence in your correspondents' letter reads thus: "In no other department of surgery is inflammation of an organ considered to justify its removal." Can it be possible they are so little cognisant of what goes on in the surgical world as to be unaware that the hip and knee joints (for example) are being daily opened for chronic inflammation in order to remove the diseased parts, or that when, only a few years back, Sir Joseph Lister advocated and practised opening the knee-joint antiseptically, a well-known London surgeon threatened, in the event of a fatal case occurring, that the distinguished operator might find himself in the dock on a criminal charge? By all means hedge round these cases by some such rule as that (brought forward by myself) which my colleagues and I passed a year or two ago at the Middlesex Hospital, with a view of safeguarding both patient and operator in these cases; this rule ensures that the parts re-

moved are carefully examined by a subcommittee of three, and a written report is read to the Medical Committee. On the other hand, let us not be hampered in doing what we conscientiously believe to be the best for our patients by the statements of those who, on their own admission, have practically no experience whatever of the operation in question, and whose opinions cannot reasonably be expected to carry greater weight than the opposite views of others possessing as wide or wider acquaintance with the diseases of women.

Doubtless in years to come your correspondents and those with like views will change round, but it is to my mind sad to contemplate the suffering which must meanwhile be endured.

When I said at the Medical Society on January 17th that the results in my cases of abdominal section at the Waterloo Road Hospital, before it was put into a good sanitary condition, were so bad, I did not, of course, mean in any way to reflect on the authorities, for immediately they were informed of the condition existing they had the drainage completely overhauled at great expense, with the result that since 1885 only five of my cases have died after abdominal section at that hospital. Where the surroundings are insanitary, to compare the results in cases in which the peritoneal cavity is opened with those of ordinary surgical operations (as your correspondents suggest), or even with ordinary gynæcological operations, would, as every medical man knows, be obviously useless and misleading.

If those who object to operating in the treatment of chronic disease of the uterine appendages will bring the subject forwards before any of the societies they may rest assured that not only I but many others holding views similar to mine will take care not to be absent. Meanwhile I see no good likely to accrue from continuing a controversy in the BRITISH MEDICAL JOURNAL; and in concluding must ask your correspondents to carefully peruse my paper which you published. —I am, etc.

Harley Street, W. WILLIAM DUNCAN.

SIR,—My own opinions upon this question will be found expressed in the abstract of my memoir, which appeared in the BRITISH MEDICAL JOURNAL of January 17th. That communication was read before the Medical Society immediately after Dr. William Duncan's paper. I take the opportunity of making some observations, suggested by the instructive correspondence which has since appeared.

Those who read papers upon the removal of the uterine appendages for chronic inflammatory disease must never lose sight of the fact that they are incurring a heavy responsibility. If they say that they have operated successfully, of course others will operate. Success implies cure, but in my paper I took care to note the sources of fallacy respecting reported "cures." Recovery from an operation is not necessarily a justification for its performance. Brilliant tables of cases, with low mortality, will encourage men of little or no experience in diseases of women. Such men are also fascinated by so-called "minor" proceedings. Hence, if they be bold surgeons, they may be tempted to remove appendages for chronic disease, but they do not possess the experience necessary for justifying these radical operations. If timid, they are apt to believe in the arguments of certain authorities who hold that these diseases can be treated by uterine medication. So they take to doing things with French names to the interior of the uterus under the mistaken notion that dilating and scraping are not only efficacious, but safe. Hence the experienced must not only be careful how they lay down rules for the justification of oöphorectomy; they must be equally cautious in their advocacy of "minor" or "palliative" proceedings. That is why I spoke in guarded language about such proceedings as removal of the appendages.

In the Samaritan Hospital out-patient department hardly a day goes by without cases of chronic disease of the appendages applying for relief. On the other hand, many weeks often pass without a single case of true ovarian tumour being seen. I make this statement because an idea is prevalent that little is done besides ovariotomy and removal of uterine tumours at my own hospital; therefore, it has been said, we may know much about cysts and fibroids, but have no opportunity of gaining a wide experience in chronic diseases of the appendages. We have plenty of opportunities; nor do we neglect them. I know myself how strong is the temptation to think that a case of chronic inflammation of the ovary must be incurable except by oöphorectomy. Yet I have been surprised to find how many such cases undergo spontaneous cure—a cure at least as certain as those which are claimed by the extreme advocates of oöphorectomy. A patient, whom I saw in private six years ago, had very marked disease of both appendages, which caused severe suffering for several months. I examined her last autumn and found that she was pregnant. Not a trace of disease remained, and she was safely delivered at term in January. A year later I visited another case, where the objective and subjective symptoms were similar. The patient again came under my notice about a year ago. The most careful bimanual palpation failed to give any evidence of disease on either side of the pelvis, and the patient being thin the slightest enlargement of the tubes and ovaries could have readily been defined. At the beginning of the case the tender diseased parts could be detected with the greatest facility by the finger introduced into the vagina. The manifesto of Drs. J. Williams and Champneys is well worthy of the grave consideration of the profession. As to cases where operation is really justifiable, I have dealt with that subject in my paper.

On the other hand, those who, like Mr. Ormerod, of Munslow, advocate delay in cases of ovarian cystic tumour, incur almost as grave a responsibility as do those who plead too zealously in favour of the removal of the appendages for chronic disease. I have been put to great anxiety in at least four cases in my own practice where early surgical interference was discouraged either by the patient or her medical adviser. I had to operate late and at great risk. As I said before the Medical Society, we must behave on Danton's principles in cases of ovarian cyst, but we should act like Fabius Cunctator in dealing with chronic disease of the appendages. We want boldness in deciding to remove a cyst. We require boldness in determining to proceed with the operation when we have made the abdominal incision, even though we discover many adhesions and find that the cyst is sessile. We still need boldness in thoroughly removing the base of the tumour and searching the opposite side of the pelvis. In chronic disease of the appendages, on the other hand, masterly inactivity often saves the patient, her tubes, her ovaries, and her instincts.—I am, etc.,

Granville Place, Portman Square. ALBAN DORAN.

SIR,—Few things could be more personally distasteful to me than to find myself differing strongly in opinion from Dr. John Williams and Dr. Champneys.

On this occasion, however, I should be false to my convictions if I did not express my dissent from their view. I deprecate, as strongly as they, the removal of healthy ovaries, whether ill-developed or otherwise, simply for the relief of pain. The question on which we differ is the proportion of cases of actual disease of the appendages in which, "on ordinary surgical principles," operative interference is called for. I believe this to be much larger than they seem prepared to admit. In a paper published five years ago,[1] I wrote as follows: "I have now for some time been convinced that surgical interference affords us the best, if not the only, means at our disposal of relieving and curing a large number of women who have hitherto drifted on from year to year without sensible amelioration of their suffering, and who have long been the opprobria of our gynæcological out-patient and consulting rooms." This conviction, slowly and reluctantly arrived at, increased experience has but served to deepen.

I hope before very long to bring before the Obstetrical Society the evidence furnished by my own cases. I shall then be prepared to discuss the subject fully, and to state the grounds on which my opinion and practice are based.—I am, etc.,

Brook Street, W. CHAS. J. CULLINGWORTH.

SIR,—The joint letter of Drs. John Williams and Champneys is of so extraordinary character, and the step is so new in medical ethics, that I crave your indulgence for a few remarks.

It is quite true that "affections of the uterine appendages

[1] BRITISH MEDICAL JOURNAL, January 30th, 1886.

are nothing new;" it is also true that a definite knowledge of these affections is comparatively new; and it is equally true that it is not very long since Mr. Lawson Tait put us in the way of treating these affections in a rational manner. Yet there was a time—not so very long ago—when an acute inflammation within the pelvis was described as "pelvic peritonitis," without any definite idea as to the parts involved. An attempt was made towards a more exact definition when the terms "pelvic cellulitis," "parametritis," and "perimetritis" were introduced. Now, Drs. Williams and Champneys sneer at the new nomenclature in which "words ending in 'salpinx' have displaced the older and more general names." But this nomenclature was a necessity, arising from a more precise knowledge, and as such needs no defence.

The writers affirm that "perimetritis is probably the very commonest of all the serious diseases of women." What do they mean by "perimetritis?" For years I have been on the look-out for a case of "pelvic cellulitis," or "parametritis," or "perimetritis," apart from an inflammatory affection of the uterine appendages, but have failed to find a solitary instance. If they mean the same as I do, then I am not disposed to contest their statement as to its frequency. But when they affirm that it is "also perfectly certain that the great majority of cases get quite well without any operation," then I join issue with them, and deny the truth of the statement. A general assertion on one side is as good as one on the other. It is, however, probably true that a majority of these cases lose all serious and certainly all distressing symptoms without operation. But why is it that there are so many cases of sterility in this and other countries? The answer is—because of disease of the uterine appendages. Why are there so many one-child marriages? Because of disease of the uterine appendages. Why are there so many cases of extrauterine gestation? Because of disease of the uterine appendages. Hence I affirm that the great majority of cases do not get quite well, but are permanently damaged.

They admit that "exceptional cases call for surgical procedures," but because some one else, whose lot it has been to meet with a larger number of these "exceptional cases," or who perhaps has greater skill in diagnosis, has operated more frequently, therefore he is to be branded as indulging in wholesale mutilation. I am not concerned in defending Dr. W. Duncan, or in extricating him from a false position, for which he has only himself to thank; but I, for one, protest against being included in this category, because with fewer opportunities of meeting with these cases, I operate more frequently than they.

But I more especially protest against this new code of ethics by which two gentlemen, who "have both been in charge for many years at the obstetrical and gynæcological departments of two of the great general hospitals of London, besides general practice;" through whose hands "during that time thousands of patients have passed," "and a very large number of cases of pelvic inflammation;" and who have only "on the rarest possible occasions resorted to the removal of the appendages," venture to sit in judgment on another who has a different experience to relate, and that, too, without knowing all the details of the cases. What claim have they to more virtue—if less skilful in diagnosis—than others who are probably guided by the same principles, and who only operate when "after a long course of patient treatment it has seemed to them imperative to operate"?

"To operate after 'a couple of months,' is, in our opinion, quite unjustifiable in chronic cases." Surely there is some confusion of ideas here. No case can be called chronic that has lasted only "a couple of months." Is a patient that has been the round of half-a-dozen general hospitals—or special—under the care of gentlemen who have "for many years been in charge," etc., to be kept waiting an indefinite time in distress, and in a state of inability to earn her living, after she comes under the care of another man who at once recognises the exact nature of the case, before he is permitted to give her that relief which only a surgical operation can give her? Humanity, at least, says No. Observe that it is not a question of disease in its acute stage that we have to do with.

"Death from disease of the appendages" may be "of extreme rarity," but total disablement is by no means rare. If the imminence of death, or, as they put it, "life seemed to be threatened," were to be taken as the guiding principle determining operation, then I say that one-half at least of the surgical operations now being performed would be unnecessary, if not unjustifiable. I need not particularise.

"Oh! that mine enemy would write a book!" cried the disputant of old: and behold they have done the next best thing. It was safe to deal in generalities. But they have descended to particulars, and have recorded their "protest against the removal of the appendages" in certain conditions as follows:—

1. "Whenever a tumour of them is found, accompanied by pain and hæmorrhage." These were the very conditions present in a case in which I operated as late as Saturday last—not after "a couple of months," but after a couple of days—in the presence of a near relative and the regular medical attendant. There was a tumour as large as a small cocoa-nut on the right side, formed by a collection of bloody fluid in the tube (whether a hæmatosalpinx or tubal gestation is not yet determined), which was fused with the ovary. There was pain also occurring at intervals, and there was hæmorhage, continuing for several weeks. Yet the symptoms did not extend over six weeks. Should I not have been held to blame if I had refused to operate in such a case? I can affirm that the gentleman to whom I have referred held me thoroughly justified.

2. "A dilated tube." A dilated tube must contain pus or blood, or a more or less bland and innocuous fluid, or an ovum, or it may even be affected with malignant disease (papilloma). Anyone who refuses to operate in either of these conditions, accompanied by symptoms demanding relief, even though "life" may not seem to be immediately "threatened," is, in my opinion, unworthy of the confidence of his patient.

3. "Affections of the tubes, with tender or enlarged ovaries after treatment has been tried for a couple of months." Who does operate under such circumstances?

4. "When a woman suffers from pelvic pain or dysmenorrhœa, or dyspareunia, after one or more attacks of pelvic inflammation." Here it is entirely a question of the amount of suffering and the circumstances of the patient.

5. "In cases of ill-developed ovaries with anteflexion and dysmenorrhœa." Is this a recognised pathological condition? I have never met with such a case.

6. "In cases of cardiac dyspnœa;" or

7. "Of tubercular disease of the tubes associated with similar disease of other organs;" or

8. "In neurotic women *without disease of the appendages.*" Are the writers really serious? I trust not.

But I will enumerate the conditions in which it is the duty of the surgeon—not of the obstetric physician—to interfere. In cases of pyosalpinx, of hæmatosalpinx, of tubal gestation, in the outer part of the tube, if he can diagnose it; of hydrosalpinx, when the sufferings of the patient demand relief, without reference to the question of duration; of papillomatous disease of the tube; of chronic ovaritis, where prolonged treatment—over many months—has failed to give relief to urgent symptoms; of cirrhosis of the ovaries under similar conditions; of dermoid tumours of the ovary of small size.

If the surgeon be guided by the principles I have laid down, and if he be very careful to explain to the patient and her nearest relative in all such cases, the exact nature of the operation and the issues it involves, he would fear neither "legal proceedings" nor that the subject should "form the object of legislation."—I am, etc.,

Granville Place, W. GEO. GRANVILLE BANTOCK.

SIR,—I have to request that I may supp y an omission in Drs. Williams and Champneys's letter. They say that "this particular operation has already furnished material for legal proceedings in a well-known case. It is conceivable that it might form the object of legislation." I find it to be generally accepted that their allusion is to an action which was brought against me four years ago. As I am unaware of any other case to which their remarks can refer, I am compelled to remind these gentlemen that the jury, convinced by the evidence before them, gave a unanimous verdict in my favour, without waiting for my counsel's summing up, and that I won the action with costs. To omit any indication of the conclusion of these legal proceedings is misleading to the profession to

whose "good sense" the writers of the letter appeal, and is also injurious to me.

They profess to accept Bernutz's pathological observations, which are based upon many fatal cases, yet they hold that "death from diseases of the appendages is of extreme rarity." This was not the opinion of the late Dr. Alfred Meadows, to whom we are all indebted for Bernutz's memoirs, and who had probably more practical knowledge of the pathology of these pelvic diseases than any of his contemporaries. So convinced was he of their gravity and of the need for surgical interference that he—a busy man—spent three days in Liverpool in order that he might add his testimony to the evidence of the many eminent witnesses who appeared in my behalf, and was only prevented from entering the witness-box by the law's delay and by urgent telegrams recalling him at the last moment to London.

Surgical treatment of the inflammatory diseases of the uterine appendages is now the accepted practice in Birmingham, Edinburgh, Manchester, Leeds, and other towns, and I fail to see the benefit of a reprint of ancient denunciation. It is certainly conceivable that it might form the subject of legislation. But Drs. Williams and Champneys themselves remove the appendages "when life is threatened" and "when the health has been impaired for many months," and probably they wish to be free to continue these operations. But the threatened legislation may fail to make suitable provision for their wishes. In the *Lancet* four years ago I called upon my critic to publish his cases, but they have not yet seen the light. Before the good sense of the profession is exercised upon Dr. William Duncan's cases, Drs. Williams and Champneys should publish theirs *seriatim* for comparison.—I am, etc.,

Liverpool. FRANCIS IMLACH.

SIR,—As I have, comparatively speaking, operated on few diseased appendages, I feel I may join the discussion without having strong prejudices either way. At the Hospital for Women we are conservative, too much so according to my way of thinking, and such cases are admitted, treated, sent out, readmitted, and occasionally operated on rather late in the day, though with almost invariable operative and curative success. At the present time there are ten such cases among the in-patients and yet others waiting admission, and I can have no hesitation in signing the consultation book for operation in seven of these ten cases, and for the following reasons:—They have been invalids for a considerable time, and have undergone various treatments without permanent benefit, and they are the unfortunate possessors of pelvic tumours which may at any time inflame or rupture, and seriously imperil their existence; and though I admit that the operation is sometimes tedious and difficult, our results have been most encouraging. It may not always be necessary to remove the diseased appendages, for in suitable cases one or other of the more modern conservative plans, such as salpingotomy, removal of only the diseased portions of ovary and tube, or merely separating adhesions, may be adopted with success.

As to the so-called cure by non-operative means of diseased and matted appendages, this has yet to be proved. I am very sceptical about it, and if our knowledge of the pathology of chronic inflammatory conditions of other contents of the abdomen be any guide, any large percentage of cures seems most unlikely; amelioration there may be, but recrudescence, often in a serious form, is almost certain in the majority of cases. Let the believers in the commonness of cure (?) submit say six cases prior to treatment for diagnosis to as many men experienced in this class of case, and let them have opportunities for examining the cases monthly during twelve months, and if these women are then cured (that is, if the tumour be gone or very much diminished and the adhesions absorbed), the profession will have some foundation, however small, for belief in cures. At present there are nothing but individual statements, which, as in all scientific matters, require independent corroboration.

One of your correspondents doubts the frequency of the diseases under discussion, talks of spaying operations, and says that "the matter rests entirely with the leaders of the profession," and threatens the latter with dire penalties if they do not interfere. Mr. Butler-Smythe says, "it would seem that disease of the ovaries and tubes must either be enormously on the increase," etc. Surely it is well known that peritonitis is about the commonest of pelvic troubles, and that this is most frequently due to disease of the tubes, or is conveyed by them from the uterus, they becoming affected also. No one having large opportunities denies their frequency, the difference is as to treatment; but when he terms removal of diseased appendages "spaying," he makes use of a very incorrect expression. I fail to understand his appeal to "the leaders of the profession," unless he means the heads of abdominal surgery. This would be reasonable, but to appeal to general surgeons and physicians on a matter with which they can have but a very limited experience must result in failure, for specialists would very justly decline to be guided by those whose practical knowledge in this department was infinitesimal as compared to theirs. Virchow's sound remarks on specialism do not seem to be known in these isles.

Dr. Cullingworth says "application for admission into a special hospital generally means that the case has been already diagnosed." I am not familiar with the practice at the Samaritan, but at the Hospital for Women this is far from being the case. The out-patient officers diagnose their own cases, and admit them, and their diagnosis is usually confirmed after consultation. The Samaritan, according to its prospectus, lays itself out for abdominal surgery, whilst the work at the Hospital for Women covers the entire ground of gynæcology, and this is amply testified to by our pupils. They say that they see abdominal work at the Samaritan, but all sorts at our hospital. Dr. Duncan's practice at the Middlesex seems to me to be amply justified, and, in my opinion, great credit is due to him for having proposed the formation of a committee to examine parts he has removed. At the Hospital for Women we have a consultation book in which we enter our diagnosis and the treatment advised, and sign it. This is an excellent plan, but I think we are a little too strict in not permitting an operation unless two of the staff assent. This seems to me unnecessarily hampering. I think that any operator at a public hospital should, in the interests of the hospital, be under the check of consultation open to the whole staff, but that he should be allowed to assume the responsibility of his position by being free to operate, it being clearly understood that before operating he shall fully explain the nature and risks of the operation to the patient and relatives. Gynæcologists at general hospitals have a free—some would say too free—a hand, as they operate without consultation. They may properly ask, with whom are we to consult? seeing that our "general" colleagues have no experience in these matters; but there are hospitals at which some of the staff take interest in, and have experience of, gynæcological work, and their knowledge ought to be utilised on behalf of patients and the institution.

A metropolitan surgeon remarked, after reading the correspondence on this subject, "This looks like an inspired metropolitan effort to strangle a provincial operation." Whether this really be so or no I know not, but I have seen enough of removal of diseased appendages in proper cases to say that I care not whether the operation be named after Tait, Jones, or Snooks, it is an admirable proceeding in many cases, and a great and honourable addition to abdominal surgery. No one is compelled to adopt a proceeding which he may consider rash, and he need not be compelled, or compel himself, to be obstructive. Fordyce Barker wrote: "I have learned only from the younger men." Let the "younger men" remember this, and not be persuaded to depart from the path of discovery and cautious operative progress which has been opened to and for them, and which will, if properly followed up, result in substantial benefit to many a suffering woman.—I am, etc.,

Grosvenor Street, W. H. A. REEVES.

SIR,—Certain statements contained in the joint letter of Drs. John Williams and Champneys in the BRITISH MEDICAL JOURNAL of February 7th seem so widely at variance with the teaching of other gynæcologists, that those who are still open to conviction, and desire to ascertain which creed is the true one, must be excused if they venture to seek for fuller information than the letter gives. Is it permissible to ask the authors of the letter to fulfil the same obligations to the

profession as they require from those who differ from them? namely (1) to state the number of women seen during the periods they refer to a little more exactly than by "thousands;" and (2) the proportion of "tubal" cases among them. Further, it would be highly valuable to learn what proportion of cases of pyosalpinx or suppurating ovary, or of tuberculous disease of the tubes or ovaries has been cured by patience? What is the average duration of such cases when treated by patience? How long is pelvic suppuration to be left uninterfered with after diagnosis and treated with patience? Is "patience" synonymous with purely expectant treatment, or what is meant? "Patience and resignation will lighten every difficulty," but it is just as true *non est vivere sed valere vita*. Will the authors formulate some more definite and precise rules for general guidance as to when it is "imperative to operate" when advisable?

Five years ago I was prejudiced against tubal operations; since then, and particularly within the last year or two, I have seen a considerable number of such operations; the result has been that in practically every instance the pathological condition has amply proved the absolute necessity for surgical interference.—I am, etc.,

Grosvenor Street, W. A. D. LEITH NAPIER.

THE MIDWIVES BILL.

SIR,—When the President, at the annual meeting of the Obstetrical Society, excluded all discussion on the merits of the Midwives Bill or its details, I determined neither to speak nor vote on Dr. Aveling's resolution, which was simply a vote of confidence in the Council of the Society.

Now, the Council of the Society having, both by circular to the Fellows and through the President in his address, disclaimed all responsibility for the present Midwives Registration Bill, and the President having himself declared that he did not approve of certain of its clauses, and that this Bill, as amended by the Privy Council, does not contain the most important of the suggestions made by the Council of the Obstetrical Society, I saw no valid reason why I should vote for or against the resolution in the restricted shape in which it was put to the meeting.

I went to the meeting under the impression that it would be open to any Fellow to give his opinion on the amended Bill and that we should not be restricted to a mere vote on the question as to whether any kind of legislative action was desirable. Many Fellows of the Society may approve of legislation, but they think they see such grave blots in the present Bill that no influential medical body before whom this Bill comes for discussion, least of all an Obstetrical Society, should hesitate to express an opinion antagonistic to the Bill itself.

When I found that all criticism of the Bill was precluded by the President's ruling, I merely protested against a vote on such a resolution as that of Dr. Aveling being regarded as any expression of approval of the Bill itself.

As a Fellow of the Obstetrical Society I feel, after the statement of the President, that the Society, through its Council, has been snubbed by the Privy Council, and that its suggestions have been ignored. When this occurred, I consider that the Council, in so important a matter, might have taken the Fellows into its confidence, and shown that the Bill was not constructed on lines approved of by it, and thus much misunderstanding would have been avoided. It was widely circulated by the promoters of the Bill that it met with the approval of the Obstetrical Society. I was asked and pressed to add my name to a document on which appeared the names of many of the Council. This was an obliquely-worded statement. When such documents under the heading, "Registration of Midwives Bill" are signed by influential members of the medical profession, they cannot be surprised if their signatures are used for the purpose of proving that they are in favour of the Bill itself. The Obstetrical Society, by a vote, has now deliberately pledged itself, and unconditionally, to the principle of legislation for midwives; legislation on what lines?

Are the lines and limits to be those agreeable to and approved of by the medical profession and the Obstetrical Society itself, or on terms which will be forced on the profession and the Society by the Legislature? Certainly we must be prepared for this latter contingency if the Society, blindfolded, agrees to the principle of legislation, and calmly sits down, while the safeguards it recommends are passed by and ignored. I say nothing of the standard of education adopted by the Obstetrical Society in granting midwives a diploma. It is to be hoped that a considerable alteration for the better in the conditions imposed for the diploma may follow, should there be legislation on the subject. Meantime, I maintain that it is the duty of obstetricians to prevent any Bill passing through the Legislature with such glaring defects as those existing in that one now before Parliament.

Finally, I should have wished that, no matter how strongly pledged was the Council to the principle of legislation, the verdict of the Fellows should have been taken on the merits of the Bill itself.—I am, etc.,

Harley Street, W. H. MACNAUGHTON JONES.

SIR,—I notice you refer to the "Branches" which support the "general principle"—whatever that means—of the Bill, but I fear that in many cases the councils, or a clique, have spoken in the name of the Branch. Next, on page 304, you print Mr. Costelloe's opinion "of Dr. Commins's legal opinion." Now, why does not Mr. Costelloe give us his opinion of the Bill also? The fact that both these legal gentlemen give so very diverse views surely damns the Bill. If a Bill cannot be drawn up without being full of legal quibbles, would it not be best to put the Bill behind the fire? I notice Mr. Costelloe says it would be "highly improper" for a registered midwife to employ an unqualified assistant. What we want to know is, would it be legal under this Midwives Bill for a midwife to employ an unregistered midwife as her assistant? Mr. C. also says he is of opinion that it would be illegal for a midwife to conduct other than "natural labours." He owns he does not know what a "natural labour" is. Does Mr. Costelloe mean to say that a midwife will not be able to apply forceps and turn in all cases of "urgent necessity," and where the services of a doctor cannot be had? Are not almost all confinements cases of "urgency"? I notice he uses the term "registered practitioners," and puts it in inverted commas, as if to signify that he quoted from Mr. Commins's opinion. In no part whatever does that expression occur. The term "midwifery practitioner" was used. The Obstetrical Society say they had a clause in the first Bill which puts not only the care of women, but of infants also, into the midwives' hands. It is worth reproducing. It runs thus: "Clause 2.—In this Act 'midwife' means any woman of good character and of fair elementary education who is capable of managing a case of natural labour, and of undertaking the ordinary care of a mother and child after labour, and of recognising any conditions requiring the aid of a medical practitioner during the parturient and puerperal states." Of course these must be the duties of a midwife if any Bill is allowed to pass. But how is this midwife to diagnose any conditions—disease of heart, lungs, kidneys, liver, ovaries, uterus, or pelvis—in the "parturient woman"? Nor is this all. The heaven-sent midwife is to be able further to diagnose "any conditions" in the "puerperal woman"—*i.e.*, parametritis, perimetritis, the different puerperal diseases, and so on. She is also to have care of the infant.

Those goodnatured but unpractical persons who took charge of this Bill are guilty of folly. Would they themselves employ these midwives? I know that Sir W. Foster has taken his name off the back of this iniquitous Bill, and I learn that a large majority of others who "backed" it are only waiting for a chance to retire.

Dr. R. Barnes says the Bill is dead. The Bill cannot be dead until official notice be given that it has been withdrawn. But until then, and not until then, I urge each one to work against this proposal. Look at the resolution proposed by the secretary of the North of Ireland Branch, page 311 of the BRITISH MEDICAL JOURNAL, of February 7th. "That the North of Ireland Branch approves of the principle of the Bill, viz., the compulsory registration of midwives after due examination." Now, Clause 9 of the Bill says that Dr. Aveling's 15,000 midwives are to be registered without any examination whatever. Nor is this all; for every woman who enters as a pupil midwife within eighteen months after the passing of the Act is to be registered, and without any examination whatever. How many members of his Branch voted for this resolution?

As a very practical question, I want to ask, Who is paying

for the running of the Midwives Bills through the Commons? The fees for running a Private Member's Bill through average about £75 per Bill. There have been three Bills. Surely the Midwives Institute, with its ninety-five midwife members, is not. To oppose the three Bills has already cost me over £130. To run them through would cost over £225. I would finally point out that the Medical Act of 1886 lays it down that if a man wishes to practise midwifery he must have qualifications in both medicine and surgery. But by this Bill a woman is to practise midwifery without having any training or qualification whatever in medicine and surgery. This is one-sided legislation.—I am, etc.,

Liverpool. ROBERT R. RENTOUL.

SIR,—Dr. Grigg, in his presidential address to the Gynæcological Society, made an accusation against "cheap practitioners" which requires proof, and, to say the least of it, is as injudicious as it is untrue, because in these days, when opposition of all kinds is so keen, there is no class of the community that would tolerate the "unnecessary use of the forceps" in order to save time, or any other method which would interfere with Nature in a normal case. Such an accusation, although powerless to advance any good cause, is at the same time sufficient to secure the resentment of every general practitioner.

Nobody cares for the cheap practitioner, but it must be recognised that in whatever locality a medical man's lot may be cast he must there assimilate his fees to the condition of the people he practises amongst; if it be a poor district his fees are small, and he consequently becomes a cheap practitioner. Should he refuse to attend a patient on account of the small fee, he would at once defeat the great end of the profession, which is not to make money, but to do good. But general practitioners are all cheap practitioners if their fees are to be compared with the exorbitant claims of some West End men. What does Dr. Grigg mean by cheap practitioners? If the working classes are poor they are not to be imposed upon by malpraxis, and they like to be independent rather than be pauperised by the wholesale schemes of charity which this age is producing, started by quasi-philanthropic agencies to sweep into the net all sorts and conditions of men so that some few may be benefited and another few reap a cheap notoriety. The medical man who works in a poor district is generally much respected, because he has the welfare of his patients at heart; his interests and theirs are bound up together; he has to maintain his position and the honour of his profession; and these sentiments undoubtedly burn as ardently in his breast as within that of the more fortunate brother who dwells in a wealthier part.

Reckless use of the forceps and turning would soon cut short the career of any man who adopted such practice, for the people as a rule have a horror of "the instruments," and they are too discriminating to apply again to the same practitioner who was once so impatient. If young practitioners just commencing practice inflict the injury and physical disaster which Dr. Grigg says he has seen, the medical schools are to be blamed for sending them forth so unfledged; but what guarantee have we that the midwives shall be better informed, when just now it is a rare occurrence to come across a certificated midwife who can pass a catheter? There are irregular practitioners at work doing a vast amount of mischief; the law, however, does not touch them, but it is to become more adverse to the general practitioner.—I am, etc.,

Mecklenburgh Square, W.C. W. D. HASLAM.

THE PRESENT POSITION OF ANTISEPTIC SURGERY.

SIR, Professor White replies to my criticism of Sir Joseph Lister's Berlin address, a task which I think I may venture to say had better have been left to Sir Joseph himself.

Fortunately for my present purpose, Professor White puts the issue syllogistically, and formulates for both of us a major premiss upon the truth or error of which depends the whole conclusion; and I accept this issue freely. I say that germs of decomposition exist already in the blood and elsewhere in the body and are ever present, but do not bring about their results till death, or some condition which we may call a tendency to death, gives them permission so to do. Professor White says that the elaborate and carefully conducted experiments of Hauser, Watson Cheyne, and others completely contradict the statement "which is really the foundation of Mr. Tait's argument."

In reply, I say I care not a straw for elaborate and carefully conducted experiments, no matter at whose hands, when their conclusions are diametrically opposed to every-day experience. There must be an error in the experiment or in the minds of the experimenters—more probably in the latter. John Hughes Bennett and Arthur Gamgee, with others in the case, must be admitted to be skilled experimenters. By hundreds of experiments they showed that mercury has no action on the liver and secretion of bile, and that the absence of bile from the intestinal circulation of the animals experimented on killed them by slow starvation. But my daily experience and the daily experience of all humble unscientific practitioners like myself shows absolutely that mercury has a very potent influence on the liver and on the secretion of bile. My clinical experience shows, and it is published to the effect, that patients gain weight and improve in health whilst every particle of bile formed by them is pouring out of a fistula in their gall bladders. Mayo Robson and others have confirmed this, therefore we laugh at Bennett and his scientific experiments.

In the present case how are we to explain, on the germ theory, the occurrence of abscesses in closed cavities, such as joints or the pleura, or in muscular tissue—or, indeed, anywhere save in open wounds—unless the germ theory is a delusion, or unless germs are omnipresent, and are at times, and for reasons not understood, permitted to wreak their wicked wills? It is perfectly impossible to argue with people who cannot see such a self-evident proposition as this.

But the facts of decomposition—save their immediate microscopic causes—have been known for centuries, and it has been only our want of reasoning power which has prevented us applying the every-day facts of the housekeeper's room to the processes of disease. Let me quote a familar example. A solid mass of beef—say, a bed and silverside—is removed from a perfectly healthy ox, and is put at once into a sound and healthy pickle. The pickle is a powerful antiseptic, and if the pickle reaches the middle of that beef before the germs contained in it have had time to start their work, the beef in a few days, or a week or two, will be fit to eat. But every housekeeper knows perfectly well that the result will depend absolutely upon the outside temperature. It would be absolutely impossible to pickle a piece of beef in August, which could be easily pickled at Christmas. Does Professor White imagine that during the few hours—it may be few minutes—that the beef is exposed to the air it becomes impregnated with germs right to the centre, or is it not more consistent with common sense to believe that the germs were in it before it left the ox, and therefore in life? In truth, the facts of the housekeeper and the henwife are far more scientific, that is, far more exact, than those of our biological experimenters. They are in harmony with what I see in my work every day, and, therefore, it seems to me a perfect waste of time to follow Professor White beyond his own major premiss, which is utterly mistaken.—I am, etc.,

Birmingham. LAWSON TAIT.

A SUGGESTED TREATMENT OF TUBERCULOSIS.

SIR,—Dr. Markham Skerritt observes that "Dr. Weigert devised an apparatus for the treatment of phthisis by the inhalation of hot air, with the view of raising the temperature of the lung tissue," and that its reputation had been short lived.

I do not think that the action of heat produced by a healthy process can act in the same way as heat the result of a destructive process. In Koch's treatment, may it not be that the reaction is not maintained for a sufficiently long period? It is admitted a temperature of 105.7° F. killed the bacillus outside the body, then why should not a maintained temperature of 105.7° kill them in the body? It seems to me to be an impossibility for so high a heat to be inhaled for any length of time by a phthisical patient who has only a limited area of respiration to have any decided effect on the bacilli; and would not the hot air be cooled in its transit through the mouth, larynx, and bronchial tubes before getting to the seat of the bacilli? Might not the maintained even high temperature, the result of an inflammatory destructive and unhealthy process for a continued period without intermis-

sion, accompanied by the allied agencies and chemical changes that take place, the result of such a fever, combined with the poison generated by the small-pox bacilli or other acute diseases, have a deadly influence on the tuberculous bacilli? or may not the nutrition of the tissues be so changed, deteriorated, and affected by the high temperature, that it is not suitable for the livelihood of the bacilli themselves? Could not such a temperature be produced and maintained for a period by the injection of some agent that would imitate the course run by such attacks of small-pox, erysipelas, or rheumatic fever which Drs. McNamara, Thornton, Eddowes, and Cole report have cured their phthisical cases?

With the absence of recognised bacilli in these affections, one can only infer for the present that heat and the poison caused by the virus of small-pox, erysipelas, rheumatic fever, and other acute diseases may be a prominent agent in solving this difficult problem.—I am, etc.,

Chepstow. A. G. LAWRENCE, M.D.

THE TREATMENT OF ABSCESS BY FLUSHING WITHOUT DRAINAGE.

SIR,—Mr. Barker's paper on the treatment of abscess by flushing without drainage in the BRITISH MEDICAL JOURNAL of February 7th is, all will agree, most instructive, and a subject to which attention should be most prominently called; at the same time, it is a line of treatment which I feel sure is being, and has been for years, very thoroughly carried out, but perhaps not with all the valuable suggestion in Mr. Barker's paper. The principle of removing the lining membrane of an abscess cavity has been for years strongly advocated by Mr. Clinton Dent and the other surgeons at St. George's Hospital. In fact, in all abscesses, acute or chronic, it is the practice to remove sloughing cellular tissue and the lining membrane by copious washing and free use of gauze fixed to forceps, and freely rubbed over and into every part of an abscess cavity. At the St. George's Hospital, this line of treatment has been attended with some excellent results.—I am, etc.,

Grosvenor Street, W. HERBERT W. ALLINGHAM.

DEFECTIVE TISSUE OXIDATION, AUTO-INTOXICATION, OR SULPHONAL?

SIR,—Under this heading I commented on cases in the BRITISH MEDICAL JOURNAL of November 22nd, 1890, by Dr. V. Harley.

Dr. Copeman brought before the Pathological Society, on January 20th, four cases of hæmatoporphyrin in the urine of women, cause unknown. Dr. Copeman kindly answers my inquiry as to the drug administration as follows: "One case, I think, may have been caused by a dose of antifebrin (phenylacetamide); one had been accustomed to take various hypnotics in considerable quantities; another was treated with sulphonal and chloral for persistent sleeplessness three days before her death; while as to the remaining one, there is no evidence available as to drugs taken."

I think it well again to call attention to this risk of blood-destruction attending the administration of blood-reducing agents as the hypnotics.—I am, etc.,

King's College, W.C. HUGH R. BEEVOR.

PRACTICAL CURE OR DISASTROUS FAILURE?

SIR,—As the Gynæcological Society has appointed a committee of inquiry into the facts of a case which has been brought before them twice, I need only say that I will give the committee any information that I possess. So far I have heard nothing from any member of the committee. But I must add that I never said or thought that the case was one of "neurotic ailment." When the patient was first brought to me, in 1879, there was serious disease—supposed to be malignant—of the cervix uteri. The result of amputation in that year and the use of the cautery in 1880 was followed by more than seven years of good health, and a second marriage in February, 1888. After marriage, a long journey in Italy and France was thoroughly enjoyed for several months. Then in autumn an accident in Scotland was followed by some pelvic trouble, which, unfortunately for the patient, led to the operation at Birmingham in November, 1888, from which she has never recovered, although it was called a "practical cure." It is really amazing to hear now for the first time, by page 316 of the BRITISH MEDICAL JOURNAL of February 7th, that I am "answerable for the operation" because a telegram was sent by someone to somebody unnamed, saying, "Wells has been communicated with and declines to advise."

One practical point of importance comes out in the same letter. The patient is said to have had a hæmatocele tapped last May; it is also asserted that she has another now, and it is added that "such hæmatoceles interrupt the convalescence of such cases, as everybody knows who has had any experience of them;" yet this is called a "practical cure." It was argued that the case is not a failure because only 1 or 2 of such failures occur in 100 cases. The patient has a letter from the operator in which he assures her that it occurs in 1 of 10 cases. So far as I have read, the profession has not been warned of any such danger. I have never seen any such case in my own practice, though the operator in this case speaks of "many parallel cases."

Upper Grosvenor Street. T. SPENCER WELLS.

THE GENERAL PRACTITIONER AND HOSPITAL ABUSES.

SIR.—Mr. George Brown's suggestion strikes me as a good one, though a better, I think, would be that the Metropolitan Counties Branch of our Association should form a joint committee of hospital physicians and surgeons and general practitioners to discuss between them the main points now at issue before the Lords' Committee, namely: 1. Should there be a central controlling board for hospitals and dispensaries? 2. Should the out-patient department be improved or abolished? 3. Should the number of metropolitan medical schools be diminished? 4. Should the Poor-law infirmaries be thrown open to medical students? and so on.

As I have already had my say on most of these points before the Lords, I claim to act in a spirit of pure benevolence in offering to serve on either of such committees if formed. I must add, however, that I do not admit that general practitioners have shown indifference about this matter. Last session almost as many of them gave evidence as of hospital physicians and surgeons, and others are waiting their turn to do so now; the suggestions for reforms have come almost exclusively from them, and it is evident to anyone who has carefully followed the course of examination since, that their evidence has not been without influence on their Lordships' minds.—I am, etc.,

Dulwich. H. NELSON HARDY.

"MAT. MEDIC. TERAP." IN BRITISH COLUMBIA.

SIR,—In the BRITISH MEDICAL JOURNAL for October 25th, 1890, I see a letter from Dr. McGuigan, of Victoria, on the question of British practitioners in this colony. He claims that as the General Medical Council of Great Britain could not come to an understanding with the British Columbia Medical Council on the matter of reciprocity in recognition of medical men, they felt justified in having removed Clause 30 of the Medical Act by which hitherto all registered men from the old country were "entitled" to be registered here also on payment simply of a fee of 10 dollars. I fail to see how there can be reciprocity when there is no medical school in the province granting degrees or diplomas of any sort. There is an Examining Board, it is true, but that board grants nothing but the right to practise in this province alone, and that on payment of 100 dollars and after that 10 dollars annually. Nearly every educated men can see through the policy of this local medical council, namely, to try to put a stop to wholesome competition from England. Dr. McGuigan can scarcely justify himself in running down the abilities of men from England when his own fellow-examiners are guilty of such a set of questions as those published in the appended extract from the *Victoria Weekly Times* of November 14th:—

"The following is a certified copy of what was presented to medical applicants for their licence to practise medicine and surgery.

"Mat. Medic. Terap.

"1. What is an alkaloid, cataplasmata, extracta of the later how many kinds are there?

"2. In the following preperations mention which of *them* contains opium and state in what proportions:—Pulv. kino

co., pulv. rhei. co., pulv. ipecac. co., *pill* saponis co., *pill* ipecac cum *scsIliae*, tinct. camph. co.

"3. Write a perscription for an adult. Tablespoonful doses, each perscription to contain a preperation of cocaine, strychanie, arsenic, acd. hydrocyanic dil.

"4. Name some of the specific uses of mercury, belladonuar, opium, iron.

"5. Discuss the action of aconite and quinine in fever, and how would you perscribe them to produce the best effect from each?"—I am, etc., VERNON ARDAGH,

Medical Missionary, Church Missionary Society.

Metlakatla, British Columbia.

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

DEGREES.—At the Congregation, on Thursday, February 5th, the following medical and surgical degrees were conferred:—M.B. and B.C.: Francis Wellford, B.A., Trinity (thesis, Tubercle of Kidney); Cuthbert Wyman, M.A., Trinity (thesis, Pernicious Anæmia); Alfred Featherstone Kellett, B.A., St. John's (thesis, Chronic Endometritis and its Local Treatment); William Wickham Simmons, B.A., St. John's (thesis, Ataxia); Harry Edward Smith, M.A., Gonville and Caius (thesis, Syphilitis and Perityphilitis); Thomas Greenwood Crump, B.A., Emmanuel (thesis, Purpura Hæmorrhagica); John Elsdale Molson, Emmanuel (thesis, Aneurysm of the Descending Thoracic Aorta); Edward Spencer Blaker, B.A., Cavendish (thesis, Opium Poisoning and its Treatment with Atropine).

FRANK FREDERIC SCHACHT, B.A., M.B., of Trinity College, has kept the Act for the degree of Doctor in Medicine (thesis, The Electrical treatment of Uterine Fibromyomata).

PROFESSOR NEWTON.—A portrait of A. Newton, F.R.S., Professor of Zoology and Comparative Anatomy, has been painted by Mr. C. W. Furse, and has been presented to the University by the Committee of Subscribers; it will probably be hung in the New Museums.

LECTURER IN INVERTEBRATE MORPHOLOGY.—Mr. S. J. Hickson, M.A., of Downing College, has been appointed to the Lectureship in the Advanced Morphology of Invertebrates, vacant by the resignation of Professor W. F. R. Weldon, F.R.S., now of University College, London.

DEMONSTRATIONS IN PHYSICS.—Mr. G. F. C. Searle, of Peterhouse, and Mr. S. Skinner, of Christ's, have been appointed Demonstrators of Experimental Physics at the Cavendish Laboratory.

BACTERIOLOGICAL COURSES.—In addition to the lectures announced by Professor Roy, and referred to in the BRITISH MEDICAL JOURNAL of January 31st, the following more advanced classes have been arranged for:—

A course of instruction by lectures and practical work on the Pathology of Epidemic and Infectious Diseases, with instructions in Bacteriological Technology, by Mr. J. G. Adami (Christ's) and Mr. E. H. Hankin (St. John's). This course is intended to meet the requirements of candidates for the Diploma in Public Health, and will be continued during the Easter Term and the Long Vacation. The date of commencement, fees to be charged, etc., will be announced later.

An advanced course of lectures on Bacteriology, including the Biology of Pathogenic and Non-Pathogenic Microbes, as well as the mode in which they act in producing infective diseases, the nature of acquired and natural immunity from infective diseases, etc., etc., by Mr. J. G. Adami (Christ's) and Mr. E. H. Hankin (St. John's). To be held thrice weekly during the Easter Term, at such an hour as is found most convenient for those desiring to attend. No fee.

In connection with the above-mentioned elementary courses, Dr. A. Gamgee, F.R.S. (formerly Professor of Physiology in Owens College), has kindly consented to give a short elementary course of Pathological Chemistry, with lectures and practical work. The time of commencement will be arranged after the class has met. No fee.

LECTURES IN PUBLIC HEALTH.—During the ensuing long vacation Dr. Anningson, University Lecturer, and medical officer of health for the borough of Cambridge, will give a series of lectures and demonstrations in public health, suitable for candidates for the Sanitary Science diploma. The following is an outline of the course:

I. *Water Supply.*—1. Quantity, collection, storage, distribution, with explanations of the several methods and of the hydraulic and other calculations involved. 2. Quality, classification of potable waters, sources of impurities, methods of purification, effects of insufficient or impure supply.

II. *Principles of Ventilation.*—1. Impurities in Air: their sources and effects. 2. Quantity of air required, methods of ventilation, natural (Montgolfier's theorem), artificial, movement of air in closed spaces. 3. Measurements of air currents (anemometer), measurements of cubic space.

III. *Meteorology and Climate.*—1. Exhibition of and explanation of meteorological instruments, thermometers, max. and min., barometers (use of Vernier), hygrometers of various forms (calculations of the dew point and relative humidity), wind gauge, rain gauge. 2. Explanation of meteorological charts and reports. 3. Relation of disease cycles to meteorological conditions.

IV. *Collection, Removal, and Disposal of Excreta.*—1. Composition and quantities of sewage. 2. Conservancy systems of dealing with sewage. 3. Water-carriage systems of dealing with sewage. 4. Construction of sewers with the hydraulics of drainage systems. 5. The several methods of sewage disposal.

V. *Characters of the Earth's Surface in Relation to Health Questions.*—1. Soils and building sites (dry, malarious, etc.), preparation of sites. 2. Geographical distribution of disease. 3. Watersheds, river basins, catchment areas, etc. Ordnance survey.

VI. *Dwellings.*—1. Construction of dwellings, hospitals and schools respectively, illustrated by diagrams and models of good and bad systems. 2. Interpretation and criticism of building plans.

VII. *Vital Statistics (their Calculation and Significance).*—1. The census, method of estimating a population between census periods. 2. Birth rates, death rates, etc., their calculation and significance. 3. Methods of the actuary, construction of life tables (De Moivre's theorem). 4. Instruments and tables in aid of calculations.

VIII. *Examination of Unsound Food of all kinds.*—1. Character of sound and unsound food. 2. Causes and effects of unsoundness. 3. Animal plagues and parasites.

IX. *Micro-parasitic Diseases, their Origin, Propagation, and Prevention.*—1. Individual diseases. 2. Epidemics, their cycles and laws of advance. 3. Methods of tracing origin and course of any given outbreak.

X. *Unhealthy Occupations and the Diseases to which they give rise.*

XI. *Powers, Duties, and Responsibilities of Sanitary Authorities and their Officers, and the Legal Remedies placed at their disposal.*

LONDON.

PRELIMINARY SCIENTIFIC (M.B.) EXAMINATION.—January, 1891. Pass List. Entire Examination.

First Division.—W. Dyche, B.A., Westminster Training and Yorkshire Colleges; T. H. Green, Guy's Hospital; R. Kay, Owens College and private study; J. A. Mawson, Yorkshire College; H. B. Shaw, Yorkshire College; A. H. Spicer, The Leys, Cambridge, and University College.

Second Division.—M. Cameron, London Hospital; C. L. Chevalier, St. Thomas's Hospital and Birkbeck Institute; H. J. Harris, B.A., University College; T. C. Last, St. Mary's Hospital; C. H. J. Lockyer, St. Thomas's Hospital, Birkbeck Institute, and private study; W. J. Oakes, B.A., private study; P. A. Palmer, St. Thomas's and St. Bartholomew's Hospital; G. H. Wheeler, B.A., private study.

Chemistry and Experimental Physics.—*A. C. Bean, University College and private study; *S. H. Belfrage, University College; *W. M. Bergin, Clifton Laboratory; *V. J. Blake, University College and private study; H. Cardin, Dulwich College; *F. B. Carter, University College; *W. E. Cross, Guy's Hospital and private study; E. C. Davenport, Mason College; *A. Dimsey, University College and private tuition; *S. R. Douglas, St. Bartholomew's Hospital; *E. G. D. Drury, University College; B. Dyball, St. Thomas's Hospital and Birkbeck Institute; *A. Earnshaw, King's College, Guy's Hospital, and Birkbeck Institute; *W. D. Frazer, University College, Cardiff, and private study; F. H. Gervis, St. Paul's School and St. Thomas's Hospital; H. N. Goode, St. Thomas's Hospital and Birkbeck Institute; C. Hanks, private tuition and study; *C. J. Harnett, Guy's Hospital; *T. Hood, St. Bartholomew's Hospital and City of London College; *D. Horwitch, Mason and Queen's Colleges, Birmingham, King Edward's School, Aston, and private study; E. E. Lloyd, private tuition; *L. F. Marks, private study; J. T. Marsden, Owens College and private study; *S. H. Mason, Mason College and private study; *J. C. Muir, The Leys School, Cambridge; *W. P. Nicol, King Edward's High School, Birmingham; *J. H. F. Nunn, St. Bartholomew's Hospital and Birkbeck Institute; *A. J. Pedley, Mason College and King Edward's High School, Birmingham; *N. H. Pike, Dulwich College; *D. Rice, Guy's Hospital; *E. L. M. Rusby, King's College; *J. Shardlow, Firth College, Sheffield; *F. A. Smith, St. Bartholomew's Hospital; *L. A. Smith, London Hospital; *J. C. Spillane, London Hospital; *L. K. Thomas, King Edward's High School, Birmingham, and private study; C. R. Watson, St. George's Hospital and private tuition; H. C. Watt, University College, Liverpool; *M. Wilks, University College; *H. M. Wise, Guy's Hospital.

Biology.—*W. B. Bennett, University College, Liverpool, and private tuition; *L. W. Burrow, private study; *J. E. G. Calverley, Dulwich College and St. Bartholomew's Hospital; *C. F. Gordon, Dulwich College and St. Bartholomew's Hospital; *J. A. K. Griffiths, University and Epsom Colleges; T. A. Hawkesworth, private study; Sindia Emily Hickson, University Colleges, London and Bristol; *A. Hilton, Owens College and private study; G. P. James, University College, Aberystwith, and private study; A. D. Ketchen, University College; W. M. McDonald, St. Bartholomew's Hospital and private study; F. A. H. Michod, St. Mary's Hospital; C. H. Murray, Guy's Hospital and private study; *H. A. Scott, Owens College; *T. B. Sellors, Middlesex Hospital and private study; *A. R. H. Skey, St. Bartholomew's Hospital; *J. C. Smellie, St. Mary's Hospital; D. L. Smith, University College, Aberystwith, and Guy's Hospital; F. J. Smith, Owens College; *G. U. Smith, King's College; *P. M. Smith, Epsom College and St. Mary's Hospital; *H. J. Spon, Guy's Hospital; *J. R. Steinhaeuser, Guy's Hospital; *C. W. Stickland, St. Paul's School; *T. M. Thomas, University College, Aberystwith, and Guy's Hospital; *E. O. Thurston, private study; *S. G. Tippett, St. Mary's Hospital and private study; *T. H. Wells, private study and tuition; S. Whicher, University College, Aberystwith, and Guy's Hospital.

Two Subjects of the Examination (under former Regulations).[1]*—C. C Clarkson (C., B.), St. Thomas's Hospital and University College; A. W. R. Cochrane (P., B.), St. Bartholomew's Hospital; Adele I. De Steiger (C., P.), University and Bedford Colleges, London; W. H. Gray (P., B.), private tuition; T. Lambe (C., P.), University College and private study; E. Pratt (C., P.), St. Bartholomew's Hospital and Birkbeck Institute.

One Subject of the Examination (under former Regulations).[1]*—W. E. N. Dunn (B.), St. Bartholomew's Hospital; H. W. Eldred (B.), St. Thomas's Hospital; E. J. Hynes (B.), London Hospital; H. F. Turner (C.), Guy's Hospital.

[1] The subjects taken up by these candidates are indicated by initials after the names :—C.=Chemistry; P.=Physics; B.=Biology.

* These candidates have now completed the examination.

ROYAL UNIVERSITY OF IRELAND.

The Senate of the Royal University met on Wednesday, February 4th, 1891. It was directed that henceforward the examination for the diploma for proficiency in the treatment of mental diseases shall be held every year.

The following examiners were appointed in the Faculty of Medicine:—Mental Science: J. I. Beere, M.A.; Wilfrid Ward. Natural Philosophy: John England, M.A. Chemistry: E. A. Letts, D.Sc. Biology: Rev. L. E. Baynard Klein, D.Sc. Anatomy: A. E. I. Birmingham, M.B. Materia Medica: F. J. B. Quinlan, M.D.; William Whitla, M.D. Medicine: Joseph F. O'Carroll, M.D. Surgery: W. Thornley Stoker, M.D., M.Ch. Midwifery: J. W. Byers, M.D.; A. J. Smith, M.B. Medical Jurisprudence: C. Y. Pearson, M.D.; M. F. Cox, L.K.Q.C.P.I. Ophthalmic Surgery: H. R. Swanzy, M.D.; D. D. Redmond, F.R.C.S. Sanitary Science: Sir Chas. A. Cameron, M.D. Law: R. B. Barry, B.A.; S. L. Browne, M.A.

DUBLIN.

At the spring commencements (Comitia Verna) in Hilary Term, held according to custom on Shrove Tuesday, February 10th, 1891, in the Examination Hall of Trinity College, the following were among the degrees conferred by the University Caput in the presence of the Senate:

Baccalaureus in Chirurgiâ.—P. C. H. Ryan.

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—G. P. Adamson, M. J. Bulger (*antea lic.*), G. Cole-Baker, F. W. Dobbin, R. M. Going, J. G. Moyles, J. Ryan, T. Woulfe-Flanagan.

Doctores in Medicinâ.—C. E. M'Naught, H. M'Quade, W. A. Morton, J Ryan, P. C. H. Ryan.

Royal College of Surgeons of England.—The following gentleman having passed the necessary examinations, and having attained the legal age (25 years), was, at the ordinary meeting of the Council on February 12th, admitted a Fellow of the College, namely:

E. Deanesly, M.D.Lond., University College Hospital, Wincanton, Somerset, Diploma of Member dated June 24th, 1887.

Conjoint Examination Board in Ireland of the Royal College of Physicians and Surgeons.—The following candidates, who were successful at the Final Professional Examination held on January 26th and following days, have been duly admitted Licentiates of the Colleges in Medicine and Midwifery at the Royal College of Physicians in Ireland; in Surgery and Midwifery at the Royal College of Surgeons in Ireland:

J. A. Burland, T. G. Dillon, A. N. Heron, A. H. Jacob, jun., J. Mackenzie, G. Moorhead, A. J. M'Munn.

In addition to the foregoing gentlemen, the following have completed the Final or Qualifying Examination:

A. N. D. Oakes, J. Pim.

The following have passed the specified group of subjects:

Medicine.—M. F. Cahill, H. M. Cullinane, J. C. Ryan.

Surgery.—H. M. Cullinane, M. G. Dobbyn, M. L. Fischer, J. C. Ryan, J. A. Thompson.

Midwifery.—M. F. Cahill, M. G. Dobbyn.

Society of Apothecaries of London.—Pass List, January, 1891. The following passed the First Examination in Chemistry, Materia Medica, Botany, and Pharmacy:

Berne, D., Sydney University
Greaves, R. B., Sheffield
Grange, E., Edinburgh
Johnston, T. L., Edinburgh University and University College

The following passed in the subjects indicated Materia Medica, Botany, and Pharmacy:

Dodds, E., Sheffield
Peers, T. H. P., Charing Cross Hospital

Materia Medica and Botany:

Hunter, K. M., Royal Free Hospital
Rider, F. K., Leeds Yorkshire College

Pharmacy:

Rouse, F. R., University College

The following passed the Second Examination in Anatomy and Physiology:

Ashby, W., Guy's Hospital
Baird, G. H., Dublin Carmichael College
Brabyon, G. W., St. Mary's Hospital
Chilcott, E. S., St. Mary's Hospital
Clarke, S. A., Cork Queen's College and Middlesex Hospital
Collin, T. S., Victoria University, Owens College
Cregeen, F. A., Cambridge and Liverpool University College
Francy, A. B., St. Mary's Hospital
Grace, A. H., Bristol
Higginson, G., Cambridge and London Hospital
Howells, H., St. Thomas's Hospital
Hudson, T. S. F., Birmingham Queen's College
King, W. A., Charing Cross Hospital
Marwood, A. E., Charing Cross Hospital
Merry, S. R., Charing Cross Hospital
Netherton, J. C., Dublin Trinity College
Robinson, C. St. H., St. Mary's Hospital
Seller, J. D., St. Mary's Hospital
Shotton, J. R., Leeds Yorkshire College
Stott, J., Oxford and Victoria University, Owens College
Welch, R. W. F., St. Thomas's Hospital

The following passed in Anatomy:

Bayley C., Edinburgh University
Douglas, G. E., St. Mary's Hospital

The following passed in Physiology:

Baldwin, A., Birmingham Queen's College
Venis, H. C., Calcutta and St. Mary's Hospital

The following Candidates passed in Surgery:

Adams, T. H., London Hospital
Buss, W. L. W., Cambridge and Middlesex Hospital
Earle, R. A., Cambridge and Middlesex Hospital
Finch, E. J., St. Mary's Hospital
Irvine, R. A., Belfast, Queen's College, and Glasgow
Mayner, A. E., M.D., Bishops College, Montreal
Parish, B. F., St. Mary's Hospital
Rutherford, G. J., Middlesex Hospital
Smith, S. C., Middlesex Hospital
Smyth, J. D. H., Belfast, Queen's College, and St. Mary's Hospital
Stilwell, G. R. F., St. Thomas's Hospital
Twist, J. F., Birmingham, Queen's College
Wrench, E. B., Cambridge and St. Thomas's Hospital

The following Candidates passed in Medicine, Forensic Medicine, and Midwifery:

Beck, C. A., Bonn University and Middlesex Hospital
Minter, L. J., King's College
Morris, R. B., Manchester, Owens College
Wilkinson, G., Cambridge and Middlesex Hospital

The following passed in Medicine and Midwifery:

Williams, G. C. W., St. Thomas's Hospital
Willock, E. H., St. Thomas's Hospital

The following passed in Medicine:

Laver, P. G., St. Thomas's Hospital

The following passed in Forensic Medicine:

Coopland, H. C., St. Bartholomew's Hospital

The following received the Diploma of the Society, having passed in all the subjects required for registration:

Messrs. Adams, Beck, Buss, Finch, Irvine, Morris, and Wilkinson.

Presentations.—The members of the Union Masonic Lodge, No. 105, Royal Arch Chapter, and Preceptory in connection therewith, have presented Dr. James Taylor, on the occasion of his marriage, with an address and Past Preceptor's Jewel, in appreciation of his many good qualities and services to Freemasonry.—Dr. Francis Brady, of Carnew, has been presented with an address by his friends in Carnew, county Wexford, on the occasion of his marriage.—The members and associates of the Chemists' and Druggists' Society of Ireland (North Branch), have presented their President (Sir J. Haslett) with an illuminated address for his recent services in connection with the passing of the recent Pharmacy Act Amendment measure.

A New Neurological Journal.—A new German journal, specially devoted to neurology, is about to be published under the editorship of Professors Erb, Lichtheim, Schultze, and Strümpell. The characteristic feature of the new periodical, which will be entitled *Zeitschrift für Nervenheilkunde*, is intended to be the prominence that will be given to neurology in relation to general medicine rather than to mental disease. The supply of "neurological scientific material" will, it is stated, be unusually full and extensive.

The Sanitary Assurance Association.—The tenth annual meeting of this Association was held on February 9th, Sir Joseph Fayrer, President, in the chair. A resolution, proposed by Surgeon-General Cornish, was adopted praying the Government to introduce into the Public Health Consolidation Bill clauses providing for the sanitary registration of houses. Surgeon-General Cornish was elected President, in succession to Sir Joseph Fayrer.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

STAFF-SURGEON HENRY GEORGE TRAVERS STRICKLAND, M.D., died at the Royal Naval Sick Quarters, Portland, on February 8th, aged 38. Appointed Surgeon, March 31st, 1875; became Staff-Surgeon, March 31st, 1887. He was Surgeon of the *Achilles* during the Egyptian war in 1882, and had received the medal and Khedive's bronze star granted for that campaign.

THE MEDICAL STAFF.

SURGEON-MAJOR W. A. PARKER is brought on the strength of the British forces in the Bombay command from December 31st, the date of his arrival at Bombay.

Surgeon W. J. CROFTON, M.B., is brought on the strength of the British forces in the Bombay command from January 7th, the date of his arrival at Bombay.

Surgeons H. J. BARNES and J. E. TRASK, serving in the Bombay command, are posted to the Poona district on general duty.

Surgeon C. G. WOODS, M.D., serving in the Bengal command, is appointed to the civil medical charge of Chunar, in addition to his military duties, from December 13th, *vice* Surgeon J. W. Bullen, transferred.

Surgeon M. L. HEARN, who is serving in the Madras command, has leave from December 26th to June 26th, for the recovery of his health.

Deputy Surgeon-General ALEXANDER ALLAN, M.D., has been appointed Principal Medical Officer in Scotland, in place of Deputy Surgeon-General C. G. Irwin, M.B.

Deputy Inspector-General CHARLES COWEN died at Southsea on January 3rd. He entered the service as Assistant-Surgeon, March 27th, 1835; became Surgeon, February 16th, 1844; Surgeon-Major, June 22nd, 1855; Honorary Deputy Inspector-General, May 6th, 1862, the date of his retirement. *Hart's Army List* informs us that he served with the 18th Royal Irish in China, and was present in the operations against Canton, and at the attack and capture of Chapoo, Shanghai, Woosung, and Chin Kiang Foo (medal). He was also engaged in the campaign in the Punjab in 1848-49 (medal).

ARMY MEDICAL RESERVE.

SURGEON WILLIAM DUNCAN, M.D., F.R.C.S.Eng., having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve, February 11th.

Acting-Surgeon JOHN HUBERT GRIFFIN, 16th Middlesex Rifles, is appointed Surgeon, ranking as Captain, February 11th.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR J. W. JOHNSTON, M.D., Bengal Establishment, has retired from the service, to which he was appointed October 1st, 1860, attaining the rank of Surgeon-Major, October 1st, 1872.

The services of Surgeon-Major D. W. D. COMINS, Bengal Establishment, Protector of Emigrants and Superintendent of Emigration, Calcutta, are placed at the disposal of the Government of India, in the Finance and Commerce Department.

Surgeon J. HOEY, Madras Establishment, is appointed to the civil medical charge of the Pakokku District, Burmah, *vice* Surgeon-Major E. Levinge.

On return from furlough, Surgeon C. P. LUKIS, Bengal Establishment, Civil Surgeon, 2nd class, resumed charge of the Jhansi District on December 20th.

With effect from the date on which the services of Surgeon-Major S. J. Thomson were placed at the disposal of the Government of India, Surgeon W. G. THOROLD, Bengal Establishment, officiating Deputy Sanitary Commissioner, North-West Provinces and Oudh, is promoted to be Deputy Sanitary Commissioner, North-West Provinces and Oudh.

Surgeon J. J. PRATT, Bengal Establishment, Civil Surgeon, 2nd class, is transferred from Sitapur to Mirzapur.

Surgeon D. F. BARRY, M.D., Bengal Establishment, Civil Surgeon, 2nd class, is transferred from Mirzapur to Sitapur.

Surgeon-Major T. H. HENDLEY, Bengal Establishment, Residency Surgeon Eastern Rajpootana States, has leave of absence for fourteen months, on private affairs; and Surgeon-Major J. O'M. MCDONNELL, also of the Bengal Establishment, for twelve months in extension.

Surgeon J. L. T. JONES, Bombay Establishment, is appointed to act as Civil Surgeon of Karwar, during the absence of Surgeon-Major J. A. Howell.

Brigade-Surgeon D. E. HUGHES, Bombay Establishment, is directed to act as Civil Surgeon of Poona during the absence of Brigade-Surgeon H. Cook, M.D.

Surgeon-Major G. W. R. HAY, Bombay Establishment, officiating Secretary to the Principal Medical Officer Her Majesty's Forces, Bombay, is confirmed in that appointment from October 26th, the date of the decease of Surgeon-Major D. A. Patterson.

Surgeon C. B. MAITLAND and Surgeon-Major P. MURPHY, both of the Bombay Establishment, have been permitted to return to duty. Surgeon Maitland was granted a year's leave from March 30th, 1890; Surgeon-Major Murphy, a year from February 7th, 1890.

Surgeon-Major WILLIAM DAY STEWART, M.D., F.R.C.S.Edin., Bengal Establishment, died at Cuttack, India, on November 23rd, in his fifty-first year. He was appointed Surgeon, October 1st, 1866, and Surgeon-Major twelve years therefrom.

THE VOLUNTEERS.

ACTING-SURGEON E. W. F. STIVEN, M.D., 21st Middlesex (the Finsbury), is promoted to be Surgeon, February 7th.

Mr. GEORGE GUNNIS FERGUSON, M.B., is appointed Acting-Surgeon to the 1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade).

Mr. WILLIAM DUNCAN, M.D., is appointed Surgeon to the Middlesex Yeomanry (Duke of Cambridge's Hussars), January 25th.

Surgeon and Surgeon-Major T. M. WILLS, 4th Volunteer Battalion King's Liverpool Regiment (late the 15th Lancashire), is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the Mersey Brigade Infantry Volunteers, February 11th.

EXCHANGES.

WE have lately received several communications protesting against the arbitrary manner in which the War Office deals with exchanges between medical officers. A correspondent urges that the matter should be placed before Mr. Stanhope, who, he is sure, would put his foot down on the attempts to treat medical officers as children. Exchanges are not entered upon out of mere caprice, and are always, whether on the score of health or private affairs, of vital importance to individuals, while also, in the great majority of instances, of real benefit to the army and the State. The power to exchange within reasonable limits is a great boon, which can hardly be abused; it is also a privilege which should not be obstructed by arbitrary rulings, or withheld in what seems a punitive spirit. No other officer is so hampered and handicapped in this matter as the medical. He is not allowed to exchange after being put under orders for foreign service; but, pray, how can he negotiate an exchange until he knows where he is going? He is refused because he may not have been two years in a station; but what has health or urgent private affairs to do with this senseless arbitrary ruling?

It is, indeed, high time the regulations regarding the exchange of medical officers were revised and brought into some sensible relation with ordinary facts, and freed from mere haphazard decisions.

MEDICO-LEGAL AND MEDICO-ETHICAL.

WE may remind some of our correspondents who urgently ask for immediate replies to their inquiries that the questions submitted frequently involve points not always governed by general principles, and requiring the gravest consideration. It is, therefore, impossible in many cases to give a reply in time for the next issue of the BRITISH MEDICAL JOURNAL.

THE APOTHECARIES' SOCIETY AND UNQUALIFIED PRACTICE.

E. N. N.—The "great doctor" referred to would doubtless be prosecuted by the Society of Apothecaries if the patient would be willing to give evidence, and a statement of the facts were sent to the Clerk to the Society, Blackfriars, London. The Society of Apothecaries can alone sue for penalties for unqualified practice, and they are always willing to take action at their own expense in suitable cases. The case referred to seems to be eminently one calling for interference.

A QUESTION OF NAME.

QUIBBLE.—In suing for accounts, etc., due, it will be well to use the full registered name to prevent difficulty in case of proof of registration being required. As regards the life policy (if such a policy is referred to), we would suggest that a certificate of birth, accompanied by a statement of facts as to the name, should be sent to the company. This might obviate the necessity of formal proof of identity on the policy moneys becoming payable, and the age of the assured would be admitted on the policy, which is always desirable. We think no real difficulty can, however, arise.

ALLEGED IRREGULAR PRACTICE.

H. C.—We would suggest that a letter stating the facts should be addressed to the Clerk to the Society of Apothecaries, Blackfriars, London. The Society would doubtless prosecute the person complained of if evidence of unqualified practice were forthcoming. A communication might also be made to the Secretary of the Medical Defence Union, Birmingham, who prosecute persons under Sec. 40 of the Medical Act, 1858, for the unlawful assumption and use of medical titles.

QUIS CUSTODIET CUSTODES?

GRADUATE writes: I am in practice near some courts of law, and get occasional calls to witnesses, prisoners on trial, etc., who may be taken suddenly ill; the call is always made by some official in uniform, and I was at first under the impression that the Court would therefore be liable for the fee. On inquiry, however, I am told that there is no fund out of which medical fees can be paid for attendance in such cases, and that I must look to the patient. The latter, however, is generally too poor to pay a fee, and, if not, shelters himself behind the fact that he did not send for me, and therefore cannot be liable. Who is liable in such cases? Would it be right for me to decline to attend in the future without a fee in advance? The general impression seems to be that a medical man can afford to give his time and services for nothing, trusting to the reward which virtue brings.

*** The person who engages the services of a medical man is liable to pay the reasonable price for them, just in the same way as the person who engages any other person to do any work for him. Who has in fact engaged those services it is sometimes difficult to say. The official in uniform is obviously acting under the orders of some other person, who is liable if he can be shown to have ordered the doctor to be sent for. The patient is also undoubtedly liable, but, if he is impecunious, his liability is not likely to be productive of fees. The only safe course in such cases is either to stipulate for payment in advance or at least to have a distinct statement that some named person will be responsible for the fee.

DISPOSAL OF PRACTICE OF INSANE PRACTITIONER.

JUMNA writes: A practitioner X is certified insane and is removed to an asylum. As there is but little prospect of his recovery, his wife and friends desire to sell the practice, which is fast dwindling away through

neglect. The husband has not been certified incurable by the Commissioners, and there seems no prospect of this for six months. The question arises, who is authorised to sell the practice?

*** We are advised that the best course would be for a near relative to apply by summons under the Lunacy Act, 1890 (Sections 116 and 117 more especially), for an Order for Sale for one or more of the reasons given in Section 117 of the Act, and that some one be named to carry the sale into effect. It is impossible, in the case of an Act so recent, to say what powers a judge will consider vested in him thereunder, but we can see no other course than the above application.

It might, however, be that an Order would only be made in case there was an actual contract for sale, and not in general terms, so as to enable a sale to be made at any time when convenient. In any contract which might be entered into, it would have to be made subject to the approval of the Court, otherwise the vendor, if unable to perform the contract, would incur a serious responsibility.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

LANDLORD'S LIABILITY FOR DEFECTIVE DRAINS.

THE question of the liability of a landlord for the defective drainage of a house which he lets has again come before a court of law, this time before Mr. Commissioner Kerr at the City of London Court. The tenant had taken a house on a three years' agreement on the faith, as he swore, of an assurance given by the agent, who let the house, that the drains were as good as any in London. After he had been some months in occupation sewage came into the house in such quantities that the drains were carefully examined, with the result that they were found to be old and much broken. Finally, after only half the term had expired, the tenant left the house and refused to pay any more rent, and, when sued for it, set up a counterclaim for damages.

Mr. Commissioner Kerr ruled that a counterclaim for damages sustained by reason of a fraudulent misrepresentation that the drains were good would in law be sufficient, and consequently refused to withdraw the case from the consideration of the jury. The house agent denied that he had made the representation that "the drains were as good as any in London;" but, as he also said they were in good order at the commencement of the tenancy, the jury, not unnaturally declined to accept his denial of the representation, and gave a verdict for the defendant on both claim and counterclaim.

The decision seems consonant both with law and with common sense. In many cases of course it is impossible to prove that a landlord or his agent has made any untrue representation as to the condition of the drainage to a house which he lets. The tenant ought to find out for himself all that he wants to know about the condition of the premises he is going to occupy, and, if he neglects to do so, he cannot throw on other persons the blame of their being less eligible than he had expected. But, if he does make inquiries from the person with whom he is dealing, and receives an answer which lulls his suspicions, he is entitled to make his bargain on the faith of that answer to recover damages from the person who makes it, should it subsequently turn out to have been false. There is no difference in principle between the case of a man who lets a house and that of a dealer who sells a horse. He need not say anything about the merits or condition of the commodity of which he wishes to dispose, but, if he does, and especially if he answers questions put by the person with whom he is making the bargain, he must answer truly. The recent case does not establish any fresh liability on the part of a landlord, but it enunciates clearly, if such a statement were required, that the condition of the drainage of a dwelling house is an all-important matter, so that a misstatement about it will give a cause of action to a person who sustains injury in consequence of relying upon its truth. The tenant in this case seems to have been more than usually careful in making inquiries before agreeing to become tenant, yet he got an unhealthy house, and his family became ill from inhabiting it. The verdict of the jury of the City of London Court shows that he made all reasonable inquiries, and was in no way to blame for bringing his family there; but we fear he has sustained a loss and annoyance for which their verdict cannot fully compensate him. Still, he is better off than many tenants, who, for want of making proper inquiries, find themselves under the liability to pay rent for insanitary premises, and without any claim against anyone else.

Another case—tried about the same date before Mr. Justice Stephen—shows how difficult it is to establish the liability of a landlord. The tenant had taken a flat into which sewer gas penetrated from the unsealed trap of a disused water closet, which the previous tenant had turned into a larder, and from a defective ventilating shaft. It was not shown that the landlord had made any express representation as to the condition of the drains or ventilating shaft, and the question to be decided was therefore whether he was responsible to his tenant for their being defective, as they admittedly were. It was not disputed that if they had been part of an ordinary dwelling house, of the whole of which the tenant had possession, the landlord would not have been responsible; but it was contended that, as the building was let out in flats, the defective pipes were not under the tenant's control, and therefore the landlord was responsible.

Mr. Justice Stephen at first took this view, and said that he should rule that the defendants—that is, the landlords—were liable if the jury thought that the tenant had been injured in consequence of their using their pipes in such a way as to allow noxious gases to escape. Subsequently, however, he reconsidered the matter and withdrew this ruling, and, consequently, nonsuited the plaintiff.

Whether this judgment will be accepted as final, or there will be an appeal, we do not know. The judgment must proceed on the particular facts proved, and a newspaper report can only give an imperfect idea on this point; but, even if the plaintiff should eventually succeed, judgment in his favour will only show that his tenancy was different from the majority, and that he has managed to impose on his landlord a liability from which most landlords manage to escape. The case, as it stands, enunciates over again the old rule that a tenant, when taking premises, must ascertain for himself that they are in a satisfactory sanitary condition, and that if defects subsequently become apparent, which he might have discovered at first, if he had investigated the condition of the premises with sufficient care, he cannot usually make his landlord responsible for the existence of those defects.

THE NOTIFICATION OF ENTERIC FEVER.

AT the Bolton County Police-court, on Monday, Dr. Gilchrist was summoned, at the instance of the Rural Sanitary Authority, for not complying with the provision of the Infectious Diseases Act, 1889. The case for the prosecution was that in December last the defendant attended a girl suffering from typhoid fever, and did not report the case until about a fortnight afterwards. Dr. Barr said that when he received the notice from defendant he visited the child and found that it was convalescent. For the defence it was submitted that Dr. Gilchrist had always shown himself willing to assist the local authority, and conformed with the regulations in this case as soon as he could accurately diagnose the disease. After some evidence as to the difficulty of diagnosing typhoid fever, the Bench dismissed the case. A second case was withdrawn, but notice of appeal was given by the clerk to the Rural Sanitary Authority.

DUTIES OF MEDICAL OFFICERS OF HEALTH UNDER THE NOTIFICATION ACT.

THE letter which, with the omission of names, is printed below, will be read with interest.

Local Government Board, Whitehall, S.W.,
February 6th, 1891.

SIR,—I am directed by the Local Government Board to advert to your letter of the 27th ultimo, respecting your duties in connection with certificates received by you under the Infectious Disease (Notification) Act, 1889; and, with regard to your inquiry on the subject, I am to state that the Act does not impose fresh duties on a medical officer of health, but merely increases the sources of information upon which he acts in the discharge of his existing duty in relation to infectious disease. Neither the Act itself nor any order of the Board imposes on a medical officer of health any obligation to visit each case notified to him, for the purpose of testing by personal examination of the patient the accuracy of the certificate, and it appears to the Board that it would usually be inexpedient that he should undertake such a personal diagnosis unless he

has reason to believe that the certifying medical practitioner is not acting in good faith.—I am, Sir, your obedient servant,

ALFRED D. ADRIAN, Assistant Secretary.

AN URBAN M.O.H. writes: The question is often asked in the BRITISH MEDICAL JOURNAL whether a medical officer of health is justified in examining patients reported to be suffering from infectious disease. No doubt your answer that he should not do so is correct as a rule; but, as I shall show, it may often become the painful duty of the medical officer of health to inspect the patients.

Some years ago a practitioner in this neighbourhood reported three cases of typhoid on the same day—a very unlikely thing to happen in our population of 20,000. You know what that meant. Three half-crowns for him, and for the sanitary staff the inspection of drains, disinfection and separate treatment of excreta, and the usual routine in typhoid in three houses. In addition, consider the inconvenience to which we put these three families, and the falsification of our records if the cases were not typhoid—on which I express no decided opinion, for I did not look at the patients. After taking a little time to breathe, this gentleman reported four further infectious cases on the same day. I thought it was now time to have a look around, and this was the result:—

Case 1, a female, reported as suffering from diphtheria; found that she had never ceased to do her housework; she had had a slight sore throat; called in the doctor as he passed; he offered her neither advice nor medicine. I noticed a slight swelling of one tonsil, but no trace of diphtheria.

Case 2, a woman of 45, also reported as ill of diphtheria; she never had a sore throat at all; he never told her she had diphtheria; she had called in a doctor of known skill, who treated her for some inflammatory affection of the bowels.

Case 3, an adult male, reported as suffering from typhoid; came home from work on Friday with looseness of the bowels, was in bed on Saturday, got up on Sunday, and went back to work quite well on Tuesday.

Case 4, scarlet fever—a genuine case.

I reported to the Sanitary Committee that in my opinion this man was going in for making money at their expense. The Board refused to pay for the first three of these cases, and the reporting practitioner acknowledged the justice of their procedure by his acquiescence. I know one or two practitioners who are too fond of reporting doubtful cases, as membranous tonsillitis, for diphtheria. From the foregoing experience, therefore—and all medical officers of health could relate something of the same sort—you will admit that, while the officer of health should accept the reporting certificate as containing the opinion of an honourable man, there are cases where the medical officer of health must himself see the patients, else he and his sanitary authority will be swindled.

MEDICAL ATTENDANCE IN INFECTIOUS HOSPITALS.

A MEMBER writes: In a small borough town where small-pox has recently appeared there is an infectious hospital to which no medical officer is attached. Are medical men supposed to attend and send medicine to patients, club and others, received there by order of the Sanitary Authority, without fee or remuneration from them?

*** We know of no regulation which would make it compulsory for medical men to attend patients in an infectious hospital, unless by some contract they have undertaken to do so. If the patients are paupers it is possible that the duty of attending them might be thrown on the Poor-law medical officer of the district in which the hospital is. Some regulations beyond those now in existence are much wanted in reference to the management of hospitals for infectious diseases in rural districts.

PENSIONS FOR DISPENSARY DOCTORS IN IRELAND.

"ENQUIRENS," who has held a dispensary appointment for eleven years, and is now incapacitated from rheumatism, wishes to know if he would be entitled to a small pension under such circumstances?

*** We do not think that so short a period of service as eleven years would entitle a dispensary surgeon to a pension, even if the board of guardians were inclined to recommend it.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, February 7th, 6,608 births and 3,803 deaths were registered in twenty-eight of the largest English towns, including London, which have an estimated population of 10,010,426 persons. The annual rate of mortality in these towns, which had declined from 28.7 to 22.3 per 1,000 in the preceding five weeks, further fell to 19.8 during the week under notice. The rates in the several towns ranged from 12.6 in Derby, 13.5 in Leicester, 14.7 in Hull, and 16.5 in Huddersfield, to 24.5 in Portsmouth, 26.9 in Blackburn, 30.2 in Plymouth, and 37.8 in Preston. In the twenty-seven provincial towns the mean death-rate was 20.4 per 1,000, and exceeded by 1.4 the rate recorded in London, which was 19.0 per 1,000. The 3,803 deaths registered during the week under notice in the twenty-eight towns included 332 which were referred to the principal zymotic diseases, against 401 and 379 in the preceding two weeks; of these, 81 resulted from whooping-cough, 80 from measles, 58 from scarlet fever, 43 from diphtheria, 37 from diarrhœa, 30 from "fever" (principally enteric), and not one from small-pox. These 332 deaths were equal to an annual rate of 1.7 per 1,000; in London the zymotic rate was 1.5, while it averaged 1.9 per 1,000 in the twenty-seven provincial towns, among which it ranged from 0.0 in Derby, in Hull, and in Cardiff, and 0.4 in Brighton to 3.8 in Oldham, 4.4 in Blackburn, 4.4 in Preston, and 5.7 in Halifax. Measles showed the highest proportional fatality in Bristol, Oldham, Preston, Halifax, and Blackburn; scarlet fever in Bradford and in Plymouth; and whooping-cough in Salford, Huddersfield, and Halifax. The fatality from "fever" showed no marked excess in any of the twenty-eight towns. Of the 43 deaths from diphtheria recorded during the week, 31 occurred in London, and 3 in Manchester. No death from small-pox was registered during the week, either in London or in any of the provincial towns; and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, February 7th. These hospitals contained 1,288 scarlet fever patients on the same date, against numbers steadily declining from 2,024 to 1,343 at the end of the preceding thirteen weeks; 92 new cases were admitted during the week, against 106, 99, and 93 in the previous three weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.0 per 1,000, and was considerably below the average.

OBITUARY.

HENRY MORTLOCK FERNIE, F.R.C.S.Ed.

THIS esteemed member of our profession died at his residence, Park Green, Macclesfield, on January 22nd. Mr. Fernie came of a family which has, for some generations, given members to the medical and clerical professions. Born at Yelden, Beds, in 1837, the fourth son of the Rev. John Fernie, rector of that place, he entered St. Thomas's Hospital, and in due course obtained the diploma of M.R.C.S. and L.S.A. Leaving St. Thomas's he entered on the house-surgeoncy of the Dover Hospital, in the duties of which he passed some two or three years.

In 1864 Mr. Fernie settled in Macclesfield as partner of the late Mr. Firth, on whose death, in 1871, he succeeded to the practice. Mr. Fernie did much good and sterling work in Macclesfield as Senior Surgeon to the infirmary, Certifying Factory Surgeon, and Surgeon to the Macclesfield School Board and to the Industrial School: he was most highly esteemed by all with whom his duties brought him in contact. In the industrial school especially he took a warm and philanthropic interest, and there he will be sadly missed.

Mr. Fernie was an active member of the honorary staff of the infirmary, and as a member of the house committee for many years his advice and opinion on all matters connected with the internal management of the institution were highly valued by his colleagues. He was a zealous member of the British Medical Association and of the Council of the Lancashire and Cheshire Branch; to his efforts the success of the last meeting in Macclesfield was largely due. Mr. Fernie was well read in modern literature, and was an ardent admirer of Dickens, of whose works he had a remarkable collection; he prided himself on possessing every pamphlet, *brochure*, or other writing in any way connected with that author.

In private life Mr. Fernie was an extremely genial companion, possessed of a fund of quiet humour, and was valued not less for his sterling honesty and independence of character than for his quiet and unobtrusive manners. He was always a peacemaker, and always on good terms with his colleagues and all about him, ever ready to do a kind action. No poor brother in the struggling ranks of the profession ever appealed to him in vain.

At his funeral was assembled a large number of sympathising friends and patients, and representatives of the various institutions with which he had been connected.

GEORGE TURNER, M.D.Edin., M.R.C.S.Eng., L.S.A.

THE death of Dr. George Turner, which occurred on January 31st, at the advanced age of 94, has deprived Stockport of one of its oldest and most respected townsmen. The deceased gentleman was Consulting Physician to the Stockport Infirmary. For many years he took an active interest in the local affairs of the borough; he became a member of the Municipal Council in 1847, and was elected mayor in 1850. In the following year, as first president of the Stockport Medical Society, he was presented with an inkstand and an illuminated address. After serving the full term of his aldermanship, he retired from the corporation in 1883. He associated himself with many public movements, and in the several offices which he filled won the respect and esteem of his colleagues and friends. A large body of admirers, including the mayor and magistrates of the borough, members of the Infirmary Committee, and representatives of the Wesleyan denomination, of which he was a member, showed their respect by attending the funeral of the deceased, which assumed a public character.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, February 6th.

Custody of Children Bill.—On the motion to go into Committee on this Bill, Lord MORRIS said the provisions in Clause 1 were all that were required. Clause 3 especially went beyond what ought to be the purview of the Bill.—Lord THRING, Lord NORTON, the BISHOP OF CARLISLE, and the Earl of MEATH defended the Bill.—Lord HERSCHELL said the Government considered the third clause a very necessary part of the Bill. It provided that when the Court was opposed to giving up a child, the onus of proof should rest upon the parent of showing that he was fit to be the guardian. —The Bill passed through Committee without material amendment.

Monday, February 9th.

Custody of Children Bill.—The report of amendments to this Bill was agreed to, and the third reading was fixed for Thursday.

Viscount CRANBROOK obtained leave to bring in an Elementary Education (Blind and Deaf) Bill.

Physical Education in Schools.—The EARL OF MEATH has introduced in the House of Lords a Bill for the promotion of physical education in elementary schools. It proposes to impose on the school authority for every elementary school in any populous town the duty of making provision for instruction and practice of all scholars of both sexes in physical education.

HOUSE OF COMMONS.—Friday, February 6th.

Police and Sanitary Regulations.—Mr. STUART WORTLEY moved the appointment of the Police and Sanitary Regulations Committee.—The motion was agreed to, as was also an instruction moved by Mr. FOWLER directing the Committee not to insert in any Bill referred to them clauses relating to matters which are the subject of provisions in "The Infectious Disease Notification Act, 1889," "The Public Health Acts Amendment Act, 1890," or "The Infectious Disease Prevention Act, 1890."

Monday, February 9th.

The Disease of "Yaws" in the Leeward Islands.—In reply to Sir T. ESMONDE, Baron H. DE WORMS said the medical officer of the public institutions in Dominica had been instructed to inquire into and report upon the disease of "yaws" in the Leeward and Windward Islands. The expenses of the inquiry would be paid out of the funds of the several islands in which it would be held.

Tuesday, February 10th.

Factories and Workshops.—Mr. MATTHEWS gave notice of a new Bill to amend the law relating to factories and workshops.

Indian Hospital Corps.—Sir W. FOSTER asked the Under Secretary of State for India whether it was the case that the men of the Indian Hospital Corps and bearer companies in war time received less rations than the Sepoy; were allowed only 10 lbs. weight of kit, against 33 lbs. allowed to the Sepoy; were entirely unarmed when in the field; and were rewarded only by a bronze medal, while the Sepoy received a silver one; and whether anything could be done to remedy these conditions.—Sir J. GORST said the statements in the question were substantially correct. The arrangements referred to were made by the military authorities in India, and the Secretary of State saw no ground for interfering with them.

MEDICAL NEWS.

THE Countess of Cadogan has become Patroness of the National Pension Fund for Nurses in succession to the late Lady Rosebery.

THE German Emperor has given a sum of 20,000 marks towards the erection of a sanatorium in some "elevated healthy region of German East Africa." A German hospital has been built at Dar-es-Salaam.

AN asylum for female inebriates has just been opened at Bonn. The patients are divided into three classes, the payments being respectively from 3 to 5 mark, 1½ mark and 60 pfennigs a day.

SUCCESSFUL VACCINATION.—Mr. Beaven Rake, M.R.C.S.Eng., L.S.A., has for the ninth time in succession been awarded the Government gratuity for successful vaccination in the No. 2 District of the Fordingbridge Union.

PHARMACEUTICAL SOCIALISM.—It is stated that the German Social Democrats have proposed to the Reichstag that the Government should take the drug vending business altogether into its own hands, and should sell all medicines at cost price.

NEW SCIENTIFIC SOCIETIES IN AMERICA.—A new Society, entitled "The American Anthropometric Society," has lately been founded at Philadelphia under the presidency of Dr. J. Leidy, Professor of Anatomy in the University of Pennsylvania. Professor Virchow has been elected Honorary Vice-President. Another new Society is the "American Morphological Society," which has just been established at Boston.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. H. Obersteiner, of Vienna, formerly physician to the Archduke Maximilian (aged 71), and Dr. Ed. Michaelis, of Berlin (aged 66), well known as having been assistant and generally *fidus Achates* to von Graefe from 1851 to 1862, and the author of a *Dictionary of Diseases of the Eye*, which he dictated when he himself had lost his sight.

ILLUSTRATIONS of skin diseases have been sent us from Dr. Garden's dermatology clinic at the Aberdeen Royal Infirmary, reproduced from photographs by zincography by Angerer and Goeschl, of Vienna. The photographs in the first instance must have been excellent, and the success of the reproduction deserves all praise. There are thirty-four illustrations showing a variety of rare and well-known skin diseases. They will, we believe, be found useful both for teaching purposes and for practitioners.

PRESENTATIONS.—The retirement of Dr. Robert Lunan, of Blairgowrie, from the post of parochial medical officer has been chosen by his friends as a fitting occasion for the expression of their high appreciation of his professional services for a period of fifty-three years. This they have done by entertaining him at a public banquet, and presenting him with a massive silver dinner service, together with an illuminated address, Miss Lunan being the recipient of a diamond and pearl necklet.—Mr. William Blusson, M.R.C.S., who has practised in Edgware and Mill Hill for about twenty-eight years, has been presented by his friends and patients with a massive silver bowl on an ebonised stand, a handsome walnut sideboard, and a cheque for £140, as a mark of esteem on his leaving Edgware.—Dr. A. W. Hogg, of Huddersfield, who has been conducting a class in connection with the St. John Ambulance Society, 100 per cent. of which have successfully passed their examination, has been presented by them with a handsome marble timepiece with an appropriate inscription.

WHAT CONSTITUTES CRIMINAL NEGLECT?—The inquest recently held at Oldham by Dr. Thomson, the coroner for the borough, raises the question to what extent a parent is justified in withholding from his child medical treatment which he is told may save his child's life, when without such treatment the illness is almost certain to have a fatal termination. In the case in question, Dr. Hodgson, who was in attendance, having recognised that the child was suffering from pleural effusion, proposed to puncture the chest to see whether the effusion was serous or purulent, and fully explained to the parents the nature of the case and the probable termination if the fluid, being purulent, was not removed. The father declined to allow anything to be done, and requested Dr. Hodgson to discontinue coming to see the child, though warned that the fluid might burst into the lungs and cause the child's death. Sixteen days later, Dr. Hodgson was summoned again to the child, and found it much emaciated and bringing up large quantities of pus, and shortly afterwards it died. Believing that the conduct of the father amounted to criminal neglect, he refused to give a certificate, and the case coming to the knowledge of the coroner, an inquest was held, with the result that, although it was made plain that the father knew the risk that was run, the jury refused to find him guilty of manslaughter. Has then a person not only a right to commit suicide by refusing a necessary operation on himself, but also to refuse to allow a necessary operation to be performed on another?

EXTENSION OF GUY'S HOSPITAL MEDICAL SCHOOL.—The Court of Governors of Guy's Hospital have acceded to the request of the medical staff for increased accommodation in the medical school. The existing carpenters' shops within the hospital grounds had fallen into such a dilapidated condition that it was necessary either at once to undertake very costly repairs or to rebuild them. The latter alternative being preferred, the Court decided to combine with it a considerable extension of the hospital and school. The proposed buildings comprise a dental department, consisting of a conservation room 110 feet long and 24 feet wide, with space for fifty operating chairs, to replace the existing room, which, though erected in 1889, is already too small for the needs of the dental school. Beneath the conservation room will be the dental laboratory, measuring 65 feet by 24 feet, in which thirty

students can work at one time; and beneath the laboratory will be the waiting rooms for male and female patients, with the necessary conveniences. Adjoining the conservation room will be a large lecture room intended for the dental lectures and for those on experimental physics. There will also be a smaller room for the exhibition of apparatus and for practical work in physics. Facing the conservation room, but at a lower level to avoid obstruction to light, will be a new chemical laboratory, to accommodate a hundred students working at one time, and adjoining the laboratory is a lecturers' room and a balance room. The old chemical laboratory will be used for classes in bacteriology, and for a course of practical work required for the diploma in Public Health. A new bacteriological laboratory, intended chiefly for advanced students and for research, is also included in the plans, and the building will be wired for the electric light.

MEDICAL VACANCIES.

The following Vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—House-Physician. Salary, £65 per annum, with board, lodging and washing in the hospital. Applications to John Bonnett, Secretary, 23, St. Andrew's Street, Cambridge, by March 10th.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Medical Registrar; double qualifications. Must not hold Poor Law, club, or paid dispensary appointment. Applications to the President and Committee by February 28th.

BRIXTON, STREATHAM, AND HERNE HILL DISPENSARY.—Resident House-Surgeon; unmarried; double qualifications. Salary, £150 per annum, with furnished apartments, attendance, coal, and gas. Applications to the Secretary, Water Lane, Brixton, by February 28th.

BROWN ANIMAL SANATORY INSTITUTION.—Professor-Superintendent. Salary, £250 per annum. Application by March 2nd to the Registrar of the University of London, Burlington Gardens, W., from whom full information respecting duties, etc., can be obtained.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser, unmarried. Salary, £100 per annum, with board and residence. Applications, on printed forms to be obtained to William Appleton, Clerk to the Managers. Clerks' Office, Cleveland Street, W., by February 14th.

CHICHESTER INFIRMARY, Chichester.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, with not more than five testimonials, to Eugène E. Street, Secretary, by February 21st.

CITY HOSPITAL FOR INFECTIOUS DISEASES, Newcastle-upon-Tyne.—Resident Medical Assistant. Salary, £50 for first year, and, if reappointed, £70 for second year, with board, lodging, and washing. Applications to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, by February 28th.

COUNTY COUNCIL FOR THE COUNTY OF DERBY.—Medical Officer of Health for the Administrative County of Derby. Salary, £600 per annum, with £200 extra for travelling and other expenses. Applications to N. J. Hughes-Hallett, Deputy Clerk to the Council, 40, St. Mary's Gate, Derby, of whom forms of application, etc., can be obtained.

COUNTY DONEGAL INFIRMARY.—House-Surgeon and Registrar. Salary, £60 per annum, with apartments and rations. Applications to Rev. J. S. McClintock, Honorary Secretary, Lifford, before March 1st.

CO. NTY OF LANARK.—Medical Officer, under 45 years of age, must reside in or near Hamilton or Uddinston. Salary, £700 per annum, with travelling expenses and allowance for a clerk and office. Applications to W. Alston Dykes, County Clerk, Hamilton, by February 14th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House-Surgeon, unmarried, double qualifications. Salary, £100 per annum, with board and residence in the house. Applications to William Clark, Honorary Secretary, by February 19th. Election on March 3rd.

EDENDERRY UNION (Edenderry Dispensary).—Medical Officer. Salary, £115 per annum, and the usual fees. Applications to Garrett Tyrrell, Esq., Monasteroris, Honorary Secretary. Election on February 14th.

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer; must be Graduate in Medicine. Salary, £130 per annum, with residence, board, and washing. Applications to Dr. J. D. M. Coghill, House-Governor, by February 28th. Election on March 6th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Surgeon to Out-Patients; must be F.R.C.S.Eng. Applications to William T. Grant, Secretary, by February 24th.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Westminster, S.W.—Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by February 24th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—House-Physicians. Applications to Henry Dobbin, Secretary, by February 25th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Surgical Registrar. Applications to Adrian Hope, Secretary, by February 24th.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Board and lodging provided, but no salary. Appointment for six months. Applications to C. W. Carver, Honorary Secretary, by February 16th.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Junior House-Surgeon; double qualifications. Salary, 60 guineas per annum, with board and residence. Applications to the Chairman of the Medical Board by February 23rd.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon; must possess L.D.S. diploma. Salary, £50 per annum. Applications to Arthur G. Klugh, Secretary, by March 10th.

NEWCASTLE-ON-TYNE DISPENSARY.—Resident Medical Officer. Salary, £250 per annum, with furnished residence, double qualifications. Applications to the Honorary Secretary, Neison Street, Newcastle-on-Tyne, by February 19th.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant; qualified men or fourth-year students. Appointment for six months. Board, lodging, and washing. No salary. Applications, stating age, with testimonials, to E. M. Keely, Secretary, by February 14th.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant; qualified men or fourth-year students. Board, lodging, and washing. No salary. Applications to the Secretary, E. M. Keely, by February 14th.

OWENS COLLEGE, Manchester.—Demonstrator in Pathology; must devote his whole time. Stipend, £140 per annum. Applications to H. W. Holder, Registrar, by March 2nd.

PAROCHIAL BOARD OF FETTERCAIRN.—Medical Officer. Applications to D. Frain, Clerk to the Board, Fettercairn, by February 21st.

ROYAL ACADEMY OF ARTS.—Professor of Anatomy; professorship tenable for five years, the holder being eligible for re-election. Applications, with not more than four testimonials, to the Secretary, by February 21st.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House-Surgeon and Secretary. Salary, £80 per annum, with board. Applications to H. G. Lys, Secretary (of whom particulars of the duties may be obtained) by March 4th.

ST. THOMAS'S HOSPITAL.—Surgeon; must be F.R.C.S.Eng. Applications to Mr. E. M. Hardy, Treasurer's Clerk, by February 21st.

SCARBOROUGH HOSPITAL AND DISPENSARY.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications to the Honorary Secretary, by February 14th.

SOUTHERN HOSPITAL, Clifford Street, Manchester.—House-Surgeon. Appointment for not less than six and not more than twelve months. Must reside near the hospital. Applications to Geo. Wm. Fox, 53, Princess Street, Manchester.

UNIVERSITY OF GLASGOW.—Six Examiners in Medicine. Annual fee, £30. Appointment for four years. Applications, with twenty printed copies of testimonials, to the Secretary of the Court, Alan S. Clapperton, 91, West Regent Street, Glasgow, by February 21st.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Board, lodging, and washing in the hospital. Appointment for six months. Applications to W. H. Laban, Secretary, by February 22rd.

MEDICAL APPOINTMENTS.

ASHDOWN, George William Wetton, M.D.Edin., M.R.C.S.Eng., appointed Medical Officer to the Tetbury Cottage Hospital.

BERTHON, Ellen Margaret Tinnè, M.B.Lond., appointed Clinical Assistant to the New Hospital for Women, Euston Road, *vice* Miss M. M. Sharpe, L.R.C.P. and S.

BERRYMAN, H. A., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the General Hospital, Birmingham, *vice* E. V. Gibson.

BLUMBERG, Henry, M.D.Prague, L.R.C.P.Lond., appointed Honorary Medical Officer to the Southport Hydropathic Hospital.

BOASE, Richard Davey, L.R.C.P.Lond., M.R.C.S.Eng., appointed Honorary Surgeon to the West Cornwall Dispensary and Infirmary.

BROCK, William John, M.B., C.M.Edin., appointed County Medical Officer for Caithness-shire.

BULLOCK, Thomas William, M.R.C.S.Eng., L.S.A., reappointed Senior Surgeon to the Warwick Provident Dispensary and Cottage Hospital.

CAMERON, James A., M.D., M.R., C.M.Edin., appointed by the Joint County Councils of Banff, Elginshire, and Nairnshire, Medical Officer of Health for the Three Counties.

COLLINS, T. Tenison, L.R.C.P. and S.Edin., L.M.Rotunda, appointed Medical Officer of Creagh Dispensary District, Ballinasloe Union.

CRAWFORD, James, M.D., M.R.C.P.Lond. and Irel., L.M., appointed Honorary Physician-Accoucheur to the Farringdon General Dispensary and Lying-in Charity, *vice* I. Tanner, M.D., resigned.

DAGGETT, H. L., M.B., B.C.Cantab., L.R.C.P.Lond., M.R.C.S., appointed House-Surgeon to the Ripon Cottage Hospital and Dispensary, *vice* Dr. Buxton.

DAVIES, Sidney, M.D., M.R.C.S.Eng., appointed Medical Officer for the Parish of Plumstead.

FOOTT, St. John T., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Third District of the Hollingborn Union, *vice* J. J. Langston, L.R.C.P.I., resigned.

FRY, J. F., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the First District of the Shepton Mallet Union.

GIBSON, John Hutchinson, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Aldershot District of the Farnham Union, *vice* W. W. Young.

GRAHAM, John Thomas, M.D.Glas., M.R.C.S.Eng., appointed County Medical Officer for Perthshire.

GRANT, Frederick William, M.D., C.M., B.Sc.Edin., appointed Visiting Physician to the Gray's Hospital, Elgin, *vice* W. Galletby, M.D.

GRANT, Ogilvie, M.B., C.M.Edin., appointed County Medical Officer for Inverness-shire.

GUNTHER, Theodore, M.D., appointed Medical Officer of Health to the Hampton Wick Local Board.

HALLIWELL, John, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the No. 2 or Vale District of the Winchcomb Union, *vice* Dr. S. J. Campbell.

HUNTER, William Lovell, M.D., B.Ch.Dub., appointed Medical Officer of Health for the Pudsey Urban Sanitary District of the North Brierley Union, *vice* Dr. Wilson.

MACGREGOR, Johnston, M.R.C.S., L.R.C.P., appointed Resident House-Surgeon and Apothecary to the Royal Orthopædic Hospital, *vice* Mr. Arnold Lyndon, resigned.

MILLIGAN, William, M.B., C.M., appointed Honorary Assistant Physician to the Manchester Hospital for Consumption and Diseases of the Throat, *vice* Dr. Blore, resigned.

MONTGOMERY, H. M., M.D., M.B., C.M.Edin., reappointed Assistant Physician to the West Cornwall Dispensary and Infirmary.

MONTGOMERY, James Barclay, M.D.Glas., F.R.C.P.Lond., L.R.C.S.Edin., reappointed Physician to the West Cornwall Dispensary and Infirmary.

FERKIN, Robert Frederick Thornton, L.R.C.P.Edin., M.R.C.S., reappointed Visiting Surgeon to the Warwick Dispensary and Cottage Hospital.

POLLARD, Reginald, M.B., M.R.C.S., appointed Honorary Surgeon to the Torbay Hospital, *vice* Mr. H. Gordon Cumming, resigned.

POWERS, Charles Henry, L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Cumberland Infirmary, Carlisle.

REYNOLDS, Ernest James, M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Poplar Hospital for Accidents.

ROBERTSON, John, M.D.Edin., appointed Assistant to the Medical Officer of the County Borough of St. Helens.

SEMON, Felix, M.D.Berlin, F.R.C.P.Lond., Assistant Physician for Diseases of the Throat, St. Thomas's Hospital, appointed Physician.

SENIOR, A. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Manchester Southern Hospital, and to the Manchester Maternity Hospital.

SHIMELD, James, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Ilford Urban Sanitary District of the Romford Union.

SMEETH, Henry G., B.A.,M.D., B.Ch.Dubl., appointed Medical Officer to the Heaton Norris (No. 2) District of the Stockport Union, *vice* — Bale, resigned.

SOUTHWELL, Charles H., Ph.C., appointed Public Analyst to the Administrative County of the Parts of Holland, Lincolnshire, *vice* Dr. Charles Graham.

STOKOE, B. T., M.B., B.S., appointed Resident Medical Assistant to the City Hospital for Infectious Diseases, Newcastle-on-Tyne, *vice* W. Tonge Smith, M.D.

STOPFORD, Robert, L.R.C.P.I., appointed Honorary Medical Officer of the Southport Hydropathic Hospital.

SUTTON, Frederick, M.R.C.S.Eng., L.S.A., appointed Medical Officer to the Raynard Cottage Hospital, Willingham.

SYMONS, John, M.R.C.S.Eng., L.S.A., reappointed Surgeon to the West Cornwall Dispensary and Infirmary.

TIBBETS, John, M.D.St.And., M.R.C.S.Eng., L.S.A., reappointed Medical Officer to the Warwick Provident Dispensary and Cottage Hospital.

WAITE, Henry, L.R.C.P.Edin., M.R.C.S.,Eng., appointed Medical Officer for the Upper and Lower District of the Bramley Union.

WILLIAMS, W. C., L.D.S., R.C.S., reappointed Honorary Dental Surgeon to the Warwick Provident Dispensary and Cottage Hospital.

WILSON, Andrew, M.B., C.M.Glas., appointed Assistant Surgeon to the Glasgow Eye Infirmary.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: On Diseases of the Iris. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. W. R. H. Stewart: On Otorrhœa.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor B. Plowright: On Fungi in Relation to Plant Disease. Lecture I. Phytopathology in its General Aspect.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Clinical evening. Dr. Herringham: Asthma in a Boy. Mr. Paget: Strangulated Hernia; Gangrene of Bowel; Recovery with a Fistula. Dr. Ewart and Mr. Bennett: Dexiocardia (without transposition of other viscera) and Bronchiectasis; Pulmonary Incision and Resection of Rib for the Latter. Dr. Rivers (for Dr. Jackson): A Case of Treadler's Cramp. Mr. Edmund Owen: Amputation of both Mammæ for Scirrhus. Sir Hugh Beevor: (1) Malformation of Heart, Defect of Ventricular Septum: (2) Defective Development of Abdominal Parietes, Respiration entirely Costal. Dr. Ewart: A Case of Situs Inversus Viscerum. Mr. Sheild: Loose Body in Knee-Joint of Unusual Size. Mr. Allingham: Case after Trephining. Dr. Campbell: Lupus Cases under Koch's Treatment. Dr. de Havilland Hall: (1) Raynaud's Disease; (2) Addison's Disease; (3) Bronchocele.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. Thorne: The Milroy Lectures on Diphtheria, its Natural History and Prevention. Lecture I.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On General Paralysis of the Insane. Epilepsy. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On the Nature of Granuloma Fungoides and Allied Affections.

ROYAL STATISTICAL SOCIETY, Lecture Theatre of the Museum of Practical Geology, 28, Jermyn Street, S.W., 7.45 P.M.—Dr. A. Newsholme: The Vital Statistics of Peabody Buildings and other Artisans' and Labourers' Block Dwellings.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Specimens: Dr. Job Collins: Hypertrophied Kidney with Dilated Pelvis. Mr. Stephen Paget: Imperforate Rectum. Dr. William Ord: Aneurysm of the Aortic Arch Opening into the Superior Cava. Mr. Bland Sutton: Cervical Teeth. Mr. B. Pitts: Columnar-celled Carcinoma of Humerus Secondary to Carcinoma of Rectum. Mr. J. R. Lunn: Carcinoma of Kidney. Mr. J. J. Clarke: Effects of Intrauterine Pressure on the Fœtus. Mr. W. G. Spencer: Exophthalmic Goitre in a Girl causing Death by Asphyxia.—Card Specimens: Dr. W. Hadden: Carcinomatous Destruction of Œsophagus Opening the Aorta. Mr. G. H. Makins: Spinal Meningocele Excised after Morton's Injection. Mr. S. G. Shattock: Fœtus with Genu Recurvatum.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. R. Maguire: On the Pulse, with Demonstrations. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. B. Lawford: On Optic Atrophy.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. B. Plowright: On Fungi in Relation to Plant Disease. Lecture II. The Potato Disease.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 8 P.M.—Dr. Louis C. Parkes: The Relations of Saprophytic to Parasitic Micro-organisms.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7 P.M.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, W., 8 P.M.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. Thorne: The Milroy Lectures on Diphtheria, its Natural History and Prevention. Lecture II.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Buzzard: Selected Cases. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Montagu Lubbock: On Anomalies of Speech in Children and their Treatment. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. G. Stoker: On Chronic Glandular Disease of the Pharynx and Nasopharynx.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND, Bethlem Hospital, 4 P.M.—Dr. CLIFFORD ALLBUTT: Observations on the San Clemente Asylum at Venice. Dr. Savage: On the Plea of Insanity. Dr. Baker: Notes Descriptive of a New Hospital Villa recently erected in the Grounds of the York Retreat. Dr. Hyslop will show and describe Pathological Specimens.

HARVEIAN SOCIETY, 8.30 P.M.—Dr. Maguire: Demonstration of a Method for detecting Free Hydrochloric Acid in the Gastric Juice. Dr. Charles Theodore Williams: The Treatment of the Pyrexia of Phthisis.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. R. Maguire: On Pulmonary Cavities.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. B. Plowright: On Fungi in Relation to Plant Disease. Lecture III. The Heteræcismal Uredineæ.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On the Different Forms of Lupus.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

MAYNARD.—On Friday, the 23rd January, at The Hollies, Walton-le-Dale, Preston, the wife of Surgeon F. P. Maynard, M.B., I.M.S., of a daughter.

MARRIAGES.

COCKRAN—SMITH.—On the 2nd inst., at St. Mary Magdalene's, Brighton, by the Rev. Canon Moore, Christopher Henry Cockran, physician and surgeon, of Caversham, Reading, to Lilian, second daughter of F. Gilliatt Smith, Esq., (late) of The Oaks, Woodmansterne, near Epsom, Surrey.

MORTON—GOODCHILD.—On Saturday, February 7th, 1891, at St. Mark's Church, Hamilton Terrace, by the Rev. Canon Duckworth, D.D., assisted by the Rev. G. Ward Saunders, B.A., and the Rev. Edward Bate, B.A., Edwin Morton, M.D., son of the late Vicar of Wetton, Staffs., to Anne Emily, youngest daughter of the late John Goodchild, Esq., of Chelsea, and Barwell Court, Walton-on-Thames.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

MEDICUS (B.S.) would be glad to hear of any private institution where a gentleman, helpless from locomotor ataxy, could be received on payment of a moderate sum, his income being very small.

ANSWERS.

SANATORIUM.—The manufacturers of baths, etc., who exhibited at Leeds were Messrs. Slater and Sons, 21A, Bond Street, Leeds, and Mr. T. J. Wilkinson, 2 and 6, Spencer Street, Hull.

B. I.—Salomonsen's little book, *Bacteriological Technique*, translated by Trelease, would probably be the best. Professor Crookshank's *Bacteriology* and Klein's *Micro-organisms in Disease* might also be mentioned.

AMENORRHŒA.

DR. FRED. J. SMITH (Christopher Street, Finsbury Square, E.C.) writes: In answer to "A Country Surgeon," I would suggest "letting well alone." Why should a healthy woman be compelled *nolens volens* to menstruate? Surely menstruation is one of Nature's offices, with which, in the absence of symptoms, we have no need to interfere. Meddlesome midwifery is, I believe, condemned on all sides; why, therefore, should meddlesome gynæcology be advocated? Should symptoms supervene, by all means interfere; but until they do so "Country Surgeon" may rest well assured that no harm is likely to accrue.

MR. G. SHERMAN BIGG, F.R.C.S.Ed. (Victoria Street, S.W.), writes: In reply to "Country Surgeon," he would be wise to leave well alone. The cessation of menstruation is a probable conservation of Nature, and any interference is likely to cause trouble. If, however, he cannot persuade his patient to be content with good health, he should order a full length hot bath for fifteen minutes every morning and evening, and administer salicylic acid in ten to fifteen-grain doses three times a day. Masssage and galvanism add to the efficacy of this treatment. A French physician, whose name has escaped my memory, has published a series of observations on the emmenagogue effect of salicylic acid.

PHYSICAL EDUCATION AT PREPARATORY SCHOOLS.

PATER.—It would probably be vain as yet to search for any preparatory school in which the principles of a perfect education—one, that is, in which moral, intellectual, and physical training is each accorded due and proportionate importance in practice as well as in theory. Even in the larger schools for older pupils the physical side of education has, until recently, owed its existence as well as its development mainly to the natural instincts of the pupils themselves. It is only lately that practical educationalists have awakened to an appreciation of the essentially symmetrical nature of all education worthy of the name. It is inevitable that in preparatory schools that should chiefly be done and taught which is likely to "pay" in the larger schools for which each child is being "prepared;" and under these circumstances it is but natural to find schoolmasters anxious to throw upon the shoulders of parents all such additional burdens as are entailed by drilling, swimming, and other physical exercises which have not hitherto been generally admitted as integral parts of the education of youth. If a parent desires that his son should be drilled, and is willing to pay some extra equivalent for this advantage, well and good; but the schoolmaster has not found that a well set up boy is, for that reason, allowed extra marks in the scholarship examinations of those older schools into which his pupils will be drafted, and upon success in which his reputation as a successful teacher largely depends. No doubt there are several schools for young children in whose system much more attention is now being devoted to the physical side of education than was the case a few years since; but it is extremely doubtful if there be any one in which the whole question is adequately treated, or in which its several relations are fairly adjusted. The influence which alone can improve this state of things must, as regards all schools, be ultimately derived from outside public opinion. And as the older schools set their houses in order the preparatory schools may be trusted to recognise their own interests in following suit. At present individual schools of the latter type can scarcely be blamed because they have not undertaken the speculative risk of furnishing to the schools above them a supply of youths educated more wisely no doubt, but after a fashion for which there has until quite lately and only in scattered quarters arisen anything like an appreciable demand.

INFLUENZA IN HORSES.

DR. GEORGE PARSONS.—Our correspondent will find information of the kind asked for in the *Veterinary Journal* for January, 1891; also a full account of the outbreak of influenza in Manchester in the same journal for February, 1891. The publishers are Baillière, Tindall, and Cox, 20, King William Street, W. A paragraph on this subject was published in the BRITISH MEDICAL JOURNAL of January 3rd, p. 31.

NOTES, LETTERS, Etc.

OPERATIVE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

DR. HEYWOOD SMITH (Harley Street, W.) writes: Mr. Butler-Smythe's most extraordinary letter must not be allowed to go unanswered. One would imagine that he does not wish to be ranked with the modern school of gynæcologists, but to be associated rather with those who shut their eyes to the great advance that has been made in the last twenty-five years. He says, "Judging from the number of operations for removal of the uterine appendages.....it would seem that diseases of the ovaries and tubes must either be enormously on the increase, or else organs are frequently removed in cases which do not warrant such extreme measures." In this sentence, apart from his discrediting the judgment of his compeers, he gives two alternatives, one of which is vague and the other erroneous, and altogether omits a third premiss—that the wide experience of late years has so greatly added to our knowledge and diagnostic skill that diseases are now recognised earlier and remedied which used then to be ignored.

After using the offensive expression of "spaying" women, he goes on to remark on the "unlimited mutilation of women." Does Mr. Butler-Smythe thus speak of a poor woman who has had to lose her leg for extensive disease of the knee-joint? Yet he might with equal propriety do so. Then he says, "The matter rests entirely with the leaders of the profession." Who are the leaders of the profession? Do not these so-called leaders often drag behind in the general advance, and by their very obstruction tend to hinder good being wrought? "If they decline to move in the matter, not only will they be guilty of culpable negligence, but they will also be looked upon as acquiescing in what has become little short of a public scandal." This sentence may be turned back on Mr. Butler-Smythe. They are already thus guilty, not in their acquiescence, but in their refusing to recognise the gravity of the diseases that are sought to be remedied.

It is very reprehensible for Mr. Butler-Smythe to have used such an expression as "public scandal" in reference to the earnest work of those who are doing their utmost by painstaking investigation into the seriousness of those maladies which cripple so many suffering women in order to relieve and cure them; and especially as your widely-circulating JOURNAL is read not only by thousands of our professional brethren in general practice, who look to the "leaders of the profession" for guidance, but also by hundreds of laymen in numerous clubs and reading rooms.

PUBLIC HYPNOTIC DEMONSTRATIONS.

DR. GEO. C. KINGSBURY (Blackpool) writes: I was very pleased to read the note on the above subject in the BRITISH MEDICAL JOURNAL of February 7th, page 321. The object of this letter is to warn your readers against recognising in any way a public showman, who has recently been in Manchester, and is now, I believe, in Southport. He advertises himself in the newspapers, by circular, and placard, as "Dr. George André," and, like Dr. Vores, gives himself out as a "pupil of Charcot." By means of his "title" he has unfortunately succeeded in inducing some highly respected members of the profession, not only to attend his shows, but even to preside at them.

In Manchester one of the most attractive features of the shows was a demonstration of how he could induce a subject to steal or commit murder. When questioned as to his degree, he had to admit that he was only a "Doctor of Hypnology." He has been able to combine with the show a large "clinique," where high fees are paid in advance by all classes of patients. He also undertakes to teach doctors, clergymen, lawyers, and ladies how to hypnotise and "apply the science to surgical operations, epilepsy," etc. I enclose two of his circulars.

ROUGHTON'S SPLINT.

MR. EDMUND W. ROUGHTON (Westbourne Terrace, W.) writes: My attention has only just been drawn to a letter in the BRITISH MEDICAL JOURNAL of November 8th, 1890, in which Mr. Jonathan Hutchinson, jun., accuses me of inventing a splint with which everybody has been familiar for years. I have no claim to such inventive genius, never having invented a splint of any sort. The splint in question is an outside splint, with a foot piece, used in the treatment of Pott's fracture. When I was house-surgeon at St. Bartholomew's Hospital I was dissatisfied with the results produced by this apparatus, and was thereby led to add to it the arrangement of bandages described by me in the *Lancet* of December 10th, 1887, in a short paper entitled "A Method of Treating Pott's Fracture." This modification was attended with such good results that I felt justified in drawing the attention of surgeons to it. Since that time my method of treating Pott's fracture has been extensively practised at St. Bartholomew's and elsewhere, with, I believe, very good results. Unfortunately, students and others have given my name to the splint used (but not invented) by me in this method. This appears to have annoyed Mr. Hutchinson so much that he has felt it

his duty to write to you, and accuse me (*a*) of inventing something already well known; (*b*) of claiming novelty in reference to the same; and (*c*) of plagiarism. I have disposed of his first accusation; as the second and third are dependent upon the first, I need say nothing about them.

In conclusion, I wish it to be understood that although I lay no claim to the invention of any splint, I consider that a certain amount of credit is due to me for having converted an unsatisfactory apparatus into a highly efficient and useful one.

A WARNING.

MR. E. NETTLESHIP (Wimpole Street, Cavendish Square, W.) writes: I shall be glad if you will allow me, through your columns, to warn others against a person calling himself a medical man and former student of St. Thomas's under the name of Charles Huthwaite. I cannot find that name in any of our books, and the only medical man of that name to be found on the *Register* or in the *Medical Directory* died in 1883. I think it right to trouble you with this letter, because the person I refer to is in possession of a sheet of note paper from my waiting room, stamped with my address, on which he appears, after leaving me, to have written my name, and the names of some of my colleagues previously visited, together with an exaggerated statement of the sum given to him by each, in reality only a few shillings. This paper he has, as I have since learned, been using in order to extort larger gifts from another colleague.

PREVENTION AS WELL AS "CURE."

W. H. writes: While we all recognise the efforts made lately towards the prophylactic and hygienic treatment of tuberculosis, yet Professor Koch's "cure" only intensifies the long-urged medical dictum, that, for some amelioration of consumption, cancer, and such germ diseases, it is not alone sufficient to improve the vital resisting force, or to starve the bacilli by cutting off their pabulum; but it is essential that the public be instantly roused to enact, that in such cases, the sputa, discharges, etc., should be carefully destroyed, and more especially that the corpse should be cremated instead of being consigned to the earth to be shortly after "imprisoned in the viewless winds and blown with restless violence round about the pendent world," along with other poisons not less dangerous to the living. Would that Sir Henry Thompson's paper on Cremation[1] was read in every school, college, and public library, and that thoughtful men would deserve well of future generations, by giving their attention to this most pressing, deadly, subject, one far more important than the other "questions of the day."

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) Mr. H. W. Allingham, London; Mr. H. C. L. Arnim, Shikapur; Dr. L. Atthill, Dublin; Dr. Arlidge, Stoke-on-Trent; Arbitrator; Dr. T. C. Allbutt, London; Dr. Atkinson, London. (**B**) Mr. Gilbert Barling, Birmingham; Dr. Clifford Beale, London; Messrs. J. B. Baillière et Fils, Paris; Dr. A. Burger, London; Mr. E. H. Buckell, Chichester; Mr. A. H. Benson, Dublin; Messrs. Baiss Brothers and Co., London; Mr. G. S. Bigg, London; F. C. B.; Mr. H. C. Burdett, London; Mr. H. Bradburn, Southport; Dr. J. W. Ballantyne, Edinburgh; Dr. Bride, Wilmslow; Dr. W. G. Barras, Govan; Mr. W. Boggett, London; Mr. W. Berry, Wigan; Dr. F. Barnes, London; Mr. C. J. Bond, Leicester; Dr. G. G. Bantock, London; Dr. P. Boobbyer, Nottingham; Dr. Balding, Royston; The J. P. Bush Manufacturing Company, London. (**C**) Mr. F. Collins, Wanstead; Dr. M. Cameron, London; Critic; Dr. J. M. Caw, Cupar; Dr. C. J. Cullingworth, London; Mr. J. Clare, Stoke-on-Trent; Dr. S. M. 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[1] *Nineteenth Century Magazine*, January, 1888.

BOOKS, ETC., RECEIVED.

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AN ADDRESS

ON THE EDUCATION OF MIDWIVES, CONSIDERED IN CONNECTION WITH THE MIDWIVES REGISTRATION BILL.[1]

By LOMBE ATTHILL, M.D.,
Ex-Master Rotunda Hospital.

Preventive Medicine, or, as it is more commonly termed, "Sanitary Science," has made great progress during the last twenty years. Indeed, until within the recollection of the present generation it can hardly be said to have been recognised by the public as forming a part of medical science, or been insisted upon as a branch of medical education. Jenner's discovery of the protective powers of vaccination was the first great step in the science of preventive medicine. Now thousands of additional lives are annually saved by careful sanitary engineering and by ample supplies of pure water; by Lister's discoveries; by those of Pasteur and others; and last, though we may hope not least, by that of Koch.

Diplomas in sanitary science are issued by all the licensing bodies, and the standard of education necessary to obtain them is very high. The General Medical Council insists that for the future a year must elapse from the date of the candidate's obtaining qualifying degrees or licences in medicine, surgery, and midwifery, before he can present himself for examination for a diploma in sanitary science, and that interval must be devoted to study in a laboratory and in outdoor sanitary work. All this is right. The Medical Corporations in Great Britain are actively engaged in promoting the study of preventive medicine; yet the lives saved by their efforts are hardly more than those yearly sacrificed by the incompetence, carelessness, or indifference of those who attend women in the lower grades of life during parturition. Children die unborn in our great manufacturing towns: hundreds perish within a few days or hours of birth from the same causes; mothers die undelivered, or delivered too late to save life, because the midwives failed to recognise an abnormal presentation, or the existence of some cause impeding delivery. How many more sink and die in consequence of errors arising from ignorance and incapacity after delivery, or drag on a miserable existence from the results of ignorance or from injuries inflicted by, perhaps, well-intentioned but injurious attempts at assistance, must remain for ever unknown. But from what comes to the knowledge of those medical men who have opportunities of judging of the matter, it must be enormous, and yet no attempt has been made by the State to remedy in any way this crying evil; while some of the medical corporations -to their shame be it said- give no encouragement to candidates for their degrees or licences to obtain anything more than a mere smattering of obstetric medicine and surgery.

But the graduates and licentiates of these bodies are educated persons, and most of them, without doubt, set themselves to work to remedy the errors of their education; but what is to be said about the women who attend the majority of the midwifery cases occurring annually in Great Britain? Few have, or profess to have had, any training: they are absolutely ignorant of everything connected with their adopted calling except what they may have picked up from old women probably nearly as ignorant as themselves. That the patients and their offspring die in large numbers is no wonder; that they should carry infection from house to house, ignorant as they are of the causes producing puerperal disease, is a matter of course, but the State seems to care for none of these things, and cannot be induced to take a step in so important a matter. The cause of this is obvious, for the question is surrounded by great difficulties.

Women, to be competent midwives, should first be educated, and when educated examined by competent examiners, and granted a certificate. These simple requirements are easily stated, but when they come to be carried into effect the question of when, for how long, and by whom are these women to be trained and then examined arises; and in the present state of things—at least in England—great difficulties in these respects present themselves and cannot be easily overcome, for the means of educating a number of women do not exist.

The State having failed to do its duty in this matter, private individuals have come forward, and a Bill has been introduced into Parliament entitled "The Midwives Registration Bill." By whom it has been drawn up or inspired I have no means of knowing, but it appears to have been by a person or persons who, with the best intentions, have possessed but a limited knowledge of the important and difficult subject with which they were dealing. From the provisions of the Bill no less than from its title it seems evident that the principle on which the authors of the Bill based it is this: Enforce the registration of midwives, and in time centres at which they may be educated will spring up. I quite admit that, in accordance with the law of supply and demand, there is something in this; but what is to be done till such places come into existence? and who is to certify that such-or-such a place affords fair opportunities for acquiring the requisite education?

The first of these difficulties is got over by the simple process of putting every woman who has at present a claim to be called a midwife at once on the Register; I do not see how anyone who has been present at even a few cases of labour could under the clause be refused. At any rate, irrespective of character or of circumstances, all women who can call themselves midwives are to be registered, and once so they are not liable to be prosecuted by any private individual except with the consent of the Attorney-General or of a County Council. All these women must die out before educated women can take their place. I would ask: What during that long interval is gained by registration? Nay, does not the fact that these uneducated women become recognised practitioners in midwifery elevate them, and impress the public with a false sense of their value, and thereby inflict an injury on those amongst whom they practise?

Again, why should a licensed midwife be granted a probable immunity from the consequences of misconduct not granted to medical men? and the injustice done is enhanced by the fact that whereas it will be impossible to have charges against midwives accused of drunkenness, incompetence, or disgraceful conduct properly investigated, except by the creation of a competent court, which necessarily must entail considerable expense, no provision is made to create or provide for the erection of such. The Privy Council are, indeed, to provide for erasing the names of offenders from the Register; but how can this be done unless funds are provided to defray the expense? The names of medical practitioners are liable and frequently are removed from the *Register* by the action of the licensing bodies, or by the General Medical Council; but these midwives, who undoubtedly will be their rivals in practice in many districts, may be fairly considered as safe from interference except in cases of an extraordinary nature. Injury to medical practitioners must not for a moment be allowed to interfere with any legislation calculated to benefit the community, but injustice must be carefully avoided.

The Bill further provides that the General Medical Council, or failing it the Privy Council, shall make "rules regulating the conditions of admission to examination, the qualifications of examiners, the methods and periods, and the subjects of examination and the general standard to be attained" by women, while the County Councils shall appoint examiners; these Councils shall also grant certificates to those who pass, and keep a register of the midwives ordinarily residing in their district. Doubtless there are other minor details, but what I have stated is a fair outline of the Bill. It contemplates the registration of all women hitherto acting as midwives, and the examination and registration of those who for the future desire to become midwives, but no course of education is to be required.

With respect to the drawing up of rules for the conduct, etc., of the examination, it is well known that the General Medical Council will most likely refuse to act; the whole working, therefore, of the Bill, if it becomes law, will devolve on the Privy Council. I ask any reasonable man: Is it likely any

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[1] Read before the Section of State Medicine of the Royal Academy of Medicine in Ireland.

Government department like this, with the enormous and multitudinous mass of work which devolves on it, is fitted to, or ever could, efficiently discharge the duties thus thrust on it? It is a body in which neither the public nor the profession will in this case repose confidence, nor is it in any way fitted for the task.

Next comes the consideration of the duties which are to devolve on the County Councils. They are to appoint examiners. Now in the election for members of these Councils politics play the chief part, and an examiner will in nearly every case be elected, not for his professional attainments or fitness, but because he or his friends belong to one or other of the sections which can command the most votes. Doubtless the sanction of the Privy Council is required; but that is pretty sure to be a mere form. With examiners chosen and examinations conducted by such bodies, the whole is sure to become rapidly inefficient, and the admission of these untrained women to the Register a mere farce. The more closely you examine the Bill the more evident it becomes that registration is almost the sole object aimed at by the framers of it.

To my mind, registration without close and efficient supervision is objectionable. Midwives once placed on the Register become, no matter whether the framers of the Bill deny it or not, medical practitioners—practitioners, no doubt, of a lower grade, but still practitioners, possessed of a legal qualification granted by virtue of an Act of Parliament, and by the registration of which the privilege of suing for fees is granted, and also protection from prosecution in cases of misconduct, in at least a great number of instances; and yet these practitioners are not to be required to produce any evidence of training, and are therefore almost certain to be in a very great number of cases—if not, as I believe, in the great majority—quite ignorant of their profession.

What, then, is gained by registration, since the women put on it in the first instance—estimated as being 15,000 in number—are admittedly so ignorant that this very Bill is introduced to protect the public from them? That their successors will be little if really at all more competent than they are is very doubtful, and if there be no machinery whereby incompetent and careless midwives as well as those of bad character can be removed promptly from the Register, the matter is made worse.

The Bill prescribes that a midwife must act "in cases of natural labour only;" but who is to define what a natural labour is? Some, following Denman's classification, exclude breech presentations; some consider a breech a natural presentation. Who is to decide?—and until decided, how can a midwife be punished for breach of the law? Again, the occurrence of hæmorrhage doubtless removes the labour from the definition "natural;" but some hæmorrhage generally occurs, and, excluding very serious cases, it will be a nice point to decide whether the midwife has acted legally or not in a given case of hæmorrhage. Twin births are not "natural labours." What is the midwife to do on discovering, after the birth of one, a second child *in utero*? It may be born in a few minutes; but if she delivers the woman she breaks the law. This provision of the Bill cannot be enforced, and is practically useless.

The advocates of the Bill lay great stress on the assumption that "the effect of the Bill will be to diminish the number of women now following the calling of midwives." I think in this they are entirely mistaken; they forget the law of supply and demand. If the Bill were to effect its purpose and create a really educated class of women, it is quite certain the number so educated and registered would be greatly less than that of the uneducated women now practising; but the reduced number would almost certainly prove insufficient to meet the demand, and as certainly would uneducated women be employed by the poor. Moreover, the educated women would be fairly entitled to, and would generally obtain, better remuneration than the present class of women receive, and for economy, if for nothing else—the latter would, in many instances, be employed. No law could be framed in this free country, where every impostor is allowed to practise medicine, that could stop uneducated women acting as midwives. Doubtless they could be punished for calling themselves "midwives," but no one could be punished for styling them so; in fact, my belief is that the effect of the Bill would simply be to create a lower grade of partially-educated midwifery practitioners, while the mass of the poor would still be attended by "the ignorant Gamp already in existence."

It is easy to criticise the Bill, but much more than this is needed. It is the duty of those interested in sanitary science to consider what can be done to raise the standard of education amongst the women practising as midwives, and I think it will be admitted that to effect this object those desirous of becoming midwives should, in the first instance, be carefully trained and examined, and granted a certificate if found efficient.

To accomplish these objects, the first steps, in my opinion, should be: (1) To establish educational centres where these women could be trained and instructed; and (2) to establish competent examining boards. Neither of these requisites can at present be said to exist in England, though doubtless in London and in a few larger towns attempts, on a very limited scale, have been made, but the system at present in force is most inefficient, and would break down the moment the Bill became law, when a large number of women would in consequence present themselves for education.

To carry out these two fundamental principles will be impossible without the active co-operation of the profession and of the public; and, indeed, to put us upon a par with other countries, State aid will be required, as is the case in Prussia and elsewhere, and in no better way could public money be expended. Maternities will have to be established, and it will not do to have a maternity existing in name only in this or that town or city under the nominal charge of some busy local practitioner. The medical man in charge must be prepared to devote a great part of his time to the work, for if there be patients sufficient in number to make it worthy of being considered an educational centre for the training of even a limited number of midwives, the supervision of the patients and the training and teaching of the pupils will leave little time for private practice, and a salary sufficient to attract competent men must be forthcoming.

Consider what the duties of the surgeon or physician in charge should be. He should be summoned to every case in which any departure from natural labour takes place. He should visit every case subsequent to delivery, many of them necessarily daily for a considerable time; he should personally instruct, or at least supervise the instruction of, the pupils while in charge of cases, and give oral instruction to the class almost daily. Without this—and I speak from long personal experience—the training of these women will be a delusion. Bear in mind what the class of persons who, as a rule, seek to be trained as midwives are: they are generally middle-aged women—and, indeed, I think it is well that they should be so; many are servants who have saved a little money, and expend a portion of it in paying for their training, and their intellect and education is that of women of their class, neither more or less. A woman may have been a housemaid, cook, or lady's maid for some ten, fifteen, or more years, and decided to adopt the calling of midwife; or be a widow anxious to earn a living; but be they young, married, widows, or old maids, the education of nine out of ten will be of a rudimentary and imperfect nature; they will be able to read and write as servants do, but the difficulty experienced by persons of this class in taking up new ideas is immense; words which seem so simple to us as "os," "pelvis," "sacrum," etc.—to them present great difficulties; and when you place in their hands an elementary work on midwifery, they simply cannot understand it; you must explain in the simplest language, and with the aid of diagrams, the knowledge you wish to convey, and it must be gone over day by day, and again and again, to make them comprehend your meaning; tact, and above all patience, is required, and lectures must be in a great degree catechetical. Systematic lectures are of little use; I speak on this part of the question with great confidence. Of course there will be exceptions amongst the women presenting themselves, but they will be few; and if, as is possible, women of a superior rank by-and-by seek in any numbers to be trained, their education will doubtless be better, but, if this be the case, you will have them absorbing the patients who at present pay a small fee to regular medical practitioners, and the poor will be reduced, as at present, to employ uneducated women, who may not, indeed, be able to call themselves midwives, but will certainly act as such. Great stress is laid by the promoters of

the Bill on the fact that the title "Midwife" cannot be used, if the Bill becomes law, by unregistered women. For myself, I see little gained by the title being dropped if the practice remains—as I believe it will—of employing uneducated women.

Over what length of time should the training of these women extend? In a general hospital the minimum period of training a probationer before admitting her to the rank of nurse is a year. Should a shorter time be demanded for the training of a midwife? I think not. Still, I believe it will be found impossible, in practice, to devote even this short period to their training. In the Rotunda the term required before the pupil can be examined for her certificate is six months, but they are carefully trained, the opportunities of learning are great, and they are instructed that even after they obtain their certificate, or their "diploma" as they usually prefer to call it, they are only competent to conduct cases of natural and easy labour, and that on the least deviation therefrom they should call in a qualified practitioner, and, as a rule, they do so.

By whom should the examinations be conducted? In the Rotunda the Master and his two assistants, in accordance with the provisions of the charter, examine and grant the certificates, but obviously that system is unsuited for the majority of places in which the education of midwives may be hereafter conducted, and I think the examination of these women should be placed in the hands of the existing licensing bodies. They are surely numerous enough. The Victoria University and that of Durham would supply the north of England; Cambridge and Oxford could co-operate if they wished; from London two examiners could, at stated intervals, be sent to any locality in which one of the licensing bodies found a difficulty in meeting with competent examiners, and a fee of £2 2s. will, I believe, prove sufficient to meet the necessary expenses. I do not make any reference to Ireland; the system at present in existence works fairly well, and in addition to the two chartered hospitals, the Royal College of Physicians of Ireland has under its charter special powers to examine and license midwives, and a few from time to time are examined and licensed, but the diploma of the Rotunda is so well known and so valued, that that of the College is seldom sought for. The fee there is £2 2s., and the course of education required is six months at a recognised lying-in hospital or maternity.

What form of diploma should be granted? I think that issued by the Royal College of Physicians in Ireland as good as any; they are licensed by it to practise as "midwives and nurse tenders," the latter term conveying the same significance as "monthly nurse" does in England, and consequently in England the latter term should be substituted for it. It is an advantage to join the two titles together, for it clearly shows that the holder of the diploma is not a fully qualified practitioner in midwifery.

I have reserved the question of registration to the last. I believe it is unwise to register these women. If registration be enforced it manifestly becomes the duty of the State to see that the Register be kept pure. Considering the number of names there would be on it, that would be a difficult matter, and it would be essential to have a special court, on which at least two experienced medical men should have seats, to investigate all charges made against midwives. Seeing that in every case purely professional matter would certainly crop up, if not be the only one to be investigated, a barrister, either as chairman or assessor, should be added. All this would involve much expense, and is certainly to be avoided. The end in view—that of supplying fairly educated midwives to the poor—can only be attained by affording facilities for education. If these were obtainable and courts of examiners established, it would, I think, suffice if it were made an indictable offence for any woman to assume the title of midwife who was not the holder of a certificate granted by the examiners appointed by one of the licensing bodies, the holder of which should also be alone able to recover fees or hold any office under a board of guardians or other authority. These women would be pretty sure to look after their own interest and have the law enforced. The several licensing bodies should also have the power of erasing the name of any midwife from the roll, and compelling her to surrender her certificate or diploma in case of misconduct.

All that I have suggested obviously hinges on the establishment in every large town of maternities under the charge of capable medical men. That such do not exist is a disgrace to England. General hospitals abound, poor lying-in women alone are neglected. The Bill at present before Parliament has no claim whatever for support except in this—that it might stimulate the establishment of maternities, so that my aim might indirectly be furthered by it becoming law; but its defects are so numerous that the chance of doing this must not be considered. I hope that those who brought it forward will be induced to reconsider the matter, and that, with more information before them, they will succeed in having an Act passed calculated to be of real use to the poor. But to effect this it is, I think, absolutely essential that a Select Committee be appointed, with power to take evidence and to report to Parliament before any legislation be undertaken.

ABSTRACTS OF THE MILROY LECTURES
ON
DIPHTHERIA:
ITS NATURAL HISTORY, AND PREVENTION.

Delivered before the Royal College of Physicians of London.

By R. THORNE THORNE, M.B., F.R.S., F.R.C.P.,
Assistant Medical Officer to the Local Government Board; and Lecturer on Public Health at St. Bartholomew's Hospital.

Lecture I.

Dr. Thorne Thorne commenced these lectures by recalling the labours of Bretonneau and his desire to attach a specific name to a specific phlegmasia which should be anatomically distinct, as also Hirsch's criticism that the identity or otherwise of two or more diseases in a group could only be determined by having regard to their anatomical, clinical, and above all their etiological aspects. He then referred, first, to the failure from the anatomical point of view to differentiate between the several membranous affections of the throat; next, to clinical medicine as not supplying the means of distinguishing between the infective or the benign character of throat diseases, and, whilst claiming that great advances had in recent years been made as to the etiology of the disease, he admitted that in this respect, too, we have many of the former difficulties still to deal with. It was next shown by reference to statistics that during the last decennium there had been a substantial increase of diphtheria mortality in this country, and that a very significant portion of this increase had taken place in the metropolis. This increase was the more remarkable because, whilst it had been in progress, the zymotic group of diseases—and notably those causes of death which were amenable to sanitary administration and public health measures—had undergone steady diminution. He next referred in some detail to the statistical researches of Dr. G. B. Longstaff, and to his comparisons of the relative diphtheria mortalities in districts that were divided into dense, medium, or sparse, according to the density of their populations; and from these statistics it was shown that, whereas antecedent to 1860 the diphtheria rate for the sparse districts was double that for the dense districts, the rates during the period 1871-80 for these respective districts had come to be nearly equal. In short, the incidence of diphtheria was undergoing a change, and the preference which it had formerly shown for rural areas was being transferred to dense communities. Indeed, the increasing excess referred to in the case of London was found to extend to the large towns and cities as a whole, these urban districts having in 1889 a diphtheria mortality of 0.26 per 1,000 as opposed to one of only about half, namely, 0.14, in 1881. The circumstances detailed were, it was alleged, such as to call for a searching inquiry into the natural history of the disease, especially as regards its causation and prevention.

Turning next to the historical aspect of diphtheria, it was shown that a disease indistinguishable from it—and this even

as regards its paralytic sequelæ—was known before the Christian era; and as to this country, the quaint writings of Noah Webster were quoted, in which comets, meteors, and other phenomena were conjured up to account for epidemics of throat disease, other than scarlatina, which vividly recalled the several features of diphtheria prevalences in our own day. The first recognised prevalence of diphtheria in England, alleged to have been imported from Boulogne, was discussed in connection with the writings of Simon, Greenhow, and Burdon Sanderson; and then the general distribution of the disease in different parts of England and Wales was considered in some detail by the aid, in the main, of Dr. Longstaff's statistics. The broad geological features of the country were shown to have no direct influence on diphtheria mortality, and as to attacks apart from death no sufficient data were available. Some areas in the same geological formations exhibited the most striking contrasts in this respect: but, at the same time, Dr. Thorne differed from other authorities who had declared that soil—and this even when altitude and dampness were also in question—had no concern in the development or diffusion of the disease. The two areas in our own country where diphtheria had caused the highest rates of mortality were shown to lie along our exposed north-eastern and eastern coasts, and in the mountainous districts of Wales, and this especially in the damp valleys so abundant in some Welsh counties. Clays, as such, were shown not to have excess of diphtheria death; indeed, the great stretch of the Oolite from the borders of Lincolnshire into Dorset, where clays abounded, was the line of England's greatest immunity from diphtheria, a circumstance which was largely attributed to the facilities for drainage afforded by the flow of the great rivers which drained that area. On the other hand, where water was upheld in clays or in gravels, and where to the resulting dampness was superadded a cold bleak air and vegetable decomposition, there it was held that conditions favourable to diphtheria existed; but, at the same time, other conditions favourable to the disease were shown often to outweigh all considerations of climate and soil. These points having been somewhat fully discussed by the aid of charts and diagrams, Dr. Thorne further illustrated them by somewhat detailed references to epidemics which he and his colleagues at the Local Government Board and various local health officers had investigated. And as to the influence of soil wetness, it was suggested that whilst stagnant water, like stagnant air, was conducive to ill-health and probably to diphtheria, the result of moving water, as in the drift along the beds of great rivers, was in no similar way injurious.

The influence of season was next considered, and it was shown generally that over a long period of years excess of diphtheria mortality had occurred during the fourth quarter of the year, a circumstance that had in some respects been held to favour the view of a fungoid origin of the disease. Comparison between attacks and deaths from this disease was only possible in the case of the large towns where compulsory notification had been adopted, and the records as to this, which had been compiled owing to the initiative of Dr. John Tatham, were referred to in this connection, with the result of showing that a striking rise in diphtheria mortality took place in the month of October, that this hardly abated during November, but that subsequently it showed a tendency to diminish. But with regard to attacks, it was evident that diphtheria increased at an earlier date, the month of September showing a marked number of attacks. And, on the other hand, the January deaths from diphtheria were, in not unimportant amount, due to attacks commencing in December. How far these urban statistics could be held as applicable to rural areas, Dr. Thorne did not feel able to say, but the urban experience was stated to be generally the same as that observed in prevalences that had been carefully investigated in the country as a whole.

Coming next to the question of sex, some of Dr. Thorne's experiences were referred to, and this especially where he had expressed the opinion that the excess of diphtheria in females over males during the first fifteen years of life was probably due to the fact that female children were likely to be brought into closer contact with the infected sick than was the case with boys. This had been generally accepted by Dr. Downes as applicable to females who had passed the age of childhood, but the latter observer had brought forward a number of statistical and other considerations which he thought tended to show that there was also some physiological proclivity amongst females to take the infection, beyond that which attached to males. Dr. Thorne, on the other hand, gave his reasons for believing that in girlhood, as in early womanhood, there was in females opportunity for greater and more sustained exposure to infection than in males.

The question of age incidence as a predisposing cause was also fully discussed. The greatest proportion of total diphtheria deaths was shown to fall in the period 3 to 15 years; this period could, however, be narrowed, for there was a still greater incidence on 3 to 12 years, and a further excess could be shown on 2 to 5 years. The comparative scarcity of diphtheria mortality under 1 year of age was referred to as related to such circumstances as avoidance of exposure to infection, the use of breast milk and of milk preparations practically sterilised in process of manufacture, as possibly also to the rudimentary character of the tonsils at a period of life associated with the functional obliteration of the thymus gland. But this question of age incidence was found to be much involved in other considerations. Thus the age 3 to 12 years was essentially the school age, and so-called school influence here came into operation; it was the age when diphtheria was a much more marked disease than at later ages, and in rightly appreciating how far the question of age might be one merely influencing the clinical features of the local affection, much was held to depend on the right interpretation which ought to be put on the term "diphtheria," as used both in mortality and in sickness returns.

ABSTRACT OF

THE ERASMUS WILSON LECTURES

ON

THE VALUE OF COMPARATIVE PATHOLOGY TO PHILOSOPHICAL SURGERY.

Delivered at the Royal College of Surgeons, February, 1891.

By J. BLAND SUTTON, F.R.C.S.,
Assistant Surgeon to the Middlesex Hospital.

Lecture II.—Hydrosalpinx and Allied Conditions.

In this lecture I propose to discuss some morbid conditions of the Fallopian tube, which, though of frequent occurrence, have been hitherto much misunderstood. A comprehensive study of the anatomy, normal and morbid, of the internal genital organs of female mammals, throws much light on the conditions known as hydrosalpinx, tubo-ovarian abscess, tubo-ovarian cyst, ovarian hydrocele, and hydrometra occurring in bihorned uteri occasionally found in the human female.

Before discussing these abnormalities in detail, we may briefly consider the relation of the Fallopian tubes to ovarian and parovarian cysts.

A parovarian cyst always burrows between the layers of the mesosalpinx. When the cyst is very large, and has a capacity of 20 or 50 ounces, the tube is stretched across the cyst, and may measure 40 centimetres in length. Although the tube is thus stretched, its lumen is not interfered with, and the abdominal ostium remains patent, and is indicated by a few atrophied fimbriæ. The greatly stretched tubo-ovarian ligament is easily detected, and the ovary is usually somewhat enlarged and flattened. Another point of interest is that the Fallopian tube never communicates with the interior of a parovarian cyst. These facts refer to a cyst which has not been subject to inflammation. When this accident affects such cysts, it may lead to perimetric closure of the ostium.

True ovarian (oöphoritic) cysts never burrow between the layers of the mesometrium. The Fallopian tube generally lies curled up on the cyst. If inflammation have occurred, the ostium may be perimetrically sealed. The tube walls may be thickened, but the tube never opens into the cyst. It must be borne in mind that many unilocular cysts often classed in operation lists as ovarian are, as a matter of fact,

parovarian. The relation of the tube to the cyst offers a ready mode of discrimination. Even when an ovarian cyst suppurates, the tube does not communicate with its interior.

When the Fallopian tube is affected with salpingitis of a mild type, yet sufficiently severe to produce salpingitic closure of the ostium, the ampulla of the tube may be slowly distended with fluid, due either to transudation of serum from the vessels in its walls, or from the glands lining its mucous membrane. As the tube distends, its walls slowly thin from the continual pressure exerted by the accumulating fluid, and at length it forms a legume-shaped cyst with delicate translucent walls. The situation of the closed ostium is indicated by a dimple, from which a series of folds and furrows radiate. In such a specimen the walls of the cyst are often adherent to adjacent parts of the mesometrium. The uterine end of the tube is, as a rule, permeable, and the ovary readily recognisable. Such a condition of the tube is called hydro-

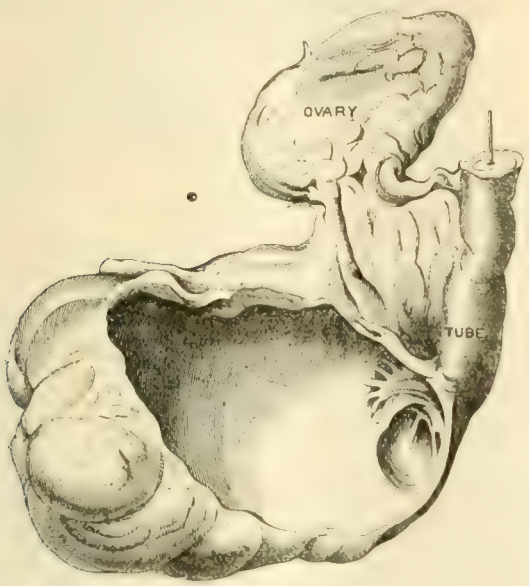


Fig. 1.—Hydrosalpinx.

salpinx. Unfortunately the term hydrosalpinx has been used to include other conditions. For instance, specimens occasionally come to hand in which the ampulla of the tube is widely dilated, and communicates with a cyst replacing the ovary. Such a condition is loosely called hydrosalpinx; it is more correctly termed tubo-ovarian cyst. In this case the ostium of the tube is occluded by salpingitis, and the tube slowly transformed into a retention cyst, which subsequently adheres to, and by absorption, the result of continuous pressure, communicates with a small cyst in the ovary.

A study of such specimens indicates that although ovarian cysts do not open up communication with a Fallopian tube, a distended Fallopian tube may, and frequently does, communicate with a small cyst in the ovary, and this, which seems an inconsistency, is easily conceivable when the textural alterations which distension of a tube induces are taken into account.

Very frequently we meet with distended tubes communicating with a cyst replacing the ovary, but the cavities are filled with pus. Such are termed tubo-ovarian abscesses. The walls of the tube and cyst are usually thick, and the orifice of communication between tube and cyst is often narrow and scarcely admits anything larger than an ordinary-sized probe. A typical tubo-ovarian abscess is given in Fig. 2.

Quite distinct from either of these is the interesting condition which I propose to term ovarian hydrocele. In Fig. 3 a specimen is sketched in which the tube is widely dilated towards its ampulla and then opens by a wide orifice into an oval cyst the size of an egg. Projecting into the floor of the cyst is a portion of the ovary; the remainder of the ovary, though adherent to the cyst wall, lies outside the cyst and presents a recent corpus luteum. On examining the relations of the cyst we find that it cannot be separated from the peritoneum forming the mesometrium; indeed, the cyst wall is directly continuous with it. On examining the orifice by means of which the tube and cyst communicate, we notice in this case some small, atrophied, but unmistakable Fallopian fimbriæ. They were much more conspicuous in the recent specimen; the spirit in which they were preserved caused them to shrink. It is unusual to find fimbriæ, but in many cases a series of low longitudinal ridges emerge from the tube and are gradually lost on the cyst wall. The general outline of a tubo-ovarian cyst has been aptly compared to "a retort with a convoluted delivery tube" (Griffith).

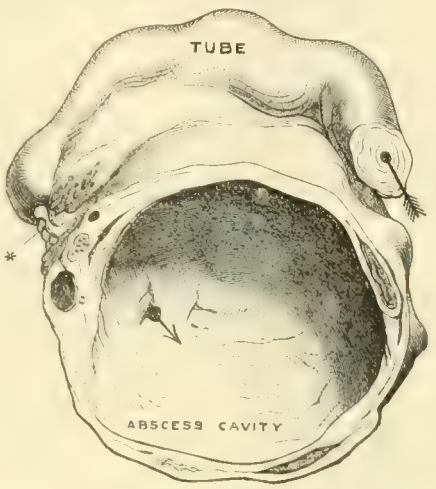


Fig. 2.—A tubo-ovarian abscess.

Ovarian hydroceles may attain a large size. I once removed one which contained three pints of fluid, and similar large specimens have been recorded by other surgeons.

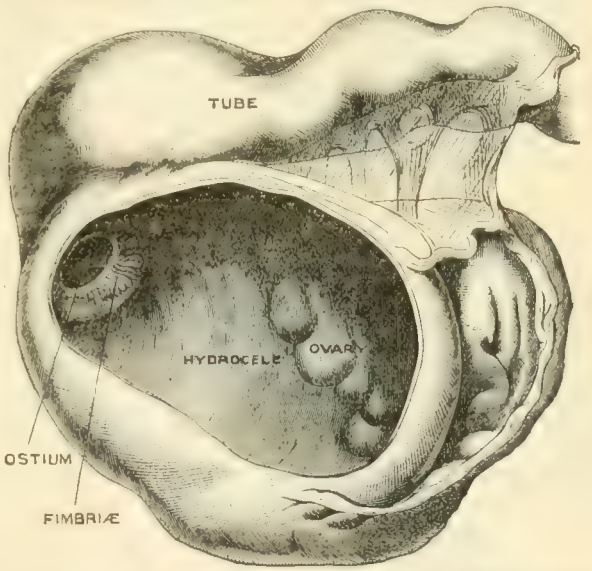


Fig. 3.—An ovarian hydrocele. This specimen was removed by Dr. W. Walter, of Manchester.

Hydrosalpinx and tubo-ovarian cyst are the results of chronic salpingitis leading to occlusion of the abdominal ostium of the tube. Ovarian hydrocele arises in a very different way. Before discussing its manner of origin it will be well to recapitulate, with the aid of Figs. 1, 2, and 3, the points of distinction in these varieties of retention cysts.

1. Hydrosalpinx.—The cyst is formed by the distended tube only, and this is quite separate from the ovary.

2. Tubo-ovarian Cyst.—The ovary is replaced by a cyst which

communicates with a distended tube. The orifice of communication is an adventitious opening, and does not represent the abdominal ostium of the tube.

3. Tubo-ovarian Abscess.—Anatomically, this is a tubo-ovarian cyst, but it contains pus and the cyst walls are very thick. The orifice of communication is usually small, barely capable of admitting a probe.

4. Ovarian Hydrocele.—The tube opens by its abdominal ostium into a cyst. The ostium is recognised in rare cases by the presence of fimbriæ; more frequently by longitudinal ridges, which emerge from the walls of the tube and radiate over parts of the cyst wall adjacent to the ostium. The ovary is either incorporated in the cyst wall or projects into the cavity of the cyst.

Intermitting Ovarian Hydrocele (Hydrops Tubæ Profluens).—An ovarian hydrocele differs from hydro- or pyosalpinx in the fact that it may intermit; that is, the fluid which it contains sometimes escapes through the tube into the uterus, and is discharged externally. Dr. Barnes mentions a case of this sort, which occurred to Mr. Anderson. A woman with an abdominal cyst waiting to be tapped suddenly passed what was supposed to be an excessive quantity of urine. The fluid was found to be albuminous, and contained cholesterine. Six months later she died from hæmoptysis, and a large empty cyst, with secondary cysts in its walls, was found in the abdomen. A good-sized staff passed easily through the tube into the uterus.[1]

Intermitting ovarian hydroceles must be very rare. A few practitioners believe that hydro- and pyosalpinx behave in this way. I have elsewhere indicated that in these cases the fluid escapes through a fistula formed between the cyst and the rectum, or bladder or vagina. In a few specimens the operator may have failed to distinguish between an ovarian hydrocele and a hydrosalpinx.

We may now proceed to discuss some points in the anatomy of the tube and ovary immediately related to the production of ovarian hydrocele.

In the human female the ovary lies in a shallow recess on the posterior aspect of the mesosalpinx. This recess is the ovarian bursa or pouch. It varies greatly in depth; in some it is small and inconspicuous, in others sufficiently deep to accommodate the entire ovary. In the virgin the ampulla of the tube falls over the mouth of this recess and conceals the ovary. This relation of parts is usually disturbed in the first pregnancy. The relation of this pouch to the ovary, tube, and uterus is shown in Fig. 4, which is slightly modified from the well-known figure introduced by Richard.

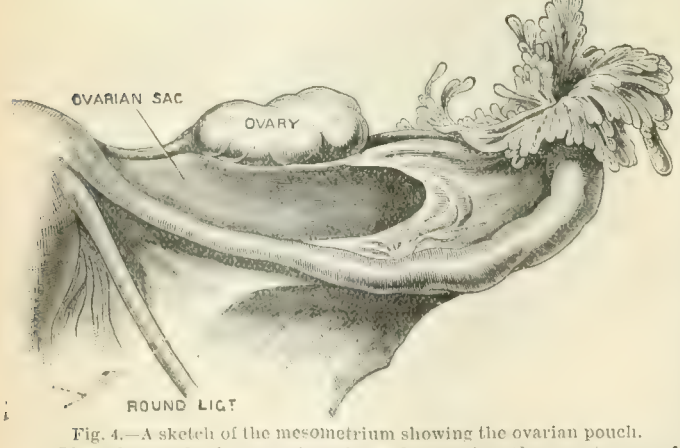


Fig. 4.—A sketch of the mesometrium showing the ovarian pouch.

If we leave the human female and examine the anatomy of the ovarian sac in other mammals we find it to present every variation from a shallow pouch as is usual in the human female to a complete sac, excluding the ovary from all connection with the general peritoneal cavity. The most perfect pouch exists in rats and mice. A transverse section through the ovary of a mouse is shown in Fig. 5, where it will be seen that the peritoneum bears precisely the same relation to the ovary that the tunica vaginalis bears to the testis. The mode in which this pouch is formed has been investigated by Dr. Robinson,[2] and his contribution to this question is a clear and admirable piece of work in morphological anatomy.

When the pouch is well-formed, the Fallopian tube communicates by means of it with the general peritoneal cavity. When the pouch is complete, as in the mouse, the Fallopian tube of course opens into it, but has no communication with the peritoneal cavity.

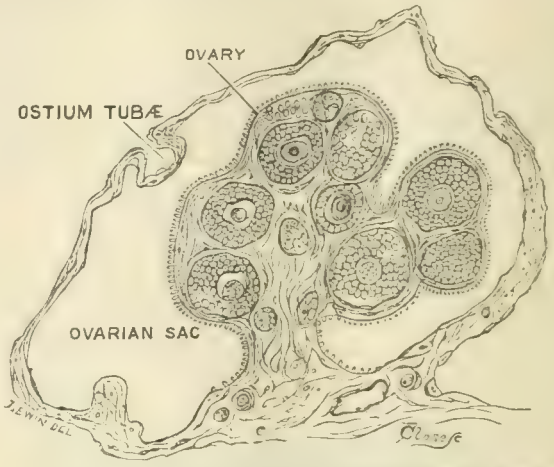


Fig. 5.—Transverse section of the ovary and ovarian sac of a mouse (after Robinson).

We know quite well that the tunica vaginalis testis often becomes distended with fluid, and is termed hydrocele, and that the testicle projects on the floor of the sac. In old standing hydroceles the testicle after long subjection to continuous pressure becomes flattened and may subsequently atrophy.

The existence of a tunica vaginalis to the ovary in various mammals has long been known and for several years I have been on the watch for specimens of ovarian hydrocele. Up to this date I have succeeded in obtaining information of ovarian hydroceles in the mare, guinea-pig, and white rat, in addition to several specimens in women.[3]

It is of some interest to mention that in a specimen of ovarian hydrocele in a white rat, for which I am indebted to Dr. Robinson, of Manchester, the ovarian pouch was filled with thick pus, and it is not difficult to understand how the contents of an ovarian hydrocele become purulent if septic trouble arise in the uterus, seeing that there is a narrow channel of communication by way of the Fallopian tube. It would also be interesting to obtain evidence of an impregnated ovum developing in one of these pouches.

Before bringing this lecture to a conclusion, let me illustrate the way in which a comprehensive study of abnormal conditions serves a useful purpose in enabling us to correctly interpret special cases.

The museum of this College contains two large cysts resembling huge legumes. They have thick muscular walls. The catalogue tells us they were removed by Sir Spencer Wells from a young woman. At the time of removal the right one weighed 75 and the left one 22 ounces. Each contained fluid like that found in multilocular ovarian cysts. (This fluid was in all probability thick mucus.) These cysts are regarded by those responsible for the catalogue, as well as by other competent persons, to be greatly dilated Fallopian tubes.

It is a fact important to be remembered that when a Fallopian tube becomes distended by fluid accumulations or even by an impregnated ovum developing within it, the walls of the tube gradually thin. In this respect the tubes are in striking contrast with the uterus. Whenever the uterine cavity becomes distended either by a developing embryo, by the accumulation of retained mucus, or a myoma growing in

[1] *Diseases of Women*, p. 324, 1873.

[2] *Journal of Anatomy and Physiology*, vol. xxi. p. 169.

[3] The specimens are fully described in the *Journal of Comparative Medicine and Surgery of New York*, January, 1891.

its walls, the uterine tissue hypertrophies. This is true not only in the case of the human uterus but also in mammals generally. Thus the view held of these cysts in the catalogue is, in my opinion, erroneous, as I will now attempt to show.

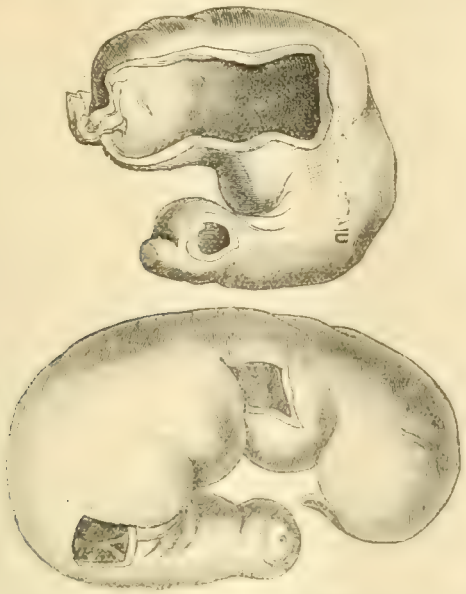


Fig. 6.—Two legume-shaped cysts supposed to be Fallopian tubes.

In 1887 I exhibited to the Pathological Society of London the uterus of a hog-deer, *Cervus porcinus*, abnormally distended with fluid secondary to obstruction of the vagina, the precise nature of which could not be determined, as the parts were carelessly removed before the nature of the specimen was appreciated. The uterus of the hog-deer, like that of ruminants generally, is bihorned, the cornua communicating with the vagina by a common canal. In this specimen the cervical canal is dilated and interrupted by a series of perforated diaphragmata. Each diaphragm is in the position of a thick fold of mucous membrane, several of which exist in the cervical canal of ruminants.

Examine now the ewe's uterus (Fig. 7); this sketch was made from a specimen in the Museum of the Royal College of Surgeons; it is in the same series as the supposed Fallopian tubes. The cervix is obstructed, and has led to the retention of mucus and induced the distension of the uterine cornua, and produced the condition known as hydrometra. Similar conditions occur in the bitch and other mammals

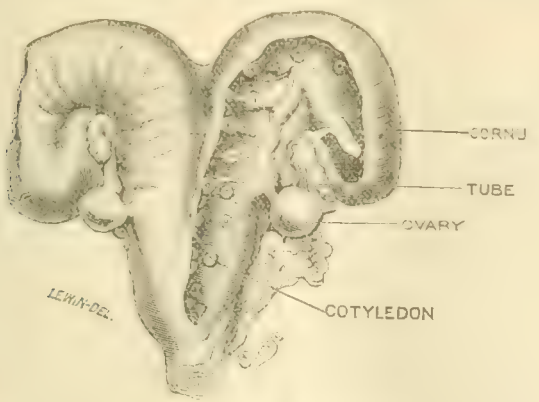


Fig. 7.—The uterus of a ewe distended with mucus; hydrometra.

with a bicornuate uterus. In all that I have examined, the distended cornua had thick muscular walls; in all the examples of distended Fallopian tubes the walls of the tubes were thin. In mammals many specimens of pyometra and other pathological changes have been attributed to the tubes, but as a matter of fact the observers have not been sufficiently careful to discriminate between a distended and elongated uterine cornu and the tube proper. This want of care has been a most fertile source of error in the comparative physiology as well as the comparative pathology of the uterus and Fallopian tubes. With these facts for our guidance, let us look anew at the specimen, and restore the legume-shaped cysts to what we may fairly believe to be their original position (see Fig. 7). It will be seen that these supposed Fallopian tubes are dilated uterine cornua, and the woman from whom they were removed had a bicornuate uterus, and that, as in the case of the ewe, there had been some stenosis of the cervical canal, or at any rate obstruction to the free escape of secretion, and this being retained, produced pyometra.

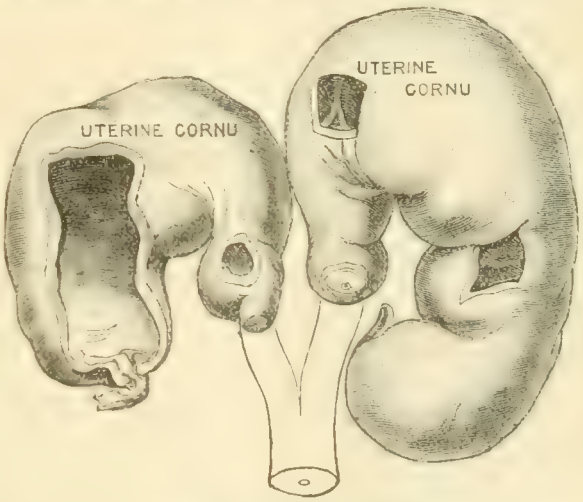


Fig. 8.—The two supposed Fallopian tubes restored to their probable natural relationship.

Were it necessary, other cases could be adduced in support of this view, for several specimens have been shown at Societies supposed to be large specimens of pyosalpinx, and the tube had thick muscular walls. All such cases which I have had opportunities of examining were distended uterine cornua. I have selected the College specimen because of the ease with which it may be consulted as a "type," to use a zoological term, by all who may chance to take an interest in the matter.

ON THE PHYSIOLOGY OF ASPHYXIA, AND ON THE ANÆSTHETIC ACTION OF PURE NITROGEN.[1]

By GEORGE JOHNSON, M.D., F.R.S.,
Consulting Physician King's College Hospital.

THE main object of this paper is to bring forward additional evidence in support of the theory that the immediate cause of death in cases of asphyxia is the arrest of the pulmonary circulation. I have to express my obligation to my friend Mr. Charles James Martin, M.B., B.Sc., Demonstrator of Physiology in King's College, for the time and labour which, by my request, he has bestowed in the performance of numerous and various experiments, the results of which will, I think, throw much light upon the complex phenomena of asphyxia. It is right to mention that Mr. Martin is not responsible for my interpretation of the results of his experiments.

All the experiments were performed on animals under the influence of anæsthetics, and every animal was finally killed by deprivation of air.

Animals—rabbits, cats, and, in a few cases, dogs—were asphyxiated either by ligature of the trachea, by the paralysing influence of curare, or by causing them to inhale a gas

[1] Abstract of a paper communicated to the Royal Society, February 5th 1891.

containing no free oxygen, namely, nitrous oxide, pure nitrogen, hydrogen, and carbonic acid gas. In all these experiments, reinspiration of the gases was avoided by allowing the expired gas to escape through a T-tube fixed in the trachea.

During the performance of the experiments, in most cases, the chest and pericardium of the animals were opened so that the relative fulness of the cavities might be readily observed. In all the experiments the results, as regards distension of the heart's cavities, were essentially the same, no matter whether the air was simply excluded, or whether an azotic gas (that is, a gas, not in itself poisonous, but unable to support life) was substituted for atmospheric air; the only difference being that when an azotic gas is inhaled the phenomena are far more rapidly produced, in consequence of the more speedy displacement of oxygen from the lungs.

The principal changes in the heart's cavities were, first, great distension of the left cavities; secondly, enormous distension of the right cavities with diminished distension of the left, the circulation being apparently arrested by the inability of the right cavities to empty themselves, in consequence of obstruction in front. That the arrest of the circulation is not due to paralysis of the heart's walls, by the circulation of venous blood through its tissues, seems to be proved by the following experiment:

Into the trachea of a small dog, with the chest and pericardium opened and kept alive by artificial respiration, a glass T-tube was introduced, through which pure nitrous oxide was passed into the lungs, whilst the expired gases escaped into the air. As usual, first the left, then the right, cavities became distended, and in one minute the heart's action had nearly ceased, with over-distension of the right side. Then inhalation of nitrous oxide, *impregnated with the vapour of nitrite of amyl*, was substituted for pure N_2O, by means of a two-way stopcock, and the result was that almost immediately the distension of the right cavities began to subside, and in two minutes they had nearly regained their normal size.

The explanation is, that the circulation, having been arrested by the contraction of the arterioles, was for a time restored by the paralysing influence of nitrite of amyl upon those vessels, while atmospheric air was strictly excluded.

Additional evidence of the influence of the arterioles in arresting the circulation during the progress of asphyxia is derived from the fact that a sufficient dose of such agents as are known to paralyse the arterioles—for example, curare and atropine—prevents over-distension of the heart's cavities and considerably prolongs the life of the animal.

This is conclusively shown by experiments performed by Mr. Martin, the details of which are given in the paper of which this is an abstract.

It has been suggested that the distension first of the left then of the right side of the heart in asphyxia is the result solely of *systemic* arterial contraction, the impediment acting backwards from the left side of the heart, through the lungs, to the right cavities and the systemic veins. The main objection to this theory is the fact that when the chest is opened immediately after death from asphyxia, the lungs are found extremely pale, from anæmia of their minute vessels, and in a corresponding degree collapsed. Backward pressure from the left side of the heart, sufficient to greatly distend the right cavities, must of necessity involve engorgement of the pulmonary capillaries.

That there is a certain amount of backward pressure from the primary distension of the left heart, extending as far as the pulmonary veins, would seem to be proved by observations made by Mr. Martin to the effect that a manometer in a branch of a pulmonary vein indicates an early and continuous increase of pressure during the progress of asphyxia; but that this backward pressure does not extend to the right side of the heart is shown by the fact that in the last stage of asphyxia, while the right cavities are in a state of extreme distension, the left are, as a rule, flaccid and comparatively empty, the lungs themselves, as before mentioned, being extremely anæmic and collapsed. The condition of the heart's cavities in the successive stages of asphyxia was clearly shown by an experiment which Dr. Rutherford performed in my presence in 1873. The details of this experiment are given in my paper.

The true explanation of these facts appears to be that, during the latter stages of asphyxia, the pulmonary arterioles contract, and cause the extreme distension of the right cavities, with anæmia of the pulmonary capillaries and a corresponding defective supply to the left cavities of the heart.

The continued increase of pressure in the pulmonary vein, observed by Mr. Martin, may perhaps be partly accounted for by the fact that in the last stage of asphyxia the suction power of the left auricle is impaired, partly by anæmia of the cardiac tissue, consequent on the contraction of the arterioles—both pulmonary and systemic, the coronary included—and partly by the fact that the small amount of blood with which it is supplied is more or less completely deoxidised. It is probable, too, that a concurring, if not the main, cause of increased pressure in the trunks of the pulmonary veins is the compression of these vessels by the extreme collapse of the lung which occurs when the chest is opened to introduce a manometer into one of the pulmonary veins. It is an acknowledged fact that the comparatively slight compression of the pulmonary veins which occurs towards the end of expiration lessens the flow of blood into the left side of the heart.[2]

Drs. Bradford and Dean have proved not only the existence of pulmonary vasomotor nerves, but also that they leave the cord higher up than the systemic vasomotor nerves.[3] These authors remark that "it is probable that the pulmonary vasomotor mechanism is but poorly developed, compared with that regulating the systemic arteries." It would indeed be an incredible physiological anomaly if the vessels of an organ through which the entire blood of the body has constantly to pass had not the same regulating and resisting power compared with the force of the right ventricle as that possessed by the systemic arterioles.

Mr. Martin has found by introducing a manometer into a branch of the pulmonary artery of a moderate sized cat, while the remaining branches were suddenly obliterated, that the blood pressure was rather more that doubled, rising from 17 mm. to 36 mm. of mercury. Mr. Martin also found that, during the last stages of asphyxia, the pressure in the pulmonary artery is nearly doubled, while that in the carotid is rapidly falling.

No experiment that has hitherto been devised can accurately measure the resisting power of the pulmonary arterioles or the actual force of the right ventricle, for the reason that the arrest or great diminution of the pulmonary circulation weakens the muscular walls of the heart by cutting off the blood supply through the coronary arteries.

The increase of systemic arterial blood pressure, which instantaneously follows readmission of air into the lungs after the circulation had been almost completely arrested by exclusion of air, seems to prove that the heart's walls are not paralysed by venous blood. On the other hand, such a speedy restoration of the circulation is at once explained by the sudden removal of the obstruction which had been caused by the contracted pulmonary arterioles.

Conclusions relating to Asphyxia.

That the immediate cause of death is the arrest of the pulmonary circulation appears to be proved by the following facts:

1. When the chest of an animal is opened immediately after death caused by a ligature on the trachea, the right cavities of the heart are found enormously distended, while the left are comparatively empty.

2. When the heart of an animal is exposed during the progress of asphyxia, the right cavities are seen to become distended, while the left, which had been previously gorged, are found to be collapsed and nearly empty.

3. In the last stage of asphyxia there is a continuous increase of pressure in the pulmonary artery, while the systemic arterial pressure is falling.

4. That the arrest of the circulation through the lungs is due to the contraction of the pulmonary arterioles appears to be proved by the influence of agents which paralyse the arterioles—namely, nitrite of amyl, atropine, and an excessive dose of curare; the effect of which is that deprivation of air is unattended by distension of the right cavities of the

[2] Dr. M. Foster's *Physiology*, 5th ed., p. 618.
[3] *Roy. Soc. Proc.*, vol. xlv.

heart and other evidence of obstructed pulmonary circulation, the life of the animal is prolonged for several minutes, and death ultimately results from the influence of venous blood upon the cardiac and nervous tissues.

THE ANÆSTHETIC ACTION OF NITROGEN ALONE OR WITH A SMALL PROPORTION OF OXYGEN.

The phenomena which result from the inhalation of nitrous oxide as an anæsthetic are strictly analogous with those observed in the early stages of asphyxia.[4]

Some writers maintain that the anæsthetic action of nitrous oxide is due to its preventing access of free oxygen to the system, others believe that it has a specific anæsthetic action. It occurred to me that light might be thrown upon this subject by the administration of pure nitrogen. Accordingly I obtained from the Scotch and Irish Oxygen Company, of Glasgow, a cylinder containing 100 cubic feet of compressed nitrogen in which the proportion of oxygen was only 0.5 per cent. by vol., whilst that of the CO_2 present was 0.3 per cent. As a preliminary trial, Mr. F. W. Braine was good enough to administer this gas in five instances to members of the staff of King's College, who volunteered to inhale it.

The result was, in each case, the production of complete anæsthesia and of general phenomena precisely similar to those observed from the inhalation of nitrous oxide. Encouraged by these results, Mr. Braine felt justified in administering the gas to patients at the Dental Hospital. Nine patients took the gas. In every case, the result was the production of complete anæsthesia, with general phenomena precisely similar to those observed during nitrous oxide inhalation. The pulse was first full and throbbing, then feeble; in the advanced stage respiration was deep and rapid, with lividity of the surface, dilated pupils, and more or less jactitation of the limbs; the only difference, in the opinion of some of those present, being that the anæsthesia was less rapidly produced, and somewhat less durable than that from nitrous oxide, though in each case the tooth was extracted without pain.

On a subsequent occasion, the same gas was administered by Dr. Frederic Hewitt at the Dental Hospital. Nine patients took the gas. The maximum period required to produce anæsthesia was 70 seconds, the minimum 50 seconds, and the mean time 58.3 seconds.

In one case two teeth were extracted without pain; in one only was pain experienced, and in that case, the tooth having been broken and not extracted, the patient said she felt a "smashing up."

I subsequently obtained from the same company a cylinder containing compressed nitrogen with 3 per cent. of oxygen, and a second cylinder containing nitrogen with 5 per cent. of oxygen. These gases were also administered by Dr. Hewitt to patients at the Dental Hospital, with the following results:

Five patients took the 3 per cent. gas. Anæsthesia was complete in 75 seconds (max.) and in 60 seconds (min.), the average time required being 67.5 seconds. In each case the tooth was extracted without pain, the duration of anæsthesia being somewhat longer than with pure nitrogen. In each case there was lividity, dilatation of pupils, and more or less jactitation. Four patients took the nitrogen containing 5 per cent. of oxygen. With this mixture the time required for the production of anæsthesia ranged from 75 to 95 seconds, the average time being 87.5 seconds. In each case there was complete anæsthesia, during which one patient had three molars extracted. Although she said she felt the last two, the sensation appeared to be that of a pull and not of acute pain. In most of these four cases there was slight lividity before the removal of the face piece. In only one case was there slight jactitation of the limbs; the other three patients were perfectly quiescent.

For the information of those who may be disposed to investigate the anæsthetic action of nitrogen with a small proportion of oxygen, I may mention that Brin's Oxygen Company, 69, Horseferry Road, Westminster, are prepared to supply nitrogen containing from 4 to 7 per cent. of oxygen at the same rate as they charge for pure oxygen. Below 4 per cent. of oxygen nitrogen could be supplied only by special arrangement, and probably at increased cost.

[4] *Vide* the author's "Essay on Asphyxia," p. 30.

ON THE CHEMICAL PROPERTIES AND PHYSIOLOGICAL EFFECTS OF THE PRODUCTS OF THE TUBERCLE BACILLUS IN PURE CULTIVATIONS.

By E. M. CROOKSHANK, M.B.,
Professor of Comparative Pathology and Bacteriology, King's College;
AND
E. F. HERROUN,
Fellow of the Institute of Chemistry.

(Preliminary Communication to the Physiological Society, February 14th, 1891.)

DURING the past year one of us has confirmed the experiments of Nocard and Roux with regard to the cultivation of the tubercle bacillus on glycerine agar-agar, and in liquid media both with and without glycerine. Having succeeded in obtaining such cultivations in liquid media in quantity, we were in a position to study the products after removal of the bacilli. We proceeded on a line of research which has been engaging the attention of bacteriologists for some years. In 1886-87, Salmon, in America, produced immunity from hog cholera by the injection of the filtered culture fluids. Later, Charrin, Woodhead and Wood, and Blagovestchensky studied the products of bacillus pyocyaneus. In a similar way Roux and Chamberland investigated malignant œdema; Roux, symptomatic anthrax; Chantemesse and Widal, typhoid fever; and Roux and Yersin, Brieger and Fraenkel, diphtheria. In our own country, Wooldridge, Hankin, and Martin have investigated the products of the growth of the anthrax bacillus.

We filtered our cultures of the tubercle bacillus through porcelain, and obtained on December 5th a clear amber-coloured liquid, which gave important and suggestive chemical reactions. As this filtrate contained the products of the growth of the bacillus, most probably in minute quantities, we evaporated it at a low temperature over sulphuric acid. We obtained after some weeks (January 12th) a viscous residue, which was dissolved in distilled water and tested on the healthy guinea-pig. The result was a marked fall of temperature, staring coat, extreme irregularity of the heart's action, muscular spasms, loss of control over the extremities, and death.

With the cultures in glycerine broth, which we now possessed in considerable bulk, we next proceeded to isolate pure materials, and to determine their chemical properties, their physiological effects, and, if possible, their chemical constitution. We were stimulated in our endeavour to obtain pure substances from the crude extract by Koch's announcement three days after our experimental inoculation of the toxic extract, that the substance or substances which he had found to produce remarkable phenomena in lupus and tuberculosis had been obtained from a glycerine extract of pure cultivations of the tubercle bacillus.

A preliminary examination of our glycerine-broth cultivations having shown the presence of non-coagulable proteid bodies of the nature of albumose and peptone, and a crystallisable precipitate of a remarkable character resulting on the addition of iodine, the idea naturally suggested itself that the tubercle bacillus might form albumoses and an alkaloid or ptomaine similar to the substances isolated by Martin from pure cultivations of the anthrax bacillus.

Koch, after pointing out that the effective substance in his extract could be precipitated by absolute alcohol, states that "for application in practice, however, this purification of the glycerine extract offers no advantage." This seemed to indicate that he regarded the isolation of the active material in a pure state as superfluous. It appeared to us, however, to be a matter of great scientific interest to determine, if possible, the properties and physiological effects of the separated products. We accordingly set to work to isolate the ptomaine, of the existence of which we had some qualitative indication, and at the same time to examine the properties of the albuminous bodies.

In this endeavour the general method we found satisfactory was as follows:—The clear filtrate from the culture was

evaporated at 40° C. to a very small bulk, and the residue thus obtained was mixed with an excess of absolute alcohol, which precipitates the albumoses and peptones. It was found that by adding the alcohol by degrees a partial separation of the albumose from the peptone could be effected, the latter being only precipitated when the alcohol was nearly absolute. The precipitated albumose was collected on a filter, and redissolved in distilled water. In another experiment the albumose underwent a second precipitation, and after washing was again dissolved. The alcoholic filtrate from the precipitated albuminous bodies was then concentrated at a very gentle heat until a viscous residue was left containing the glycerine originally present in the cultivating medium and the extractives and products of the bacillus soluble in alcohol. With the residue definite reactions of an alkaloidal substance or ptomaine were obtained. Careful experiments, however, led us to believe that the whole of the ptomaine was not separated from the albuminous precipitate by simple addition of alcohol, and we have therefore been led to slightly modify the above method.

By Scheibler's method applied to the alcoholic residue it was found possible to separate the ptomaine and to obtain a solution of it free from glycerine and other matters; but the quantity thus treated up to the present time has been so small that only a few qualitative tests could be applied, and as these agreed with those given by the alcoholic residue, they will be described as referring to both.

The ptomaine is soluble in water and alcohol, and sparingly soluble in amyl-alcohol, but insoluble in benzene, ether, or chloroform, which liquids, therefore, fail to extract it from aqueous solutions. In its aqueous solutions it is distinctly but not strongly alkaline to test paper. Phosphotungstic acid gives with it a white flocculent precipitate. Phosphomolybdic acid gives a pale yellow precipitate, soluble in ammonia to a blue solution, which becomes colourless on boiling. In this respect it resembles the vegetable alkaloids, aconitine and atropine. (It must be remembered, however, that albuminous bodies are precipitated by both this and the preceding reagents, and in the case of the latter a reduction of the phosphomolybdate, giving the blue solution with ammonia, is obtained.)

The reducing power of the ptomaine is shown by the conversion after a short time of ferricyanide of potassium to ferrocyanide, giving the prussian blue test with ferric chloride, to which much undue importance was attached by Brouardel and Boutmy. A solution of albumose and a solution of peptone are both capable of giving this reaction as well as many vegetable alkaloids.

A solution of the ptomaine is not precipitated by ferrocyanide of potassium or potassic bichromate. In strong solutions it yields precipitates with platinic chloride (yellow), gold chloride (pale yellow), and mercuric chloride (white). That yielded by the first of these reagents is granular in character and quite insoluble in alcohol, though apparently soluble in water. It is hoped that this compound, if obtained in quantity, might be made to yield quantitative results as to its composition. The precipitation by gold chloride excludes amides and ammonium salts.

With iodine in hydriodic acid or potassic iodide, a precipitate is obtained which is occasionally crystalline, more often granular or amorphous. This precipitate is soluble in alcohol, and is redeposited when the alcohol is evaporated. On heating it is converted into oily drops of a dark colour. With picric acid a granular precipitate is obtained which, under the microscope, is seen to consist of minute crystals. This precipitate on standing is converted into rounded crystalline masses with numerous small crystals admixed.

The ptomaine appears to be easily broken up by heating, especially in the presence of mineral acids or of baryta. The actual quantity obtained from a considerable amount of culture fluid was very small; and thinking that if the bacillus were grown in a medium richer in albumin, such as the animal body, more of these products might be formed, we examined in a similar manner the liquid obtained by extracting large masses of tuberculous growths from cases of *Perlsucht*. In this extract, after filtration through porcelain, we obtained an albumose, and minute quantities of a ptomaine, which in its reaction was identical with that obtained from the artificial cultivations of the bacillus, but present in even smaller amount. The probable explanation of this is that in the living animal the ptomaine is constantly being removed; or it may indicate that it is only formed in minute quantity under those conditions.

Reflecting upon the fact that the tubercle bacillus would be destroyed in the process of extraction of its products, we have employed a further modification of the methods which we have described, by dispensing with the tedious process of filtration through porcelain, and thus the copious deposit of the cultivated organism is also submitted to the process of extraction. We are now endeavouring to cultivate the bacillus on media richer in albumin, prepared from white of egg.

Having succeeded in obtaining the albumose and the ptomaine in separate solutions, we next proceeded to ascertain the effects of these substances upon healthy and tuberculous guinea-pigs. Our experiments so far have given the following results:

Experiment A.—A tuberculous guinea-pig was injected hypodermically with 0.5 gramme solution of the ptomaine obtained from the glycerine-broth cultivations. The temperature before injection was 99.4° F., and subsequently at intervals of an hour, 101°, 102.2°, 102°, 103.2°, 101.8°. While the tuberculous glands were only slightly increased in size, they became distinctly indurated and painful.

Experiment B.—A second tuberculous guinea-pig was injected with the same dose of ptomaine from another series of broth cultivations. The temperature before injection was 103°, and subsequently 104°, 103.4°, 105.2°, 104.8°, 103.4°. In this case there was distinct enlargement of the tuberculous glands.

Experiment C.—A tuberculous guinea-pig received 0.5 gramme of the ptomaine isolated from tuberculous tissue (*Perlsucht*). The temperature before inoculation was 102.6°, and, subsequently, 101.6°, 101.8°, 101.8°. Practically the result was negative; there was indication of slight lowering of temperature, but no alteration in the tuberculous glands could be recognised.

Similar experiments were made with the albumose separated from the glycerine extract of tuberculous tissue and the extract of the glycerine-broth cultivations.

Experiment D.—A tuberculous guinea-pig was injected with 0.5 gramme of a solution of albumose from *Perlsucht*. Temperature before injection was 101.4° F., and afterwards, at intervals of an hour, 104.4°, 104.2°, 103.8°, 102.6°. The glands were distinctly enlarged, and the rise in temperature was in this case very striking.

Experiment E.—A tuberculous guinea-pig was injected with 1 gramme of the solution of albumose separated from pure cultivations of the bacillus in glycerine broth. The temperature before inoculation was 100.4°, and the subsequent hourly temperature 103.8°, 103.4°, 104.6°, 102.8°, 102.2°.

Experiment F.—Another tuberculous guinea-pig received the same dose of albumose. The temperature before injection was 102°, and the subsequent hourly temperature 103.2°, 103°, 103.6°, 103.6°, 102.4°. In both this and the previous case there was a visible effect shortly after inoculation, and in guinea-pig E a fatal result was anticipated, but the animal recovered. In both cases the tuberculous glands were distinctly affected.

To sum up, the effect of the ptomaine isolated from different series of cultures was as follows: A rise of temperature occurred in tuberculous animals, and slight indication of depression of temperature or hypothermic effect on healthy animals. The albumose, whether obtained from pure cultivations of the bacillus or from tuberculous tissue, produced a marked rise of temperature in tuberculous guinea-pigs. On the other hand, in an experiment (G) tried on a healthy guinea-pig, there was an equally well-marked fall of temperature. Whether this result is constant can only be determined by repeated experiments.

The effect upon the tuberculous glands in the cases associated with marked rise of temperature, was to render them well-defined, indurated, and painful, rather than to produce any considerable increase in volume.

It is interesting to compare these results with those obtained after the injection of tuberculous guinea-pigs with centigramme doses of Koch's fluid. Until Koch, however, has published the mode of preparation of the substance or

substances used in his anti-tuberculous treatment, it must not be concluded that our researches are necessarily upon exactly the same lines. Koch has stated that his liquid is a "glycerine extract of pure cultivations of the tubercle bacillus," and without further details it is impossible to interpret the exact meaning of this expression, and it does not necessarily follow, however probable it may be, that our extract of glycerine-broth cultivations, or the substances isolated therefrom, would produce exactly similar results to those produced by Koch's fluid.

CASE OF AINHUM.

By H. J. McC. TODD.
Staff-Surgeon, R.N., H.M.S. *Magicienne*.
(Communicated by the Director-General of the Medical Department of the Navy.)

As cases of this disease are not frequently reported, a short account may interest some of the readers of the British Medical Journal.

King Twala, aged 30, Krooman, was placed on the sick list complaining of pain and swelling of both little toes, which presented the following appearances. The left toe was enlarged to twice its natural size, and was twisted on its axis so that the nail looked outwards, and was so loosely connected to the foot that I feared he would lose the member if it struck against anything. He had no power of moving it in association with the other toes, and its sensation was very deficient. On a level with the web of the toe was a very tight constriction, which on the inner and plantar surface had ulcerated, but on the outer side was represented by a firm band of fibrous tissue; the right little toe was surrounded by a similar tight band, which, however, had not broken down. This man states that his left toe was first affected four years ago, and his right about one year since.



On inquiry into his family and previous history, I can find no cause for this disease, excepting the prevalence of this affection in that part of the West Coast from which he comes, and from his description the disease must be extremely common there, the popular remedy being to tie a piece of string over the seat of the constriction, and to tighten this from time to time until the toe drops off, this occupying about three months. This man is of very good physique, and, excepting his troublesome toes, is in excellent health. As he wished to have the toe removed on account of the discomfort it caused and his inability to walk, I amputated it at the metatarso-phalangeal joint, previously injecting cocaine. The operation was painless.

On examining the excised portion, I found the constricting band had reduced the structures below it to great thinness. There was a greatly increased development of adipose tissue in the enlarged portion, giving the sensation of fluid before removal.

CASE OF ŒSOPHAGOTOMY.

By THOMAS H. MORSE, F.R.C.S.Eng.
Norwich.

The operation of œsophagotomy is, I am surprised to find, a very rare one. I hope, therefore, the present case may prove of interest. Mr. Durham, in *Holmes's System of Surgery*, speaks of it as having been performed so long ago as 1738, and that since then as many as forty-five cases have been recorded. On two occasions it was performed at Guy's Hospital by Mr. Cock, for the removal of tooth plates.

The present case occurred on January 11th, 1890. The patient, a woman, aged 32, whilst bolting her dinner and at the same time attending to the impatient indicator of a telegraphic machine, suddenly felt that she had swallowed a foreign body, which gave her considerable pain. The pain, which was increased by pressure, was situated on the left side of the neck just below the cricoid cartilage. An œsophageal bougie when passed was suddenly arrested at a distance of 6½ inches from the teeth, and the passage of both liquid and solid food was obstructed.

With the able assistance of Dr. Hills, Mr. Warlters, and Mr. Cecil Muriel, an attempt was first made with a coin-catcher, but this failing to remove it, the operation was at once proceeded with.

An incision three inches long was made in the left side, on the inner border of the sterno-mastoid muscle, terminating below at the level of the sterno-clavicular joint. After dividing the superficial fascia, the platysma, and the deep fascia with several superficial veins, the omo-hyoid muscle was seen crossing the upper angle of the wound, and, as it interfered with the deeper dissection, it was divided between two ligatures. The dissection was now chiefly carried out with the tips of the two forefingers. The jugular vein and common carotid artery were exposed for about two inches. On the inner side of the wound was the thyroid gland, and deeper down the inferior thyroid artery, running horizontally into the gland was distinctly seen. Next the junction of the larynx and trachea, with corresponding portions of the pharynx and œsophagus, and running upwards between these two tubes, was seen the recurrent laryngeal nerve. A hard substance could now be felt in the œsophagus, and this organ was next separated from the cervical vertebræ and rotated on its long axis, for the purpose of making an opening into its posterior aspect, in order to avoid the recurrent laryngeal nerve. A small opening was made with scissors, and gradually dilated as the foreign body was removed with forceps. The œsophageal wound was not sutured. The skin was closed with silver wire, two drainage tubes being inserted. I need not enter into the details of the after-treatment, except to mention that although no food or drink was given by the mouth at all for three days, yet the pangs of hunger were entirely prevented by nutrient enemata in the form of suppositories. By degrees water, and afterwards milk, were swallowed, small quantities occasionally coming through the wound, and causing the discharge to be offensive, but recovery was practically uninterrupted, and was complete in three weeks.



Bone of fowl—natural size.

Should a similar case ever occur to me, I should feel much inclined to suture the œsophageal wound.

The foreign body was a portion of one of the rib bones of a fowl, and measured 1 inch in breadth and nearly 1½ inch in length.

REMARKS ON THE TREATMENT OF PURULENT PERICARDITIS.

By SAMUEL WEST, M.D., F.R.C.P.,
Assistant-Physician to St. Bartholomew's Hospital.

Dr. Bronner, in a very interesting case which he records in the British Medical Journal of February 14th, makes one or two remarks which call for comment. He refers to the cases recorded by Rosenstein and myself, which, after the lapse of several years, remain still, as far as I know, the only two successful cases of operation in which recovery was complete, and he goes on to remark upon the rapidity of recovery in these words: "It would hardly seem possible that in this time the pericardial sac could be obliterated by granulations gradually creeping over the heart from the base, as one might expect by analogy with the pleural cavity under similar conditions."

It is dangerous to argue from analogy, especially when the analogy is imperfect. I point out in my original paper that an analogy cannot be fairly drawn between the pleura and pericardium, and that all the advantages are in favour of the pericardium, for the fluid in the sac is no sooner let out than the two layers of the pericardium come into close relation all over, and are therefore in a very favourable condition for rapid adhesion. The rapidity with which such adhesion may take place is demonstrated in a case to which I refer, also in the same paper, but which is reported by me more at length in the *Pathological Transactions* for 1885, p. 104, and of which a full clinical account is given in the *St. Bartholomew's Hospital Reports* for 1883, by Dr. Brinton and Dr. Collyns. The case is one of pyæmia, and in this respect also resembles that of Dr. Bronner.

The pyæmia followed a severe fall. An abscess formed in the left shoulder, and subsequently in the right thigh. Left pleurisy developed, which was twice tapped and bloodstained serum removed. An incision was then made into the side; no fluid was found, but instead the pericardial sac was found distended, and this was opened with a bistoury from the wound in the side; twenty-four ounces of pus escaped with very great relief, but the child died fourteen days later. At the *post-mortem* examination, besides the signs of pyæmia mentioned, the left pleura was found divided into three separate compartments. The middle one only had been incised, and the other two contained serous fluid stained with blood. From the external incision the finger could be passed into the opening into the pericardium. This was empty of fluid, and adherent over the whole right upper and chief part of the posterior surface; the lower anterior with the apical portion of the posterior surface was not obliterated, and was covered with flakes of cheesy-looking pus. I think we may fairly conclude that within fourteen days all these adhesions had formed, that is, the greater part of the pericardium had become pretty firmly adherent, and I am inclined to think that more of it was only prevented from adhering by the frequent introduction of a tube which was passed into the opening to keep it free, even up to a short time before death. This fatal case goes far, I think, to establish rapid adhesion, which may occur, and explains the rapid recovery of Rosenstein's case and my own. To me rapidity of cure would be an argument in favour of the pericardium, and not against it, as Dr. Bronner seems to imply.

The dangers of surgical interference with the pericardium, to which Dr. Bronner refers, are, I think, greatly exaggerated. The only risk is that of wounding the heart, and, with care, this may be avoided. Exploratory punctures and paracentesis are, in my opinion, much more risky than incision, especially if the ordinary blunt aspirator needles are used. I have tapped the pericardium now several times, and without a single misadventure. On one occasion I was alarmed by getting nothing but a jet of blood. I at once removed the needle and, of course, drew off no fluid, but whatever it was that was done the patient was greatly relieved, and rapidly improved from the time of the puncture. The chief risk is that the diagnosis is incorrect, and the difficulties are in some cases considerable in distinguishing between a greatly distended heart and pericardial effusion. Even then it is not a clean puncture through the walls of the heart that is dangerous, for this has frequently occurred as the result of accident, and has even been deliberately performed with the object of tapping a greatly distended cavity. What has produced the fatal result has been, not the clean puncture, but a laceration, as I once saw happen in the practice of a deceased surgeon. With proper care puncture of the pericardium may be performed without any real risk at all, and I have on more than one occasion made an exploratory puncture into it for the purpose of diagnosis, and never, as I have said, with any untoward result.

The dangers, again, of the rapid removal of fluid are, I believe, for the most part imaginary. In my own case, the incision was followed by a gush of pus which spurted out eight or ten inches from the chest; in a few seconds fully two quarts were evacuated, and that without any bad symptoms or even faintness: on the contrary, with immediate relief. In the series of cases I refer to in my paper on Paracentesis Pericardii, there are several in which many pints have been rapidly removed, and in all cases no mention is made of any bad symptoms.

Washing out the pericardium seems also to inspire as much fear in the minds of some writers as the washing of the pleura, and I believe with just as little real ground. In my case, the pericardium was many times washed out, and always without harm; and I may in passing say that, out of the very many times in which I have freely washed out the pleura, I have never experienced any one of the terrifying accidents to which reference is so often made. I believe that, with ordinary care, that procedure is absolutely without risk.

Though I have ventured to make these remarks and criticisms upon Dr. Bronner's case, I wish to congratulate him and those concerned on the skill with which the diagnosis was made and the operation carried out. It was only unfortunate that the nature of the case almost precluded hope of ultimately saving life.

I may take this opportunity of recording the fact that my patient, whose pericardium was opened, washed out, and drained, is at the present time perfectly well. He has developed into a full-grown man, above the average weight and height. Although the pericardium must be universally adherent, there are no physical signs to indicate this. Except for the scar, there is nothing whatever to indicate that he ever had anything the matter with him. He has been for years in active work, and is capable of any ordinary muscular work, and has been only as a matter of precaution cautioned against undertaking work which calls for violent muscular effort.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

INTRAUTERINE ABSORPTION OF PLACENTA.

The question as to the power which the mucous membrane of the uterus is able to exercise in the absorption of solid parts of placental tissue is one of which the solution is fraught with great difficulties, and is at the same time one of such importance as to warrant the publication of any contribution which appears to throw light upon it.

That such absorption does occur, and often to a large extent, and without hurtful effects to the maternal organism in those cases where the tissue remains aseptic, is undoubtedly true. In a case, for example, which came under my observation, and where I am certain a large piece of the placenta which was completely adherent to the fundus was left attached, the woman recovered without a bad symptom, although it is likely that some of the portion left would afterwards be discharged with the lochia. The following case, however, proves to my mind conclusively that under some circumstances the absorptive power of the mucous membrane of the uterus on the placental tissues is very great, and as such the case, I think, is worthy of note.

Mrs. S., aged 38, wife of a labourer and mother of three healthy children, on this occasion miscarried about the seventh month of her fourth pregnancy. For the past two months, judging from her own feeling and from the absence

of increased size as the period of gestation advanced, she had been of the opinion that the child she was carrying was dead.

The fœtus was expelled with the bag of membranes entire; the whole capacity of the bag would be about a pint and a half. There was not the slightest sign of any placenta, but at the part where it should have been the end of the cord projected for half an inch from the outer surface of the bag, which at this point—the point where the placenta should have been—presented exactly the same appearance as that shown throughout the entire extent of their surface.

On opening the sac, about 10 ounces of dark-coloured amniotic fluid escaped. It was of a dark-brown colour, probably due to an admixture of blood, meconium, and exosmotic fluid from the fœtus.

The fœtus was well formed, not at all macerated, but of a sodden parchmented appearance, about 8 inches long, and with no other feature of significance. From its size it would be of the age of about five months, so that, taking the mother's reckoning as correct, it had been dead about two months.

The questions of importance are: What had become of the placenta, and was the death of the child due to its absorption? The end of the umbilical cord, which, as has been said, protruded from the membranes for half an inch, and then ended abruptly without any sign of ramification or division, presented no sign or appearance by which one might be led to conclude that it had ever been attached at all to an after-birth. But the latter must have been there at one time, and in all probability the death of the fœtus and its absorption occurred simultaneously.

As far as my own knowledge goes, the case is unique, and is, I think, worthy of record; doubtless, however, the same must have occurred within the knowledge of many practitioners.

Cupar, Fife, N.B. JAS. MATTHEW CAW, M.D.Ed.

EXCISION OF THE SAC IN A CASE OF SPINA BIFIDA.

MRS. H., aged 36, was delivered of her eighth child on June 13th, 1890. The nurse drew attention to a projection on the child's back, which turned out to be a spina bifida. This was situated at the lower lumbar region, and was the size of a hen's egg. The most prominent part of the tumour was membranous and semitransparent in appearance, with leashes of blood vessels coursing over it. The gap in the bones was made out to be small, the tip of one's forefinger easily plugging it. Manipulation quite satisfied us that a pedicle was present. The child was healthy and strong, and everything pointed to a suitable case for operation.

The child being under A C E, Dr. Alfred Swann dissected two flaps of healthy skin from the sac, and placed a ligature of chromicised gut round the pedicle. After opening the sac and finding that no nerves were present, he tied his ligature, cut away the sac, and stitched up the flaps. The dressings were antiseptic. No leakage occurred, and the flaps united by first intention.

This child has also a hypospadias of moderate extent at the proximal end of the penis. Taken along with the spina bifida, this seems interesting, particularly when the family history shows no previous occurrence of either deformity.

Batley, Yorks. J. STEWART, M.B., C.M.

A CASE OF HYDRONEPHROSIS, PROBABLY CONGENITAL.

I FIRST saw H. L. a few days before Christmas, 1890. His mother gave the following history. Ever since he was 2 years old he has wetted himself, at first in the daytime only, but latterly also at night. He complains every now and then of pain in the back and lower part of the stomach. The boy looked a little flabby, but was otherwise bright and intelligent. He had a long and fairly tight prepuce. The next day I examined him under chloroform. On passing in the sound there seemed to be a roughened condition, and a peculiar harshness of the lining of the bladder at parts, insomuch that it made one uncertain as to whether there was or was not a stone. While he was still under the anæsthetic I circumcised him, thinking that perhaps the tight prepuce might partly account for the irritable bladder.

The chief thing noticeable after this slight operation was that the wound never looked healthy, the parts remaining much swollen, but the incontinence was not so marked. On January 9th, 1891, he looked ill; temperature 103° in the evening, tongue slightly furred. On January 10th he began vomiting all his food. He slept quietly that night, but on the morning of the 11th he again began to vomit, it being now dark coloured, probably altered blood; he had symptoms of obstruction of the air passages; the right tonsil was swollen and sloughing; the heart was beating very slowly and irregularly; the pupils were semi-dilated, not acting well to light. The boy was dull but not unconscious, and he remained conscious until death took place the same afternoon. During the last twelve hours the amount of urine passed was much lessened, but there was never total suppression.

The *post-mortem* examination revealed the following condition of the urinary organs:—The urethra was normal. The bladder, which was about the size of a small orange, felt hard like a solid tumour. On cutting into it, its walls were about half an inch thick and very hard. The cavity was very much contracted, only holding 1½ ounce of fluid. The mucous membrane was white, thickened, and rough at parts. The muscle wall was pale pink; the ureters were much dilated, easily admitting my thumb: the pelves of the kidneys were enlarged. Both kidneys were 3½ inches in length and very soft. The right kidney was lobulated, the lobes being separated from one another as if there was commencing dilatation. The left kidney was not lobulated.

REMARKS. This condition of the urinary organs in a child is, I believe, most rare, and is most probably congenital. The probable cause of death was partial suppression of urine due to the abnormal condition, although many of the symptoms pointed to a septic cause. I look upon the operation as a sort of "last straw," hastening on death, which apparently was inevitable at no distant date—I mean that it increased the amount of refuse to be got rid of by the kidneys, and that they, under the circumstances, were unable to meet the call made upon them.

As far as diagnosis goes, I do not know that one could be able to tell in future whether a case was or was not of this nature. Perhaps having seen a case of the kind the following symptoms might be a help—the age, the incontinence being at first only in the daytime, and, on sounding, the peculiar roughness of the mucous lining of the bladder.

Guernsey. E. LAURIE ROBINSON.

TRISMUS INFANTUM.

ON December 27th, 1889, I was called to see an infant (female) 14 days old. On examination, I found the child's jaws slightly open, but otherwise fixed by strong muscular spasm, the arms rigid and straight, with the fingers flexed and the thumbs bent in the palms. Below the knees the legs were firmly flexed on the thighs and crossed. The distal phalanges of the toes were flexed; the big toes widely separated from the others. The muscles of the abdomen were rigid, and there was slight opisthotonos. The umbilical cord was stated to have fallen off on the fifth day, and when I saw it the wound was clean and almost healed. Up to 2 days old, the child is said to have been perfectly healthy, and took the breast well. After that there was some difficulty, and a bottle was procured. It was able to get a fair amount of nourishment in that way, until a day or so before I saw it, when the mother found the only way it could take nourishment was by the use of a teaspoon. In this way life was sustained until the child was 19 days old. Previous to the birth of the child, the mother had experienced considerable mental anxiety owing to nursing her child, who subsequently died of tuberculous meningitis.

The hygienic surroundings were not of the most perfect character, the house being rather dirty and badly ventilated upstairs. Hot baths and bromide with dill water was the only treatment adopted, with the exception of the child being wrapped in flannel.

The peculiarity of the case in my mind consists in the unusual time to which the child lived from the first approach of the serious symptoms, the rarity, as far as I can gather, in England, and the lack of any definite cause.

F. G. STEWART, M.R.C.P., L.S.A.

Wadebridge, Cornwall.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

LARGE EXTRAPERITONEAL DERMOID CYST SUCCESSFULLY REMOVED THROUGH AN INCISION ACROSS THE PERINEUM, MIDWAY BETWEEN THE ANUS AND THE COCCYX.

(By Frederick Page, Surgeon to the Royal Infirmary, Newcastle-upon-Tyne.)

M. M., aged 47, was admitted into the Royal Infirmary, Newcastle-upon-Tyne, under the care of Dr. Limont, March 20th, 1889, supposed to be suffering from an ovarian tumour. She was a pale, flabby, broken-down looking woman, and gave the following history: She married at the age of 19, has given birth to seven children, and has twice miscarried. All her labours have been difficult. After the birth of her fifth child, twenty years ago, she first noticed a swelling in the lower part of the belly. This swelling has slowly but steadily increased in size. Her sixth confinement was more difficult than any previous one. Her seventh, eleven years ago, could not be completed naturally, as all the others had been, and, after the failure of forceps, craniotomy was performed. For years she has had an offensive vaginal discharge, and experienced increasing difficulty in defæcation and micturition. She ceased to menstruate three years ago. For the last two years she has been aware of a tumour occupying the pelvis and encroaching upon the vagina.

On March 28th I was asked by Dr. Limont to see the case. Immediately below the navel a tumour, the size of a cricket ball, could be felt in the belly. It was round, hard, and regular, and could be moved from side to side. Behind this was a larger growth, reaching as high as the umbilicus and downwards so as to occupy the pelvis. The patient was now put under chloroform and into the lithotomy position. The posterior wall of the vagina protruded slightly through the vulva. With some difficulty the two forefingers were introduced into the vagina, and the globular swelling, made out to be the uterus, thrust upwards. The vagina was much elongated. On introducing the finger into the rectum it was ascertained that there was a growth behind which displaced the rectum and posterior wall of the vagina forwards, and caused the elongation of the vagina by forcing the uterus upwards. This was the deeper growth already mentioned, and the question arose—what was it? A coarse aspirating needle was passed into the anus, through the posterior wall of the rectum, backwards and upwards into the growth. Nothing flowed, but on withdrawing the needle and passing through it a stilet it was found to be blocked with yellow pultaceous material imbedded in which was a hair. It was evident a dermoid cyst had been punctured. Two days after this examination, on March 30th, the patient's temperature rose and continued to rise till, on the evening of the 31st, it stood at 103°. She vomited several times, and had a rigor followed by sweating.

On the morning of April 1st she was in a critical condition. The perineum was in a state of acute inflammatory œdema, bulging, red, and tense. She was placed under chloroform, and in the lithotomy position. A semilunar incision, 6 inches long, was made across the perineum, its centre corresponding to a point midway between the anus and the coccyx, and deepened till the cyst was opened, when at once the contents began to exude. Pressure over the abdomen, by squeezing out the thick, putty-like material, mixed with hair, with which it was filled, rapidly reduced the size of the tumour, and it was emptied with a tablespoon. By seizing the margin of the cyst, and passing the hand upwards between it and the tissues, it was readily enucleated and withdrawn. To do this, the hand and the greater part of the forearm was buried in the wound. Large drainage tubes were introduced, and the wound closed with sutures. There was little bleeding. The after-treatment consisted in simply keeping the vagina and wound frequently syringed with an antiseptic fluid, and carefully nursing the patient. On April 21st the temperature was normal, and early in May the patient went home. She is now quite well, her only inconvenience being a tendency to prolapse of the anterior wall of the vagina.

The cyst, with its contents, weighed three pounds, and from its interior surface numerous hairs spring. In its dried condition, stuffed, its circumference in one direction is 29½ inches, in the other 17½ inches. It has no pedicle.

Retrorectal dermoids have been described in Germany a few times. Sänger removed one through a vertical incision in the perineum. I believe one or two cases have been recently brought before a London medical society, though I have not seen them reported. I take it, however, these growths are not common. How and where they originate is an interesting pathological question. This cyst was certainly not a perineal growth. My colleague, Dr. Limont, is of opinion it developed in the broad ligament, springing probably from the parovarium on the right side. As it grew, he thinks, it separated the layers of the broad ligament, till emerging from between them it expanded behind the peritoneum upwards towards the diaphragm and downwards towards the perineum. In its downward progress it lay to the right of the rectum, and, continuing to increase, passed behind it, and reached the perineum. In the British Medical Journal for January 17th, 1885, Dr. Fancourt Barnes relates the history of a case of labour obstructed by a pelvic tumour, which on *post-mortem* examination was found to be a suppurating dermoid cyst "attached to the posterior aspect of the pelvic margin by a peduncle, narrow at the tumour and spreading out on the sacrum in a digitate manner." Dr. Barnes tells me "the seat of origin could not be made out, because all the parts were so matted together. Dr. Bennet, however, did not think it originated in the broad ligament." It appeared to Dr. Barnes to be in Douglas's pouch.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, February 17th, 1891.

W. H. Dickinson, M.D., F.R.C.P., President, in the Chair.

Single Asymmetrical Hypertrophied Kidney, with greatly Dilated Pelvis.—Mr. Job Collins showed a specimen of this nature, which was taken from the body of a man, aged 50, who had died in the London Temperance Hospital from malignant disease of the œsophagus. It was situated in the usual position in the left loin. It weighed 5½ ounces. The surface was rough, and the organ was evidently hypertrophied. The pelvis was greatly dilated, and the ureter admitted a finger. The vesical orifice of the ureter was stated to be valvular. The bladder was dilated, and its mucous membrane injected. The right kidney was noted to have been represented only by "a small dark flaccid mass, little more than an inch in length." The right ureter was of the size of a lead pencil. There was apparently no true renal tissue in the mass. The case appeared to be one of asymmetrical hypertrophic kidney, the result of destruction of the opposite kidney, probably from complete hydronephrotic atrophy, as there was a similar earlier condition of dilated pelvis and ureter in this kidney also. The important bearing of the occurrence of such cases was sufficiently obvious in cases where nephrectomy for hydronephrosis or tubercle of the kidney should be contemplated.

Imperforate Rectum.—Mr. Stephen Paget showed three specimens of imperforate anus: (1) From a very small, feeble infant, a thirteenth child, never at the breast. He did a left inguinal colotomy, and ten days later he passed a director down the bowel, and was able to evert the *cul de sac* and push it out at the anus, and open it easily. But the baby did not thrive, and died at five weeks old. (2) From a small, feeble infant. He found the bowel at the depth of an inch, opened it, and dragged it down. The child died at six days old, and was found to have only one kidney, the right kidney being undeveloped. There was ulceration of the opened bowel. (3) From an infant that had gone thirteen days unrelieved. Mr. Paget failed to open the bowel in the *cul de sac*, and passed

instead into the peritoneal cavity. He therefore made a small median incision above the pubes, and attached the dilated bowel here, and opened it; but the infant never rallied, and died the second day after the operation. At the *post-mortem* examination some peritonitis was found round the wound, but there was no extravasation or giving way of the bowel. A Meckel's diverticulum existed on the small intestine. Mr. Paget called attention to the co-existence of other malformations in these cases, and to the difficulties of operating upon them.—Mr. Bland Sutton had examined *post mortem* several fœtuses with imperforate rectum, and in five of these he had found the kidneys abnormal. In one the kidneys and ureters were represented by mere fibrous tissue, in others the kidneys were sacculated. The rectum in these cases occupied the cavity of the pelvis, and was in each case much distended. The pressure of this over-distended rectum was doubtless the cause of the obstruction to the ureters, with the subsequent sacculation of the kidneys.—Mr. Bowlby understood Mr. Paget to say that he had not found a ureter in connection with the kidney that he had described; and Mr. Paget said that this was so.—Mr. Symonds, of Oxford, referred to two cases of imperforate rectum. In one, after endeavouring to reach the rectum from the perineum, but unsuccessfully, he had performed colotomy. After some time the rectum burst on to the surface of the body at the proper place. In the second case, also, he had been obliged to perform colotomy after endeavouring to reach the rectum from the perineum. The operation, however, was a difficult one in many instances, and in this case had proved unsuccessful.—Mr. W. G. Spencer thought that Mr. Sutton's suggestion that the condition found in kidneys in these cases was due to over-distension of the closed rectum was difficult to understand.

Aortic Aneurysm communicating with Superior Vena Cava.—Dr. William M. Ord showed a specimen which was taken from the body of a police constable, aged 43, who had been admitted into St. Thomas's Hospital on November 14th, 1890. The patient had been a constable for thirteen years, and previously had led a life of very hard work. There was no history of syphilis or of intemperance. Five months before admission he began to experience a pricking sensation in the right side of the chest, accompanied by dysphagia and inability to lie on the left side. When first seen he showed marked lividity of the face and ears, and the right side of the neck and chest was œdematous, with turgid superficial veins. No tumour of the chest was visible, but there was marked dulness from the right border of the sternum outwards, between the upper border of the second and upper border of the fourth ribs. There was pulsation, but no thrill over this area. On auscultation there was a long, continuous, humming murmur, never ceasing, but varying in intensity, being more sonorous during cardiac systole, fainter during diastole, conducted into the neck, and heard over the whole of the right side of the chest posteriorly. The cardiac area of dulness was increased, and there was a musical, apical, systolic murmur, distinct from the continuous murmur. The radial pulses were equal; the arteries were thickened. There was no ascites or anasarca. For the first ten days in hospital the patient improved decidedly, but on November 26th there was marked increase of the facial œdema, and sharp dyspnœa. Signs of pressure on the upper part of the right lung developed, and the patient died somewhat suddenly on the night between December 3rd and 4th. At the *post-mortem* examination the right pleura was found to contain about eight pints of fluid and clotted blood; a small perforation opening into it was found in the sac of the aneurysm near the root of the lung. The aneurysm began 2 inches from the aortic valves, but the first part of the aorta was not healthy; the sac was about the size of an orange, and, except for a little pale adherent clot, was empty. In the interior a small slit in the sac, about half an inch in length, opened directly into the superior vena cava, two inches below the union of the innominate veins. Reference was made to two cases occurring under the care of Dr. Bristowe in St. Thomas's Hospital, which presented similar physical signs.—Mr. Raymond Johnson mentioned a case that had been described by Dr. Arkle at the Clinical Society, which agreed almost exactly with Dr. Ord's case, both clinically and pathologically.—Dr. Seymour Taylor thought the chief interest in the case under discussion was in connection with the characters of the murmur that had been present during life. He had listened both to this and also to Dr. Bristowe's cases. The late Dr. Murchison had shown that there were four signs indicative of aneurysm, and to these he thought a fifth might be added, namely, diastolic shock, the importance of which Dr. Ord had previously pointed out. A murmur in the sac of an aneurysm, if produced by the contraction of the wall of the sac, would be synchronous with the cardiac diastole. A musical humming murmur would be the kind of murmur likely to be produced by the contraction of the sac wall, and the murmur might be compared to that heard in cases of congenital heart disease in which there was an imperfect ventricular septum.—Dr. Ewart referred to a specimen in St. George's Hospital Museum in which there was a communication between an aortic aneurysm and the superior vena cava. During life there was very great pressure on the veins at the root of the neck. In order to try and give relief venesection had been performed, and the blood had escaped from the opened vein in jets as though from an artery. Although he had not recognised the full significance of this at the time, he felt that it was a point of much importance, and asked Dr. Ord if he had noticed any venous pulsation in his case.—Dr. Hadden had seen Dr. Ord's case during life, and also the two cases of Dr. Bristowe's that had been mentioned. He would prefer to describe the murmur as a continuous one with a wave of greater intensity in it. A murmur of this character was not absoluteiy diagnostic of aneurysm, as such murmurs had been known to occur in very vascular sarcomata, and, indeed, murmurs had been heard in sarcomata situated both within the thorax and elsewhere.—Dr. Ord, in reply to Dr. Ewart, stated that no pulsation could be detected in the veins of the neck owing to the œdematous condition of the parts, and that there was no pulsation in the veins of the arms. Dr. Hadden's remarks with reference to sarcoma were very important. He had himself occasionally heard murmurs over sarcomata which were of much the same quality of tone as the one in the case under discussion, but varied in time by not being so continuous.

Cervical Teeth.—Mr. Bland Sutton first showed a sheep's ear, in connection with which was a persistent second branchial cleft, and attached to it was a flap of skin, known as a cervical auricle. The edge of this flap was covered with papillæ like those found on the lip of a sheep, and in the cleft there was a tooth somewhat similar to a sheep's incisor. The second specimen was a tooth which had been removed from a persistent second branchial cleft in a horse. Teeth had been found in connection with the petrous bone in oxen, and two cases had been described by Magillot which were preserved in the veterinary museum at Alfort, near Paris. Teeth had occasionally been found in the second branchial cleft in man, and he mentioned one case in which a tooth was cut behind the angle of the jaw in the neck, in the usual position of a persistent second branchial cleft. This had been erroneously supposed at the time to be a wisdom tooth which had wandered.—Dr. Ord remarked on the great interest of these cases, and asked Mr. Sutton whether the teeth conformed to the mammalian type or approached that of some of the lower vertebrates, as some fishes had teeth on their branchial arches.—In reply, Mr. Bland Sutton stated that the teeth were of strictly mammalian character. He then referred to dermoid cysts, the contents of which also conformed to the type of the animal in which they were found. It was, however, interesting that teeth had only been found in dermoid cysts which were connected either with the ovary or the neck.

Columnar Carcinoma of Humerus Secondary to Tumour of upper part of Rectum.—Mr. Bernard Pitts showed a specimen of the above description, which was removed from a woman, aged 32, who was admitted into St. Thomas's Hospital in February, 1890, with obstruction of the bowels, caused by a large growth in the upper part of the rectum. Symptoms dated from her last confinement, eighteen months previously. For the last year she had been losing flesh, and suffered from profuse and offensive diarrhœa. The distension of the abdomen was so great on admission, and the rectal examination revealed such a hard and fixed growth of the bowel, that Mr. Pitts performed left lumbar colotomy, and opened the bowel at once. After the abdominal distension had subsided, a hard mass could be felt through the abdominal wall in the left iliac

region, but from its extent and its attachments, it was not thought advisable to attempt excission of the growth. So she left the hospital on April 6th, having gained flesh greatly, and she was in fair general health. She was able to do ordinary household work, and suffered comparatively little inconvenience from the artificial anus. Early in November, whilst making her bed, she felt her arm suddenly snap, and was unable to use it afterwards. She was admitted again into hospital, under Mr. Pitts, in December, in an emaciated condition, suffering great pain from a large tumour of the right humerus, with a fracture about the middle of the bone. The rectal tumour had increased somewhat in size, but there was no evidence of further growth within the abdomen or elsewhere to be detected. On December 4th, 1890, Mr. Pitts amputated at the shoulder-joint, by skin flaps, having first ligatured the vessel in the axilla. The patient made a rapid recovery, and left the hospital on January 14th, 1891, with a perfectly healed stump, and having gained flesh and strength in a surprising manner. The tumour of the humerus shown was of large size, and in appearance very like an ordinary subperiosteal sarcoma which had infected the medullary cavity. A microscopic examination of the tumour, made by Mr. Shattock, showed it to be, as expected, a columnar-celled carcinoma, so perfect in character that it would be impossible to distinguish it from a similar growth in the rectum. Mr. Pitts, in his remarks, stated that he could find no reported case of such a growth in bone secondary to tumour of bowel; but referred to a case of similar growth in the humerus recorded in the *Pathological Transactions* for 1886, by Mr. J. Hutchinson, jun., where, however, no primary bowel tumour had been found during life, and no abdominal symptoms had been present. Unfortunately, in this case a *post-mortem* examination had not been allowed. In the present case it was quite clear that the tumour could not be described as a cylindrical sarcoma; and the specimen showed how closely a carcinoma of bone might resemble a sarcoma in general appearance. The life-history of columnar carcinoma of bowel had not been satisfactorily determined, for the growth was often present for a long time without giving rise to any direct symptoms; it might remain for a year or two local, not even implicating surrounding structures. So few of these tumours had been removed at an early period that it was impossible to form an estimate as to the prognosis in early and complete excision; but it must be more hopeful as regards life than in carcinoma in most other places.—Mr. STEPHEN PAGET read the following statistics, which he had collected: Out of 40 cases of cancer of the rectum, in only one had there been secondary deposit in bone (femur). In 291 cases of cancer of the alimentary canal, from the lip to the anus, only 3 presented secondary deposit in bone; the one mentioned above, and one from the lip and one from the cheek, both with secondary deposit in the seventh rib. In cancer of the uterus, out of 200 *post-mortems* no bone was secondarily affected; whereas, in cancer of the breast, out of 205 cases the humerus had been affected six times, the femur in eleven, and many other bones. Of German statistics, Gussenbauer had collected 903 cases of cancer of the stomach, and no mention was made of any bones having been affected; Sprengel, in 131 cases of cancer of the breast, the femur four times, the cranium and other bones somewhat frequently; Torok, out of 336 cases of cancer of the breast, humerus in 5, femur in 3, and many other bones. In malignant disease of the thyroid, secondary deposits in bone were particularly liable to occur. Out of 24 cases which he had collected, the bones contained secondary deposits in 16. It did not appear to be a mere question of embolism, but there must be some predisposition, as special parts of bones, especially the upper half of the femur and of the humerus, were most usually affected. He asked Mr. Pitts if, in his case, any other bones had been affected. He said that Torok had found that in many cases there was an unusual brittleness of bone.—Mr. R. WILLIAMS said that fragilitas ossium in cancer was quite distinct from metastatic deposits. Secondary deposits in bone were found in several cancers besides those in the breast, and, he believed, sometimes with uterine cancer. He considered secondary deposits in bone to be undoubtedly embolic. In Mr. Pitts's case it was interesting that so large a tumour must have grown from a single cell, as he had no belief in any spermatic influence. Mr. R. JOHNSON mentioned a case that was in University College Hospital about two years ago in which there was secondary growth in the humerus. It was thought at first to be a sarcoma, but, on examination, was found to be carcinomatous, though no primary deposit had then been found, but later a small ulcerating growth in the cervix uteri was discovered. The case was interesting from the large size of the secondary deposit as compared with the small primary growth. He mentioned another case of squamous epithelioma with secondary deposits in the ribs.—Mr. SHATTOCK remarked that secondary deposits were almost unknown in squamous cancer other than in glands. This, he thought, might be explained mechanically, as the cells, owing to their large size, were filtered off in the glands, whereas the small cells of scirrhus not uncommonly had secondary deposits in bone.—Mr. SYMONDS related the case of a lady who had persistent pain in the neighbourhood of the left shoulder. She was under the care of Mr. Bryant, who found the coracoid process to be enlarged by a cylindrical-celled epithelioma. No primary growth could then be detected, but she afterwards died of carcinoma in the neighbourhood of the liver; probably of the gall-bladder.—Mr. BOWLBY said that bones generally escaped unless the growth was widely disseminated. Vertebræ were most commonly affected, and this was generally due to a local cause. He mentioned a case of recurrent scirrhus of the breast which had directly infected ribs and thence vertebræ. In connection with the commonness of tumours of bone secondary to growths in the rectum, he mentioned two cases, one with secondary deposits in the femur and the other in the humerus. All would agree with Mr. Pitts as to the comparative innocence of growths in the rectum.—Mr. PITTS, in reply, thanked Mr. S. Paget for his statistics. It was wonderful the way in which spontaneous fractures of the bones would unite. The fragility of the bones was generally due to a secondary deposit, and he mentioned a skeleton in St. Thomas's Hospital museum in which nearly all the bones had been fractured, and many were reunited, the union being by growth. The primary disease was scirrhus of the breast.

Tumour of Right Kidney weighing 4½ lbs.: Hæmaturia: Death.—Mr. JOHN R. LUNN showed the specimen, which was removed from the body of a man aged 57, who was admitted into St. Marylebone Infirmary, Notting Hill, on September 10th, 1890, with hæmaturia. He stated he had suffered from hæmaturia off and on for six years; the last three weeks before admission his feet began to swell. On admission the patient was a tall man, pale from loss of blood by the urethra. The urine was drawn off by a No. 10 catheter; it was acid and contained blood, as shown by microscopical examination. On examination of the abdomen a large tumour was found occupying the right renal region. An exploring needle was inserted into the swelling, but nothing was withdrawn. The patient gradually became worse and sank. At the *post-mortem* examination it was noted after opening the abdomen that the liver was pushed forward by a tumour behind. The liver was removed and a large tumour was seen occupying the right lumbar region. Mr. Targett kindly examined the specimen, and said the tumour had replaced the right kidney and in shape resembled it. The mass weighed 4½ lbs., and measured 7½ inches in length, 5 inches from side to side, and 3½ inches in thickness. On section, it was found that the whole of the kidney structure had not disappeared, for at the upper extremity a small triangular area of normal renal tissue could be recognised; for the rest, the surface of the section had a spongy appearance and was very soft, yielding an abundant juice on scraping. The pelvis for the most part had disappeared, except at the upper end, in the neighbourhood of the normal kidney structure, where one or two calyces remained and were much dilated. Their outlet was blocked below. Examination of the hilum showed that the renal vein was completely filled with a plug of new growth, which had extended inwards towards its opening into the vena cava. The funnel shaped portion of the pelvis was similarly blocked with growths and blood clot. The growth did not appear to have perforated the capsule anywhere except at the hilum, and there were two bossy projections which seemed to have commenced as intravenous extensions. The opposite kidney (left) weighed 8 ounces, and contained one secondary deposit about the size of a walnut. Neither kidneys showed amyloid changes. The urinary bladder was rather thickened, but otherwise normal; the prostate enlarged; the liver weighed 4½ lbs., and was

soft and friable; no deposits. The other viscera normal. Heart was much dilated, and left ventricle thickened; weighed 26 ounces 3 drachms, Valves healthy. Histologically, the growth was a very soft carcinoma.—The PRESIDENT mentioned the rarity of primary carcinomata of the kidney, and the specimen was then referred to the Morbid Growths Committee.

Effects of Intrauterine Pressure on the Fœtus.—Mr. J. J. CLARKE brought before the Society specimens with deformities in two newborn children which were born at full term. In both cases there was good evidence of the conditions at the time of labour. The first case was brought to the author by Mr. Déqué. The mother had previously attended at St. George's Hospital for pelvic pain, and after delivery four fibroids had been found. The quantity of liquor amnii in this case was small. The second specimen was given to the writer by Mr. H. S. Collier, and was a monster. The mother had previously borne six healthy, well formed children. The labour was slow, and no liquor amnii had been present. The following points of interest were present in the deformities. In the first there were membranous fenestræ in the cranial bones, particularly in the parietal bones. In the second case there was complete encephalocele, the cranial bones being entirely absent. In the first there was a myelocele, and in the second a spina bifida occulta. In the second case, owing to the thighs having been pressed close to the groins, the descent of the testes had been interfered with, and in this case also there was a small caudal appendage. The deformities in these fœtuses he attributed to excessive pressure on the developing embryo, due to the absence of liquor amnii.

Card Specimens.—Dr. W. B. HADDEN: 1. Carcinomatous Ulceration of Œsophagus Opening into the Aortic Arch and Trachea. 2. Patent Foramen Ovale in Adult.—Mr. G. H. MAKINS: Spinal Meningocele Excised after Morton's Injection.—Dr. H. D. ROLLESTON: Rupture of the Right Bronchus and Fracture of the First Rib.—Mr. S. G. SHATTOCK: Genu Recurvatum.

Recent Specimen.—Mr. WYATT WINGRAVE: Lungs and Larynx from a Case of Tuberculosis after Koch's Treatment.

CLINICAL SOCIETY OF LONDON.

FRIDAY, FEBRUARY 13TH, 1891.

Sir DYCE DUCKWORTH, M.D., LL.D., F.R.C.P., President, in the Chair.

Stricture of the Pylorus following upon Hydrochloric Acid Poisoning, in which a Modified Loreta's Operation was Performed.—Dr. W. HALE WHITE and Mr. W. ARBUTHNOT LANE contributed this case. The patient, a man, aged 43, seven weeks before admission into Guy's Hospital, swallowed some hydrochloric acid, whether intentionally or accidentally could not be made out. This was followed by a sharp attack presenting all the symptoms of acute irritant poisoning, but at the end of a few days he was better and seemed all right. At the end of a month severe hæmatemesis and pain set in, for which he was admitted seven weeks after he took the acid. He was wasted and weak, and had hæmatemesis and melæna. He was allowed an ounce of milk every hour, and in a few days appeared better; but a fortnight after admission it was obvious that the stomach was dilated, and the vomiting returned. By careful dieting and washing out of the stomach he improved considerably, but he again relapsed, and became so weak and collapsed that death seemed close at hand. Three diagnoses were possible: either it was severe traumatic chronic gastritis, or there was ulceration with cicatrisation near the pylorus, or he had some tumour of the pylorus independent of the poisoning. October 6th. Mr. Lane, having washed out the stomach and left the tube in as a guide, made an incision through the right rectus muscle and exposed the stomach, which was found to be a little dilated and much hypertrophied. The pylorus and the stomach close to it formed a firm hard mass not presenting any sign of malignant growth; it was so firm that it was thought it would be impossible to dilate the pylorus rapidly, and so the stomach wall was attached to the edges of the abdominal wound, and the patient was fed with nutrient enemata for forty-eight hours, at the end of which time the stomach was opened, and it was found that the pylorus would only admit a No. 4 catheter. Through this the patient was fed every two hours for three days; he seemed to be doing well, but he died suddenly seventy-six hours after the stomach had been opened. The necropsy showed no cause for death; there was no peritonitis, no pulmonary embolism, nor was there any ulceration of the stomach to account for the pyloric obstruction. The cardiac end of the stomach was normal.—Mr. B. JESSETT advocated the operation of gastro-enterostomy with decalcified bone-plates, as introduced by Senn, for the treatment of such a case, and remarked that Loreta's method of treatment by dilatation of the pylorus was almost certainly followed by subsequent contraction.—Mr. F. TREVES objected to the statement that contraction recurred after Loreta's operation. He mentioned two cases, upon one of which he had himself operated, in neither of which had symptoms of contraction returned, although two years had elapsed since the operation. In such a case as that of Dr. White, he should advocate the treatment actually pursued rather than that by gastro-enterostomy. He was of opinion that Loreta himself endeavoured to dilate the pylorus to an unnecessary extent by introducing "three or even four fingers," inasmuch as the lumen of the normal pylorus was about the size of a sixpenny piece. As to the difficulty of finding the pylorus, he remarked that in one of his own cases, in spite of every conceivable procedure during a search of more than half an hour, he was unable to discover the pylorus, and closed the wound without having done anything. That patient's condition nevertheless subsequently improved immensely, so that she was able to go home, and remained free from severe symptoms for nine months. This led him to remark upon the curiously beneficial effects that sometimes followed the mere opening of the abdomen, as to which he cited several examples.

A Case of Removal of Suppurating Vermiform Appendix; Cure.—Mr. H. W. ALLINGHAM read notes of this case. The patient, a boy, aged 15, walked into the Great Northern Hospital, bending forward considerably and complaining of pain in the abdomen said to have been due to a fall the day before. The previous history was that he had been quite well up to the time of the fall, but that three months back he was ill for a week with constipation. On admission the temperature was 100.6°, pulse rather feeble, tongue furred and a little dry; he complained of pain like knives cutting him in the lower part of the abdomen just below the umbilicus in the median line. Respiration was chiefly thoracic, but the lower part of the abdomen was partly used also. The abdomen below the umbilicus was tense and tender, but not to any great extent. There was no marked tenderness, fulness, or pain over the usual region of the cæcum. The urine was drawn off by a catheter; it contained no blood, was clear, and measured 10 ounces. Mr. Allingham saw him a few hours after admission to hospital, and about twenty-four hours after the said accident, and as the symptoms were obscure he desired to make an exploratory abdominal incision. This was made in the median line, as a careful examination of the abdomen while under chloroform revealed nothing. On opening the peritoneum, pus welled up into the wound, and there were evidences of commencing peritonitis. The intestines were found not to be wounded, so the surgeon at once turned his attention to the cæcum and appendix vermiformis. When the appendix was found it was observed to be perforated by a ragged ulcer, and by it were two fæcal concretions. The appendix was closely adherent to the cæcum. The appendix was separated from the gut, and ligatured with fine silk at its base, and cut away. There were no evidences of previous inflammation about the cæcum. The abdomen was carefully washed out with warm water, a glass drainage tube inserted, and the abdomen closed with silkworm gut sutures. After a rather protracted convalescence the boy made a complete recovery, and had since been at work four months. The patient, a specimen of appendix, and fæcal concretions were shown.

Four Cases of Excision of the Vermiform Appendix.—Mr. J. B. SUTTON described these cases, which he had successfully treated by excision. The first patient was a man, aged 24, under Dr. Sydney Coupland's care, with unmistakable signs of appendicitis. The cæcum was exposed by a lateral incision, and the appendix found lying adherent to its anterior aspect. The middle third of the appendix had sloughed, and

an abscess, containing several ounces of pus, had formed in consequence. The appendix was removed, the stump sutured, and the peritoneal cavity flushed with warm water. The patient made an uninterrupted recovery.—Case II. A groom, aged 22, came under Mr. Sutton's care as a case of renal colic. The patient had had three attacks previously, the first, two years previously, diagnosed as "typhlitis," the second as "ruptured muscle," the third as "renal colic," and the last remained undiagnosed. On careful examination it was clear that the disease was relapsing appendicitis. Mr. Sutton exposed the cæcum by a lateral incision, and found the appendix slightly adherent to the brim of the pelvis. Its lumen was obstructed. The appendix was cut off, the end carefully sutured, the muscles drawn together by gut sutures, and the skin closed in the usual manner. The appendix below the stricture was filled with pus. The patient left the hospital convalescent on the fourteenth day.—Case III. This patient was seen in consultation, and regarded by the practitioner in charge as a case of renal colic. After examination under chloroform Mr. Sutton came to the conclusion that the patient had a postcæcal abscess, probably secondary to inflammation of a vertical retrocæcal appendix. The parts were explored and this diagnosis verified; the appendix was lying vertically behind the cæcum, and its middle third had sloughed. The pus was washed away, the stump of the appendix sutured, and a drainage tube inserted. Convalescence was interrupted by an attack of pleurisy, which suggested that the trouble in the tube was tuberculous. Sections of the appendix were examined for tubercle and tubercle bacilli, but with negative results. The wound granulated, and the patient left the hospital convalescent.—Case IV. A shoemaker, aged 19, was admitted under Dr. Finlay's care with typical signs of typhlitis. Under medical treatment he seemed to improve; but in the course of three weeks the presence of pus was clearly indicated. Mr. Sutton operated by a lateral incision and evacuated a large quantity of pus from the iliac fossa; the tip of the appendix had sloughed. As the rest of the appendix was dilated it was cut off, its end closed by three gut sutures and the wound stuffed with iodoform gauze. On the eighth day a small fistula formed in the colon, allowing gas to escape. This, however, became closed as the wound cicatrised, and the patient left convalescent. Of these four cases, three were examples of acute and one an example of chronic relapsing appendicitis. The smooth and rapid convalescence in Case II, in which the operation was performed for chronic appendicitis, formed a striking contrast to the risk, danger, and anxiety in the acute cases. All the cases illustrated the importance of early operation, which is simple enough to surgeons acquainted with the practical details of abdominal surgery. Case III suggested that an abscess secondary to appendicitis in a vertical retrocæcal appendix might invade the perirenal tissues and set up a perinephritic abscess. It was also curious that an abscess due to appendicitis, though very fœtid, failed to conduct itself in an orthodox manner and indicate its presence by rigors. It must also be remembered that in many cases of typhlitis which presented abdominal distension, pain, and the characteristic symptoms of infective peritonitis of sudden onset, these ominous signs were due to the escape of septic material from a latent abscess into the general peritoneal cavity. In such cases surgery could do little good.

Two Cases of Typhlitic Abscess in which the Vermiform Appendix was removed.—Mr. Andrew Clark contributed notes of these cases. In the first, the patient had general peritonitis when he was first seen, and although he improved after the operation, he died of peritonitis on the fourth day. In the second case, where the attack was the third, the appendix was found bound down by adhesions and sloughing; it was removed and the patient made a good recovery. He had had no recurrence of symptoms to the present date (January 22nd, 1891).

The President remarked that all such cases formerly presented a sad record; but that since the triumphs of surgeons in abdominal surgery had become so remarkable, the cases could now be treated with a great possibility of success. He conceived it to be the duty of the physician, when he had made a definite diagnosis of appendicitis, to transfer the case to his surgical colleague. Cases in which the cæcum was involved were much less severe, and should be distinguished from those in which the appendix was the site of disease. The former class of cases did not require the abdomen to be opened, as did cases of the latter kind. He noticed that there was usually a concretion found in the appendix submitted to operation, but it should be remembered that more or less fæculent matter, the ordinary contents of the intestine in fact, was usually found in the appendix, if trouble were taken to open it, as one of his colleagues at St. Bartholomew's had done, at every *post-mortem* examination.—Mr. Treves said that from the signs of amusement which had greeted Mr. Sutton's remark that "the usual treatment which the physician uses for such cases" had been adopted in one of his cases it might be supposed that such treatment was usually inefficacious. But he contended that the medical treatment of cases of typhlitis was on the whole remarkably successful; and that any proposal to treat all cases of typhlitis by operation would lead to disaster. In the London Hospital nearly all cases of typhlitis recovered under ordinary medical treatment. Perhaps, therefore, it would be better to return to the days before the "epidemic" of removing the appendix had set in; and possibly it was better to do too little than too much. As to the diagnosis of appendicitis, many of the cases of cæcitis were very acute at first. In young cases, especially, the inflamed appendix might be felt per rectum. There was often, also, much reflex pain in the groin, testicle, and labium in appendicitis from the pressure on the ureter. Only a few of such cases required treatment by operation. Early interference, too, with typhlitis was bad, and the practice of running needles in had led to serious disaster. Probably no cases should be operated on before the fifth day, for the cases of death on the third or even the fourth day were almost unknown. In 1887, in a paper read before the Royal Medical and Chirurgical Society, he had urged the removal of the appendix in these cases during a quiescent period; now every museum was crowded with appendices, and soon he should expect that the human subject, following the law of heredity, would be born without an appendix. In making ordinary *post-mortem* examinations, an appreciable percentage of cases was found in which at some time during life there had been inflammation of the appendix, from which the subject had usually recovered. The removal of the appendix, during a quiescent period even, was often a very difficult operation. Twice he had failed, and two or three times it had taken him over an hour to complete the operation. He believed that some day a portion of the ureter would be removed instead of an appendix. The operation was often formidable. The appendix was usually behind the cæcum, and a vertical appendix behind the cæcum was exceedingly common. He had seen the inflammation from it reach to, and perforate, the peritoneum. A subsequent yielding cicatrix, too, was very common, and he did not think that any surgeon could be sure that the cicatrix would not bulge. An abscess should be opened through the skin directly over it, and the pus evacuated directly. The peritoneum should not be opened first and the pus allowed to drain away through the peritoneum. In a case of abscess around the appendix he would say, let a free incision be made, the pus evacuated, and no search, except the shortest, be made for the appendix in the depths of the abscess. He had seen the appendix at the bottom of such an abscess covered with lymph; he had left it, and seen no harm result from it. As to the bringing of the two sides together by sutures, when inflamed, that was impossible. Perhaps the best way of dealing with such an appendix was to attach the stump of the appendix to a prominent piece of peritoneum. Dr. Cayley asked how long a case should be left before the surgeon was asked to operate? A case, for example, might be left until acute peritonitis supervened. Mr. Hulke in such a case had opened the abscess and washed out the pus, and the patient had recovered. He would ask again how long the physician should go on with the medical treatment of such cases before handing them over to the surgeon. Dr. Coupland said it was quite refreshing to hear a surgeon say a good word for the physician's treatment of these cases. He thought there was no single symptom by which to differentiate a case of typhlitis from one of acute inflammation of the appendix cæci. The vast majority of cases of typhlitis were due to inflammation of the appendix. As a rule in appendicitis, the patient was young, and his symptoms had arisen very quickly; and such cases usually found their way at last to the *post-mortem* room. In a young patient, then, with symptoms of sudden acute

peritonitis, without anything else to account for them, they were probably due to inflammation of the appendix. In cases in which there was probably perforation, mostly sudden cases, and in cases in which there was suppuration, he thought the surgeon should be at once called in; and he believed that many lives had been saved during the past few years by the treatment of these cases being placed in the hands of surgeons.—It was resolved, on the proposition of Mr. LANGTON and Mr. GOULD, that further discussion should be adjourned to the next meeting of the Society.

MEDICAL SOCIETY OF LONDON.

MONDAY, FEBRUARY 16TH, 1891.

J. KNOWSLEY THORNTON, C.M., President, in the Chair.

Raynaud's Disease.—Dr. F. DE HAVILLAND HALL showed a labourer, aged 31, the subject of phthisis, who presented signs of Raynaud's disease, the ears showing necrosis of the skin of the helix. He was being treated with small doses of opium.—Mr. SHEILD and Mr. OWEN were inclined to doubt the diagnosis of Raynaud's disease, and suggested frostbite as a cause.—Dr. HALL replied the man had suffered from the same symptoms last year, but he had not at present had the opportunity of examining the urine.

Addison's Disease.—Dr. HALL then showed a well-marked instance of the above affection, the pigmentation being particularly well marked in the buccal mucous membrane. There was angular spinal curvature, the result of a fall in childhood.

Complete Transposition of Viscera. Dr. HALL had exhibited this patient fifteen years before, since when he had suffered severely from acute rheumatism which had produced lesions of the cardiac valves. The liver dulness was on the left side.—Dr. W. EWART showed a woman aged 48 who was the subject of complete situs inversus viscerum, but she was right-handed.

Bronchocele.—Dr. HALL showed case. The thyroid gland had been enlarged for thirty years, and a cyst had been punctured twenty-one years ago, since when she had had no treatment for it. The veins of the neck were very much enlarged, and, except for slight dysphagia and some dyspeptic symptoms, she enjoyed very good health.

Strangulated Hernia.—Mr. STEPHEN PAGET showed a man, aged 24, on whom he had operated for strangulated hernia. The sac was of hourglass shape, and the bowel was found gangrenous. It was, therefore, fixed by sutures and opened. The patient made a good recovery, with only a small fistula, through which there was no leakage of fæces.—Mr. H. ALLINGHAM had operated on a similar case in a woman who recovered with a fæcal fistula which subsequently closed.—Mr. BALLANCE, referring to the treatment of gangrenous intestine, agreed that no attempt at resection should be done at the time of opening the gut.

Asthma in a Boy.—Dr. W. P. HERRINGHAM showed a boy, aged 10, who was subject to spasmodic asthma, which commenced after an attack of post-scarlatinal pneumonia when he was 4 years of age. His symptoms were completely relieved by inhaling burnt pulv. lobeliæ co.—Dr. HALL had found the powder referred to very efficacious in cases of asthma. Mr. SPENCER WATSON inquired if there was any obstructive condition in the nostrils, which often provoked asthmatic attacks. Mr. BALLANCE said that twice he had experienced asthmatic attacks due to the presence of cats in the house.

Cancer of Both Breasts.—Mr. E. OWEN exhibited a woman aged 49, who had suffered amputation of both breasts for cancerous disease. He pointed out that it was an accepted surgical principle that malignant disease of both breasts contraindicated operation; but to this he took exception, as cancer was a local disease, and the bilateral condition was probably accidental and did not indicate constitutional implication.—Mr. BALLANCE referred to a case of bilateral scirrhus of the breasts in a woman aged 80, who had had the growths for ten years, and he pointed out that in these aged people death did not usually result from the effects of the malignant disease.—The PRESIDENT inquired whether it started in both breasts at the same time or if one followed the other after an interval.—Mr. OWEN replied that the lump in the left breast was noticed eighteen months after that in the right. The patient had had no blow on the breasts, nor was there eczema of the nipples.

Dexiocardia.—Dr. W. EWART and Mr. A. H. BENNETT showed a case in which the heart was on the right side, but the other viscera were not transposed. The patient was a groom aged 28, who had suffered from bronchiectasis, resection of rib, and pulmonary incision had been performed without benefit. The evidence was not sufficient to enable him to say whether the cardiac displacement was congenital, or brought about by retraction of the right lung.—Sir HUGH BEEVOR said that, looking to the history of pleurisy and bronchiectasis of long duration, and to the fact that the right side of the chest was not appreciably smaller than the left, he was inclined to regard the displacement as a pathological one.

Treadler's Cramp.—Dr. W. H. RIVERS showed, for Dr. HUGHLINGS JACKSON, a case of treadler's cramp occurring in a handloom weaver. The spasm occurred at the commencement of the flexion movement, which accompanied the upward motion of the treadle, the extension or downward motion being well performed.

Malformation of Heart.—Sir HUGH BEEVOR showed this case, in which he believed the lesion to be a congenital deficiency between the ventricles. He pointed out that people with such deficiencies might live to a great age.

Congenital Deficiency of Abdominal Wall.—Sir HUGH BEEVOR likewise exhibited a boy with defective development of the abdominal parietes, the respiration being entirely costal, and the chest expansion consequently quite exceptional.

Loose Body in Knee-Joint.—Mr. SHEILD showed a man of middle age and stout habit, who presented a cartilaginous and partly calcareous loose body in the right knee-joint. It had attained such a large size that it gave the patient no inconvenience, and therefore operative interference was not considered advisable.

Case after Trephining.—Mr. H. W. ALLINGHAM showed a patient whom he had trephined a year ago for an old injury to the head, with giddiness and loss of memory. The operation gave relief for a time, but of late the man had experienced a return of the giddiness and a sense of pressure over the side of the skull.

Lupus Cases after Koch's Treatment.—Dr. C. M. CAMPBELL showed two women, aged respectively 23 and 45, who had been treated for lupus after Koch's method. Both patients had ceased to react, and the lupoid patches, though attenuated, were certainly not eradicated.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, JANUARY 21ST, 1891.

JOS. EWART, M.D., F.R.C.P., President, in the Chair.

Colonisation of Central Africa by Europeans.—Sir W. MOORE, K.C.I.E., read a paper entitled "Is Colonisation in Central Africa by Europeans Possible?" He maintained that, great as was the power of accommodation possessed by individuals, each race was specially fitted for certain climatic conditions, which tended sooner or later to eliminate the unfit. He believed that an infusion of native blood was essential to the permanent existence in one climate of immigrants from another and very diverse one, adducing the example of the Portugese in India and of the mixed Spanish races in Central and South America. He would go so far as to say that the so-called "Aryan" population of northern India was, though Aryan in language, largely composed of non-Aryans absorbed by the invaders. Families of pure Aryan descent were to be found only among the Rajputs and a few aristocratic houses, probably not exceeding 10,000 persons in the whole of India. The Eurasians, on the other hand, were, he believed, in some respects better fitted than either European or native for developing Western civilisation in that country. Legitimate marriages between Europeans of all classes and natives should be encouraged by the Government, for while residence in the plains induced anæmia with consequent susceptibility to disease, the physical obstacles to the colonisation of the terraces of the Himalayas by Europeans were insuperable; in fact the native population of the hills for the most earned their living by migrating to the plains and towns. The constitutional effects of malarial disease, anæmia, and nervous irritability caused by residence in the tropics were hereditary, and it was a fact that no European race had per-

manently established itself even in Egypt or Mexico; in Algiers and North Queensland signs of degeneration were already apparent, and, on the other hand, the deterioration of the negro in the more northerly of the United States was painfully evident. He gave a sketch of the physical geography, and the temperature of the different parts of Africa. The most fertile districts were, he said, the low lands along the river basins, and thus the most malarious, more fatally so than any other region of the globe. Even the high mountain ranges, which enjoyed a more temperate climate, were under all the other conditions of the tropics, a vertical sun, and heavy rainfall, while the influence of altitude in inducing cardiac and respiratory embarrassment must not be lost sight of; extensive plateaux for colonisation in the proper sense of the word there were none, and the inaptitude of the negro for continuous labour, except under the conditions of slavery, would present serious difficulties. He quoted the evidence of numerous travellers as to the unsuitability of even the more temperate regions of Africa, for example, Matabeleland, for European constitutions. Occupation of the country as rulers and traders, as engineers and missionaries was, he was convinced, the most that we could hope, or should attempt to achieve.—Dr. Willoughby was much surprised that Sir William Moore had discussed every region of Africa except that on which the question mainly turned; namely, that part under the East African Company. That the German territory was fearfully malarious, and the Italian arid in the extreme; that the great valley of the Congo resembled the basin of the Ganges, but exaggerated its evils, and the West Coast was utterly uninhabitable by Europeans he fully admitted, but Mr. Thompson and Bishop Hannington, who knew both the British and German East African Companies' territories, almost the only men who did, and to whose works Sir William had made no reference, were agreed in their opinion as to the unhealthiness of the latter, and the remarkable salubrity and temperate character of the interior of the former, though interspersed with desert tracts. He read several passages from Bishop Hannington's diary, describing the European, almost English, climate and vegetation, his immunity from any ill health, the suitability of many districts for European residence, and the "bracing" character of the air, a description since confirmed by Dr. Peters. He referred to Dr. Lombard's observations on the increase of red blood cells and of hæmoglobin after prolonged residence at high altitudes compensating for the rarity of the atmosphere, and he insisted on the recognition of two meanings of the term colonisation, that which alone Sir William accepted, and that of which the West Indies afforded an illustration where outdoor labour was performed by blacks, but the white population had maintained itself without any admixture for two centuries, and with no appreciable deterioration. Intermarriage with negroes was repugnant to Europeans, and was almost unknown in the United States and West Indies, while in the latter the negro had been found so averse to labour that Indian coolies had been introduced on a large scale and the same would have to be done in East Africa.—Sir Joseph Fayrer, though he entertained a high opinion of the moral characteristics of the Eurasians, was not so hopeful of their future as Sir William. He thought there was a tendency to revert to the darker race, men boasting of noble blood, as Da Silvas and De Souzas, being as black as any of the aborigines. Generally, he believed we should have to do in Africa as we had done in India. Intermarriage he thought desirable, though Europeans would be less inclined to amalgamate with natives of Africa than with their nearer kindred of Asia. As for colonisation in the fullest sense of the word, we must make ourselves acquainted with the interior of our new protectorate, which the lecturer had certainly made no effort to do.—Surgeon-General Murray believed the so-called Portugese in India to be really the descendants of native converts, and Portuguese in their baptismal names only, but Sir Joseph Fayrer denied this, pointing to the marked difference in their features, and was convinced of the mental and moral deterioration of succeeding generations of mixed blood, even though physically able men.—The President expressed his hope that the warning sounded by the lecturer and the encouragement given by Dr. Willoughby would alike attract the notice of the authorities at the present time. We did not yet know enough of the interior of our territory to justify a decided conclusion, but he did believe that it was in parts exceptionally favourable for British enterprise in one form or another.

HUNTERIAN SOCIETY.

Wednesday, January 28th, 1891.

Stephen Mackenzie, M.D., President, in the Chair.

Clinical Evening.

Epithelioma of the Larynx.—Dr. J. Dundas Grant showed a case of epithelioma of the larynx treated by thyrotomy (Mr. Butlin's method.)

Tuberculosis of Larynx.—Dr. Dundas Grant also demonstrated the laryngeal condition in a man suffering from tuberculosis, with especial swelling of the arytenoid cartilages. Menthol had been injected—half a drachm at a time—into the larynx with a blunt syringe. The appearances were little altered, but the treatment had given much comfort, and the patient could now swallow well.—Mr. Mark Hovell had seen better results from painting with lactic acid in a 30 or 40 (to even 80) per cent. solution than from menthol.

Multiple Papilloma of Larynx removed by Forceps.—Mr. Mark Hovell showed a boy, aged 4½ years, from whose larynx many small papillary growths which had filled its cavity were removed by forceps a year ago, after tracheotomy. An astringent (strong solution of perchloride of iron) was used after removal. The boy remained perfectly well. Every step had to be taken under an anæsthetic.—Dr. D. Grant, in operating on a similar case in a little girl where neither cocaine nor chloroform could be borne, and where laryngitis followed each use of the forceps, had succeeded with a week's rest and the cold Leiter's coil after every operation.

Intracranial Murmur.—Mr. T. E. Bowkett exhibited a girl, aged 4, in whom a musical blowing murmur was audible, chiefly about the base of the mastoid process. It was accidentally discovered by the mother, and there were no other symptoms.—The President referred to an unpublished case of his own in a child in whom such a *bruit* came on, in a like position, after a fall. A pulsatile tumour eventually appeared and bulged outwards, pressing the thin bone before it. Hemiplegia and death followed. Dr. Osler considered that the murmur was often compatible with normal conditions.

Rheumatoid Arthritis in a Child.—Mr. J. Poland showed a girl aged 14, affected with rheumatoid arthritis. Swelling of the left knee occurred at the age of 2 years. Later she was treated for rickets and wry neck, and, at the age of 8 she was in the Evelina Hospital for nine months, all the joints in succession becoming enlarged and tender, with some fever. She was a wasted girl, with a thin delicate skin. All the joints were swollen, including the smallest, and the articular ends of the bones enlarged, and there was a tendency to contraction in the flexed position; the knees were nearly ankylosed. The heart was normal; some lymphatic glands were enlarged. The case differed from that shown some time ago by Dr. Barlow in the marked enlargement of the bones.—The President remarked upon the possible nerve origin of the lesions, although in Charcot's disease—the best example of spinal arthropathy known—it was the large joints which were affected. Mr. Rivington objected to the term "rheumatoid," unless some definite signification were attached to it; he preferred "multiple arthritis."

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Friday, February 6th, 1891.

T. Gunton Alderton, M.R.C.S., L.R.C.P., President, in the Chair.

Specimens.—Pathological specimens were shown by Mr. Percy Dunn.

Fatty Heart.—Dr. Clemow read a paper on observations on certain cases of fatty heart, in which details were given of a case of fatty heart associated with obesity, hepatic enlargement, and severe dyspnœa. The treatment adopted and recommended by Dr. Clemow was rest at first, followed by exercise, Oertel's diet, restricted fluid, digitalis and strychnine. The patient lost weight and girth, and gained strength, being able to take long walks without breathlessness or other untoward results.—Dr. Travers agreed with Dr. Clemow, but

where there was high specific gravity of urine, fluids must not be restricted.—Drs. Campbell Pope and Batten took part in the discussion, and Dr. Clemow replied.

Chloroform and Ether.—Mr. R. Lloyd read practical notes on the administration of chloroform and ether. He laid down the axiom that anyone on whom it was desirable to operate was at least fit for attempted induction of anæsthesia. The choice between ether and chloroform depended on the nature of the disease or injury, the presence or absence of complications; for example, heart, lung, or renal malady, and on the site of the operation. Posture, method of administration, and the effects on the respiratory and vasomotor centres of anæsthetics were alluded to, and Mr. Lloyd detailed his own views, urging that morphine should not be given before administration of anæsthetics, save in certain traumatic cases of brain surgery.—A discussion followed, in which the President, Drs. Orr, Hewitt, C. Pope, Batten, Travers, and Silk, and Messrs. Keetley, Edwards, and Benham took part; and Mr. Lloyd replied.

MANCHESTER PATHOLOGICAL SOCIETY.

Wednesday, January 21st, 1891.

G. A. Wright, M.B., F.R.C.S., President, in the Chair.

Volvulus.—Dr. H. Ashby showed the stomach and duodenum of a youth, aged 19 (patient of Mr. C. E. Graham), who had been subject to attacks of vomiting every two or three weeks, from the time of his birth. He had often vomited from six to eight pints of fluid during a single night. On several occasions of late years he had nearly died from exhaustion brought on by vomiting. No treatment seemed to have had any effect, but errors in diet invariably brought on the attacks. He usually suffered from constipation. In December, 1890, he had one of his usual vomiting attacks, followed by acute obstruction of the bowels and symptoms of peritonitis, which proved fatal. The necropsy showed the immediate cause of death to be acute volvulus, involving nearly the whole of the small intestine, the last few feet of the ileum being twisted from right to left round the upper part of the jejunum below its junction with the duodenum, the latter being twisted on its own axis. The stomach was found immensely dilated and hypertrophied; the duodenum was also dilated, looking like a second stomach. The lower part of the duodenum and the upper part of the jejunum were surrounded and in part constricted in front by fibroid adhesions, with some cretaceous deposit the result of old (probably fœtal) peritonitis. About six inches of gut were thus bound down. There was no complete obstruction, as a forefinger could be readily passed through the narrowest part. A sister of the patient had died of acute peritonitis. The history of vomiting from birth was so definite that there seemed to be no doubt that the lesion (adhesions) described was congenital.—Dr. Robinson inquired whether or not there was any displacement of the cæcum. At a certain period in development, the cæcum was normally situated in the right hypochrondium, just below the liver. He thought the adhesions might be due to arrested development.—Mr. Deakin wished for information as to the presence or absence of Meckel's diverticulum.—The President desired to know, with reference to the question of surgical interference, whether the obstruction was due to the volvulus or to the matting together with hypertrophy of the coats of the bowel. Volvulus occurred much more commonly in the large intestine.—Mr. Hare was anxious to know what diagnosis had been come to, and thought that the operations of Senn or Wölfler, or at all events abdominal section, might have been tried.—Dr. Ashby replied that the cæcum was dislocated upwards, but not so high as to occupy the right hypochondrium. Meckel's diverticulum was not looked for. He considered the obstruction to be due primarily to the matting together and thickening of the coats of the intestine, and that the efforts at vomiting were chiefly responsible for the volvulus. He had not seen the patient in a fit condition for operative interference.

Deformity of Skull.—Mr. A. E. Giles showed an abnormally narrow skull and brain from a man aged 40, of weak intellect and dumb. The skull was described as scaphocephalic, the sagittal suture being quite obliterated. It was observed that this premature fusion of the parietal bones had probably determined the narrow condition of the skull, affecting even the upper jaw. A characteristic feature was that the lower jaw was much less affected, and formed a larger arc. Nearly all the teeth in the upper jaw had disappeared. The brain was strikingly narrow, and the convolutions, especially those near the median fissure, were strongly marked, but of a simple character. Some of the fissures were abnormal to a slight extent.—Mr. Young was interested to know the nationality of the man.—Mr. Hare said that notwithstanding the deformity the relationship of the cranial contents to the "surgical landmarks" was in such cases usually normal.

"Fuchsine Bodies" in Cancer.—Mr. J. W. Smith showed sections of various carcinomata, stained to display the "fuchsine bodies." After referring to the observations of Russell and of Continental observers, he stated that out of fourteen carcinomata of various types examined, the "fuchsine bodies" were present in ten. None could be discovered in certain actively-growing tissues, or in degenerative tissues examined. In considering their nature, he did not think them due to any accidental contamination during preparation, or to the chromogen of the nuclei taking on the fuchsine at some particular period of growth. He was, from certain appearances, at first led to think that some hyaline degeneration of nuclei, protoplasm of epithelial cells, or leucocytes, might account for their presence. The appearance, however, of some of the growths examined, notably a case of early epithelioma of the lip, seemed to preclude this source, for, whilst no "fuchsine bodies" or signs of degeneration were found in the columns of epithelioid cells, clusters of large, perfectly-formed "fuchsine bodies" were present in the small-celled layer outside the columns. These groups were seen lying in apparently healthy tissue, their component bodies being bound together by some cementing material.—Mr. Hare had no doubt that the bodies in question were micro-organisms, and thought that it would be easy to obtain cultivations which would prove this. The important question was, "How came they in their present position?" He knew of a case in which these bodies had been found in which it was impossible for them to have obtained ingress from without. He did not believe in Edington's theory of colloid degeneration granules as accounting for their presence. He withheld judgment, but had a strong opinion that the bodies in question were micro-organisms, and the cause of carcinoma.—Dr. Harris was sceptical, and considered Mr. Hare's idea of easy isolation and pure cultivation most fallacious. He instanced the difficulty of obtaining pure cultivations of such well-known organisms as trichophyton tonsurans. He held that for proof pure cultivation was not necessary. He had seen the bodies in question in the tissues of an inflamed gland treated by Gram's method, but had been unable to render them visible with aniline green. He considered them to be due to the persistence of the stain in the nuclei in some cases, but there was also another factor unknown to him. "Fuchsine bodies" were a distinct group, but whether micro-organisms or not was very doubtful.—Dr. Robinson thought they were degeneration bodies found when tissue was undergoing rapid growth or rapid degeneration.

MANCHESTER MEDICAL SOCIETY.

Wednesday, February 4th, 1891.

Thomas Jones, M.B., F.R.C.S., President, in the Chair.

President's Address.—The President delivered an inaugural address on Asepsis in General Surgery.

Nephrolithotomy.—Mr. G. A. Wright showed a man, aged 33, from whose left kidney he had removed eight calculi. Symptoms had been present for twenty-six years. The operation gave complete relief. They were found in a cavity at the lower end of the kidney. Operation was by lumbar incision, and convalescence was easy. The largest stone was about the size of a large broad bean, the rest smaller.

Gastric Ulcer.—Dr. Dreschfeld made some observations on the diagnosis and treatment of gastric ulcer. He drew attention to the difficulty of diagnosis from cancer of the stomach, chronic catarrh, the various forms of dyspepsia, and the so-called "neuroses of the stomach." Of the various symptoms, such as pain, vomiting of food, and vomiting of blood, only one or the other might be present. Pain due to the ulcer was usually localised, varying in its situation, occurring some time after a meal, according to the situation of

the ulcer. Often when the stomach was empty nocturnal pain was very common. The pain was relieved by food, and could generally be made out by palpation and deep pressure. Vomiting of food occurred usually some time after food, and had an acid taste and acid reaction; bilious vomiting in ulcer was very rare. The filtrate from the vomit showed in most cases free hydrochloric acid, only a small amount of lactic acid, peptones, and albumoses, but rarely gave the reaction for sugar. Microscopic examination of the vomit showed the muscular fibres from the ingested food partly digested, the striation being lost. When there was much dilatation of the stomach, the vomit showed the features characteristic of this condition. Hæmatemesis might occur at any time during the course of the ulcer. Hæmatemesis at the onset, which was observed not infrequently when ulcer occurred in elderly people, almost always pointed to ulcer and not to cancer, and if, in cases with undoubted symptoms of cancer, hæmatemesis was one of the first symptoms observed, the case was one of cancer implanted on a gastric ulcer. Profuse hæmorrhage occurred, especially when the ulcer was situated at or near the pylorus and on the posterior wall; hence, in these cases symptoms of gastric dilatation from the cicatrisation of the ulcer usually supervened, and as by extension of the ulcer adhesion between the stomach and pancreas was often established, perforation of such ulcers was rare. Ulcers situated near the lower curvature or on the anterior wall of the stomach usually gave rise to no hæmorrhage or only slight bleeding, and were apt to perforate. Coffee-ground vomiting indicated the gradual slow extension of the ulcer. Dilatation of the stomach, occurring in many other affections of the stomach (congenital stenosis, chronic gastric catarrh, atrophy of the stomach, cancer of the stomach, occasionally in the gastric crises of locomotor ataxy, and from pressure of tumours outside the stomach) was often found in ulcer of the stomach. Besides the various means of recognising dilatation of the stomach, Dr. Dreschfeld drew attention to one symptom, hitherto not described, but almost invariably present in extensive dilatation, namely, dilatation of the epigastric veins, due probably to the dragging down of the distended stomach, compressing tributaries of the portal vein. Free hydrochloric acid in normal or increased quantity in the gastric juice and vomit, as determined by phloro-glucin vanellin and by other clinical tests, was usually present in gastric ulcer; it was, however, occasionally absent under various conditions, and was occasionally present in cancer of the stomach. In the various types of acid dyspepsia it might be much increased, also in nervous dyspepsia and in the gastric crises of locomotor ataxy. Dr. Dreschfeld then considered the differential diagnosis between the several diseases easily confounded with gastric ulcer, and discussed the treatment of gastric ulcer. In cases of profuse hæmorrhage, turpentine acted best and most speedily in these cases; no food should be given by the mouth for some days after the hæmorrhage had ceased; the patient should be fed entirely for that period by nutrient enemata or suppositories. For the treatment of gastric ulcer generally, enforced rest in bed for some weeks, the application of very hot poultices to the epigastric region, and a careful and well-regulated diet, which might consist of nitrogenous material, but should contain little or no fat and not much starchy food, was indicated, and should be persisted in for a long time. For the relief of the pain, powdered bismuth and often nitrate of silver acted very well; when there was much hyperacidity, large doses of alkalies often gave great relief. Surgical treatment might be indicated in some cases.

Edinburgh Association for the Relief of Incurables at their own Homes. The annual general meeting of this institution was held on Monday last, when it was reported that during the past year 318 persons had been receiving relief, that the amount of the annual pension was now £5, that the subscriptions and donations for the year amounted to £1,780. This is one of the most laudable of the too many medical charities of the city of Edinburgh, and perhaps none deserves stronger support. It was founded by Mrs. Elizabeth Keir in 1805. It is the wish of the directors to raise the yearly pension to £10. To this end two sums, one of £2,000, and the other of £1,000, have just been given to the Association.

REVIEWS AND NOTICES.

A Textbook of Practical Therapeutics, with especial reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., B.Sc. Edinburgh and London: Young J. Pentland. 1890.

The scope of Dr. Hare's book differs somewhat from that of most of our standard works on pharmacology and therapeutics, in that nearly one-half of the work is devoted to a description of the treatment to be adopted in combating the chief diseases and symptoms commonly met with in practice. These are arranged in alphabetical order, beginning with "Abortion" and ending with "Worms," and under each heading detailed directions for treatment are given. It thus trenches largely on the domain of practice of medicine, and, according to the author, is an attempt to bring the clinical application of medicines into harmony with our knowledge of their physiological actions.

This endeavour is not a new one: it has avowedly constituted the aim of many of the recent books on pharmacology and therapeutics, and yet our use of drugs is still to a very large extent empirical and based solely on clinical experience. Chemical and pharmacological research has as yet failed to demonstrate why many of our most trusted remedies exercise their curative effects, although others must be considered to have emerged from this category. This being so, it is hardly possible that a compendium of our knowledge can be considered even approximately satisfactory; but a textbook written, as Dr. Hare's is, with such an aim must be more stimulating and suggestive than one which simply gives a summary of recorded experience. Dr. Hare is well and favourably known as a scientific investigator on both sides of the Atlantic; but on reading his book one is tempted to wish that he had brought a wider and more exact knowledge of pharmacology and a riper clinical experience to bear on its production.

It is divided into four parts, entitled respectively General Therapeutic Considerations, Drugs, Food and Remedial Measures other than Drugs, and Diseases. In the first of these, which only embraces twelve pages, Dr. Hare dismisses very briefly such subjects as dosage, idiosyncrasy, absorption of drugs and duration of their action. What he says is in accordance with received opinion, but this part may fairly be regarded as not sufficiently full, considering the importance of these questions and their general interest. In the second part, which treats of the pharmacological actions and therapeutic uses of drugs, an excellent whole is disfigured by many inaccuracies and errors, which might easily have been avoided. But there are certain portions the faults of which go somewhat further than this. Take, for instance, such an important article as that on digitalis. Dr. Hare, so far as we know, is not an acknowledged authority on digitalis, nor has he made any novel or striking contributions to our knowledge of this subject, yet he propounds a view of its action which is not that of any well known worker on digitalis, and which cannot be considered to be authorised by a study of its literature.

To begin with, he states that digitalis leaves "contain a number of alkaloids, none of which represent its true active principles, which probably reside not in one, but in several forms." What is the meaning of this sentence? Dr. Hare probably means to say that digitalis leaves contain more than one active principle, but it is common knowledge, and certainly the writer of a textbook should be aware of the fact, that none of the active principles of digitalis are alkaloids. His description of its action on the heart is as follows: "The action of digitalis on the heart is a double one, in that it creates two opposing forces. By the action on the heart muscle it steadily strives to cause contraction or systole of the ventricles; by the action on the vagi it equally steadily struggles to produce diastole or dilatation of these cavities. In medicinal doses neither of these tendencies gets the upper hand, for both are equally excited, so that now increased systole occurs, now increased diastole." He then goes on to describe the action of poisonous doses in much the same strain, but in view of our present knowledge, such explanations of its action must be

considered as grossly erroneous. In the article on ergot the chemistry is not nearly up to date; it is also stated that ergot acts on the nervous system only through its effects on the blood-vessels, whereas several years ago an alkaloid, cornutin, was obtained from it, which undoubtedly acts directly on the nervous system, and is the cause of the spasmodic form of ergot poisoning. The explanation of the action of ether is very difficult to understand. It runs: "Ether does not act by influencing the blood, coagulating the protagon of the nervous system, or by any other destructive influence. It simply puts aside, for the time being, the vital functions of the parts affected by it." No doubt it does do so, but there surely must be some physical basis for its action in so doing.

The statement that the urine nearly always contains sugar after the use of nitrite of amyl is scarcely correct. It is a very rare occurrence, and is only seen after very large doses. The prescription given on page 84 for migraine could never be dispensed. It consists of "Antipyrin gr. 25, caffein citrat. gr. 10, potass. bromid. gr. 25, acid. phosphoric gr. 25. M. Ft. in chart No. v. S. One powder as needed." Anhydrous phosphoric acid is extremely deliquescent, and even if it were not so could not be given pure, even in very small dose. The Latin on page 91, "*Ft. in infusio*" is surely incorrect.

Under the heading of Remedial Measures other than Drugs, the subject of antiseptics is discussed. A short account is given of the principal antiseptics, such as corrosive sublimate, iodoform, and chloride of zinc, and certainly these substances are drugs.

Such errors as the foregoing are numerous; they crop up all through the book, and greatly detract from its value. This is much to be regretted, as the conception and plan of the whole work are so excellent. A second edition over which much additional time and care had been spent would be a valuable contribution to medical literature.

HYGIENE AND PUBLIC HEALTH. By B. ARTHUR WHITELEGGE, M.D., B.Sc.Lond., D.P.H.Camb., Medical Officer of Health to the West Riding County Council. London: Cassell and Co. 1890.

THIS little book is written not only to meet the requirements of examinations in hygiene, but also to give an insight into the practical work of medical officers of health, and the questions upon which they are called upon to advise sanitary authorities and the public. The author has, therefore, devoted a considerable amount of space to vital statistics, sanitary law, the etiology of specific diseases, and to notification, isolation, disinfection, and other preventive measures. Dr. WHITELEGGE may be congratulated upon the manner in which he has performed this task. He has certainly succeeded in presenting to his readers a very readable and succinct account of the etiology of communicable diseases, and the methods to be adopted for their prevention. The account is necessarily a condensed one, but loses nothing in clearness and intelligibility on that account; whilst the avoidance of any description of the wearisome details of bacteriological research will be a boon to those readers who desire to master the results of the latest experimental inquiries, and learn their bearing upon the science as a whole, but who are unable to devote the time to an acquisition of the knowledge by which those results were attained. In addition to the bacteriology, the author's remarks under each disease include, as a rule, a short historical description, an account of its geographical distribution; its relation to climate, season, and meteorology; its incidence on different communities of the population, according to age and sex, with the statistics relating thereto; the period of incubation, duration of infection, mode in which the contagion is spread, and the measures necessary for its prevention—everything, in fact, which is necessary for the full equipment of those engaged in the practice of preventive medicine.

A chapter is devoted to sanitary law, and another one to by-laws and regulations. Although these chapters containing a short account of the chief provisions of the Public Health Acts and Local Government Board by-laws will no doubt prove very useful to those who are preparing for examinations, they can hardly be of much service to those who are actually in practice as health officers. The ways in which certain sections and phrases of the Acts must be interpreted, according to the judgments of magistrates and the superior courts, must be fully realised by those who are engaged in enforcing them, and are therefore no less important than the Acts themselves: yet, of course, these different interpretations form a volume in themselves, and could not be included in a chapter on sanitary law in a small textbook. We cannot help thinking that Dr. Whitelegge would have been better advised if he had confined himself to an elucidation of such points of sanitary law as are most intimately involved in practice—making his chapter, therefore, more of a guide to the working of obscure points in the law—than have attempted an exposition of the whole subject in so short a space.

The treatment of vital statistics is very good, and places clearly before the reader the most important matters with which the medical officer of health is concerned. Statistics, in fact, of all kinds are quite a feature of the book, and are an evidence of the care and attention which the author has bestowed upon its preparation. Presented in the skilful fashion adopted by the author, they enhance its interest no less than its value, and entirely justify the view that an extension of our knowledge of the causes of disease must in future largely depend upon the accumulation of correct and trustworthy data of all kinds, and upon their subsequent analysis in various directions for the purposes of comparison.

On the subjects of more purely hygienic interest on water, air, foods, and the disposal of refuse—little need be said. The chapters dealing with these subjects are very much condensed, and are apparently subordinated to those which deal with the communicable diseases and the subjects of more personal interest to the medical officer of health. A good deal of information has, no doubt, been compressed into a small bulk, and it is in every way perfectly reliable and in accordance with the most recently acquired knowledge.

NOTES ON BOOKS.

Public Health: Water, Air, and Ventilation: Catechism Series. (Edinburgh: E. and S. Livingstone. 1890.)—The preface, which is as follows, sufficiently indicates the scope of Messrs. Livingstone's productions: "It is hoped that the method of question and answer here adopted will aid the student in preparing his work for examination—by suggesting possible questions that otherwise might have escaped his notice. In this way the book will be a great and useful means of self-tuition. The small size of the book, too—the absence of packing—will enable him to run over the work the night before the examination and recall the most important points to his memory." This is a method of teaching for which we have no sympathy when conducted in this fashion. It simply means that students learn the answers parrot-like, without comprehending, or even trying to comprehend, what they read. For oral teaching the method answers well enough, as the teacher can always ensure that the students really understand the answers he or they give.

The Shadow Test in the Diagnosis and Estimation of Ametropia. By W. M. BEAUMONT. (H. K. Lewis. 1890.)—This little book, which only consists of thirty-seven pages, is what it professes to be—a practical exposition of the manner of using the shadow test—and nothing more. We confess that in a treatise dealing with only a single test we should have liked to have seen the subject considered more thoroughly; as it is, the book contains nothing more than is to be found in all the best textbooks; it is therefore not easy to see for whom it is intended. The author occasionally is hardly sufficiently careful to be accurate in his language. On page 10 it is stated that accommodation and contraction of the pupil are convertible terms; that is just what they are not, although they are often considered to be so by students. The concave mirror is recommended in preference to the plane, but Mr. Beaumont does not treat the user of the plane mirror quite fairly when he pokes fun at him for "walking backwards and forwards through those weary four metres until his very steps have left a trace." There is no necessity

to use the plane mirror at so great a distance; when, however, a doubt arises as to whether a small amount of myopia is present, a great distance is an advantage, and it is claimed for the plane mirror that it allows (not compels) the test to be used at a distance of 4 metres. The description given of emmetropia seems to us fanciful. "It is to be regarded as the border which separates the haven of hypermetropia from the pitfalls of myopia.....it is, however, a condition of refraction too dangerously near myopia to be desirable." This is nearly equivalent to saying that good health is a condition too dangerously near illness to be desirable.

* *A Sermon preached in St. Andrew's Cathedral, Honolulu*, before His Majesty King Kalakaua, by the Right Rev. ALFRED WILLIS, D.D., Bishop of Honolulu. (The Church Agency, Lombard House, London.)—The Bishop of Honolulu who pleads the cause of the lepers in an eloquent sermon holds it to be not only justifiable, but the duty of Governments to separate them from the healthy. He urges the necessity for liberality towards those "who are slowly descending to the grave under the cliffs of Molokai." He states that in March, 1890, there were at the settlement at Molokai 1,159 lepers.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW ROLLER PESSARY, FOR UTERINE AND OVARIAN DISPLACEMENTS.

By T. MORE MADDEN, M.D., F.R.C.S.Ed.,
Obstetric Physician and Gynæcologist, Mater Misericordiæ Hospital, Dublin; etc.

I DESIRE to call the attention of gynæcological practitioners who meet with difficulty in ensuring the retention of pessaries to a new form of support, namely, the "roller pessary," depicted in the subjoined illustration, designed for the treatment of posterior displacements of the uterus, and also for those less generally recognised though not less important instances of ovarian displacement or prolapse into Douglas's fossa that are so commonly met with. The advantages claimed for this instrument are—first, greater facility of introduction, which in the roller pessary is favoured by the rotation of the upper arm of the support; secondly, more certainty of filling the *cul de sac*, and so overcoming the tendency to descent of the replaced organs; thirdly, the obviation of the pressure troubles frequently occasioned by the pessaries ordinarily employed; and fourthly, that the new pessary affords no fixed point or shelf for the lodgment of discharges or septic matter. Besides these points, which as I claim are thus gained in this form of uterine support, there is, moreover, another, and, as I think, a still more important advantage connected with the rotatory movement of its upper arm, namely, a greatly diminished risk of the pessary slipping from the usual cause of this occurrence. As every gynæcologist is aware, in nine cases out of ten that accident arises from the expulsive efforts of the patient to dislodge a mass of hardened fæces from the upper rectum. In the instrument now referred to this displacement is prevented by the roller action, by which the pessary is made to travel slightly upwards instead of being forced down, as in other pessaries, by the fæcal pressure through the recto-vaginal wall.



I have only, in conclusion, to express my obligation to the makers, Messrs. Arnold and Sons, West Smithfield, London, for the pains they have taken in carrying out my suggestion in the construction of this instrument, which, from clinical experience of its use will, I think, be found serviceable in the treatment of the most frequent forms of uterine and ovarian displacement.

THE "GLASS-ROD TEST" FOR DIPLOPIA.

THE "glass-rod test" for diplopia, which was suggested by Dr. Maddox,[1] is so simple and efficient that it is likely to supersede those at present in use. The test object is a small flame, such as a gas jet a quarter of an inch high. Before one eye is placed a glass rod, care being taken that no light enters the pupil on either side of it; the effect of this solid cylinder is, of course, that the flame is seen as a fine line of light, having a direction at right angles to the long axis of the rod. The other eye is left uncovered. The line forms an object which is so dissimilar to the flame—as seen by the uncovered eye—that there seems to be no inclination to fuse them. Moreover, the linear nature of the image renders it easy to define its position and to measure the amount of deviation by means of a scale placed immediately behind the flame.

Any glass rod will answer the purpose. Messrs. Curry and Paxton have constructed one that is conveniently mounted with a stenopäic slit to fit an ordinary trial frame.

PURE OAKUM TOILET PAPERS.

THE sample of the above which we have received appears to be very suitable for the purpose intended. It is a paper specially prepared from oakum, and possesses the odour of the tarry matters contained in the original rope. It is very tough and does not tear with moisture, and becomes soft and unirritating when gently rubbed. The London agents are Messrs. Dalton and Morgan, 46, Southwark Street, S.E.

COMPOUND SYRUP OF THE HYPOPHOSPHITES.

THE sample of syrup. hypophosph. comp., sent by Messrs. Duncan, Flockhart, and Co., Edinburgh, is an excellent preparation, from both a chemical and a pharmaceutical point of view. It is a matter of great importance to the prescriber that preparations of this kind should contain invariably the proper proportions of each ingredient. The amounts are stated upon the label, and our analysis shows that this statement is correct.

A MODIFICATION OF ZWANKE'S PESSARY.

A ZWANKE'S pessary, as ordinarily made, is too wide from the tip of one blade to that of the other, and it is too narrow at the central part where the hinge is placed. These defects render it almost useless in those very common cases of senile prolapse and procidentia in which it would otherwise be of great use, and which it is better calculated to relieve than any other form of pessary is.

We have for some time time had in use at the Leeds Infirmary Zwanke's pessaries, much wider at the central part or hinge, and, at the same time, of less expanse from side to side when opened. When one of these instruments is introduced, and the patient is directed to strain, the anterior wall of the vagina does not bulge downwards in front as in the common form of the pessary. They are made in three sizes by Messrs. Reynolds and Branson, 13, Briggate, Leeds. Their use is not confined to senile prolapse, as they are used by me in every case in which a Zwanke is employed, to the entire exclusion of the narrow form of the pessary, and they give great satisfaction.

JAMES BRAITHWAITE, M.D. Lond.,
Obstetric Physician to Leeds Infirmary.

THORACIC AND ABDOMINAL BANDAGE.

MR. A. DE ST. DALMAS, of Leicester, has recently added to his list of useful rollers a new form of broad bandage—suggested by Mr. Tiley, of Melton Mowbray—for application around the chest and abdomen. This is made of a material which, whilst light, soft, and porous, is firm and non-elastic. From a sample sent to us we have reason to believe that this broad bandage, the cost of which is moderate, will be found of service, both in private and hospital practice, as an efficient and, at the same time, comfortable appliance.

[1] *Oph. Rev.*, p. 129, 1890.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, FEBRUARY 21ST, 1891.

THE THIRST OF A METROPOLIS.

THAT ancient jest which lauded the beneficent providence that caused great rivers to flow beside large towns has long since died on the lips of those who have intelligently watched the methods by which London supplements her own natural supply of water. The earlier growth of the great city and its suburbs spread mainly over the beds of alluvial gravel which were saturated with water held up by the stratum of impervious London clay on which they rested. From this source water was easily to be obtained by shallow well sinking; and in due course it became as easily polluted. The outcome of a primitive cesspool system sunk in the pervious gravel alongside shallow wells was an increase of disease so fatal and so alarming as to compel the search for some outside source of water supply. By the close of the sixteenth century Londoners were being supplied with water pumped from the Thames at London Bridge. Thirty-three years later Myddelton's New River had tapped the Amwell and Chadwell springs in Hertfordshire for their benefit. But for another two centuries and a half the readily accessible river continued to be used as the chief source of supply; and up to the passing of the Act of 1852, the Chelsea, the Lambeth, the West Middlesex, and the Grand Junction Waterworks all drew their water from the tidal portion of the Thames; and thus rendered independent of the gravel, the great city extended rapidly over the clay beyond. In deference to the principal clause in the Act of 1852, all the companies named removed their works to above Teddington Lock; the East London Company adopted a new intake from the Lee at Ponder's End above the limit of tidal inflow; and the East Kent Company, abandoning the polluted Ravensbourne, began to pump its supplies from deep wells in the chalk.

Meanwhile, the same causes which had first driven London to drink the Thames, and then had compelled her to abandon its most polluted reaches in disgustful dread, were operative in the growing towns which dotted the upper reaches of the main river and of its various tributaries. Their needs had increased beyond the supplies of surface wells, rapidly becoming foul when not exhausted. The destruction of forest and underwood had notably lessened the rainfall throughout the whole area of the catchment basins of the Thames river system. The multiplying needs of a quickly growing population had already compelled large districts to tap the great chalk reservoir within their own neighbourhood, and the level of this pure supply was falling rapidly in response to increased abstraction and diminished rainfall. London was drinking and laving in water drawn almost exclusively from rivers fed by the rain falling on an area of many hundreds of square miles. The height of these streams indicated the level of the plane of saturation in the permeable strata, into which a small proportion of this rainfall percolated, and through which their beds were cut. The streams themselves were more or less contaminated by the unrestricted drainage of riparian towns, and subject to frequent pollution by floods which swept heavily manured lands and closely grazed pastures. But the surface of each stream at any particular spot only indicated the local level—or something a little above the local level—of the great subterranean reservoir, of whose existence it was but an accidental indication.

Such of the rain falling on the surface of the catchment basin as could percolate to the lower absorbent strata accumulated there until these porous chalks or greensands were saturated, tending ever to trickle downwards. Thus, in each river basin the level of saturation formed an inclined plane, the highest point of which was in the uplands near the river's source, falling thence, in the direction of the river's course, towards the sea. Wherever the river bed cut, like a trench, below the level of this inclined plane, the imprisoned water soaked or jetted into this channel, because there was less resistance to its flowing thus than to its attaining the same end by a slower percolation through the sodden strata; and wherever the level of this plane fell below the bottom of the river's bed, the stream became shrunken and dried up. Deepening the river's bed and the straightening of its channel—good conservancy, in fact—naturally increased the rate of outflow, and tended to lower the plane of saturation from which the river was supplied. High farming and thorough drainage made also to the same end—by depriving the deeper water-bearing strata of some of the supplies which would otherwise have reached them. The conversion of forest land into arable, and the clipping of the old-fashioned high hedges, lessened the rainfall upon an area thus "improved;" and the rain which did fall on it, being poured hastily through the well-laid pipes into the clean cut ditches, of which the squire was so proud, and thence into the straightened watercourse, and so to the well-banked river, was hurried down to sea before it had full time for that slow percolation through the soil, or even much chance of soaking through the river bed itself. Hence the angler of the present generation finds the broad stream thickened with muddy water within twelve hours of a cloudburst on the higher lands, while his father often waited three full days before a heavy rain had brought down from the fields and roads soil enough to tinge its waters. Hence, too, in the driest months of summer drought, when the soil is eager to drink in the rain, a heavy thunderstorm swells the previously shrunken stream into a devastating flood almost before the farmer's roots have felt the wet at all.

London, then, had attained to this position—her shallow surface wells had been practically abandoned; and the Thames below Teddington was no longer available for furnishing water to her enormous population, which was now entirely dependent upon a great natural reservoir, the water of which (derived from a diminished rainfall) percolated down to and accumulated in the permeable strata which underlay a great part of its suburban districts, as well as the metropolis itself. The level of the water in this reservoir was being con-

tinuously lowered at the rate of more than two feet per annum: the population scattered throughout the great catchment areas thus affected were themselves beginning to draw upon this underground supply by deep well borings, in order to meet their own requirements; and the rivers through which the metropolis was largely lessening this source of supply were admittedly polluted. But while the other considerations were hardly taken into account, this last point was recognised as urgent. London had long since herself so fouled the stream which bathed her feet, that she dared not use it; now her population was becoming distrustful of water derived from intakes at a higher point: and the difficulties thus engendered were to be solved by a measure framed in full sympathy with that charity which begins at home, and is apt to stay there.

Twenty years ago it was recommended, in the Sixth Report of the Commission appointed in 1868 to inquire into the best means of preventing the pollution of rivers, that the rivers Thames and Lee, and especially the former, should be abandoned as speedily as possible as sources of water supply to London. It is a remarkable fact, as was pointed out by Dr. John Evans in his Presidential address to the Geological Society in 1876, that the Commissioners, while condemning the water derived from the Thames and Lee, extolled the quality of that which the East Kent Company supplied, at the rate of some nine million gallons daily; and this, although (according to the analyses given in their report) its proportion of "previous animal or sewage contamination" was 6.480, as against an average of only 2.304 for the seven other companies drawing their supplies from the condemned rivers the highest figure for any one of these companies, with the exception of the New River in 1868, being 3.226 for the Grand Junction Waterworks—while the position of the Kent Company's wells, and the amount of chlorine contained in its water, afforded a presumption that some of its supply was obtained by percolation through the bed of the polluted Thames itself. As an alternative to the use of the rivers, the Commissioners suggested that London should be exclusively supplied from deep borings in the chalk and greensand within a radius of thirty or forty miles of St. Paul's. This scheme, which, had it been realised at an enormous expense to London would have entailed disastrous results throughout the large area of some 1,000 square miles or more over which it would have been operative, was not put into execution. But since that date the essence of the proposal has been carried out on a smaller scale by the deep borings with which the East London and New River Companies have, for some years past, been engaged in supplementing their natural sources of supply. And the results of these operations are quite sufficient even if other evidence were wanting to open the eyes of all reasonable observers to the far reaching and inevitable effects of those more subtly-worded proposals by which it is now sought to revive the scheme originally propounded by the defunct Commission of 1868. It will not be difficult to prove that such a scheme, while securing only temporary and partial relief to the necessities of the metropolis, must entail ruinous results upon a very large and populous area in its immediate neighbourhood.

It has been decided by the courts that no plumber can follow his trade in Baltimore without a certificate from the Commissioners of Practical Plumbing.

TUBERCULOUS MEAT.

During the last fortnight two rather important cases have come up for consideration, one before the magistrates of Portsmouth, and one before those of Birkenhead. The two cases were undoubtedly on a very different footing, but we fear that in the present unsatisfactory condition of affairs the magistrates in both cases were justified in giving the decisions at which they ultimately arrived. We say this with regret, for in one case—that brought before the Birkenhead magistrates—the decision was given in favour of a butcher who maintained that the carcass of a cow of which the lungs were distinctly affected with tuberculosis ought to be allowed to be passed for human food.

It may be well to indicate the points of difference in the two cases in order that the above opinion may be justified. It is not now necessary to enter into any argument as to the accuracy of these decisions from the point of view of the careful scientific medical officer of health. But in both cases it would appear that the magistrates took the only course available in view of the evidence that was placed before them.

In the Portsmouth case, according to the report in the *Portsmouth Evening Mail*, the butchers had evidently recognised the gravity of the disease, as the lungs were cut up into small pieces and buried in a manure heap. Attached to the lungs was a growth weighing 30 lbs. There was tuberculosis of the pleura on the chest wall and even of the tissues beneath the pleura. The meat was so rotten that it could be broken down with the fingers. The pleura had been carefully stripped; most of the organs were in an advanced stage of tuberculosis, and tubercle was also found in the flesh itself. All this was confirmed by the use of the microscope, bacilli being found in the positions named. There can be little doubt that the flesh of such an animal was absolutely unfit for human food, and one can scarcely understand how anyone could maintain that such a tuberculosis was sufficiently localised to allow of the flesh being used as human food. A smart fine was inflicted, and the costs raised the amount to be paid to £37 18s. 6d.

The Birkenhead case is on a somewhat different footing, and it appears to have been rather unfortunate that an animal in the condition described by the medical officer of health should have been selected as that on which to go to the court with a test case. The lungs were affected—of that there can be little doubt but according to the report in the *Liverpool Mercury*, the inspectors and those who examined the carcass for the prosecution most unaccountably made no examination of the glands, and the defendants stated that none of the glands were, so far as they could see, affected—a statement that must be taken with very considerable reserve. It is quite possible, of course, that glands other than those at the roots of the lungs might be perfectly healthy, and although the use of any flesh from an animal in which there was this tuberculous condition is distinctly objectionable, there has not yet been accumulated sufficient reliable evidence to enable anyone to maintain that a localised patch of tuberculosis in the lungs, with no affection of the neighbouring glands, would be sufficient to render the flesh of an animal unfit for human food, especially if it were well cooked. The very fact that it is thought necessary to appoint a Royal Commission to consider this question leaves it open to butchers to say that it still unsettled.

The evidence for the prosecution in the Birkenhead case was not thorough enough; there was no microscopic examination made of any of the tissues, bacilli were never demonstrated (and this can be done by an expert within half an hour), and it does not appear to have been proved in evidence that the disease was anything more than the local tuberculosis of a single organ described by witnesses for the defence.

Of course there are differences of opinion as to what is a healthy lymphatic gland, and what one man considers perfectly healthy another may look upon as in an advanced stage of tuberculous change. Much depends on the skill and experience of the observer. The evidence given by some of the medical witnesses in both cases was far from sound, and the public will be apt to draw the conclusion from the contradictory evidence given, that those on one side or the other—perhaps both—know very little about the subject: and that, where there is such great difference of opinion, butchers may be excused for maintaining that their pockets should not be allowed to suffer. A staff of skilled inspectors, men trained in scientific methods, and in the use of modern scientific instruments, must be appointed, if we are to avoid these unseemly contentions about matters regarding which there should not be the slightest doubt.

The United Kingdom is one of the few civilised countries in which the inspection is not carried on, either by skilled and specially trained veterinary surgeons or by medical men who have had the opportunity of becoming thoroughly trained in cattle pathology. So long as we continue to work by rule of thumb we may expect to get scant, or too full, measure of convictions. The Commission on Tuberculosis ought to exert a great influence in determining the direction of future legislation as regards the sale of the meat from tuberculous animals. They have been engaged in collecting what evidence they could from those who are considered experts on the subject, but have not yet obtained sufficient evidence on which to base a report. That being the case, it may be anticipated that they will obtain evidence from other sources, and also, in all probability, investigate some of the more important points for themselves. This is to be desired in the interests of all parties. The public would look upon a report thus framed as deserving of the utmost confidence: the butchers and cattle dealers would hail it with delight, as placing beyond cavil a number of questions on which they at present have no reliable information; whilst medical men, magistrates, and others concerned in the administration of the law, would feel that a great responsibility had been removed from their shoulders. Until an expression of opinion is obtained from the Royal Commission, the present uncertainty as regards convictions for tuberculous meat must necessarily continue.

MODEL DWELLINGS.

For those who are interested in the housing of the working classes, two papers read[1]—the one at the Sanitary Institute, by Dr. Louis Parkes, the other at the Statistical Society, by Dr. Arthur Newsholme—will prove of much interest. Dr. Parkes shows what is going on at the present day as the result of the clearing of unhealthy areas, and the acquisition of sites in central London for business purposes. Blocks of barrack-like buildings, five, six, or even seven storeys in height, are being erected almost back to back, or with so small a curtilage as to have nearly half their rooms uninhabitable from want of light and air. The overcrowding on space is consequently greater than ever, and the conditions are becoming even more unfavourable to health and active life than prevailed in the old and dilapidated structures from which so many poor people have been evicted. This evil is traced to the exceptional way in which London is always treated when it is a question of sanitary regulations interfering with the rights of property. The Legislature conferred sixteen years ago on all provincial urban sanitary authorities the power to frame by-laws for open spaces around new domestic buildings, under the Public Health Act, 1875; but no such power has ever been given to metropolitan sanitary authorities. The sections in the various building Acts relating to this subject are utterly inadequate in 90 per cent. of the cases to prevent the crowding together of houses on very insufficient space. The effect of the new Housing of the Working Classes Act will be to multiply the bad type of model dwelling, unless the County Council is given power to frame adequate by-laws. Dr. Parkes expressly excludes from his criticisms the blocks erected by the Peabody Fund, the Improved Industrial Dwellings Company, and other large and responsible companies, and hints that the worst buildings belong to the small companies or to private owners.

Dr. Newsholme's paper is interesting for its contained statistics. This is, indeed, the first time that any statistics of this nature, analysed and corrected by an expert hand, have been made publicly available. They are likely to be much quoted in future by those who are studying the problem of the housing of the poor, and they will serve as a guide to the action of public bodies and private philanthropists. Stated broadly, the statistics prove that the close relationship supposed to exist between density of population and mortality does not apply to dwellings of the class of the Peabody Buildings.

With regard to the condition as to age of the population of the Peabody Buildings, a somewhat remarkable result is arrived at—a result which could not have been anticipated considering the high birth-rate—namely, that the age distribution of the population is less favourable to a low mortality than that of London as a whole. The explanation appears to be that the population consists largely of young or middle-aged adults with families of children, but the older children (over 15 years) are absent, as the proportionate number of persons between the ages of 15 and 25 is far smaller than in the London population generally. It is this defect in persons of an age when mortality is very slight that serves to make the age distribution generally less favourable to a low death-rate than in the metropolis as a whole.

Some of Dr. Newsholme's other conclusions are summarised as follows: (1) The death-rate of the Peabody Buildings averaged about 2 per 1,000 lower than that of London during the twelve years ending 1885. During the four subsequent years the two death-rates have more closely approximated. (2) The death-rate at different groups of ages is lower in the Peabody Buildings than for the whole of London, with the exception of the ages 0 to 5 and 25 to 35. (3) The infantile mortality is much lower in the Peabody Buildings than for

[1] Model Dwellings in London, and Overcrowding on Space. By Louis C. Parkes, M.D., D.P.H. (read before the Sanitary Institute, February 11th). The Vital Statistics of Peabody Buildings, and other Artisans and Labourers' Block Dwellings. By A. Newsholme, M.D., D.P.H. (read before the Royal Statistical Society, February 17th).

all London. (4) The death-rate from diarrhœa is slightly lower, and from enteric fever only half that of the whole metropolis. (5) The diseases more immediately due to direct infection (scarlet fever, diphtheria, and still more whooping-cough and measles) are more fatal, and, therefore, probably more prevalent. This shows the influence of the closer aggregation under which the families dwell, and the more frequent contact on stairs and landings than obtains in ordinary one- or two-storeyed houses. (6) The death-rate from phthisis and other other tuberculous diseases is slightly higher in the Peabody Buildings than for all London.

On the whole, the figures are reassuring as showing that aggregation of families into lofty blocks is not harmful to health or life if the buildings are well designed and constructed on adequate sites, and the drainage and ventilation of the tenements have received due care and attention. If all model dwellings were as satisfactory as the Peabody Buildings there would be no cause for complaint.

Dr. Edouard Chantre has been commissioned by the French Government to study the organisation and practical working of the various "polikliniks" in Germany and Austria.

THE MIDWIVES BILL.

The Committee of the Royal College of Physicians on the Midwives Bill held its first meeting, under the presidency of Dr. Priestley, on February 16th. We understand that at an early date a special meeting of the Obstetrical Society will be summoned to consider the Bill. A report of the proceedings of the Parliamentary Bills Committee will be found at page 423, and of a deputation to Lord Cranbrook on page 425.

PROFESSOR VON HELMHOLTZ.

It is proposed to celebrate the 70th birthday of Professor von Helmholtz, which occurs on August 30th, 1891, by presenting to him a marble bust, and striking a special medal to be bestowed upon eminent physicists. The project is, we understand, now engaging the attention of the Ophthalmological Society of the United Kingdom. It is proposed to form an international committee for carrying out the programme.

DEFECTIVE COLOUR VISION.

A meeting of the Committee on Defective Colour Vision, appointed by the Royal Society, was held on Wednesday, February 18th, at Burlington House, Lord Rayleigh in the chair. The mode of procedure in the future was discussed. The next meeting will be held at the Royal Institution, where we understand that various practical appliances for the investigation of colour blindness will be examined, and on a future occasion we believe that several typical examples of colour blindness will be made the subject of a special examination.

THE TRUTH ABOUT HYDROPHOBIA.

In his lecture upon the Prevention and Cure of Hydrophobia, delivered at the Midland Institute, Birmingham, on February 9th, Professor Romanes, after giving an account of the disease in man and the lower animals and describing Pasteur's system of inoculation, dwelt upon the ease with which rabies might be stamped out in this country if only a simultaneous method of muzzling were adopted for a limited period, followed by perpetual quarantine. He also exposed the fallacy of the time-worn arguments against the muzzle, as well as of those in favour of registration. The lecturer truly remarked that at the present time there was an astonishing amount of misapprehension in the public mind upon the question, but what is most extraordinary is the fact that, although the highest authorities have unanimously declared their belief in the efficacy of the plan advocated by Professor Romanes, the Board of Agriculture should gradually withdraw the muzzling orders, and this although, in consequence of the orders not having been made general, it can only be a question of time before the deaths of human beings recommence. Mr. Chaplin, probably through fear of clamour by a section of the public, has disregarded the predictions and warnings of those best qualified to advise, and the responsibility for such deaths as must inevitably occur will rest solely at the doors of the Board of Agriculture.

SIR GEORGE MURRAY HUMPHRY.

On February 18th, a highly successful dinner took place in the Hall of Downing College, Cambridge, in honour of Sir George Murray Humphry, Professor of Surgery in the University of Cambridge. Sir George Paget, K.C.B., Regius Professor of Physics presided, and was supported by the Master of Downing College, Mr. Hemming, of Kimbolton, President of the Cambridge Medical Society, and about eighty representatives of the medical profession in Cambridge and the adjoining counties. We propose to publish a report of the proceedings next week.

GERMAN SURGICAL CONGRESS.

The twentieth Congress of the German Surgical Society will be held in Berlin at Easter week, from April 1st to the 4th, under the presidency of Professor Thiersch. The first day of the meeting will be devoted to Koch's treatment of tuberculosis, and the introductory address on this subject will be delivered by Professor von Bergmann. Patients and specimens illustrating the effects of the new method will be exhibited in the University Clinic on the forenoon of Thursday, April 2nd. Those wishing to take part in the proceedings are requested to communicate with Professor Gurlt, 6, Keithstrasse, Berlin, W.

COLD WEATHER AND THE DEATH-RATE.

The vital statistics of Paris during the last two months show not only the effect of cold weather in raising the death-rate, but the period of time at which it begins to show itself. The French capital, like the greater part of the rest of Europe, suffered severely from the recent Arctic weather. Frost set in on November 26th, and lasted without intermission till January 21st; it was not, however, till the third week after the beginning of the cold weather that the death-rate rose above the average for the time of the year. The greater mortality, it is hardly necessary to say, was entirely due to diseases of the respiratory organs. On the other hand, the effect of the thaw on the death-rate was immediate, the mortality falling at once to the normal standard in the week from January 25th to 31st.

BIRMINGHAM STUDENTS.

Slight friction has recently existed at Queen's College between the students and Mr. Pemberton, Professor of Surgery. The matter would hardly call for comment here, but that it has found its way into the lay press, where the incident has been exaggerated into a matter of importance. The facts are these: About a fortnight ago, on entering the theatre to lecture, Mr. Pemberton noticed that some of the students had been smoking, and that a broom had been placed on the table in front of the lecturer's chair. Having suffered a similar annoyance from smoking on a previous occasion, Mr. Pemberton now announced that he should not lecture, and a notice was subsequently posted stating that the lectures would only be continued when the students had apologised for their misbehaviour. Apology was made by nearly all of them, but not by the foolish person who placed the broom on the table; at a subsequent lecture Mr. Pemberton, commenting on this, announced that he must received an apology

from this particular offender, and a notice was posted by the Warden that this further apology must be made by a certain time or severe steps would have to be taken to maintain discipline. The time allowed had elapsed ere the apology was made, but it was at last proffered to Mr. Pemberton by the chief offender and was accepted, the matter then being declared by the professor at an end. The tardy reparation, however, led to misunderstanding, for whilst Mr. Pemberton had promised that the suspended student should now resume his place in the class, the Warden of the College announced the continuance of the suspension, on the ground that the apology was not made during the time of grace allowed. This excited considerable feeling amongst the students, who, not having power to meet in the college, held a meeting at a hotel, and passed some rather unwise resolutions. There seems in fact to have been misunderstanding between the Warden and the Professor of Surgery; the latter had an interview with the head of the college, and explained how matters stood, and the suspension was thereupon withdrawn.

THE PUBLIC HEALTH (METROPOLIS) BILL.

It is a pity that the Government have decided to restrict to the metropolis their Bill to amend and consolidate the laws relating to the public health. Certainly the chaos of sanitary enactments in force in London is a matter which has year by year been growing more unbearable and injurious to the common weal. But outside of the metropolis the law has also become very complex since the passing of the Public Health Act of 1875, and is ripe both for further amendment and for consolidation. There are respects in which legislation for London must differ from that for the provinces, but it is difficult to see why, to take a single instance, the machinery needed for the suppression of a nuisance should be different in London. As a matter of fact, it will be found that the new Public Health (Metropolis) Bill has been based mainly on the Public Health Act of 1875, which applies only to the provinces, with a number of amendments which the provincial experience of the working of that Act has shown to be needed, and which are as desirable for the provinces as for the metropolis. Partial and piecemeal legislation is to be deprecated. Londoners, however, will welcome the new Bill. They have waited with considerable patience for at least sixteen years. By it the various Nuisances Removal Acts of 1855, 1860, 1863, and 1866, the Sanitary Acts of 1866, 1868, and 1870, the Public Health Act of 1872, the Diseases Prevention Acts of 1855 and 1883, and numerous provisions scattered through a host of other Acts, will finally be repealed and superseded by a single enactment. Much trouble and skill have been employed in making the Bill comprehensive and liberal, and generally acceptable, and, with some necessary further amendments, it will prove to be a very complete and useful measure.

THE NEW YORK ACADEMY OF MEDICINE.

At the meeting of the New York Academy of Medicine on February 5th, the President, Dr. Alfred Loomis, gave an address on the present position and future prospects of the Academy. The choice of this subject was due to the fact that it was the first presidential address delivered in the new buildings of the Academy. We should be loth to gauge the standing of the medical profession of New York by the amount of money at its disposal, but it is undoubtedly the case that an institution such as the New York Academy of Medicine does not grow rich in houses and funded properties unless it not only honestly fulfils the needs which it professes to satisfy, but commands also a certain enthusiasm among its members. For this reason it is satisfactory to find that this great medical institution of the new world has been able to spend nearly 250,000 dollars on the site and building of its new home, and that it finds itself the possessor of property of the aggregate value of some 400,000 dollars. The Academy comprises a number of Sections, each with a complete organisation, but each forming an integral part of the parent institution, and the President spoke with especial approval of an arrangement by which each Section in order took charge of one regular meeting of the Academy each month. This plan has been found to bring the Sections into closer relation with the Academy, has stimulated them to more careful work, and excited a keener interest in the regular Sectional work. In no country does the present position of medicine afford a more interesting spectacle to the medical historian than in the United States of America, and nowhere one which, rightly regarded, better justifies an optimistic view. In no country, perhaps, has charlatanism, licensed and unlicensed, been more rampant, and yet in no country are the best men —the men who love medicine as an honourable profession surely based on the certainties of science—more certainly winning the day. Dr. Loomis believes that in the near future the medical profession will play even a larger part in the public life of his country, and anyone, even at our distance, who has watched the growth of a healthy professional spirit in America during the last decade must feel persuaded of the truth of this prophecy.

COUNTY MEDICAL OFFICERS OF HEALTH.

The points referred to by the Earl of Dunraven in the House of Lords a few evenings ago respecting the sanitary functions of county councils deserve more serious attention than they have yet received. Except in London and in the county boroughs, the county councils have very ill-defined relations to sanitary administration. The Local Government Bill of 1888 gave county councils the power, if they chose to exercise it, of appointing medical officers of health to advise them. The councils are also furnished with copies of the annual reports made by the local medical officers of health to their respective sanitary authorities, and can make representations to the Local Government Board; but the councils have no statutory power or duty to make independent inquiry. Their action is limited to the statements in the annual reports of the local health officers. Moreover, beyond their moral influence, county councils have no powers of coercing negligent sanitary authorities. Up to the present time comparatively few of the county authorities have availed themselves of even the few sanitary powers which they possess. Several have, it is true, appointed county medical officers of health, and the efforts of these councils and their officers to stimulate neglectful authorities to a proper sense of their responsibilities have in several instances been distinctly beneficial. In a few cases councils have proposed to take action for dealing with the pollution of rivers, notably in Lancashire. But the great majority of county councils have taken no cognisance of sanitary administration, and, mainly for reasons of economy, have not appointed medical officers of health. This is much to be regretted, and it is to be hoped that some opportunity may be afforded during the discussion of the District Councils Bill which the Government are pledged to bring forward soon, of casting on the county councils some definite duties of supervising the administration of the public health laws in their respective counties.

SALARIES OF MEDICAL OFFICERS OF HEALTH.

In commenting recently on the sanitary condition of Southend,[1] we had occasion to note the evident desire of the Local Board to take the steps necessary to put the town in such a state of preparation against outbreaks of zymotic disease as were evidently urgently required in view of the recent prevalence of enteric fever there. One of the Local Board's proposals to effect this end was the appointment of a medical officer of health at a salary of £300 per annum, such officer to devote his whole time to the service of the Board. It was necessary, however, to obtain the sanction of the Local Government Board to the appointment, in order that half the proposed salary might be defrayed out of Imperial funds.

[1] British Medical Journal, January 24th, p. 196.

The Local Government Board has, we learn, taken the extraordinary step of disapproving of the Local Board's proposal, on the ground that the salary to be paid is, in proportion to area and population, considerably in excess of that paid in other sanitary districts in Essex. Surely the Local Government Board cannot have considered the matter seriously before arriving at a decision so opposed to the true public health interests of the country. In the first place, it would have to be shown that the salaries of medical officers of health in Essex generally are properly adequate to the duties which such officers should be called upon to perform. It is generally acknowledged that medical officers of health—those, at least, who do any work at all—are wretchedly underpaid for their services. The Local Government Board should endeavour to improve the status and emoluments of the public health service. Secondly, it appears to have escaped the Board's notice that Southend, being a favourite watering place, crowded in the season with visitors and day excursionists, is not as other Essex towns, and requires an amount of sanitary supervision by a competent and experienced staff far in excess of that due merely to its resident population and its area. A salary of £300 a year is not a large sum to engage the entire services of a qualified medical practitioner, and exception may well be taken to it on this ground; or it was even open to the Local Government Board to have suggested that it was not necessary to take the whole time of the medical officer of health. But the Board's answer is of such a nature as to lead us to suppose that the matter never received the attention of the responsible heads of the department, but was determined by subordinate officials, whose knowledge of the sanitary responsibilities of local boards of health is extremely limited. For a sanitary authority, desirous of doing its duty in public health matters, to have its proposals set aside by a Government Department in this manner, is no less unusual than it is pitiful.

SCOTLAND.

ROYAL SOCIETY OF EDINBURGH.

The sixth meeting of the Royal Society was held on Monday evening, when Dr. Berry Haycraft defended his method of estimating uric acid from the adverse criticisms that have been made upon it, and he also submitted favourable notices of the process. Dr. H. Marshall read a note on persulphate of potassium.

OUTBREAK OF SCARLATINA IN EDINBURGH.

Following close on the outbreak of scarlet fever in the Stockbridge district of Edinburgh during the month of December, 1890, the medical officer of health has submitted a report to the Town Council of a further epidemic of the same affection. It appears that since January 27th, 128 cases of scarlatina have occurred in Edinburgh, that a large number of these have occurred in the same Stockbridge district, that 60 of these cases were found to be in families supplied from one dairy. As to the cause of the outbreak, Dr. Littlejohn is unable to offer an adequate explanation. He says: "No undiscovered source of infection existed at the farm (from which the milk came), nor can the milkshop, so far as the tenant is concerned, be looked upon with suspicion. I must therefore confess," he adds, "that, so far as our inquiries at present go, no definite and satisfactory explanation of the cause has been discovered."

SCOTTISH UNIVERSITIES COMMISSION.

The Scottish Universities Commission held its forty-sixth meeting on Tuesday, February 10th, when Professor Sir William Turner gave evidence with regard to graduation in medicine. The forty-seventh meeting was held on February 12th, when Dr. John Duncan, Dr. Stevenson Macadam, Dr. Symington, and Dr. Noel Paton attended and gave evidence as representatives of the Edinburgh School of Medicine. The forty-eighth meeting was held on the 13th, when evidence referring to the Faculty of Medicine in the University of Edinburgh was given by Professors Grainger Stewart, Annandale, and T. R. Fraser (the Dean). The forty-ninth meeting was held on Monday, February 16th, when evidence with regard to graduation in medicine and surgery was given by Professors Buchanan, Cleland, and McCall Anderson, as representing the University of Glasgow; by the Faculty of Physicians and Surgeons, Glasgow, as represented by Dr. Robert Perry (President) and Dr. Yellowlees; by Anderson's College, Glasgow, as represented by Mr. A. T. Mathieson (Chairman of the Governors), Dr. Buchanan, Dr. Samson Gemmell, and Mr. John Kidston (Secretary).

IRELAND.

THE MERCER'S HOSPITAL CASE.

On Monday last the Judges of the Queen's Bench Division gave their decision in the case of Messrs. Ward and Nixon, Surgeons of Mercer's Hospital, against Dr. Auchinlech, who had been appointed a physician by the Board of Governors. The application was for a *quo warranto*, the "relators" contending that the appointment was vested in the medical board and not in the general board of the hospital. The Lord Chief Justice held that Dr. Auchinlech held a position in a private hospital which could not be challenged by an information in the nature of a *quo warranto*. He carefully guarded himself against describing in whom the right to appoint lay. The other judges concurred, and expressed disapproval of the system of purchase which had been observed in this hospital. The result is a serious one as regards the future appointments to the hospital, and their relation to the outgoing officers who have paid large sums for the positions which they now occupy. If the power practically lies with the general board, it is not likely that any money will in future pass in connection with the appointment, and those who have already paid may regard their investment as gone. It is stated that the case is likely to be brought to the Court of Appeal.

PRESENTATION TO BRIGADE-SURGEON SANDFORD MOORE.

Many members of the Army Medical Staff have joined in showing their regard for Brigade-Surgeon Sandford Moore by presenting him with a splendid silver salver on the occasion of his marriage. The gift has been forwarded through Surgeon-General Sinclair, P.M.O., Ireland, who states in the accompanying letter: "Your proved professional attainments, earnestness, and genial qualities have endeared you to all who enjoy the pleasure of your acquaintance; but it is mainly as a mark of our appreciation of all you have accomplished in the interests of the Army Medical Service that we embrace this opportunity of conveying to you our congratulations and thanks. We know that many of the most important improvements connected with the instruction, equipment and organisation, and efficiency of the Medical Staff are due to your initiative, and to the zeal, judgment, and care with which you elaborated the details." Dr. Moore was Assistant Professor of Hygiene at Netley a few years ago, when symptoms of failing sight began, and he was ultimately obliged to leave the service. He is now, and has been for two or three years, totally blind, and his calamity—bravely borne as it is—has evoked general sympathy for him. Dr. Moore, who is a young man, retains all the brightness of manner and the kindliness which have helped to make him so popular. It is a proof of his courage that he intends to devote himself to the practice of his profession—at least, in those departments where hearing will be useful and sight is not essential. He has in this the example of a successful American physician.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the offices of the Association, on February 18th, Mr. S. W. SIBLEY in the chair. The members present were Dr. Agar, Dr. Harrison, Mr. Macnamara, Mr. Hugh Ker, Dr. Esler, Dr. Holman, Dr. Phillips, Dr. Crocker, Dr. Mickle, Mr. Wallace, Mr. Vacher, Mr. Galton, Mr. Joseph White, Dr. Langdon Down, Mr. Rivington. Dr. Aveling and Mr. B. F. C. Costelloe, barrister-at-law, and, during a part of the meeting, Dr. Farquharson, M.P., were also present.

Letters of apology for non-attendance were received from the Treasurer, Mr. J. H. Hemming, Dr. Philipson, Mr. Noble Smith, Mr. W. D. Spanton, Dr. Carter, and Dr. F. Needham.

ARMY MEDICAL OFFICERS.

The following memorandum, giving a brief retrospect of the steps which had been taken with regard to the rank and status of medical officers of the army was submitted:

The stages by which the present position of this prolonged but important controversy has been reached, as well as the part played in it by the medical corporations and schools and by the Parliamentary Bills Committee of the British Medical Association, may be briefly reviewed with advantage now that the medical officers and their opponents are getting to close quarters.

It is clear that it was the military necessities involved in the reconstruction of the Commissariat, Ordnance, and Pay Departments which led to the sudden abolition of relative rank in January, 1887. But while these departments were then receiving anxious attention on the part of the military authorities, the medical was either overlooked or more probably treated with indifference.

It was some months before the medical officers were fully aroused to the gravity of the position, or rather want of position, in which they found themselves by the abolition of relative rank. But, once realised, the depth, strength, and force of the agitation which speedily set in were fully recognised by all who had any knowledge of it, except those who had brought about the crisis by interference with the only rank possessed by the Medical Staff.

When the subject came before the meeting of the British Medical Association at Dublin in August, 1887, Sir Thomas Crawford, K.C.B., the then Director-General of the Army Medical Department, expressed his incredulity as to the universality or earnestness of the agitation among medical officers; and this led to the issuing of circulars by the Parliamentary Bills Committee to medical officers at home and abroad, through which a *plébiscite* was obtained on the rank and titles considered necessary to enable them to duly perform their army duties and to place them in a position of fair and legitimate equality with the other reconstructed army departments.

The response to the circular was of no uncertain kind, and much disconcerted those who had vainly endeavoured to minimise or officially frown down the agitation. Three-fourths of the officers distinctly voted for definitive army rank and titles, and only a very small fraction deprecated agitation and declared themselves content with an indefined *status quo*.

Meanwhile the agitation gathered force and voice to such an extent that the Council of the British Medical Association memorialised the War Minister on the subject in February, 1888, setting forth the results of the *plebiscite*, and urging the importance of the rank and titles question. Mr. Stanhope, in reply to questions asked in the House of Commons during the session of that year, made conciliatory answers, and it was hoped matters would soon receive favourable attention at his hands. But such hopes were disappointed when, on the Estimates coming before the House in December, he said he thought the grievances of medical officers were mainly sentimental, and he had also previously gone out of his way to belittle and decry relative rank as useless and unmeaning, and therefore, of course, its abolition was not a vital matter to those concerned. It was now quite clear that Mr. Stanhope had been influenced by the military party, who refuse to acknowledge any equality between medical officers and themselves, and who, with a persistency curious and inexplicable to civilians, oppose every concession towards the medical staff. But the controversy could not be allayed, and daily acquired such volume, through publicity mainly afforded by the BRITISH MEDICAL JOURNAL, that the War Minister was driven to the usual refuge of a Committee which should take evidence and report on the pay, status, and conditions of service of the medical officers of the army and navy. It will be noticed that the latter service was officially dragged into the controversy, although it had made no complaints similar to those advanced by the army. Lord Camperdown's Committee in due course made its report and recommendations in August, 1889, the chief of which were, that neither the pay nor retirement of army medical officers could be safely interfered with; that relative rank should be restored in a "Royal Medical Staff," and expressed in compound titles from Surgeon-Lieutenant upward; that foreign service should not exceed five years consecutively. But important dissents, emanating from the combatant naval and military minority of the Committee, were appended to these recommendations.

Meanwhile the criticism and comments which followed in the press on the report were of the most exhaustive character; and while the recommendations on pay, retirement, service, and examinations were viewed with much satisfaction, it became apparent that those on rank and title, at first received with considerable favour, were being more and more estimated at a doubtful value. But the main question was, What will Mr. Stanhope do with the recommendations of the Committee of his own creation? This was anxiously asked, because it was no secret that the hostile military party were more than ever strenuously endeavouring to neutralise every concession to the "doctors," as they term them. It was also a matter of suspicious public comment that the evidence given before the Committee had been withheld, on the supposed ground that some of it was not likely to redound to the credit of the military witnesses examined. But Mr. Stanhope at length consented to its publication, which was undertaken by the British Medical Association. The evidence of some of the military witnesses was sufficiently startling and even amusing; but its chief feature was the utter weakness displayed in the contention that it would be wrong to concede definitive army rank and title to medical officers on the ground that they were not soldiers, but civilians. When pressed on this point, they broke down hopelessly under cross-examination, and were driven helplessly, for lack of reason or argument, to take refuge in appeals to military instincts! The publication of this evidence and the regrettable animus undoubtedly displayed, opened the eyes of both the medical profession and medical officers to the true nature of the opposition they had arrayed against them, and showed that nothing short of radical reform would secure the betterment of the medical service. It was then seen that the compromise of restored relative rank and compound titles recommended by the Camperdown Commission would afford no sufficient barrier against after-encroachments of the hostile military faction. So it was thought that nothing short of a consolidated corps, after the model of the Royal Engineers, would properly safeguard the status and interests of the Medical Staff; and this idea afterwards found expression through Sir Andrew Clark while heading a deputation to Mr. Stanhope from the medical corporations.

Mr. Stanhope had, meanwhile, at the instance of his "military advisers," declined to give effect to the really valuable part of the Camperdown recommendations, and by so doing had turned the current of the agitation in the direction of substantive military rank and title, in which it now so strongly flows. The controversy, in truth, has been worked up to the position it now occupies by the delays and refusals which have sprung from the influence of the military party, who are hostile to every concession. The medical profession may, indeed, be charged with having shifted ground, but it has been forced on by the obstinate refusal to listen to any sort of compromise, and the wholly unreasoning opposition with which its more modest claims have been met, as proved in the "evidence."

Mr. Stanhope's decision—we trust not his final one—is contained in his letter to Sir Andrew Clark, in answer to a masterly statement which the President of the College of Physicians had laid before him, and which were both published in the BRITISH MEDICAL JOURNAL of February 14th. We have still to get Sir Andrew's reply, which will no doubt be equally able.

The concession in the matter of sick leave will be gratefully accepted; not so the refusal to limit the continuous foreign service to five years. Mr. Stanhope concedes the compound title, but says nothing of the rank with which it is to be associated, which is the very kernel of the matter. It is evident a critical moment in the controversy has now arrived, and the Parliamentary Bills Committee of the British Medical Association will in no way abate its vigilance till justice be done.

The following resolution, proposed by Mr. MACNAMARA and seconded by Dr. KER, was unanimously adopted:—"That a committee be appointed, with instructions to draw the attention of the Secretary of State for War to the conclusion arrived at by the British Medical Association, regarding the position of the affairs of the Army Medical Staff, and to take such further steps as may seem necessary to secure these officers unequivocal substantive rank and corresponding military titles, for which purpose the Association believes it is necessary the Army Medical Staff should be converted into a Royal Army Medical Corps, on the lines of the Royal Engineers."

The following gentlemen were appointed members of the Committee: President of Parliamentary Bills Committee, Treasurer of the Association, Sir Walter Foster, M.P., Dr. Farquharson, M.P., Surgeon-General Cornish, Mr. Macnamara.

THE MIDWIVES BILL.

Mr. COSTELLOE said that he had examined the Bill in its amended form, as it came to him from the subcommittee, in order to ascertain whether it was consistent with itself and with the various expressions of opinion which had been given. He submitted the following memorandum for the consideration of the Committee, and made some explanatory observations upon each paragraph.

(a). It might be expedient to add a new clause to the following effect:—"A certificate issued under this Act shall not be deemed to be for any purpose a 'medical diploma' within the meaning of the Medical Act, 1886, but it shall be deemed to be an offence under the Medical Act, 1858, and the Acts amending the same, if any person registered only under this Act shall represent herself to be a qualified practitioner under the Medical Acts."

(b). The proviso in Clause 5 as to "legally qualified medical practitioners" who may choose to act as midwives should perhaps be extended and altered so as to apply to the whole Bill. It might run thus, as a new clause, preceding the Definition Clause:—"Nothing in this Act shall be construed so as to limit or defeat any of the rights or privileges of women who may be legally qualified medical practitioners under the Medical Act, 1858, and the Acts amending the same."

(c). The words "United Kingdom," in Clause 6, suggested a difficulty. Was it intended that the registration and the effect of the regulations, &c., thereunder should apply outside England and Wales, to which the Bill is now limited? The words should either be altered to "England and Wales" or else omitted.

(d). There is now no express provision for the issue of a certificate to "existing midwives" who are registered as such. It might be desirable to add after "register" the words "and shall obtain a provisional certificate in the prescribed form." This seems to be necessary, so that offences may be endorsed upon it, and it would show that she had *not* passed an examination. I do not think it is necessary to make any provision as to certificates of stillbirth, since these are already confined to practitioners *qualified under the Medical Acts*, but the suggested new Clause *(a)* would provide a further security in that matter. As to assistants, I do not think it is practicable to alter the present law as to unqualified medical assistants in this Bill, and it is unnecessary to provide against a registered midwife employing an unregistered assistant, since the words of Clause 6 imply *personal* attendance. But a line can be added in the Definition Clause to say so, if desired.

It was pointed out by Dr. PHILLIPS and Dr. KER that midwives at the present time frequently gave certificates of stillbirth.

Mr. GALTON said that it could not be too clearly expressed that this Bill did not give increased powers to midwives to grant certificates.

Mr. COSTELLOE suggested that a declaratory clause might be inserted in the Bill to the effect that it shall not be lawful for any woman, whether registered under this Bill or not, to give any certificate of stillbirth or cause of death.

A letter from the Secretary of the Thames Valley Branch was read, stating that at a meeting of the Thames Valley Branch held at Kingston on February 11th, the Midwives Registration Bill was considered as amended, and the following resolution was unanimously adopted: "That this Bill in its present form is imperfect, and requires further amendment."

After some further discussion, the recommendations made by Mr. Costelloe were adopted, and he was instructed to embody them in the Bill as amended by the subcommittee, and prepare the Bill in its final amended form for publication and circulation among the Branches.

Mr. COSTELLOE reported that he had received from Dr. Bridgwater a letter containing certain definitions to be embodied in the Bill. These were as follows:—

"In this Bill a midwife means a monthly nurse so trained—her efficiency tested by examination and guaranteed by registration—that in the absence of a registered medical practitioner she can safely attend to a woman in natural labour.

"Natural labour, for the purposes of their art, may be defined as a labour at full time, in which, the head presenting, in the first stage, the 'os' is slowly and efficiently dilated; and, in the second stage, the perineum is cool, well lubricated by secretions, and is gradually yielding to pressure of the head—the labour being completed in from twenty-four to thirty hours."

Some discussion ensued in which it was pointed out the policy pursued throughout the Bill had been to leave the duty of making these definitions to the General Medical Council or the Privy Council, as the case might be.

The following resolution, moved by Dr. HOLMAN and seconded by Mr. GALTON, was unanimously adopted: "That it is inexpedient that any definition of the character proposed by Dr. Bridgwater be made."

Dr. HOLMAN said he had asked Dr. Farquharson, who had just entered the room, whether he would be good enough to introduce a deputation to the Lord President, in order that the views of the Committee might be succinctly stated, since he had taken part in several deputations to previous Lord Presidents, and they had always appeared to be favourable to legislation on this subject. From 1869 down to the present time no opposition had arisen within the profession against legislation on the subject of the registration and control of midwives. From the time he was Vice-President of the Obstetrical Society in 1870 and 1871 he had worked at this subject. He regretted that an appeal had been made to the cupidity of the profession. He begged to move the following resolution: "That a deputation from this Committee be appointed to seek an interview with the Lord President, and that Dr. Farquharson be requested to introduce it."

Mr. WALLACE seconded this, which was carried *nem. con.*

Dr. FARQUHARSON thought the two points which should be specially brought to the notice of the Lord President were, in the first place, the desirability of appointing a select committee of the House of Commons to consider the question: and, in the second place, the propriety of the Government, when the report of that Committee had been received, taking up the question for itself.

Dr. HOLMAN thought that the members of both Houses of Parliament required information as to the stages which the subject had passed through. With this view he had drawn up a brief historical memorandum which he was about to send to all members of both Houses, and to the members of the General Medical Council. This he had done entirely upon his own authority, and did not wish at all to commit the Committee in any way, but at the same time he did not wish to appear to have done anything behind the back of the Committee, and for this reason he mentioned the matter.

THE MORTMAIN ACT.

The CHAIRMAN stated that, in accordance with the resolution adopted at the last meeting of the Committee, a Bill had been drafted to amend the law relating to charitable uses. It was resolved that further consideration of the Bill should be postponed until the Committee had had the advantage of the opinions of the various eminent legal authorities who had consented to examine such a Bill, among others, Lord Selborne, Lord Herschell, Sir Horace Davey, and Sir Edward Clarke. The following is the text of the Bill:

A BILL TO AMEND THE LAW RELATING TO CHARITABLE USES.

WHEREAS great hardship, uncertainty, and litigation have arisen by reason of the restrictions imposed on dispositions of property for charitable uses,

Be it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the Charitable Uses Act, 1891.

2. From and after the passing of this Act, no assurance of land within the meaning of the Mortmain and Charitable Uses Act, 1888, to

or for the benefit of any charitable uses shall be void for non-compliance with the requirements of that Act if the same is made by any will or codicil in such manner as, but for the operation of the said Act, would be valid and effectual.

3. Every disposition of land by any testator to or for the benefit of any charitable use by any such will or codicil shall be deemed to be made by the testator, and the land assured shall be held by the persons taking the same thereunder upon trust for sale, and in every such will or codicil there shall be implied, as regards every such disposition of land, and shall be deemed to be included, all such provisions as to trusts for sale as are usually comprised in settlements of land.

4. Every question arising under this Act, or under the second part of the Mortmain and Charitable Uses Act, 1888, as to the validity, construction, or effect of any such assurance of land, or as to the said implied trusts, or as to the rights of the donees thereunder may be determined on an application made in the High Court of Justice in the same manner as if the same were a matter arising under the Settled Land Act, 1882, and the Acts amending the same.

5. Upon any such application the Court or a judge shall have power subject to any rules of Court for the time being in force to make all such declarations and to give all such directions and advice as to the time and method of sale, and as to the investment of monies, and as to any dealings with the land before the completion of any sale as may be deemed necessary for giving effect to this Act.

6. Nothing in this Act shall be construed so as to defeat any of the exemptions or savings in Part III and Part IV of the Mortmain and Charitable Uses Act, 1888, contained.

7. In this Act, "land" shall have the same meaning as in the Mortmain and Charitable Uses Act, 1888.

Lunacy Acts.

Dr. MICKLE said the defects in the working of the Lunacy Act had been carefully considered by the subcommittee appointed for that purpose, and the Committee suggested that the following memorandum should be addressed to the Lord Chancellor, the law officers of the Crown, and to the legal and medical members of the House of Commons:

"It is suggested that in each county or borough all the justices in the county or borough be specially appointed by the justices at the Michaelmas Quarter Sessions to act under the Lunacy Act, 1890; or if this recommendation be not adopted, it is suggested that all the justices be specially appointed by the said justices of the said sessions, except such as have previously during that year intimated their objection to so act by letter to the Clerk of the Peace for the county or borough, and that the justices appointed in either of these ways be appointed to act under the Lunacy Act, 1890, for the year following, beginning on the 1st day of January and ending on the 31st day of December thereafter following. And that between the date of the said appointment of the said justices at the Michaelmas Quarter Sessions and the 1st day of December following, it be a duty of the Clerk of the Peace for each respective county or borough to prepare and have printed a list of the justices thus specially appointed, together with their addresses, and a statement as to the area within which each of them is appointed to act, and that such printed list be by him sent to any person who at any time may make application for the same."

The recommendation was adopted.

Factory Acts.

Attention was called to the various Factory Acts before Parliament this session. It was understood that Dr. Arlidge would be prepared to advise the Committee as to the action to be taken. Mr. COSTELLOE observed that Mr. Sydney Buxton's Bill contained several provisions affecting the medical profession.

Medical Practice in Sierra Leone.

The following letter to the Chairman of the Parliamentary Bills Committee was read:—

SIR,—We, the undersigned members of the medical profession, duly qualified and registered in Great Britain, beg to ask your advice as to the best way of proceeding to have our rights and privileges asserted and protected in this colony. We reside in Freetown, the chief commercial centre of the colony, with an estimated population of about 22,000 inhabitants, which may be distributed as follows: Liberated Africans and their descendants, with Europeans, 9,000; Mahomedans, 5,000; Pagans, 8,000. Of the Christians about 6,300 can be said to be able to read and write. The remainder are wrapped in ignorance and superstition like their less fortunate brethren the Pagans and Mahomedans. The system of the registration of deaths is very defective, as it does not deal effectually with registration of deaths among the Mahomedans and Pagans. Consequently the death-rate of the people, as a whole, cannot be definitely arrived at. There is no doubt, however, that a constant and steady high death-rate has been kept up for years. Only the Christians seek scientific medical aid. About 6,000 apply annually for treatment at the Colonial Hospital, the remaining 3,000 obtaining private medical attendance in time of need. The Mahomedans and Pagans are attended by Moslem and fetish medicine-men, and it is the exception for these people to apply for scientific treatment.

There exists at present in this colony no local law or rule, as in many other British colonies, whereby imposition by quacks and others not legally qualified as physicians and surgeons can be prohibited or checked. Consequently the country is overrun by all sorts of people setting themselves up as doctors, druggists, herbalists, etc., who, not content with selling officinal drugs and poisons without a licence, actually practise as physicians and surgeons amongst a large number of ignorant people who do not know the difference between qualified and unqualified medical practitioners.

There are at present a dozen duly qualified men in the colony, civil and military; the latter, though not actually in practice, are not prohibited by military rules from practising; and there are a dozen other native gentlemen in England qualifying as physicians and surgeons: so that there is no scarcity of medical men. Cases not infrequently occur where the causes of death have been masked and unknown, the system of registration of deaths, as before remarked, being very defective.

The following cases will substantiate the above:

1. Three months ago one of these unqualified men, who styles himself a Professor, an Eclectic Medical Doctor, and a Rophong Man (that is, a fetish medical man) was called in to attend a case of midwifery. He allowed labour to continue for thirty-six hours after the rupture of the membranes, during which time he was performing his rites, etc., and stuffing the relatives of the patient with all sorts of nonsense. The patient developing some alarming symptoms, one of the relatives ventured to call in a duly qualified medical man. He found the patient weak and exhausted, with complete uterine inertia. He immediately applied forceps and completed delivery. He then found that putrefaction had set in, owing to the mismanagement by the quack. There then supervened some symptoms of septicæmia, which were fortunately suppressed by proper treatment.

2. Two other cases occurred about two years ago, where two of these so-called druggists had dispensed from their stores croton-oil pills in mistake for quinine pills, with very evident results. Fortunately for the takers, proper medical aid was near at hand and the lives saved. It may here be mentioned that these croton-oil pills could be obtained without conditions from these unqualified men acting as dispensers and druggists, and for the known object of procuring abortion. Amongst a certain class of women the pill is well known as "the three-drop medicine."

3. This case occurred some six months ago, where a medical man was called in to see a patient who was suffering at the time from violent hæmoptysis. Physical examination disclosed phthisis, and, on going into the history, it was discovered that the patient had been for three months immediately preceding the time when the physician was called in in the hands of one of these quacks, who was treating her, evidently without knowing what the case was.

The unqualified men tell the people that there exists no difference between qualified and unqualified medical men. The result is that we duly qualified men—natives, who have spent a good many years in England in hard study—have been, and are still, labouring under great disadvantages and difficulties in asserting the dignity of our profession, and obtaining for ourselves and others like us, who will ultimately join our ranks, that remuneration and credit which we consider our just and lawful due. Our registration in Great Britain is absolutely of no use to us, excepting the pleasure of seeing our names in the British *Medical Register*, since we have no protection whatever in a place like this from invasion by quacks and mountebanks.

Certain members of the Legislature, who know absolutely nothing of medical practice, are opposed to a Medical Registration Bill. It has been attempted to introduce such a Bill, but there being no medical man in Council to fight the cause it was not even entertained.

We do not mean by urging the passing of such a measure to interfere with the "country medicine man." The quack is different from the country medicine man, who administers only "native herbal medicines," and professes nothing; and, besides, the country medicine man does not go about in a "broadcloth coat and black hat," or drive about the town in a Bath chair with a black bag, or otherwise imitate the legally qualified medical practitioner.

We have the honour to be, Sir, your faithful and obedient servants,

WILLIAM RENNER, M.D.
M. L. JARRETT, M.R.C.S.Eng., L.R.C.P.Edin.
C. JENKINS LUMPKIN, M.D., L.R.C.P., etc.
I. NICHOL PARIS, M.B., B.S.
Native Medical Practitioners.

Freetown, Sierra Leone, West Coast Africa,
January 16th, 1891.

It was resolved that steps should be taken to obtain further information on the subject, with a view to action.

THE MIDWIVES BILL.

THE Lord President of the Council (Lord Cranbrook), who was accompanied by Sir William Hart Dyke, received at the Privy Council Office on February 13th a deputation of medical men who were opposed to the above Bill. The deputation was introduced by the Attorney-General for Ireland, the Right Hon. H. D. Madden, and included representatives from the Royal College of Physicians of Ireland, the Royal College of Surgeons of Ireland, the Royal University of Ireland, and the Irish Medical Schools' and Graduates' Association, as well as the following gentlemen:—Surgeon-Major S. Smith (Bristol), Drs. C. R. Illingworth (Blackburn Medical Society), J. E. Dunn (Preston), A. Orlando Jones (Harrogate), M. Dolan (Halifax), W. D. Jones (Sheffield Medico-Chirurgical Society), G. Brown (Colchester Medical Society), Lovell Drage (Hatfield), Frank Greaves, J. Bate Bawden, H. Cooper

Rose, G. Douglas Pidcock, J. Crawford, H. B. Greene, C. Boyd, T. J. Alderton, G. D. Bhabha, W. Westcott, F. Godfrey, F. H. Alderson, W. H. Bourke, and T. Archer.

The Attorney-General for Ireland explained that he had been asked to introduce the deputation. Their views would be better expressed by speakers from among them than by anything he might say, but he might add that the deputation did not object to a proper system of registration as a safeguard for the interest of the public, although they did object to the present Bill as being unsafe, especially as regarded registration without proper examination. The Bill was a danger to the public, inasmuch as the public would be led to suppose that those who were registered had received some proper preparation, whereas the Bill made no such provision. It was desirable that the whole matter should be threshed out in a select committee. He had received a letter from the Royal College of Physicians of Ireland, which was strongly of opinion that the Act should not be passed without due inquiry into the circumstances of the case. The College objected to the registration of nurses without their having passed through a previous curriculum, and it objected also to the appointing of examining boards by the County Councils, and hoped that the matter would be referred to a select committee of the House of Commons.

Mr. Croly, representing the Royal College of Surgeons of Ireland, said that the Council of that College would agree to the Bill, providing certain points were attended to. There should not be registration without adequate guarantees as to education and competency, and the midwives should be put through a proper course of instruction and be examined before receiving their diplomas. The proposal to register all midwives now in practice was objectionable, and the limitation as to their only attending to natural labour was impracticable. A case might suddenly become complicated. In Ireland no person was now allowed to be registered without six months' practice in a lying-in hospital, and if such a midwife came to England it would not be reasonable for her to have to pass another examination in this country.

Lord Cranbrook observed that that was provided for in the Bill.

Mr. Croly continued that it would be impracticable to leave the examinations to the County Councils, and in Ireland, where there were no County Councils, he hardly knew what would happen if the matter got into the hands of the boards of guardians.

Dr. Macnaughton Jones, representing the Royal University of Ireland, which had, he said, a large number of graduates practising in England, stated that that body had gone to considerable trouble to raise the standard of obstetrical education, and took great interest in such a Bill as that. They opposed the Bill on the ground that it was fraught with great danger to the public, and that there were so many elements of danger that it would be impossible to amend it in committee. There was no definition in the Bill of the duties of a midwife, or of what was natural labour. On that very point there was a great difference of opinion, and if they accepted the most approved definition the Bill gave those women the right to attend that form of labour in which, more than in any other, unskilful interference imperilled the life of the infant and was a danger to the mother. The duties of a midwife had undergone considerable modification in their relation to the medical profession, and the science of medicine had absorbed midwifery into its curriculum, so that now they rather wished for a high class obstetric nurse than a low class midwife. Under the Bill, any woman who had ever assisted at a delivery would be entitled to be put on the register, without any previous hospital training to ensure that she was really fit to undertake the important duties of a midwife. She should at least have spent one year in a general hospital, where she would have a better chance of studying women and have more experience of infant life. The Bill was quite inadequate in its provisions, and required a definition of the midwife's duties. It was defective in its clauses as to when a midwife could herself attend a labour and when she must call in skilled assistance, and there was no penalty to be imposed should she fail to call in that assistance.

Dr. Archibald Jacob, representing the Apothecaries' Hall of Ireland, said that special interest was taken in the Bill in Ireland because it enabled any registered midwife to practise in Ireland, where the standard of education had been raised to such a degree that they dreaded the effects of the Bill. It was objected that women who had merely been "annexed" as existing midwives, or who had gone through a form of examination by a County Council, should be allowed to practise in Ireland. He referred to the registration of dentists to show how objectionable it would be to register midwives without any other guarantee than a statement that they had already been in practice. The profession objected to the Bill because there was nothing definite which would guarantee that the midwives of the future would be competent persons, and the Apothecaries' Hall of Ireland felt that no amendment of the Bill could make it tolerable.

Dr. Gilbart Smith (the Irish Medical Schools' and Graduates' Association) said that 600 or 700 Irish graduates were in practice in England. He would like to make an objection from a physician's point of view. A natural labour often became abnormal from the presence of some disease, such as Bright's disease or heart disease, and from other diseases which were obscure and difficult to recognise; and it would be hardly safe to leave such a matter in the hands of a woman even of eighteen months' training. The question of natural labour was, therefore, a very difficult one. That they were not alone in their opposition to the Bill was shown by the action of the Royal College of Physicians of London. There had been some divergence of opinion among the Fellows of that College, and the Bill had been submitted to a Special Committee for consideration. The Committee was at present sitting, and had not yet reported, but there was good reason for believing that it would report in a similar direction to that taken by the profession generally. The Association he represented firmly believed that it would be better to set the Bill aside, as there were so many features in it which it would be impossible to amend in the best interest of the public.

Dr. Rentoul, of Liverpool, said the Bill was opposed to the spirit of the Medical Act of 1886, which required education in medicine, surgery, and midwifery. Yet this Bill proposed to give the midwife the right to attend 99 out of every 100 labours, in some of which she would have to take upon herself the treatment of sudden changes in the character of the labour which would give no opportunity or time to call in medical aid. It was well known that 30 per cent. of the total blindness in the country was due to one complaint—infantile ophthalmia, the result of improper care of the child at birth. If the midwives were to receive a proper training he failed to see how it was to be given; there would not be a sufficient number of cases attended by the various charities. If the births were left to midwives entirely there would also be a great danger of an increase of stillborn infants, as had been the result in France.

Mr. Mansell Moullin referred to the increase in the deaths from puerperal fever, which he attributed to the increase in the number of midwives attending labours by themselves.

Mr. J. E. Dunn, of the Preston Medical Society, Dr. Drage, and Dr. Illingworth also spoke against the Bill, and

Mr. P. Dunn read a letter from Mr. B. Hicks, Coroner for East Surrey, in which that gentleman said that he had instructed the registrars to report all cases of so-called stillbirths to him before the body could be disposed of, and he was confident—and other coroners in the country agreed with him—that if midwives were registered it would also be necessary to register stillbirths.

Lord Cranbrook, in reply to the deputation, said he was much obliged to them for the information they had put before him. They were quite aware that the Bill to which they had referred was not a Government Bill but a private member's, and he supposed they addressed him as being in some way connected with the Medical Council and supposed to have some medical interest in the matter, and because they saw the Privy Council was to have certain duties to perform under the Bill. There was no Government support to the Bill at present, and it was entirely in a private member's hands. He was a little puzzled as to the speeches of some of the members who had addressed him. On the one hand, the gentleman who had addressed him first spoke with some pride of the examination of midwives as an advantage to Ireland. Dr. Rentoul, on the other hand, was rather for ending the mid

wives than for mending them. In Ireland they wanted to mend them, but Dr. Rentoul said that, unless they became general medical practitioners, they should not be taken notice of, and he (Lord Cranbrook) understood from that that he would rather things were left as they were, and that midwives should not be recognised in any way, as they were at present, although there was nothing now to hinder any woman in the country, if she wished setting up a midwifery establishment at once, without any educational qualification. In fact, he was told that many had done so without any education or qualification. Therefore, so far as the present state of things was concerned, he could quite understand many persons supposing that it would be much better to have some education—even a smaller education—if it would make more efficient those midwives who practised now, educated or not. What he gathered generally was this, that they entirely condemned the Bill, and, secondly, that some of them were in favour of a general inquiry into the subject of midwifery in this country, whether in connection with the Bill or not, or as a general inquiry into the whole question before any Bill were introduced at all. That was a matter for grave consideration. Parliament was not very fond of taking up subjects in that sort of way. So far as he was concerned, after hearing powerful arguments put before him on the part of the medical profession, he should give full consideration to them, and should defer offering any support to the Bill at present, and, so far as the Bill was concerned, he should say that there was no support on the part of the Government to the Bill at present, and the Government would not support it.

The deputation, having thanked his lordship, then withdrew.

THE RECONSTRUCTION OF THE UNIVERSITY OF LONDON.

The Last Revised Scheme.

In the British Medical Journal for February 7th we were enabled to publish an outline of the new revised scheme for the reconstruction of the University of London.

In the explanatory Memorandum which was forwarded by the Senate, with the draft scheme, to the various bodies interested, the main objects sought to be obtained in the new scheme were set out, and we are enabled to reproduce here that part of the Memorandum which refers to Degrees in Medicine:—

II. As to the Degrees in Medicine the modifications are as follows:—

(1) No alteration is now made in the degree of M.D.

(2) Increased representation is given to the Royal Colleges and the Faculty in Medicine.

(3) A Standing Committee is formed for the consideration of matters relating to the examinations in medicine and to the constituent Colleges in Medicine; the Committee to consist of four representatives of the Royal Colleges, the five representatives of the Medical Faculty, one representative of the Provincial Colleges (holding a chair in medicine), and nine members to be elected by the Senate.

(4) Power is given to the Senate to enter into arrangements with the Royal Colleges for a conjoint examination in the subjects for the M.B. Pass Examination.

In the course of the communications which took place between the Senate and the representatives of the Royal Colleges and of the medical schools, the opinion was unanimously expressed by those representatives, and was indeed strongly urged upon the Senate, that nothing should be done which should lower the standard or lessen the value of the medical degrees of the University, or impair their scientific character; and, in particular, the necessity was pressed upon the Senate of retaining the entire control of the Preliminary Scientific Examination.

The position taken by the representatives of the medical profession on this subject removed at once one of the most difficult questions with which the Royal Commissioners were confronted, and rendered it no longer necessary to provide for that differentiation in the degree of M.D. which was recommended by them.

The views, however, which were so strongly expressed by the Royal Commissioners with respect to the organisation of medical teaching in the metropolis were similarly urged by the Colleges and schools, and their recommendations have resulted in the modifications indicated above.

Under these arrangements the Pass M.B. Examination will be put in a position very analogous to that occupied by the Pass B.A. and B.Sc., the Preliminary Scientific being, however, retained in the hands of the Senate. In this, however, as in the matters relating to the degrees in medicine in general and to the organisation of medical teaching, the Senate will hereafter have the advantage of possessing a Standing Committee in Medicine analogous to that in Arts and Science; and the increase in the number of the representatives of the Royal Colleges and the Faculty of Medicine is, in their opinion, justified by considerations similar to those which apply in the case of the London Constituent Colleges in Arts and Science.

With respect to the position on the Committee of one representative from the Provincial Colleges, it is to be observed that although the medical schools of the metropolis must, for the reasons pointed out by the Royal Commission, always remain at the head of medical teaching in this country, it will, in the opinion of the Senate, be of mutual advantage to London and provincial medical instruction that a distinguished and experienced teacher of medicine in the Provincial Colleges should have a seat upon the Committee; the more so as it would for obvious reasons be practically impossible to constitute a distinct medical organisation for the provinces.

In the following paragraphs we have summarised the main features of the new scheme, giving fully those parts which affect medical education.

Senate.—The Senate would consist of 52 Fellows, namely: the Chancellor and nine Fellows nominated by the Crown (10); the Chairman of Convocation and nine Fellows elected by Convocation, of whom two would be elected by graduates in medicine (10); the President and two Fellows of University College and the Principal and two Fellows of King's College (6); the President and one Fellow of the Royal College of Physicians and the President and one Fellow of the Royal College of Surgeons (4); the Presidents of the Council of Legal Education and the Incorporated Law Society (2); four persons to be elected by the Principals of the Provincial Constituent Colleges (4); and sixteen persons elected by the Faculties, namely, twelve by the London Faculties, of whom five would be elected by the Faculty of Medicine, and four to be elected by the Provincial Faculties acting conjointly (16).

Standing Committees.—Much of the business of the University would be transacted by standing committees in the Faculties of Arts and Science, Medicine, and Law. In the Faculties of Arts and Science there would be no less than three standing committees: (*a*) in connection with the London Constituent College, (*b*) in connection with the Provincial Constituent Colleges, (*c*) in relation to the examinations in Arts and Science other than the examinations conducted under arrangements with the Constituent Colleges. The standing committee for the Faculty of Medicine would "consist of the Presidents of the two Royal Colleges, the two Fellows elected by the said Colleges, the five Fellows elected by the London Faculty of Medicine, and one Fellow holding a chair in a Provincial Constituent College of Medicine, to be chosen by the Fellows elected by the Principals or chief officers of the Provincial Constituent Colleges and the Fellows elected by the Provincial Faculties acting conjointly, and nine members to be elected by the Senate." The business of the standing committee would be to discharge such functions in relation to the medical constituent colleges and the examination of students in medicine as the Senate might from time to time delegate to it. The Chancellor and Vice-Chancellor would be *ex officio* members of all standing committees.

Constituent Colleges.—As already stated, the London Constituent Colleges would be University College and King's College in all the Faculties, and in the Faculty of Medicine the

Medical Schools of Charing Cross, Guy's, London Hospital, Middlesex, St. Bartholomew's, St. George's, St. Mary's, St. Thomas's, Westminster, and the London School of Medicine for Women. The Senate would have the right in the future to admit other colleges in or near London as London Constituent Colleges upon its being shown that such colleges gave instruction on an adequate scale in one or more, or in all, the Faculties. The Provincial Constituent Colleges are not named, but the Senate would admit such institutions situated in England or Wales, but not in or near London, as would be able to show that they gave instruction upon an adequate scale in one or more of the Faculties. This provision, with regard to the Constituent Colleges, would not affect the status of institutions from which the University now receives certificates for degrees in medicine.

Faculties.—There would be two sets of Faculties—London and Provincial. The London Faculties would be (1) Arts: (2) Science; (3) Medicine; (4) Laws. Each Faculty would consist of the teachers of London Constituent Colleges. The Medical Faculty would elect five members of the Senate, and apparently the majority of the Board of Studies. In connection with the Provincial Constituent Colleges, similar Faculties would be established, but for the purpose of electing to the Senate the Provincial Faculties would act together to elect four members.

Boards of Studies.—These, also, would be in duplicate: (*a*) The London Board of Studies would consist of members elected by the Faculty, the number being four, eight, twelve, or sixteen, as the Faculty might see fit to determine, two members elected by Convocation, an Examiner in each subject of the Faculty, and, if the Board of Studies itself think fit, any persons, not exceeding two, eminent in the subject of the Faculty, whether members of the University or not. The Board of Studies would be empowered to consider and report to the Senate upon any matter referred to it by the Senate, or connected with the degrees and examinations and teaching of the subjects of its faculty. It might also be called upon to deliberate in conjunction with the Senate, or any committee thereof. The Provincial Boards of Studies would be constituted on similar lines, but it is proposed to reserve the power of constituting separate Boards of Studies for Faculties belonging to any group of the Provincial Constituent Colleges. Moreover, Boards of Studies, whether London or Provincial, would be empowered to meet and act concurrently on particular subjects.

Matriculation.—The Senate would have the power to enter into arrangements with the Constituent Colleges in Arts and Science, or any of them, as to the examination of students for Matriculation and the Pass Examinations of B.A., B.Sc. The Senate, it would appear, is prepared to grant degrees on production of evidence of satisfactory attendance at approved courses of College lectures, and of examination by a College Professor, or other person appointed by the College, and an Examiner appointed by the Senate, acting conjointly.

Degrees in Medicine.—The Senate would have power to enter into arrangements with the Royal Colleges for conducting the examinations in anatomy, physiology, medicine, surgery, and midwifery for the Pass M.B. degree by a Board of Examiners consisting of the examiners appointed by the University and examiners to be appointed by the Royal Colleges, who would join in the reports to the Senate on such examinations. The examiners appointed by the University might be called upon, if the Senate so thought fit, to make in addition separate reports. These examinations might, if so agreed on, be conducted in combination with examinations for the Royal Colleges. The arrangements for giving effect to this clause would be carried out under the direction of a Committee to be appointed in equal numbers by the Standing Committee for the Faculty of Medicine and a Committee to be appointed by the two Royal Colleges. Such arrangements would be subject to the approval of the Senate and of the two Royal Colleges. This arrangement for joint examination, it is added, "shall not lessen or interfere with the duty of the Senate to be satisfied as to the adequacy of the examination in all respects." Candidates for degrees in the Faculty of Medicine would be required to show that they had passed though the required courses of instruction in one or more of the Constituent Colleges in that Faculty, or of the recognised medical institutions. (Clause 47.)

THE HUNTERIAN ORATION.

THE Hunterian Oration was delivered at the Royal College of Surgeons on Saturday last by Mr. JONATHAN HUTCHINSON, F.R.S. The orator remarked that the family which resulted from the marriage of John Hunter and Agnes Paul, and which comprised William, James, and John Hunter, and the grandmother of Joanna and Dr. Matthew Baillie, was a remarkable example of the production of family genius. In this, as in all other cases, it would be well if the maiden name of the mother were always prefixed to that of the father, that the mothers might have an equal share in any credit accruing to the family name from the deeds of their children. Hunter was not, as usually represented to be, the uneducated and uncouth son of a Scotch farmer, brought up as a cabinet-maker. His maternal grandfather was the treasurer of Glasgow, and his father was of an old family, the Hunters of Hunterston. And the inheritance of gout by Hunter and his brother—which showed itself in both of them in early life—might probably be taken as strong proof of their inheriting gentle blood. Hunter was born in 1728, and died in 1793: and the orator narrated the chief historical events of that time, and mentioned the relationship in respect of dates between Hunter and the chief of his contemporaries, English and foreign, in the world of science. Comparing and contrasting Hunter with Aristotle, Mr. Hutchinson showed that our countryman was far behind the Greek in the breadth of his attainments and sympathies, in the encyclopædic range of his knowledge and insight, in his study of the deepest problems of metaphysics, and in his habits of impartial investigation into all departments of knowledge: for Hunter, when he left his own domain, sometimes exhibited curious prejudices. In spite, however, of these differences, the two, where they met on common ground, showed similar habits of thought and intellectual powers not very unequal. Both were systematic and enthusiastic zoologists in times when very few studied zoology. Both recognised that advance in natural history knowledge could be made only by the collection of facts; and both set themselves zealously to the work. Probably no third name can be placed in any sort of competition with either of these in respect to originality of effort in this direction. In reference to scientific zoology, there was no one between Aristotle and John Hunter; none, at any rate, whose achievements could in the least compare with Aristotle's account of the parts of animals or with John Hunter's museum. During the twenty centuries that were passed between these two men, there appeared no one so capable of applauding Aristotle's work as Hunter—not one who would have contemplated Hunter's preparations with more true interest than Aristotle. But Aristotle was throughout his career liberally provided with funds, especially by Alexander the Great, who not only supplied him with money, but also collected specimens for him in distant lands—"an endowment of research" on a truly liberal scale. Hunter, however, had to earn every pound that he expended in zoological science in the practice of a toilsome profession, to which he was compelled to devote the better half of his thoughts. In what, then, did his strength consist? Chiefly in his great capacity for work. For a quarter of a century after his death, no one appeared who was in the least qualified to take up his work. After a time his much loved museum passed under the hands of Owen and Paget, men well entitled to take rank with its founder; but they were two, and the subjects which Hunter had held in his own giant's grasp were now divided, never to be reunited as he united them. Many physicians and surgeons will take delighted interest in topics concerning botany, zoology, and geology, but the race of medical naturalists, as illustrated in transcendental excellence in Hunter, is, for obvious reasons, past. He combined the qualities of thinker and observer as few others have ever done. It was his delight to think, as he himself tells us; and he was an unrivalled observer and experimentalist, with an insatiable thirst for knowledge—"He, soul hydroptic, with a sacred thirst, suck'd at the flagon." His "sacred thirst" was primarily innate, a matter of hereditary transmission, just as much as the colour of his hair and the form of his features. For it the whole race of his predecessors are to receive the credit. His mind was the result of the union of their efforts; their zeal after knowledge culminated in him. The parentage of a

man's mind counts by thousands of influences, and passes back into centuries of time. Teachers, however, may remember for their comfort that the Hunters of the future must be bred, and cannot possibly be obtained by mere training. In education, much that may for the present seem to be seed scattered to the wind, and from which one sees but little hope of a crop, is certain in the future to produce a harvest. "Though the mills of God grind slowly, they grind exceeding small." The trainers of medical men may gather many valuable lessons from Hunter's life. First, it teaches faith in the power of that innate desire for knowledge which is the inheritance of all in the least fitted for medical pursuits. The possession of knowledge is a delight to all, though the toilsome methods by which it is acquired and the difficulty with which it is retained disgust the idle and sometimes dismay even the zealous. Let teachers adopt Hunter's methods, and take their students more directly to Nature herself. Let education become more objective, and concern things rather than books. Let teachers renounce utterly the ancient distasteful pedagogic methods of education, and trust to the intrinsic attractions of their subject. Let examinations become more objective and less verbal. All minds will not fit into one and the same mould; and even without the aid of preliminary study, there have been men who have brought gain to science and credit to themselves and their profession. Lastly, in respect of university schemes and curricula of studies, as, in accordance with Hunter's aphorism, "life precedes and causes organisation, not organisation life," so men must beware lest by the premature imposition of a too artfully contrived organisation they hinder the development of life itself.

The address was listened to with marked attention by an audience which included the President and Vice-President of the College, Sir James Paget, Sir Joseph Lister, Sir E. Sieveking, the President of the Royal College of Surgeons in Ireland (Mr. H. G. Croly), Professor Flower, and nearly all the members of the Council of the College. In the evening a banquet took place in the Library, at which most of the above named gentlemen were again present. The chair was taken by Mr. Thomas Bryant, the President. Amongst the guests were the Lord Chancellor, the Lord Mayor, the Director-General of the Medical Department of the Navy, Sir J. D. Linton, Sir Spencer Wells, Mr. Leslie Stephen, Mr. W. H. Lecky, Dr. W. H. Russell, the Treasurer of Lincoln's Inn, the Astronomer Royal, the Principal of the Royal Academy of Music, Sir Joseph Lister, the President of the Incorporated Law Society, the Master of the Society of Apothecaries Professor Michael Foster, the Master of the Merchant Taylors' Company, the Prime Warden of the Fishmongers' Company, the Master of the Ironmongers' Company, the Master of the Clothworkers' Company, the Prime Warden of the Goldsmiths' Company; more than 100 guests were present on the occasion. After the usual loyal toasts, "The memory of John Hunter," proposed by the President, was drunk in silence. General Brackenbury and Admiral Hamilton returned thanks for "The Army, Navy, and Reserve Forces." Sir W. Mac Cormac proposed "The Houses of Parliament," for which the Lord Chancellor and Mr. E. W. Beckett, M.P., responded. Sir W. Savory proposed "The Bench and the Bar:" Lord Justice Fry replied for the Bench, and the Attorney-General on behalf of the Bar. The toast of "Science, Literature, and Art" was proposed by Sir J. Paget, and was responded to by the Astronomer Royal, Mr. Frederic Harrison, and Mr. Calderon, R.A. The Senior Vice-President (Mr. T. Smith) proposed "The Royal College of Physicians of London and the Medical Corporations;" and Sir Andrew Clark responded to the toast. Sir Joseph Lister proposed "The Orator," and Mr. Hutchinson replied. The last toast of the evening was that of "The President," proposed by Sir George Paget, to which Mr. Bryant made reply; and the company shortly afterwards separated.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A special comitia of the College was held on Wednesday, February 18th, Sir Andrew Clark, Bart., President, in the chair.

The President explained the points in which the revised scheme of the University of London differed from its predecessors, and pointed out the clauses which most closely concerned the College, and concluded by reading the resolution unanimously arrived at by the Standing Committee of the College on the University question, which recommended the College to accept the revised scheme, as being based upon principles which the College had throughout approved.

Sir Richard Quain formally proposed and Sir Risdon Bennett seconded the adoption of the scheme.

Dr. Sansom proposed, as an amendment, that the College should defer the consideration of the subject until the scheme had been submitted to the Convocation of the University of London. His speech showed him to be strongly opposed to this or any similar scheme, as, in his opinion, it meant nothing less than the annihilation of the University of London.

Dr. Lionel Beale seconded the amendment.

Dr. Norman Moore said that the line hitherto taken by the College in this matter was solely in the best interests of education and the public, but it was very different with Convocation. As to Dr. Sansom's fear that this meant the annihilation of the University of London, he said that such a belief was flying in the face of history; the histories of the oldest universities was one of continual reconstruction and reform, as radical as anything proposed for the University of London. There were two main points which were essential: (1) The Senate was to be reconstituted so as to bring into it representatives of persons actually engaged in teaching in London; and (2) lest the Senate so constituted should tend to become sleepy, Boards of Studies were to be constituted to keep it in constant touch with the teachers. This was an attempt to reform the University from within, not to destroy it from without, and it was the duty of the College to assist in this laudable attempt.

Dr. Bastian, as a Fellow of the College, was quite satisfied with the scheme, but as a University College teacher disapproved of it, especially Clause 47, providing for the mode of conducting the examinations. He was sure the scheme would be stopped, that it would never pass Convocation.

Sir Richard Quain urged Dr. Bastian not to be too ready to become a prophet, and expressed his conviction that Convocation would not reject the scheme.

The President explained that this proposal was a mere expansion of the University, a taking in of bodies which should have been long since included.

Dr. Allchin reminded the College that the Senate was trying to fulfil the recommendation of the Royal Commission, and it was the duty of the College to assist in that endeavour until it was proved to have failed. He could not see on what grounds University College and King's College objected to the inclusion of the Provincial Schools; if the University had conceded this point it certainly was not for the College of Physicians to complain.

Dr. Sansom's amendment was rejected by an overwhelming majority.

Dr Pye Smith, being invited by the President, expressed his belief that the scheme would pass Convocation. He hoped it would not be proved that the University of London was too old and too stiff to be capable of being improved, and strongly deprecated the rumoured opposition of University and King's Colleges.

Dr. Lionel Beale declared himself entirely in favour of another University whose examinations would not be so severe, and for which he declared there was plenty of room.

Sir R. Quain's motion was carried *nem. con.*

A vote of thanks was passed to the Committee for their labour.

THE VIRCHOW TESTIMONIAL FUND.

Sir William Bowman, Bart., F.R.S., and Dr. Charlton Bastian, F.R.S., have joined the Committee of the Virchow Testimonial Fund. The following additional subscriptions have been received since the last list was published:—

	£	s.	d.		£	s.	d.
Sir John Banks, M.D. ...	2	2	0	Robert W. Philip, M.D. ...	1	1	0
C. G. Wheelhouse, F.R.C.S.	2	2	0	F. de Havilland Hall, M.D.	1	1	0
W. Broadbent, M.D. ...	2	2	0	Percy Kidd, M.D.	1	1	0
S. Wilks, M.D.	1	1	0	Charles Coates, M.D. ...	2	2	0
C. Theodore Williams, M.D.	2	2	0	Octavius Sturges, M.B. ...	1	1	0

THE HOSPITALS COMMITTEE.

St. Bartholomew's Hospital.—Charing Cross Hospital.

THE Lords Select Hospitals Committee resumed their inquiry on Monday last under the presidency of LORD SANDHURST.

Dr. THORNE THORNE, assistant medical officer Local Government Board and lecturer at St. Bartholomew's Hospital, stated that the treasurer of the hospital had asked him if he would make an inquiry into the sanitary circumstances of the hospital in so far at it might be connected with the outbreak among the nurses, and he consented to do so, not officially, but as a personal matter between the treasurer and himself. He made an investigation into the sanitary state of the two nurses' homes and three of the principal ward blocks of the hospital, and sent a provisional report, marked "Private," to the treasurer. The principal nurses' home was so perfect that it would be hardly possible to find any better drainage or sanitary arrangements. The Witness further stated that the second nurses' home was an old building where a great many attempts had been made to put the drainage in good order at very great expense. But there were certain faults which he advised should be altered, although he expressed the opinion that they had nothing to do with the outbreak of diphtheria. As to the three principal ward blocks of the hospital, he had two criticisms to make. About fifteen years ago, at the cost of many thousands of pounds, the governors erected so-called sanitary blocks at the end of the wards with the object of getting the closets, lavatories, and baths aërially quite distinct from the wards. He did not think it had been done effectively, but a very small alteration would remedy the defects. His second criticism was that there was some defect in the shafts, but it was only a trivial matter.

The CHAIRMAN: But at the same time would it not have a prejudicial effect upon health?—He hardly thought so, because all the drains goinginto the disconnecting shaft were quite independent. One other defect was connected with what was called the nurses' scullery, and there there was a closet which had not been aërially disconnected. His recommendations had been embodied in his report, and he had been informed that instructions had been given to remedy all those matters.

Have you been able to form any opinion as to how this diphtheria occurred?—He was rather anxious not to express an opinion, because in order to do so with any authority one had to know the exact data as to when and how the nurses were engaged, and where. He had not yet sufficient materials to form a decided judgment, but he felt fully convinced that any sanitary defects connected with the ward buildings could only have had the most trivial effect on the outbreak.

Is it not very rare that the nurses, with proper precautions usually taken in hospitals nowadays, contract diphtheria from the patient?—Not if they carry about children affected with diphtheria. At St. Bartholomew's they have lady nurses who to a large extent out of kindness to the children have been in the habit of carrying these diphtheria cases about, and in that way they may contract diphtheria by inhaling the exhalations from the children.

In answer to Lord CATHCART, the WITNESS said that diphtheria was rapidly increasing in England and in the large cities. He did not believe there was any direct relation between sanitary circumstances and diphtheria. The conclusion of his report was as follows: "First, that the sanitary circumstances of the nurses' home in Little Britain are such as to forbid the belief that they can in any way have been concerned in the production of the disease; secondly, that whilst I am unable to speak with equal confidence as to the Duke Street Home, I have no grounds for believing that diphtheria has been induced by any of the sanitary conditions of that building. That, as regards the drainage of the wards, blocks, and internal arrangements of these buildings, conditions do exist and it is notable in the ward kitchens- which do tend to unwholesomeness, and which have been known to produce sore throat; and that even if this form of sore throat be not in its beginning regarded as of a specific character, it is certain that those suffering from it are, to an exceptional degree, liable to contract diphtheria when the disease is prevalent. This statement is not intended to prejudge the question as to the origin and diffusion of infection during the recent prevalence, as to which the necessary data are not forthcoming." The Witness added that there was no evidence to show that the outbreak of diphtheria was in any degree due to the sanitary state of the hospital. He did not know that there was any escape of sewer gas. There was a defect in the scullieries of the wards, and he knew that there had been complaints of offensive odours from that part of the wards, and he was bound to admit that there was some evidence that there might be danger at that point. Some of the nurses had, in reply to his questions, complained of bad smells. The closets opened out into the scullery. He had no objection to put in his report although it was not conclusive.

Lord CATHCART: Are you going on further with this matter?—Certainly, data are being collected for that very purpose.

In reply to Lord KIMBERLEY, WITNESS stated that he had recommended that an alteration which would remedy the defect of the closets opening into the scullieries. It was an arrangement which, from a sanitary point of view, ought not to be allowed to continue. The drain was an old brick culvert.

Is it not a fact that brick drains tend to become defective and are not to be relied upon?—As a general principle I concur in that. The culverts in question were, he added, very exceptional, and had been laid down in a remarkably efficient manner.

Mr. W. H. CROSS (clerk of the hospital) was recalled, and, in reply to the CHAIRMAN, stated that a periodical examination of the sanitary conditions of the hospital was not made. He had no reason to think that similar defects to those already admitted existed in any other part of the hospital. If a nurse were ill the matron would report to the treasurer. She made a report every week, and if anything was wrong an inquiry would be made. The clerk of the works went round the hospital at least every three months. He was afraid that they might have admitted some nurses not perhaps sufficiently fit constitutionally. About two months ago a more searching examination had been instituted as to their fitness. No one could deny that their hours were long. He did not think them underfed. He had a daughter as a nurse at the hospital, and he did not believe there was any ground for complaint.

Have you not very recently, in consequence of this outbreak, increased the food of the nurses?—The matron suggested that it was desirable to give the nurses a glass of port wine, and, for those who care to have it, some soup should be prepared about 10 o'clock. The Witness stated that it was absolutely untrue that any of the medical officers had had an attack of diphtheria. There were four cases of typhoid among the nurses, and they had all been nursing typhoid patients. The matron, who relieved one of the hard worked sisters, nursed a diphtheria case, and she attributed her infection to that case. If there had been a choice of places, the nurses would not have been removed into the cubicle near the infectious ward. Nothing had occurred which justified the idea that they were infected from being put there. A very long time ago—perhaps over ten years ago—the cubicle ward had been used as an infectious ward. It was then reserved for typhus.

Lord CATHCART: Have your authorities never considered the question whether you should not form a branch establishment in South London?—No; the governors have never discussed that.

Has it never occurred to you that some of the salaries might be greatly reduced?—No.

In answer to Lord MONKSWELL, the Witness said he was glad of the opportunity of stating that the authorities had never gone to the Charity Commissioners, *in formâ pauperis*, asking to be allowed to take in paying patients.

Mr. I'ANSON (surveyor of the hospital) stated that he had general supervision of the hospital, and his duties required him to report anything that was wrong as to the sanitary state of the institution. He had a report from the clerk of the works every week. He (the Witness) was a salaried officer, receiving 300 guineas a year, and a commission of 2½ per cent. on all new buildings. He had made two recent reports as to the sanitary condition of the hospital—one on December 11th, 1890, and the second in the present month. His inspection included all the wards, the nurses' home, and the matron's house. In his report he had pointed out a number of alterations required from a sanitary point of view. He had been three years surveyor, but he had not made an inspection of the drains. He thought that the sanitary condition of a hospital should be as good as that of any place.

Lord CATHCART: And do you think they were?—Yes.

And yet you have made these recommendations?—Yes. What he had suggested would, he thought, be sufficient.

Dr. ROBERT BARNES, F.R.C.P. and F.R.C.S., examined by the CHAIRMAN, stated that he had been connected as Physician with the London, St. Thomas's, and St. George's Hospitals, and was now consulting physician of St. George's, the Chelsea Hospital for Women, the Seamen's, the East London Hospital for Children, and the Hospital for Epilepsy and Paralysis, and other Diseases of the Nervous System. The special hospitals, he considered, were absolutely necessary as supplementary to the general hospitals, and made up the deficiency which would otherwise exist.

The CHAIRMAN: Are you in favour of all special hospitals?—I should say there may be good and bad; perhaps some few might be unnecessary. There were six supplementary general hospitals without schools—the French, German, Italian, Great Northern Central, Metropolitan, and the West London Hospitals. There were ten hospitals for children, with 505 beds; one for children with hip diseases, with 50 beds; four for women's diseases, 225 beds; four for consumption, 615 beds; one fever hospital (Islington), 200 beds; five metropolitan fever hospitals under public management, 2,141 beds; a small-pox hospital, 108 beds; one for heart disease (Soho Square), 26 beds; three for incurables, 301 beds; the St. John's and Elizabeth Hospital, 50 beds; the Lock Hospital, 240 beds; three hospitals for lunatics, 656 beds; six lying-in hospitals, 175 beds; five ophthalmic hospitals, 195 beds; three orthopædic hospitals, 118 beds; one for stone, 24 beds; Seamen's Hospital, 225 beds, and a branch in the Albert Dock with not less than 20 beds; the accident hospital at Poplar, 51 beds; four throat and ear hospitals, 52 beds; three for skin diseases, 52 beds; one for cancer, 120 beds; two for fistula, 42 beds. He did not pretend to say that that was an absolutely complete list, and it gave a total of 6,494 beds.

Do you consider that in the majority of these cases the special diseases are better treated than they would be at general hospitals?—Yes. One great reason for the cancer and other special hospitals is that they afford medical men a better opportunity to study the special disease than they could have at the general hospitals. The Witness added that the very essence of English philanthropy was free and independent management. He would allow hospitals as much freedom as possible. There might, however, be some general supervision; but it should be outside the Government. If there were any State control it would stop the flow of charity and individual philanthropy. He would not like at present to trust the County Council.

In reply to Lord KIMBERLEY, the WITNESS said that some control was now exercised by the Hospital Sunday and Saturday Fund Councils, and he had understood that they would like to exercise still more.

Would it not be well if no hospital were opened without a certificate that it was properly equipped?—If that law had been in operation thirty years ago it would have stopped many useful institutions.

Why?—The control might have been arbitrary, because we cannot say on what principle the power would have been exercised.

The CHAIRMAN: You would like to maintain as much as now the individuality of each hospital?—Yes; they do good by rivalling each other.

The Committee then adjourned.

Upon resuming on Thursday, Mr. F. C. MELHADO (Secretary of the Middlesex Hospital) made a few amendments to his previous evidence. He stated that twice a year the accounts of the hospital were audited by a firm of public chartered accountants. There was, he added, a most complete drainage plan of the hospital, according to which, as it was kept posted up, any defect in the drainage could be detected.

Mr. A. W. READE (Secretary of the Charing Cross Hospital) presented a balance-sheet of the institution which had the previous day been agreed to at the annual court of governors. The hospital was founded in Villiers Street in 1820, and thence it was removed to its present situation in 1831, and was opened in 1834. It was quite free. Letters were issued for both in- and out-patients, but it was not compulsory upon patients to have a letter. Last year there were 2,165 in-patients. The test of admission was that the applicant was a poor person in need of hospital treatment. A patient bearing a governor's letter would have no preference. He (the Witness) was responsible to the council. All male servants were engaged and discharged by himself, and the nurses and probationers were engaged and discharged by the lady superintendent. But sisters were engaged by the council on the recommendation of the superintendent. In the event of a dismissal of a male servant or a nurse it was always reported to the weekly board or the council. A finance committee had to do with all questions regarding the nursing and investigated any charges which would involve dismissal. Funds were derived chiefly from subscriptions, donations, and legacies. There was a little property. The income was about £6,000 a year. That included annual subscriptions, which was the most reliable source of income. Legacies formed a very unknown quantity; last year they had only a little over £1,000, the smallest sum they had received from that source since the hospital had assumed its present importance. The annual subscriptions last year amounted to £1,838.

Is that sufficient to pay for the nursing and administrative staff of the hospital?—No; we have a little money from house rent. The Witness continued that, with the exception of about ten beds kept vacant for accident cases, all available beds were occupied almost throughout the year. There were 175 beds, of which 165 were considered working beds.

Do you consider the medical relief in that part of London is sufficient for the requirements?—I should say so. There are one or two dispensaries near the hospital.

How do complaints of patients get to the proper quarter?—They would complain to the nurse, who would tell the lady superintendent, who would call me.

Have you a resident medical officer?—No; there are five "residents"—house-physicians and surgeons—who admit to the beds. Nearly all urgent cases which come to the hospital are admitted at once. The Witness stated that he had a salary of £400 a year, and was non-resident. In his absence the chaplain (who received £100 a year and board and lodging), was responsible. There were ten sisters, seventeen nurses, and twenty-four probationers. They began to have their own nurses in March, 1889, and trained them at the hospital. The sisters went on duty for eight hours and a half a day, one Sunday five, and the next Sunday nine hours, a total average of fifty-eight hours a week. The nurses and probationers had ten hours a day, on one Sunday nine, and the next six hours. The nurses' average was sixty-seven, and the probationers sixty-nine hours a week. The nurses did nothing but nursing. There was no pension for them at present, but the question was under the consideration of the council. There were six wards of the same size, four smaller ones, two special wards for children, and one ward for accidents which came in at night. At night there was a nurse in each ward and two in the children's ward. The nurses began at £22, going up to £25, and had in- and outdoor uniforms, and 2s. 6d. a week for washing. The probationers were not paid the first year, had £15 the second, and £20 the third year, and had uniform and washing. The Hospital Sunday Fund last year awarded the hospital £1,010, and the Saturday Fund £261. The Sunday Fund system of accounts was a very good one, and, so far as it was possible, he would like to see it adopted. But he did not think it was possible to adopt it in all details; for the whole of the hospitals to carry it out the account would be interminable.

Lord CATHCART inquired whether it was the universal practice in hospitals to render the patients insensible before operations.—I think not. The Witness further stated that the sanitary arrangements of the hospital were in good order. There was a medical school in connection with the hospital. There were over 200 students, and the school was increasing. There was nothing in the nature of a residence or a club. He did not consider the institution was shorthanded in regard to the nurses. They were young and active nurses, cheerful and contented, and a very happy family. The sister had a month's holiday, the nurses three weeks, and the probationers had an occasional week; and they could all have a half-holiday without difficulty.

Lord CATHCART and Lord ZOUCHE bore testimony to the satisfactory state in which they had found the hospital.

Lord ZOUCHE: What are the duties of the Medical Com-

mittee?—They advise upon all questions purely medical, and they examined the officers when they came up for appointment, and recommended them to the weekly board. They settled all the drug tenders. Subject to the control of the highest authority, the Medical Committee had a free hand.

In further answer to the CHAIRMAN, the WITNESS stated that scarlet fever and diphtheria cases were not admitted to the hospital except in serious cases of children when tracheotomy was required. The most urgent cases were taken. Cases of typhoid fever were taken, but not typhus nor lock cases. Poor patients were sometimes sent to the hospital by London medical practitioners, but not from the country.

Mr. STANLEY BOYD, surgeon to Charing Cross Hospital and Dean of the medical school, was called, and gave a general account of the medical school. He stated that the number of students last year was 228. There were 31 new general students who were going to take the ordinary medical qualification; 35 dental students, and 16 occasional students. That made altogether 82 new entries. The school was increasing. The general students paid 90 guineas in one sum, or £100 by five instalments, for the whole curriculum, which took four years. The dental students paid 54 guineas, or 62 by two instalments. The total gross revenue of the school last year was £4,070; out of that, the expenses of the school had to be paid. One-fifth was taken off all fees for the hospital. That amounted last year to £814; one-fifth was taken off for school management and three-fifths was divisible among the hospital staff and lecturers. The school was a separate building and was connected with the hospital by a subway. The average amount earned from the winter classes was £170, and from the summer classes from £60 to £80. The minimum a teacher or lecturer might earn might not be more than £60 for the summer course. The clinical fees were divided according to shares.

The CHAIRMAN: Are you satisfied with the present system of medical education at hospitals?—Very fairly. It would, however, be a very great advantage if the hospitals were relieved entirely of teaching botany, zoology, and physics, and a certain amount of the rudiments of chemistry; the students ought to pass that before they began their medical education. A central institution for the purpose did not seem necessary; they could go to the science department of colleges.

Do you think it would be an advantage to have a central education board for students?—There would be great danger about it.

In answer to Lord CATHCART, the WITNESS said that it would be much better if there were a uniform system of medical examination.

The Earl of ARRAN: Would you like a central body conducting this examination?—It would be disadvantageous to have to bring everybody in the kingdom to one place. It might be conducted all over the kingdom, and, if we get a uniform standard instead of going through by a side portal, so to speak, it would be a great advantage.

Lord THRING: You do not wish to do away with the degrees of Oxford and Cambridge and other great universities?—No.

What you want is to get rid of certain examinations?—Either that or to give them a decent standard. Of course, he added, it would not be possible to get uniformity without having one body to examine.

Lord SPENCER: Is there any central body in England that could conduct this preliminary examination?—No. It would have to be created.

In answer to the CHAIRMAN, the WITNESS stated that he was personally very anxious to maintain the individuality of his own school.

Dr. FREDERICK WILLCOCKS, out-patient physician to Charing Cross Hospital, explained the practice in force there of admitting patients. The fact of a person applying for hospital treatment constituted him an out-patient. These were not seen after half-past one. The patients for dental and other special departments were seen in the afternoon. Casuals came at any time. The new cases were limited by opening the door at one and shutting it at half-past. The large majority of the out-patients were of the poorer classes, and from his nine years' experience he did not think the hospital was abused.

The CHAIRMAN: If there were no out-patient departments at hospitals, patients would have to go to the Poor-law?—Yes.

In reply to Lord MONKSWELL, the WITNESS said that he agreed with Mr. Boyd as to a reform in the system of medical education. He did not think the schools should be separated from hospitals.

Lord CLIFFORD: Is it your opinion that if there were a strong central examination it is immaterial at which school students should study?—I think it would be in that case.

The WITNESS stated, in answer to the CHAIRMAN, that neither he nor any of the "residents" received any salary.

The Committee then adjourned.

THE CLIMATE OF GRASSE.

WE have received from Dr. D. H. Cullimore the following note on Grasse, where the Queen is about to spend a short time. Towards the end of last March, he writes, I spent a week exploring the country between Cannes and the hills to the north, and away to the Esterels which bound the plain towards the west. On this plain, which for variety and scenic beauty is not surpassed either at home or abroad, and on the sunny slope of Mount Rocarignon, at an elevation of 1,100 feet above the sea, and 12½ miles by rail north and inland from Cannes, lies the picturesque, old-fashioned, crooked, and crowded little city of Grasse. Rich in historic and Napoleonic traditions, quiet and sequestered in situation, having great facilities for driving excursions, and possessing lovely views, good water and a pure and tonic air, Grasse has many attractions. Beautiful roads lead in all directions, of which that to Cesaire, nine miles to the west, and the high Corniche Road, affording delightful views of the sea, are deserving of mention. The chief industry of the people, of whom there are 12,000, is the distillation of the otto of rose and Nerogli perfumes, the flowers for which are grown all over the district. The climate is said to be colder than Cannes, which is about 9° or 10° higher than London. It did not, however, appear so to me, but the contrary. The heavy rains which generally occur in March, had ceased, the trees were bursting into leaf, and though there was a certain touch of keenness in the air, there was no mistral, and the wind was far less felt than at Cannes or Antibes. Having a sunny aspect and being well sheltered by the mountains close behind, I believe that in the daytime the climate is milder than Cannes, and the air more still. At night, however, and when the sun goes down, the cold is probably greater.

CHARGE OF MANSLAUGHTER AGAINST A MIDWIFE.—The charge of manslaughter against Mrs. Berry was heard at the Central Criminal Court, on February 14th, before Mr. Justice Charles. The charge arose out of the death from puerperal fever of a woman attended by this midwife. About a month previously she had attended two other cases which had died of puerperal fever. After hearing evidence from Dr. S. E. Bligh, Dr. W. Taylor, and Mr. J. K. Purdieu, who had attended the cases; Mr. T. Bond, who had made a *post-mortem* examination in the case out of which the charge arose; Mr. Braxton Hicks (the coroner), and Dr. W. C. Grigg, the jury stopped the case and found the prisoner not guilty.

SMALL-POX IN BELFAST.—Our Belfast correspondent telegraphs that small-pox has broken out in four districts in that city. Seventeen cases altogether have been recorded; the attacks have been mild in character, and no deaths have occurred. Several of the sufferers are policemen.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The annual Examination on Alcohol, for prizes given to medical students in their third year, will be held in London, Edinburgh, Glasgow, Dublin, and Belfast, on February 27th. Notice of intention to compete must be sent to Dr. J. J. Ridge, Carlton House, Enfield, Middlesex, not later than February 21st.

EDENDERRY DISPENSARY.—Dr. Saunderson, after thirty-three years' service as medical officer of Edenderry Dispensary, has resigned, and his son, Dr. R. Saunderson, medical officer of Rhode Dispensary, has been appointed to the vacancy.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

STAFFORDSHIRE, AND SHROPSHIRE, AND MID-WALES BRANCHES.—A joint meeting of the above Branches will be held at the Swan Hotel, Stafford, on Thursday, February 26th, at 3.30 P.M.—GEO. REID, M.D., Stafford.

YORKSHIRE BRANCH.—A meeting of the above Branch will be held at the Beckett Hospital, Barnsley, on Thursday, February 26th, at 3 P.M. Members intending to read papers are requested to communicate at once with ARTHUR JACKSON, Secretary, Sheffield.

BATH AND BRISTOL BRANCH.—The fourth ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Wednesday evening, February 25th, at half-past seven o'clock, A. B. Brabazon, M.D., President. The evening will be devoted to a discussion on Lateral Curvature of the Spine, which will be opened by Mr. T. D. Ransford.—R. J. H. SCOTT and E. MARKHAM SKERRITT, Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will take place at Faversham on Thursday, March 12th, Dr. Boswell in the chair.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The next meeting of this Branch will be held in the Crown Hotel, Falkirk, on the afternoon of Tuesday, March 3rd, at 2.30. Members desirous of showing specimens, etc., are requested to communicate with the Honorary Secretaries, C. J. LEWIS and J. PEAKE.

THAMES VALLEY BRANCH.

A MEETING was held at the Sun Hotel, Kingston, on Wednesday, February 11th, Dr. WADD, President, in the chair.—The minutes of the last meeting were read and approved.

New Member.—Mr. R. N. Goodman, M.B., of Kingston, was proposed and elected a member.

Motion as to Election of President.—The HON. SECRETARY then moved: "That before the annual election of office bearers the Council of the Branch shall select three members from whom the President shall be elected."—After a very brief discussion this was adopted.

Midwives Registration Bill.—The Midwives Registration Bill, consideration of which had been postponed from the last meeting, was discussed, and there was a considerable debate as to the bearing of the several provisions, the majority of those present being adverse to the Bill in its present form.

Examination of Sputum.—Dr. W. ESSEX WYNTER read a paper "On the Examination of Sputum by Simple Methods for the purpose of Diagnosis." He suggested the following methods of investigation: (1) Throwing the sputa into water to allow bronchial casts to unfold, and portions of lung tissue to separate. As illustrations, he showed a bronchial cast from a case of plastic bronchitis, with well-marked laminations, and exhibiting ramifications down to the smallest bronchioles. And in another case a blood cast, which had been coughed up a few days before a fatal hæmorrhage from aneurysm. (2) Mounting a small piece of the denser part of the sputum without any reagent, by pressing it out between a slide and a cover glass, and examining under a low power of the microscope. In this way Dr. Wynter prepared and demonstrated elastic tissue in a case of phthisis, and pointed out the aid that could be obtained by recognising Curschmann's spirals, hæmatoidin, various forms of crystals and fungi, and more rarely portions of cysts. (3) The demonstration of tubercle bacilli was effected in three minutes, as follows: (*a*) Crushing a small portion of purulent sputum between two cover glasses, sliding apart, and drying over a spirit lamp; (*b*) Passing the cover slips rapidly thrice through the flame to fix the preparation: (*c*) Placing two drops of Neelsen's solution on the dried surface and warming over the lamp till steam rises; (*d*) Washing off excess and decolorising in 25 per cent. solution of sulphuric acid; (*e*) Rinsing in water, counterstaining with a drop of methylene blue, drying, and mounting in cedar oil. The entire succession of processes did not occupy more than five minutes, and in many cases furnished much valuable information.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE fourth general meeting of this Branch was held in the Library of the Medical Institute on Thursday, January 15th, the President, Mr. ALFRED FREER, in the chair. The minutes of the last meeting were read, approved, and signed.

Cases.—Mr. JORDAN LLOYD showed a woman, aged 28, upon whom he had performed Lumbar Nephrectomy. She had suffered from lumbar pain and pyuria for two or three years. In February, 1889, she had developed a lumbar tumour. Nephrotomy was then performed, and an abscess of the kidney opened and drained: no calculi were found. A lumbar fistula resulted, which discharged freely; and, as the patient was losing ground gradually, the damaged kidney was removed. The tumour was intimately adherent to all surrounding structures. The patient made a complete and uninterrupted recovery.—Dr. SIMON showed a case of Ophthalmoplegia Externa and Interna in a woman, aged 51, who had had attacks of migraine all her life at monthly intervals. The pain was always followed by ptosis of the left eyelid, external strabismus, and dilatation of the pupil. Her mother had noticed these phenomena when she was six weeks old. The ophthalmoplegia had lasted only two or three days at a time until the present attack, which had persisted for three weeks, and was only just beginning to disappear.

Specimens.—Mr. MARSH showed the Left Carotid Arteries of a man, aged about 40, illustrating the condition sixteen hours after ligature in continuity of this vessel 1¼ inch below the bifurcation. The operation was performed to arrest profuse hæmorrhage from the brain and meninges occurring after removal of a large clot when trephining for the relief of pressure symptoms in a case of compound fissured fracture of the skull. The internal and middle coats had been divided; there was no proximal clot, but, distally, a clot extended to the bifurcation of the vessel.

Time of General Meetings.—It was resolved: "That ordinary general meetings of this Branch be called for 4 o'clock."

The late Dr. Strange.—A vote of condolence with the family of the late Dr. Strange, of Worcester, who was a member of this Branch, was passed.

Papers.—Mr. T. F. CHAVASSE read a paper on a Case of Diverticulum of the Œsophagus. In the discussion which followed, Dr. EDGAR UNDERHILL, Dr. RATCLIFFE, Mr. LLOYD, Mr. MAY, Dr. DOUGLAS, and the PRESIDENT took part.—Dr. EDGAR UNDERHILL read a paper on Mollities Ossium. In the discussion which followed, Mr. TAYLOR, Dr. RATCLIFFE, Dr. SIMON, Dr. SUCKLING, Mr. MARSH, Mr. LLOYD, and Mr. MAY took part; and Dr. UNDERHILL replied.

SPECIAL CORRESPONDENCE.

BERLIN.

A New Remedy for Tuberculosis.—Death of Dr. Hartnack.—Koch's Treatment of Tuberculosis.

A PARAGRAPH is going the round of the Berlin daily papers to the effect that Professor O. Liebreich has succeeded in improving the action of Koch's remedy by a new method. In this form the news is not correct. The fact is that Professor Liebreich has for some time been engaged on experiments with a substance of his own—not Koch's remedy in any form—which he has been trying in many cases of tuberculosis of the larynx. Though his results have been encouraging in the extreme—surprising, in fact—Professor Liebreich very much wished to avoid all publicity for the present. But the secret has leaked out, and so the Professor has determined to publish the nature of his remedy and treatment in an address to be given before the Berliner Medizinische Gesellschaft on Wednesday, February 25th.

Professor Dr. Edmund Hartnack, the eminent optician, is dead. He died at Potsdam, where his optical institute was. Before 1870 he lived in Paris, but, after the war broke out, he returned to Germany. He is believed to have been the first to introduce immersion into microscopy. His microscopes quickly obtained a European reputation, and it is not too much to say that indirectly we owe to him much of the progress of modern medicine. The University of Bonn made him Doctor *honoris causâ* in 1868; the honorary title of "Professor" was conferred on him by the Government.

The discussion on Fraenkel's address was resumed on Wednesday, February 11th, by Professor A. Fraenkel, who gave a long account of his cases in the Urban Hospital, concluding with the following words: "(1) In cases of pulmonary tuberculosis treated by Koch's remedy, an improvement can be observed in a certain number of cases, especially those of the slighter kind, in so far as the bacilli disappear from the sputum, and the general condition improves. It seems that this effect can be explained by the loosening and breaking down of caseous infiltration caused by the remedy, exfoliation being the result where the anatomical circumstances are otherwise favourable; but even in the less severe cases, as far as our experience goes at present, it is impossible to foretell the success of the treatment with any degree of certainty. (2) In a large number of slight and medium cases (about fifty per cent.) improvement of the general condition can be observed. Further experience must show in what degree Koch's treatment is superior to the simple tonic, hygienic, and dietetic treatment of consumption. (3) As a certain percentage of moderately severe cases grow worse under the treatment, patients belonging to this category should be told of the danger to which the treatment may possibly expose them. (4) Advanced and bad cases should under no circumstances be treated by the remedy. Professor Julius Wolff has had nine cases of tuberculosis of the large joints under treatment. His decided impression is that in two cases the injections caused an extension of the disease in the joints. In none of his cases was any continuously bad effect on the general condition observed, and in none of the operation cases did the remedy have an unfavourable effect on the wound. Dr. Th. S. Flatau reported the death of a young lady, who had been under treatment since the end of November. This much discussed case came under treatment with a slight affection of the larynx. At first there was both local and general improvement, until after several ups and downs, there came a decided turn for the worse. Professor Virchow spoke at great length on the effects of the remedy, summing up as follows: "Up to the present we have, in the first place, no experience to prove that the bacilli as such are killed and reabsorbed; secondly, we know of no facts that would prove that a dissolution of tuberculous tissue takes place, that by the treatment the tubercle as such is reabsorbed; thirdly, we have a whole series of observations showing that the tubercle, as well as the irritable tissue, the inflammatory tissue surrounding it, is brought to a speedy destruction by the treatment, and that this destruction favours the possibility of a comparatively rapid healing process. On the other hand, we have no experience to prove that indurative processes are favourably influenced, or that encapsulation, the enveloping of caseous parts with fibrous masses, is favoured. Rather, I feel bound to say, the suspicion sometimes arises that the remedy mobilises encapsuled masses, brings them into movement, and thus transforms a focus, which might possibly have continued to be harmless, into an actual danger for the patient."

LIVERPOOL.

Discussion on Cremation.—New Nurses' Home for the Royal Southern Hospital.

AN important discussion lately took place at the Medical Institution on cremation, the subject being introduced by Dr. Hope, the deputy medical officer of health, in a paper describing the history of the practice in recent years and the advantages to be derived from it. Liverpool, he said, contributed about 15,000 dead to the soil annually, and allowing fifteen years for the complete destruction of a body there were approximately 225,000 in every stage of decay within the neighbourhood. Although rules had been laid down for the sanitary performance of earth burial the geological formation of the region made them not always capable of being carried out. The first revival of cremation in modern times took place about twenty years ago in Italy, and a gas crematorium was erected in Milan in 1880. The practice had largely extended during recent years, and there were now about forty-two crematoria in existence throughout the world. In 1879 the Cremation Society erected a gas apparatus at Woking, and by its use an adult body was capable of undergoing combustion in one hour without smoke, but for some years the Home Office prohibited its employment. In 1884, however, Mr. Justice Stephen delivered the famous judgment that cremation was a legal procedure provided it was effected without nuisance to others. The Cremation Society imposed rigid conditions for the use of their crematorium at Woking, and they were such as sufficiently to dispose of the objection that had been urged against the practice, namely, that evidences of poisoning might be obliterated by it; it was hardly likely a poisoner would court the searching investigation demanded by the society. In contrast to this might be noted the fact that about 15,000 deaths occurred yearly in the United Kingdom, with regard to which no medical certificate was given and no inquest held. The superiority of burning the dead lay in the fact that a few hours effected the work of many years. Instead of the old process of putrefaction occupying a term of years, the action of fire resolved the body into volatile matters and into pure white ashes in the space of an hour. Dr. Hope concluded by moving the following resolution: "That this society recognises the advantages of cremation as a means of disposal of the dead, and considers the establishment of a crematorium in Liverpool, under suitable regulations, as free from objection." In the debate, which followed, some interesting facts regarding cremation were elicited. Mr. Boulnois, the city engineer, who was present by invitation, described the wide prevalence of the practice in Japan, where the cost of the combustion only amounted to about 3s. 6d. Dr. Carter, Dr. Alexander, and Mr. F. W. Lowndes, strongly supported the resolution, which was carried by an overwhelming majority.

A new Nurses' Home has been opened in connection with the Royal Southern Hospital, and supplies a need that has long been felt. It is constructed according to the most approved modern principles, and will be of great service both as affording healthful accommodation to the nurses engaged in the hospital, and also as an institution for providing private nurses. Of the latter the number in Liverpool might with advantage be increased, as the supply has lately fallen considerably short of the demand.

THE CORONER AS A SCIENTIFIC INVESTIGATOR.—The *Medical Record* of New York states that one of the coroners of that city has announced that all cases of death "from the use of Koch's lymph" shall be investigated by him.

IN Kansas the courts have decided that a cemetery need not be maintained in perpetuity, and that the land may be used for other purposes.

CORRESPONDENCE.

THE "REVISED SCHEME" FOR THE RECONSTRUCTION OF THE UNIVERSITY OF LONDON.

SIR,—In the fourth paragraph of the report of Lord Selborne's Committee, the Commissioners observe:

Of the evidence which we have received, a large and important part relates to the position and wants of the Medical Faculty and its schools in London, and to the reasons for and against the petition of the Royal College of Physicians of London and the Royal College of Surgeons, England; the result has been to satisfy us that a great demand exists for medical degrees attainable in London more easily than at present, and that it may be desirable to provide for that want in some proper manner. But a careful consideration of the whole evidence has led us unanimously to the conclusion that the establishment of such a body as the Senate of Physicians and Surgeons proposed by the Royal Colleges would not be the best means by which that end could be attained, and that a remedy may be found for any practical grievance under which the medical students of London and the licentiates of the Society of Apothecaries may now labour under in respect of medical degrees, without either conferring the power of giving such degrees upon colleges which have no academical character, or creating a new examining and degree-giving university in a single faculty.

With the recommendations of the Royal Commission before them, the Senate of the University of London proceeded to draw the outlines of a scheme for the reconstruction of the University, their efforts, like that of the Commissioners, being directed towards raising the standard of medical education and the completeness of examination tests for London medical students. While adhering to these principles, there was obviously ample opportunity of granting degrees to every well educated and industrious medical student, reserving higher distinctions or honours for men who were able to raise their standard of attainments above the level of the majority of students. In this spirit, the Senate elaborated their first scheme for the reorganisation of the University; this was submitted to the Colleges of Physicians and Surgeons on November 20th, 1889. In March, 1890, the Colleges accepted the main part of this scheme, upon condition that the University would provide: (1) that the examinations for the M.B. degree should be under the control of a conjoint board of the University and the Royal Colleges; (2) that the University should undertake the matriculation and preliminary science examinations—Lord Selborne's Commission had recommended that the preliminary science examination of the University of London should be dispensed with, and the examinations of the Colleges accepted in its place; (3) that the London medical schools should be directly represented on the Senate. It would appear that the Senate of the University either dismissed or did not comprehend the meaning of the first of these demands, for they issued a second revised scheme for reorganising the University, dated June 4th, 1890, in which, in place of a conjoint board to control the examinations for the M.B. degree, they proposed a conjoint board of examiners to be appointed by the Senate and the Colleges, who should conduct the examinations and send up their joint report as to its result to the Senate. This plan, however, was not what the Colleges proposed, and the scheme was therefore sent back to the Senate with an intimation that what was desired was a standing committee outside the Senate of the University, to be appointed conjointly by the University and the Royal Colleges, which committee was to be an administrative board of management in all matters relating to professional examinations for the M.B. degree; and to these terms the Senate of the University have now, as was stated in the BRITISH MEDICAL JOURNAL of February 7th, 1891, virtually agreed.

Obviously the Senate have altered their views since issuing their first scheme. Under the last scheme the Senate virtually hand over their final examinations for the M.B. degree to the Conjoint Board of the Royal Colleges. In fact, any student who has matriculated and passed the conjoint examination will, if he pleases, receive an M.B. degree from the London University, in addition to the diploma of the Colleges, to which he is entitled. Presumably he will have to pay an entrance fee for the degree.

As I understand this scheme, the Colleges are practically to determine if a student is to obtain a degree, and so become a graduate in medicine of the University, but surely this is giving the Colleges precisely the powers which the Royal Commissioners have decided it was unwise to grant them, and against which the universities of the United Kingdom and the Apothecaries' Society petitioned. The distinction between allowing the Councils of the Colleges to combine and form a senate to grant degrees and the scheme now proposed of permitting students who pass the final conjoint examinations of these Colleges to demand an M.B. degree from the University of London is more nominal than real. No reference is made to the M.D. degree. Would the scheme tend really to improve medical education in London? I feel sure that a degree obtained in this way will be of so small a value that many London students will, as at present, prefer leaving the metropolis to seek degrees having a higher intrinsic value than they could obtain under the remarkable arrangement proposed by the Senate of the University of London.

It is unwise to prolong this kind of struggle, the interests concerned are pressing; they are far too serious for further delay. It would be better to refer the matter, with all the documents from the Senate and other educational bodies bearing on the subject, to the Commissioners, to draw out a scheme to be presented to Her Majesty, providing for the construction of a university in London upon the lines contained in the report presented to both Houses of Parliament, by command of Her Majesty, on April 29th, 1889.—I am, etc.,

F.R.C.S.

ENDEMIC FEVER IN BERMUDA.

SIR,—It is an admitted fact that typhoid is endemic amongst the civil population of Bermuda, and that from time to time it breaks out amongst the military by reason of their using polluted water for drinking purposes, which they obtain in the several grog shops, etc., in the town of Hamilton and St. George's. Recent statistics prove that matters are growing worse year by year, and point to the fact that unless some radical sanitary measure is taken in hand, Bermuda, which ought to be, by its position and conformation both as a military station and a health resort, one of the most coveted of Her Majesty's possessions, will soon earn for itself unenviable notoriety, and its name and typhoid become synonymous terms.

Some few years ago—and I believe the same state of affairs still exists—there was not a made drain upon the island, the only attempt at sanitation being a number of cesspools, loosely covered by planks of wood, here and there in the public streets, and generally within a very few yards of a dwelling-house, which served alike for the reception of both surface and other drainage. The arrangements in private houses were no better, the privies being either in, or close to, the dwelling-house, and almost invariably in juxtaposition to, and, if possible, on a higher level than, the tank wherein was stored the drinking water. It will thus be seen that, under these circumstances, contamination of the water supply easily takes place, more especially when it is understood that the soil is of a very porous nature. The natives themselves have no idea of sanitation in any form, and adopt what seems to them to be the easiest way of disposing of their excreta, and are thus unwittingly a powerful means of propagating disease. One would imagine, in such a place, that there would be a sanitary officer with a working staff, whose especial duty it should be to look after the health of the population, but such is not the case. Some time since, I understand, there was an individual one of whose multifarious duties was to look after the sanitary condition of the town of Hamilton; but in the course of Nature he passed away, and was never replaced.

Under these circumstances is it any wonder that typhoid fever should prevail at Bermuda? Some good drainage scheme should be at once adopted and carried out. A short sanitary Act should also be passed in the House of Assembly, and a sanitary medical officer, with a properly organised staff, appointed, whose duty it should be, by periodic inspections, to ascertain that the island was kept in a good sanitary condition. I am convinced that, if the Government were to adopt the above suggestions, Bermuda would soon become, instead of as it is a hotbed of typhoid fever, one of the most delightful and healthy of Her Majesty's possessions.—I am, etc.,

SANITAS.

THE GENERAL PRACTITIONER AND HOSPITAL ABUSES.

SIR,—Mr. Hardy's letter affords me an opportunity for reminding your readers that if the hospital abuses from which we all suffer so grievously are to be put down, the case of the

general practitioner should be thoroughly ventilated before the Lords' Committee. Mr. Hardy and others have no doubt put the case very ably according to their own knowledge of the facts, but, to make it complete, others should also have their say. I have myself applied to the Lords, for I would have something to say on Irish hospital abuses, but, so far, the friends of these abuses have been able to shut me out. The provinces, Ireland, and Scotland should be included within the scope of the inquiry.—I am, etc.,

THOMAS LAFFAN, M.R.C.P.,
Physician to Union Hospital, Cashel.

THE PRESENT POSITION OF ANTISEPTIC SURGERY.

SIR,—In the BRITISH MEDICAL JOURNAL for September 22nd, 1890, p. 731, Mr. Tait states that "a damp sponge kept at a temperature of 100° will be a mass of stinking putridity beyond all imagination in twelve hours." He instances the case of a sponge tent in the uterus. In this example, the sponge is placed under conditions well known to be favourable to putrefaction. Under other circumstances, a different result is obtained. In the process of draining the abdominal cavity, it is now the custom to use a glass drainage tube, the end of which is covered by a sponge enclosed in a rubber sheet in which the discharge collects. Here we have dead animal matter, moisture, and warmth, which Mr. Tait declares are alone necessary for the development of putrefaction, since, in his opinion, the causes of this process cannot be kept out. But if the sponge be rendered aseptic by carbolic or other antiseptic solution, and if there be no discharge except from the peritoneal surface and from divided tissues, it is a fact that the dressings may be left untouched for twelve hours with the utmost confidence that the sponge will remain quite sweet and free from any sign of putridity.

In the paper already quoted (page 732), Mr. Tait also says that if "a big bit" of sponge be left in the peritoneal cavity, the patient "dies rapidly of suppurative peritonitis, no matter what Listerian precautions have been taken." This is not proved. On the contrary, a sponge has been left in the cavity of the peritoneum, on one occasion at least, for twenty-two hours. After this time the sponge was removed, and was found to be "full of dark serum, and firmly adherent to the surfaces with which it was in contact." It was quite sweet, and "permeated to some depth with organising lymph."[1] There was no further evidence of peritonitis, and the patient got quite well. According to Mr. Tait, this sponge should have been "a mass of stinking putridity beyond all imagination" twelve hours after the operation. Doubtless, had no antiseptic been used, exudative peritonitis and rapid death would have been brought about. Thanks, however, to the fact that the sponge was thoroughly aseptic, the patient is now alive and well.

It thus appears that certain clinical facts do not agree with Mr. Tait's statements about sponges. This is not remarkable when we consider that he avowedly laughs at the knowledge acquired from scientific experiment, and prefers to found his opinions upon the evidence of certain household customs, on which he has put an interpretation the accuracy of which is not above suspicion.

One more clinical point. It is a fact within my knowledge that death from general peritonitis, with abundant exudation of lymph, in less than three days after a simple ovariotomy, is not unknown in experienced hands when no antiseptic is used. The careful use of antiseptics is a scientific means directed to the prevention of such deaths, and is in my experience invariably successful in this respect in abdominal surgery, when there is no complication, such for instance as a fistula, which necessarily counteracts the benefits to be derived from the antiseptics. I have never seen such rapid death with general peritonitis and exudation of lymph when the operation has been performed with the careful use of antiseptics, and the peritoneal cavity has been completely closed at the time of operation. Hence it seems to me that, in not using antiseptics, the surgeon subjects his patients to an additional risk, to which the simplest case is as liable as the most difficult, and to which the patient may succumb when a fatal termination is least expected.—I am, etc.,

Bryanston Street, W. JOHN D. MALCOLM.

[1] *Lancet*, January 9th, 1886, p. 58.

THE MIDWIVES BILL.

SIR,—I have hitherto abstained from adding anything to the wordy discussion in your columns on the proposed Midwives Registration Bill. This must be my justification for asking room at the last moment for a very brief statement of what I conceive to be the proper attitude to be taken up by the general practitioner in reference to the Bill at the present time.

In a matter of such importance to the future well-being of a large portion of the community, and at the same time so vital to the interests and status of the midwifery practitioner—of either sex—"no Bill at all" is vastly preferable to one which many of us consider calculated to intensify the very evils which it is desired to remedy. I think, then, it becomes the duty of every registered practitioner who shares this view to petition against the Bill, and to ask the members of Parliament in his division to oppose its second reading. Opponents of the principle of the Bill have already, in many instances, had recourse to such a step, but those who, like myself, are not antagonistic to the principle of registration after adequate instruction and examination for the most part have abstained from doing so. I venture, therefore, to draw their attention to the fact that if they continue to stand aside for fear of appearing to make common cause with those whose opposition may possibly be founded on a somewhat different motive to their own, the Bill may pass, and the opportunity for introducing into it such provisions as they think urgently required be ultimately lost. To prevent such a result as this, all the registered practitioners in the town from which I write have put their names to a petition, and have thus, I venture to submit, adopted the only logical course under present circumstances.—I am, etc.,

Tamworth. J. HOLMES JOY.

SIR,—Anyone who reads between the lines of the Midwives Registration Bill must see that it will, for all practical purposes, repeal the Medical Act. That Act lays it down that if any person wishes to practise any branch of medicine such person must hold three registrable qualifications, namely, in medicine, surgery, and midwifery. But by this Midwives Bill a person will be able to practise midwifery if such person has a diploma in midwifery. It has been suggested that this new midwifery practitioner is to attend natural labours only, that is, 990 out of every 1,000. But mark, this Bill does not say that this new midwifery practitioner *is not to conduct abnormal labours*. It does not say that she is not to vaccinate, or prescribe for mother or infant.

Therefore, I trust each doctor will do his best to kill this infamous Bill, and will at once write to the member of Parliament for his division to oppose it. I shall be glad to offer any suggestions to those who wish to do so.

The worst fault of this Bill is that in the future the training of the student in practical midwifery will be placed in the hands of the midwives, for they will attend all those who are now treated by doctors.—I am, etc.,

Liverpool. ROBERT REID RENTOUL.

ON THE OPERATIVE TREATMENT OF DISEASE OF THE UTERINE APPENDAGES.

SIR,—In 1887 a paper of mine "On the Frequency of Diseases of the Fallopian Tubes" was read at the Obstetrical Society of London, based on an examination of the pelvic organs in 100 bodies in the *post-mortem* room of the London Hospital. Dilatation of the tubes was found in 17 of the cases; in 2 of these the condition (pyosalpinx) had probably been the cause of death, but in the other 15 cases death was due to other causes. In the discussion that followed the reading of my paper, the late Dr. Matthews Duncan drew attention to the comparatively advanced ages of most of the patients in my list—the average age being 42—and argued, therefore, that in many of them the disease had passed into an obsolete condition, that is, had undergone a process of natural cure. This seemed to me then, and still seems to me, to be the true explanation. It is curious to find that Dr. William Duncan spoke in the same discussion as follows:—"He thought it remarkable and most important that of the 17 cases of tubal disease recorded in Dr. Lewers's valuable contribution, 14 were over 40 years of age; in only one single

case were definite pelvic symptoms given in the previous history, and almost all died from diseases not attributable to the tubal mischief, *thus showing the fallacy of the view that most cases of tubal disease necessitate laparotomy.*" The italics are mine. These were Dr. W. Duncan's opinions in 1887, yet they must have undergone a radical change very soon afterwards, for the series of cases in his table recently read at the Medical Society began in 1888, and he had operated in several cases previous to that. I think Dr. W. Duncan should tell us what reasons led him to so complete a change of opinion and practice as regards these cases.

Then, let us keep before us clearly what constitutes a successful case when laparotomy is undertaken for chronic diseases of the appendages. Here I think Dr. W. Duncan overlooks the point at issue, for in a letter to the *Lancet* of February 7th, 1891, he says: "Since the meeting on Monday last, there is another successful case to be added." Now, in the case of this operation surely the test of success is the permanent relief of the symptoms for which the operation is undertaken. Careful observation of the patient for two years after the operation is necessary before we count any of these cases a success, because it is well known—both Dr. W. Duncan and Dr. Cullingworth must have seen cases of the kind—that in some cases (what proportion these bear to the whole number we have no means of judging) the last state of the patient is often no better, and sometimes even worse, than the first.

Then there is no reasonable doubt that many cases of chronic inflammation of the uterine appendages get well without operation. Dr. John Williams and Dr. Champneys have seen cases not only get well, but become pregnant afterwards. Dr. Bantock bears witness of the same kind in his letter in the BRITISH MEDICAL JOURNAL of February 14th, for he says: "It is, however, probably true that a majority of these cases lose all serious, and certainly all distressing, symptoms without operation." This is near enough getting well to content most people. My own experience is certainly in the same direction. I see a large number of cases of chronic inflammation of the appendages at the London Hospital, yet while I have done some forty abdominal sections there and elsewhere, in only two of these has the operation been for chronic inflammation of the appendages, over thirty of the operations being for cases of ovarian tumour.

Dr. Bantock criticises the protest entered by Dr. John Williams and Dr. Champneys against removal of the appendages "whenever a tumour of them is found accompanied by pain and hæmorrhage," and mentions a recent case of his own where the tumour was the size of a cocoa-nut as one that would be included in the protest. I think the case in point is one I saw shortly before Dr. Bantock, and it was one where there was an equal probability that the tumour might be either an ovarian tumour or a dilated tube. Such a case is obviously not included in Dr. Williams's protest, or a large number of cases of ovarian tumour would be left to run their natural course without operation. Everyone is agreed as to the propriety of operating on cases of ovarian tumour, or where there is a strong probability that the case may be an ovarian tumour. The protest clearly refers to swellings that almost certainly are not ovarian tumours, but composed of the ovary and tube more or less adherent to one another and to the pelvis, the tube being dilated or not according to circumstances. It is in cases of this kind that patience and palliative treatment so often, though of course not always, produce the happiest results.

The analogy between inflammatory diseases of the uterine appendages and diseases of the joints referred to by Dr. W. Duncan surely tells much more against operative interference than for it. For surely in no class of diseases are the good results of careful and prolonged treatment, without radical operation, more conspicuous.—I am, etc.,

Wimpole Street, W. ARTHUR H. N. LEWERS.

SIR,—During the last two years I have watched the course of five cases, in which I was consulted because the patient had been advised to have the uterine appendages removed, and thought it well to have a second opinion before submitting to the operation; and in which the patients got perfectly well without any operation, two of them becoming pregnant. This seems to me a large number to occur in the practice of one physician, and makes me think that by some persons too unfavourable a view is taken of the prospect of recovery in cases of inflammation of the uterine appendages. I believe that the great majority of such cases get quite well without operation if properly treated.

I do not think it likely that ovaries will be again removed for cardiac dyspnœa; and for this the profession is much indebted to Dr. Braithwaite, of Leeds, for his courage and candour in fully reporting the result of a case in which he did the operation for this condition.—I am, etc.,

Harley Street, W. G. ERNEST HERMAN.

MEDICAL INSTITUTE FOR WOMEN.

SIR,—There are now ninety-five qualified medical women on the Register. Of these, many are practising in India or elsewhere abroad, but a considerable number are in London. They have had hitherto no library of reference where they could, as occasion arose, consult the best literature of their profession. For the present the great advantage of belonging to the various medical societies is not open to them, and books are, therefore, even more needed by them than they are by young men in the early years of professional life. An attempt is being made to create for the use of medical women a library of reference, where they shall have access to all the best knowledge and experience recorded within the last twenty or thirty years.

The promoters of this library do not aim at collecting old and rare books, or books of merely historical interest. They wish to have the *Transactions* of all the leading medical societies, and the medical journals for twenty years back, all the best modern books—English, French, German, and American—on Obstetrics and Gynæcology, and a selection of the best recent books in all other departments of medical science.

The library is housed in a good room on the ground floor of the New Hospital for Women, 144, Euston Road, and it is known as the Medical Women's Institute. Valuable donations of books have been received from Mrs. Matthews Duncan, Mr. Erichsen, Messrs. Macmillan, and other friends, and we shall be very grateful for the gift of the *Transactions* of the various medical societies in London and in the provinces, for legacies of good books, and for contributions from authors and publishers.—We are, etc.,

E. GARRETT ANDERSON, Chairman.
MARY A. MARSHALL, Treasurer.
CHARLOTTE ELLABY, Hon. Librarian.

A SUGGESTED TREATMENT OF TUBERCULOSIS.

SIR,—The Turkish bath in pulmonary phthisis is a remedy of which my experience goes back fifteen or more years. Difficulty in arriving at a scientific conclusion as to its value arises from its having been associated with strict hygienic management somewhat of the usual nature, much fresh air of the best kind obtainable, much daily rest in bed, strict regulation of digestion, use of cod-liver oil, abundance of milk, quinine, etc. Such opinion as I have formed for myself is indicated by the fact that I continue to prescribe Turkish baths in cases of phthisis habitually under treatment in ordinary consulting-room practice.

Results are that in early cases of consolidation at the apex, with but little softening and moderate pyrexia, most patients who diligently carry out treatment go on to recovery. In more advanced phthisis, with extensive softening and ulceration of lung, there is commonly much improvement in regard to pyrexia, expectoration, and flesh, lasting for a longer or shorter time before the sufferer ultimately goes downhill. In some instances improvement has appeared to take a fresh start upon the Turkish bath having been superadded to previous treatment. Without asking your space for details, I think I may claim that these results are not unfavourable; certainly they do not confirm the superstition that the Turkish bath is commonly "weakening." Like other remedies it has, of course, its contraindications and requisite precautions.

The experience of shampooers *in propriâ personâ* has long been with me a matter of inquiry. Some of them have been

from ten to twenty years employed in the Turkish bath. The men commonly grumble at their long hours of work and comparative poverty; nevertheless, with almost one accord, they praise the effect of their occupation upon their health, and their testimony is confirmed by their appearance in a stripped condition. Some give a consistent account of having begun the bath by reason of lung disease, of having recovered and subsequently become shampooers.

That inhalation of superheated air fails to raise materially the temperature of the lung is surely not conclusive as to the Turkish bath. During mere inhalation the cooling action of the skin remains in full operation, but during the Turkish bath the skin is surrounded by air whose temperature is often above that of boiling water. We may note for what it is worth that the air pouring into the bath at a still higher temperature is necessarily aseptic.

Re bacilli *versus* bacilli, is there not a tradition abroad of strumous children with enlarged glands, sore eyelids, etc., becoming well after measles? I had occasion especially to note one such little patient, who, after measles, remained too well to require further treatment. The suggested effect can hardly be due to the mere pyrexia of the eruptive fever, since this is but little greater than the pyrexia of phthisis itself.—I am, etc.,

Stratford Place, W. W. WILBERFORCE SMITH.

NAVAL AND MILITARY MEDICAL SERVICES.

SURGEONS FOR THE ROYAL NAVAL RESERVE.

A SERVICE contemporary lately suggested that, as a civil Army Medical Reserve had been formed, so should the Naval Reserve of Surgeons be enrolled. The Royal Naval Reserve of Officers, as it exists, is formed of about 500 men, classified as lieutenants, midshipmen, and engineers, liable to be called up from civil employment in the event of our becoming involved in a naval war. It is suggested that civil surgeons enrolled in the reserve could be sent afloat during the naval manœuvres to put them on their sea legs. A lack of naval medical officers has always been felt when we have had a big war on hand. In 1855, when the huge Baltic Fleet was formed, it became necessary to draft a number of third year medical students from the schools of London and Edinburgh for service afloat; such volunteers wore the undress uniform and received the pay of assistant surgeons, and were called "dressers," although better known among the sailors as "doctor's mates," a name handed down from the great wars of the beginning of the century. A number of these gentlemen are still living, and look back with much pleasure and interest to that episode in their career. It would be better, however, could the Admiralty provide a duly qualified reserve to meet a similar and almost inevitable emergency in future. But therein probably lies a difficulty. At the time of the formation of the so-called Army Medical Reserve we pointed out its unreal and illusory character, inasmuch as its members were gentlemen almost all deeply involved in civil engagements, and as officers of the militia and volunteers were counted two or three times in connection with their proper duties in the auxiliary forces. A naval medical reserve, if not open to the last of these objections, would, we fear, equally labour under the first. Then service ashore and afloat are two different things. Marching through the country and camping out in good weather is far from unpleasant, and may be made to form an enjoyable holiday for a jaded professional man; but a sea-sick cruise in a dismal ironclad or a half-submerged torpedo boat would be very poor fun for a holiday landsman in the guise of a reservist!

It must be remembered that the 500 naval reserve officers alluded to are already seasoned seafaring men, but there is no such class among medical men in civil life, except a small number who sail in the great ocean steamers, but who even give that up when they marry and settle down. We fear, therefore, that the formation of a Naval Medical Reserve would be a much more difficult task than the formation of an army one has been. We say nothing as to the real value of one or the other when fairly put to the test.

ENTRANCE EXAMINATION, MEDICAL DEPARTMENT OF THE NAVY.

THE following gentlemen, who competed at the examination held on February 2nd and following days at the Examination Hall, Victoria Embankment, for appointment as surgeons in the Royal Navy, have been successful:—

	Marks.		Marks.
T. C. Meikle, M.A., M.B.	2,741	N. S. Richards	2,364
R. W. Senior	2,632	E. A. Penfold, M.B.	2,318
E. E. P. Tindall	2,521	G. McGregor	2,312
E. E. Kershaw	2,521	B. R. Clarke	2,258
J. C. Wood	2,453	E. J. Finch	2,251
A. H. Howell	2,421	J. K. Robinson, M.B.	2,240
H. B. Marriott	2,405	H. Clift	2,163
E. C. Lomas, M.B.	2,400		

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:

	From	To
Brigade-Surgeon G. E. Will	Cyprus	Aldershot.
,, F. B. Scott, C.M.G., M.D.	Canterbury	..
,, F. Johnson, M.B.	Bengal	Canterbury.
Surgeon-Major J. Williamson, M.B.	Colchester	Bengal.
,, J. Riddick	Bengal	Colchester.
,, R. Blood, M.D.	..	Portsmouth.
,, H. Scott, M.B.	..	Aldershot.
,, S. H. Carter, M.B.	Aldershot	Woolwich.
,, W. L. Chester, M.B.	Mullingar	Egypt.
,, H. J. McLaughlin, M.B.	Birmingham	St. Helena.
Surgeon T. Dorman, M.D.	Home District	Nova Scotia.
,, R. D. Donaldson, M.D.	Longford	Bermuda.
,, P. Mulvany	Gosport	Jamaica.
,, B. T. M'Creery, M.B.	Dublin	Bengal.
,, P. M. Carleton, M.D.	Enniskillen	Belfast.
,, D. L. Irvine	Newcastle-on-Tyne	Sunderland.
,, H. J. R. Moberly	Portsmouth	C. of Good Hope
,, A. S. Rose, M.D.	Netley	Bengal.
,, M. W. O'Keeffe, M.D.	Gibraltar	Belfast.
,, E. M. Wilson	Netley	Sierra Leone.
,, S. F. Lougheed, M.D.	Aldershot	Bengal.
,, W. W. Pike	Curragh	Barbadoes.
,, W. B. Thomson	Leeds	..
,, T. R. Morse	Curragh	Dublin.
,, G. Wilson, M.B.	Glasgow	Piershill.
,, J. R. Barefoot	Ashton-u.-Lyne	Nova Scotia
,, H. N. Thompson, M.B.	Limerick	Templemore.
,, A. Stables, M.B.	Clonmel	Bengal.
,, C. W. Johnson, M.B.	Seaforth	Birmingham.
,, R. Caldwell	Colchester	Barbadoes.
,, B. O. W. Norfor, M.B.	Dover	Bengal.
,, S. Hickson, M.B.	Bengal	Dublin.
,, A. O. Fitzgerald	Dublin	Curragh.
,, D. R. Hamilton, M.B.	Chester	Ashton-u-Lyne
,, H. E. Cree	York	Bengal.
,, W. H. Starr	Woolwich	..
,, W. S. Boles, M.B.	..	..
,, G. F. Alexander, M.B.	Edinburgh	..
,, C. A. Stone, M.D.	Netley	..
,, H. J. Waller, M.B.	Aldershot	Madras.
,, S. G. Moores	..	Bengal.
,, L. Way	..	Madras.
Quartermaster J. Hunt	Woolwich Dist.	China.
,, W. McCallum	C. of Good Hope	Woolwich Dist.

THE NAVY.

THE following appointments have been made at the Admiralty:—JAMES MURRAY, M.D., to be Surgeon and Agent at Inverness; WILLIAM BETT, Surgeon to the *Stork*, February 12th; OCTAVIUS S. FISHER, Surgeon to the Plymouth Division, Royal Marines, February 11th; GEORGE A. WATERS, M.D., Surgeon to the *Boomerang*; WALTER J. BEARBLOCK, Surgeon to the *Hearty*; THOMAS AUSTIN, Surgeon to the *Karrakatta*; GEORGE M'SHANE, Surgeon to the *Seagull*; CHARLES C. GODDING, Fleet-Surgeon to the *Vernon*, February 11th; JOHN WILSON, M.A., M.D., to Chatham Hospital, February 14th; JOHN ARCHIBALD MACQUARIE to be Surgeon and Agent at Peel, Isle of Man; HENRY BELL, to be Surgeon and Agent at Bangor, co. Down, Groomsport, and Helen's Bay, February 17th.

MEDICAL STAFF

BRIGADE-SURGEON GEORGE ELMSLY WILL is promoted to be Deputy Surgeon-General, ranking as Colonel, *vice* C. G. Irwin, M.B., placed on retired pay, January 4th. Deputy Surgeon-General Will entered the service as Assistant-Surgeon, January 19th, 1860; became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1875; and Brigade-Surgeon, June 15th, 1885. He served throughout the New Zealand war of 1863-66, including the Waikato and Taranaki campaigns (medal); in the Egyptian war of 1882 with the 1st Battalion of the Cameron Highlanders, and was present at the battle of Tel-el-Kebir (medal with clasp and Khedive's star); and with the Nile Expedition in 1884-85 as Field Medical Inspector on the Lines of Communication (mentioned in despatches, promoted Brigade-Surgeon, clasp).

Surgeon-Major ROBERT COLLINS, M.B., ranking as Lieutenant-Colonel, is promoted to be Brigade-Surgeon, *vice* G. E. Will, January 4th. His previous commissions are dated: Assistant-Surgeon, March 31st, 1865; Surgeon, March 1st, 1873; and Surgeon-Major, March 31st, 1877. He has no war record.

Surgeon WILLIAM PARSONS FELTHAM is promoted to be Surgeon-Major, ranking as Major, January 29th. He was appointed Surgeon August 4th, 1878.

Surgeon-Major K. S. WALLIS, serving in the Bengal command, is posted to the medical charge of the station hospital at Ahmedabad.

Surgeon R. J. COPELAND, serving in the Bengal command, and Surgeon J. GIRVIN, serving in the Bombay command, are ordered to do general duty in the Nagpore district.

Quartermaster GEORGE FOWLES died at Netley on January 11th, aged 43. He was appointed Quartermaster, Medical Staff, May 21st, 1887, with the honorary rank of Lieutenant, after having served in the ranks for 18 years and as a Warrant Officer nearly three years.

INDIAN MEDICAL SERVICE.

SURGEON H. E. BANATVALA, Bengal Establishment, is appointed Medical Officer to the 33rd (Punjab) Regiment of Bengal Infantry, formerly the 33rd (The Allahabad) Regiment of Bengal Infantry.

Surgeon-Major W. M. COURTNEY, Bengal Establishment, is appointed Medical Officer to the 38th (Dogra) Regiment of Bengal Infantry, formerly the 38th (The Agra) Regiment of Bengal Infantry.

Surgeon-Major C. J. MCCARTIE, M.D., is appointed to the medical charge of the 39th (Garwhali) Regiment of Bengal Infantry, formerly the 39th (Allygurh) Regiment of Bengal Infantry.

Surgeon W. VOST, Bengal Establishment, is appointed to the medical charge of the 40th (Baluch) Regiment of Bengal Infantry, formerly the 40th (The Shahjehanpore) Regiment of Bengal Infantry.

Surgeon H. J. DYSON, Bengal Establishment, officiating Deputy Sanitary Commissioner, Punjab, is confirmed in that appointment from October 25th.

Surgeon S. LITTLE, Bengal Establishment, is appointed a Civil Surgeon of the 2nd Class from October 25th.

Surgeon G. C. HALL, Madras Establishment, is appointed to act as District Surgeon and Superintendent of the Gaol at Cuddalore, during the absence of Surgeon-Major A. H. Leapingwell on furlough.

Surgeon-Major M. ROBINSON, Madras Establishment, is permitted to return to duty from furlough granted June 18th, 1889.

Surgeon-Major F. A. SMYTH, Bengal Establishment, is appointed to the medical charge of the 2nd Battalion 3rd Goorkha Regiment.

Surgeon P. D. PANK, Bengal Establishment, Civil Surgeon of Bikanir, is appointed to officiate as Residency Surgeon at Jeypore, from the date of assuming charge and during the absence on furlough of Surgeon-Major T. H. Hendley, C.I.E.

Surgeon-Major T. FERENCH-MULLEN, M.D., Bengal Establishment, Medical Officer of the Meywar Bheel Corps, is appointed to officiate as Civil Surgeon of Bikanir, from the date of assuming charge, *vice* Surgeon P. D. Pank.

Surgeon-Major P. N. MOOKERJEE, Madras Establishment, is appointed to the medical charge of the 32nd (Burma) Regiment of Madras Infantry.

Surgeon A. J. HEATH, Bombay Establishment, is posted to general duty in the Mhow District.

The promotion of Surgeon G. A. CONES, of the Bengal Establishment, to be Surgeon-Major, and which was announced some time since in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

The Queen has also approved of the restoration of Surgeon-Major D. J. MCCARTHY, M.D., of the Madras Establishment, from the half-pay list to the effective list. Dr. McCarthy was transferred to half-pay on April 5th last year.

Surgeon-Major JOHN WILSON JOHNSTON, M.D., of the Bengal Establishment, has retired from the service, which he entered as Assistant-Surgeon, October 1st, 1860; becoming Surgeon, October 1st, 1872; and Surgeon-Major, July 1st, 1873. He served with the Jowaki Afreedee Expedition in 1877-78 (medal with clasp); in the Afghan war of 1878-80, being present at the occupation of Candahar and Khelat-i-Ghilzie, and in the actions at Shahjui, Ahmed Khel, and Urzoo, where he was wounded (medal with clasp); and with the Burmese Expedition in 1885 (clasp).

THE VOLUNTEERS.

THE following announcement is substituted for that which appeared in the *London Gazette* of January 6th last: Surgeon S. DAVIES, M.D., from the Volunteer Medical Staff Corps (Woolwich Division), is appointed Surgeon to the 3rd Kent (Royal Arsenal) Artillery, January 7th. [The announcement referred to was that Surgeon Davies was appointed Acting-Surgeon to the corps specified.]

Acting-Surgeon W. J. SHAW, M.B., 1st Lanarkshire Artillery, has resigned his commission, which was dated March 2nd, 1889.

Acting-Surgeon W. GOWANS, of the 3rd Durham Artillery (Western Division Royal Artillery), is appointed Captain to the same corps, February 11th. Captain Gowans joined the corps as Acting-Surgeon, June 7th, 1881.

Acting-Surgeon T. LYNDON, M.D., 4th Volunteer Battalion Queen's Royal West Surrey Regiment (late the 8th Surrey), is promoted to be Surgeon, February 14th.

Acting-Surgeon E. G. YOUNGER, M.D., 3rd Volunteer Battalion Royal Fusiliers (late the 11th Middlesex), is also promoted to be Surgeon, February 14th.

Acting-Surgeon J. D. GRANT, M.D., 24th Middlesex, is likewise promoted to be Surgeon from February 14th.

Mr. ALEXANDER STEVENSON GREENWAY, M.D., is appointed Acting-Surgeon (Supernumerary) to the Woolwich Division of the Volunteer Medical Staff Corps, February 14th.

Surgeon and Surgeon-Major F. F. LEE, M.B., 1st Wiltshire Rifles, is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the Western Counties Brigade, Infantry Volunteers, February 18th.

PROMOTION IN THE MEDICAL STAFF.

M.S. writes: The question of the stagnation in promotion is becoming serious. In the last *Gazette* we have an officer of thirty-six years' full pay service placed on the retired list who has only attained the rank of deputy surgeon-general with the so-called army rank of colonel. Can any other branch of the service show such a case? The senior major-general in the January *Army List* has but thirty-six years' service, the junior lieutenant-general but thirty-seven years' service. Whilst ordinary promotion is so slow, special promotion for service in the field would appear to have practically ceased.

It can hardly be that the present director-general can favour such a system, as, having himself been twice specially promoted, he should be the first to recognise the advantage of a system which prevails in every other branch of the service, and by which alone merit can be rewarded and incompetency meet with its deserts.

EMPLOYMENT OF RETIRED OFFICERS AT FOREIGN STATIONS.

M. S. writes: This has been advocated from time by correspondents, but it must not be lost sight of that, should such a system be permitted, retired officers would naturally select only the healthiest and best stations abroad, and service being optional, they could not be moved from these stations. This means for officers on full pay, service in the most unhealthy and most disagreeable stations for the best years of their lives.

Retired officers have already absorbed many of the best home appointments, thereby increasing the foreign service of their brother officers on full pay. Should they now attempt to monopolise the good stations abroad, they must expect the strongest opposition from the full pay officers.

MEDICO-LEGAL AND MEDICO-ETHICAL.

WE may remind some of our correspondents who urgently ask for immediate replies to their inquiries that the questions submitted frequently involve points not always governed by general principles, and requiring the gravest consideration. It is, therefore, impossible in many cases to give a reply in time for the next issue of the BRITISH MEDICAL JOURNAL.

ARBITRATOR. — The contention raised by B. in the case submitted by "Arbitrator" is to our mind both legally and morally wrong; nor can there, in our opinion, be any reasonable doubt that the "notification fees" in question should be debited to the account of the week in which they were received by A.

MIDWIVES AS *LOCUM TENENTES*.

DELTA writes: If a medical man is late for a confinement through his own fault—say, delay in getting out of bed, taking his breakfast before going, etc.—what proportion of the fee should he give to any woman who may be called in? Is 5s. too much?

*** If, as would seem to be the case, "Delta" deems it well to consult his own comfort and convenience rather than the pressing necessities of his patient, it is, perhaps, but right that he should have to suffer a proportionate loss of the expected fee. So far, however, from the suggested honorarium to the attendant midwife being "too much," many will think that it should be more instead of less.

ACCIDENTAL INSURANCE.

P. H. M. writes: J., a tradesman, duly insured in the Railway Passengers Insurance against Accident of All Kinds, punctured his left eye with a packing needle. The apparently slight wound healed without reaction and he made no claim. Two months afterwards he struck the same eye with a hamper, causing abrasion of the cornea. His medical attendant sent him to me for an opinion, given as follows: "The eye is in a very dangerous state, tension high, and possible risk of sympathetic mischief." No detailed examination was possible from the irritable state of the eye. I saw him again three weeks later, and advised "that no settlement should be come to with the assurance company, as the loss of the eye was possible." I saw him a third time, and found that tension still existed. The sight was very bad, field contracted, but the eye not gone as an organ of vision. I wrote "that glaucoma had supervened, that operation except for pain was not desirable, and that he must still tell the assurance company that I could not give a positive opinion till I could thoroughly and exhaustively test the eye." I did this three months and two weeks after the accident for which he claimed, and pronounced the eye lost from the accident and advised the payment of £500, being the sum allowed for the loss of one eye. They refuse to entertain the claim, as it was not made within three months after the accident.

The outcome of the refusal must be that either the victim of such an accident must claim before the full effects develop, in which case he is open to prosecution for perjury, or the company get out of payment by a quibble which is opposed to equity, or the company can be made to pay their just debt to this unfortunate man. Please give an opinion on the legal aspect of the case, and whether an action entered against the company is likely to be successful.

*** We cannot express any reliable opinion on this case without the policy. If no notice whatever was given to the insurance company within the time limited by the conditions of the policy, and if by the conditions in this respect "time" is stated to be of "the essence of the contract," we are advised that the omission to give due notice would be an answer to any action to recover under the policy. The assured was doubtless well advised not to come to any settlement with the insurance company until the quantum of injury sustained had been duly ascertained; but notice of the accident should have been given to the

company as soon as possible, and certainly within the time limited by the conditions. Was this notice given? If so, we cannot (in the absence of the policy) understand the reason of the company's refusal to pay. The case of Patton *v.* The Employers' Liability Assurance Company (*L. R.*, sc. 93, C. P. D.) affords an illustration of the importance of notice. The policy therein was subject to a condition (*inter alia*) that in the event of any accident to the assured, he or his representatives should give notice thereof in writing to the company within ten days after its occurrence, stating the number of the policy, the nature of the injuries, place where and manner in which they were received, and extent of disablement; and also, within fourteen days after the accident, forward a written report from the assured's medical attendant of the facts of the accident, and nature and extent of the injuries received; and then the condition provided that unless it were complied with as to time and otherwise (time being of the essence of the contract), no person should be entitled to claim under the contract. The Court held that the omission to give notice within the prescribed time (even if death was instantaneously caused by the accident) was an answer to a claim made under the policy.

We mention this case to show the urgent necessity of notice, and in order that the conditions of the policy may be compared.

IS THE COUNTY RESPONSIBLE?

DELTA writes: I was called by a bystander to a drowning case, where I carried out Sylvester's method, &c., unsuccessfully. Sent my bill to the lad's father, who refuses to pay the fee (5s.), and says the county is liable.

*** We are not aware that the county can be made responsible in any case of this kind. The parish is liable when medical aid is rendered to a poor person at the request, or with the sanction, of the relieving officer or overseer. We have very little doubt in the case referred to that the law would imply a contract on the part of the father to pay the fee. If a child is under 14 years of age a parent is punishable by statute for neglecting to provide proper medical treatment for such child. Were it not for the attendant melancholy circumstances, we should feel inclined in these days of attempted repudiation of legal obligations to get the point in this instance determined through the medium of the county court as a monition to others. Should, however, our correspondent be induced to forego his just claim in view of the father's bereavement, he (the parent) should be made clearly to understand what, in our opinion, is his legal responsibility.

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

ELECTORAL BOARDS.—The following have been chosen as electors to the several professorships indicated:—Chemistry, Sir H. E. Roscoe; Anatomy, Professor Liveing; Botany, Dr. Vines; Zoology, Medicine (Downing), Sir G. M. Humphry; Physiology, Pathology, Surgery, Sir G. E. Paget.

LONDON.

INTERMEDIATE EXAMINATION IN MEDICINE.—January, 1891. Pass list. Entire examination.

First Division.—H. G. Felkin, London Hospital; J. R. Hickinbotham, Queen's College, Birmingham; C. Paine, St. Mary's Hospital; F. J. Poynton, St. Mary's Hospital; H. C. Thomson, Middlesex Hospital; H. J. Walton, St. Bartholomew's Hospital.

Second Division.—C. Addison, St. Bartholomew's Hospital; M. Ashley, University College; J. A. Berlyn, Queen's College, Birmingham; R. H. Castellote, University College; R. F. Chance, St. Thomas's Hospital; D. W. Collings, St. Bartholomew's Hospital; H. G. Dain, Queen's College, Birmingham; H. Fox, Glasgow Royal Infirmary and Middlesex Hospital; B. H. Kingsford, St. Thomas's Hospital; R. C. Kirkby, Guy's Hospital; E. G. G. Little, St. George's Hospital; T. D. Manning, Guy's Hospital; Mary Ellen Rye, London School of Medicine for Women; S. R. Schofield, University College; W. S. H. Sequeira, London Hospital; W. Shears, St. Bartholomew's Hospital; G. N. O. Slater, Sheffield and St. Bartholomew's Hospital; K. B. J. Vickers, St. Thomas's Hospital.

Excluding Physiology.

First Division.—F. P. Piper, St. Mary's Hospital; C. M. Rhodes, St. Mary's Hospital; E. Sly, King's College.

Second Division.—E. L. Adams, Guy's Hospital; A. P. Allan, Guy's Hospital; H. K. Birley, Owens College; A. J. Edge, St. Bartholomew's Hospital; P. S. Eves, University College; C. F. Gross, King's College; G. F. Murrell, St. Bartholomew's Hospital.

Physiology only.

First Division.—L. A. Bidwell, St. Thomas's Hospital; A. G. Jones, Middlesex Hospital.

Second Division.—R. T. Bakewell, University College; L. W. Bathurst, St. Bartholomew's Hospital; A. H. Card, Guy's Hospital; W. H. Jewell, Guy's Hospital; G. Martyn, King's College; A. H. Minton, King's College; A. Paling, Middlesex Hospital; W. C. C. Park, Guy's Hospital; R. Smith, Owens College.

ROYAL COLLEGE OF SURGEONS.

AN ordinary Council was held at the College on February 12th, when the minutes of the last quarterly Council were read and confirmed.

On the recommendation of the Museum Committee, it was resolved that an honorarium be offered to Mr. B. T. Lowne, F.R.C.S., for revising the Teratological Catalogue of the Museum.

A report was received from the Laboratories Committee, in which it was stated that sixteen gentlemen were at present working, or had received permission to work, in the laboratories.

A letter was read from Mr. Arthur Milman, Registrar of the University of London, forwarding, by direction of the Senate, copies of the revised scheme for the reconstitution of the University, upon the basis of which the Senate propose to invite Convocation to concur in applying for a new charter.

It was proposed by Mr. Hill: "That members of the Council who desire to nominate Members of the College of twenty years' standing for election to the Fellowship by ballot in April shall submit such names at the meeting of the Council in December in each year, and that such names be circulated among the members of the Council before the meeting in January." This motion was seconded by Mr. Macnamara, and carried.

Opinion of Counsel as to Meetings of Fellows.

The following opinion of Council was submitted:

"We are of opinion that no legal objection exists which prevents the Council of the College granting the use of the College premises to either the Fellows or the Members for a meeting for purely consultative purposes, and that this course is equally open to the Council whether such meeting be summoned by the President or Council, or merely allowed to take place there with their permission or authority. It must, however, be distinctly understood that such meeting would in no sense be of any official or corporate character or efficacy, and nothing resolved or occurring thereat would in any way alter the rights of the College, or any one of its Members, whether Fellows or Members only. Any proposals to affect the interests of the corporation or any of its Members could only be discussed so as to have effect at a regularly assembled meeting of the whole corporate body.

"By-law XVII is, in our opinion, a purely prohibitive provision, designed to meet certain specified cases, and no inference can legitimately be drawn therefrom as to any inherent or implied power to summon or countenance any official or effectual meeting of Fellows only, or of Members as distinguished from Fellows. Nor do we find anything in the charters giving or implying such power.

"We must point out that if any such meeting of Fellows was either summoned or permitted on the College premises, it would not be consistent, or, in our opinion, reasonable to refuse similar facilities for a meeting of Members, either with or without the presence of the Fellows, who are, by the constitution of the College, necessarily Members, were such a meeting requested by a substantial number of the Members.

"The summoning or permitting such a meeting of Members would not, in our opinion, constitute any admission of any right of the Members to hold such a meeting on the College premises without summons or permission; but we think that to permit a meeting of any section of the College, except in the cases expressly provided by the charter and by-laws, would be unwise in view of the pending litigation before Mr. Justice Stirling. The refusal to call or allow such a meeting of Members, supposing one of the Fellows alone had previously been held, would be ground for comment and prejudice in the course of that litigation.

"It is for the Council to consider whether the end they presumably have in view—namely, to take the sense of the body of Fellows—cannot as well be attained by some less formal method, either by private meeting elsewhere than on the College premises, or by circular, neither of which courses seems to us open to the same objections as the one suggested.

"RICHARD E. WEBSTER,
"Temple." "JOHN R. PAGET."

The following gentlemen having passed the necessary ex-

aminations, and having conformed to the by-laws and regulations, were admitted Members of the College:

Addison, Wm. Bragg, L.R.C.P.Lond., Caius House, Battersea Sq., W.
Adler, M., L.R.C.P.Lond., 6, St. Stephen's Ter., Albert Sq., Clapham.
André, James E. F., L.R.C.P.Lond., Hurst Road, Horsham, Sussex.
Austin, Reginald F. E., L.R.C.P.Lond., General Hospital, Bristol.
Barrett, A. K., L.R.C.P.Lond., 24, Addison Terrace, Notting Hill, W.
Blakeman, C. J., L.R.C.P.Lond., 8, Chatsworth Villas, Stockwell Park.
Bloomer, Frederick William, L.S.A., Russell Street, Wednesbury.
Blucke, H. F. S., L.R.C.P.Lond., 3, Glo'ster Road, Regent's Park, N.W.
Bowker, C. S., L.R.C.P.Lond., 42, Albert Street, Regent's Park, N.W.
Burt, William Charles, L.R.C.P.Lond., "Courtfield," Enfield.
Chambers, William F., L.R.C.P.Lond., 75, Ladbroke Grove Road, W.
Chapman, G. W., L.R.C.P.Lond., 10, Richmond Terrace, Clapham, W.
Chater, Arthur Reginald, L.R.C.P.Lond., 72, Kensington Park Rd., W.
Clark, W. A., L.R.C.P.Lond., 130, St. Paul's Rd., Camden Square, N.W.
Clarke, Edwd. A., L.S.A., 122, Astley Rd, Dukinfield, near Manchester.
Clift, Hugh, L.R.C.P.Lond., 7, Tresillian Crescent, St. John's.
Coombe, T. S., L.R.C.P.Lond., 53, St. Quintin Avenue, N. Kensington.
Coventon, Charles Arthur, L.R.C.P.Lond., Bowes Park, N.
Cowell, Alfred R., L.R.C.P.Lond., Nevern Ho., Crown Hill, Harlesden.
Crosskey, Roger, L.R.C.P.Lond., 28, Bromley Grove, Shortlands, Kent.
Curtis, Henry Jones, L.R.C.P.Lond., 171, Stanhope Street, N.W.
Daniel, William Patrick Taylour, L.R.C.P.Lond., 15, St. Charles Sq.
Dodds, Matthew, L.R.C.P.Lond., Chase Side, Southgate.
Dow, John Hardman, L.R.C.P.Lond., Green Bank, S. Shore, Blackpool.
Drake, Ernest Charles, L.R.C.P.Lond., 204, Brixton Hill, S.W.
Dryland, Leslie Winter, L.R.C.P., Kettering.
Duer, Sidengham Unwin, L.R.C.P.Lond., 22, Harewood Square, W.
Dufty, Patrick Joseph, L.R.C.P.Lond., The Meads, New Fillibrook Road, Leytonstone.
Evans, Percy, L.R.C.P.Lond., 2, Foxton Villas, Richmond, Surrey.
Farquharson, Wm. G. Robertson, L.R.C.P.Lond., 12, St. Mary's Sq., W.
Field, Frederick Arthur, L.R.C.P.Lond., 23, Woburn Place, W.C.
Forde, Thomas Arthur M., L.R.C.P.Lond., 49, Park Rd., West Dulwich
Freeland, Reginald Stilwell, L.R.C.P.Lond., 18, Buckland Crescent, W.
Gamgee, Leonard Parker, L.R.C.P.Lond., 6, Stirling Road, Edgbaston.
Godfrey, Clarence G., L.R.C.P.Edin., 3, Houghton Place, Ampthill Sq.
Gordon, Harry, L.R.C.P.Lond., 244, Wellington Road, Stockport.
Grabham, Michael, L.R.C.P.Lond., 8, Great College St., Westminster.
Graham, John Henry Porteus, L.R.C.P.Lond., Wallasey, Cheshire.
Green, Charles Albert, L.R.C.P.Lond., Didsbury College, nr. Manchstr.
Green, Percy A., L.R.C.P.Lond., St. Simon's Vicarage, Morpeth St., E.
Greenwood, Richd. E., L.R.C.P.Lond., 1, Lansdown Pl., Brunswick Sq.
Griffiths, Gilbert H., L.R.C.P.Lond., 3, Abercromby Terrace, Liverpool.
Grimshaw, John, L.R.C.P.Lond., 50, Cranmer Road, Forest Gate.
Gyton, Walter George, L.R.C.P.Lond., 30, Sankey Street, Warrington.
Harwarden, Samuel, L.R.C.P.Lond., 88, Brood Green, Croydon.
Haydon, Thomas Horatio, L.R.C.P.Lond., 50, Mount Ararat, Richmond.
Hemming, Charles Harold, L.R.C.P.Lond., 117, Old Street, E.C.
Hewitson, John G., L.R.C.P.Lond., 260, Westgate Rd., Newcastle-on-Tyne.
Hird, Frederick Robert, L.R.C.P.Lond., Walton, near Wakefield.
Howard, Arthur Walters, L.R.C.P.Lond., 33, Bolsover Street, W.
Hutchinson, Cyril G., L.R.C.P.Irel., 349, Moseley Road, Birmingham.
Kellock, Thomas Herbert, L.R.C.P.Lond., 51, Lambeth Palace Rd., S.E.
Kidd, Archibald, L.R.C.P.Lond., Farncombe, Godalming, Surrey.
Langston, Thos. A. O., L.R.C.P.Lond., 29, Broadway, Westminster, S.W.
Levick, Harry Driffield, L.R.C.P.Lond., 51, Lambeth Palace Road, S.E.
Lewis, Frederick, L.R.C.P.Lond., Henfield, Sussex.
Lovell, Charles Petre, L.R.C.P.Lond., 68, Gloucester Gardens, W.
Low, Vincent Warren, L.R.C.P.Lond., Thames View, Staines.
Lukmani, Budrudin A., L.R.C.P.Lond., 54, Bonner Road, Victoria Park.
Mactavish, James William, L.R.C.P.Lond., 201, Victoria Street, S.W.
Manwaring, Edward E., L.R.C.P.Lond., 6, Albany Vils., West Brighton.
Marder, Nicholas, L.R.C.P.Lond., 104, Guilford Street, W.C.
Masterman, Ernest William G., L.R.C.P.Lond., 23, Percy Circus, W.C.
Mayor, John B., L.R.C.P.Lond., The Beeches, Lavenshulme, Manchstr.
Mills, Yarnold Hubert, L.R.C.P.Lond., 153, Wilberforce Road, N.
Morris, Edwin Haigh Grant, L.R.C.P.Lond., 47, Jamaica Road, S.E.
Morris, James John Nixon, L.R.C.P.Lond., 30, Munster Square, N.W.
Mulvany, Thomas Edward, L.R.C.P.Lond., 381, Holloway Road, N.
Norgate, Robert Henry, L.R.C.P.Lond., 13, Cotham Road, Bristol.
Nynlasy, Arthur John, L.R.C.P.Lond., 3, Houghton Pl., Hampstead Rd.
Ord-Mackenzie, Stuart Allan, L.R.C.P.Lond., 37, Belsize Park Gardens.
Penny, Herbert Lloyd, L.R.C.P.Lond., College Green, Gloucester.
Pernet, George, L.R.C.P.Lond., 54, Great Ormond Street, W.C.
Perrine, Edmund K., M.D. Philadelphia, 31, Keppel St., Russell Sq.
Powell, Thomas Morgan Jones, L.R.C.P.Lond., The Elms, Swansea.
Pritchard, Eric Law, L.R.C.P.Lond., 12, Alwyne Place, Canonbury.
Quinby, Edward Melville, L.R.C.P.Lond., 11, Belvidere Rd., Liverpool.
Reeks, Henry, L.R.C.P.Lond., 62, Clova Road, Forest Gate.
Reynolds, A. E., L.R.C.P.Lond., Highcroft, Shepherd's Hill, Highgate.
Rogers, Leonard, L.R.C.P.Lond., Hartley, Plymouth.
Rogers-Tillstone, John M., L.R.C.P.Lond., 26, Myddleton Square, E.C.
Ronaldson, Robert Miller, L.R.C.P.Lond., 34, Bernard Street, W.C.
Round, John Cornwell, L.R.C.P.Lond., Sydenham Hill, S.E.
Rows, Richard Gundry, L.R.C.P.Lond., Helston, Cornwall.
Rygate, Henry Bertram, L.R.C.P.Lond., New South Wales.
Samways, Daniel West, L.R.C.P.Lond., The College, Guy's Hospital.
Senior, Arthur W., L.R.C.P.Lond., Chorlton-cum-Hadly, Manchester.
Senior, Robert Wilks, L.R.C.P.Lond., 2, Abbeville Rd., South Balham.
Shirtliff, Edward Dickinson, L.R.C.P.Lond., Holybrook Ho., Reading.
Smith, Henry, L.R.C.P.Lond., Rose Hill, Basingstoke.
Soulby, Charles Ernest, L.R.C.P.Lond., Middlesex Hospital, W.
Stalker, James, L.R.C.P.Lond., Elders Street, Scarborough.
Stephens, Reginald, L.R.C.P.Lond., 23, Percy Circus, W.C.
Sturdee, Alfred William, L.R.C.P.Lond., 19, Highbury Place, N.
Sturge, William Howard, L.R.C.P.Lond., St. Luke's Hospital, E.C.
Summers, Thomas Collyer, L.R.C.P.Lond., 78, Mile End Road, E.
Thompson, Arthur H., L.R.C.P.Lond., 7, Mount Vernon, Hampstead.
Twyford, Walter, L.R.C.P.Lond., 49, Nelson Street, Manchester.
Tyler, Edwin Joseph C., L.R.C.P.Lond., St. Thomas's Hospital, S.E.
Waring, John Alfred, L.R.C.P.Lond., Bridge House, Harrow.
Weldon, Stawell, L.R.C.P.Lond., 159, Victoria Street, S.W.
Whitfield, Arthur, L.R.C.P.Lond., Eskdale, The Park, Wimbledon.
Wightman, John Prest, L.R.C.P.Lond., 15, Station Road, Finchley.
Wilks, Joseph Henry, L.R.C.P.Lond., 40, Westernholme Rd., Sheffield.
Willey, Thomas, L.R.C.P.Lond., 13, Upper Hornsey Rise, N.
Williams, David John, L.R.C.P.Lond., 30, Rutland St., Hampstead Rd.
Winslow, Walter, L.R.C.P.Lond., The College, Guy's Hospital, S.E.
Wyman, Cuthbert, L.R.C.P.Lond., Red Brae, Putney Hill.
Young, John, L.R.C.P.Lond., 6, Dean Street, Borough.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH: SURGICAL ESSAY PRIZE.—The surgical essay prize of thirty-five guineas has been awarded by the College to Mr. Harold Jalland Styles, M.B., F.R.C.S.E., 5, Castle Terrace, Edinburgh, for his essay on "Contributions to the Development, Anatomy, Pathology, and Surgery of the Breast." The prize was open to all Licentiates and Fellows of the College, except Fellows who were members of the President's Council, and candidates had the selection of any surgical subject.

OBITUARY.

JOSEPH PARRISH, M.D.

DR. JOSEPH PARRISH, who died recently at Burlington, New Jersey, was of English descent. He was the son of a well-known Quaker physician, was born at Philadelphia on November 11th, 1818, and practised successively in his native city and at Burlington. For a time he was a member of the American Sanitary Commission; and, on the day after General R. E. Lee's surrender, he in person established a branch at Richmond, furnishing hospital stores for the opposing armies. He afterwards visited the chief cities of the South, inspecting the schools of the Freedmen's Commission. In 1866, in Pennsylvania, he established a Citizens' Association for, among other objects, the reclamation of inebriates; and in 1867 opened, as President, the Sanitarium of that State. In 1870 Dr. Parrish founded the American Society for the Cure of Inebriates, of which he was President for many years prior to his decease. In 1872 he gave valuable evidence on the curability of inebriety before Dr. Donald Dalrymple's Committee of the House of Commons.

Dr. Parrish paid many visits to England, attended the Dublin meeting of the British Medical Association, and was entertained at a reception by the President and Council of the English Society for the Study of Inebriety. He was the author of several works, among which was *Alcoholic Inebriety*, and edited various medical journals in the United States. Since 1876 he had devoted himself mainly to the treatment of inebriates under his own roof, which work is carried on by his brother and nephew.

Dr. Parrish's death will be mourned by a wide circle of friends on both sides of the Atlantic.

C. R. CROSSLEY, M.R.C.S., L.S.A., J.P.

MR. C. R. CROSSLEY, of Leicester, whose death occurred on January 9th, at the age of 67, was born at Ashby-de-la-Zouch in 1824. He commenced the study of medicine as an articled pupil under the late Mr. Kirkland, afterwards completing his professional education at the Derby Infirmary and Guy's Hospital. In 1851 he settled at Leicester, and in 1861 he was elected surgeon to the infirmary. Having held that position for twenty-five years, he retired in 1886. He was also a certifying surgeon under the Factory Acts for many years. He took a keen interest in the public affairs of Leicester, the Municipal Council of which he entered in 1863. His services to the Conservative party were recognised in 1867 by the public presentation of a handsome épergne and service of plate. In 1867 Mr. Crossley was appointed a justice of the peace for the borough, and later his name was added to the commission of the peace for the county. In 1876 he was elected to fill the civic chair.

Mr. Crossley for years had a very large practice, and was very popular with his patients. His death has caused general regret among all classes of the population.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENTERIC FEVER IN THE TEES VALLEY.

In an interim report which has just been issued by the Medical Department of the Local Government Board, Dr. Barry gives a brief history of the epidemic of enteric fever in the valley of the River Tees. It supplies one more example of the great danger which attaches to the use, for drinking purposes, of river water taken at a considerable distance from the river's source and after it has had many opportunities of being excrementally polluted. As Dr. Barry incidentally remarks, it is "doubtful whether a water pumped from a river at a point upwards of 40 miles from its source is, anywhere in this country, a desirable supply for drinking purposes." At the present time this broad view of the water supply question has a special interest for Londoners.

As regards the Tees Valley outbreak, it was observed in September last that enteric fever was exceptionally prevalent in Middlesbrough, North Ormesby, and Stockton-on-Tees, and that there seemed to be a similar prevalence in other neighbouring towns.

Dr. Barry found it necessary to include in his inquiry thirty-two sanitary districts situate to the north and south of the River Tees, in the counties of Durham and York respectively, but in several of these districts there were no fever cases. Without giving the statistics in detail, it may be stated that, during the four weeks ended October 4th, upwards of 570 cases of enteric fever were reported to have occurred throughout the whole area of inquiry in 550 out of the total 97,000 houses included in that area—Middlesbrough, Stockton, Normanby, Eston, Ormesby, and Darlington being the most severely attacked. Milk, sewerage, and filth removal could all be excluded as channels of infection.

Of the 97,000 houses included in the area of inquiry, 41,000 obtained their water supply from the River Tees. The water is pumped direct from the river into subsidence tanks, and is afterwards filtered through sand and gravel before being delivered to consumers; 56,000 houses were supplied from other sources. During the four weeks ended October 4th some 500, or 12 per 1,000, of the houses supplied with Tees water were invaded by enteric fever, whereas in the 56,000 other houses less than 50, or about 1 per 1,000, were attacked.

Dr. Barry does not seem to have been able to trace any special source of specific infection of the river, but he shows the innumerable channels through which such infection could have reached the river. Above the intakes of the two waterworks the river has a drainage area of upwards of 300 square miles, upon which there is a scattered population of some 15,000 persons in a large number of villages and detached farmhouses. Within this area the Tees receives, either directly or indirectly, the drainage of some fifteen to twenty villages, as well as that of the town of Barnard Castle. This latter town—which contains 1,000 houses, has an estimated population of from 5,000 to 6,000 persons, and is in constant communication with the surrounding districts, being a market town and a watering-place—discharges its sewage directly into the river. Low Coniscliffe, High Coniscliffe, Gainford, Staindrop, Middleton, High and Low Startforth, all discharge either slop drainage or sewage or filth of other kinds into the river or on to its foreshores. At Barnard Castle the foreshore during ordinary states of the river varies from 10 to 40 feet in width, and is only covered when the river is in flood. "In the intervals between floods, excrement, ashes, slops, and other filth accumulate in very considerable quantity; in fact, the whole of the foreshore becomes covered with a mass of stinking abominations which have to be seen and smelt to be appreciated." In support of his own view Dr. Barry quotes reports of Professor Hare and Mr. Stock, the public analyst for the county. The latter observes that "the way in which the Tees water is seasoned at Barnard Castle for use by the inhabitants at Darlington is absolutely scandalous." It is in times of flood that this filth is, for the most part, swept into the river, and on August 13th and 23rd last the river was in "heavy flood."

From a consideration of all the circumstances of the case, Dr. Barry has no hesitation in attributing the epidemic in question to the water pumped from the river Tees during the fortnight ended August 23rd last, at a time, that is to say, when the river was in flood, and when it must have contained abundance of excremental matter. He also considers that so long as water for drinking purposes is drawn from the Tees, the condition of that river remaining as at present, so long will there be danger of the occurrence of similar epidemics in the districts supplied with Tees water.

It is sound advice that he gives to those interested, namely, that until some very decided improvement is effected either in the river conditions or in the source of the water supply, it will be advisable for persons residing in the towns recently infected by enteric fever to boil all water prior to its use for drinking purposes.

MILK ADULTERATION AND MILK RETAILERS.

The Sale of Food and Drugs Act, 1875, by Section 25, provides a protection for the retailer of adulterated food who *bonâ fide* sells it under the belief that it is genuine. It enacts that if the defendant in any prosecution under the Act satisfies the Court that he purchased the article as genuine, and with a written warranty to that effect—that he had no reason at the time when he sold it to believe that it was otherwise, and that he sold it in the same state as when he purchased it, those facts shall save him from conviction. The Act also, by Section 27, imposes substantial penalties on persons who give false warranties. These enactments are only what is required by ordinary fairness, in order to insure that those who are responsible for selling adulterated food shall be convicted, and to protect an innocent dealer who merely sells spurious articles supplied to him by some other person, who really is guilty of cheating the public. The effect of the section protecting the person who has a warranty of the genuineness of the articles he retails was carefully considered by the Queen's Bench Division in the year 1883. A shopkeeper had contracted in writing for a daily supply of pure and new milk. Some of the milk supplied under this contract was retailed by him and was found to be adulterated, and the magistrates were satisfied that he sold it innocently without any knowledge that it was otherwise than pure. They held, however, that the contract was not a warranty such as to protect him from the consequence of selling milk which was, in fact, adulterated, and so convicted him. He appealed, but the Court affirmed the conviction. Lord Coleridge, in giving judgment, said that Parliament meant that a person seeking to protect himself against the penalty, and wishing to make himself perfectly safe in respect of the sale of a specific article, must show that he had a proper specific warranty in writing in respect of that article from his vendor. He held that the antecedent contract was not such a warranty, and consequently that the retailer was properly convicted.

A very similar case has recently come before Mr. Bushby the police magistrate, in which a dairyman had a contract with a farmer for the supply of "pure milk with all its cream." The milk supplied was adulterated. The dairyman had taken the precaution to give the farmer a quantity of labels having printed on them the name of the consignor and the words "pure milk," as well as the name and address of the consignee. One of these labels was attached to each can of milk, and he relied on it as being together with the contract or written warranty so as to bring him within the protection of the Act. Mr. Bushby upheld this contention, and dismissed the summons. The point is no doubt one of great importance to the milk trade and the public, and we are glad to know that it is to come before the High Court. As the magistrate must have found the defendant to be personally free from blame, one would be glad that he should escape conviction; but it remains doubtful whether the present farmer had any intention of warranting his milk to be pure when he tied the printed label on to the can. Whether the Court will hold such a label to be the written warranty of the specific article contained in the can which the statute requires seems very doubtful, and we shall look with curiosity for the report of the case when it comes on before the judges of the High Court.

Another case, tried recently at the Walsall County Court, shows that the retailer, even if liable to conviction because

he has failed to provide himself with a proper written warranty of the genuineness of the article he sells, still has his remedy against the person who has supplied the article to him. The dairyman there, too, had entered into a contract with a farmer for the supply of milk, guaranteed to be pure. The milk was adulterated, and the dairyman having no written guarantee with his can, was himself convicted and fined £2 and costs. He then brought an action against the farmer for consequential damages, and recovered a verdict for £20, which the judge aided as far as he could by allowing costs on the higher scale. Such a verdict will be a substantial solatium for having been fined, and will go far to reinstate the plaintiff's reputation as an honest tradesman, which had probably been somewhat damaged by the fact of his being convicted of selling adulterated milk. It will also be effective as a deterrent to the farmer, who will no doubt find that the expenses of the trial consume the profit made by adulterating his milk, unless he has carried on such a practice with impunity for a considerable period.

These cases are instructive as showing both that the adulteration Acts are enforced in some parts of the country, and also that it is possible to make the persons really in fault responsible for the consequences of their misdeeds.

INFECTIOUS DISEASE NOTIFICATION ACT.

We have received the following letter with reference to the case briefly reported in the British Medical Journal of February 14th, 1891, p. 386:

Sir,—In consequence of the prosecution of Dr. Gilchrist by the Bolton Rural Sanitary Authority for not notifying a case of typhoid fever forthwith, a meeting of the medical profession was held on the 13th instant. It was the general opinion of those present that the medical officer of health, in making a clinical examination of the patient, went beyond his instructions, and violated professional courtesy. It was deemed by all that it was a great hardship for the doctor that the present state of the law prevented him from entering the witness box. With a view to remedy this evil, a unanimous resolution was passed to the following effect: "That it be a recommendation from this meeting to the Parliamentary Bills Committee of the Association to take such steps as they may deem needful to secure the insertion in the Infectious Diseases Notification Act of a special clause empowering the medical man to give evidence in his own defence."—I am, etc., Norman McLiesh.

ANNUAL MEDICAL VISITS TO PAUPER LUNATIC ASYLUMS.

O. B. writes: I am appointed by the guardians to accompany them in their official visit, as their medical officer, once a year to the lunatics in two asylums, one being sixteen miles off, the other thirty-five; second-class return fare is allowed. It takes the whole morning to go to the nearer asylum and back, and the whole day to the further one. What would be a fair charge to make in each case?

*** We think that one guinea, in addition to the railway fare allowed, for the shorter journey, and two or three guineas for the longer journey, would be a fair charge.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, which have an estimated population of 10,010,426 persons, 6,321 births and 3,818 deaths were registered during the week ending Saturday, February 14th. The annual rate of mortality in these towns, which had declined from 27.8 to 19.8 per 1,000 in the preceding six weeks, was 19.9 during the week under notice. The rates in the several towns ranged from 14.2 in Leicester, 15.5 in Portsmouth, 16.1 in Wolverhampton, and 16.3 in Halifax to 25.3 in Cardiff and in Blackburn, 25.8 in Derby, and 28.5 in Preston. In the twenty-seven provincial towns the mean death-rate was 20.3 per 1,000, and exceeded by 0.9 the rate recorded in London, which was 19.4 per 1,000. The 3,818 deaths registered during the week under notice in the twenty-eight towns included 340 which were referred to the principal zymotic diseases, against numbers declining from 404 to 332 in the preceding three weeks; of these, 93 resulted from whooping-cough, 77 from measles, 52 from scarlet fever, 50 from diphtheria, 36 from diarrhœa, 32 from "fever" (principally enteric), and not one from small-pox. These 340 deaths were equal to an annual rate of 1.8 per 1,000; in London the zymotic rate was 1.4, while it averaged 2.1 per 1,000 in the twenty-seven provincial towns, and ranged from 0.7 in Portsmouth, 0.9 in Cardiff, and 1.0 in Derby and in Oldham to 3.3 in Plymouth and in Blackburn, 3.4 in Preston, 3.5 in Salford, and 3.6 in Huddersfield. Measles showed the highest proportional fatality in Brighton, Halifax, Huddersfield, Blackburn, and Bristol; scarlet fever in Plymouth, Preston, and Bradford; and whooping-cough in Salford, Plymouth, Birkenhead, and Huddersfield. The mortality from "fever" showed no marked excess in any of the large towns. Of the 50 deaths from diphtheria recorded during the week in the twenty-eight towns, 29 occurred in London, 4 in Sheffield, 3 in Manchester, 3 in Salford, 2 in Norwich, and 2 in Birkenhead. No death from small-pox was registered during the week, either in London or in any of the provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, February 14th. These hospitals contained 1,250 scarlet fever patients on the same date, against numbers steadily declining from 2,024 to 1,288 at the end of the preceding fourteen weeks: 90 new cases were admitted during the week, against 99, 93, and 92 in the previous three weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.6 per 1,000, and was below the average.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 784 births and 574 deaths were registered during the week ending Saturday, February 7th. The annual rate of mortality in these towns, which had been 24.9 and 26.4 per 1,000 in the preceding two weeks, declined again to 21.9 during the week under notice, but was 2.1 per 1,000 above the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Greenock and Leith, and the highest in Glasgow and Paisley. The 574 deaths registered in these towns during the week under notice included 57 which were referred to the principal zymotic diseases, equal to an annual rate of 2.2 per 1,000, which exceeded by 0.5 the mean zymotic rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow, Dundee, and Perth. The 259 deaths registered in Glasgow included 9 which were referred to whooping-cough, 6 to scarlet fever, and 4 to diphtheria. Three fatal cases of diphtheria were recorded in Dundee, and 2 in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 6.2 per 1,000, against 5.0 in London.

During the week ending Saturday, February 14th, 872 births and 561 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 26.4 and 21.9 per 1,000 in the preceding two weeks, further declined to 21.4 during the week under notice, but exceeded by 1.5 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Greenock and Perth, and the highest in Edinburgh and Glasgow. The 561 deaths registered in these towns during the week under notice included 50 which were referred to the principal zymotic diseases, equal to an annual rate of 1.9 per 1,000, which slightly exceeded the mean zymotic rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Edinburgh, Glasgow, and Paisley. The 272 deaths registered in Glasgow included 7 which were referred to diarrhœa, 5 to whooping-cough, 4 to measles, 3 to scarlet fever, and 3 to diphtheria. Three fatal cases of scarlet fever were recorded in Edinburgh, and 6 of measles in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.3 per 1,000, against 5.6 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, January 31st, the deaths registered in the sixteen principal town districts of Ireland were equal to an annual rate of 30.6 per 1,000. The lowest rates were recorded in Armagh and Lisburn, and the highest in Lurgan and Kilkenny. The death-rate from the principal zymotic diseases averaged 1.4 per 1,000. The 221 deaths in Dublin were equal to an annual rate of 32.6 per 1,000 (against 37.1 and 38.4 in the preceding two weeks), the rate for the same period being 22.1 in London and 21.6 in Edinburgh. The 221 deaths in Dublin included 6 which were referred to the principal zymotic diseases (equal to an annual rate of 0.9 per 1,000), of which 4 resulted from typhoid fever, 1 from measles, and 1 from diphtheria.

In the sixteen principal town-districts of Ireland, the deaths registered during the week ending Saturday, February 7th, were equal to an annual rate of 26.0 per 1,000. The lowest rates were recorded in Wexford and Cork, and the highest in Drogheda and Lisburn. The death-rate from the principal zymotic diseases averaged 1.9 per 1,000. The 180 deaths in Dublin were equal to an annual rate of 26.6 per 1,000 (against 38.4 and 32.6 in the preceding two weeks), the rate for the same period being 19.6 in London and 19.9 in Edinburgh. The 180 deaths in Dublin included 7 which were referred to the principal zymotic diseases (equal to an annual rate of 1.0 per 1,000), of which 3 resulted from different forms of "fever," 2 from whooping-cough, 1 from scarlet fever, and 1 from diphtheria.

INDIA AND THE COLONIES.

INDIA.

Leprosy in Bengal.—In the Triennial Report of the Working of the Charitable Dispensaries under the Government of Bengal for the years 1887, 1888, and 1889, recently published in Calcutta, it is stated that out of 255 dispensaries scattered throughout the province there were in 1889 only 57 at which no case of leprosy had been under treatment. The report adds that, judging from a comparison of the census returns of 1872 with those of 1881, there is reason to fear that the disease is increasing in many localities, for out of 40 districts in Bengal, the returns of the census show that it had increased in 35 while it had diminished in 5 only in those ten years. While recognising that the establishment of leper retreats would do much good, it is pointed out that the expense would be enormous, because the census of 1881 shows that there were in British India alone 131,968 lepers. In the Madras Presidency the official report shows that 4,371 cases of leprosy were treated in the dispensaries during 1889.

Presentation.—The members of the Yeadon Branch of the St. John Ambulance Association, on February 9th, presented Dr. Russell McLean with a beautiful Parisian timepiece, in appreciation of his services in lecturing to them last year. The presentation was made by Mr. Jonathan Peate, J.P.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, February 12th.

The Custody of Children Bill.—This Bill was read a third time and passed.

Friday, February 13th.

The Condition of London Streets.—Lord De Ros called attention to the dangerous and disgraceful condition of the streets of London during the recent severe weather, and urged that, if possible, some uniform and effective system of regulating the paving and cleansing of the thoroughfares should be adopted before another winter.—Lord Meath pressed for the early introduction of the promised Bill for establishing district councils in lieu of the existing vestries, and suggested that only by placing those bodies under the central control of the County Council could the evils now complained of be remedied.—Lord Salisbury, on the other hand, doubted whether the substitution of district councils for the vestries would insure perfect uniformity in such matters as paving, and he desired much longer experience of the working of the London County Council with limited powers before arming them with despotic authority.—The subject then dropped.

Monday, February 16th.

Elementary Education (Blind and Deaf) Bill.—Viscount Cranbrook moved the second reading of this Bill, and said its object was to ensure that blind and deaf children, wherever capable of being instructed, should receive an education like other children in the country under the Bill; they would be sent to institutions which already existed throughout the country for the benefit of persons so afflicted.—Lord Herschell regretted that the Bill made no provision for dealing with idiots or imbeciles.—Lord Norton objected to the fees for educating these children being the same as would be charged in ordinary schools, as the instruction must necessarily be much more expensive.—Lord Egerton said the Royal Commission over which he presided recommended that the fees should not be greater in the case of these afflicted children, because they did not wish to impose a burden on parents so unfortunately situated.—The Earl of Powis supported the Bill.—Viscount Cranbrook, in reply, said the subject of the education of imbeciles and idiots was one which required a good deal of thought. There was room for much more benevolence in this direction, and perhaps, also, for contributions on the part of the State, to which he had no personal objection.—The Bill was read a second time.

Tuesday, February 17th.

Duties of Medical Officers of Health.—The Earl of Dunraven inquired as to the powers and duties of a medical officer of health appointed by a County Council under Section 17 of the Local Government Act, 1888. It appeared to him to be very difficult to gather from the Local Government Act what were the powers of medical officers appointed by the County Councils, or what powers the County Councils themselves had. He also moved for a return of the medical officers appointed and the Councils appointing them; and also for a return showing the representations, if any, made to the Local Government Board under Section 19 of the Act, and the results of such representations. He did not imagine the return would be very voluminous.—Earl Stanhope observed that this seemed to be a very practical question, and hoped the Government would be disposed to give the return.—Lord Thring agreed that the section required some amendment.—Lord Henniker, in replying, said that it was quite true that under the 17th section of the Local Government Act of 1888 the County Councils had the power to appoint one or more medical officers of health within their jurisdiction. Special appointments had been made, and there was no obligation whatever on the part of any of the Councils to report to the Local Government Board as to any appointments they made; therefore they had no list at the offices of the Local Government Board of the medical officers of health appointed. The statute did not in any way prescribe the duties which were to be performed by those officers; neither had the Local Government Board any power whatever to define their duties. In each case the duties must be such as the County Council might lay down when making the appointment. He had no objection to grant the returns for which the noble lord asked.—The motion was agreed to.

HOUSE OF COMMONS.—Tuesday, February 17th.

Indian Factory Legislation.—Mr. W. H. Smith, in reply to Mr. Maclean, announced that legislation would be proposed immediately by the Government of India to amend the Indian Factory Act. The provisions of the Bill would follow, speaking generally, the recommendations of the International Labour Conference at Berlin, with this limitation that it was proposed to raise the age for the employment of young children from 7, at which age they were now employed, to 9 years.

Insurance of Infant Life in Scotland.—Mr. J. P. Smith introduced a Bill for the registration of insurances on the lives of children in Scotland, which was read a first time.

Consolidation of the Metropolitan Public Health Acts.—Mr. W. H. Smith, in reply to Mr. D. Thomas, said the Government hoped to introduce within the next few days Bills to amend and consolidate the laws relating to public health in the metropolis, but they did not anticipate that the time at their disposal would enable them to deal this session with these laws outside the metropolis. The Government would be glad if they were able, by the progress of other business, to propose legislation this session in connection with district councils, but it entirely depended on the progress of public business.

Consumption in Schools.—The Michigan State Board of Health has decided that "any person or pupil known to be affected with pulmonary consumption should be excluded from all public schools, colleges, and other institutions of learning until such person or pupil is so far recovered from consumption that no cough or expectoration occurs."

MEDICAL NEWS.

The King of Denmark has bestowed the Cross of Knighthood of the Dannebrog Order on Dr. Koch's son-in-law, Professor Pfuhl.

Professor Sattler, of Prague, has received a "call" to succeed the late Professor Coccius in the chair of Ophthalmology at Leipzig.

Copenhagen is said to be suffering from a visitation of small-pox. Up to the present time, most of the cases have been of a mild type. Animal lymph is chiefly used for vaccination in the Danish capital.

The Lord Mayor has consented to preside at a festival dinner in aid of the Royal National Hospital for Consumption, Ventnor, to be held at the Whitehall Rooms on April 13th, and will be supported by the Sheriffs of London.

The grand jury at the Kent Assizes, on February 16th, found a true bill against Charles Lyddon, who is charged with the murder of his brother, Dr. Lyddon, at Faversham. The case has been remitted to London.

Dr. Bridges and Mr. R. Hedley have been appointed by the Local Government Board to hold an official inquiry into the complaints against the management of the Eastern (Homerton) Hospital of the Metropolitan Asylums Board.

A verdict of £20 damages has been given against a chemist who supplied ammonia when sal volatile was asked for. The plaintiff, an actress, was said to have been prevented from following her engagements for nine days as a result of the mistake.

Fire at a Hospital.—A portion of St. Mary's Hospital at Rochester, New York State, was burned down at midnight on February 15th; 250 patients and nineteen nuns were in the building at the time of the outbreak, but all were fortunately saved.

The Hospitals Association have, by permission of the Gresham Committee of the Mercers' Company, established an ambulance station within the portico of the Royal Exchange. This is the fiftieth station the Association has established in the metropolis and the fourth in the City of London.

Congress on Mental Diseases.—The annual Congress of the "Alienists of France and the French-speaking Countries" will meet this year at Lyons on Monday, August 3rd. The following is the programme so far as at present arranged: 1. The part played by Alcoholism in the Etiology of General Paralysis, introduced by Dr. Brun. 2. The Legal Responsibility and Sequestration of Persons suffering from Delusions of Persecution, by Dr. Henry Coutagne. 3. Care of Epileptics, by Dr. P. Lacour. All communications should be addressed to Dr. Albert Carrier, 13, Rue Laurencin, Lyons.

Rarity of Venereal Disease amongst Workmen in Paris.—Some statistics have recently been published by Dr. L. Fiaux, in the *Gazette des Hôpitaux*, which would appear to prove that venereal disease is remarkably rare amongst workmen in the French capital. Dr. Fiaux examined a number of new hands on the Northern Railway of France, chosen from every type of skilled and unskilled labourer. Between September 1st, 1888, and June 30, 1890, 2,488 adult males passed under his observation. Two-thirds were bachelors, aged from 20 to 40; the remaining third were married and aged from 25 upwards. One-fifth of the total had resided under one year in Paris. Out of the 2,488 workmen, the total amount of venereal disease appeared to be three cases of gonorrhœa and one of chancroid, with suppurating bubo. Between July 1st and December 31st, 1890, Dr. Fiaux examined 752 workmen applying for labour on the railway, classified as above. The total of venereal disease was two cases. The first was gonorrhœa, in a single man, a stoker aged 29. The second case was the same disease, with severe phimosis; the patient, aged 26, was also a bachelor, and a stoker. One of these patients had contracted his malady in a *maison de tolérance*. Not one instance of syphilis was detected. The above statistics contrast very favourably with what might be collected from bodies of British workmen.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Albert P. Scott, Professor of Anatomy in the University of Bishop's College, Montreal; Dr. E. C. Harwood, of New York, a member of the Committee of the New York Neurological Society which did so much to improve the treatment and study of insanity in the United States; and Dr. Hermann Quincke (aged 83), formerly on the staff of the Charité, and one of the leading members of the older generation of medical practitioners in Berlin.

MEDICAL "SECTARIANISM."—An American paper states that an agitation for the abolition of "sectarian medical teaching" in the State University is being promoted in Michigan, presumably among the representatives of homœopathy and the numerous other heterodox "'pathies" which seem to flourish in the free air of the great republic more luxuriantly than in the effete monarchies of the Old World. Petitions are being circulated by medical men, and hundreds of names have already been secured. "Sectarian medical teaching" is distinctly "good," as Polonius would say.

MEDICAL VACANCIES.

The following Vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—House-Physician. Salary, £65 per annum, with board, lodging and washing in the hospital. Applications to John Bonnett, Secretary, 23, St. Andrew's Street, Cambridge, by March 10th.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Medical Registrar; double qualifications. Must not hold Poor Law, club, or paid dispensary appointment. Applications to the President and Committee by February 28th.

BRIXTON, STREATHAM, AND HERNE HILL DISPENSARY.—Resident House-Surgeon; unmarried; double qualifications. Salary, £150 per annum, with furnished apartments, attendance, coal, and gas. Applications to the Secretary, Water Lane, Brixton, by February 28th.

BROWN ANIMAL SANATORY INSTITUTION.—Professor-Superintendent. Salary, £250 per annum. Application by March 2nd to the Registrar of the University of London, Burlington Gardens, W., from whom full information respecting duties, etc., can be obtained.

CHELTENHAM GENERAL HOSPITAL.—Junior House-Surgeon; unmarried; double qualifications. Salary, £40 per annum, with board and apartments. Applications to Lieutenant-Colonel Croker-King, Honorary Secretary and Treasurer, by February 21st.

CHICHESTER INFIRMARY, Chichester.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, with not more than five testimonials, to Eugène E. Street, Secretary, by February 21st.

COUNTY DONEGAL INFIRMARY.—House-Surgeon and Registrar. Salary, £60 per annum, with apartments and rations. Applications ot Rev. J. S. McClintock, Honorary Secretary, Lifford, before March 1st.

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer: must be Graduate in Medicine. Salary, £130 per annum, with residence, board, and washing. Applications to Dr. J. D. M. Coghill, House-Governor, by February 28th. Election on March 6th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Surgeon to Out-Patients; must be F.R.C.S.Eng. Applications to William T. Grant, Secretary, by February 24th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Casualty Officer, and to act as Registrar and Assistant Anæsthetist. Must reside in immediate neighbourhood of the hospital. Honorarium, 50 guineas per annum. Applications to William T. Grant, Secretary, by February 21st.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Westminster, S.W.—Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by February 24th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—House-Physicians. Applications to Henry Dobbin, Secretary, by February 25th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—Surgical Registrar. Applications to Adrian Hope, Secretary, by February 24th.

LEEDS UNION.—Assistant Medical Officer and Dispenser; unmarried; not more than 35 years of age; double qualifications. Salary, £100 per annum, with board, washing, apartments, and attendance. Applications (on forms to be obtained on application) to John King, Clerk, Union Offices, East Parade, Leeds, by February 24th.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Junior House-Surgeon double qualifications. Salary, 60 guineas per annum, with board and residence. Applications to the Chairman of the Medical Board by February 23rd.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—House-Surgeon; double qualifications. Salary, 50 guineas per annum, with board and residence at the Hospital. Applications to the Secretary by March 2nd.

LUTTERWORTH UNION.—Medical Officer for the No. 6 District of this Union. Salary, £20 per annum, with usual extra medical fees. Applications to Thos. C. Bodycote, Clerk to the Guardians, Lutterworth, by March 2nd.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Convalescent Hospital at Cheadle; must not be more than 25 years of age; unmarried; double qualifications. Salary, £150 per annum, board and residence. Applications to the Chairman of the Board by March 4th.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon; must possess L.D.S. diploma. Salary, £50 per annum. Applications to Arthur G. Klugh, Secretary, by March 10th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-on-Trent.—Assistant House-Surgeon. Board, apartments, and washing provided. Applications to R. Hordley, Secretary, by March 2nd.

OWENS COLLEGE, Manchester.—Demonstrator in Pathology; must devote his whole time. Stipend, £140 per annum. Applications to H. W. Holder, Registrar, by March 2nd.

PAROCHIAL BOARD OF FETTERCAIRN.—Medical Officer. Applications to D. Prain, Clerk to the Board, Fettercairn, by February 21st.

ROYAL ACADEMY OF ARTS.—Professor of Anatomy; professorship tenable for five years, the holder being eligible for re-election. Applications, with not more than four testimonials, to the Secretary, by February 21st.

ROYAL MATERNITY CHARITY.—Obstetric Physician for the Eastern Division; must be Fellow or Member of the Royal College of Physicians of London, and must reside in the division. Applications to J. Long, Esq., the Charity's House, 31, Finsbury Square, E.C., by February 28th.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House-Surgeon and Secretary. Salary, £80 per annum, with board. Applications to H. G. Lys, Secretary (of whom particulars of the duties may be obtained) by March 4th.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—House-Surgeon. Board and residence provided. Applications to St. Vincent Mercier, Secretary.

ST. THOMAS'S HOSPITAL.—Assistant Physician; must be Fellow or Member of the Royal College of Physicians of England. Applications to Mr. E. M. Hardy, Treasurer's Clerk, by February 28th.

ST. THOMAS'S HOSPITAL.—Surgeon; must be F.R.C.S.Eng. Applications to Mr. E. M. Hardy, Treasurer's Clerk, by February 21st.

SALFORD UNION.—Visiting Medical Officer and Two Resident Assistant Medical Officers for the Union Infirmary; double qualifications. Salary, £150 per annum for the first, and £130 per annum each for the latter, with furnished apartments in the Infirmary. Applications, endorsed "Visiting Medical Officer" or "Assistant Medical Officer," to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles, New Road, Salford, by February 24th.

UNIVERSITY OF GLASGOW.—Six Examiners in Medicine. Annual fee, £30. Appointment for four years. Applications, with twenty printed copies of testimonials, to the Secretary of the Court, Alan S. Clapperton, 91, West Regent Street, Glasgow, by February 21st.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Board, lodging, and washing in the hospital. Appointment for six months. Applications to W. H. Laban, Secretary, by February 23rd.

MEDICAL APPOINTMENTS.

BEVILLE, F. W., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Skin Department, St. Thomas's Hospital, from March 3rd.

BERRY, Edmund, L.R.C.P.I., L.F.P.S.Glas., reappointed Medical Officer of Health to the Leyland Local Board.

BLYTH, Alex. Wynter, M.R.C.S.,Eng., L.S.A., appointed Professor of Hygiene to the College of State Medicine, *vice* Dr. W. R. Smith, resigned.

BRUNSKILL, Ralph R., M.B., C.M.Dub., appointed Medical Officer to the Carlisle Dispensary, *vice* Dr. Graham, resigned.

BYHAM, Wm. Louis, L.R.C.S.Edin., L.R.C.P.Edin., appointed Surgeon to the Johnson Hospital, Spalding, *vice* Dr. Morris, resigned.

CAMPBELL, John, M.A., M.D., M.Ch., and M.A.O.Roy.Univ., M.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Belfast Hospital for Sick Children, *vice* J. St. Clair Boyd, M.D., M.Ch., resigned.

CARTER, W. R., B.A.Cantab., L.R.C.P., M.R.C.S., appointed Resident Accoucheur to St. Thomas's Hospital from March 3rd.

COLLIER, Horace, F.R.C.S., L.R.C.P., appointed Resident Medical Officer and House-Physician to the Hospital for Sick Children, Great Ormond Street, *vice* J. F. Bays, M.D.

CONNOLLY, Charles Hamilton, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health for the Urban Sanitary District of the Wood Green Local Board.

CRAWFORD, James, M.D.Durh., M.R.C.P.Lond., appointed Honorary Physician-Accoucheur to the Farringdon General Dispensary and Lying-in Charity, *vice* Dr. John Tanner.

DAVIES, Sidney, M.A., M.D.Oxon., D.P.H.Camb., appointed Medical Officer of Health for Plumstead.

EMRYS-JONES, A., M.D., appointed Honorary Ophthalmic Surgeon to the Ardwick and Sale Industrial Schools, Manchester.

FORDE, T. A. M., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Skin Department, St. Thomas's Hospital, from March 3rd.

FOX, J. A., L.R.C.P.Lond., appointed Honorary Surgeon to the West Cornwall Dispensary and Infirmary.

GORDON, Collin, M.B., C.M.Edin., appointed Senior House-Surgeon to the Ingham Infirmary and South Shields and Westoe Dispensary, *vice* Mr. George Berwick.

GRIFFITH, W. S., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital from March 3rd.

HARPER, J. R., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital from March 3rd.

HAYDON, T. H., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Ear Department, St. Thomas's Hospital, from March 3rd.

HICHENS, Frank, M.D., M.B., B.S.Lond., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Stithians District of the Redruth Union.

HODGSON, Victor, M.R.C.S., L.R.C.P., appointed House-Surgeon to the Scarborough Hospital and Dispensary, *vice* A. C. Dutt, B.A., M.B. Cantab.

HUNTER, Wm., M.D.Edin., M.R.C.P.Lond., appointed Assistant Physician to the London Fever Hospital, Liverpool Road, N.

KEMPE, Arthur, M.D.Brux., M.R.C.P., reappointed Medical Officer of Health, Exeter Port Sanitary Authority for one year.

KING, A., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital from March 3rd.

LEVICK, H. D., L.R.C.P., M.R.C.S., appointed Senior Obstetric Clerk to St. Thomas's Hospital from March 3rd.

LOW, H., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Non-Resident House-Physician to St. Thomas's Hospital from March 3rd.

LOVELL, C. P., M.A.Oxon., L.R.C.P., M.R.C.S., L.S.A., appointed Non-Resident House-Physician to St. Thomas's Hospital from March 3rd.

LYONS, Algernon Wilson, M.B.Lond., L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Medical Officer to the City of London Lunatic Asylum, near Dartford, Kent.

MCFADYEN, Duncan, L.R.C.S.Edin., appointed one of the Medical Officers to the Inverness Parochial Board.

MACKINNON, Nicol, M.B., C.M.Aberd., appointed Medical Officer to the Parochial Board of South Uist, *vice* Dr. Maclachlan, resigned.

MILLAR, W. H., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Throat Department, St. Thomas's Hospital, from March 3rd.

MORRIS, Edwin, M.D., F.R.C.S., appointed Honorary Consulting Physician and Surgeon to the Johnson Hospital, Spalding.

MORTON, C. A., F.R.C.S.Eng., appointed Pathologist to the Bristol Hospital for Sick Children and Women.

NAPIER, A. D. Leith, M.D., M.R.C.P., appointed Physician to the Out-patient Department of the Chelsea Hospital for Women, *vice* Dr. Rutherford.

PHILLIPS, Sidney, M.D., M.R.C.P.Lond., appointed Physician to the London Fever Hospital, Liverpool Road, N.

POWELL, Lionel Louis, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer for the Ashfordby District of the Melton Mowbray Union.

REES, Oswald, M.B., C.M.Glas., appointed Junior House-Surgeon to the Macclesfield General Infirmary, *vice* J. A. Cooke, M.R.C.S.

ROUILLARD, L. A. J., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital from March 3rd.

SAYRES, A. W. F., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Ear Department, St. Thomas's Hospital, from March 3rd.

SHEARER, D. F., B.A., B.M., B.Ch.Oxon., appointed House-Surgeon to St. Thomas's Hospital from March 3rd.

SOMERVILLE, John, F.R.C.S., L.R.C.P.Edin., appointed Certifying Surgeon for the Macclesfield District, *vice* Dr. Fernie, deceased.

STOKES, W. G. G., B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital from March 3rd.

THOMSON, Wm. Tweeddale, L.A., M.B. and C.M.Edin., appointed House-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

TOLLER, S. G., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital from March 3rd.

TOSSWILL, J. Cecil, M.B., C.M.Edin., appointed House-Surgeon to the Central London Ophthalmic Hospital, *vice* W. Kent-Hughes.

UMNEY, W. F., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital from March 3rd.

USHER, C. H., B.A., M.B., B.C.Cantab., appointed Clinical Assistant in the Throat Department, St. Thomas's Hospital, from March 3rd.

WALPOLE-SIMMONS, Edward, M.D.Durh., M.R.C.S.Eng., L.S.A., appointed Physician to the Worcester General Infirmary, *vice* Dr. William Strange, deceased.

WHITBY, Charles J., B.A., M.B.Cantab., appointed Resident Physician to the West of England Hydropathic Establishment, Limpley Stoke Bath.

WILBE, Haydock, M.D.Durh., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer to the St. John's Wood and Portland Town Provident Dispensary.

WILDE, Leonard, M.D., D.P.H., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer of Health for Croydon Borough.

WILLAN, George Thos., M.R.C.S.Eng., L.S.A., reappointed Medical Officer to the No. 2 District of the Melton Mowbray Union.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: On Affections of the Orbit. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. McNeill Whistler: Demonstration of Cases.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor W. Watson Cheyne: On the Pathology of Tuberculous Diseases of Bones and Joints. Lecture I.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—The adjourned discussion on Dr. Douglas Powell's paper on Angina Pectoris will be opened by Sir Walter Foster, M.P.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On Alcoholic Insanity. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On Herpes in its Relation to Syphilis.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. Thorne: The Milroy Lectures on Diphtheria, its Natural History and Prevention. Lecture III.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Mr. R. Barwell: On Rachilysis: its Object and its Method. Mr. J. H. Hutchinson: On Measles as a Cause of Endocarditis, being an account of four cases in which organic mitral murmurs developed during the course of the disease.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. C. T. Wilson: Cases of Phthisis Treated by Koch's Method. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: On Intraocular Growths.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor W. Watson Cheyne: On the Pathology of Tuberculous Diseases of Bones and Joints. Lecture II.

HOSPITALS ASSOCIATION, Westminster Hospital, 8 P.M.—Dr. Richard Greene (Northampton): On Hospitals for the Insane and Clinical Instruction in Asylums.

HUNTERIAN SOCIETY, 8 P.M.—Dr. J. L. W. Thudichum: On Urochrome: its alleged Derivation from the Pigments of the Blood and Bile, and on the Bearing of the Alkaloids and Extractive Acids of the Urine in Gout and Pyæmia. Mr. F. R. Humphreys: On Permanganate of Potash as a Test for the Colouring Matter of the Urine.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Mr. R. Brudenell Carter: On Ocular Symptoms in Nervous Diseases. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Montagu Lubbock: On Anomalies of Speech in Children and their Treatment. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. G. Stoker: On the More Common Forms of Disease of the Nose.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. Thorne: The Milroy Lectures on Diphtheria, its Natural History and Prevention. Lecture IV.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Dr. Dunbar Hooper (Melbourne): A Case of Pelvic Hæmatocele treated by Abdominal Section. Special meeting to consider and pass rules and regulations for examination of obstetric nurses.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 8 P.M.—Living Specimens:—Mr. E. Hurry Fenwick: Three Cases of Hydatids of the Kidney. Mr. Stanley Boyd: A Case of Thiersch's Method of Skin Grafting. Mr. Pearce Gould: A Case of Fracture of the Ulna. Mr. Balmanno Squire: Serpiginous Rodent Ulcer of the Face of Seventeen Years' Duration. Dr. Stephen Mackenzie: A Case of Multiple Lipomata. Adjourned discussion on Cases of Removal of the Vermiform Appendix. Paper:—Mr. Pearce Gould: Case of Simultaneous Gangrene of Both Feet from Syphilitic Disease; amputation through knee-joints; recovery.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton 4 P.M.—Mr. C. T. Williams: Clinical Demonstrations.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor W. Watson Cheyne: On the Pathology of Tuberculous Diseases of Bones and Joints. Lecture III.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On Vegetable Parasitic Diseases of the Skin.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

DICKMAN.—On February 11th, 1891, at Buntingford, Herts, the wife of Henry Dickman, M.B., of a daughter.

MARRIAGE.

GODLEE—SEEBOHM.—On February 12th, at Hitchin, Rickman John Godlee, F.R.C.S., of Wimpole Street, W., second son of the late Rickman Godlee, Esq., of Lincoln's Inn, to Juliet Mary, eldest daughter of Frederic Seebohm, Esq., of Hitchin.

DEATH.

JAMES.—Mary James, widow of the late Dr. James, of Aberystwith, at the residence of her son, J. Brindley James, Esq., on Wednesday, February 11th, 1891.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

A. M. asks: Would anyone kindly inform a member where a male dipsomaniac in reduced circumstances could be received, say at £1 per week inclusive?

TRISTIS asks to be recommended a home or sisterhood for an elerly lady (now abroad) to be placed in on arriving home. She is subject to fits of melancholia and tendency to be suicidal, and her means are limited.

TREATMENT OF GONORRHŒAL RHEUMATISM.

GENERAL PRACTITIONER writes: Would anyone suggest a course of treatment for a patient who has suffered from gonorrhœa with gonorrhœal rheumatism of several joints since the beginning of the year? Several remedies have been tried without any beneficial results. He has been taking lately copaiba and iodide of potash internally, with local astringents of lead, lime, and opium. The patient is not constitutionally strong, and has lost flesh occasionally since the attack commenced.

TUBERCULIN.

R. E. asks for information where Koch's lymph can be procured in London; price, and directions for inoculation.

*** The fluid cannot be obtained in London. Application should be made to Dr. Libbertz, 28, Luenenburgerstrasse, Berlin. Full directions for inoculation have been given more than once in the BRITISH MEDICAL JOURNAL.

ANSWERS.

MEDICAL STUDENT, BELFAST.—It is impossible to advise as to treatment without seeing the case, as the symptoms might be due to one of several different conditions. It can generally be relieved.

A MEMBER.—No special textbook on surgical anatomy is prescribed by the Edinburgh College of Surgeons; the *Surgical Applied Anatomy* of Mr. Frederick Treves, and Dr. J. MacLachlan's book on the same subject can be recommended.

HOME FOR PARALYSED GENTLEMAN.

MISS E. FOSTER, Lady Superintendent, writes: If "Medicus, B.S.", will apply to Dr. Pendleton, the Drive, West Brighton, he will be able to hear of home for paralysed gentleman. Terms will be sent on application if advertiser will send full particulars of case.—If "Medicus, B.S.", will communicate with Dr. Clark, of Staithes, Yorkshire, he may possibly obtain what he requires.

NOTES, LETTERS, Etc.

SUBNORMAL TEMPERATURES IN TYPHOID FEVER.

MR. G. D. DEEPING, M.R.C.S., L.R.C.P., sends us the following notes concerning the cases of typhoid fever that have occurred in his practice in the recent epidemic at Southend:

"I have attended and carefully observed over thirty cases of unmistakable typhoid in which the temperature oscillated between 95° and 98° F., and in which it never rose to the normal point until the patient was completely convalescent. Another peculiarity of these cases was a more or less regular reversal of the usual thermic course of typhoid, as evidenced by the fact that the temperature rose in the morning and fell in the evening to the extent of one or two degrees. Indeed, if the chart were read upside down, it would then very nearly represent the ordinary thermometric line of the disease. That they were instances of undoubted typhoid is shown by the following facts: 1. All these cases exhibited in a greater or less degree most of the ordinary symptoms of the fever. They had the rose spots, distended abdomen, typical typhoid stools, foul tongue, fœtid breath and exhalations, rapid increase of symptoms if overfed or allowed solid food too soon; in some instances relapses arose from this latter circumstance, rendering the convalescence tedious and protracted. 2. Many of these cases occurred in the same house and in the same family, in which other members were simultaneously suffering from undoubted typhoid, and in which, moreover, in several instances, the disease terminated fatally. 3. The occurrence of cases intermediate between those running a subnormal and those following a supernormal course. In some of these patients I have seen the temperature in the first week or ten days of the disease fall from 104° or 103° to 96° or 95°, and then continue subnormal for three or four weeks longer, all the symptoms of typhoid meanwhile coexisting; but in these subnormal conditions I have never witnessed any delirium, nor seen sordes on the teeth or lips, nor hæmorrhage from the bowels, nor have I observed any troublesome diarrhœa."

Mr. Deeping adds that, in order to render the above observations accurate and reliable, these temperatures have been repeatedly taken with the same and with different thermometers, two instruments having been placed simultaneously in the patient's armpits. Moreover, these records have been corroborated by his medical colleagues and by different nurses, all acting independently of and unknown to each other.

A DANGER OF CALOMEL POWDERS.

IN giving evidence at a recent inquest on a child whose death had followed the administration of certain powders containing calomel, Dr. Stevenson stated that he had analysed two powders and found them to contain calomel 0.3 grain, sugar 3.4 grains, with starch, and a little carmine to give colouring. The formula from which the powders were made up gave each powder to contain one grain of calomel, therefore, some of the powders must have contained more calomel than the others, but added that there was a tendency in such powders, when kept in bulk, to separate, the heaviest ingredient, calomel, settling to the bottom. It was possible, but he did not think it likely, that the excessive purging to which death was due was caused by the calomel. The jury eventually decided to return an open verdict as follows; "That the deceased died from excessive purgation, but the evidence was not sufficient to show how the purgation was caused."

THE DEADLY HATPIN.

EXPERIENCE has taught the great majority of male mankind that it is a labour of Sisyphus to attempt to induce ladies to run counter to the dictates of fashion. The reasonableness and unanswerable logic of paterfamilias is generously admitted, and the good man, if still inexperienced, imagines that he has won; but the next occasion he finds that that part of womankind which is not reasonable nor logical has again triumphed, things have recurred to the *status quo ante*, and he ruefully admits himself defeated. These reflections have been suggested by reading a paragraph in the *Boston Medical and Surgical Journal* which recounts how a lady in New York, "fell upon the side walk in that city the other day, and drove her hatpin into her brain." She died, but he would indeed be a sanguine person who would suppose that ladies will therefore revert to bonnet strings; why they ever gave up bonnet strings in favour of the present formidable and dangerous steel pin, half a foot or more long, no man knows—no, nor woman neither. Hat and bonnet strings are probably uncomfortable: the male person long ago got over the difficulty by making his hat fit his head, the string with which he used to tie it on his head, "persisting" only as the now useless hatband; but this would be altogether too simple a solution of the difficulty for the female person, whose head gear has always defied all the ordinary laws of development.

THE SOPORIFIC ACTION OF MERCURY.

MR. R. MANSELL-JONES (Brighton) writes: I can fully corroborate Dr. Tyson's remarks in the BRITISH MEDICAL JOURNAL of January 31st with regard to the soporific action of mercury in cases of deficient liver action; but I have also noticed that several other medicines which act as hepatic stimulants—such as salicylate of soda, euonymin, podophyllin and phosphate of soda, etc.—have also the same soporific effect, more or less, when administered in similar cases. The sleeplessness, which is usually a prominent symptom, is probably due to waste products, urea, uric acid, etc., circulating in the blood, owing to the imperfect eliminatory action of the liver, and thereby causing brain irritation; on their removal by suitable remedies, the brain is enabled to obtain the repose so much needed. Notwithstanding that calomel has no apparent effect on the secretion of a healthy liver, it is the most potent remedy we possess when the bile ducts are blocked up by catarrh and inspissated bile.

DR. KOCH'S AND PROFESSOR VIRCHOW'S PAPERS.

DR. GEORGE ROBERTSON, M.D. (Kilburn, N.W.), writes: On reading Dr. Koch's description of his remedy, and Professor Virchow's account of his cases and important pathological observations, I was at once reminded of Professor Boeck's (of Christiania) treatment of constitutional syphilis by syphilisation, which created such a sensation in the medical world a quarter of a century ago.

Granting the difference betwixt our knowledge at the present day as compared with the past, and the fact that in the case of syphilis the virus was introduced directly by fresh inoculations from other sores on the body of the patient or from those on another person, whilst in phthisis or lupus the *materies morbi* is subjected to a process of heat, trituration, and mixing with glycerine before being used. The processes proceed on such parallel lines that it would seem as if the hopes of cure depended on the "overcrowding" of the virus to such an extent as to be destructive to itself, always remembering that the strength and vitality of the patient require to be sufficient to live through the treatment.

There is no process of attenuation in Dr. Koch's preparation at all comparable to Professor Pasteur's treatment of anthrax and hydrophobia, or to Jenner's prophylactic of vaccination for small-pox; and Professor Virchow's necropsies point very strongly to the overcrowding hypothesis. With regard to its beneficial effects on lupus, time alone

will show whether in the process of cure an apparently local, is transformed into a decidedly constitutional, disease.

As yet, the results of what must still be regarded as experimental research can scarcely be sufficient to decide the point as to whether a person apparently cured by Professor Koch's method ought to marry. This is a social question that must crop up sooner or later.

Should the celebrated doctor be successful—as everyone hopes—in giving the world a successful means of checking phthisis in its early stages, it will go far to prove that the Christiania professor was not very far wrong in seeking to check a foul disease by loathsome treatment, and will lead to further researches in the same direction, to discover a remedy for syphilis, a disease that can scarcely be considered secondary to phthisis in its far-reaching effects.

The Specific Gravity of the Blood in Disease.

Dr. S. Monckton Copeman (Physiological Laboratory, St. Thomas's Hospital), writes: In my report on this subject, which recently appeared in the British Medical Journal, I find I unwittingly misrepresented a point of some importance relating to the work of Mr. Lloyd Jones on the specific gravity of the blood. In speaking of the composition of the fluids used by Dr. Sherrington and myself, I quote from the British Medical Journal of 1888, vol. ii, p. 1,345, the statement of Lloyd Jones that his solutions consisted of glycerine and water, but on referring to his paper in the *Journal of Physiology*, I find that he recommends in addition the use of some antiseptic, such as thymol or corrosive sublimate. Such addition is most essential, as otherwise the specific gravity of the solutions is liable to considerable alteration in the course of time, which is the reason for my laying stress on the matter. I freely admit that I ought not to have been satisfied with a reference to one of Mr. Lloyd Jones's articles only, and beg to offer him a sincere apology for my unintentional error.

Wood Wool Sponges.

T. Henderson Pounds, F.R.C.S.Eng. (Derby) writes: Having been hitherto dissatisfied with the ordinary artificial sponges in general use, I have for some time past been experimenting with different sponge substitutes, with the aim of getting a cheap, antiseptic, and highly absorbent sponge. I find that Hartmann's wood wool enclosed in a layer of sublimate gauze is far and away the best substance I have tried. I may mention that both wood wool and gauze are impregnated with 0.25 per cent. of corrosive sublimate.

French Medical Papers.

From a publisher's catalogue recently issued it appears that there are no fewer than 145 medical newspapers and magazines published in Paris alone. This series does not include five serials on veterinary medicine and nine on pharmacy, nor several purely biological reviews: five provincial papers at least are mentioned in this list. A small journal can be "run" very cheaply in Paris, and a band of medical men or even a single physician or surgeon may maintain a paper for the advancement of their views.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(**A**) Dr. Arlidge, Stoke-on-Trent; Dr. E. J. Adams, Sheffield; Dr. F. P. Atkinson, Surbiton; Mr. W. C. Aylward, Tunbridge Wells; Mr. C. E. Abbott, Braintree; Mr. Samuel Alexander, Bulwell; Messrs. Arnold and Sons, London. (**B**) Surgeon J. W. Beatty, Cape Coast Castle; Messrs. John Beal and Sons, West Brighton; P. Boobbyer, M.B., Nottingham; Mr. J. Barron, London; Dr. Fletcher Beach, Dartford; Dr. W. Boulting, Hampstead; Mr. G. Bate, London; Dr. Ballantyne, Edinburgh; Dr. Clifford Beale, London; Dr. Balding, Royston; Mr. W. Baldwin, Clapham; Dr. Edward Burd, Shrewsbury. (**C**) Dr. C. A. Crane, London; Mr. Watson Cheyne, London; Mr. R. L. Caunter, Banwell; Mr. J. Chalmers, Bolton; Mr. H. B. Collins, London; J. M. Clarke, M.B., Clifton; Dr. Adam Ciaglinski, Warsaw; Dr. F. W. Clark, Staithes; F. H. Carlyon, M.B., Truro; Dr. D. H. Cullimore, London; Dr. J. A. Cunningham, Moultan, Punjab; Dr. Cranstoun Charles, London; Surgeon-General Cornish, London; Dr. J. Cagney, London; Mr. A. M. Campbell, London. (**D**) Mr. J. P. Doyle, Dublin; Surgeon J. D. Day, Dublin; Mr. E. G. Dutton, Plymouth; Mr. Alban Doran, London; Dr. S. Davies, Plumstead; Dr. O. Dickinson, London; Mr. M. D. Davies, London; Mr. F. A. Davis, London; Mr. H. R. Davies, London; Mr. F. Dethridge, London; Director-General of the Medical Department of the Navy, London. (**E**) Dr. A. Emrys-Jones, Manchester; Mr. H. M. Earle, St. Leonard's-on-Sea; The Editor of the Monthly Medical Review, London. (**F**) A. H. Frere, M.B., Bradford; Mr. T. H. Fyfe, Forres; Dr. H. Fox, London. (**G**) Surgeon G. H. D. Gimlette, Rewah, Central India; Mr. W. S. Granger, Wool; Mr. A. Greenwood, London; Mr. A. G. P. Gipps, Haslar; Mr. James Gibson, Greetland. (**H**) Dr. J. B. Hurry, Red Hill; Messrs. Hassard and Tyrrell, London; Messrs. Hertz and Collingwood, London; Surgeon A. Harding, Poona; Dr. G. E. Herman, London; Dr. Peter Horrocks, London. (**I**) Income Tax Repayment Agency, London. (**J**) Dr. George Johnson, London; Mr. W. H. A. Jacobson, London; Justitia; Mr. W. M. Jones, Rotherham; Mr. S. Blake Jolly, Sydenham; Mr. J. H. Joy, Tamworth. (**K**) Mr. B. Kerswill, St. Germans; Dr. Norman Kerr, London; Mr. F. Kerslake, London; Dr. G. C. Kingsbury, Blackpool. (**L**) Dr. C. H. Leet, Liverpool; Dr. A. H. N. Lewers, London; Mr. T. Laffan, Cashel; Dr. C. J. Lewis, Stirling; A. W. Lyons, M.B., Dartford; Dr. Lyon, Fencehouses. (**M**) Dr. John Mason, Windermere; Miss A. Macconnell, London; Dr. Edwin Morris, Spalding; Surgeon J. R. Mallin, Rawal Pindi; Mr. M. McLeish, Bolton; Mr. J. D. Malcolm, London; A. Marshall, M.B., London; M.S.; Surgeon J. D. Moir, London; Dr. R. J. McCalman, Oporto; Mr. P. Michelli, London; F. M. McJannet, M.B., Middlewick; Dr. T. Mitchell, Gorseinon; Dr. Murrell, London; Dr. H. W. G. Mackenzie, London; Mr. E. B. Mason, Pontypool. (**N**) Dr. R. Neale, London. (**O**) Dr. T. Oliver, Newcastle-on-Tyne; Mr. A. G. Osborn, Dover; Obstetricus. (**P**) Dr. Pendleton, West Brighton; Punjab; Dr. T. Pearse, Portsmouth; The President of Queen's College, Birmingham; Dr. T. Partridge, Stroud; A. Percival, M.B., Newcastle-on-Tyne; Dr. G. W. Potter, London; Mr. J. Poland, London; Mr. H. Power, London. (**R**) Mr. Robertson, Edinburgh; Mr. A. C. Roberts, Eastbourne; Dr. Rentoul, Liverpool; Dr. J. J. Ridge, Enfield; Mr. G. Rendle, London; Royal Medical Corps; Mr. T. F. Raven, Broadstairs. (**S**) Dr. T. G. Styan, Ramsgate; Mrs. Saunders, Tunbridge Wells; Secretary of the St. George's Hospital, London; Secretary of the Birmingham and Midland Counties Branch of the British Medical Association; Mr. Bland Sutton, London; Secretary of the Harveian Society, London; Dr. R. J. H. Scott, Bath; Secretary of the Sheffield Medico-Chirurgical Society; Dr. H. Snow, London; Dr. W. C. Sharpe, Matlock Bridge; Mr. E. H. Strong, Dudley; Secretary of the Statistical Society, London; Mr. W. Johnson Smith, London; Surgeon M.S.; Secretary of the Bristol Hospital for Sick Children and Women; Mr. W. L. Symes, Hacketstown; Surgeon M. Smith, London; Mr. A. de St. Dalmas, Leicester; Dr. E. Seaton, London; Mr. T. Smailes, Honley; Secretary of the University of London; Dr. Shand, Edinburgh. (**T**) Dr. J. C. Thresh, Chelmsford; Dr. Thorne Thorne, London; Mr. Lawson Tait, Birmingham; Thirty Years' Service A.M.S.R.P.; Mr. T. Thatcher, Bristol; Mr. J. W. Taylor, Birmingham; T. E. H. (**V**) Dr. F. Vacher, Birkenhead; Væ Victis. (**W**) Dr. T. J. Walker, Peterborough; Dr. A. R. Waghorn, Red Hill; Mr. Waterhouse, Dunraven; W. W. Westcott, M.B., London; Dr. T. Whipham, London; Mrs. E. de Winton, West Malvern; Dr. W. E. Wynter, London; Mr. E. White Wallis, London; Dr. Hale White, London; Dr. Samuel West, London; Mr. W. Wallace, Garnethill; Mr. F. C. Wood, Nottingham; Dr. J. Wigmore, Tiverton-on-Avon; Dr. T. O. Wood, London; Dr. S. Wilks, London; etc.

BOOKS, Etc., RECEIVED.

The Yearbook of Treatment for 1891. London: Cassell and Co.

Psychologie de l'Idiot et de l'Imbécile. Par le Dr. Paul Sollier. Paris: Felix Alcan. 1891.

Mikrophotographischer Atlas der Bakterienkunde. Von Dr. Carl Fraenkel und Richard Pfeiffer. Neunte und zehnte Lieferung. Berlin: August Hirschwald. 1891.

Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Year 1890. Washington: Government Printing Office. 1890.

Our Baby. By Mrs. Langston Hewer. Bristol: John Wright and Co. 1891.

The Intracranial Circulation and its Relation to the Physiology of the Brain. By James Cappie, M.D. Edinburgh: James Thin. 1890.

The Barbarity of Circumcision. By Herbert Snow, M.D. London: J. and A. Churchill. 1890.

Body, Parentage, and Character in History. By Furneaux Jordan, F.R.C.S. London: Kegan Paul, Trench, and Co. 1890.

Saint Bartholomew's Hospital Reports. Edited by W. S. Church and W. J. Walsham, F.R.C.S. Vol. XXVI. London: Smith, Elder, and Co., 1890.

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AN ADDRESS
ON THE
HISTORY OF ANATOMY IN CAMBRIDGE.

Delivered at the Opening of the New Anatomy Buildings of the University.

By ALEXANDER MACALISTER, M.A., M.D., F.R.S.,
Professor of Anatomy, University of Cambridge; and Fellow of St. John's College.

In the lives both of individuals and of institutions there are certain events which mark out the subdivision of their history into epochs, and which are on that account naturally suggestive of retrospection.

The circumstances under which we meet here to-day are eminently of this character. The liberality of the Senate of the University has provided the Anatomical Department with this magnificent residence, and, as we formally take possession of our new home, it will be profitable to look backward and review the position which the science for whose cultivation these buildings are provided has hitherto taken among the studies of this University.

The attempt to trace the early history of any subject of study is beset with difficulties. The organisation of a mediæval *studium generale* on the one hand, and, on the other, that of a well-equipped modern university with its suite of laboratories each fitted for one particular branch of research, present differences comparable with those existing between a protozoon and a vertebrate; and as in the evolution of the organism it is seldom easy to identify the stage at which a given mass of protoplasm assumes a specific function and foreshadows the development of a separate organ, so there is the same kind of difficulty in determining the exact point of time at which the teaching of any one branch was differentiated from that of the generalised mass of knowledge comprehended of old under the title of philosophy.

The original university organisation of Cambridge was founded on the model of that of Paris, and from the time that a distinct Faculty of Medicine was set apart there must have been some kind of teaching—doubtless of an unsystematic character—by some of the resident readers in the Faculty which professed to deal with the physical nature of man.

We learn from a petition presented to Henry V. in 1491 that there was a "Scole of Fisyk" in each of the great universities, and these claimed a monopoly of the granting of licences to practise medicine. The prayer of this petition was granted by Parliament, one of the new enactments being that no woman should practise medicine under pain of a long imprisonment, and of a payment to the king of a fine of £40. The medical course laid down by the early statutes in this University consisted in the reading of the books of Johannicius, Philaretus *On Pulses;* Theophilus *On Urine; quemlibet librum Isaac*, viz., *librum urinarum, de dietis particularibus, et librum febrium, librum viatici, tres libros commentatos*, viz., *librum Tegni Galieni, librum prognosticorum, librum aphorismorum, librum de regimine oculorum et quod legerit cursorie ad minus unum librum de theorica et alium de practica*, etc.

Nearly two centuries after the dawn of the revival of anatomy in Italy, a young student from Norwich, John Key or Caius by name, having graduated from Gonville Hall, Cambridge, in 1539, proceeded to Italy. Having settled in Padua, he was there appointed professor of Greek language and literature, having become proficient in these studies in Cambridge, where the labour of the great Erasmus, of Queen's College, had given a new impetus to classical study.

While residing in Padua, Caius was for eight months a fellow lodger with the great Belgian anatomist, Vesalius, and it is reasonable to suppose that this companionship was the means of turning his attention to the new and attractive branch of study. Fired with enthusiasm, Caius devoted himself to his anatomical work under the guidance of Montanus, and when he had graduated as M.D. he returned to England in 1541.

In the Harveian Oration for 1761, Sir Thomas Baker claims for Caius the credit of introducing into England the practical study of anatomy, and I see no cause to doubt it, as the only English works on anatomy before his time, those of Vicary and Halle, are at best poor compilations from the earlier Italian writers.

In 1559 Caius became Master of the College which bears his name, and he set himself to make specific provision for the introduction of practical anatomy among the studies of the institution. In the statutes of the College, which came into force in 1572, there is one paragraph which expressly provides for the maintenance of anatomical teaching.

The entries in the burial register of the parish church of St. Michael bear testimony that this statute was no dead letter, and this is confirmed by the statements of Dr. Mede, of Christ's College, and of other contemporaries. These facilities for the study of anatomy gave to Caius College its character as a favourite place for medical study, which it has ever since maintained.

The lectures on anatomy delivered by Caius in London, as well as in Cambridge, attracted the attention of the Corporation of Surgeons to this new branch of study. From this time forth they set apart annually two of their number to give instruction to the younger members of their body. It is worthy of note that of the lecturers who discharged this duty between 1563 and 1663, six were Cambridge men. The new interest in anatomy induced a London engraver, Thomas Gemini, to reproduce on copper the anatomical plates of Vesalius, and to bring them out in a form accessible to the English student.

Among the medical students attracted to Caius College, one of the earliest on record was William Harvey, who joined the College in 1594, being then in his 16th year. Having graduated as Bachelor, he proceeded to Padua; but it is extremely probable that he had commenced his anatomy in Cambridge, as he seems to have at once attracted the attention of Fabricius ab Acquapendente, the Professor, and a special note of his proficiency was marked upon his diploma.

This is not the place to recount the labours or to sound the praises of the earliest and greatest of British physiologists. Suffice it to say that his writings have given the texts to the successive Harveian orators of the College of Physicians, and are as yet unexhausted. It was in his course of lectures delivered in 1615 that he first announced his views as to the circulation of the blood; but his classical work, *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*, was not published until 1628 (at Frankfort).

Harvey was not only a physiologist; he was an anatomist of no mean note. In the MS. fragment of his lectures preserved in the British Museum, and described by Sir George Paget, there is evidence of the care with which he describes the different parts referred to.

During Harvey's lifetime there were not a few Cambridge men engaged in the study of anatomy. Helkiah Crooke, of St. John's College, published in 1616 a folio work on descriptive anatomy, under the title, Μικροκοσμογραφια. Winston, of Clare, three years Harvey's senior, lectured on anatomy in London, and published his *Compleat Anatomist* in 1664. Drake, of Pembroke, who graduated in 1627, was one of Harvey's stoutest allies in the controversy which arose in reference to the circulation. In this connection I may also name Sir George Ent, of Sidney Sussex College, "to whose incomparable pen Dr. Harvey owes half his glory, and to whose divine art both natural philosophy and anatomy owe the hints at least of the best part of their new discoveries."

Of the other stars of the brilliant galaxy who, in the earlier part of the seventeenth century, raised the fame of the Cambridge school, there are some who deserve special mention. Francis Glisson, of Caius, two years younger than Harvey, follows him very closely in point of eminence. It was one of his books which Haller characterised as *egregius liber ut solent hujus viri esse;* and the great Dutch physician Boerhaave calls him "*omnium anatomicorum exactissimus.*" He was a man of erudition, and of a philosophic mind. His admirer, Walter Charlton—no mean judge—puts him alongside of Bacon, and says of him that he had the felicity to improve whatever he borrowed, and to raise illustrious theories from obscure hints. He deserves the credit of having given the first accurate description of the lacteals of the stomach, as well as the structure which bears his name, and he noted the vas-

cular area of the chick. The fame of Glisson attracted to Cambridge a young Oxford student, who, having discovered that there were, throughout the body, vessels like those which Aselli, of Cremona, had found in the wall of the digestive canal, migrated hither to work with Glisson. Jolyffe joined Clare College, and he shares with Bartholin and Rudbeck the honour of being the discoverer of the lymphatic system.

Another classic anatomist of this period was Thomas Wharton, of Pembroke College, born in 1614. Having studied anatomy both in Cambridge and London, he published in 1656 a remarkable work—*Adenographia*—wherein he describes, among other structures, the ducts of the submaxillary glands to which his name has been attached. In later days a newer Cambridge investigator, Langley, has given us our best and most detailed observations on the structure of these glands.

Among others interested in pursuits allied to anatomy at this time, we find the name of Croone, of Sidney Sussex College, the founder of the periodic Croonian Lectures, and himself the author of a paper on embryology. He was a close friend of Martin Lister, of St. John's College, notable for his researches on the anatomy of the mollusca. Briggs, of Corpus Christi College, who resided in Cambridge, published here in 1676 his work on the eye—*Ophthalmographia*—and is chiefly known as having been a friend of Isaac Newton, and the man from whom Newton learned whatever of anatomy he knew.

Two other migrants from Oxford in the later years of the century were here engaged in anatomical research. Tyson, one of the earliest and most painstaking of comparative anatomists, joined Corpus Christi College, and in the same year published his work on the anatomy of the porpoise. Subsequently he published "*The Anatomy of a Pygmy*," being the first recorded dissection of the orang-outan.

The other migrant, Humphrey Ridley, joined Pembroke College, and here matured and finished his monograph on the *Anatomy of the Brain*, one of the most accurate of the early descriptive treatises on that subject.

Of the other seventeenth century Cambridge anatomists there are two who cannot be passed by without notice: Clopton Havers, of St. Catharine Hall, in his *Osteologia Nova*, described, in 1670, those vascular canals in bone with which his name is associated, and the fatty masses in joints we have learned to call Haversian bodies. The other writer is James Drake, of Caius, the author of a very creditable work—*Anthropologia Nova*. On leaving Cambridge, Drake had given up anatomy and commenced authorship as a play-writer, but his first essay in that department—*The Sham Lawyer*—although performed at Drury Lane, proved unsuccessful. Turning then to history and politics he narrowly escaped prosecution and the pillory through a fortunate error in the drawing out of the indictment against him. Finally he returned to the less exciting task of writing a treatise on anatomy, which was published in 1707, and which, in the succeeding twenty years, went through three editions.

The Corporation of Surgeons kept up their connection with Cambridge in the seventeenth century by the maintenance here of scholars from time to time, to whom they allowed 40 shillings annually for maintenance and 20 shillings for the purchase of books. None of their scholars, however, attained to any note in anatomical science.

The amount of anatomical study required of candidates for graduation in medicine, during the seventeenth century, was small, attendance at the dissection of at least two bodies being specified in the statutes. In the statutes of Trinity College, Dublin, which were closely modelled upon those of Cambridge, it was ordained that every candidate must bring certificates of having been present at three anatomies.

The method of anatomical study was of the simplest, and not very systematic. The dissections only took place in winter. The bodies were opened, the viscera taken out and examined, the brain and spinal cord removed, then the muscles of the limbs were dissected and finally the skeletons were preserved, usually as natural skeletons. These dissections took place in private rooms in the colleges, there being no central place set apart for the special purpose.

Down to the end of the seventeenth century there was no official representative of the science of anatomy; but the Regius Professor of Physic was by ordinance of 1627 directed preside at the demonstrations. In the early years of the eighteenth century, however, there was a general movement in all the great university centres in the direction of providing systematic teaching. In 1705 Dr. Elliott applied to the Town Council in Edinburgh to be allowed to give instruction in anatomy, and by a minute of August 29th, in that year, they granted his request; but he was not definitely appointed as a university professor, and the name professor is not used in connection with the subject until some years later.

As through the instrumentality of Caius Cambridge had taken a foremost place in introducing anatomy as an academic study, so now of their own motion the University took action in appointing a definite professor of the subject, and in 1707 a grace passed the senate founding a separate professorship of anatomy. Dublin followed suit in 1711, and Oxford in 1803. There had been in Oxford, in 1627, a titular professorship founded under the title of Tomlin's Professor of Anatomy, but by the founder's will this was not a separate post but only an appanage of the Regius Professorship of Physic, and a separate professorship was only founded under the will of Aldrich in 1803.

A portion of the disused printing office was set apart in 1707 as an anatomy house for the use of the new professor.

As has often happened, however, the foundation of the new chair in Cambridge was not productive of any increased interest in the subject. George Rolfe, the first professor, held office for twenty-one years, and was finally dismissed from his post for non-residence. The second professor, John Morgan, Fellow of Trinity, held office from 1728 until his death in 1737. No record remains of his work as far as I can discover, but we have indirect evidence that anatomy was diligently studied at that time, for in the later years of his professorship the resurrectionist was busy in the neighbourhood of Cambridge. In 1734 a body, exhumed from a neighbouring churchyard, was traced into Emmanuel College, and the pursuers obtained a warrant from a magistrate, Mr. Pern, to search for it. I need hardly remind you that this was quite illegal, as there is legally no recoverable property in a dead body. It was, however, meekly submitted to, but the body was so carefully concealed that it was not to be found.

An effort was made to introduce an Act for the better enabling the Faculty of Physic to take for dissection the bodies of persons who were executed for felony and other crimes, but owing to the opposition it encountered the Bill was dropped.

Very soon after a private arrangement was made whereby two bodies were sent up to Cambridge from London each year for the professor's public demonstrations; these were supplemented by others obtained privately from other sources. This, however, became a matter of such notoriety that a statute was passed in 1752 forbidding students from taking part in the procuring of bodies.

Morgan was succeeded by George Cuthbert, Fellow of Trinity, who held office only for one year, and was followed by Robert Bankes, of King's College, a Fellow of the College of Physicians, who filled the chair until his death in 1746. There was in that year a contest for the office; Gibson, a Fellow of Jesus, succeeded in obtaining it by 55 votes, the unsuccessful candidates—Hutchinson, of St. John's, and Scotsman, of Caius, receiving 43 and 42 votes each. Gibson held the professorship until 1753.

This first half century of the professorship was a singularly barren period: I can find no traces of any research, or of any teaching worthy of the name. There seems to have been no museum, and if we may judge from the references in contemporary pamphlet literature, the endowment of the science seems to have extinguished all interest in it. In *A Letter from a Physician in Town to his Friend in the Country*, published by Miller in 1753, the author finds fault with the College of Physicians for giving special privileges to men from the universities: "Medicine is not regularly taught either in Oxford or Cambridge. The professors do not always reside, and seldom teach physic." And he satirically adds: "I would by no means be thought to intimate that a physician bred at Oxford or Cambridge must be inferior to one who has studied at other universities. There are geniuses who surmount every disadvantage."

The ease with which degrees were to be obtained by those who resided at the universities is referred to in another

pamphlet, *Pharmacopolæ justificati*, published by Roberts in 1724, in which the author says that the student "need not fear being denyd a degree in physick from the University, for I think I may affirm that there are very few or no instances of persons stopped for insufficiency in that study."

Gibson's successor, Charles Collignon, Fellow of Trinity, was in some respects a remarkable man. He has left behind a sample of his teaching, having published in 1756 a syllabus of his course, *Compendium Anatomico-Medicum eorum quæ in Scholis apud Cantabrigienses mense Martio quotannis explicat demonstratque Charles Collignon, M.D.* His course consisted of twenty-eight lectures, but he says that they were not always delivered in the same order. He did not teach or lecture except in the Lent term. The professor also published in 1763 his introductory lecture, under the title *Tyrocinium Anatomicum*. His style is of the stilted rhetorical character so common at this period. Thus he speaks of the nervous system as "a kind of boundless ocean—a deep unfathomable abyss. The nerves are those (almost tyrannical) instruments of sensation, without which we can have no bodily perceptions, and by means of which we can suffer such variety of pain." He tells us that in his lectures he combined with the anatomy "a mixture of physiology which properly interspersed greatly relieves the nauseous satiety of bare descriptions." In spite of this, if the *Tyrocinium* is a fair sample, his lectures must have been uncommonly dull for his class, if he had any.

Leaving the beaten track of anatomy, Collignon published a heavy tractate, entitled, *Medicina Politica*, in 1765. The year before he brought out a popular treatise, entitled, *An Inquiry into the Structure of the Human Body, relative to its Supposed Influence on the Morals of Mankind*. He also published an equally dull work, *Moral and Medical Dialogues*, in which his characters, Hortensius, Sophronius, Cleanthes, Philalethes, and Ariston discourse of Nature, habit, etc.

During Collignon's professorship, a strange and gruesome incident occurred in the history of our school. Near the end of the Lent term of lectures in 1768, the professor invited two friends to see an interesting dissection which he had prepared to illustrate his lecture for March 26th. The body was one which had been procured from a resurrectionist who had brought it from town. The friends accompanied him to the room, and during the dissection one of them uncovered the face of the body, and recognised it as that of Laurence Sterne, whom he had known in his lifetime. Poor Tristram Shandy had died in an obscure lodging, and had been followed to his grave by two friends. His place of interment was St. George's Burial Place at Tyburn, a favourite spot for the operation of the resurrectionists, and it was disinterred probably that night, and brought to Cambridge and sold to Collignon. Malone records that he had the story directly from the lips of the gentleman who had recognised him, and at a later date it is recorded that the Rev. Thos. Greene stated that he had seen the skeleton of Sterne in Cambridge. What the ultimate fate of the poor satirist's bones has been I cannot discover. I am informed by Mr. J. W. Clark that the story was current when his father was appointed professor in 1817. I cannot identify any skull in the collection as that of the author of *Tristram Shandy*, who, having so tragically ended his sentimental journey of life, returned after death to his old university. It is a strange coincidence that of the two great Irish satirists of that period, the skull of Swift should have temporarily sojourned on the shelves of the museum in Dublin, and that of Sterne in the collection at Cambridge.

On the death of Collignon, Busick Harwood of Christ's, and afterwards of Emmanuel, College was elected to the chair, which he held until 1814. Shortly after his election he commenced the publication of a large work on comparative anatomy, but, not receiving sufficient encouragement, one part only was published, that on the organ of smell. It is a matter of regret that the project fell through, for the part of the work issued shows originality and erudition, and is beautifully illustrated. It was translated into German, and published under the editorship of Wiedemann. To Harwood we owe the formation of our anatomical museum, as he prepared a series of specimens to illustrate his lectures, and the University purchased these at his death.

The gossipy chronicler, Gunning, tells many amusing incidents of Harwood's domestic life. He tells us that in his day Cambridge was but a poor school for medicine. Harwood had been in practice in India for some years before coming to Cambridge. He lectured on comparative anatomy, "and it was no unusual thing to see the turbot on which Mr. Orange, his demonstrator, had exercised his skill one day, carved by the professor on the following."

Haviland, of St. John's, succeeded Harwood, and held the chair for three years; and, being elected into the Regius Professorship of Physic, he was succeeded by Dr. Clark.

Dr. Clark entered upon his office in 1817, and held the professorship for forty-nine years. He is best known to science as the translator of Van der Hoeven's *Zoology*, and he has earned the gratitude of the University by his untiring labours in the formation of a creditable museum. Conscious that the teaching of anatomy, more especially of comparative anatomy, in which, rather than in human, he was particularly interested, could not be carried on without a collection, Professor Clark added largely to the nucleus of Harwood's Museum. He procured from Italy a number of anatomical models in wax, purchased a number of specimens from Brookes's Museum, and the whole of the collection made by Professor Macartney, of Dublin.

The Macartney collection deserves a special word in passing, but I refrain from more full reference at present, as I hope shortly to publish a biographical notice of that distinguished man. He had, while lecturing on comparative anatomy at St. Bartholomew's in the early days of the century, commenced to prepare a series of illustrative specimens, which Sir Charles Bell, Brodie, and Home pronounced to be the most beautiful dissections they had ever seen. During his twenty-one years' service as professor in Dublin, he had added to this museum until his specimens numbered over 2,000. When elected to the professorship in Dublin he found a museum of fewer than 100 specimens, a lecture class of 15, and a dissecting roll of 3 students. He raised the class to be the largest in the kingdom, and attracted to it men from all parts; but he met the fate of a reformer, and was in the end forced to resign. The authorities in Dublin having refused to buy his museum, he offered it to Dr. Clark, who most willingly secured it, Cambridge giving him for it an annuity of £100 a year for ten years. Clark's museum consisted of 1,307 specimens, and with this accession of 2,000 it became one of the best selected and richest collections in Europe. In 1837 Clark writes to Macartney to tell him how much admired the collection. He says that Owen and Buckland having come to Cambridge to examine the fossils in the Woodwardian Museum, were so much taken with Macartney's specimens that they spent most of their time in the Museum of Anatomy. "In short, your museum is the chief lion of Cambridge."

Hitherto there had been only one professorship in subjects relating to animal life and organisation; but in the beginning of the second half of this century rapid changes were in progress in biological science in general and in the Cambridge School in particular. On the one hand, the growth of knowledge and of interest in biology was rapid and unprecedented, and on the other, the more purely medical side of the Cambridge School of Natural Science, so long dormant, began to show signs of reviving life, owing chiefly to the labours and influence of two men—Sir George Paget and Sir George Humphry.

In consequence of this growth the duties of the chair were divided, even during Clark's professorship (about 1852), Dr. Humphry taking the lectures in human anatomy and the Professor retaining those in comparative anatomy. On the occurrence of a vacancy in the professorship in 1866 the subject of anatomy was divided, Professor Humphry being elected into the Chair of Human Anatomy and Professor Newton into into the newly-founded Chair of Zoology and Comparative Anatomy.

Of the progress of the department since that time there is no need for me to speak. The labours of him whom our gracious Sovereign has recently delighted to honour are fresh in our memories, and we all most heartily unite in wishing that he may be spared for many years to participate in the prosperity of our University Medical School, whose present vigour and activity are so largely due to him. In many branches of anatomy the researches of Humphry have become classical. His work *On the Human Skeleton* was an

epoch-making monograph in British anatomy, and his various works on myology are all of the highest importance to comparative anatomists. It was, therefore, a well-merited tribute to his position as the foremost of British anatomists that he was chosen as the first President of the Anatomical Society of Great Britain and Ireland.

ON THE ACTION OF APOMORPHINE AND APOCODEINE, WITH REFERENCE TO THEIR VALUE AS EXPECTORANTS IN THE TREATMENT OF CHRONIC BRONCHITIS.

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A.—Apomorphine.

The discovery of apomorphine is usually ascribed to Matthiessen and Wright, although there is reason to suppose that they were to some extent forestalled by Arppe. At a meeting of the Royal Society held on June 10th, 1869, Mr. Augustus Matthiessen and Mr. C. R. A. Wright read a paper received on May 6th of the same year, "On the Action of Hydrochloric Acid on Morphine,"[1] and in this communication they gave particulars of the mode of preparing a substance, for which they proposed the name of "apomorphia." It is not necessary to give all the details of their method, but it practically amounted to this, that they took some morphine, sealed it up in a tube with a large excess of hydrochloric acid, and kept it at a temperature of from 140° to 150° for two or three hours. On breaking open the tube it was found to contain the hydrochlorate of the new base apomorphine. It was purified by dissolving in water, adding an excess of bicarbonate of sodium, and extracting the precipitate with ether or chloroform. On shaking up the solution with hydrochloric acid the sides of the vessel became coated with crystals of the hydrochlorate. These were drained from the mother liquor, washed with cold water, recrystallised from hot water, and dried on bibulous paper, or over sulphuric acid. This was the way in which they originally obtained their apomorphine, but they found on further investigation that the new base might also be prepared by digesting morphine with excess of hydrochloric acid for some days on a water bath under paraffin. In this process the morphine loses a molecule of water, and becomes converted into apomorphine (morphine, $C_{17}H_{19}NO_3 = H_2O + C_{17}H_{17}NO_2$, apomorphine). They found that apomorphine might also be obtained by heating codeine with hydrochloric acid according to the formula (codeine, $C_{17}H_{17}(CH_3)HNO_3 + HCl = CH_3Cl + H_2O + C_{17}H_{17}NO_2$, apomorphine). It is probable that in this reaction there is an intermediate product, but with this we are not for the moment concerned.

These same observers showed that apomorphine was formed when morphine was heated with dilute sulphuric acid in sealed tubes for some hours at a temperature of from 140° to 150°. This is pretty much what was done nearly a quarter of a century previously by Arppe,[2] his product, which was probably an impure sulphate of apomorphine, being subsequently named by Laurent and Gerhardt "sulphomorphide." This sulphomorphide turned green on exposure to light and air, and gave the reactions now ascribed to apomorphine.

In a paper by Matthiessen and Burnside,[3] the authors called attention to the fact that apomorphine might be prepared by heating morphine with chloride of zinc. This method of manufacture seems to have been suggested by E. L. Mayer,[4] who worked at the subject in conjunction with Matthiessen.

[1] *Proceedings of the Royal Society*, vol. xvii, p. 455.
[2] "Über eine merkwürdige Veränderung des Morphins durch Schwefelsäure, *Annalen der Chemie und Pharmacie*, vol. xl, 1845, p. 96.
[3] *Proceedings of the Royal Society*, vol. xix, 1871, p. 71.
[4] *Berichte deutsch. chem. Gesell.* Berlin, 1871, vol. iv, p. 121.

The hydrochlorate of apomorphine prepared by these different methods was distinctly crystalline, and its crystalline form was determined by Professor W. H. Miller.[5] When exposed for some time to the action of air and light it turned green, probably from oxidation. The reason for supposing that the change in colour was due to oxidisation was that, under these conditions, the salt increased in weight. The green mass was soluble in water, communicating to the solution a bright emerald green colour. It dissolved in alcohol, forming a green solution in ether and benzol, giving a magnificent rose purple, and in chloroform a violet pink. It was found, too, that it gave certain characteristic colour reactions with nitric acid, perchloride of iron, and other reagents.

Some of the specimens of apomorphine obtained by Matthiessen and Wright were submitted for investigation to Dr. Gee, who published two papers on the subject. The first of these was read before the Clinical Society,[6] and the second was published in the *St. Bartholomew's Hospital Reports*.[7] Dr. Gee established the fact that when the hydrochlorate of apomorphine was injected subcutaneously in doses of a tenth of a grain, it acted as a speedy emetic. He also mentioned the circumstance that "a gentleman who was working with the new base, and who had his hands sometimes wetted with the solutions, frequently vomited three or four times in the course of the evening," presumably from its absorption by the skin. Dr. Gee seems also to have supposed that it acted equally well as an emetic when taken by the mouth, for he quoted the case of a man who, after taking ⅓ of a grain, "felt dizzy and depressed, with an uncomfortable sensation in the head, and vomited freely in twenty-five minutes." That this was not regarded as exceptional seems to be established by the fact that in a summary of the advantages of the drug, Dr. Gee says: "As much can be raised by the tip of the little finger as will cause vomiting when taken by the mouth," and in his second paper he adds: "To the best of my knowledge apomorphine has never been administered in an emetic dose (namely, $\frac{1}{10}$ grain subcutaneously, or ¼ grain by the mouth) without producing speedy vomiting."

During the next four or five years a good many papers appeared on the action and properties of apomorphine, the most noteworthy contributions being by Dujardin-Beaumetz, of Paris;[8] Siebert, of Dorpat;[9] Max Quehl—[10] under the direction of Professor Köhler—Bourgeois;[11] Routy;[12] Carville; Charcot; Chouppe;[13] Trousseau and Pidoux; Théodore Verger;[14] Vulpian and Juratsz.[15] Reichert, in an inaugural thesis published in 1880, gave an elaborate account of its physiological action, but no serious attempt seems to have been made to controvert the statement that it uniformly acted as an emetic when administered in small doses by the stomach. It was pretty generally accepted that it produced emesis by whatever channel it was introduced into the system, and that solutions could not be employed with safety when once they had commenced to change colour.

In 1881, being anxious to obtain a good emetic for use in cases of poisoning, I made some observations on apomorphine, and found: (1) That it acted promptly as an emetic when injected hypodermically. (2) That no emetic effect was produced when given by the stomach in small doses. (3) That its properties were not impaired by keeping; and (4) That it differed so completely in action from morphine that there was no reason why it should not be given as an emetic in cases of poisoning by opium. As a proof that the drug does not deteriorate by keeping, I may mention that I gave a patient a hypodermic injection of 4½ minims of a 1 in 50 solution of the hydrochlorate, which had been exposed to the light for three months, and had assumed a dark green colour, and in less than two minutes it acted powerfully, and completely evacuated the stomach. Six months later I used the

[5] *Proceedings of the Royal Society*, vol. xviii, p. 88.
[6] On the Action of a New Organic Base, Apomorphia, *Transactions of the Clinical Society*, vol. ii, 1869, p. 166.
[7] Note upon Apomorphia and Chlorocodide, vol. v, 1869, p. 215.
[8] *Bulletin Général de Thérapeutique*, October 30th, 1874.
[9] *Untersuchungen ueber die physiologischen Wirkungen des Apomorphins*, Dorpat, 1871.
[10] *Ueber die physiologischen Wirkungen des Apomorphins*, Halle, 1872.
[11] *De l'Apomorphine, Recherches cliniques sur un nouvel Emétique*, Paris, 1874.
[12] *De l'Emploi de l'Apomorphine comme Vomitif administrée par Injection hypodermique*, Paris, 1874.
[13] *Gaz. hebd.*, December, 1874.
[14] *Bull. de Thérap.*, No. 32, p. 499, 1877.
[15] *Centralblatt f. d. med. Wiss.*, p. 499, 1874.

same solution in the same dose for another patient, and it acted equally promptly, the patient vomiting at intervals for over an hour.

In the *British Pharmacopœia* of 1885, the injectio apomorphinæ hypodermica (1 in 50) was made official, with the misleading direction that "the solution should be made as required for use." About this time attention was directed on the Continent to the use of apomorphine as an expectorant. Juratsz recommended it for internal use for this purpose in doses of from $\frac{1}{60}$ to $\frac{1}{30}$ of a grain. He gave it in a mixture with simple syrup and a few drops of hydrochloric acid. In 1881 Beck[16] advocated its use in doses of $\frac{1}{4}$ of a grain every three or four hours; and in 1882 Rossbach[17] published some cases in which he had administered it in doses of from 5 milligrammes to 1 centigramme, or from $\frac{1}{12}$ to $\frac{1}{6}$ of a grain. Dr. Wertner,[18] of Wartberg, in Hungary, used it in doses of 2 centigrammes, or $\frac{1}{3}$ of a grain. One of Wertner's cases is interesting, the patient having by accident taken, without serious inconvenience, ten times the dose intended, or over 3 grains. The only English writer who appears to have paid any attention to the subject is Dr. Charteris, of Glasgow, who in a communication published in 1881 mentions casually that on two occasions he gave $\frac{1}{12}$ of a grain by mouth without any bad result.

Some three years ago, whilst casting about for a new expectorant for use in cases of bronchitis, I determined to try the hydrochlorate of apomorphine by mouth. My first endeavour was to determine the dose. At first I gave it in very small doses, for I was impressed by Dr. Gee's very positive statement that in doses of $\frac{1}{4}$ of a grain it uniformly acted as an emetic. I had to feel my way cautiously, for the majority of my patients were out-patients whom I saw but once a week, and I was especially anxious to avoid giving anything like an overdose. For convenience of dispensing, I usually employed a 1 per cent. solution, and not the 2 per cent. solution of the *Pharmacopœia*. I began with a 5-minim dose (gr. $\frac{1}{20}$), and worked my way up drop by drop until I found that the majority of my patients could take a grain of apomorphine three times a day without inconvenience. Of late I have considerably exceeded this dose, and I have now under treatment several patients who take 1½ or 2 grains three times a day without any difficulty. I have not kept notes of all the cases treated by this method, but I have full notes of forty patients who have been under observation during the present winter. The majority were out-patients at the Westminster Hospital, a few were under my care in the wards, and a still smaller number were private patients. With one or two exceptions, to which I will presently refer, they were all suffering with what for the sake of convenience may be called "winter cough," that is to say, bronchial catarrh or chronic bronchitis with or without emphysema. Some of the patients were men, others were women. The list included a man aged 76, another aged 71, a third aged 70, and two children whose ages were respectively 5 months and 7 months.

On finding that such large doses could be given with impunity, I experienced some doubt as to the purity of the drug. I made inquiries as to the source of the supply, and found that several different specimens had been used for making the solution, and that they had been obtained in the ordinary course from the chemists who supply the hospital with drugs. Most of them were crystalline, and answered to the ordinary description of apomorphine as given in the *Pharmacopœia*, but one or two were amorphous. I tested them, and found that they all gave the ordinary colour reactions with nitric acid and with perchloride of iron, as described by Matthiessen and Wright, and adopted in the *British Pharmacopœia*.

It was obviously necessary to ascertain if the apomorphine I was using would produce an emetic effect if injected hypodermically. In out-patient practice it is rarely necessary to give emetics, but fortunately there happened to be in the wards a lad of 16 for whom an emetic was required. He was admitted for chorea, but was suddenly seized with an acute attack of dyspepsia. The house-physician, Mr. A. M. Cato, gave him, at my suggestion, a hypodermic injection of 5 minims of a 2 per cent. solution of the hydrochlorate dispensed from the particular specimen of the drug at that time in use for the out-patients; it had not been long prepared, but was dark green in colour. The injection was administered in the forearm, and the patient vomited in thirty-five seconds. The onset of the vomiting was so sudden that he had no time to avail himself of the porringer which had been placed in readiness, but deposited the contents of his stomach on the floor. The vomiting continued at intervals for four or five hours, with much relief to the patient. His chorea seemed to be so much better that on the 25th he was ordered 5 minims of the same solution three times a day by mouth. On December 2nd this was increased to 10 minims, on the 8th to 15 minims, on the 9th to 30 minims, and on the 16th to 40 minims without the production of any emetic effect. The medicine was given in the ordinary course, and there was no doubt that he took it. One thing was perfectly clear, that a patient who was made violent sick by $\frac{1}{6}$ of a grain given hypodermically could take $\frac{2}{3}$ of a grain by mouth three times a day, or $2\frac{2}{3}$ grains daily, without the slightest inconvenience.

In the majority of cases the apomorphine was given in the form of solution, but in one or two cases I had it made into pills. A patient, aged 21, came to me suffering from well-marked phthisis. He had had a cough for three years, and had on four occasions suffered from profuse hæmoptysis. He had a moist cavity at the base of the right lung, and rhonchus was to be heard all over the chest on both sides. On December 21st I ordered him $\frac{1}{60}$ of a grain of hydrochlorate of apomorphine, to be taken three times a day, and on the 28th $\frac{1}{30}$ of a grain three times a day. On the 31st the dose was increased to $\frac{1}{12}$ a grain three times a day, and on January 4th to 1 grain three times a day. The pills were taken after meals, and the only effect was to make him expectorate very freely. On January 6th he was ordered a pill containing 1¼ grain three times a day. He took twelve pills, and then complained that they made him feel rather sick, but not enough to cause him any inconvenience. On January 10th he was ordered 1½ grain three times a day, and this seems to have exhausted his capabilities in this direction, for he took only five of them and said he was unable to continue the treatment on account of the nausea they produced. I may mention that this was not a hospital patient, and that every precaution was taken to obtain a reliable specimen of the drug.

Although these large doses of apomorphine, when given by mouth, failed to produce either nausea or emesis, they exerted a powerful expectorant action in cases of chronic bronchitis. I give a brief abstract of a typical case which occurred in hospital practice.

W. A., aged 67, is a horsekeeper by occupation, and is engaged in omnibus work. Is in the yard exposed to all weathers from 6 in the morning till 8 at night. Is well enough in the summer, but has had a bad cough every winter for the last fifteen years. He coughs all day, and expectorates in the intervals. Has lost flesh a little this winter, but not more than usual. On examination it is found that the chest is emphysematous, that expiration is prolonged, and that there is moist rhonchus all over, but especially at the bases posteriorly. On November 12th he was ordered ½ a drachm of the 1 per cent. solution three times a day, with syrup of tar. On November 15th he reported that he had expectorated a great deal, and to use his own words, he "regular vomited it up;" but he was not sick. The dose was increased to 1 drachm three times a day. On the 19th he said that the phlegm came up "much easier," and that the medicine "cleared the chest," and "made the breath freer." The dose was increased to 1½ drachm, and on the 22nd, the improvement still continuing, to 2 drachms three times a day. On December 3rd he was ordered 3 drachms three times a day. He reported that after the first dose he brought up in about half an hour quite half a pint of thick yellow phlegm; it was all phlegm each time, and there was no food with it. On December 6th the dose was increased to 200 minims three times a day, or 6 grains daily. This, too, gave him great relief and caused him no inconvenience. There was no headache and no nausea. This apomorphine, when given to another patient hypodermically in a dose of $\frac{1}{60}$ of a grain, produced vomiting in less than a minute. I have no doubt that for the production of its expectorant action large doses are much more efficacious than small ones.

[16] *Deutsche med. Wochen.*, February, 1881.
[17] *Berlin. klin. Wochen.*, No. 27.
[18] *Pest. med.-chir. Presse*, No. 18 and 19, 1882

In a few cases apomorphine given by mouth produced nausea and vomiting. One patient, an Irish-American, and a gas worker by occupation, had taken a drachm of the 1 per cent. solution three times a day for ten days without complaint. He was then ordered two drachms of the same solution once a day. Three days later he returned, and said that it had made him violently sick. On inquiry, it was found that he had taken it in the morning on an empty stomach. He was directed to take it after breakfast, and from that time experienced no inconvenience. The dose was subsequently increased to two and a half drachms three times a day, but there was no further complaint.

An almost identical case was that of a woman, aged 52. She was ordered a drachm of the 1 per cent. solution once a day for four days, and took it every morning before breakfast. Three mornings it made her feel sick, and on the fourth she actually vomited. She was then told to take the medicine immediately after dinner, and did so for four days without vomiting or experiencing any nausea. She was then ordered 1½ drachm once a day. Two mornings she took it before breakfast and was sick, and on the other two days she took it after breakfast and was not sick. She then took 2½ drachms three times a day without difficulty, and subsequently 3 drachms three times a day, or 5.4 grains a day, with much benefit to the chronic bronchitis from which she suffered.

Even when the patient complains of nausea it does not follow that it is due to the action of the drug. A hysterical girl of 17 complained that she was sick after each dose, but as on investigation it was found that she was sick "as soon as she looked at the bottle," very little importance was attached to her statement. A patient, age 33, a carman, was admitted into the wards suffering from phthisis, the physical signs being dulness at both apices and deficient movement, with coarse breathing all over the left front. He was ordered ½ a drachm of the 1 per cent. solution three times a day, and suffered from an attack of vomiting every morning. The medicine was at once discontinued, but the vomiting persisted, and was evidently the result of the violent cough from which he suffered, especially in the morning. A small dose of morphine promptly arrested it.

It is somewhat difficult to reconcile my results with those obtained by Dr. Gee. It may be urged that the specimens used by him, having been obtained direct from Matthiessen and Wright, were pure, whilst mine were adulterated. The fact that my specimens gave the ordinary reactions of apomorphine cannot be accepted as conclusive evidence that they were pure, for it must be remembered that the colour tests for apomorphine are very delicate, and that a small percentage of the drug mixed with some inert substance, such as sugar of milk, would give them almost equally well. One point in favour of the purity of the specimens I employed was that most of them were crystalline. My colleague, Dr. Dupré, very kindly undertook an examination of the specimen, which had been chiefly employed in making the solution, and was of opinion that it was pure. It not only gave the chemical reactions of apomorphine, but, on microscopical examination, it was seen that almost every particle was distinctly crystalline. He was satisfied that the impurity, if any, did not amount to more than 1 per cent.

It may, too, be urged that my solutions had undergone some chemical change by long keeping, and that they had deteriorated. In answer to this, I may say that although some of the solutions employed had been prepared for some time and had turned green, others were made as required for use and dispensed on the spot. An argument against the age of the specimen being the important factor is to be found in the fact already quoted, that a 2 per cent. solution which had been kept exposed to the light for a period of six months acted promptly as an emetic when injected hypodermically.

Then, too, it might be said that as I usually commenced with small doses and worked up to big ones a condition of tolerance was in some cases established. This explanation will not suffice, for in some cases I commenced with half-drachm or drachm doses of the 1 per cent. solution three times a day. Possibly the substance which we now call apomorphine is not identical with that submitted to Dr. Gee twenty years ago. There are, as we know, some four or five different methods of preparing apomorphine, and it may be that the product is not identical in every case. This is a possible explanation, but not at all a likely one. At all events, I know experimentally that the action of apomorphine prepared from codeine is identical with that of the apomorphine prepared from morphine.

Another possible explanation is that apomorphine, being a somewhat unstable body, undergoes some chemical change in the stomach. This, again, is not probable, for it will be remembered that hydrochloric acid is used in the preparation of the alkaloid, and there is no reason for supposing that the pepsin would in any way alter its chemical composition. The rate of absorption has probably more to do with it. When injected hypodermically it is absorbed at once, but when mixed with food in the stomach it is probably absorbed comparatively slowly. The fact that apomorphine administered on an empty stomach produces vomiting more readily than when given after meals throws some light on the subject.

With the view of testing the question of the rapidity of absorption I administered what would be an emetic dose of apomorphine if given hypodermically in the form of an ointment. I had three specimens prepared, one with lard, one with vaseline, and one with lanoline, each containing $\frac{1}{10}$ of a grain to the drachm. They were given to three different patients, with instructions that they should be rubbed into the chest before the fire at bedtime. They produced no emetic effect. The strength of the ointment was then increased in each case to ½ of a grain, and the result was the same. I subsequently employed an ointment containing a grain of apomorphine mixed with an ounce of lard or lanoline, directing the patient to rub in half the quantity on two consecutive nights. It acted as an expectorant, the effect lasting for some hours, but it induced no nausea. I repeated this in several cases, and the result was always the same. I presume that the fact of the drug being comparatively slowly absorbed affords an explanation of what at first sight appears an anomalous result. Practically it is a decided advantage to have at our disposal a drug which may be relied on to induce an expectorant effect when used in the form of an ointment. In the case of children suffering from bronchitis it is simply invaluable.

I have also employed apomorphine as a spray, on the lines of the old ipecacuanha wine treatment. I used for its administration a bottle with a conical bottom, the silver tube reaching to the apex, so that the whole of the solution could be utilised. I took care to observe the recognised precautions in such cases, using a warm solution, making the patient spit out the fluid which accumulated in the mouth, instructing him not to arch his tongue against the roof of the mouth, and making him inspire deeply with every contraction of the air ball. I began with 10 minims of the 1 per cent. solution in a little water for each inhalation, but I now frequently give as much as half a drachm at a dose. The expectorant effect is very marked, especially with the large doses. The results have exceeded my expectations, and I hope to give details of this method of treatment in a future communication. The point of interest with regard to the action of apomorphine is, that a dose which would act as an emetic, if administered hypodermically, can be used as an inhalation without inducing this effect.

Several writers have stated that apomorphine may, under exceptional circumstances, induce narcotic effects. I have notes of three cases which bear on this point; the first was a patient, aged 67, a stockbroker, who was under treatment for chronic bronchitis. I prescribed a mixture containing 10 minims of the 2 per cent. solution of hydrochlorate of apomorphine to be taken three times a day. He returned at the expiration of a week, and said that the medicine had made him expectorate freely, but that he could not continue taking it, as it made him so sleepy. On expressing my surprise, he added that "morphine always disagreed with him." He had evidently been trying to read my prescription, and detecting, as he thought, the word "morphia," had experienced the sensations which from former experience he had been accustomed to associate with that drug. On explaining the matter to him, he was perfectly satisfied, and continued taking the drug without any further complaint as to its narcotic action. I may mention incidentally that several of my patients have objected to taking "apomorphine" on the ground that "morphine never agreed with them." In another case, a patient, aged 58, a cattle salesman, took a drachm of the 1 per cent.

solution three times a day for a week without difficulty. I then increased the dose to 2 drachms three times a day, and the patient complained that it gave him a sharp pain across the forehead and over the bridge of the nose, and made him feel so sleepy, that he could hardly keep his eyes open. Curiously enough, on increasing the dose to 2½ drachms three times a day, he made no complaint. The medicine was then discontinued, but a month later he was given a drachm and a half three times a day. It caused him no inconvenience until the fifth day, when there was a slight return of the drowsiness and headache. He again discontinued taking it. Mr. Betts, the house-surgeon at the Westminster Hospital, gave a casualty patient 5 minims of the same solution hypodermically, and it not only failed to produce vomiting, but made him drowsy, and contracted his pupils. This result was so exceptional that I am inclined to think that the apomorphine must in some inexplicable manner have become mixed with morphine. The specimen was submitted to Dr. Dupré for examination, but unfortunately the quantity was too small to enable him to give a decided opinion. It will be remembered that ether is used as a solvent in the preparation of apomorphine, and it is usually stated that morphine is insoluble in that menstruum, but I am informed on reliable authority that this insolubility is not complete. Professor Wormley, in his *Micro-chemistry of Poisons*,[19] states that morphine requires 7,725 parts of absolute ether for its solution, and that commercial ether dissolves one part of the alkaloid in 4,225 parts of the liquid.

There is no reason why apomorphine should not be given in combination with morphine. Rossbach speaks highly of this mixture in the treatment of phthisis, and says that it lessens the frequency of the cough and increases the fluidity of the sputum. Lauder Brunton says: "When apomorphine and morphine are given together, they do not destroy each other's action, so that from the combination we get increased secretion from the mucous membrane, with diminished irritability of the respiratory centre, and consequently lessened cough. The cases in which the combination is useful are those where there is difficulty in breathing, continual cough, and thick tenacious mucus."

In the majority of cases of winter cough which have been under treatment I have given the apomorphine in a mixture flavoured with either syrup of Virginian prune, syrup of tar, or syrup of lemons. I do not know that this is the best form in which to give it, especially as in some cases the mixture after a time assumes a dirty green colour; but there are so many colour reactions for apomorphine that our pharmacists should have no difficulty in devising a formula which would meet this objection.

I have treated a few cases of bronchorrhœa with small doses of apomorphine with success. On November 5th, Dr. Edgeworth, of Bristol, wrote to me saying that he had suffered from a cough every year for many winters, and that fifty or sixty times a day he expectorated a large quantity of frothy phlegm. I ventured to suggest that he should take ⅟₂ of a grain of apomorphine in a teaspoonful of syrup of tar every two or three hours. On December 9th he wrote saying that the expectoration had been reduced by quite one-half, and that he rarely expectorated more than twelve times a day. He added that at first he had experienced some difficulty in taking the syrup of tar made according to the *United States Pharmacopœia* formula, but that on substituting glycerine for the sugar the difficulty had at once disappeared. He says: "I think the alteration is a good one for general use," and in this expression of opinion I certainly agree with him. In the French *Codex* there is a preparation of tar known as "glycéré de goudron," but it is made with glycerine of starch and not with glycerine.

Apomorphine has in addition been used with success for a variety of purposes: to remove foreign bodies from the œsophagus, to ward off an attack of epilepsy, to check hæmoptysis and *post-partum* hæmorrhage, and in the treatment of chorea, laryngismus stridulus, and whooping-cough.

B.—Apocodeine.

In 1869 Matthiessen and Wright published two papers[20] on the Action of Hydrochloric Acid on Codeia, but seem to have experienced some difficulty in arriving at any definite result. In 1870 Matthiessen and Burnside published a paper[21] on the Action of Chloride of Zinc on Codeia, in which they describe in minute detail the method of obtaining apocodeine when hydrochlorate of codeia is heated for fifteen minutes at a temperature of from 170° to 180° C. with a concentrated solution of chloride of zinc, decomposition taking place according to the reaction: (codeine, $C_{18}H_{21}NO_3 = H_2O + C_{18}H_{19}NO_2$, apocodeine). On cooling, a yellowish-brown tarry mass separates from the liquid, and may on further cooling be drawn into thin threads, and obtained almost free from the excess of chloride of zinc. This amorphous silk-like mass is almost pure hydrochlorate of apocodeine. To obtain the base the hydrochlorate is dissolved in hot water and precipitated by hydrochloric acid. The liquid containing the precipitated hydrochlorate is allowed to cool, and the precipitate on solidifying is separated from the acid solution. The operation of dissolving and reprecipitating with hydrochloric acid is repeated several times, and lastly the hydrochlorate is dissolved in water, precipitated with carbonate of sodium, and the base extracted with ether. On evaporating the solution in ether, the base remains behind as an amorphous gum-like reddish mass, which is subsequently powdered and dried in a water bath.

Apocodeine itself is soluble in alcohol, ether, and chloroform, but is almost insoluble in water, and has not been obtained in a crystalline form. The hydrochlorate obtained by shaking the solution of the pure base in ether with hydrochloric acid and evaporating to dryness is freely soluble in water, but is not crystalline. The action of reagents on apomorphine and on apocodeine is almost identical, with the exception that the blood-red colour yielded with nitric acid is much more permanent with apocodeine than with apomorphine. Between the two bases a marked difference was found to exist with respect to stability, apocodeine being in this respect far in advance of apomorphine; the hydrochlorates also differ, for the apomorphine salt is crystalline whilst the apocodeine is amorphous. The preparation of apocodeine is easy and simple, yielding a very large product, and in this respect, too, it differs very materially from apomorphine, the preparation of which is tedious whilst the yield is uncertain.

The apocodeine prepared by Matthiessen and Burnside was submitted for examination to Dr. J. Wickham Legg, who, in a paper entitled "Observations on the Physiological Action of Apocodeia and of the Hydrochlorate of Cotarnamic Acid,"[22] reported that "when given in doses of 1, 2, or 3 grains to a healthy man no appreciable effect was produced." He added: "It is obvious that apocodeine is wholly unfitted for subcutaneous injection. In the only instance in which it was practised ⅟₆ of a grain injected under the skin of the forearm produced great redness, tingling, and considerable suffering for more than a week." His observations appear not to have been carried beyond this point.

Dr. Dujardin-Beaumetz states that apocodeine possesses all the therapeutic properties of apomorphine, but in a modified degree. He says that it is an emetic, and has been found useful in the treatment of hæmoptysis, croup, and whooping-cough. He recommends it hypodermically in doses of ¼ grain and by the mouth in doses of ⅔ grain. I have been unable to find any other account of the use of the drug in the treatment of disease.

In 1881, whilst working at apomorphine, I made some observations with apocodeine with the view of ascertaining its possible value as an emetic in cases of poisoning. I took care to obtain a reliable specimen, and administered to two patients hypodermically 15 minims of a freshly prepared 1 in 50 solution, but without exciting either nausea or vomiting. Both patients vomited promptly after an injection of 5 minims of a 1 in 50 solution of hydrochlorate of apomorphine. The hydrochlorate of apocodeine employed was amorphous.

During the last few months I have repeated these observations. A patient, aged 48, was under my care suffering from chronic bronchitis. His cough was very violent, he was emphysematous, and moist rhonchus was to be heard in abundance over both front and back. On November 5th I gave him an injection of 5 minims of a 1 per cent. solution of

[19] J. B. Lippincott, Philadelphia, 1885.

[20] *Proceedings of the Royal Society*, vol. xvii. p. 469, and vol. xviii. p. 83.

[21] *Ibid.*, vol. xix. p. 71.

[22] *St. Bartholomew's Hospital Reports*, vol. vi, p. 97.

hydrochlorate of apocodeine, but no effect was produced. On November 8th I gave him an injection of 15 minims of the same solution. In eleven minutes he commenced expectorating freely, and the expectoration continued during the rest of the day. He was not sick, and there was no irritation at the seat of injection. On November 12th he was given an injection of 15 minims of the solution in the right arm, and 5 minims in the left. He again expectorated freely, but there was neither nausea nor vomiting. This time he complained that the injection made his arm sore. There was a good deal of tenderness and swelling, which persisted for some days, but there was no abscess. I tested the solution with litmus paper, and found that it was acid. I then reverted to the specimen of apocodeine used in 1881, and had a 1 in 50 solution prepared which was perfectly neutral. The same patient was given an injection of 20 minims of this solution—10 in the right arm and 10 in the left. This, too, acted as a powerful expectorant, but fortunately produced very little local irritation.

A freshly prepared specimen of the salt having been placed at my disposal, it was made into a 1 in 50 solution, and used in the case of a man aged 31, a gas stoker, who for many years had suffered from chronic bronchitis. On January 6th a hypodermic injection was given of 10 minims in each arm, or $\frac{2}{3}$ of a grain. He reported that he felt "a little bit queer" after the injection "just for a moment," but it did not make him feel sick. The arms smarted just a little for about an hour, but he did not notice anything the matter with them after that. On January 9th the same solution was used, and he was given a hypodermic injection of 10 minims in the right arm, and 15 in the left, or $\frac{1}{2}$ of a grain in all. It caused him to expectorate very freely, but he suffered no inconvenience, and the smarting in the arms was very slight. The solution employed in the case was perfectly neutral. In the face of these observations I cannot confirm Dr. Wickham Legg's statement that apocodeine is "wholly unfitted for subcutaneous injection." All that is necessary is to use a neutral solution.

In six cases I have used apocodeine by mouth as an expectorant with satisfactory results. The first patient was 70 years of age, and had long been under treatment. On September 24th he was ordered 10 minims of a 1 per cent. solution three times a day; on October 1st the dose was increased to 20 minims three times a day; on October 9th to 25 minims; and on October 29th to half a drachm. He expectorated very freely indeed, especially after the larger doses, but there was no complaint of nausea or vomiting. In the case of another patient, aged 71, the dose was gradually increased from 10 minims to half a drachm three times a day, and again it answered well as an expectorant, and produced no disagreeable symptoms. This patient in six weeks took 28 grains of apocodeine. In one case, and one only, the apocodeine produced nausea and vomiting. The patient was a boy, aged 17, an artist's model, who suffered from neurotic asthma. From April 23rd to June 25th he was on apomorphine, the dose being gradually increased from 15 to 50 minims three times a day. During this period he took nearly a drachm of the hydrochlorate of apomorphine, not only without the production of any unpleasant symptom, but with marked relief to his attacks of dyspnœa. On July 16th he was ordered 5 minims of the 1 per cent. solution of apocodeine three times a day, the dose being week by week increased by 5 minims at a dose. There was no complaint until, on October 1st, the patient was ordered 20 minims three times a day. He then stated that it made him feel sick, and that he was "unable to keep it down." He took twelve doses, and usually vomited about two hours after each dose. On October 8th the dose was reduced to 15 minims three times a day, which he took without difficulty. On October 15th the dose was again increased to 20 minims three times a day, and this he took for a fortnight without suffering from vomiting, although he admitted that he usually felt sick after each dose. He took in all 24 grains of apocodeine.

The hydrochlorate of apocodeine acts as a powerful expectorant when given in the form of pill. From 3 to 4 grains may be administered daily with perfect safety.

These observations on apocodeine are admittedly incomplete, but the supply of material at my command was limited.

CURES FOR INFECTIOUS DISEASES.

By E. H. HANKIN, B.A.,

Fellow of St. John's College, Cambridge; Junior George Henry Lewes Student.

Our knowledge of the nature of the conflict between the organism and the microbe has now so far advanced that, of the numerous "cures" that have been attempted, a partial explanation of the *modus operandi* of the curative agents can in many cases be brought forward. Such "cures" can be roughly divided into two classes: (*a*) those in which a "febrile reaction" is probably produced, and (*b*) those in which a bactericidal substance is introduced into the living animal body.

Of the first of these classes a good example is to be found in Buchner's method of curing anthrax by injection of sterilised cultures of bacillus pneumoniæ.[1] The living anthrax microbe and the sterilised pneumonia culture were subcutaneously injected in different parts of the body, in order to exclude as far as possible the direct action of one upon the other. About 50 per cent. of rabbits treated in this way completely recovered. It was found that the sterilised cultures of Friedländer's pneumonia bacillus produced a rise of temperature when injected into healthy rabbits, and not only this but also other febrile symptoms when injected into the experimenter himself. In 1887 Emmerich[2] succeeded in making rabbits refractory to anthrax by inoculation with the erisypelas microbe. Probably here again a stimulation of the febrile reaction occurs. In a certain number of cases I have succeeded in curing rabbits of anthrax by injections of minute quantities of pepsin or trypsin.[3]. Hildebrandt[4] has lately shown that these substances, besides various poisonous symptoms, produce a rise of temperature.

It is well known that if rabbits are inoculated with very virulent anthrax, as a rule no rise of temperature takes place, and the animal dies within a couple of days. Inoculation with less virulent anthrax is often attended with a rise of temperature, and the animal may only succumb after a longer struggle with the microbe. Only if the rabbits have been made immune against anthrax is an inoculation with the virulent bacillus followed by a rise of temperature. I have found that when the animal's power of resisting the onset of the disease has been increased by injecting a "protective proteid," a febrile reaction occurs, and on the death of the animal the bacilli showed various signs of degeneration.

In all these cases it appears that the increased power of resisting the attack of a pathogenic microbe is attended with the appearance of a "febrile reaction." What is the nature of this "febrile reaction"? A great many speculations and but few facts have been brought forward to explain its action.[5]

It has been supposed that the temperature *per se* exercised a harmful action on the microbes present. Bouchard[6] has shown that this explanation does not hold. He once found virulent anthrax bacilli in a rabbit, whose inoculation had been followed by a rise of temperature to 44° C., which temperature would be amply sufficient to attenuate, and even kill, the same bacilli when growing in a test tube.

The following experiment of my own appears to throw some light on the subject, and indicates another way of arriving at an explanation of fever. A rabbit was inoculated with anthrax; twenty-four hours afterwards it was found to have a temperature of 40.4°. It was then decapitated, and its blood allowed to flow into alcohol. After some days the precipitated proteids were filtered off, dried, and extracted with water. The extract was filtered, and it was found to have the power of killing anthrax bacilli. This was tested by the plate culture method as used by Nissen, Nuttal, and Buchner.

[1] Buchner: Ueber Hemmung der Milzbrand Infection und ueber das aseptische Fieber. *Berliner klinische Wochenschrift*, 1890, No. 10.

[2] Emmerich: *Archiv für Hygiene*, vol. vi, 1857, p. 442.

[3] Hankin: A New Result of the Injection of Ferments. *Proceedings of the Cambridge Philosophical Society*, November 11th, 1889, vol. vii, p. 16.

[4] *Virchow's Archiv*, vol. 122, p. 1.

[5] See the Goulstonian Lectures on The Nature of Fever, by Dr. Donald MacAlister, Fellow of St. John's College, Cambridge. (London: Macmillan and Co. 1887.)

[6] *Actions des Produits sécrétés par les Microbes Pathogènes.* Paris: Gautier Villars et Fils. 1890.

In several other experiments I equally succeeded in extracting a bacteria-killing substance from febrile blood. From normal blood, on the contrary, I could not by this method prepare a solution having bactericidal powers, except in one or two cases, and then to a very slight degree.[7]

From these experiments it may be surmised that the "febrile reaction" is in some way connected with the appearance of bacteria-killing substances in the blood; certain researches that have recently been published give good ground for hoping that the investigation of such "natural disinfectants" will lead to valuable practical results. Foremost among these researches must be mentioned the work of Behring and Kitasato on tetanus and diphtheria.[8] These investigators have succeeded in curing the above-mentioned diseases by injections of serum from animals that had previously been made immune against the tetanus and diphtheria bacilli. In this case, however, the serum appears to owe its curative power to a substance that destroys the poison produced by the microbes rather than the microbes themselves.

Other researches recently published show that the serum of naturally immune animals can be used to confer insusceptibility to a disease. Behring,[9] in an article on Disinfectants, in the current number of the *Zeitschrift für Hygiene*, mentions that he has made mice immune against anthrax by injection of rat's serum. Ogata and Jasuhwara have recently published in the *Proceedings of the University of Tokio* (Japan) a paper entitled "The Influence Exerted by the Blood of Various Animals on the Anthrax Bacilli." They have succeeded in curing mice from attenuated anthrax by injections of blood from dogs, rats, and frogs. They found it necessary to inject the blood within five hours after inoculation. I have recently obtained similar results by injections of rats' serum, and have found that the injection of so small a quantity of serum as 0.01 cubic centimetre was sufficient to preserve a mouse from exceptionally virulent anthrax. In one experiment eight mice were inoculated with rat's serum, in quantities varying from 0.01 to 0.11 cubic centimetre, and in the same place with virulent anthrax spores. All of them remained in good health, while two control mice died within eighteen hours.

That this result is not due to a "febrile reaction" was shown by another experiment in which ten mice were used, and in which the serum and spores were injected at different parts of the body. In this way the direct antiseptic action on the anthrax spores was diminished, and in this experiment every mouse died, though from one to three days later than the controls. The latter, as in the other experiment, died within eighteen hours.

What are the substances to which these curative actions are due? Apparently they belong to a class of bodies which I have called "protective proteids," and which I described in this Journal[10] nearly a year ago. By the methods described in the article referred to I have isolated the protective proteid from both the spleen and blood serum of the rat, and with it I have succeeded in rendering mice insusceptible to anthrax.

I find that this substance is a globulin which (so far as I know) stands alone among bodies of this class in giving an alkaline reaction, even after prolonged dialysis against normal salt solution. Since it is only soluble in dilute salt solutions, the alkaline reaction vanishes by dialysis against distilled water, to return on the addition of a small quantity of pure sodium chloride. A further account of my experiments with the rat's defensive proteid will shortly appear in the *Centralblatt für Bakteriologie*.

[7] Hankin: Indications for the Cure of Infectious Diseases, read at the Leeds meeting of the British Association for the Advancement of Science, 1890.

[8] Ueber das Zustandekommen der Diphtherie-Immunität und der Tetanus-Immunität bei Thieren, *Deutsche medicinische Wochenschrift*, No. 49, December 4th, 1890, p. 1113; also The Production of Immunity to Tetanus and Diphtheria, BRITISH MEDICAL JOURNAL, December 13th, 1890, p. 1395.

[9] Ueber Disinfection und Disinfectionsmittel, *Zeitschr. f. Hygiene*, vol. ix, 1890, p. 473.

[10] BRITISH MEDICAL JOURNAL, July 12th, 1890, On the Conflict Between the Organism and the Microbe.

MR. WALTER C. AYLWARD, M.R.C.S., L.R.C.P., has been presented by the Rusthall Branch of the Girls' Friendly Society, to whom he has been delivering a course of ambulance lectures, with a handsome Tunbridge ware inkstand, accompanied by an address.

ABSTRACTS OF THE MILROY LECTURES
ON
DIPHTHERIA;
ITS NATURAL HISTORY, AND PREVENTION.

Delivered before the Royal College of Physicians of London.

BY R. THORNE THORNE, M.B., F.R.S., F.R.C.P.,
Assistant Medical Officer to the Local Government Board; and Lecturer on Public Health at St. Bartholomew's Hospital.

LECTURE II.

THE term "diphtheria," as limited by our returns of sickness and death, was held by no means to cover all that must be included in any inquiry as to the etiology of this disease, the recognised diphtheria being often involved in a number of other less defined throat affections. A number of epidemics were referred to in this connection, showing how sudden occurrences and fatal attacks of so-called "croup" were followed first by returns of "diphtheritic croup," and finally by "diphtheria," when at last the true nature of the disease was recognised. And it was also shown that preceding any marked diphtheria cases it was often learnt that for some considerable period there had been prevailing a large amount of illness to which were applied such terms as sore throat, tonsillitis, etc., these attacks commonly receiving but little notice until the seasonal activity of diphtheria showed their true meaning, and indicated also how these mild throat attacks were often the connecting links between successive prevalences of well-marked diphtheria. The infectious quality of the minor throat affections was also adverted to, and it was pointed out how in the same household fatal diphtheria was contracted from them. In confirmation of these views, and with the object of indicating the true relation of many minor throat ailments to epidemic occurrences of diphtheria, a number of outbreaks were referred to in some detail, such as Mr. Power's report on Titchmarsh diphtheria, Dr. Bruce Low's report on Halstead diphtheria, and other work by Dr. Blaxall and Dr. Parsons.

Further reference was then made to the same class of minor illness in discussing the origin of certain epidemics, and it was suggested that beyond any interpretation which regarded them all as distinct though mild attacks of true diphtheria, there were a number of other considerations which called for attention. Dr. Thorne Thorne then recalled certain experiences of his own which dated from 1878, and which had led him in that year to express the view that in the case of diphtheria we had to do with an unstable poison which gave evidence of a progressive development of the property of infectiveness, which property might be as easily lost as it was acquired, in much the same way as special characteristics may be artificially developed in higher plant life, and be as easily lost again. And it was held that there were local conditions under which sore throat, as it is commonly called, might at times thus acquire a specific and infective quality, ultimately resulting in true diphtheria. The views of a number of observers, including certain local health officers, such as Mr. E. L. Jacob and Mr. Fosbroke, were quoted in this connection; and, in a similar way, it was shown that certain experiences of Mr. Power tended in the same direction. But it was admitted that this view was not universally accepted, and that some of the more recent discoveries as to the causation of diphtheria tended to limit the number of diphtheria occurrences to which it might be applied.

Coming next to the question of there being some sort of identity between diphtheria and scarlatina, the reports of Dr. Bond were referred to as those most strongly pressing this view; and a contribution by Dr. Parsons to the Epidemiological Society, on the same subject, was dealt with at some length. It was, however, held by Dr. Thorne that if there is any relation between the two diseases it probably lies in the circumstance that the lesion of the fauces in scarlatina affords a favourable soil for the reception of the diphtheria contagium. Were it otherwise, the almost total absence of diphtheria as a complication of scarlatina amongst several thousand scarlatina patients treated at the London

Fever Hospital would be inexplicable. And, even elsewhere, diphtheria was stated to have almost always occurred as a sequel to the scarlatina, hardly ever to have been synchronous with it. Some recent experiences, having perhaps a somewhat contrary tendency, at the Metropolitan Asylums Board hospitals, were to be preferably discussed under another heading, namely, that of the aërial diffusion of the contagium of diphtheria. The relation of diphtheria to faulty sanitary circumstances was then fully entered into. As regards water-supply, it was held—and much confirmatory evidence was appealed to as to this—that no prevalence of diphtheria had ever been definitely traced to polluted water, or even to water covered with fungoid or other allied growths; whereas there was, on the other hand, abundant evidence, necessarily of a negative character, in the opposite direction. As to sewerage and drainage, the matter was not to be so easily disposed of.

Many observers who did not as a mere matter of course regard two concurrences as being related to each other as cause and effect were decidedly of opinion that such defects as led to contamination of soil and air by sewage did cause and tend to diffuse diphtheria. On the general question, it was pointed out that the last twenty years, during which diphtheria had been increasing in our midst, was of all periods the one in which most progress had been made in improving conditions of sewerage and drainage, and that hand in hand with this there had been diminution of general death-rate and diminution of rate of death from such diseases as typhoid fever. Especially had progress been made in this direction in our towns and cities; and here, too, the same diminution of death had taken place, whilst diphtheria, on the contrary, was steadily laying hold of our large urban communities. But notwithstanding these general considerations, it was admitted that careful inquiry had at times associated grave sanitary defects of the sort referred to with grave and sustained prevalence of diphtheria; and typical amongst such occurrences was the story embodied in Mr. Spear's report on diphtheria at Aylesbury. This report was carefully entered into, and the main contention of the author seemed to be that recurring localisations of diphtheria could only be accounted for by the localisation of specially grave drain and filth conditions at those spots. The story was, however, one of extreme complication, for there had been an earlier diphtheria epidemic about eighteen months before, which was associated with school attendances, and there had been a vast number of sore throat attacks in the interval that might easily be regarded as links between the two prevalences. But Dr. Thorne felt that instances of this sort did afford some evidence of a relation between the conditions referred to and diphtheria, and this went beyond mere increase of fatality owing to unhealthy surroundings. The explanation, he believed, lay very largely, if not entirely, in the circumstance that the faulty conditions in question often produced sore throat, apparently of a benign character; and that, just as in the case of such diseases as scarlatina and measles, the abraded surface of the throat afforded the very soil suitable for inoculation by the diphtheria organism when present in the air, as it unquestionably was at the time in Aylesbury. In such a case it would be difficult to say whether other causes were not at work leading to the development of some special specificity in type amongst the prevailing throat affections; but it is unquestioned that these attacks of so-called tonsillitis do at times become infective and are communicable within the same household. Drains, too, may possibly retain a diphtheria contagium received through the sputa and dejecta of the sick. But the main influence of drain effluvia in relation to diphtheria was held to be the preparation of a soil by means of a morbid surface of the fauces, ready to receive and promote the development of the wandering specific organism.

Much the same line of argument was applied to another story based on a valuable report by Mr. Matthew Adams, of Maidstone, who had pointed to the existence of a relation between diphtheria and variations in the level of the subsoil water. The occurrences in question were illustrated by means of a large chart, in which the amount of diphtheria could be compared year by year, and even week by week, with variations in the ebb and flow of the subsoil water; and Mr. Adams's main contention was that so long as the ordinary single autumnal rise and summer fall of subsoil water took place, even a filth-laden soil was so far washed clean, and the diphtheria contagium was so far drowned out that no material mischief resulted; but it was explained to be otherwise when, owing to abnormal meteorological conditions, continual oscillations of subsoil water kept the soil damp, favoured decomposition of its organic contents, afforded a breeding ground for specific organisms, and at frequently recurring intervals expelled from the soil into the atmosphere above an air laden with these organisms. Mr. Adams's report was also specially referred to as an example of the admirable and exact record of facts which not infrequently resulted from investigations made by local health officers, and which afforded such excellent material for the elucidation of difficult problems in preventive medicine. In conclusion, Dr. Thorne discussed the influence on the human system of drain effluvia in their relation to specific disease in the light of the recent researches of Klein and Achille Monti on the concurrent inoculation of different infections: and he referred also to those of Oertel, which go to show that diphtheria is primarily a local disease manifesting itself solely at the point of inoculation, whether this be effected aërially as on morbid and abraded fauces, or mechanically on a cornea or elsewhere, and that the general disease is altogether a secondary one due to infection of the system owing to changes at the seat of the primary lesion.

A RARE SEQUELA OF SCARLATINA.

By HUGHES REID DAVIES, L.R.C.P.Lond., M.R.C.S.,
Late Clinical Assistant Victoria Hospital for Children, Chelsea.

On the morning of November 10th, 1890, F., S., aged 9 years, at the end of the third week of an attack of scarlatina, in the free desquamation stage, awoke apparently in the best of health at 7 A.M., and was playing with his brothers and sister, all of whom were convalescing from the same disease. At 9.30 A.M. of the same day he ran crying to his mother, complaining of violent pain in his lower limbs, which were described as being "cold, puffy, and very tender to touch." "Spots" then first appeared on the shins, both calves, and the dorsum of the left foot.

The father and mother's history was good, except for the following facts:—The maternal grandfather died of small-pox and "bleeding" (?hæmorrhagic small-pox); "nose had to be plugged." The family on the maternal side bled easily. Two years ago, F. S. was attending at the North-Eastern Hospital for Children suffering from "general debility." He was always pale. He had measles and chicken-pox about four years ago. His nose used to bleed on the slightest provocation; general health at time of contagion good.

Nothing worthy of note occurred during the course of scarlatina in any of the six children. F. S.'s attack seemed rather more severe than any of the others; the rash was well developed, lasted about six days, desquamation commencing almost immediately afterwards.

At 1.30 P.M. on November 10th I saw the patient, and noted the following condition:—He was anæmic, desquamating freely, clear headed, chatty, and in capital spirits. Temperature, bowels, and urine were normal; the pulse about 100, rather "irritable": the lower extremities, from knees downwards, were slightly œdematous: the surface was warm; there were ecchymoses about both ankles, generally scattered, but in some places merged. Both calves were covered by bluish-black subcutaneous hæmorrhagic patches, surrounded by narrow zones of inflammation, and were very tender on touch.

On the following day, November 11th, at 9.30 A.M., I again saw the patient, and made sketches of the lower extremities and of the left elbow. The patient had passed a fairly restful night: the temperature was normal, the skin moist and very pale; the urine scanty but normal; the pulse quicker, 120; the extremities were warm.

The ecchymoses were now completely merged into patches of "raven-blue," surrounded by inflammatory zones; the symmetry of the patches was remarkable; the legs were slightly less œdematous but still exceedingly painful, the child shrieking if they were moved or roughly handled. New centres of ecchymoses were appearing on the legs, and one

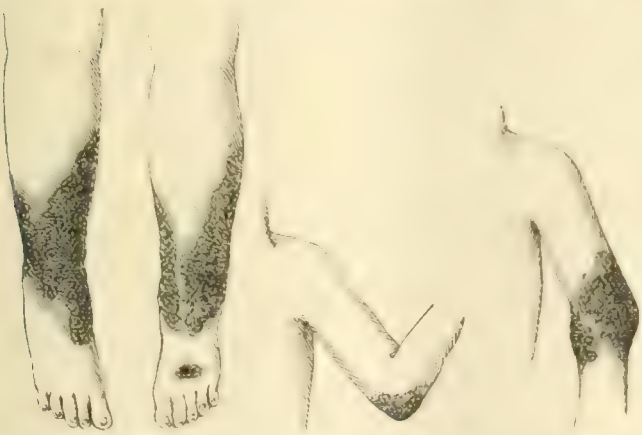
of about the size of a five-shilling piece on the right hip from pressure. The appearance of new patches was always heralded by great pain; there was no enlargement of the joints.

At 1 P.M. the patches were stationary, except those on the right hip and the dorsum of the left foot, which were spreading rapidly. A bruise-like ecchymosis had appeared on the point of the left elbow, which was very painful. There was no swelling of the joint proper, although it was moved with pain and great difficulty. The patient was still very clear headed, and took great interest in each new patch, which he exhibited for my inspection on every visit. The limbs were warm; there were no feverish symptoms.

At 4.30 P.M. the patches were spreading rapidly, and there was considerable swelling of the left elbow-joint, with marked purpuric discoloration. The joint could not be moved, actively or passively, without intense pain. Slight feverish symptoms were developing: the pulse was about 140.



November 11th, 1890, 9.30 A.M. November 11th, 9.30 A.M.



Nov. 11th, 9.30 A.M. Nov. 11th, 1 P.M. Nov. 11th, 4.30 P.M.

At 7.30 P.M. the patient was removed with every care to Homerton Fever Hospital. The father informed me that removal had been borne capitally, and that the child was quite clear headed and in good spirits. He also stated that the patches were still spreading, new centres forming in other parts, and that swelling of one ear had been noticed. The patient died on November 12th about noon.

For the following *post-mortem* notes I am indebted to Dr. Alexander Collie, Medical Superintendent, Homerton Fever Hospital: "A *post-mortem* examination was made at 12 noon, November 14th, forty-eight hours after death. Some blood-stained fluid in each pleural cavity, most in right cavity. Lungs anæmic, otherwise normal. Heart contained no clots; walls somewhat thin and flabby. Liver and kidneys anæmic. Spleen not enlarged. Intestines very anæmic, walls very thin, contained a little fæculent matter. Bladder contained only a few drops of urine. No fluid in peritoneal cavity. No extravasations of blood in any internal organ, and no abnormality except anæmia. Mouth and throat examined; tonsils congested in patches. Brain removed and examined; arachnoid milky, convolutions somewhat flattened, small quantity of serum in ventricles: nothing further detected."

REMARKS.—I believe I am right in deeming such a sequela of scarlatina one of the rarest of occurrences. Dr. Reginald Southey[1] exhibited a case of "symmetrical gangrene" in many respects similar to that which I relate, in some dissimilar. Dr. Southey's case presented the marked external anæmia of mine; the small, wiry, "irritable" pulse; absence of elevation of temperature; perfect consciousness; pain heralding advent of ecchymosis, and absence of pain except when pressure was placed upon the seat of discoloration, together with the fact that the ecchymoses seemed considerably determined by pressure, and also the marked symmetry of their distribution. In Dr. Southey's case there was no joint effusion; in mine I noted enlarged left elbow-joint. Dr. N. Moore's report of the *post-mortem* examination of Dr. Southey's case can be read with great interest, and compared with that made by Dr. Alexander Collie. In the former stasis and extravasation are noted in skin and connective tissue; in the latter no report is given of a similar condition, nor of the condition of the cellular tissue noted in Southey's case. Marked anæmia of the internal organs was present in my case, while in Southey's they were reported as normal in appearance.

I must also call attention to the fact of F. S. being in the third week and desquamating stage of scarlatina, thus differing from Dr. Southey's patient, a child, aged 2½ years, who was attacked by febrile purpura in October, 1882, only on December 2nd of the same year developing the true gangrenous patches. But in both instances the rapidity of course towards a fatal end seems the same. Hæmophilia, as a cause, Dr. Southey thinks might be excluded in his case; in mine I must leave it an open question.

[1] *Trans. Path. Soc. Lond.*, vol. xxxiv.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

REMOVAL OF A PEA AFTER LODGMENT IN THE EAR FOR 5½ YEARS.

A YOUNG gentleman of 18 complained of earache of six weeks' duration; it had been worse for five days; there was no discharge. On examination I found the external meatus apparently filled with wax. Repeated syringing removed the wax, but left a rounded body of a greyish, moist appearance, about the middle of the meatus, nearly the whole of which was occluded. I looked upon this as a polypus with a deeply placed pedicle. A subsequent syringing removed what was evidently the inside of a pea in two deep brown hemispheres, and after these came the altered husk, which I had mistaken for the polypus. The tympanic membrane was left much thickened and somewhat retracted, while almost the whole external meatus was greatly contracted. Hearing is still slightly deficient but will probably improve. Of his own accord the patient then told me that when he was 12½ years' old a schoolfellow shot a pea into his ear with a peashooter; that he never told anyone of it but could not remove it, and soon forgot all about it, and had had no trouble from it till the present time. ARTHUR FOXWELL, M.B., M.R.C.P.,
Physician to the Queen's Hospital, Birmingham.

THE POLYURIA OF PREGNANCY.

A PARAGRAPH appearing in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of January 31st, under the above heading, reminded me of some notes I took of a case that I had under my care about two years ago, which possibly might prove of interest. Although I tried to gather further information on the subject at the time, I was unable to obtain any history of a similar case.

Mrs. B., aged 25, when I first saw her was seven months advanced in her second pregnancy. Since the fourth month (when she quickened) she had passed daily an increasing quantity of urine, which had reached the enormous amount of 20 pints in the twenty-four hours. The urine examined was very pale and limpid, had very little smell, specific gravity 1001, apparently neutral, with no sediment, and contained neither albumen nor sugar. She had wasted considerably, and suffered much from the extreme thirst. Her tongue and mouth were dry and covered with sticky mucus, the former very red and sore, and having numerous superficial small ulcers upon it. There was no œdema of the extremities, except very slight puffiness around the ankles. I ordered a warm hip-bath two nights consecutively, and three times weekly afterwards, and a mixture containing arsenic, chlorate of potash, nux vomica and capsicum. This was continued for some time, and she expressed herself as feeling better, but although the urine was measured daily for a few weeks, the lowest quantity passed in the twenty-four hours was 16 pints. The patient believed that this was the lowest measurement during the four latter months of the pregnancy. Bromide of potassium was given a fair trial, but without any appreciable benefit.

A large female child was born at the full term, and this was followed by an immediate reduction in the quantity of urine passed. On the third day after her confinement the quantity measured was only 5 pints, and during the next seven days varied from 3 to 3½ pints (this quantity being passed in about three acts of micturition). The urine was now faintly acid, light yellow colour with urinous smell, specific gravity 1004, and contained no albumen and no sugar.

About fifteen months after I heard that she had suddenly appeared strange in her manner and fancies, and had subsequently to be placed in an asylum, where she was retained for about six months, but she was not then supposed to be again pregnant.

ARTHUR H. DODD, L.R.C.P.Lond., M.R.C.S.Eng.
West Brighton.

LABOUR DURING HYPNOTIC SLEEP.

INSTANCES in which hypnotism has been employed with more or less success, during labour, have been recorded by Liébeault, De Jong, and others, but I think the case which I now present is the first of its kind in England, at least within recent years.

V. S., aged 14 years and 7 months, was brought to me, from an inland town, last November, with a view to making arrangements for her approaching confinement, she being then in the seventh month of pregnancy. The regular medical attendant now stated that he feared the patient's confinement would be fatal.

The patient being so young, and of stunted growth, certainly seemed likely to have a difficult labour. I therefore determined to try if hypnotism would be of any service, her parents readily consenting to the experiment. She was easily hypnotised, and became cataleptic; anæsthesia was also present. I suggested that she should sleep through her confinement. After this she was regularly hypnotised once a week; in all, twelve times prior to her confinement. At the last sitting the anæsthesia was so profound that her cornea could be rubbed with the finger without disturbing her in the least.

On February 17th, 1891, I was called to her at 7.30 P.M., and found her in labour, the os slightly dilated, and the pains recurring about every fifteen or twenty minutes. She was, however, walking about. I ordered her to bed, and hypnotised her, telling her to remain asleep until I told her to waken, and further suggesting to her to "bear down" whenever a "pain" came. I then left her, and returned at 9.30 P.M. She had slept during the interval, and the contractions were now much more frequent, and during each she could be seen to assist greatly by forcing down. The nurse now got her out of bed to pass water, which she did without waking, and also had her bowels relieved. Soon after she vomited freely, but this too failed to rouse her.

The "pains" steadily increased in violence and frequency, and as each came she groaned loudly, but all the time assisted herself as directed, and even when the final "crowning pains" came she did not cry out, but pursed up her mouth and powerfully aided the expulsive efforts of the uterus.

At 11 P.M. she was delivered of a female child, weighing 8¼ pounds, absolutely without aid. The placenta followed in ten minutes. The patient having been bound up and everything put right, I wakened her at 11.30 P.M. by blowing on her eyelids. She opened her eyes instantly, and said she felt "all right;" that she had no recollection of anything which had happened since she went to sleep, had no idea how long she had slept, and that she was quite positive that she "had had no pain." Since then she has made a good recovery, and the baby is thriving well.

Now, had this case been left absolutely to Nature, it seems probable that the labour would have been much more protracted, for the patient would have exhausted herself screaming in the ordinary fashion: and this, again, would have prevented her from aiding as she did. If chloroform had been given screaming would have been suppressed, but the patient would not have been able intelligently to respond, as she did to the last, to every suggestion.

That the patient was in some sense conscious of the pains was evident from her groans and her aid, but the fact remains that they did not waken her, and that she had no memory of them on being awakened: and further, it is clear that the hypnotism had no injurious effect on either the mother or the child.

I advise anyone who wishes to test this method to have at least six preliminary sittings, so as to accustom his patient to the process, and also to thoroughly test to what degree of hypnosis he can bring her.

I am quite sure it will not succeed in every case, but whenever a woman is known to be susceptible to hypnotism, and to exhibit anæsthesia, I think it will be justifiable to try this plan, if circumstances warrant any interference at all with natural labour.

Blackpool. GEO. C. KINGSBURY, M.A., M.D.

CONGENITAL OCCLUSION OF THE URETHRA.

MR. ADAMS'S paper in the BRITISH MEDICAL JOURNAL of February 7th reminds me of my negligence in so long delaying to publish a case I met with in 1882—a more complete case of occlusion of the male urethra than any I have read of.

In October of that year, I was called at 10 P.M. to see an infant 24 hours old who had not yet passed water. On examining the glans, the meatus appeared to be covered only by a thin layer of membrane. Anticipating no difficulty, I divided this with a tenotome, but to my surprise found no canal.

As the case was unusual, I asked the assistance of my then partner, Mr. Blackburn, a gentleman of long and varied experience. We found that no blunt instrument would enter beyond the incision I had made, so, using alternately a sharp probe, a blunt probe, a stilette, and a No. 1 silver catheter, we dug our way through the penis for two hours. Great care was necessary to keep in the imaginary line of the urethra, the only guide being the finger under the floor. In this way we advanced very slowly; at last, however, having made an opening as far as the subpubic arch, with finger in the rectum I made a plunge forwards with the stilette, using force. It went in somewhere, where no further resistance was met, but on withdrawing it and introducing the catheter, no urine came. Twelve hours later the boy made water freely. He was 3 years old when I last saw him. His mother said he was all right, and certainly no fault could be found with his general condition.

Saddleworth, Yorks. C. G. CAMPBELL.

DR. DAVID W. FINLAY has been appointed Extern Examiner in Medicine for degrees in medicine of the University of Durham for the current year.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GUEST HOSPITAL, DUDLEY.

DEATH UNDER CHLOROFORM.

(Under the care of Mr. F. S. GOULDER and Dr. A. S. UNDERHILL.)

J. C., aged 46, was admitted on December 1st with contraction of the right elbow-joint of fourteen months' duration, due to the cicatrix of a burn.

On December 19th the house-surgeon (Mr. E. H. Strong) commenced the administration of chloroform, using a drop bottle and an Esmarch inhaler. His heart and lungs having previously been examined were found normal. No special record of the condition of the urine was recorded, but as it is part of the hospital routine to examine the urine of every patient, and a note made if it be abnormal, it was probably examined on admission and found to be normal. About thirty drops had been sprinkled on the lint when the house-surgeon was summoned to an accident, and Dr. A. S. Underhill undertook the administration. No change was noted for about two minutes, when the patient began to struggle somewhat violently, and his breathing became laboured, his face congested. His conjunctivæ were still sensitive, and no appreciable alteration in pupils had occurred; pulse firm. The inhaler was removed for a few seconds, but, as he was still struggling, it was again replaced. After a few more respirations, the face became decidedly cyanotic, the conjunctivæ for the first time were not sensitive, and the breathing was stertorous. The inhaler was again removed, and pulsation was sought for at the wrist and carotids, but was found to have ceased, and auscultation revealed no cardiac rhythm. The patient was still breathing, the tongue was at once pulled forward with forceps, and the head lowered; Mr. Goulder having ceased the operation, immediately commenced artificial respiration. Ether ♏xxx was injected subcutaneously over the chest. Brandy ℥ij, hot water ℥iij, were given *per rectum*. As the extremities were cold, friction was applied, and hot bottles placed round the patient. While artificial respiration was still being continued, nitrite of amyl inhalations were given. As the patient still continued cyanotic, venesection was performed from the left median cephalic, resulting, however, in the flow of only a few drops of almost black blood. The galvanic battery was used without effect. Artificial respiration having been kept up for upwards of thirty minutes, and the heart having again been examined, it was evident death had set in, and no further means could be of any avail.

Necropsy Twenty-seven Hours after Death.—A well-nourished and muscular body. Rigor mortis well marked. Venous congestion of all viscera. Lungs œdematous; engorged; float; no consolidation. Heart: Muscular substance normal in consistence and thickness of its walls; valves intact, and no appreciable thickening; left ventricle contracted, with about 2 or 3 drachms of fluid blood; right ventricle distended with dark fluid blood, as also right auricle; left auricle somewhat contracted. Liver: some slight fatty degeneration. Brain œdematous, and deep venous congestion. All other organs normal.

REMARKS.—The chloroform used was that made by Duncan, Flockhart and Co., and prepared with pure alcohol, specific gravity 1497. The drop bottle, which was graduated to ℥j, showed ℥iiss had been used. In the excitement of attempting resuscitation, it had been laid on its side on the pillow, and some most probably escaped; certainly not more than ℥iiss were used. Approximately seven minutes elapsed from the commencement of administration till the respiration ceased. It is, however, certain that the cardiac action failed in the first instance, and it is suggested that the violent struggling might have been the chief factor in causing the cardiac failure. The respiration continued fully thirty seconds after the pulse had ceased.

THE INFIRMARY, CARDIFF.

ENCHONDROMA OF RIB.

(Under the care of P. RHYS GRIFFITHS, B.S., M.B.Lond.)

THE following case is of interest when placed side by side with the one published by Mr. F. Marsh in the BRITISH MEDICAL JOURNAL for June 14th, 1890.

Mrs. B., aged 40, presented herself at the out-patient department in April, 1890, stating that she had a tumour in her left breast. She first noticed a small lump, about the size of a hazel nut, two years ago. It was then quite fixed, and from her account it was apparently attached to the third rib on the left side. It was very hard and painful. For the first twelve months it grew very little, but since then, and especially lately, it has grown rapidly. It was extremely painful, the pain radiating chiefly to the left under the left scapula. When first seen the tumour measured about 4 inches long, 3 inches wide, and it projected about 2½ inches from the ribs. It was oval in shape, very hard, and was nodular. The long diameter was in the horizontal direction. It covered portions of the third, fourth, and fifth ribs, and extended from the left border of the sternum to the left anterior axillary line. It was firmly fixed to the ribs, and moved freely with respiration. The skin and mamma moved freely over it, and the lower border of the pectoralis major might be traced passing over it. Immediately below it the apex beat was distinctly visible.

At present the growth is about the size of a cocoa-nut, measuring 5 inches in length, 4 inches in width, and it projects about 3 inches from the chest wall. Laterally it extends at its base from the left border of the sternum to a point a little outside the anterior axillary line, and from its inner border a portion projects, forming a bridge over the sternum. Vertically it extends from the lower border of the first rib as far as the sixth. Its general characters remain much the same, except that there are small areas, soft and elastic on palpation, portions probably of the growth which are undergoing fatty or mucoid degeneration.

The tumour has been diagnosed several times as "cancer of the breast;" and this rather loose diagnosis has occasioned far more trouble and inconvenience to the patient than the tumour. A little care in examining the condition of the opposite breast, which is very small, and the relation of the pectoral muscle to the growth, might have prevented the mistake.

With regard to treatment, I have so far simply prescribed an anodyne application. There are no urgent symptoms calling for relief. The position of the tumour and the history of a case which was at one time under the care of Mr. Marcus Beck, at University College Hospital, and subsequently shown at the Pathological Society, have guarded me from hastily interfering with a growth the exact relations of which, as in Mr. Marsh's case, can only be found on exploration. Growing from the bony portions of the ribs, it may extend inwards into the cavity of the pericardium, and interfere with the action of the heart, and thus justify operative measures. I believe one case has been published of successful removal of a cartilaginous tumour in this region, the cavity of the pericardium being opened and the heart freely exposed.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 24TH, 1891.

TIMOTHY HOLMES, M.A.Cantab., President, in the Chair.

On Rachilysis, its Object and its Method.—Mr. BARWELL, in this paper, stated that the first commencement of lateral curvature was merely a faulty position, produced either by unequal length of the lower limbs, by bad habits in sitting while writing, etc., by muscular debility and excessively rapid growth, or by other like causes. If this position were maintained for a certain period with considerable persistency, both muscles and ligaments underwent certain changes; he laid more particular stress on the latter, showing that the intervertebral discs became wedge-shaped, the thinner end lying in the concavity of the curve. But the changes undergone by the

anterior common ligament were even more important. In 1881 he observed, at a *post-mortem* examination made under restrictions and very great difficulties, that this structure had a very tight, sharp edge, which lay quite in the concavity of the curve, the whole structure having become apparently moved in that direction. Since that date Nicoladoni had shown, and his observations had been amply confirmed, that in lateral curvature this ligament shifted its place towards the concavity. Mr. Barwell accounted for this phenomenon by the fact that most fibres of this ligament passed from one vertebra over several others to be inserted into a more distant one, the more superficial over five or six bones, the deeper over a less number. Therefore, when the column assumed a sideways curve, these fibres must tend to be straighter than the deviated spine; subsequently, as they thickened and contracted, they bound the bones into their abnormal position, acting as did the string which kept a tense bow bent. Considering that this condition could hardly be overcome by mere gradual pressure, or by what was erroneously termed support, Mr. Barwell devised some years ago a potent means of straightening the curves—in other words, of stretching the contractured ligaments. This, which he therefore named "rachilysis," he demonstrated to the Society. In describing, let it be supposed an S-shaped curvature, dorsal to the right, lumbar to the left. To two walls or beams facing each other certain hooks are fixed: between these, on an ordinary chair, the patient is seated in a three-quarter side-back position. A properly padded, loop-like belt is placed on the side of the loin opposite the most pronounced part of the curve, and fixed by a hook on the right. A similar appliance is placed, loosely for the present, on the dorsal prominence. A loop, with a lanyard attached, is passed under the left axilla, the body is inclined to that side so as to unfold somewhat the lumbar curve, and the cord of the lanyard is secured immovably, acting as counter-extension on the patient's right. Now the dorsal belt is hitched on to the hook of a system of dislocation pulleys, an 18-inch board or strut is placed between the laps of each belt, preventing compression of the abdominal organs or of the ribs, and traction is made. This, though considerable, produces no pain, and, after two or three times, not even discomfort. Measures were taken on two lads markedly curved, which showed that by this force the column was lengthened in one case 1 inch, in the other $1\frac{3}{4}$ inch—an effect which could only be due to rectification of the morbid bends. In practice Mr. Barwell applied this method with a frequency commensurate to the severity of the case and the age of the patient. The amount of traction used by the hand varies according to the same condition: From 8 lbs. to 16 lbs., that is, the force exercised by the belt is from 40 lbs. to 80 lbs., minus unavoidable friction. Immediately after its use he applies that one of his bandages most adapted to the sort of curve. An appendix to the paper consisted of histories of cases which justified the following conclusions: That in young persons, even badly deformed spines are curable with patience and sufficient perseverance within a moderate period; that older patients, even considerably deformed, may be greatly benefited, that is, the form improved and persistent aching of the back cured; that deformation of the bones—certainly of the ribs, therefore presumably of the vertebræ—may be to a considerable extent rectified. Mr. Barwell also demonstrated his method of straightening the spine, as described in the paper on two well-marked cases of lateral curvature.—Mr. GOLDING-BIRD asked if the methods would satisfy recognised surgical standards. Lateral curvature was an effect of certain other conditions. Inequality of length of legs would only produce a slight curvature, and on the legs being brought to an equal length the curvature soon disappeared. In all, or almost all, cases of lateral curvature there was a general limpness of the muscular system with deficient muscular power, and in such cases actual curvature might arise from abuse of the habit of holding the body at ease, lolling, etc. He did not agree with the author that the altered position of the anterior common ligament, as shown in his diagrams, was the cause of, or maintained, lateral curvature. Any method which attempted to get a lateral curvature straight should relieve the spine of the weight of the head and shoulders, and he referred to Sayre's methods, which were not entirely satisfactory owing to the impracticability of getting the jackets fixed tightly enough. One very important part in the treatment was to get the muscles into as good a condition as possible, and he had had most satisfactory results by getting the patients to assume, during a portion of the day, a recumbent position, which relieved the spine of the weight of the head and shoulders; to this he added active and passive exercise of the muscles. In cases of great deformity, troublesome symptoms were the muscular pains in the back, the distressed breathing, and an irritable condition of the heart. These cases could find relief by suitable exercises. In all these kinds of cases it was important that the treatment should be as far as possible in the patients' and friends' own hands. —Mr. HAWARD could not agree either with Mr. Barwell's views on the causation of spinal curvature, or his method of treatment. He held that the faulty position was found in persons with weak muscles, and in these cases the ligaments were too lax. In health the ligaments only allowed slight rotation, but in lateral curvature there was evidence of the laxness of the ligaments in the rotation of the chest, and also frequently in the presence of flatfoot, etc., in such cases. He agreed almost entirely with the remarks that Mr. Golding-Bird had made as to treatment.—Dr. FLETCHER LITTLE, about three years ago, had seen a girl whose health was broken, and about whose condition he had felt considerable anxiety lest she should develop phthisis. This patient had worn a steel support for seven or eight years, which weighed 4 lbs. 1 oz. He had the support removed, and the girl treated by rubbing. Her health almost immediately began to improve, and she was now, and had been for some time, in perfect health. —Mr. NOBLE SMITH felt it was too narrow a view of cases of lateral curvature to assume that the defects were entirely due to weakness of the muscles, as softened bones and lax ligaments contributed to the deformities. No one method of treatment, such as exercise of muscles, was suitable for every case, and mechanical appliances had their uses, though the worst forms of supports were plaster-of-paris and poroplastic jackets. He himself believed in massage, exercise, and rest in the recumbent, particularly in the prone, position.—Mr. BARWELL, in reply, pointed out that he had not stated that the alteration of the position of the anterior common ligament towards the concave side of the curve made by the bodies of the vertebræ, was the cause of the curvature, but only that it would help to increase the curvature after it was present. Numerous observers had pointed out the fact that the ligament did so shift in cases of lateral curvature. He contended that repeated application of his method certainly gave good results, even in severe cases, and mentioned one case in which the rotation, originally 25 degrees, was now only 5 degrees. He had not in his paper dealt generally with lateral curvature, but only with the particular condition which he had termed rachilysis. He used also various methods in the treatment of lateral curvature. He did not agree with Mr. Golding-Bird that the weight of the head and shoulders could produce lateral curvature, and was sure that it was not possible to relieve the spine of their weight for any length of time by means of mechanical supports. The most obstinate cases to relieve were those which had already been treated by supports. He had not himself had very good results with Sayre's treatment, as it had a certain tendency to weaken further the back muscles, and the same objection applied to the recumbent position. Curvature was produced, not only by inequality of length of legs, but by faulty position during school hours, especially whilst writing, by carrying heavy weights with one arm, and by several other causes. If the condition had advanced beyond an early stage, it was not possible to get even a temporary straightening by ordinary methods. He then showed to the members of the Society his instrument for measuring the amount of rotation of the chest in degrees.

MEDICAL SOCIETY OF LONDON.

MONDAY, FEBRUARY 23RD, 1891.

J. KNOWSLEY THORNTON, C.M., President, in the Chair.

ADJOURNED DISCUSSION ON ANGINA PECTORIS.

THE discussion was reopened by Sir WALTER FOSTER, M.P., who concurred in the view that a wider basis was necessary in considering the pathology of such a condition as angina pectoris, comprising as it did a variety of morbid conditions,

ranging from remediable functional disorders on the one hand to conditions involving the imminent danger of sudden death on the other. He then briefly alluded to the history of four cases of angina pectoris. The first was that of a medical man, aged 64, who complained of the characteristic symptoms—intense pain over the left breast, with an acute sense of impending dissolution. There being indications of a gouty taint, the treatment was directed to the eliminatory functions, and it was attended with very great benefit. He met with death eight years later, when the examination of the heart revealed dilatation and degeneration, but no valvular lesion. The second case was that of a young man, a practised runner, who one night ran the length of the street for a wager, when he suddenly experienced a violent pain in the chest, became rapidly cyanosed, and died in a few minutes. In this case the right auricle was found to be enormously distended, while the right ventricle and other cavities were almost empty. The third case occurred in an elderly man, aged 56, with well-marked arcus senilis. He complained of attacks of intense pain across the chest. His pulse was a high tension pulse, 50 to the minute, falling to 30 during the attacks, when it also became intermittent. He subsequently married a young wife, but died suddenly eleven months after the marriage. In this case there were no valvular lesions or aortic atheroma, but dilated and degenerated left ventricle. The fourth case was also in a medical man, who described his own attacks very fully. His pulse presented the anomaly that it beat at the rate of only 20 a minute in the attack while the heart was contracting frequently. His face was pale and anxious; he complained of no pain in the chest, but he experienced acutely the fear of impending death. The attacks subsided under the influence of diffusible stimulants. The patient himself ascribed his trouble to the effect of the poison of influenza on an irritable pneumogastric. There was no indication of any organic disease of the heart or arteries, and, so far as one could judge, he was free from obvious disease. He died during his third attack. The speaker compared the pain in these cases with that which was so frequently associated with rupture of the aortic valves causing acute distension of the left ventricle, and dwelt upon the peculiar liability to painful attacks in disease of the basic valves, the symptom being usually absent in mitral disease. He pointed out that the pain was almost invariably associated with vasomotor conditions calculated to exert pressure on the heart and to produce distension of that organ. It was also most frequently associated with some degeneration of the myocardium. The distension might bear on the right or the left heart, on the auricles or the ventricles. He preferred to consider angina proper rather as a mode of death than as a specific disease. The pathological basis was, in most cases, weakened or degenerated myocardium; the exciting cause increased vascular pressure; and the determining cause of death, distension of the heart. He pointed out that the first great step in the treatment of this disease had been made by the application of physiological observation to therapeutics, when Dr. Lauder Brunton introduced the use of nitrite of amyl to reduce the arterial tension. He thought that Dr. Brunton and Dr. Murrell had done good service to the profession by generalising the employment of amyl nitrite and nitroglycerine. After recapitulating the other drugs resorted to in the intervals of the attacks, he concluded by saying that no drug had yielded such uniformly good results in his hands as the administration of iodide of potassium, in doses of from 5 to 15 grains three times a day.

Professor GRAINGER STEWART said that Sir Walter Foster's views and his own were somewhat divergent, but he cordially concurred in the view that a more comprehensive basis was necessary on which to consider the affections grouped under the term of angina. He regretted that more had not been said in reference to the association of glycosuria with anginal symptoms. He himself was disposed to group the cases under four heads: (1) conditions which appeared to be simple neuralgia of the heart; (2) cases in which the only pathological lesion was aortitis; (3) cases of the ordinary type where there was degenerative change in the heart muscle; and lastly, cases not necessarily associated with degeneration, but in which the symptoms appeared to be due to intracardiac pressure due to spasm of the arterioles, a condition which might be brought about in various ways. Passing on to the consideration of the determining causes, he alluded to the well known effects of exercise, emotion, dyspepsia, and especially constipation, the influence of various toxines and circulatory changes. The last named cause accounted for the frequent supervention of the attacks at night just when the circulation was undergoing those peculiar modifications which took place in sleep. He pointed out that each or any of these influences might suffice to precipitate an attack belonging to either of the four clinical types which he had described, and the attack might or might not be associated with pain, which was a frequent but not an essential feature. He declined to admit the explanation that the pain was of muscular origin, due to a contraction similar to that which occurred in the legs in cramp. The regular action of the heart during the attacks, which was often observed, negatived this idea, and besides, there was no *post-mortem* evidence pointing to any such condition of spasm. In fact, he failed to attach any meaning to the expression of spasm of the heart. He urged that the pain presented a very close resemblance to that met with in epileptiform neuralgia, the peculiarities of which he described in detail. His idea of the causation of the pain was that some change had taken place in the terminations of the nerves which regulated the action of the heart.

Dr. D. C. MCVAIL said that pain not connected with the endo- or the pericardium must be regarded as anginal. He described the different kinds of pain complained of, it being likened in different cases to a sensation of cutting, crushing, or dilatation. In some instances it was strictly localised, while in others it radiated. He thought that the faintness which accompanied these attacks in some cases might be due, not to any defect in the supply of blood to the brain, but to a stimulus conveyed to the brain instead of the usual stimulus to the sensorium. He pointed out the resemblance between the aura of epileptic patients and that experienced in certain cases of angina. He had observed that the sensation of heart pressure was associated with a double aortic murmur, while that of dilatation corresponded to mitral lesions. He insisted upon the importance of determining the condition of the heart in these cases of pain. He declined to dismiss the hypothesis of the pain being of muscular origin in the offhand manner of Professor Stewart, though he admitted that it was impossible to distinguish between muscular pain and that due to a neurosis. He pointed out that the regular functioning of the heart was not inconsistent with the presumption of spasm, and he instanced the tetanus of the arm muscles induced by the faradic current, which might within certain limits be overcome by the effort of the will. Up to a certain point muscular exercise was a pleasurable sensation, but in case of malnutrition or fatigue then it became one of pain, and he thought that this might explain the pain of angina. Referring to the generally accepted view that during diastole the ventricular walls were quite flaccid and the cavity of the ventricle empty, he said that this view had been completely disproved by recent researches, and he urged that the murmur of aortic regurgitation could not be due to vibration of the valves, for no vibration could take place under the mechanical conditions which were present. This murmur, he argued, must be due to the impinging of the return current of blood on the larger mass which remained in the ventricles even after systole. This explained how pressure on the heart substance was caused by defects in the aortic valves. He concluded by expressing the opinion that the view originally promulgated by Heberden was the correct one, namely, that the pain was due to a spasm of the heart.—On the motion of Dr. SEYMOUR TAYLOR, the discussion was adjourned to a date to be subsequently fixed.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, FEBRUARY 4TH, 1891.

ANNUAL MEETING.

A. L. GALABIN, M.D., F.R.C.P., President, in the Chair.

Specimens.—Mr. ALBAN DORAN, for Mr. ERNEST HART: Ancient Gold Ornament from Crete, representing a Woman in Labour in the Upright Position.—Dr. HANDFIELD-JONES: Specimen of Ovary from a case of Hæmorrhage after an accident.—Dr. RUTHERFORD: Uterus removed by Vaginal Hysterectomy.—Dr WHEATON: (1) An Ovary containing three Dermoid

Cysts; (2) Early Tuberculous Disease of the Uterus.—Mr. MALCOLM: The Uterine Appendages, showing small Multilocular Ovarian Cysts.—Dr. HERMAN: (1) Case of Submucous Fibroid presenting at os uteri ten days after delivery; (2) A case of Cancer of the Uterine Body, illustrating the difficulty of diagnosis between the disease and senile endometritis.—Dr. HERBERT SPENCER: Congenital Diaphragmatic Hernia.—Dr. J. PHILLIPS: Blighted Ovum, with fleshy condition of the Decidua.

Financial and other Reports.—The report of the auditors of the accounts of the treasurer for the year ending December 31st, 1890, was read. It was proposed by Dr. CHAMPNEYS, and seconded by Dr. Gow, and carried, that the report be received, adopted, and published in the *Transactions*.—The report of the Honorary Librarian was read and adopted.—The report of the Chairman of the Board for the examination of midwives was read and adopted.—The PRESIDENT laid upon the table the new scheme of the *Transactions*.

President's Address.—The PRESIDENT, in his address, congratulated the Society upon a prosperous year. The most notable event had been the removal of the Society to its new premises in Hanover Square. The losses by death, though in one sense very heavy, had not been great in numbers. William Butler Young, M.R.C.S.Eng., L.S.A., had practised in Reading. He was a man of high principle and great uprightness of character. He died March 22nd, 1890, at the age of 68. William Pollard, F.R.C.S.Eng., L.S.A., was a descendant of Sir Hugh Pollard; he had practised in Torquay, where he was respected and beloved, both socially and professionally. He died March 29th, 1890, at the age of 70. G. Serignano, M.D., practised in Naples; he died suddenly on March 7th, 1890. Frantz Christian Faye, M.D., was born in 1806; in 1850 he went to Christiania, where he became professor of midwifery in the university. He wrote several works on obstetric subjects. He was physician to King Oscar I as well as to his son, Charles XV. He was Knight of the Swedish North Star in Diamonds. He was fond of the English, and travelled much in England, Scotland, and Ireland. He was elected an honorary Fellow of the Obstetrical Society in 1863. He died at the age of 83 on May 9th, 1890. Montagu H. C. Palmer, M.R.C.S.Eng., practised in Newbury. Besides being a successful practitioner, he was an excellent antiquarian, a good natural historian, and a botanist. He was mayor of the borough. He died at the age of 39 on May 22nd, 1890. James Matthews Duncan, M.D., was born in April, 1826. He studied in Edinburgh and on the Continent. He was assistant to Sir James Simpson, and was the first person ever rendered insensible by chloroform, Simpson and Keith subjecting themselves to the same experiment on the same night. He rapidly established a reputation as a great teacher in obstetrics. His published works soon became widely known. In 1862 he was elected an Honorary Fellow of the Obstetrical Society. A similar honour was conferred upon him in later years by a large number of societies on the Continent and in America. On the death of Sir James Simpson in 1870 it was generally expected that Dr. Matthews Duncan, who had already a European reputation as one of the greatest obstetricians of any time, would succeed to the Chair of Midwifery in the University of Edinburgh. The choice of the electors, however, fell upon Dr. A. R. Simpson. This event had doubtless much to do with the result that he accepted the post of Obstetric Physician and Lecturer on Midwifery to St. Bartholomew's Hospital when it was offered to him, on the retirement of Dr. Greenhalgh in 1877. The debates of the Society gained an added interest from his presence and constant participation, and he occupied the chair as President in the years 1881 and and 1882. In 1860 he married Miss Jane Hart Hotchkiss, of Castlewick, Dumfriesshire. He had in all sixteen children. Mrs. Matthews Duncan and five sons and four daughters survived him. In the spring of last year his health began to fail. He suffered from gouty eczema, and from attacks of angina. He died on September 1st, at Baden Baden. He was buried at East Finchley Cemetery. Most of the leaders of the profession who were not out of town at the time were present, and Sir Richard Quain was deputed to represent the Queen. John Armstrong, M.D., M.R.C.S., L.S.A., was born in 1805. At first he practised in Sligo, and afterwards in Gravesend. In 1873 he retired from practice, and went to live at Greenstreet Green. He was held in great respect by his fellow townsmen, and was highly esteemed by his professional brethren. He died November 20th, 1890. The subject of Midwives Education and Registration was then entered upon, and a discussion followed which has been already reported.

Vote of Thanks.—Dr. JOHN WILLIAMS moved a vote of thanks to the President, which was seconded by Dr. POTTER, and carried unanimously. During the meeting the officers for the ensuing year were elected.

HUNTERIAN SOCIETY.

WEDNESDAY, FEBRUARY 11TH, 1891.

STEPHEN MACKENZIE, M.D., President, in the Chair.

ANNUAL GENERAL MEETING.

Election of Office-bearers.—The following officers were elected for the ensuing year: *President* (re-elected for a second year): Stephen Mackenzie, M.D. *Vice-Presidents:* Edward G. Gilbert, M.D.; F. Charlewood Turner, M.D.; C. J. Symonds, M.S.; R. G. Tatham. *Treasurer:* F. Charlewood Turner, M.D. *Librarian:* Arthur T. Davies, M.B. *Orator for 1892:* C. J. Symonds, M.S. *Secretaries:* John Poland; R. Hingston Fox, M.D. *Council:* S. H. Appleford, M.D.; T. Lloyd Brown; G. A. Carpenter, M.B.; J. S. E. Cotman; T. Rowing Fendick; J. Langton Hewer, M.D.; T. Mark Hovell; R. Clement Lucas, B.S.; T. Horrocks Openshaw, M.S.; G. Newton Pitt, M.D.; W. Percy Reynolds; F. J. Smith, M.B.

Annual Oration.—The annual oration was delivered by Dr. FLETCHER BEACH, who took as his subject "Psychological Medicine in John Hunter's Time, and the progress it has since made." After some introductory remarks, he said that during the earlier years of Hunter's life the belief that the insane were possessed of the devil had not entirely passed away, and ignorance and superstition guided the treatment. Ducking the lunatic was practised in some parts of Cornwall, while in Scotland lunacy-healing wells and superstition survived as late as 1793. In Ireland the most important of the many stories connected with the treatment of the insane was that concerning the Valley of the Lunatics, in which were two wells, to which lunatics used to resort, drink the waters, and eat the cresses growing on the margin, in the firm belief that the madman would thus be restored to mental health. In asylums at that time manacles were applied to the arms and legs of the patients, who were often confined in dark chambers and lay on straw. Many others were kept in gaols, and served as sport to visitors at assizes, fairs, and other places. The patients in private asylums were no better off, and matters at length became so bad that a Committee of the House of Commons was appointed to inquire into the state of the private asylums of the kingdom. In 1774 an Act (14 Geo. III, c. 49) was passed, by which five Fellows of the College of Physicians were annually elected Commissioners in Lunacy for granting licences in London, Westminster, and the county of Middlesex. In the provinces, houses were licensed by the justices of the peace. The medical treatment consisted in bleeding, purging, and giving emetics, probably with the idea that insanity was due to excess of bile in the blood. Drs. Fallowes, Pargeter, Cullen, Arnold, and Mason Cox wrote on insanity. The last was the first to lay much stress on moral as accessory to medical treatment. Management he looked upon as of the highest importance. Altogether he was much in advance of the treatment of his time, though he believed that bleeding, blistering, and the promotion of vomiting and purging were necessary. In 1792, a year before Hunter's death, owing to the supposed ill-treatment of a patient confined in an asylum at York, William Tuke, a citizen of the city, proposed the erection of an institution where there should be no concealment, and where patients should be humanely and kindly treated. His proposition was adopted, funds were provided, and in 1796 the York Retreat was opened and the experiment started. The institution was made as much as possible a home with cheerful surroundings, and the patients were encouraged to work in the open air. The compassionate treatment of the insane also commenced in France about this time, for Pinel, in the year 1793, had freed the lunatics at the Bicêtre from their fetters, although he did not know until 1798 that the same humane treatment was pursued in England. The system of treatment pursued in the Retreat was not followed for

some time. Its success excited the jealousy of the Superintendent of the York Asylum; discussion followed, and eventually an investigation was set on foot which necessitated legislation. In 1815, a Select Committee was appointed to consider provisions for the better regulations of asylums in England. Evidence was taken from various witnesses relative to the condition of patients in the York and Bethnal Green Asylums and Bethlem Hospital, then near Moorfields. At the York Asylum cells were discovered, four in number, eight feet and a half square, perfectly dark when the door was shut, and the stench almost intolerable: in these cells thirteen women slept. At the Bethnal Green Asylum several of the pauper women were chained to their bedsteads naked, and only covered with a hempen rug. The effect of this Parliamentary inquiry did not then bring about a new statute, and thirteen years elapsed before a radical alteration of the law took place. In 1829, according to Conolly, a patient in Lincoln Asylum had died "in consequence of being strapped to a bedstead during the night: this accident led to the establishment of an important rule, that whenever restraints were used in the night, an attendant should continue in the room." In 1834, it was found that this principle, which acted so well at night, was also applicable by day, and the result was that the necessity for restraint became less frequent. In 1835, Mr. Gardiner Hill was appointed house-surgeon of the Lincoln Asylum, and from that date the era of non-restraint was inaugurated, and Dr. Conolly, on going to Hanwell in 1839, set to work to carry it out in the then largest asylum in the kingdom. In 1877, in consequence of an impression that patients were too easily admitted into asylums, and when there could only with difficulty get out, a Select Committee was appointed to inquire into the subject; many false charges were made, but on strict investigation they fell to the ground. Various proposals were suggested, which were embodied in a Bill introduced into Parliament by Mr. Dillwyn in 1881. The Bill finally received the Royal assent in 1889. A consolidation of this and previous Acts was passed last year. Great progress had been made in the views held as to the nature of insanity. The old writers were of opinion that it was due to excess of bile in the blood, and hence the blood-letting, purgative, and emetic treatment. The views of Laycock, Carpenter, Munro, Anstie, Thompson, Dickson, and others had all contributed to make it more clear that insanity was due to depression of the higher centres and excessive action of others. Dr. Hughlings Jackson, adopting the hypothesis of evolution as laid down by Herbert Spencer, thought that cases of insanity might be considered as examples of dissolution. According to this view, insanity was dissolution beginning at the highest nervous centres, and this was the doctrine usually held by the more advanced scientists of the day. The pathology of insanity had of late years made great strides, and there was reason to hope that, as time advanced, it might be possible to establish a relation between the physical appearances seen after death and the lesion of intellectual functions observed during life. Excluding the more recent cases of acute insanity, Bevan Lewis had told him that even now he could do this in epilepsy, alcoholism, general paralysis, idiocy (in this Dr. Fletcher Beach agreed with him), chronic melancholia, senile dementia, and a large group of consecutive dementias, including "organic" dementia. With regard to the treatment pursued at the present day, the wards in asylums were well furnished and cheerful looking. In some parts of the country the tendency had been to do away with the huge buildings characteristic of the older asylums, and to build cottages, or, in higher class asylums, villas, upon the estate. The conditions of life more nearly resembled those of home, and it was found that patients could be just as conveniently classified and treated. In Scotland the most important change had been to allow greater liberty to the patients; in some asylums the airing courts had been abolished, locked doors had to a great extent been disused, and many quiet harmless cases were boarded out under medical supervision. Industrial occupation, especially in the open air, was of great use. Mechanical restraint, no doubt, in some cases could never be abolished; this was recognised by the Lunacy Act of 1890, and acknowledged by the Commissioners. Combined with the moral treatment, which comprised the personal influence of the physician upon the patient, was the medical, which included the hygienic treatment. Diet and regimen were of the highest importance. Fatty foods, easily digested animal and farinaceous food, and nourishing ale and porter were useful, and though the patient might be too weak for outdoor work, yet exercise, or even sitting out in the open air, was now insisted upon. The state of the bowels should be attended to, and tonics, diuretics, the use of the Turkish bath and wet pack, and the bromides, chloral, sulphonal, and paraldehyde were often beneficial. For the carrying out of this treatment, good attendants, possessing some knowledge of mental disease and acquainted with a few simple rules in nursing, were essential. Many such were found in all our asylums at the present day, but the Council of the Medico-Psychological Association had elaborated a scheme by which attendants, on going through a prescribed course of lectures and instruction in the wards, and on successfully passing an examination, might obtain a certificate, which would be a guarantee to the public that those who possessed it had attained proficiency in nursing and attendance on insane persons. The Council of the same Association was also now engaged in formulating resolutions directing attention to what was known as the hospital treatment of insanity. A Society for the After-Care of the Insane had for some years been at work. The difference between the old and new treatment was well summed up by Dr. Hack Tuke as follows: "The old system believed in harshness and darkness; the creed of the new is sweetness and light." With regard to idiots and imbeciles, the first idiot who attracted the attention of scientific men was the savage of Aveyron. He was a child about 11 or 12 years of age, who had lived for some time in the woods of Caune, in France, where he subsisted on acorns and roots. He was eventually taken to Paris in 1799 under the care of a poor but respectable old man, who soon after had to leave him. Pinel, physician-in-chief to the insane at the Bicêtre, declared him to be idiotic, while Itard, physician of the Deaf Mute Institution, asserted that he was simply wild and untaught, and undertook his education. At the end of five years, although he had immensely improved the boy, Itard was convinced that Pinel was right, and gave up his task in disgust. His labours were, however, not so barren as he anticipated, for the principles of training and treatment which he adopted still remained, but had been further perfected by others, and by none more than by the late M. Séguin, whose treatise on idiocy and its treatment by the physiological method was still a standard work. The pathology of idiocy was still in its infancy, but progress was being steadily made. Mierzejewski had written an important paper on the subject, which was also being worked at by Dr. Wilmarth, pathologist at the Philadelphia Training School for Imbecile Children. He had collected 100 brains, and had noted the peculiarities met with in each. One important conclusion had been reached, namely, that the convolutions of brains of idiots and imbeciles often closely resembled those found in the brains of criminals. There was a tendency of the principal fissures to run into each other, forming what Benedikt called a "confluent fissure type." Dr. Fletcher Beach referred those interested in the pathology of idiocy to an article of his own, which would appear in the forthcoming Dictionary of Psychological Medicine, edited by Dr. Hack Tuke. Much improvement was gained by treatment. It was necessary first to strengthen the body and alleviate its defects; and, secondly, to undertake the special training of the mind. Having placed the patient in as good hygienic conditions as possible, the physical training was commenced. As a result, the muscular system became strengthened, the hands had less difficulty in performing any simple act, locomotion was improved, the dribbling from the mouth met with in low class cases was less evident, the eyes wandered less restlessly, and listlessness and inertness to a great extent disappeared. The moral training had to go on side by side with the physical and mental treatment. Obedience must be taught, and efforts made to impart good temper and affection. The intellectual training in the lowest class of idiots commenced by the cultivation of the senses; and as the tactile function was the most important, the sense of touch was first educated. The senses of sight, hearing, taste, and smell were awakened by a series of experiments, in every case proceeding from the simple to the complex, instilling ideas by

the use of concrete forms, and not by abstract notions. Having educated the senses, they proceeded to higher branches of learning, and, when some progress was made, instruction was given in tailoring, shoemaking, etc., to the male patients, while domestic work and sewing proved useful for the females. On glancing at the future, one was led to inquire whether there was any hope that the progress which had already been made in every branch of psychological medicine would be maintained. He (the speaker) was of opinion that there was good ground for such a hope; for, as science advanced, more and more would be known of the structure and functions of the brain. The labours of Gaskell had already thrown light upon the origin of the brain and nervous system; and those of Betz, Bevan Lewis, and a host of others had supplied much knowledge with reference to the structure of that important organ. Who, many years ago, would have thought that the brain would be laid open, and pus and tumours removed from it, as was now done from day to day? Science looked forward to still greater conquests. To stimulate inquiry in this important branch of medicine, the Medico-Pschylogical Association had for some years given a prize, which was open to all assistant medical officers of asylums, for the best dissertation on any clinical or pathological subjects relating to insanity. Three essays were sent in last year, and two of them possessed so much merit that the examiners were obliged to award two prizes. The knowledge of psychological medicine should, however, be still more extended among all branches of the profession, so that those to whose lot it might fall to treat mental disease at its commencement, when remedial measures were most valuable, might be able to apply their knowledge with benefit to the patient. Inquiries into the causation of insanity should be pushed still further; more attention should be paid to the laws of inheritance; endeavours should be made to impress upon those who were the subjects of this *damnosa hæreditas* the utmost importance of paying attention to the laws of health; and teachers should be warned against unduly pressing and overworking the brains of growing children.

Dinner.—The Fellows and friends dined together at the Holborn Restaurant, on Friday, 13th inst.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, FEBRUARY 18TH, 1891.

Jos. EWART, M.D., F.R.C.P., President, in the Chair.

Saprophytes and Parasites.—Dr. LOUIS PARKES read a paper on "The Relations of Saprophytic to Parasitic Micro-organisms." Saprophytes, he said, were those bacilli, micrococci, etc., which, living on dead organic matter only, swarmed everywhere in the air, earth, and water, and to which, in conjunction with moulds and yeast fungi, all fermentative and putrefactive processes were due. The parasitic micro-organisms, on the other hand, preyed on living matter only, or equally with dead. The power of attacking non-living matter, which was evidence of a certain degree of saprophytism, enabled us to cultivate many pathogenic organisms in artificial media. These, which included the microbes of tubercle, diphtheria, anthrax, erysipelas, tetanus, and many others were called "facultative" parasites, while those which were not as yet known to develop out of the living animal were termed "obligate." To the latter class belonged the micro-organisms of small-pox, vaccinia, whooping-cough, measles, etc., and of them we necessarily knew but little. The division, however, was only provisional. Another subdivision of the parasites had been proposed, namely, into (1) non-infectious but toxic organisms, and (2) the truly infectious. The latter, including those of the exanthematous fevers, were found to pervade the blood and every organ of the body: the former, of which those of diphtheria and tetanus were typical examples, acted on the organism through the toxines or ptomaines which they produced. Closely corresponding with the division of parasitic micro-organisms into obligate and facultative was that of the respective diseases into epidemic and endemic on etiological considerations. Whatever the explanation of immunity conferred by one attack against subsequent infection, it was peculiar to the epidemic class, the endemic diseases, as a rule, conferring little or no such protection, though it would seem that some degree of insusceptibility was acquired by long residence in infected localities. It was an interesting question whether such pathogenic organisms might not be developed by a long process of evolution from the non-specific saprophytes of the place, and that the comparative insusceptibility of the native populations might not be attributable to the previous influence of transitional and less virulent microbial forms, not sufficient to give rise to the disease, but conferring immunity, which was the opinion of Professor Hueppe and Dr. Cartwright Wood. The attenuation of pathogenic micro-organisms by cultivation under unfavourable conditions, and the fact that these degenerative microbes grew more luxuriantly in artificial—that is, non-living—media than their original forms, seemed to indicate a retrograde tendency or reversion to the saprophytic character. If such processes of evolution were still going on, we could well understand the striking contrast between the uniformity of the phenomena of diseases depending on obligate parasites and the anomalous cases and variety of symptoms exhibited by those caused by the facultative, as enteric fever and diphtheria, and we might yet expect new forms of disease to arise in the world as the result of long previous evolution. —Dr. WILLOUGHBY said that he had put forward a rational classification of specific diseases, in which he had used the terms intra- and extra-corporeal contagia in almost the same sense as obligate and facultative: and had also, in a paper read before this Society and afterwards in his work on the *Natural History of Specific Diseases*, advanced identical theories of evolution and degeneration, and the same explanations of immunity as well as of the greater variety of symptoms and absence of subsequent immunity in diseases of his extra-corporeal class of contagia, which he held to be less differentiated or specialised than the intra-corporeal or obligate parasites.—Dr. COPEMAN, as a working bacteriologist, was very sceptical as to the evolution of pathogenic from non-pathogenic organisms.—Sir JOSEPH FAYRER, though asserting his disbelief in the communicability of cholera by human agency or material means, urged bacteriologists to pursue their investigations in the calm, temperate, and judicial spirit shown by the lecturer.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, FEBRUARY 13TH, 1891.

H. E. ARMSTRONG, M.R.C.S., President, in the Chair.

The Present Position of Disinfection.—Mr. A. WYNTER BLYTH, after referring to the fact that non-spore-bearing organisms were much less resistent to heat or to chemical action than the spore-bearing, observed that in a paper read before the Royal Society he had pointed out the importance of temperature, time, and space as factors, and had shown that under appropriate conditions such simple means as lime washing and aëration were amply sufficient for disinfection in most cases. Recent experiments, as those of Behring, published in the *Zeitschr. f. Hyg.*, and of Pfuhl, had proved the remarkable efficacy of lime. Boer had shown that, while the addition of very small quantities of lime to a culture fluid greatly favoured the development of bacteria, larger quantities, or the equivalents of potash or soda, producing an alkaline reaction equal to what was known as 50° of normal acidity, were speedily fatal to all pathogenic organisms in any other form than the spore. Thus the strongly alkaline soft soap was a far better germicide than carbolic or thymol soap, and the stripping of papers off the walls, limewashing of walls and ceilings, with scrubbing of the floor and woodwork of a room with soft soap, was generally sufficient for all the purposes of disinfection. Lime, from its power also of absorbing sulphur compounds and other offensive gases, while it was itself inodorous, was specially suited for application to the contents of street gulleys, the removal of disinterred corpses, use in mortuaries, and in nearly all circumstances in which it would not cause the evolution of ammonia. For deodorising manure and excreta, he thought that the acid sulphates which would fix the ammonia and not detract from the value of the manure, would be preferable to carbolic powders. In the disinfection of rooms he believed now that sulphur fumigation was a valuable adjunct to lime washing. He was inclined to the belief that the danger of infection being carried in the clothing of persons visiting the sick had been exaggerated. He did not deny that it might be conveyed by attend-

ants who had been, so to say, "soaking" all night in the poisoned atmosphere; but it was quite a different matter with medical men and inspectors, whose exposure to infection was of short duration. Many sanitary authorities had now opened refuges for the families whose rooms were being disinfected; and he would ask whether it was necessary to subject their persons and clothing to any process of disinfection.—Dr. SWETE called attention to Section 5, subsection 3, of the Infectious Diseases Prevention Act, and described his practice of fumigation with sulphur and hot lime washing, not whitewashing.—Dr. SYKES narrated his experience of the immense value of quicklime in the removal of 2,000 bodies and 4,000 tons of the most horribly fœtid earth from St. James's churchyard, in the parish of St. Pancras, to the extramural cemetery. As the ground was opened, quicklime was thrown in, and the stench at once ceased. The coffins were placed in wooden cases with lime, and at first lime was spread over the loads of earth, but, complaints being made by the residents of the streets through which the carts passed, he substituted clean earth, when no more complaints were raised. He objected, however, to the use of lime in mortuaries, preferring to irrigate the place with a 50 per cent. dilution of Burnett's fluid, which was a 4 per cent. solution of chloride of zinc, a powerful disinfectant. He called attention to the admirable arrangements of the refuges recently opened in Berlin, where the persons admitted were treated to a bath while their clothing was being disinfected in a steam chamber.—Mr. HOLLINSHEAD said that in the Midlands the removal of the midden refuse was a serious question. He used a mixture of powdered sulphate of iron and sulphate of lime, which he found both cheap and efficient.—Dr. CAIGER, as medical officer to two large fever hospitals, had used, to disinfect wards, soft soap and lime washing, followed by free aëration, and had never found the patients subsequently admitted contract the fever previously treated in the same wards. He did not use sulphur fumigations. There were regulations as to bathing and change of clothing by nurses going out of the hospital, but he believed that these were practically a dead letter; yet, though he had given 12,000 passes in one year, he was not aware of any infection by their means. In the laundry, clothes were subjected to steam for twenty minutes before soaping.—Dr. GIBBONS on the other hand had, when in the country, often known scarlatina carried out by nurses to the neighbouring villages. He objected to odorous disinfectants, and was surprised that no mention had been made of corrosive sublimate.—Dr. WOODFORDE observed that he always employed it, and Dr. NEWSHOLME recommended it for the disinfection of enteric stools.—Dr. CAIGER believed that the common experience of the conveyance of infection by patients discharged from hospitals after disinfection of their persons and clothing might be that they continued to exhale the poison for some days.—Dr. VERDON invited inspection of the disinfecting chamber at Lambeth, where steam was injected into a Neville's baking oven, the temperature of which had been previously raised to 360° F., the iron trays being covered with asbestos to avoid scorching the clothing, etc.—The PRESIDENT deprecated any hasty expressions that might be calculated to put the public off their guard, and especially regretted two, namely, that 'disinfection might on theoretical considerations be carried too far," and that under such and such circumstances "disinfection had been seen to be efficacious." We could not see infection, much less disinfection. It was also a question whether lime might not occasionally act as a preservative of infection.—Mr. BLYTH replied.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

CLINICAL EVENING.

FRIDAY, FEBRUARY 6TH, 1891.

JOHN POLAND, F.R.C.S., President, in the Chair.

Presentation of Books.—The PRESIDENT announced that seventy books had been presented by the authors to the library since the last meeting, and a cordial vote of thanks was given to the President for his gift of a bookcase to the Society.

Cases.—Dr. ERNEST CLARKE showed a young married woman with Cataract (Complete) of Right Lens and Total Absence of Iris. A few radiating white fibres suspending the capsule of the lens were visible. A blow on the eye fifteen years previously was followed by gradual loss of sight. Perception of light only.—Mr. W. JOHNSON SMITH exhibited a case, illustrated by specimens, of a Large Epithelioma involving the skin of the left temple and a portion of the outer wall of the orbit. The removal of this growth by the knife was followed by the formation of a large cicatrix, which remained firm and sound until the death of the patient, a man aged 66, from gastric cancer after an interval of nearly three years. The case was discussed by Drs. G. NEWTON PITT, MOON, WAINEWRIGHT, Messrs. W. ARBUTHNOT LANE, THOS. MOORE, and the PRESIDENT. Mr. Johnson Smith also showed an instance of what was supposed to be Compound Separation of the Superior Epiphysis of the Left Humerus. The subject of this injury was a sailor, aged 18, who had fallen from aloft on November 16th, 1890, and remained without surgical treatment on board ship until January 26th, 1891. The left upper extremity was shortened to the extent of 1½ inch, and the muscles both of the forearm and arm were much wasted. The head of the humerus was in its normal position, and could be freely rotated. Projecting under the skin, near the coracoid process and to the inner side of the head of the bone, could be felt the upper end of the shaft of the humerus, which was smooth and even. In front of the shoulder-joint was a long vertical cicatrix following the seat of a wound through which it was stated a long piece of bone protruded immediately after the injury. After alluding to the twelve recorded cases of compound separation of this epiphysis, the PRESIDENT commented upon the specimens of this injury in the London museums and elsewhere. He recommended operation in this case on account of the possibility of dividing the soft osseous material which probably existed between the end of the diaphysis and the epiphysial head. Reduction of the (incomplete) displacement forwards and inwards of the diaphysis might then be effected, and the ends of the fragments pegged or wired together.—Mr. THOS. MOORE showed a boy in whom he had performed Resection of a Rib for Empyema following Injury, with Wound of the Lung. The pus which was evacuated on the fourteenth day, the date of operation, was very foul, but rapid improvement and ultimately complete recovery took place.

Specimen.—Mr. JOHN PRIOR PURVIS showed a specimen of Glioma of the Retina and microscopical sections taken from a boy aged 2 years, whose maternal grandmother died of cancer after removal of the breast for carcinoma, his mother and six older children being quite healthy. The eyeball was removed very shortly after the glioma was detected, and a large piece of the optic nerve removed with it.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, FEBRUARY 12TH, 1891.

W. DALE JAMES, M.R.C.S., President, in the Chair.

Case of Dog Bite.—Dr. L. G. HUNT read the notes of the case of a man who had been admitted into the Fir Vale Union Infirmary suffering from the effects of a dog bite. The symptoms were extensive œdema of the face and head, epistaxis, delirium, and fever. *Post-mortem* examination revealed meningitis, and on the membranes were found a large number of tuberculous-like tumours. There was no pus or fluid in the ventricles. The wound, where the man had been bitten, was discharging pus. There was nothing of importance found in the other organs. Dr. Hunt could not say how far the condition of the brain, which was the cause of death, was attributable to the bite which had been received a month before.

Cystic Bronchocele.—Dr. SIDNEY ROBERTS showed a woman, aged 67, with multiple cystic bronchocele of 47 years' duration. The swelling had been tapped 27 years previously, but speedily refilled. In the last 11 years the patient had been subject to attacks of sudden dyspnœa, and had to be propped up in bed. Except for this, the tumour caused no pressure symptoms whatever, and very little discomfort. The greatest circumference of the neck was 24 inches. The goitre measured 17 inches across, and 9 inches from above downwards. The walls of the thyroid between the cysts were extremely hard and cartilaginous.

Xanthoma Multiplex.—Dr. C. N. GWYNNE showed a boy, aged 9, suffering from xanthoma multiplex. The disease had com-

menced when he was about 4 years old, appearing first on the elbows, and next over the tendo Achillis, just above its insertion, where it formed an oval mass, 1 inch long by ¾ inch broad, and raised ⅓ inch above the surface. It next appeared on the webs of the fingers and on the posterior aspect of the pinnæ of the ears. The patches on the elbows were about an inch in diameter, and had the usual nodulated appearance and wash-leather colour. There was no family history of any special diathesis. The boy had suffered from the usual complaints incident to childhood. He had never had jaundice. He was delicate, of sallow complexion, with pigmentation of the skin under the eyes.—The PRESIDENT, Dr. SIDNEY ROBERTS, and Dr. MARTIN made remarks on the case.

Specimens.—Mr. J. JEEVES showed Three Hearts, all taken from the bodies of men between 50 and 60 years of age, in which the pericardium was very thick and adherent, presenting, in nearly the same situation in each case, on the posterior aspect of the heart, a calcareous plate from 3 to 4 inches in diameter. Dr. BURGESS, Dr. GWYNNE, and Mr. BOYNTON LEE made remarks.—Dr. ARTHUR HALL showed a series of Micro-Photographic Slides with the oxy-hydrogen lantern. They included physiological and pathological specimens, which had been taken by Mr. G. T. W. Newsholme from sections by Dr. Hall. Dr. Hall stated that his chief object in showing the specimens was to endorse what had been said and done by others lately on the great teaching value of micro-photography. The photographs, which had been taken with an ordinary camera without its lens, a Beck's microscope, and an ordinary paraffin lamp, included specimens of human retina, intestine of frog (showing the absorption of fat by the epithelium), rodent ulcer, pneumonic lung, anthrax bacilli, etc. A discussion followed, in which Dr. BURGESS, Dr. RHODES, Mr. BOYNTON LEE, Dr. RUXTON, Dr. LYTH, Dr. MARTIN, and Dr. SINCLAIR WHITE took part.

Lymphangioma Cavernosum.—The PRESIDENT read notes of a case of lymphangioma cavernosum, which he had shown to the Society on a former occasion as a doubtful tumour, which he believed then to be cystic. The patient was a boy, aged 5. The swelling which was situated near the angle of the left scapula, was a smooth, slightly lobulated tumour, bluish in colour, not greatly involving the skin, but rather subcutaneous. It had been noticed for six months, and was painful when it was struck, which not infrequently happened. The tumour was removed on December 5th, peeling readily from its bed. To the naked eye it presented a large number of cysts of various sizes, from a millet seed to a marble, some containing clear lymph, others venous blood. The cyst walls were well defined and very tense, the contents being jerked several feet on puncture. Microscopical examination showed a structure characteristic of this form of tumour. The surface of the epithelium was quite normal, and the dermis as far down as the level of the sudoriparous glands. Here, amongst and between the lobules of adipose tissue, were large and small irregular spaces, some containing granular shrunken lymph corpuscles. These were surrounded by very definite cyst walls, some of them showing faint indications of endothelial lining. The fibrous structures were presented in two very different conditions: those which remained were evidently hypertrophied, while others had undergone atrophy and appeared as partially destroyed septa between lymph spaces. The etiology and histology of the disease was discussed, nothing being found to lead further back than Porök's suggestion that it was a congenital disease analogous to the earlier stages of congenital elephantiasis. A series of micro-photographs of the tumour were shown by the oxyhydrogen lantern. Mr. BOYNTON LEE, Mr. ATKIN, Dr. SIDNEY ROBERTS, Dr. KEELING, Dr. S. MATHEWS, and Mr. ARTHUR JACKSON, took part in the discussion.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, FEBRUARY 6TH, 1891.

T. CHURTON, M.D., President, in the Chair.

Therapeutics of Hypnotism.—Dr. J. MILNE BRAMWELL showed five cases which had been cured of various complaints by the induction of the hypnotic state and subsequent "suggestion." 1. A girl, aged about 20, after an attack of rheumatism, was seized with aphemia. She was put under ether, and had various treatment (endolaryngeal faradism was not used), but she remained unable to make the slightest attempt at speaking for three years. Subsequently there appeared some paralysis of the legs. When the hypnotic state was induced she had a slight unilateral convulsion. The next day she could walk, and in six days, after a severe attack of sneezing, she regained her voice. [Mr. HEWETSON had seen the case, and corroborated Dr. Bramwell's report.] 2. A girl, aged 15, had had hyperidrosis over half the face from infancy. A year previously she consulted Dr. Bramwell for neuralgia and general debility, and there was a patch of skin on the left wrist which constantly sweated, saturating cloths, and dripping on the ground. After the first "suggestion" the sweating ceased, and had only once recurred since. This patient was a perfect somnambule, and when hypnotised could be made to be blind or anæsthetic, or to have any hallucinations suggested by the operator. 3. A girl, four years before, had suffered from "cold" and severe otorrhœa, becoming deaf, hearing a watch on contact only in one ear, and at 2½ inches in the other. After hypnotic treatment her hearing became hyperacute. She had not been under treatment for twelve months. On testing the hearing in the room it was found that the hearing in the left ear was normal, with the right about ⅓. Dr. Bramwell said he had had many cases of deafness under treatment. Where the fault seemed to be in the conducting power there was considerable improvement. In four cases of Menière's disease, with almost total deafness and inability to walk, there had been loss of the vertigo and improvement of hearing, so that the patients could hear a loud voice, but not a perfect cure.—4. A girl with anæmia: a double strabismus operation was performed under hypnotic anæsthesia. Menstruation having ceased for eleven months, repeated suggestions were made of the act of menstruation and the usual accompanying *malaise*; these were to occur on a particular day. This was successful: menstruation occurred on the day fixed, and had recurred regularly since. This patient was a perfect somnambule, and had the power of throwing herself into a trance, which lasted the length of time she suggested to herself. This she would do sometimes when she wished to avoid work. She would also sometimes assume a somnambulist state and walk out, make purchases, etc., apparently sensible: but she had a different character in this state, being "cheeky" and impudent, instead of quiet and modest as she was in her normal condition. 5. A lad of 18 came for cure of intercostal neuralgia, which took place after three sittings. A number of teeth were extracted under hypnotic anæsthesia, and his "granular" lids treated surgically under similar influences. This patient was unusually sensitive, and almost any delusion could be induced in him, even without producing the hypnotic state. When he came into the room he appeared to be in a normal intelligent condition, but was found to be entirely anæsthetic, when tested by touching the conjunctiva and pricking his skin with a needle. In conclusion, Dr. Bramwell described the methods of inducing the hypnotic state, and stated that it was his practice at the first sitting to suggest to the patient that he should be hypnotised by no one but himself, and that he should never be called upon to do anything which he might disapprove of in his waking condition. This was a great safeguard against abuse.—In reply to questions on the nature of the hypnotic sleep, Dr. Bramwell said the sleep was dreamless and refreshing, and passed often into natural sleep. He referred to the earlier days of hypnotism, before "suggestion" formed part of the treatment, when the only therapeutic measure in use was the induction of the hypnotic sleep. Some cases presented great difficulty. In one case of most distressing pruritus vulvæ, in which every conceivable form of treatment had been adopted, he had tried to hypnotise the patient 67 times without success, but the 68th time she became a perfect somnambule, and the pruritus ceased. He had had some success with chorea and epilepsy and epileptiform neuralgia.

Some Considerations respecting Hypnotism.—Dr. J. H. WHITHAM read a paper on this subject. He said that ordinary sleep often passed into a hypnotic sleep, and *vice versâ*, and he mentioned cases in which these changes had occurred. He believed coma vigil to be hypnotic. Suggestion in the waking state was well worth the attention of the medical man. Some of the inexplicable features of hypnotism were

touched upon, together with the questions of the individuality of the hypnotist, and the electivity of the patient. Dr. Whitham believed that every individual capable of displaying functional nerve disturbance could be successfully hypnotised. His own experience did not satisfy him that hypnotism could be useful in organic lesions, although he was unable to discredit the observations of some eminent men who practised hypnotism. He thought surgeons would recognise the few instances in which hypnotism would be of use as an anæsthetic. Its main uses were, however, therapeutic. He objected to hypnotic demonstrations being regarded as "entertainments." He hoped that English hypnotists would not be divided into "schools."

Infantile Hemiplegia.—Dr. Whitham showed a case of infantile hemiplegia in a boy. He had hypnotised this case for three months, suggesting improvement in movement.—Mr. Littlewood, who had seen the case three months before, said the patient had greatly improved as regards walking.

Cases.—The following cases were shown: Mr. Atkinson: Cases of Lupus Treated by Koch's Method.—Mr. Brown: Cases of Lupus Treated by Koch's Method.—Dr. T. Wardrop Griffith: Case of Trophic Changes of Upper Extremity Associated with Locomotor Ataxy.—Mr. Mayo Robson: (1) Successful Case of Tendon Grafting (operation 15 months ago); (2) Removal of Vermiform Appendix from a Case of Recurrent Typhlitis (Patient and Specimen shown).—Mr. Ward: (1) Case of Excision of Hip by Anterior Method; (2) Case of Malignant Disease of Parotid with Secondary Growths.

Specimens.—The following specimens were exhibited: Dr. Braithwaite: Ovarian Cyst Removed from a Pregnant Woman.—Mr. W. H. Brown: Hydrocele Removed from Canal of Nuck.

Apparatus.—Mr. Littlewood showed Wolpert's Apparatus for Estimating Amount of CO_2 in atmospheric air.

REVIEWS AND NOTICES.

Studies of Old Casebooks. By Sir James Paget, Bart. London: Longmans, Green, and Co. 1891.

This volume, though small and made up of essays, some of which are very brief, will, from the eminence and ripe experience of the author, excite a lively interest in the profession and be accepted as a contribution of much importance to the surgical literature of the present year. The publication of a new book from the hand of Sir James Paget will naturally arouse expectations both of profit and pleasure. One will surely be instructed by the teaching of a surgeon endowed with almost unrivalled powers of observation and exposition, and the written words will be welcomed as echoes of a voice which, by the bedside, in the theatre, and at meetings of our medical societies, practitioners of all grades were ever in past years so delighted to hear. Another cause of the gratification aroused by the appearance of this work is the further proof it affords that, in the scientific as in the political world, there are gifted and energetic men who, in spite of overwhelming duties and urgent official and social demands, can find opportunity from time to time for literary efforts of abiding value and high order.

The contents of the book are seventeen essays, most of them dealing with subjects of purely surgical import. In an interesting and suggestive preface expression is given of an idea regarding the value of casebooks, which must, we imagine, have often occurred to hospital surgeons of long experience. According to Sir James Paget, whose own notes of cases range through a period of about forty years, few things of the kind seem to be more useless than such records. Many, indeed, it is suggested, might even prove mischievous, as giving evidence of success under justly discarded and obsolete methods of treatment. A like estimate might, we think, be taken of most literary material consisting of bare records of scientific work and observation. The same applies, as has been found by Sir James Paget, to pathological as to clinical records, and very probably in the formation of any good and useful library a set of the *Philosophical Transactions* would be found as profitless as so many ponderous tomes of casuistry. There are, however, some exceptional instances of casetaking, and the clinical records of some few great surgeons, those of Dupuytren and Pott for example—and, indeed, we might add, notwithstanding his depreciatory estimate of his own work, those of the author of these essays—will long continue to enlighten and instruct. Sir James Paget points out that, although in his opinion clinical records can have no abiding value, casetaking is by no means to be regarded as a waste of time. Such work, it is held, may serve as a valuable method of self-education, the very act of careful recording being nearly equivalent to a renewal of observation. Moreover, as is shrewdly stated, "the present use of old casebooks is no just estimate of their value in past years." Although in this age of rapid progress the teacher of surgery may be disposed to regard the records of his former practice as so much effete and useless material, he cannot well forget the services they have rendered in building up his professional authority and renown.

The studies presented in this volume have been written at various times during the last six or seven years. They are all of practical import, some describing the characters and features of certain rare lesions, others bringing far-reaching scientific speculation to bear on the management of simple and well known forms of surgical disease. Whilst the practitioner of ripe experience and advanced years will find here much to learn and to study, the younger members of the profession, on the other hand, may on looking over the pages of the book, meet with something that is unaccustomed and strange. We meet with no mention of bacilli or of antiseptic precautions, or of any of the latest developments of applied pathology, but a simple and graphic description of clinical phenomena that have been keenly observed, and a description of the bearings of these on general surgical principles on the one side, and on the health and welfare of the individual on the other. Some two or three of the essays may be thought slight and sketchy, but there is hardly one that does not deserve careful perusal. Apart from the intrinsic merit of these studies, the collection is interesting as representing in its best form a mode of study that has in its time served to establish and maintain the high position of British surgery.

There is much variety in the series of sketches, both in scope and subject. Some, as for instance, those on Perforating Ulcer of the Septum of the Nose, on Caries of the Spine, and on Ununited Fracture in Children, are of strictly clinical interest. In two interesting essays—one on Diseases of the Corpora Cavernosa, the other on Diabetic Gangrene—Sir James Paget discusses the influence of certain constitutional diseases on the causation of localised inflammatory lesions, and describes the altered features of such lesions when thus produced. The very suggestive sketch on the Use of the Will for Health is one of more general interest, and may be commended by medical men as likely to bring both comfort and instruction to many an intelligent patient. In a short essay on an Irregular Pulse, the author describes, in really a charming manner, not, as we all know, for the first time, the results of introspective clinical study. Most readers, we have no doubt, will regard as one of the best, if not the best, in the volume, that on Errors in the Chronometry of Life, in which is included an abstract of a lecture delivered at the Royal Institution in 1859.

New Official Remedies, containing all the Drugs and Preparations contained in the Addendum (1890) to the British Pharmacopœia of 1885, with Pharmacological and Therapeutical Notes, Adapted for the use of Students and Practitioners. By Ralph Stockman, M.D., F.R.C.P.E., Lecturer on Materia Medica and Therapeutics, School of Medicine, Edinburgh. London: Percival and Co. 1891.

We have read Dr. Stockman's opusculum with much pleasure and interest. Dr. Stockman is so well known from his long connection with Professor Fraser and the pharmacology department of the University of Edinburgh, that any work from his pen naturally commands attention. The title adopted by the author for his work is somewhat cumbersome, but his object is clearly to popularise the drugs and preparations

recently rendered official. The author is, of course, not in any way responsible for the selection of subjects, or for the nomenclature adopted, and has simply grafted his remarks or comments on to the official publication. The general arrangement is that adopted in the "Addendum," and is alphabetical. The notes naturally fall into two categories, those devoted to pharmacological action, and those concerned with the description of the therapeutical uses of the different drugs. The pharmacological notes have been carefully compiled, a full and complete abstract being given in most cases of the recent literature of the subject. The sections on acetanilide, phenazone, and strophanthus are especially good, whilst under the head of adeps lanæ full justice is done to the classical researches of Liebreich. Speaking of gluside, the author points out that it can never replace sugar in our dietary, as it is not a food, and passes through the body unchanged. It is simply a sweet flavouring substance, and does not satisfy the craving of the system for carbohydrates. The pharmacology of sulphonal, or diethylsulphon-dimethyl-methane as it is sometimes called, receives adequate attention, and reference is made to the inconveniences which attend its employment as a hypnotic, especially to the uncertainty of gait and sleepiness experienced on awaking.

The notes on therapeutics are, it must be confessed, less complete, and occasionally convey the impression of a want of practical familiarity with the matter under discussion. The account of the uses of hamamelis, which is summed up in six lines, hardly does justice to the importance of the subject, the most casual reference being made to the extensive use of this valuable drug in the treatment of piles, whilst nothing is said respecting its employment in the treatment of varicose veins and varicocele. Hydrastis is recommended for chronic constipation, but no directions are given as to its mode of use. We find no reference to its undoubted value in the treatment of hæmorrhoids or to Bartholow's recommendation of its employment for the catarrh of chronic alcoholism. Hydrastin is mentioned in connection with its reputed ecbolic action, but its value as an antiperiodic is not referred to, although, by many American therapeutists, it is regarded as second in efficacy only to quinine. Speaking of the new castor-oil mixture, the author very properly points out that it contains far too large a quantity of essential oils, and adds justly that there are several better emulsions in common use. In connection with euonymus or wahoo bark, Dr. Stockman points out that euonymin is simply a dry extract of euonymus, and that the name "euonymin" is inappropriate, seeing that the termination "in" is reserved for active principles. No valid reason has been assigned for the introduction of the "liquor morphinæ sulphatis," seeing that "its action and uses are the same as those of the other solutions of morphine salts." Dr. Stockman's assertion that "the applications of picrotoxin have no apparent connection with its physiological action," points to the necessity for a more extended inquiry into the properties of this active remedy. The value of small doses of sulphur in the treatment of chronic bronchitis, rheumatoid arthritis, muscular rheumatism, and the various manifestations of the gouty diathesis has long been recognised, and the introduction of the sulphur lozenge, in which the sulphur is triturated with acid tartrate of potassium, will be regarded by many as a distinct advance in therapeutics. It is probable that when large doses of insoluble drugs, such as sulphur and the salts of bismuth, are administered a very small proportion is absorbed or exerts any remedial action, the greater part being eliminated, practically unaltered, with the fæces.

Dr. Stockman's production is undoubtedly a very creditable performance, and the book is likely to be frequently consulted by those still unfamiliar with the uses of some of our newer remedies. It is true that here and there there are traces of hasty work, but they do not detract materially from the value of the information conveyed. The notes have evidently been jotted down hastily, and would be all the better for a little revision. Such statements as the following might perhaps be more judiciously expressed: "Many of the secret preparations for the cure of asthma contain stramonium leaves in large quantities. They are sometimes used as a poultice in painful local inflammations." There are, of course, many "secret preparations for the cure of asthma"—Hair's cure, for example—which are simply solutions of iodide of potassium, and obviously could not contain stramonium leaves. The author evidently intends to refer to what are called "fuming preparations," such as Himrod's powder and the "Green Mountain cure." The second sentence is ambiguous, for it is the stramonium leaves and not the secret preparations which are employed in making poultices.

We trust that in a second edition Dr. Stockman will have an opportunity of extending and developing these therapeutical notes.

Railway Injuries in their Medico-legal and Clinical Aspects. By Herbert W. Page, M.A., M.C.Cantab., F.R.C.S., Surgeon to the St. Mary's Hospital. London: Griffin and Co. 1891.

Mr. Page's position, extending over many years as surgeon to one of our most important railway companies, has afforded him exceptional opportunities of gaining experience in all kinds of railway injuries; it has enabled him to ascertain the exact nature of the accident, and to follow out the results in all their details. This has made his opinion more or less authoritative. He had already done good service by the publication of a work on *Injuries to the Spine and Spinal Cord*, in which he showed that the sufferers from railway collisions were accustomed far too frequently to be regarded as the victims of some lesion of the spinal cord or other organic change, instead of being the subjects of a temporary shock to the nervous system. It was surmised that a concussion of the cord in the first place had been the basis of a subsequent inflammatory process which would end in a permanent paralysis. Mr. Page had, by a careful collection of cases, shown the fallaciousness of this opinion, and even threw doubt upon the possibility of such a condition as concussion of the spine.

In the present work he has shown the mode in which railway injuries arise; that they are due for the most part to a strain of the spine or other portion of the body combined with the general nervous shock which the whole system has undergone. He shows also how the symptoms are prolonged or intensified during the process of litigation, and how rapidly these depart when pecuniary compensation has been made, and this without any intentional deception on the part of the plaintiff.

It is very noteworthy that the symptoms in railway cases are remarkably uniform, more than 60 per cent. of the patients having pain in the back, whatever may have been the nature of the accident, the other symptoms being pain in the limbs and altered sensations. This uniformity is accounted for by the fact that the patient is sitting in the carriage when the collision occurs; if he is upright and reading, his cervical spine is strained, or in another person it may be the lumbo-sacral region. The traveller receives no blow and believes he is unhurt, but on the following day he complains of pain in his back, and shortly after he is unable to move. This pain and weakness may remain for weeks and months, and is often associated with hyperæsthesia or other altered sensations. We remember some years ago an important case where the two conflicting medical opinions were very strongly enforced. A gentleman received a severe shaking in a first-class railway carriage from an engine running into the back of his train, which was standing still during collection of tickets; he was thrown forward from his seat, but not struck. He alighted from the carriage and went home. He shortly, however, began to complain of his back, became extraordinarily hyperæsthetic, remained sitting in his chair all day, declared he was unfit for business, and was a ruined man. He claimed a large sum of money from the railway company, his medical man declaring that his nerves were completely wrecked; in this opinion he was supported by other eminent medical men. The company's surgeon as strongly asserted that he presented no symptoms of organic disease, and there was no reason why he should not recover. A submission to the arbitration of a medical board brought the case no nearer solution, when it was agreed on both sides to accept the decision of an umpire. The latter, as is often done in difficult cases, split the difference, and awarded the gentleman a sum of several thousand pounds. The plaintiff immediately began to improve in health, and he was shortly afterwards back in business as well as ever.

Mr. Page describes symptoms of a very severe nature arising from shock, even reaching to weakness of the rectum and bladder, in which recovery is yet perfectly possible. Paralysis is the word feared by the patient, and often declared to be present by the medical attendant, but Mr. Page maintains that it does not arise from shock, but is only seen in the most severe form of railway accidents where the spine itself has been directly injured by a blow.

The author's chapter on nervous shock, and the multitude of symptoms which ensue, is one full of interest, as it is applicable to numerous cases besides those of railway injury. Cases are described in which the whole nervous system has been disturbed by bodily and mental shock, and a number of symptoms have arisen which, in the female sex, would have received the name of hysterical. Instances are given of men who have sat in their chair for weeks or months unable to move, when, on a sudden, they have risen up and walked. They had been the subjects of an utter loss of will power. Mr. Page speaks strongly of the ill effects of prolonged litigation in confirming temporary symptoms or developing fresh ones. Whilst action is pending, and every symptom is being noted down for his supposed advantage, the sufferer is ever on the look out for some new sensation to arise. During this time there is an enforced absence from business, and, therefore, of occupation, to divert the mind. The author, in describing these cases, is not doubting the *bona fides* of the sufferer, but only proving how the symptoms are purely nervous in the popular sense of the word. He subsequently alludes to cases of malingering and gross deception, and the method of investigating them to discover the fraud. The general conclusions of the author are that the symptoms in the so-called railway spine are due to nervous shock combined with, perhaps, some actual strain or sprain of the spinal muscles and ligaments, the result being pain in the back, with numbers of symptoms indicative of a perturbation of the sensory nerves. He altogether ignores the older theory which attributed all these symptoms arising after a railway injury to a meningomyelitis of the brain and cord. In ignoring such an affection as concussion of the spinal cord, we confess that we cannot see how he would explain the cases of a temporary paraplegia after a fall. We have known of the case of a gentleman who fell off an omnibus, and then was found unable to stand or move his legs. This temporary paralysis gradually departed after a few days. Exactly the same thing has happened to a gentleman thrown from his horse; on attempting to rise it was found that his legs were completely powerless. In two or three days he had regained his power. In these cases of apparent concussion there seems no reason why an inflammatory process and degeneration might not have ensued.

We believe, however, that Mr. Page is in the main right. He has a larger number of facts than most medical men can possibly have to enforce his opinions. His work is most interesting reading as exemplifying what a numberless set of nerve symptoms may be present in our fragile bodies without any organic lesion to cause them. It is a work invaluable to those who may have difficult railway cases under their care pending litigation, and they will acquire from it much valuable knowledge to guide them, both as to the diagnosis and as to the best course to pursue in the interest of their clients. It is a book which every lawyer as well as doctor should have on his shelves.

NOTES ON BOOKS.

Year-Book of Pharmacy and Transactions of the British Pharmaceutical Conference, 1890. (London: J. and A. Churchill. 1891.) This annual summary of researches or suggestions having any bearing on pharmacy, made during the year to which it applies, is, as usual, well filled with material in the form of abstracts from home and foreign publications. The abstracts are as brief as is compatible with an intelligent indication of results; references to the original papers are given, and the gist of upwards of 500 communications is gathered into the limited space allotted to this department of the volume. The selection has been made with discretion. Besides the abstracts, a collection of notes and formulæ, and a bibliography of scientific books published during the year, the volume contains a record of the work of the British Pharmaceutical Conference at its twenty-seventh annual meeting, which took place at Leeds last year. Among the twenty-nine papers read at that meeting were several valuable contributions to pharmacology, including investigations of the comparative alkaloidal strengths of annual and biennial henbane, the solvent action on drugs of alcohols of various strengths, and their suitability for tinctures; on the comparative medicinal strengths of the three official kinds of buchu, on the green iodide of mercury, on extract of malt, etc. Besides these were many of a more purely chemical character, some of which are of considerable interest to the medical man; we might mention one on the constitution of the synthetic remedies, where all the numerous bodies of this class which have of late years been introduced into medicine are compared with one another in composition, and their relations to each other graphically shown.

Guide de Dissection et Résumé d'Anatomie Topographique. Adaptation Française du Manuel d'Anatomie Pratique de D. J. Cunningham, M.D. Par Dr. P. Kuborn. (Paris: Carré. 1890.)—It is not many months since we reviewed the last volume of Professor Cunningham's excellent work on practical anatomy. The praises which we then bestowed upon it seem to have been well deserved, for not only has it won increasing favour in this country, but it has also received the compliment of being translated into French. This has been done by Dr. P. Kuborn, who is anatomical assistant in the University of Liége. The whole of the original three volumes have been compressed into one of less than four hundred pages, and the translator has added a number of notes which, as a rule, explain slight differences in nomenclature. This brevity has only been attained by omitting a good deal of Professor Cunningham's text. This is, we think, to be regretted; although it may be allowed that the translator is the best judge of the requirements of his readers. In other respects the translation is very clear and correct, and calculated to make Professor Cunningham's book as popular in France as it is in England.

Aids to Sanitary Science. By Francis J. Allan, M.D.Edin., D.P.H.Camb. (London: Baillière, Tindall, and Cox.)—This little work is written for the use of candidates for public health qualifications, and is avowedly the latter-day production known as a "crambook;" it is a compilation from various authors, the classical work of the late Professor Parkes, as edited by Professor de Chaumont, being the author's guide. The information there obtainable is supplemented by that provided by the writings of other authors on special subjects, so as to present, as far as possible, a summary of the latest additions to our knowledge in each division of the subject. The aim and object of the ordinary crambook is to place before the student in a small compass a large number of facts of which a temporary knowledge is likely to enable him to pass his examination, but little effort being made to ground him in the subject, so that he may have a solid foundation on which to rear his superstructure of facts and details. Perplexity of arrangement, multiplicity and ill assortment of facts are, then, the prevailing features of crambooks, but Dr. Allan's work is to a large extent free from these undesirable features. The facts are there, but they are well arranged and well assorted, and it is evident that great pains have been taken to render the work complete and exhaustive, as far as space would permit. The style is necessarily very pithy and concise, consequently the labour involved in reading such a work is considerably greater than in reading a better reasoned and larger book, even if time is saved. Used as an aid to the larger works—as no doubt Dr. Allan intends it to be—we can recommend the work as being replete with reliable information.

Irish Medical Schools' and Graduates' Association.—The annual general meeting of this Association will take place at the rooms of the Medical Society, Chandos Street, W., on Tuesday, March 7th, at 5 P.M. On the same evening the members will dine at the Holborn Restaurant at 7.30 P.M., Dr. Gilbart Smith, President, in the chair.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, FEBRUARY 28TH, 1891.

WATER-FILCHING FOR LONDON.

In an article in the British Medical Journal of February 21st, we briefly sketched the manner in which London has outgrown her own natural sources of water supply; and it was intimated that the latest means proposed for meeting the exacting needs of her huge population must involve lamentable results over a large area of the surrounding country. The region most seriously affected—and that which is already most alive to the dangers of this scheme and most active in opposing it—is that which corresponds to the catchment basins of the rivers Colne and Lee, including almost the whole of Hertfordshire, with part of Essex, and small portions of Bucks, of Bedfordshire, and of Middlesex. The Herts County Council and the Hertfordshire Natural History Society are giving serious attention to a matter which gravely affects the prosperity of the districts that they represent, and Mr. Hopkinson has lately published two papers, in which the scientific evidence against all proposals for further abstraction of water from this great chalk basin is admirably marshalled.

Hertfordshire has a total area of 633 square miles, about half of which is occupied by permeable strata. If to this be added the considerable part of Essex which is drained by the Lee and its tributaries to the east (above the lowest point where the New River and East London Companies are augmenting their supplies by deep borings), together with so much of the other counties named as contribute to the waters of this river and of the Colne (above the point where it is now proposed to institute deep borings for an additional supply to London), and the Brent, and sundry other small streams which occasionally run for a portion of the year for variable distances over the London clay, we reach a total area of some 800 square miles, of which rather less than half, being occupied by permeable strata, permits a portion of its rainfall to percolate into the subterranean chalk reservoir. In other words, not more than 400 square miles is available in the whole district (more than double the size of many English counties) which may be conveniently spoken of as the catchment basins of the Colne and Lee.

In this district the mean rainfall for the last half century averages rather less than 26.5 inches per annum; it is sometimes nearly 10 inches less in a single year, and may be only about 20 inches per annum for three years in succession. Of the rain which falls upon it, a variable proportion—from 46 per cent. in the winter months to barely 4 per cent. in summer—penetrates the soil and finds its way by percolation to the chalk. And prolonged and careful observation proves that an average percolation of only about 4 inches of rain per annum can be relied on, while it may be at least an inch less for three successive years.

In an average year, therefore, or on the average of a longer succession of varying years, it would not be possible to draw by deep borings from the chalk in the catchment basins of the Colne and Lee more than about 104 millions of gallons per diem, which, allowing 32 gallons per head per diem, would suffice for only 3¼ millions out of the 5 millions of the population of London and its suburbs. In an exceptionally dry series of years the supply would be little more than 47½ million gallons a day, sufficient only for 1½ million of people. But in neither of these cases would there be any water for the population resident within this area of some 800 miles, nor any wherewith to feed the rivers. And it follows that even if there were no residential population to be considered, if it were seriously proposed to reduce the whole region concerned to the condition of a waterless desert, the merely present needs of London would require that an area of some 1,600 square miles should be laid under contribution, supposing the strata to be similarly arranged, and on the assumption that the water required is to be pumped from deep borings into the great subterranean reservoir.

This is not a merely theoretical assumption. We have seen that, in average years, the total supply available from percolation in the catchment basins of the two rivers Colne and Lee may be calculated to yield about 104 million gallons of water a day. It appears that in the year 1879 the New River and the East London companies together drew from the Lee catchment basin a daily average of 58½ million gallons; the amount now taken is considerably more. Now, it is not probable that the supply available from the Lee basin is much in excess of that obtainable from the Colne, in which case some 80 million gallons are now being daily abstracted from the Lee basin as against the 52 million gallons which percolate into it. In other words, for every two gallons of water collected within the Lee valley, London is withdrawing three from its reservoir in that chalk basin, and this quite apart from the amount every day required by the resident population of that area. The result of such a process can only be a steady, if gradual, exhaustion of water from the chalk, and a progressive lowering of its plane of saturation; and, unfortunately, facts abundantly confirm this calculation, and prove that such a lowering of the deep-water level is proceeding, not merely in the valleys of the Colne and Lee, but in the main valley of the Thames itself as well; and this, moreover, to a degree which has already begun to excite the alarm of both agriculturists and manufacturers.

Watercress growing—one of the most important industries of Hertfordshire, and one which few Londoners would willingly abolish—is being seriously damaged, and is threatened with destruction at no very distant date. Springs which were perennial and abundant thirty years ago have now run dry; the level of the water in deep wells has fallen more than 20 feet within less than as many years. Mills are being abandoned for lack of water power; and rivers which once flowed regularly past ancient mansions built to command a view of their bank-full streams, are now lost in swallow holes, or flow only scantily or for a few weeks in occasional years. In 1821 the water in a well in the East of

London stood at Trinity high-water mark—22 feet above the present ordnance datum; in 1851 its average height was 43 feet below; and in 1881 it was 105 below ordnance datum, a lowering of 127 feet in sixty years, and indicating a fall in the plane of saturation in the chalk of more than 200 feet in the century. This depletion is not explicable on any theory of a diminished rainfall; for in this district the average of the last twenty years (during which the fall has taken place at an increasing rate) is nearly 2 inches above the average rainfall for the previous thirty years. The cause is to be found wholly and solely in the fact that water has been, and is being, increasingly drawn from the chalk basin in excess of its supply. Under these circumstances is it strange that the population of the large area so immediately affected should be alarmed, or that they should believe that they have the strongest grounds for opposing any schemes by which the rate of depletion must be enormously increased, to their own immediate loss, and to the ultimate devastation of their county? Whether it be brought about by deep borings at Rickmansworth, in the already suffering valley of the Colne; by the additional wells and miles of subterranean tunnels contemplated by the East London Company; or by that stringent and absolute control of all the streams in the watershed of the Thames and Lee, for which the London County Council asks as an obvious prelude to a further abstraction from the catchment basin of the Lee, the result must be the same—a temporary augmentation of the water supply of London at the expense of a populous and important residential district, which is already dangerously overtaxed by an abstraction of water from the chalk in excess of its income by percolation.

THE NEW FACTORY BILLS.

Factory legislation is just now in a state of active fermentation, with the prospect of becoming very unlike its former self by obliteration of some of its best features.

There is a prevailing conviction abroad, originating principally from the report of the Commission on "Sweating," that the provisions of the Factory Act should be so enlarged as to be made applicable not only to factory and workshops, as officially known, but also to all places of domestic work where employment is carried on for gain. To extend the Act so as to make it effective for the vast additional work required of it necessarily involves very considerable additions to, and alterations of, its present provisions.

The task of adaptation has been undertaken by several prominent members of Parliament; in the Upper House by the Lords Thring and Dunraven, and in the Lower by Sir Henry James, Mr. Sydney Buxton, Mr. Rendells, and last, not least, by the Home Secretary, Mr. Matthews, whose Bill, backed as it is by Mr. Ritchie and Mr. Stuart Wortley, must be looked upon as a Government measure.

A few months since we commented upon the Bill by Lord Thring, introduced last session in the House of Lords, and need not again recur to it. The next most prominent Bill, which has reached a second reading in the Commons, is that propounded by Sir Henry James, entitled, "The Factory and Workshop Act (1878) Amendment Bill, 1891." From his remarks when introducing it, it would appear that the measure is not of his own devising, but rather represents the views of the trades unions, and especially of those existing in the cotton districts; and as a result of its limited range of view it has been objected to by manufacturers in other districts as both inapplicable and mischievous in certain details. Its prospects, therefore, of being approved by Parliament in its entirety, are very small, and, in all probability, only a few of its clauses will find a place in the Statute Book. The Bill prepared by Mr. Sydney Buxton is far more comprehensive, and has evidently been thoroughly thought out. At the present moment we shall not attempt its analysis, for the last Bill introduced by Mr. Matthews demands our immediate and undivided attention by reason of its serious innovations.

The other measures enumerated leave untouched the medical organisation of the Factory Act now in force. Mr. Matthews, by an autocratic stroke of the pen, erases the whole of it; and, whilst professedly adding to the sanitary efficiency of the Act, he deprives it of a principal element.

Lord Cross, when Secretary for the Home Department, insisted on the truth that factory legislation is essentially sanitary; and, after a vast expenditure of time and consideration of the matter, and an exhaustive examination of the whole range of factory enactments in existence, he brought in, and carried through Parliament the Factory Act of 1878, which was accepted on all hands as an admirable settlement of the whole question, and a wise and comprehensive consolidation of all previous Legislative Acts.

It may be admitted that the course of events since that time—the extension of machinery to manufacturing processes, the advance of sanitary science, and the changed relations between employers and employed—now necessitate some extension and modifications of existing legislation. But the course pursued by the Home Secretary in the Bill before us must be looked upon not as reformatory but as revolutionary. For, by his project of law, he robs factory legislation of sanitary provisions sanctioned by use ever since factories were brought under Government inspection, and of proved utility. He would seem to ignore the whole history of the factory laws, and to be prepared to open the way for the recurrence of the wretched physical and moral condition of factory operatives—especially of their children—which several Commissions had proved to exist, and which raised a cry throughout the land for remedial measures.

It would be vain to attribute the vast improvement of the condition of the manufacturing population wholly to the medical organisation of the Factory Act; yet, no one having personal experience and knowledge of factories and factory hands can deny to it a most salutary result in regard to the health of youthful operatives, and, consequently, also to that of each succeeding generation. It represents a preventive system, and its effects are not measurable by the number of rejections for employment, made by the certifying surgeons, on account of bodily ailments or of insufficient strength, but, by the effects of its constant operation as an agency antagonistic to attempts to impose work on the unfit, and it would be equally reasonable to assess the value and efficiency of the police by the number of persons taken into custody.

It is a favourite proposition with many that it is enough for all purposes to produce evidence of age and of school progress, as though the attainment of a certain age implies normal development and strength and freedom from disease. Mr. Matthews appears to have proceeded on this sophism,

for all that he demands as qualifications for work are certificates of age and education.

What was wanted in framing an amended Act was a statesmanlike review of the whole of the sanitary purposes to be accomplished and of the machinery to give effect to them. Were this course taken the outcome would not be the destruction of the existent medical organisation, but the development of a scheme to augment its efficiency and to extend its operation.

The processes of manufacture are infinitely diverse in character, and demand very varied qualifications in the way of bodily strength and aptitude. And it must be perceived that an appeal to medical experience will be of material value both to employers and employed, on behalf of those seeking to enter upon any given form of work. Under the present *régime* this advantage has been enjoyed, for though the certifying surgeons are not specifically required to take note of the form of employment children and others are to pursue, they have practically kept this point in view, and acted accordingly when giving certificates of fitness.

Again, in numerous occupations poisonous materials are in use, or are generated, which sooner or later sap the health and destroy life. Here again is scope for medical action to prevent the employment of unfit persons, and to watch over those already engaged with the view to arrest their work and to secure their treatment before the serious ills consequent upon their calling have made fatal inroad upon their bodily health.

It may be contended that parents will not put their children to work when bodily unfit or diseased. Experience gives denial to this contention. The Children's Employment Commissioners, after their exhaustive inquiries, declared that children needed most of all protection against their parents; and certifying surgeons will bear out this assertion with respect to a considerable number of the working classes. Others will tell us that adult workers will look sufficiently after their own health; but here again experience teaches the contrary. It is too well known how reckless women have been in pursuing their work too soon both before and after childbirth, and not only do they err in this direction, but they frequently persist in their occupation at the sacrifice of their health; a circumstance, however, not peculiar to women, although more common among them than men. Here again may be perceived room for medical supervision in factories of adult *employés*, under proper limitations.

These remarks on the scope for medical agency in the interests of the manufacturing population may serve as examples, but cannot be further extended in this article. They open up problems which the author of a sanitary Factory Act ought to deal with; and what we have to deplore and to protest against is not merely the ignoring of such problems, but the sacrifice of the only device to deal with them yet attempted.

The Bill dispenses with the services of those best qualified by study and training to carry on sanitary work, and leaves all such work as it provides to a miscellaneous body of inspectors and sub-inspectors, having no accredited knowledge of sanitary science or of disease. We must, however, give credit to most of the present staff of inspectors for a considerable acquaintance, obtained from experience, of structural sanitary requirements in the case of manufactories; and we are also glad to see that Mr. Matthews proposes to engage the services of local sanitary medical officers in certain conditions. Nevertheless, our remarks lose but little force after due allowance for these favourable exceptional circumstances has been made; for it seems from observations made by Mr. Matthews, in the House of Commons, that, in future, inspectors are to be recruited especially from among factory operatives who gain the support of their unions and can command the patronage of the Home Secretary.

It is not for us to discuss the policy of this proceeding, but we must object to making individuals of the class named administrators of sanitary provisions, to the exclusion of medical men who have so long and so faithfully performed those functions entrusted to them as certifying surgeons, and who are so well qualified to undertake whatever further sanitary work is considered desirable in the interests of the health and welfare of the working classes. It has in the past been the boast of the Conservative party that the passing of factory laws was due to it. It will be a disgrace to that party if it now sanctions such a weakening of the purposes of that Act as will wreck its most characteristic sanitary features. To avert the threatened mischievous and mistaken scheme of the Home Secretary is the pressing duty of all medical men, not only out of regard for their own interests, but also for the wellbeing of the labouring classes at large. We trust that the whole profession will be aroused to this duty, and will exert whatever political influence it possesses.

THE fourth Congress of the German Gynæcological Society will be held at Bonn from May 21st to the 23rd.

MR. ALEXANDER EDINGTON, M.B. and C.M., who has for several years superintended the Bacteriological Laboratory associated with the Chair of Surgery in the University of Edinburgh, has been appointed Bacteriologist to the Cape of Good Hope Government.

THE President of the French Republic has conferred on Professor von Helmholtz the Grand Cross of the Legion of Honour. This is said to be the first time since 1870 that this distinction has been conferred on a German.

THE Lord President of Council has arranged to receive a deputation from the Parliamentary Bills Committee with reference to the Midwives Bill this day (Friday), at 2.30 P.M. The deputation will be introduced by Dr. R. Farquharson, M.P. At 12.30 P.M. on the same day Lord Cranbrook will receive a deputation of ladies, which will be introduced by Lady Aberdeen, in favour of the Midwives Bill.

ON February 17th, Dr. Clement Godson performed Porro's operation in the City of London Lying-in Hospital on a woman in labour, aged 41. The patient had a rickety pelvis, the conjugate diameter being 2 inches. The child, weighing 7¾ lbs., was extracted alive. The patient did well, and a week after the operation appeared to be in a fair way to recovery. The temperature had not been above 100° F. nor the pulse above 80.

A PROVISIONAL committee has been formed among graduates of the University of London to take steps to oppose the latest revised scheme for the reconstitution of the University. It consists of—Dr. J. B. Napier (Chairman); Dr. W. E. Grigsby, LL.D., L.C.C.; Dr. Baines; Dr. W. J. Collins, M.S., B.Sc. Dr. J. W. Carr, B.S.; Mr. H. Austen, M.B., B.S.;

Mr. J. G. Joseph, LL.B., B.A., 3, Harcourt Buildings, Temple, E.C.; and Mr. H. J. Waring, M.B., B.Sc., St. Bartholomew's Hospital, E.C., have been appointed Honorary Secretaries.

A LECTURE on Certain Points in the Physiology of Diabetes will be given in the theatre of the University of London on March 3rd, at 5 o'clock, by Dr. A. E. Wright, late "Grocers' Student."

HYPNOTISM IN AMERICA.

THE Chicago Medico-Legal Society recently passed a resolution that public *seances* of hypnotism, mesmerism, and "magnetism" should be forbidden by law, and that hypnotism for therapeutic or other legitimate medical purposes should be practised solely by duly qualified medical men, and only in the presence of other practitioners or undoubted friends of the person operated upon.

THE INGLEBY LECTURES.

THE first of this year's course of Ingleby Lectures was given before a large audience in the Examination Hall of the Queen's College, Birmingham, on February 19th. The subject of the course is the Surgical Diseases of Children, and in the first lecture Mr. Jordan Lloyd, Ingleby Lecturer for the year, dealt with anæsthetics, shock, the dry antiseptic system of operating and dressing, and with some of the commoner congenital conditions, especially hare-lip. The second lecture, on February 26th, deals with injuries and diseases of bones. Subsequent lectures will be given on March 5th, 12th, 19th, and 26th, at 4 P.M.

A MEDICAL COLLEGE IN MID-CHINA.

AT Hang-Chow, in Mid-China, there is a large mission hospital under the charge of Dr. David Main. It was built expressly for the purpose in 1885. As the Chinese have no name for a hospital, the institution is commonly known as "The Universal Benevolent Healing Office," not a bad name in itself, though a trifle cumbrous in these days of storm and stress. A medical class is in constant training at the hospital, and last year eight of the students "satisfied the examiners" at the end of a curriculum which, in one respect at least, would receive the approval of our own General Medical Council, inasmuch as it was of five years' duration.

A LUNACY REFORM UNION IN AMERICA.

MISS CLARISSA CALDWELL LOTHROP, who was confined for two years in an asylum in Utica, United States, is said to be forming an Anti-Kidnapping and Lunacy Reform Union in America. The president is Mr. Bronson Murray, of New York, the secretary being Miss Lothrop herself; and the treasurer, Madame Demarest. The object of the Union is to prevent the detention of sane persons in lunatic asylums, and to promote legislation for the general "betterment" of the really insane. The investigations of the Union have, it is alleged, already shown that in seven years fifty-six sane persons were confined in the Buffalo Asylum, and that in the Utica Asylum over one hundred such persons have been placed in confinement in thirty years. It is admitted that in many, if not in all, of these cases the authorities are not responsible for the outrage. It is the law that is defective.

INCREASED CONSUMPTION OF ALCOHOL.

THE "rush to alcohol," which we commented on last year, still continues. Dr. Dawson Burns, in his annual "drink budget" in the *Times*, shows that in 1890 there has been an increased alcoholic expenditure in the United Kingdom of £7,282,194 over 1889. Nearly one-half of this increase was for beer, nearly one-third for spirits, and less than one-ninth for wine. The average amount spent in all intoxicants has, in the past year, been £3 13s. per head of the population. This increasing outlay, which has probably arisen from our greater national prosperity, cannot be viewed with satisfaction by a profession which, especially of late years, has done so much to enlighten the people as to the influence of alcohol on the organism, and ought to call forth renewed effort on the part of those who, from the ample opportunities of observation in their practice, are thoroughly conversant with the injurious effects of indulgence in alcohol.

DEGREES FOR LONDON MEDICAL STUDENTS.

AT the annual meeting of the members of University College, London, held on February 25th, the President, Mr. J. E. Erichsen, delivered an address in which he criticised the draft scheme of the University of London. This scheme, which he said must be regarded as an ultimatum from the University, was objectionable, because it would leave the University a university for England and not for London, because the M.D. degree would still be almost, if not quite, as difficult of attainment as previously, and because the Standing Committee in Medicine of the Senate would be an unwieldy body most difficult to bring together and to manage.

THE DERBY INFIRMARY.

THE Governors of the Derbyshire General Infirmary have taken the bull by the horns, and at a meeting on February 23rd decided to pull down the existing infirmary, which has been condemned as insanitary by Dr. Seaton. Plans for the new infirmary, prepared by Messrs. Young and Hall, who are well known as architects who have given special attention to hospital construction, to be erected at a cost of £64,000, were unanimously adopted. A considerable sum of money was subscribed in the room, the chairman of the meeting, Sir William Evans, promising £3,000; Mr. Francis Ley, £1,000; the Mayor of Derby, £500; and Sir Henry Wilmot, £500. The Lord Lieutenant of the county, the Duke of Devonshire, will shortly call a county meeting to consider the method of raising the necessary sum.

SPANISH FLY IN PULMONARY CONSUMPTION.

AT the meeting of the Berliner Medicinische Gesellschaft on February 25th, Professor Oscar Liebreich read a paper on the Use of the Active Principle of Spanish Fly as an Internal Remedy in the Treatment of Pulmonary Phthisis. Our Berlin correspondent telegraphs that there was a crowded meeting to hear the address. The remedy is cantharidinate of potash injected subcutaneously in doses of 1 to 2 decimilligrammes. Professor Liebreich's theory is that the remedy causes transudation of blood serum at the *locus affectus*, thus disinfecting *in loco*. Fraenkel has observed diminution and degeneration of bacilli after injections. The remedy is thus prepared:—cantharidin 0.2 gramme and potassic hydrate 0.4 gramme, dissolved in 20 cubic centimetres of warm water. The solution is then cooled, and brought to one litre by addition of water; one cubic centimetre is then equal to two decimilligrammes of the remedy.

THE LEPROSY COMMISSION IN INDIA.

DURING the first three months of their sojourn in India the members of the Leprosy Commission have travelled over the whole of Southern India. They have personally visited the most important asylums in the Bombay and Madras Presidencies, as well as in the Central Provinces of Burmah. Between one and two thousand cases of leprosy have been examined personally by the members of the Commission, and by this means they have been enabled to obtain a very full insight into the disease in its varying conditions. The North-West Provinces, the Punjab and the Bengal Presidency, still remain to be visited by them. The well known asylum at Almora, in the Kumaun District, as well as the asylum at Possolia, have yet to be inspected. The latter is especially interesting, as it is largely devoted to the progeny of leprous parents, and from the patients there assembled it is to be expected that important questions as

to the hereditary character of the disease may find solution. The evidence at present obtained by the Commissioners does not, we understand, lend any support to the view that fish diet has any important part in determining the incidence of the disease, for it is found that Brahmins and others who never touch fish are often affected with leprosy, whilst the number of lepers in the food bazaars would seem to indicate that whatever the contagiousness of the affection may be, but little attention in that direction has been paid to the disorder by the native population. As soon as they have completed their travels and have mastered the natural history of the disease, the Commissioners will occupy themselves with what will probably prove their most difficult task, namely, the experimental inquiry, and the results which are to be deduced from it.

THE UNIVERSITY QUESTION HALF A CENTURY AGO.

In the number of *John Bull* for January 23rd, 1837, appears the following paragraph, which now possesses no little historical interest :—

British Medical Association.—Thursday evening a meeting of gentlemen connected with the medical profession was held at Exeter Hall, George Webster, Esq., of Dulwich, in the chair. The Chairman explained the object of the Association to be the relief from the disabilities under which licentiates of the College of Surgeons laboured by reason of their not ranking with those who had studied at the universities, and also from their being precluded from all Court appointments. The remedy proposed was an union of the three branches of the medical profession, so as to form one general faculty of medicine, who should have the power of electing its own officers and managing their own affairs. The address, which want of space has compelled us to curtail, was received with much applause. After passing various resolutions the meeting separated.

HOSPITAL ABUSES AND GENERAL PRACTITIONERS.

We are informed that on Monday, February 23rd, a meeting of medical men in general practice was held at 29, Threadneedle Street, E.C., to consider the question of hospital abuse, and the advisability of taking collective action to make the views of general practitioners as regards hospital reform known to the Special Committee of the House of Lords now sitting to inquire into the management of metropolitan hospitals. Among those present were Messrs. George Brown, M.R.C.S., Chairman; T. R. Atkinson, M.R.C.S.; J. B. Cook, L.R.C.P.Edin.; F. H. Alderson, M.D.; F. H. Corbyn, L.R.C.P.Edin.; J. Dawson, M.D.; W. Piercey Fox, L.R.C.P.Edin.; A. C. Dove, M.D.; T. C. Winn, M.R.C.S.; and Hugh Woods, M.D. After considerable discussion, the following resolution, proposed by Dr. Corbyn and seconded by Dr. Cook, was carried *nem. con.*: "That a provisional Committee be formed with a view to organise general practitioners to protect their mutual interests, especially in regard to the abuses of medical charities." All the above-named gentlemen having consented to join the Committee, Dr. A. C. Dove was elected Honorary Secretary *pro tem.*, and the meeting terminated with a vote of thanks to Mr. Brown for presiding.

MILK DIPHTHERIA.

Dr. Philpot, the Medical Officer of Health of Croydon, has presented a report upon the recent epidemic, which again brings forward the interesting question as to whether milch cows suffer from a malady which imparts to the milk the power of producing diphtheria in human beings. The epidemic commenced towards the end of September, and by November 9th it was evident that a particular milk supply was implicated, for out of 541 houses receiving milk from this source 65 (or 12 per cent.) were invaded by diphtheria, while of the remaining 16,000 odd houses in the borough receiving milk from other sources, 32 were similarly invaded (or less than 0.2 per cent.). The supply of milk from the suspected farm was stopped on November 3rd, but cases still continued to occur, probably from secondary infection, until the end of the year. The farm and dairies supplying the milk were carefully examined, but although some of the arrangements were not of a very desirable nature, Dr. Philpot was unable to point to any condition of which it could be said that it undoubtedly stood to the infectiveness of the milk as cause to effect. With regard to the cows, however, three animals which had been brought to the sheds at a recent date (one on September 25th and two on September 29th) were found to be suffering from an eruption of the teats, and the disease had spread from the newcomers to other cows in the shed. It was, therefore, a communicable disease, and it was subsequently stated by Dr. Klein that the disease was identical with that which has been known to occur in cows in other diphtheria epidemics, and with the diseases which he had actually produced in cows by injecting them with the diphtheria bacillus. The evidence pointing so conclusively to a particular milk supply, Dr. Philpot is able to negative the assumption that insanitary conditions in the borough were the cause of the spread of the disease. There are, says Dr. Philpot, no gross insanitary conditions present in the district, such as foul privies, damp, excrement-sodden soil, or such general conditions of filth as have been shown to prevail in places where epidemics of diphtheria are prevalent. Nor are there defects in the drainage arrangements of the houses where the cases have occurred such as would allow sewer air to escape within, and thus spread the disease.

THE INVESTIGATION OF HYPNOTISM.

The action taken by the British Medical Association at the last annual meeting with regard to hypnotism, which resulted in the appointment of a Committee of Inquiry, will be strengthened by the report of the Standing Committee on Hypnotism appointed by the Medico-Legal Society of New York, which has just been submitted. The report is not lengthy, but it is very much to the point. It states that "the number of reputable investigators increases, and that taken out of the hands of those whose aims and methods cast discredit on it, hypnotism is studied by members of the learned professions, vitally related as it is to the interests of which they are the natural custodians." Whilst we hold to the opinion that hypnotism should only be practised by qualified medical men, we cannot deny there are medico-legal questions connected with the study of the subject which, on further investigation, may be found worthy of attention. Before, however, going so far as the Committee of the Medico-Legal Society of New York, and countenancing the study of this subject by "members of each of the learned professions," we should be satisfied that the medico-psychological aspect of hypnosis is clearly defined and understood. The moral and legal relationships of hypnosis, which the medical profession has now begun to regard as a physiological and not a pathological state, can only be studied with advantage by the learned professions after it has been thoroughly investigated and given the place to which it may be found to be entitled by those competent to undertake such a purely medical inquiry. Briefly, the conclusions which the Standing Committee arrive at are: That hypnosis, or artificial trance sleep, is a subjective phenomenon, that it is not in itself a disease. Neurotic conditions predispose to the trance sleep, but the strongest minds have been enthralled. Hypnosis is recognised in three stages—lethargy, somnambulism, catalepsy. It has been serviceable in medical and surgical practice as a therapeutic agent, and in some cases as a safe anæsthetic. The last proposition, that "the illusory impressions created by hypnosis may be made to dominate and tyrannise the subsequent actions of the subject" is far from being established. We have not yet sufficient proof that post-hypnotic suggestion has led to actual crime, or that "illusory impressions" (hallucination?) have been either lasting or post-hypnotic. The more medical men study this interesting and possibly valuable agent as a means of combating disease, the stronger will the desire

of the profession become to see it taken out of the hands of showmen. Nothing can be more degrading to the medical profession than to see these would-be doctors posing in public and filling their pockets by exhibitions of the power of hypnotism before lay audiences, and to see them supported and patronised by medical men as stated by one of our correspondents in last week's issue.

TESTIMONIAL TO MR. GANT.

A COMPLIMENTARY dinner was recently given to Mr. Gant, on the occasion of his promotion to be Consulting Surgeon to the Royal Free Hospital, after nearly forty years of active service on the surgical staff. The chair was taken by Dr. Samuel West, who was supported by all Mr. Gant's present, and many of his former, colleagues, by many of the old resident officers of the hospital, and by representatives of the Committee of Management. Very laudatory speeches were made in honour of Mr. Gant, who was evidently deeply touched by the cordiality of his reception. It was suggested —and it is hoped the suggestion will be adopted—that the meeting of the staff and governors thus successfully inaugurated should be an annual one, for such social gatherings tend to promote good fellowship and to establish those friendly feelings between the governors and medical staff upon which the comfort and smooth working of a hospital, with its many conflicting interests and possibilities of friction, so largely depend. At the annual meeting of the governors of the Royal Free Hospital, Mr. Gant was presented with an illuminated address by the committee, who desire "to place on record the high appreciation of his very valuable services, which, together with his well known works on surgery, have reflected the very greatest credit upon him and the hospital with which he had been so long and so honourably connected."

CERTIFYING FACTORY SURGEONS.

THE subsection of Clause 19 of the Factory and Workshops Bill, backed by Mr. Secretary Matthews, Mr. Ritchie, and Mr. Stuart Wortley, by which it is proposed to abolish the whole system of certifying as to the fitness of children and young persons for employment in factories and workshops, runs as follows: "After the commencement of this Act certificates of fitness for employment of children and young persons in factories and workshops shall not be required in pursuance of Section 27 of the Act." We give elsewhere a sketch of the probable effects of this clause if it be carried into law. A meeting of the Association of Certifying Surgeons was held in Manchester on February 23rd, and a second special meeting at the offices of the British Medical Association on February 26th. After consultation with the executive of the Parliamentary Bills Committee, a memorial for immediate presentation to the Home Secretary was drafted, and a series of amendments to the clauses of the Bill affecting the sanitation of workshops and the system of certification were prepared, and will be put upon the notice paper at an early date.

THE JUBILEE OF THE CHEMICAL SOCIETY.

THE Chemical Society of London celebrated its jubilee on February 24th. A meeting was held in the theatre of the University of London in the afternoon, when Dr. Russell, the President, delivered an address in which he recalled the circumstances of the formation of the Society in 1841, under the presidency of Dr. Thomas Graham, then Professor of Chemistry in University College. Sir Lyon Playfair, M.P., and Sir William Grove, who had been members of the original meeting of twenty-five who had formed the Society, also addressed the meeting, and Professor Odling gave a lecture on the development of chemical theory since the foundation of the Society. Congratulatory addresses were then presented from the Royal Society, the Société Clinique de Paris, the Deutsche Chemische Gesellschaft, the Russian Physico-Chemical Society, and the Pharmaceutical Society of London. In the evening a *conversazione* was held in the splendid rooms of the Goldsmiths' Company, where a number of interesting historical objects were exhibited. Among these were some of the earliest photographs ever taken, including some by Daguerre himself, a pocket balance given by Scheele to Orfila, a balance used by Cavendish, a series of patterns illustrating the development of the safety lamp in Sir Humphry Davy's hands, apparatus employed by John Dalton, tubes used by Faraday in his earliest experiments on the liquefaction of gases, a model of the calorimeter used by Joule, and a number of specimens of the beautiful radiometers and other allied apparatus designed by Mr. W. Crookes. There was also an extremely interesting series of portraits of the Presidents from Graham to Crookes, and including such well-known men as Miller, Playfair, Brodie, Williamson, Frankland, Odling, Abel, Gladstone, and Roscoe. On February 25th, a public dinner was held, at which Lord Salisbury and Sir Lyon Playfair were the principal speakers.

VOLUNTARY INDUCTION OF LABOUR BY MENTAL INFLUENCE.

DR. LEFOUR, of Bordeaux, read before a recent meeting of the Société Obstétrique de Paris a case where premature labour could be induced by mental impression, as appeared at first sight, by suggestion. The patient had a rickety pelvis; she had been unable to walk till she was 3 years old. Her first labour, which occurred at term, was lingering, and the forceps had to be applied; convalescence was complicated by phlegmasia dolens. Dr. Lefour determined in future to induce labour at the eighth month. The patient became pregnant six times. On four occasions premature labour occurred spontaneously a few hours after Dr. Lefour had announced his intention (never expressed "until the last moment") of inducing labour next day. The date of the last period was always carefully noted; in one pregnancy the date of conception was easily settled, through special circumstances. The two remaining pregnancies ended by premature delivery felt about the time of quickening. The patient was always in great dread of labour, after her first experience, and had signs of a slightly deranged intellect. Dr. Lefour traces the spontaneous labour to her extreme impressibility. He denies that the phenomenon was due to suggestion, even auto-suggestion. He had observed a hysterical patient, easily hypnotised, who could not be prematurely delivered by hypnotisation, nor could labour be brought on by that process even close upon term. No doubt the opinion of a psychologist of authority would be necessary to decide as to whether the spontaneous induction of labour was not due to suggestion rather than to impression in an excitable patient. The distinction is certainly subtle. The effect was not due to will, as the patient, on moral grounds, always wished that labour could proceed to term, though she dreaded the consequent dangers.

GERMAN CONGRESS OF INTERNAL MEDICINE.

WE announced some time ago that the tenth Congress of Internal Medicine is to be held this year at Wiesbaden, from April 6th to 9th, under the presidency of Professor Leyden. In addition to the subjects of discussion which have already been mentioned,[1] the following have now been placed on the programme: On April 7th there will be a general debate on Koch's treatment in tuberculosis of the lungs and other internal tuberculous diseases. On the other days communications will be presented by Professor Mosler, of Griefswald, on the Treatment of Leukæmia; by Dr. Brieger, of Berlin, on Chemical Processes in Infective Diseases; by Dr. Knoll, of Prague, on Disorders of the Circulation and on Morbid Changes in Striped Muscle; by Dr. Rosenstein, of Leyden, on the Diagnosis of Hepatic Cirrhosis; by Dr. Quincke, of Kiel, on Hydrocephalus; by Professor Eichhorst, of Zürich, on Patellar Tendon Reflex in Tabes Dorsalis; by Dr. Fried-

[1] BRITISH MEDICAL JOURNAL, December 13th, 1890, p. 1389.

länder, of Leipzig, on the "Mathematical Diagnosis" of Acute Articular Rheumatism and all Other Forms of Central Rheumatism, and on the Etiology of Bright's Disease; by Dr. Schmaltz, of Dresden, on the Specific Gravity of Human Blood and its Relation to Anæmic Conditions; and several others. An exhibition of new apparatus, instruments, preparations, etc., will be held in connection with the Congress. All communications should be addressed to Dr. Emil Pfeiffer, Friedrichstrasse, Wiesbaden.

SCOTLAND.

Dr. J. Maxwell Ross, Edinburgh, has been appointed Medical Officer for the County of Dumfries. The salary is £300, with an allowance for expenses.

The managers of the Royal Infirmary, Edinburgh, at a recent meeting determined to ask clergymen visiting patients in the wards to do so after 2.30 P.M. in the medical and after 3 P.M. in the surgical wards.

The fiftieth meeting of the Scottish Universities Commission was held in Edinburgh on February 18th, when Dr. Leishman, Professor of Midwifery in the University of Glasgow, attended and gave evidence with reference to graduation in medicine.

The fourth meeting of the Royal Physical Society, Edinburgh, was held on February 18th, Dr. R. H. Traquair, President. Dr. W. Russell read a paper on "Robertson's Prevertebral Hæmolymph Glands," in which it was indicated that these structures were probably to be regarded as blood glands.

The Lord Rector's address at Aberdeen University is to be delivered in the Music Hall on March 6th. All the arrangements are to be carried out by the Students' Representative Council, who, it will be remembered, managed the arrangement so successfully on the occasion of Mr. Gosehen's address in 1888.

INFLUENZA AND MELANCHOLIA.

At the annual meeting of the Royal Edinburgh Asylum, Morningside, Dr. Clouston, the Superintendent of the asylum, presented his report for 1890, and urged that the asylum ought to be able to admit at least 100 private patients every year, if it was to meet the wants of the city and district. He stated that while the population of the Edinburgh district had during the past fifteen years increased by 30 per cent., pauper lunacy had only increased by 3.7 per cent., from which it appeared that Edinburgh was now in a more sane condition than then, while the popular notion was that insanity had enormously increased. Dr. Clouston traced an intimate relationship between the epidemic of influenza in the beginning of 1890 and melancholia. Ordinarily mania provided far more inmates of the asylum than melancholia, while during 1890 melancholia predominated. He attributed this in some way to influenza, which had greatly lowered human vitality, and even now Europe had not recovered its nervous tone.

MEDICO-LEGAL CASE IN EDINBURGH.

An unusually interesting case was recently tried before the Edinburgh High Court of Justice. A hotel keeper was placed at the bar, charged with the murder of his wife by poisoning her with arsenic. The main facts were these: Mrs. Webster, the person suspected of having been murdered, died on August 4th, 1890. Her life had been comparatively recently insured for £1,000 in a joint policy with her husband, payable to the survivor on the death of either. There was some delay in the payment of this insurance, and a legal action to compel payment was threatened. Rumours grew, and the Crown authorities took up the matter, ordering the exhumation of the body in the month of December. Arsenic was found in nearly all the important viscera—stomach, duodenum, intestine, liver, spleen, kidney, and lung—(the heart was not carefully examined), and in the stomach in comparatively large amount, namely, about 1.764 grains. The case was to have been heard in January, but a day or two before the date fixed one of the chief Crown witnesses, a barman at the hotel, committed suicide. Why, must for ever remain a mystery. An unfortunate mistake appeared to have been made in the estimation of the amount of arsenic found in the stomach. The mistake was discovered before the trial, but no second report was sent to the Crown authorities by their analyst. No attempt was made by the prosecution to connect the prisoner with the purchase or possession of arsenic. The prisoner and deceased had had a quarrel, and had been separated for a time. It was shown by the defence that the deceased had suffered from subinvolution of the uterus, and probably from nephritis; and it was stated in evidence that arsenic was a suitable remedy for the former condition. It was stated by medical experts for the defence that some of the conditions alleged to be due to arsenic poisoning might be due to decomposition. It was also brought out that the deceased had probably consulted some doctor or quack who could not now be identified. This she apparently did for some painful uterine ailment from which she was known to suffer. The jury, after a few minutes' consultation, returned a verdict of "Not guilty."

SCOTTISH MICROSCOPICAL SOCIETY.

The fifth meeting of this Society was held on February 20th, Professor Rutherford, F.R.S., in the chair. Dr. Joseph Coats, of Glasgow, was elected by the Council a Vice-President of the Society, in place of the late Mr. Schulze. Dr. G. Carrington Purvis, B.Sc., gave a communication on the microscopic structure of the electric organ of raia fullonica. He traced the development of electric organs from muscle, as originally described by Babuchin, and showed that in raia fullonica the "cup" type of electric organs is most highly developed. Each cup has a thin nucleated mass of protoplasm—the electric layer—lining its concavity, in which the nerves end. The existence of an electric organ in the skate was discovered by the late Dr. Stark, of Edinburgh, and Burdon Sanderson has shown that it produces feeble electric currents. Dr. Robert Muir, junior assistant to the Professor of Pathology in Edinburgh University, read a paper on blood plates, and gave reasons for regarding them as distinct elements of the blood. He described their characters as seen in fresh blood, in various preservative fluids, and in films prepared by Ehrlich's method. He discussed Hayem's theory of their being hæmatoblasts about to become red corpuscles, and regarded it as untenable. He detailed the results of elaborate enumerations of blood plates, leucocytes, and red corpuscles in artificial anæmia and in various diseases. He showed that blood plates are found only in blood, and not in lymph from the thoracic duct, that the theory of their being the nuclei of broken down multi-nucleated leucocytes had some facts in its support, but was still unproved. Both papers were illustrated by numerous diagrams and preparations, and excited much interest. Mr. Frazer, optician, explained a new method of adjusting a double nosepiece to give a minimum of trouble to the microscopist.

THE DANCING MASTER AT ABERDEEN.

Our Aberdeen correspondent writes: Many old graduates will be pleased and surprised to learn that the halls of Marischal College resound on Saturday nights to music and dancing. A feeling has sprung up in University circles that something might be done to develop the potentiality that students have for healthy social enjoyment were the environment favourable. The first venture took place on February 21st, in the

form of a Cinderella dance, with music at intervals, in which the professors and their wives and lady friends were the good fairies. The success of the entertainment was marked; and now that so successful a beginning has been made, it is expected that the scheme will be developed next session. At present a large section of northern Scotch students suffer from the difficulty of pleasantly associating in the social world, owing to the isolated sort of life that living in lodgings forces them into. Gatherings such as those of Saturday will tend to rub into tolerable smoothness the angles they develop in comparative solitude. The committee, however, will do well to avoid falling into the error of developing this form of entertainment amongst those who have already sufficient opportunities for social relaxation.

PROPOSED STUDENTS' UNION FOR ABERDEEN.

All the Scotch universities except Aberdeen have now been provided with Unions similar to those of Oxford and Cambridge. At the recent students' concert, the Lord Rector made an appeal for funds, but so far there has not been much response. In view of the early extension of the University buildings, it would be well if the Union Committee put forward their claims as widely and as extensively as possible.

IRELAND.

Mr. Austin Meldon has been elected a member of Council of the College of Surgeons, in room of the late Dr. Anthony H. Corley.

The President of the Royal College of Surgeons in Ireland (Mr. H. G. Croly) has issued invitations for a banquet on Saturday, March 7th. His Excellency the Lord Lieutenant (Lord Zetland), Lord Wolseley, and a large number of other distinguished persons will be present.

The annual medal for proficiency in the surgical and medical diseases of children, awarded by the visiting staff of St. Joseph's Hospital for Children, Dublin, has been gained by M. G. McElligott (Catholic University); *proxime accessit*, E. E. Deal, M.D. (Harvard).

MR. STANHOPE'S LETTER.

A well-informed correspondent writes: The letter which Mr. Stanhope has addressed to Sir Andrew Clark on the subject of the army medical grievances does not do much to soften the discontent of the department. This will be shown in Sir Andrew's reply, which will also embody the views of the Irish College of Surgeons, and of other licensing bodies. It is stated that at the recent examination for admission to the medical department of the army nine out of twenty places, including the first four, were taken by Irishmen.

A CORONER ON THE DUTIES OF SANITARY AUTHORITIES.

An inquest was held on February 21st at Tullamore, on the body of a young man who had died of typhoid fever. Evidence having been given, the jury returned a verdict of death from typhoid fever, and stated that they believed that the numerous deaths in the town recently were caused by the deficient and impure water supply of the town. The coroner said that if another death occurred, and the same verdict was returned, he would issue warrants for the arrest of the sanitary authorities for neglecting their public duties.

SMALL-POX IN BELFAST.

The outbreak of small-pox in Belfast originated, it is believed, with a sailor. So far the cases do not number quite a score, and, with two or three exceptions, have been very mild. No deaths have as yet taken place. In one police barrack seven policemen were almost simultaneously affected, and the barrack has in consequence been closed. Very active measures have been taken to localise, and, if possible, stamp out the epidemic. It is stated that none of the persons affected had ever been revaccinated. A special meeting of the Belfast Dispensary Committee was held on February 23rd to consider the question. The Committee was of opinion that revaccination should be promoted in every possible way; and they also passed a resolution affirming the necessity of erecting a special hospital for infectious diseases in Belfast. It is an extraordinary fact that with all the rapid growth and immense improvements that have taken place in Belfast within the last two or three decades there is still no separate hospital for infectious diseases. There is large fever departments in the Union Hospital, but well-to-do patients object to being mixed up with paupers. The fever department of the Royal Hospital has no accommodation for small-pox patients, and such cases are not admitted. The necessity for a new separate fever hospital is very urgent, and it is believed that the Corporation has the matter in hand.

ULSTER MEDICAL SOCIETY.

A special meeting of this society, held on February 18th in the Museum, Belfast, the president, Dr. Dempsey, in the chair, was largely attended. The first business was the consideration of a resolution of the Council, condemning in strong terms the advertising which has lately been going on in the Belfast press, with reference to the treatment of consumption by Koch's lymph. The Council expressed the opinion that such proceedings, whatever their intention, were "injurious to the best interests of the public, degrading to the honour and dignity of the profession, and deserving of the strongest disapproval." The resolution was moved by the President, seconded by Professor Dill, supported by Professor Cuming, and unanimously adopted. A long discussion took place subsequently regarding the proposed adoption of the Compulsory Notification of Infectious Diseases Act by the Belfast Corporation. A resolution approving of this adoption was moved by Dr. Lindsay and seconded by Dr. Shaw, but the general feeling of the members seemed to be that until some defects in the machinery of the Act as applying to Ireland had been remedied, its adoption would be productive of serious inconvenience. It was decided ultimately to postpone action in the matter. Dr. Stafford, Local Government Board Inspector, was present, and gave valuable information on various points which arose during the discussion.

QUEEN'S COLLEGE, BELFAST.

A movement is in progress to promote a reunion of the former graduates of the Queen's College, Belfast. A circular, influentially signed, has been issued, pointing out that the College has now been in existence for nearly fifty years, that it has educated a very large number of men who now hold important positions in all the professions and in the public services, and that it is desirable that some means should be taken to promote *esprit de corps* among the graduates, and to afford an opportunity for renewing old friendships. It is suggested that a dinner should be held in March. The date has not been positively fixed, but March 19th has been suggested. The dinner will probably be held in the Great Hall of the College. The Committee consists of Dr. Hamilton, the President of the College; the Right Hon. A. M. Porter, Master of the Rolls; Mr. C. C. Connor, M.A., Mayor of Belfast; Rev. William Park, M.A.; Professor Cuming, M.D.; Mr. Thomas Sinclair, M.A.; Mr. W. H. Dodd, Q.C.; Mr. J. J. Shaw, Q.C.; Professor Samuel Dill, M.A.; Mr. Adam Duffin, LL.D.; Professor Sinclair, M.D.; Professor Park, M.A.; Dr. J. A. Lindsay; and Mr. R. T. Martin, B.A. The last three gentlemen are acting as secretaries, and will be happy to afford every information. Communications may be addressed either to the Queen's College or to the secretaries individually.

CONGRATULATORY DINNER TO SIR GEORGE MURRAY HUMPHRY.

On February 18th a congratulatory dinner was given to Sir George Murray Humphry, M.D., F.R.S., F.R.C.S., etc., in the hall of Downing College, by members of the University, town, and county of Cambridge. Sir George Edward Paget, K.C.B., presided.

After reading letters from Professor Newton and Dr. Bushell Anningson, expressing regret at inability to attend, the Chairman said that the honour upon which they had assembled to congratulate their guest was greatly enhanced by the applause and enthusiasm with which those who had long known the recipient had received the announcement. Sir George Humphry was so well known that words of praise or panegyric were unnecessary. There were few present who, like himself, knew what the University Medical School was forty years ago. There were many present who knew what it was now: the zeal and spirit and character of its teaching, and the continually increasing number of students. In the great and grand change Sir George Murray Humphry had had a large share. There were some present who had seen more of their guest in another way, namely, through the Society which was established a few years ago—the Cambridge Medical Society. The idea of establishing it was Sir George Humphry's own. He would not enlarge further upon their guest's claims, but would only quote the words which he found upon the menu of the dinner—words which Sir George Humphry had himself written of another, but which were peculiarly applicable to himself: "With thoughts above the sounds of applause and the impulses of ambition, he upheld the honour and dignity of the profession by the surest and steadiest of all means, the force of a high and consistent example." Sir George Paget concluded by giving the toast of "Sir George Murray Humphry," which was received with musical honours.

Mr. C. F. Hodson here interposed, and proposed the "Health of Lady Humphry," a toast which was also received with the greatest enthusiasm.

Sir George Murray Humphry, in reply, said that it was impossible for him to express in adequate terms his thanks to them for the tremendous compliment paid him. It was no small thing to be honoured in one's own country, and amongst one's own people, but to be thus honoured by those persons amongst whom one had worked for nearly half a century was an honour passing that which one could acknowledge. In the course of his life he had taken two steps—two very important steps—with considerable reluctance, both of them having turned out well for him. One was his entrance into the medical profession, and the other was coming to Cambridge. As a lad he had great repugnance for the medical profession. He had revolted from the thoughts of dead bodies and all that was associated with them; he revolted from the thoughts of people sick and sore, and he did not at all rejoice in the idea of the hard life—work by day, work by night, work in fine weather, work in foul weather—which would devolve upon him. However, it was not a matter in which there was room for much sentiment, and he was packed off with his goods and chattels, and apprenticed for three years at Norwich, and it so happened, happily for him, he was apprenticed to one of the most earnest, energetic, and hardworking men he ever knew in his life. He had the good fortune to be thrown into hospital work with all the freshness of boyhood, and to have had placed in his hands at that time two books which had attracted him greatly. The one was *Bell's Surgery*, and he had always regarded Bell as the novelist of surgery. The other was a little book by Mrs. Marcet, *Conversations on Chemistry*, and he had always regarded her as the novelist of physics. The one attracted him to the practice of the profession, and the other attracted him most strongly to the science of it. At St. Bartholomew's Hospital he had met those two great teachers, Lawrence and Latham, and that greatest of living teachers, Sir James Paget, whose qualities had rendered him the most popular and most loved man of the profession. No sooner had he qualified (and in those days they had not discovered written and practical examinations, and an hour of oral examination at the College of Surgeons enabled him to "cross the bar" of his profession) than, on the advice of Sir James Paget, he went to Cambridge. He went to Cambridge, he remembered, on the Star Coach, driven by Joe Walton, who used to swear like a trooper and go to church regularly. His hospital life in Cambridge had been a most happy one. He was received at once by all the medical men in the place with the greatest kindness and heartiness. Now, that told not a little for their profession—that they should have received a novice, a stranger, one who came in, forced himself in in the most audacious manner, and at once took one of the best posts in the place. From that time he had always received the greatest assistance as their hands, and that they still felt kindly towards him was evidenced by the meeting that night. He had always maintained there was no place in the world so delightful to live in as Cambridge, with all its many associations, colleges, all its bright and beautiful surroundings, not to say good dinners, and all the various subjects of interest. In addition to that, there was the continuous acquisition of new blood running and passing through it; new blood of the very best in England was always coming and passing through, and those who stood by the river's bank would catch some of its freshness, and it would keep them all young. Having expressed in happy terms his sense of the assistance and support in his scientific work which he had received from Lady Humphry, he concluded by again most heartily thanking the company for the kindness which had been done him.

Professor Michael Foster, in a humorous speech, proposed the toast of the Master, Professors, and Fellows of Downing College. There was a curious link, he said, between him and the College, for Mr. Downing, a Bedfordshire squire, who founded it, was an ancestor of his own. Simple country gentleman as he was, he had yet grasped the situation by differentiating Downing from other colleges by reinstating the old factors of medicine, law, and theology, for those really composed the whole of human learning. Medicine was the spirit of science, of natural knowledge. All sciences had come from it and on science it rested. Law was the spirit of development of mankind, and theology was that spirit which reminded them that behind the seen there was an unseen, the spirit which was at the base of all their true and noble literature. When he was a volunteer for a brief period, he was exercised in marking time, which consisted in lifting up one leg and putting it down again directly in the same position. Applied to the mind, that exercise was, in certain circles, spoken of as culture. They thought that the intellectual training of the University ought to leave a man exactly where he was. That was not the view of the founder of Downing. He thought it was quite possible that the arm could be strengthened in the trials which prepared it for the strength it had to exercise in after life, and that the studies which prepared a man for his duties in life might also expand and widen his mind.

The Master of Downing (Dr. Alex Hill) having briefly replied, Mr. Hemming, President of the Cambridge Medical Society, proposed the Secretary of the Acting Committee, Dr. Griffiths, who in his reply thanked Dr. Hill and Dr. D. MacAlister for the assistance which they had given.

A vote of thanks to Sir George Paget, proposed by Mr. Hodson, brought the proceedings to a close.

PHYTOPATHOLOGY.

Dr. Charles Bagge Plowright, in the first of his lectures at the Royal College of Surgeons on Parasitic Fungi in Relation to Plant Disease, said that the recognition of the important part played by these fungi was only of recent date; only within the past twenty years had the subject really been grasped. Fungi might be saprophytes or parasites, or partly parasitic and partly saprophytic. Plant disease of parasitic origin was almost always local, although the local lesions might be so numerous that the host-plant was killed. Nothing analogous to the zymotic diseases could be said to exist. True heredity did not play so important a part in the etiology of fungoid plant disease as in the case with animals. Certain varieties of wheat were more liable to mildew; certain kinds of apple as the ribstone pippin—to canker; certain varieties of potato to the potato disease. But these were more instances of the constitutional peculiarity of varieties than true heredity. Just as was the case with cholera, and with measles in Iceland, the Faroe Islands, and the Fiji Archipelago, so with regard to epidemics of fungoid plant disease, as shown by the potato disease, which, on its intro-

duction in 1845, threatened to exterminate the potato. So also with the hollyhock disease, which first appeared in this country in 1873, and for several years threatened to annihilate this flower; although the disease was still present, yet the hollyhock was beginning to reappear in our gardens. The celery disease (puccinia apii) was another instance.

One of the most frequent effects of the presence of the mycelium of a parasitic fungus in a plant was to cause hypertrophy. This might be general, as in the foliage of the common garden anemone when it was infected with œcidium punctatum. Cruciferous plants attacked by peronospora parasitica became so hypertrophied as to recall elephantiasis. Local hypertrophies were more common. They might occur in any part of a plant—leaves, stems, fruit, woody tissues, or roots. The remarkable tumours caused by the American gymnosporangium macropus, called "cedar apples," produced by the mycelium entering through a leaf into the very smallest branches, was an instance in point. Allied species of gymnosporangium also produced local hypertrophies of smaller size and slower growth—the former existing for one season, the latter lasting for years—thus affording a parallel to the well known fact that in the human subject rapidly-growing tumours tended to die sooner than slow-growing ones. Phytopathology afforded many instances of local death of a part produced by the parasite, accompanied by hypertrophy of the surrounding parts. Such were the larch disease (peziza willkommii), the apple tree canker (nectria ditissima), and the black knot (plowrightia gibbosa). Possibly the nearest approach to malignant disease was afforded by the "finger and toe" (plasmodiophora brassicæ), in which the parasite produced local tumours, tending to multiply, containing elements not found in the healthy tissues of the plant—the plasmodia—and eventually breaking down into fœtid, pultaceous masses.

Many plant, or rather tree diseases, were of traumatic origin—the epidermal structures having been removed, and the vital tissues beneath exposed, a suitable nidus was offered for fungoid parasites. These injuries might be caused by accidental fractures, by wind, bites or scratches of animals, frost cracks, sun cracks, blows from hailstones, etc. The well-known canker caused by nectria ditissima on apple, beech, oak, elm, and other trees was an instance. Here the parasite destroyed a portion of the bark, cambium, and woody tissues, in a similar manner to the peziza willkommii before mentioned as the cause of the larch disease. Many hymenomycetes, such as polyporus sulphureus, dryadeus, and igniarius, were well-known examples of these wound parasites. Polyporus squamosus and allied species produced a condition of the wounded surface resembling caries, and requiring for its treatment surgical measures, namely, enlargement of the wound, gouging out the softened wood, swabbing the cavity with strong carbolic acid, and, to prevent the re-entry of fungus spores, stopping it with cement, as a dentist stops a carious tooth.

Agaricus melleus and polyporus annosus were capable of entering the roots of pine trees and causing the death and decay of the interior of the trunk—producing gangrene, in fact. Atrophy was caused in shoots of fir trees by uredo pinitorquum and of the wheat kernels by puccinia graminis the wheat mildew. The mycelium of puccinia suaveolens rendered young plants of the common thistle anæmic, while the uredo linearis produced a state of plethora in wheat plants. Sterility of the host-plant was a common effect of fungoid parasitism, especially with the ustilagineæ, and many plants containing perennial mycelia failed to develop their inflorescence.

In conclusion, the effect of the mycelium of parasitic fungi might be summed up as Seymour had done: the parasites injured their host-plants (1) by depriving them of nourishment; (2) by impairing their power of assimilation; (3) by abnormally accelerating or retarding their growth, and thus causing distortions.

PRESENTATION.—Dr. Graham Godfrey has received from the *employés* at the Mansfield Railway Station, members of his ambulance class, a gold pen and pencil case; and a handsome inkstand from the Mansfield police, who have also received ambulance certificates.

THE HOSPITALS COMMITTEE.

St. Mary's Hospital.—Westminster Hospital.

THE Committee resumed their sittings on Monday last under the presidency of Lord SANDHURST.

Mr. THOMAS RYAN (Secretary of St. Mary's Hospital, Paddington) said the hospital was founded in 1845. The letter system existed, but there were very many patients admitted without letters owing to the gravity of their cases. There were no paying beds or paying wards. There were 281 beds, and the working maximum was about 255. The number of patients per bed per year was approximately 14. There had to be a constant and careful sifting of the patients. The whole of the district west of the Edgware Road and north of the Park was served by St. Mary's. The population had greatly increased. Medical relief in Paddington was certainly deficient. He was a non-resident official, having a salary of £400 a year. He was responsible to the Weekly Board. The hospital was governed by those who subscribed 3 guineas annually or who gave 30 or more guineas as a donation. There was a House and Finance Committee, and their functions were that they practically managed the hospital. The treasurers were not bankers, but prominent governors who were for some reasons considered especially fit for the post. He had power to deal with complaints, but if they were very serious he should report the cases to the House Committee. The Medical Committee sat on the first Monday in the month, and their business was to consider the books and reports of the medical superintendent, anything as to any septic condition which might have arisen during the month, the behaviour of clerks and dressers, and the sanitary condition of the hospital. He had the right to dismiss subordinate officers, but would have to report the circumstances. Under certain circumstances he should suspend an officer. The medical superintendent had a salary of £150 a year, with board and lodging, and would be the head of the hospital at night, when he (the Witness) was away. The medical superintendent's particular function was to supervise the resident medical officers, clerks, and dressers; and he admitted all patients who were admitted through letters of recommendation. All sorts of cases were taken in except infectious cases. Cases of enteric fever were taken in last year; the number was 47. There were four male, four female, and two special isolation wards. There was no restriction as to the number of out-patients, but there was a careful system of inspection as to the circumstances of the patients, and the results proved to him that the hospital was not abused so far as regarded the out-patient departments. The income was mainly derived from subscriptions and donations. The staple of the income was annual subscriptions, which last year reached £5,227. That more than covered the annual salaries and wages of all classes, which last year were £4,590. The grand total of expenses last year was £23,608. There was a deficit of £1,063 to make up, and that was thus made up: donations, £3,177; dividends and rents, £2,521; legacies, £8,276; the Hospital Sunday Fund, £2,083; the Hospital Saturday Fund, £368; payments by probationers, £412; and the rest from miscellaneous small sources. The average income from legacies was £7,354.

The WITNESS then said he should like to refer to the Charity Organisation Society's memorandum, which, so far as St. Mary's Hospital was concerned, was incorrect. The comparison made was fallacious, and extremely misleading.

Would you like some universal system of hospital accounts?—Nothing would please him better. A hospital with a medical school attached to it was more expensive than one without. But at the same time it increased the area of those interested in the hospital, and increased its income. A hospital which took a large number of cancer cases increased its expenses; and if the proportion of children in a general hospital was large, the expense per head was less. The extent of the maternity department would considerably affect the out-patient department expenses. Some hospitals were rated at their full value, whilst others would only pay a small fraction. The mere cost per bed was not at all a safe guide as to the good or bad management of a hospital. The head of the nurses was the matron, who had a salary of £125, with board and lodging. She was responsible to the Weekly Board. The nursing staff consisted of the matron, 1 night superinten-

dent, 10 sisters, 26 staff nurses, and 23 probationers. The nurses were trained at the hospital. The proportion of beds to the nurses on day duty was about seven. The sisters' hours were from 8 A.M. to 10 P.M. They were off duty twice weekly, from 5 to 10.30; once weekly, from 7 to 10.30; every other Sunday, 3 to 10.30; and on Saturday from 2 to 10.30. Their holidays were one day per month, and one calendar month per annum. The staff nurses hours were 7 to 9 P.M. They were off duty twice weekly from 5, and once weekly from 7, and every other Sunday from 3 P.M. Their holidays were one day per month, and one calendar month per annum. The probationers' hours were from 7 to 8.30; off duty two hours daily, from 10 to 12 one week, and from 2.30 to 4.30 in another week. Their holidays were once a month a day, and annually three weeks, but that was not all at once, but spread over a year. The night superintendents' duty was from 10 P.M. to 7 A.M., their holidays one night per month, and a calendar month per annum. The night nurses' duty was from 9 P.M. to 8.30 A.M., and the holidays the same as the staff nurses. As to their pay, the sisters commenced at £30, increasing to £40, the maximum. The staff nurses began at £20, increasing to £25. The probationers received £10, and all found. The hospital was affiliated to the National Pension Fund for Nurses.

The CHAIRMAN: It has been said that it would be useful to have some central body who should visit hospitals, see to their accounts, and possibly register or license the building of new hospitals. Do you think anything useful would come of that?—Some such central authority as that would do good; if it could stay the establishment of small hospitals, which damage the larger ones, it would do a valuable work indeed. Personally, he did not think, from the experiments of the Metropolitan Asylums Board institutions, that a central outside authority would do much good. The ambulance system, he added, now had fifty stations throughout the metropolis. So soon as that system was completed, it would not be possible for any person to be injured in the streets of London without an easy-running ambulance being at hand.

Colonel BIRD (Chairman of the Weekly House and Finance Committee of St. Mary's) stated, in reply to the CHAIRMAN, that the chief part of the duty of the Finance Committee was to check any extravagance. The hospital was governed by an open board, which was not advantageous to the hospital, as it was open to anyone to come. He would like to see the open Weekly Board abolished, because the members were likely to be swamped and overruled on questions of interest to the hospital by those who knew little or nothing of its affairs. One case in point was when the Weekly Board were beaten on the question of dismissing the matron.

Mr. HERBERT W. PAGE (ex-Dean of the medical school of St. Mary's) said that he was one of the surgeons of the hospital. The number of the students was 300. The school had increased considerably of late years until last year. The average income of the school during the last seven years was about £4,500. The largest sum ever received was £5,900 for the year 1887-88. The expenses were £4,400, irrespective of fees to lecturers; about £3,300 or £3,400 was required before anything was paid to the lecturers. The salaries altogether amounted to about £1,100. The largest sum that any man ever received for his lectureship was about £160, which was taken out of the fees. The same man might hold other appointments, from which he would receive something in the same hospital and provided from the same funds. The Dean was responsible for the discipline of the students. There was a School Committee, which met once a month.

The CHAIRMAN: Do you wish to see any reform in medical education?—I am not exactly content with it. It might be improved by getting rid of certain subjects of instruction before men begin their definite medical work. Such subjects as chemistry, physics, and botany might with advantage be taken by men before they begin their purely medical studies. That would be an advantage. As to whether it would be advisable to have a central school, the Witness said he thought it would be wise to have some subjects thus dealt with, but the individuality of the schools should not be interfered with. There was a great waste of energy and money in maintaining the medical schools fully equipped in London. There was a residential college, which was a commercial undertaking connected with the school, and the hospital had nothing to do with it. As to anybody outside the hospitals to control them, he did not think there should be any such outside body. It would be a good thing, indeed, that somebody, perhaps connected with the London County Council—upon which there were some eminent medical men—should have some voice in deciding whether hospitals should or should not be erected in particular places. He should like to keep them absolutely free from any Government interference.

Mr. MALCOLM MORRIS, F.R.C.S.Ed., Surgeon of the Skin Department of St. Mary's Hospital, was then examined, and said that there was a considerable number of students attending that and other departments. A patient who was seriously ill would not be kept waiting before being attended to. A good many cases were sent to the hospital for consultation by practitioners in the neighbourhood. The outside practitioners were only slightly injured by the out-patient department of the hospital. There was a very large amount of material in the large Poor-law infirmaries in London which might be utilised for teaching purposes. They ought to be thrown open for systematic teaching. It would operate favourably for the patients, medical students, and medical teaching. If nothing else came out of the Committee than the one thing that no hospital should be formed without some licence, much good would be done, for that was most desirable, as it was now impossible for the benevolent public to discriminate between hospitals started for the benefit of private individuals and those started for the commonweal. Theoretically, probably the County Council would be the best body. Those who desired to start a new hospital ought to be compelled to show its necessity. The Committee would do much good in supporting not only uniformity of hospital accounts but also uniformity of hospital management.

Mr. PEARCE GOULD, Dean of the Medical School at Middlesex Hospital, was recalled, and said that it was a serious matter that there was not now sufficient material at the hospitals for dissecting purposes. The general medical schools had not sufficient means of teaching their students. The general hospitals excluded infectious diseases—scarlet fever, measles, and small-pox—from their wards, and that was a great want. Whilst the old apprentice system for the medical curriculum had almost died a natural death, yet it did supply that which hospital training could not supply. It would be a great boon if they could have some system of apprenticeship after their curriculum. The experience gained in London was not strongly in favour of residential colleges.

After a correction on behalf of Sir HENRY LONGLEY as to St. Bartholomew's Hospital appealing to the Charity Commissioners *in formâ pauperis* to have paying patients, the Committee adjourned.

Upon resuming on Thursday, the first witness called was Mr. QUENNELL (Secretary of the Westminster Hospital), who stated, in answer to the CHAIRMAN, that he had been thirteen years the secretary, and had previously had experience at the Poplar Hospital. The Westminster Hospital was practically a free hospital to both out- and in-patients, the qualification being disease, and the severity of the case applying, and not favouritism. There were governors' letters, the holders of which would only have preference if their case was quite as severe as that of others. There were 205 beds, and sometimes the hospital was quite full. Last year the average number of beds full was 184. He was responsible to the House Committee, which met weekly, and was under the control of the governors. There was a Quarterly Court open to all the governors, who were summoned by circular. The executive of the hospital was the House Committee. There was no permanent committee. The function of the House Committee was to manage the business of the hospital. The House Committee consisted of the President, Vice-President, and the Treasurer, *ex officio*; and 36 members elected at the first Quarterly Court of each year. The Finance Committee met once a quarter. The financial control of the hospital was under the Audit and Finance Committees. His (Mr. Quennell's) salary was £400 a year, and he had lunch and dinner at the hospital, but did not reside there.

In answer to the CHAIRMAN, the WITNESS said that last year they received £2,116 from dividends and rents; £1,461 annual subscriptions; £1,860 donations; £6,610 legacies; £1,145 Hos-

pital Sunday Fund: £300 Hospital Saturday Fund—making, with a small amount from miscellaneous receipts, a total of £14,109. The total expenses were £13,333. There was thus a surplus of £778. In addition to the funds mentioned, there was a sum of £24,000 in Consols transferred to the hospital, which was not noticed in the accounts, but which was given in the receipts on the income side. Really the income last year was close on £40,000. They had £10,000 for the endowment of a ward, and £17,353 for the endowment of what was called the incurable establishment, £324 for the endowment of the lithontriptic ward, and there was £4,400 for the endowment of beds and cots. Those funds came from property which could not be sold. The practice was to invest every penny they could, from whatever source. If there was more at the bankers' than would be required for three months that would be invested. There were no wards kept shut for want of funds. At present there was £50,806 to the credit of the general purposes fund, and about £34,000 to the credit of the endowments. Last year the wages and salaries amounted to £3,599. With regard to the admission of the patients, practically they were all admitted by the senior house-physician or senior house-surgeon. They were admitted at all hours of the day and night. There was no resident medical officer; there were two house-surgeons and two house-physicians. They were usually about 23 or 24 years of age. If there was a very grave case the responsible medical officer would be sent for. Small-pox, typhus fever, and scarlet fever cases were excluded; diphtheritic cases were taken in. Such cases were not isolated as a regular practice. It depended upon the severity of the case and the occupants of the ward. With regard to out-patients, the physicians were not obliged to see more than 20 new cases. There were 2,730 in-patients last year; that included the number in the hospital at the end of the year, namely, 192. The in-patients numbered 27,026; those were all new patients. Inquiries were not made into the circumstances of the out-patients, although a proposal to that effect had been considered by the governors but rejected by them. He did not think the charity was abused on the whole. They had sometimes had to turn persons away from the hospital because there was no vacant bed. He did not think the medical relief in that district insufficient. He presumed he was responsible for the sanitary condition of the hospital. There was an architect, and also a chaplain, who received £200 a year. The matron was the head of the nursing establishment. She was the lady superintendent of the Westminster Training School and Home for Nurses. Their nurses were trained in the hospital. The nurses were paid by the nursing institution. The Witness then read at length the agreement between the authorities of the nursing institution and of the hospital. The medical staff was not paid. There were, however, a medical and a surgical registrar, who were paid £40 each, and a pathologist who received £50. With regard to the question of setting up a central authority with control over hospitals, Witness said such a body might do a great deal of harm, and he could hardly think it could do much good.

In reply to Lord CATHCART, the WITNESS said that the authorities kept a drain plan up to date, and had a hose and fireman, and took precautions in case of fire for the safety of the patients. The water supply was constant. If reporters applied for admission to the quarterly meetings of the governors, he should probably consult the court on the matter. He thought that as a principle institutions which appealed to the public for funds should admit the press.

Answering Lord ZOUCHE, the WITNESS stated that last year the cost per bed was £62 18s. 4d.; previous to that it was £66 5s. 6d., and the previous year £62 18s. 9d. In reply to Lord KIMBERLEY, he said a yearly inspection of the hospital by an outside authority to see that the drains were in a satisfactory working condition would be very inconvenient. They had their architect, who knew all about the drains, and for an engineer to come in and disturb them would be an inconvenience.

The WITNESS then expressed the opinion that if there were a central authority to have some control over the hospitals, even if consisting of hospital representatives, it might have the effect of withdrawing public subscriptions. As to the medical staff of the hospital, there were 3 physicians, 4 physicians to see the out-patients, an obstetric physician, an assistant obstetric physician, a physician for skin diseases, 3 surgeons, 4 surgeons to see the out-patients, an oral surgeon, 2 surgeon-dentists, and an administrator of anæsthetics. With regard to uniformity of hospital accounts, it would be difficult to carry it out in practice.

Miss PAYNE, Matron of the Westminster Hospital and Lady Superintendent of the Westminster Training School and Home for Nurses, said that she found that the system of having a separate institution for nurses answered very well. There were 8 ward sisters. The whole staff numbered 32 hospital nurses and 23 probationers. There were no paying probationers. The institution did not provide nurses for any other hospital. There was a large private institution for sending out nurses to private persons, and the charge was from one and a half to two guineas a week. The Witness then gave details as to the hours of work, rest, and recreation of the nursing staff, and also of their food and wages, and stated that their health was very good indeed. There was nothing to complain of as to the food. The nurses were sufficient in number for the needs of the hospital, and there was no necessity to go outside.

Dr. ALLCHIN, Dean of the Medical School of the hospital, stated, in reply to the CHAIRMAN, that he had also the medical charge of the nurses. The number of students was 100. The average receipts of the school for the past five years were £1,860, and the expenses £913. The balance was divided amongst the staff and lecturers. The majority of the staff were also lecturers in the hospital, and they derived something from both sources, and probably the maximum since he had been connected with the school (20 years) did not much exceed £100 from both sources. There might be a great advantage in amalgamation of some of the smaller schools, but it would not be advantageous to have one central institution for the whole of London to teach the preliminary subjects of education. Students might be better prepared when they came to the schools. The finances might be utilised more than at present for the students.

The Earl of ARRAN: Do all your surgeons and physicians hold the London diploma?—Yes: they have to do so by the laws of the hospital. It is a most desirable arrangement for several reasons. It can hardly be called a hardship that anyone should be called upon to pass these examinations.

Lord ZOUCHE: Do you think that this insisting upon membership of the Colleges leads to the running of a risk of losing the services of eminent men?—No: not at all. There is no risk whatever of any loss from that restriction.

You think there is no difficulty whatever of any eminent practitioner late in life who wished to get an office in London running a risk in submitting himself for examination?—No; and there are many cases in point of those who have submitted themselves for examination, and have found no difficulty.

Lord THRING: If London makes restrictions, then Dublin or Edinburgh or any other place might use the example as a reason for restricting appointments to their own people?—I do not know that it would be injurious. But it is not a question of restriction to London degrees. The degrees of the university is not the question, but the question of the qualifications of the Royal Colleges which exercise a control other than that of a purely professional standard.

The WITNESS then spoke as to the out-patient department of the hospital, and explained the process adopted in the reception and treatment of cases. Out-patient departments were absolutely necessary for teaching purposes. His experience, and that of most of his colleagues, was that the out-patient department was not abused, unless in very exceptional cases. The Witness further expressed the strong opinion that there should be some limitation of special hospitals, as with few exceptions the work could be done better in general hospitals, and they necessarily diverted the funds from the general hospitals. He would like to see some system of licensing special hospitals. He would make some exceptions in the case of infectious and children's hospitals, and also for hospitals for essentially chronic cases.

Mr. DENT (of St. George's Hospital) gave evidence how far the out-patient departments of general hospitals might work in connection with provident dispensaries, stating that it was impossible that the provident dispensaries could do the work of the out-patient departments of hospitals. If there were a

central institution for London medical students, there would be a great saving of expense, and the schools would thus be able to work more efficiently. Centralisation might be effected very well by the amalgamation of some of the smaller schools.

The Committee then adjourned.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The next meeting of this Branch will be held in the Crown Hotel, Falkirk, on the afternoon of Tuesday, March 3rd, at 2.30. Members desirous of showing specimens, etc., are requested to communicate with the Honorary Secretaries, C. J. LEWIS and J. PEAKE.

NORTH WALES BRANCH.—The intermediate meeting will be held at the Imperial Hotel, Llandudno, on Wednesday, March 11th. Members having anyone to propose as a member or wishing to read a paper are requested to communicate at once with the Honorary Secretary, W. JONES MORRIS, Portmadoc.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—The next meeting of this District will be held at the Temperance Hospital, Hampstead Road, N.W., on Thursday, March 12th, at 8 P.M., Dr. Bridgwater, J.P., Vice-President of this District, in the chair. Dr. Radcliffe Crocker will read a paper on the Early Diagnosis of the Acute Exanthemata and the Simple Eruptions which Simulate them. Dr. R. Crocker will show some cases treated by Koch's method. Dr. Collins will also show cases under the same treatment; and Dr. Edmunds will exhibit some interesting cases from the wards. All registered medical men, whether members of the Association or not, are earnestly invited to attend these meetings.—GEORGE HENTY, M.D., Honorary Secretary, 302, Camden Road, N.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will take place at Faversham on Thursday, March 12th, Dr. Boswell in the chair.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The spring meeting of this District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 12th, at 4 P.M., Mr. H. G. Plimmer, of Sydenham, in the chair. Dinner at 6 P.M.; charge, 7s. (exclusive of wine). Papers will be read by Charters Symonds, M.D., M.S., Dr. Armand Ruffer, Dr. John H. Galton, and Mr. H. G. Plimmer. Members desirous of exhibiting or reading notes of cases will please communicate with the Honorary Secretary, P. T. DUNCAN, Park House, Croydon.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A conjoint meeting of the above Districts will be held at the Grand Hotel, Brighton, on Wednesday, March 25th. Mr. Seymour Burrows, will preside. Gentlemen desirous of contributing papers or cases are requested to communicate with one of the Honorary Secretaries, T. JENNER VERRALL, Brighton, or W. A. GOSTLING, Worthing.

SOUTH-WESTERN BRANCH.—An intermediate meeting of the Branch will be held at the Commercial Hotel, Newton Abbot, on Thursday, March 5th, at 12 o'clock, E. Slade-King, M.D., D.P.H., President. Mr. C. H. Wade (Chudleigh) will open a discussion on The Difficulties and Uncertainties in the Diagnosis of Typhoid Fever. Notices of papers to be read or of cases, specimens, etc., to be shown should be sent to the Honorary Secretary without delay. Luncheon will be provided after the meeting by the Branch. Members intending to be present are requested to write to the Honorary Secretary to that effect not later than March 1st.—P. MAURY DEAS, Honorary Secretary, Wonford House, Exeter.

BORDER COUNTIES BRANCH.—The spring meeting of this Branch will be held at the County Hotel, Carlisle, on the afternoon of Friday, March 20th. Notice of papers, etc., should be sent to the Honorary Secretary, JAMES ALTHAM, Penrith.

BATH AND BRISTOL BRANCH.

A SPECIAL meeting of this Branch was held at the Bristol Medical School, on February 18th, 1891: Dr. W. JOHNSTONE FYFFE, retiring President, in the chair. There were also present sixteen members.

Midwives Bill.—Dr. MARKHAM SKERRITT read the requisition under which the meeting was summoned—"to discuss the Midwives Registration Bill, and to express such opinion or pass such resolution thereon as may then be deemed best, having regard to the best interests of the medical profession and of the general public." After a discussion, in which Dr. BROOM, Messrs. EWENS and SAMUEL SMITH, Dr. AUST LAWRENCE, Mr. CARR, and Drs. SWAYNE and HINTON took part, it was proposed by Dr. MARKHAM SKERRITT, and seconded by Mr. S. H. SWAYNE, "That this Branch has confidence in the deliberations of the Parliamentary Bills Committee of the Association on this question, and in any action thereon which they may see fit to take." To this the following amendment was proposed by Dr. BROOM, and seconded by Mr. SMITH: "That the present special meeting of the Bath and Bristol Branch of the British Medical Association, having discussed the Midwives Registration Bill, does not approve of such Bill in its present amended form." The amendment was carried—ayes, 9; noes, 4.—Dr. FYFFE then proposed, and Dr. HINTON seconded, the following resolution: "That this meeting, having expressed its disapproval of the Bill by the above resolution, refers the further consideration of the question to the Parliamentary Bills Committee of the Association." This was carried by 13 votes to 2.

SPECIAL CORRESPONDENCE.

PARIS.

Small-pox and "Grippe" at Marseilles.—Cholera.—Typhoid Fever in France.—Ambulance Service in Paris.—Proposed Amendment of the Lunacy Laws.—Morphinomania.—News.

AT a recent meeting of the Comité Consultatif d'Hygiène Publique, M. Proust stated that in January, at Marseilles, there were eighty-seven deaths from small-pox. "Grippe" of an infectious character also broke out in that city. In one flat seven people were attacked, three died. One of these was taken to the Conception Hospital, and transmitted the illness to a male nurse, who fortunately recovered. In 1866 a similar epidemic broke out in the Pitié Hospital, in Paris. The patients died from infectious pneumonia.

In Syria cholera has not appeared since January 22nd. Clean bills of health are given to vessels leaving the ports. In Japan, also, the cholera epidemic has died out. Yellow fever has broken out at the mouth of the Nile.

M. Brouardel estimates that 25,000 people in France die annually from typhoid fever. Some years ago the yearly mortality in the army was 1,500. Now that well water has been replaced by spring water, the mortality is less.

The "Ambulance Urbaine" of the St. Louis Hospital conveyed to the ambulance station 2,112 patients during the year 1890; as against 2,054 during 1889. Thirty telephonic stations are established at different chemists' shops, which are thus in communication with the "Ambulance Urbaine."

M. Joseph Reinach has proposed in the Chamber of Deputies a revision of the laws concerning the insane. He suggests that criminal lunatics should not be set at liberty without a certificate from the medical man stating not only that the patient is cured, but that a recurrence of insanity need not be feared.

Two cases recently before the law courts have incidentally brought to light some curious details concerning morphinomania. In one instance a husband became a victim to mor-

phinism, and persuaded his wife to follow his example. The husband died, and the widow ruined herself physically and mentally—in other words, became a morphinomaniac. Those who followed the Wladimiroff case will remember she was shot by her reputed lover. In another criminal case the wife of a morphinomaniac was in such a state of terror from what she called his *crises*, that in order to prevent them she, by means of falsehood, gained admittance to a convent where her husband's mistress was in retreat, and assisted setting her at liberty, stating that her husband could not live without her, and he would take more morphine if he did not have his own way.

The marriage of Miss Blanche Edwards, M.D., of the Paris Medical Faculty, with M. Pilliet, "interne" in the Paris hospitals, took place recently.

BERLIN.

Professor Liebreich.—Another New Treatment for Tuberculosis.—Discussion on Koch's Treatment.—Regulations for the Sale of Tuberculin.

Professor O. Liebreich has received the title of "Geheimer Medicinalrath," in recognition of his work in various branches of medical science.

The clinical experiments with Dr. Liebreich's new remedy for tuberculosis are being continued, not only in cases of tuberculosis of the larynx, but also in lupus cases, and cases of catarrhal affections. The results thus far are said to be exceptionally good. Nevertheless the Professor himself affirms that the experimental stage has not been passed, and is anxious that no final conclusions should be drawn as yet. The remedy has several important practical advantages: it is easily obtainable, cheap, and simple in its application. The injections are not followed by fever, nor any kind of inflammatory reaction. [See a'so p. 475.]

At last Wednesday's meeting of the Berliner Medizinische Gesellschaft, the discussion on Fraenkel's address, the longest and perhaps the most important discussion on record in the annals of the society, came to an end. Professor Fraenkel, in replying, said: "I am of opinion that tuberculin exercises a direct influence on those parts of the body where tubercle bacilli exist, and where they have caused changes to take place; and that this influence consists in a corrosive action with supervening necrosis. Thus I uphold my opinion that tuberculin is a specific for tuberculosis. If this be so, whence comes it that its therapeutic action is so much called in question? I think the answer is: because tuberculin (1) does not affect the tubercle bacilli, and (2) because it has some untoward by-effects." He carefully weighed the pros. and cons. of the tuberculin treatment, such as his own experience had made known to him, and said that though fully alive to the possible dangers of the injections, he had found the curative effect in many cases so marked, so much greater than he had yet observed to follow any other therapeutic method, that in his opinion the physician, after having carefully and conscientiously selected suitable cases, must calmly face the danger, in the same way as the surgeon does day after day. At the close of his remarks Professor Fraenkel referred to Professor Liebreich's new remedy, with which he had obtained surprisingly successful results in cases of tuberculosis of the larynx.

The Verein für innere Medizin has opened a discussion on Koch's tuberculin. The introductory address fell to Dr. Thorner, who reported most favourable experiences with the lymph, adding that, in his experience, the dangerous by-effects had been quite exceptional.

The official regulations as to the sale of tuberculin have appeared. The chemists are to obtain their supply from Dr. Libbertz, who will continue to prepare the lymph under the supervision of Professor Koch. It will be sold in sealed bottles containing from 1 to 5 cubic centimetres, and marked with the date of preparation. The chemists are to use the same precautions as with poison, and only to sell it in the original bottles and upon the written prescription of medical men. A special book is to be kept for the entry of sales, etc., and in each case the quantity sold, the date of preparation, of purchase, and of sale, and the name of the physician prescribing it must be noted. Six months after preparation the lymph may no longer be sold. Bottles six months old should be returned to Dr. Libbertz, who will exchange them for new ones without extra charge. The price has been fixed at 6 marks (6s.) for a cubic centimetre, and 25 marks (£1 5s.) for 5 cubic centimetres.

MELBOURNE.

Charities Commission in Melbourne.—Alleged Overwork of Nurses.—Koch's Discovery.—Hospital for Infectious Disease.—Portable Incinerators and the Prevention of Typhoid Fever.—Brain Surgery.—Mode of Administering Iodide of Potassium.—Mediastinal Sarcoma.

Through the medium of the Charities Commission the public were informed that during the last eleven or twelve years 10 per cent. of the resident medical officers of the Melbourne Hospital have contracted pulmonary consumption, and that five-sevenths of the cases have proved fatal. These deaths were attributed to the insufficient and unhealthy condition of the accommodation provided. It appears that five residents have three rooms, or what have been called stalls, between them; the cubic feet of air space each has been roughly estimated at 2,500. The wall paper and conditions that existed twenty years ago have remained unaltered. Yielding to public opinion, the committee of the hospital are endeavouring to improve matters.

Hitherto criticism of hospital management has been restricted to the "Melbourne," but a female nurse recently attached to the staff of the Alfred Hospital stated in evidence that she was relegated to the typhoid fever tents, and, in addition to attending to the patients with the care that such cases demand, she had all the rough work that is expected from an ordinary domestic servant. She was compelled to rise at 5.30 A.M., and, with intervals of about a quarter of an hour for meals, she remained on duty until 6.30 and 8.30, and occasionally until after 11 P.M. She had to make her toilet without a bath, and the food given to her was so coarse that only great hunger compelled her to eat it. On one occasion, when she was left alone with one of the patients, she was seized and attacked by him, was finally pinned up against a tree in the grounds and beaten to such an extent that she was laid up for some time afterwards. In less than a year she became ill from blood poisoning, and had to resign her position. Of the twelve nurses who slept in a tent in the proximity of a drain leading from the typhoid tents, six developed typhoid and one died. She declared against pay-tents, on the ground that patients in them get attention, to the loss of the others, and she asserted that while there were no deaths in the two pay-tents, twelve had occurred in the other four. At the meeting of the Hospital Committee the next day after the evidence had been given, the chairman termed the evidence of the nurse erroneous, and the statements unfair and exaggerated. It is stated that notwithstanding the highly disparaging statements made by her, the nurse made an effort to get readmitted into the institution as nurse, but was refused. It appears, also, that in the free tents there were 140 cases, and in the pay-tents only 19; so that this statement on the part of the nurse is certainly misleading.

After the close of his labours as Chairman of the Sanitary Commission, Professor Allen obtained leave from the University, and received £1,000 from the Government of Victoria, in order to examine matters connected with the science of sanitation in Europe. The following telegram was sent to him by the Premier: "Presume Professor Allen understands that investigation Koch's method embraced in scope of his commission." The other colonies have now sent representatives to Berlin for the same purpose. Professor Anderson Stuart is acting for New South Wales, and Professor Watson for South Australia.

Dr. Gresswell, through the Board of Health, is arranging with the various municipalities for a conference to discuss the advisability of establishing a hospital for the treatment of infectious cases. In his report he says: "The present hospitals give no accommodation for the treatment of diphtheria or scarlet fever, and the provision for typhoid is of a temporary and imperfect character."

In a paper which Dr. Gresswell recently read before the local

Branch of the British Medical Association "On the Prevention of the Communicability of Disease," he recommended a portable incinerator, which can be used on the premises, for incineration of excreta from persons suffering from typhoid and diarrhœa, etc. He warned householders not to take milk, aërated waters, ice, ice cream, etc., from any seller, unless that seller can show a certificate of recent date from a competent authority, to the effect that the water or milk, or both, have been effectually filtered or boiled prior to being manufactured into a beverage.

At another meeting of the Branch Dr. Springthorpe read a paper on two brain cases. The first case was that of a boy, aged 13, who had until three years ago enjoyed good health. About that time he fell off a fence 5 feet high, striking the right side of his forehead. He then suffered from headaches, was unable to read, and had attacks of vomiting. At intervals of three or four days he was seized with convulsive attacks, in which he became unconscious. Both arms were in a state of tonic contraction. He had become shaky in standing, and giddiness was very marked. As it seemed certain that there was some cerebellar tumour, with pressure symptoms, an operation was suggested; the patient was trephined over the right lobe of the cerebellum, but succumbed. The *post-mortem* notes showed that a fatal issue was inevitable. Almost the whole of the middle lobe of the cerebellum was occupied by a decomposing cavity, with prominences in its walls, the seat of numerous hæmorrhages. There seems to have been little doubt that the whole lobe had been infiltrated with glioma. The case is interesting, as illustrating the usual cause of a glioma—external violence. The other case was a large hydatid cyst, floating free in the left lateral ventricle. Operation was delayed, and death ensued from acute hydrocephalus. The patient was a girl, aged 10. The interest in this case is the unusual position of the hydatids, which, though not rarely found in the brain, have seldom been observed in the lateral ventricle.

At the same meeting, Dr. E. H. Fyffe read some notes on large doses of iodide of potassium. He advocated large doses in suitable cases.

Dr. W. Snowball reported a very interesting case of sarcoma of the anterior mediastinum. The patient was a boy, aged 12, and when seen was puffy about the neck and face, while the breathing was asthmatic in character. The front of the chest was prominent, and scattered over with small veins. Dyspnœa was severe, and at times he became delirious. In one of these attacks he died. The *post-mortem* examination disclosed behind the sternum a massive nodular growth pressing on the lower end of the trachea and adherent to both lungs.

LEEDS.

The Projected Hall of Residence at the Yorkshire College.—The General Infirmary.

A COMPANY has been formed to be called "The Yorkshire College Hall of Residence (Limited)." The directors are Principal Bodington (the chairman), Sir James Kitson, Bart., the Vicar of Leeds (the Rev. Dr. Talbot), Mr. T. Pridgin Teale, F.R.S., Mr. James Bedford, Mr. C. T. Bentfield, Mr. G. W. Brown, and Mr. R. Reynolds. The intention is to raise a capital of £5,000, in 1,000 shares of £5 each, and of these 834 shares have already been subscribed.

The annual report of the Board of the Leeds General Infirmary states that the records of the year 1890, like those of many previous years, exhibit the work in every department still increasing day by day. The available accommodation for in-patients, although it has been extended from time to time, has been frequently found inadequate to meet the pressing needs of many who have been anxious to obtain relief, and numbers have had to go away contented with having their names registered for admission at the first opportunity. This unsatisfactory condition of things the Board hope will be remedied when the present extension of buildings is completed. The crowded condition of the infirmary may be well illustrated by the fact that on 140 days during the year the in-patients numbered from 300 to 320, and bearing in mind that the total number of beds is but 326, it will be seen how dangerously small has been the margin of accommodation available for accidents, owing to the desire of the staff to do all in their power to alleviate urgent distress at once, rather than turn people away to wait until more beds were empty. The number of in-patients admitted was 4,994, against 4,814 the preceding year: and the number remaining in the infirmary at the end of the year 1889 was 272—making a total of 5,266 treated during the year, being an increase of 182. The average daily number of beds occupied was 290, and the average duration of treatment of each in-patient was 20 days, as against 21 days the previous year. The rate of mortality was 5.29 per cent., but, deducting 83 patients who died within 48 hours after admission, the percentage is reduced to 3.78. In the previous year the rates were 5.31 and 3.64 respectively. The number of out-patients registered was 26,585, against 26,197 the preceding year; the number of in-patients discharged and made out-patients was 3,923, and there remained on the books at the end of the year 1889, 2,500. In the outside maternity department there were 605 confinements, with 11 deaths, all infants; and 3,410 visits were paid to the patients' homes. In the electrical department for out-patients there were 109 new cases, with a total attendance of 5,222. The total number of out-patients treated was 33,722, being an increase of 524. The average weekly attendance at the infirmary was 2,365, and the total attendances 122,989, against 117,706 of the previous year. The average cost of each in-patient for treating, nursing, and maintenance was £2 14s. 7¾d.; or, inclusive of fittings, furniture, and repairs to buildings, £3 2s. 11¼d., the former sum being at the rate of 19s. 1¼d., and the latter of 22s. 0¼d. per week. The average cost of each occupied bed, including every item of expenditure, was £57 2s. 10¾d., but exclusive of fittings, repairs to buildings, etc., £49 12s. 2½d. The average cost of in-patients is a little higher this year in consequence of large renewals and other extra expenditure in anticipation of the requirements of the new extension. The estimated cost of each out-patient was 1s. 3¾d.

CORRESPONDENCE.

TAPPING THE VENTRICLES.

SIR,—In the BRITISH MEDICAL JOURNAL for December 6th, 1890, Mr. Mayo Robson published a paper on "Tapping and Draining the Ventricles in certain Cases of Brain Disease," which he read before the British Medical Association last July. The entire absence of reference to the pioneer work I have done as to this operation, as well as the assertion that the case Mr. Robson reports is "one of the earliest, if not the first, in which the operation of trephining and tapping the ventricles has been performed," makes it proper that I should state the facts.

In 1881 Wernicke, and in 1886 Zenner, of Cincinnati, were the first to propose in a general way to trephine and puncture the lateral ventricles. On November 7th, 1888, I read a paper before the College of Physicians of Philadelphia, in which, in ignorance of these earlier propositions, I proposed to trephine, puncture, and drain the lateral ventricles, and also, based upon dissections, distinctly formulated the procedure, and established accurately the *technique*, pointing out three practicable routes (frontal, occipital, lateral) and showing the advantages of the lateral route. This I believe was the first formal statement of the method of operating. This paper was published in the *Medical News* of December 1st, 1888. In addition to this I reported to the Philadelphia County Medical Society, on February 13th, 1889, the first case in which I followed out my proposition, and also irrigated the ventricles from side to side. This was published in the *Medical News* for March 9th, 1889.

Instead of being the first case in which the operation of trephining and tapping the ventricles has been done, Mr. Robson's is the fourth. The first one ever operated on was by von Bergmann. This was done on July 15th, 1887, though it was not published till 1889, in the second edition of his *Surgical Treatment of Brain Lesions*. The second case was done by Ayers and Hersman, on December 4th, 1888, and published in the *Pittsburgh Medical Review* for March, 1889. The third case was my own first case, which was operated on on January 11th, 1889. At that time neither of the other cases had been published and of course I was not aware that I had been anticipated in the operation.

All of these cases were not only done but were published, it will be seen, over a year before Mr. Robson's paper was read. Mr. Robson, however, has the credit of doing the first successful case on record. I the more regret the necessity of correcting the misstatement because Mr. Robson has been extremely kind in furnishing to me brief notes of both his cases for embodiment in an elaborate paper on the "Surgery of the Lateral Ventricles," which I presented at the Tenth International Medical Congress at Berlin last August.—I am, etc.,

Philadelphia. W. W. KEEN.

ON THE OPERATIVE TREATMENT OF DISEASE OF THE UTERINE APPENDAGES.

SIR,—I am really grateful to Dr. Herman for the way in which he refers to the "courage and candour" with which I reported the result of a case of removal of the "ovaries" for cardiac dyspnœa—meaning, I suppose, that the result was so bad that no one would again attempt the like.

I feel, however, that I hardly merit his praises, as the case, instead of being a miserable *fiasco*, was a brilliant success. Moreover, only one ovary was removed. I read this case before the Obstetrical Society of London on April 5th, 1882. The Chairman, the late Dr. Matthews Duncan, completely extinguished me. The drift of his denunciatory speech was to the effect that it is better for a woman to have pain, or any amount of suffering such as my patient had, rather than have one diseased ovary removed. This was echoed by most of the members, with the noteworthy exception of Dr. Barnes. They declined to publish my case in the *Transactions*, and it never was published. It is so unique and interesting that I venture now to give a brief account of it.

L. R., aged 30, multipara, applied as an out-patient at the Women's and Children's Hospital, to which I was then one of the surgeons, in April, 1881. She stated that she had been under the care of numerous medical men, of whom she could give the names of eight or nine, but she had never succeeded in getting relief from attacks of dyspnœa. These attacks came on from any ordinary work or exertion, and had for five years rendered her unable to do her own housework except to a very limited extent. On admission I observed one of these attacks, and it was clearly cardiac, the heart being excited and beating violently. The patient could lie upon her stomach or on either side in bed, but not upon her back, as the "shortness of breath" was at once induced. During the day she found out that she could relieve the attack by sitting upon a stool and bending the body forward, so that the forehead rested upon another stool; also by lying down "curled up" on one side. There was a marked mitral murmur. The lungs were sound. Behind the uterus and almost in Douglas's pouch was a prolapsed ovary, exquisitely sensitive to pressure, and pain and discomfort continued for some time afterwards. My colleague Mr. Scattergood agreed with me that it was worth while trying whether removal of this ovary would relieve her; and we thought ourselves justified in doing this by the great length of the case, and the absence of any hope of relief by any other mode of treatment. The curious effect of certain positions in relieving her and in bringing on the attacks also led us to this opinion.

I removed this one ovary through a small incision in the roof of the vagina, the other ovary being left; it was examined, and found to the touch normal.

The first result of the operation was spontaneously mentioned by the patient, namely, that she could lie upon her back with comfort. The result was to nearly, but not absolutely, cure the dyspnœa. On September 27th her husband reported that she had up to then been able to do her own housework, and especially to knead the dough, which she never could do before. It had not been necessary for her to resort to the peculiar positions again. Of course, I could come to no other conclusion than that the dyspnœa, although cardiac, was excited in some way by pressure upon the ovary owing to its position.

Dr. Galabin kindly made a microscopic examination of the ovary, which was cystic. He says: "The tissue near the cysts was in parts greatly infiltrated with inflammatory nuclei, especially between the cysts and the surface of the ovary, and dilated vessels containing blood were here seen."

I am content to leave this case to the judgment of the profession.—I am, etc.,

JAMES BRAITHWAITE, President of the North of England Gynæcological Society.
Leeds.

SIR,—Some of the "younger men" content themselves with reiteration of statements of cure in their own practice, but no one as yet seems willing to accept the very reasonable proposal I made. Firm believers in "cure" should have no hesitation in doing this. What do these gentlemen mean by cure? and to what class of inflammatory affections of the tubes and ovaries do they deem the term applicable? As a matter of experience in almost all cases of tumour formation—that is, when one or both tubes are distended with fluid, and especially if this be pus—cures, either spontaneous or after treatment, are almost unheard of, and, when heard of, need corroboration.

Then there is the important element of diagnosis, which all experienced men know is difficult in not a few of these cases, and it is always open to honest scientific doubt, when anyone claims to have had several cases of cures of distended and matted tubes, whether his diagnosis was correct, and whether the œdema and nodular thickenings or even engorgement of the lymphatics by the side of the uterus, as demonstrated by Poirier, was not the condition which was present, and which by absorption became cured.

As to the question of pregnancy, this, of course, may occur in cases of unilateral disease; but if this be severe the diseased parts should be removed. Cases are recorded in which a woman has had several children while carrying an ovarian tumour, but this is no valid argument against ovariotomy; in fact, we remove such tumours during pregnancy, so as to avoid serious complications and with excellent results, and if we know, or have sound reasons for believing, that a woman has hæmato- or pyosalpinx of one side and is liable to become pregnant, the stronger the reason, I think most men would say, to rid her of that which is a real source of danger, as proved by experience. I expect that most of the ameliorations, termed cures, occur in cases of hypertrophic salpingitis without tumour formation, and these also are subject to relapses, but do not necessarily strongly indicate operation in their earlier stages.

There is another explanation of the fact, that in Dr. Lewers's cases fourteen were 40 years of age, than that given by Dr. Matthews Duncan—this is, that in them the disease commenced late in life, and that the occurrence of the menopause hastened their obsolescence. I may mention in passing that distended tubes often postpone and intensify the climacteric. With reference to the statement that an eminent obstetric physician successfully dissuaded from operation five patients who had been advised to submit to it throws no light on the nature of the disease of these parts, which may have been of the hypertrophic variety prior to the stage of fluid collection; in fact, the letter reads as if the physician did not believe them to be diseased, as he simply says that these patients had been advised to have their appendages removed, that he differed, and that the patients got well. Naturally, if there was nothing the matter with them, it ought to have been easy for them to get perfectly well, with or without proper treatment. If they were diseased, another two years may bring a different history.

When we consider the constipation and rectal accumulation to which so many women are liable, the monthly congestion of the pelvic organs, and the occasional vascular engorgement of coitus, we can have no difficulty in accounting for relapses or for increase of the mischief, but we cannot but have considerable diffidence in believing in "cures." Scientific men expunge the word "cure," as applied to medical or surgical processes, from their vocabulary; some deny it to natural means also, but medical men are practical, hence their just belief in what may be termed practical cures.

There is the patients' view also, which is more important than the surgeon's, and which is that they consider themselves cured when all aches and pains are gone, and if they do not return. In some cases we can offer them this with appropriate treatment, which consists mainly of general and local rest, hot douches and glycerine plugs, but poor women cannot rest, and so it comes about in these cases, as in uterine fibroids, that shortly after they leave hospital they return with the old complaints.

I am no advocate for meddlesome surgery. I admit that to remove diseased parts is not to cure them; but we must take things as we find them, endeavouring, meantime, to make advances, however small, towards that end—much to be desired, but, I fear, little to be believed in for many a long day—when surgery can really cure without the use of the knife. Until that day arrives I must agree with Pozzi that practical cures (not a *restitutio ad integrum*) are possible, but that they are excessively rare, and that clinical experience shows that once the appendages are diseased the persistence of the symptoms proves how rebellious is the malady, and how durable are the traces it leaves. Until, therefore, it is indubitably proved to the profession that the commonness of cure is as claimed by the minority, I would urge early operation in suitable cases; and though one has seen, as Pozzi puts it, "veritable resurrections"—when the general health has been allowed to seriously fail through expectant treatment and through not attacking the diseased appendages which are the cause of these local and general symptoms, but, instead, playing with the latter—yet such cases are the exception to be avoided, if we do not wish to add to the list of "too late" cases recently discarded, and with the best results, in other departments of surgery.—I am, etc.,

Grosvenor Street, W. H. A. REEVES.

SIR,—While in strong sympathy with every honest endeavour to restrict the operation of removal of the uterine appendages to cases which are absolutely incapable of cure by other methods, I cannot see the wisdom or use of grouping together a number of distinct and different affections of the ovaries and Fallopian tubes under the name of chronic disease of the uterine appendages, either for the purpose of recommending or deploring the operation of removal as a method of treatment.

The operation as applied to (1) myoma, (2) suppurative inflammatory disease, (3) non-suppurative inflammatory disease, (4) arrested development and malformation, and (5) extrauterine pregnancy, to say nothing of other diseases, involves such vastly different questions in each case, that it is simply impossible to deal intelligently with any arguments for or against operation unless each class is considered separately.

I separate cases of inflammatory disease into two distinct classes, the suppurative and non-suppurative. This may be a rough classification, one not always capable of exact differentiation by diagnostic methods, but it is a practical division. In the suppurative class, which is not necessarily "acute," where abscess of the ovary or tube is present, operation is necessary: and I believe it is to the discredit of medicine, and not very seldom to the loss of life, that this method of treatment is withheld.

In the non-suppurative class, on the other hand, the greater bulk do not require operation. Even when distinct enlargement of the tube or ovary has been present, it is quite possible to obtain in time such a measure of recovery and health that no disease can be thereafter detected on the most careful examination. Such cases not only may recover from every sign and symptom of disease, but some of them may bear children. My own experience of such recoveries has been considerable, and I believe they will contrast very favourably with those which have been obtained after operative removal. They have possibly been more tedious, but the final result is much more satisfactory.

On this restricted platform, therefore, regarding cases of non-suppurative inflammatory disease, I find myself agreeing thoroughly with the recommendations to caution and patience which have been given by Dr. Williams, Dr. Champneys, and Mr. Doran. This belief in the power of rest and time, however, must not blind our eyes to the necessity of interference when a strumous constitution or a higher grade of inflammation makes an operation for the cure of intraperitoneal abscess necessary.—I am, etc.,

Birmingham. JOHN W. TAYLOR.

THE Bill which enables urban sanitary authorities to provide and maintain museums and gymnasiums was passed through Committee in the House of Commons on February 25th.

THE MIDWIVES BILL.

SIR,—Dr. Rentoul asserts in the BRITISH MEDICAL JOURNAL of February 21st that the above Bill will, for all practical purposes, repeal the Medical Act; and he bases this totally incorrect assertion on another, if possible, more incorrect statement, that "that Act lays it down that if any person wishes to practise any branch of medicine, such person must hold three registrable qualifications, namely, in medicine, surgery, and midwifery."

It seems hardly necessary to point out that no Medical Act ever contained anything so absurd as that any person should be required to possess three registrable qualifications before being entitled to be registered, though the Medical Act of 1886 undoubtedly requires an examination to have been passed in medicine, surgery, and midwifery, before a diploma, which shall in future be registrable, shall be granted—a very different thing. Nor does the Act apply to those merely who wish to practise, as Dr. Rentoul says, but to those who wish to be registered as medical practitioners—again a very different thing, and one which renders it practically useless against quacks, bone-setters, etc.

At the deputation to the Lord President of the Council, Dr. Macnaughton Jones opposed the Bill, on the ground that it was fraught with great danger to the public, and that there was no definition in it of the duties of a midwife; but if we turn to his *Hints to Midwives*, which are furnished with his Nurse's Midwifery and Gynæcological Bag, by Maw, Son, and Thompson, we shall find that midwives' duties include, according to him, the diagnosis of pregnancy; examination of the urine; the treatment of costiveness during pregnancy; the treatment of abortion; the treatment of convulsions; the administration of laudanum, bromide, and chloral hydrate; stitching up the perineum if ruptured; and the resuscitation of the newly born by Sylvester's method. It is no doubt due to my dulness of apprehension that I am unable to see how it will increase the danger to the public if women who are already (if in possession of Dr. Macnaughton Jones's *Hints* and bag) considered capable of performing such medical and surgical duties as these, are required in addition to register their names before calling themselves midwives.—I am, etc.,

Dulwich. H. NELSON HARDY.

SIR,—A number of us general practitioners have been rather severely maligned by Sir W. Foster and Dr. C. Holman, both of whom have said that our motives in opposing the three Bills have been "sordid" and based on "cupidity."

We oppose this Bill for many reasons. Our chief objections are: A. It will repeal the Medical Act of 1886, which lays it down that if any person wishes to practise any branch of medicine, such person must possess three qualifications; one in medicine, one in midwifery, and one in surgery; while this Bill says that if a woman wishes to act as a midwifery practitioner she need possess only one diploma, that of midwifery. Let us remember that the 36 millions of persons in this country are depending on the skill of the general practitioner, and that anything which will bring back the *régime* of the old apothecary and the "great" physician will be a public danger.

B. We are opposed to any Bill becoming law until the General Council of Medical Education has completed its requirements regarding the education of the medical student in midwifery. At the last meeting of the Medical Council it was proposed that each student before being admitted to his final examination should present a certificate showing that he had personally conducted thirty labours.

C. We are opposed to any Bill passing until it is shown that there are a sufficient number of lying-in cases by which to train both the medical student and pupil midwife. If the above thirty cases is enforced, we shall require 51,990 labours for the students alone; and I have already pointed out that 51,059 confinements received relief during 1889, at the medical charities in the United Kingdom.

D. We are opposed to any Bill being passed which will compel the medical student to receive his practical education in midwifery from the midwife.

E. We are opposed to any Bill being passed until legislation relating to the certificates of "stillbirths" has been

amended. The Registration of Births and Deaths Act, 1874, Section 18, says that a "stillbirth" may be interred if any of the following state that it was "stillbirth": father and mother of child, occupier of house, person present at the birth, person having charge of the child, or practitioner. I find that during 1889, 6,263 "stillbirths" were interred at 72 Burial Boards' cemetries. There are 1,100 Burial Boards, and thousands of churchyards. By the above 18th Section, it follows that a midwife, being "a person" present at birth, can certify.

We also hold that even now the poorer classes are thoroughly provided for: (1) By the Poor Law, with its extra medical fee of from 10s. to 40s. per confinement; and by the Act which provides for "relief on loan" to the person who employs the parish doctor, and who can therefore repay the fee to him. (2) By our voluntary medical charities. (3) By friendly societies, such as the National Provident, Hearts of Oak, and Royal Standard, which make grants of 30s. and 40s. to every member's wife when confined. (4) By provident and sick provident dispensaries; where by paying about 6d. per week for eight months, a woman can secure most efficient medical services; and (5) by a very large number of doctors who are very willing to go for a fee varying from 7s. 6d. upwards.

At Newcastle and Oxford the local lying-in charities pay their district medical staff a retainer of £70 and £40 each per annum, and 10s. 6d. for confinement. Also to the plan lately carried out at the Glasgow Maternity, where the work of the midwives, lately carried on by the Sick Poor Nursing Association, has been entirely taken over by the hospital. None of the above three now employ midwives.

Lastly, I would point out that the London Obstetrical Society during the last eight years received £663 for diplomas. Is it not a fact that the present system of "training" monthly nurses and pupil midwives is only a system of making money for the benefit of the charity? In 1889, eleven "charities" made over £4,428 by training.

I think the above arguments are sufficient to show that we are more than justified in opposing this Bill.—I am, etc.,

Liverpool. ROBERT REID RENTOUL, M.D.

SIR,—In the county of Caithness, where I am at present practising, nearly the whole of the midwifery department of our profession is in the hands of midwives. The parish of Halkirk, in which I reside, has a population of about 3,000. My nearest neighbour practitioner is six miles off, and yet, during the fifteen months I have been here, I have only been called to attend five cases of midwifery, three of which required the use of instruments, else I should not have been sent for. I do not grumble at having so little midwifery practice, as I am fully occupied otherwise; but what I have to say is this: I am fully convinced that many poor women are kept suffering for hours, and sometimes days, when a little well-timed help would speedily and safely terminate their pains. I have known several cases, since coming here, where the patient has pleaded with the midwife to send for medical aid, and where the patient's wishes were not carried out, because the midwife knew that if the doctor came she would require "to take a back seat." In consequence also of this pernicious conduct there can be no doubt that many stillbirths occur which otherwise would be prevented.

Further, many midwives not only keep their patients suffering too long before calling in skilled help, but, worse still, the majority of them pose as authorities in one of the most difficult departments of medicine—the treatment of children's ailments. As a result of their "scientific directions" I am frequently called in to see little ones suffering—sometimes dying—from bad feeding.

Recently I saw a child, aged 3 weeks, who was being fed on oatmeal porridge, and it was with some difficulty that I could convince the mother—an ignorant girl of 20—that the child's illness was due to unsuitable feeding. At first she seemed to be amazed at my directions, and asked me how it was that I differed so much from the nurse, who had ordered her to begin and give the child porridge shortly after it was born.

Another case, recently under observation, was that of a child, aged 6 months, who had been suffering for some days from aphthous stomatitis. The midwife had been called to see it, but her directions for treatment seemed so cruel that, immediately after she left the house, I was sent for. The recommendation of the midwife was that the child's tongue, which was densely covered with aphthous patches, should be rubbed with a piece of loaf sugar until all the white coating was removed and the tongue made to bleed! This woman makes it her boast that she studied in Edinburgh under "the great Dr. Matthews Duncan."

If we are to have midwives registered, by all means let us have them carefully educated and carefully examined. If the present Bill were to become law, in many cases it would be nothing short of a legal recognition of quackery.—I am, etc.,

Halkirk. D. GAIR BRAIDWOOD, M.B., C.M.Edin.

"FUCHSINE BODIES."

SIR,—In the report of the discussion upon Mr. J. W. Smith's paper on the above subject in the BRITISH MEDICAL JOURNAL of February 21st, p. 413, I am credited with the opinion "that the bodies in question were micro-organisms, and the cause of carcinoma." While cheerfully accepting responsibility for the first part of the statement, I must entirely disclaim any such belief as that expressed in the second. Any such expression, in the present state of our knowledge of the subject, would be obviously both premature and illogical. That the appearances described by Dr. Russell exist, and are clearly to be seen as he figures them, cannot be denied, nor can they be otherwise than startling to skilled histologists. His arguments cannot be met in a spirit of *a priori* negation; and, however much one may regret the unfortunate vogue attained by the subject in the lay press, and the fatuous anticipations there developed, it will be a real misfortune if the question is not seriously and thoroughly dealt with by those who have special opportunities of testing its bearings. Dr. Russell has established merely a histological fact—of great interest, it is true, possibly of great importance; but that possible importance can only be assessed when the necessary chain of experiment, observation, and induction has been produced on the lines laid down by Pasteur and Koch, from which alone a reasonable opinion can be formed. Till such work is forthcoming, a suspended judgment is the only possible attitude for reasonable minds.—I am, etc.,

Owens College, Manchester. ARTHUR W. HARE.

THE HOSPITALS COMMITTEE.

SIR,—Owing to the arrangements in Room A in the House of Lords, whereby each witness before the Hospitals Committee sits with his back to the reporters, it is probable that many of the answers are only partially audible to them. For this reason, doubtless, two slight inaccuracies occur in your report of my evidence before the Select Committee. I am reported to have stated (1) that the entrance fee at St. George's Hospital is £120—it should have been £125; (2) "that there were lower fees for those who had had a certain amount of scientific work previously." I went on to explain that such arrangements applied to students who joined the school after having passed the First M.B.Oxon. or the Second M.B.Cantab.

Some few years ago many of the London medical schools united in fixing a uniform scale of fees. My evidence, as it given in the BRITISH MEDICAL JOURNAL of February 14th, might be taken as an attempt to withdraw from a compact into which we at St. George's most heartily entered, and my reason for asking your permission to make the above corrections is that I may dispel any such idea.—I am, etc.,

St. George's Hospital, S.W. THOS. WHIPHAM.

MINERS' NYSTAGMUS.

SIR,—In an article on page 365 of the BRITISH MEDICAL JOURNAL of February 14th, in referring to my paper on "Miners' Nystagmus" read before the Ophthalmological Society, it is stated: "According to Mr. Thompson, the affection is unknown in the pits where the naked lights are used, but it occurs in those in which the Davy lamp is used." This is incorrect; what I stated was that it is comparatively unknown in South Wales in those pits where the naked lights are used, but frequently occurs in the steam coal pits where

"safety lamps" are used. The lamp used most frequently in South Wales is the "Clanny," not the Davy lamp.—I am, etc.,

Cardiff. J. TATHAM THOMPSON.

NAVAL AND MILITARY MEDICAL SERVICES.

ON THE PRESENT METHOD OF RECRUITING THE ANGLO-INDIAN ARMY.

By SURGEON-GENERAL SIR WILLIAM MOORE, K.C.I.E.,
Honorary Physician to the Queen.

II.

The important point, however, in connection with the subject of this paper is the fact that, whatever the fever may be, young soldiers have been, are, and probably will be, the principal sufferers. The malady, whatever it may be, stands in definite relation with age and length of service in India, the liability to be affected becoming rapidly diminished as age and length of service advance. A common sense view of the subject leads to the conclusion that soldiers should not be sent so young to India. The Army Sanitary Commission long ago recommended that no soldier should leave England for the tropics until he had attained the age of 21; and the late Deputy Surgeon-General Hewlett, then Sanitary Commissioner of Bombay, in a special report on enteric fever, strongly recommended that soldiers should reach the age of 25 before they are sent to India. Under the short service system, however, this would not be practicable, for it would still further curtail the period of service in India, so that many men would only go there to be brought back again immediately. As there seems no intention of abolishing the short service system, some other plan should be adopted.

Under precisely similar circumstances of climate, men, by reason of their different temperaments and constitutions, suffer in very varying degrees. There are individuals who do not feel heat, and there are others who feel it intensely. There are some who sleep well through the noises and nuisances of the tropical night, and there are others whose health is disturbed by insomnia. There are some who seem proof against so-called malaria, and there are others not so. There are some who grow stout, and others who become thin in the tropics. There are people who, in consequence of peculiar idiosyncrasies, are utterly unfitted for tropical life. Among such idiosyncrasies may be mentioned an inability to take even the smallest quantity of quinine, and tendency to action of the bowels under slight mental emotion. There are some individuals who enjoy life and flourish in the Indian climate, who like the life, and who would willingly remain there if offered sufficient inducement to do so. They are not troubled by the heat, they know how to avoid chill, they seem proof against malaria, they have neither scurvy nor syphilitic taint, and they have learned how to take care of themselves in all ways, and under the different circumstances in which they may be placed. Doubtless such individuals are to a considerable extent the survival of the fittest. Men who, like good wine, have mellowed by age, and may be credited with more than the average *vis vitæ*, with prudence of life, and with freedom from disease. These are the men required as soldiers in India; these are the men who would like to remain there; and these are the men who are so frequently sent home as time-served soldiers, or when their regiment receives the order to march to the coast, for embarkation to Europe. For the inducements held out to them to exchange into some other corps still serving in India are not sufficient, and the corps they change into, if they do change, may have only a short time to stay in the country. Under such circumstances, as already mentioned, the men "go in" for the run home. When I left India in 1888, there was a growing opinion that a return to the old system of a European army, especially for India, is desirable. But I think this idea gained ground among certain authorities because it was foreseen that eventually it would be necessary to replace troopships by new vessels. Coming events cast their shadows before them. An Admiralty order just issued states the troopships are to be made over to the Indian Marine, thus making India responsible for the whole cost of new ones. There are many arguments in favour of a separate European army for India, and there are many reasons which may be advanced against it. On these I will not enter, merely mentioning that I think the former, in the essentials of economy and efficiency, counterbalance the latter. What I would suggest as an initiatory measure, which might or might not be extended, is the formation of one European regiment in each of the presidencies—Bengal, Madras, and Bombay—for prolonged service in India. Into such regiments only men fitted as sketched above, and after medical examination, should be admitted.

The period of service should extend to, at least, 45 years of age. But, in this respect, I would not propose any hard and fast rule. For some men—even in the tropics—are as young at 50 as others are at 40. There should be increased pay and retiring allowance, and concessions as regards furlough to Europe or elsewhere. The medical examination would need to be searching. Among other disqualifications, any suspicion of albuminuria, or of diabetes, of alcoholic craving, of a gouty or rheumatic condition, of hæmorrhoids, or of scurvy, or of syphilis should forbid acceptance. Previous liver or spleen affection, or a previous sunstroke, should also be disqualifications. Under such a system there would soon be regiments composed of men in every way fitted to endure the Indian climate with the least liability to disease. Any small extra expenditure entailed would be more than reimbursed by diminished loss of service from sickness and invaliding. I am supported in this suggestion—which I believe no one else has made—by a tabular statement given in the Report of the Sanitary Commissioner with the Government of India for 1888. This compares the sickness and death-rate of men who have, under existing unfavourable conditions, extended their service in India with men who have not done so. The result is so favourable to the former that the Sanitary Commissioner deems explanation necessary. He writes: "The man who extends his service in India has satisfied himself that his health stands the climate, and has to satisfy a medical officer that it is likely to do so." The difference to the present system which my suggestion involves is the formation of special regiments for service in India, with special rules and privileges, and a more stringent medical examination than is now considered necessary for prolongation of service in India. In the old East India Company's European regiments, and especially in the European artillery, many men were found—apparently by birth, and certainly by education—superior to the ordinary class of recruits. Whatever may have been their antecedents, these men made good soldiers. There is little doubt that a similar class would be attracted to an Indian service regiment.

There is also another aspect of the subject which presents it in a favourable light. Many men in the old company's army married native or Eurasian females. This would most probably be the case in a new Indian service regiment. It has been the custom to look down on the half-caste, or Eurasian, as one combining all the vices of both Europeans and natives, while destitute of the virtues of either. With this view, after considerable observation of Eurasians, I do not agree. If the half-castes, or Eurasians, of India were well taken care of and fostered by the State (which has never yet been the case), if they were legitimate instead of, as has often occurred, illegitimate, they would become a power in the Eastern Empire, perhaps our principal safeguard in the hour of need.

As regards fitness for the climate, I believe they would be better suited than Europeans, and in some respects better fitted than pure natives. Under this conviction I have advocated the formation of Eurasian regiments. I do not forget that hybrids are not usually satisfactory productions, but it should be recollected that the Hindu and the Anglo-Saxon derive from the same ancient stock. There is evidence that the early Aryans were a white people, and there are no reasons why the two divisions of the race should not successfully amalgamate, excepting sentiment, prejudice, and religion, which it is confessed are still potent, although fast breaking down. The inhabitants of Hindustan are not negroes, neither are Eurasians mulattoes, of whom a writer in the *Times* of January 8th, 1891, "On the Negro Question in America,"

affirms, that they rarely attain the age of 50, that they are particularly subject to certain diseases, and that Nature refuses to perpetuate this inappropriate hybridism.

THE NAVY.

THE following appointments have been made at the Admiralty:—E. A. SPILLER, M.D., Surgeon, to the *Excellent*, additional, February 28th; J. MENARY, M.D., Surgeon, to Jamaica Hospital, February 18th; J. M. ROGERS, Surgeon, to the *Urgent*: J. L. THOMAS, Surgeon, to Jamaica Hospital, February 19th: A. KIDD, Surgeon, to the *Bellerophon*, February 19th.

Fleet-Surgeon JAMES CARMICHAEL, M.D., Retired List, died at Glasgow on February 21st, at the age of 88. He was appointed Surgeon, February 13th, 1824; became Surgeon, February 6th, 1835; and Fleet-Surgeon, May 13th, 1859. He served in the Black Sea during the Crimean war, and received the medal with Sebastopol clasp and the Turkish medal, and was made a Knight of the Legion of Honour.

The following qualified candidates for the Naval Medical Service have been appointed Surgeons in Her Majesty's Fleet:—T. C. MEIKLE, M.A., M.B., R. W. SENIOR, E. E. P. TINDALL, E. E. KERSHAW, J. C. WOOD, A. H. HOWELL, H. B. MARRIOTT, E. C. LOMAS, M.B., N. L. RICHARDS, E. A. PENFOLD, M.B., G. M'GREGOR, B. R. CLARKE, E. J. FINCH, J. K. ROBINSON, M.B., H. CLIFT, February 11th.

ENTRANCE EXAMINATIONS: ARMY MEDICAL STAFF.

THE following is a list of the successful candidates at the recent competitive examination for Commissions in the Medical Staff of Her Majesty's Army:

	Marks.		Marks.
F. J. W. Porter	3,135	W. E. Hardy	2,780
O. L. Robinson	3,025	F. W. Begbie	2,770
F. J. Brown	2,960	C. H. Burtchaill...	2,760
C. J. Healy	2,960	T. J. Lenehan	2,760
C. E. G. Stalkart	2,930	F. McDowell	2,760
T. W. Gibbard	2,925	N. Faichnie	2,755
H. J. M. Buist	2,905	I. A. O. MacCarthy	2,695
C. W. Duggan	2,880	J. J. Gerrard	2,690
J. E. Brogden	2,815	G. B. Stanistreet...	2,680
J. H. E. Austin	2,780	J. C. Jameson	2,670

THE MEDICAL STAFF.

BRIGADE-SURGEON JAMES WILSON, M.B., F.F.P.S.Glasgow, is placed on retired pay. His commissions bear date: Assistant-Surgeon, August 5th, 1858; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; and Brigade-Surgeon, May 7th, 1889. He was engaged in the Afghan war in 1878-80, when he took part in the expedition to the Hissarik Valley (medal), and in the Egyptian war of 1882 (medal and Egyptian bronze star).

Surgeon ROBERT HIPPISLEY COX, from the Coldstream Guards, to be Surgeon, February 14th. He was appointed to the Coldstream Guards, April 7th, 1886.

The undermentioned surgeons on probation are appointed Surgeons, ranking as Captains:—T. B. BEACH, E. E. POWELL, C. W. R. HEALEY, J. W. JENNINGS, E. McK. WILLIAMS, H. E. DOWSE, J. C. CONNOR, M.B., J. E. CARTER, M.B., F. W. HARDY, J. T. CLAPHAM, W. AP S. J. GRAHAM, D. D. SHANAHAN, C. W. H. WHITESTONE, M.B., A. PEARSE, H. D. MASON, C. DALTON.

The undermentioned Surgeons, who are serving in the Madras command, are posted as follows:—F. B. MACLEAN, doing duty in the Secunderabad District, to do duty in the Rangoon District; M. J. SEXTON, M.D., doing duty in in the Myringyan and Mandalay districts, to do duty in the Secunderabad District; H. C. THURSTON, doing duty in the Belgaum and Bangalore Districts, to do duty in the Myringyan and Mandalay Districts; F. S. LE QUESNE, V.C., doing duty in the Myringyan and Mandalay Districts, to do duty in the Secunderabad District; E. D. FARMAR BRINGHURST, doing duty in the Secunderabad District, to do duty in the Myringyan and Mandalay Districts; E. F. SMITH, doing duty at the station hospital at Bellary, to do duty in the Myringyan and Mandalay Districts; J. F. DONEGAN, on arrival at Belgaum from Upper Burmah, to do duty at the station hospital at Bellary.

Surgeon S. POWELL, serving in the Bengal command, has leave to England for six months on medical certificate.

Surgeon-Major W. A. PARKER and Surgeon W. J. CROFTON, who are serving in the Bombay command, are placed on general duty in the Mhow district.

Surgeon-Major J. E. V. FOSS, M.D., serving in the Bombay command, having returned from leave in England, is appointed to the medical charge of the Station Hospital, Aden.

Surgeon-Major B. W. WELLINGS, serving in the Bombay command, in medical charge of the Station Hospital, Aden, is transferred to general duty, Poona district.

Surgeon W. O. WOLSELEY, serving in the Bombay command, in medical charge of the Station Hospital, Ahmedabad, is transferred to general duty, Aden district.

Surgeon A. PETERKIN, M.B., serving in the Bombay command, in medical charge of the Station Hospital, Purandhar, is transferred to general duty, Poona district.

ARMY MEDICAL RESERVE.

SURGEON C. E. DOUGLAS, M.B., has resigned his commission, which was dated May 16th, 1888.

INDIAN MEDICAL SERVICE.

SURGEONS A. J. MACNAB and H. B. LUARD, appointed to the Bengal Establishment from March 31st, 1890, reported their arrival at Bombay on December 26th.

The services of Surgeon D. SIMPSON, M.B., Madras Establishment, are placed at the disposal of the Public Department.

Surgeon J. B. SMITH, Bombay Establishment, on general duty in the Sind district, is directed to officiate in medical charge of the 27th Bombay Infantry (1st Belooch Battalion), during the absence on leave of Surgeon S. T. Avetoom.

THE following is a list of the successful candidates at the recent examination for admission to the Indian Medical Service:

	Marks.		Marks.
F. H. Burton-Brown	3,625	G. H. Frost	3,035
J. S. S. Lumsden...	3,340	S. B. Smith	3,030
B. H. Deare	3,330	D. H. McD. Graves	3,020
A. T. Brown	3,215	J. Penny	3,020
R. Bird, M.D.	3,180	G. F. W. Ewens, M.D.	3,010
B. C. Oldham	3,165	W. Heavey...	3,010
E. Wilkinson	3,160	W. G. Pridmore	3,010
C. Duer	3,155	I. W. Irvine	3,005
H. S. Wood	3,125	S. A. C. Dallas	2,995
J. Entrican, M.D.	3,090	C. H. L. Palk	2,975
C. Donovan, M.D.	3,050		

THE VOLUNTEERS.

ACTING-SURGEON R. BULLOCK, 2nd Volunteer Battalion Royal Warwickshire Regiment (late the 2nd Warwickshire), is promoted to be Surgeon, February 21st.

Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) S. H. MUNRO, M.D., 5th Volunteer Battalion Cheshire Regiment (late the 5th Cheshire), has resigned his commission, with permission to retain his rank and uniform; he was appointed Surgeon, March 14th, 1877, and Surgeon-Major, February 1st, 1889.

Acting-Surgeon H. W. R. BENCRAFT, 2nd Volunteer Battalion Hampshire Regiment (late the 2nd Hampshire), has also resigned his commission, which was dated May 22nd, 1886.

Surgeon and Surgeon-Major F. E. MANBY, 3rd Volunteer Battalion South Staffordshire Regiment (late the 4th Stafford), is seconded while holding the appointment of Brigade-Surgeon in the Staffordshire Infantry Volunteer Brigade.

MR. WILLIAM MAURICE ABBOTT-ANDERSON, M.B., is appointed Acting-Surgeon to the 3rd London Rifles, February 21st.

Acting-Surgeon D. WALLACE, M.B., is appointed Surgeon to the Edinburgh Division of the Volunteer Medical Staff Corps, February 21st.

MR. STANHOPE'S DIFFICULTIES.

M.S. writes: Are any so blind as those who will not see? Most of Mr. Stanhope's difficulties can be easily resolved, if it be truly desired to get over them. On the command difficulty let him only turn to the supernumerary list of the Army Service Corps, or the Indian Commissariat, to find that officers holding combatant rank and titles can be incorporated in the general army without having any command outside their own corps. Then the seniority hindrance can be remedied, as regards the junior medical officers, by the recommendation of the Camperdown Commission that they should spend the first few years as lieutenants: and as regards the seniors, it does not apply, for they are far outstripped in promotion by their combatant brethren. Look at brigade-surgeons, men varying in age from 42 to 55 years, and in service from 26 to 32 years; whereas the last promoted full colonel in the army is not yet 44 years of age, and has but 24 years' service, while the second last—a Royal Engineer—is 46 years old, and has 26 years' service.

The difficulty in the matter of pay can easily be adjusted by granting extra corps pay, as in the Royal Engineers and Army Service Corps. It is to be feared Mr. Stanhope's reply to Sir Andrew Clark's letter will not be regarded as a message of peace. Composite titles are not now considered sufficient by the majority of medical officers; if substantive army rank and title be impossible, has he any objection to honorary? That has already been granted freely to numerous non-combatants.

ROYAL MEDICAL CORPS writes: Mr. Stanhope's statement that if medical officers became officers of a Royal Medical Corps they would draw only regimental instead of staff allowances, through which they would suffer pecuniary loss, should be examined. The loss may be estimated at 1s. 6d. per day for each executive rank. But Mr. Stanhope must be reminded that such loss would be made good by the issue of corps pay, to an equivalent amount, exactly as in the Royal Engineers and Army Service Corps. Any loss in so-called regimental allowances would be covered by corps pay in the different ranks. This would not involve any extra expense to the State, no more than any loss to the individuals concerned.

*** Just so. So many thousand pounds are yearly voted for the pay and allowances of medical officers. Nobody asks Mr. Stanhope to spend more money on the present establishment. The total pay, as it stands, was considered enough, though no more than sufficient, by the Camperdown Commission. Medical officers are quite indifferent as to how the Accountant-General's Department may make up their pay. They will, indeed, be the last to object to the mode in which accounts are kept, provided that pay and allowances work out present totals.

SURGEON M.S. wants to know: 1. Whether the sum of £27,000 has been saved since the introduction of the extra year added to foreign service, because, if not, how would it cost that sum to revert to the old rule?

2. As regards sick leave, is not the fact that it required the recommendation of a special commission to effect this very ordinary piece of fair dealing a sufficient commentary on the way in which medical officers have hitherto been treated?

3, 4, 5, and 6. Social questions may not be capable of adjustment by regulation, but Mr. Stanhope should peruse general army orders to see whether this is a fact or not?

7. This question is again shirked. Does Mr. Stanhope think us so foolish as to agitate for subsidies to messes other than our own?

8. The rank question is also shirked. The terms rank and title are

cleverly confounded. When have medical officers held courts-martial on soldiers of the Medical Staff Corps? Since when has there been "no Army Medical Department?" Are not medical officers themselves quite willing to serve in the "initial" rank of lieutenant for three years? Do not officers of the Royal Engineers enter from four to six years younger than medical officers? Mr. Stanhope should get his facts from trustworthy and unprejudiced sources.

THIRTY YEARS' SERVICE writes: I have read Sir Andrew Clark's letter with admiration and Mr. Stanhope's reply with regret—but without surprise. The difficulties in the way of rank and command were easily surmounted in the reorganisation of the Commissariat, and would be also in the Medical if the will existed.

PUNJAB fears that Mr. Stanhope delayed his decision on the rank and titles question until he saw whether a sufficient number—quality no object—of misguided candidates would come forward for the next examination. If we are to have composite titles without accompanying *bonâ-fide* rank, shall we sign ourselves on mixed boards "Surgeon-Captain" below second Lieutenants? or will our names appear, as heretofore, in official and other lists as "Surgeon-Colonels" under the last-joined subalterns?

T. E. H. gathers from the correspondence between Sir Andrew Clark and Mr. Stanhope that the establishment of a Royal Medical Corps with *bonâ fide* rank and titles therein is not at present likely to be obtained by medical officers, but is certain ultimately to come. Meanwhile the titles of Surgeon and Lieutenant, etc., may be granted. Mr. Stanhope and his military advisers constantly remark that if a military title were given the question of command enters, and combatant officers seem to think the medical want to encroach upon their special functions. This is a complete delusion; let it not be lost sight of that medical officers are not given combatant commissions on being first gazetted, and so therefore are precluded from assuming combatant command. When a captain of infantry joins the Pay Department he resigns his combatant commission, but retains his title, showing that title and command are not synonymous. Let it be drummed into Mr. Stanhope that medical officers want no command beyond what they have already got.

*** The mixing up of general command with military title is a purely false issue raised to frighten Mr. Stanhope. It is of course absurd, as all who bear honorary rank and title with limited or no command at all, know full well. But it passes muster to confound the claims of medical officers, and throw dust in the eyes of the uninitiated and unthinking.

TITLES AND RESPECT.

MEDICAL STAFF writes: Medical officers being unable to claim the military title of their corresponding rank, fail also to receive the respect due to it by juniors and subordinates. Needless friction will never cease till simple equalising military titles are granted. The "twelve reasons" of an Indian medical officer in the BRITISH MEDICAL JOURNAL of December 27th, 1890, can no doubt be borne witness to by most medical men in the service. I trust both the public and the authorities will ultimately be roused to see that it is most inexpedient medical officers should be treated in any way which diminishes the importance or hinders the fulfilment of their great responsibilities.

SURGEON-MAJOR I.M.S writes: I again make a selection of addresses which reach me from time to time from all sorts and conditions of men. First series: I am addressed as "Dr." by a major on the staff, by a brother officer, by a sergeant-major, and by a tradesman. Second series: as "Esq." by a captain on the staff and by a tradesman. Third series: as "Major" by a tradesman. Fourth series: as "Surgeon" by a tradesman. Fifth series: as "—— Esq., Surgeon, M.D." Sixth series: as "Sub-Major." Seventh series: as "Mr. ——, Surgeon-Major." From all this it is clear my present compound title of Surgeon-Major conveys no meaning either to my combatant brother officers or to my civilian friends.

PAY OF MEDICAL OFFICERS.

OBSERVER writes: Your correspondent in the BRITISH MEDICAL JOURNAL of January 24th has done well to point out that the pay of Royal Engineer officers exceeds that of medical officers in every rank; but he ought also to have stated that the Royal Engineer obtains his professional training very largely at the expense of the taxpayer, whereas the army surgeon obtains his solely at private expense.

MIXED BOARDS.

CRITIC writes: In the interests of the soldier and of sanitation, I submit that the medical officer who attends a mixed board can have no real influence in its deliberations. He may or may not be asked his opinion, and does not sign the proceedings. Why should not the Director-General of the Army Medical Department be President of the Army Sanitary Committee; surely he is likely to know more of his special work than a quartermaster-general?

MEDICO-LEGAL AND MEDICO ETHICAL.

THE INQUEST FARCE.

D. C. writes: F. is a farmer, who, returning home from a village shop up a steep hill to his farm, dies suddenly on the road. M. is a medical man who has not attended F. for any illness, but sees his body some two hours after death. An inquest is held, and M. is not called on to give evidence. The body of F. was carefully examined by a nurse and the police, and found free from any marks of violence whatsoever. There was no suspicion of any criminal charge, and F. had often complained that the hill would be one day too much for him. Your opinion is asked if the coroner neglected his duty by not calling M. as a witness, and if M. could have given any evidence of value without a *post-mortem* examination which the jury considered unnecessary: and if a verdict as given by the jury, that F. "died from natural causes, and not from any violence whatever," was a reasonable one for the coroner to accept.

*** The coroner acted quite in accordance with custom in not calling M. as a witness: moreover, M., without making a *post-mortem* examination, would hardly have been able to give evidence as to the cause of death less worthless than that of the nurse and policeman. As the jury decided that they did not want to know the cause of death, they ought to have been directed to bring in a verdict of "Found dead." The absence of any mark of external violence is not a proof of death from natural causes. We do not believe that a nurse or policeman, or both together, could infallibly detect fracture of the skull, or even fracture of the ribs, in the dead body, nor, for the matter of that, could a medical man do so in very many cases without a *post-mortem* examination. Instead of being aggrieved, he ought to congratulate himself that he has escaped being made to take part in an inquiry which we cannot but designate as a farce.

LABELS.

M.R.C.S. asks as to the propriety or otherwise of using dispensing labels bearing the name, address, and surgery hours for a general practice either in town or country.

*** We have no hesitation in affirming that the suggested course would not only be personally derogatory, but tend to lower a skilled and scientific profession to the level of a trade.

THE RECOVERY OF FEES.

A. states that unless a medical man be an L.S.A., he cannot recover for professional attendance and medicine in a court of law. B. states that a qualified practitioner in medicine, for example, having the diplomas L.R.C.P. and S.Edin., and L.F.P.S.G., can sue and can recover costs for the above—debt and costs.

*** "B." is correct in his assumption, provided the practitioner with the qualifications referred to (which are qualifications to practise both medicine and surgery) are duly registered. Registration is essential to enable a medical man to recover fees.

By Section 31 of the Medical Act, 1858, it was provided that every person registered under that Act should be entitled, according to his qualification or qualifications to practise medicine or surgery, or medicine and surgery, as the case might be, in any part of Her Majesty's dominions, and to demand and recover in any court of law, with full costs of suit, reasonable charges for professional aid, advice, and visits, and the cost of any medicines or appliances rendered or supplied by him to his patients.

This Section was repealed by the Medical Act, 1886, but the effect of it was re-enacted by Section 6 of the Act which provides that on and after the appointed day (June 30th, 1887) a registered medical practitioner shall (save as in the Act mentioned) be entitled to practise medicine, surgery and midwifery in the United Kingdom and (subject to any local law) in any other part of Her Majesty's dominions, and to recover in due course of law in respect of such practice any expenses, charges in respect of medicaments or other appliances, or any fees to which he may be entitled, unless he is a Fellow of a College of Physicians forbidden by a by-law of his College to sue.

Section 24 of this Act further provides that the Act shall not increase or diminish the privileges in respect of his practice of any person who on the day preceding the appointed day (June 30th, 1887) is a registered medical practitioner, and that such person shall be entitled on and after the said appointed day, to practise, in pursuance of the qualification possessed by him before the said appointed day in medicine, surgery and midwifery, or any of them, or any branch of medicine or surgery, according as he was entitled to practise the same before the said appointed day, but not further or otherwise. By Section 27 of the Medical Act, 1858, the *Medical Register* is made evidence in all courts that the persons therein specified are registered according to the provisions of the Act.

LEGAL OWNERSHIP OF PRESCRIPTIONS.

D. H. writes: A. goes to a physician, pays a guinea, and gets a prescription, which becomes his property. At another time, A. calls in the physician to consult with his family doctor, pays three guineas, and the physician writes a prescription. Is this prescription also the property of A.? Is A. legally entitled to it, or to a copy of it? In a consultation case, the custom is for the physician to give the prescription to the family doctor; but, supposing this doctor runs away for a month's holiday, leaving the patient to a *locum tenens*, whom the patient refuses to see, can the patient claim the prescription, and have it dispensed by a chemist?

*** We have taken legal advice on this point, which has often been raised. We are advised that there seems to be no doubt that the patient need not be satisfied with verbal directions from the physician

whose advice he takes, but may, and in many cases must, get a written prescription. When he does so, the paper on which it is written legally becomes his property, and he is entitled to its custody and possession if he chooses to demand it. We say nothing as to his wisdom in using a prescription which may no longer be suitable to his case; but there seems to be no doubt that he and not the family doctor is entitled to have and use the document. The case is similar to that of deeds, which for convenience are often kept by the family lawyer, but which belong to the owner of the property to which they relate.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, February 20th.

Factory and Workshop Sanitation Bill.—Lord THRING, in moving the second reading of this Bill, explained that the object of the measure was to extend to workshops the regulations now applied to factories. It proposed to provide that every workshop should be kept in a cleanly state; that power should be given to the superintending authority to modify sanitary regulations to suit special cases. The inspector might enter, at all reasonable times, a workshop, and take with him a medical officer or other person experienced in sanitary matters, also a constable where any serious obstruction was apprehended; the occupier, in case of non-compliance with the Act, to be liable on summary conviction to a fine not exceeding £10. The Bill gave power to the inspector to enforce sanitation instead of taking proceedings to enforce a fine. It gave power of appeal to the occupier, and in default the work might be done by the authorities. The control of the inspectors was vested in the county councils, which would be charged with the duty of superintending the inspection of workplaces within their jurisdiction.—The Earl of DUNRAVEN, in supporting the second reading, pointed out that the Bill contained no provision for the registration of workshops. Clause 5 contained a useful provision calling for a record to be kept of work which passed into the small sweaters' dens. The definition was that they were workplaces where fewer than fifty persons were employed. This, he imagined, would cover nearly ninety-nine hundredths of all workshops in the country. The county council was given power to dismiss sanitary officers, and the effect of this provision would be to place the unfortunate officers under the control of two masters, thereby rendering the discharge of their duty a difficult matter.—Lord DE RAMSEY asked that it should not be further proceeded with until there had been an opportunity of discussing the Government measure.—The Bill was read a second time.

Factory and Workshop Bill.—The Earl of DUNRAVEN, in moving the second reading of this Bill, said it was founded principally, if not entirely, on the evidence brought before the Committee on Sweating. It was to make the law more universally applicable and to insure that it should be equally applied to all factories and workplaces. He laid down the minimum cubic space per person to be provided in all factories and workshops as 250 feet by daylight and 400 feet by gaslight. Without interfering with the existing powers, he proposed to make into law the practice at present generally observed in factories. He proposed to compel the local authorities to do what, by the existing law, they might now do, and to extend to the metropolis the sanitary provisions of the Public Health Acts. He proposed to extend the existing system of sanitation under the Factories Act to all workplaces where private work was carried on in cellars unfit for human dwellings, and to give certain authority to county councils; that the sanitary officer and the factory inspector should assist and check each other, the sanitary officer to have the duty of reporting to the factory inspector, and, if he took no action, the sanitary officer to report direct to the Home Secretary; if no action was taken in such cases by the local authority, on notice from the factory inspector, the latter to be empowered to report to the county council. It proposed to abolish that section of the existing Act which allowed women to be employed for fifteen hours a day, and to raise the age of children employed in factory or workshop from 10 to 12. He had provided that factories and workshops of every kind should be registered, with the exception of domestic workshops, and if used by more than three persons they would have to be certified. Where not more than three people, members of the same family, resided, should be defined as a domestic workshop. He proposed to repeal Section 69, which made it necessary for an inspector to obtain a warrant from the Home Secretary before effecting the entry where the occupier objected.—Lord NORTON doubted the expediency of raising the age of children employed from 10 to 12. This Bill was read a second time.

Monday, February 23rd.

Elementary Education (Blind and Deaf) Bill.—This Bill passed through Committee and was reported with amendments.

HOUSE OF COMMONS.—Friday, February 20th.

Smoke Abatement in London.—In reply to Sir H. TYLER, Mr. MATTHEWS said the President of the Local Government Board would very soon circulate a Bill to amend and consolidate the law as to public health in the metropolis, and he hoped his hon. friend would be content to await the publication of this Bill for an answer to his first question. A Committee of the House of Lords sat in 1887 to investigate the subject of smoke in the metropolis, and he did not think any new light would be thrown on the subject by another inquiry of this nature.

Metropolitan Water Supply.—Mr. BAUMANN, in moving the second reading, said the Bill proposed to create a Water Commission, which was to have power to promote Bills in Parliament for the acquisition of the undertakings of the existing water companies, and to do other things which were necessary to enable it to step into the shoes of the water companies. The terms on which the properties were to be acquired were to be left for future settlement by Parliament. He was opposed to the schedule which proposed that the Commission should consist of fifty-one members, of whom five would be nominated by the Corporation of the City of London and twenty by the London County Council.—Sir A. BORTHWICK thought on several grounds it was unsatisfactory as it stood.—Mr. LAWSON also objected to the constitution and numbers of the Commission. The County Council should lay down the policy and exercise control, and a small body of experts adequately paid should manage the details. He believed the scheme before them to be inadequate and unsatisfactory. He thought that there should have been the fullest preliminary inquiry, to bring their information up to date, as to cost, quantity, and quality. What was true of the Thames was true of the Lee. The chalk would not, according to expert opinion, be more than auxiliary.—Mr. RITCHIE said the discussion showed clearly that all parties in the House were agreed that the water supply of the metropolis ought to be placed in the hands of some public authority—the view he had always held. For his own part, he felt perfectly confident that if the County Council were entrusted with the administration of the London water supply they would discharge their duty faithfully and without a particle of jobbery. Having created a representative body for London, he considered that that was the body in whom the control should be vested. He agreed that the whole question should be exhaustively inquired into by a strong Committee of the House, to whom all Bills relating to the water supply of the metropolis should be referred. That Committee should have power to avail itself of the highest professional advice.—Sir W. HARCOURT expressed the opinion that so vast a question should be dealt with by a Government measure, and not be left to the Corporation. Unless power was taken to acquire an alternative water supply, it would be impossible to deal with the existing companies.—Sir JOHN LUBBOCK said, having the fullest confidence in the investigations of a strong Parliamentary Committee, he did not propose to offer any opposition to the second reading of this Bill.—After some remarks from Mr. DIXON-HARTLAND, Mr. J. ROWLANDS, and Mr. CAUSTON, the Bill was read a second time, and referred to a Select Committee of nine.

Monday, February 23rd.

The Sale of Ether in Ireland.—Mr. A. J. BALFOUR, in answer to Dr. TANNER, said that, as stated by the Chancellor of the Exchequer on December 1st, 1890, ether had been scheduled, and it could only now be sold by qualified chemists or druggists as a poison.

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

MUSEUM APPOINTMENT.—Mr. J. J. Lister, M.A., of St. John's College, is nominated Assistant to the Superintendent of the Museum of Comparative Anatomy (Mr. J. W. Clark).

OLD ANATOMY SCHOOL.—The syndicate appointed to consider the question of sites for the medical and scientific departments propose to assign the Old Anatomy School, now vacated by the department of human anatomy, to the departments of medicine, surgery, midwifery, and medical jurisprudence.

DEGREES.—At the Congregation on February 19th, the following degrees were conferred:—M.B. and B.C.: Alfred Waugh Metcalfe, B.A., Trinity (thesis, Tuberculous Peritonitis); Arthur Henry Bindloss, B.A., St. John's (thesis, Compression of the Brain by Extravasated Blood); John Crossley Wright, B.A., St. John's (thesis, Tuberculous Peritonitis); Victor Grey Molteno, B.A., Clare (thesis, Hydatid Disease); Charles Rolfe, B.A., Clare (thesis, The Mimicry of other Diseases by Chorea); Thomas Horatio Haydon, B.A., Caius (thesis, Typhlitis and Perityphlitis); Charles Howard Usher, B.A., Caius (thesis, Nystagmus); Henry Sharland Pope, B.A., Cavendish Hostel (thesis, On Venesection as a Remedy in Disease).

COURSE OF BACTERIOLOGY.—The Professor of Pathology gives notice that a course on Bacteriology, with special reference to the requirements of candidates for the Diploma of Public Health, will be given in the Pathological Laboratory during the Long Vacation, commencing on July 8th, and extending over a period of six weeks from that date. The course will consist of lectures at 2 P.M. thrice weekly, each lecture being followed by practical laboratory work and demonstrations, lasting till 6 P.M., but those attending the course will be permitted to continue their laboratory work at other times. The following short summary will serve to show the scope of the course:—

1. The morphology of microbes.
2. Artificial cultivation of microbes. Culture media liquid and solid, mode of preparation, and methods of sterilisation by heat, filtration, antiseptics, etc.
3. Staining of microbes in fluids and in the tissues.
4. Modes of inoculation and special characters of pathogenic microbes.
5. Special characteristics with practical work on the following pathogenic micro-organisms: (1) Bacillus anthracis; (2) bacillus of chicken cholera; (3) bacillus of swine plague; (4) pyococcus aureus; (5) pyococcus albus; (6) streptococcus erysipelatis; (7) pneumococcus of Friedländer; (8) pneumonic bacterium of Fränkel; (9) bacillus pyocyaneus; (10) bacillus typhosus; (11) bacillus cholerae Asiaticae; (12) bacillus tuberculosis; (13) bacillus mallei (glanders); (14) bacillus of tetanus; (15) bacillus diphtheriticus; (16) bacillus lepræ; (17) bacillus murisepticus; (18) actinomyces;

(19) trichophyton tonsurans; (20) achorion Schönleinii; (21) virus of rabies; (22) virus of variola.

6. Aërobic and anaërobic bacteria, methods of cultivating the latter.

7. Nature of immunity from infective disease, and modes of producing it. Phagocytosis, defensive proteids, toxines, etc.

8. Antiseptics and disinfectants.

The fee for the course, including apparatus, material, and use of immersion lens, will be £7 7s., payable to Mr. J. W. Clark, at the New Museums.

SOCIETY OF APOTHECARIES OF LONDON.—Pass List, February, 1891. The following Candidates passed the Examination in Surgery:

Allen, A., Charing Cross Hospital
Collier, H., Liverpool University College and Middlesex Hospital
Cornwall, C. E., St. Bartholomew's Hospital
Freeland, R. S., L.R.C.P., M.R.C.S., Guy's Hospital
Haydon, A. G., St. Bartholomew's Hospital
Hutchinson, C. G., L.K.Q.C.P.I., Queen's College, Bhm., and Dublin
Jones, G., M.A., Oxford and London Hospital
Newbery, W. F. L., M.D., Trinity Medical College, Toronto
Roberts, J. H., Guy's Hospital
Spencer, C. B. P., Guy's Hospital
Waghorn, R. D., Westminster Hospital
Wood, F. C., L.S.A., London Hospital

The following passed in the subjects indicated—Medicine, Forensic Medicine, and Midwifery:

Byas, T. S., University College
Fairfax, H., Charing Cross Hospital
Lewis, F., St. Mary's Hospital
Lowe, F. H., St. Bartholomew's Hospital
Nunes, H. F. S., St. Mary's Hospital
Spencer, C. B. P., Guy's Hospital
Twist, J. F., Queen's College Hospital

Medicine and Forensic Medicine:

Thomas, W. R., M.D., McGill, Montreal, and London Hospital.

Medicine, and Midwifery:

W. R. Willey, St. Mary's Hospital.

Forensic Medicine:

Nicol, W. R., M.D., McGill, Montreal
Toyne, W. E., Sheffield and Edinburgh

The following received the Diploma of the Society, having passed in all the subjects required for registration:

Messrs. A. Allen, T. S. Byass, C. E. Cornwall, H. Fairfax, F. Lewis, [F. H. Lowe, H. F. S. Nunes, C. B. P. Spencer, and J. F. Twist.

OBITUARY.

FREDERICK BRITTAN, M.D. DUBLIN.

DR. BRITTAN, the Senior Consulting Physician to the Bristol Royal Infirmary, died suddenly in London on February 15th, in his 68th year. One of a large family, the son of a well known solicitor of Bristol, he was born in 1823, and received his general education in the schools of his native town, and afterwards went to Trinity College, Dublin, where he attended the requisite lectures, and took the degrees of B.A. and M.B. in 1842, returning to Bristol to become dresser to the late Mr. Lowe, one of the surgeons of the infirmary. He then studied in the Paris hospitals for a year; became M.R.C.S. in 1844, and M.D. Dublin in 1845, and then settled in practice in Clifton.

He very soon began to take an active part in the medical work of Bristol; he joined the Bristol Medical School in 1848, as lecturer on physiology, holding the appointment for seven years, concurrently with that part of the summer botanical course touching on vegetable physiology; and then, after giving part of the course of descriptive and surgical anatomy for one season, he took, in 1855, the lectureship on medicine, and this he held until 1868. He was elected physician to the Bristol Royal Infirmary in 1856, and retired in 1873, when he was made consulting physician. Soon after his return from Paris he brought out a translation of Malgaigne's *Surgery*, which was well received.

In the cholera year, 1849, he was appointed with Dr. Swayne, the late Dr. William Budd, and others, one or two of whom are still living, on a committee of the Bristol Medico-Chirurgical Society, to investigate the whole subject of cholera in its chemical, microscopical and pathological aspects, and the report of the Microscopical Subcommittee excited much interest at the time, both with the profession and the public; certain peculiar minute bodies having been found in the rice-water evacuations by Drs. Brittan and Swayne and other members, and similar ones by Dr. Budd in the drinking water, and by Dr. Brittan in the air of a cell in Bridewell, from which a body of a man who had died of cholera during the night had recently been removed. These may, or may not, have been the present acknowledged cholera bacilli; but notwithstanding the *ex cathedrâ* sentence of condemnation pronounced by the Royal College of Physicians of that day, in the opinion of the writer of this notice, they were never disproved; and William Budd, in a letter to the London *Times* of February 26th, 1849, states as his conviction that "the cause of malignant cholera is a living organism of a distinct species."

Dr. Brittan and Dr. Swayne took the most active part in publishing this report of the Microscopical Subcommittee, with their own separate accounts, and with illustrations of the objects, which may be seen in the *Medical Times* and *Provincial Medical Journal* of the latter part of 1849; Dr. Brittan subsequently obtained a Government appointment as inspector or superintendent at Taunton, where he did good service in helping to organise the medical care of the place during the epidemic. He afterwards undertook the care of the typhus patients during an outbreak of that fatal disease in Bristol.

When the Bristol Medico-Chirurgical Society revived in 1874, after a considerable period of suspended animation, Dr. Brittan was the first new president, and gave the usual inaugural address, which, with the following discussion, was very much on the side of the germ theory of disease.

Dr. Brittan was a successful physician, and was held in good esteem by the profession: he was careful and minute in the examination of the patient, and in difficult or doubtful cases he was often a real help to the practitioner who called him in consultation. He had an artistic taste, and was a clever painter, and a keen sportsman with gun and rod.

After the death of his first wife, by whom he leaves one son, a solicitor in Bristol, he gave up practice, and retired to Gwynfryn, Glandovey, Cardiganshire, and married again. He had for some time suffered from weak circulation and albuminuria, and died suddenly in London, leaving a widow and some young children. He was taken back and buried in North Wales.

WILLIAM AGNEW BROWNE, M.D.Q.U.I., L.R.C.S.I.

WE regret to learn of the death of Dr. William Browne at Bowen, Queensland, where he had resided for upwards of twenty years. The deceased, a native of Dundalk, where he was born in 1841, was the eldest son of Dr. John Browne. He was educated at the Dundalk Grammar School, whence he proceeded to Belfast (under Professor Redfern) and to Dublin. He finally obtained his degree at the Queen's University, and became assistant to Dr. Tiffin, of Wigton. He spent three years in the service of the Peninsular and Oriental Company, and ultimately settled at Bowen, in Queensland, as surgeon to the Kennedy Hospital, and there he had an extensive practice. His death will be much regretted by a numerous circle of friends by whom he was held in high estimation, owing to his genial nature, and upright, honest, and manly disposition.

HOSPITAL AND DISPENSARY MANAGEMENT.

GREENOCK INFIRMARY.

THE annual report of Greenock Infirmary shows, unlike the reports of most other similar institutions, a marked diminution in the number of patients admitted. To the medical and surgical house the admissions were 605—165 fewer than in 1889—and to the fever house 209—139 fewer. Of those admitted to the medical and surgical house, nearly one-half were accident or urgent cases, of whom 30 died soon after admission. Of the total admissions to this part of the hospital, 78 died—a mortality of 13 per cent. In the fever house the deaths numbered 14. Over the whole infirmary the cases under treatment during the greater part of the year were the fewest for years past. The accounts for the year show a debit balance of nearly £650, and the balance now due to the bank amounts to nearly £3,000. Several meetings were held by the directors with a view to devise means to liquidate the debt, and finally it was agreed to adopt the proposal to hold a bazaar—a proposal approved of at the annual meeting of the trustees held later.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN 1890.

In the accompanying table will be found summarised the vital and mortal statistics relating to the twenty-eight great English towns, issued by the Registrar-General in his weekly returns. Quarterly summaries of these statistics have already been published in these columns.

During 1890 the births registered in twenty-eight of the largest English towns were equal to an annual rate of 30.0 per 1,000 of their aggregate population, estimated at 9,715,559 persons in the middle of that year. This birth-rate showed a further decline from that recorded in recent years; since 1876, when the birth-rate in these towns was as high as 38.1 per 1,000, it has continuously declined. In London the birth-rate last year was 29.1, while it averaged 30.7 per 1,000 in the twenty-seven provincial towns, among which it ranged from 22.6 in Huddersfield, 23.2 in Brighton, and 24.9 in Nottingham, to 35.5 in Sunderland, 36.1 in Preston, 38.7 in Cardiff, and 39.8 in Newcastle-upon-Tyne.

The deaths registered last year in the twenty-eight towns were equal to 21.3 per 1,000 of their estimated population, which considerably exceeded the very low rates recorded in the preceding two years. During the ten years 1871-80 the rate of mortality in the large towns dealt with by the Registrar-General averaged 24.0 per 1,000. During the next ten years, 1881-90, the rate of mortality in these towns did not exceed 20.9 per 1,000. This reduction in the death-rate implies that upwards of 275,000 persons in the twenty-eight towns were alive at the end of last year whose deaths would have been recorded had the mean rate of mortality during the decade just ended equalled that which prevailed during the ten years 1871-80. It may be mentioned that the estimated saving of life in England and Wales during the last ten years, as the result of the marked decline in the national death-rate, is upwards of 650,000. The rate of mortality in London last year did not exceed 20.3 per 1,000, while it averaged 22.2 in the twenty-seven provincial towns, among which it ranged from 16.5 in Nottingham, 17.8 in Brighton, 17.9 in Leicester, and 18.5 in Derby to 25.8 in Bolton, 25.9 in Newcastle-upon-Tyne, 27.4 in Preston, and 30.6 in Manchester.

During the year under notice 26,935 deaths were referred to the principal zymotic diseases in the twenty-eight towns, equal to an annual rate of 2.73 per 1,000, which corresponded with the rate recorded in 1889, and was considerably below the average rate in the preceding ten years, 1880-89. The lowest zymotic death-rates in these large towns last year were 1.2 in Huddersfield, 1.4 in Halifax, 1.6 in Nottingham, and 1.8 in Portsmouth and in Hull; while the highest were 3.7 in Bolton, 3.8 in Salford, 4.0 in Manchester, and 4.3 in Preston. The 26,935 deaths referred to the principal zymotic diseases included 7,678 which resulted from diarrhœa, 6,194 from measles, 5,795 from whooping-cough, 3,029 from scarlet fever, 2,350 from diphtheria, 1,879 from "fever" (including typhus, enteric, and simple or ill-defined fever), and 10 from small-pox. The rate of mortality from diarrhœa was equal to 0.77 per 1,000, against an average rate of 0.93 in the preceding ten years, 1880-89; this disease showed the largest proportional fatality in Norwich, Manchester, Blackburn, Leicester, and Preston. The death-rate from measles was equal to 0.63 per 1,000; it showed a slight decline from the rate recorded in 1889, and almost corresponded with the average in the preceding ten years: in London the measles death-rate was 0.73 per 1,000, while it averaged 0.54 in the twenty-seven provincial towns, among which this disease showed the highest proportional fatality in Liverpool, Birkenhead, Bradford, Manchester, and Derby. The rate of mortality from whooping-cough, which had declined from 0.62 to 0.48 per 1,000 in the preceding three years, rose again to 0.59 during 1890, but was below the average. In London the whooping-cough death-rate was 0.73 per 1,000, while it averaged only 0.47 in the twenty-seven provincial towns, and was highest in Salford, Brighton, Bristol, Norwich, and Bolton. The death-rate from scarlet fever was equal to 0.38 per 1,000; it almost corresponded with the rate recorded in 1889, and was considerably below the average rate in the preceding ten years. In London the death-rate from scarlet fever was only 0.19 per 1,000, while it averaged 0.40 in the twenty-seven provincial towns, among which this disease showed the highest proportional fatality in

Public Health Statistics relating to Twenty-eight Large English Towns, for the Year 1890.

Towns.	Estimated Population mid-1890.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Rate per cent. of Uncertified Deaths.	Deaths of Children under one year of age to 1,000 Births.
28 Towns	9,715,559	295,912	210,824	30.0	21.3	2.7	26,935	10	6,194	3,029	2,350	5,795	1,879	7,678	2.0	172
27 Provincial Towns	5,293,898	165,222	119,581	30.7	22.2	2.7	14,656	9	2,903	2,153	933	2,519	1,217	4,925	2.9	179
London	4,421,661	130,690	91,243	29.1	20.3	2.7	12,279	1	3,291	876	1,417	3,276	662	2,753	0.9	163
Brighton	123,659	2,915	2,232	23.2	17.8	2.4	299		61	12	14	102	12	98	3.0	164
Portsmouth	142,952	4,881	2,847	33.6	19.6	1.8	266		4	19	47	38	51	107	0.7	135
Norwich	95,352	3,198	2,041	33.0	21.1	3.0	295		33	5	27	84	31	115	1.2	180
Plymouth	78,780	2,198	1,795	31.2	22.4	2.7	219	1	58	29	15	30	25	61	0.6	161
Bristol	232,248	6,634	4,536	28.1	19.2	2.0	482		94	39	13	201	35	100	2.4	151
Wolverhampton	83,406	2,735	1,850	32.3	21.8	1.9	157		33	13	5	27	11	68	1.2	175
Birmingham	461,865	14,139	9,735	30.1	20.7	2.8	1,305		326	209	56	200	57	457	3.0	183
Leicester	154,344	4,789	2,811	30.5	17.9	2.1	336		29	35	12	15	30	215	2.2	195
Nottingham	244,909	6,196	4,100	24.9	16.5	1.6	394	—	52	34	16	48	59	185	1.5	159
Derby	100,871	2,757	1,898	26.9	18.5	2.7	276	1	122	10	19	61	17	46	0.9	157
Birkenhead	105,049	3,355	2,102	31.1	19.7	2.7	287		93	16	12	43	44	79	1.1	166
Liverpool	613,463	17,972	14,687	28.8	23.6	3.5	2,191		539	588	104	359	124	477	6.1	195
Bolton	115,846	3,703	3,036	31.4	25.8	3.7	439		97	58	18	110	28	128	1.9	176
Manchester	379,437	13,478	11,789	34.9	30.6	4.0	1,545		389	287	150	161	118	460	2.0	187
Salford	242,509	7,098	5,512	28.8	22.4	3.8	946		103	122	201	183	86	251	3.0	199
Oldham	146,716	4,023	3,166	27.0	21.2	2.0	303		96	26	6	82	17	76	2.2	180
Blackburn	123,553	4,083	2,947	32.5	23.5	2.1	268		18	32	5	23	39	151	3.1	188
Preston	105,163	3,859	2,932	36.1	27.4	4.3	458		80	25	15	36	30	272	2.8	241
Huddersfield	94,253	2,167	1,818	22.6	19.0	1.2	114	1	4	7	5	38	24	35	4.4	168
Halifax	82,034	2,327	1,873	27.9	22.5	1.4	114	—	25	24	13	19	15	18	5.5	170
Bradford	240,515	6,253	4,984	25.6	20.4	2.3	556	—	225	47	8	53	32	191	1.9	169
Leeds	363,799	12,340	8,367	33.4	22.6	2.4	884		100	103	24	184	112	361	1.0	172
Sheffield	332,837	10,889	8,334	32.2	24.9	3.4	1,161		234	272	52	164	71	368	4.9	195
Hull	213,833	6,795	4,183	31.3	19.2	1.8	400	8	17	25	20	82	39	214	3.4	160
Sunderland	136,506	4,932	3,152	35.5	22.7	2.5	345		21	71	12	54	49	138	1.2	173
Newcastle-on-Tyne	162,987	6,596	4,285	39.8	25.9	2.0	331		6	26	49	82	38	130	2.2	169
Cardiff	117,012	4,600	2,469	38.7	20.8	2.4	285		64	19	15	40	23	124	2.1	168

Manchester, Sheffield, and Liverpool. The rate of mortality from diphtheria, which had increased from 0.16 to 0.26 per 1,000 in the preceding four years, declined again to 0.24 during the year under notice, but considerably exceeded the average rate in the previous ten years. In London the diphtheria death-rate was as high as 0.32 per 1,000, while in the twenty-seven provincial towns it averaged 0.17, and was highest in Newcastle-upon-Tyne, Portsmouth, Manchester, and Salford. The death-rate from different forms of "fever" (principally enteric) was equal to 0.19 per 1,000; it was slightly lower than the rate recorded in 1889, and was considerably below the average in the preceding ten years; in London the rate of mortality from "fever" was only 0.15 per 1,000, while it averaged 0.23 in the twenty-seven provincial towns, among which this disease showed fatal prevalence in Portsmouth, Salford, Sunderland, and Birkenhead. During the year under notice 10 fatal cases of small-pox were recorded in the twenty-eight towns, against 332, 604, and 7 in the preceding three years; of these 10 cases, 4 occurred in London, 3 in Hull, and one each in Plymouth, Derby, and Huddersfield.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, averaged 172 per 1,000 in the twenty-eight towns during the year under notice; in London the rate of infant mortality was equal to 163 per 1,000, while in the twenty-seven provincial towns it averaged 179, and ranged from 135 in Portsmouth, 151 in Bristol, 157 in Derby, and 159 in Nottingham, to 188 in Blackburn, 195 in Leicester, in Liverpool, and in Sheffield, 199 in Salford, and 241 in Preston.

HEALTH OF ENGLAND AND WALES DURING 1890.

We are enabled to summarise the vital and mortal statistics relating to England and Wales for the year 1890 from the last quarterly return of the Registrar-General, which has been recently issued. The birth-rate was equal to 29.7 per 1,000 of the population, estimated at nearly twenty-nine and a half millions of persons. The birth-rate has shown a continuous decline since 1876, and was last year 2.9 per 1,000 below the average rate in the preceding ten years. The death-rate, which in the previous two years, 1888 and 1889, had been only 17.8 and 17.9 per 1,000 respectively, and the lowest on record, rose during the year under notice to 19.2, which was, however, a lower rate than in any year prior to 1881. The recorded death-rate in each year of the past decade, 1881-90, was lower than in any year since the establishment of civil registration more than fifty years ago. During the ten years 1881-90 the mean annual death-rate did not exceed 19.0 per 1,000, while in the preceding ten years, 1871-80, it averaged 21.4. This marked and continued decline in the national death-rate since 1880 implies that more than 650,000 persons in England and Wales were alive at the end of last year whose deaths would have been recorded during the past ten years had the rate of mortality equalled that which prevailed during the previous decade, 1871-80. The natural increase of population during 1890, or the excess of births over deaths, was 308,267, and was considerably below the average increase in recent years. According to returns issued by the Board of Trade, it appears that 221,105 emigrants of British origin left the various ports of the United Kingdom during the year under notice; of these, 142,530 were English, 21,049 Scotch, and 57,526 Irish. The amount of emigration from each division of the United Kingdom showed a considerable further decline from that recorded in 1888 and 1889.

The 564,248 deaths from all causes registered in England and Wales during 1890 included 59,698 which were referred to the principal zymotic diseases, of which 16,574 resulted from diarrhœa, 13,110 from whooping-cough, 12,386 from measles, 6,876 from scarlet fever, 5,456 from "fever" (including typhus, enteric, and simple or ill-defined fever), 5,281 from diphtheria, and only 15 from small-pox. These 59,698 deaths were equal to an annual rate of 2.03 per 1,000, against 2.37, 1.83, 2.17 in the preceding three years. The mean annual death-rate from these principal zymotic diseases, which had been 4.15 and 3.38 per 1,000 respectively in the two decennial periods 1861-70 and 1871-80, did not exceed 2.30 per 1,000 during the decennium just closed, 1881-90. The mean rate of zymotic mortality, therefore, during 1881-90 showed a decline of no less than 32 per cent. from that recorded in the preceding ten years, 1871-80. Compared with the average rates in the previous nine years of the decade 1881-90, the mortality from whooping-cough and from diphtheria last year showed a slight excess, while that of the other principal zymotic diseases, especially of scarlet fever and of "fever," showed a considerable decline. Only 15 deaths from small-pox were registered in England and Wales during the year under notice, against 28 in 1889; the smallest number recorded in any preceding year having been 275 in 1886.

The 564,248 deaths at all ages registered in England and Wales during 1890 included 131,535 of infants under 1 year of age, equal to a proportion of 151 per 1,000 of the registered births, against 136 and 144 in the preceding two years; in the previous ten years the rate of infant mortality averaged 142 per 1,000. Among elderly persons the rate of mortality during 1890 also showed an excess, and exceeded that recorded in any recent year.

EXPOSURE OF INFECTED PERSONS.

It is satisfactory to know that the case in which we recently advised, after consultation with a well-known legal authority, that a prosecution might be successfully brought for the offence of exposing a person in a public place while suffering from scarlet fever has terminated by the defendant pleading guilty and being fined. It is true that the penalty imposed was a small one, but for such offences every conviction obtained is a matter of importance as a warning to the numerous people who, from selfishness or carelessness, expose others to the danger of infection. It is well to remind everyone who has to do with patients suffering from any infectious disease, that the law very properly requires such patients to be kept isolated, so as to minimise the chances of the infection being communicated to others and the disease spreading. The penalties which can be imposed for the breach of this enactment are ludicrously small when compared with the serious injury which may be inflicted on the community. But still, the knowledge that penalties may be imposed, and that they may have to appear as defendants in a police court, is likely to have a salutary effect on many people who otherwise would show very little consideration for the well-being of their neighbours. When a child takes such a disease as measles or scarlatina, the first thought of the mother very often is to send it away from home, so as to remove the risk of infection from her other offspring, regardless of the danger thus brought near other people. Sometimes, too, as in the recent case at Ramsgate, the child is allowed to run about, the person in charge being too apathetic to keep it away from other children. Such people are liable to punishment, and have occasionally been punished. Now that in most large towns the existence of cases of infectious disease has to be notified to the sanitary authority, the attention of the medical officer of health is called to them, and he can ascertain, as was done at Ramsgate, whether the necessary precautions are observed or ignored by the persons responsible. Where they are wilfully and persistently ignored, it is the duty of the sanitary authority to prosecute, and, we would add, it is the duty of magistrates to impose penalties sufficient to warn the offender and others that the law cannot be broken with impunity.

THE DISCONNECTION OF HOUSE DRAINS.

The Health Committee of the Corporation of Sheffield recently instituted legal proceedings against the owners of some houses in that city to compel them to comply with an order to disconnect the bath and lavatory waste-pipes of each house from the soil-pipe, to ventilate the soil-pipes, and to insert proper disconnecting traps between the house drains and the street sewer. The evidence of the sanitary inspector and of the medical officer of health, Dr. Theodore Thomson, showed that with the existing arrangements the houses were liable to incursions of sewer gas when the water traps on the waste-pipes and beneath the water-closets were sucked dry by siphonage, such as is extremely likely to occur in an unventilated drainage system. There was, however, a failure to bring forward any evidence that nuisance had resulted at any time from an escape of sewer gases into the houses, and a number of the tenants, who were called, stated that their health had not suffered from living in the houses. The magistrates, having regard to the evidence of these tenants, were not satisfied that a nuisance existed, and consequently refused the application for an order.

The prosecution, therefore, failed from inability to prove the present or past existence of a nuisance. The question as regards the meaning of the word "nuisance," its dependence upon possible or actual injury to health, did not arise in this case. Nevertheless, the decision is an important one, for it emphasises the fact that many of the drainage provisions of the Public Health Act of 1875 are absolutely inoperative unless the existence of a nuisance can be proved. It is often impossible to bring forward evidence of nuisance, even in houses of a most insanitary class, not only on account of the unwillingness of tenants in poor and crowded districts to come into court to give evidence against their landlords, but also from the fact that the emanations from defective drains are not always of a kind to be recognised as nuisances by reason of foul or disagreeable odours accompanying them. The ailments or low condition of health which the inmates of such houses may be liable to are often also attributed to other causes than the defective sanitary condition of the places they inhabit. For these reasons it is evidently desirable that there should be an alteration in the law in the direction of making the sanitary authority, through its officers, the judges of what constitute drainage defects, the magistrates being empowered to refuse the enforcement of orders, when such orders are unreasonable, but not on the ground that there is no evidence of nuisance. In the Sheffield case the alterations required by the Health Committee were necessary to ensure that the drainage of the houses should not be at any time the cause of disease amongst the inmates; they were such also as have been complied with by house owners all over the country, and were, therefore, perfectly reasonable, as being designed for the protection of the public health. Yet the prosecution failed on what all sanitarians must regard as totally insufficient grounds.

It is a remarkable circumstance that the drainage provisions of the Metropolis Local Management Act (1855) enable metropolitan sanitary authorities to enforce suitable remedies for defective sanitary conditions of houses without the necessity of proving that nuisance resulted from defects. These provisions have been little used in London, for very insufficient reasons, yet they might be taken as valuable guides when the time comes to consolidate and amend the sanitary legislation of the country.

THE CERTIFICATION AND CAUSATION OF PAUPER LUNACY.

A PAPER under this title has been published by John Carswell, L.R.C.P.Edin., which has been reprinted from the *Poor-law Magazine and Local Government Journal*, and it deals with the question in an interesting manner.

The author points out the advisability of fencing round the causation of insanity with safeguards which he thinks are as much required as those set up for the purpose of limiting small-pox and other infectious diseases.

In the Barony parish for the year ending May 14th, 1890, there were 308 applications for admission into the asylum, 121 of which were found to be in a state which did not require certification. In this district, at any rate, it would therefore appear, from the readiness with which admission into the asylum is sought, that the prejudice against asylums has passed away, and that there exists in the public mind confidence in the kindly and efficient treatment of the inmates.

Attention is directed to the fact that owing to the want of special training the majority of medical men know no more about insanity than any lawyer or other intelligent layman; and as the question whether a person should be sent to an asylum or not is one upon which the opinion of a medical man ought to be obtained, there should be some guarantee of his fitness to give such an opinion. "Medical students," remarks the author, "are required to produce a certificate of proficiency in vaccination before being admitted to their professional examination, but nothing similar is called for in regard to knowledge of insanity."

UNION INFIRMARY APPOINTMENTS.

MANCUNIENSIS writes: An advertisement has lately appeared in the BRITISH MEDICAL JOURNAL for a visiting medical officer to the Salford Union Hospital, which contains 700 beds. There has recently been set on foot a scheme for the entire reconstitution of this hospital, which is now to have two resident medical officers and one visiting medical officer, the latter to have entire control. Presumably, therefore, he should be a man of very considerable experience and high qualifications for hospital work. To secure such efficiency the Guardians offer a salary of £150 per annum, for which the visiting medical officer is expected to discharge the following duties: To exercise a general medical supervision over the whole hospital; to attend six days a week (each visit not to be of less than an hour and a half's duration), and at such other times as the assistant medical officers may require his services; to see and order treatment for all new patients, and be familiar with all serious cases; to examine every patient with the assistant medical officers at least once a week; to be responsible for all reports and records of the assistant medical officers; to inspect the infirmary—once a month at least—making a report of his inspection, and giving a summary of the prevailing diseases; to vaccinate weekly; to be responsible for all returns and communications required by the Local Government Board; to order all the diets, extras, and wines, and to see to the changing of the same—"No order for 'extras' to remain in force for more than three days."

Comment on this is needless: still I hope the appointment referred to is exceptional, and does not represent the general run of such offices. The paltry salary offered for the enormous amount of skilled work demanded is an insult to the profession and anything but calculated to secure the efficiency of the Union Hospital.

"THE PROVIDENT DISPENSARY A CENTRE FOR THE SPREAD OF INFECTION."

DR. F. FAULDER WHITE (Coventry) writes: In these days, when the progress of sanitary science is exciting the interest of all intelligent persons, and when the efforts of the Legislature are being directed to the prevention of disease, it seems strange that more attention has not been paid to the danger that attends the development of centres for the spread of infection in the midst of large populations.

The history of the provident dispensary has not been written up to date. Of late years the numbers of dispensary patients have greatly increased, and in some towns form at the present time a large proportion of the total population. Such institutions, when on a large scale, afford extraordinary facilities for the spread of disease.

It must be remembered that the dispensaries, unlike the general hospitals, undertake infectious cases, that the waiting rooms are usually small, the patients numerous, the time of waiting lengthy. Some idea of a dispensary crowd may be gathered from an announcement in the *Coventry Standard* (February 14th) to the effect that "on one day last week 700 bottles of medicine were handed out at the provident dispensary."

In 1889 an epidemic of measles spread through this city with such rapidity that the medical officer of health thought it necessary to recommend that the public schools should be closed. But at this time the dispensary buildings were being thronged each day with hundreds of women and children, who had to wait their turn for medicine or advice. Many of them must doubtless have come from infected houses, for dispensary patients, infectious or otherwise, have to send to the dispensary buildings. Such a condition of things must tend to the spread of disease. Notification, under these circumstances, seems an absurdity. The evil is a real one, and, if unchecked, must counteract any good that might otherwise result from recent legislation.

ESTIMATION OF POPULATION.

DR. S. BLAKE JOLLY (Medical Officer of Health for Lewisham District) writes: My attention has just been called to an error in the BRITISH MEDICAL JOURNAL for January 31st, in regard to the estimated population of Lewisham sanitary area. The estimated population of Lewisham (excluding Penge) is quoted as 69,952. The true estimated population of Lewisham (excluding Penge), as estimated at midsummer, 1890, is 72,779. As a matter of fact, the figures represent the estimated population for midsummer, 1889. This difference will naturally make our death-rate for the quarter considerably lower than that quoted in the JOURNAL.

*** We have reason to consider that our estimate of the population of Lewisham probably overstates rather than understates the actual number. The birth-rate in 1881, calculated upon the population enumerated in that year, was equal to 33.3 per 1,000. The birth-rate in 1890, calculated upon our estimate of the population for that year, did not exceed 24.2 per 1,000; or, calculated on Dr. Jolly's estimate, it was only 23.3 per 1,000. The approaching census in April next will soon set at rest all doubts upon the subject; but it appears extremely probable that the population of Lewisham is actually less than either of the above estimates. The rate of mortality in Lewisham last quarter, calculated on our estimate, was 16.6 per 1,000; if calculated on Dr. Jolly's estimate it was 16.0 per 1,000—not a very considerable difference.

DIPLOMAS IN PUBLIC HEALTH.

J. B.—The examinations for diplomas in public health of the University of Cambridge and of the Conjoint Board of the Colleges of Physicians and Surgeons in London are now generally acknowledged to be of very equal merit, and require very much the same standard of knowledge and practical acquirements from their candidates.

MEDICAL MEN AS SANITARY INSPECTORS.

ROYLAT.—It does not appear to be desirable that medical men should hold such an appointment as that of county sanitary inspector. There would perhaps be nothing to be said against a recently qualified medical man, who intended to devote himself to public health work, holding office as sanitary inspector for a limited period, and acting also as an assistant to the medical officer of health, with a view to acquiring practical experience; but it would be derogatory to the profession for medical men to take posts as sanitary inspectors for a term of years, or as a permanency. In saying this, we have no wish to detract from the very useful work performed by inspectors, or to underrate the training and knowledge such officials ought to possess.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, February 21st, 5,964 births and 4,139 deaths were registered in twenty-eight of the large English towns, including London, which have an estimated population of 10,010,426 persons. The annual rate of mortality in these towns, which had been 19.8 and 19.9 per 1,000 in the preceding two weeks, further rose to 21.6 during the week under notice. The rates in the several towns ranged from 14.5 in Nottingham, 14.8 in Wolverhampton, 14.9 in Hull, and 15.4 in Brighton to 28.6 in Blackburn, 30.9 in Manchester, 31.0 in Huddersfield, and 37.7 in Halifax. In the twenty-seven provincial towns the mean death-rate was 22.5 per 1,000, and exceeded by 2.1 the rate recorded in London, which did not exceed 20.4 per 1,000. The 4,139 deaths registered during the week under notice in the twenty-eight towns included 381 which were referred to the principal zymotic diseases, against 332 and 340 in the preceding two weeks; of these, 126 resulted from whooping-cough, 113 from measles, 49 from diphtheria, 11 from scarlet fever, 27 from diarrhœa, 22 from "fever" (principally enteric), and not one from small-pox. These 381 deaths were equal to an annual rate of 2.0 per 1,000; in London the zymotic rate was 1.5, while it averaged 2.4 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Norwich, 0.2 in Hull, 0.4 in Nottingham, and 0.7 in Portsmouth and in Plymouth to 3.7 in Salford, 4.6 in Blackburn, 5.7 in Halifax, and 5.9 in Oldham. Measles showed the highest proportional fatality in Leeds, Huddersfield, Halifax, Bristol, Blackburn, and Oldham; scarlet fever in Bradford; and whooping-cough in Oldham, Birmingham, Halifax, Salford, and Birkenhead. The mortality from "fever" showed no marked excess in any of the large towns. Of the 49 deaths from diphtheria recorded during the week in the twenty-eight towns, 34 occurred in London, 7 in Manchester, and 2 in Derby. No death from small-pox was registered during the week, either in London or in any of the provincial towns: and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday, February 21st. These hospitals contained 1,222 scarlet fever patients on the same date, against numbers steadily declining from 2,024 to 1,250 at the end of the preceding fifteen weeks; 55 new cases were admitted during the week, against numbers declining from 99 to 90 in the previous four weeks. The death-rate from diseases of the respiratory organs in London was equal to 6.1 per 1,000, and slightly exceeded the average.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 872 births and 591 deaths were registered during the week ending Saturday, February 21st. The annual rate of mortality in these towns, which had declined from 26.4 to 21.4 per 1,000 in the preceding three weeks, rose again to 22.6 during the week under notice, and exceeded by 1.0 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Greenock and Leith, and the highest in Glasgow and Paisley. The 591 deaths registered in these towns during the week under notice included 62 which were referred to the principal zymotic diseases, equal to an annual rate of 2.4 per 1,000, which exceeded by 0.4 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Perth, Leith, and Paisley. The 293 deaths registered in Glasgow included 16 which were referred to whooping-cough, 5 to scarlet fever, and 3 to diphtheria. Four fatal cases of scarlet fever were recorded in Edinburgh, 2 of diphtheria in Leith, and 4 of measles in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.4 per 1,000, against 6.1 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, February 14th, the deaths registered in the sixteen principal town-districts of Ireland were equal to an annual rate of 26.0 per 1,000. The lowest rates were recorded in Lisburn and Lurgan, and the highest in Waterford and Dundalk. The death-rate from the principal zymotic diseases averaged 1.8 per 1,000. The 182 deaths in Dublin were equal to an annual rate of 26.9 per 1,000 (against 32.6 and 26.6 in the preceding two weeks), the rate for the same period being 19.3 in London and 21.2 in Edinburgh. The 182 deaths in Dublin included only 4 which were referred to the principal zymotic diseases (equal to an annual rate of 0.4 per 1,000), of which 2 resulted from enteric fever and 1 from diphtheria.

MEDICAL NEWS.

The further use of Koch's tuberculin has been officially forbidden in all the hospitals of Warsaw.

A new law relative to lunatic asylums is now before the Italian Senate.

The Windsor Town Council has adopted the Infectious Disease Notification Act.

Dr. White, medical officer of Macroom dispensary, has resigned his appointment after a lengthened service.

Professor G. Retzius has resigned the Chair of Anatomy in the University of Stockholm, and has been succeeded by Dr. A. Lindström.

Professor Angerer has been definitively chosen to succeed the late Professor von Nussbaum in the Chair of Surgery in the University of Munich.

On February 3rd Dr. John S. Billings was chosen by the trustees of the University of Pennsylvania Director *pro tem.* of the new Department of Hygiene.

Professor Mosso, of Turin, has been appointed Extraordinary Professor of Materia Medica and Experimental Pharmacology in the University of Genoa.

The late Dr. Emil Müller, a German general practitioner, has left a legacy of 1,100,000 marks (£55,000) to the Central Mutual Help Fund of German Medical Practitioners.

A meeting in support of the extension funds of University and King's Colleges was held at the Mansion House, under the presidency of the Lord Mayor, on February 23rd.

A Medical Association has been formed at Florence, under the name of "Collegio Medico Toscano" (Tuscan Medical College), with the object of protecting the "moral and professional interests" of medical men.

Herr Viereck, formerly a representative of "Social Democracy" in the German Chamber of Deputies, has addressed a petition to the Reichstag, praying that the use of Koch's fluid be prohibited, as being dangerous to the public.

International Exhibition at Padua.—The Padua Society of Hygiene is organising an international exhibition of "materials and apparatus for the construction of dwellings," to be held in that city in May and June of the present year.

Lord Beaconsfield Memorial Hospital.—Negotiations are in progress for the transfer to the High Wycombe Hospital of £3,000, balance of the Beaconsfield Memorial Fund after the erection of the statue in Parliament Square.

Dr. Luiz da Camara Pestana, who acted as bacteriologist to the Commission appointed by the Lisbon Society of the Medical Sciences to study Koch's method, has been sent to Berlin by the Portuguese Government to study bacteriology, with special reference to the use and effects of "tuberculin."

Professor Guiseppe Ruggi, the well known surgeon of Bologna, and Dr. Vincenzo Cozzolino, of Naples, with several other members of the medical profession, have had the dignity of "Officer of the Crown of Italy" conferred on them.

The British Nurses Association will, by permission of Her Majesty the Queen, henceforth adopt the title of Royal. The first annual Register of about 3,000 nurses is, we are informed, in course of issue.

The College of State Medicine.—Professor W. R. Smith, M.D., D.Sc., has resigned the office of Professor of Hygiene and Public Health in the College; and the Council have selected Mr. A. Wynter Blyth, Medical Officer of Health and Public Analyst, St. Marylebone, to fill the vacant office. Professor Blyth will commence his classes early in April.

Dr. Jacob H. Gallinger has been elected a member of the United States Senate for New Hampshire. The new Senator, who is 53 years of age, began life as a printer, and, as most Americans seem to do at some period of their lives, afterwards edited a newspaper. Dr. Gallinger is said to be the first medical man who has obtained entrance to the American Upper House.

Dr. E. F. Sperck, chief physician of the Kalinkin Hospital at St. Petersburg, has been appointed Director of the Institute of Experimental Pathology, recently founded in that city by Prince Alexander of Oldenburg. The post was, it is understood, first offered to Professor Metschnikoff, now *Chef de Service* of the Pasteur Institute at Paris, and afterwards to Professor Kowalewski, of Odessa.

A Koch Institute at Reichenhall.—On the initiative of the local medical practitioners, steps have been taken to establish a small hospital at Reichenhall for the reception of poor patients, especially such as are about to undergo the Koch treatment. The institution will be opened on May 1st. The nursing will be in the hands of the Sisters of the Red Cross.

The New York College of Physicians and Surgeons.—The New York College of Physicians and Surgeons has become amalgamated with Columbia College. This arrangement, it is thought, will be found mutually advantageous by these institutions, for Columbia required a Medical Faculty to complete its organisation as a university, and the Medical College will gain in academic dignity and probably in usefulness from its incorporation with a body which has "taken all learning to be its province."

New Bacteriological Laboratory in Dublin.—The Council of the Royal College of Surgeons in Ireland have resolved to establish a small laboratory for the purposes of research in bacteriology. Dr. McKee, the curator, and translator of *Cohnheim's Pathology*, will have charge of the new department, but some time must necessarily elapse before the necessary preparations can be perfected.

New Medical Journal.—The first number of a new Italian journal, entitled *La Tuberculosi*, is announced to appear on March 1st. The new periodical, which will be entirely devoted to the pathology, clinical phenomena, and treatment of tuberculosis, will be edited by Professor E. Maragliano, of Genoa. It will be issued twice a month, and will be published by Vallardi, of Milan.

Prosecution of Quacks in America.—Although the United States are generally believed to be veritable happy hunting grounds for all kinds of irregular ministers to minds and bodies diseased, it is satisfactory to find that something is done by the medical profession itself for its own protection against unlicensed practice. The New York County Society, which is the largest local society in the States, spent 2,357 dollars last year for legal assistance in prosecuting quacks. Out of eleven cases taken up, a conviction was obtained in ten. In addition to its useful labours in safeguarding the legitimate interests of the profession, the society also publishes a medical directory of New York County.

Uncertificated Deaths and Burials.—Dr. Cameron has given the following notice of motion in the House of Commons (March 17th): "To call attention to the state of our law respecting the disposal of the dead, and to move a resolution." The motion is designed, it is stated, to draw attention to the large number of uncertificated deaths and burials which take place throughout the country, and the advisability of providing additional safeguards in the matter. The Government will be asked to assent to the appointment of a Committee to inquire into the question. The members who are favourable to cremation are anxious that something should be done to introduce stricter safeguards, in order that the new mode of sepulture may not suffer in public opinion through the uncertainty of the existing system of certifying.

Warren Triennial Prize.—The Warren triennial prize, founded by the late Dr. J. Mason Warren in memory of his father, will be awarded in 1892. Essays in competition may be on any special subject in physiology, surgery, or pathology. The essays must bear a motto only, the name of the writer being enclosed in a sealed envelope bearing the same motto. A high value will be placed on original work. The value of the prize is 500 dollars. Further information may be obtained from the Resident Physician of the Massachusetts General Hospital, and the physicians and surgeons of that hospital are the arbitrators.

University of Turin.—During the year 1890 the number of students in the Faculty of Medicine and Surgery of the University of Turin was 668, not including 10 who entered for special courses. The number who attended the course of "phlebotomy" was 3. The total of "special examinations" in the two sessions of the year was 2,340, in 1,796 of which the ordeal was gone through successfully. The number of candidates who presented themselves at the final examination for the degree was 92, all of whom apparently succeeded in winning the *laurea* or diploma. The course of obstetrics for midwives was attended by 110 women, whose examination record, if not so phenomenally brilliant as that of the male students, must yet have been highly satisfactory to themselves and their teachers. It is to be hoped that it will be not less so to their future patients.

The Association for Relief of Incurables for Glasgow and the West of Scotland.—This Association has issued its sixteenth annual report. The Association provides for the maintenance of a certain number of incurables at Broomhill Homes, and also gives pecuniary assistance, advice, and medicine to out-patients. During last year the inmates numbered 108, and the outdoor pensioners 187. Since the opening of Broomhill Home in 1876, 356 have received its benefits within the institution, and since the formation of the Association, sixteen years ago, 754 out-patients have been assisted. The directors are considering the propriety of providing accommodatian for imbecile children, who, on account of incurable bodily disease, are not admissible to Larbert Institution. The total income for the year has been £5,550, short of the expenditure by £94.

Propagation of Syphilis by Nurslings in Italy.—The Italian Minister of the Interior has sent a circular, dated February 6th, to all the prefects of the kingdom, calling their attention to the fact that "cases of the diffusion in the communes of the kingdom of syphilitic infection, epidemic in character, depending on the suckling of nurslings suffering from that disease, are of not infrequent occurrence." The circular points out that this evil had been brought under the notice of the Italian Government in 1887, and that steps were then taken to prevent or minimise it. It is not obscurely hinted that the instructions then issued have been disregarded in certain provinces, and the prefects are enjoined to see that they are in future carried out "with the exactness and care which are indispensable."

Devon and Exeter Medico-Chirurgical Society.—A meeting of this Society was held at the Devon and Exeter Hospital on February 20th; Dr. Davy, President, in the chair. The members examined the patients at present undergoing Dr. Koch's treatment in the hospital. Dr. Woodman read notes of a case of abscess between the liver and the diaphragm, which subsequently opened into the lung, and described the *post-mortem* appearances. Dr. Blomfield read a paper on Raynaud's disease, and showed two cases of local asphyxia. Mr. J. D. Harris read a paper on the uses of antipyrin, and showed photographs illustrating the value of prolonged surgical treatment in certain cases. Dr. Gordon read notes of a case of cerebral hæmorrhage, and exhibited hardened sections of the brain showing the areas damaged by the hæmorrhage. Mr. Wade showed, for Mr. Coombe, an improved nozzle for a nasal douche. The next meeting of the Society will be held on March 20th.

Deaths in the Profession Abroad.—Among the members of the medical profession who have recently died in foreign countries or in the colonies are Dr. George R. Cutter, of Brooklyn, aged 50, author of a well-known German-English medical dictionary; Dr. John Stewart, of Kingston, Ontario, who took a principal part in the foundation of the Royal College of Physicians and Surgeons of Kingston; Dr. Thomas Davids, of Amsterdam, aged 82, whose father introduced vaccination into the Netherlands in 1803, and who himself took an active part in extending its use; Dr. Nathan Bernstein, aged 54, Vice-President of the Odessa Medical Society, and lecturer on anatomy and physiology in the university of that city from its foundation in 1865 till he was compelled by ill-health to resign the post in 1881; Dr. James Thompson, of Sydney, aged 54, from the after-effects of an operation for stone in the bladder; Dr. P. H. Gentle, of Goulburn, N. S. W., aged 51; Mr. William Hobbs, of Brisbane, aged 68, who was a member of the Legislative Council of Queensland from 1861 till 1880; and Dr. G. F. Huston, of New Norfolk, Tasmania, for many years superintendent of the New Norfolk Hospital for the Insane.

A Rare Book on Surgery.—Amongst the rarities now in the hands of Mr. Quaritch, the well-known bibliophile bookseller of Piccadilly, is one of special interest to students of old surgical literature—it is: "*La maniere de traicter les playes faictes tat par haquebutes que par fleches: et les accidents d'icelles, come fractures et caries des os, gangrene et mortification: avec les pourtraictz des instrumentz necessaires pour leur curation, et la methode de curer les combustions principalement faictes par la poudre à canon.* Le tout cõposé par Ambroise Paré, maistre barbier chirurgien à Paris. 1551." In the ordinary state this edition of Ambroise Paré is very scarce, but the copy now for sale is unique; it is printed on vellum, and was the presentation copy to Diane de Poitiers, whose monogram, together with that of Henry II, is painted on the title page. Brunet mentions a 1545 edition of Paré, but does not refer to any copy of that date, nor has one come to light since his time; it is therefore probable that this is the first edition. The initial letters and the woodcuts of instruments are all illuminated, and the book is in the original calf binding as pre-

sented to Diane de Poitiers. Doubtless there are many collectors who would like to add this gem to their libraries, but probably the fact that Mr. Quaritch demands £300 for it will lessen the rush of purchasers.

At the last fortnightly meeting of the Metropolitan Asylums Board a letter was read from the Local Government Board stating that Mr. Hedley and Dr. Bridges would open an official inquiry into the allegations contained in recent communications from the Hackney Union respecting the Eastern Hospitals at Homerton this week.

Presentations.—Dr. Edward Pope, of Tring, has been presented by the members of the Court Albion, No. 4423, A.O.F., with a handsome cruet "as a token of esteem and regard on his retirement after a service of twenty-four years as medical officer."—Dr. Eadie, of West Coker, has received an illuminated address and a handsome timepiece, from a number of friends desirous of marking "their high appreciation of his character at a time when his patience and courage were severely tested."

MEDICAL VACANCIES.

The following Vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—House-Physician. Salary, £85 per annum, with board, lodging and washing in the hospital. Applications to John Bonnett, Secretary, 23, St. Andrew's Street, Cambridge, by March 10th.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Medical Registrar; double qualifications. Must not hold Poor Law, club, or paid dispensary appointment. Applications to the President and Committee by February 28th.

BRIXTON, STREATHAM, AND HERNE HILL DISPENSARY.—Resident House-Surgeon; unmarried; double qualifications. Salary, £150 per annum, with furnished apartments, attendance, coal, and gas. Applications to the Secretary, Water Lane, Brixton, by February 28th.

BROWN ANIMAL SANATORY INSTITUTION.—Professor-Superintendent. Salary, £250 per annum. Application by March 2nd to the Registrar of the University of London, Burlington Gardens, W., from whom full information respecting duties, etc., can be obtained.

CASTLEREA UNION, Frenchpark Dispensary.—Medical Officer. Salary, £120 per annum, with fees. Applications to Mr. John Mahon, Honorary Secretary. Election on March 5th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.— Medical Officer. Salary, £80 per annum, with board and residence. Applications to A. C. Davies, Secretary, by March 31st.

CITY ASYLUM, Birmingham.—Clinical Assistant. Board, lodging, and washing provided; no salary. Applications to the Medical Superintendent.

COUNTY DONEGAL INFIRMARY.—House-Surgeon and Registrar. Salary, £80 per annum, with apartments and rations. Applications ot Rev. J. S. McClintock, Honorary Secretary, Lifford, before March 1st.

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer; must be Graduate in Medicine. Salary, £130 per annum, with residence, board, and washing. Applications to Dr. J. D. M. Coghill, House-Governor, by February 28th. Election on March 6th.

HULL ROYAL INFIRMARY.—Four Honorary Assistant Surgeons to take charge of out-patients; must be F.R.C.S.Eng. Applications to the Chairman, Committee of Management, by March 12th.

HULL ROYAL INFIRMARY.—Ophthalmic Surgeon; must be a Member of one of the Royal Colleges of Surgeons of the United Kingdom. Applications to the Chairman, Committee of Management, by March 12th.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—House-Surgeon. Salary, £85 per annum, with board and lodging. Applications to C. W. Carver, Honorary Secretary, by March 9th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—House-Surgeon; double qualifications. Salary, 50 guineas per annum, with board and residence at the Hospital. Applications to the Secretary by March 2nd.

LUTTERWORTH UNION.—Medical Officer for the No. 6 District of this Union. Salary, £20 per annum, with usual extra medical fees. Applications to Thos. C. Bodycote, Clerk to the Guardians, Lutterworth, by March 2nd.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for the Convalescent Hospital at Cheadle; must not be more than 25 years of age; unmarried; double qualifications. Salary, £150 per annum, board and residence. Applications to the Chairman of the Board by March 4th.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon; must possess L.D.S. diploma. Salary, £50 per annum. Applications to Arthur G. Klugh, Secretary, by March 10th.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-on-Trent.—Assistant House-Surgeon. Board, apartments, and washing provided. Applications to R. Hordley, Secretary, by March 2nd.

OWENS COLLEGE, Manchester.—Demonstrator in Pathology; must devote his whole time. Stipend, £140 per annum. Applications to H. W. Holder, Registrar, by March 2nd.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon; must possess at least one qualification. Rooms, commons, and washing provided; no salary. Applications to the House-Surgeon by March 12th.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—House-Surgeon and Secretary; unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications endorsed "Applications" to the Chairman of the Committee by April 1st.

ROYAL MATERNITY CHARITY.—Obstetric Physician for the Eastern Division; must be Fellow or Member of the Royal College of Physicians of London, and must reside in the division. Applications to J. Long, Esq., the Charity's House, 31, Finsbury Square, E.C., by February 28th.

ROYAL SOUTH LONDON DISPENSARY, St. George's Cross, S.E.—Surgeon in Ordinary. Applications to Dr. Nundy by February 28th.

ROYAL VICTORIA HOSPITAL, Bournemouth. — House-Surgeon and Secretary. Salary, £80 per annum, with board. Applications to H. G. Lys, Secretary (of whom particulars of the duties may be obtained) by March 4th.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—House-Surgeon. Board and residence provided. Applications to St. Vincent Mercier, Secretary.

ST. THOMAS'S HOSPITAL.—Assistant Physician; must be Fellow or Member of the Royal College of Physicians of London. Applications to Mr. E. M. Hardy, Treasurer's Clerk, by February 28th.

SKIRLAUGH UNION.—Medical Officer and Public Vaccinator for the District of Sproatley; double qualifications. Salary, £20 per annum, exclusive of fees. Applications to Thomas A. McCoy, Clerk to the Guardians, Beverley, by March 11th.

MEDICAL APPOINTMENTS.

Ballance, Charles A., F.R.C.S.Eng., appointed Surgeon to the National Hospital for the Paralysed and Epileptic, Queen's Square, Bloomsbury, *vice* William Adams, F.R.C.S., appointed Consulting Surgeon.

Beaumont, Albert William, B.A.Cantab., L.R.C.S.Edin., appointed Medical Officer for the Fourth District of the West Ham Union.

Bell, William Ker, M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Liverpool Infirmary for Children, *vice* Mr. W. J. Kerr.

Blacker, G. F., M.R.C.S., L.R.C.P., appointed Senior Obstetric Assistant to University College Hospital.

Bryant, J. H., M.B., B.S.Lond., appointed Assistant House-Physician to Guy's Hospital.

Cassal, C. E., appointed Public Analyst for the administration of Kesteven.

Coles, A. C., M.B., C.M., B.Sc., appointed Assistant House-Surgeon to the East Suffolk and Ipswich Hospital, *vice* F. D. Bennett, M.R.C.S.

Crossfield, A. Kyffin, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for the Dittisham District of the Totnes Union.

Elliman, Arthur C., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Kent and Canterbury Hospital, Canterbury, *vice* W. F. A. Clowes, Esq., resigned.

Evans, Abel, M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Lampeter District of the Lampeter Union.

Farmer, Gabriel William, B.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P., appointed House-Physician to the London Hospital, from March 25th.

Hanson, Alfred, L.R.C.P.Edin., M.R.C.S.Lond., appointed Medical Officer for the Withern District of the Louth Union.

Harris, J. Henry, M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Ugborough District of the Totnes Union.

Harrison, Reginald, F.R.C.S., appointed Consulting Surgeon to the Braintree and Bocking Cottage Hospital.

Hawkins-Ambler, George A., M.R.C.S., L.R.C.P.I., L.M., appointed Medical Officer to the Whitby Upper Sanitary District.

Hill, William Henry, M.B., C.M.Edin., appointed Medical Officer for the Basford District of the Basford Union.

Horner, Charles Julian, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Twelfth District of the West Ham Union.

Housley, John, M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer for the East Retford Rural District.

Huggard, William R., M.A., M.D., M.R.C.P.Lond., Prakt.Arzt.Schweiz., appointed British Pro-Consul at Davos-Platz, Switzerland.

Hugo, Edwin Victor, M.B., B.S.Lond., appointed Assistant to the Medical Superintendent at the Infirmary and Assistant Medical Officer at the Workhouse of the Parish of Paddington.

Jackson, John Lowthian, M.B., C.M.Edin., appointed Medical Officer of Health for the Hedon Urban Sanitary District, Yorkshire.

Johnson, Henry Sandford, L.R.C.P.I., L.F.P.S.Glas., reappointed Medical Officer for the South Brent District of the Totnes Union.

Kelynack, T. N., M.B., Ch.B.Vict., Pathological Registrar to the Manchester Royal Infirmary, appointed Junior Demonstrator in Pathology to the Owens College.

Knox, Alexander W., M.D., M.S., appointed Medical Officer to the Smallburgh District and the Smallburgh Workhouse of the Smallburgh Union, *vice* Mr. W. F. Dix, deceased.

Leader, Charles Robert, M.B., M.S.R.U.I., appointed Medical Officer for the Worthen District of the Forden Union.

Littleton, Philip Richard, M.R.C.S.Eng., reappointed Medical Officer for the Ashbourne District of the Ashbourne Union.

Lucas, Herbert, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Huntingdon Town Council.

Munro, James Mitchell, M.B., C.M.Aberd., reappointed Honorary Medical Officer to the Mansfield and Woodhouse District Hospital.

NEILSON, Henry J., M.D., M.B., C.M.Glas., appointed Medical Officer to the Workhouse, Basford Union; and Medical Officer to the Pride of the Village Lodge of the Manchester Unity Independent Order of Odd Fellows, Old Basford.

RANSON, William Edward, M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Needham District of the Bosmere and Claydon Union.

RILEY, Roland J., M.R.C.S.Eng., L.R.C.P.Edin., appointed Medical Officer to the Workhouse, Cannock, *vice* Thomas Wilson, M.D., resigned.

ROWSE, E. Lea, L.R.C.P., M.R.C.S., appointed House-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

SAUNDERSON, Robert, M.D.Q.U.I., L.R.C.S.I., L.& M.R.C.P.I., appointed Medical Officer of the Edenderry Dispensary, *vice* Dr. Saunderson, resigned.

SHORE, Herbert George, M.R.C.S.Eng., appointed Medical Officer to the Cropredy District of the Banbury Union, *vice* Mr. Michael Hodgson, resigned.

SIMMONS, W. W., M.B.Cantab., appointed House-Physician to the City of London Hospital for Diseases of the Chest.

SLOGGETT, H. Paynter, L.M.K.Q.C.P.I., M.R.C.S.Eng., appointed Resident Surgeon to the Victorian Eye and Ear Hospital, Melbourne.

SMITH, Kenneth Rawlings, M.D.Lond., M.R.C.S.,Eng., reappointed Medical Officer for the Harbertonford and Halwell Districts of the Totnes Union.

STEVENS, T. G., M.B., B.S.Lond., appointed Assistant House-Surgeon to Guy's Hospital.

THOMPSON, Wesley Hayes, M.D.Durh., L.R.C.P.Edin., reappointed Medical Officer of Health for the Quarry Bank Urban District of the Stourbridge Union.

TUNSTALL, Albert Edward, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Clayton Urban Sanitary District of the North Brierley Union.

UBSDELL, Henry, M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Staverton and Rattery District of the Totnes Union.

VIRET, B. P., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Dorset County Hospital, Dorchester, *vice* T. F. Shackleton, M.R.C.S.Eng.

WATSON, John, M.B.Durh., F.R.C.S.Edin., appointed Senior House-Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital.

WELLFORD, F., M.B., B.C.Cantab., appointed Assistant House-Surgeon to Guy's Hospital.

WELSFORD, Arthur G., M.B., B.C.Cantab., appointed Assistant Medical Officer to the Central London Sick Asylum, Cleveland Street, W.

WILD, Robert B., M.D.Lond., B.Sc., M.R.C.S., appointed Senior Demonstrator of Materia Medica and Therapeutics in the Owens College, Manchester.

WOOD, William, M.B., C.M.Edin., appointed Assistant Medical Officer to the Edinburgh Provident Dispensary attached to the School of Medicine, Marshall Street, *vice* Andrew Messer, M.B., C.M., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BEVILLE.—On February 23rd, at The Firs, Palace Road, East Molesey, the wife of Frederick W. Beville, L.R.C.P.Lond., M.R.C.S.Eng., of a daughter.

BLENKARNE.—On February 19th, at 335, Humberstone Road, Leicester, the wife of W. L'Heureux Blenkarne, L.S.A., M.R.C.S., of a son (Rupert Harrison).

DODS.—On Wednesday, February 18th, at Bugbrooke, Weedon, the wife of Louis F. Dods, Surgeon, of a son.

STEELE.—On February 23rd, at Underleigh, Darwen, Lancashire, the wife of W. F. Steele, M.B., B.S.Dunelm., of a daughter.

STIVEN.—On February 21st, at The Manor Lodge, Harrow-on-the-Hill, the wife of E. W. Flemyng Stiven, M.D., of a daughter.

MARRIAGES.

BICKERTON—BURTON.—On February 21st, at St James's Church, Birkdale, by the Rev. R. Stephenson, Thomas H. Bickerton, of Rodney Street, Liverpool, to Mary Jessie, daughter of the late James Burton, of Hilton House, Prestwich.

BLOXAM—SLOAN.—On February 21st, at St. John's, Weston, Bath, George Edward Bloxam, M.R.C.S., L.R.C.P., to Emma Jane Sloan, both of Lower Weston, Bath.

SPENCER—CHARLTON.—On February 21st, at St. Bartholomew-the-Less, Smithfield, by the Rev. W. Ostle, Vicar, Walter George Spencer, of 35, Brook Street, son of the late Walter Spencer, Esq., of Little Chalfield, Wilts, to Elizabeth, daughter of the late William Charlton, Esq., of Madras.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: On Strabismus. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Woakes: On Tinnitus and Vertigo.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor B. T. Lowne: On the Anatomy and Development of Insects in Relation to Recent Views on the Origin of Vertebrates Lecture I.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 8 P.M.—Dr. W. Job Collins: Related and Associated Ocular and Dental Diseases. Mr. Storer Bennett: A Case of Alveolar Abscess of Three Years' Duration caused by the Perforation of the Side of a Root. Mr. Ackery: Some Cases of Eruption of Teeth in Abnormal Positions. Dr. Scanes Spicer: Opacity of the Antrum in Disease: a demonstration with the electric light. Mr. David Hepburn: A New Dental Dressing Stand.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 5 P.M.—Annual general meeting. Agenda:—Report of President and Council; Treasurer's Accounts; Election of Officers and Council for following year; Proposed Changes in By-laws.

MEDICAL SOCIETY OF LONDON.—General meeting at 8 P.M. for the election of Officers and Council. Ordinary meeting at 8.30 P.M.—Mr. Knowsley Thornton (President): Further Observations on Cases illustrating Hepatic Surgery.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 2 P.M.—Dr. Savage: On Legal Relation to Insanity. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: On the Modern Treatment of Syphilis.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. T. Oliver: The Goulstonian Lectures on Lead Poisoning in its Acute and Chronic Manifestations. Lecture I.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. W. G. Spencer: Exophthalmic Goitre. Mr. H. B. Robinson: Cystic Disease of Breast (two cases): Duct Carcinoma. Dr. William Collier: Thrombosis of Cerebral Veins. Mr. Howard Marsh: Loose Bodies from a Tuberculous Knee-joint. Mr. Edgar Willett: Loose Body from the Knee. Mr. Bruce Clarke: Loose Body from the Knee, consisting of portion of the Articular Cartilage of the Patella. Dr. H. D. Rolleston: Patella with Dislocated Internal Semilunar Cartilage fixed to it. Mr. Lauriston Shaw: Sarcoma opening Trachea. Card Specimens.—Mr. E. Solly: Melanotic Sarcoma of Conjunctiva. Dr. W. B. Haddon: Pancreas in Diabetes. Messrs. S. G. Shattock and C. A. Ballance: Fuchsine Bodies in Carcinoma, Tuberculosis, Diphtheria. Dr. Rolleston (for Mr. A. A. Kanthack): Fuchsine Bodies in Various Conditions.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Acland: On Some Affections of the Bronchi. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. B. Lawford: On Ocular Palsy.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor B. T. Lowne: On the Anatomy and Development of Insects in Relation to Recent Views on the Origin of Vertebrates. Lecture II.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Mr. J. Bland Sutton, Dr. Hayes, Dr. Crawford, and others. The President (Dr. J. Watt Black) will deliver the Inaugural Address. Dr. Dakin: Tetany in Pregnancy. Dr. John Phillips: On a Case of Death following Vaginal Injection of Acid Nitrate of Mercury.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Ormerod: On Electrical Testing. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Octavius Sturges: On Cases Illustrating the Simulation of Tuberculosis in Young Children. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Law: Demonstration of Cases.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. T. Oliver: The Goulstonian Lectures on Lead Poisoning in its Acute and Chronic Manifestations. Lecture II.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. W. S. A. Griffith: Vulvitis and Vulvar Leucorrhœa. Dr. R. Boxall: Offensive Lochia.

FRIDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Acland: Demonstrations of Cases of Affections of the Bronchi.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor B. T. Lowne: On the Anatomy and Development of Insects in Relation to Recent Views on the Origin of Vertebrates. Lecture III.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 P.M.—Mr. Percy Dunn: Pathological Specimens. Mr. Bruce Clarke: A Case of Extensive Skin Grafting. Mr. Edwards: Two Cases which have undergone Operative Treatment subsequent to Inoculation with Koch's Lymph. Mr. Keetley: A Boy with Healed Tuberculous Finger. Dr. Ball: A Case of Lupus of the Nose treated by Scraping. Mr. Pickering Pick: Notes of a Case of Trephining for Epileptic Fits, the result of a Depressed Fracture. Dr. Herringham: A Case of Multiple Neuritis in a Man. Dr. McAdams Eccles: A Child with Multiple Epiphysitis of Syphilitic Nature; and other cases.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration. Hospital for Diseases of the Skin, Blackfriars, 2 P.M.—Dr. Payne: On the Treatment of Cutaneous Inflammations.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, (Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2, Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.15; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

URTICARIA.

J. H. G. asks for advice in the treatment of a case of urticaria. The patient is a governess, aged 49. The eruption first appeared after an attack of congestion of the liver eight months ago. Her digestive organs are now acting very well; she takes daily walking exercise, the plainest of food, no stimulants, and leads a very regular life. Various medicated baths and lotions have been tried. Quinine at once disagrees. Bromides have been thoroughly tried, and mineral acids with vegetable bitter aloes; all are apparently useless.

WORKS ON MEDICAL ELECTRICITY.

X. Y. Z. asks to be informed of any good elementary work or works on electricity and galvanism as associated with medical treatment.

*** Dr. de Watteville's *Medical Electricity* is a very excellent handbook. A larger and excellent work is *Erb's Electro-therapeutics*, being Vol. vi of v. Ziemssen's *Cyclopædia of Therapeutics*, and translated by Drs. de Watteville and Cagney. Very elementary and very good is Skene Keith's *Introduction to Galvanism*; and for the purely physical aspect of the question, the *Science Primer on Electricity*, by Professor Jamieson, published by Messrs. C. Griffin and Co.

WATER SUPPLY.

J. S. writes: It is proposed to supply a small town with drinking water by damming a stream four or five miles distant. This stream drains an agricultural district, where the land is fairly well cultivated, town refuse, privy contents, etc., being used as manure. (1) Is this a safe source of supply? (2) Can any system of filtration ensure purification of this water? In the hills surrounding the basin of this stream are numerous springs. (3) Would it not be safer to bore for a water supply? (4) Is it true that spring water or the water from a bore hole does not keep well in a reservoir? (5) What is the best authority on water supply?

*** (1) Such a stream would not be a safe source of supply for a town. (2) A good system of filtration would very much improve the quality of the water. It is not yet determined, however, if filtration will under all circumstances deprive a specifically infected water of its contagious properties. A marked reduction in organic matter by filtration may not mean the elimination of all dangerous microbes or their spores. (3) It is probable that a purer water free from any suspicion of contamination could be obtained from the springs issuing at the foot of uninhabitated hills and uplands. (4) Spring and deep well waters can be stored in reservoirs without deterioration. (5) Parkes's *Practical Hygiene*, edited by De Chaumont; *Sixth Report of the Rivers' Pollution Commission; Report of Committee of House of Commons on London Water Supply, 1889.*

ANSWERS.

PATER.—After taking the M.R.C.P., our correspondent would have to give up dispensing medicine even for his own patients. This rule is never relaxed.

DROITWICH.

M.B.M.A., who asks for information as to whether Droitwich is a good place to recommend for a rheumatic case, will find some particulars in the BRITISH MEDICAL JOURNAL of August 23rd, 1890, p. 489.

INCOME TAX.

W.—The assessment and duty are both correct as the law stands, for no concession is made to a professional man using part of his house for the purposes of his profession. See Chapman's *Inhabited House Duty: How and When to Appeal*, which can be obtained post free for thirteen stamps forwarded to 25, Colville Terrace, W.

NOTES, LETTERS, Etc.

ATHLETIC LADIES.

A LADIES' ATHLETIC CLUB has been opened at New York, and the membership is already so numerous as to justify the belief that it meets a want largely felt by American women.

"ALBUMINURIA IN THE APPARENTLY HEALTHY."

DR. JOHN MASON (Windermere) will be glad to communicate with the "Medical Man" who wrote under the above heading in the BRITISH MEDICAL JOURNAL, January 3rd, p. 50.

ICHTHYOL AS A REMEDY FOR CHILBLAINS.

SURGEON W. G. MACPHERSON, Medical Staff (Woolwich), writes: The effect of the application of ichthyol to chilblains is so marked as to deserve notice. The unguentum ichthyol (30 per cent. with lanolin or vaseline) relieves the excessive irritation completely and rapidly, and its continued use will cure the condition. I have collected notes of several cases during the last two months, and in none has this treatment failed.

CIRCUMCISION.

DR. THOS. LEEDS (City Road, E.C.) writes: In the operation for circumcision, it is neither necessary nor advisable to remove the whole of the foreskin in subjects free from disease of the part. The prepuce should be shortened only to such an extent as to permit of the glans penis being comfortably uncovered. The natural function of the prepuce, that of preserving the sensitiveness of the glans penis is thus retained. It is clumsy surgery to completely and permanently lay bare the glans. The operation suggested also leaves a more sightly result.

A NEW METHOD OF READILY FINDING THE OPTIC FUNDUS.

MR. D. W. L. SOUTTER (King's College Hospital) writes: A difficulty having been experienced by ophthalmic students in finding the objects visible at the fundus of the eye, this difficulty may be obviated by the following simple invention. A thin wire is attached to the side of the lens used in the indirect method, and made to project in front to a distance equal to the focal length of the lens. The wire is bent so that its end is opposite the centre of the lens. If now the observer hold the lens at the ordinary distance from the patient's eye, with the end of the wire projecting towards himself, he can illuminate the fundus in the usual way. The point of the wire must be brought in front of the illuminated fundus. The observer then looks at the point, and the optic disc and vessels come into view. The observer will find it useful to move the lens to and fro a little while looking at the point of the wire.

ACCESS TO MOUNTAINS.

LONDONER writes: Why should Mr. Bryce, in his resolution as to access to mountains, for which he failed to obtain a hearing in the House of Commons early this month, have restricted his attention to Scotland? Are Scotch landlords more inclined to enclose their lands, and debar the public from right of access thereto than their compeers of England and Wales? The Public Footpaths Preservation Association of Cumberland have, at any rate, had some stiff encounters with encroaching landlords, and, fortunately, have usually retired victorious from the fray, as the owner of Latrigg, near Keswick, experienced to his cost some three years ago, after a three days' trial at Carlisle. In Wales, too, in some parts there is a tendency on the part of certain landlords to encroach on the rights of the public. It is much to be hoped that another opportunity may be found, and at an early date, for Mr. Bryce to ventilate this question in Parliament; and when he next essays to introduce the subject to the Legislature it is to be hoped that he may see his way to enlarge the scope of his motion, so that it may include the whole of the British Islands, and not be restricted to Scotland alone.

HYPNOTIC EFFECT OF MERCURY.

MR. JAMES E. BLOMFIELD, M.B., B.S. (Oxon.) (Sevenoaks), writes: I think it may prove of interest to Dr. Tyson and others who read his paper in the BRITISH MEDICAL JOURNAL of January 31st, on the hypnotic effects of mercury, to know that in Dr. Broadbent's excellent little book on *The Pulse* (Cassell's Clinical Manuals) there is an explanation of this effect (pp. 278-280). Dr. Broadbent associates the sleeplessness with high arterial tension, which renders the cerebral vessels incapable of the contraction requisite to produce the anæmia of the brain associated with sleep; and he finds that this condition is relieved by small doses of mercury, as well as by other methods which determine a flow of blood from the brain, such as hot baths, sitz baths, etc.

"HYPNOTIC SUGGESTION."

M.D. writes: Dr. Arthur's cases, four in number (two of cancer and two of paralysis), were said to be hypnotised by a few drops of tincture of valerian which had been invested with the charm of "suggestion."

Now, as three of these cases were large opium takers—one taking as much as 6 drachms of morphine solution per diem—and the fourth being hysterical, and probably also an opium taker, it seems not unreasonable to suppose that the result from "hypnotic suggestion" was in each case really due to opium. Moreover, it should not be forgotten that patients of these two classes (opium takers and hysterical) are those whose statements are seldom to be trusted.

It was said to me once by a confirmed opium taker, "Never trust a person with that habit—we always prefer to tell a lie than to speak the truth;" and my experience fully confirms this.

Our profession is often twitted with being ungenerous in its unwillingness to investigate every tomfoolery which is brought to the front; but really there is or should be a boundary where generosity ends and credulity begins; and it is advisable now and again to pause, and look whither we are being led.

AMBULANCE CLASSES FOR THE MERCANTILE MARINE.

MR. CHARLES HENRY LEET, F.R.C.S., late Surgeon-Major, Royal Engineers (Seaforth, Liverpool), writes: Some influential nautical men have inaugurated this work in Liverpool, so that at no distant date it may fairly be expected few vessels will leave this port without at least one mate or seaman holding the certificate of the St. John Ambulance Association. This movement, initiated as it has been by employers and not by seamen themselves, marking the commencement of a new era in marine sanitation, induced me on February 9th to address a respectful letter to the manager of the Shipping Federation, pointing out that as these classes were to be "specially adapted for sea service," the medical instructors should include in the course the subjects of ship sanitation and personal hygiene; and that the practical result would be that insanitary conditions on shipboard could, in future, be respectfully reported to the owners and the Board of Trade by those men who were trained in the ambulance course.

But one practical difficulty I have submitted in a letter to the leading Liverpool shipping paper, namely, "Will not masters, mates, engineers, and seamen holding ambulance certificates hesitate to use their knowledge by submitting to their employers anything like a report upon insanitary matters, lest their personal interests should suffer thereby? In fact, somewhat like the ships' surgeons of to-day, who, possessing no *locus standi* on shipboard, are tempted to shut their ears to seamen's complaints of faulty ventilation."

VIRCHOW TESTIMONIAL FUND.

PROFESSOR HUXLEY, F.R.S.; Professor Struthers, Aberdeen; and C. Theodore Williams, M.D., have joined the Committee. The following additional subscriptions have been received since the last list was published:—

	£	s.	d.		£	s.	d.
T. H. Huxley, F.R.S. ...	2	2	0	T. Grainger Stewart, M.D....	2	2	0
Sir Joseph Lister, Bart. ...	2	2	0	T. Bryant, F.R.C.S. ...	2	2	0
P. Frank, M.D.	2	2	0	W. Priestley, M.D.	2	2	0
J. Althaus, M.D. ...	1	1	0	Julius Dreschfeld, M.D. ...	2	2	0
Professor A. R. Simpson	2	2	0	Henry Simon, Esq.	2	2	0
Walter K. Sibley, M.B. ...	0	10	6	Professor Struthers... ...	1	1	0
John Moorhead, M.D. ...	1	1	0				

DENTAL ABNORMALITIES.

DR. J. R. STOCKER (Glasgow) has forwarded brief notes of the case of an old lady who was born with three or four teeth already cut, and who recently, in her 75th year, cut a double tooth. He adds that within recent years she has cut several double teeth, and that down to an advanced age she had a perfect set of teeth. As to the first peculiarity in this lady's case, it would appear that the eruption of the earliest milk teeth may occur at almost any period after the last month of intrauterine life; they are not infrequently cut during the first few weeks of extrauterine life, and this premature eruption often causes much inconvenience to the nursing mother. As a matter of fact, the only satisfactory evidence of the "perfectness" of the set of teeth to an "advanced age" would be a model showing the teeth in position. Only in this way could it be proved (1) that all the permanent teeth were erupted; (2) that no temporary teeth persisted, a third set of teeth is absolutely unknown. The teeth now erupting, therefore, in Dr. Stocker's case are either some members of the ordinary permanent set that had not erupted at the normal period, and had remained encysted in the jaw until all obstruction to their eruption had been removed by the shedding of the permanent teeth, and so gave the encysted teeth room, or they may be some supernumerary teeth that had not erupted but that were formed at the same time as the rest of the permanent set. The loss of the teeth is due to atrophy of the alveolus resulting from old age. Cases of this sort are very commonly met with in dental practice.

DEGENERATION OF TUBERCLE BACILLI.

MR. EDW. F. GRÜN, M.R.C.S., L.R.C.P. (Putney, S.W.), writes to correct a slight error in the published report of the discussion on Dr. Crookshank's paper at the Pathological Society. He says: In reply to a question from me, Dr. Abraham is reported to have said that no changes were found in the bacilli of tuberculous guinea-pigs after injection with Koch's lymph, etc. What Dr. Abraham really said was that "he had only examined the blood of the guinea-pigs, and had not found any bacilli in it, therefore could not note any change of structure." This is a point of some importance. In the review of a book published by myself and Mr. Severn you accuse us of a misstatement on this point. I am happy to find that my observations have been entirely corroborated by Dr. Amann, of Davos. Dr. Amann, after examination of 128 cases of sputum, distinctly describes the degeneration and alteration of the bacilli after injection of Koch's fluid. Whether this degeneration be directly produced by the injected fluid, or be a consequence of altered conditions after injection, is a matter of pure theory. The central fact remains that an alteration capable of photographic representation is constantly present. Dr. Amann's observation as to the difficulty of staining was also noted by us, and it was for this reason that we described the two (not one, as your reviewer reports) special methods of staining which we found most serviceable in bringing to view these difficult bacilli, and we described these methods with great exactitude.

We might write more on the subject of your review of our book, but we feel that many of the statements to which you have taken exception will ultimately prove to be correct, although at present somewhat at variance with received opinion; for although the book was written hurriedly, yet all the original remarks were based upon very careful observation, and have since been corroborated by subsequent examinations, etc. As our excuse for writing the book in such a hurry, we must urge the demand which existed at the time for reliable observation; and having had facilities which few other men were possessed of, we thought we were conferring a benefit on the profession in putting in-

formation before it, especially as the first two hundred advanced proofs were gratuitously distributed, for which we have received the thanks of some of the best known men in the profession.

*** It is quite possible that there may be an error in the report of what was said at the Pathological Society meeting, as Mr. Grün had to put his question twice, and it had to be answered twice, and it was somewhat difficult to understand exactly what was the point at issue. Mr. Grün's object was apparently to obtain evidence in favour of the theory that the bacilli were killed by their own products—a theory which may be undoubtedly true, but in favour of which the evidence is as yet *nil*, as mere changes in structure can certainly not be looked upon as evidence of the death of the bacilli, especially as they have been proved by inoculation experiments to be alive.

As regards the review of his book, it would perhaps have been better to have said "mis-suggestion" instead of "misstatement," for although Messrs. Grün and Severn are giving their own ideas on Koch's treatment, Mr. Grün appears to forget that Koch has performed a very large number of experiments, whilst the authors have nothing more than a suggestion to offer, in addition to which the idea put forward is so inadequately expressed that it is somewhat difficult to make out exactly what is meant. He says: "But the fluid itself not containing the organism, it is no case of acclimatisation of the system, as is the theory of the inoculation of hydrophobia virus in an attenuated or mitigated state, but if we may be allowed to guess, we would suggest that this treatment depends for its principle on the fact that the bacillus, like others, is killed by an excess of its own poisonous excreta." This is a whole sentence, the one to which we referred. It is not a matter of putting one man's opinion against that of another; it is a case of one theory, which may be wrong, but which is founded on a number of facts, being set against another theory that has no foundation on facts. Mr. Grün states that they describe in their book two methods of staining. This is scarcely correct, as although they give two formulæ, in one of which they use rectified spirit and aniline oil, and in the other alcohol, distilled water, and phenol, the methods are practically the same, as in both cases fuchsine is used as the stain, and this is removed from the tissues by means of nitric acid, methyl blue in both cases being used as a contrast stain, the slight modifications introduced not in any way altering the nature of the stain, and there is certainly no difference as regards the vital question of the removal of the stain, the retention of which by the tubercle bacillus is its chief characteristic.

LETTERS, COMMUNICATIONS, ETC., received from:
(**A**) Mr. H. E. Armstrong, Newcastle-on-Tyne; Dr. Arlidge, Stoke-on-Trent; Mr. H. W. Allingham, London; Surgeon A. Asbury, Secunderabad; Another M.S. (**B**) Dr. E. G. Barnes, Eye; Mr. R. Bradshaw, West Allendale; Dr. Lauder Brunton, London; Dr. George Buchanan, Glasgow; Mr. G. F. Blacker, London; Mr. T. Bell, Uppingham; Mr. B. Brooks, Hull; Mr. J. F. Briscoe, Esher; Dr. A. G. Blomfield, Exeter; Mr. G. E. Bloxam, Lower Weston; Mr. W. F. Brooks, Fareham; D. G. Braidwood, M.B., Halkirk; Dr. J. Brown, Dundalk; Dr. Balding, Royston; Mr. W. P. Biden, Hyères; Dr. J. Brown, Bacup; Mr. G. Brown, London; Dr. Berdoe, London. (**C**) Mr. G. Carpenter, London; Professor M. Charteris, Glasgow; Dr. D. H. Cullimore, London; Mr. Arthur Cooper, London; Mr. Cardwell, Grantham; Dr. Calderwood, Methven; Mr. Watson Cheyne, London; Central Stationery and Printing Company, Liverpool; Dr. A. H. W. Clemow, London; Mr. W. R. E. Coles, London. (**D**) Dr. P. M. Deas, Exeter; Dr. C. Dunscombe, London; Mr. Alban Doran, London; Director-General of the Army Medical Department, London; Mr. E. G. Dutton, Plymouth; Deputy Coroner; Dr. Wm. Donovan, Birmingham; D. I. G.; Dr. Davidson, Liverpool; Mr. L. F. Dods, Weedon; Dr. P. T. Duncan, Croydon. (**E**) Mr. E. W. Emtage, Holsworthy; Mr. E. East, London; Mr. E. C. Elliman, Canterbury. (**F**) Dr. D. A. Fraser, Totnes; Mr. Adams Frost, London; G. W. Farmer, M.B., Oxford; Mr. G. H. Fuller, London. (**G**) Mr. N. Grattan, Cork; Mr. E. Goodall, Wakefield; Dr. Clement Godson, London; Mr. T. H. Gillam, Worcester; Mr. G. W. Grote, Cardiff. (**H**) Dr. W. R. Huggard, Davos Platz; Miss M. A. Hooper, London; G. Heaton, M.B., Birmingham; Dr. D. Hooper, London; Dr. J. Holmes, Ouselhurst; Mr. Nelson Hardy, London; Mr. G. Y. Hunter, London; Dr. Haslam, London; Mr. J. M. Horsburgh, London; Mr. G. A. Hawkins-Ambler, Huddersfield; Dr. G. Herschell, London. (**I**) Irish Medical Schools' and Graduates' Association, London. (**J**) Dr. M. Parry Jones, Alfreton; Mr. R. S. Jaynes, Leeds; Dr. Wm. Jones, Ruabon; R. W. Jones, M.B., Penrhiwceiber; Dr. R. Conwy Joyce, Treorky. (**K**) Mr. T. N. Kelynack, Manchester; Mr. R. Kay, Heywood; Dr. Norman Kerr, London; Mr. R. Kershaw, London; Mr. F. W. Kirkham, Downham. (**L**) Jordan Lloyd, M.B., Birmingham; Mr. C. H. Lect, Liverpool; Mr. H. Lund, Manchester; A London Graduate. (**M**) Mr. E. S. Medcalf, Hove; Dr. J. Murphy, Sunderland; Mr. Wm. Marriott, London; Mr. G. Miller, Salford; Dr. J. Molony, Dublin; Medical Officer of the Local Government Board; Medicus; Mr. J. McCullagh, Dublin; Dr. Stephen Mackenzie, London; Mr. W. D. Massy, London; Dr. Mules, Bowdon; Military Secretary, India Office; Surgeon J. D. Moir, London; Dr. W. J. Morris, Portmadoc; Dr. M'Jannet, Middlewick; Mr. J. Y. Macalister, London; Mr. L. Mark, London. (**N**) Mr. H. C. Nance, London. (**O**) Dr. T. Oliver, Newcastle-on-Tyne; Mr. T. P. O'Meara, Carlow. (**P**) Dr. L. Parkes, London; Dr. G. W. Potter, London; Dr. C. B. Plowright, King's Lynn; Dr. F. Peregrine, London; Mr. J. Pocock, Bangor; Miss N. Paul, London. (**R**) Mr. J. R. Riley, Cannock; Dr. R. R. Rentoul, Liverpool; Dr. W. Rutherford, Edinburgh; Mr. H. A. Reeves, London; Mr. F. A. Rogers, London; Mr. E. L. Rowse, London; Mr. C. E. Richmond, Manchester; Dr. R. Ruttle, Accrington; Dr. Ridge, Enfield; Retired; Mr. H. A. Rawlings, London. (**S**) Mrs. J. E. Simms, Twickenham; Dr. T. G. Styan, Ramsgate; Secretary of the Statistical Society, London; Dr. J. E. Scowcroft, Bolton; Secretary of the Royal Holloway College, Egham; Mr. J. E. Sullivan, Liverpool; Dr. A. Smart, Edinburgh; Dr. A. Stuart, Sydney; Secretary of the Caledonian Insurance Company, London; Dr. J. Hamilton Scott, Camberley; Mr. W. Towers Smith, London; A Sufferer; Professor Semmola, Naples; Dr. T. Savile, London; Mr. Johnson Smith, London; Mr. H. P. Sloggett, East Melbourne; Mr. W. W. Swinbshall, Shantung; Mr. W. G. Spencer, Ventnor; Mr. J. T. Skrimshire, Holt; Dr. R. W. Savage, London; W. F. Steele, M.B., Darwen; Dr. Markham Skerritt, Clifton; Dr. S. W. Smith, Cheltenham; Secretary of the Bristol Hospital for Sick Children and Women; Secretary of the British Gynæcological Society, London. (**T**) Mr. E. Trimmer, London; Mrs. J. Thorne, London; T. Thomson, M.B., Sheffield; Dr. J. G. Totherick, Wolverhampton; Mr. Arthur Thomson, Oxford; Mr. J. T. Thompson, Cardiff; Mr. R. Thorbury, Sedbergh; Dr. Thorne Thorne, London; Mr. R. Turner, York. (**V**) Mr. T. Jenner Verrall, Brighton. (**W**) Mr. W. W. Waten, Stoke-sub-Ham; Mr. E. Waterhouse, West Kirby; Dr. Outterson Wood, London; Dr. J. A. Wetherell, Barnsley; Mr. E. W. White, Birmingham; Mr. J. P. Wills, Bexhill; Dr. Willoughby, London; Mr. F. F. White, Coventry; Mr. C. W. Wells, London; A. G. Welsford, M.B., Harrow; J. Watson, M.B., Portsmouth; Miss Wightman, Cardiff; Dr. R. B. Wild, Manchester; etc.

BOOKS, ETC., RECEIVED.

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GOULSTONIAN LECTURES
ON
LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians of London.

By THOMAS OLIVER, M.A., M.D., F.R.C.P.,
Physician to the Royal Infirmary, Newcastle-upon-Tyne; and Professor of Physiology, University of Durham.

Lecture I.

Extent to which Lead Poisoning Prevails.—Early References to the Danger of Contamination of Water by Leaden Pipes.—Immunity of Miners, Liability of Smelters.—Lead Poisoning in Animals.—Trades in which Lead Poisoning is most liable to Occur.—Lead-polluted Water.—Milk and Fermented Beverages.

Let me thank you, Mr. President, for the very great honour which you have conferred upon me in inviting me to become the Goulstonian lecturer for the year. Having accepted the office, I am deeply sensible of the responsibility it involves. Weighty as I feel the duty imposed upon me, it is only equalled by my desire to make these lectures acceptable and instructive.

In searching for a subject I considered that there was one upon which, with the time at my disposal for its preparation and delivery, I might be able, from the opportunities afforded me for its study, to say something that might prove of interest to you and of service to the profession.

Lead poisoning is not only of local but of national importance. The last two years have shown how truly necessary it is for us to realise the dangers that often lurk in the supply of drinking water and of various forms of food. The wholesale poisoning that occurred a short while ago in Sheffield, and which necessitated a scientific inquiry, the poisoning of the inmates of Keighley Workhouse, and the extent to which—in Yorkshire at any rate—it still follows the use of water, and the repeated announcement in the newspapers of coroners' inquests held in London and the North of England upon cases of lead poisoning, all bear testimony to the ruin wrought by lead poisoning, and are my excuse for making it the theme of these lectures. Apart from the epidemics of lead poisoning which have passed over certain towns, owing to the faulty conduction of the water, it is true that the disease usually affects only a small proportion of the labouring classes, but that is one reason why we who are the guardians of the public health should, by increasing our own knowledge, help those who cannot help themselves. Besides, this College is the academic centre from which should issue words of counsel and words of warning upon the dangers of a noxious industry, and the subtle influences of a poison which at any time may be widely diffused. It was in the College of Physicians that in 1767 Sir George Baker, a scientist of celebrity, first drew the attention of the medical profession at once to the production of colica pictonum by the use of cider, and successfully taught how to remedy the evil.

There is a general consensus of opinion that the insidious introduction into the human system of lead in very minute quantities is followed by symptoms of a more serious and persistent character than when taken in larger quantities and for a shorter period. In the latter case we have the symptoms of irritant poisoning, but in the former the symptoms are sometimes so remote that their relationship may escape our attention. So insidiously are the symptoms developed, and so variable, that not only do we as physicians occasionally fail to refer the illness to its proper category, but medical men, the authors of pamphlets on lead poisoning, and who, therefore, have had practical experience of the poison in others, have themselves suffered from the malady without being aware of the nature of their illness.[1] In the cumulative action of the poison lies its danger. Whilst briefly recognising food, water, and fermented liquors as media whereby the poison may be introduced into the system, my experience has been gained mostly from workers in lead factories. If, therefore, I deal with lead poisoning from the industrial rather than from the accidental side, it is simply because I have in this way seen more of the results arising from exposure of the system to the influence of lead. Lead under any form, if taken for a length of time, will cause poisoning even in the form of its most insoluble compounds, such as the sulphate. The acetate, which is very soluble, and the carbonate and oxide, which are insoluble, as they are acted upon by the gastric juice, are perhaps the most dangerous, unless it be the chromate and arseniate of lead, whose toxic properties would be largely influenced by the chromic and arsenic acid they contain. It is amongst lead workers, however, that we see the metal produce its most disastrous effects, rapidly converting men and women, frequently pictures of health, into human wrecks.

There are other trades besides lead making which are notorious for a high death-rate, and in not a few of them lead is manipulated in some way or other. It is upon those engaged in the manufacture of lead that the poison produces greatest havoc; and yet amongst those engaged in other industries symptoms of a slower but not less severe form of poisoning are also met with. Lead poisoning amongst printers is a thing that has practically gone out of existence. Under any circumstances, amongst printers it would be difficult to attribute death directly to lead poisoning. It can only be done by appreciating the number of deaths due to diseases of organs that are known to suffer in lead poisoning—for example, the kidneys and the nervous system. At the present time scarcely a case of lead poisoning occurs amongst printers. The high death-rate amongst plumbers, painters, and glaziers—who show a comparative mortality figure of 1,202 against 1,000—is mainly determined by their liability to lead poisoning.[2] Associated with this mortality directly attributed to lead there is an excessively high mortality from diseases of the urinary organs, diseases of the nervous system and circulatory organs. The tendency to diseases of the kidneys in painters has long been known, and by English physicians has been properly regarded as the result of lead. Amongst the file makers of Sheffield lead poisoning is frequently met with. Dr. Porter,[3] in his thesis, draws attention to the unhealthy nature of their occupation. Exposed during their work as these men are to all the dangers arising from metallic dust, and in this way with a high death-rate from phthisis a circumstance which is opposed to the opinion expressed by Tanequerel des Planches as to the protective influence of lead in this disease—they are prone to suffer from lead poisoning. This arises from the fact that these men are obliged to use a cushion of lead on which they strike the file, and thus they are daily inhaling metallic dust. Their high death-rate comes from diseases of the urinary organs; they suffer also from diseases of the nervous system and of the circulation. The next trades on the list with a high mortality from this cause are plumbers and painters.

The employment of the word "plumbism" for lead poisoning needs no explanation, and, beyond the fact that Saturn was the alchemical name for lead, I need only mention that saturnine poisoning, plumbism, and lead poisoning are synonymous.

Lead poisoning has long been known: Galen, in his *De Medicinâ*, condemns the use of leaden pipes, stating that the water which was transmitted through them contracted a muddiness from the lead, and created a kind of dysentery in those who drank it. Nicander—a century before the birth of Christ—described acute poisoning by ceruse, and in his poetic fantasies can be detected an accurate description of details relating to lead poisoning. The Roman architect, Vitruvius, who lived in the time of Cæsar Augustus, forbade the use of lead for conducting water, owing to the ceruse which is formed upon it being hurtful to the human body. Close to the Roman wall, which stretches from Newcastle to the south of Carlisle, built, as many of my hearers know, in the time of Hadrian, there are the remains of Roman camps. Some time ago, in passing over Cilurnum, one of the most perfectly preserved of these camps, I was much interested in finding a leaden pipe jutting out from the wall in a perfect state of preservation, not at all crusted, exactly similar in appearance to

[1] Case of Dr. Norris, quoted by Harrison, *Contamination of Water by Lead*, p. 119.

[2] *Registrar-General's Reports*, p. 25.

[3] Porter, Thesis for the Degree of M.D., Durham University.

that in use at the present day, except that it had been rolled and not moulded. Dr. Bruce, an authority on the Roman wall, informs me that in the station of Cilurnum lead had been largely used for soldering purposes. I regard these two facts as interesting from the point of view of the antiquary. As a matter of fact, lead would be very little used on the Continent by the ancients. Their reservoirs for holding water were made either of marble or of cement, and their domestic utensils were made of pottery or of copper. In their decorative painting their pure atmosphere encouraged the use of fresco. The oxides of lead, so essential in oil painting, would be readily dispensed with, and thus, whereas at the present time the victims of lead poisoning in this country are numbered by the hundreds or thousands, plumbism must have been, in days long gone by, only an occasional phenomenon. How it fared in this respect with the soldiers of the Roman legions, transferred from the plains of southern Europe to the more uncertain climate of Britain, we have now no means of knowing.

Lead is introduced into the system in many forms. The lead miner never suffers. Dr. Montgomery, of Blanchland, and Dr. Robertson, of Stanhope, both of whom have practised for many years in the dales of Durham, have never met with a case of lead poisoning in the miner. The danger arises, in the first instance, during the smelting of the ore. A few years ago the smelting of lead was a dangerous process, but since manufacturers have introduced a hood in front of the furnace, all the fumes are carried up the chimney, and the smelter to a great extent escapes. The men engaged in this work are generally strong, but most of them are pale, and show a well marked blue line on the gums. So injurious are the fumes which escape from the molten metal that cattle grazing in the neighbourhood suffer severely from symptoms of lead poisoning. This has occurred at Leadhills, in Scotland, and in some of the dales in the county of Durham, where the animals are said to be "bellond," an old term taken from the French *bellon*.

Frequently lead poisoning thus introduced amongst animals, has proved of a wholesale character, and been the cause of litigation. Cattle grazing in the fields in proximity to the smelting furnaces have died, the symptoms having been pain in the abdomen and constipation. Dogs, too, which have lapped the water trickling from lead works, have also suffered. These animals exhibited very peculiar symptoms. The subjects of circus movements, they kept wheeling round and round, and were then seen to fall. Dogs which had simply slept on the coats or jackets of their masters who were lead smelters also became "bellond." A few years ago a very peculiar epidemic occurred in France, where women who had simply washed the clothes of their husbands, who were workers in lead factories, suffered from saturnine poisoning.

Some interesting facts bearing upon this point have recently come to light from Germany. Schroeder and Reuss, in dealing with the influence of forge smoke upon the animals of the forest, state that by the road sides and in the meadows and parks near to the forges are to be found many mountain-ash trees. Their berries are a favourite food with thrushes and some species of finches in autumn, and are used as food by nearly all the birds which remain there during the winter. Below and close to these trees were often found birds sickly or dead. Those that were alive had their extremities contracted, and their power of flight appeared paralysed. In a few days they also died, powerless in their attempt to flutter. Without doubt, they say, here is lead poisoning. The birds eat the berries upon which are deposited the particles of oxide of lead, and thus poison themselves. The wild animals which roam around these forges do not appear to suffer from paralysis of their extremities, but a very peculiar circumstance has been noticed by these observers in regard to stags. Their antlers exhibit certain monstrosities: the branches are short and stunted; the pedioles are small, and sometimes are altogether absent, the rosettes in this case being flat and almost touching the cranium; the branches, too, are not shed, or only one is shed, and as a consequence double crowns appear. These monstrosities are most apt to occur amongst stags whose sexual organs have been injured; for stags, like men, have their reproductive organs affected in lead poisoning. On the meadow hay in the neighbourhood of the Altenau forges Freytag found a deposit of lead oxide equal to 0.0027 per cent. Since the introduction of the hood in front of the furnace, to which I have already alluded, other arrangements have been made whereby the fumes from the furnace are prevented from escaping, and lead to the extent of 33 per cent. is obtained from the deposit of these fumes. Gamgee, in his work on the *Domestic Animals in Health and Disease*, draws attention to the fact[4] that cattle have frequently died from drinking water contaminated by lead and from eating grass impregnated with the oxide of lead, and he has shown that the deposition upon land of town manure which contains the refuse of paint, sheet lead from tea chests, and pieces of painted oilcloth has been followed by an outbreak of what is known as "staggers" in the animals that have been allowed to graze in the fields. Additional interest attaches to the fact that certain fields are known by graziers to be dangerous to animals; several crops may even have been raised in rotation before the animals have been placed upon them, and yet death has occurred. The process of working the land and bringing up to the surface lead long buried, and thus allowing it to be influenced by the atmospheric air and rain, explains the danger. Two forms of poisoning, according to Gamgee, occur: the slow form attended by paralysis, and the other acute and due to solid lead having been eaten in large quantities, paralysing the stomach and inducing symptoms such as are met with where animals have filled themselves to repletion, causing obstruction of the third stomach.

Thackrah, in his book on the *Effects of Trades on Health and Longevity*, gives no place to lead-making as a dangerous employment. He introduces the subject in his remarks upon plumbers and painters.[5] Plumbers suffer, he says, from inhalation of the volatilised oxide of lead arising during a process of casting; they frequently complain of a sweet taste in the mouth during the beating of lead and the application of solder; their occupation undermines the constitution. Plumbers are short lived. In Leeds, at the time he wrote his monograph, only two individuals had regularly pursued their employment beyond the age of 40. His book was written in 1831 and, speaking now sixty years afterwards, I think we can safely say that plumbers appear to be a longer lived class than formerly. Painters follow an unhealthy occupation; lead in their case gains entrance into the system partly through the skin and partly through the lungs. Of the occupations in which lead poisoning is apt to arise by absorption through the skin, that of potters, but only the dippers, suffer most. It is their duty to dip the pots into a solution containing lead; it is this which gives the glaze to the ware. Those who have been long engaged frequently suffer from symptoms of lead poisoning, for example, vomiting, constipation, colic, double wrist-drop and tremors. In industrial occupations, as in things in general, it would appear as if customs die hard. We advance slowly. An old author, Ramazzini, represents the potters of his day as affected with tremors, paralysis, cachexia, and he remarks that almost every man thus employed has a cadaverous face. This remark equally applies to the potters of to-day. Amongst other trades in which symptoms of lead poisoning are met with I would mention leather cutters. Dr. Frederic Taylor, of Guy's Hospital, has recently met with cases of lead poisoning amongst men thus employed. These men cut the leather upon leaden slabs, and come to hospital complaining of colic and constipation, and nearly all of them exhibit a well marked blue line upon their gums.

Lindt[6] relates a fatal case of plumbism in a woman who had only been employed for half a year in a type foundry. In spite of warning, she ate her food with unwashed hands; there was no paralysis, but anæmia, jaundice, constipation, colic, blue line on gums, and headache, followed by convulsions and coma, death supervening on the fourth day. Women engaged in gumming bands on to cardboard boxes have also suffered from plumbism.

It is amongst lead workers that the worst types of plumbism are met with. So far as the working of lead is concerned, we have seen that the producer of the raw material never suffers; it is the smelter. The next danger arises during the process of the conversion of the metal into

[4] P. 179, vol. i.
[5] Page 55.
[6] Sajous, *Med. Annual*, 1889, vol. ii, A. 50.

white lead or carbonate. There is no process of preparation of white lead so far known that is equal to the old Dutch or dry method; it is a simple but dangerous procedure. It was introduced into this country about the year 1780, and is briefly this: Thin sheets of lead are placed upon the top of small earthenware pots, which contain strong acetic acid; the pots are arranged side by side in ordinary tan from the currier, and covered with planks; another layer of pots similarly arranged in tan is placed over these, and over these again another, and thus a "stack" is formed of alternations of planks and layers of pots. This is known as the "blue beds," and is of itself not dangerous. The acetic acid slowly volatilises by the heat induced through fermentation of the tan, and the lead is converted into a subacetate, and subsequently into a carbonate. When the conversion has become complete, girls enter the stack—now known as "white beds"—and remove the layers of carbonate of lead, carrying it in little trays on their heads, first to the rolling mills, where the white is separated from the metallic lead, and subsequently it is taken to the stoves—a chamber not unlike a dairy, shelved all round for the trays to rest upon, and always at a high temperature, seldom less than 190° F. It usually takes about fourteen weeks for the lead in a stack to be completely converted into lead carbonate or white lead. Mr. Forster, of Messrs. James's lead works, tells me that if girls are allowed to enter the stack too soon—that is, before the lead acetate is fully converted into lead carbonate—they suffer very readily and severely from colic. The readiness with which girls suffer in the white beds is always an indication to him of the incompleteness of the conversion of the lead acetate. These two—the "white beds" and "stoves"—constitute, in my opinion, the most dangerous part of lead making. Nothing injures a young girl more quickly than a few weeks of work in the white beds and stoves. After being thoroughly dried the lead is ground and washed, then dried as a fine powder. In this form it is packed in casks, a process attended by a certain amount of danger owing to the dispersion of particles in the atmosphere. It was the opinion, when Sir James Alderson delivered the Lumleian Lectures in this College in 1852, that women were less frequently affected by lead than men; but such is not my opinion. Women suffer far more frequently and more severely than men.

Alderson says there is an impression amongst the workers that the fineness of the pores of the female skin in some way protects them. This is a very doubtful supposition: it rather explains their susceptibility, a susceptibility not only of the female lead worker but of females generally. It has been shown that when the two sexes are exposed equally, as in the epidemics of plumbism from water pollution, the fair sex is weaker, and that their nerve centres are more easily undermined by lead. Of accidental lead poisoning water may be regarded as the principal medium by which the metal is carried into the system. It was towards the end of last century that in this country medical men began to study the connection of lead poisoning with the drinking of water. Dr. Lambe, of Warwick, was amongst the first to examine this subject. He regarded spring water as particularly dangerous and unfit for man, owing to its solvent action upon lead, a power due to the saline ingredients which it contained. Guiton Morveau regarded distilled water as even more dangerous. All the relationship that need be dwelt upon now is the fact that some waters act upon lead, whilst others are destitute of that power. The use of some waters is followed by widespread symptoms of poisoning, as witness the outbreak in Sheffield little more than a year ago, where 129 cases are recorded as coming under the observation of six medical men within twelve months.

It is scarcely within the scope of these lectures to enter into the details respecting the chemistry of lead poisoning and drinking water. Those who are interested in this will find it ably discussed in Christison's treatise on *Poisons*, and by Dr. Brown, of Bacup, in his observations on *Plumbism due to Lead-polluted Water*. Water containing acids produced by vegetable decomposition is prone to act upon lead, and especially that which penetrates peaty soils. In this way, I apprehend, are explained the epidemics of lead poisoning which have recently scourged various towns in Yorkshire. Dr. Downes, in his report to the Keighley Board of Guardians, found 68 per cent. of the inmates suffering from lead poisoning traceable, as in Sheffield, to the fact that Keighley had a moorland supply of drinking water which had become acid, the acid having been increased by the preceding drought. Bradford and Huddersfield have also experienced lead poisoning, and in Bacup they suffered severely. Dr. Brown found lead to the extent of two-thirds of a grain in each gallon of water.

The account published by Tronchin of an outbreak of lead colic in Amsterdam more than a century ago lends considerable weight to the view here stated. Until that period lead colic was unknown in Amsterdam. Meanwhile, the residents had been substituting lead for tiles on the roofs of their dwellinghouses, and they collected for culinary purposes the water from the house tops. The rain water was of itself sufficient to act upon the lead, but Tronchin showed that as the epidemic was most severe in its ravages in the autumn, the rain water had become impregnated with acid caused by the decay of leaves from the trees which abounded in the city. Acids generated from decomposing matter and acid emanations from manufactories exert a powerful influence in increasing the solvency of water upon lead. Dr. Herbert, of Whitby, thinks that a danger arises from sportsmen shooting over the moors and leaving behind them tons of lead all over the land. Small shot is composed of lead, arsenic, and antimony, and in some places he maintains the ground is simply paved with lead. The effects of this are terrible to contemplate when we know that much of the water on the moors, which becomes impregnated, finds its way into the towns.

A very interesting case of lead poisoning from drinking water came under my notice a few months ago. Last year I was asked by Dr. Smith, of Ryton, to see, in consultation with him, a gentleman, aged 50, who, a few months previously, whilst in the hay field, became suddenly unconscious and fell. The attack was regarded as syncopal, but from that date he was never well. He complained of severe pain in the abdomen just above the umbilicus and became extremely depressed in spirits. When I saw him, a few months afterwards, he had all the symptoms of a general paralytic. He still complained of abdominal pain and constipation. He had delusions and fibrillary tremor of the tongue and lips; his right pupil was dilated compared to the left; he was extremely cachectic, complained of a disagreeable taste in the mouth, and a blue line was noticed on his gums. His heart and lungs were healthy. He was sent to the seaside for a few weeks, where all his symptoms diminished, but, on returning home, most of them reappeared, the blue line deepening, and his delusions and depression came back again. There was no albumen in the urine. There was, however, a trace of lead in it. The drinking water was analysed, and analysis disclosed lead to the extent of only 0.0028 grain per gallon. This patient died of an intercurrent disease. He retained many of the symptoms of lead poisoning. At the *post-mortem* examination the principal thing noticed was a very marked accumulation of fluid in the subarachnoid space over the fronto-parietal convolutions, slight thickening of the arachnoid and of the pia mater, extreme pallor and hydræmia of brain, with fluid in the ventricles. His wife had also a blue line on her gums, but none of the children. The water from the well passed through several feet of lead piping into his house.

It may not be unimportant to observe here that danger from drinking water is mainly when it has become impregnated with vegetable acids. Acetic, citric, tartaric, and malic acids all act with various degrees of solvency upon lead. To the presence of these acids is ascribed the lead poisoning which follows the use of wines and ciders. Many of these beverages have doubtless become accidentally contaminated with lead, as in the case of the Seltzer water now supplied in Paris. Others, again, have been intentionally adulterated. Wine growers have long known how wine that is acid and harsh can be materially improved in taste by the addition of litharge. This is an old-established fraud, and, as far back as the fifteenth century, was sternly prohibited in Germany. The endemic colic of Poitou, which broke out in 1572 and which lasted from sixty to seventy years, has been ascribed, in modern times and with justice, to the wines having been adulterated with lead. I may remind you that it is from this association with a locality that lead colic was described by Citois as colica Poitou.

Milk that is sour may easily become impregnated with lead. Cider, ginger beer, and lemonade have also been the vehicles for the introduction of lead into the system.

One of the most interesting cases of lead poisoning from the use of fermented liquors that has recently come under my observation is that which occurred in the practice of Dr. Cromie, of Blyth, in Northumberland. In September of last year he was called to see a "botanic beer" manufacturer. The man, aged 44, had been quite well until two years previously, when he lost his appetite. He had never had colic nor sickness, but he had suffered from constipation and dyspepsia. In February, 1890, he had "wrist-drop;" the paralysis appeared first in the right forefinger, which felt at first stiff and numb, and this gradually extended to the other fingers and then to the wrists. When seen by Dr. Cromie at the end of August he had well-developed double wrist-drop, was very anæmic, had blue line on gums and inner surface of the lower lip. The patient had a convulsion, but soon recovered consciousness. For some time afterwards his speech was slow. With the exception of headache, no warning preceded this fit, which was followed by vomiting and convulsions, sometimes one daily, sometimes two reappeared every second or third day. In his last fit, the seventh, patient remained in a state of coma until death. The interesting point in this case is that the "botanic beer" was carried through forty feet of leaden pipe into the shop, and that every morning before breakfast the man took a good draught of the beer straight from the pipe. He died undoubtedly from lead poisoning. The history of his household is soon told. His wife, aged 28, had formerly a good deal of colour; she is now anæmic. This woman has two children, one aged 5, and the other a little over three. Since the birth of the younger she has had a miscarriage; her menses are regular, but rather profuse. At her husband's instigation she has taken "botanic beer" every day for nearly two years. She was seized with colic twelve months ago, had vomiting, headache, and was constipated, but made a good recovery. Shortly after her husband's death she was again seized with colic, the order of symptoms being first constipation, then vomiting and headache, accompanied by pain in the bowels. When I saw her the colic had disappeared, but she was pale, had well-marked blue line along the gums; her pulse was 80, not unduly hard; there was no cardiac *bruit* and no albuminuria. Living in the house with her two children was a domestic servant. The maid, though frequently pressed to take the "botanic beer," refused, as she did not like the taste of it. She has remained quite well, has no blue line, and is not anæmic. The elder child has been living most of the time with his grandmother, and has, therefore, not had many opportunities of taking the "botanic beer." He is not distinctly anæmic, is not constipated, and has only the faintest trace of a blue line on his upper gums. His sister, a child of over 3 years, has lived always at home, and since early infancy has received daily a small quantity of this beer; she is very anæmic, and has a blue line on the upper gum. This child when I saw her could not talk nor even walk well. Her knee-jerks were absent. There was a good deal of staggering, as in locomotor ataxia, with much restlessness and fidgetiness; there was no history of colic, constipation, or of vomiting. Three months afterwards this child died of convulsions, which began on October 13th, and lasted until the 24th. The convulsions were never severe, were more of the nature of tremors, and always attended by profuse perspiration; the urine contained a small quantity of albumen. The temperature throughout was normal, except that on the night before her death it reached 100.8°. It is interesting to note that this child had involuntary micturition and defæcation a circumstance of interest when we know how very frequently in animals poisoned by lead the bladder is found empty, and is seen to contract in convulsive crises.[7]

(To be continued.)

[7] Moreau, *L'Empoisonnement par le Plomb*, p. 73.

PRESENTATION.—On January 30th, at the Norfolk and Norwich Hospital, Mr. H. C. Nance, on the occasion of his resigning the post of house-surgeon, which he had held for six years, was presented by Mr. Cadge, on behalf of the nursing staff, with a handsome fitted dressing bag, with silver mounts.

ABSTRACTS OF THE MILROY LECTURES
ON
DIPHTHERIA;
ITS NATURAL HISTORY, AND PREVENTION.

Delivered before the Royal College of Physicians of London.

BY R. THORNE THORNE, M.B., F.R.S., F.R.C.P.,
Assistant Medical Officer to the Local Government Board; and Lecturer on Public Health at St. Bartholomew's Hospital.

LECTURE III.

THE third lecture was largely devoted by Dr. Thorne Thorne to the subject of "school influence" in relation to diphtheria. That some such influence obtained had been one of the earliest observations following on inquiry into this disease, and it was assumed that the question was simply one of personal infection under specially favourable circumstances. Beyond this the earlier investigations did not go. Dr. Thorne cited as an example of further progress in this matter the story of the Coggeshall epidemic in 1877, from which it was seen that under 3 years of age school attendance did not materially affect the number of attacks; that between 3 and 12 years the incidence was 50 per cent. greater on those attending school compared with those who did not; and that from 12 to 15 years the school attendants suffered three times as much as those not known to attend school. An outbreak at Radwinter was next adverted to, from which it appeared that school attendance had clearly afforded to healthy children at a particular age the special opportunity of coming in contact with others capable of transmitting throat infection. There was also a marked difference in the incidence of the disease at different ages on school attendants and on others; from 3 to 12 years of age 76 per cent. of school attendants were the first attacked in households, whereas, including all subsequent attacks at those ages, they only amounted to 48 per cent. There was also some evidence to show that attack and death were more common, in the same locality, in the case of schools that were overcrowded and ill-ventilated than in others.

But in 1883 an outbreak at Pirbright, which was investigated by Mr. Power, revealed other features of school influence. It was here distinctly shown that the child from 3 to 12 years of age had for a reason other than its age a susceptibility to contract the disease and to convey it home, school-going being the reason in question. Then, again, each time the school was closed the diphtheria practically came to an end; each time it was reopened the disease recommenced, and this without any source of infection that was obvious, although much care was taken to detect any such cause. And although it became quite clear that school attendance had played an important part in the speciality of the diphtheria amongst children at the ages 3 to 12 years, it seemed clear that faulty sanitary circumstances had had no concern that could be detected in bringing about this result. But a further point was illustrated by reference to the facts observed. Not only did diphtheria break out each time school operations were recommenced, but the disease appeared each time with startling suddenness and with fatal gravity, and this without any known intermediate cases which could have admitted of a process of progressive infectiveness, and it seemed that the mere bringing together of the children was responsible for imparting to the throat affection the serious specific quality in question.

Other cases were also cited in which the commencement of school operations had led, after apparent cessation of diphtheria, to sudden "explosions" of the disease; and one instance was quoted to show that other aggregations of children than those actually in schoolhouses operated much in the same way. The case in question was one recorded by Dr. Bruce Low, in which an outdoor school treat was held on a damp day in a tent, after a prevalence of throat disease, the result being that the disease broke out again within twenty-four hours with a virulence and fatality quite in excess of anything that had gone before. And it was held that such aggregations had, under certain circumstances, the peculi-

arity of manufacturing, as it were, an infection of a special potency and virulence.

Another point had also been observed in connection with school attendance, namely, the recrudescence of the infective quality attaching to throat affections, the observations as to this having been mainly recorded by Dr. Astley Gresswell. It had been noticed that a number of persons in different parts of the country, who had years before been attacked with diphtheria, were constantly suffering from throat affections, any change of weather or trifling cold sufficing to produce an acute inflammatory condition about the tonsils. And it having been observed that amongst those associating with such persons there had occurred cases of diphtheria, the origin of which could not be accounted for, the question arose whether the chronic tonsillar affection left in certain persons after diphtheria might not be due to the continued sojourn in them of the material cause of diphtheria. A number of instances were quoted in connection with these occurrences, and it was especially pointed out that in schools diphtheria attacks had occurred immediately subsequent to the recurrence in monitresses, who had previously had diphtheria, of any symptoms of renewed throat mischief, such as was assumed only to have resulted from taking cold. These cases have suggested dormancy and recrudescence in an infectious form of the material cause of diphtheria in an individual. The obscurity involved in such occurrences was also pointed out to be the greater because convalescents from diphtheria who have returned to their work with healthy-looking tonsils, may be found shortly afterwards with creamy patches on the tonsils and pharynx, or even with genuine diphtheria membrane on the fauces, and this apparently without any of those general symptoms usually affecting the system when such results ensue on a primary attack of the disease. Diphtheria would, according to the views expressed, appear at times to become a chronic malady in certain individuals with liability to recrudescence; and glanders in the horse, contagious ophthalmia in children, as also gleet in its relation to gonorrhœa, were referred to as analogous to diphtheria in this respect. A somewhat parallel experience had also been noticed in the case of certain parasitic organisms which exhibited periods of renewed vitality, to which the term "rejuvenescence" had been given. And as regards diphtheria, it was stated that such recrudescences had mostly been associated with unwholesome circumstances and surroundings, much of the same sort as those conditions which had before been shown to induce a form of sore throat which rendered the individual especially liable to receive the diphtheria contagium; the tonsils in such a condition affording exceptionally suitable hosts for sustained maintenance of the virus of the disease. Such experiences, also, may possibly afford one explanation of the circumstance that one attack of diphtheria does not, as is the case with most of the specific fevers, afford immunity against a second or even a third attack.

Dr. Thorne then summed up under a number of headings the various methods in which school influence would appear to be operative in favouring diphtheria, and he laid especial stress on the conditions of school life that tended to communication of the disease from person to person, by reason of the closeness of the mouth and nares of the recipient individual to the faucial mucous membrane of the individual by whom the infection is imparted. And, reverting again to the excess of diphtheria in females at school ages over males, he pointed out how a number of practices which tended to danger—such as the collective singing and intoning of lessons, kissing, and the sharing of sweetmeats—were more commonly sources of mischief amongst girls than amongst boys. And this led him to speak of one possible cause of excess of diphtheria amongst females who had reached more adult years. Premising that age susceptibility had by that time largely passed away, he was inclined to think that a much closer contact with diseased fauces was necessary in the case of adults than in children; and he pointed out that, whereas in diphtheria wards, where nurses were in the habit of carrying the sick children about, the spread of the disease to those nurses was not uncommon, there were instances where no such spread had been known for a series of years, this result being associated with a prohibition ever to lift up or carry about a diphtheria patient. The danger to adults of close contact with diphtheria was exemplified by the terrible risks incurred by surgeons and dressers in endeavouring to save life by suction of blocked tracheotomy tubes; but whilst such action must be regarded as akin to a deed of heroism, the needless actions of parents, nurses, and others, who could not be prevented from embracing and fondling the diphtheritic sick, amounted only to a wanton carelessness of life; and when, as was not uncommon, especially in some northern counties, children were deliberately brought by school teachers to see and even kiss their dying or dead schoolmates, the practice became one bordering on criminal culpability. The various aspects of school aggregation, involving a steadily increasing stringency in bringing together children to the elementary schools under our present Education Acts and Regulations, were next considered in so far as the success in attaining those educational results may have had a bearing on the increasing incidence and fatality of diphtheria both in the country generally and especially in our large towns and cities.

And in this connection Dr. Thorne explained that again and again had suggestions to exclude from school children residing in infected houses and localities been resented because the step tended to diminish the average attendance on which the financial status of the school, and at times of the teachers also, was dependent. Indeed, when children stayed away from causes such as "sore throat" amongst others, there was at times a "whip up" of this dangerous absentee residuum; and it had become notorious that the suspicious form of sore throat previously adverted to could most easily be found in schools; then often followed "explosions" of diphtheria. "And if," said Dr. Thorne, "as I have suggested, the specific organism of diphtheria tends to behave as do certain low forms of vegetable life, may it not be that, just as special characteristics tend to be developed by the gathering together into a hothouse of selected forms of plant life that have hitherto been struggling towards a tardy and imperfect development in the open, so the increased virulence and greater reproductivess of the diphtheria contagium, which would appear in point of time to have been associated with the steady growth of a system by which the young are gathered together for educational purposes, may turn out to be dependent on the aggregation, forced or otherwise, within school premises, of children suffering from such throat ailments as I have indicated?"

ON THE RELIEF OF LABOUR WITH IMPACTION BY ABDOMINAL SECTION, AS A SUBSTITUTE FOR THE PERFORMANCE OF CRANIOTOMY.

By MURDOCH CAMERON, M.D.,

Obstetric Physician to the Glasgow Maternity Hospital; Dispensary Physician for Diseases of Women to the Western Infirmary, Glasgow.

It has always been a recognised rule in midwifery that no woman should be allowed to die undelivered without some attempt being made to save her and her offspring, or, at least, to save her at the expense of the child.

Concerning the latter point, whether we are justified in destroying the infant when alive, there has been, and still exists, difference of opinion, due, in some measure, to religious belief, and likewise to the personal feeling of the husband, who felt that very little hope was held out to him that his wife could be saved by section. Amongst such men we had Napoleon, who, when appealed to by Dubois, said: "Treat the Empress as you would a shopkeeper's wife in the Rue St. Martin, but, if one life must be lost, by all means save the mother." In marked contrast to him we had Henry VIII, who, when thus questioned before the birth of his son Edward, exclaimed: "Save the child by all means, for other wives can be easily found." At the present time such men might be put down as either a good husband but a bad father, or a good father but a bad husband.

The doctrine of the Roman Catholic Church has been that, if you could not extract the child without killing it, you could not, without mortal sin, do so, and likewise, until

lately, it was held that the infant could not be baptised in the uterus, as it should be *natus* before it could be *renatus* by baptism.

Of late years the happy results following Cæsarean section and Porro's operation have done much to efface the dreadful feeling that we have got in such cases to decide whether the life of the mother or that of the child is to have our preference, seeing it is now quite possible to save both.

We must never forget that we have a sacred trust, and I hold we have no right to sacrifice a child, however unequal its life may be in some cases to that of the mother. In advocating the preference for section as against craniotomy in the living child, I do so only after very mature consideration, and with a feeling that to do otherwise would be to sacrifice a life which I was bound to preserve. I think the time has come when the lives of the mother and child may alike be saved, and prefer to think that an infant come to maturity is destined for something greater than to have its glimmering life extinguished by an accoucheur skilled in the use of a dreadful perforator. Let our motto be, "We live to save and not to destroy." Dr. Barnes has recently said: "It is no longer permitted to us, without ample proof of clear necessity, to sacrifice the child in order to save the mother. The cases in which the two lives are supposed to stand in antagonism are vanishing before the light of modern science and skill."



FIG. 1.—Case III. Height, 48 inches; diameter of conjugate, 2 inches.

If anything is needed to sicken one at the revolting practice of craniotomy, I might be allowed to recite the obstetric history of a rachitic woman, who during her three last confinements was under my personal care:—

1st	1862	Embryotomy
2nd	1863	Embryotomy (labour induced)
3rd	1864	Embryotomy
4th	1865	Induced labour at half term
5th	—	Embryotomy (Birmingham L.-I. Hosp.)
6th	1868	Induced labour at half term
7th	1870	Embryotomy
8th	1871	Embryotomy (eighth month)
9th	1873	Embryotomy
10th	1874	Embryotomy
11th	1875	Induced labour at half term.

Comment upon the above case is needless; but I may be allowed to say that I informed my patient that if pregnancy again resulted she would require to submit to section. She took the hint, and I have had no further trouble on her account.

In considering the treatment of cases of obstruction, our decision should be based upon the degree of contraction of the pelvis, the size of the child's head, and its reducibility—unless the obstruction be due to some other cause, such as cancer or the presence of a tumour in the pelvic cavity.

Every practitioner should be able to form a fair estimate of the amount of contraction, as it is easier to measure a contracted pelvis than a normal one, and, therefore, I hold that it does not require a highly skilled obstetrician to say before labour has begun, or during the early stage of the process, that the diameter of the pelvis is, or is not, less than three inches, and that as a matter of fact such a pronouncement is within the skill of the ordinary practitioner. Further, I will assert that the general practitioner must, in the practice of midwifery, be more than a generally useful person, otherwise he will sink to the level of an ignorant midwife. Not only must he be able to form an estimate of the amount of contraction, but, by the patient study of normal cases, qualify himself to form an opinion as to whether it will be impossible for a living child to pass, and also whether, under the circumstances in which he may be placed, it would not be wiser to send the patient where Cæsarean section could be safely performed than to extract a mutilated fœtus through a minimum diameter.



FIG. 2.—Case VII. Height, 50 inches; diameter of conjugate, 1¾ inch.

Upon the skill of the medical man who first sees and examines such a case will always rest the fate of the patient, as a surgeon, however well qualified to perform a Cæsarean or Porro operation, will not assume the responsibility of deciding whether the case could be terminated by forceps or that abdominal section should absolutely be performed. For instance, only recently I had two cases within a few days of each other, both with a conjugate diameter of about 3 inches; but in the one case the child weighed nearly 9 lbs., whereas the other was, if anything, smaller than normal. This shows clearly that much depends on the size of the fœtus, as with the smaller and more compressible head there is less danger of impaction, and frequently these conditions allow spontaneous termination, even where the measurements of the pelvis indicate instrumental aid. Such conditions call for our best attention, for, with a diameter of from one to two inches, where engagement of the head is impossible, no one would hesitate to advise abdominal section, although there will always remain cases—such as where the child is dead or a subject of hydrocephalus—in which craniotomy will be resorted to.



FIG. 3.—Case VIII. Height, 57½ inches; diameter of conjugate, 2⅝ inches.

It is only the skilled practitioner or obstetrician who, influenced by principles and principle, can under such circumstances give an opinion worth having, as such men do not allow a love of novelty, a thirst for notoriety, or a fit of heroics to interfere with their better judgment. Experience alone will enable one to avoid extreme measures in cases with a conjugate measuring more than three inches, and where, by inducing labour near the eighth month, it may be possible to extract a living child through the natural passage. Where the diameter is much under three inches, the child can only be saved by section.

There can be no questioning that abdominal section is a highly dangerous operation, but the danger in most part depends on delay, and death frequently results not so much from the operation as from previous operative abuse. Success depends on prompt interference before the patient is exhausted, as then there is less danger from hæmorrhage, delayed shock, or peritonitis.

When section has been resolved upon another question presents itself, namely, whether Cæsarean section or Porro's operation is preferable. If the former, there still remains to be decided whether the operation will be accompanied or followed by the removal of the ovaries, or the patient be sterilised by the simple expedient of tying both Fallopian tubes. In my last two cases this was done and no harm has resulted, although textbooks would lead us to believe that such a procedure would be surely followed by retro-uterine hæmatocele, resulting from the effusion of blood from the Graafian follicles.

Personally, I am in favour of Cæsarean section where the patient is seen early, and where, I might say, there is a choice of operation. Under such circumstances section is safer for the patient, and offers very little difficulty to the operator, who can readily combat any complication such as hæmorrhage.



FIG. 4.—Case X. Height, 49 inches; diameter of conjugate, 2 inches.

Upon opening the uterus, the operator and his assistant can prevent loss of blood by simply placing each a finger along the cut surface. When the membranes are exposed the utmost care should be taken to prevent rupture of them, as they keep the uterus fully distended. By so doing the wound is smaller after the removal of the child when the uterus has contracted, than if the child had been extracted through a partially contracted uterus from which the liquor amnii had previously escaped.

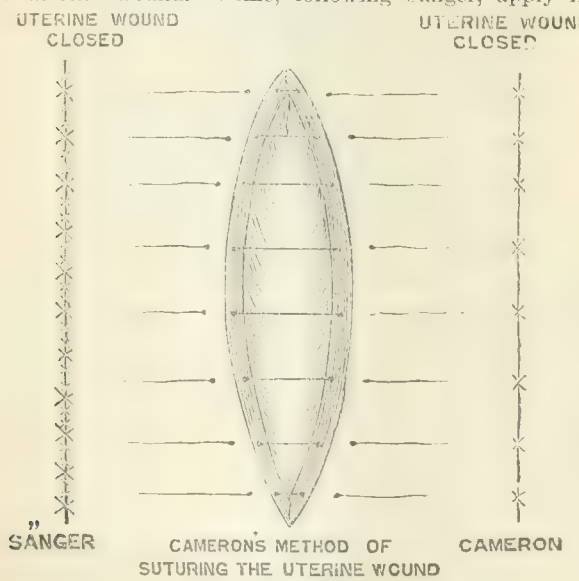
I can quite understand how one could be driven to any extreme in the case of profuse bleeding if the precaution was not taken immediately after the child was extracted to place the cut surfaces in apposition, and to press them tightly together till you are ready to extract the placenta, and imme-

TABLE OF DR. M. CAMERON'S

No.	Date.	Age.	Number of Pregnancy.	Height	Diameter of Conjugate.	Duration of Labour.	Results.		Remarks.
							Mother.	Child.	
				Inches.	Inches.	Hours.			
1	Apr. 10th, 1888	27	Prim.	49	1½	16	Recovered	Male, lived	BRITISH MEDICAL JOURNAL, January 26th, 1889.
2	May 8th, 1889	18	Prim.	48	1	6	Recovered	Male, lived	BRITISH MEDICAL JOURNAL, March 15th, 1890, Fallopian tubes tied.
3	Oct. 8th, 1889	23	Prim.	48	2	48	Recovered	Female, lived	Fallopian tubes tied.
4	Sept. 11th, 1890	24	Prim.	57½	2	15	Recovered	Male, lived	Fallopian tubes tied.
5	Oct. 28th, 1890	19	Prim.	48	1¾	14	Recovered	Male, dead for several hours before operation	Fallopian tubes tied.
6	Dec. 10th, 1890	28	Prim.	56	1¾	22	Recovered	Male, lived	Fallopian tubes tied.
7	Dec. 13th, 1890	24	Prim.	50	1⅞	12	Recovered	Female, lived	Fallopian tubes tied.
8	Dec. 16th, 1890	24	3rd	57½	2⅛	7	Recovered	Female, lived	Embryotomy was done on 2 previous pregnancies. Section by request in this case. Fallopian tubes tied
9	Jan. 3rd, 1891	28	4th	50	2	24	Lived 42 hours	Twin females, lived	Embryotomy was done on 3 previous pregnancies. Section by request. Labour in 8th month due to a fall of about 10 feet down a stair with loss of blood.
10	Feb. 16th, 1891	28	Prim.	49	2	9	Recovered	Female, lived	Fallopian tubes tied.

diately after it has been extracted, again to press the cut surfaces together and hold them so, whilst the uterus is everted and stimulated to contract by gentle kneading. Only after this has been done is it safe to introduce the stitches. The uterus answers readily to friction, and then deep sutures can be easily inserted without fear of further bleeding. I am of opinion that the use of an elastic band induces inertia, and so gives rise to hæmorrhage on its removal; besides, it induces asphyxia in the child. If treated as I have indicated, there should be no more danger from bleeding than in a normal delivery.

Unless the child had been dead for some time, I should be opposed to any interference with the uterine cavity by medication, the application of tampons, vaginal drainage tubes, etc., as such are needless and a source of danger. There is great difference of opinion regarding the method of closing the uterine wound. Some, following Sänger, apply from twenty to thirty or even more deep and superficial stitches, whilst others—myself among the number—simply insert from seven to twelve deep stitches, and reserve superficial sutures for any points where it might be thought advisable to use them. In both instances antiseptic silk could be used, although I prefer gut for the superficial ones.[1]



Concerning the time for operation, I am opposed to interference before labour has commenced, as there would certainly be a greater chance of *post-partum* hæmorrhage than if performed after labour had commenced, when the uterus contracts more readily upon being emptied. Speed in operating is an important factor, as a long exposure is likely to induce death from shock.

Porro's modification I am inclined to reserve for cases where the uterus has been injured or ruptured by violent and vain attempts to extract the fœtus by the natural passage.

In prolonged labour where no injury has been inflicted, I would still prefer Cæsarean section, as done in my third case, in which the liquor amnii had escaped two days before operation.

I noticed that Porro had been recommended in cases of placenta prævia, but feel inclined to look upon this more in the light of a surgical joke than as a serious suggestion. Placenta prævia is, indeed, a dangerous complication in pregnancy or labour, but it is not necessarily fatal. During the past two years I have had over twenty cases in public and private which have all been successfully treated by ordinary measures.

Further, it is satisfactory to have the assurance that the author of such a proposal has not practised midwifery for nearly a quarter of a century, otherwise his suggestion might call for severe comment.

On two previous occasions I had the good fortune to be able to set before the members of this Association the satisfactory results following the treatment of obstructed labour by Cæsarean section. This year I am happy to record the equally successful result in a third case.[2] The particulars of the first two cases are detailed in the BRITISH MEDICAL JOURNAL of January 26th, 1889, and of March 15th, 1890; and it will therefore suffice that I should simply for reference in-

[1] In several instances these uterine sutures have been expelled months after the operation through a small sinus which soon healed, and gave no further trouble.

[2] Since the meeting other seven cases have been operated upon, particulars of which are appended.

CASES OF CESAREAN SECTION.

Days.	1		2		3		4		5		6		7		8		9		10		11		12	
	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.	M.	E.
Temp.	98.6	97.8	99.8	98.8	97.8	98.0	98.4	99.2	99.6	97.2	97.2	98.1	98.0	99.8	97.8	99.8	97.8	100.6	97.8	97.2	97.1	98.6	98.0	98.0
Pulse		106	100	111	112	98	102	104	112	84	88	80	92	102	104	118	108	124	108	110	100	100	96	80
Temp.	98.2	100.2	100.8	99.2	102.0	100.0	100.4	100.2	100.4	100.4	99.6	100.0	100.0	101.0	102.0	101.2	101.4	101.0	100.0	100.4	100.4	101.0	98.0	99.6
Pulse	124	115	100	96	102	108	100	110	120	101	102	102	118	120	120	118	120	118	112	112	112	104	108	96
Temp.		100.4	99.8	100.2	99.8	101.2	99.6	101.2	100.8	101.6	99.8	102.4	100.4	101.8	101.4	100.2	97.4	100.4	100.6	99.8	98.2	99.2	98.6	98.6
Pulse		120	118	110	100	106	90	94	92	100	94	98	96	104	106	106	84	94	96	90	84	86	74	82
Temp.		98.4	98.8	99.4	98.2	100.0	98.6	98.0	98.2	98.0	99.2	98.4	98.6	98.0	98.6	98.0	98.6	98.4	98.6	98.4	98.6	98.4	98.6	98.4
Pulse		80	82	100	84	94	87	80	89	80	93	87	86	89	84	86	79	80	79	80	79	78	79	80
Temp.		100.4	99.4	101.2	101.0	102.0	101.4	101.8	101.4	100.0	99.6	99.0	100.4	101.6	99.2	98.2	98.6	98.2	98.8	99.2	98.6	98.2	98.6	98.6
Pulse		87	108	122	116	118	112	116	104	90	94	92	90	102	80	80	80	89	80	86	78	72	80	78
Temp.		98.4	100.0	98.6	100.2	98.4	99.0	98.2	101.0	98.4	100.0	99.2	98.2	98.4	98.4	98.4	98.4	99.4	98.4	99.2	98.4	98.4	98.4	99.2
Pulse		132	128	116	122	120	112	112	122	112	100	100	116	100	102	100	96	102	102	100	90	96	100	96
Temp.	99.0	99.6	100.2	100.2	99.4	100.4	99.6	98.4	98.4	98.4	98.4	99.4	98.8	99.2	99.0	100.2	98.4	99.4	100.0	100.2	98.2	101.0	100.4	100.6
Pulse	94	104	100	118	110	120	106	100	100	100	104	100	98	96	94	100	102	102	100	100	90	102	98	100
Temp.	98.4	98.4	98.6	98.4	98.8	99.2	98.4	99.2	99.0	99.8	99.8	99.6	99.0	99.6	98.6	100.2	99.0	99.0	98.8	98.2	98.2	98.4	98.4	98.4
Pulse	96	100	112	102	100	100	100	96	91	98	100	96	92	96	90	96	80	92	96	90	90	86	90	84
Temp.		98.6	98.4	100.2	101.0	died																		
Pulse		82	70	104	136																			
Temp.		98.4	100	99.2	99	98.4	99	98.6	98.4	99.2	98.4	98.4	98.4	98.4	98.4	98.6	98.6	98.6						
Pulse		91	104	115	102	106	104	90	76	98	80	73	80	74	76	76	76	76						

clude them in a tabular statement along with the third case, which is of more interest than the previous ones, seeing the subject of the operation had been a long time in labour.

CASE III.—On the morning of Tuesday, October 8th, 1889, I was waited upon by a practitioner from a neighbouring town, who desired my advice upon the case of a young unmarried woman who had been in labour since the previous Sunday, when the membranes had ruptured. He stated that the case was one of contracted pelvis, and that the conjugate was not more than 2 inches. She had been attended by a handy woman, and he had only been called in owing to the tedious labour. The os was dilated, but the uterus was in a state of complete inertia. Another practitioner had seen the case, and they both agreed that it was one for abdominal section. As the house was unsuitable and there was no hospital in the town, I was of opinion, after considering all the circumstances, that the best plan was to send her right into the city by train, which I thought was safer and quicker, as the journey would not exceed half an hour. This was accordingly done. Seeing there were no labour pains and the child was still alive, the patient, after her admission into the Maternity Hospital, was allowed to rest two hours before operation.

Notes.—A. T., aged 23, unmarried, and a primapara, measured 48 inches in height, and was markedly rachitic. The pelvis measured between the anterior superior spines 9 inches; iliac crests, 8½ inches; external conjugate, 6½ inches; internal conjugate, 2 inches. At 3.23 P.M. the patient was put under the influence of chloroform. Dr. Reid, my colleague, assisted; Dr. Oliphant attended to the instruments; Drs. Gray and M'Gregor administered the chloroform; whilst Dr. Black waited in readiness to receive the child in case it should require special attention. The nurses took charge of the sponges, etc. The abdomen and genitals were shaved, washed, and disinfected, after which a mesial incision was made from the umbilicus to a little above the pubes. A few vessels were clamped with compression forceps. Upon opening the peritoneum a quantity of ascitic fluid escaped. The uterus when exposed was steadied and held forwards. An incision was then made straight down the anterior aspect for about 5 inches, care being taken to arrest the gush of blood from the sinuses by placing a finger on each side along the bleeding surface. The child, a female, was then extracted by the presenting head, and the cord divided. She weighed 6 pounds, and measured 22 inches. Immediately after the removal of the child the cut surfaces were placed in apposition whilst the uterus was stimulated to contract by gentle kneading. The placenta was then extracted, and the cut surfaces again placed in apposition and held firmly together, whilst gentle kneading was resorted to, when the uterus contracted firmly. A subcutaneous injection of ergotin was administered. Eight silk antiseptic ligatures were passed through the outer two-thirds of the uterine wall. Afterwards three superficial sutures were inserted. Both Fallopian tubes were then ligatured near the junction of their outer and middle thirds. After the uterine wound and abdominal cavity had been carefully sponged, the external wound was closed by antiseptic silk sutures. Three strips of adhesive plaster were applied to prevent strain upon the stitches, after which the wound was dressed with boracic cotton and sublimated Gamgee. The clothing was immediately changed, and hot pans placed round her. Time occupied: 45 minutes.

On recovering from the chloroform she was as well as could be hoped for, with a temperature of 99.8° F., and a pulse of 100. She dosed a good deal, but did not sleep any length of time. Feeling thirsty she had several sips of hot water. During the night she wakened frequently, and had sips of hot water and milk. Skin moist. Passed urine.

October 9th. Passed 18 ounces of urine in twelve hours. The patient is restless, thirsty and talkative; says she would be quite well if I would just give her a good bowl of porridge and a cauf (chaff) bed. Complains of uneasiness about the abdomen. Passed flatus downwards and felt easier.

October 10th. Had passed urine freely during the night. Still pained in the back, but a small pillow under it makes her quite comfortable. A ½-grain morphine suppository was given, and shortly after she fell asleep and slept soundly for five hours. She says she is in a new world, but feels very hungry.

October 11th. Patient did not sleep so well as on the previous night; when awake she had milk and hot water frequently. Small pieces of ice given to relieve the thirst. Had a little toast and tea. Perspired freely.

October 12th. Had a comfortable night, free from pain. She seemed bright and fresh after her sleep, and quite inclined for conversation.

October 13th. "Never felt better in all her life." She was very sleepy during the afternoon. Had tea and toast with frequent sips of hot water and milk.

October 14th. Passed a comfortable night but complained

of a slight pain in the abdomen. The dressings were unfastened, and upon pressure a quantity of straw-coloured fluid escaped near one of the stitches. Wound again dressed. Had an enema of soapy water and glycerine, after which the bowels acted quickly and well, with no pain on evacuation.

October 15th. Had a ½-grain morphine suppository. Slept well. Quite free from pain. Dressings changed. A small quantity of pus exuded on pressure.

October 16th. Patient very quiet; wound dressed; the discharge to-day was very slight, and was taken up by a small syringe.

October 17th. Very slight discharge on dressings. The wound was quite healed, unless at the point where the discharge first appeared. Had a free motion of her bowels.

October 18th. Passed a good night. Slept well and seems bright. She cannot be kept from singing. Had arrowroot, tea and toast. Very little discharge.

October 19th. Had a ½-grain morphine suppository. Slept frequently and did not complain of any pain. Had porridge and milk and seemed very well pleased. Little or no discharge on the dressings.

October 20th. Diet. Porridge and milk, tea and toast, and chicken broth.

From this time the patient made a rapid recovery and was soon on full diet. The lochia had almost ceased on October 24th.

This patient had been living with the father of her child, and both having expressed the desire to be lawfully married, the marriage knot was tied before leaving the hospital, the first and second Cæsarean patients acting as bridesmaids. After the ceremony I had the trio photographed in the back court, and they formed a peculiar company.

There is very little to mention regarding most of the new cases, but I might explain that Case VIII happened to be in the hospital at the time I operated on Case II, and she was so impressed with the good recovery that patient made that she declared that if ever she was pregnant again she would prefer a living child by section rather than undergo embryotomy. I append a chart, which speaks for itself, showing the temperature after embryotomy and also after Cæsarean section in the same patient.

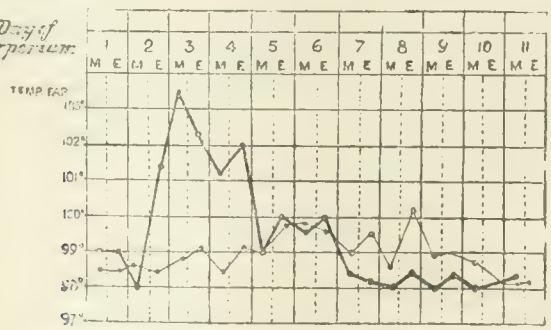


Chart of Case 8.—Thick line, temperature after embryotomy. Narrow line, temperature after Cæsarean section.

The ninth case can scarcely be reckoned as a death from Cæsarean section. The facts were not revealed until after the operation, when she informed the nurse that she had tumbled down an outside stair. On inquiry we learned that she had fallen about ten feet, and that there was a discharge of blood with labour pains immediately after. Next day, in the street, she was seized with a flooding and severe pains. She was immediately removed to the hospital. On examination, the os uteri was found dilated, but the membranes were unruptured. As the conjugate was only 2 inches, Cæsarean section was at once performed. The children (twins) are still alive, but the mother, who was progressing favourably, became seriously ill on the second day and died. On examination, the uterine and abdominal wounds were found closed, but the examiner, Dr. Dewar, found that the heart was very fatty and its muscular tissue pale. For the first time the placenta was found lying in the line of incision. This would have been a more serious complication but for the precautions taken in opening the uterus.

At an earlier period I recommended that a vertical incision should be made for about five inches in the anterior wall of the uterus, It is much safer, however, to begin by making a small button-hole incision, and then gently cut deeper until the membranes are exposed, when a peritoneal director can be introduced and the excision extended from within outwards with a blunt-pointed bistoury sufficiently to admit two fingers, which, acting as a director, protect more effectually the membranes from puncture. The incision is then extended upwards and downwards, but the operator should avoid cutting downwards too far, in order to ensure proper contraction of the uterus.

In this case, when carefully cutting down upon the membranes as described, a spout of dark-coloured blood made me suspect that the placenta was immediately under the incision. With the tip of the left forefinger I arrested the bleeding, and then made a second small incision about half an inch higher up, in the hope that I might possibly reach the membranes, but a second spout of dark blood clearly indicated that the placenta lay beneath. This bleeding was easily controlled by placing the tip of the second finger on the bleeding aperture. No time was to be lost, as the bleeding was expected to be serious. Speedily the uterus was opened for about 5 inches, the placenta separated, the twin children extracted, and the double placenta removed. The uterus speedily contracted, and was firmly pressed with warm sponges. Very little blood was lost, and no bleeding took place after the uterus was emptied. No doubt exists in my mind that this patient died from the injurious effects of the fall.

The accompanying plates along with measurements in table give a very good idea of the marked deformity in all these cases.

A tenth case, Fig. 4, is at present in the hospital. She is 49 inches in height, and has a conjugate diameter of 2 inches. Operation on February 16th. Child, female. Both doing well.

A SUCCESSFUL CASE OF PORRO'S OPERATION IN INDIA.

By Surgeon-Major G. G. MACLAREN, M.D.,
Civil Surgeon, Dehra Dun, N.W.P., India.

On the morning of November 10th I was hurriedly summoned by the hospital assistant in charge of the dispensary to "operate on a woman who had been in labour for four or five days." On reaching the dispensary, I found the woman's relations had brought her from Rajpore, a village on the Dehra-Mussoorie road, distant about five miles. On inquiry and examination, I elicited the following history:—

M. K., Mussulman, aged 22, married twelve years ago; began to menstruate six months after marriage, and remained in good health for six years after this, when she suffered from a severe attack of rheumatism, which confined her to bed for over one year. During recovery from this she could walk about only with the aid of a stick, and ever since she had not been able to stand erect or to walk in an upright position. Her husband having left her during her illness, she married another man about a year ago, and conceived for the first time about three months after marriage. In due course the pains of labour commenced; but, after "five days of extreme pain," and no delivery occurring, the relatives, believing the child to be dead, brought her to the dispensary.

On examination, I found the pelvis extremely small and undeveloped and the lower part of the spinal column distorted and projecting forwards, carrying with it the upper part of the sacrum. The outlet of the pelvis was also so contracted that I could with difficulty introduce my two fingers. The passages were dry. The os was partially dilated, the membranes, of course, ruptured, and the head of the child (which was dead) presenting; but it was so firmly jammed at the brim that even on severe pressure I could not pass a finger round it. In fact, the uterus was so firmly contracted on the dead fœtus that there was no room for the passage of instruments over the head, even if the outlet had been spacious enough for their introduction. Embryotomy was, of course, out of the question. The general condition of the patient was alarming. She appeared to be moribund. Pulse 120,

small and feeble; voice a mere whisper; sordes on teeth and lips; tongue dry. All uterine action had ceased, and it seemed to me that unless something rapid was done there was little hope of anything but death from exhaustion.

With the assistance of Hospital Assistants Chundun Singh (retired), Doorga Prasad (in charge of dispensary), and Achru Ram (in charge of gaol and police hospitals), I proceeded at once to operate. Having drawn off the urine and washed the abdominal walls, etc., with a strong bichloride lotion, Achru Ram at the same time administering chloroform, I made an incision a little to the right of the median line, half-way between the umbilicus and symphysis pubis, cutting down at once on to the uterus. Introducing two fingers, I enlarged the incision down and up, having the bladder—which was lying collapsed and exposed at the lower part—kept out of the way by the points of my fingers as the incision was being extended.

I then waited a short time until all bleeding (from a few veins) had ceased, made an incision into the body of the uterus, somewhat to the left of the median line, exposing the back of the fœtus, and extending this by the introduction of my finger in the same manner as in the primary incision, both up and down, extracted the child—which was a fully developed male—cut through the cord, and put it (the child) aside. I then, leaving the placenta inside, compressed the uterus with both hands, causing it to contract somewhat, and pulled it, along with the ovaries, completely out of the abdomen, and handed it over to one of the hospital assistants, who held it in that position until I had transfixed the cervix with a couple of steel knitting needles. These I introduced at an angle, so that they crossed each other in a line parallel with the fold of each respective groin. While one hospital assistant dragged the uterus well forwards, and another kept the intestines *in situ*, I passed an india-rubber drainage tube firmly round the cervix, below the level of the knitting needles and, tying it there firmly, cut off all the structures above, which included both ovaries. There was scarcely a drop of blood lost. The walls of the abdomen were brought together by interrupted silver sutures, the peritoneum being included in each stitch. A glass drainage tube was inserted on the umbilical side of the stump, and the whole dusted over with aristol, a many tailed bandage relieving the tension on the sutures.

After the effects of the chloroform had passed off, 20 minims of laudanum were given. The operation lasted less than half an hour, and not more than an ounce of blood could altogether have been lost. On my evening visit I found that the patient had slept for four hours and had passed urine without the aid of the catheter.

The subsequent history of the case is one of uninterrupted recovery. There was a little tympanites for two days, which passed off when the bowels were relieved by a turpentine enema. The incision above and below the stump healed by first intention.

The knitting needles and tubing were removed on the third day, the stump being allowed to drop back into the pelvis, and the drainage tube on the fourth. Since then the parts have been syringed out twice daily with a weak boracic acid lotion, the abdominal walls, vulva, etc., being carefully dried and dusted over with aristol powder, a many tailed bandage of course being used as a support. No other treatment has been found necessary. After the operation the temperature never rose above 100°, nor the pulse above 96.

November 21st. This is the eleventh day since the operation. All sutures are removed; the cavity is filling up and contracting rapidly; bowels and bladder are acting naturally. Temperature normal, pulse 82, and appetite voracious.

November 30th. The woman is "up and about," and the wound entirely healed. She has gained markedly in flesh, and all her digestive functions are normal.

December 9th. She is walking about, and now fit to go to her home.

A SUPPLEMENT to Squire's *Companion to the British Pharmacopœia*, containing notes on the additions made in 1890, has been issued by Messrs. Churchill.

A ZOOLOGICAL station has been established on the borders of Lake Plön, in Holstein. The German government has promised an annual subvention.

CASE OF CÆSAREAN SECTION.

By R. F. GRANGER, L.R.C.P. AND L.R.C.S.Ed.,
Surgeon Whitby Workhouse Infirmary.

My excuse for publishing this case is the rarity of the operation in private practice and the remarkably successful result. I was called in to see the patient, S. P., aged 24, at 6 P.M. on November 4th, 1890, and found her to be in the second stage of labour. She was a dwarf, 4 feet in height. Above the pelvis she was well developed and of normal size, but her pelvis was extremely small and rickety, and her lower limbs did not exceed 16 inches in length. On my arrival the pains were occurring every two minutes, increasing in rapidity, and on vaginal examination the conjugate diameter of the pelvis was found to be only 1¾ inch.

Drs. Wilson and Stonehouse consulted with me, and it was decided that Cæsarean section was the only remedy. In consequence of the poor accommodation at her home, she was at once removed to the workhouse infirmary, and when she arrived the pains were almost gone. She was at once prepared for operation, and I performed it in the presence of Drs. Wilson, Stonehouse, and Tinley. The latter gentleman gave ether.

I had the bladder emptied. The operation was performed antiseptically. In consequence of the small distance between the umbilicus and pubes, the incision extended between these two points; an incision of the same extent was made through the linea alba down to the peritoneum, and the peritoneum was divided on a director for the same distance. The uterus appeared at the wound, and no protrusion of intestines occurred. I made an incision through the uterine wall the length of the abdominal wound. Very little bleeding occurred; the bleeding vessels were at once secured, and the uterine wall hooked up to the edges of the skin incision. The membranes were cut and the right arm presented, the child lying in the normal position. The head was found and with difficulty extracted, on account of the small size of the wound; the body followed without difficulty, but the placenta, being slightly adherent to the left side, was removed after some little trouble. There was very little bleeding, and the uterus contracted firmly immediately after removal of the placenta, so firmly, indeed, that I was some time in finding the uterine incision. The uterus was brought out of the abdominal wound and held between the hands for about a couple of minutes to ensure continued contraction. The uterus being replaced, a drainage tube was introduced through the incision into the vagina, and the uterine incision closed by five silver sutures.

On examination there was practically no blood, as far as could be seen, in the peritoneal cavity. Seven silver sutures were introduced through the entire thickness of the abdominal wall; carbolised dressings and a flannel binder were applied.

The patient rallied well after the operation. On visiting her the following morning she said she had slept well, and had been very little troubled with after-pains. I had the dressings changed, and very little discharge was found from the abdominal wound, but a free and very offensive discharge had occurred from the vagina. The catheter was used once, but after that she had a free escape of urine. The wound healed by first intention. The temperature was 100° twelve hours after the operation, and it never exceeded that. The wound was dressed daily, and the vagina syringed out twice a day with a weak solution of carbolic. She was given a mixture of tinct. opii and sp. æth. nit., and kept on gruel for the first week, and then allowed beef-tea. She slept well and took her food well throughout the whole course of her recovery, which was uninterrupted, and she was allowed to sit up on the nineteenth day, and discharged on the forty-second day. The child lived.

REMARKS.—The success of the operation was probably chiefly due to its being performed before the patient was too far exhausted, to the smallness of the incision, that of the uterus involving neither fundus nor cervix. The case is noticeable in there being no apparent shock, in the rapidity in which the wound healed, and in the entire absence of bad symptoms.

A MODIFICATION OF HYSTERORRHAPHY FOR CHRONIC SENILE PROCIDENTIA.[1]

By A. D. LEITH NAPIER, M.D., M.R.C.P.Lond., F.R.S.Ed.
Physician Accoucheur St. Pancras and Northern Dispensary.

THE practical requirements for successful ventral uterine fixation are—to heal erosions and ulcerations, and reduce the size and weight of the uterus before attempting fixation. So far as practicable, vaginal prolapse must be corrected by astringent douches—for example, oak bark, quebracho, etc. The uterus should be temporarily supported by a pessary; above all, hyperplasia must be corrected by rest in the horizontal position. As a lesser operation, perineorrhaphy, with or without colporraphy, may be first tried, especially in cases where rectocele or cystocele is a marked complication. Despite all these measures, a few cases will be found to require something more. Unless a trial of shortening the round ligaments is made, ventral fixation of the uterus is the only radical cure.

For chronic senile procidentia, the following procedure seems to me likely to become more generally used than any hitherto employed:

Operation. The uterus is well returned within the vagina; then, by means of a broad-pointed sound-like repositor, it is pressed up against the abdominal peritoneum. A short incision is made in the mid-line through the superficial and deep abdominal layers down to, but not through, the peritoneum. A narrow curved needle, with a fairly large eye, of Hagedorn's pattern, and fixed in a long firm handle, is introduced *per vaginam*, and brought out through the right side of the uterus and through the exposed abdominal peritoneum. The needle is threaded with strong silkworm gut or reindeer tendon, or silver wire, from the abdominal side; the needle is withdrawn through the same puncture, the thread is drawn through, and the lower end brought into the vagina. The ends of the suture are fixed with catch forceps. The needle is disinfected, then reintroduced, and made to pass through the left side of the uterus and the abdominal peritoneum covering it; the needle is threaded as before, and, on being withdrawn, brings the left side thread into the vagina. There are now two single threads or two free ends inferiorly, with a loop on the abdominal aspect; the latter should be divided, and the ends fixed with forceps. The forceps on the vaginal ends of the sutures are removed, and on each suture a small, stout flattened ovoid glass disc, with rounded edges, or a plate of decalcified chicken bone is slipped. A little manipulation may be needed to get the discs through the cervix. As a rule this can be managed by steadying the uterus, if need be, by volsellæ, and then guiding the discs sideways by forceps, or by gentle traction on the abdominal ends of the sutures. Before tightening the sutures, care must be observed that the intrauterine repositor maintains the fundus uteri in close apposition to the abdominal peritoneum. The sutures are now drawn tight from the abdominal ends till both discs are closely applied to the inner uterine wall; the operator should be able to lift up the uterus by means of the threads. If the uterus is unduly large, or if there is any doubt about the position or strength of the sutures, a third or fourth disc may be introduced in the manner already described, but this will seldom be necessary. The abdominal ends of the sutures are now threaded in an ordinary Hagedorn's needle, and passed through the muscular layers of the abdomen; discs of bone or glass may be slipped on, and the sutures secured and buried. At times the sutures from the opposite sides are tied together and then buried. The intrauterine repositor is withdrawn. (Two deeply buried silkworm gut stitches, including the whole thickness of the uterine wall, but not passing through the endometrium, may be used to further connect the uterus with the abdominal muscles. These latter stitches are only to be used when the uterus is large and heavy). The abdominal wound is closed. The vaginal ends of the sutures are not cut short, but allowed to remain as drainage tubes for ten days. The vagina is packed with antiseptic tampons for a fortnight. If the sutures are not loosened by the end of a fortnight, they are cut off at the level of the os. The patient should be kept in bed for three weeks after operation, and, in a considerable proportion of cases, it may be desirable that a pessary should be worn for two or three months after getting up. In event of retro-uterine adhesions, it may be necessary to open the peritoneal cavity and break these down. If this has to be done, a strip of uterine peritoneum should be dissected off by scissors and the uterine surface stitched to the parietal peritoneum, as practised by Caneva, of Milan, and many others.[2] This should be done after the intrauterine sutures have been passed, but before they are tightened.

The advantages claimed for this operation are—

(1) It gives more secure and reliable fixture than any other.

(2) The time occupied in performing the disc operation is much shorter than in plastic methods.

(3) Sufficient adhesive peritonitis is induced to warrant belief that, after the absorption of sutures (if destructible sutures are employed), the uterus will retain its relations to the abdominal wall.

(4) The risks of bleeding are *nil*. The risks of septic absorption from the thread passing through the uterus are practically *nil;* fluid matter will come down into the vagina, and the sutures, passing through the substance of the uterus with the closely applied discs, block the uterine end of the suture tract, and prevent passage of fluid into the peritoneal cavity.

(5) The operation is much easier than a plastic method. Any operator conversant with the uterine sound can do all that is needed.

I believe that strands of glass threads might make an excellent and imperishable suture, pliable as silkworm gut, non-irritating, and more durable than silver.

In senile uteri, the small glass discs do no harm; probably they pass out in course of time. In younger women, chicken-bone plates (like Senn's intestinal plates) should perhaps be preferred. They may pass out or become absorbed. The adhesions produced may also become absorbed. But if the uterus is kept well up for a time and the vaginal walls regain tonicity, the procidentia will be found cured, even if time destroys the adhesions and absorbs the sutures.

[1] Read in the Section of Obstetrics at the Annual Meeting of the British Medical Association held in Birmingham, July, 1890.

ON OPERATION FOR FRACTURE EXTENDING INTO JOINTS.

By W. WATSON CHEYNE, M.B., F.R.C.S.,
Surgeon to King's College Hospital, and to the Paddington Green Children's Hospital, etc.

FRACTURE in the immediate vicinity of and extending into a joint is an injury which must always cause serious anxiety with regard to the future function of the joint, more especially if the fracture is a comminuted one, or if, owing to the occurrence of swelling before the case comes under notice, a satisfactory diagnosis of the exact injury cannot be made. No doubt, in some cases, a fairly satisfactory result is obtained where early passive motion and subsequent massage are employed, but too often the result is considerable and sometimes serious impairment of movement. The question, therefore, arises whether, at the present time, seeing the impunity with which we can open healthy joints under aseptic precautions, we ought not to cut down at once in certain cases of fracture extending into joints with the view of restoring the fragments to their proper position or of removing useless fragments, especially where the fracture is a complex one, or where comminuted fragments are present which cannot be manipulated into position, and which tend to lock the movements of the joint, and interfere permanently with its function. I venture in this paper to bring forward four cases in which, for the reasons above given, I have interfered by operation with, I think, great benefit to the patients. I only speak here of recent cases. Some years ago, in my book on *Antiseptic Surgery*, I mentioned several instances in which joints had been opened in the course of operation for badly united fractures in the neighbourhood of joints, or extending into them, and since that time the number of cases of that kind has considerably increased; nor have I included opera-

[2] *Hystéropexie*, par M. Baudoin, pp. 318-370. Paris: 1890.

tions for recent fracture of the patella or olecranon, of which I could have brought forward a considerable number, for operative interference in these cases is looked on now by a number of surgeons as the proper immediate treatment: it is the treatment which I always adopt, and I have seen no reason to abandon it.

Case I. *Partial Fracture of the Head of the Radius.*—This case is not one of immediate operative treatment, for I did not see it till some weeks after the accident, but I have included it because it is a rare injury, and because it is a typical example of one class of cases where early operation is called for—namely, those where a joint is locked by a loose fragment which cannot be replaced in its proper position.

Miss S., aged 26, was thrown out of a carriage on August 3rd, 1888, and in falling struck the outer side of her left elbow joint against the edge of the seat, and the carriage in overturning struck the arm again about the same place. The result was a small contused wound above the olecranon, which, however, did not extend deeply and soon healed, and a fracture of the head of the radius, which was diagnosed as fracture of the shaft of the bone, and treated with anterior and posterior splints. When the splints were left off four weeks later the following was the state of matters: the forearm was completely pronated and supination was impossible; the forearm was almost completely extended, the range of movement was very slight, and attempts at movement caused great pain in the elbow joint. When I saw the patient for the first time on September 20th, the condition of the arm was as above described, and on examination of the elbow-joint a loose fragment of bone was felt at the posterior part between the olecranon and the head of the radius; there was no swelling of the joint and no evidence of any fracture of the shaft of the radius. The diagnosis was partial fracture of the head of the radius, the loose and displaced fragment locking the joint.

On September 25th I made a longitudinal incision over the posterior and outer aspect of the elbow, and on opening the joint and exposing the loose fragment I found that it consisted of about half the head of the radius, which had been chipped off and become wedged between the bones, thus completely locking the joint. On removing this piece of the bone and breaking down the adhesions, which were pretty firm, perfect movement of the joint could be obtained. The remaining portion of the head of the radius was left, the wound stitched up and dressed aseptically.

As regards the after-progress of the case, very little need be said. The wound healed by first intention, and at the present time the movements of the joint are absolutely perfect. At first there was considerable tendency to stiffness, more especially as regards flexion and supination from reunion of the previously existing adhesions, but by careful passive motion and massage this was ultimately completely overcome.

This case seemed to me to be worthy of record, for two reasons: first, on account of the peculiarity and rarity of the fracture; and, secondly, on account of the treatment adopted.

The broken fragment consists of about one-half of the articular surface of the radius at the posterior part. The line of fracture runs in the first instance directly downwards through the cartilage and the shell of the bone, and then turns backwards, downwards, and inwards. Thus the thickest part of the fragment is at the posterior and inner surface. About one-half of the anterior and inner part of the articular surface of the radius was intact, and remained united with the shaft. Another point of interest is the displacement which had occurred. The detached fragment had been turned completely upside down, so that the articular surface looked downwards, and not only so, the fragment had been turned round so that no manipulation could have put it in its place. I suspect that in the first instance, the force, acting obliquely downwards and outwards chipped off this portion of the head of the radius, and turned it upside down, and then the second blow or the subsequent movements of the arm turned it round, and wedged it in between the bones. There was no attempt at bony union of the fragments.

Partial fractures of the head of the radius are rare, but Bruns records twenty-two cases of longitudinal fracture, in five of which this was the only injury. Mr. Wainewright, in the *Clinical Society's Transactions*, vol. xx, records a case complicated with fracture of the coronoid process of the ulna (the most common complication), in which he removed the whole of the head of the radius and part of the coronoid process of the ulna thirteen weeks after the accident, with a fairly satisfactory result; and in this paper he refers to all the published cases. Where operative treatment has been adopted in these cases, it has, with the exception of Mr. Wainewright's case, been excision of the whole joint.

The other point to which I wish to refer is the treatment. The operation which I performed was, of course, clearly indicated as the only means short of excision of restoring the functions of the joint; and had the injury been recognised at the time, and the portion of bone removed aseptically, much trouble as regards stiffness of the joint would have been avoided. The point which, however, seems to me to be of chief interest is that the function is perfect, although only about half of the articular surface of the radius is present. It was a question with me at the time of the operation whether I should leave the remains of the head of the bone or remove it altogether; but I thought that in the latter case there might be a little outward deformity. As a matter of fact, the patient states that on flexing the arm she occasionally feels something (no doubt the small head of the radius) slipping in the joint, but it causes her no pain or inconvenience.

(I have lately had another case of partial fracture of the head of the radius, where half the head was detached and had not united, and the movements of the elbow-joint were considerably limited. The accident occurred from a kick from a horse. I cut down and removed the loose fragment, and the wound healed by first intention. When the patient left the hospital the movements of the elbow-joint had much improved.)

Case II. *Fracture of the Neck of the Left Femur: Pegging together the Broken Fragments.*—M. M., an Irishwoman, aged 52, was admitted to King's College Hospital under my care on October 1st, 1889. The patient was a feeble woman who looked much over 60, and had been a hard drinker. She had infantile paralysis on the right side, the right leg from the knee downwards being paralysed and withered, and the right foot much deformed.

When admitted she was suffering from a pretty severe attack of bronchitis, and could not lie on her back. Some hours before her admission to hospital she had been pushed over and fell heavily on her left hip on the pavement. When admitted she was found to be suffering from a fracture of the neck of the left femur; there was no impaction, and the shortening was about 1½ inch, as determined by the height of the trochanter above Nélaton's line.

From the condition of the right limb it was evidently of great importance, if possible, to obtain bony union of the left femur; while, on the other hand, her bronchitis prevented treatment in the recumbent position. Treatment by long splint, extension and prolonged rest in bed was therefore impracticable, nor did I think it expedient to trust to any apparatus such as that recommended by Senn, and I, therefore, determined to cut down and peg together the trochanter and neck of the femur. Accordingly, on October 4th, the patient was placed under chloroform, and a longitudinal incision was made in front and to the outer side of the hip-joint in the same line as in excision of the joint by the anterior incision. The joint was at once laid open, and I was able to feel exactly the line of fracture. The fracture was partly intra- but chiefly extracapsular. It ran from just in front of the trochanter above, where the finger passed freely into the joint to a point immediately below the lesser trochanter at the inner side, the smaller fragment thus consisting of the head and neck of the femur and the small trochanter. Towards the lower part the neck of the bone was split in the line of its axis, the split extending into the head of the bone as far as I could feel, but whether it involved the whole of the head I could not say. The upper fragment was thus divided into an upper and a lower portion, the upper consisting of by far the greater part of the head and neck of the bone, and the lower of the lesser trochanter and a thin scale of the neck. I imagine that the vertical fracture occurred in the first instance, and that then, as the patient rolled over, the great trochanter pressing on the neck split up the bone, but no impaction took place. Extension by means of pulleys was now applied to the leg, and the trochanter drawn down and manipulated till I felt that the

fractured surfaces were in fairly good apposition. The pulleys being fixed and my finger kept in the wound, I made a small longitudinal incision over the centre of the outer surface of the trochanter, and an assistant then drilled two holes half an inch apart through the trochanter and along the neck of the femur. Ivory pegs were then driven in for about 3½ inches, and by this means the main part of the neck and the trochanter were firmly fixed together; the lesser trochanter had, however, still a tendency to tilt forwards, but by flexing the thigh it was readily brought into good position. The wounds were then stitched up by a continuous suture, and antiseptic dressings applied. No drainage tube was used. The limb being semiflexed, the thigh and pelvis were then enclosed in a plaster-of-paris bandage applied outside the dressing. When the patient was put to bed she was propped up in a semirecumbent posture, the thigh resting on a pillow, and extension by a light weight was kept up to relieve the strain on the pegs.

The patient did not suffer at all from the operation; the bronchitis troubled her a great deal, but she was much more comfortable in the semi-recumbent posture than when lying down. The plaster was taken off and the wound dressed for the first time on October 15th, and healing was found to be complete; the stitches were removed, and a fresh plaster case applied. The plaster was reapplied a second time on November 23rd, and was finally removed on December 4th, when bony union was apparently complete; the great trochanter was then about three-quarters of an inch above Nélaton's line, and moved freely in the arc of a large circle; the other movements of the joint were good. The patient was allowed to get up at the end of December, but it was some days before she could be persuaded to try to stand or to use crutches. From the end of January she got on more rapidly, and was discharged on February 12th, 1890. She was seen again on March 17th, and was then able to get about very well with one crutch, and could stand without a crutch, but could not take more than two or three steps without some support. I have tried in vain to see her since, but I hear that she has been seen going about Drury Lane with one crutch, much as she used to get about before the accident.

On looking up the literature of the subject, I find that pegging of the trochanter to the neck of the femur with the view of getting bony union was in reality suggested some time ago by Dr. Senn as the result of some experimental work which he had done on the lower animals; but, so far as I can find, this suggestion has not been carried out in practice. In a more recent paper[1] he gives up this suggestion in favour of a method of fixing the fragments by means of a plaster-of-paris case and a movable pad, and he narrates some excellent cases treated by this plan. There is no doubt that an operation such as I have described must be very rarely called for in fracture of the neck of the femur, but in this particular instance it was essential to obtain bony union, while, owing to the bronchitis, Senn's plan could hardly have been carried out, and I can easily conceive that under other circumstances also operative interference may be the best way of dealing with some of these cases.

Case III. *Fracture of the Olecranon, the Coronoid Process of the Ulna and the External Condyle of the Humerus: Dislocation of both Bones of the Forearm backwards.*—T. H., aged 13, was admitted under my care at King's College Hospital on January 31st, 1890, suffering from the above injuries to the right elbow. On the day of his admission he was climbing a ladder, when he fell about ten feet, and, as far as he can tell, struck his right elbow on thy ground. When I saw the case on February 1st, I found the whole region of the elbow-joint enormously distended with blood, and it was impossible to make out the exact injuries. It was clear, however, that the olecranon was broken, and also that there was another fracture about the outer side of the joint, and it also seemed as if the forearm were displaced backwards. The injury being evidently a complex one, I determined to open the joint, ascertain exactly what the injuries were, and try to remedy them if possible.

On February 4th, the patient was placed under chloroform, and a free incision made over the outer part of the joint. It was at once seen that the posterior part of the external condyle of the humerus had been chipped off, and was almost completely loose. This piece of bone was removed, and then it was found that both bones of the forearm were dislocated backwards. On passing the finger in front of the joint, the coronoid process was found to be detached and broken into several small fragments. As there seemed no hope of getting proper union of these fragments, I removed them. An incision was then made over the olecranon process, an oblique fracture was found, and the parts were wired together. The dislocation was reduced, the wounds stitched, and the arm put up at right angles on a splint.

In this case, as I now usually do, I stitched up the wound with continuous suture, and did not put in a drainage tube, but bleeding occurred into the joint, and I found it necessary to put in a tube on the outer side on February 10th, when I changed the dressings for the first time. This delayed healing, but the wounds were completely healed on March 17th, when the boy was discharged, passive motion being kept up every other day, and easily performed. The splint was left off on April 2nd. On April 3rd, he got a blow on the outer side of his arm, and the scar where the drainage tube had been broke down, but this had healed again by April 30th. On June 2nd, I removed the wire from the olecranon, as it pricked him when he moved the arm. Careful movements have been kept up from time to time under chloroform, and when I last saw the patient in the middle of June the movement of the joint was good, and was steadily improving.

In such a severe injury as the above the result by any means short of operation could hardly have been satisfactory, and the joint would probably have become fixed, or at best there would have been slight movement with ununited fracture of the olecranon. It is in these complex fractures about the elbow-joint that I think we should most often intervene by operation, for their exact diagnosis is a matter of great difficulty, while subsequent stiffness of the joint is very apto occur.

Case IV. *Old-standing Dislocation of the Patella: Fracture of the Projecting Edge.*—J. G., aged 26, was admitted to King's College Hospital on March 29th, 1890. Two years previously he fell on his right knee, and went to a hospital, but beyond bandaging it nothing further was done. Since that time the movement of the joint has been much impaired, but it was impossible to get an exact account of the condition from the patient. On March 28th, 1890, he was carrying a sack of potatoes, and fell on his right knee. He was unable to stand afterwards, and the knee became swollen. On admission, the knee was much swollen, a little crepitus could be felt in front of the joint, and the patella was dislocated outwards, lying on the outer side of the external condyle. It was firmly fixed in that position, and could not be replaced.

On April 1st I made a long vertical incision (ultimately 7 inches in length) over the middle of the joint in front, and dissected the skin and subcutaneous tissues off the patella and capsule. The patella was found firmly bound down on the outer side of the external condyle; its articular surface was concave from long pressure in that position, and the external condyle was much atrophied; the cartilage was still intact. A small portion of the internal edge of the patella had been broken off, and was removed. The strong fibrous tissues binding down the patella to the outer side of the joint were next divided freely, the incision extending sufficiently high in the vastus externus to enable the patella to be brought forwards to its normal position. The old V-shaped tear in the vastus internus was seen and pared, and a sufficient amount of the fibrous tissues in front of the joint was cut away, so that when the tissues on the inner side of the patella were stitched to the remains of the capsule on the inner side of the joint and the rent in the muscle brought together the patella should remain in its proper position. The synovial membrane, especially on the inner side and in the suprapatellar pouch, was very villous, and was removed. The capsule on the inner side was then stitched to the inner side of the patella, the tear in the muscle brought together, and the wound in the skin united by a continuous suture; no drainage tube was employed. Naturally the patella did not move at all smoothly in its new position, but I hoped that in time it would regain to some extent its proper form. A posterior splint was applied.

On the second day after the operation the patient developed delirium tremens, but this had passed off by

[1] *Journal of the American Medical Association*, 1889.

April 9th. On April 11th the wound was dressed for the first time, and was found to have healed by first intention; the stitches were removed. On April 16th a small collodion dressing was applied over the line of incision, and the splint was left off; passive motion could be performed nearly to a right angle. Massage was commenced, and on April 26th the patient was allowed to walk about the ward; this he was able to do without sticks and without much pain, but the knee was very stiff. On May 2nd, and once a week till the date of discharge, the knee was moved under chloroform, while massage was continued in the intervals. He was discharged on June 2nd, on which date he could walk without a limp and could himself bend his knee to a right angle.

I kept the patient in hospital till June 2nd partly for the sake of the massage, but chiefly because he was a drunkard, as I feared that he would be falling again and tear up the young adhesions. As a matter of fact, he was brought back on the evening of June 3rd in a state of intoxication, having fallen on his knee; but I was glad to find next day that, though the joint was somewhat swollen, there was no recurrence of the displacement. I met him in the street in the middle of July, and he was walking well and could bend his knee to a right angle.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE TREATMENT OF DIPHTHERIA.

I SHOULD like to put on record a method which I have found exceedingly useful in the treatment of diphtheria; it consists in the hourly spraying of the fauces and naso-pharynx with a saturated solution of biborate and bicarbonate of soda (about 40 grains of each to the ounce of water). The *rationale* of the thing is, I believe, that the bicarbonate of soda tends to loosen and liquefy the tenacious mucus which is always present in these cases, and thus allows the borax to exert its action as an antiseptic; it is, of course, a weak antiseptic, but it has the advantage of being compatible with the bicarbonate, which I believe plays an important part as I have said above.

I have not the smallest doubt, in my own mind, that it tends to shorten the course of the disease; in fact, in one case the recovery was so rapid that I should have doubted my diagnosis if it had not been that a sister of the patient, who was living in the same house, had just died of the disease in St. George's Hospital.

In severe cases it is well to spray up the nostril to prevent the membrane spreading upwards, but for this the solution should be diluted, for if it is saturated with the alkali it causes hyperæmia and soreness of the mucous membrane.

I must say, in justice to Dr. Soltau Fenwick, that in all my cases I have given iron, though only in one according to the prescription which he gives in the BRITISH MEDICAL JOURNAL for February 14th.

It is now nearly two years since Dr. R. H. Coall mentioned the line of treatment to me; he tells me that he had used it for several years previously—in fact, it is to him that the credit is altogether due if the method should prove useful after a more extended trial.

Bedford Square. VERNON JONES, M.B., B.Ch.Dubl.

MINERS' NYSTAGMUS.

I HAVE long argued with my friend Mr. Snell that this disease is due, not to position, but to faulty illumination, and I now give the following reasons:

1. Less than half of the men who work down the pit are colliers (these are the only men who use the lying down position), but the disease is common to all the underground men.

2. It is especially common in men who work in headings, who do very little "holing." As a rule, the air in headings is very impure, the work is very hard, and the men have to concentrate their eyes on their work.

3. It is very liable to come on in men who have previously worked with naked lights.

4. It is very much more common in the winter than in the summer. In the winter almost every underground man I examine in my surgery has nystagmus more or less. In the summer I only see the confirmed cases.

5. The disease is not confined to the oblique muscles. It is as often met with in the recti.

There is very little difference in the position of the collier in the thin and the thick seams. When a collier says he "sits" to his work, he means he lies down. This peculiar nomenclature will account for some of the discrepancies as to position.

I believe the disease is a clonus of any or all of the ocular muscles due to the fatigue following their tonic contraction, which is correlative of the dilatation of the pupils which occurs when the eyes are fixed on any object in a bad light. I also believe that the presence of "fire damp" favours its development.

Wath-upon-Dearne, Rotherham. W. MAKEIG JONES.

IODIDE OF POTASSIUM IN ABDOMINAL ANEURYSM.

G. B., aged 34, came under my care in March, 1889; he had recently undergone several weeks' in-patient treatment at a general hospital, apparently by Tufnell's method, without benefit. There was a history of syphilis, also of a blow three years previously; the symptoms were of one year's duration; the tumour had steadily increased in size since first noticed.

In the epigastrium, arising from, or from the immediate vicinity of, the cœliac axis was a rounded mass, with well-marked *bruit* and expansile pulsation; the latter sign began 2 inches above the umbilicus, extending upwards in the middle line to ½ inch from the tip of the ensiform cartilage, laterally 1 inch towards the left side, ½ inch to the right. Violent paroxysms of pain were frequent; the cardiac second sound was strongly accentuated.

The patient was placed in bed, and treated with 15 grains of potassic iodide, 5 minims of tincture of aconite, and some gentian infusion, three times a day, in a tumblerful of water. Tea, coffee, and stimulants were prohibited, otherwise the diet was unrestricted. The dose of iodide was gradually increased to 1 drachm; and that of the aconite to 15 minims, taken every four hours, freely diluted. No iodism or other ill effect was noticeable, but the pulse became accelerated to 105 beats in the minute. On June 8th, 1889, the man was allowed to get up; all pain had long ceased.

The patient has since been kept under observation, and the iodide is still given from time to time. The aneurysm is considerably diminished in size, causes no pain, and the man follows a light occupation. A *bruit* is still audible, but only in the middle line, down the course of the aorta; not at all at the lateral parts of the tumour. It is, therefore, regarded as a pressure *bruit* only. Pulsation, in like manner, is no longer expansile, and is felt only along the large vessels, as though transmitted through the superincumbent remains of the aneurysm. It is, of course, impossible to affirm that these conditions will remain permanent, but no reason exists to doubt the fact, and there can be no question of the advantages conferred by the iodide treatment.

Gloucester Place, Portman Square. HERBERT SNOW.

RECRUDESCENT INFLUENZA OCCURRING IN THREE MEMBERS OF A FAMILY.

G. C., aged 27, felt unwell on the evening of January 25th. On the morning of the 26th he sent for me; said he "felt just the same as he did last year with the influenza." Temperature 104°. Bowels confined. All organs appear to be healthy. Complains of nothing but aching of limbs and slight thirst. 27th, 28th and 29th, very little change; 30th, slight dulness under left clavicle, with fine crepitation, over an area of 2 inches square. Rhonchus and sibilus over upper part of left lung, right lung normal. Expectoration frothy, slightly rusty coloured. 31st, temperature 102°. February 1st, temperature 101°; cough less, dulness almost gone; no crepitation. February 2nd, much better; temperature 99°. February 3rd, breath sounds normal, rather weak, otherwise feels well; temperature 98.6°.

This patient had a similar attack last year, but the lung

mischief was at the right base, and took longer to clear up (January 8th to 28th).

February 14th. Came to see me to-day; says he had a slight papular rash on legs and arms yesterday; nothing much can be seen now.

This man's brother had a modified attack of influenza last year at the same time as my patient; he was only laid up two days. This year he has had a similar attack, but not bad enough to stop work. He has also had a rash.

The sister was attacked on both occasions at the same time as her brothers. She suffered mostly from dyspeptic troubles.

HENRY B. COLLINS, Resident Medical Officer,
St. George's (Hanover Square) Dispensary.

HALVIVA: A SUBSTITUTE FOR QUININE.

I BEG to be allowed to introduce to the medical world a remedy for malaria called "halviva," prepared from the Indian plant kreat. Kreat has long held high repute among the natives as a tonic and restorative; indeed, they consider it the miracle-working plant, and it is rapidly growing in favour with European practitioners, several of whom have testified to its value, amongst others Sir William Moore, the late honoured head of the Bombay Medical Service. The natives use it in the form of an infusion, which they prepare fresh every day or two, and this has been their custom ever since we first went to India, and probably centuries before. The old botanical name was agathotes (*αγαθος*), which speaks volumes for the belief of former botanists in its efficacy. It is now generally recognised that quinine in a large number of cases produced ill effects; for example, it causes head symptoms, nervous exhaustion, and intense irritability, whereas kreat, which is equally useful in malarial fevers and the *malaise* set up by long continued exposure to malaria, is attended with no such serious consequences. Again, kreat can be taken with great advantage as a prophylactic, whilst the injudicious use of quinine for that purpose has resulted, in many instances, in marked deterioration of health. As a preventive quinine often fails, and in malarial fever itself it frequently seems to intensify the mischief and add to the pernicious action wrought by malaria.

As a tonic it is unrivalled, being a pure clean bitter without astringency, and acting as a gentle laxative by increasing the secretion of bile. It is of great service in indigestion, accompanied by constipation; it is also highly beneficial in gouty dyspepsia and the legion of symptoms due to indigestion. Of course quinine acts well in many cases, but as kreat has never in my twenty years' experience failed to do good, I think I am justified in calling it a substitute for a medicine which frequently fails. Both natives and Europeans believe in it as a tonic in nervous debility, and as a restorative in exhaustion through excesses of various kinds; and, for my part, I can safely say I know nothing equal to it among the many fine tonics India possesses.

G. YEATES HUNTER, late Brigade-Surgeon Bombay Army.
Philbeach Gardens, S.W.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

LEEDS GENERAL INFIRMARY.

A CASE OF LACERATION OF THE ASCENDING COLON: HÆMORRHAGE, FÆCAL EXTRAVASATION, AND ACUTE PERITONITIS DUE TO AN INJURY RECEIVED FOURTEEN DAYS BEFORE ADMISSION.

(Under the care of Dr. CHURTON and Mr. MAYO ROBSON, with Pathological Report by Dr. BARRS.)

MEDICAL HISTORY BY DR. CHURTON. William A., aged 19, a sparely built but athletic youth, was seen in consultation with Mr. Spong, of Leeds, on November 15th, 1890, at 7 P.M. His abdomen was distended and tender, and the pain had been so severe that morphine had been injected in the morning; the pupils were contracted, and he was drowsy; the flanks were both dull, but the left flank became resonant when he was turned on to the right side; the right flank was unaltered by position; the rectum was empty; a tense smooth swelling was felt above the bladder; there was no swelling upon the pelvic wall on either side. No vomiting, but no flatus or fæces had been passed for thirty-six hours. The intestines did not move in peristalsis under palpation. An exploring needle inserted an inch above the outer third of Poupart's ligament, and passed in an upward direction, drew off dark blood which had a fæcal odour, and did not coagulate. Exploration in the flank about midway between the margin of the ribs and the crest of the ilium found exactly similar fluid; no pus, pulse 120, temperature 99°, breathing entirely thoracic.

The history was remarkable. On November 1st, when playing at football, a player's knee struck him in the right flank with such force as to compel him to rest for some minutes; he felt rather sick and faint, but ultimately resumed his share in the game. He worked during the whole of the following week, and again played in a football match on November 8th without any difficulty, and without any further accident or hurt. On the 9th he felt all right, but next morning, the 10th, he had some pain in the right flank, worked with difficulty during the morning, and left his work at midday. The pain increased, but he did not consult Mr. Spong until Wednesday, November 12th. There was no distension of the abdomen and no vomiting at this time. Some aperient medicine was taken, and he seemed relieved; but on Friday morning, the 14th, the pain in the flank came on and spread rapidly over the whole abdomen. It was necessary to subdue the pain by morphine hypodermically.

As the blood was apparently contained in the peritoneum, my first supposition was that the blow had been followed by ulceration, and that perforation had occurred, rupturing a vessel in the process. There was, however, no appearance of ordinary bowel contents, or of pus accompanying the blood. No blood had at any time been seen in the stools, so that it seemed very improbable that the blood was in the interior of the gut.

In this uncertainty the patient was at once sent to the infirmary, where, in consultation with Mr. Mayo Robson, I once more explored the right flank, blood with a strong fæcal odour being again withdrawn. He was then transferred for operation, which was done at 11 P.M.

SURGICAL REPORT BY MR. MAYO ROBSON FROM NOTES TAKEN BY MR. BASIL HALL, HOUSE-SURGEON.—Chloroform having been given, a vertical incision was made about 1 inch above the crest of the ilium through the abdominal muscles. On opening the peritoneum a large quantity of dark partly clotted blood ran out, possibly more than a pint. Mr. Robson passed his two fingers into the wound, and found a large cavity shut off from the general peritoneal cavity by adhesive peritonitis, but reaching up to the under surface of the liver, along which it was thought a laceration could be felt, but not so distinctly as to be a matter of certainty, on account of the large amount of clotted blood lining the cavity. The space was thoroughly irrigated with hot boracic lotion, a large drainage tube was inserted, and the wound was sutured. The advisability of incising and washing out the left side was considered, but on account of the patient's critical condition it was not deemed expedient to do more. Nutrient enemata were ordered every four hours, with brandy and soda-water by the mouth in small doses.

November 16th, 10 A.M. Good pulse, but breathing shallow and rapid. There is much distension. He rambles a good deal. Tenderness over the left lumbar region and marked dulness. Turpentine enema and seidlitz powder ordered. Has only been sick once. Consultation held to consider the propriety of opening the left side of the abdomen, but as the patient's reserve was so small it was deemed inadvisable to operate further. 5 P.M. Has had his bowels very freely moved; distension much less; abdomen feels much less tense; patient seems better.

November 17th, 9 A.M. Pulse softer and more compressible. Patient more inclined to ramble. 8 P.M. This evening very delirious; inclined to be violent, and tries to get out of bed. Morphine injection gr. ¼ given. Champagne every hour.

November 18th, 9 A.M. Has been delirious most of the night. Pulse soft, compressible, and rapid; rambles constantly; ab-

domen free from distension. 12 noon. Much worse; pulse failing; morphine ½ gr. 3 P.M. Violent delirium; pulse very rapid and feeble; morphine ½ gr. injected hypodermically; breathing thoracic and gasping. 9 P.M. Pulse 55; respiration only just perceptible. 10.20 P.M. Died.

PATHOLOGICAL REPORT BY DR. BARRS.—Abdomen moderately distended, especially in lower two-thirds; oblique incision in right flank, from which fluid is still oozing: the finger passed through this finds itself in a ragged undefined cavity. Abdomen opened: intense general peritonitis, with much firm adhesion of coils of intestine; blood in all parts and recesses of cavity, mainly coagulated, and helping to embed coils of intestine; bloody pus in pelvic cavity. The cause of the peritonitis and hæmorrhage was found to be an extensive laceration of the free wall of the right colon. The extent of the laceration was with some difficulty defined while the gut was *in situ*, owing to the matting and obstruction by coagulated blood. The laceration corresponded exactly with the right kidney, and was so extensive that three fingers could be passed through the serous and muscular coats, but not through the mucosa, for the latter was irregularly torn, there being two openings, so to speak, in it, so that opposite the middle of the opening in the serous and muscular coats the mucosa presented as a complete tube. The mucosa of the intestine immediately above the laceration was much prolapsed into the opening. Blood had infiltrated between the different coats of the intestine at and about the laceration. Some masses of dry hard fæces were also lying in the immediate vicinity. The main effusion had been of blood as distinguished from intestinal contents. The explanation of this fact seems to be that the irregularity of the laceration, the contraction of the lower end, and the general infiltration of blood round about had made the escape of fæces and flatus difficult, while the laceration of vascular parts was extreme. The other organs of the abdomen were uninjured and free from disease, and there was nothing in the condition of the torn intestine to indicate that the structure of it had been otherwise than healthy previous to the violence inflicted fourteen days before admission to the hospital.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MARCH 3RD, 1891.

W. H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Exophthalmic Goitre Causing Death by Asphyxia.—Mr. W. G. SPENCER showed a specimen taken from a fatal case of exophthalmic goitre, consisting of a large bronchocele, attached to which, at the lower border, was a persistent thymus gland. The bronchocele had been produced by uniform enlargement of both of the lateral lobes and of the isthmus, and surrounded the trachea so as to meet behind that tube, compressing it laterally from the larynx above to one inch from the bifurcation below. The carotids, vagi, and internal jugulars had been pushed outwards, and lay separated from one another in deep grooves on the back of the tumour, whilst the recurrent nerves, after their reflection, were buried in the mass. The inferior thyroid arteries were much enlarged, that on the right side being a branch of the subclavian, on the left it arose from the aorta between the left carotid and subclavian arteries. The tumour had the structure of a cystic colloid hypertrophy of the thyroid gland. There were no changes in the central nervous system. A persistent thymus, larger than the head of the pancreas, was attached to the goitre at the lower part, having the characteristic microscopic structure. The specimen was taken from a girl, aged 20, who had been under the care of Drs. Ferris and Davidson, of Uxbridge, for a year, suffering from exophthalmic goitre. The goitre slowly increased in spite of treatment until the patient had attacks of dyspnœa. After admission to the Westminster Hospital asphyxia became imminent, and Mr. Spencer opened the trachea through the upper part of the tumour. There was much hæmorrhage, and the gland substance bulged greatly when the capsule was divided, showing the tension which existed within the capsule. The operation could not have been performed except with the aid of several assistants. No relief was afforded when the trachea was opened, nor when an ordinary tracheotomy tube was inserted; however, air entered freely through a vulcanite tube passed for four inches down the trachea. The dyspnœa was quite relieved for a time, but during the same evening mucus collected below the tube, which the patient could not cough up, and she died asphyxiated. Mr. Spencer further remarked that this termination of a case of exophthalmic goitre was rare, and that some recent operations by which a cure had resulted after the removal of a great portion of the gland connected the pathology of the disease closely with the thyroid gland.—The PRESIDENT asked which part of the trachea had been constricted.—Mr. SPENCER replied that the lower four inches were.

Duct Carcinoma.—Mr. H. B. ROBINSON showed sections of a tumour which had been removed from the left breast of a woman aged 51. The tumour had been growing for sixteen months. On admission, there was a tumour of the left breast just below the nipple, the upper part of which was hard, the lower part soft. There was no retraction of the nipple, but slight puckering of the skin. The axillary glands were not enlarged. After removal, on bisection, the lowest half consisted of a cyst full of greenish-brown fluid. The upper half was hard, and cupped somewhat on the cut surface. It contained several small cysts full of greenish-brown fluid. The larger cysts were lined with two layers of epithelial cells, and in some there had been further proliferation of the epithelium. The solid parts also consisted of columnar epithelium, with very slight round-celled infiltration of the connective tissues. The tumour had not involved the skin, though close to it, and it almost touched the pectoral muscles. The case was remarkable, clinically, from the fact that duct cancer was hardly ever so like scirrhus cancer as to be liable to be mistaken for it. But in this case the only differences were that the nipple was not retracted and the glands were not involved. The low degree of malignancy of the tumour might perhaps point to a hope of non-recurrence. Duct carcinomata might either begin in the large ducts, like papillomata, or in the small acinous terminations of the glands.—Mr. ROGER WILLIAMS said that many villous growths of the breast were not carcinoma, though some were, but some were papillomata and some sarcomata.—Mr. BOWLBY recognised that these tumours did not have the course of ordinary cancers of the breast, as they grew more slowly, the glands were not involved, and they were not liable to recur. They differed entirely from papillomata in affecting the fat, infiltrating the surrounding tissues, and causing ulceration of the skin. The specimen was fully entitled to the name of duct cancer. He thought it would be of interest to know the future history of the patient.—Mr. ROBINSON, in reply, stated that the tumour, with the whole breast, had been removed in November, 1889, and that no recurrence had taken place.

Cystic Disease of Breast.—Mr. ROBINSON then gave the details of two cystic tumours. The first had been removed from the breast of a girl, aged 20, whose mother had died of phthisis. The tumour was situated in the left breast. The skin was not adherent, nor was the nipple retracted, and the glands were not enlarged. After removal, the tumour was found to contain numerous cysts. The second specimen was removed from the left breast of a girl, aged 19; it had been situated just above the left nipple, which was not retracted. The tumour was tender. There were no enlarged glands. After removal, it was found to contain numerous small cysts. It was not encapsuled. The microscopical appearances of the two tumours were identical; they consisted chiefly of fibrous tissue in which were situated several cysts. Each cyst was lined by one or more layers of flattened epithelium, which were sometimes carried into the interior of the cysts on processes of connective tissue. The origin of the cysts was obscure, but very probably they were dilated ducts.—Mr. ROGER WILLIAMS regarded them as cases of chronic interstitial mastitis, and asked if there were any intracystic growths.—Mr. ROBINSON replied that there were some small ones.

Thrombosis of Cerebral Veins.—Dr. WILLIAM COLLIER, of Oxford, showed a brain which had been removed from the body of a young woman. The patient sixteen days after confinement had an atack of general convulsions, most marked on the right side. The convulsions were repeated, though with lessening intensity, during the four following days, when

she passed into a semi-comatose condition, and died eight days after the onset of the convulsions. At the *post-mortem* examination the pia mater over the left hemisphere was ecchymosed, particularly over the frontal and parietal convolutions, and the veins were full of soft clots, which were also found in the superior longitudinal sinus, at the torcular Herophylli, and in the right superior petrosal sinus. There were ecchymoses on the mesial surface of the hemisphere, and the veins over these convolutions also contained clots. The ecchymoses penetrated into the substance of the left hemisphere to a depth of an inch and a half. The arteries at the base were empty; no arterial embolism was found. The ears were quite healthy, and there was no evidence elsewhere of septic infection.—Dr. HADDEN referred to a similar case mentioned in Dr. Bristowe's recent work on *Diseases of the Nervous System*.—Dr. COLLIER said he had brought the case forward on account of its rarity.

Loose Bodies from a Tuberculous Knee-joint.—Mr. HOWARD MARSH showed several loose bodies removed from the knee-joint during the operation of excision. The patient from whom the specimens were removed was a female, aged 17, whose left knee-joint had been the seat of tuberculous disease for three or four years. The synovial membrane was considerably thickened, and the head of the tibia was displaced backwards and outwards towards the popliteal space. When the joint was opened, five loose bodies escaped. They were about the size of almonds, glistening, and perfectly smooth on the surface, of a pale yellow colour, and apparently consisted of masses of fat. The joint was extensively diseased; the synovial membrane was thickened, and overlapped the articular cartilage. There was no suppuration, and the joint contained no fluid. Two other similar loose bodies were found attached to the synovial membrane investing the lower end of the femur. On examination, these loose bodies were found to consist of a shell or capsule, enclosing a central mass, with an intervening space. The capsule was firm, and of the consistence of coagulated fibrine. The central portion resembled, in general appearance, those shaggy masses of fibrine which could often be found in the cavities of bursæ. Mr. Edgar Willett, curator of the museum, had furnished the following report: "Under the microscope the difference between the outer layer and the central portion is very distinct. The outer layer is about one-sixteenth of an inch thick, and is composed of a uniform collection of granular cells without stroma or definite structure. The transition to the inner part or kernel is very marked. This kernel has an imperfect and irregular structure, presenting a number of well-defined collections of small cells, either circular or oval in shape, and resembling the giant cells found in tuberculous deposits. No tubercle bacilli were found." Mr. Marsh remarked that he had not met with this kind of loose body before, but, after Mr. Willett's report, he was inclined to regard them as tuberculous formations in the fringes of the synovial membrane, to which some were still connected, while some had become detached. The view which some might be inclined to hold—that these masses were similar to the melon-seed-like bodies often found in the sheaths of tendons—appeared to be negatived by the fact that the two differed from each other in structure, the melon-seed-like bodies being quite amorphous, evidently nothing more than masses of coagulated fibrin, while the bodies which he had shown presented the microscopic structure of tubercle in, as he thought, an unmistakable form. Mr. Alexis Thomson, of Edinburgh, had described, in a chapter on nodular tubercle of the synovial membrane, the occurrence of polypoid masses apparently precisely similar to those described in the paper, and Mr. Watson Cheyne had also alluded to loose bodies of the same kind.

Loose Body from the Knee.—Mr. EDGAR WILLETT showed (for Mr. HARRISON CRIPPS) two loose bodies which had been removed separately, with an interval of four weeks, from the left knee-joint of a healthy young man. There was a history of an injury. The bodies were flat, roughly about 1 inch square, and had a layer of smooth cartilage on one surface, and were calcareous, if not bony, on the other. On comparing them, it was found that they fitted together. The question was raised as to whether they had originally been attached to the femur, and had become separated by the injury.

A Piece of Patella Cartilage knocked off and forming a Loose Body in the Knee-Joint.—Mr. BRUCE CLARKE showed a specimen, of which he gave the following account: J. W., aged 28, slipped as he was getting into an omnibus in the Hammersmith Road, and was taken to the West London Hospital. He was operated on for a dislocated semilunar cartilage, and in the course of the operation an abrasion was found on the under surface of the patella, from which a piece of cartilage had been knocked out, probably at the time of his fall. The cartilage, about $\frac{1}{2}$ inch by $\frac{3}{4}$ inch, was extracted from the joint, and was shown to the meeting. A good recovery, with perfect movement of the knee-joint, ensued, and the patient has since been under his care for loose body in the opposite joint. A loose body had been removed from this opposite joint by Mr. Baker, of Birmingham, seven years ago. It was worthy of note that this joint, which had been twice operated on, was now the seat of rheumatoid thickening of the edges of the condylar cartilages on the femur.

Patella with Dislocated Internal Semilunar Cartilage Fixed to It.—Dr. H. D. ROLLESTON showed the patella from a joint which had been for many years partially dislocated outwards. The articular surface of the patella had what appeared to be the internal semilunar cartilage adherent to it. The internal semilunar cartilage was absent from its proper position on the tibia. The cartilage attached to the patella was adherent to its periphery, just in the way that the semilunar cartilages are to the tibia; there was the same space between the articular surface of the patella and what appeared to be the tibial surface of the internal semilunar cartilage as there is between the semilunar cartilages and the tibia. The cartilage was, however, adherent for its whole depth to the patella at the upper part. The two extremities of what appeared to be the internal semilunar cartilage were united by a firm plate of cartilage the size of a shilling. This portion of the cartilage, which was adventitious to the supposed internal semilunar cartilage, was underhung by a synovial pouch, as was the greater part of the body. This additional piece of cartilage lay to the inner side of the patella, so that the supposed internal semilunar cartilage had turned round before becoming adherent to the patella. The joint from which the specimen was taken was the left knee, which had long been partially dislocated, the external condyle of the femur only articulating with the tibia. There was chronic rheumatoid arthritis of the joint. The surface of the external condyle was eburnated and devoid of cartilage; the external semilunar cartilage was partially eroded. The internal condyle of the femur was covered with cartilage. The cartilage was lipped over both condyles, but especially over the external.—Mr. SHEILD referred to a specimen that he had brought forward a year or two ago, and, although the view that he had at that time advocated—that it was of traumatic origin—had met with much opposition, yet he ventured still to hold his original opinion, which was supported by two of the cases brought forward at this meeting. He asked if Mr. Willett's specimens had been examined microscopically, as, if they showed the appearances of true bone, it would settle the question of their origin. The idea that loose bodies in joints might be tuberculous was new to him, although he knew that the lemon-seed bodies from compound palmar ganglia had been shown to be tuberculous.—Mr. JONATHAN HUTCHINSON, jun., agreed with Dr. Rolleston's view of his specimen. He suggested, however, that it might possibly be a developmental abnormality.—Mr. CLUTTON said that in recent years, on opening knee-joints for tuberculous disease, masses had been found attached to the synovial membranes, whereas previously they had softened down before the joints were opened. He thought that the fact of a loose body having been found in the opposite knee-joint was against the idea of traumatic origin in Mr. Bruce Clarke's case.—Mr. SHEILD added that the cartilage in Dr. Rolleston's specimen was very small for a semilunar cartilage.—Mr. BRODIE noticed that in Dr. Rolleston's specimen the cartilage was only attached to the patella on the outer side.—Mr. ROBINSON said that in three cases of knee-joint disease recently in St. Thomas's Hospital there had been tuberculous masses with very long peduncles.—Mr. ROGER WILLIAMS thought the microscope could settle the nature of the cartilage.—Mr. WINGRAVE remarked on the fact that in Dr. Rolleston's case the cartilage was of the exact size of the patella.—Mr. MARSH, in reply, thought that loose bodies might be tuberculous in a larger number of cases than

had been suspected.—Mr. WILLETT had not cut sections of his specimens, as he wished to show them entire to the Society. —Mr. BRUCE CLARKE, in answer to Mr. CLUTTON, stated that in his case the patient had had an injury to the opposite knee.—Dr. ROLLESTON, in reply, said that as there had been a history of severe injury to the joint during early adult life, he should hesitate before attributing the condition to an embryonic abnormality. The smallness of the cartilage might be due to arrest of development after displacement.—Dr. Rolleston's specimen was then referred to a subcommittee.

Card Specimens.—Mr. E. SOLLY: Melanotic Sarcoma of Conjunctiva.— Dr. HADDEN: Pancreas in Diabetes.— Messrs. SHATTOCK and BALLANCE: Fuchsine Bodies in Carcinoma, Tuberculosis, and Diphtheria.—Dr. ROLLESTON (for Mr. A. A. KANTHACK): Fuchsine Bodies in Rhinoscleroma and Madura Foot.

Living Specimen.—Mr. ROGER WILLIAMS: Man with Median Supernumerary Nipple.

Recent Specimens.— Mr. WYATT WINGRAVE: Lungs and Larynx from a case after treatment by Koch's method.—Dr. A. F. VOELCKER: Scurvy Rickets.— Dr. NEWTON PITT: Gumma of Heart.

CLINICAL SOCIETY OF LONDON.

FRIDAY, FEBRUARY 27TH, 1891.

Sir DYCE DUCKWORTH, M.D., LL.D., F.R.C.P., President, in the Chair.

Living Specimens.—Mr. E. HURRY FENWICK showed two cases of Hydatids of the Kidney in men aged 46 and 57 respectively. One had passed hydatids *per urethram* for five years past, the renal tumour having been noticed on the right side thirty years ago. The other patient also passed hydatids in the urine, and the cyst appeared to be suppurating. In a third case (not shown) Mr. Fenwick had drained the renal tumour.—Mr. STANLEY BOYD showed a man for whom he had done Thiersch's Method of Skin Grafting. A large wound had been left in the patient's leg, in consequence of the removal of an epithelioma of the limb, and cicatrisation of the wound had been produced in the above manner. Mr. Boyd pointed out that healing by first intention and ultimate success of the grafting could only be relied upon if the hæmorrhage were arrested before the application of the grafts, and if strictly antiseptic precautions were observed.—Mr. PEARCE GOULD showed a rare form of Fracture of the Ulna. The patient, aged 28, fell upon his elbow and produced a fracture that extended obliquely through the base of the olecranon. Mr. Gould had seen only four such cases.—Mr. BALMANNO SQUIRE showed a case of Rhinoplastic Operation for Restoration of the Tip of the Nose. The patient was a man, aged 65. Mr. Squire also exhibited a case of Serpiginous Rodent Ulcer of the Face of Seventeen Years' Duration in a female patient, aged 54. Mr. D'Arcy Power had made a microscopical examination of this case, and by letter confirmed the diagnosis.—Dr. STEPHEN MACKENZIE showed a case of Multiple Lipomata in a young man. The growths had been first noticed after an attack of acute rheumatism twelve or thirteen years ago; they were most plentiful on the extremities. There was no family history of any lipomatous tendency.—Mr. C. SYMONDS showed two cases of Œsophageal Stricture in men suffering from General Paralysis. One had a peculiarly high-pitched tone of the voice, due to paralysis of the left side of the larynx.

Removal of the Vermiform Appendix (*Adjourned Discussion*).—The PRESIDENT thought the discussion had so far hardly covered the ground which it might have been expected to occupy. The cases were of extreme interest both to the physician and surgeon. It was for the former to determine whether and when to transfer his cases to the latter, and for the surgeon to decide upon the nature and extent of the operative procedures which were called for. It was evident, from the large measure of success that had attended the medical treatment of these cases, that it was not every case that required surgical treatment; hence the difficulty in deciding what cases to refer to the surgeon and the time for such reference. —Mr. LANGTON thought the results of the cases described at the previous meeting showed that the operation was not accompanied by great risk, and that this had, perhaps, led to too hasty surgical interference. He thought that increased experience would show more accurately when cases should be passed from the physician to the surgeon for operative interference. He confessed that he did not think many cases should be so transferred. Many cases, treated entirely by the physician, had subsequently remained well for years. But surgical treatment was far ahead of medical treatment in these cases. The many positions in which the appendix might lie were tolerably well known. He preferred the incision in the right linea semilunaris to the median incision, as having a much less tendency to subsequent ventral hernia, and he thought it wise, after the operation, to order a kind of abdominal support to lessen the chance of such protrusion. As to the method of dealing with the stump of the appendix, he had done the operation five times, and had dealt with the stump in those cases in five different methods, all of which had proved successful. As to the time at which the operation should be done, he thought that in cases of acute perforative appendicitis, especially if accompanied by acute peritonitis, as in one of Mr. A. Clark's cases, the operation should be done at once; also in cases of recurrent appendicitis, accompanied by a rise of temperature; for here the connective tissue was inflamed, possibly with a drop of pus, which it were better to let out. Owing to the position of the appendix the forcing of a needle into its locality for the discovery of pus must lead to extra danger to the patient. It was much better to wait a little for the abscess, if there were one, to declare itself. He remarked that 70 or 80 per cent. of the cases occurred in the male sex, and that 60 or 70 per cent. of the cases occurred before the age of 25. He thought this due to the large amount of adenoid tissue which the appendix contained, and that the part was apt to give way if distended. The cases of simple inflammation were best left to the physicians. The operation of removal of the appendix was a very great advance on the treatments that formerly allowed the severe cases to drift to the *post-mortem* room.—Mr. GOULD remarked that these cases were exciting much interest just now, not only here, but also in Berlin and America. He did not think that surgeons were all agreed in their views of the subject. The different positions in which abscesses formed were accounted for by the variations in the position and relations of the appendix itself, which was usually the source of the trouble. The seven cases described at the last meeting represented all three groups of cases of typhlitis treated by the surgeon. The majority belonged to the first group, in which there was a local suppurative peritonitis, limited by adhesions, and usually due to perforation of the appendix. The second group comprised cases in which there were no adhesions and in which perforation was followed by general peritonitis. These formed, perhaps, about 10 per cent. of all cases. Mr. Allingham's case was one of this kind. The third variety comprised relapsing typhlitis, with the tendency to suppuration little marked. These formed about 10 or 12 per cent. of all cases, so that one could not say there was great chance of relapse in any case that ran a favourable course under palliative treatment. Cases that ran on to suppuration, and burst, and were opened externally did not relapse, they were cured. When relapse occurred it was generally often repeated, but might ultimately cease to give trouble. In the above first class of cases, incision and drainage was indicated; this treatment was simple, led to a smaller incision, caused less damage to the abdominal wall, and was successful. An incision of an inch to an inch and a quarter was quite long enough. It avoided the risk of breaking down limited adhesions, and of opening the general peritoneal cavity. The adhesions were often very delicate; he believed he had seen them ruptured by a surgeon merely feeling for fluctuation, under which something seemed to give way, and although the abscess was opened and drained, the patient died in a few hours, with all the symptoms of shock as from rupture into the general peritoneal cavity. Besides, the adhesions of the appendix were often so firm that its removal often endangered the slender limits of the abscess. He understood Mr. Sutton to speak of opening the general peritoneal cavity outside, and before entering the abscess cavity. But this, he thought, should be avoided by all means. He thought, too, that scarcely any appendix need ever be removed; an appendix left behind was scarcely ever a source of trouble, immediate or remote. If ulcerated, it became buried in the lymph that obliterated the abscess cavity; if gangrenous, the slough was accurately cast off from the living tissues. To open, wash out, and drain should, therefore, be

the treatment of limited peritoneal abscess, without exploration or removal of the appendix. He would further advise that the opening should be carefully made direct into the abscess without opening the general peritoneal cavity, and therefore delay should be practised until the site and direction of progress of the pus was indicated. The pouches of pus, of which there might be many, should all be emptied, cleansed, and drained. Such a pocket in the pelvis, if overlooked, might lead to fatal general peritonitis. In his second class of cases, those accompanied by general peritonitis, he considered that early operation was urgently called for, with careful irrigation of the whole peritoneal sac. And even if a median incision were made, another must be made over the appendix either for removal of the appendix or to allow of the direct escape of slough or fæcal matter that might flow from it. As to the third class of cases, the relapsing cases, represented by Mr. Sutton's second case, prolonged rest might have led to complete quiescence, as did many cases of the kind; and to wait for operation until local suppuration had supervened would not expose the patient to any great additional risk.—Dr. J. K. Fowler referred to the pathology of the affection. Mr. Treves was apparently now of opinion that in the majority of the cases which recovered the symptoms were due to fæcal accumulations in the cæcum, followed by stercoral ulcer and inflammation of the overlying peritoneum. Stercoral ulcer was a rare condition, generally absent in cases of fæcal accumulation far in excess of that met with in typhilitis, and when present, as in chronic obstruction of the large bowel, often the cause of perforative peritonitis; whereas, in fatal cases of typhilitis, no such changes were found in the cæcum. All *post-mortem* evidence, and that derived from operations, was in favour of the appendix being the seat of the affection. That "the complete clearing up of the local signs" could not be trusted to prove that the mild cases were of cæcal origin was shown by Mr. Treves's case,[1] which proved to be one of appendicitis, although before the operation there was "no trace of the iliac swelling," and "the abdominal signs had entirely disappeared." He agreed with the statement that "it could not be denied" that inflammation of the cæcum might in some cases be the cause of the symptoms, but he knew of no evidence pointing to that conclusion. He had analysed the medical and pathological *Reports of the Middlesex Hospital* for the ten years 1880-89. During that period 85 cases had been admitted with the diagnosis of typhilitis or perityphilitis, of which 84 had recovered,[2] and one had been "discharged at own request." Apparently only two of the cases had been submitted to incision (1889). These figures showed that "the measures generally employed by physicians" were not without success, and they to some extent indicated the degree of need for surgical interference. During the same period, in 14 cases in which the appendix was found on necropsy to be perforated, the diagnosis on admission had been (generally) peritonitis (? perityphlitis), or (?) intestinal obstruction (1 case), or (?) enteric fever (1 case), pyopneumothorax, etc. In none were the signs sufficiently definite to allow of a positive diagnosis of typhlitis. Twelve of these cases were fatal from acute peritonitis, in three of which there were old lesions about the appendix. A fæcal concretion was found in 9 cases; in 6 cases it was still in the appendix. As regarded operative measures, he agreed with Mr. Pearce Gould's views. Where the diagnosis was acute peritonitis (? typhlitis) laparotomy was indicated; in all other cases the early treatment should be that at present adopted. No absolute rules could be laid down as to the time for incision, but the persistence of a high temperature after the fifth day suggested suppuration. Medical treatment in the early stage could not be said to have failed even should incision ultimately become necessary, as by localising the pus it saved the patient from general peritonitis. He was opposed to the removal of the appendix. Relapsing appendicitis in the case of a labouring man, who could not afford to rest, might be treated by operation; other cases, he thought, had better be left alone. Mr. Charters Symonds mentioned a case of his own, the patient being a young man, aged 23, who was first ill in 1883. He had had six severe attacks of abdominal pain in five weeks. When admitted during an attack he had a rise of temperature, with swelling in the right iliac fossa. This subsequently cleared up, except for a small hard lump. He was then allowed to go home, but soon became ill again, and, being readmitted, Mr. Symonds, at the suggestion of Dr. Mahomed, cut down upon the lump, which proved to be a calculus in the appendix. It was removed, and the cavity was sewn up. The patient recovered, though a sinus remained for some time. He had no more attacks. He considered it justifiable to operate in such a case. He thought that in many cases it was not at all necessary to remove the appendix. He had recently had three cases upon which he had operated without removal of the appendix, and all had recovered. Of course, a possible concretion must be searched for, but care should be taken not to interfere with adhesions.—Mr. B. Jessett thought that if the cases brought forward had been operated upon earlier, the risk to life would have been less. He considered it advisable usually to leave the appendix. If it were removed, and if the peritoneum were opened, he thought the stump might be pushed into the cæcum, and the opening closed by suture, so that anything which might slough might pass away by the bowel.—Mr. H. Allingham, in reply, said that in his cases it was not possible at first to say what was the cause of the disease in either child. He made the incision in the median line, so as to be prepared to deal with whatever there might be found amiss. If he had been certain beforehand that he was going to operate on the appendix he should have made the incision through the right linea semilunaris. As to the tendency to protrusion in the boy, there were special circumstances connected with the healing of the wound which favoured it. It had been necessary to remove the stitches, and then the wound gaped, and for four or five days the intestine could be seen covered with granulations. In both cases the appendix was ruptured, and the peritoneal cavity had to be opened in one case before it was possible to get to the abscess cavity itself. In fact, in neither of his cases was there a localised abscess. He arranged all these cases in three classes: first, the very acute cases, severe from the beginning (such as his own cases); secondly, acute cases supervening on chronic attacks (such as one of Mr. Sutton's cases); and, thirdly, relapsing and recurrent chronic cases. Cases of Class I should be operated upon at once, so that the surgeon might know what he had to deal with. In cases of Class II, if there was pus, it should be cut down upon and let out at once. The abscess should not be left to open just where it might please. If the symptoms pointed to pus, the abscess should be treated as it would be elsewhere in the body. Most of the cases in St. George's Hospital which died were cases of appendicitis; those in which recovery ensued were instances of perityphlitis.—Mr. Bland Sutton, in reply, observed that he had seen no signs of any such "epidemic" as that ridiculed by Mr. Treves. His six cases represented the whole of his practice in that direction for some years. Mr. Treves seemed to fear that the result of wholesale removal of the appendix might lead to its suppression; but he assured Mr. Treves that there was overwhelming evidence against the transmission of mutilations, consequently they need not be under any apprehension, like the silversmiths of Ephesus, that their art would suffer in that direction. Speaking as a demonstrator of anatomy of many years' experience, he said he had never once failed to find the appendix, though it was occasionally tucked away in odd corners. He had only met with one instance of abnormality in this respect, and that was in a fœtus. Mr. Treves's observations bore on far too small a number of cases. He had had a "run of luck." He observed that in the same series of 100 cases Mr. Treves had looked for Meckel's diverticulum, and had arrived at the conclusion that it was absent, yet he (Mr. Sutton) had found it in 3 per cent. of bodies. That showed the fallacy of arriving at conclusions on too limited a number of observations. He likened the appendix to an abdominal tonsil, and pointed out the presence of a large quantity of lymphoid tissue with a fibroid sheath around it as justifying the analogy. Pathologically this resemblance explained the morbid phenomena met with in respect of the appendix. Many people suffered from relapsing tonsillitis, and a similar condition in the appendix would account for the cases of relapsing appendicitis which

[1] *Med. Chir. Trans.*, vol. lxxi., p. 171.

[2] In three fatal cases included in 1889 the diagnosis was altered *post mortem*.

recovered under medical treatment. Others, however, ran on to suppuration, these to acute quinsy, those to suppurative appendicitis. He repudiated any intention of speaking lightly of the value of the medical treatment in these cases. By "measures usually adopted by physicians" he only intended to comprise purgatives, enemata, etc. With reference to the greater frequency of appendix troubles in children, he explained that affections of adenoid tissue generally were more common in young life. As to the greater frequency in males as compared with females he suggested that part of the excess might be accounted for by the fact that the symptoms, when occurring in females, were usually put down to pelvic cellulitis, but a feeling was gaining ground that many of these cases might probably be due to affections of the appendix. Still there would remain an unexplained preponderance of male patients. He never opened the peritoneum intentionally where there were adhesions, but he insisted that it was gross dereliction of duty on the surgeon's part to leave the appendix when it was easily removable, thereby prolonging convalescence, maintaining a source of future danger, and leaving a sinus. If he did not, under such circumstances, remove the appendix he should consider himself as guilty as he would be if in operating for hernia he did not remove a piece of faulty omentum. Pus should be evacuated, and, if the cause of the suppuration were found, it should be removed. All he asked was that the ordinary rules of surgery should be followed in the treatment of this class of affections.—Mr. ANDREW CLARK also made a few remarks.

MEDICAL SOCIETY OF LONDON.

MONDAY, MARCH 2ND, 1891.

T. GILBART SMITH, M.D., Vice-President, in the Chair.

Observations on some Additional Cases illustrating Hepatic Surgery. This paper was read by Mr. MARMADUKE SHEILD for the PRESIDENT,† Mr. J. Knowsley Thornton.—After recalling his two previous papers on the same subject, read before the Society in 1887 and 1888, the author stated that the present series completed the whole of his practice in this branch of surgery to the end of January, 1891. He gave full notes of nine cases in which he had diagnosed gall stones, had found and removed them in seven with complete cure, had failed to find a stone which was present in one, the patient dying, and the stone being found after death in the peritoneum, and in the remaining case found hydatids to be the cause of obstruction instead of gall stones, the patient making a smooth recovery. He then referred more briefly to seven other cases in which he had operated, and found pathological conditions having a more or less important bearing upon hepatic surgery; one of these was a large hydatid cyst of the liver, which had been diagnosed by several physicians as disease of a much more serious character. The patient recovered. Two were cases of malignant disease; one a case of doubtful nature, and one of chronic pain and adhesion after the passage of large gall stones. In none of these did he consider before operation that the indications pointed to the presence of gall stones. In one other case he operated expecting to find gall stones, found nothing definite to account for the attacks of pain, and though temporary relief followed the exploration, there had been recently fresh attacks of pain. The last case was one of very large tropical abscess of the liver in a gentleman, aged 63, in which unusually rapid recovery followed free incision and drainage. Commenting on the whole series, he claimed the results as good, and as amply justifying the operative procedures. At the same time, there was sufficient uncertainty and failure to show that it was to more perfect diagnosis that their attention must be directed. This would be greatly aided by more frequent exploration in doubtful cases. He dwelt upon the important points in the diagnosis of gall stones while still in the bladder, in the cystic duct, and in the common duct, and emphasised from two of the cases recorded the danger of attempting to force the stones through by massage; pointed out that adhesion of the gall bladder to the right kidney was a potent source of error in diagnosis, both from the position of the swelling and the sympathetic renal symptoms induced. He claimed three entirely new departures in this branch of surgery: 1. Direct incision of the common duct and removal of the stone, with complete suture of the opening, without opening the gall bladder. 2. Incision into the common duct, needling the stone into fragments, and closing the duct over the fragments, leaving them to find their own way into the duodenum. 3. Leaving the gall bladder open in the peritoneum, with efficient provision for drainage through the abdominal incision in cases in which it was impossible to suture it into the abdominal wound, and not advisable to attempt complete intraperitoneal suture. In the latter cases, and in all cases where fouling of the peritoneum was possible, he strongly advised a counteropening above the pubes, and additional drainage by means of a glass tube in the pouch of Douglas.—Sir JOSEPH FAYRER said he himself had seen practically nothing of the surgery of the gall bladder, but he had a very large experience of hepatic abscess. He mentioned two cases of calculus of the gall bladder in which Nature had effected a cure. One patient came to him with a long-standing history of trouble in the hepatic region and a sinus at the umbilicus. He recovered completely without operation after passing twelve gall stones by way of the artificial opening. The other patient was the wife of a medical man who was suffering from severe hepatic colic and jaundice. On deep palpation an enlarged gall bladder was felt, the outline of the stone being distinctly perceptible. He advised waiting a day or two before resorting to an operation, and during this time all the gall stones were passed by the bowel, the manipulation for the purpose of diagnosis having probably dislodged them.—The CHAIRMAN alluded to a case which he had seen seven years before. The patient, an old gentleman, was at the point of death, the principal symptom being abdominal pain. He presented a hard lump in the neighbourhood of the gall bladder. Malignant disease had been diagnosed, but after examination, inclining to the belief that it was gall stone, he ordered gentle massage over the neighbourhood of the swelling with the local application of hot fomentations and the administration hypodermically of strychnine and digitalin every two hours, to stimulate the failing heart. Two days later he passed a large gall stone and had since been quite well. He suggested that the frequency with which patients, after abdominal palpation, passed the gall stones which had given rise to the pain, etc., authorised the belief that massage in many cases might be very properly employed. To illustrate the value of exploration in abdominal disease he related two cases. The first was that of a patient with pyloric obstruction, who died within a week of his first seeing him. Malignant disease had been diagnosed, and operation was held to be contra-indicated. At the necropsy a duodenal ulcer was found, which had been caused by an impacted gall stone. Some years later this patient's brother came to consult him, suffering from symptoms which had been diagnosed as cirrhosis and ascites; but the absence of a history of alcoholic indulgence and the peculiar results of percussion of the abdomen militated against this idea. Some fluid of an inflammatory nature was withdrawn by aspiration, and then a tumour in the epigastrium could be detected, which was variously diagnosed as abscess, malignant disease, and enlarged spleen. A week later, by means of an exploratory incision, eleven pints of dark green fluid were evacuated, which proved on examination to be decomposed blood. The patient ultimately recovered, a result which could hardly have been hoped for had it not been for the exploration. He referred to one other such case in which a cyst was opened under the impression that it was hydatid. It turned out to be connected with the kidney, and it unfortunately drained into the peritoneal cavity, causing a fatal issue.—Dr. ALTHAUS said that one of the cases of syphilitic origin which was referred to had since come under his care, and was progressing favourably under antisyphilitic treatment.—Mr. JOHN TAYLOR (Birmingham) said that his experience of hepatic surgery was almost restricted to the operation of cholecystotomy, which, though not needed in quite so many cases as he had at one time thought, was useful in obstinate cases of biliary colic, in cases of distension due to obstruction of the cystic duct, and in suppurative cholecystitis. Phosphate of soda he had found to afford relief in most cases of hepatic colic due to the impaction of biliary calculi. In cases of calculus impacted in the cystic duct, when all efforts to seize or break it from within had failed, three resources remained—either to crush it from outside the duct, or to extract it through an in-

cision in the duct; or, after cholecystotomy, to inject fluids which were either solvent or tended to induce spontaneous cleavage. The two former methods he looked upon as dangerous, whereas the third in his hands had proved highly efficient. He injected a solution or emulsion of the taurocholate of soda twice a day into the gall bladder, and this speedily produced separation, breakage, and evacuation of the impacted stone. The removal of the obstruction was indicated by the discharge of bile from the wound, and the incision as a rule healed within a few days.—Mr. MARMADUKE SHEILD referred to Murchison's remarks on the similarity of hepatic gummatous projections to cancer formations. He observed that in the case of a young man presenting hepatic nodules, the possibility of these being due to syphilis should never be lost sight of, and mercurials with the iodides should be administered for the purpose of clearing up the diagnosis. He related a case which he had seen two years ago, which had been pronounced by two well known physicians to be of a cancerous nature, but in which, with Murchison's remarks before him, he had advised the adoption of this method of treatment, with the result of bringing the case to a favourable issue.—Dr. SIDNEY COUPLAND said he had no personal experience of the treatment of gall stones suggested by Mr. Knowsley Thornton. Evidently a considerable advance had been made, for at present not only were dilated gall bladders operated upon, but the bile duct itself was dealt with surgically. The question arose as to how long these patients should be allowed to suffer from hepatic colic before being submitted to surgical treatment.

Election of Officers.—The following officers and Council were elected:—*President:* Richard Douglas Powell, M.D. *Vice-Presidents:* Stephen Mackenzie, M.D.; Reginald Harrison; William Henry Allchin, M.B.; and William Rose. *Treasurer:* Arthur Edward Durham. *Librarian:* William Henry Allchin, M.B. *Honorary Secretaries:* Thomas Colcott Fox, M.B., and Arthur Marmaduke Sheild. *Honorary Secretary for Foreign Correspondence:* Jean Samuel Keser, M.D. *Council:* Herbert W. Allingham; Frederick Bagshawe, M.D. (St. Leonards); Charles Alfred Ballance; J. Astley Bloxam; W. Watson Cheyne; Thomas Churton, M.D. (Leeds); Charles James Cullingworth, M.D.; Alban Doran; Arthur E. W. Fox, M.B. (Bath); David Henry Goodsall; William F. Haslam (Birmingham); George Allan Heron, M.D.; Donald W. C. Hood, M.D.; Charles Bell Keetley; Percy Kidd, M.D.; Isambard Owen, M.D.; Stephen Paget; Bernard Pitts; Charles E. Sheppard, M.D.; John Knowsley Thornton.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, FEBRUARY 5TH, 1891.

H. CRIPPS LAWRENCE, M.R.C.S., L.R.C.P., President, in the Chair.

THE PRESIDENT, in taking the chair for the first time, alluded to his long connection with the Harveian Society, having been co-Secretary with Mr. Curgenven in 1871, when Mr. Victor de Méric occupied the Presidential chair; he paid a tribute to the memory of that surgeon, whom he described as a medical critic of no mean order, and stated that a marked advance in the scientific character of the communications dated from his presidency. The President congratulated the Society on its flourishing condition. The Harveian Society had been the training ground for many of the best medical debaters who now shone in the large Societies. He cordially invited younger members to take an active part in the discussions, but urged brevity.

Inguinal Colotomy. Mr. J. ERNEST LANE read notes of a case of inguinal colotomy. The operation was undertaken for the relief of a patient in the Lock Hospital, who had for years suffered from incontinence of fæces owing to severe phagedæna. The labia majora and minora, the surface of the perineum, and portions of the vaginal and rectal walls had been destroyed, and occupying their position was an area of scar tissue in which there existed one large and somewhat ragged opening, and also several minuter ones. The large aperture was found to lead into a species of cloaca with which the vagina, rectum, and probably the urethra were in communication, and from which the fæces were constantly escaping. Mr. Lane performed inguinal colotomy in the usual manner. The patient made an uninterrupted recovery, and her condition was greatly improved by the operation. Mr. Lane found, on a close examination, that the fæces escaped from the lower instead of from the upper angle of the aperture, and the tube leading downwards was moist and contained fæces, while the upper one was dry and empty. He explained this by stating that at the time of the operation the sigmoid flexure had become twisted upon itself, and was disposed somewhat in the form of a volvulus, and he deduced from this circumstance that it was not always possible in an inguinal colotomy to recognise which was the upper and which the lower end of the portion of bowel exposed. The operation in this case was purely one of expediency, whereas inguinal colotomy had hitherto seldom been performed except in cases of stricture of the rectum.—Mr. ROUGHTON congratulated Mr. Lane on the result, and asked whether the operation was directly responsible for the restoration of the menstrual function, or whether the catamenia had, perhaps, previously passed without observation in the fæces.—Mr. LANE, in reply, said it was altogether unlikely that the menstrual periods should have escaped observation, and he regarded the restoration of menstrual function as only a coincidence.

Falmouth as a Health Resort.—Sir EDWARD SIEVEKING read a paper on Falmouth as a Health Resort.—Dr. SYMES THOMPSON stated that from Sir Edward Sieveking's maps and descriptions he gathered that there were no really high hills close to the proposed health colony, although a certain elevation was desirable; it was possible for a place to be too much sheltered and shut in, in which case the air was injuriously stagnant. Our own country undoubtedly possessed many advantages over the distant resorts of the Continent which were not to be gainsaid.—Mr. KITTO, Dr. HANDFIELD-JONES, Dr. HILL, and Mr. WARRINGTON HAWARD also joined in the discussion, and Sir EDWARD SIEVEKING briefly replied.

THURSDAY, FEBRUARY 19TH, 1891.

H. CRIPPS LAWRENCE, M.R.C.S., L.R.C.P., President, in the Chair.

Free Hydrochloric Acid in Gastric Juice.—Dr. ROBERT MAGUIRE gave a demonstration on the methods adopted for detecting free hydrochloric acid in the gastric juice. He demonstrated the older methods, which employed tropæolin, gentian violet, and rosanilin, and showed that certain objections attached to them. Methyl violet was of much greater use and was very sensitive, but by far the best test of the kind was a solution of Congo red, which was exceedingly delicate and was not affected by such quantities of lactic and other organic acids as were likely to be found in the stomach. Its sensitiveness to hydrochloric acid and insensitiveness to lactic acid were demonstrated. The value of the test was also greatly enhanced when it was employed in the form of paper stained by Congo red, the colour of which became a deep blue in the presence of acids. But other tests were necessary if it were wished to absolutely exclude organic acids. Two of these were demonstrated. One was Günzburg's test, consisting of a mixture of phloroglucin, vanillin, and absolute alcohol. A few drops of this evaporated to dryness with a few drops of fluid containing hydrochloric acid gave a bright carmine colour. The second test was that of Boas, the fluid for which was a mixture of resorcin, sugar, and dilute spirit. This applied in the same way gave a chocolate brown colour. These tests were not affected at all by organic acids. Uffelmann's claret test, in which a mixture of red wine, alcohol, and ether gave a rose red colour with free acid, had not been found satisfactory by Dr. Maguire. These tests were of some value in clinical medicine, for the persistent absence of hydrochloric acid in the gastric juice spoke strongly for the presence of carcinoma of the stomach, though it was not absolutely diagnostic. The absence of hydrochloric acid from the fluid removed from a cancerous stomach was then shown.—Drs. C. T. WILLIAMS and CLIFFORD BEALE made remarks.

Treatment of Pyrexia of Phthisis. Dr. C. THEODORE WILLIAMS read a paper on this subject, which will be published.

The PRESIDENT suggested that, as the paper necessarily covered a large amount of debatable ground in connection

with phthisis and the fever of phthisis, it would be well to limit the discussion to certain broad points, such as (1) is it advisable to reduce the fever in phthisis? (2) the value or otherwise of derivatives; (3) on the hastening of softening; (4) the question of rest in bed in addition to good nourishing food.—Dr. ALDERSON thought there could be no doubt as to the importance of reducing the temperature in the pyrexia of phthisis. He had often reduced the temperature 2° or 3° by quinine or acetic acid, and had found a draught of acid acetic morph. acet. gr. $\frac{1}{4}$ or gr. $\frac{1}{2}$ most useful for the night sweats. Rest in bed was most important; he had found a pill of zinc sulph. gr.i useful in lessening night sweats, when other remedies had lost their effect.—Dr. WILLIAM EWART had never prescribed the cold bath on account of the dread consumptives had of even cold air. He did not find it necessary to resort to such large doses as 15 to 20 grains of such occasionally hazardous drugs as antipyrin: 5 grains every four hours or less often was generally sufficient. There could be no doubt that the fever was in many instances due to nervous inco-ordination, the thermotaxic function being in abeyance. He had found sulphate of zinc very useful under these circumstances.—Dr. CLIFFORD BEALE insisted on the advantages of rest in bed, warmth, and a good regular dietary. He had always been able to reduce the fever by one or other antipyretic, but this treatment in most instances did not do so much good or prove so comforting to the patient as might be expected. Pyrexial cases might be divided into three groups: 1, those in which the temperature ranged from 100° to 103° F. or more and rarely fell below 100°; 2, those cases in which there had been a high evening temperature, which fell to or below normal in the morning; 3, those moderate cases in which the evening and morning range was from 100° to normal.—Dr. MAGUIRE was strongly of opinion that the old-established antipyretic methods were safer and not less efficacious than the recent depressing remedies. These, he believed, caused changes in the blood and cyanosis, owing to the presence of the benzene group. He had seen excellent results with iodoform in the hands of Professor Dreschfeld—results not referable perhaps so much to limitation of temperature as to general improvement. As an essential part of the treatment, however, inhalations of iodoform in ether were prescribed in conjunction with iodoform pills. The PRESIDENT said it seemed probable that the fever was due to the excreta of micro-organisms rather than to changes in the tuberculous cell growth. That the nervous system shared in the disturbance was probable, and this might explain the afternoon and evening rise.—Dr. THEODORE WILLIAMS replied.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, FEBRUARY 12TH, 1891.

W. CHAPMAN GRIGG, M.D., President, in the Chair.

Sir Spencer Wells and Mr. Lawson Tait.—A discussion took place in reference to a subcommittee appointed to investigate Mr. Lawson Tait's cases, and it was finally carried "That the Obstetrical Society be invited to appoint a subcommittee to act with the subcommittee of this Society to inquire into the cases in dispute between Sir Spencer Wells and Mr. Lawson Tait."

Tuberculous Salpingitis.—Dr. R. T. SMITH showed a specimen removed from a married woman, aged 24. Physical examination showed the presence of pulmonary disease, and a pelvic swelling was detected, globular in shape, with a distinct boundary, situated in front and to the left of the uterus, which was central and low in the pelvis, and fixed. For three weeks the patient was treated on general principles, there being profuse night sweats, and the temperature ranging from 100° to 102° F. The abdomen having been opened in the median line, a tense fluctuating swelling, intimately adherent to the intestines, was found. Aspiration having detected the presence of foul pus, the sac was incised, the edges sewn to the edges of the abdominal incision, and a glass drainage tube inserted. There was not much improvement in the patient's condition, and, but little pus escaping from the tube, a counter opening was made in the vagina two months later, and the abscess cavity freely irrigated with antiseptics. The patient's strength gradually declined, and she died after being in the hospital six months and a half. A *post-mortem* examination showed tuberculosis of the lungs, pleura and bronchial glands, general tuberculous peritonitis, with extensive interintestinal adhesions. The opening in the abdomen led into a cavity to the left of the uterus, occupying the position of the left broad ligament, and was the size of a small orange, and contained thick dirty pus; on the right side the ovary could be recognised in a dense mass of adhesions containing a small cavity. Both these cavities proved to be Fallopian tubes, and though the lymphatic glands in the neighbourhood were tuberculous, there was no tubercle in the walls of the cavities nor in the uterus.—After some remarks by Mr. B. JESSETT and Dr. EDIS, Mr. LAWSON TAIT commented upon the futility of any procedure which left a piece of a suppurating cyst in the pelvis. He had adopted as an absolute rule to finish any operation he had begun.—Mr. MAYO ROBSON was convinced that Mr. Tait's dictum was a golden rule.—Dr. V. DICKINSON, Dr. ROUTH, Dr. HEYWOOD SMITH, Dr. WHITTLE, Dr. DOLAN, and Dr. LYCETT also joined in the discussion.

Specimens. Dr. FANCOURT BARNES showed a Tooth removed from a Dermoid Cyst which had previously been tapped but had not healed; the tooth had been the cause of prolonged suppuration, and after its removal a complete cure was effected.—The PRESIDENT showed a Uterus with a cyst firmly adherent to the intestines; the cyst had given way during parturition, and caused death sixteen hours after. Considering its relations, he did not see how it would have been possible to remove it, even though its rupture had been suspected.—Mr. TAIT thought a Porro would have been the best course.

THURSDAY, FEBRUARY 26TH, 1891.

W. CHAPMAN GRIGG, M.D., President, in the Chair.

Trough.—Mr. F. BOWREMAN JESSETT showed a trough intended for use in all operations on the perineum, uterus, and rectum, so as to convey all discharges, etc., down into a receptacle under the operating table.—Dr. HUGH FENTON showed an apparatus of the same kind.

Specimens.—Dr. BENINGTON showed Cystic Ovaries removed from a girl aged 17. The right ovary was enlarged to the size of an orange, the left was also cystic. The patient recovered by the eighteenth day, free from pain, and was able to walk with ease.—Dr. Benington also showed drawings of a Symelic Fœtus which demonstrated the existence of muscular fibres in the caudal appendage.—Remarks were made by Dr. HEYWOOD SMITH, Mr. LAWSON TAIT, Dr. ROUTH, The PRESIDENT, Dr. PARSONS, Dr. MACNAUGHTON JONES, and Dr. FANCOURT BARNES.

A Case of Pelvic Hæmatocele Treated by Abdominal Section.—Dr. DUNBAR HOOPER, Melbourne, read this paper. The patient was aged 33, had been married two years, had never been pregnant. Apart from dysmenorrhœa on the first day of the catamenia, which otherwise were regular, she enjoyed good health. She was suddenly seized with acute abdominal pain, about one week after the cessation of a menstrual period, which had lasted fourteen days and caused much more pain than usual; this was followed by collapse, symptoms of acute peritonitis, and examination disclosed the presence of a tumour, the size of a large orange, smooth and elastic, in the right iliac fossa. Under general treatment the patient so far recovered as to be able to be removed to a private hospital, and during a tardy convalescence she menstruated twice painlessly, but as the tumour had enlarged abdominal section was performed. A tumour was found between the right ovary and the fundus, not dipping into Douglas's space. During the separation of its adhesions to the uterus, bladder and pelvic fascia, it ruptured, and five handfuls of dark clot turned out. Its walls were now found to consist merely of the thickened two layers of broad ligament. Only two intestinal adhesions required ligation, and recovery was satisfactory. As no traces of decidua were found, Dr. Hooper thought the case more probably due to ruptured vein in the broad ligament during menstrual congestion, and considered that removal was the most satisfactory treatment.

THE Metropolis Water Supply Bill was read a second time in the House of Commons on March 4th, and referred to the Select Committee which had to deal with the water supply of the metropolis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

Friday, February 6th, 1891.

S. R. Mason, M.B., F.R.C.S.I., President, in the Chair.

The late Dr. A. Byrne.—The following resolution of sympathy with the family of the late Dr. J. A. Byrne was passed *in silentio*: "That the Obstetric Section of the Royal Academy of Medicine desires to record its deep regret at the loss it has sustained by the recent death of Professor Byrne, and to express its sincere sympathy with his widow and family."

Specimens.—Dr. T. More Madden exhibited a Dermoid Cyst which he had removed seven days previously from a young unmarried woman at the Mater Misericordiæ Hospital. Death occurred three days after the operation. On *post-mortem* examination the wound was found fairly united, the peritoneal walls and intestines somewhat congested, but not sufficiently to account for the result, which was probably largely attributable to the fact of the heart and kidneys being found very extensively affected by fatty degeneration. The solid portion of the tumour, on examination by Dr. M'Weeney, proved to be a dermoid cyst, containing hair, a plate of bone, and fatty matter.—Dr. W. J. Smyly showed a Uterus extirpated *per vaginam* for carcinoma of the cervix. The patient had made an uninterrupted recovery. He also showed tubes and ovaries removed for chronic salpingo-oöphoritis. The patient had been treated without benefit for three years, and was most anxious to be relieved by operation.—Dr. Bagot showed an Ovarian Cyst which he had removed at the Rotunda Hospital from a woman, aged 22. She had made a perfect recovery.

Massage in Incontinence of Urine in Women.—Dr. W. S. Bagot read a paper on massage as applied to the treatment of incontinence of urine in females, in which he gave a full account of the treatment of this affection by the Brandt system, by Sänger's method, which consisted in dilatation of the vesical sphincter, and also by massage, by distension of the bladder with warm water, as practised first by Nissen and Marion Sims, jun. He had cured three cases by the use of Brandt's system, omitting some of the steps which he considered useless. Details of the cases were given. The most essential part of this method was the direct treatment of the neck of the bladder by the finger in the rectum or vagina. In children one used the finger in the rectum. Massage by distension of the bladder with warm water was of use in case of contraction of the bladder following long-continued incontinence of urine from any cause, the holding capacity of the bladder being then much diminished. This condition was especially seen where fistula had existed or where patients had formerly suffered from severe cystitis of long standing. While recommending these treatments, Dr. Bagot urged the necessity of a careful diagnosis in every case. The cystoscopic examination should be more generally used.—Dr. W. J. Smyly had not tried the method; but he had seen excellent results from massage in uterine displacements.—Dr. More Madden expressed his most emphatic dissent from Dr. Bagot's views with respect to the use of massage in the treatment of incontinence of urine in females. The great majority of cases of incontinence of urine in females, when not resulting from parturient injuries or causes, resulted from cystitis; and might generally be more effectually treated by other and rapidly curative methods of treatment.—Remarks were made by Dr. S. M. Thompson and Mr. O'Callaghan; and Dr. Bagot replied.

Section of Pathology.

Friday, February 20th, 1891.

E. H. Bennett, M.D., President, in the Chair.

Cystic Kidney. Mr. Kendal Franks showed a specimen of a large kidney, weighing over two pounds, which was in a condition of advanced cystic degeneration. The kidney was removed by operation on January 13th, through a median abdominal incision, from the left side of a married woman, aged 25; and it was specially remarkable in this, that the right kidney, which was examined through the abdominal wound at the time of operation, was apparently healthy. This was a rare condition. The patient made an uninterrupted recovery. Some remarks were made by Dr. M'Kee, Dr. Alfred Smith and Mr. Patteson and Mr. Kendal Franks replied.

Cerebral Tumour.—Dr. E. H. Bennett exhibited a cerebral tumour occupying a large part of the motor area of the right cerebral hemisphere, including almost the entire arm centre, which had proved fatal by intracranial pressure, but without at any time paralysis of the left arm. The sections showed the size of the tumour to be about that of an half of a Tangerine orange, the base of the hemisphere being directed against the dura mater. The tumour lay enveloped in the cortical convoluted surface, directly over the fissure of Sylvius. The microscopic examination was reserved until the more important facts relating to the site of the tumour had been demonstrated. It was probably a sarcoma.—Mr. Story had examined the eyes of the patient when in hospital, and found neither optic neuritis nor hemianopia. Proptosis (or rather retraction of lids) was present on both sides, winking was infrequent, and the upper lids did not follow the downward movement of the globes. There was partial anæsthesia of cornea and conjunctiva, and loss of conjunctival reflex. It was an interesting fact to observe these well-known signs of that remarkable disease, exophthalmic goitre, in an undoubtedly cerebral case, and it strengthened the modern view that this disease was of central origin.—After some remarks from Dr. M'Weeney, Dr. M. A. Boyd said that in a case of cerebral tumour under his care a considerable part of the motor area of the brain was involved in a tumour without any motor symptoms whatever being present. The patient, as in Mr. Bennett's case, had some difficulty in walking, and complained constantly of pain in the head, and, as a tumour was suspected, an ophthalmoscopic examination was made. Double optic neuritis and hemianopia were found. These symptoms pointed to the occipital lobe as likely to be the situation of tumour. The patient ultimately died of convulsions and coma, and the *post-mortem* examination showed five or six tumours present in the occipital lobes and cerebellum—the principal one in the former, and which proved to be, on microscopic examination, a sarcoma.—Dr. R. G. Patteson said that as regards the the non-occurrence of motor phenomena in connection with the presence of a tumour involving most of the motor area, it was possible to conceive, in the case at least of slowly developing tumours, that a certain amount of accommodation could take place, either through already established or new formed channels, in the opposite side.

Rhinolith.—Dr. N. Falkiner exhibited, for Dr. T. E. Little, some fragments of a nasal concretion and rhinolith, which had been extruded from the back of the nasal cavity after a severe attack of sneezing, there having been for some time previously some slight trouble from an insignificant nasal discharge and occasional epistaxis. The fragments only weighed 3 grains, and were yellowish-white and soft.

Hydatid Cyst of the Pleura.—Dr. G. F. Duffey made a communication on this subject, and exhibited a large cyst (tænia echinococcus), with numerous daughter cysts, removed from the right pleural cavity of a man, aged 31, together with the lungs, portion of the diaphragm, and the cyst wall. The usual physical signs of a large pleural effusion on the right side were observed. Forty-seven ounces of a clear, straw-coloured fluid was removed by paracentesis. Alarming dyspnœa, and intense cyanosis of head, face, and neck, with burning heat of the hands, set in while the fluid was being removed. He rallied slightly, but subsequently the dyspnœa recurred, the pulse and temperature rose, and he died thirteen hours after the operation. On *post-mortem* examination, it was found there was no pleural effusion. The pleura on the right side was most intimately adherent. In trying to detach it, the hand ruptured a large tumour, which forcibly ejected a quantity of clear fluid, immediately followed by the extrusion of a large hydatid mother cyst, with a number of small daughter cysts. This cyst was situate between the diaphragmatic and pulmonary pleura. It lay within a dense fibrous capsule, intimately adherent by its external surface to the lung, pericardium, and diaphragm. The left lung was pushed upwards, forwards, and to the left by the tumour, and its lower and middle lobe greatly compressed. Its upper lobe contained numerous miliary and caseating tubercles, and in the apex one large and three small vomicæ. A similar condition, but more advanced, existed in the upper lobe of the left

lung, and its lower lobe was much congested. The cyst was sterile, but the laminar construction of its delicate wall was sufficiently distinctive.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Pathological and Clinical Section.

Friday, January 30th, 1891.

Priestley Smith, M.R.C.S., in the Chair.

Obstetrical Paralysis.—Dr. C. W. Suckling showed a baby with paralysis and wasting of the deltoid biceps, coraco-brachialis, brachialis anticus, and supinator muscles on the right side. The reaction of degeneration was present. The cause of the paralysis was injury of the fifth cervical nerve at birth.

Diagnosis of Distended Gall Bladder.—Mr. John W. Taylor read a paper on the differential diagnosis of distended gall bladder from tumour of the right kidney, maintaining that difficulty arose when the distended gall bladder rested upon a somewhat enlarged or displaced right kidney, the two organs under ordinary examination moving together and simulating a renal tumour. Evidence of the independent movement of the gall bladder overcame this difficulty. Mr. Taylor read notes of a recent case of cholecystotomy which was illustrative of his advice regarding the differential diagnosis of these conditions.

Adherent and Calcareous Pericardium.—Dr. A. Foxwell brought forward a specimen of heart and lungs taken from a strumous girl of 16, who never remembered to have been free from respiratory trouble. The liver and spleen were much enlarged, had their capsules much thickened, and, with the specimen, formed a great zone of absolute dulness right across the body, with its upper limit at the fifth costo-chondral level (a small triangle reaching up to the junction of the fourth left cartilage with the sternum), and its lower a horizontal line 1 inch above the umbilicus. All the organs mentioned, as well as the kidneys, intestines, and stomach, had undergone marked fibroid change. The lower lobes of the lungs contained numerous bronchiectases, while both pleuræ and pericardium were dense masses of fibroid tissue with large calcareous plates embedded in them.

Four Cases of Axial Rotation of Ovarian Tumours with Subsequent Strangulation.—Mr. Lawson Tait read notes and exhibited specimens of four cases: (1) Mrs. N., aged 61, widow, a hospital patient under the care of Mr. Christopher Martin: change of life twelve years before. A cyst the size of a six months' pregnancy was recognised and removal advised. She hesitated to adopt this advice. Ten days afterwards Mr. Martin was hurriedly called to see her, and found her suffering from very acute symptoms, which had commenced suddenly the day before. She was propped up in bed in great pain, with a dry brown tongue and frequent vomiting. The abdomen was greatly distended and tender on touch, and there was marked constipation. The pulse was 130 and the temperature 98.4°. The cyst had doubled in size since she was seen three days before. She was immediately removed to hospital. On hearing the history Mr. Tait diagnosed axial rotation of an ovarian tumour with hæmorrhagic effusion into it. The same afternoon (August 14th, 1890) he confirmed this diagnosis by opening the abdomen and finding a large cyst full of blood, the surface being of a dark reddish-brown colour and the pedicle twisted to the right about four times. The tumour was in a condition of gangrene. The patient made a perfectly easy recovery, and left the hospital on September 3rd. She remained perfectly well. (2) When in Florence in December last Mr. Tait was asked by Dr. A. R. Coldstream to see a lady, aged 78. Her menstruation had ceased a great many years before, and, during her married life, she had had only one child, then 52 years of age. She was a remarkably strong and healthy woman till August, 1890, when she had an attack of swelling of the right leg, and a tumour was found in the abdomen. She was under the impression that she had been increasing in size for three years, and thought she was only getting stout. All the functions of the body had been ascertained by Dr. Coldstream to be normal. When seen by Mr. Tait she had a worn and anxious look and was in acute pain all over the abdomen. This pain, which had set in quite suddenly two evenings before, was caused, according to her statement, whilst twisting her body when getting into bed. The abdomen was very tense and painful. It was clear that the tumour reached from the pelvis to the xiphoid cartilage. She had some dark brown vomiting, and could not permit any but the most gentle touching of the abdomen. From the history and condition, Mr. Tait diagnosed the presence of an ovarian tumour, which had probably become rotated. Dr. Coldstream had mitigated the symptoms as far as was safe by the hypodermic administration of morphine. Mr. Tait put it to the patient and her daughter that if anything was to be done it must be done immediately. After a good deal of discussion they accepted the risk, and the same afternoon he opened the abdomen, and found a large strangulated ovarian tumour of a dark reddish-brown colour, with bloody pus in its cavity and diffused into its texture. The pedicle was twisted between three and four times to the right. He tied the pedicle in the ordinary way with the Staffordshire knot, and the patient made an uninterrupted recovery, her temperature never rising more than one degree above normal, and the highest pulse record being 88. (3) Mrs. E. R., aged 49, married twenty-eight years, was sent to Mr. Tait by Dr. Dukes, of Rugby. She had had three children, the last nineteen years ago. About January, 1890, she had noticed that her abdomen was enlarging. On January 16th, 1891, her abdomen was found to be enlarged by a unilocular cyst, diagnosed to be parovarian. Its removal was accomplished on January 17th, and the operation revealed a semi-solid cyst, full of blood, strangulated and gangrenous, the blood being clotted and the fluid and surface of the cyst being of a dark greenish hue. The cyst was of the parovarian kind, and the pedicle was twisted five or six times to the right, and it looked black, and exactly like an umbilical cord. The cyst was adherent extensively to both small and large intestine, and almost completely to the abdominal and pelvic walls, and had to be peeled off bit by bit with great care. The peritoneum was flushed out, and a drainage tube inserted. The patient made a recovery without interruption, except that she had a slight attack of mumps. In this case there was a total absence of any history of acute symptoms. (4) Mrs. M. D., aged 58, patient of Dr. Clarkson, married thirty-eight years, her last child being 25 years of age. She noticed her abdomen getting large, and the substance increased and developed so as to grow up to the right lumbar region. She had no pain till eleven weeks before, when she began to suffer very acutely in the right lumbar region, the pain being inconstant, but increased by any exertion. The mass of the tumour lay over the right kidney, and was diagnosed as a tumour of that organ, in addition to a pelvic mass which could be felt from the vagina, and which was regarded as an ovarian tumour. Abdominal section performed upon January 16th proved that this latter mass was a tumour of the left ovary packed in the pelvis, and extending as high as the umbilicus. On being tapped the fluid was found to be thick pus. It was removed, and the pedicle treated in the ordinary way. The mass up in the right lumbar region was then found to be a tumour of the right ovary, with an extremely long pedicle, certainly more than four inches in length, and this was twisted exactly like an umbilical cord. It lay in the flank over the right kidney, and above the other tumour. It was a multilocular cystic growth, and was covered on the surface by small grape-like cysts, somewhat resembling those characteristic of Rokitanski's tumour. In this case the tumour was not infiltrated by blood, and it was, perhaps, doubtful if the axial rotation had occurred sufficiently to strangulate it. The patient made an easy and uninterrupted recovery. It was specially noteworthy that the tumour was from before, backwards, and to the left, an opposite direction to that of any other case Mr. Tait had ever seen. That was precisely the direction of twist that would be effected if the twist were due to the filling and emptying of the ascending colon, which, of course, lay under the back of the tumour. This curious observation was made by Mr. Christopher Martin.

Case.—Dr. Simon showed a patient with Ophthalmoplegia Externa and Interna.

Specimens.—Mr. H. Langley Browne showed Kidneys containing Calculi from a case that had died after Lithotomy. He also read a note of a case of Perforating Ulcer of the Duodenum.—Mr. Barling showed a specimen of Tuberculosis of the Tarsal and Ankle Joints, amputated after the patient had been under treatment by injection with Koch's fluid.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION: SOUTH LONDON DISTRICT.

WEDNESDAY, FEBRUARY 4TH, 1891.

J. W. OSWALD, M.D., Vice-President, in the Chair.

Cases.—The following cases were shown: Cerebellar Tumour, with Raynaud's Disease and Hæmoglobinuria: Lupus of Nose treated with Koch's Remedy; Suprascapular Tumours: Jaundice in a Child, with Enlargement of Spleen and Liver.

Ulcerative Endocarditis.—Dr. FREDERICK TAYLOR read a paper on this subject. He defined the disease as a febrile process resulting from recent, often ulcerative, lesions of the endocardium, accompanied, as a rule, by evidences of embolic obstruction of vessels in different parts of the body. He recorded a case, recently under his care and that of his colleagues at Guy's Hospital, in which the characteristic features of persistent pyrexia, cardiac valvular disease, anæmia, optic neuritis, and enlarged spleen were seen clinically; while, after death, there was found to be an extensive lesion of the mitral valve, with rupture of the chordæ tendineæ, and abundant fungating granulations on the surface of the left auricle. Micro-organisms had been found in the vegetations by Dr. Pitt. With regard to the etiology of the disease, observations were more and more tending to confirm the views of those who believed that ulcerative or septic endocarditis was not due to one particular organism, but might result from the invasion of the organisms of different diseases. According to MM. Lion and Martineau, there had been found in cases of septic endocarditis the organisms of septicæmia and pyæmia, those of pneumonia, typhoid fever, and tuberculosis, as well as six others not found in other diseases. In different cases the valves might be differently affected according to the particular organisms concerned. Clinically, it became of the greatest interest to note the diseases with which any case of ulcerative endocarditis was associated as bearing upon its course and complications. Thus it had been noted by more than one observer that septic endocarditis following pneumonia attacked especially the aortic valves, and was sometimes accompanied by suppurative meningitis. Such a case had happened at Guy's Hospital comparatively recently. Dealing with the symptoms, Dr. Taylor called attention to the cardiac murmurs, the pyrexia, and the evidences of embolic processes, and discussed points connected with them. He pointed out the long duration of the pyrexia which was seen in some cases, extending, for instance, to six months in the case above quoted, during which the fever was almost absolutely regular, the temperature rising at night and falling in the morning. The evidences of obstruction he dealt with under six heads—(*a*) absence of pulsation in accessible vessels; (*b*) loss of function of vessels not accessible, for example, hemiplegia from blocking of a middle cerebral; (*c*) disturbed function, such as albuminuria; (*d*) obvious infarcts, as shown by the enlargement of the spleen in some cases; (*e*) hæmorrhages—of some of these he suggested that they might not be embolic, but rather stand to the bacterial virus of endocarditis in the same relation as the petechiæ of small-pox and typhus did to the virus of those diseases, namely, they might be toxic in origin; (*f*) inflammatory lesions, such as optic neuritis and nephritis; their relation to embolic processes was uncertain. Among the various symptoms of this disease, special stress was laid upon anæmia and optic neuritis. Anæmia was very frequent, and had some diagnostic value. Optic neuritis occurred with greater frequency in this disease than in typhoid fever, with which it was apt to be confounded. The diagnosis, prognosis, and treatment were briefly discussed.—Dr. CAMPBELL BOYD related a case recently under his care which he considered was probably one of ulcerative endocarditis.—Dr. HECTOR MACKENZIE said that anæmia had been a very striking feature of the cases he had seen. He had only seen optic neuritis once, and in that case there was also very extensive cerebral softening. Of 25 fatal cases at St. Thomas's Hospital during the last five years, 8 were associated with rheumatism, 3 with parturition, 2 with pneumonia, 1 with pleurisy, and 2 with alcoholism, while in the remaining 9 there was no causal relation. The duration of pyrexia in these cases was very varied; in 4 it was about one month, in 7 between one and two months, in 5 from two to four months, in 6 from four to six months, in 1 eight months, and in another nine months. One patient had left St. Thomas's with the disease apparently quiescent after fever lasting nearly a year. The cases had been fairly evenly distributed over the five years, and had not shown the tendency to occur in little epidemics which had been noticed by Dr. Goodhart at Guy's Hospital.—Dr. PITT exhibited microscopical specimens showing micro-organisms in ulcerative endocarditis.—Dr. GOODHART, Dr. PERCY SMITH, and the CHAIRMAN took part in the discussion, and Dr. FREDERICK TAYLOR briefly replied.

MANCHESTER CLINICAL SOCIETY.

TUESDAY, FEBRUARY 17TH, 1891.

C. H. BRADDON, M.D., President, in the Chair.

Cystic Degeneration of Kidneys.—Dr. S. BUCKLEY reported a case of general cystic degeneration of the kidneys in a woman aged 42. At first the symptoms pointed to bowel obstruction: the urine was free from albumen, blood, or pus. Three days before death, which occurred during uræmic convulsions, albumen was present. Both kidneys were found to have undergone complete cystic degeneration, the cysts varying in size from a pea to a walnut. The cysts contained a serous-like fluid, varying in colour from light yellow to deep purple. The fluid contained albumen, but there was no urea and no uric acid. The left kidney weighed 28 ounces and the right 22 ounces. Similar cysts were also found in the liver. No trace of hydatids could be found. There was also disease of the aortic and mitral valves with left cardiac hypertrophy.

Prostatic Retention.—Mr. F. A. SOUTHAM made remarks on the treatment of prostatic retention of urine, and mentioned two cases where, the ordinary palliative measures having failed and self-catheterism being impracticable, the patients had regained the power of voluntary micturition—in one instance after division, in the other after removal of the obstructing portion of the prostate gland through a suprapubic opening.

Tuberculous Peritonitis.—Dr. H. R. HUTTON read notes of a case of peritonitis, occurring in the course of an attack of tuberculosis, treated by incision and free drainage with very satisfactory results.

Cases.—Dr. OWEN showed several cases of Spasmodic Affections in Childhood, and made remarks upon the treatment of these conditions.—Dr. HILL GRIFFITH showed a case of Vascular (?) Protrusion of the Eyeball.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, FEBRUARY 4TH, 1891.

JOHN W. TAYLOR, F.R.C.S., in the Chair.

Exostosis of Humerus.—Mr. W. F. HASLAM showed a small branched exostosis that he had removed from a woman aged 34. It was growing from the upper and inner aspect of the humerus, and was causing pain by its pressure on the branches of the brachial plexus.

Vesical Calculi.—Mr. HASLAM showed some phosphatic calculi that he had removed by the suprapubic operation from a man aged 70.

Ovarian Cyst with Twisted Pedicle. Mr. JOHN W. TAYLOR, in showing a specimen of this condition, which had been diagnosed previous to operation, pointed out the main elements which went to form a rational and successful diagnosis. (1) The previous knowledge of a cystic tumour of moderate size (presumably ovarian) situated fairly high in the abdomen, and therefore possessing a long pedicle. 2. The sudden occurrence of abdominal pain and other local peritonitic symptoms, together with marked and rapid increase in the size of the tumour. When these conditions were present, strangulation of the cyst with hæmorrhage into its cavity and walls might be inferred, and a correct diagnosis led to early and usually to successful treatment. In the case reported the patient was removed to a private ward for operation, and made an easy and rapid recovery.

Rupture of Heart.—Mr. DAVID WALSH showed a heart which, with its great vessels, had been extensively ruptured by indirect violence. A patient suffering from advanced phthisis, jumped from the top storey of the workhouse infirmary. At the *post-mortem* examination, fractures were

found in both dorsal and cervical vertebræ, as well as in the right scapula and ribs of the same side. The pericardium was distended with dark blood clot. The heart showed the following lesions. An irregular rent opened into the cavity of the right ventricle on its front aspect. The tip of the auricular appendix was completely torn away and was found lying loose among the clots in the pericardium. The left ventricle showed a small non-penetrating laceration of substance at its left border, and a ragged rent at the apex communicating freely with the cavity. The aorta was almost completely severed from its cardiac origin by a spiral slit running downwards from left to right, across the front of the vessel. The pulmonary artery showed a longitudinal rent about an inch in length on its left side near the bifurcation, exactly opposite the torn auricular appendix. The heart substance appeared fairly healthy, and the vessels no more brittle than might be expected in a patient aged 66, suffering from an exhausting disease. The lungs were completely consolidated in their upper halves, and closely adherent both to the chest wall and to the pericardium. This latter condition would partly account for the extensive nature of the injuries to the heart. As the man fell head first, the abdominal viscera would be forcibly impacted against the diaphragm, which in turn would crush the heart against the solidified lungs. There was also a superficial laceration of the left lobe of the liver.

Paper.—Dr. MALINS read a paper On Rudimentary Organs of Generation in the Female, which was illustrated by six cases.

REVIEWS AND NOTICES.

OUTLINES OF PHYSIOLOGICAL PSYCHOLOGY: A Textbook of Mental Science for Academies and Colleges. By GEORGE TRUMBULL LADD, Professor of Philosophy in Yale University. London: Longmans, Green, and Co. 1891.

THIS work is in the main a reconstruction, in the form of a textbook, of a volume entitled *Elements of Physiological Psychology*, published in 1887. Its object is to exhibit in a complete, and yet compact, form the science of the phenomena of human consciousness in their relations to the structure and functions of the nervous system.

Professor LADD commences by pointing out that states of consciousness, as primary facts, can be ascertained only by introspection. Introspection is an indispensable and legitimate method of psychology. But to interpret these facts, and to elevate psychology into a science, mere self-examination is insufficient. Self-consciousness can no more discover all the factors which constitute mental states than mere external observation will reveal all the constituent elements of a chemical compound. Inductions from the observation of other minds, the study of their development and reaction to environment are required to formulate the laws of mind, and it is further necessary to investigate the nerve conditions which precede or accompany mental states; and this, whether in the end these changes are held to be the real conditions or merely the invariable concomitants of mental states.

Professor Ladd, although a metaphysician to the core, has, in this work, definitively abandoned that wearisome whetting of the philosophical knife where there is nothing for it to cut, which has been the profitless task of so many thinkers. He quits the pure ether of speculation and descends to the real and practical business of to-day, that, namely, of correlating, by scientific method, the phenomena of sentient life with the life, growth, and reaction to stimuli of the nervous system.

The earlier chapters of the work deal with the anatomy and physiology of the nervous system. The account he gives is a succinct and clear digest of the subject, and the illustrations leave nothing to be desired. It is so well done that it is, perhaps, ungracious to suggest that it would possibly have been as well if these six chapters had been devoted to the true subject matter of the work. In Chapter VII Professor Ladd wisely elects to follow the scientific aim and method of recent physiology. He would have us study vital function by the light of the known laws of mechanics and the reactions of the laboratory. He is impregnated with the spirit of modern science, and fully conscious of the brilliant and promising results of that point of view which regards the nervous system as a molecular mechanism. It is worth while to quote his remarks on the equilibrating functions of the nervous system, which he regards as "nothing but the movements of physical elements whose constitution and changes, when performing their work, it is indeed very difficult to discover, but which undoubtedly have a physical constitution, and which change their relations in space under laws resembling those familiar to general molecular science. But this is precisely what science understands by a 'molecular mechanism.' On the other hand, it cannot be denied that such a description as the foregoing is not full and exact enough to satisfy the demands of scientific research. It is confessedly based on conjecture; it is full of gaps and assumptions. A complete and satisfactory mechanical theory of the nervous system would have to answer a number of extremely difficult special problems, the very beginning of an answer to which has scarcely, as yet, been attained. What, for example is the precise nature of those chemical changes which, we have every reason to believe, go on in every nerve when it is irritated? If the process of excitement consists in the explosive decomposition successively of the elements of the nerve, what checks the process of explosion? How does the nerve manage to repair itself so as to answer, within certain limits, all the demands which it is possible to make upon it? So, too, if we attempt to bring the nervous mechanism under the terms of a general electrical theory, we find a number of difficult and hitherto unanswerable problems awaiting us. How shall the phenomena of electrotonus in nerves be explained in terms of any known electrical theory? How shall we regard the so-called 'natural current,' etc? These immense and, perhaps in some instances, insuperable difficulties do not, however, excuse us from the obligation to hold firmly by the proposal to regard the nervous system under the terms of a mechanical theory. Molecular science in general—in all its different branches of heat, electricity, magnetism, etc.—encounters many and great difficulties. But it knows no other way, in fidelity to principles established by all scientific experience and by all the past developments of physical science, than to face the difficulties with successive attempts to overcome them, and thus satisfy all the phenomena in terms of a *mechanical* theory." (p. 164, *f.*)

But later on, Professor Ladd loosens his hold of this saving clue to the position, and advances a theory of the action of unsubstantial will at variance with the correlation of forces and the mechanical theory of life. The ontological prepossession slips out in his supposal of the interference with and control over the cerebral centres of a metaphysical entity. He would have "choice" to imply a real influence of the mind over the body. We had thought that Ribot's admirable treatise, *Des Maladies de la Volonté*, would have rendered so crude a position impossible, and the recent full, brilliant, and suggestive experiments of Dr. Hugo Münsterberg on this subject are barely referred to by Professor Ladd. Indeed, they are mentioned only to be somewhat superciliously and incontinently dismissed. The truth is that, if the mechanical theory of life were proved up to the hilt, the old metaphysical problems would remain untouched. Professor Ladd's well-known solicitude for the welfare of ethical philosophy renders him unduly sensitive, and a little inconsequent. The ultimate problems can be affected by no scientific inquiry, however exhaustive, though the results of science may render their restatement in an amended form necessary.

As an introduction to the subject, this volume is a conscientious and, in the main, impartial textbook. Two faults almost inseparable from the unavoidable compression of the work are, indeed, to be found. Much important work is not referred to, and some of the facts are so baldly stated as to be vague. The crucial clinical experiments of Victor Horsley are practically unnoticed. Dr. Hugo Münsterberg receives very insufficient justice. Indefinite statements are too frequent. As an example, the question of the age at which infants first hear may be taken. Some years ago Dr. Champneys pointed out in a short paper in *Mind* that, owing to the non-absorption of embryonic tissue in the tympanum, infants do not hear at first. He is inclined to believe that they do not hear for the first week or ten days. In many instances, however, they certainly hear after a few hours. But what is the student to gather from such a loose statement as the fol-

lowing: "Children (*sic*) differ greatly as respects the age at which they give sure tokens of having sensations of sound." Perhaps the least valuable chapter is the last, entitled The Nature of Mind, wherein the ontologist in Professor Ladd is most manifest. The imposing problems that are comprised in Theory of Knowledge have, it is true, a different subject matter and a different method from science, but much has been effected that is secure. The Kantian and *post*-Kantian work has been too thorough to admit of such a cheap and facile solution as the introduction of "entities." An "entity" is an object, and an object divested of all cognised quality is a fictitious and barren abstraction.

One word as to the index. It is as good as many others—that is to say, essentially useless. There are capable men ready to index works properly at small remuneration, and it is a cheeseparing policy on the part of publishers to depreciate the value of such excellent works as this by an index which is of no value to the serious student.

Des Suppurations Pelviennes chez la Femme. Par le Dr. Pierre Delbet, Prosecteur à la Faculté de Médecine, Lauréat des Hôpitaux et de la Société de Chirurgie, etc. (On Pelvic Suppurations in Women.) Paris: Steinheil. 1891.

This exhaustive treatise is well worthy of being classed with the works of Bernutz and Goupil and Matthews Duncan on pelvic inflammations. Certain questions in relation to diseases of the female organs, once fiercely disputed, may now be fairly considered as settled. The general opinion amongst authorities concerning ovariotomy when Bernutz and Goupil brought out their *Clinical Memoirs on the Diseases of Women* is well known. Nobody at the present time doubts the justifiability of that operation. During the past ten years much has been written by competent authors on the treatment of uterine fibroids. There is still much to be settled, yet the subject has at least been well cleared for further investigators. Our knowledge of the origin and course of pelvic inflammatory processes remains limited, or, what is worse, we have abundant clinical and pathological records at hand, without a clear general grasp of the subject.

Dr. Delbet's work will greatly aid the pathologist and gynæcologist in making an obscure subject clear. The author has established his right to be consulted as an authority through his truly scientific yet practical researches on the action of flushing the peritoneum in abdominal section. He possesses the Frenchman's power of synthetical reasoning upon a vast undigested mass of analytical records of single cases. The subject of this work is peculiarly adapted for the display of a Frenchman's peculiar intellectual skill. *Des Suppurations Pelviennes* is tightly packed with cases, yet it is perfectly readable. The text consists of 432 pages, but nearly 200 more are devoted to condensed reports, admirably prepared and classified. Dr. Delbet follows the good example of Pozzi and other contemporary French writers in displaying a cosmopolitan impartiality. In treating of any subject, he quotes the best authorities—German, British, or American, as well as French. We regret that there is no index, though the clinical reports are so arranged as to allow of easy reference.

Roughly speaking, the work is divided into sections on salpingitis and ovaritis, pelvic peritonitis, suppurating tumours and hæmatoceles, pelvic phlegmon, and abscess, primary or secondary.

We are glad to find that Dr. Delbet strongly advocates the application of the term "phlegmon" to the disease known to many as "pelvic cellulitis" and to others as "parametritis." At page 153 the objections to the use of the word "parametritis" are ably demonstrated. On the other hand, the author's principle of distinguishing "perisalpingitis," "periovaritis," and "perimetritis" from "pelvic peritonitis" is questionable. The passages devoted to "phlegmon" and subsequent abscess form the most essential feature of this book, but a high value must be set upon Dr. Delbet's observations on inflammation of the tube and ovary.

It would be well if somebody translated this work, as Dr. Meadows rendered into English the now classical treatise of Bernutz and Goupil. A yet better course remains for some countryman of ours to pursue. Let this work be improved upon, for there is an inexhaustible mine of clinical material in this country of which some young worker might well take advantage. *Sic itur ad astra!*

Aphorisms in Applied Anatomy (or Anatomy for the Final Examinations) and Operative Surgery, including 100 Typical *Viva Voce* Questions in Surface Markings, etc. By Thomas Cooke. Pp. 173. London: Longmans, Green, and Co.

In this little book Mr. Cooke has epitomised the work done in his course of operative surgery. It is avowedly an attempt to give only the leading points of applied anatomy and surface marking. The operations referred to are those which it is considered advantageous for the average student to perform; and these are outlined only, mainly from what is called the cadaveric as opposed to the practical surgical standpoint. The aphorisms are not presented as a superstructure, but as a foundation to build upon. Further, it is stated that they are intended to favour practical work, and it is believed that it is of little use to read the anatomical portion unless each statement is at the same time verified on the exposed body with both finger and eye. These short extracts from the definition of the scope of this book give a fair idea of its plan and character. The author's extreme anxiety to be brief and aphoristic is probably the cause of a certain want of clearness in places. For instance, we fear that the position of the axillary artery would not be marked with perfect accuracy by a line drawn from the junction of the outer and middle thirds of the clavicle to the outer part of the axilla; and no rule whatever is given for marking the exact beginning and end of this artery or of its continuation, the brachial. It is obvious that in most instances the beginning and end of an artery is all that is required to enable anyone to mark the course of the vessel. We note a similar vagueness with regard to the superficial femoral and popliteal arteries. Perhaps this is covered by a statement in the preface which says that the measurements given are roughly correct, sufficiently so for practical purposes. However, as we should expect in a book written by Mr. Cooke, whatever information is given is correct as far as it goes, and whatever is given is of the kind which no candidate for an examination could possibly do without.

The surgical anatomy is given in the form of tablets, and deals very accurately and concisely with hernia, the ischio-rectal region, and the perineum. More than half this small work is given to operative surgery. The remarks made under this heading are very sensible, and betray the experienced teacher. But the descriptions of the operations are so brief that they are practically useless. For instance, inguinal colotomy is dismissed in less than sixteen lines, and nothing is said of the extremely important step of suturing the peritoneum to the skin before suturing the loop of intestine. Tracheotomy is almost as briefly described, although vaginal and supravaginal amputation of the cervix—two operations little practised upon the dead body—are both, oddly enough, mentioned; the one, it is true, in half a dozen lines, the other in nearly eight. The hundred questions at the end are all exceedingly good, and such as every student ought to be able to answer.

NOTES ON BOOKS.

Clinical Manual For India. For the Use of Students of the Madras Medical College. By Deputy Surgeon-General C. Sibthorpe, F.K.Q.C.P., M.R.I.A. (Madras: Higginbotham and Co. 1890.)—This is the third edition of this clinical manual, which is not confined to medicine, strictly so called, but deals also with surgical diagnosis, so far at least as the examination of the ear, throat, eye, rectum, and bladder is concerned; with directions for the employment of antiseptics in surgical practice, the treatment of cases of emergency, as well as poisons and antidotes. The first chapter deals with clinical study, its aims and objects; the second with disease. In subsequent chapters, case taking, the clinical examination

of patients, and special modes of investigation are dealt with, followed by chapters devoted to the examinations of the various "systems." The diagnosis of skin diseases is considered at some length. The topography of the brain and the functions of the cerebro-spinal systems are explained, introductory to the diseases of the nervous system, and the examination of the insane. Many other subjects are discussed with more or less fulness, which cannot fail to be useful, not only to medical students in India, but to isolated medical practitioners in charge of hospitals and dispensaries among the natives of that great country. Those who have mastered the contents of this useful work, not merely by rote, but in the proper acceptation of the term, have taken a long step to make themselves good diagnostic physicians, without which they can never be good doctors.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. X. Session 1889-90. (London: J. and A. Churchill. 1890.) It is not necessary to do much more than chronicle the appearance of this annual volume. The work of the Society has been regularly reported in these columns during the year, and in this volume will be found the original articles of great interest to specialists, abstracts of which have already appeared in these pages. Some of the lithographic illustrations are excellent reproductions of the original drawings, but not quite so much can be said for the photographic process plates.

The Westminster Hospital Reports. Edited by OCTAVIUS STURGES, M.D.Cantab, F.R.C.P., and GEORGE COWELL, F.R.C.S. Volume VI. (London: J. and A. Churchill. 1890.) —The sixth volume of the *Westminster Hospital Reports* is somewhat smaller than some of its predecessors. It contains the usual official reports of the Registrar, and some clinical notes of special cases. The more elaborate papers range over a large number of subjects. Dr. Sturges has a thoughtful article, "On Prognosis in Pneumonia"; Mr. Macnamara contributes a carefully-considered essay on "Granular and Tubercular Conjunctivitis," and Dr. de Havilland Hall briefly discusses the "Causes and Treatment of Asthma." Dr. J. B. Potter reports four additional cases of fibroid tumours of the uterus treated by electrolysis. He expresses a very guarded opinion as to the value of this method of treatment, but concludes with the observation that, on the whole, he is "inclined to think that the benefit is mainly due to galvano-caustic action; and that, probably, a similar result might be obtained with treatment less expensive, troublesome to manage, and cumbrous." Dr. Donkin publishes condensed reports of some clinical lectures of a very practical kind on the treatment of some intestinal disorders of childhood. A note by Dr. Hebb on the germicidal action of the blood contains a summary of recent publications on the subject, and Mr. Morton Smale has a short illustrated article on the treatment of fracture of the lower jaw. Mr. Cowell contributes a sympathetic obituary notice of the late Dr. Fincham.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

EFFERVESCENT CARLSBAD POWDER.

THIS effervescent preparation is stated to contain amongst other ingredients the active principle of the Sprudel salt obtained direct from the mineral water. It is an improvement upon the ordinary crystalline form of Carlsbad salt in use, as a solution can be readily made by stirring the powder in water. Our analysis of the Effervescent Carlsbad Powder shows that it contains the various salts which are known to exist in the Carlsbad springs. The taste is not unpleasant, so that it can be easily taken, and its action we find to be mild but efficient.

The sample has been sent by Messrs. S. Kutnow and Co., 66, Holborn Viaduct, London, E.C.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MARCH 7TH, 1891.

THE GOVERNMENT FACTORY BILL.

SINCE the leading article on "The New Factory Bills" appeared in the BRITISH MEDICAL JOURNAL of February 28th, we have had the advantage of learning from the author of the Government Bill, the Home Secretary, the principles aimed at in that project, and the grounds upon which he bases his reasons for abolishing the office of certifying surgeons. The latter must engage our present consideration. But we will first remark that the debate that followed on the second reading of the Government Bill was remarkable for the small encouragement lent to the Home Secretary's scheme for the destruction of the medical organisation of the Factory Act as now existing. The sense of the House was decidedly adverse to it. Its opponents comprised, among many members well known for their interest in social questions, Sir Lyon Playfair, Mr. Shaw Lefevre, Dr. Farquharson, and Sir W. Foster. Some half-hearted general approval of the Bill as a whole was given by a few members representing textile districts, and Mr. Stuart Wortley, one of the backers of the Bill, did his best to bolster up the lame and fallacious arguments urged by Mr. Matthews in its favour.

The Home Secretary's first contention is, that as the Education Act requires proof of age for all children, and as the certificates given for the purpose are available for factory purposes, therefore medical men are quite unnecessary to watch the ages at which children and young persons are entered for work in the required registers. This assertion is not wholly true. Certifying surgeons continually find it necessary to compare the certificates with those who present them to guard against personation, and, still more, to closely examine the dates affixed to detect alterations, and such tampering with age certificates is of no very rare occurrence.

It may be said that this examination of the documents produced is the work of the individuals to whom are entrusted the duties of registering the names of those applying for employment. So, indeed, it legally is, but experience proves that irregularities, such as cited, are mostly overlooked by them.

Again, it is no prescribed duty of the certifying surgeons to inspect the evidence of education required, yet those officers customarily do examine the certificates of the standard passed, note their entry, and often discover alterations of figures designedly made to obtain employment in half time or whole time work. And it must also be remembered that there is a certain proportion of children born abroad, or

otherwise unable to obtain certificates from registrars of birth, in whose case the opinion of the surgeons is of value. But putting aside the utility of the certifying officers in regard to the questions of age, the residue of the functions they are called upon to exercise affords ample reason for their retention. For it is no needless inquiry, respecting those put to labour, whether they are in a state of health, free from disease and deformity, and of sufficient development and strength to be subjected to the requirements of the work they are hired to perform.

On this matter we are completely at issue with Mr. Matthews. He refers to the medical certificate of fitness as a purely unmeaning form, and as totally unnecessary; and to establish his statement quotes some unspecified "authority of experience" who has informed him "that for years such a thing has not been known as a child being rejected by the examining surgeon." We know not who this experienced authority may be, but it is a very unstatesmanlike proceeding to propose to make a sweeping change of the factory system on such solitary evidence, and actually in face of many proofs that have been put before him proving indisputably that many rejections for physical unfitness are made yearly. Evidence of the kind was placed before the Home Secretary by a deputation of factory medical officers who waited upon him last year, and also by a memorial submitted to him. Had this not been so, it would still have been his duty to take some pains to examine into the matter before making the astounding statement he did before the assembled House of Commons.

Those affected by this operation can categorically deny its truth in reference to themselves as a body. In so large a service there may be men who discharge their duties perfunctorily, and there may be small factories employing very few hands, and possibly, too, larger ones, where none but "young persons" above 14 are engaged, and the work is light. In such instances we can imagine that a lengthened period may pass by without the surgeon finding occasion to reject youthful applicants for employment. But such instances are very exceptional, and furnish no argument against the system of medical examination to be applied to all places of manufacture.

The bold statement in question might be left to refute itself; for either many hundreds of professional men through Great Britain and Ireland totally neglect their duty, or are incapable of recognising disease and bodily weakness in the many thousand children submitted to their inspection, or else the health of the country has arrived at such perfection that disease, deformity, and weakness are extinct in the population, and every child is fitted for employment of every sort and kind, if only it brings evidence of having attained a certain age.

Leaving the wholesale assertion noticed to this *reductio ad absurdum*, we pass to the next and milder statement, that the rejections are so few that the office of certifying surgeon as at present exercised need not be continued. From a common sense point of view this objection amounts to nothing. The question is not the number of rejections for unfitness, but whether the exercise of the office protects the unfit against improper employment; in other words, does it operate to prevent such employment? A town whose inhabitants were in the possession of their senses would not discharge their policemen because they made few prisoners; on the contrary, they would rather congratulate themselves on the presence of those guardians of the peace who prevented their peace being broken and their goods stolen. As the police are to the community, so are certifying surgeons to the health of the working classes—agents preventive of acts injurious to their health and well being.

The fewness of rejections affords evidence of the surgeons' efficiency in the present and in past periods. Under the operation of the Factory Act, there has been a considerable improvement of the health of factory *employés*. The curtailment of working hours, the denial of employment to very young children, and the general regulations for meal times and holidays, are important factors in bringing about this improvement. But the medical supervision also has materially contributed to it. For a series of years it has helped to weed out the weak lives, and rescue them from destruction. It has aided in arresting infections and contagions within as well as without factories: it has brought about regularity in the registration of the employed; it has continuously acted as a barrier to the entrance on work of the unfit, and has contributed in manifold ways, by rendering assistance to the inspectors, and by indirectly encouraging cleanliness among the working classes and the promotion of sanitary improvements in factories.

Having rid himself of the doctors, we may ask what has the author of the Bill done in the way of providing against the evils of indiscriminate employment? How will he supply their place? He propounds three remedies: (1) parental affection; (2) the interests of employers; (3) the arrangements for education. With the efficacy of the first he himself is not fully satisfied. The second, if we rightly understand him, is not altogether reliable; there is a qualification about it expressed by the words "it is not likely."

It were indeed extraordinary could Mr. Matthews place confidence in these two securities against improper employment. The entire history of factory legislation, founded on most exhaustive inquiries, distinctly proves that they are untrustworthy. Had they been so in the past, factory laws to regulate age and labour would never have been called for. All this is so self-evident to everyone who has any acquaintance with the past history of factory labour, that no further words about it are needed. The third deterrent remedy is educational, and we quote it in his own words, so that our readers may form their own interpretation of their meaning: "The third safeguard is that no one of these children can be employed unless he is daily going to school: and in this way we have a constant check, as the child would not be able to attend work unless he was well enough to go through his school attendance." We are fain to confess that we see little value in this so-called safeguard against the employment of the unfit.

The first allegation will not hold good if examined. Even with respect to half-timers, the school register will give no reliable evidence. There are such beings as school truants; and there are many who are constantly changing their place of work, and often their school also, and, in consequence, can with difficulty be followed up and have their school attendance verified. Then, as to full-timers, Mr. Matthews must have altogether forgotten that they do not attend school at all; and, of necessity, the school register will furnish no account of them nor of their place of work, and it is worth remembering that full-timers are more numerous than half-

timers, although equally with the latter subjects for medical examination, until they have reached the sixteenth year of age.

So much for the efficacy of the first part of the prescription. The second cannot be looked upon as wholly trustworthy. We cannot perceive that it follows as a matter of course that because a child is not well enough to go to school, therefore he is not well enough to work. Who is to settle this point as to the possession of health qualifying for school or for work? Parental affection, it may be answered, will determine it. But we have seen that parental affection cannot be trusted; and parental interests may demand work when they do not recognise the call for schooling. On the other hand, a child may be "well enough to go through his school attendance" who is not well enough to go through with the work imposed upon him. To decide the latter matter is the office of a medical man. To make the decision demands various considerations, and chiefly those connected with the nature of the work to be done, the labour attending it, and the circumstances of the manufacture, such as the existence, the presence of great heat or vapour, or of poisons necessary in certain processes. A child with a diseased joint may be able to attend school, but perfectly unable to perform bodily labour. A boy can attend school who is too weak, or has some physical defect that unfits him for the labour of a forge. A child with asthma may become an apt scholar, but his days will be greatly shortened if he work in the dusty atmosphere common to many occupations. There is a tendency among persons unacquainted with manufactures to think of them as if all presented the same conditions of labour; whereas those conditions are most variable and pronounced. The agitation against the factory surgeons is especially a product of the textile districts, and hence it happens that in the Bills introduced the circumstances of labour in such factories have unduly weighed upon the proposals made in them.

Another check to improper employment approved by the Home Secretary yet awaits notice. He says: "I propose to keep the check contained in Section 29 of the existing Act, which gives a valuable safeguard, in that it empowers the inspector at any moment to call in a surgeon to say whether the child is fit for work or not."

We take this proposal to be one of the compensatory ones to make amends to the certifying surgeons for the loss of their employment. As such it is about on a par in the matter of value with the proposal above quoted—that is, it is so small as virtually to be inappreciable.

Mr. Matthews was informed by several speakers that the visits of inspectors are few and far between—that their faces are unknown in some factories for one or more years; and, as everyone acquainted with the working of the Factory Act is aware, the task imposed upon the inspectors is one that cannot be efficiently performed according to the provisions of the Act. If the projected Bill be passed, the load of work will be further augmented. What, then, becomes of the valuable safeguard of inspectorial recognition of unfitness? What amount of oversight as to the subject can be expected of an officer perambulating the shops of a manufactory with the special purpose of noting the fencing of machinery, the general cleanliness, ventilation, and freedom from dust and steam, the obedience to the law respecting notices, hours of work, and meals, and other details that fall to him as duties?

To make only one more remark on this visionary safeguard: Between the biennial, the annual, or the half-yearly visits of the inspector, half or more of the juvenile workers of the factory will have been changed; a host of unfit may have come and gone, and more or fewer been disqualified by the labour pursued. From no point of view, therefore, can we reckon on Mr. Matthews's safeguard as practically efficient. Here we must conclude the present article. The Bill and the Home Secretary's comments upon it comprise several other topics that demand most careful examination.

THE ALTERNATIVE SOURCES OF LONDON WATER SUPPLY.

The very magnitude of the figures which confront us on the threshold of this inquiry as to how and whence London is to be furnished with a supply of water at once pure and adequate to its requirements, tends to obscure some other equally important *data*. The population of London is now increasing by a yearly addition of 75,000 persons, so that in the next census year (1901) its total will be little short of six millions and half; and in this connection it is significant that the London County Council has instructed its engineer to make provision for dealing with the sewage of a population of seven millions; whence it follows that any practical and efficient scheme of water supply must be equal to furnishing 30 gallons per head per day to a population of seven millions within a short period of time; and good authorities contend that it should be capable of expansion and extension to meet the wants of ten millions of persons at no absurdly distant date.

In the articles lately published on this subject in the British Medical Journal we have pointed out the practical impossibility of meeting London's daily needs from any merely local sources of supply; and any such conclusions deduced from considerations based on her present population can only be proportionately strengthened by our knowledge of the rate at which her numbers are increasing, and of the vast total which, in a few more years, they must represent.

The eight London water companies at present supply a population of about 5,582,000, which is daily increasing, furnishing between them some 167,000,000 gallons per diem. If all this is to be drawn from the chalk, in addition to the other millions of gallons which are needed to supply the daily wants of the country population in the district concerned, how long will it be before failing streams and parched vegetation begin still further to diminish a rainfall and percolation which is even now inadequate to the present demands? And what will be the condition of the country around London, what the accumulated loss, how great the induced disease, by the (not too distant) time when London herself shall again find even this supply beginning to fail her! Though the process of exhaustion may seem comparatively slow, it is plainly, even now, proceeding at a perilous rate; but should it become imperative to stop it, if that were possible, the process of replenishment must be slower still. Taking the depth of the London chalk bed at 600 feet, it would require no less than 400 years of the present average rainfall to resaturate it after once becoming thoroughly dry, even supposing that not one gallon of water were to be artificially drawn from it throughout that period. And, says Mr. Hop-

kinson, if all pumping from the underground reservoir were stopped to-day, "it would be forty years before the rainfall (assuming a percolation of six inches per annum) brought up the water level to the height it was sixty years ago."

Nor is the danger merely that of a water famine; other risks attend its progress. Chalk soils are notoriously expensive to manure, for the simple reason that their permeable nature permits the rain to wash an extraordinarily large proportion of the fertiliser down through their substance, partly in solution through the pores of the chalk itself, partly in suspension through the fissures which abound in this formation, and which the flowing water is continually enlarging. In proportion as chalk dries does its absorbent power increase, and with this come increased facilities for the carriage of organic filth to lower depths, and a greater chance of fouling subterranean reservoirs with an intermittent water level; and in this connection efficient exclusion of all sewage and sewage effluents from the streams of such an area must undoubtedly increase the local dangers attendant on sewage farms, and, indeed, on any means of sewage disposal short of its destruction by fire.

A consideration, then, of all the circumstances which attend the metropolitan water schemes shortly to be submitted to Parliament would appear to demonstrate that they are impracticable, because it does not appear probable that they would finally solve the question of an abundant and pure supply of water to the huge and rapidly-growing population of London itself, even though their execution should ensure as appears inevitable enormous injury to the health and property of a large and now prosperous district with the prospect of nothing less terrible than its eventual devastation.

Yet, if London needs a fresh supply of pure water, it has a right to obtain it on fair terms, and is rich and powerful enough to do so without thereby inflicting cruel and irreparable injury on the neighbours at its gates. If Manchester can supply itself from the Thirlmere, Liverpool from the Vyrnwy, and Glasgow from Loch Katrine, need London dream in vain of getting a supply for domestic purposes from Wales — from Bala Lake, as has been suggested, for example a district not densely populated, and where the rainfall averages fifty inches per annum, with probably a percolation five times as great as that which obtains in the chalk district which we have hitherto been considering. All chalk waters, moreover, are necessarily hard, every million gallons pumped to the surface carrying with it close upon 1¼ ton of the chalk through which it has percolated. And if Glasgow saves £40,000 a year in soap alone by the use of the softer Loch Katrine water, the saving similarly effected by a population of between five and six millions in London would prove a handsome contribution towards the interest on the cost of such a scheme great as that must necessarily prove in the first instance.

The whole problem is but another example of the results which follow from our heedless and piecemeal methods of dealing with both the conservation and the distribution of that one necessary of life for which there is no substitute. We contrive that our most trying droughts shall occur in autumn, and even in winter; our worst and most destructive floods in summer, when the streams are dry; and finally we propose to reduce whole counties to the condition of an arid desert in order that the thirst of the richest and largest city in the world may be safely—and cheaply quenched. At present water is a sort of *fera naturæ*, which every man may catch and keep if only he do not trespass on the surface of his neighbour's land for the purpose; for he may, by sinking a deeper well alongside my own, for instance, practically undermine my property, and seduce my own natural supply. Much might doubtless be accomplished, both for health and purse, by generally enforcing some system of efficiently storing an adequate amount of rainwater in connection with every dwelling house. At present almost the whole "catchment area" of our roofs is wasted in contributing storm water wherewith to choke our sewers and embarrass our local boards of health. But the British public is slow to move, as the public; and while the world lasts, each generation will doubtless continue to undergo the discipline of expensively compounding for the shortsightedness of its predecessors.

ABDOMINAL SURGERY.

Owing to certain legal proceedings recently brought against an operator, or rather operators, the American medical press has taken to discussing the ethics of abdominal surgery. The *American Journal of Obstetrics* publishes an article by Dr. Potter, entitled, "What is the Present Medico-Legal Status of the Abdominal Surgeon?" and comments on this paper appear in several transatlantic newspapers. In the case of a suit against an operator after an unfortunate abdominal operation, several questions are set down by the author as necessary for consideration. These questions concern the training and skill of the surgeon: the determination of the propriety of the operation; the explanation of all risks to the patient and her friends. They involve the nature of the preparations for the operation, whether "according to the most approved rules of modern abdominal surgery:" also the experience of the chloroformist, and the share which the operator personally took in superintending the after-treatment. The patient has a right to refuse operation, however urgent. According to the American law she has, if sane, the legal right to insist upon her removal at any time after the operation, and the surgeon can be held liable should he detain her against her will. In this country the law is similar in that respect.

There can be no doubt that every special operator must exercise great discretion in respect to his patients and his operations: this duty is a hundredfold more important in the case of less expert surgeons. To enforce abdominal surgery as a speciality is impossible, and, if possible, would be wrong and absurd. Nevertheless, experience has amply proved that the earlier series of every specialist show a higher mortality than the later. It is true that men who have only performed two or three ovariotomies can often claim good results, but such surgeons have usually selected favourable cases. For this they are not to blame, as every beginner is likely to meet with cases which are really beyond his powers: besides, at the best, a case apparently simple may prove to be far otherwise. Special legislation is impossible. No decision could be fixed as to whether "the preparations for the operation have been made according to the most approved rules of modern abdominal surgery." Our columns have amply testified for the last twenty years that rules "most approved" by some of the most recognised experts are most condemned by others. A dispute in a law court as to clamp or ligature fifteen years since, or as to antiseptics or

otherwise at the present day, would puzzle a jury. The operator must exercise a fair, reasonable, and competent degree of skill, and must take commonsense precautions as to the patient's feelings and those of friends. Particularly should he be cautious lest death or failure to cure might clearly be traced to an evidently ill-advised determination to attempt a task beyond his strength.

The French Congress of Scientific Societies will be held at Paris from May 19th to 23rd.

The second reading of the Midwives Registration Bill has been deferred till March 17th.

The adjourned discussion at the Medical Society of London on Angina Pectoris will be reopened on Monday next by Dr. Lauder Brunton.

At the quarterly Court of Governors, held on Thursday, February 26th, Sir Joseph Lister, Bart., F.R.S., was elected Consulting Surgeon to the Brompton Hospital, in the room of the late Professor Marshall.

A general meeting of the Metropolitan Police Surgeons' Association will be held at the Cannon Street Hotel on Thursday, March 12th, at 8 P.M., when Mr. Nelson Hardy, Vice-President, will read a paper on some cases of medico-legal interest.

A committee consisting of Sir Richard Quain (Chairman), Sir William Turner, Mr. Wheelhouse, and Mr. Macnamara has been appointed by the Executive Committee of the General Medical Council to draw up a uniform code of regulations for the conduct of the forthcoming election of direct representatives.

It will be remembered that last year the Chancellor of the Exchequer arranged to make an annual grant of £15,000 to the University Colleges of England. On February 27th a very strong deputation was introduced to Mr. Goschen by Mr. Joseph Chamberlain, and urged upon him the desirability of increasing the grant in future. Mr. Goschen gave an encouraging reply.

At a meeting of the Berlin Municipal Council on February 26th, a proposal to establish a convalescent home for patients who had undergone the Koch treatment was considered. Professor Virchow, who took part in the discussion, referred to Professor Liebreich's new remedy and its effect on tuberculosis of the larynx. Finally, at his suggestion the matter was referred to a special committee of fifteen members.

We regret to announce the death, at the ripe age of 87, of Mr. Richard Middlemore, F.R.C.S., Consulting Surgeon to the Birmingham Eye Hospital. Mr. Middlemore had for some years retired from practice, but retained his interest in all matters connected with the profession. It will be remembered that he was the founder of the Middlemore prize awarded by the British Medical Association every three years. He was also the founder of the Middlemore Post-Graduate Lectures in Birmingham.

TUBERCULOSIS IN CATTLE.

The Committee on Public Health of the Massachusetts Legislature recently passed a resolution that the State Board of Health should undertake an investigation into the dangers to human life and health arising from tuberculosis in the food products of cattle. It was recommended that authority should be given to spend a sum not exceeding 15,000 dollars on the inquiry.

THE PHONOGRAPH IN MEDICINE.

Some time ago we drew attention to the probability that the phonograph would before long be found to be of considerable use in the study of diseases characterised by abnormalities of speech. From the notices of the meeting of societies during the coming week, it will be seen that two demonstrations of its value will be given. On March 11th, at the Hunterian Society, Dr. Hughlings Jackson will demonstrate a phonogram of a patient subject to disseminated sclerosis; and on March 10th, at the Royal Medical and Chirurgical Society, Dr. Hale White and Mr. Golding-Bird will demonstrate before the meeting phonograms of two patients suffering from the peculiarity of speech to which the term "idioglossia" has been applied. They will also show the patients, who have now, it is stated, considerably improved under treatment. Dr. F. Taylor and Dr. Hadden will also show cases of this curious disorder.

THE EFFECT OF GRAVITATION ON THE FORM OF THE THORAX.

Remembering how constant and how potent is the action of gravitation, and arguing that the segments of the thorax were so many rings of more or less elastic material, Professor Anderson Stuart, of Sydney, in a communication made to the Royal Society during a recent visit to this country, pointed out that if similar rings of any other elastic material were suspended in the same way the form of the thoracic segments should be reproduced, provided there intervened no other condition strong enough to counteract the action of gravitation. If hoops of crinoline steel, or even bands of paper were held between the finger and thumb, and gradually turned from lying in the vertical to lie in the horizontal plane, the forms of the thoracic segment of the quadruped, of the human fœtus, and of the human adult were successively reproduced. The complete reproduction of the features of the human adult thorax at its most characteristic level was most striking. The steel used was some six feet long and half an inch wide. As the hoop was made smaller the forms of the higher segments appeared in succession. The points thus reproduced were so numerous that Professor Stuart urged they could not be mere coincidences, but that gravitation had a greater influence in determining the typical form of the thorax than would generally be admitted. This was supported by the shapes assumed by the steel rings when the mode of suspension was varied from the normal, as in deformities of the vertebræ; but the particular form in the individual—the thoracic deformity—was more or less accurately reproduced.

THE LATE MR. JOHN MARSHALL.

At the last meeting of the Executive Committee of the General Medical Council, the first since the death of Mr. Marshall, the following resolution of condolence was adopted:

> The Executive Committee desire, at the earliest opportunity, to convey to the family of their late President the expression of their sincere sympathy and personal sorrow at the great loss they have sustained in the death of Mr. Marshall. His long and able services to the General Medical Council, first as a member, and of late years as President, accentuate this loss; and the Executive Committee desire to express their sense, not only of the great business capacity which, for many years, he brought to the work of the Council and of its Committees, but also of the uniform courtesy, kindness, and well-balanced judgment in the conduct of its affairs, by which he endeared himself alike to his colleagues and to the officers of the Council.

Sir Richard Quain, the Senior Treasurer, who presided at the meeting at which this resolution was adopted, was requested to perform any duties that would devolve upon the President pending the election of a successor to Mr. Marshall.

PRACTICAL INSTRUCTION IN SANITARY WORK.

One of the last official acts of the late Mr. John Marshall, as President of the General Medical Council, was to call the attention of the Local Government Board, the Board of Supervision in Scotland, and the Local Government Board in Ireland, to "the strong opinion entertained by the Medical

Council 'that urgent necessity exists that candidates for sanitary diplomas should have opportunities open to them for studying the duties of outdoor sanitary work under the medical officer of health of a county or large urban district.'" The Boards were requested to give permission to sanitary officers under their control to instruct in the practical details of their work candidates who were preparing for future public health appointments. Favourable replies were received from each board, and at the recent meeting of the Executive Committee, Sir Richard Quain was requested to have an interview with the medical officer of the Local Government Board of England, with the view of conferring with him as to the best steps to be taken for securing for candidates for diplomas in public health a thorough course of instruction in the practical duties of officers of health.

MARAT'S CONTRIBUTIONS TO MEDICAL LITERATURE.

M. Georges Pilotelle has just issued in a handsome form a translation of Marat's tract, *An Inquiry into the Nature, Cause, and Cure of a Singular Disease of the Eyes, hitherto unknown, and yet common, produced by the Use of certain Mercurial Preparations.* London, 1776. The tracts issued by Marat during the time he was practising in London are excessively rare, so much so that their existence has been denied by some French writers on the Revolution. It is probably to put this denial out of court that M. Pilotelle has issued this reprint. Unfortunately, he has translated the tract into French instead of reprinting it in its original state. The reason he gives for not keeping to English is that "*tout le monde n'est pas obligé de savoir cette langue.*" The translation has been made from the copy in the library of the Royal Medical and Chirurgical Society of London, which is the only one of which there is any public record. In 1775, Marat published an essay on Gleets, but of this no copy was known until quite lately, when Dr. J. F. Payne was fortunate enough to secure one in a volume of tracts purchased at auction. A reprint of these two tracts as Marat wrote them would make a volume of very curious interest.

AMBULANCE CLASSES FOR THE SAILOR.

The proposal to establish ambulance classes for the mercantile marine appears to be one in every way well worthy of support. The great ocean-going steamers belonging to the passenger lines carry surgeons; but ordinary cargo boats, whether "ocean tramps" or sailing ships, do not; when accidents occur, or when sickness breaks out on board such boats, the captain or some other officer consults the book of instructions, which is supposed to be found in company with the ship's medicine chest, and many are the yarns told as to the peculiarities of the consequent practice. If these officers, who are generally men of considerable intelligence and mother-wit, could find at the chief ports classes specially arranged to meet their convenience and needs, they would probably take advantage of them to pick up a few useful hints. Such knowledge would be of great use to them if called upon to treat burns or scalds, to reanimate the apparently drowned or partially suffocated, or to arrest haemorrhage. As to fractures, it should be quite possible to teach the sailor, with his well-known handiness, how to deal with all fractures so as to diminish pain, and with many simple fractures so as to produce a fairly satisfactory cure. At Liverpool, the meeting of shipowners which decided that ambulance courses ought to be established, adopted a resolution which went a good deal further: "To establish ambulance classes specially adapted for sea service, and include in the course of lectures the important subjects of ship sanitation and personal hygiene." As we have frequently pointed out, there is great room for improvement in sanitation, not only in "ocean tramps," but in ocean liners otherwise well appointed.

THE "REGISTERS."

The *Medical Register*, the *Dentists' Register*, and the *Medical Students' Register* are printed and ready for the binder. Unless, therefore, the Stationery Office is more than usually dilatory, these *Registers* ought to be issued rather earlier than usual. In any case, much credit is due to Mr. Miller, the Registrar, for having finished his part of the task at a much earlier date than has ever been accomplished before. The *Medical Register* now contains, we understand, 29,163 names, an increase since 1876 of 7,163 names. During the year 1890, 1,266 new practitioners were registered, a number slightly over the average for the last fifteen years, which is 1,205. The number of names removed in consequence of reported deaths and other causes has been 556. For the first time the *Medical Register* contains a separate Colonial Register, appended in accordance with the provisions of the Medical Act, 1886, which gives power to the Medical Council to recognise qualifications conferred in colonies to which, by direction of the Privy Council, the operation of Part II of the Act has been extended. The list of such colonial qualifications now registrable includes those of the Universities of Melbourne, Sydney, and New Zealand. The *Dentists' Register* contains the names of 4,817 dentists, showing a decrease since the first register in 1879 of 472. The number of dentists registered as being in practice before July 22nd, 1878, continues to decrease, and has now fallen to the proportion of 76·32, while the number of licentiates in dental surgery has shown a corresponding increase. The *Medical Students' Register* shows that 1,846 students were registered during 1890—namely, 974 in England, 643 in Scotland, and 229 in Ireland. Among other data shown in this *Register* there are given the numbers passed by the various examining bodies, and registered as having commenced their professional education at the various places of medical study.

OFFICIAL REGULATIONS AS TO TUBERCULIN IN GERMANY AND ITALY.

The Prussian Minister of the Interior has given permission for the use of Koch's remedy for tuberculosis in prisons, under the following conditions: (1) A special department must be established for the purpose. (2) The medical officer in charge of the cases must reside in the institution. (3) In the case of patients with pulmonary phthisis, only those in whom the disease is recent, or who seem in other respects particularly suitable subjects, must be subjected to the treatment; and (4) the remedy must in no case be used against the patient's will. Surgeon-General von Coler has issued an order regulating the use of Koch's remedy for tuberculosis in the Prussian army. Each garrison hospital is to be provided with a special department in which the treatment can be carried out, and to this all cases of tuberculosis in soldiers belonging to the corresponding district corps which appear suitable are to be sent. The tuberculosis department is to be isolated from the others, and must be provided with all the necessary equipment for scientific observation. At a recent meeting of the Italian Superior Council of Health, the President, Professor Baccelli, presented a report on the Koch treatment, which was referred to a Special Committee. This committee has now submitted the conclusions at which it has arrived to the Council. The following is a summary of the committee's report: (1) The instruction issued by the sanitary authorities on December 14th, provisionally restricting the use of Koch's fluid to university and hospital clinics, is approved of. (2) Circumstances are now changed. The numerous experiments made in Italy and in other countries, and particularly those of Professor Baccelli himself, have better defined the true value of the remedy, and shown the indications for its use, and the possible dangers attending it. The committee therefore has no hesitation in proposing that the remedy be entrusted to the hands of individual members of the medical profession, just as they are allowed to use other remedies not less useful and at the same time not less dangerous. (3) Compared with other remedies in the phar-

macopœias, however. Koch's fluid presents this difference that while the purity and quality of these can always be kept under strict control, in the case of the latter there is no other guarantee than the fact of its coming from the institute in which it was originally discovered. The committee therefore considers it indispensable that the fluid should be introduced into Italy directly by the central authority, by which also it should be distributed under such conditions and with such safeguards as may be thought advisable. (4) Lastly, the committee recommends that in distributing the fluid the central authority should at the same time issue the necessary instructions for its use, and should request the medical practitioners to whom it is supplied to report all the cases in which they employ it, and the results obtained. The committee's report was unanimously adopted by the Superior Council of Health.

THE HOUSING OF THE PEOPLE.

A CONFERENCE was held at the National Liberal Club, on March 4th, under the presidency of Professor Stuart, M.P., at which Mr. Ernest Fordham read a paper on "The Home of the Farm Labourer," in which he urged that local authorities should be empowered where necessary to erect labourers' cottages. In the discussion which followed, Sir Walter Foster said that he was in favour of legislation on the same lines as the Labourers (Ireland) Act; it would confer great benefits upon the rural population, and, more than anything else, would tend to check the influx into large towns, which now constituted so grave a danger. Dr. Thresh (Chelmsford) and several other speakers pointed out that medical officers of rural districts were often prevented from condemning insanitary cottages, because they knew that it would practically result in turning the inhabitants houseless on the road. A resolution to the effect that the local authority should have power to insist on the provision of healthy cottages with good water supply, or in case of default to provide them with money raised from a tax on land values, was carried.

DEGREES FOR LONDON MEDICAL STUDENTS.

THE Royal Colleges of Physicians and Surgeons have, we understand, informed the Senate of the London University that they are prepared to accept the last revised scheme. The medical schools in London are understood to have expressed a similar concurrence, but University and King's Colleges, on the other hand, desire to see important modifications made. The Senate has issued a further revised edition of the memorandum published in the BRITISH MEDICAL JOURNAL of February 21st, p. 427. It is pointed out that as the result of negotiations with the Royal Colleges, the 47th clause provides for the formation of a Committee by which the various questions of detail involved in carrying out the provisions of the clause may be arranged. The Senate conceive that this arrangement will tend greatly to facilitate the operation of the clause, but it may be necessary to point out that the Committee so constituted will have no power of final decision, the Senate on the one hand, and the Royal Colleges on the other, retaining that power in their own hands. As a result of this arrangement, students who desire both the diploma and the degree will be spared a needless repetition of examination in subjects common to the degree and the diploma, while each of the responsible bodies will remain answerable for the standard required by them respectively, the final words of the clause expressly imposing on the Senate the duty of being satisfied as to the adequacy of the examination in all respects. It is to be noted, also, that the Preliminary Scientific Examination does not fall within the scope of this clause.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

A MEETING of the General Committee of this Congress will be held in the rooms of the Royal Medical and Chirurgical Society on Monday, March 16th, when the Prince of Wales will take the chair, at 3.30 P.M. The reports of the Organising and Finance Committees will be presented. The Queen has consented to be the patron of the Congress, and among the Vice-Presidents are: Prince Christian, the Marquis of Salisbury (Foreign Minister), the Lord Lieutenant of London (the Duke of Westminster), the President of the Local Government Board (Mr. Ritchie), the President of the Board of Agriculture (Mr. Chaplin), the Lord Mayor of London, the Chairman of the London County Council (Sir John Lubbock), Sir William Jenner, Sir John Simon, and Sir Robert Rawlinson. A programme of sections has recently been circulated, but it is as yet far from complete, and for this reason the criticism to which it has been subjected in some quarters appears to be premature. Owing to the very large number of societies and professions interested in the Congress, considerable difficulty has apparently been encountered in reconciling the various claims for recognition. The Congress will consist of two divisions, Hygiene, containing nine sections, and Demography. The President of the Section of Preventive Medicine is Sir Joseph Fayrer; of Bacteriology, Sir Joseph Lister; of the Relation of the Diseases of Animals to Man, Sir Nigel Kingscote, Chairman of the Board of Governors of the Royal Veterinary College; of Hygiene of Infancy and Childhood, Mr. J. R. Diggle, Chairman of the London School Board; of Chemistry and Physics in Relation to Hygiene, Sir Henry Roscoe; of Architecture in Relation to Hygiene, Sir Arthur Blomfield, A.R.A.; of Engineering in Relation to Hygiene, Sir John Coode; of Naval and Military Hygiene, Lord Wantage; of State Hygiene, Lord Basing; of Demography, Mr. Francis Galton, F.R.S. The selection of the officers of the Sections is, we understand, largely left in the hands of the presidents in each case. The Honorary Secretary-General is Dr. G. V. Poore; the offices of the Congress are at 20, Hanover Square.

THERMO-HYDRO-THERAPEUSIS.

HYDRO-THERAPEUTICS is—if we may judge by the number of its votaries—a subject of peculiar fascination; and, like all fascinating things, it has much to answer for—more especially as regards its local developments. Incidentally it is responsible for a *jeu d'esprit* by A. Hidrocephalus Idyot, Esq., who—in the combined characters of a member of several diploma-granting bodies and a "candidate for the post of Physician to the Hot-water Hospital"—has issued to the world at large a treatise on the thermal baths of the popular health resort in which he has resided for full six months, and the therapeutic value of which a shifting practice "in London and several of the great provincial cities" has enabled him to estimate, "from a distance," with breadth and clearness. A modest dedication, followed by a few pertinent maxims, and a preface—intended, like all wise prefaces, to furnish data for a favourable review—are succeeded, in the orthodox style, by four chapters dealing with: "A General Account of the Waters and their Properties;" "Methods of Administration;" "General Therapeutics;" and "Diseases in which the Balneoville Waters are Beneficial." The ingenious reader will naturally infer, after a perusal of this important contribution to scientific therapeusis, that if there is any malady for which the Balneoville waters are unsuited, then the Balneoville physician (to whom the exception that has "proved" his rule must be a matter of the gravest moment) must be the man to consult upon it, even though, as our author very rightly points out, "a patient who wants really to be properly treated sees first his family doctor, who tells him what the matter is and what to do; then he sees the specialist for the organ affected, and the specialist for the disease that affects it; and finally he consults a specialist as to the way he is to take the prescribed remedy." Indeed, one might suspect the active ingredient in such waters to be a broad and catholic toleration of contemporaneous medication, when

we consider, for instance, that "in no disease is the benefit of these waters more evident than in the case of this troublesome affection (psoriasis); especially is this so when their use is combined internally with ordinary liquor arsenicalis, and externally with chrysarobin ointment." Yet there remains, after all, a mysterious *tertium quid*, which excites interest and bolsters faith in proportion as it defies analysis. Thus, on the all and always important subject of constipation we are told that "though in their mechanical operation these waters do not materially differ from common water, when we consider the action on the nervous system, the variation is more evident." (Even in these cases, however, "most authorities agree that a small quantity of Carlsbad or other salt may be added with advantage.") This treatise on the baths of Balneoville does not pretend to a literary style above the average of its congeners, but it is quite as instructive as most of them, and more entertaining than any.

CERTIFYING FACTORY SURGEONS.

We refer elsewhere (p. 533) to the general policy of the Government Factory Bill, but the special attention of factory surgeons ought to be given to Sir W. Foster's letter; they ought to lose no time in "briefing" their advocates with full and accurate information. Up to this point everything has gone well. The debate showed an almost unexpected consensus of opinion in favour of their work and their retention, and it was strongly urged, from all parts of the House, that the withdrawal of the protection which their examinations furnish to the children of the poor would be a retrograde and dangerous step; and when Clause 19 had been heartily condemned by ex-Cabinet ministers, doctors, and labour representatives, the conviction almost became a certainty that its days were numbered and that it might be allowed to die in peace. But, after all, it may be only scotched, not killed, and a sharp look-out must be kept for signs of returning vitality. The next stage of progress will be that the Bill will go before the Grand Committee on Trade to be minutely considered in detail. The names of the members of this Committee are printed on page 545. It is quite possible—and, indeed, probable—that it may reappear *minus* the drastic proposal for the disestablishment and disendowment of factory surgeons, which has already excited so much hostile comment. But, on the other hand, it is also within the limits of probability that Ministers may cling to their position until some machinery for "letting themselves down easy" is provided. The surgeons themselves can erect the fire-escape; all they have to do is to furnish an ample apology for their existence in the shape of statistics showing that they frequently reject weak and malformed children, who would otherwise be compelled to work. We are quite aware that the mere fact of the examination acts as a deterrent, and that many cases are settled out of court, but, making allowance for all this, we believe that the sifting process is very efficiently carried out, and that its withdrawal would be a distinct loss to preventive medicine. Dr. Farquharson has been placed on the Grand Committee, and Sir W. Foster will take charge of amendments when the Bill comes back to the House, and they will be glad to receive information and suggestions. It is not probable that the Grand Committee can consider this Bill before Easter, so that the surgeons have plenty of time to get up their case, and we have no doubt that they will do it effectually.

OPHTHALMOLOGY AS A COMPULSORY SUBJECT.

A special meeting of the Ophthalmological Society of the United Kingdom will be held after the ordinary meeting on Thursday next, to consider, among other things, a motion to be made by Mr. Tweedy, with the concurrence of the Council of the Society. The motion is in the following terms: "That, in view of the course of medical study extending over a period of five years, it is expedient that the Ophthalmological Society of the United Kingdom urge upon the General Medical Council the desirability for making the subject of ophthalmic medicine and surgery a compulsory part of the ordinary curriculum."

SCOTLAND.

The fifty-first meeting of the Scottish Universities Commission was held in Edinburgh, on February 26th, when Professor Stephenson, Professor Matthew Hay, and Dr. Angus Fraser, representing the Medical Faculty of the University of Aberdeen, gave evidence with reference to graduation in medicine.

The Board of Supervision for Scotland has intimated its disapproval of the appointment of Medical Officer made by the Perth County Council. The objections taken are: (1) The salary of £200 is inadequate; (2) The County Medical Officer is to be permitted to take private practice.

CHILD LIFE INSURANCE.

Mr. Parker Smith, M.P., has introduced a Bill for Scotland, the object of which is stated to be "to impose a check on the abuse of child life insurance." The Bill provides for the compulsory registration of each child life insurance, and of every claim in respect of such insurance. The children to whom the measure applies are boys under 14 and girls under 16. The registration is to be made by the insurance company with the registrar under the Births, Deaths, and Marriages Act in the district where the insurance is effected, and is to be accompanied by a formal signed statement by the insurance company or their agent. The register form will include a variety of particulars concerning the child and its surroundings; among others, an answer to the questions:—Was the child born in lawful wedlock? And was it seen by the insurer or his officer? And was it apparently in good health and well nourished at the time of insurance? The register is to be open to public inspection. Claims are to be registered with the same registrar as the insurance was registered with.

INTER-UNIVERSITY SCOTTISH STUDENTS' CONFERENCE.

The third annual conference of delegates from the Students Representative Councils of the four Scottish Universities was held at Edinburgh on February 21st, Mr. Douglas, President, Edinburgh Students' Representative Council, was chairman, and all the Universities were represented. Among the medical subjects discussed were the Saturday examinations, which are felt to be a great grievance in Glasgow and Aberdeen. It was unanimously agreed that means should be taken to have them done away with. It was agreed to petition to have the professional examinations in medicine held twice a year in Edinburgh, and to recommend to the various councils that have not already done so, to give detailed evidence on the medical faculty before the Universities Commission. It was intimated that the Scottish students' song book, which has been in preparation for a year, will be published some time in May. The songs consist of three classes: academic, miscellaneous, and college; the book will be published for half-a-crown. The question of having an Inter-varsity *Annual* was sent down to the councils for consideration. The delegates all spoke of the good work being done by the councils, both in the interest of the students and as a medium of communication between them and the University authorities. The delegates were entertained by the Edinburgh Students' Representative Council.

SCOTTISH ASSOCIATION FOR THE MEDICAL EDUCATION OF WOMEN.

THE first annual general meeting of the Scottish Association for the Medical Education of Women was large and influential. The Association has more than justified its existence, for its College is now being attended by twenty-eight students. Unfortunately, ten of these have had to go to Glasgow, "to obtain in the Royal Infirmary there the hospital instruction which, so long as the Infirmary in Edinburgh was closed to women students, could not be had" in Edinburgh. Leith Hospital has "handed over for three years a monopoly of its clinical advantages" to the students of the "Edinburgh School of Medicine for Women." At length, however, the managers of the Edinburgh Royal Infirmary have resolved to admit women students to the wards of that institution, and "the whole question now rests upon whether the medical and surgical staff can make arrangements to carry out the views of the managers." Necessarily considerable expense must be incurred in the first establishment of a medical college that cannot be defrayed by the fees of the students. Those who are interested in the cause of the medical education of women are asked to lend a helping hand, and so build up a medical college for women worthy of the fame of Edinburgh.

MEAT INSPECTION IN GLASGOW.

THE Town Council of Glasgow, at the last meeting as Police Commissioners, held on March 2nd, had before them a report of a Subcommittee on Dead Meat Inspection. The Subcommittee's report proposed a series of new by-laws on the subject, the chief provisions of which were that the responsibility of meat inspection should be taken out of the hands of the police, with whom it lies at present, and placed in those of the Health Committee; that five inspectors should be appointed if possible, practical butchers and that each of the inspectors, when required by the sanitary inspector, should inspect the byres, cowsheds, and butchers' shops in his district. It was also suggested that the Health Committee should consider whether they ought to have the services of a man skilled in cattle and their diseases. The cost of the new arrangements was to be borne by the Health Committee out of the public health or sanitary rate. After some discussion, an amendment, proposing to leave the arrangements for meat inspection as they were at present, was carried by the casting vote of the Chairman. It is difficult to understand the ways of the Glasgow Town Council. About two years ago, at the time of the tuberculous meat inquiry, the Council seemed prepared to adopt a really efficient and thorough system of meat inspection, both of that killed within and that killed without the city. Much of the meat killed outside is able to escape inspection. It is this more careful examination of all dead meat that the Council have refused to adopt, apparently chiefly under the excuse of the increased taxation it would involve.

IRELAND.

DECREASE OF INFECTIOUS FEVERS IN CORK.

THERE were 153 patients suffering from febrile diseases admitted into the Cork Fever Hospital last year, and deducting 6 cases which were in a moribund condition, the death-rate was equal to 2.97 per cent. In the early part of the year influenza prevailed, and the medical staff believed it swept away for the time being the more serious forms of infectious disease, notably typhus fever and scarlet fever. The small number of admissions for typhus fever, which is a disease intimately associated with insanitary dwellings, as compared with the large numbers admitted ten years ago, is worthy of notice. It is to be hoped that, with greater attention to the quality of food for human use, and more especially to the quality of the drinking water, enteric fever, which has lately alarmed the citizens, will become a preventable form of disease. On the whole, however, the nature of every kind of febrile disease has for some years been so modified as to clearly denote the amount of good work done by the Public Health Committee and the Medical Superintendent Officer of Health.

SMALL-POX IN BELFAST.

SINCE our last report there has been only one fresh case of small-pox reported to the sanitary authorities in Belfast; and although it would be premature to conclude that the epidemic has been so speedily stamped out, it is gratifying to known that the prompt measures taken have been thus far so successful. The cases under treatment are still for the most part very mild, and no deaths have taken place. The Corporation has under consideration the question of the erection of a new hospital for infectious cases, and the necessity for such an institution is being very strongly advocated in the press. If the present epidemic secures this end it will not have been an unmixed evil.

THE ULSTER MEDICAL SOCIETY AND SANITARY REFORM IN BELFAST.

AT the last meeting of the Belfast Corporation, a deputation attended from the Ulster Medical Society, to lay before the Council the views of the Society regarding the necessity for certain sanitary reforms in the city. Dr. Dempsey, president of the Society, pointed out that the death-rate of Belfast was 25½ per 1,000, whereas that of Birmingham was only 19 per 1,000. These figures meant that 1,500 persons died annually in Belfast whose lives would be preserved if the health-rate of the city could be reduced to the average of Birmingham. He was of opinion that one of the most potent causes of this high death-rate was the accumulation of filth in ashpits, yards, and back premises. This evil was particularly serious in Belfast since the small-house system prevailed among the working classes (to the exclusion of the tenement system), and in many cases rows of small houses were built back to back, so that accumulations of filth in yards were peculiarly dangerous. The Ulster Medical Society recognised the efforts which the Corporation had recently put forth to remedy this condition of things, and were anxious to strengthen the hands of those who aimed at perfecting a system of frequent removal of filth. Dr. Dempsey admitted that sanitary reform encountered some peculiar difficulties in Belfast, but he was of opinion that if the new main drainage scheme was successfully completed, and if the measures now suggested were carried into effect, the result would be a marked diminution in the death-rate. Dr. O'Neill and Dr. Lewers also spoke. The Mayor, in reply, thanked the deputation, and promised the most ample consideration of their views.

DUBLIN HOSPITAL SUNDAY FUND.

THE report presented at the seventeenth annual meeting of subscribers to the Hospital Sunday Fund stated that the fund for 1890 was £4,168, as against £4,155 in 1889. The working expenses were £273 3s. 3d. The report of the committees appointed to inspect the participating hospitals was submitted, and it contained very free criticism of the general management of some of the institutions visited. The General Committee strongly recommended the amalgamation of the National Eye and Ear Infirmary and St. Mark's Ophthalmic Hospital. A resolution was passed stating that no hospital, the governors of which permit a medical officer to receive a fee from a patient in respect of any service rendered while in the institution, shall be allowed to participate in the fund.

MEDICAL MAGISTRATES.—Mr. John Dix, M.R.C.S., Hull, has been added to the list of justices of the peace for the borough of Kingston-upon-Hull.—Dr. John E. Scrowcroft has been added to the roll of the Bolton borough magistracy.

MIDWIVES BILL.

Deputations to the Lord President.

Deputation of the Parliamentary Bills Committee.

Lord Cranbrook, the Lord President of the Privy Council, received on Friday, February 27th, a deputation consisting of the following representatives of the Parliamentary Bills Committee of the British Medical Association, the Obstetrical Society of London, and the British Gynæcological Society: Mr. Sibley (Acting Chairman of the Parliamentary Bills Committee), Dr. T. R. Almond Hind, Mr. Prankerd, Mr. Hugh Ker, Dr. Robert Barnes, Dr. Langdon Down, Dr. Bridgwater, Mr. Galton, Dr. Walter Dickson, Dr. William Playfair, Dr. James Aveling, Mr. Wickham Barnes, Dr. Grigg, Mr. G. Eastes, Dr. Rivington, Mr. Macnamara, Dr. Esler, Mr. Wallace, Dr. Nicholson, Dr. Crocker, and Dr. Robert Jones.

The deputation was introduced by Dr. R. Farquharson, M.P., and accompanied by Mr. Fell Pease, M.P.

Dr. Farquharson, M.P., in introducing the deputation, said the deputation did not come in the interests of any particular Bill but in the interest of general legislation required in the interests of the general community. He hoped Lord Cranbrook would continue to accentuate the interest the Privy Council had always taken in that department of medical practice, and he hoped that in the fulness of time the Government itself would be prepared to bring in a Bill. He ventured to propose that the Government should allow a Select Committee to be appointed before whom this question might be thoroughly threshed out and evidence taken. He now called upon Mr. Sibley, the Acting Chairman of the Parliamentary Bills Committee, in the absence of Mr. Ernest Hart.

Mr. Sibley said he wished to direct attention to the unsatisfactory condition in which midwives now were and the absence of regulations. In other countries midwives were, as a rule, under State control, but here any woman might call herself and practise as a midwife. Two or three lying-in hospitals and the Obstetrical Society granted certificates to midwives, but all midwives ought to be compelled to pass through a definite course of study and pass a definite examination. They wished to press upon the Government the urgent necessity of attention to this subject. The risk of life to women was very considerable if they were attended by incompetent persons. In Mr. Pease's Bill, which was now before Parliament, to which they gave a general support, the regulation of the midwives was placed very much under the county councils, subject to the Privy Council and the General Medical Council. This Bill left everything perfectly open for the regulations to be framed by these different bodies.

Mr. Pease, M.P., reminded his lordship that he appeared before him in a deputation last year, when the Bill he introduced was submitted to a Select Committee; the present Bill was the one which the Committee threshed out. It was widely different to the one originally introduced. Since that time there had been so much discussion on the subject, and evidently so much difference of opinion throughout the country in the medical profession, that those who had charge of it and many others thought it would be very desirable to have a Select Committee with the view of calling evidence. As Dr. Farquharson had stated, they did not appear before the Lord President in the interest of that particular Bill, or any other, but still entertaining the belief that some legislation was necessary, and as far as he—and he believed those who had acted with him—were concerned, they would be perfectly satisfied to withdraw this Bill if the Government could see their way to allow of the appointment of a Select Committee with power to take evidence.

Dr. Grigg, speaking on the subject of education of midwives, said that the little that was done had been done by the Obstetrical Society, which had laid down certain rules and regulations for guidance in the examination of candidates that came before them. A Select Committee could inquire into what was done in foreign countries, and adapt the rules to British wants. There were other points as regards the age at which these women were allowed to undertake these duties. It had been said that, if they trained these women thoroughly and completely they would compete with the general practitioner. Speaking from his own experience, however, it was ignorant women, untrained, untaught to look to medical men for assistance, who took upon themselves duties for which they were incompetent.

Dr. Aveling said that he was one of the surviving members of the numerous deputations which had appeared before Lord Presidents to urge the necessity of ameliorating the condition of midwives. Public utility demanded the existence of midwives, for the poor were compelled to employ midwives when they could not afford to employ medical men, and because a further economy was effected, since the midwife combined also the duties of the monthly nurse. Public safety demanded legislation. There were in this country 900,000 births annually; of this number midwives attended 3,000. The average mortality in childbirth was about 1 in 200. It was found that trained midwives employed by lying-in hospitals for attendance on patients at their own homes did so with a mortality of only 1 in 600. This proved that trained midwives were a great boon to the poor: and it would be seen that if they could get this rate of mortality throughout the country, there would be a saving annually of 3,000 mothers. Midwives had at each birth the care of two lives, consequently the midwives of this country had annually under their charge no fewer than a million souls. Surely this was a sufficient cause for legislation to see women having so much power for good or evil. The figures he had given might be considered approximately correct. The policy of the Bill was to leave the details of the arrangement and control to the Privy Council or the General Medical Council. The General Medical Council had always given its support, and as far as possible was endeavouring to forward legislation with regard to midwives. All the larger bodies had assisted or advised legislation. Of the three clauses which had been most found fault with, the first dealt with the examination and registration of midwives by the county council. In respect to this, it would be admitted that it was always better to use existing bodies when it was possible to do so; and the county councils would be required to appoint examiners, whose qualifications would be fixed by the General Medical Council. That appointment had also to be approved by the Privy Council. As to Clause 6, it would prevent women from attending, as they now did, any sort of case; by the clause they would be restricted to natural labour. It had been stated that natural labour could not be defined: but lying-in hospitals found no difficulty in doing so. The last clause, to which objection was taken, referred to the existing midwives: the clause would provide that no woman would be allowed to be placed on the Register who was at present practising, unless she should prove herself a *bonâ-fide* midwife to the Privy Council, who would decide on the evidence to be produced by the midwife.

Dr. Robert Barnes said there was need for legislation for the recognition of midwives as a distinct body, in order to make them responsible to the State. There could be no doubt that there was a great deal of illegal practice going on in procuring abortions and premature labours. These sources of danger and crime would very much diminish if every midwife were registered and made responsible to the State.

Dr. Playfair said that as a member of a committee appointed by the Royal College of Physicians to report on this Bill he desired not to commit himself with regard to it; but, as he had the honour of appearing before one of his lordship's predecessors some ten years before, as President of the Obstetrical Society, his views on the general question were pretty well known. At the period he had referred to, the medical profession received the proposal to legislate for midwives, so far as he knew, with universal approval. It was universally admitted that some form of legislation was essential now there was an exceedingly energetic minority opposed the Bill. He had looked very carefully into the objections to the Bill, and was quite satisfied in his own mind that they were entirely fictitious, and had no real basis of fact. The chief objection was that women at present practising as midwives were placed on the Register immediately, but no one single woman would be qualified by this Bill to practise as a midwife who did not practise as a midwife now. He felt certain that in the future women qualified as midwives, instead of competing with medical men, would render them great assistance. As a matter of fact, it was ignorant women who knew nothing whatever about the dangers of midwifery who opposed the

medical man; it was those who knew the dangers who would call him in.

Lord CRANBROOK thanked the deputation for the brevity and skill with which they had brought before him the evidence on the subject under discussion. He thought it might be taken for granted, as Dr. Playfair had said, that there was an almost unanimous opinion that something should be done to improve the position of midwives. If it were possible by legislation to do so, and, in fact, as early he thought as more than twelve years ago, in one of the Government Bills, there was an attempt to deal with it, but it had to be taken out in consequence of the opposition it encountered. Since it had been regularly discussed, there was no doubt a great deal of opposition had sprung up on various points. Considerable objection was taken to the county councils having anything to do with the matter, and to the Privy Council, or a lay-elected body, having authority to define what was a *bonâ fide* midwife. That, he ventured to say, was a question which he should be very sorry to have to solve himself, and he did not know whether they could obtain sufficient assistance to lay down certain rules with regard to all the practising midwives, and to say what should entitle a *bonâ fide* midwife to go upon the Register. With regard to the existing midwives going upon the Register, it would be worse than it was before, because the midwife who now practised without any qualification would be able to say she was on the Register and was now a qualified person, and as good as any other person on the Register. That was one of the points to which considerable objection was taken, and yet he quite agreed with Dr. Playfair, that to leave out existing interests would be impossible. If they were to have only registered and qualified midwives, would not that, to a great extent, deprive the country districts of any midwives at all? The question was a very serious one. He could not help thinking that in the country districts the old women or middle-aged women who undertook these duties would still be called in by the poor, and still occupy the position they now held. Medical men in country districts generally had parochial duties connected with the poor, and medical aid was given in that case very freely. He did not consider from what had passed that the Bill was so much before him as the general question of registration and qualification of midwives. He had been reading an essay of a medical man in the BRITISH MEDICAL JOURNAL on the subject, but saw he laid no stress on registration, and, of course, if they had a qualification, the keeping of a Register was a matter of indifference. But he had the greatest difficulty in finding out who was to lay down the rules and regulations, who was to keep the Register, and who was to be responsible for it. He could not help saying that while medical men were so divided in opinion it made it extremely difficult for the lay Privy Council to say that they could undertake a duty for which they were not qualified without a great deal of medical advice. In the Privy Council they had no official medical man to whom they could refer. Of course they had means of referring as others had, but the responsibility remained with them, and he could not help saying that in any question of this distinct character it would be impossible for the Council to act satisfactorily unless it was officially supported by medical authority, and that medical authority was not at present forthcoming. With regard to the question of a Select Committee, he had not laid the matter before his colleagues, whom of course it would be necessary to consult, and he could therefore not give an answer that day. In the House of Commons the number of committees this year was very great; it would not be easy during the present session to get members for a committee of a character required for a measure so intricate. With respect to the House of Lords, there was a very large committee sitting, occupied in taking evidence in an inquiry into the hospitals of London, and there again the same difficulty presented itself. Mr. Pease deserved great credit for endeavouring to solve a very difficult question, and one which he (the Lord President) frankly owned he thought would be easy to solve, but it was found that the difficulties grew so much upon them, that he was obliged to say, speaking for the Government, that they could not this year support the Bill which Mr. Pease had brought forward; nor did he think there would be a chance to amend it this year to make it acceptable to the medical profession and to the public, and to do justice to the midwives already in practice. He would think over the question; it was really not so much in his hands as in the hands of the House of Commons. They thought it best that the Bill should be withdrawn; and all he could say with regard to the whole question was that it should have his careful consideration.

Dr. FARQUHARSON thanked his lordship, and the deputation withdrew.

DEPUTATION OF LADIES.

A DEPUTATION of ladies representing nursing and other kindred organisations waited upon the Lord President of the Privy Council (Viscount Cranbrook), who was attended by Sir Charles Lennox Peel, Clerk of the Council, and Lord Richard Nevill, private secretary, on February 27th, on the subject of the Midwives Bill. The deputation, which was introduced by the Countess of Aberdeen, consisted of the following, among others:—Lady Lucy Hicks-Beach (Rural Nursing Association), the Hon. Mrs. Stuart Wortley (East London Nursing Society), Mrs. Smith (President of the Midwives' Institute), Dr. Anne M'Call, Mrs. C. MacLaren (Women's Liberal Federation), Miss Bramston (Guardian of the Poor of St. George Hanover Square), Miss Rosalind Paget (Inspector of Nursing, Queen Victoria Jubilee Institute for Nurses), Miss Wilson (Hon. Sec. of the Workhouse Infirmary Nursing Association), Miss Freeman (Matron of the British Lying-in Hospital), Mrs. Lidderdale, and Mrs. Malleson (Honorary Secretary of the Rural Infirmary Nursing Institute).

Lady ABERDEEN said they desired respectfully and earnestly to press upon the Government the importance of the Bill for the registration of midwives. Those who had gone into the subject felt very strongly the need of reform, inasmuch as it was computed that seven out of every ten cases of childbirth took place without the presence of a medical man, and a large number of deaths and chronic illnesses could be traced to the inefficiency of the women employed. Many of the leading medical men and members of the Obstetrical Society were in favour of the principle of this Bill. There were many provisions in the Bill which would require alteration in Committee, but the representatives of the various nursing associations and other bodies and societies working among the poor, who were present, knew more of the details of the Bill than she professed to do.

Lady LUCY HICKS-BEACH said she was told that the objection was made that registration of midwives would tend to interfere with medical practice. She did not see how this could be the case, because—at any rate, as far as the rural districts were concerned—not one in ten of the labourers' wives employed a medical man, but relied solely upon the village midwife. The midwives rarely knew when a case was abnormal, and often the doctor was not sent for until it was too late.

Mrs. SMITH, as president of the only incorporated body of midwives, could state that registration was demanded by the midwives themselves. This was shown by the fact that the Bill now before Parliament originated in the Midwives' Institute. She had twenty years' experience as a trained midwife among poor women, and was thoroughly aware of all the difficulties and injuries that happened to them from want of proper attention. Nothing but compulsory registration could cure the evils which the existing system of voluntary registration by the Obstetrical Society was insufficient to cope with.

Dr. ANNIE M'CALL said she had had experience for the last five or six years in South London among the very poor class, and had trained women students in midwifery; she had had ample opportunities of seeing the evils done by untrained midwives. She referred to the necessity that existed for trained midwives in rural districts by people living four or five miles away from a doctor, for the emergencies that arose in midwifery were both sudden and quick. She did not want them to take the place of doctors, but only that they should know the proper time when the doctor should be sent for, and that was quite possible with six months' training.

Miss WILSON, speaking from eleven years' experience in the Workhouse Infirmaries Nursing Association, said that in the unions in London some certificate was generally required, but in the country unions the guardians encouraged women

"with some experience in midwifery," which meant little or nothing. If the example was set by the Local Government Board of having a strict standard of training and certificate, it would be of the greatest possible value. Another point she urged was that the present lying-in wards of workhouses should form large schools of training for midwives as abroad, with trained skilled midwives at the head.

Mrs. Stuart Wortley instanced a case in the Limehouse and Stepney district in which one midwife, through her want of skill, had caused the death of no fewer than seven persons.

Lord Cranbrook said he understood that what was asked was that the Government should support the second reading of the Bill. He was afraid he could not promise that. The Bill as it stood was an impossible Bill, and would not meet the wants which the deputation put forward. He did not suppose there was any difference between them as to the object, namely, that midwives should receive a better instruction than they do at present, and that there should be some means adopted for registering them; at the same time he did not suppose the deputation meant him to infer that they would make it compulsory to employ only certified midwives; and if that were not done he was afraid that a great number of poor people would continue to employ the same class of people they now employed. Although there might be a higher class, that class would not find some of the rural places to which reference had been made sufficiently remunerative to settle down there. There were a good many points to consider, and until the medical profession arrived at some sort of agreement, it seemed to him it would not be possible to carry a good Bill. There was no medical authority to which they could refer that would give a distinct opinion one way or the other. In Ireland, without an Act of Parliament, midwives were given instruction and were certified, and practically had a very considerable practice. There was a time when there was a cry, and a very just cry, against the nurses that they had no training, but now, not by legislation but by the action of people interested, there were large bodies of trained nurses. In the same way he found there was some training going on, for instance, the Obstetrical Society had certified between one and two thousand. With regard to the subject itself, he thought that there was a general impression that something should be done in order to bring about a better condition of the midwives, and to give them at least the opportunity of instruction, but he deprecated hasty legislation. The Medical Council declined to undertake the examination. It was quite impossible for the Privy Council to undertake this duty. The registration ought to be in the hands of medical men. A lay body could not undertake the registration. The instruction should not be of a character that would elevate midwives into a kind of doctor. He would be most anxious to do anything if he felt it could be done with success and advantage, but so long as the medical profession was so divided, it seemed to him almost hopeless to go on with a measure which would neither please the lay body, the medical department, and, in his opinion, would not satisfy the requirements which the deputation had stated to him.

Lady Aberdeen, in thanking his lordship, expressed her regret that he could not promise the Government support of the Bill. The object of the deputation was that these women now practising as midwives should not be able to call themselves midwives, but nurses.

COMPLIMENTARY DINNER TO SIR G. M. HUMPHRY.

The Cambridge Medical Graduates Club entertained Sir George Murray Humphry at dinner on February 24th, under the presidency of Sir George Paget, who proposed the toast of the evening, congratulating Sir George Humphry upon the honour recently conferred upon him by the Queen.

Sir George Humphry, in reply, said it had been remarked that words were for the purpose of concealing thoughts and feelings. Certainly they were not granted to him in such measure as would enable him adequately to express his thanks for this manifestation of their kindness to him. When a few days earlier his health was, in similar friendly and flattering terms, proposed by their chairman, and in like manner received, at a dinner given to him in Cambridge by the medical men of the district, he felt it to be the greatest compliment he had ever received, or perhaps could receive. The present warm and handsome reception ran *pari passu* with it; and the two seemed to make up the maximum of complimentary possibilities. This was given to him by the Cambridge Medical Graduates Club, of whom a large number were his old pupils. The relations between teacher and students were of the closest and most binding nature, and though he was well aware that the human mind was so constituted that the disagreeables and the unprofitables faded away, leaving the agreeables and the profitables in strong relief on the memory; and that his old pupils, viewing him through the magnifying vista of time, saw him greater than he really was, still this testimony could not but be peculiarly gratifying to him. The honour he had received from Royalty was greatly enhanced by the manner in which the offer of it was made to him—a most kind and flattering letter from the Vice-Chancellor—and by the reason assigned being for services done in the University and the profession, and also by the extremely kind, he might say enthusiastic, manner in which it had been welcomed by others. It had ever been his desire to promote a close relation between the University and the profession. Their mutual influence could not but be beneficial to both. It was good for the profession to participate in the higher culture and the varied associations of the University, and it was most desirable for the University to have nearer contact with that queen of sciences, medicine, which spread her *ægis* over all, or nearly all, branches of science, and combined them in the great work of promoting the welfare and happiness of mankind. Cambridge might be regarded as the birthplace of practical anatomy in England, for when the eminent and learned Caius, at the middle of the sixteenth century, returned from Padua, where he was professor of Greek and graduated in medicine and lived in the house of Vesalius, he founded Caius College and made provision for two subjects annually to be supplied for dissection: and it was not improbable that Harvey, who was a member of this college, gained his first knowledge of anatomy here. Glisson was a member of the same college, and Wharton was a member of the University. The Professorship of Anatomy was founded in 1707, but not much progress was made. When he (Sir George) went to Cambridge in 1842, planted by one Paget (Sir James, who sent him there), and watered by another (Sir George, who was then a Fellow of Caius College), and was elected surgeon to Addenbrooke's, Dr. William Clark was the professor of anatomy, a talented and learned man, the most learned anatomist at that time in England, who gave to the few pupils who formed his class a higher knowledge of the subject than was then obtained through any other teacher in the country. One body, sent annually by Government direction from Woolwich, was the only means afforded for the study of practical anatomy, and was dissected and demonstrated by him. He (the speaker) volunteered to assist in the dissection, and soon was asked to take part in giving the lectures. He then entered the University as fellow commoner of Downing College. (Several interesting details of this early time were here given, and of the difficulties which had to be encountered to obtain a supply for practical anatomy, which were ultimately in great measure overcome.) Five-and-twenty years ago he succeeded Professor Clark in the chair of anatomy, and had much enjoyed the work. He had a class of men who took a ready interest in the subject, and he felt it should be the object of the lecturer to excite and maintain the interest of the student, and not by exhausting details to run the risk of exhausting his attention and patience. His object had been to teach human anatomy as a branch of science, feeling that it—as, indeed, every subject taught in the University—should be so regarded. The school throve beyond expectation, and that which he could look back upon with greatest satisfaction in connection with it was that when the class had become too large for him to conduct with efficiency, and the stipend of the professor had been raised, he retired from the chair, and promoted the election to it of Professor Macalister, who shed a lustre upon the science not only in Cambridge but in the country, under whom, and under the teaching of Professor Foster, the number of students had greatly increased, and a building, second for its purpose to none in the empire, had been erected for the accommodation of human anatomy. He hoped that for the sake of the University, the profession, and

science, the success of the Cambridge Medical School might long be maintained.

The toast of "The Guests" was given by Dr. W. H. Dickinson, and acknowledged by the President of the Royal College of Surgeons, and the Provost of King's College, Cambridge, the heads of two colleges of which Sir George Humphry is at present a Fellow. Dr. Hare gave the health of "The Chairman," who, in acknowledging, proposed the toast of "The Hon. Secretaries of the Club."

FACTORY LEGISLATION.

The Factory and Workshops Bills have been referred to the Standing Committee on Trade. This Committee consists of the following members of Parliament:

Addison, Mr.	Hoyle, Mr.
Asher, Mr.	Jackson, Mr. W. L.
Attorney-General, Mr.	Lowther, Mr. William
Baring, Mr.	Lubbock, Sir John
Barran, Mr.	Maclean, Mr. J. M.
Barnes, Mr.	M'Donald, Mr. Peter
Beach, Sir M. Hicks	M'Lagan, Mr.
Birkbeck, Sir Edward	Morrogh, Mr.
Bolitho, Mr.	Mowbray, Mr.
Bonsor, Mr.	Mundella, Mr.
Boord, Mr.	Murphy, Mr.
Brown, Mr. A. H.	Northcote, Sir Stafford
Brunner, Mr.	O'Connor, Mr. T. P.
Burt, Mr.	Paget, Sir Richard
Chamberlain, Mr. Joseph	Parnell, Mr.
Childers, Mr.	Pease, Sir Joseph
Collings, Mr. Jesse	Power, Mr. Richard
Colman, Mr.	Rathbone, Mr.
Corry, Mr. James	Robertson, Mr. Edmund
Craig, Mr.	Round, Mr.
Dalrymple, Sir Charles	Sexton, Mr.
De Worms, Baron Henry	Shiel, Mr.
Dixon Hartland, Mr.	Sinclair, Mr. William P.
Elliott, Sir George	Smith, Mr. Samuel
Ellis, Mr. T. E.	Stewart, Mr. Mark
Eyre, Colonel	Sullivan, Mr. T. D.
Fisher, Mr. Hayes	Tomlinson, Mr.
FitzGerald, Mr. R. U. Penrose	Trevelyan, Sir George
Gilliat, Mr.	Whiteley, Mr.
Goldsmid, Sir Julian	Williamson, Mr. Stephen
Grotrian, Mr.	Wilson, Mr. C. H.
Heath, Mr.	Winterbotham, Mr.
Houldsworth, Sir William	Wood, Mr.
Howell, Mr.	

The Committee of Selection of the House of Commons met on March 3rd, and added the following members to the Committee for the consideration of the Factory Act Amendment Bills:

Abraham, Mr. (Rhondda)	James, Sir Henry
Broadhurst, Mr.	Matthews, Mr.
Buxton, Mr. Sydney	Oldroyd, Mr.
Campbell, Mr. J. A.	Reed, Mr. Byron
Coddington, Mr.	Sidebottom, Mr.
Cranborne, Viscount	Wortley, Mr. Stuart
Farquharson, Dr.	Tanner, Dr.
Fenwick, Mr. C.	

The following memorial was presented to Mr. Matthews on February 26th shortly before the debate on his Bill:

The Memorial of the Association of Certifying Surgeons appointed under the Factory and Workshops Acts

Showeth as follows:—

1. Your Memorialists have recently learned with great surprise from the text of Clause 19 of the Bill introduced by you in the House of Commons for the amendment of the Factory and Workshops Acts (being Bill No. 205 of the present session) that Her Majesty's Government propose to abolish summarily the whole system of medical certificates of fitness for employment in the case of children and young persons whom it is proposed to employ in factories and workshops subject to the provisions of the Factory and Workshops Act, 1878.

2. Your Memorialists respectfully submit that such a proposal is a retrograde step, and would lead to grave evil, and they are unaware of any public advantage which can be reasonably claimed as likely to result.

3. They gather that representations have been made to the effect that the certifying surgeons seldom refuse certificates, and that the existing system is ineffective. They desire at once to deny any such allegations, and to point out that such statements cannot be supported by any statistics, and have, in fact, been made without consideration, inasmuch as they are able to produce instances of such refusals in the case even of a mill belonging to one gentleman who has alleged that refusals do not occur. In the case of one certifying surgeon who happens to have kept a private record they are aware that there have been 198 refusals in two years.

4. They beg further to point out that even if a low percentage of refusals were in any case shown, that circumstance would prove little or nothing to the purpose, inasmuch as they are well aware that in the common usage of most factory districts doubtful cases are ordinarily dealt with by private inquiry, and are not submitted for certificate unless already approved. It is most usual for the parents to ask and for the certifying surgeon freely to give his opinion as to the physical fitness of children whom it is proposed to send to a mill. The surgeon sees them in his own surgery, and if he says he cannot pass them the parents proceed no further in the matter.

5. They are also well aware, and it is common knowledge, that the necessity of obtaining such a medical certificate prevents parents from trying to send weak, deformed, or diseased children to earn wages. The standard of health and strength which is likely to be required by the local surgeon is in practice perfectly well known among the people, who regulate their family arrangements accordingly.

6. Your Memorialists are certain that if Clause 19 should become law a large number of physically unfit children will be proposed for employment and accepted, possibly at wages below the common rate, with the worst possible results to the factory population and the public health.

7. Your Memorialists do not believe that the legal charges for certifying would impose any unreasonable burden on the workpeople, though in some cases they are at present in various ways made to pay more than the legislature intended. Your Memorialists would welcome any just amendment of the law on this point, and they submit that such amendment could be made effective.

8. Your Memorialists deny that the present system of medical inspection is ineffective, but they would themselves desire to see it rendered more useful, and they will be prepared to submit suggestions for that object if they are permitted to do so. They also respectfully submit that the existence of a Medical Staff appointed by authority of Parliament in connection with the Factory and Workshops Acts ought not now to be ignored in amending the provisions of the existing law as to the regulation of factory and workshop employment in the interest of the public health. They are not aware that any charge is brought or can be brought against the body of public servants whom they represent, many of whom have been for years in charge of large districts, and some of whom have to a considerable extent given up their opportunities of private practice.

9. They therefore respectfully submit that it is neither just nor expedient to abolish the present system, which was evidently devised to provide a necessary check on possible cruelty to persons of tender years who cannot defend themselves, and they respectfully ask that Her Majesty's Government would agree to omit Clause 19 in Committee, either absolutely or subject to such reasonable improvements of the existing arrangements as the wisdom of Paliament may approve.

Signed on behalf of the Association of Certifying Surgeons under the Factory Acts.

Francis H. Walmsley, President.
C. F. Moore, Vice-President.
James Holmes, Honorary Secretary.

VIRCHOW TESTIMONIAL FUND.

An official letter has been received by the Honorary Secretaries to the above fund from the German Committee, in which the latter express their pleasure at seeing the thoroughly representative character of the British Committee, and their warmest thanks for the readiness with which the British profession are responding to the invitation to do honour to the great pathologist.

They further inform the honorary secretaries that it is the intention of the German committee to present, as far as means will permit, replicas of the medal which is to be struck in Virchow's honour to some of the representative British institutions.

Finally, they state in reply to a question raised by several

British admirers of Virchow, who wish to possess a lasting memento of his jubilee, that the artist to whom the execution of the large medal will be confided will also produce a replica on a smaller scale, which may be purchased from him. Particulars on this point will be given later.

The following additional subscriptions to the fund have been received:

	£	s.	d.		£	s.	d.
Robert Munro, M.D. ...	1	1	0	Sidney Martin, M.D. ...	1	1	0
W. Collier, M.D.	1	1	0	A. C. Maclaren, L.R.C.S. ...	2	2	0
Sir George Paget, K.C.B. ...	1	1	0	H. Charlton Bastian, M.D...	1	1	0
Thomas Oliver, M.D. ...	1	1	0	Thomas Barlow, M.D. ...	1	1	0

THE HOSPITALS COMMITTEE.

University College Hospital.— Special Hospitals. — Royal Free Hospital.—Hospital Abuse.

THE Hospitals Committee resumed their inquiry on Monday, March 2nd, under the presidency of Lord SANDHURST.

Mr. NEWTON H. NIXON, secretary of the University College Hospital, said that it was started in 1828 as a dispensary, and founded as a hospital in 1833. It was practically a free hospital, for, although there were governors' letters, the qualification for admission was the severity of the disease. There was a large school attached to the hospital. The beds numbered 207, and the average number in occupation was 181. There was a large out-patient department. So far as he knew, there were in the immediate district only two dispensaries—in Bloomsbury and St. Pancras. The nearest hospitals would be the Middlesex and the Royal Free.

The CHAIRMAN: Do you ever have to send patients away because of insufficient accommodation?—Yes. The Witness stated that the grand total of patients last year was 41,732. Those were all new cases. There were also 1,291 patients sent by local and other medical men. There was a hospital committee, which met every fortnight, and was composed of fourteen elected by the donors and subscribers, six nominees of the council of University College, and four delegates from the medical committee. This was practically the executive of the hospital. There were also subcommittees—house and finance and Samaritan Fund committees. There was no nursing committee, as the sister superior was summoned to attend before the house and finance committee. After speaking of the duties of the respective committees, the Witness said that his salary was £600 a year, but he did not reside at the hospital. In his absence a clerk and steward who lived opposite assumed control. As to his powers, the Witness said he should only have power to suspend in the case of servants. There was also a resident medical officer. He (the Witness) had the general superintendence of the hospital, for the preservation of order throughout the building, the control of the officers and servants of the hospital, except the nursing staff, but he could not interfere with matters under the control of the resident medical officer.

The CHAIRMAN: Whence do you get money for the support of the hospital?—From annual subscriptions, £2,020; dividends, £2,947; legacies, £1,972; fees of students for clinical instruction, £596; people's contribution fund in aid of the hospital, £500; donations (including Hospital Sunday and Saturday Fund grants), £7,853. There was no landed property. The total amounted to £19,334. The expenditure last year was £19,560. He could not say that that was an unusually good year. The average of legacies during the last ten years was £4,300. There was always a dinner held, and 60,000 appeals were sent out yearly. There was a total of £112,042 permanent endowment. The resident medical officer admitted both surgical and medical cases. He was a gentleman of standing in his profession, and his salary was £150 with board and lodging. To the out-patient department, the officer on duty—a member of the staff of the hospital, either physician or surgeon admitted. As to whether inquiry was made into the circumstances of the patients, the Witness said that the responsibility was thrown upon the governors who gave the letters. All sorts of cases were taken in except infectious diseases. There was a surveyor who was constantly in the building. A plan of the drains of the hospital was kept up to date. The surveyor was paid 5 per cent. commission on the works carried out. The patients were nursed by a Church of England sisterhood, but nurses who were Roman Catholics, or of any other religious persuasion, were admitted.

The CHAIRMAN: Do you find the plan of having a sisterhood nursing answer?—Excellently.

Have you a chaplain?—Yes, belonging to the Church of England; he has a salary of £70 a year.

The WITNESS further stated that there was one ward in the hospital for children. He should like to see children in hospitals separated from the other wards, as to a certain extent they disturbed the other patients.

In reply to Lord KIMBERLEY, the WITNESS stated that in 1879 great improvements were effected in the drains. They were completed in 1888. It would be a protection if an independent official made a yearly inspection of the sanitary condition of hospitals. It was contemplated to rebuild the hospital.

The WITNESS then described the connection between the hospital and University College, and said that the ultimate control rested with the Council of the College. The finances of the two bodies were entirely separate.

Lord CATHCART: The drawback to your hospital is that it appears to be semi-detached. You have not an aërial zone, which every hospital ought to have?—It is open all round.

The WITNESS further stated that there was a constant supply of water, and other precautions were taken for protection in case of fire. As to the circumstances of the patients, he said they were of a poor class, their wages ranging from 15s. to 19s. per week. If anyone came who earned as much as 30s. per week the medical officer would hesitate before admitting him. He certainly did not think the hospital injuriously interfered with the outside practitioner.

Lord KIMBERLEY: Are you not practically pauperising—making a great number of paupers by your charity?—It is difficult to define the term "pauper."

In answer to Lord THRING, the WITNESS stated that the floors of the hospital were made of deal. He did not like the condition underneath. It was very dirty, and he should like to see the flooring renewed.

The WITNESS further stated that the hospital was insured for £20,000. The clinical fees amounted to about £2,000, and the medical officers took two-thirds and the hospital one-third. Paying patients were not taken in. Occasionally a case of mania, dangerous to other patients, developed, and it was necessary to move the patient. At present this could only be done through the relieving officer. He would like, therefore, to suggest that it would be a great convenience to hospital staffs generally if the certificate of the officer under whom the patient had been in the ward was accepted as sufficient to send the patient, in their own ambulance, to the workhouse infirmary.

Lord KIMBERLEY: Do you think it is the duty of the State to relieve a hospital of one of its patients?—I do not think it is the duty of a hospital to treat mania cases.

Sister CECILIA (All Saints' Anglican Sisterhood) stated that the whole of the nursing of University College Hospital was carried out by the Sisterhood under a contract entered into between the authorities of the two bodies. There were, besides herself, 9 ward sisters, 56 nurses, and 13 probationers. The hospital paid so much a year, and the Sisterhood were bound to provide sufficient nurses. [Mr. Nixon then read the agreement, which was dated December, 1878, and stated that the management of the entire nursing staff and of all the female servants of the hospital should be committed to the charge of the home, and that the hospital should pay £1,820 per annum, for which the home should provide at least a sister superior, 7 sisters, one sister to act as night superintendent, 27 nurses—of whom 20 should be of more than one year's standing and 2 should be at liberty for cases of isolation—6 probationers, and 14 male servants: that there should be no interference with the religious views of the patients; and that there should be a six months' notice on either side before the agreement was terminated.] The Witness stated that complaint as to the conduct of the nurses would be dealt with by her. She went round the hospital daily. The nurses had a month's holiday every year. Although the nature of the work was very trying, she did not consider that they were overworked.

In reply to the Archbishop of CANTERBURY, the WITNESS said that she engaged the nurses and gave no preference because of their religious persuasions. No inquiry was made as to their religious views.

Dr. BARLOW said, in reply to the CHAIRMAN, that he had

been ten years connected with University College Hospital. He was associated with the out-patient department, admission to which was immediate to urgent cases. Cases of small ailments were seen between 12 and 1. There were three modes of entrance—governors' letters, casualty cases, and cases sent by clergymen and medical men. Although the hospital was not perfect, the out-patient department was very satisfactory and was not overcrowded. There was no systematic inquiry made into the circumstances of the patients. It was, he considered, desirable to have an inquiry officer for the out-patient department of all hospitals, but the matter must be dealt with in a very broad way. He was very much in favour of out-patient departments. His hospital did not injure the outside practitioner. In fact in the casualty department many of the poor practitioners outside were greatly relieved.

The CHAIRMAN: Are you satisfied with the nursing arrangements?—Yes, the dual control, as a matter of fact, works well. It is not an ideal plan, but experience shows that it works very well.

The WITNESS added that although the hospital was in a good sanitary condition it was desirable that they should have a new hospital, and in reply to Lord CATHCART, said that he would prefer to have an aërial zone around the hospital. The midwifery department did not interfere with the poor practitioner.

The CHAIRMAN: Have you any reason to think that your charity is abused?—That is a difficult question to answer. I should not like to say there has been no case of abuse, but from my observations there have not been many. There was, he added, a prevalent misunderstanding that a medical school as such was not favourable to a hospital as a charity, that the existence of students in the wards of a hospital and in the out-patient department was not favourable to the interests of the poor as objects of charity, but the patients were very distinctly benefited by the students. In the first place, those hospitals which had medical schools attached to them were the most popular among the poor, and those in which the medical school element was most predominant were the hospitals that stood highest in the number of attendances. They heard from many sources that the school hospitals were most popular among the poor, who, so far from resenting the numerous examinations by the students, felt it to be a greater security. The health of the nurses was, the Witness added, generally good.

Mr. A. E. BARKER, F.R.C.S., surgeon to University College Hospital, said that about five years ago there was some overcrowding in the out-patient department, but there was not now on the surgical side. He was a strong upholder of the out-patient system. It was one of the most useful parts of surgical teaching. At the examination of women in the out-patient department of this hospital there was always present a nurse and a friend of the patient. Anyone objected to by the patient was excluded. The hospitals were used for consultative purposes, and he thought they might be used still more for that purpose. He thought the poor and the public had great confidence in the present administration of the hospitals.

Mr. BERKELEY HILL (the late Dean of the Medical Faculty of University College) then stated, in reply to the Chairman, that there were 309 students on the books of the hospital. If they paid the whole of the fees at once for the whole curriculum the amount would be 130 guineas. As a maximum a lecturer might get £400 a year, and also get fees for clinical teaching. The minimum received by a lecturer might be 10 guineas. The school expenses were paid by the council, and did not come out of the funds of the charity. He thought the system of the medical school of that hospital was superior to the systems at other hospitals.

In answer to Lord CATHCART, the WITNESS said there might be some advantage if students, before they began their medical curriculum, were relieved of some of the preliminary subjects by having learnt them before.

Replying to Lord KIMBERLEY, the WITNESS said he thought there were enough teachers in London, but some of the schools were not well equipped. The students were far better educated now than they were fifteen or twenty years ago. It would be a very great improvement to medical education if students were admitted to the fever asylums. It was a great want in the system of medical education that there was no ordinary access for the students to infectious diseases.

Mr. BRUDENELL CARTER, F.R.C.S., said, in reply to the CHAIRMAN in regard to the question of special *versus* general hospitals, that he had a very strong opinion as to the relative effects of the two institutions on medical education. The effect of special hospitals was, to a great extent, to deprive the general hospitals of the means of teaching which were greatly required for the proper instruction of the students.

The CHAIRMAN: We were told that one of the disadvantages of general hospitals was that in treating special cases there was a certain amount of professional jealousy?—I should think there is no foundation at all for that. The treatment was as good at the general hospitals as the patients would receive at special hospitals. Now that the general hospitals had these special departments the functions of the special hospitals had passed away.

Do you express disapproval of all special hospitals?—No. Such hospitals as the Consumption are useful. The hospitals for children had many disadvantages, in the sense of interfering with clinical teaching. Children's wards were perfectly practicable in general hospitals.

In answer to Lord KIMBERLEY, the WITNESS said that there might be some central board—some controlling body—of hospitals, and that opportunities should be given of devoting certain buildings and certain funds to certain purposes which medical science from time to time required. The advantages of doing away with special hospitals would be greater than the disadvantages, and the advantages would be far greater if the funds could still be applied to hospital work.

Lord KIMBERLEY: Is not the tendency of all modern science—not in medicine alone—to specialise?—As the field of science extends men are obliged to confine themselves more to particular departments.

Is not that a strong argument in favour of the present specialism in medicine?—Not so strong in medicine as in some other departments.

In further reply to the CHAIRMAN, the WITNESS expressed the opinion that it would be very desirable that some central authoritative body outside the Government, something like the General Medical Council—of which he was a member—should be empowered to license all new hospitals.

Mr. NIXON, recalled, said that the medical relief, so far as the out-patient department was concerned, was sufficient for the district, but that 100 more beds at the hospital could be readily filled.

The Committee adjourned.

Upon the resumption of the inquiry, on Thursday, Mr. CONRAD W. THIES, the secretary of the Royal Free Hospital, Gray's Inn Road, was examined by the CHAIRMAN, and stated that he had been three years secretary of the charity. Medical students were attached to the London School of Medicine for Women, and only came to the hospital for clinical teaching. It was an entirely free hospital. The governors had no privileges. No letters were issued, and cases were received upon the discretion of the medical officers. The government of the hospital was entrusted to a court of governors, a committee of management, and a weekly board. The governors met annually and appointed a committee of thirty governors. The weekly board managed all the affairs of the hospital, but if anything occurred which would render it necessary to call a committee to consider any special question, such committee would be appointed. The governors' committee met regularly once a quarter. Practically the weekly board was the executive. He, as secretary, was the representative of the committee and the board in the absence of, and was responsible to, the board. There were 160 beds in the hospital, and the working average numbered 135. All cases except infectious diseases were admitted to the hospital. During the last cholera epidemic in London the committee threw open the doors of the hospital, entirely free, for cholera patients, and a large number were admitted. As to the medical relief in the district, the nearest hospital east was St. Bartholomew's, 1½ mile distant; west, University College Hospital, within a mile; and south, King's College Hospital. They had to turn away patients every week because there was no room for them. The hospital was very popular, and large numbers of persons passed the doors of other institutions and came to it. With regard to inquiries as to the circumstances of patients treated, a system of tickets was adopted for the out-patient

department; 25 tickets were distributed for admission to the medical, and 30 for the surgical side.

The CHAIRMAN: That means to say that any person who requires a bed gets it?—Yes.

Who determines that?—The physician or surgeon who has seen the case.

With regard to the funds, where do they come from?—Last year the annual subscriptions amounted to £1,013 3s.; the donations (including alms boxes at the hospital) £2,253 16. 11d.; dividends on invested property, £934 12s. 5d.; receipts from the Nurses' Training School £625 5s., and that included probationers' fees; and with other miscellaneous receipts the total ordinary income was £6,048 17s. Legacies were received last year to the amount of £6,855 14s., showing a total income from all sources £12,904 11s. The average ordinary income for the past ten years was £5,028, and from legacies £7,370, showing a total average income of £12,398. The expenses last year were £16,671 17s. 4d. Last year they were fortunate in getting £3,500 out of the Court of Chancery. The total of their investments amounted to £20,931. They were not in the habit of appealing, but the committee were now making a special appeal for the express purpose of completing the buildings of the hospital, as increased accommodation was very much needed.

The CHAIRMAN: Who is responsible for the sanitary condition of the institution?—The architect, who has a thorough knowledge of all sanitary matters. There was a plan of the drains kept up to date. It was in contemplation to alter and improve the system of drainage when the new building was constructed. The lady superintendent was the head of the nursing staff, and received £100 a year with board and lodging. Besides the lady superintendent there were 40 nurses, consisting of 10 fully trained staff nurses in charge of wards, 8 nurses in their third year, 15 probationers in their second year, 5 in their first year, and 2 paying probationers. There were 27 engaged in the day and 13 on night duty. The nurses were trained at the hospital. There was one nurse to every 3.35 patients. The nurses were paid as follows: £26 for the first year and £5 bonus, £28 the second year and £10 bonus, £30 the third year and £15 bonus, and £30 the fourth year and £20 bonus. The salary of the probationer was £10 for the first, £14 for the second, and £20 for the third year. The nurses on day duty worked from 7 A.M. until 8.30 P.M.—13½ hours, but every nurse had a total of 4½ hours off, so that they were working only 9½ hours. They further had 4 and 6 hours off every month, and also 3 weeks' holiday during the year. The average of illness among the nurses for the past 4 years had been very slight, there having been only 4 cases. There were no ward maids, but every morning scrubbers came in and did the heavy work. The lady superintendent practically appointed the nurses, but she reported to the board. There was a non-resident chaplain who was paid £100 a year.

The CHAIRMAN: Have you any salaried medical officers?—Yes; the senior resident medical officer receives £100 a year, with board and lodging; three junior medical officers receive only board and lodging, and their appointments are temporary, for six months. His own salary was £250 a year, and he had lunch at the hospital.

The CHAIRMAN: Do you provide everything for the patients?—Everything but tea, sugar, and butter—that question is under consideration.

Replying to Lord CATHCART, the WITNESS said there was a constant supply of water at the hospital, and great precautions were taken for the purpose of safety in case of fire. As an abstract principle, he thought it would be well if hospitals were in telephonic communication with one another.

Lord ZOUCHE: Do you think the out-patient department of your hospital is at all abused?—No; we are in touch with the Provident Medical Association, and have a system of sending cases to dispensaries if necessary.

The WITNESS further, in reply to the Earl of LAUDERDALE, stated that the total number of out-patients was 17,263, of which 9,043 were medical and 6,260 surgical, 667 ophthalmic cases, 591 diseases of women, and 702 dental cases; there were also 10,804 casualty cases. The hospital stood on its own freehold, and was insured for £35,000.

Re-examined by the CHAIRMAN, Mr. THIES stated that the receipts last year from the Hospital Sunday and Saturday Funds were £947 18s. 4d. and £249 5s. respectively. He had worked out the cost per patient per bed at £66 11s. for every bed occupied. There was a great difficulty in making a reliable estimate, because they had to deal with the expenses of out-patients. He had also come to the conclusion that their out-patients cost 1s. 3d. each. He should undoubtedly like to see a similarity in the system of accounts of hospitals, and he had recently drafted his accounts in the form approved by the Hospital Sunday Fund.

Mrs. GARRETT ANDERSON said she practised medicine, and she was the dean of the Ladies' Medical School at the Royal Free Hospital. The ladies paid fees—£110 for the school and hospital instruction, and £70 of that went to the school and the rest to the hospital funds. There were 107 students, and that was an increasing number. Last year's entry was the largest, and there were 34 new students at the beginning of October. This was the only hospital in England where ladies studied medicine, and was the only ladies' medical school in England. A very small number had passed the M.D., but a considerable number passed the M.B. examinations, and that was a high qualification. There was not at present a midwifery department at the Royal Free, but it was most desirable that there should be one. The practical teaching of infectious disease was very imperfect. Access must be given to students to the large asylums. There were lady dispensers at the New Hospital for Women in Euston Road, but they were not employed at the Royal Free. She had nothing to say as to any special difficulties in the instruction of ladies, as she thought the stage of obstruction had really passed. They had got their school well organised. There was no difficulty in getting good nurses. At some hospitals they were overworked and underpaid, but they had no trouble at the Royal Free Hospital. The medical profession was becoming lucrative to ladies. It was a very good profession for them. She knew of no real cases of failures. The number of female medical practitioners was yearly increasing.

Answering further questions from the Committee, Mrs. ANDERSON stated that at the New Hospital for Women the ladies performed operations. She was in favour of special hospitals. It was a great advantage in many cases to have persons constantly dealing with a particular class of diseases or subjects. It tended to greater advancement. The New Hospital for Women was the only place where women had public hospital practice on a large scale. The lady students at the Royal Free attended operations. She was strongly in favour of the out-patient departments of hospitals. It was a very valuable part of the teaching work of hospitals, and, in fact, she thought it would be quite ruinous to medical education to abolish the out-patient departments.

Dr. CALVERT, M.D., M.R.C.P., Assistant-Physician at the Royal Free Hospital, said that he had filled that post for two years. He explained the method pursued on the medical side in receiving and treating the out-patients. There was sufficient material, but not too much for teaching purposes. The charity he did not consider abused in connection with the out-patient department. Many of the patients who came, if not treated at the hospital, would, he believed, have to go to the workhouse. He was strongly in favour of the retention of the out-patient department as being indispensable to medical education. Consultative cases were frequently sent to the hospital. The charge that outside practitioners were starved by hospital out-patient departments was not, he considered true; for his experience was that they lost very little.

Mr. JAMES BERRY, surgeon of the Royal Free, stated that there were more medical than surgical cases. He was satisfied with the sanitary condition of the hospital. There was no special reason for deviating from the usual practice of hospitals treating midwifery cases outside. There had been no arrangement made for such a branch of the hospital work. The theatre of the hospital might be made more commodious, although, except on special occasions, it was large enough. It was very advisable that students should have the opportunity of obtaining medical instruction at the infirmaries. They might go round with somebody accustomed to teach them. He thought it desirable there should be such a rule as that which prevailed at the Royal Free and other hospitals, viz., that the staff should possess the qualifications of the Royal College of Surgeons and Royal College of Physicians. It was essential that schools should be attached to hospitals, at least for the latter portion of the education of the students. The

preliminary education might be obtained elsewhere than at the hospital schools.

Dr. FREDERICK ALDERSON, a general practitioner at Hammersmith, stated that he had been house-surgeon and was on the Managing Committee of the West London Hospital, as well as house-surgeon of other hospitals. He considered the continuous free treatment at hospitals injured the outside practitioners. The charities of London were no doubt abused. That general opinion was based on his own experience, having suffered indirectly from it. It would in many cases be difficult to determine who were proper recipients of charitable relief at hospitals. The special hospitals were very much more abused than the general hospitals. It was almost impossible to prevent it under the present system. He did not consider that he was starved by the hospital system, but it militated against deserving young men obtaining practice, and also tended to lower the profession. The tone of the profession was not so good as it was ten or twenty years ago.

Lord CATHCART: Have you any practical suggestions for the better management of the out-patient departments in view of the interest of the private practitioner?—I think they ought to be limited to a certain number, whereas I think the committees encourage them to come to obtain larger numbers in their reports.

You do not mean to say that the medical officers do not act fairly and honestly?—I do not think they could.

You have not quite satisfied me that there is any gross abuse with regard to the management of out-patient departments.—I do not think that medical men willingly do it. The Witness, continuing, said that the medical profession was overstocked. He was in favour of there being a sufficient number of out-patients necessary for medical instruction. He could not speak too highly of hospitals, but he thought they were for the purpose of providing for the poor. In the case of persons well able to pay, if they were treated at charities they should be made to pay.

The Committee then adjourned.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of the session will be held at the Town Hall, Walthamstow, on Thursday, March 19th, at 8.45 P.M. A paper on Rest and Food in the Treatment of Anæmia and Anorexia Nervosa will be read by J. F. Goodhart, M.D. Visitors will be welcomed.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, N.E.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—The next meeting of this District will be held at the Temperance Hospital, Hampstead Road, N.W., on Thursday, March 12th, at 8 P.M., Dr. Bridgwater, J.P., Vice-President of this District, in the chair. Dr. Radcliffe Crocker will read a paper on the Early Diagnosis of the Acute Exanthemata and the Simple Eruptions which Simulate them. Dr. R. Crocker will show some cases treated by Koch's method. Dr. Collins will also show cases under the same treatment; and Dr. Edmunds will exhibit some interesting cases from the wards. All registered medical men, whether members of the Association or not, are earnestly invited to attend these meetings.—GEORGE HENTY, M.D., Honorary Secretary, 302, Camden Road, N.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of the above District will be held at the Cottage Hospital, Faversham, on Thursday, March 12th, at 3 P.M., Dr. Boswell in the chair. The Chairman will be pleased to see members and their friends to luncheon at his house in East Street, between 1 and 2. Agenda:—Dr. Halstead: Notes on two cases of Orbital Abscess. Dr. Alexander: Notes on some cases of Skin Disease. Dr. Frederick Eastes: On the Medical Defence Union. Mr. T. Whitehead Reid: A case of Ligature of the Subclavian Artery.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The spring meeting of this District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 12th, at 4 P.M., Mr. H. G. Plimmer, of Sydenham, in the chair. Dinner at 6 P.M.; charge, 7s. (exclusive of wine). Papers will be read by Charters Symonds, M.D., M.S., Dr. Armand Ruffer, Dr. John H. Galton, and Mr. H. G. Plimmer. Members desirous of exhibiting or reading notes of cases will please communicate with the Honorary Secretary, P. T. DUNCAN, Park House, Croydon.

BORDER COUNTIES BRANCH.—The spring meeting of this Branch will be held at the County Hotel, Carlisle, on the afternoon of Friday, March 20th. Notice of papers, etc., should be sent to the Honorary Secretary, JAMES ALTHAM, Penrith.

NORTH WALES BRANCH.—The intermediate meeting will be held at the Imperial Hotel, Llandudno, on Wednesday, March 11th, at 1 P.M. Luncheon on the table at 12.30; tickets 3s. each. After formal business: To read Treasurer's Report. To discuss the Midwives Registration Bill. To discuss the advisability of petitioning the Licensing Bodies to recognise the Science Classes of the University College of North Wales as part of the Medical Curriculum. To read papers, namely: J. Lloyd Roberts, M.B.: Retention of Urine. John Roberts, M.D.: Chronic Urticaria. R. R. Jones: Trismus Neonatorum. A. Emrys Jones, M.D.: Hints on the Treatment of the Commoner Eye Accidents. Richard Williams: Optic Neuritis with almost absolute Blindness: Recovery. E. J. Lloyd: Treatment of Wounds. T. L. Kendrick Davies, M.B.: Llandudno as a Sanatorium. F. Imlach: A note on the Non-operative Treatment of Cancer. R. A. Prichard will show a case of Tuberculosis of Nose. W. Jones-Morris will show a Ruptured Liver and Stomach.—W. JONES-MORRIS, Honorary Secretary, Portmadoc.

JAMAICA BRANCH.

A GENERAL meeting of this Branch was held on May 28th, 1890, at the Public Library, Kingston, Dr. G. C. HENDERSON, President, in the chair. There were present Drs. F. H. Saunders, Da Costa, L. M. Clarke, A. R. Saunders and Turton. The minutes of the previous meeting, March 26th, were read and confirmed, and signed by the President.

Branch Representative at Annual Meeting.—It was resolved that Dr. Sidney Martin be appointed to represent the Branch at the annual meeting of the Association.

Papers.—Mr. A. R. SAUNDERS read notes of a Case of Supravaginal Amputation of the Uterus for Fibroid Complicating Pregnancy; recovery was rapid and complete.—Mr. J. W. PLAXTON showed Crystals of Human Blood Prepared after the Method of Bond and Copeman, and said he had recently determined to go over some part of the ground covered by Dr. S. M. Copeman in his paper published in the BRITISH MEDICAL JOURNAL of July 27th, 1889. Dr. Copeman, by adopting a method almost identical with the method employed long before by Mr. Bond, of Leicester, had found it possible, as Mr. Bond had shown, to obtain with the greatest ease crystals of human hæmoglobin. Dr. Copeman carried his investigations from human blood to that of many mammalians, and used, besides, other and more usual methods of bringing about crystallisation. Mr. Plaxton placed human blood which had been treated with putrid serum in the manner described, under the microscope and micro-spectroscope, and showed that the crystals so obtained were really in the form of reduced hæmoglobin. Dr. Copeman's investigation, from a medico-legal point of view, were of intense interest; they furnished the long sought criterion of human blood.

[At a subsequent meeting, on July 30th, Mr. Plaxton announced that he had gone over some of Dr. Copeman's ground and by the methods of decomposing serum and bile, and was sorry to say that in no one instance had his results tallied with those of Dr. Copeman, but had, without exception, been contradictory of that gentleman's conclusions. The bloods experimented with, human and non-human, all alike crystallised in the reduced form of hæmoglobin. Dr. Copeman's criterion was therefore nugatory.]

YORKSHIRE BRANCH.

THE members of the Yorkshire Branch met at the Beckett Hospital, Barnsley, on Thursday, February 26th, 1891, the President, Dr. EDDISON, being in the chair.

Papers.—The following papers were read: Mr. MAYO ROBSON: The Treatment of Large Tubercular Abscess associated with Bone Disease by Evacuation, and Injection with an Etherial Solution of Iodoform, with Illustrated Cases.—Dr. CHURTON: On the Treatment of Pleurisy with Effusion by Drugs.—Mr. H. BENDELACK HEWETSON: The Radical Cure of Ectropion with Granular Lids. A Case of Deafness with Severe Tinnitus Aurium, both Symptoms being Permanently Relieved by the Division of a Fibrous Band in the Membrana Tympani.—Dr. MAJOR: Remarks on the State of the Superficial Reflexes in Cerebral Hemiplegic Attacks.—Mr. R. LAWFORD KNAGGS: Cases Illustrating the Surgical Relations of Gout.

SHROPSHIRE AND MID-WALES BRANCH.

THE half-yearly meeting of this Branch was held at the Swan Hotel, Stafford on February 26th, 1891.

New Members.—The following gentlemen were elected members of the Branch: A. G. Flemming, M.D., Church Stretton; J. E. Gabb, Shrewsbury; G. H. Monk, Shrewsbury.

Midwives Bill.—Mr. RILEY proposed, and Mr. BRATTON

seconded, the following resolution: "That, in the opinion of this meeting, it will be prejudicial to the best interests of the community that the Midwives Registration Bill as it now stands should become law; and that its amendment is most desirable and necessary; and that the Parliamentary Bills representative be empowered to express this view at the next meeting of the Parliamentary Bills Committee."

The meeting then adjourned to join the conjoint meeting with the Staffordshire Branch.

BRITISH MEDICAL ASSOCIATION.

FIFTY-NINTH ANNUAL MEETING.

THE fifty-ninth Annual Meeting of the British Medical Association will be held at Bournemouth on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1891.

President: WILLOUGHBY FRANCIS WADE, B.A., M.B., F.R.C.P., J.P., Senior Physician, Birmingham General Hospital, 27, Temple Row, Birmingham.

President-elect: JOHN ROBERTS THOMSON, M.D., F.R.C.P., Consulting Physician, Royal Victoria Hospital, Bournemouth, Monkchester, Bournemouth.

President of the Council: WITHERS MOORE, M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Burgess Hill, Sussex.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital.

An Address in Medicine will be delivered by THOS. LAUDER BRUNTON, M.D., F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, London.

An Address in Surgery will be delivered by JOHN CHIENE, M.D., F.R.C.S.Ed., Professor of Surgery at the University of Edinburgh.

An Address in Public Medicine will be delivered by EDWARD COX SEATON, M.D., Lecturer on Public Health at St. Thomas's Hospital, London.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

A. MEDICINE.—*President:* P. H. PYE-SMITH, M.D., F.R.S. *Vice-Presidents:* WILLIAM GEORGE VAWDREY LUSH, M.D.; THOMAS BARLOW, M.D. *Honorary Secretaries:* WM. FRAZER, M.D., "Elmhurst," Madeira Road, Bournemouth; H. MONTAGUE MURRAY, M.D., 27, Savile Row, W.

B. SURGERY.—*President:* JOHN WARD COUSINS, F.R.C.S. *Vice-Presidents:* J. D. G. DOUGLAS, M.D.; WM. WATSON CHEYNE, F.R.C.S. *Honorary Secretaries:* A. GUNTON TURNER, M.R.C.S., "Holmwood," Bournemouth; A. A. BOWLBY, F.R.C.S, 43, Queen Anne Street, W.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President:* W. J. SMYLY, M.D. *Vice-Presidents:* ALLAN MACLEAN, M.D.; A. H. G. DORAN, F.R.C.S. *Honorary Secretaries:* H. A. LAWTON, M.R.C.S., 74, High Street, Poole, Dorset; MONTAGU HANDFIELD-JONES, M.D., 24, Montagu Square, Hyde Park, W.

D. PUBLIC MEDICINE.—*President:* J. BURN RUSSELL, M.D. *Vice-Presidents:* H. F. PARSONS, M.D.; JOHN COMYNS LEACH, M.D. *Honorary Secretaries:* C. H. W. PARKINSON, M.R.C.S., Wimborne Minster; P. W. G. NUNN, L.R.C.P., "Maplestead," Christchurch Road, Bournemouth.

E. PSYCHOLOGY.—*President:* P. MAURY DEAS, M.B. *Vice-Presidents:* HENRY JOHN MANNING, M.R.C.S.; D. NICOLSON, M.D. *Honorary Secretaries:* P. W. MACDONALD, M.D., Dorset County Asylum, Dorchester; WILLIAM HABGOOD, M.D., Belmont, Sutton, Surrey.

F. PATHOLOGY.—*President:* W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* KINGSTON FOWLER, M.D.; W. RUSSELL, M.D. *Honorary Secretaries:* W. G. SPENCER, M.B., 94, Wimpole Street, W.; E. HYLA GREVES, M.D., Rodney House, Poole Road, Bournemouth.

G. OPHTHALMOLOGY.—*President:* N. C. MACNAMARA, F.R.C.S. *Vice-Presidents:* ROWLAND W. CARTER, M.D.; MALCOLM M. MCHARDY, F.R.C.S.Ed. *Honorary Secretaries:* J. B. LAWFORD, M.D., 55, Queen Anne Street, W.; BERNARD SCOTT, M.R.C.S., "Hartington," Poole Road, Bournemouth.

H. DISEASES OF CHILDREN.—*President:* J. F. GOODHART, M.D. *Vice-Presidents:* T. W. TREND, M.D.; T. B. SCOTT, M.R.C.S. *Honorary Secretaries:* SIDNEY PHILLIPS, M.D., 62, Upper Berkeley Street, W.; DENNIS C. EMBLETON, L.R.C.P., "St. Wilfred's," Michael's Road, Bournemouth.

I. THERAPEUTICS.—*President:* WM. VICARY SNOW, M.D. *Vice-Presidents:* SIDNEY COUPLAND, M.D.; A. G. BARRS, M.D. *Honorary Secretaries:* CHRISTOPHER CHILDS, M.D., 2, Royal Terrace, Weymouth; JOHN ROSE BRADFORD, M.D., 52, Upper Berkeley Street, W.

Honorary Local Secretary: JAMES DAVISON, M.D., "Walderslow," Bournemouth.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 28TH, 1891.

9.30 A.M.—Meeting of 1890-91 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees: and other business.
1 P.M.—Sermon by the Right Rev. the Lord Bishop of Winchester.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address.

WEDNESDAY, JULY 29TH, 1891.

9.30 A.M.—Meeting of 1891-92 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Dr. T. LAUDER BRUNTON, F.R.S.

THURSDAY, JULY 30TH, 1891.

9.30 A.M.—Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery by Professor J. CHIENE.
7 P.M.—Public Dinner of the Association in the

FRIDAY, JULY 31ST, 1891.

10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Public Medicine by Dr. EDWARD C. SEATON.

SATURDAY, AUGUST 1ST, 1891.

Excursions.

SPECIAL CORRESPONDENCE.

BERLIN.

Cantharidinate of Potash in Tuberculosis.

LAST week's meeting of the Berliner Medizinische Gesellschaft was of exceptional interest. Every place in the hall was filled in expectation of Professor Liebreich's address on his new remedy for tuberculosis. The following is an abstract of the address, some of the principal points being given in the Professor's own words. He began by saying that, though it was not his custom to publish a research the results of which he had not investigated in detail, he felt obliged, by the special circumstances of the case, to do so in this instance.

He gave an account of the principles that had guided him in this and similar researches. Years ago, in his first address on chloral hydrate, he had already pointed out that, in considering a substance, it is of the greatest importance to form a notion of the atomic grouping in the molecule. The observation of this principle led to the discovery of a number of efficacious remedies - for instance, salicylic acid and salicylate of soda. "How long substances can remain unemployed is shown by the example of chloral hydrate, the therapeutic qualities of which were unknown for thirty-seven years after its discovery by Justus von Liebig."

But it would be onesided to be led only by the above principle in research. An illustration of a different method is the discovery of lanolin, by which ointment therapeutics, which had sunk almost into contempt, were raised to a scientific basis. "Then again - and this we owe to Koch - disinfectants were made the objects of inquiry. From the beginning I expressed my opinion that all those substances that exercise a deleterious influence on the lowest organisms outside the body must be inefficacious when introduced into living tissue. In continuation of my former chloral researches, I was able to show, in connection with the 'dead spaces' in chemical reactions, that the reaction that takes place in the cell is very different from that which takes place outside of it."

Then, again, Pasteur's theory that bacteria are destroyed by their own products of metabolism was followed up; but the extremely toxic quality of these products has hitherto formed

a hindrance to their efficacious therapeutic action. It is to be hoped, however, that the attempts to extract efficacious bactericidal substances from the products of metabolism of the bacteria may yet be attended with success. At present treatment by attenuated bacterial cultivations is forming the subject of many experiments, but this has no direct relation to pharmaco-dynamic investigations.

Professor Liebreich then turned to his experiments with local anæsthetics, named by him anæsthesia dolorosa, because though they produce local anæsthesia, the injection itself is painful. In the course of investigations with these bodies, it became clear that their effect was not due to chemical action, as in the case of chloral hydrate, but to purely physical causes. It was while engaged in these researches that Professor Liebreich first saw lupus cases which were being treated by tuberculin, and at once formed the opinion that the local action must be due to a substance, whatever its origin, similar in action to those known under the name of "acria." Upon this the speaker's experiments with cantharidin (the active principle of the Spanish fly) were begun. The Spanish fly has been used occasionally in therapeutics since the time of Hippocrates; Pliny mentions it. In later times it occurs in France and Italy under the names of "pastilles galantes" and "diabolini," but its effect has always been uncertain, often dangerous, owing to the impossibility of dosing the active principle with any accuracy.

It was Robiquet who first extracted the active principle, cantharidin, as a chemically pure crystalline substance, which can be weighed and dosed with exquisite accuracy. Its toxic qualities, and especially its irritating action on the kidneys and urino-genital apparatus are well known, and have been described by Cornil, Ida Eliaschoff, and others. When cantharidin is taken internally serum is exuded from the capillaries, not only of the kidneys, but also of the lungs and of other organs, as has been proved by the experiments of the speaker. This is the characteristic action of cantharidin. According to the speaker's theory, the irritability of the capillaries varies in the different parts of the organism. He assumes that an irritated condition of the capillaries favours the process of exudation. Thus a dose of cantharidin, too small to exercise a toxic action on healthy capillaries, will produce exudation in inflamed capillaries. This exudation of serum in tissue may act in two ways (1) by nourishing the cells and bringing back to their normal condition badly nourished cells; and (2) by the disinfecting action of the serum the affected spot.

In his experiments, which he began at the Augusta Hospital, the speaker made use of a solution containing cantharidinate of potash. The maximum dose was 6 decimilligrammes, the usual dose being from 1 to 2 decimilligrammes. "If it can be proved that in cantharidin we possess a means of producing an increased secretion of serum at any one spot, we may succeed in concentrating at this spot efficacious substances, which, under ordinary circumstances, do not easily find their way there. We know substances that circulate in, and are decomposed by, the blood, but which only with difficulty pass through the capillaries. But if we know that at an affected spot the exudation from the capillaries is facilitated, we can imagine that a larger quantity of an efficacious substance may find its way to this spot, thus strengthening the otherwise feeble disinfecting power of the serum. It seems to me not unlikely that such a combination of two remedies might possibly lead to a new therapeutic method. As regards practical application, special attention should be paid to the kidneys. It is clear that this treatment should not be applied where there is disease of the kidneys. I should advise doses of 1 decimilligramme to begin with, followed by an experimental increase to 2 decimilligrammes. It is as well to let a day elapse between the injections."

On the conclusion of the address Dr. Heymann and Professor B. Fraenkel exhibited cases treated by cantharidinate of potash, which showed marked and in some cases surprising improvement.

LIVERPOOL.

The Outbreak of Typhus in Birkenhead.—The Liverpool Dispensaries.

The outbreak of typhus fever in Birkenhead, noticed in the British Medical Journal some months ago, has not yet been stamped out, a fresh case having been reported on an average about once a fortnight, and the disease has lately made its appearance in two districts that had hitherto escaped. The Town Council, acting on the recommendation of the Local Government Board, has sanctioned the erection of a hospital containing seventy-two beds on a new site, but its construction has not yet been commenced, and the old fever hospital continues to be used when fever cases require to be removed from their homes. It was supposed that since public attention was directed to the management and condition of the latter institution last autumn, considerable improvements had been effected in it, but that much remains to be done before it can be considered satisfactory is evident from the fact, which is not disputed, that lately adult male and female patients have been treated in the same ward. The proposal to construct a new hospital has met with a good deal of opposition from the ratepayers and a section of the press, and one paper has expressed the opinion that the so-called "indecency" of mixing the sexes in cases of virulent typhus was more sentimental than real, adding the irrelevant comment that in children's hospitals separation of the sexes is not attempted. It is much to be desired that the Town Council would carry out the recommendation of the Local Government Board and erect a new hospital without delay, and in the meantime place the management of the existing institution above suspicion by appointing to it a competent and responsible medical officer.

The annual report of the Liverpool Dispensaries shows that the charity is in the exceptional position of being free from pecuniary embarrassment. Judging from the statistics embodied in the report, the work accomplished by it is very large, 67,708 patients having been treated at the three dispensaries during the year, while the visits and attendances reached a total of 198,551. It is a decided anomaly that the acting medical officers are all salaried, and have no voice in the management of the institution and the disposal of its funds; and there can be no doubt that the Committee would be much strengthened if its constitution were modified in this respect so as to bring it into conformity with similar bodies elsewhere. The three dispensaries are each officered by three resident medical men. The peculiar feature of the work consists in visiting the sick poor at their own homes, and this is so vast an undertaking in a city as large as Liverpool that it might well absorb the energies of the nine medical men. But, in addition to this, each dispensary is open at all hours for the treatment of accidents, and this necessitates the constant presence of a medical officer in the house. It is not too much to say that serious accidents could be much more satisfactorily treated at the hospitals, which are so situated as to minister to the same areas as the dispensaries; and the maintaining of a medical officer constantly on duty at both institutions is a needless waste of funds and time. It is no uncommon occurrence for patients to obtain treatment first at one and then at the other institution.

BIRMINGHAM.

Amalgamation of Queen's and Mason Colleges.—Hospital Reform Committee.

For some years part of the teaching of the medical faculty of Queen's College has been carried out by the Professors of Mason College at that institution, and the arrangement has been of advantage to both. The time has now arrived when it seems very desirable, we might even say necessary, for this association to be made closer, and negotiations are in progress for the complete transfer of the medical faculty to Mason College, where suitable provision exists, or will be provided, to accommodate the increasing number of students, for which the present buildings occupied at Queen's College are becoming quite inadequate. The theological faculty will remain in possession of the present Queen's College building, and the Court of Chancery will be appealed to to authorise the separation of the two faculties. The details of the proposed arrangement are under the consideration of a joint committee taken from the governing bodies of the two Colleges, and so far no real obstacle has arisen to the proposed fusion. At a meeting of the professorial body of Queen's College held last week, an outline of the scheme was sub-

mitted in so far as it relates to the formation of the Senate, Boards of Studies, title and constitution of Council, and was unanimously approved. The general feeling outside the two Colleges is strongly in favour of the amalgamation, which is rightly regarded as an important step in the direction of a complete provision for a university education in the Midlands.

The report of the Committee of Inquiry is now published, and will be considered at a meeting shortly to be held by the representatives of the medical charities and the medical profession, under the presidency of the mayor. The Committee recapitulate the steps which led to their appointment, and then point out the sources, written and oral, from which they obtained the evidence considered. The allegations against the existing hospital system in Birmingham are summarised under several headings, which are discussed by the Committee, as to their existence, their causes, and their possible remedies. A very important statement is made on page 10; it is to the effect that the fundamental work of the hospitals consists in the treatment of in-patients, and that before the Committee practically no complaints were made concerning the management of the in-patient departments. It is also pointed out that the Committee is purely one of investigation, and so have thought it right not only to state their conclusions, but to place the main arguments submitted to them on record, so that hospital managers and the public may form an independent judgment. From what has gone before, it is evident that the out-patient departments are those most closely requiring scrutiny, and it may be accepted without hesitation that a large number of people obtain treatment there who are unsuitable cases—a few because they can well afford to pay for treatment, some perhaps who would be better dealt with by the Poor-law authorities, and very many with trivial complaints who might by providence provide their own private medical treatment. The result is demoralisation of the patients, who lose habits of thrift, insufficient investigation of some cases of difficulty, interference with medical instruction for students, and undue strain upon the medical officer attending. The question whether a patient is a fit subject for hospital treatment or not is admitted to be a very difficult one, depending partly on pecuniary and partly on medical considerations, and the evidence seems to point to a preliminary investigation by laymen as to eligibility *quâ* pecuniary means, reserving power to the medical officer to reject any case subsequently on the ground of triviality. In conclusion, the Committee recommend:—1. The formation of a General Council, representative of all the public medical institutions of the city. 2. The formation of an inquiry agency, to investigate the circumstances of applicants for treatment at the hospitals. 3. That apart from first aid and urgent cases, regulations should be framed by the hospitals to exclude trivial cases, and cases where either the patients are in a position to pay for such treatment as they may require, or which could be more properly dealt with under the Poor Law. 4. That facilities should be given for cases so excluded being dealt with by dispensaries and provident associations. 5. That any person recommended by an approved provident association, or by a qualified medical practitioner, should, as a rule, be admitted to the out-patient departments of the hospitals without further formality.

SHEFFIELD.

Reservoirs and Suicides.—Management of the Workhouse Hospital.—The Jessop Hospital.—A Centenarian.

The body of a young lady, who had been missing for seven weeks, has recently been found in one of the reservoirs for supplying the town with water, where it had been, there seemed no doubt, since her first disappearance. These reservoirs near the town are often chosen by suicides, and the coroner's jury did well to call attention to the easiness of access to their banks, and to suggest that the authorities should adopt some means to remedy this.

That the mixed authority of master, matron, and superintendent nurse at the hospital of the Sheffield workhouse does not appear to have given satisfaction is not to be wondered at, nor is it surprising that the Chairman of the Hospital Committee is desirous of effecting some change. It is proposed that the hospital matron, to the relief of the workhouse master and matron, shall have the control of the nurses and nurses' home, the control of the sick in the wards—indeed, the direction of the medical staff, and the general ordering and direction of the infirmary as far as nursing goes. To the outsider the Chairman seems to be pursuing a right course: and it is to be hoped that when the subject comes up again before the guardians they will give the proposal fair consideration.

The annual meeting of the Jessop Hospital was held on February 23rd. The report testified to the continued good work that the hospital was doing, but regretted that the expenditure had exceeded the ordinary income by something like £500. This deficit had been met by using donations and legacies which had come in during the year; but, as the Chairman pointed out, it was impossible to take into account such a precarious source of income as that derived from donations and legacies, and he appealed for increased subscriptions.

A centenarian is reported to be living at Mexboro. She is stated to have attained her 103rd year on March 2nd. Some years since her age was verified by a reference to the parish register at her native place. Her memory of events seventy or eighty years ago is said to be very clear. She is hearty and vigorous, and to "all appearances has a long lease of life before her."

CORRESPONDENCE.

THE NEW FACTORY BILLS.

Sir,—The debate on the Factories and Workshops Bill was most gratifying from the support which the certifying factory surgeons received from both sides of the House. Their position was materially strengthened in the course of the discussion, and there are now good reasons to hope that the 19th Clause of the Bill will not pass in its present form. To ensure a satisfactory modification in the clause in the interests of young workers for whom the surgeons form a most valuable protection, the Standing Committee on Trade, to whom the Bill has been referred, should be supplied with figures from different districts showing the number of young persons rejected for physical unfitness or actual disease during specified periods. Evidence of this kind ought not to be difficult to produce. I hope factory surgeons will supply such statistics to Dr. Farquharson or to myself, so that all possible steps may be taken to defend the interests of the profession, and to maintain that medical supervision which is essential to satisfactory sanitary working of any factory or workshops Act.—I am, etc.,

House of Commons. Walter Foster.

TAPPING THE VENTRICLES.

Sir,—When reading the interesting and valuable paper of Mr. Mayo Robson on tapping the ventricles in certain cases of brain disease, I was surprised to find that he described his case as "one of the earliest, if not the first, in which the operation of trephining and tapping the ventricles has been performed."

From subsequent correspondence in the British Medical Journal, it appears that there are other competitors for such priority. So far as these claims relate simply to the evacuation of the ventricles by surgical operation, it seems only right, on the principle of *suum cuique*, to show that neither in the case of one or the other of three competitors can their claim be sustained. My attention was called to this question so long ago as 1841, when working on the subject of my Fothergillian essay on acute hydrocephalus, though no mention is made therein of the operations, as I was restricted to the acute disease. But at that time Dr. Conquest informed me of the success that had attended two cases of chronic hydrocephalus in which he had punctured the ventricles in the year 1830. Prior to this, Mr. Callaway, at Guy's Hospital, had performed the like operation, and about the same time Mr. Marsden and Dr. Armstrong both in London. But even earlier than this Dr. Bedor, of Troyes, in December, 1827, performed the operation with complete success on a child, aged 14 months, evacuating about a pint of clear

serum. The operation was repeated nine times within four months, when the child is said to have got quite well, and remained so for a year, when it died of pneumonia.

In one of Dr. Conquest's cases, shown to his class at St. Bartholomew's Hospital, the right ventricle was punctured with a trocar specially made for the purpose, which was passed in obliquely from the edge of the frontal bone on the right side. Some inflammatory reaction and severe convulsions followed, after which the coma disappeared, and the child improved so much as to become again intelligent. The head was kept strapped for some time, but how long after the child survived I know not.—I am, etc.

Cavendish Square, W. JAMES RISDON BENNETT.

SIR,—In the BRITISH MEDICAL JOURNAL of February 28th is a letter from Dr. W. W. Keen, of Philadelphia, under the above heading, in which reference is made to my paper published in the BRITISH MEDICAL JOURNAL of December 6th, 1890, concerning a case in which I tapped the lateral ventricles in February, 1889, the patient being shown at the meeting of the British Medical Association, in Leeds, in August of the same year.

Dr. Keen's letter gives an extremely interesting historical review of the operations previously performed, for which I am personally much obliged, as I have no desire to claim priority in an operation which has previously been done in Germany and in America. I find on reference to my paper that I do not actually state that mine was the first case, but merely say that I believe it to be "one of the earliest, if not the first." It is interesting to me, however, to know that mine was the first successful case, which Dr. Keen is good enough to point out.

Just as Dr. Keen in his letter remarks that he operated without knowing that the operation had been previously suggested or performed, so when I performed the operation (a month later), and when I showed the case at the meeting and prepared my paper I had no idea that mine was the fourth case of the kind, or that it had been previously suggested.

For those who are interested in the subject, and who care to refer to my paper, it will also be noticed that I mention Dr. Keen's name, along with the names of two or three other eminent surgeons, as being a leader in cerebral surgery.—I am, etc.,

Leeds. A. W. MAYO ROBSON.

THE LATE MR. JOHN MARSHALL, F.R.S.

SIR, Former colleagues and many of the friends of the late Professor John Marshall wish to establish a memorial of him in connection with his *Alma Mater*, University College, London. It is proposed that primarily the memorial should take the form of a bust to be placed within the the College. In the event of the contributions to the funds which is being raised for this purpose being more than enough, the surplus will be set aside for the foundation of a prize in the medical faculty of the College, to be called the Marshall Prize.

As there are, doubtless, among your readers many of Mr. Marshall's friends and old pupils who will be glad to co-operate in this attempt to perpetuate the memory of his useful and many-sided labours both within the profession and without, we beg to be allowed to state that subscriptions may be sent on or before April 10th next to the treasurer of the fund, Mr. John Tweedy, 100, Harley Street. We are, etc.,

THOS. BARLOW, M.D., 10, Wimpole Street, W.;
VICTOR HORSLEY, 80, Park Street, W.; } Hon. Secs.

THE MIDWIVES BILL.

SIR,—In a letter in the BRITISH MEDICAL JOURNAL of February 28th, I find Mr. Nelson Hardy stating that I opposed the present Midwives Bill before the Lord President of the Council, on the "ground" that it was fraught with danger to the public, and that there is no definition in it of the duties of a midwife.

This statement is partially correct. I did state that, in my opinion, this Bill is fraught with danger to the public. Among several other reasons for this position I referred to the difficulty of defining a midwife's duties, and exemplified this by the clause which would give a number of uneducated "Gamps," who could be registered under the Bill, the power of construing for themselves a term which has so wide a significance and so many interpretations as that of "natural labour."

This, however, is only one of several other grounds on which I opposed the Bill. Mr. Hardy there states that in my *Hints to Midwives* certain midwifery topics are dealt with. Here he is quite correct. He next, however, draws from these premisses quite an unauthorised and incorrect inference regarding me. This, however, he explains by his "dulness of apprehension." He says he is unable to see how it will increase the danger to the public if women who are capable of performing such medical and surgical duties as those touched on in my little *brochure* are required to register their names before calling themselves midwives. Thus he leaves readers of his letter to infer that I objected before the Lord President of the Council to properly educated and instructed midwives being registered. This I have never done. My entire position has been, and is, one of unswerving opposition to the present Bill. As to the principle of registration, I am one of those—a considerable number in the profession—who maintain that before we finally pledge ourselves to that principle, and irrevocably accept it, we should have before us a far more secure and comprehensive basis for registration than that on which the lines of the present Bill are constructed. This was my attitude before the Lord President of the Council. I have never spoken in opposition to the principle of legislation. I fail to see, save on the ground postulated by Mr. Hardy himself, why such an attitude—my *Hints to Midwives* notwithstanding—should appear, to his apprehension, inconsistent.—I am, etc.,

London. H. MACNAUGHTON JONES.

SIR,—As one who holds in very high esteem the work which Mr. Nelson Hardy has done in the matter of medical charity reform, I am sorry to have to contradict the statements in his letter in the BRITISH MEDICAL JOURNAL of February 28th.

Section 11, subsection 3, of the Medical Act of 1886 says: "A qualifying examination shall be an examination in medicine, surgery, and midwifery, held for the purpose of granting a diploma or diplomas conferring the right of registration." The same Act gives "any combination of two or more Medical Corporations" the right to hold such examinations; and, I understand, if the College of Physicians combine with the College of Surgeons, these two grant the three diplomas. If this were not so then their qualifications are not registrable; in fact, the Medical Act of 1886 established the "triple qualification."

Further, if the Midwives Bill pass, it will repeal the Medical Act; for it will register the new obstetric practitioner, and allow her to sue for fees, without possessing a surgical or medical diploma.

This is the legal side of the question. In England any person can practise medicine, surgery, and midwifery. Any person cannot sue in a court for fees; but quacks, bonesetters, herbalists, etc., get their fees all the same.

I would call Mr. Hardy's attention to the fact that although the Midwives Bill says a midwife is to attend "natural" labours only, it does not make it penal if she attend unnatural labours. The Bill permits this new midwifery practitioner to practise both medicine and surgery; in other words, the Bill does not say she shall not practise these. Indeed, her position will be similar to the surgeon, physician, or apothecary before 1886. The apothecary had the legal power to practise medicine, and to charge for such and medicines. But we all know he practised midwifery and surgery also, and took fees for so doing. Similarly, the midwife will treat infants' diseases, etc., and take payment for so doing.—I am, etc.,

Liverpool. ROBERT REID RENTOUL, M.D.

COLONEL SEELY has offered to contribute £10,000 for the erection of a convalescent home for men at Skegness.

MISS BARBARA ABERCROMBIE, daughter of the late John Abercrombie, M.D., first physician to the Queen for Scotland, died in Edinburgh on Sunday, March 1st, at the advanced age of 80. Up to a few days before her death she was actively engaged in those philanthropic works to which for some fifty years she has devoted her unbounded energy.

NAVAL AND MILITARY MEDICAL SERVICES.

THE VOLUNTEER MEDICAL SERVICE.

Brigade Bearer Companies.

I.

Many changes have taken place of late in the constitution of the Volunteer Medical Service, some of which have affected it considerably. A most important one was Army Order No. 77 of February, 1888, which gave acting-surgeons the right to be recommended by their commanding officers to the proper military authorities for promotion to surgeon with the rank of captain when they had qualified by passing the proficiency examination; formerly acting surgeons remained as such, with the rank of lieutenant, for long periods, although they were proficient. This new order was a distinct encouragement for acting surgeons to qualify for promotion by becoming proficient, and as a consequence the number of these officers is decreasing yearly, and a proportionate number of surgeons is being commissioned. In the Home District the proficiency examination is held quarterly, in most others half yearly, the standard varying considerably.

Another important departure has been the appointment of brigade-surgeons to volunteer infantry brigades, the method of selection appearing to be "merit tempered by seniority." In April of last year an army order was issued, calling upon these officers to form brigade bearer companies. By an amended order the composition of the company was to be one surgeon-major or surgeon, two surgeons or acting surgeons, seven staff-sergeants or sergeants, the senior to act as warrant officer, one bugler, and fifty-three rank and file. This company was not to be supernumerary to the existing regimental establishment; or, in other words, no extra capitation grant would be allowed, it being clearly intended that the men should be drawn from the existing complement of regimental stretcher-bearers, which are allowed at the rate of two per company, in addition to which the medical officer of each regiment has a corporal and an orderly, these being also obtained regimentally. In a brigade composed of seven or eight regiments, this complement of men would be sufficient for the formation of a bearer company as far as the rank and file proportion of it is concerned.

With regard to the staff-sergeants and sergeants it is not so; the army order distinctly stated that the bearer company was to be composed of men not supernumerary to the existing regimental establishment. Here then was a difficulty. Six or eight corporals (that is one for each regiment of the brigade) are assigned as the staff of non-commissioned officers and seven staff-sergeants or sergeants are also required. The existing corporals cannot be promoted, as that would be creating supernumerary sergeants contrary to the regulations. The difficulty might have been met by adding an ambulance sergeant to the strength of each infantry regiment which has an establishment of eight companies. This man would have under his charge at least sixteen men, besides expensive stores, to say nothing of occasionally having to act in positions of serious responsibility, for it is a common experience of medical officers doing duty with volunteers, that cases ending fatally occur even in a camp of very short duration. It will thus be inferred that an ambulance sergeant is not recognised by the regulations—and, in fact, this is so. The only capitation grant which he earns is that of a private.

As to the transport or medical and surgical equipment allowed by the regulations, the only information on these points is contained in an army order last autumn which empowered brigade-surgeons of volunteers to draw eight stretchers, on requisition to the principal medical officer of the district. Transport, such as ambulance wagons, cacolets, or litters, is not mentioned, neither is medical or surgical equipment.

THE NAVY.

The following appointments have been made at the Admiralty: Henry G. Jacob, Surgeon to the *Wildfire*, additional, March 8th; William E. Bennett, Staff-Surgeon to the *Alexandra*, March 8th; John P. L. Coolican, Surgeon to the *Vivid*, for the Royal Naval Barracks, March 7th; Alfred E. Weightman, Surgeon to the *Wildfire*, additional, March 7th; William O'Meara, Surgeon to the *Alexandra*, March 8th; William B. Drew, Staff-Surgeon to the *Trafalgar*, March 2nd; Richard D. White, Staff-Surgeon to the *Collingwood*, March 2nd; Henry C. Walsh, Staff-Surgeon to the *Neptune*, March 2nd; Joseph William Gallagher, to be Surgeon and Agent at Kellybegs, March 3rd; Thomas M. Pollard, to be Surgeon and Agent at Tribane, March 3rd.

ARMY MEDICAL RESERVE.

Surgeon-Major George Paddock Bate, M.D., 5th Battalion Rifle Brigade (late the 2nd Tower Hamlets Militia), is appointed Surgeon-Major, ranking as Major, March 4th.

The notification in the *Gazette* of February 10th, that Surgeon William Duncan, M.D., F.R.C.S., ceased to be an officer of the Army Medical Reserve, is cancelled.

INDIAN MEDICAL SERVICE.

Surgeon G. S. Thomson, of the Bombay Establishment, has been granted leave to proceed out of India for six months on medical certificate.

The Queen has approved of the following appointments to the Indian Medical Service: Surgeons on probation, to be Surgeons, ranking as Captains, January 31st:—*Bengal:* James Muir Crawford, John William Wolfe, Bawa Jiwan Singh, Hugh Robert Campbell Barber, Charles Henry James, Frederick O'Kinealy, Christopher Clemens Cassidy, Arthur William Treminhere Buist-Sparks. *Bombay:* Ernest Gerald Robert Whitcombe, Frank Erskine Murray, Henry James Younger, Baman Das Basu.

THE VOLUNTEERS.

Surgeon John MacIntyre, M.B., of the Clyde Brigade of Royal Naval Artillery, is promoted to be Staff-Surgeon, February 21st.

Acting-Surgeon J. Quick, Duke of Cornwall's Artillery (Western Division Royal Artillery), has resigned his appointment, dated May 21st, 1887.

The undermentioned gentlemen are appointed Acting-Surgeons to the corps specified: William Square, 2nd Volunteer Battalion Devonshire Regiment (late the 2nd Devonshire); William Turnbull Barbie, M.B., 1st Roxburgh and Selkirk (the Border) Rifles; William Henry Barrett, M.B., Edinburgh Division of the Volunteer Medical Staff Corps.

Surgeon A. Craigmile, M.D., 1st Volunteer Battalion Cheshire Regiment (late the 1st Cheshire), has resigned his commission, which was dated August 21th, 1889.

Acting-Surgeon T. Fennell, 3rd Volunteer Battalion Cheshire Regiment (late the 3rd Cheshire), is promoted to be Surgeon, February 28th.

Acting-Surgeon E. Chamberlayne, M.B., 4th Volunteer Battalion Cheshire Regiment, has resigned his appointment, which bore date March 22nd, 1890.

Acting-Surgeon A. D. Moffat, 3rd Volunteer Battalion Highland Light Infantry (late the 5th Lanarkshire), is promoted to be Surgeon, February 28th.

Surgeon-Major Isaac Massey, M.D., South Notts Yeomanry, died at Park Row, Nottingham, on February 21st, in his 82nd year.

SOLDIERS ON FURLOUGH.

B. asks: Who is responsible for payment for medical attendance upon a soldier on furlough? If the military authorities, to whom am I to apply?

*** It depends on the kind of furlough. Soldiers on sick furlough, where there is no military hospital, but not soldiers on ordinary furlough, are entitled to medical attendance at the public expense (paragraph 828, Army Medical Regulations). Claims for attendance by civil medical practitioners should be made out in detail, showing visits, operations, medicines, etc., and forwarded to the Director-General, Army Medical Department, War Office. Care should be taken that the scale of charges be in relation to the social status of the soldier, not to the financial position of his paymaster, the State; if this is forgotten or ignored, the bill is sure to be returned rigorously taxed.

EMPLOYMENT OF RETIRED OFFICERS ABROAD.

"Retired" traverses the statement of M.S. in the British Medical Journal of February 21st. The employment of retired officers abroad would not necessarily be at the best stations; he himself would accept, say Bermuda, on the home terms, and other places where there are no special Colonial allowances. What may be called our best foreign stations, where retired officers could possibly be employed, are few and far between; but good or bad, the result to full pay officers in increasing the length of home service could not be otherwise than beneficial.

Another M.S. thinks that the arguments of M.S. that retired officers would monopolise all the best foreign stations is fallacious. These stations would only be selected by retired officers through having local ties, and becoming fixtures, they would be acceptable to the combatant ranks, who dislike constant changes in medical officers, and would enable the full pay medical officers to get leave more readily. It is quite clear that under an early retirement system a sufficient number of full pay officers to fill all the home and foreign stations will not be sanctioned. It is evident, therefore, that against the employment of retired officers must be put that of civil practitioners and delayed retirement.

BAD SPELLING.

At the recent meeting of the Executive Committee of the General Medical Council a letter was read from Sir Ralph Thompson drawing attention to "the manifest deficiency in orthography prevalent among the young medical officers of the army." This deficiency, it is added, "has for some time past so forced itself upon the notice of the military medical authorities that a special clause has been introduced into the regulations for admission to the Army Medical Staff to the effect that the Secretary of State reserves to himself the power of making bad spelling a cause of rejection, and it was while considering the means to make this decision operative that Mr. Stanhope thought it desirable to call the attention of the General Medical Council to the matter." The letter was

referred to the Education Committee of the Council, but it is curious that the complaint comes only from the military authorities. Mr. Stanhope thinks that the Council might "insist upon a more efficient preliminary examination of the student before he enters on his medical career." But all medical students are already subjected to the same preliminary tests. Can it be that the military medical service at present only attracts young men who cannot spell? This is very curious if true. Is it quite inexplicable?

FREQUENT MOVES.

A SUFFERER complains of the too frequent moves to which junior surgeons are subjected at home, largely, he is convinced, due to the employment of broken-down half-pay medical officers. These men, he calculates, will on an average go sick twice a year besides taking the two months' leave to which they are entitled; junior surgeons are sent off to take their place when either of these events happen. Why should they not provide their own substitutes?

*** Our correspondent is a little hard on these old officers, among whom we hope he will one day find himself. His experience of the amount of sickness among them is surely exceptional. Would he have them provide a substitute out of £150 a year? and where would they find one? A civilian cannot, and we think properly so, approve recruits, and this is one of the important duties upon which the ripe experience of the old officer is brought to bear. Let our correspondent also remember that the question of early retirement, which is of vital importance to all, is inseparably bound up with retired pay employment. And it is certain such employment will continue, for Mr. Stanhope's financial saving is entirely based upon it. Moves should certainly be reduced to a minimum, but we fear their frequency is inseparably bound up with a limited establishment of medical officers.

SENTIMENT.

D. I. G. writes: The composite titles which Mr. Stanhope proposes to confer on medical officers are no concession but only an extension of what already exists; it is the rank associated with them that is the point. The "definite substantive position" would not only remove friction but increase efficiency. Medical officers' grievances have been said to be mainly sentimental, but is it not mere sentiment on the part of a few combatant officers, however distinguished, to oppose concession of rank to medical officers?

MEDICO-LEGAL AND MEDICO-ETHICAL.

ADVERTISING DISPENSARIES.

ALPHA.—It would appear that the medical man referred to has shown great want of courtesy to his professional brethren in the neighbourhood in not calling upon them. With regard to the "dispensary" to which the card forwarded refers, we have no hesitation in condemning it; for, while we are willing to admit that properly organised provident dispensaries, with suitable "wage limits" and conducted by responsible committees, may be necessities of the time, we have no sympathy with organised schemes of cheap medical practice, especially when worked by one practitioner with the object of attracting the patients of his neighbours.

ACCIDENTAL INSURANCE.

P.H.M. We gather from the further communication of our correspondent[1] that due notice of the accident was given to the company, and that the question at issue is as to the liability of the company to pay to the assured the sum of £500, the amount payable for the loss of an eye where (as alleged by the company) such loss results within a period of three months from the date of the accident.

The conditions of the policy should be carefully read; probably there is a condition requiring a reference to arbitration in case of dispute. We do not think it would be wise to discuss the matter further though these columns, and legal advice should be obtained. We think it only right to mention that a letter has been received from the company from which it would seem that (apart from any question as to the legal construction of the conditions) the parties are not in accord as to the facts.

BONESETTERS AND SURGEONS.

QUERIST. We would suggest that a formal demand should be made by our correspondent or his solicitor for the amount due, and proceedings threatened in case of default in payment within a limited specified time. If the application is not complied with, proceedings should be at once taken in the county court to enforce the claim. It is desirable, in order to rebut the allegation made, that the matter should be promptly dealt with, otherwise acquiescence might be implied, which (although not affecting the legal issue) should, we think, be avoided. We assume, of course, that the patient is in a position to pay if judgment is obtained against him.

[1] BRITISH MEDICAL JOURNAL, February 21st, p. 439.

DISSECTION IN NEW YORK.—A Bill has passed the Senate of the State of New York which provides for the equable distribution of dissecting material among the medical colleges and the post-graduate schools of the State. Hitherto, it appears, the latter have had no regular supply of subjects.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, February 26th.

FACTORIES AND WORKSHOPS BILL.

MR. MATTHEWS, in moving the second reading of this measure, dealt at length with the sanitary provisions of the Bill. The sanitation of factories and workshops, he said, rested in a peculiar position. There had been for years provisions applicable, not merely to workshops and workplaces, but to houses and dwellings of every kind, contained in the Public Health Act. Workshops in which men alone were employed were at present outside the Factory Act, while workshops in which women alone were employed were subject only to some of the sanitary provisions of that Act. The object of this Bill was to bring all workshops and factories up to the same sanitary level as to ventilation, overcrowding, and cleanliness. It did not deal with what were called domestic workshops. He had taken the view that the Public Health Acts had already raised dwellings to a considerable sanitary level, and that the Bill to be shortly introduced by the President of the Local Government Board would raise the level still higher. With respect to the authority that would enforce the new provisions, he proposed to leave factories as they were, entirely under the existing inspection—a system that had worked well. The sanitary provisions of the Factory Act would be extended to all workshops throughout the country, so that every cobbler's shop, every blacksmith's shop, and every tailor's shop would come under the provisions of the sanitary law. The enforcement of these sanitary provisions, as far as workshops were concerned, was by the Bill given to the local authorities under the surveillance of the Local Government Board, who had large compulsory powers. The Bill of the President of the Local Government Board would still further strengthen the powers of control of the central authority. They had adopted the recommendations of the Sweating Committee in requiring notice to be given of the opening of new workshops and lists to be rendered of out-workers with a view to the enforcement of sanitary regulations wherever they might be needed. With regard to hours of employment, he had made only one change of importance. He proposed that work for women should only take place in twelve specified hours, with a specified hour and a half for meals, instead of in fifteen hours with four and a half taken out for meals as at present. If the recommendation of the Berlin delegates were followed, a child of 12 years might be employed in England the full number of hours. For the eight additional half-holidays he should suggest that a fortnight's notice should be given. As to certified service, he regarded the fact of the child attending school, the interest of the employer himself, and the influence of parental affection as sufficient protection against unfitness, especially as under the present system such a thing as a rejection of a child by a surgeon was almost unknown. The inspector would have power at any moment to call in a surgeon if he thought the child was not fit. The Act would come into operation on January 1st, 1892. This was essentially a Bill of detail, and he respectfully asked the House to give it a second reading, and then refer it to the standing Committee on Trade, where there would be persons representing all the great industries affected by it, and also persons in touch with the operative classes, and who understood their wishes and desires.

MR. S. BUXTON trusted the Bill would bring under regulation and inspection those who were at present outside the law, and were practically unregulated and uninspected. It was a scandal that for all these years places where women worked alone should have been exempt from the Factory Acts. He approved of the reduction of the hours of employment of women from fifteen to twelve with an hour and a half for meals. He thought the hours should be from six to six or from seven to seven, and not be extended so late as ten o'clock at night. He regarded with satisfaction the obligation on the employer to keep a register of the persons he employed. He regretted that the Home Secretary had not dealt in the Bill with the question of overcrowding.

MR. BAUMANN thought the Bill ought to be extended to domestic workshops.

SIR H. JAMES said he intended that his Bill should be referred with the Government measure to the Standing Committee, not with a view to its being passed into law, but in order that some of its clauses should be incorporated in the present Bill.

SIR L. PLAYFAIR said that the Home Secretary based his withdrawal of protection to young persons about to enter factories upon two grounds—namely, that protection was afforded by parental affection, and that the interests of the employers might be trusted to prevent them from taking in improper or unfit persons. What was the history of factory legislation? In 1833 a measure was introduced which provided that no young persons should be allowed to go into factories until their fitness was certified by a medical man. Before the principal Act of 1878 was introduced the question was submitted to a Royal Commission, the members of which reported in favour of this medical inspection. Then, what was the opinion of Lord Cross, the right hon. gentleman's predecessor in office, after giving the subject the fullest consideration? He said he would be unwilling to pass any law to take away certifying surgeons. They had afforded the greatest aid in carrying the Acts of Parliament into operation. With these authorities against the right hon. gentleman, he ought to have told the House how it was that he was making such a vital alteration in the Factories Act. He could also quote inspector after inspector of great experience as to the great value of the services of the certifying surgeons. This Bill abolished at one fell swoop the employment of certifying surgeons, except in the case of accidents, and removed all the safeguards that were considered so necessary by previous legislators. He considered that was altogether an unreasonable retrogression in factory legislation. The Home Secretary said—and he was surprised to hear it—that refusals were seldom or never given by certifying surgeons. In the year 1888-89, in the Dublin district, there were 56 refusals on account of age, 84 on account of infectious disease and debility, and 13 on account of disease of the heart. The right hon. gentleman might be right in saying the refusals were few; but he did not think he was right to bring before the House such a sweeping change without producing proof that the certifying surgeons did not do their duty. The Home Secretary said, in the first place, there was no necessity for the certificate of a surgeon with

reference to age, because that could now be ascertained in other ways. That was perfectly true; but there were other matters in which protection was required. This change would by no means be an economical one, for a much larger number of ordinary inspectors would be required. There were 134,000 factories and workshops registered, and the number of visits paid by the inspectors was 114,000, or on an average less than one visit each per year. But even if the inspector paid a visit every three months, what real use was that? How could they in their few visits in the course of the year find out the deformed or diseased children who had been admitted to the factory? He hoped that the right hon. gentleman would abandon his proposals in this respect, and continue the present system.

Sir F. Milner said the proposal of the Bill to do away with certifying surgeons was condemned by all who had the interest of the factory children at heart. Education was no doubt very important, but health was even more so. The provision in the Bill was certainly a retrograde step.

Dr. M'Donald, as one who had been a certifying surgeon himself and knew how the system worked, hoped the right hon. gentleman would reconsider his decision.

Mr. Lees said that he understood that, since the passing of the Education Act, the occupation of certifying surgeons had practically become obsolete. He of course would not wish to inflict any hardship upon children working in factories; and if it could be shown that the occupation of certifying surgeons still survived, and that there was still a large number of cases of children who were prevented from undertaking work injurious to their health by the intervention of the certifying surgeon, he should certainly favour the retention of that officer.

Mr. Broadhurst said it was true that the Home Secretary had been assured by large numbers of workmen and employers that they would not oppose the abolition of the certifying surgeon; but they had only consented to agree to the abolition on the condition that the number of factory inspectors should be largely increased. The visits of certifying surgeons to factories for the purpose of granting certificates had been of the utmost value, for they had kept factory proprietors on the alert. The certifying surgeon's visit to a factory or workshop had to some extent the effect of the inspector's visit. Therefore, if they abolished the certifying surgeon, they ought to increase the number of factory and workshop inspectors. A general desire had been expressed on both sides for the protection of the children of working people. He trusted the right hon. gentleman would reconsider his proposal as to the abolition of certifying surgeons.

Mr. S. Smith contended that 10 years of age was too early for a child to enter a factory.

Sir W. Houldsworth said it would be a mistake to raise the working age of children from 10 to 12 by a Bill. He thought that some benefit arose from the certifying surgeon passing the children and examining into their fitness; but he was sceptical, indeed, as to the extent to which this practice had been carried out in this country. The only statement made on the subject of the number of children refused admittance to factories for a reason other than that of not being of legal age had been from Ireland. There was no statement from England or Scotland showing the number of refusals; and this fact confirmed his opinion as to the slight extent in which the certifying surgeons had used the power of refusing children on account of unfitness.

Mr. Rowlands was of opinion that the working age of children in factories should be extended from 10 to 12.

Mr. Shaw Lefevre gave his hearty support to the measure, with the exception of the proposal to abolish the certifying medical officer. He considered the certifying medical officer to be a very important link in the general protection given to children under the Factory Acts. He knew that the late Lord Shaftesbury used to say that he regarded the institution of the medical officer as the most important feature of the policy which he carried out. In view of the prevailing tone of the debate on that point, he would seriously suggest to the Home Secretary whether he would not do well to drop the proposal to abolish the certifying medical officer.

Dr. Farquharson thoroughly approved of the excellent sanitary provisions which the Bill contained, but he protested against Clause 19, withdrawing from young children who might be introduced into factories the protection hitherto given by the factory surgeons. Many of the improvements which had been effected by the Factory Acts had been due to the operation of the medical authorities under those Acts, and to the operations of those surgeons who were now, at one stroke of the pen, to be disestablished and disendowed and abolished out of existence. Not only did the surgeons stop directly until cases, but they did more; they had a deterrent influence which prevented parents from bringing up children whom they knew to be unfit or who were, perhaps, suffering from disorders which might otherwise have caused great and serious detriment to the health of those by whom they might be surrounded. He traversed the assertion that the examination by the factory surgeons had become an unmeaning form, and said evidence on all hands could be cited testifying to the admirable way in which they had done their work. The whole current of the most recent legislation, such as the Cruelty to Children Acts, showed that strong though parental affection was, it was nevertheless necessary to protect children against the self-interest, the greed, the poverty, and frequently the ignorance of parents. He did not see that there was any less reason now to protect children from their parents than there was under the original Factory Acts fifty years ago. A parent might think a child fit for work when a medical man would detect in that child weakness or disease which rendered it quite unfit, as, for example, heart disease or incipient consumption. Although there might, in some instances, be latent, owing to the numbers to be inspected, yet he believed that, on the whole, the factory doctors did their work faithfully and well. It was said there were very few cases of rejection of children as physically unfit. The reason instances had not been forthcoming was that the surgeons had not had time to get up their case, owing to the Bill having been hurried forward. He understood, if a reasonable time were given, to show that the rejection of children as physically unfit was of frequent occurrence. He knew of one surgeon in a large town in the north who rejected, on an average, two children a week. Instead of diminishing the powers of the medical men, he would be in favour of largely increasing them. He thought they should inspect the sanitary condition of the factories, and also, from time to time, see the children they had passed, to know whether the work was injuriously affecting them. The remedy proposed by the Government was a very futile and ineffectual one. Age was a very inconclusive test of fitness, unless it was accompanied by a medical certificate that the person was of the development usual for that age. No doubt medical inspection was unpopular, but so were most other kinds of inspection which prevented a man from doing what he had a mind to. The right hon. gentleman proposed to deprive a class of men of employment upon which many of them were entirely dependent for their livelihood, and he would ask the right hon. gentleman what he proposed to do in the way of compensation for those men. It was hopeless for many of them to return to private practice, which they had entirely given up for many years. Although he spoke as a medical man for medical men, he believed he spoke in the interests of the poor and of the community at large. He was convinced that many ill-conditioned, weakly, and diseased children would pass inspectors who, however worthy and conscientious, were not medical men. It was said the present system did not work well in Lancashire, but Lancashire was not the whole kingdom; and, speaking for that part which he knew best—Scotland—he believed the old system worked extremely well.

Mr. Abraham (Rhondda Valley) said the vast majority of the working people of Wales were opposed to reducing the age of children for the purpose of getting employment. He had received a letter from a factory doctor of twenty-five years' standing, in which he stated that he had rejected many young persons. He hoped the right hon. gentleman would reconsider his decision with regard to the 19th Clause.

Mr. J. A. Campbell said he approved many parts of the Bill, but strongly disapproved of the 19th Clause. In his opinion, the good effected by the frequent visits of the certifying surgeons had done more to insure the factory laws being carried out than the annual visits of the factory inspectors did. If the system of employing certifying surgeons was abolished, it would be necessary to employ a whole army of factory inspectors.

Sir U. Kay-Shuttleworth thought that could be shown that certifying surgeons did, as a matter of fact, reject a great many cases of children whom it was proposed to send to work, but who were altogether unfit for work.

Mr. H. Wright urged the Government not to put Clause 19 into their otherwise most excellent Bill. The parents of the working classes generally were grateful for the protection afforded by the certifying surgeon, and the owners of factories were perhaps still more grateful when that gentleman pointed out any danger of infection running through his whole factory, besides doing damage to the homes of the children. The true policy was to mend, not to end.

Sir Walter Foster said that the introduction and passing of a Bill on factories and workshops required the greatest care, for it affected a statute which was one of the greatest glories of Parliament. He was anxious that the high standard of past legislation should be maintained. The protection of life and health in industrial occupations had been the object of previous Acts, but in this Bill he did not see the same spirit displayed. He had hoped that there would have been a more earnest endeavour to do away with the pernicious system of sweating, and on that account he would have been glad to have seen the Bill follow more closely the lines of that of the hon. member for Poplar. He hoped that the Home Secretary would be persuaded to accept amendments to improve the Bill in this direction. Another regrettable point was that the sanitary aspect of the Factory Acts was not extended sufficiently. There was an opportunity in a measure of this kind of making the supervision of all places of industrial occupation much more effective than in the past, and of taking care that all people should be employed under good sanitary conditions. To take that care was a primary duty of the State. Both employers and employed were insufficiently acquainted with the subject, and the increase in the number of subinspectors would not meet the case. If the Home Secretary were to appoint a number of inspectors from the ranks of the medical profession, he would obtain the kind of skill necessary for the sanitary improvement of workshops. He did not suppose that any such enlightened idea had entered his mind, and he was led to think so because the factory surgeon seemed to have incurred his disfavour. With regard to their functions, it was most important to remember that the medical officer had not to consider a question of age alone, but of physical fitness for particular occupation: and a medical man alone had sufficient insight into individual peculiarities to enable him to form a right judgment in such cases. The general expression of opinion on both sides of the House had been so gratifying on this point that he hoped there would be no more heard of the proposal to abolish certifying surgeons. It would be a retrograde step in factory legislation, and would remove one of the greatest safeguards for the protection of women and children. He did not say that the present system could not be improved, but it certainly ought not to be abolished. The importance of medical supervision went beyond particular trades, and became a matter affecting the health and wealth of the population generally. The stunted condition of the operatives connected with certain manufacturing districts in Lancashire was often an object of remark, and was a striking lesson of the necessity of the retention of such medical influences as would protect and improve the physical condition of the people.

Mr. Tomlinson thought the work of the certifying surgeon might be so managed that it would be of considerable use.

After some remarks from Mr. Burt and Mr. Winterbotham,

Mr. Leng said that there was so much eagerness to obtain employment for children as half-timers at the earliest age, that in many cases certificates which had been originally granted to children of full age were fraudulently transferred to those below the age; and unless surgeons were employed to check these certificates a large number of children below the legal age would be employed. It was quite true that the mere fact of surgeons being known to be employed diminished the number of young children who were presented.

Mr. Mundella hoped the half-time age would be raised to 11 in Committee. With regard to Clause 19, he would say that he held no brief for the certifying surgeons, though he believed they had done excellent service to the country. He had abundant evidence that not only had they frequently rejected children, but their work had acted as a great deter-

rent against the employment of sickly, weakly, and diseased children. Parents knew now that it would be useless to take such children to the certifying surgeons. In many cases evidence had been placed in his hands that children suffering from scarlet fever and other infectious diseases had been presented to and rejected by the doctor and sent home to be cured. Surely this was most important in the interests of the health of the country. He thought the right hon. gentleman had made a great mistake in this attempt to abolish the office of certifying surgeons. He did not say these gentlemen did all they might have done, but he thought that, instead of abolishing their office, the right hon. gentleman might turn them to very much better account. They ought not to be retained merely for certifying the fitness of children for work. They ought also to occasionally walk through the factories and report to Her Majesty's inspectors if they found any child in an insanitary condition or suffering from infectious diseases.

Mr. STUART WORTLEY said that in the desire to get uniformity of administration, the Government had been obliged to hand over the workshops entirely to the local authority, and in doing that they had brought into operation a quantity of most important and valuable provisions which did not appear on the face of the Bill. The provision relating to certifying surgeons had been put into the Bill at the instance of the largest, most influential, most unanimous, and most widely representative deputation that he had ever seen—a deputation representing the employers and the employed in all the textile industries of the kingdom.

Mr. ESSLEMONT was in favour of extending the Bill to people engaged in saleshops.

The Bill was read a second time, and was referred to the Standing Committee on Trade. Mr. MATTHEWS explained that the Committee of Selection had full powers to add members to the Grand Committee.

Female Inspectors of Factories and Workshops.—Mr. MATTHEWS, in reply to Mr. LENG, said the existing Act gave him the power to appoint female inspectors in factories and workshops, but there were strong objections on grounds of administration, economy, and practicability. By the Bill now before the House the sanitary supervision of workshops would be made over to the local authorities.

Factories Certificates of Birth (Fees) Bill.—This Bill was read a second time.

Factory and Workshops Act (1878) Amendment Bill.—On the motion of Sir H. JAMES, the Order for Committee on this Bill was discharged, and the Bill was referred to the Standing Committee on Trade.

New Bills.—Mr. RITCHIE obtained leave to bring in the following Bills: Public Health (London) Law Amendment Bill, to amend the law relating to public health in London; and Public Health (London) Law Consolidation Bill, to consolidate the laws relating to public health in London.—The Bills were brought in and read a first time.

Ether as an Intoxicant in Ireland.—Sir LYON PLAYFAIR asked the Chancellor of the Exchequer whether he would lay upon the table, or supply to the Select Committee on British and Foreign Spirits, the report made to the Government on the use of ether as an intoxicant.—The CHANCELLOR OF THE EXCHEQUER said that there would be no objection.

Friday, February 27th.

London Overhead Wires Bill.—This Bill was read a second time.—Sir R. LETHBRIDGE moved that it be an instruction to the Committee to which the Bill is referred to consider the advisability of amending the Bill so that its provisions might be in accordance with Part 2 of the Public Health Acts Amendment Act, 1890. Sir R. Lethbridge's instruction was carried.

The Compulsory Vaccination Acts.—Mr. RITCHIE, in answer to Mr. DE LISLE, said that he had been in communication with the Royal Commission appointed to inquire into the working of those Acts, but there was no hope that their report would be presented to Parliament this session.

Monday, March 2nd.

Soldiers' Rations.—In reply to Mr. COGHILL, Mr. E. STANHOPE said when a soldier was in barracks the ration he received from the public had to be supplemented at his own expense, in order that he should be provided with breakfast and tea. When on the march he was allowed a hot meal, which was more than equivalent to the rations in barracks, and, consequently, he had less difficulty in providing the supplementary meals. The soldiers did not depend on the generosity of the innkeeper for their breakfast, that meal being provided, as in barracks, under regimental arrangements. Billets were, however, much scattered—often over two or three miles—and it would be impossible for an officer to see that all the men had morning meals and marched at the proper time. All that could be done was to give general directions.

Fogs in London.—Viscount WOLMER asked whether Her Majesty's Government would consider the advisability of appointing a Royal Commission to examine and report how far the evil was one which could be mitigated by legislation.—Sir H. TYLER asked for an inquiry to be made as to the various descriptions of coal and their relative capabilities for converting mist into "London fog;" and as to the possibility of inducing persons in London by legislation to use comparatively smokeless coal by placing taxes or duties on coals most deleterious to the atmosphere.—Mr. W. H. SMITH said the Government were sceptical as to the value of a Royal Commission for the investigation of the subject. It was notorious that the evil mainly arose from the smoke emitted by ordinary domestic fires, and the problem to be solved was whether it was possible by legislation to prohibit and prevent the production of smoke in this way. A Bill introduced into the House of Lords in 1887 was referred to a Select Committee, which took evidence which went to show that smoke could be prevented by the use of non-bituminous coal, by the substitution of coke or gas for coal for heating purposes, and possibly by the adoption of an improved grate and great care in lighting and feeding fires with common coal. The Bill was not proceeded with. Another Bill was down for second reading in the House of Lords.

THE verdict in the libel action Fox *v.* A. J. White (Limited) for libel in connection with an advertisement of Mother Seigel's Syrup has been confirmed on appeal.

OBITUARY.

CHARLES LESTOURGEON, M.A., F.R.C.S., J.P.

MR. CHARLES LESTOURGEON, M.A., J.P., died at his residence, The Close, near Cambridge, on Sunday, February 22nd. He was born in 1808, his father being a well-known surgeon, of old Huguenot stock, practising in Cambridge, and was educated at Trinity College, of which he was a foundation scholar. He took his B.A. degree, as fifteenth Wrangler, in the Mathematical Tripos of 1828, a year distinguished by the fact that Bishop Perry was Senior Wrangler, while the next seven were all members of St. John's College. Mr. Lestourgeon then turned to medicine, and was admitted L.S.A. in 1831, and twelve years later he was elected an honorary Fellow of the Royal College of Surgeons. Settling in Cambridge, he became the partner of Mr. John Okes, who enjoyed a high reputation and an extensive practice. He was appointed Surgeon to Addenbrooke's Hospital in 1842, and held that important post for thirty-seven years; and when he retired he was appointed Consulting Surgeon to the hospital. On February 18th, at the complimentary dinner given to Sir George Humphry, of which we gave an account in the BRITISH MEDICAL JOURNAL of February 28th, the guest of the evening took occasion to eulogise highly Mr. Lestourgeon's distinguished services to the hospital and to the cause of medical education in Cambridge. He frequently acted as Examiner in Surgery and as a member of the Board of Medical Studies in the University; but of late years he had ceased to take any active part in University work. He was a Justice of the Peace for the borough, and had qualified himself for the degree of M.D., though he was never formally admitted thereto. An old friend and colleague thus writes of him:

"He was a man of considerable ability and strong common sense, a distinguished student at St. Bartholomew's under Earle and Lawrence, and devoted to natural history, with which he occupied himself up to his last moment. His simple, retiring, unselfish, and unambitious character prevented him, however, from communicating any of his rich stores of knowledge through the press. Indeed, he was one of those men who seek knowledge for the pure love of it, and have their sufficient delight in its acquisition. In society, however, he was a free and joyous communicator of knowledge, and his vivacious memory, his true kindheartedness, his ready wit, and his store of anecdote rendered him a most instructive and popular companion."

His surviving colleague, Sir George Humphry, who was elected to the hospital on the same day with himself, has the most kindly recollection of him, and often tells of his shrewd sayings and of the pleasant hours spent in his company.

MORRIS TONGE, M.A.CANTAB., M.D.LOND.

WE have to record the death of Dr. Morris Tonge, at Harrow, on Thursday, February 19th. Born in December, 1836, he had just completed his 54th year. He was sent to school at Eton in 1850, and remained there until 1853. He then studied medicine at King's College, London, became a M.R.C.S. in 1858, and, in the same year, took the degree of M.B. of the University of London; in 1859 he entered at Emmanuel College, Cambridge; in 1862 he took the degree of B.A. with honours (First Senior Opt.); in this same year he became a L.R.C.P.Lond.; in 1863 he took the M.D. degree of the University of London; and, in 1865, the M.A. degree at Cambridge. In 1863 he began practice as a physician, residing in Bolton Row, Mayfair. During his studentship at King's College he held the post of House-Physician at the hospital, and subsequently was elected Assistant-Physician and Medical Registrar. He was also Lecturer on Physiology at Charing Cross Hospital. His only public writings were: "Abstract of Cases in King's College Hospital;" "Case of Phthisis accompanied by Development of Fungi in the Kidneys;" "The Development of the Semilunar Valves of the Aorta and Pulmonary Artery of the Heart of the Chick."

An earnest, intelligent, and deeply-read physician, with every prospect of a brilliant metropolitan career before him—capable of contributing ably to the scientific research as well as the practical teaching of his profession—in the year 1869 he suddenly resolved to lay aside all the opportunities of a

London consultant, and accepted a share in a large general practice in Harrow. Retiring in habits—almost a recluse—lacking, perhaps, the *savoir faire* to win his way, he may not have won for himself the general appreciation which he well deserved, but—what is better—his deep knowledge, his earnest zealous watching and care of all entrusted to him, gained for him the entire confidence and grateful appreciation of a large circle of patients, who now realise all they have lost in his removal from amongst them. *Requiescat in pace.*

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

Pathological Chemistry.—At the request of the Professor of Pathology, Professor A. Gamgee has kindly consented to give a course of lectures, with practical work, on Pathological Chemistry, the lectures to be held twice weekly, on Tuesdays and Fridays, at 2.30 P.M., and the practical work at such time as is found convenient after the class has met. The course will be carried on during the rest of the Lent term and part of the Easter term.

Physiology for the Ordinary Degree.—A special examination in physiology, as a step to the ordinary B.A. degree, has been established on the recommendation of the Pass Examinations Syndicate.

Philosophical Society.—At the meeting, on March 9, Mr. J. G. Adami, Student in Pathology, will read a paper on Observations on the Cerebral Heat Centres; and Mr. W. Bateson on The Modes of Variation of the Teeth.

Schedules of Physics and Chemistry.—The Special Board for Medicine, in accordance with Regulation 10 for the degree of Bachelor of Medicine, have published schedules defining the range of the examination in chemistry and other branches of physics, and give notice that the schedules will come into force at the beginning of the next academical year (October 1st, 1891). (See *University Reporter*, March 3rd.)

Recognised School of Medicine.—The Special Board for Medicine give notice that, in pursuance of Regulation 4 for the degree of Bachelor of Medicine, they have recognised, as a school of medicine in which medical study out of the University may be pursued by candidates for medical and surgical degrees, the Johns Hopkins University, Baltimore.

GLASGOW.

Examiners in the Medical Faculty.—The Glasgow University Court have recently decided to increase the number of extramural examiners in medicine, and at the last meeting, on February 26th, a number of the appointments were made. The following were the examiners elected, the appointment being in each for four years:—Materia Medica: Ralph Stockman, M.D., Edinburgh; Chemistry: J. M. Thomson, F.R.S.E., of King's College, London; Zoology: D'Arcy W. Thompson, B.A., Dundee; Botany: George Murray, B.Sc., at present Examiner in Botany at the University; Clinical Medicine: Dr. Eben. Duncan, Victoria Hospital; and Clinical Surgery: A. Ernest Maylard, M.B., B.S., of Victoria Infirmary. On the report of the Senate the Court agreed to recognise, for purposes of graduation in medicine, the lectures on chemistry of Mr. A. B. Robertson, of the Western Medical School, and those of Mr. Thomas King, of Anderson's College Medical School, on botany.

Royal College of Physicians in Ireland.—At the stated Examinations in February, 1891, the following candidates were successful:

For the Licence to Practise Medicine.—A. J. McFarland, M.B.Univ.Dubl.
For the Licence to Practise Midwifery.—A. E. Price, L.S.A.Lond.
For the Diploma in State Medicine.—J. Oldershaw, L.R.C.P.I.

The undermentioned candidates passed an Examination for the Diploma of Midwife and Nursetender:

Mary A. Bridge, Elizabeth A. Ford.

Under the will of Mrs. Jane Emily Dobinson, of Notting Hill, the following sums are bequeathed to medical charities: £200 each to the Royal Hospital for Incurables (Putney), the Cancer Hospital (Brompton), and Earlswood Idiot Asylum.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

DIPHTHERIA AND COWS.

Sir,—In an article in the British Medical Journal of February 28th, commenting on Dr. Philpot's report upon the epidemic of diphtheria in Croydon in October, 1890, you say (p. 476): "Dr. Philpot was unable to point to any condition of which it could be said that it undoubtedly stood to the infectiveness of the milk as cause to effect. With regard to the cows, however, three animals which had been brought to the sheds at a recent date (one on September 25th and two on September 29th) were found to be suffering from an eruption of the teats, and the disease had spread from the new comers to other cows in the shed. It was, therefore, a communicable disease, and it was subsequently stated by Dr. Klein that the disease was identical with that which has been known to occur in cows in other diphtheria epidemics, and with the diseases which he had actually produced in cows by injecting them with the diphtheria bacillus."

Allow me to quote from Dr. Philpot's report what actually occurred (p. 192): "Dr. Klein, who came down in pursuance of a pathological inquiry in which he is engaged, pointed out that certain of the cows were suffering from an eruption of the teats. The three last cows which came to the sheds were suffering in this way, and the disease had spread to other cows. It was, therefore, as Dr. Klein pointed out, a communicable disease....."

You see from this account by Dr. Philpot that my share does not quite deserve to be reduced to those very smallest dimensions that might be implied in your article by the word "subsequent."—I am, etc.,

London. E. Klein.

*** The annotation referred to by Dr. Klein was, owing to the pressure on our space, necessarily a very much condensed account of Dr. Philpot's long and interesting report. All that we could hope to do was to lay briefly before our readers the merest skeleton of the most interesting facts. Whilst disclaiming any intention to reduce Dr. Klein's share in the investigation to any smaller dimensions than he considers himself entitled to, we would point out that the word "subsequently" refers to the fact that the eruption of the teats was discovered to be identical with bovine diphtheria after it was known to be a communicable disease, and not to the advent of Dr. Klein's co-operation at any particular stage of the inquiry.

UNQUALIFIED PRACTICE AND COVERING.

Fairplay writes: A medical man, lately deceased, had a large general practice with club and Poor-law appointments which he held for nearly forty years. During the last few years the practice was virtually carried on by his *unqualified* assistant, who became so popular that, on the death of the principal, it was necessary that this assistant should remain in the practice, or the widow could not sell. An M.D., residing one mile and a half distant, without consulting the widow—certainly not her interests—entered into a compact with the unqualified assistant, who was under no bond to his late employer and benefactor, with the result that all intending purchasers of the practice retired; and the M.D. has secured, through the aid of the assistant, all the clubs, the workhouse appointment—I may say the whole practice, the widow and trustees having given up all idea of selling it. At present the unqualified assistant lives one mile and a half from the principal, with the latter's name over the door. He has attended, I am informed, a confinement at the workhouse, and now is working the practice. Who can take, and what, action against the unqualified man? As regards the M.D., is it a case of covering, and what action can be taken against him? Is the treatment of the widow a case of infamous conduct on his part?

*** In answer to the first question, the Society of Apothecaries could—and, if sufficient evidence were forthcoming, doubtless would—bring an action for penalties against the unqualified man. The facts should be submitted to the Clerk to the Society, Blackfriars, London. On the second point it would be well to refer the matter to the Registrar of the General Medical Council, when an inquiry might be held, and facts in relation to the alleged "covering" investigated. We do not think that the treatment of the widow would be regarded as "infamous conduct."

EXTRA FEE FOR POOR-LAW MIDWIFERY.

We have received from Dr. Gorton Coombe, of Southminster, information to the effect that he has, after a long correspondence with the guardians of the Maldon Union and the Local Government Board, been paid the extra fee of two pounds claimed by him for attendance on a case of mid-

wifery where the placenta was morbidly adherent. In the BRITISH MEDICAL JOURNAL of September 20th, 1890, we expressed the opinion that the case was one in which the extra fee was rightly claimed under Art. 183 of Consolidated Order. The guardians, however, after having discussed the matter, at length took a different view, and declined to pay the extra fee. The question was subsequently referred to the Local Government Board, whose reply to Dr. Coombe was, briefly, as follows: "They consider a case of midwifery where the placenta is adherent throughout is one of difficulty, and that the fee of two pounds is payable in such a case." This reply, of course, decided the question, which we believe has hitherto been a somewhat doubtful one. Dr. Coombe is to be congratulated on having brought to a satisfactory settlement a matter of material importance to all district Poor-law medical officers.

MEDICAL OFFICERS OF HEALTH AND LOCAL BOARDS.

D. P. H. asks: (1) Can a surgeon be legally a member of a local board, he being at the same time an assistant to his father, who is medical officer of health to the same board? (2) Would the auditor, if acquainted with the above facts, disallow the medical officer of health's salary?

*** (1) The reply to this question is not altogether free from doubt; but, on a strict interpretation of the statutes, we are advised that the better opinion is that the surgeon referred to would be eligible for election as member of a local board; the rules (in relation to the point submitted) contained in the Schedule to the Public Health Act, 1875, only stipulating that "any *member* who accepts or holds a place of profit under the Local Board shall cease to be such member." (2) For the reasons stated we do not think that the auditor would have power to disallow the medical officer of health's salary.

DISTRICT MEDICAL OFFICERS AND MEDICAL ORDERS.

J. W. G., a district medical officer, wishes to say that he has received a medical order to attend the son of a gardener, earning good wages, who has been allowed 1s. 6d. per week and medical attendance by order of the Board (though some of the guardians considered the case ought not to have come before them), the weekly allowance to be repaid by the father. J. W. G. asks if he would not be justified in refusing to obey the order of the relieving officer, or what remedy he has, as the same board have on previous occasions granted medical orders for patients able to pay for attendance.

*** It is doubtful whether under any circumstances it would be safe for a district medical officer to refuse attendance when this is allowed by the board of guardians, and a formal order for it given by the relieving officer. J. W. G. has probably undertaken by contract to attend all such cases; and if, as he states, orders are granted improperly, his remedy is to represent the facts to the guardians with a view to the case being reconsidered by them, as, until this is done, or the medical order expires, he is responsible for the medical care of the patient.

J. W. G.'s case is an illustration of the abuse of the fixed salary system for the payment of district medical officers. If the per-case system of payment had been in operation in the town in question, it is probable that the application for medical attendance at the expense of the ratepayers would have been refused. Boards of guardians are not infrequently liberal when they can be so at the expense of others.

THE CERTIFICATION OF LUNACY CASES.

DR. J. FARRAR (Gainsborough) writes: At page 497 of the BRITISH MEDICAL JOURNAL of February 28th, is a note on a paper published by Mr. John Carswell, L.R.C.P.Edin. This paper appears to cast rather strong reflections upon the lack of knowledge displayed by the "majority of medical men" on the subject of insanity. It is stated that "owing to the want of special training the majority of medical men know no more about insanity than any lawyer or other intelligent layman." This is a statement to which I beg to take exception. In my opinion, it is quite a preposterous statement, and one which the profession will, no doubt, strongly resent. What has an "intelligent layman" to guide him on such a question except, simply, his common sense? And what a lawyer but this *plus* some knowledge of jurisprudence? Will either commonsense or ordinary intelligence enable either the layman or the lawyer to differentiate between a mind temporarily unstrung from the presence in the system of the poison of typhoid, chronic alcoholism, or, indeed, the earlier stages of any of the ordinary zymotic fevers, and a purely mental neurosis, arising independently of a zymotic microbe? What does the ordinary layman or the lawyer know of such matters by virtue simply of his ordinary intelligence or common sense? How, then, can either be placed on the same platform with the trained medical practitioner? I repeat that the statement is preposterous. Special training in insanity would, of course, be of great advantage to him; but the medical practitioner of the present day, with his technical knowledge and his intimate acquaintance with the diseases affecting the mental equilibrium, is not so helpless as Mr. Carswell would have the public believe; and I venture to say that, in nine cases out of ten, any well-trained medical man is just as able to correctly diagnose a case of purely mental aberration as one who has received the "special training" spoken of by Mr. Carswell.

RESIDENT AND NON-RESIDENT MEDICAL OFFICERS.

WE have received a lengthy newspaper report of the election of district medical officers of the Totnes Union. For one of the appointments there were two applicants, namely, Dr. Smith, a non-resident in the district who sought re-election, and Dr. Cook, who had recently become a resident. Much interest had been aroused in reference to the election, and, according to reports, at the meeting some personalities were indulged in. The Board, by a small majority, decided to re-elect Dr. Smith, whose services in the past had given satisfaction. Some of Dr. Cook's supporters appear to think that this is not in accordance with the regulations of the Local Government Board, and that the resident, Dr. Cook, ought of necessity to have been elected.

We believe that the Local Government Board, though holding as a general rule that residents in a district are for these appointments to be preferred to non-residents, is yet of opinion that a non-resident district medical officer, who is subject to re-election, is not to be deprived of his appointment simply because a newcomer in the district is a re-sident, and an applicant for it. In reference to a similar case in another union, the Local Government Board have recently informed the guardians that they are not compelled to elect the resident candidate.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, which have an estimated population of 10,010,426 persons, 6,210 births and 4,620 deaths were registered during the week ending Saturday, February 28th. The annual rate of mortality in these towns, which had increased from 19.8 to 21.6 per 1,000 in the preceding three weeks, further rose to 24.1 during the week under notice. The rates in the several towns ranged from 13.8 in Plymouth, 14.6 in Derby, 18.3 in Hull, and 18.4 in Portsmouth to 28.6 in Bristol, 30.4 in Huddersfield, 33.9 in Halifax, and 38.9 in Blackburn. In the twenty-seven provincial towns the mean death-rate was 24.4 per 1,000, and exceeded by 0.7 the rate recorded in London, which was 23.7 per 1,000. The 4,620 deaths registered during the week under notice in the twenty-eight towns included 431 which were referred to the principal zymotic diseases, against numbers increasing from 332 to 381 in the preceding three weeks; of these, 150 resulted from measles, 139 from whooping-cough, 52 from diphtheria, 37 from diarrhœa, 30 from scarlet fever, 23 from "fever" (principally enteric), and not one from small-pox. These 431 deaths were equal to an annual rate of 2.3 per 1,000; in London the zymotic rate was 1.8, while it averaged 2.6 per 1,000 in the twenty-seven provincial towns. No fatal cases of any of these zymotic diseases were recorded last week in Brighton, Norwich, Plymouth, Wolverhampton, and Cardiff; while they caused the highest death-rates in Leicester, Bristol, Huddersfield, and Blackburn. Measles showed the highest proportional fatality in Salford, Leeds, Leicester, Huddersfield, Bristol, and Blackburn; scarlet fever in Derby and Preston; whooping-cough in Leicester, Huddersfield, and Halifax; and "fever" in Birkenhead. Of the 52 deaths from diphtheria in the twenty-eight large towns, 32 occurred in London, 4 in Birmingham, 4 in Manchester, 3 in Liverpool, and 3 in Sheffield. No death from small-pox was registered during the week in any of these large towns, and one small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday, February 28th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital was 1,242, and showed a further decline from recent weekly numbers; 80 new cases were admitted during the week, against 97 and 113 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 8.0 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, February 28th, 821 births and 620 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.4 and 22.6 per 1,000 in the preceding two weeks, further rose to 23.8 during the week under notice, but was slightly below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Perth and Dundee, and the highest in Paisley and Glasgow. The 620 deaths registered in these towns during the week under notice included 80 which were referred to the principal zymotic diseases, equal to an annual rate of 3.1 per 1,000, which was 0.7 above the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Leith and Paisley. The 285 deaths registered in Glasgow included 9 which were referred to measles, 7 to whooping-cough, 4 to scarlet fever, and 2 to diphtheria. Nine fatal cases of whooping-cough, and 4 of "fever," were recorded in Edinburgh, and 8 of measles in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.6 per 1,000, against 8.0 in London.

HEALTH OF IRISH TOWNS.

IN the sixteen principal town-districts of Ireland the deaths registered during the week ending Saturday, February 21st, were equal to an annual rate of 26.7 per 1,000. The lowest rates were recorded in Dundalk and Armagh, and the highest in Sligo and Kilkenny. The death-rate from the principal zymotic diseases averaged 1.1 per 1,000. The 185 deaths in Dublin were equal to an annual rate of 27.3 per 1,000 (against 26.6 and 26.9 in the preceding two weeks), the rate for the same period being 20.4 in London and 16.5 in Edinburgh. The 185 deaths in Dublin included 3 which were referred to the principal zymotic diseases (equal to an annual rate of 0.4 per 1,000), of which 2 resulted from whooping-cough and 1 from diphtheria.

THE GERMAN BALNEOLOGICAL SOCIETY.—The thirteenth public meeting of the German Balneological Society will be held at Berlin from March 6th to 8th. Among the communications promised are the following:—Dr. Rompler: Prophylaxis of Phthisis; Dr. Paul Guttmann: Koch's Treatment in Pulmonary Tuberculosis; Dr. Winternitz: A New Hydrotherapeutic Remedy in Diseases of the Stomach; Dr. Groedel: General Use of the Centigrade Thermometer in Determining the Temperature of Baths; Dr. Schott: A Case of Dexiocardia, with Dilatation of Heart; Dr. Schücking: Chlorosis and Metabolism; and Dr. Schubert: Treatment of Chlorosis by small Bloodlettings and Sweating.

MEDICAL NEWS.

THE PRINCE OF WALES will preside at a festival dinner on behalf of the Eastern Counties Asylum for Idiots, Colchester, at the Hôtel Métropole, on April 24th.

MEDICAL FEES IN THE STATES.—The State Legislature of Missouri is said to have under discussion a Bill limiting the fees of medical men to one dollar for a visit between 8 A.M. and 9 P.M., and to fifty cents for an "office prescription" (corresponding to the visit at the practitioner's own house). These little eccentricities of legislators elected by universal suffrage almost reconcile us to living under an effete monarchy.

INFLUENZA.—The island of Sumatra is suffering from a second epidemic of influenza. The present outbreak is, so far, of a mild character, but it presents this peculiarity, that whereas in the former epidemic it was chiefly Europeans that were attacked, the natives are, on the present occasion, the chief sufferers. Cases of influenza are also reported to have recently occurred in Madrid.

SCIENTIFIC GRANTS IN GERMANY.—At the last meeting of the Berlin Academy of Science the following grants were voted: to Professor Fritsch, of Berlin, 4,000 marks for a journey to Egypt in order to make further researches on the electrical fishes found in the Nile; to Dr. O. Bürger, of Giessen, 1,000 marks for a research on Nemertina at the Zoological Station at Naples; and to Professor Wernicke, of Breslau, 800 marks for photographs of a series of sections of the brain.

THE VESTRIES AND LONDON WATER SUPPLY.—A conference of representatives of district boards and vestries of London was held at the County Hall, Spring Gardens, on February 27th, under the presidency of Sir Algernon Borthwick, M.P., when the proposals in the Metropolitan Water Supply Bill were considered, and the following resolution carried: "That in the opinion of this meeting it is desirable that the water supply of London should be with the least possible delay vested in a public representative authority."

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A special meeting of this society was held on February 20th, Mr. C. Haydon White, President, in the chair. Between sixty and seventy members and visitors were present. Dr. W. S. Playfair delivered an address upon the Neurotic Complications of Uterine Disease, in which he uttered a warning against the irrational treatment of more or less imaginary physical ailments of the female generative apparatus, followed by a description of neurasthenia arising from a combination of conditions especially common in parturient women. He described his own treatment for the latter condition, under the heads of altered surroundings, rest, nursing, massage, electricity, feeding. Photographs illustrating the improvement in suitable cases were exhibited. A vote of thanks to Dr. Playfair, proposed by Mr. Joseph White and seconded by Dr. Ransom, was carried by acclamation.

DEATH UNDER CHLOROFORM.—An inquest was recently held at Chelmsford Infirmary, as to the death of a man, aged 30, who had died in that institution while under the influence of chloroform. The patient was subject to fits, and had fallen across a red-hot iron, inflicting injuries necessitating the amputation of the right arm. According to the evidence, as reported in the *Essex Chronicle*, the patient had an epileptic fit while under the influence of chloroform, death being due to epilepsy and syncope. The jury returned a verdict in accordance with the medical evidence.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of several medical men practising in the neighbourhood of Highbury and Canonbury was held on Wednesday, February 25th, at Northampton House, St. Paul's Road, convened by the Council of the British Medical Temperance Association. The President (Dr. B. W. Richardson) gave an address, and an interesting discussion followed on the Practice of Total Abstinence, in which Drs. Glover, King, Moir, Norman Kerr, Wynn Westcott, Ridge, and others took part. Dr. Westcott stated that one-fifth of all the inquests held by him were on cases in which death was, more or less, due to drink.

PRESENTATION.—At a crowded meeting of the members of the Committee and of the medical staff of the Royal South London Dispensary, Lambeth Road, a handsome clock, bearing the following inscription, was presented to Dr. C. Corbett Blades, on his being appointed consulting surgeon to the institution: "Presented to C. Corbett Blades, Esq., M.D., by members of the Committee and of the medical staff of the Royal South London Dispensary, in recognition of the assiduous and valuable services rendered by him during a period of thirty years as one of the honorary medical officers of the institution, March 3rd, 1891."

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Elisha Sterling of Cleveland, Ohio, U.S., aged 65, well known as a naturalist, and described by the *New York Medical Record* as the "father of fish culture" in America: Dr. Nik. Tolski, aged 63, for thirty years Professor of Midwifery, Gynæcology, and Pædiatries in the University of Moscow, and for more than twenty years Vice-President of the Moscow Physico-Medical Society; Dr. Clech, representative of Finistère in the French Chamber of Deputies; and Dr. Felipe Poey, Dean of the Faculty of Science in the University of Havana, and a most distinguished naturalist, author of "Ictiologia Cubana," "Memorias de Historia Natural de la Isla de Cuba," and other valuable works. Dr. Poey was the founder of the Society of Natural Science in Cuba, a corresponding member of our own Zoological Society, the Berlin Society of Naturalists, etc.

UNIVERSITY OF HARVARD.—The number of students in the Medical School of Harvard University during the academic year, 1889-90, was 304, of whom 156 had literary or scientific degrees. There were 75 candidates for the degree of Doctor of Medicine in the three years' course, of whom 22 failed to satisfy the examiners. There were 15 candidates for the Doctor's degree in the four years' course, of whom 2 were rejected; 4 of the successful candidates received the degree *cum laude*. Attention has lately been called by the Dean of the school to the want of a hospital under the control of the medical faculty where proper clinical facilities should be afforded to students, and the endowment of the department of bacteriology is recommended so that the head of that department may be able to devote his whole time to instruction and research. The Faculty of the Dental School has resolved to establish a three years' graded course to begin in September, 1891. All candidates for the degree will thereafter be required to pass three years in the school.

THE GENERAL PRACTITIONERS' UNION.—At a meeting of the Provisional Committee of the above organisation, held at 29, Threadneedle Street, E.C., on Wednesday, March 4th, it was resolved: "That the name of the society be 'The General Practitioners' Union.' That the objects of the association be as follow: (*a*) To consider the question of the abuse of medical charities, to obtain evidence thereon, and to take such steps as may be necessary to safeguard the interests of general practitioners. (*b*) To obtain increased and more efficient representation on the General Medical Council, especially for the purpose of forcing that body to exercise its powers in suppressing illegal medical practice. (*c*) To supervise all legislative proposals calculated to affect the interests of general practitioners. (*d*) To deal with all matters affecting medical men in general practice. That every registered general practitioner be eligible for membership. That the subscription for the current year be 5s." The following members were elected as a Subcommittee to confer with the Charity Organisation Society on the subject of hospital abuses, namely, Drs. F. H. Alderson, F. H. Corbyn, J. Dawson, Hugh Woods, and Mr. G. Brown.

MEDICAL VACANCIES.

The following Vacancies are announced:

ADDENBROOKE'S HOSPITAL, Cambridge.—House-Physician. Salary, £65 per annum, with board, lodging and washing in the hospital. Applications to John Bonnett, Secretary, 23, St. Andrew's Street, Cambridge, by March 10th.

BOROUGH AND PORT OF PLYMOUTH.—Medical Officer of Health. Salary as Urban Medical Officer, £100 per annum; and as Port Medical Officer, £100 per annum; must be under 45 years of age. Applications to the Town Clerk, Guildhall Buildings, Plymouth, by March 19th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Medical Officer. Salary, £80 per annum, with board and residence. Applications to A. C. Davies, Secretary, by March 31st.

CITY ASYLUM, Birmingham.—Clinical Assistant. Board, lodging, and washing provided; no salary. Applications to the Medical Superintendent.

DENTAL HOSPITAL OF LONDON.—Four Demonstrators. Honorarium, £50 per annum. Applications to Morton Smale, Dean, by March 16th.

HOSPITAL FOR WOMEN, Soho Square, W.—Clinical Assistants to out-patient department. Applications to the Dean.

HULL ROYAL INFIRMARY.—Four Honorary Assistant Surgeons to take charge of out-patients: must be F.R.C.S.Eng. Applications to the Chairman, Committee of Management, by March 12th.

HULL ROYAL INFIRMARY.—Ophthalmic Surgeon; must be a Member of one of the Royal Colleges of Surgeons of the United Kingdom. Applications to the Chairman, Committee of Management, by March 12th.

KING'S COLLEGE, London.—Demonstratorship of Physiology, vacant at Easter. Applications to J. W. Cunningham, Secretary, from whom full particulars can be obtained.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—House-Surgeon. Salary, £85 per annum, with board and lodging. Applications to C. W. Carver, Honorary Secretary, by March 9th.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon; double qualifications. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman of the Committee by March 23rd.

MACROOM UNION (Macroom Dispensary).—Medical Officer. Salary, £140 per annum, with fees. Applications to Mr. Michael Holland, Honorary Secretary. Election on March 11th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich, S.E.—Physician; must be Graduate of Medicine of a University of the United Kingdom. Applications to the Honorary Secretary by March 13th.

NATIONAL DENTAL HOSPITAL, 149, Great Portland Street, W.—House-Surgeon; must possess L.D.S. diploma. Salary, £50 per annum. Applications to Arthur G. Klugh, Secretary, by March 10th.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—Junior House-Surgeon; double qualifications. Appointment for nine months at a salary of £5 per month. Applications to Alfred Dixon, Secretary, 27, Clement's Lane, E.C., by March 14th.

ROTHERHAM HOSPITAL.—Assistant House-Surgeon; must possess at least one qualification. Rooms, commons, and washing provided; no salary. Applications to the House-Surgeon by March 12th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Junior Resident Medical Officer; double qualifications. Board and residence provided in the Hospital. Applications to Conrad W. Thies, Secretary, by March 18th.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—House Surgeon and Secretary; unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications endorsed "Applications" to the Chairman of the Committee by April 1st.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—House-Surgeon. Board and residence provided. Applications to St. Vincent Mercier, Secretary.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta Street, Covent Garden, W.C.—House Surgeon; must be M.R.C.S. Appointment for six months. Honorarium, 25 guineas, board, lodging, and washing. Applications to Walter E. Scott, Secretary, by March 14th.

SKIRLAUGH UNION.—Medical Officer and Public Vaccinator for the District of Sproatley; double qualifications. Salary, £20 per annum, exclusive of fees. Applications to Thomas A. McCoy, Clerk to the Guardians, Beverley, by March 11th.

SUSSEX COUNTY ASYLUM, Hayward's Heath.—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications, accompanied by manuscript copies of testimonials, to the Medical Superintendent by March 13th.

TEIGNMOUTH, DAWLISH, AND NEWTON DISPENSARY AND CONVALESCENT HOME.—House Surgeon; double qualifications. Salary, £10 per annum, with board and lodging. Applications to the Honorary Secretary by March 21st.

TURNER'S HOSPITAL, Kirkleatham.—Surgeon. Unfurnished house, but no remuneration. Application to James Rutherford, Kirkleatham.

UNIVERSITY OF LONDON.—Examiners in the following departments: Two in Comparative Anatomy and Zoology, salary, £120 each; Two in Medicine, salary, £150 each; Two in Surgery, salary, £150 each; Two in Anatomy, salary, £150 each; Two in Physiology, salary, £120 each; Two in Obstetric Medicine, salary, £75 each; Two in Materia Medica and Pharmaceutical Chemistry, salary, £100 each; Two in Forensic Medicine, salary, £50 each. Present examiners are re-eligible. Applications to Arthur Milman, M.A., Registrar, Burlington Gardens, by March 31st.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in the hospital. Applications to the Secretary, W. H. Laban, by March 17th.

WEST HAM UNION.—Assistant Resident Medical Officer for the Workhouse. Salary, £100 per annum, with usual extra fees. Applications (on specified forms to be obtained at the Clerk's Office) to Fred. E. Hilleary, Clerk's Office, Union Workhouse, Union Road, Leytonstone, E., by March 18th.

MEDICAL APPOINTMENTS.

ADAM, Geo. Rothwell Wilson, M.B., C.M.Edin., appointed Honorary Medical Officer to the Austin Hospital, Melbourne.

ALCORN, Robert George, L.R.C.P.Edin., L.R.C.S.I., appointed Visiting Surgeon and Dispenser to the Gaol, Maitland, New South Wales.

BLADES, C. Corbett, M.D., appointed Consulting Surgeon to the Royal South London Dispensary, Lambeth Road.

BOAKE, W., L.R.C.S., L.K.Q.C.P.I., appointed Public Vaccinator for Maffra, Victoria, Australia.

BOYDEN, P. Hamilton, M.B., C.M.Edin., appointed Medical Assistant to Dundee Royal Lunatic Asylum.

BYRNE, Hugh John, L.R.C.P.I., L.R.C.S.I., appointed Medical Officer for the District of Campbell Town, Tasmania.

CASSAN, Theodore, L.R.C.P., L.M.Edin., M.R.C.S.Eng., appointed Medical Officer to the Hearts of Oak Benefit Society, Gainsborough.

CALTHORP, Lionel C. Everard, L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Accoucheur to the London Hospital.

CHARNLEY, William, M.D., M.C.Cantab., M.R.C.S., appointed Honorary Oculist to the Bridgnorth and South Shropshire Infirmary.

CREASY, Rolf, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the First District of the Winslow Union.

DIXEY, Arthur Crosbee, M.D.Mass., M.R.C.P.Ed., L.R.C.S.Ed., L.S.A.Lond., appointed Medical Officer Caldicot District, Chepstow Union; Surgeon to Severn Tunnel and Tin Plate Companies Works, Certifying Factory Surgeon, Medical Referee Prudential Assurance Company, and Surgeon to Oddfellows, Foresters, Tippling, Major and other clubs, *vice* O. T. Slatter, M.R.C.S., resigned.

DUNCAN, Ebenezer, M.D., appointed Examiner in Clinical Medicine in the University of Glasgow.

EADY, George John, M.R.C.S., L.S.A., appointed Medical Officer of the Kilburn District of the Hampstead Union, *vice* Dr. Hill, resigned.

FENWICK, W. Soltau, M.D., B.S.Lond., etc., appointed House-Physician to the Hospital for Consumption, Brompton.

FETHERSTON, Gerald H., M.D.Melb., L.R.C.P.Edin., L.F.P.S.Glas., appointed an Official Visitor of the Lunatic Asylums at Yarra Bend and Kew, Victoria, Australia.

GANT, Frederick James, F.R.C.S.Eng., appointed Consulting Surgeon to the Royal Free Hospital.

GRAHAM, John Thomas, M.D., M.B., C.M.Glas., M.R.C.S.Eng., appointed Medical Officer to the Perthshire County Council.

GRIFFITH, James De Burgh, M.B., M.Ch.Dub., appointed *pro tem.* Assistant Medical Officer at the Quarantine Station, Victoria, Australia.

HALL, George, M.D., M.B., C.M.Edin., appointed District Medical Officer and Public Vaccinator of the Witley District of the Hambledon Union.

HARTFORD, Henry Wm., L.R.C.P., L.M., L.R.C.S.Irel., appointed Medical Officer for the Workhouse, Christchurch, Hants.

KENNISH, Thomas Looney, M.B., C.M.Edin., appointed Medical Officer for the Second District of the Winslow Union.

LIPSCOMB, Eustace H., B.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Medical Officer to the St. Alban's Hospital and Dispensary, *vice* W. H. Blake, M.B., B.S.Lond., resigned.

MARSHALL, Charles Devereux, M.R.C.S.Eng., L.R.C.P.Lond., appointed House Surgeon to University College Hospital.

MAYLARD, A. Ernest, M.B., B.S.Lond., F.F.P.S.Glas., appointed Examiner in Clinical Surgery in the University of Glasgow.

MILLAR, John, F.R.S.Edin., appointed Examiner in Chemistry in the University of Glasgow.

MILLS, Joseph, M.R.C.S.Eng., appointed Anæsthetist to St. Mark's Hospital for Fistula, City Road.

MILNER, E. T., M.A., M.B.Oxon., appointed Visiting Medical Officer and Surgeon to the Salford Union Infirmary.

MUDGE, Thos. H. Tracey, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Paignton District of the Totnes Union.

MURRAY, George, B.Sc., appointed Examiner in Botany in the University of Glasgow.

O'CONNOR, E. M. H., L.R.C.P.I. and L.R.C.S.I., etc., appointed Certifying Surgeon to the Factories in the neighbourhood of Market Deeping.

READ, Sibley, W., L.D.S.R.C.S.Eng., appointed Dental Surgeon to the Metropolitan Hospital.

RICHARDSON, William George, M.B., C.M., F.R.C.S., appointed Resident Medical Officer to the Newcastle-on-Tyne Dispensary, *vice* Dr. Ridley.

ROSS, J. M., M.B., F.R.C.S.Edin., appointed Medical Officer of Health for the County of Dumfries.

SHARMAN, Mark, M.B., C.M.Glas, M.R.C.S.Eng., appointed Certifying Factory Surgeon to the Rickmansworth District, Medical Officer to the Rickmansworth District of the Watford Union, Public Vaccinator to Rickmansworth and Sarratt, Medical Officer to the Harefield District of the Uxbridge Union, and Public Vaccinator to Harefield.

SMITH, Alfred John, M.B., M.Ch., L.R.C.S.I., appointed Gynæcologist to the St. Vincent's Hospital, Dublin.

SMITH, E. M., M.B., C.M.Edin., appointed Assistant Medical Officer to the York Friendly Societies' Medical Association, *vice* G. Scarr, B.A., M.B., resigned.

STOCKMAN, Ralph, M.D., F.R.C.P.Edin., appointed Examiner in Materia Medica in the University of Glasgow.

THOMPSON, D'Arcy W., B.A., appointed Examiner in Zoology in the University of Glasgow.

VAISEY, Thos. Frederick, M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Third District of the Winslow Union.

WATERHOUSE, Herbert F., M.D., C.M.Ed., F.R.C.S.Eng., appointed Assistant Surgeon to the Charing Cross Hospital.

WEBB, Frank, M.R.C.S.Eng. L.R.C.P.,Lond., appointed House-Surgeon to the Doncaster General Infirmary and Dispensary.

WHEATON, S. W., M.D.Lond., M.R.C.P., D.P.H., appointed Physician to the Royal Hospital for Children and Women, Waterloo Bridge Road, *vice* Dr. Dakin, resigned.

DIARY FOR NEXT WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. Stewart: On Secondary Sexual Characters, and some new Additions to the Museum. Lecture I.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—The adjourned discussion on Dr. Douglas Powell's paper on Angina Pectoris will be reopened by Dr. Lauder Brunton, F.R.S.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. T. Oliver: The Goulstonian Lectures on Lead Poisoning in its Acute and Chronic Manifestations. Lecture III.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Dr. W. Hale White and Mr. C. H. Golding-Bird: Two Cases of Idioglossia. Dr. Frederick Taylor: A Case of Defective Articulation.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. Stewart: On Secondary Sexual Characters, and some new Additions to the Museum. Lecture II.

HUNTERIAN SOCIETY, 8 P.M.—Dr. Hughlings Jackson will exhibit Phonogram: Talking of a Patient the subject of Disseminated Sclerosis. Dr. J. Langton Hewer: A Case of Chronic Osteomyelitis of Tibia, with specimen. Dr. F. C. Turner: Specimen of Ulcerative Aortitis, and other specimens.

SANITARY INSTITUTE, Parkes Museum, 8 P.M.—Mr. A. Wynter Blyth: The Prevention of Infectious Diseases. The paper will be followed by a discussion.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. Broadbent: The Lumleian Lecture on Structural Diseases of the Heart, from the point of view of Prognosis. Lecture I.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M.—Patients and Card Specimens at 8 P.M.—Mr. Treacher Collins: On the Glands of the Ciliary Body. Dr. Benson (Dublin): On a Case of Neuro-retinitis with High Tension simulating Intraocular Tumour. Mr. Cross (Clifton): On Cases of Hydrophthalmos. Mr. G. D. Johnston (Vancouver): Penetration of Eyelash into Anterior Chamber: Removal by Operation. Mr. J. R. Lunn: Case of Coredialysis and Secondary Cataract. 10 P.M.—Special General Meeting to consider: (1) Alteration in the date of the Bowman Lecture: (2) Address to Professor von Helmholtz on his 70th Birthday; (3) A motion by Mr. Tweedy, with the concurrence of the Council, as to making Ophthalmic Medicine and Surgery a compulsory part of the medical curriculum (see page 537).

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, 3.30 P.M.—Mr. Lawson Tait: Further observations on the Methods of Restoring the Perineum.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. Stewart: On Secondary Sexual Characters, and some new Additions to the Museum. Lecture III.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Gowers: A Case of Atrophic Spinal Paralysis and Multiple Neuritis. Mr. A. Pearce Gould: A Case of Simultaneous Gangrene of both Feet from Syphilitic Disease: Amputation through Knee-joints: Recovery. Mr. C. Mansell Moullin: Three Cases of Septicæmia due to Sewer Gas. Mr. A. T. Norton: A Case of Popliteal Aneurysm in a Youth aged 17.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

CLARK.—March 2nd, at Rahere, Brunswick Road, Gloucester, Mrs. Oscar Clark, of a daughter.

MARRIAGE.

POWER—CLUTTERBUCK. February 26th, at St. Andrew's Church, Plymouth, by the Venerable Archdeacon Wilkinson, E. R. Power, Surgeon-Major Army Medical Staff, only son of the Rev. E. R. Power, of the Nant, Balbriggan, County Dublin, to Catherine Annie, only child of Surgeon-General J. E. Clutterbuck, M.D., Army Medical Staff (retired), of Newark Park, Walton-under-Edge, Gloucestershire.

DEATH.

JOAKIM.—At Edinburgh, on February 24th, John Joakim, of Singapore, student of medicine.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

QUERIES.

MEMBER wishes to know the most suitable suburb of London as a residence for a rheumatic lady.

CANTAB will be glad to hear of a home suitable for an orphan girl of 14, suffering from incurable spinal disease. A moderate fee would be paid.

I.G. asks what would be the pension of a navy surgeon retiring about the year 1853, after twenty-five years' service; also what would be the amount of pension due to the widow on his death five years later.

A MEMBER wishes to be informed of the address of an American firm—a representative of which is at present calling on medical practitioners in this country, pushing the sale of a new surgical chair, a model of which he carries in a small leather case.

ALOPECIA AREATA.

MEM. BRIT. MED. ASSOC. asks for suggestions for the treatment of alopecia areata. "I have had," he writes, "several such recently, and have tried all ordinary treatment without any result except limiting the baldness. In the last case (in a young veterinary surgeon) the loss of hair commenced on the beard, and now several patches have occurred on the scalp. The commencement on the beard I have not before seen. Is the disease ever transferred from other animals—for example, the horse? The last-named patient is of course constantly in contact with domestic animals.

STAMMERING.

A MEMBER has heard that a surgeon in the midland counties treats stammering successfully—a fortnight's strict silence being enjoined as preparatory to the treatment. He will be greatly obliged if any member can, through the pages of the BRITISH MEDICAL JOURNAL, refer him to this gentleman, whose name and address are unknown to him.

THE INLAND REVENUE AND THE DOCTOR'S TRAP.

T. M. asks whether he is liable to pay for licences to keep a trap and a boy to drive it and to tend the horses. He keeps only one trap, which is absolutely essential to the carrying on of his practice, and his driver does not live in the house, but in his father's.

*** The term "carriage" in the Act imposing the duty thereon is defined to be any vehicle drawn by a horse or mule, except a waggon cart, or other vehicle used solely for the conveyance of any goods or burden in the course of trade or husbandry, and whereon the christian and surname and place of abode or business of the owner shall be visibly and legibly painted in letters of not less than one inch in length. The term "male servant" is defined to mean any male servant employed either wholly or partially in any of the capacities therein mentioned, including that of a coachman.

We are advised that our correspondent cannot claim exemption from paying duty on his trap or for the boy who is kept to drive it and tend the horses, unless it can be proved that the coachman comes within the exemption mentioned in the Act 38 and 39 Vict., cap. 16, sect. 5, as a person who has been *bonâ fide engaged to serve his employer for a portion only of each day, and* who does not reside in his employer's house.

ANSWERS.

AN OLD SUBSCRIBER.—We do not know of any medical co-operative store.

M. J. D.—1. We cannot undertake to say which is the best book of moderate length for practitioners on diseases of women, but Galabin's *Diseases of Women*, or Hart and Barbour's *Manual of Gynæcology* will be

found very valuable. 2. Raynaud's original essays, translated with notes by Dr. Barlow, and published by the New Sydenham Society in a volume of selected monographs, 1888.

TUBERCULIN.

MEMBER.—See BRITISH MEDICAL JOURNAL, February 21st, page 447.

BICHLORIDE OF METHYLENE.

DR. EDWARD E. DUTTON.—The so-called bichloride of methylene was shown by Regnauld to be a simple mixture of chloroform with methylic alcohol, in varying proportions. On this last account no definite boiling point is to be established. It is usually made of 70 per cent. chloroform and 30 per cent. alcohol ($CH_2 Cl_2$). True bichloride of methylene is a convulsant, and kills in a few seconds. The action of the so-called bichloride of methylene is simply that of dilute chloroform, and its dangers and after-effects those of that substance. It is best given through Junker's inhaler, made by Messrs. Krohne and Sesemann, of which, perhaps, the most convenient form is the modification due to Dr. Dudley Buxton. The dose varies with the duration of the operation, being usually 4 drachms for one, lasting half-an-hour. The most recent writer addressing himself to the advocacy of the drug is Dr. Richardson, who, in No. XIX of the *Asclepiad* attempts to rehabilitate it in general favour. See also *Anæsthetics* by Dudley Buxton, page 102; *Anæsthetics Ancient and Modern*, by George Foy, page 63; *Les Anesthésiques*, par A. Dastre, page 233; *Manual of Anæsthetics*, by Laurence Turnbull, page 63.

NOTES, LETTERS, Etc.

LONGEVITY AT RAMSGATE.

DR. CHARLES COTTON, M.R.C.P., etc. (Ramsgate), writes: I think the following statistics will go a long way to show the longevity of the inhabitants of the town of Ramsgate. During the years 1879 to 1889 there were 177 deaths amongst the patients in my practice (not including infants under one year of age); their aggregate ages amounted to 10,253 years, giving an average age of 57 years 7 months 8 days. Of the total number, 42 died between the ages of 70 and 80, 27 between 80 and 90, and 7 between 90 and 99, namely, two at 91, one at 93, two at 95, one at 96, and one at 99. It will thus be seen that five-twelfths (or nearly one-half) of the whole number lived to be over 70 years of age.

THE TREATMENT OF HERNIA BY ASPIRATION.

E.D. writes: The very interesting article in the BRITISH MEDICAL JOURNAL of February 7th, by Dr. John Hern, upon the above subject, may prove of great value to the profession, and is especially important to practitioners in country districts, either at home or abroad.

In the latter part of 1886 or 1887 Dr. Bryden, of Hawick, published in the BRITISH MEDICAL JOURNAL a successful case of large strangulated inguinal hernia, treated by puncture with a small trocar and cannula.

Previously, in 1875, in the *Indian Ann. of Medical Science*, Surgeon Joshua Duke, I.M.D., published a paper upon the subject, headed, "Inguinal Hernia treated by Dieulafoy's Aspirator."

It will thus be seen that the treatment is not new, but its adaptation to cases of femoral hernia, and the large number of successful cases now published by Dr. Hern, fully realise the hopes expressed in Surgeon Joshua Duke's paper sixteen years ago.

PASTEURISM FOR ENGLAND.

GOOD writes: Why cannot we procure a place where rabies may be treated to the best of our ability, somewhere at home, accessible to our countrymen, for example, London or Birmingham? We must recognise the need when we note how some municipal authorities combined to send their mayor with a patient, how medical men have accompanied their patients to be treated in France, and the large sum of money collected in London for the Pasteur Institute. This need has been felt and accordingly dealt with in New York, similar steps are taken in Russia, whilst here in England, where muzzling has proved vexatious, we pay no heed.

*** We would refer our correspondent to two articles which recently appeared in the BRITISH MEDICAL JOURNAL, vol. ii, 1890, pages 1388 and 1395.

THE MIDWIVES REGISTRATION BILL.

MR. J. ROCHE LYNCH (Holland Park, W.) writes: A petition against this Bill has been signed by twenty-six out of twenty-seven medical practitioners to whom it was submitted residing in the Notting Hill Ward of the Borough of North Kensington. If time had permitted the petition would have been sent to every member of the profession residing in the ward. Had that been done, from many conversations since I do not think the proportion would be materially changed. Sir Roper Lethbridge, our member, kindly undertook to present our petition to the House of Commons.

GOOD writes: Registration of midwives I deem advisable to produce a healthier tone in the profession than it tends to retain. I have met with half-guinea cases and have heard of five-shilling midwifery, a condition of things I hold derogatory to our noble aspirations. Somebody must attend to childbirth cases whilst the "old women" grudge the medical man his nothing-to-do task in attending a straightforward case, yet how many women trust themselves to ignorant and careless nurses to the eminent risk of their own and children's lives. Some one always should attend of course, but that someone should be a trained and registered nurse, and none but such should control the lying-in room, where often harm arises afterwards through ignorance and carelessness. A certified nurse should attend every case, but she should only conduct natural labours, anything arising prejudicial to the life or future health of the mother or child, any difficulty in presentation, or with the placenta, should be a sufficient cause to compel her to send forthwith for the nearest medical man, who should obey the summons at once, his extra fee to be paid by the family, if competent, if not, by the guardians or the municipal authorities, or whoever may have been appointed by the district to deal with such matters. This course, I hold, would save the medical man much unnecessary work, save the people unnecessary expense in many instances, unnecessary dangers in many others, and is calculated to raise the standard of modern midwifery whilst furnishing the requisite staff of good, experienced, and reliable nurses.

THE PRODUCTION OF SERRATIONS OF THE EDGES OF THE CRANIAL BONES.

MR. ARTHUR THOMSON (Museum, Oxford) writes: In the Erasmus Wilson Lectures (I.) on the Value of Comparative Pathology to Philosophical Surgery, delivered by Mr. J. Bland Sutton, the lecturer, in discussing a case of cephalhæmatoma, propounds the theory that the serration of the edges of the cranial bones is produced by the continued pulsation to which the vault of the skull is subjected during the completion of the ossifying process, and as further proof in support of his theory, states that the serrations are deeper and more complicated at the vault than at the base and sides. Applying the same methods to the elucidation of this point, as Mr. Sutton so ably urges on his readers, the facts hardly justify us in supporting his conclusions.

In chelonia we find the elements of the carapace and plastron united by well marked sutures, which are serrated. In cetacea the epiphyses are united to the centre of the vertebræ by means of surfaces which are deeply serrated. We find also union taking place between the different bones of the face by sutures of a highly complex nature, as exemplified in the case of the premaxillary, intermaxillary, and palato-maxillary sutures of mammalia. In crocodilia with the elongated muzzle, the same fact is particularly well seen.

Yet in none of these examples can the serration of the articulating surfaces be explained on the hypothesis advanced by Mr. Sutton. Treating the cranial contents as analogous to a fluid through which pressure is distributed equally in all directions, it is difficult to understand why this pressure should exercise its influence more directly on the bones of the cranial vault than on the bones of the cranial base. No doubt the membrane bones of the cranial vault may offer less resistance to the pressure and, therefore, be more liable to be influenced by it, but the facts hardly bear this out, for it is well known to craniologists that the sagittal suture in the region of the obelion is often characterised by the simplicity of its outline. From these and similar facts I think it will be necessary for Mr. Sutton to advance further evidence in support of his views before we can accept his conclusions as to the production of the serrations of the edges of the cranial bones.

THE MEDICAL PRACTITIONER AND HOSPITAL ABUSE.

DR. FREDERICK PEARSE, F.R.C.S. (Portsmouth), writes: It is not only in London that general practitioners suffer from hospital abuse. In every provincial town it is just the same. There is a large section of the so-called middle classes who imagine that treatment at a hospital is much more skilled and superior, and, as they are allowed to get the treatment for nothing, they naturally avoid consulting the general practitioner. Even for "potty" little accidents they fly to the hospital, under the delusion that a young, newly-fledged house-surgeon knows more about these things than a general practitioner. I can only assume that it is the paraphernalia of office which so impress the ignorant patient with the importance of the members of a hospital staff.

What, to my mind, is so unsatisfactory in this matter is the apparent absence of sympathy of members of hospital staffs for their neighbours the general practitioners. No attempt is made to remedy the evils, while the very patients who abuse the hospital sometimes feather the nest of the physician or surgeon whose advice they first obtained for nothing. The greatest injustice is done to the general practitioner by the outpatient department—the very department of all others in which the general practitioner can professionally hold his own against the competition of his official brethren. The public do not know that the only advantages a hospital possesses is in the nursing and material; the *personnel* is not a whit better, on the average, than the well qualified general practitioner.

DRUGS AND THERAPEUTICS.

THE *Gazette Médicale de Paris* of January 31st draws a humorous sketch of the sceptical ideas prevalent in medical wards of Parisian hospitals thirty years ago. In 1860 students talked with wonder, if not contempt, about certain physicians who actually kept up the old-fashioned custom of prescribing for patients in their wards. Dr. N. Guénean de Mussy was held to be an exception to the rule, and, as he was an acknowledged head of his profession, physicians came from afar to hear him prescribe. Their patients, in private practice, always expected that medicine should be prescribed to them. How could these practitioners learn what to prescribe unless they visited the wards of the only physician, who was not a mere eccentric nobody, from whom the lost art could be acquired? As a rule, in a medical ward the clinical clerk and the physician examined the patient from his hairy scalp to his soles, and diagnosis was carefully discussed. At the end of the final observations made by the physician it often occurred that the clinical clerk was innocent enough to ask him what should be prescribed. Our contemporary says, let it be noted, that this "often" occurred, so that it was not an invariable rule. The chances were that nothing was said about treatment, therefore nothing was asked. Very often the ingenuous youth who asked about treatment was informed that he might try a prescription himself. Too often, in serious cases, "medicine was a meditation on death." In this country greater regard was then, as now, paid to the patient. Still, we remember how young gentlemen who had served an apprenticeship in the country would sneer at the industrious clinical clerk who had commenced his studies at the hospital, and inform him that it was no good hammering over a man's chest when the patient had stomach ache and nothing more; whilst "the governor" in the country would have simply prescribed "Pil. cal. cum jal." straight off and cured the man at once. The industrious scientific student would, on the other hand, have groaned at the vulgarity of his colleague's system. Yet there was right and wrong on both sides. No hospital physician sneers at drugs in these days. The student, too, knows that he has to learn something about antipyrin, sulphonal, and other new drugs that are really and frequently prescribed.

ESTIMATION OF URIC ACID BY HAYCRAFT'S PROCESS.

MR. ALFRED M. GOSSAGE, B.A.OXON., M.R.C.S., L.R.C.P., writes: With your permission I should like to reply to Dr. Haig's letter, On the Estimation of Uric Acid, published in the BRITISH MEDICAL JOURNAL of January 17th. He begins by criticising Salkowski's method, pointing out sources of error and denying its infallibility. I admit that the method is not as perfect as methods of chemical analysis should be. It has, however, been carefully worked out, and the amount of error determined, both in manipulation and in crystallisation. The error of crystallisation depends only on the amount of the mother liquor and of the wash water, and can be accurately compensated for, the solubility of uric acid being known. The error of manipulation ought, in fairly skilful hands, to be less, to give a very wide margin, than 2 per cent. Hence all chemists, who have inquired into this subject, except Dr. Haig, allow that it is justifiable to employ this method in scientific investigation.

Salkowski[1] says that he devised a volumetric method for the determination of uric acid by precipitating the uric acid with excess of silver nitrate, and determining the excess of silver in the filtrate; he, however, gave up this method on finding that the precipitate produced by adding silver nitrate to urine contained varying proportions of silver, magnesium, and uric acid with different urines.

Haycraft then devised his method, which only differed from this discarded method of Salkowski's in that he determined the silver in the precipitate instead of in the filtrate.

Czech[2] proposed as a modification of Haycraft's method, that the silver in the filtrate should be determined, thus saving the time spent in washing, etc. He found that his method gave excellent results, just as Haycraft's does, when used with solutions of pure sodium urate, to which certain quantities of magnesium sulphate, etc., had been added; but that with urine, the method, as compared with Ludwig's, showed errors varying between 5 and 20 per cent.

Thus, against Haycraft's method, there are the results obtained by Salkowski, before and after the publication of Haycraft's paper, by Czech and by myself; while for it there are only the results of Hermann, who compared Haycraft's method with Ludwig's (a slight modification of Salkowski's). The fact that Dr. Haig has obtained results by Haycraft's method during the last five years, "which agree *inter se*," is quite worthless as a test of the accuracy of that method, just as Haycraft's own results with solution of sodium urate are useless, when the method is applied to the determination of uric acid in urine.

I consider, then, that until further evidence of its accuracy is forthcoming, a method which has shown errors in its results, sometimes of at least 25 per cent., and in which these errors are not constant, is quite useless for any scientific purpose, clinical or otherwise, however short and simple it may be. I am sure, too, that no scientific man will accept deductions drawn from results obtained by such a method without a sufficient mass of evidence collected by other methods or from other sources, although such deductions may eventually be proved to be correct.

[1] *Pflüger's Archiv*, vol. 5, 1872, p. 210.
[2] *Hoppe-Seyler's Zeitschrift*, 1888.

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Les Virus. Par le Dr. S. Arloing. Paris: Félix Alcan. 1891.

Catechism Series: Materia Medica. Part II, Anatomy (Head and Neck). Edinburgh: E. and S. Livingstone. 1891.

Transactions of the American Gynæcological Society for the Year 1890. Vol. XV. Philadelphia: William J. Dornan. 1890.

Notes on the Examination of the Sputum, Vomit, Fæces, and Urine. By Sidney Coupland, M.D. London: H. K. Lewis. 1891.

Weitere Mittheilungen in Bezug auf die traumatischen Neurosen mit besonderer Berücksichtigung der Simulationsfrage. Von Dr. H. Oppenheim. Berlin: August Hirschwald. 1891.

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REPORTS

TO THE

SCIENTIFIC GRANTS COMMITTEE

OF THE

BRITISH MEDICAL ASSOCIATION.

A SHORT RECORD OF WORK DONE ON THE PATHOLOGY OF CANCER DURING THE LAST FEW YEARS.[1]

By SAMUEL G. SHATTOCK, F.R.C.S.,
Lecturer on Surgical Pathology, and Curator of the Museum at St. Thomas's Hospital, etc.,
AND
CHARLES A. BALLANCE, M.S., F.R.C.S.,
Surgeon to the National Hospital for the Paralysed and the Epileptic, and Lecturer on Practical Surgery at St. Thomas's Hospital, etc.

We have already, in the British Medical Journal of October, 1887, recounted the results of a series of experiments made with the view of cultivating a specific microbe from carcinoma and sarcoma.

Up to the present time our results in this direction have been negative. The media used comprised nutrient gelatine, nutrient agar, horse and sheep blood serum, human placental serum, and hydrocele fluid. The jelly was sometimes transferred to the incubator at 37° C., and rendered fluid; at other times not; human placental serum and hydrocele fluid have been also used, sometimes fluid, sometimes inspissated. We have used the two latter media since the date of the report referred to. The method adopted consisted in removing portions of tumours immediately after their excision and transferring them, with the usual precautions, to the tubes of the culture media.[2] Human blood serum apparently offers the most likely chance of success. We found it best to have the blood collected in sterile jars directly from the divided umbilical cord, whilst the placenta was as yet unexpelled.

The blood so collected was poured into long sterilised test tubes, which were replugged with sterilised wool, and allowed to stand in cold water. The following day the serum was drawn off with a pipette, and transferred to other sterilised tubes plugged with wool. These were then placed for six successive days in a serum steriliser, and some of them were afterwards solidified.

As an example of an experiment with fluid human blood serum, we incubated a wedge-shaped portion of a small carcinoma of the mamma, about half an inch in longest measurement. The piece of tumour submerged in the serum was incubated at 37° C. for 134 days, at the end of which period it remained quite unchanged, the serum being also clear and unaltered.

In a considerable number of cases the tubes remained sterile after incubation, and remained so when removed from the incubator and kept for long periods at the temperature of an ordinary living room.

We have at the present date portions of two scirrhous carcinomata of the breast and one sarcoma, which were placed within tubes nearly three years ago. The pieces like the media remain, even now, absolutely unchanged in appearance. In cases where any growth occurred this was due to accidental contamination.[3]

At the present time no specific micro-organism has been cultivated from malignant tumours, the alleged discoveries of different observers in this direction being now shown to have been fallacious. Although failure has attended all such experiments, we are still firmly of the opinion, from considerations of their pathology, that malignant tumours are due to the growth of some micro-organism, animal or vegetable, not native to the body, and we have little doubt that the culture of an organism from cancer will yet be achieved.

We next undertook to see whether it were possible to infect the lower animals experimentally with carcinoma or sarcoma, our hope being that if an organism could be cultivated from malignant tumours, or animals infected therefrom, the attempt might be made to treat cancer successfully on the established principle of employing an attenuated or mitigated virus. For this purpose we adopted the practice of transplanting portions of living tumours, mostly scirrhous carcinomata of the human breast—sometimes the entire tumour—into the abdomen, subcutaneous tissue or muscles of animals.[4]

Our results in inducing infection have been negative, but they have a certain value as furthering a knowledge of the pathology of cancer, though only by way of exclusion. They show that the lower animals cannot be infected with carcinoma or sarcoma from the human subject, or, at least, that the animals we have used—namely, monkeys, dogs, rats, cats, and sheep—cannot be so infected.

In these experiments the tumour, immediately after its severance from the body of the patient, was placed in a small incubator and conveyed to the Brown Institution. There it was allowed to stand in the incubator, whilst the animal, into whose body it was to be grafted, was etherised. The operation was conducted with strict antiseptic precautions. Whilst the peritoneum was being opened, one of us removed all superfluous tissue and fat from the tumour, the whole of which was then transferred to the abdominal cavity, or several portions were cut from it, and pushed in different directions with the finger into the abdomen. In some instances a piece was sutured by fine catgut into the centre of a muscle, the muscular tissue being brought together with catgut over it, and, in a third series of experiments, portions of the tumour, with more or less of the surrounding tissues, were placed into the subcutaneous or subperitoneal tissue.

The tumour tissue was transferred to the body of the animal in from half to one and a half hours after removal. In the interval it was kept at the body temperature, so that its elements probably maintained their vitality unimpaired. It is stated, on Cohnheim's authority, that skin and bone will retain their vitality over twelve hours after the complete cessation of circulation through them; renal and intestinal epithelium die within two hours.

In those animals that have died, or have been killed, the pieces of tumour, if small, have been nearly or quite absorbed, or, if large, an inflammatory capsule has been produced around them, the tumour tissue itself being in a similar condition to that of an infarct—namely, coagulation necrosis. In two instances an entire scirrhous carcinoma of the breast was inserted into the abdominal cavity, and disappeared without leaving a trace, the abdominal wound having healed without any discharge of the graft having occurred. In the first of these two the tumour was 1½ by ¾ inch. The animal was quite well 700 days after the experiment, when it was killed. *Post-mortem*, no peritoneal adhesions, no sign of the graft; all the viscera healthy.

In the second case there was placed into the abdominal cavity a scirrhus 1¾ inch in diameter discoidal; 390 days after this there was placed into the subperitoneal tissue another entire scirrhus, with some of the surrounding fat; and in the same dog, 170 days after the second experiment, was inserted into the peritoneal cavity a slice of a subperiosteal round-celled chondrifying sarcoma of the humerus; this was pushed to the right of the middle line, a similar slice being pushed to the left. The slices were cut in the carbolic spray, all surfaces previously exposed being rejected. The dog was killed 760 days after the first experiment. *Post-mortem*, no sign of the grafts, viscera healthy.

In the accompanying figure (1) is represented (× 6) a transverse section of the biceps of a monkey into which a piece of mammary scirrhus was stitched. The animal died 15 days afterwards (December, 1888). Microscopic examination shows the graft completely surrounded by the muscular substance, circumscribed by a capsule of young fibrous tissue, and itself in the condition of coagulation necrosis. The microscopic section is shown in the accompanying figure (2), from a photograph like the preceding, by Mr. Arthur Carnell, of Plymouth.

In another monkey a piece of mammary scirrhus was stitched into the biceps, and a second portion inserted into

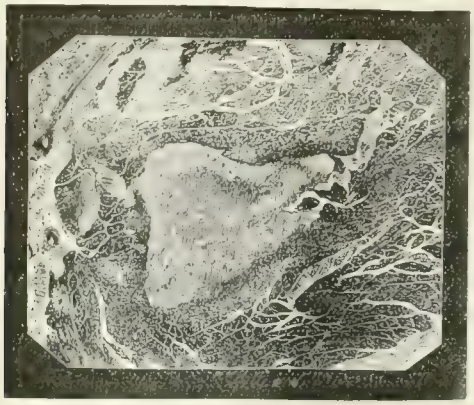
[1] The term "cancer" is used to include both anatomical forms of infective tumours, namely, those of the epithelial (carcinoma), and those of the connective-tissue (sarcoma) series.

[2] *Path. Soc. Trans.*, 1887.

[3] *Path. Soc. Trans.*, 1887.

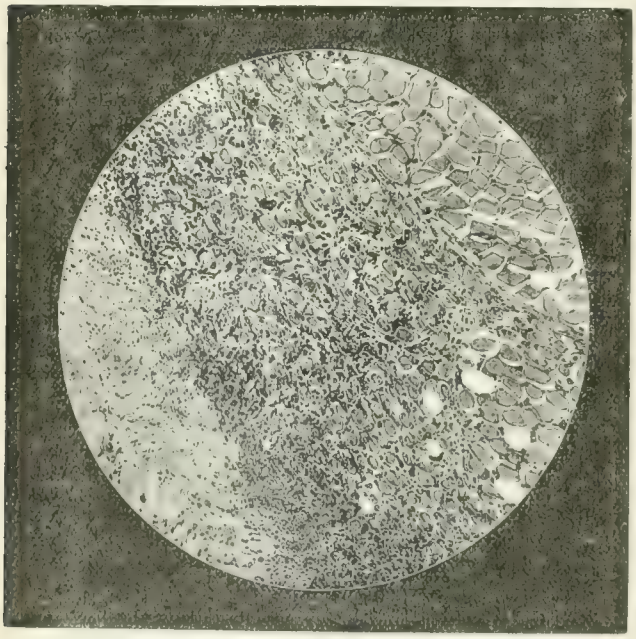
[4] *Proceedings Royal Society*, vol. xlviii, 1890.

the abdominal cavity. Lived 115 days. Was killed on account of the appearance of a lobulated pinkish swelling at the site of the abdominal wound. After death this pinkish mass was found, on microscopic section, to be a succulent granuloma, in the base of which was a small piece of prolapsed omentum. No trace of the grafts was discernible, either within the abdomen or in the biceps; that in the muscle, at least, had been completely removed by phagocytosis.



× about 6.

Fig. 1.—Encapsulation of scirrhus in the biceps humeri of a monkey.



× 16.

Fig. 2.—Encapsulation of scirrhus in the biceps humeri of a monkey.

In all the experiments, with the exception of two, the grafts were of tumours from the human subject. In two cases they were from malignant tumours of other dogs, the animals used in these two cases being also dogs. Both were negative in result.

In one dog, beneath the skin of the back, 400 days after a previous experiment in which a piece of a spindle-celled sarcoma from the human subject had been placed beneath the skin of the back, was inserted a wedge-shaped piece of a tumour from another dog. This piece was removed from a small round-celled sarcoma filling the zygomatic fossa of the second dog, which was kept etherised whilst the graft was taken, and subsequently killed. Warm saline solution was poured over the piece before its insertion beneath the skin. The wound healed by first intention, and 50 days later no trace of the graft could be felt. The animal was killed 190 days after this experiment, when no trace of the grafts could be found or any sign of cancerous infection.

The second case concerned a dog, into the abdominal cavity of which was placed a square piece cut from a tumour which had been a very short while previously excised from the ischio-rectal fossa of another dog. A second piece of the same tumour was placed beneath the skin on the right side

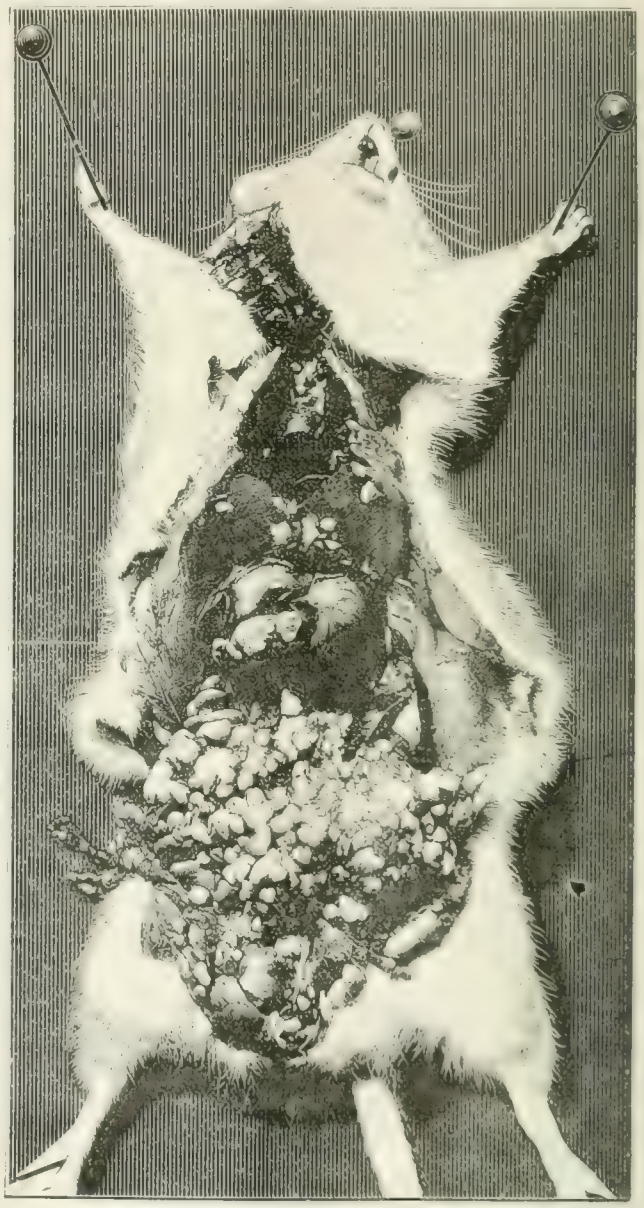


Fig. 3. Cancer in rat produced by experimental transplantation. (After Hanau).

of the front of the thorax. Wounds healed by first intention. Animal in good health 270 days afterwards. The tumour proved to be a squamous-celled carcinoma with cysts. The animal was killed 400 days after the experiment. *Post-mortem*, no sign of the grafts, viscera healthy.

Of tumours from the human subject we have transplanted portions from different cases into 8 monkeys, 7 dogs, 3 rabbits, 3 white rats, 3 sheep, and 1 cat. Besides the above transplantation experiments, we fed two white rats, male and female, with portions of fourteen fresh scirrhous carcinomata

of the breast. These feeding experiments extended over a period of seven months, during which time the rats remained well, and several litters of young were born. These experiments were undertaken with the view of seeing if infection of



Fig. 4.—A group of three "fuchsine bodies" in the fibrous stroma of a scirrhus mammæ.[5]



Fig 5.—From same specimen, showing three angular "fuchsine bodies in an alveolus.



Fig. 6.—From same specimen, four angular "fuchsine bodies," three of them in a blood clot.

the stomach or intestine could be induced in a way similar to that which is set up in some instances by the ingestion of tuberculous material. On killing the rats, the pylorus and other parts of the alimentary track were found to be quite normal.

At present there is no instance of the experimental transmission of malignant disease from man to the lower animals, or rather none that has been sufficiently authenticated to satisfy the requirements of modern criticism. But a few cases are forthcoming in which infection has been experimentally induced between animals of the same species.

[5] All the preparations were stained exactly according to Dr. Russell's directions, and drawn under a Zeiss apochromatic $\frac{1}{12}$ homog. immers., Oc. 4.

Dr. Hanau, of Zurich, has successfully transferred squamous-celled carcinoma from a rat with such a growth on the vulva, to a series of other rats; and Wehr has transferred vaginal carcinoma from one dog into the subcutaneous tissue of the abdomen of another. Dr. Hanau, when in London last year, was good enough to show us the microscopic sections of the growths induced by transplantation; these were of the typical squamous-celled kind. We are able to append a figure (3) from a photograph of one of the infected rats which he kindly left with us.

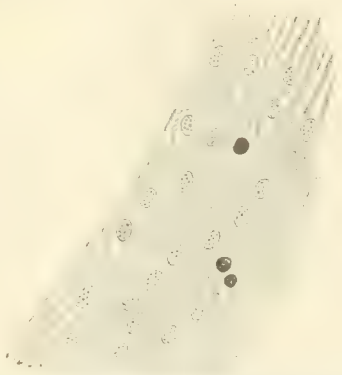


Fig. 7.—Portion of a lymphatic gland in the neighbourhood of a mass of caseous tubercle showing three "fuchsine bodies" of spherical shape in the fibrous tissue precisely like those in Fig. 4.



Fig. 8.—Three collections of "fuchsine bodies" from a section of tonsil in a case of diphtheria; the bodies lie in the lymphatic tissue.

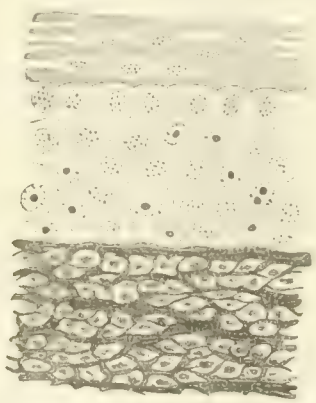


Fig. 9.—Section through the false membrane and epithelium of the same tonsil. In the nuclei of many of the epithelial cells is a small spherical "fuchsine body," in some of the nuclei there are two.

This experiment cannot but be regarded as of much importance. For it would show, amongst other things, that carcinoma may be in certain cases at first a purely local disease. This, we submitted, it sometimes was;[6] we considered that, like tuberculosis, cancer might be sometimes a purely local disease in the strict sense of the term; that at others it might have, like tuberculosis, a constitutional origin—that is, it might happen that the individual presented a certain predisposition or fitness of soil, or was possibly infected with the virus without presenting any local lesion. If a series of rats admit of infection from such a carcinoma as that mentioned

[6] *Path. Soc. Trans.*, 1887.

the conclusion is obvious that carcinoma may be in its origin, under circumstances, a strictly local disease. The complete cure of squamous-celled carcinoma in different situations by excision in the human subject supports this opinion.

It has been suggested that the rats used for experiment by Dr. Hanau *did* present a constitutional predisposition or taint, and that this may have explained the successful issue of the experiments. Judging from the rarity with which carcinoma is met with in the lower animals, this view is most improbable.



Fig. 10.—Preparation of frog's blood made according to Ranvier's directions (*Traité d'Histologie*). The blood platelets are coloured deep red and are slightly granular. The nuclei of the red corpuscles are stained blue.

From a letter of Dr. Hanau's in answer to this question, we may quote the following: "In answer to your letter, I give you the following explanations: First, the rumour that many of the Zurich laboratory rats were attacked by cancer when I was performing my transplantations is quite false; and I believe that it only arose because Professor Klebs in several publications[7] always speaks of a special predisposition of those rats to cancer. He also explained my success by this hypothesis. My opinion is a very different one. I do not believe that the laboratory rats were predisposed to malignant growth, neither do I believe this necessary to explain the result. For instance, it is known that spontaneous cancer in dogs is not seldom observed, and only a very small minority of transplantations from dogs' carcinoma to dogs seem to have been successful—one by Nerinsky, another by Wehr. The rats have lived in the laboratory since 1883: the number was between 35 and 60 in the different years. The whole number of rats from 1883 to 1887 might be put down at nearly 200. From 1883 to November, 1888, there was observed a single case of carcinoma amongst them. In November, 1888, I observed a second case of early papillary carcinoma of the skin in a rat, but made no transplantations. On November, 28th, 1888, a third case appeared, which I used to make my first and second transplantations. Of my three successful experiments I believe that not any doubt can arise on the relation between transplantation and its effects in the first and third cases. The carcinoma which appeared in the peritoneum and several lymphatic glands in the second case was quite of the same size as the spontaneous growth."

Though, however, the animal last mentioned presented a spontaneous tumour, Dr. Hanau thinks that the transplantation experiment was successful, because the histology of the growths did not quite correspond, because the nodules grew at the site of transplantation, and were of the same kind exactly as the transplanted carcinoma, and because there was no continuity between the carcinoma of the skin and that of the peritoneum.

Dr. Eiselberg has also successfully grafted fibrosarcoma from one rat to another.[8] Hahn has shown that in the human subject it is possible to transplant a carcinomatous nodule from one spot to another in the same person. This practically amounts to the artificial production of metastasis, and can hardly be said to do more than experimentally confirm what was already known in this regard.

It appears, therefore, that the transmissibility of carcinoma or sarcoma by experiment obtains only between animals of the same species. In this, carcinoma and sarcoma would seem to differ from such infective formations as tubercle and others, where the introduction of infected tissue into suitable animals is followed by the local or general infection of the animal into which the graft has been made. In the latter case it is unnecessary that the graft should retain its vitality; its purpose is to serve only as a means of conveying or introducing the infecting virus. In the case of carcinoma or sarcoma, however, it would appear necessary that the tissue introduced should itself live, and that this is as requisite as is the introduction of the hypothetical contagium. The grafting of infective tumours from the human subject to the lower animals would on this account fail; the graft would as surely die as do the corpuscles of lamb's blood when transfused into the human subject. Nevertheless, as we have pointed out,[9] the mere transference of normal epithelium would not account for the metastatic growth of a carcinoma. The epithelium so transferred in the metastasis of tumours, and from which the secondary growths arise must, as a matter of deduction, be essentially abnormal: either intrinsically or by reason of its containing within or having associated with it some microbe or microzoon, the presence of which constitutes the true cause of its morbid properties.

The observations of Darier and of Wickham on Paget's disease of the nipple cannot, as yet, be said to establish any direct causal relation between this condition and carcinoma of the breast, even if it be allowed that the cutaneous disease is a form of psorospermosis. In this, as in other cases, the four requirements laid down by Koch must be fulfilled: if the microzoon in question cannot be cultivated outside the body the infection at least of one of the lower animals susceptible (for example, the rabbit), or even of the human subject, must be accomplished.

We have on rabbits, monkeys, dogs, and rats, endeavoured to induce disease by subcutaneous and intravenous injection, and by vaccination of psorospermial material from the livers of recently killed rabbits. Although we have allowed animals to live for many months after these experiments, we have not succeeded in producing either local or general psorospermosis, much less any cancerous formation. In several rabbits we experimented by scoring the skin of the inner side of the ear (the animals, of course, being etherised) and freely inserting the psorospermial material taken from the livers of rabbits killed a few minutes previously, and which under the microscope showed an abundance of these organisms. For a while we thought that these experiments were successful, since between three or four weeks afterwards there appeared small firm elevations in the vaccinated areas; these, however, after increasing for a while, remained stationary, and on killing the animals and examining the parts by microscopic section, we found that the elevations in question were due entirely to the reparative hyperplasia of the injured cartilage which had been deeply scored and even quite divided in the experiments.

With respect to the "fuchsine bodies," described by Dr. Russell[10] as "the characteristic organism of cancer," we were ourselves, shortly after the publication referred to, able to observe the bodies in question in sections of carcinoma; but on selecting material which seemed likely to test their diagnostic value we found precisely similar bodies (in all cases strictly adopting Dr. Russell's directions) in tubercular lymphatic gland and diphtheritic tonsil, and before cutting any of these it occurred to us that of normal structures blood platelets offered a certain resemblance to them. We made, therefore, preparations of frog's blood, according to Ranvier's direction.[11] A film was allowed to coagulate on a cover glass in a moist chamber; twenty-four hours afterwards it showed numerous circular bodies as described and figured by him, and named *granulations libres*—blood platelets. The cover glass was then removed and stained according to Russell's method. (See accompanying figs. 4 to 10). The result in places was very striking. The nuclei of the red corpuscles were finely granular and of a bright blue colour, and between the corpuscles were here and there, singly and in groups, retaining the brilliant colour of the fuchsine, the blood platelets. These are, however, somewhat granular, and so differ from the fuchsine bodies as seen in carcinoma, and as we have seen them also in tubercular lymphatic

[8] *Wiener klin. Wochenschrift*, 1890.

[7] *Textbook of General Pathology*, vol. ii; and *Deutsche med. Woch.*, No. 22, 1889.

[9] *Path. Soc. Trans.*, 1887.

[10] BRITISH MEDICAL JOURNAL, December, 1890.

[11] *Traité d'Histologie*.

gland and diphtheritic tonsil. We were, however, able to observe in our sections of scirrhous carcinoma of the breast which showed the fuchsine bodies, that in extravasations of blood there were to be found homogeneous bodies giving this colour reaction; and some of the fuchsine bodies in carcinoma, more angular than the rest and found in connection with blood, we have little doubt are either platelets, or red discs which have undergone "hyaline necrosis," for we have observed some such to resemble precisely, both in form and size, the red discs amongst which they occur. In sections of glanders of the lung we have seen, in extravasated blood, areas of red discs which give the same intensely red colour on adopting the staining method described by Dr. Russell.

Again, in sections of a thrombosed femoral artery, from a case of senile gangrene, we have found in the clot, where not "organised," numerous minute fuchsine bodies mostly semilunar in form, in places where the outlines of the red discs are still recognisable; similar fuchsine bodies, some of them spheroidal occur also in the *débris*. In the organising part of the clot, where lines of blood pigment occur amidst the granulation tissue, there are to be seen minute spherical fuchsine bodies in connection with the disintegrated blood. In one place is a group of large endothelial cells, containing each about twelve spherical fuchsine bodies of medium size, and there are similar bodies in the surrounding *débris*.

Notes of one of many Sections of a Caseating Lymphatic Gland.[12] —Caseous substance, unstained, granular; around it are several giant cell systems. At one spot there is a single typical fuchsine body, spherical, without trace of structure; it lies a short way from the caseating margin, and is about a third of the size of the nucleus of a lymph corpuscle. A short way from this is a group of five fuchsine bodies, the largest of them larger than the nucleus of a lymph corpuscle. The whole of the rest of the tissue has undergone complete decolorisation as concerns the fuchsine, the nuclei of the different cells being granular and of a pale blue, the nuclear matrix being unstained. In another spot occurs a group of about ten typical fuchsine bodies, about the size of lymph-cell nuclei, and only faintly stained. Again a group of four typical fuchsine bodies, somewhat mutually adapted without relation to cells, lying in a cleft of the fibrous tissue. At many other spots similar bodies occur.

Notes of Examination of Sections of Diphtheritic Tonsil.—In the lymphatic tissue is a group of fuchsine bodies, six in number, varying in size, the largest the size of the nuclei of the lymph corpuscles. They are of a brilliant red colour, whilst the nuclei of the cells around show deeply-stained blue nodal points. They are all spherical, lie in a close group, and are quite devoid of structure. They have no relation with the cells. In another group are four individuals of about equal size, each about a third of the volume of the lymph-cell nuclei, all spherical, and in the meshes of the lymphatic tissue. These groups described are not far below the level of the epithelium. A third group is composed of nine or more in number, without relation to the lymph corpuscles, the nuclei of which the larger equal in size.

Epithelium: In many of the cells below the squamous series the nuclei, which present blue nodal points, contain a small spherical brilliant red homogeneous fuchsine body, mostly, but by no means invariably centrally placed. In some of the epithelial nuclei two such bodies occur and lying in a space between the cells presenting these changes is a large spherical homogeneous fuchsine body, larger than any of the cell nuclei, and stained faintly pink. The nuclei which contain the fuchsine bodies are in some cases almost devoid of chromatic substance. In one spot below the epithelium is an irregular fissure in which lies a large collection of similar bodies resting on a finely granular substance; the bodies vary much in size, the largest equal the nuclei of the epithelium, the smallest are very minute. This appearance occurs in many places a short way beneath the epithelium, that is to say, there occurs a cleft filled partly with granular *débris*, mingled with which are fuchsine bodies. In one of such clefts occur cells of which the nucleus is blue, the cell-body homogeneous and bright red. There are also strands of fibrous tissue bounding some of these clefts similarly deeply coloured.

[12] In this and all cases the material was carefully hardened first in Müller's fluid and subsequently in alcohol.

The title of Dr. Russell's communication (The Characteristic Organism of Cancer) involves, indeed, two assertions, namely: (1) That the bodies in question are characteristic of cancer, and (2) that they are micro-organisms. Neither of these is proved; nay, in the minds of many, including ourselves, they are disproved; and the hope which Dr. Russell's announcement raised, like that raised by Dr. Scheuerlen's, of the discovery of the bacillus of cancer, is doomed to disappointment.

The bodies in question cannot be held as characteristic of carcinoma, seeing that they are to be met with in such other diverse conditions. And secondly, there is no indication that they are really organisms, either vegetable or animal. Were they one of the forms of yeasts, as Dr. Russell believes, it is not easy to see why it should be difficult to cultivate them, though of course they may have become so widely specialised as to require a very particular culture medium, or conditions for their growth which it may be difficult or impossible to supply.

All our examinations have been made with $\frac{1}{25}$ Zeiss water imm. and Zeiss apochromatic $\frac{1}{12}$ hom. imm., Oc. 4. The very largest of the bodies show no indication of structure: they are devoid of capsule, nucleus, or even of the faintest granularity. In the face of this, it needs *direct* proof that these bodies are living structures, whilst Dr. Russell's conclusion was essentially based on indirect evidence or arrived at by way of exclusion.

In a paper in the *Pathological Society's Transactions*, 1888, we had described and figured (Fig. 19, p. 415), in sections of carcinoma which we have recently again examined—stained simply with carbol fuchsine, both after incubation and apart from it, deeply-coloured red granules or particles of different sizes, some in the alveoli, some in the cells, of the same nature as those described by Dr. Russell. These, though we thought at the time that they might in some way be connected with the infective nature of cancer, must share the same fate as the fuchsine bodies of Dr. Russell.

In the same paper we described (Plate XXXV) other appearances in sections of portions of carcinoma, after incubation on solid media, which had remained sterile—the appearance of minute coloured particles around the nuclei of certain of the epithelial and connective tissue cells, etc. The explanation of these we are still unable to give; but in regard to their having any important relation with the life-history of malignant tumours, we are inclined to be sceptical.

Of the fuchsine bodies themselves we believe that they are related to some form of proteid coagulation, occurring sometimes free, at others in the cell nucleus; or, again, affecting the whole of the cell, or involving even considerable tracks of tissue. The late Dr. Wooldridge regarded blood platelets as of the nature of precipitates, seeing that he was able to produce similar bodies by artificial means.

But for the present we conclude since we have, during the last fifteen months, made a new departure in our work, the results of which may be of some practical value, and which we hope, in due time, to publish.

REPORT ON THE POSITION AND RELATIVE VALUE OF SUCH LESIONS OF THE BRAIN AS CAUSE AN ALTERATION IN THE BODILY TEMPERATURE.

By W. HALE WHITE, M.D., F.R.C.P.,

Physician to, and Lecturer on Materia Medica and Therapeutics at, Guy's Hospital.

(Abstract.)

In some experiments recorded in the *Journal of Physiology*, vol. xi. No. 1, it was shown that the normal rectal temperature of the rabbit was nearly always between 101° and 103° F. That giving anæsthetics, trephining, and injury to the white matter of the cerebrum did not influence it to any great extent, but that lesions of the corpus striatum and optic thalamus produced a considerable rise of temperature, on the average equal on the two sides of the body. An additional series of experiments have been carried out to ex-

amine more carefully the influence of the optic thalamus, and also to see the effect upon the temperature of damage to other parts of the brain. They will be considered under their anatomical headings.

Optic Thalamus.—This body is in close contact with the corpus striatum, for the tail of the caudate nucleus almost encircles it, and the posterior part of the lenticular nucleus lies to its outer and under part, consequently it seemed possible that the rise of temperature produced by lesions of the optic thalamus was really due to implication of the posterior part of the corpus striatum. Therefore, in this series of experiments, very small lesions were made in the optic thalamus well behind the corpus striatum, and none were admitted as trustworthy unless dissection clearly showed that the optic thalamus alone was implicated. Sixteen experiments fulfilled these conditions. The temperature never rose two degrees; on six occasions it rose between one and two degrees, on five less than one degree, and once it did not rise at all. The highest rise after the operation was 1.7° F. The average rise was 0.9° F. It never rose above 104° F.; in one experiment only did it reach that point, and the average rise above normal limit was 0.4° F.—not a greater rise than the anæsthetic and the operation would explain.

Corpus Striatum. In those experiments in which the attempt to hit the optic thalamus had failed and the posterior part of the corpus striatum only was damaged, the temperature always rose considerably; twice it was above 105° F.; the highest rise was 2.4° F.; the highest point attained was 105.4° F.; the average rise was 1.9° F.; and the average rise above the highest normal limit was 1.8° F. The contrast between the slight rise after the experiments on the optic thalamus and the marked rise after the experiments on the corpus striatum is very obvious, although only the posterior narrow part of this body was injured.

If injuries of the optic thalamus cause a rise of temperature, there should be a greater rise when this body and the corpus striatum were both damaged than when the latter alone was injured. In some experiments in which both bodies were implicated in the lesion the temperature never rose above 106° F., and it was above 105° F. in 22 per cent. It never rose four degrees above normal, and more than three degrees in only 33 per cent. In a series of experiments in which the corpus striatum alone was damaged, there being a lesion well in its front broad part, the temperature rose to 106° F. or over in seven out of twenty-three, and above 105° F. in 50 per cent. It rose more than four degrees above the highest normal limit in seven out of twenty-three cases, and more than three degrees in 56.5 per cent. of the cases. From these figures it is clear that the rise is much less instead of greater when both the optic thalamus and corpus striatum are damaged than when the lesion is in the latter only. Therefore lesions in the optic thalamus can hardly be effective in raising the temperature, and the figures are to be explained by the fact that when the lesion is far enough back to implicate the optic thalamus, very little of the corpus striatum is damaged, for that body is very narrow at its posterior part.

From all these experiments, it appears that lesions of the optic thalamus do not cause a rise of temperature, but that when they appear to do so the corpus striatum is implicated. This conclusion is borne out by the following considerations: Histologically, the cells of the corpus striatum and optic thalamus are so different, that they can hardly have the same function. These two bodies are developed from different parts of the primary brain, and only grow together later.

Septum Lucidum.—In three experiments this was injured without any damage to the corpus striatum; the temperatures attained were 106.4° F., 105.4° F., and 106.0° F. It therefore appears to have much the same thermic value as the corpus striatum, which is not surprising when we remember the close developmental connection of these structures.

Cerebellum.—It is often assumed that there is some close connection between the cerebellum and the corpus striatum, but an examination of the recorded cases shows that this assumption rests on very slender evidence, and birds have large corpora striata, but no lateral lobes to the cerebellum. The temperature was observed in seven experiments in which the cerebellum was injured; in none did it rise above normal, therefore we may conclude that lesions of it do not influence the temperature of the body.

Cortex.—Some previous experimenters have shown that lesions of certain parts of the cortex may influence the temperature. In thirteen experiments the cortex of the posterior part of the upper surface of the cerebrum was destroyed. After the experiment the rectal temperature rose nine times, and fell four times. The fall was much greater than could be attributed to an operation which was trivial compared to those in the deeper part of the brain. The highest rise was 3.2° F., the least 0.6° F., and the average rise was 2.2° F. The greatest fall was 4.2° F., the least was 2° F., and the average fall was 3.1° F. The highest point attained was 106.4° F., the lowest was 99.4°. The average time after the operation in which the highest or lowest point was attained was 3½ hours. The duration of the rise or fall was on the average 20.8 hours. A very noteworthy point in these experiments is the extreme irregularity of the temperature. The appended chart shows this,

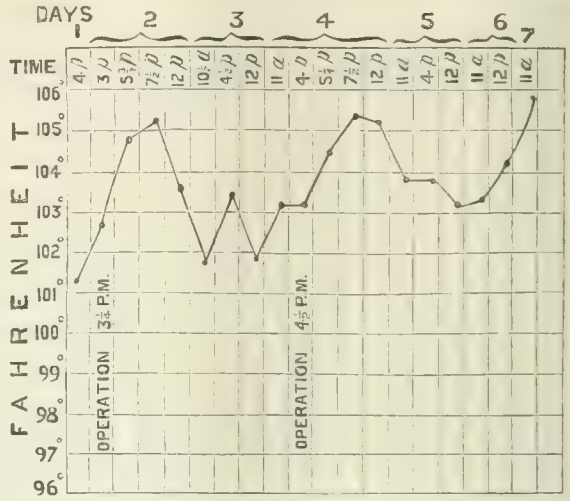


Chart showing irregular pyrexia after a lesion of the posterior upper surface of the cortex of a rabbit. The first operation was on one side, the second on the opposite side.

as well as the secondary rises, which sometimes took place. Thus, after lesions of the cortex at this spot the temperature sometimes falls, sometimes rises, is irregular, the alteration is quickly produced, quickly passes off, occasionally to return. In all these points the pyrexia after lesions of the cortex is in striking contrast to that after lesions of the corpus striatum.

Crus Cerebri.—In two experiments the crus cerebri was the only part injured; in each of them the temperature quickly rose, in one to 106.8° F., in the other to 105° F., giving a rise in the first of 3.4° F., and in the second of 2.2° F. It is probable that this rise was due to implication of fibres proceeding downwards from the corpus striatum. Hæmorrhage into the pons Varolii in man frequently causes a rise of temperature, possibly for the same reason.

Summary.

From these experiments and those previously recorded in the *Journal of Physiology* the following facts appear:

1. The normal rectal temperature of a rabbit is between 101° F. and 103° F.
2. Neither an anæsthetic nor a slight operation on the brain affects the temperature much unless some special part of the brain is damaged.
3. Lesions of the corpus striatum, if not large enough to cause shock and haemorrhage, lead to a considerable rise of temperature, on the average equal on the two sides of the body, even if only one corpus striatum is damaged.
4. Lesions of the septum lucidum also cause a rise of temperature.
5. Lesions of the optic thalamus do not alter the temperature.
6. Lesions of the white matter around the corpus striatum and optic thalamus do not cause a rise of temperature.
7. Lesions of the cerebellum do not alter the temperature.

8. Lesions of the posterior part of the upper surface of the cerebral cortex of the rabbit may cause irregular alterations of temperature, which are quickly produced, and last only a short time. Sometimes the temperature falls, sometimes it rises, sometimes there are several rises and falls after one operation—characters very different from the rise of temperature produced after lesions of the corpus striatum.

9. Lesions of the crus cerebri cause a considerable rise of temperature.

No completely satisfactory explanation of these experimental results can at present be given. I have elsewhere[1] pointed out their bearing upon evolution and upon medicine. The facts that a minute lesion in the corpus striatum can cause a considerable rise of temperature, and that the rise only lasts some hours suggest that the effect is irritative, although the central nervous system does not usually respond to mechanical stimulation; still it is quite possible that in the case under consideration the effused blood and serum act as irritants, for we know that in man unilateral convulsions may follow hæmorrhage in the opposite side of the brain.

Most observers who have performed experiments with a calorimeter, and upon the amount of carbonic acid gas excreted, consider that the rise of temperature produced by lesions of the corpus striatum is due to an increased production of heat, and indeed the uniformity, the regularity, and the extent of the rise suggest this; it is interesting also to notice that the corpora striata first became well developed in warm blooded animals, but great stress must not be laid upon this as an argument until we are more sure of the precise homologues in the lower animals of the corpora striata in the upper. We are still more in the dark about the interpretation of the variations of temperature consequent upon lesions of the cortex. Considering their very irregular and rapid character, it is tempting to assume that certain parts of the cortex are concerned in maintaining the balance between the production of heat and its loss, but much evidence must be collected before anything certain can be said upon this difficult point.

A full account of these experiments will be published in the next number of the *Journal of Physiology*. I am much indebted to Mr. A. D. Fripp, Demonstrator of Anatomy at Guy's Hospital, and Mr. J. P. Pendlebury, my late house-physician, for helping me to take some of the temperatures.

GOULSTONIAN LECTURES
ON
LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians of London.

By THOMAS OLIVER, M.A., M.D., F.R.C.P.,
Physician to the Royal Infirmary, Newcastle-upon-Tyne; and Professor of Physiology, University of Durham.

Lecture I.—(*Continued*).

Lead Poisoning from Hair Dyes; from False Teeth: from Adulterated Flour.—Colique Sèche of the Tropics.—Influence of Age on the Production of Plumbism.—Influence of Sex.

The use of hair dyes strongly impregnated with lead has been followed, not only by symptoms of saturnine poisoning, but by death. A ballet girl from the Tyne Theatre was admitted into the infirmary under my care suffering from colic headache and amaurosis; she had been using a cosmetic containing lead. She recovered.

A more striking illustration of the serious effects of the indiscriminate use of lead hair dye occurred in the practice of my friend, Mr. G. B. Morgan, of Sunderland.[2] It was that of a maiden lady, aged 72, who sought advice because her left eyelid drooped, and that she could not raise it except with her fingers, that she saw objects double, and that for some weeks past both her arms ached continuously, and that the power in them was failing day by day. She also complained of loss of appetite and obstinate constipation. Her mind was perfectly clear; there was partial paralysis of both arms, ptosis, and divergent strabismus of the left eye. A week afterwards, when seen by Mr. Morgan, there was no improvement in the symptoms: and as the pains had not diminished, he ordered 7 grains of potassium iodide to be added to her mixture. Next morning she was found dead in bed. At the *post-mortem* examination Mr. Morgan naturally expected to find some lesion at the base of the brain. The most careful examination of the brain by himself and Dr. Ransom failed to reveal anything abnormal in the brain generally or in any part of it. The medulla, pons, and ventricles, and circle of Willis were all healthy. Thus was concluded a *post-mortem* examination which was to these gentlemen extremely unsatisfactory. At the necropsy, however, both were struck by the luxuriant black hair of such an old lady. One of this lady's nieces had been struck by the beauty of her aunt's hair during her lifetime, and she ventured the suggestion, Could her illness have been caused by the use of a hair dye, which the old lady made herself by mixing a packet of sugar of lead with sulphur in some liquid unknown to the niece? By its use, as Mr. Morgan suggested, may be explained the palsy of the upper limbs, and that of the third nerve, and then rapid death, following the administration of iodide of potassium on the theory of Melsens, that a soluble iodide had been formed which is highly injurious.

Dr. Macdowell, of the Northumberland County Asylum, informs me that twice he has seen patients who have worn false teeth made of cheap plates suffer from symptoms of lead poisoning. In both there was a well-marked blue line on the gums; each patient became insane. In one of Dr. Moxon's patients mania with hallucinations arose in a woman who for some inflammatory affection of the vagina had on her own account made use of a strong lead lotion.[3]

Flour is occasionally a medium through which lead poisoning is induced. In this country we see little of this, but in France there are periodic outbreaks of it.[10] In one epidemic upwards of 100 people were suddenly attacked with violent symptoms, amongst which colic predominated. Nearly all those who suffered presented the characteristic blue line. The water supply was suspected, but could not be incriminated. On inquiry it was found that all the persons affected obtained their flour from the same mill, and that those who had partaken of rye bread suffered most. The tin buckets of the elevator which served to transport the rye flour from the grindstones had been tinned with lead, and these were found to have lost 150 grammes of their weight. Only the flour which passed through these buckets had caused symptoms of lead poisoning.

Dr. Marshall, of Pennsylvania,[11] reports that some time ago chromate of lead was used by the bakers of Philadelphia, and that in France, when eggs are scarce, it is employed to give a yellow tint to pastry. Dr. David Stewart analysed 64 cases of lead poisoning traceable to the consumption of cakes dyed with chromate of lead. In most of these cachexia, colic, arthralgia, blue line on gums were present, and traces of lead were found in the urine.

In Russia the use of tinned or canned meats has been followed by symptoms of lead poisoning, but on the authority of Professor Attfield and Dr. Thomas Stevenson no acute cases of lead poisoning have occurred in this country from that source.

It is very rarely that lead has been given for a criminal purpose; generally it is taken by individuals, in France more than in England, with suicidal intent, or it is taken accidentally, as, for instance, where a person has drunk lead lotion in mistake for his medicine.

Trousseau[12] used injections of acetate of lead to the extent of from 460 to 900 grains in a litre without causing any symptoms. When lead has been prescribed internally it has been followed occasionally by symptoms such as those of gout, in

[1] Theory of Pyrexia, *International Journal of Medical Sciences*, November, 1890; and, On the Parallelism between the Three Thermic Mechanisms and Dr. Hughlings Jackson's Three Levels, BRITISH MEDICAL JOURNAL, April 26th, 1890, p. 949.

[2] *Transactions of the Northumberland and Durham Medical Society*, April, 1887.

[3] *Journal of Mental Science*, 1881, page 130.

[10] BRITISH MEDICAL JOURNAL, 1887; Sajous, *Med. Ann.*, 1888-9.

[11] Sajous, *Med. Ann.*, 1888, p. 233.

[12] *Clinical Med.*, Trousseau, vol. iv, p. 81.

Dr. Lauder Brunton's case, or as in the case of Fouquier,[13] who prescribed to a student of medicine suffering from phthisis pills composed of 1 grain of acetate of lead. The first pill caused slight colic, the second produced very sensible effects, but the third created such severe colic that it resulted in a magisterial inquiry. The apothecary who dispensed the prescription was accused of negligence, but on analysis only 1 grain of lead was found in each pill. Wherever, therefore, lead has been freely used, either in the manufacture of articles of food or as a conductor of drinking water, there has generally been a considerable risk of lead poisoning.

For several years now there has been known in the tropics a disease spoken of as the "dry belly-ache," or *colique sèche*—a disease which at times has played sad havoc with the sailors of the French navy cruising in the tropics. The West Indies and Guiana[14] have been noted as the districts in which endemic colic has been most apt to occur. For a long period its causation was misunderstood, but there has been a gradual consensus of opinion in favour of the view that *colique sèche* or endemic colic is exactly the same as lead colic, and is traceable in every instance to the use of food or drink contaminated by the metal. The fact that the disease is almost entirely confined to the sailors of the French ships of war, and not in any corresponding degree to the inhabitants of the tropics, has given rise to considerable discussion and to not a little doubt as to the disease being saturnine. By many it has been regarded as a neurosis of the sympathetic, and due to chill; others have regarded it as of cryptogenetic origin, and others have claimed for it a miasmatic or malarial origin. Contradictory as all these opinions are, the view now generally adopted is that of Lefèvre, the Director of the Naval Sanitary Board at Brest, who says that "the *colique sèche* of the French navy is nothing more than lead colic." Many writers who had previously expressed contrary opinions have been gradually coming round to the view of Lefèvre, and the outcome of this expression of opinion from so high an authority as Lefèvre is already seen in the good results which have followed, for the Ministry of Marine are taking steps to render the disease less frequent in the French navy. When we know how very much more lead enters into the construction of French ships of war, no astonishment need be expressed at the greater frequency of colic amongst French sailors than those of other countries. Either as tanks for holding water or as pipes for conveying it, as plates for protecting the sides of the ship, in the form of putty and paint, or in the fact that the enamel of the drinking cups and cooking utensils on board a French man-of-war usually contain lead, this metal is more freely distributed throughout their ships than in those of other nations. The reason why English, American, and German sailors have not suffered in the same proportion is simply because that in their navies everything likely to give rise to lead poisoning has been carefully eliminated.

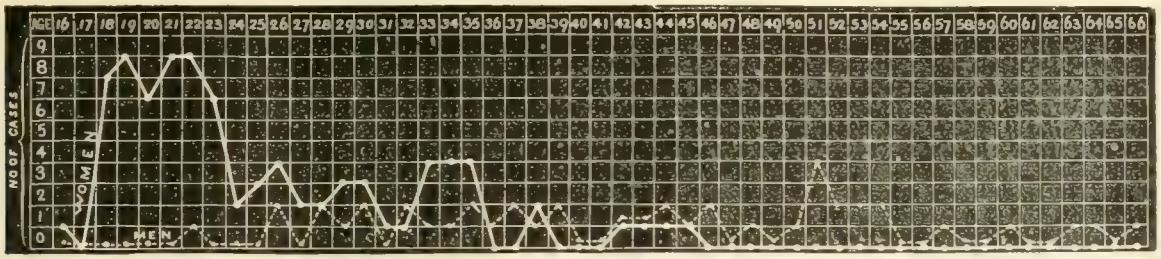
It is alleged by Dr. Stephen Mackenzie that, in the autumn, a larger number of lead cases is met with than at any other period of the year. On looking over the sick register at one of the lead factories, I find that in the months of June, July, and August, the largest number of "orders" are given to the hands to obtain medical relief.

How much of the prevalence of lead colic at one particular period of the year is accidental it is difficult to say. Trade may not always be so brisk at one time as another. Last year we had a strike amongst the lead workers which, beginning in May, ended in September. This fact renders the returns for the year unavailable for generalisation. Of the 1,217 cases observed by Des Planches, the largest number occurred in July. The warmest months of the year showed, according to him, the largest number of cases; and in these months Dr. Inglis, of Hebburn, noticed out of 947 cases of lead colic that there was a preponderance of cases. Inglis supposes that the lead dust is in the warmer months of the year more freely dispersed in the air. In this season vegetables play a larger part in the diet of the workers. Some have thought the winter months have furnished the largest number of cases, and regarded this as due to diminished elimination of the poison. In the early part of this winter I have seen more cases, but I attribute this to the fact that as it is known amongst my *confrères* that I am on the outlook for lead cases a larger number has in consequence come under my observation. The season of the year, like climate, has in my opinion little to do with it, although Hirsch attributes the greater frequency of lead colic on board ships cruising in tropical waters, to the fact that the higher temperature there materially conduces to the development of lead poisoning, and that of all the men on board ship, those who are obliged to spend most of the day in an overheated and impure atmosphere suffer most, for example, the men employed in the kitchens and engine rooms.

As regards the age at which lead poisoning is most apt to occur an answer is with difficulty returned, owing to the fact that exposure to the poison is not equal at all ages. Children are not employed in lead factories, but it has been noticed that when an epidemic of plumbism occurs as the result of drinking contaminated water they suffer readily. The children of the "botanic beer" manufacturer whose case I quoted suffered, one died; but in the case of N., who died from drinking contaminated water, none of the children suffered, nor did they exhibit even the blue line on the gums. Taylor, in his work on poisons, alludes to the case of a child who died after taking for five weeks one-fifteenth of a grain of acetate of lead twice or thrice daily. There was colic, constipation, and fœtid breath, then emaciation, and the limbs became paralysed, death occurring after convulsions and coma. In Keating's *Cyclopædia of Diseases of Children*, there is an excellent account of lead poisoning as it affects children. By the author of the article, Dr. Putnam, it is stated that if facts really point to a relatively slight liability on the part of children to poisoning from minute doses of lead, often repeated, it is a matter of interest as it indicates in all probability a more active power of elimination on their part. According to Des Planches, the largest number of cases occurs between the ages of 30 and 40, whilst in the epidemic at Bacup 15 to 50 is the period over which the liability to lead poisoning extended. Adults may be regarded as more predisposed to plumbism, for it is seldom met with in people after the age of 50, although I have met with it in men at 66.

Whatever doubt surrounds the question of age, there is, in my opinion, no doubt in regard to the very much greater susceptibility of the female to be contaminated with lead compared to the male; and this is not due simply to the fact of exposure in a lead factory to what may be regarded as the greater dangers, but depends upon sexual idiosyncrasy. This is an opinion so totally at variance with that given by several authors that I require to explain myself. My experience drawn from hundreds of cases is that, both as regards the acute and chronic forms of lead poisoning, women are much more quickly brought under its influence than men. The ratio of men to women employed in lead factories is in favour of the women, and at first sight it might appear as if the liability was explained by the greater number of women exposed. Taking a period of five years, I find that 135 cases of lead poisoning were admitted as in-patients at the Royal Infirmary, in Newcastle. Of these, 91 were women and 44 were men. Des Planches, on the other hand, regards women as less liable, even though employed at the same operations at a white lead manufactory as men, and so did Alderson. To me there is no comparison of the greater susceptibility of the female; and that it is not altogether a question of trade is shown by the fact that in the recent epidemic of lead poisoning in Yorkshire, where, out of 1,000 cases due to the drinking of water contaminated by the metal, the Special Correspondent of the BRITISH MEDICAL JOURNAL, 1890, vol. i, p. 974, found the proportion of females to males to be as 4 to 1. Against this may be urged the fact that women drink more water than men; but even allowing for this, the proportion would still be in favour of the female. Brown found 153 males as against 251 females. Not only is the female more susceptible, but she is so at an earlier age than the male, and is more likely to suffer severely, and from such nervous accidents as epilepsy. I find that the age at which the human female is most susceptible is from 18 to 23, and that in men from 41 to 48, and the interesting point in regard to exposure to lead is that, whilst young women suffer readily from saturnine poisoning, recovering quickly from colic, only to be more readily and severely affected on again exposing themselves, men may go on working for years—ten

[13] René Morcau, *L'Empoisonnement aigu par le Plomb*, p. 35.
[14] Hirsch, *Geograph. and Historical Pathology*, vol. ii, p. 269 (New Sydenham).



Lead-poisoning cases admitted into the Royal Infirmary, Newcastle-on-Tyne, during five years ending June, 1889.

to twenty—having ony one or two attacks of colic, and then after a very lengthened period of service may still fall victims either to lead paralysis or die from the effects of a kidney lesion due to the poison. It is difficult to say what length of exposure to lead is required to develop symptoms. In a fatal case of acute lead poisoning which I saw lately, the girl had only worked forty days in the factory altogether; these forty days were spread over nine weeks. The above chart shows the ages of lead workers admitted into the infirmary over a period of five years suffering from plumbism, and indicate the differences between the ages of males and females.

Not only is there a sexual, there is also an individual, idiosyncrasy to plumbism. There is a class of women too easily affected by lead,[15] but what that type is it is impossible to say. Generally the class from which these people are taken are young girls who are practically without the comforts of a good home. Many of them lead a questionable life. They expose themselves to cold, and are frequently in a state of chronic starvation before going to the lead works, and are, therefore, in a fit state for rapidly breaking down under the influence of lead. Those who are careful in regard to personal cleanliness and are well cared for at home do not, as a rule, suffer. I have seen women in the lead works who have followed their occupation for twelve or twenty years, and who have seldom been away from work on more than two or three weeks, when they have suffered from constipation and colic. It is the ill-fed, the badly housed, and thinly clad young girl who suffers early. Women who are labouring to support idle or drunken husbands, or paramours, or women who have lost their husbands, and, having failed at other occupations, betake themselves to the lead factories tempted by the high wages, after a few months' or a few weeks' service, become the victims of plumbism.

Apart from the influence of external conditions, such as want of adequate food, and exposure, there is with this as with most other diseases not only an individual, but a family predisposition to lead poisoning. Whole families will suffer readily, others scarcely at all. This observation applies to both sexes. I have known a family in which four sons and the father, all strong and well-built men, smelters, died from the effects of lead poison, and I know of other cases where, probably as the result of heredity, the sons and grandsons of men who were house painters have become early and severely affected by lead, the hereditary taint markedly precipitating the attack.

Again, I repeat, female idiosyncrasy predominates. One of the first noticeable effects of the pernicious influence of lead is the production of anæmia or cachexia. Nearly all young women, those particularly between the ages of 18 to 24, when thus exposed suffer from deranged menstrual function; hæmatosis and ovarian activity are interfered with, and the result is either amenorrhœa or menorrhagia. Once the functional activity of the ovaries and blood making is interfered with, then is that woman already in a critical condition, and at any moment she may become the subject of any of those explosive outbursts of plumbism known by the name of lead encephalopathy. To sexual peculiarity I therefore attribute much of the danger from exposure to lead. Lead as a poison strikes early at the functions of blood making and reproduction, producing sterility, liability to abortion, and amenorrhœa or menorrhagia. Woman, from her constitutional idiosyncrasy, is, therefore, more liable to be impressed by lead. Whatever may be the power of sex, of family, and individual predisposition; however potent may be the effects of inadequate food or clothing, if there is one agent which must greatly increase the influence of one or other of these as factors in determining lead poison, it is alcohol.

Once the individual has suffered from an attack of lead colic or any symptom of lead poisoning, he is launched upon a morbid stream of life where, under the influence of metabolism, which is making for health, he may safely steer his course and recover his health. On the other hand, if he is inattentive or unwilling to regulate the requirements of his constitution by abstinence from alcohol and again exposes himself, preferring thus to be wafted by the breeze that placed him on that stream, he floats the more rapidly down, heedless of the gulf in which he is so soon to be submerged. Between the first and subsequent attacks there are periods of quiescence; the first attack predisposes to the second, and this to a third; or a first attack is experienced, and without any fresh exposure, there is long after it another outburst. What is the meaning of this? Is it that during the period of apparent health lead has been deposited in some of the organs in an insoluble state, and that as the result of some particular diet, drink, or medicine, it has again been rendered soluble, circulates afresh in the system, and for the time being the person is poisoned with lead absorbed from his own tissues?

[15] T. Oliver, Local Industries, British Association Meeting, 1889.

ABSTRACTS OF THE MILROY LECTURES

ON

DIPHTHERIA;

ITS NATURAL HISTORY, AND PREVENTION.

Delivered before the Royal College of Physicians of London.

By R. THORNE THORNE, M.B., F.R.S., F.R.C.P.,

Assistant Medical Officer to the Local Government Board: and Lecturer on Public Health at St. Bartholomew's Hospital.

Lecture IV.

Milk in connection with the causation and diffusion of diphtheria was next discussed, Dr. Michael Taylor's and Dr. Ballard's experiences being referred to as the first in which any such cause was suggested as having to do with the specific fevers. Mr. Power has the credit of having first definitely shown a relation between occurrences of diphtheria and the use of particular milk services, and his investigations as to this in North London, in 1878, were recorded in some detail, it being shown that the incidence of the disease on households taking the special milk, and those having another service, was at the rate of 60 and 5 per 1,000 respectively. And when the various circumstances by which milk could at that date be regarded as liable to become infective had been discussed, the suggestion had even then been made that there had probably been some contamination of the milk by particular cows suffering, whether recognised or not, from some specific disease. The idea as to the existence of some relation between disease in the cow and human throat disease was, indeed, not altogether new. There was the analogy of foot-and-mouth disease, and some early experiences of Dr. Thorne were referred to, in which he had found that young pigs fed on the milk of cows suffering from the latter disease were killed by it, whilst children using it suffered from certain affections of the mouth and fauces. Other diphtheria outbreaks, having somewhat similar histories, were quoted,

but no substantial advance was made until the occasion of an outbreak at Hendon in 1882, which, having first been investigated by Dr. Cameron, was afterwards also inquired into by Mr. Power. Here, again, nine-tenths of the houses invaded received their milk from one dairy, the houses being those which were best circumstanced from a sanitary point of view. And here it was further noticed that there had been a special incidence of the disease on people, whether children or adults, who habitually consumed uncooked milk in large quantities. The source from which the milk had received its infection was, again, involved in much obscurity, but there were circumstances which led to the surmise that the infectiveness had possibly been brought about by causes operating through the cow herself, and enabling her to furnish a milk capable of inducing diphtheria and an allied sore throat in the human subject; and the milk itself gave some physical indications of this. But no disease in the cow other than some possible trivial ailment, which, according to veterinary judgment, did not prevent the cow from being regarded as healthy, had as yet been made out.

So matters remained until 1886, when a very severe diphtheria epidemic appeared amongst the better classes living at York Town and Camberley. The onset was sudden, 88 marked attacks and 52 of lesser severity taking place in three weeks and a half. Of those attacked, 84.2 per cent. received their milk from one dairy, which thus came under suspicion, and during ten days of special severity every one of the 48 houses invaded took the supply in question. And this specialty of incidence *quâ* milk was quite different from any other incidence that could be made out. Here, again, the amount of milk consumed was seen to have to do with risk of diphtheria. In certain milk epidemics, where other infectious diseases had been concerned, Dr. Thorne had been led to believe that there was a special infectivity attaching to cream which he thought had probably entangled the specific particles of disease, and so carried them to the surface. But this view could not account for all the circumstances noted at Camberley. Indeed, if any additional risk was incurred by cream drinkers, it was altogether overwhelmed by the danger attaching to the storage of milk, the skim milk resulting from the storage being as infective as the cream, and it seemed as if this storing gave opportunity for the cultivation of the specific organisms of disease which did not otherwise occur. Subsequent experiences of Dr. Klein have gone far to confirm this view.

In the meantime diphtheria prevalences which could unmistakably be attributed to milk were increasing, and suspicion had arisen that a number of the lower animals might be concerned in it. The early experiences of the medical department of the Local Government Board having been referred to as to this, Dr. George Turner's, Dr. Robinson's, and other observations were quoted. The existence of a disease akin to diphtheria was found amongst fowls which had pecked at diphtheria sputa, amongst turkeys from whom the disease had apparently spread to the human subject, and also amongst other animals, notably cats. With regard to cats, the disease had appeared to be transmissible both from them to children, and from the latter back to cats, and a number of occurrences of diphtheria were quoted in this connexion. Noah Webster's writings in 1800 were also recalled as to the occurrence of fatal "angina" in man synchronously with a "pestilence amongst cats," and the more recent labours of the medical department of the Local Government Board, in so far as the special pathology of the disease was concerned, was then entered into in some detail. Latterly Dr. Klein had been experimenting on certain animals with the membrane of diphtheria, and though he had failed as regards birds, it was otherwise with cats, on the cornea and conjunctiva of which animals a disease infective amongst cats could be produced by inoculation from human diphtheria membrane; and from this induced disease bacilli could be isolated resembling the Klebs-Löffler diphtheria bacilli. From this, Dr. Klein was led to study this bacillus more in detail, and he succeeded not only in confirming Löffler's view that the organisms hitherto regarded as one, included a bacillus potent to induce diphtheria and a pseudo-diphtheria bacillus, but he also showed that whilst the two forms of organisms were so far alike as to be indistinguishable microscopically and otherwise, they differed in their power of multiplication when cultivated at different temperatures: the true diphtheria bacillus multiplying, in milk, for example, at the ordinary temperature of the air. This discovery had, it was pointed out, important bearings on the special virulence of diphtheria induced as the result of drinking an infective milk which has been stored for purposes of securing cream or otherwise. At this stage Dr. Thorne recalled the fact that in nearly all the carefully recorded cases of milk diphtheria there had been evidence either of some "trivial" ailment in the milch cows, showing itself, for example, on their udders and teats by means of vesicles, "chaps," etc., or some story of a physical alteration in the quality of the milk, such as was shown by a condition of "ropiness," which dairy farmers admitted to be due to some condition affecting the cow herself. And he then gave an account of Dr. Klein's most recent researches as to milch cows—researches which are to be fully recorded in Dr. Buchanan's forthcoming report on the proceedings of the medical department of the Local Government Board. Briefly told they amount to this. Milch cows inoculated with human diphtheria membrane acquire a definite specific disease which may or may not, in the end, be fatal. The milk apparatus of the animal continues to furnish abundant milk, but the udders and teats exhibit vesicles, "chaps," sores, etc., almost exactly like those found by Mr. Power and others in the milk diphtheria epidemics. And in the lymph of these udder vesicles the true bacillus diphtheriæ could be found. So also from the milk itself abundant colonies of the bacillus could be cultivated, whilst no other organisms could be detected. Then came a curious accidental experiment. Contrary to orders, two cats had been supplied with some of the cow's milk, and in these cats the disease called by Dr. Klein "cat diphtheria" resulted. This latter experiment is stated to be referred to by Dr. Buchanan as lacking scientific precision owing to its accidental character, but it is of much interest in connexion with the subject discussed; and will doubtless be repeated under proper precautions. Reviewing the information resulting from these experiments on cows, "we are able," said Dr. Thorne, "to appreciate the import of those apparently trivial ailments in milch cows to which so little importance has hitherto been attached by veterinarians and dairymen, but which have so commonly been discovered in association with epidemics of milk diphtheria."

At this stage of the lectures Dr. Thorne laid down a series of propositions embodying the points which he had brought forward, and he explained that time had not permitted him to deal with all the matters which were properly included in the somewhat comprehensive title which he had originally attached to this course. Prevention of diphtheria had not been touched upon; and he had desired to deal with a number of other points, such as the stability of the contagium, the vehicles by which it could be communicated, its possible diffusion aërially, the incubative period of the disease, and its relation to croup. And, finally, he announced his intention of publishing the course of lectures in such form as would include these and other points which he had been compelled, by reason of time, to pass over without comment.

HISTORY OF A CASE OF CEREBRAL TUMOUR: DIAGNOSIS: OPERATION: PATHOLOGY.

Read before the Glasgow Medico-Chirurgical Society.

I. DIAGNOSIS AND LOCALISATION FROM THE NERVE SYMPTOMS.

By T. McCALL ANDERSON, M.D.,

Professor of Clinical Medicine in the University of Glasgow.

GENTLEMEN,—I have to request your careful attention to the details of the history of this case, because it is mainly from them that the diagnosis of the seat and nature of the disease was made.

A. K.,[1] aged 16, engineer's apprentice, was admitted to Ward 2 of the Western Infirmary on August 14th, 1890, complaining of fits and of paresis of the left arm and leg. No definite neurotic tendency can be traced in the family beyond the fact that his mother suffers frequently from headache, and that

[1] Reported by the resident medical officer, Mr. L. R. Sutherland, M.B., C.M.

for a number of years he himself has been similarly affected, apparently as part of "bilious attacks." There is no history nor are there evidences of syphilis or tuberculosis. There is an indefinite history of slight discharge from the ears during infancy, but all traces of this have been absent for a number of years.

About four years and a half ago, without previous warning, and while in the act of lacing his boots, his left forearm was suddenly flexed, and, uttering a cry, he fell down in a semi-insensible condition, conscious, to a certain extent, of what was going on around him, but unable to speak or move. Ever since this fit he has complained at times of slight pain, numbness and weakness in the left hand, and within the last year or so this had been more frequent and severe. The pain and its accompanying numbness are usually experienced in the left thumb and forefinger, and, only when severe, extend to the rest of the hand and forearm.

No recurrence of fits took place till a year and a half ago, when, on May 10th, 1889, a second occurred. This was preceded by lateral oscillation of the head for about two hours. Pain and numbness were then complained of in the left thumb and forefinger, which gradually extended upwards through the left hand and forearm to the arm, finally affecting the left side of the face, including the left half of the tongue. He remembers uttering a cry and falling, and a quarter of an hour later he woke up, unconscious of what had happened, and complaining of headache and nausea. A third fit occurred on the following day, and fourteen days later a fourth. These all began in much the same manner, and had much the same character and duration.

Alarmed about this state of matters, he sought admission to hospital on June 11th, 1889, and was under treatment by mixed bromides, gr. v, increased to gr. xv t.i.d. till August 3rd, 1889, when he was dismissed much improved. While under observation on this first occasion he had only two fits. These were ushered in by pain in the left thumb and forefinger, extending up the arm towards the head. The actual fit was apparently a generalised convulsion, said to have been attended by sobbing and profuse perspiration.

A fortnight after leaving hospital the fits returned, and have since continued to recur. At times intervals of from eight to sixteen weeks elapse, at others they occur daily, even though he may be under the influence of bromides. The fits, since he left hospital, have differed from the previous ones in so far as there has been no loss of consciousness. The aura has continued as before.

For a month before his readmission the numbness and pain in the left hand and forearm have been becoming rapidly worse, and partial paralysis of the left arm, gradually extending to the leg, has developed.

During the ten weeks he was under observation in hospital for the second time eighty-nine fits occurred. From August 21st to September 17th there were no fewer than eighty-seven, on an average three daily. Under the influence of treatment they gradually became less frequent, and finally ceased. For three weeks no fits occurred. On October 10th, and again on the 26th, a slight recurrence took place, all treatment having been suspended on the 21st.

Examination.—The limbs of the affected side are somewhat flabby and cold. There is very decided paresis of the left arm and hand, the dynamometer registering on the right 50 kilos, on the left *nil*. Quite distinct, but less decided, paresis can be made out in the left leg on resisting movement. There is exaggeration of the left knee and wrist jerks, slight left ankle clonus, and the superficial reflexes are active. Tactile sensation is perfect. A feeling of numbness is experienced all over the left side, particularly in the arm and leg, and to a less extent in the left side of face and left half of the tongue, but this is not constant. There is slight facial paralysis as estimated by the usual tests. There is slight deviation of the uvula to the left, and the tongue on protrusion is slightly deflected to the affected side. Pain, at times very acute, is complained of behind and above the right ear and in the right frontal region, and, at a point 2 inches above and behind the ear, an area of distinct tenderness is discovered on percussion.

The following are the results of the examination of the eyes, ears, and urine:—

Dr. Hinshelwood's Report on the Condition of the Eyes (September 11th, 1890).—"Well-marked optic neuritis present in both eyes, but all the changes are most marked in the right. The papillæ are swollen, and the normal cupping of the discs entirely obliterated. The edges of both discs are obscured, so that it is impossible to make out where the retina begins and the disc ends. The papillæ are of a deep greyish-red colour, but towards the outer part are surrounded by a palish halo. The veins are dilated, and the arteries are smaller than normal. The retinæ, for a considerable distance round the optic discs, have lost their transparency, and have an opaque greyish appearance, which gives a very dull fundus reflex on ophthalmoscopic examination."

Dr. Barr's Report on the Condition of the Ears (October 29th, 1890).—"Right ear. Hearing power slightly under the normal; tympanic membrane fairly normal; no perforation, cicatrix, or any evidence of present or past purulent disease. Bone conduction good. The tinnitus is probably connected with some form of irritation at the auditory centre in the brain. Left ear: Pear-shaped cicatrix in tympanic membrane; rest of membrane opaque. There are indications of a past purulent disease of the middle ear. Hearing power more impaired than on the right side."

Dr. W. F. Somerville's Report on the Urine (October 30th, 1890).—"A. K.; amount of urine examined, 1.2 lits in 24 hours; colour, palish amber; odour, urinous; reaction, neutral; specific gravity, 1022.

	In per Mille.	Grmms. in 24 hours.	
Water	948.8	1148.5	
Dry residue	51.2	61.4	
Organic material	33.5	40.2	rel. abs.
Ash	17.7	20.2	+ n.
Extractive material	7.3	8.7	sl. + sl. +
Urea	25.2	30.2	— —
Chlorides	11.1	13.3	+ +
Sulphates	3.0	3.6	— —
Phosphates	3.67	4.4	n. sl. —
Uric Acid	—		
Pigments	n.		
Albumen	none		
Sugar	"		
Ammon. carb.	+		
Alkali phosphates	2.46	2.95	sl. — sl. —
Alkaline earth phosphates	1.21	1.44	+ +

Note. + = increased; — = decreased; rel. = relatively to dry residue; abs. = absolutely in twenty-four hours; sl. = slightly; n. = normal.

"*Result.*—I have neither seen the patient, nor do I know any clinical particulars of the case. From the examination of the urine according to the method recommended by Mr. A. E. Haswell, pathological chemist, Vienna, I find evidences of brain irritation, as shown by the increased excretion, relatively and absolutely, of the earthy phosphates, caused, perhaps, by the presence of a tumour, or by the pressure of bone on the brain-substance; or possibly, though not likely, by a very old encapsuled abscess. From the light colour of the urine, the specific gravity, the amount of urine voided in twenty-four hours, the relatively decreased urea, and the increased chlorides, the possibility of any suppurative process, as one would find in a case of abscess or of meningitis, can be quite excluded."

The following is the substance of my remarks to my clinical class prior to the operation: In reference to diagnosis, the points which we have specially to consider are two; first, the seat; and secondly, the nature of the lesion.

1. *The Seat of the Lesion.*—The disease is manifestly cerebral, and implicates the right side of the brain, as the resulting manifestations are almost exclusively on the left side of the body, while the paralytic phenomena indicate implication of the motor tract. But what part of the motor tract is the seat of the mischief? The symptoms point, I think, very positively to the cortex cerebri. For it must be borne in mind that in cortical lesions convulsions are very common, are frequently limited, at least at their onset, to the part whose centre is irritated, and consciousness is often retained, factors which are all present in our patient. In such cases, too, a sensory aura often precedes the epileptiform seizures, and in this instance the fits set in with numbness and pain in the left thumb and forefinger.

This last circumstance, coupled with the fact that the paralysis began in the left arm, points to a lesion having its centre about the junction of the middle with the lower third of the ascending parietal convolution. This conclusion is somewhat supported by the pain which was complained of, and by the tenderness on percussion above and behind the right ear, although it must be remembered that the seat of pain does not necessarily correspond with the seat of the disease.

2. *The Nature of the Lesion.*—The history of suppurative disease of the middle ear naturally leads to the suspicion that there might be a cerebral abscess; but this suppuration occurred on the *left* side, and in early life, a good many years before there were any symptoms of cerebral irritation; while Dr. Barr's report furnishes evidence of prolonged absence of active disease of the middle ear. So that we may almost certainly exclude the hypothesis of abscess of the brain, more especially as Dr. Somerville's report on the urine is decidedly against such a view.

That being so, we can come to no other conclusion than that we have to deal with a tumour of some kind. The most common forms of cerebral growth are tuberculous or syphilitic in their nature, and which might possibly be influenced by the inoculation of Koch's fluid on the one hand, and antisyphilitic treatment on the other. But there is no history of a hereditary tendency to tuberculous disease, nor is there any indication of a delicacy of constitution in the patient himself. And, as regards syphilis, there is no history or symptom of hereditary transmission of the taint, nor is there any suspicion of the disease having been acquired, not to speak of the age of the patient which, of itself, almost excludes it. A cancerous growth is out of the question, as the patient presents none of the characteristics of malignant disease, nor does there appear to be a family predisposition thereto.

If, then, we are right in our view that the tumour is neither tuberculous, syphilitic, nor cancerous, all that we can say further is that the intracranial growths which are most commonly met with are glioma or sarcoma; and the only way of getting rid of them is by operative interference.

II.—OPERATION FOR ITS REMOVAL: RECOVERY.

By GEORGE BUCHANAN, M.A., M.D., LL.D.,
Professor of Clinical Surgery in the University of Glasgow.

Cerebral surgery at the present day is in much the same position as abdominal surgery was thirty years ago. In April, 1864, I performed the first successful operation of ovariotomy in Glasgow or the West of Scotland. Not very many years before that, the leading surgeon in Scotland had openly declared his opinion that ovariotomy was unjustifiable, and that a surgeon who undertook that operation with a fatal result, laid himself open to a charge of culpable homicide. At the present time, owing to improved methods of operating and after-treatment, abdominal section is performed with impunity almost daily.

Cranial or cerebral surgery is now on its trial. Horsley, Macewen, Park, Bergmann, and others have clearly established that operations on the cranium for the relief of abscess and removal of morbid deposits and new growths, evidenced by certain well-ascertained nerve symptoms, can be undertaken with success. But as yet the opportunities for performing these operations have fallen into very few hands, so that it is the duty of every surgeon who can add to the limited experience to do so.

Trephining has frequently been performed in cases where there are scars on the scalp or depressions of bone indicating former injury, to which nerve symptoms, such as paralysis, convulsions, or neuralgia, etc., might be traced. A very striking example of this I published in the British Medical Journal, December 14th, 1889, p. 1318.

But the interest in the cerebral surgery of the present day is centred in those cases where the abnormal condition of the brain is diagnosed and localised by the nature and situation of the nervous affection, as first pointed out by Ferrier.

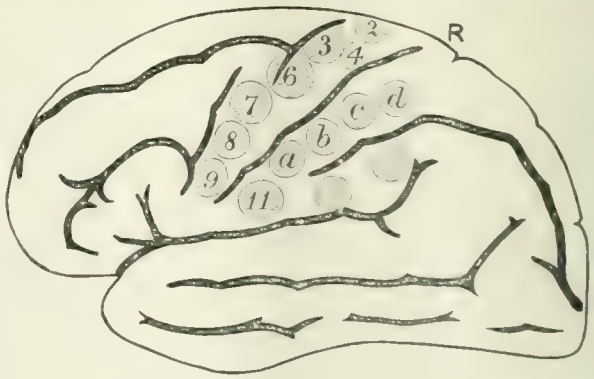
I have not for myself collected the published cases for the last two years, but the results of operations up to 1888 have been summarised in a paper by Dr. Park in the *Transactions* of the Congress of American Physicians and Surgeons at Washington, published in 1889. The table includes those only in which the operation was performed according to the principles of cerebral localisation, without reference to scars or surface markings. The table contains 63 cases; the deaths were 17: 15 of the cases were abscesses, subdural or subcortical; in 11 the lesion was a tumour, exclusive of tuberculous nodules; there were 12 cysts; the other 25 were of a miscellaneous nature, such as the fibrination of a clot, gumma, tubercle, and pressure from confined and altered serous or other fluid.

These statistics, like most others, are probably defective. Additional cases may have been recorded and escaped the notice of the compiler; others may have been done and not published. No doubt every successful case has been recorded; not so with some the result of which has been negative or fatal. Still, the table is valuable, as the compilation, so far as could be achieved, of cases of the operation referred to, during the early years of its introduction.

The following remarkable case comes under the category of those included in Dr. Park's table:—

A. K., aged 17, an engineer by trade, was admitted under my care to Ward 3 of the Western Infirmary on October 30th, 1890. He had previously been in the medical wards under Professor McCall Anderson, who has given a detailed account of the history of the case and the diagnosis, which may be summed up in a few words: For three years he has been subject to epileptic attacks, which have gradually increased in frequency and severity. They always begin and sometimes are limited to the thumb and forefinger of the left hand, but frequently involve the whole limb, and sometimes the leg of the same side. Of late, the left arm has become partially paralysed, and to a slighter degree the left leg.

These symptoms seemed to a point to a gradually developing lesion, probably a tumour, in the cerebral centre presiding over the movements of the thumb, fingers, and wrist, which are very distinctly marked out in Ferrier's map of the cerebral convolutions, at the junction of the middle and lower third of the post-Rolando convolution.



2, 3, 4, centres for the movements of arms and legs; 6, centre for supination of hand and flexion of forearm; *a*, *b*, *c*, *d*, centres for hand and wrist; 11, *a*, *b*, *c*, *d*, are on the ascending parietal convolution behind the fissure of Rolando R. The tumour was situated under *a*.

Accordingly, after careful consideration, Dr. Anderson and I decided that an exploratory operation should be performed on the region referred to. In the preparation of the patient, the steps of the operation, and the after-treatment, I followed rigidly the plan described by Victor Horsley, and had every reason to be satisfied with the result.

Three days before the operation the head was shaved, to allow me to study the topography of the cranium. The point at which I proposed to open the cranium was fixed on by the following measurements: the distance between the root of the nose and occipital protuberance was divided into two equal parts; half an inch behind the centre point, indicating the upper end of the fissure of Rolando, was marked. From this point a line was drawn downwards and forwards at an angle of 65°; this indicates the direction of Rolando's fis-

sure. Three inches down, just behind this line, are situated the convolutions indicated in Dr. Ferrier's plan as those presiding over the movements of the thumb and finger. These spots and lines were marked with a blue pencil. The scalp was then thoroughly cleansed, and a wet compress of carbolic solution kept on continuously.

On October 30th, the day preceding the operation, the bowels were cleared out with castor oil, the head was again shaved, cleansed, and kept moistened with carbolic acid solution.

The operation was performed on October 31st, at 9.30 A.M. Immediately before this he had a quarter of a grain of morphine subcutaneously, which is believed to have some effect in controlling hæmorrhage from small vessels of the brain.

The patient having been put under chloroform, I made a semilunar flap of the scalp, including the aponeurosis, the upper part of which was near the vertex, the base about 3 inches wide, across the lower part of the fissure of Rolando, that is, just on a level with the top of the pinna. One or two small arteries were ligatured. The pericranium was turned aside from part of the skull, where a trephine was applied, just at the spot previously determined by the surface marking. The trephine was rather larger than a shilling. The button of skull which was removed was placed between folds of lint moistened with carbolic solution, and kept warm. The dura mater exposed by the trephine and the convolutions beneath seemed to be perfectly normal, and presented no evidence of any tumour or lesion. Thinking that the diseased area might be further up, behind the fissure, on the centre indicated for the arm, I applied the trephine 2 inches above and behind the former situation, and removed a similar disc of bone. I then applied a Hey's saw in a line touching the outside of both centres, and with a lever removed the intervening bridge of bone. All the pieces were kept moist in warm carbolic solution. I now clipped the dura mater for four-fifths of the circumference of the oval aperture, about a sixth of an inch from the edge of the bone, and so exposed the cerebral surface. At no part was there indication of any abnormal condition, nor on pressing it with the point of the forefinger was there any evidence of either fluctuation or undue resistance. But at the lower part, just in the centre of the first trephine hole, the cerebral convolution seemed to bulge a little, and while feeling it with the smooth end of a director it suddenly burst asunder, and a dark red or brownish body resembling an Orleans plum emerged from below and pushing aside the cerebral substance, which seemed to have been extended over it, occupied the lower part of the opening. With my finger and thumb I found I could move it in the brain, and with the spoon-like end of a large director I lifted it out of its place, without tearing anything and without any hæmorrhage. It was regular and nearly globular, smooth on the surface as if enclosed in a thin capsule, and was about the size of a walnut. It was evidently removed entire without any breaking or bruising, as the cavity from which it came contained no *débris*, and it closed at once by resiliency of the surrounding substance.

After washing the wound with a stream of antiseptic fluid, I sewed the dura mater into its place with stitches of fine silk. It came together edge to edge, except at a small part where it had been torn. I now replaced the discs of bone in their situation, and filled up the space between them with pieces of the intervening bridge of bone, which I had cut into four or five portions. The semilunar flap was then put into position, and retained with fine silver wire stitches, a little opening, into which I put a drainage tube, being left at the posterior angle. A dressing of alembroth gauze and Gamgee cotton was applied with a very slight pressure. The patient stood the operation well, and his progress to recovery was almost uninterrupted.

It is unnecessary to give daily reports, but the after-treatment and course of the case have been summarised by Mr. Kerr, M.B., my house-surgeon.

Urine was drawn off only on two occasions, once on the afternoon of the operation, and once again on November 5th.

Opiates.—One-sixth of a grain of morphine was given hypodermically on two occasions for headache—at 1 A.M. on November 3rd and 5th.

Delirium.—Only on one occasion did the patient seem somewhat confused, and that only to a slight extent on the evening of November 3rd.

Headache.—A good deal of frontal headache till November 7th, which was relieved by a small dose of antipyrin.

Bowels inclined to be constipated, which was obviated first by soap and water enemata, and subsequently by gentle laxatives.

Food.—Only a little milk and soda water was allowed till November 5th, then a little toast, afterwards milk and biscuits, of which he was very fond, and gradually to more generous diet.

Dressings changed for the first time on the fourth day. Edges of the wound for the most part united, except where the drainage tube emerged, and one or two points where there were a few granulations. Tube removed.

November 13th. Dressing changed a second time; a little discharge on the dressing. Some projection of the flap, which made an elastic swelling. No pulsation.

November 18th. The bulging of the flap distinctly less; a little discharge and granulation at site of exit of tube. After this the progress of the wound to recovery was uninterrupted.

The tumour was a spindle-celled sarcoma, as reported by Dr. Coats, pathologist.

Nervous Symptoms and Fits.—On November 10th, at 11 A.M., he became unconscious for about two minutes, the arm and mouth twitched, and the head was thrown to one side.

On November 18th, in the evening, he had an attack similar to the above.

On November 19th, during most of this day he felt uncomfortable, with occasional twitchings in the limbs.

On November 25th he had a very slight attack.

After this he was very well in every way till December 22nd, when he lost consciousness for a minute and had some twitchings on the arm, but not head or leg.

Since that date he has had no return of any of these symptoms, and is very much better in every way; cheerful, taking his food well and sleeping without any disturbance.

On January 13th, 1891, he got up out of bed for the first time and daily since.

Present Condition, February 18th, 1891.—The flap of scalp, which had been dissected off to expose the bone, is now completely adherent. It is raised above the level of the surrounding scalp about half an inch. Underneath this can be felt the pieces of skull, which had been replaced and are now firmly united to each other and to the adjoining edges of the aperture, so that there is now a complete closure of the opening, except over a small space of about three-quarters of an inch in diameter, where I had left the dura mater uncovered with pieces of bone, to allow of some little discharge. Here, however, the scalp is so thick and firm that the gap is practically closed. So far as the operation is concerned the result is perfect. The patient's general health and condition are most satisfactory. He has not had any epileptic attack, nor even a partial twitching, since December 22nd, a period of eight weeks, so that that part of the nerve ailment may be considered as cured.

The left arm, which before the operation was paralysed to the extent that it lay powerless by his side, at least could not be raised or moved without the assistance of his other hand, can now be raised and moved about voluntarily. There is, however, when he moves to any great extent, a spastic contraction of the muscles of the fingers, wrist, and elbow, which tends to keep the limb more or less rigid; so that the cerebral convolutions over the region from which the tumour was removed have not regained entirely their normal functions. This, however, is daily improving.

POSTSCRIPT.

March 10th, 1891.—The foregoing paper was read at a meeting of the Glasgow Medico-Chirurgical Society on February 20th. That evening the patient was sitting by the fire, waiting for the cab in which he was to be taken to be shown at the meeting. Without warning, he was seized with an epileptiform fit, affecting, as formerly, only the left hand and arm, and slightly the leg. It lasted about two minutes and a half, and there was no loss of consciousness. He remembers all about it. It came on suddenly without any premonitory sensation or aura, and passed off leaving him very much as he was before. He told me all about it next day, and he said he believed it had been brought on by the partial excitement he had been in all day at the prospect of being taken to the Society and

shown to so many medical men. I think that probably he was right and that it was a transient attack, and might be explained by the long time the cerebral substance had been pressed upon and altered by the growth of the tumour, so that it had acquired a habit which had not yet passed off, though it had manifested itself at very long intervals. I suppose we may still expect some slight attacks to recur before the brain tissue is restored to it normal functions.

III.—REPORT ON ITS PATHOLOGY.

By JOSEPH COATS, M.D.,
Lecturer on Pathology in the University of Glasgow.

The following note was made when the tissue was fresh, immediately after the operation:—

The specimen is a soft, fleshy piece of tissue of a reddish colour; its surface is irregular, having a granular appearance, which on closer inspection looks almost papillary; at least there are a number of regular flat elevations of very small size. The tumour is a flat mass of a generally triangular shape, having somewhat the outline as well as the size of the suprarenal body. Its longest diameter is $1\frac{1}{2}$ inch; its other diameter 1 inch, and its thickness $\frac{1}{2}$ inch. The tissue is very friable, and there is no defining capsule.

A portion removed by scissors from the surface shows the tissue to be very vascular, numerous capillary vessels forming a reticulated network. At the surface the vessels show what looks like papillary projections. Between the vessels, and to some extent clothing them, are large quantities of cells which are of considerable size, and contain large oval nuclei.

A portion of the tumour was hardened in absolute alcohol imbedded in celloidin, and sections made with the microtome. The sections stained readily with logwood, alum carmine, Bismarck brown, etc.

The tissue contains numerous vessels, and each vessel is surrounded by a mantle of translucent tissue sparsely provided with cells. This tissue in specimens mounted in Canada balsam is homogeneous and structureless in appearance, but in glycerine it is seen to have a finely fibrillated character. The thickness of this mantle varies considerably, in some places equalling the diameter of the vessel, in other places much less.

The tissue generally consists of cells mostly oval or spindle-shaped. Between the cells there is the merest trace of intercellular substance consisting of reticulated fibres. The papilliform appearance noted in the fresh state is not borne out in hardened specimens; and it was due, doubtless, to the fact that at the torn edge of the tissue, the vessels with their mantle presented themselves individually.

From the character of the tumour, it may be regarded as a spindle-celled sarcoma, but taking into consideration the mantle around the vessels, it belongs to the group Plexiform Sarcoma.

THE TREATMENT OF PURULENT PERICARDITIS BY FREE INCISION.

By P. DAVIDSON, M.A., M.B.,
Honorary Physician to the Infirmary for Children, Liverpool.

The case related by Dr. Bronner in the British Medical Journal of February 14th seems to me to have been a case of pyæmia, and possibly the primary seat of the infection may have been about the cæcum or vermiform appendix—a common site of inflammation in children.

The following case resembles his in several points, in the occurrence together of pleurisy, pneumonia, and pyopericarditis and also in the character of the pneumonia—sometimes called "wandering pneumonia;" again, in the rise of temperature after the opening of the pericardium.

R. E., a boy, aged 6 years, was brought to the Infirmary for Children, Liverpool, on July 9th, 1890. Three weeks before admission he had knocked his bare foot against a stone, and a week after that a swelling appeared on the right side of his chest. (He had acute necrosis of the third metatarsal bone, and a subperiosteal abscess over the eighth rib on the right side.)

On July 12th, when I first saw him, a pericardial rub could be heard, and pleuritic friction over both lungs. He had also dulness, tubular breathing, and crepitations at the apex of the right lung. Three days after, these signs had disappeared from the apex, but had appeared at the base of the lung.

On that date (July 15th), the pulse being 144, respirations 52, and temperature 103° F., as there was considerable dyspnœa, and at the same time marked increase in the cardiac dulness, the pericardium was explored with a hypodermic needle, but without result.

On July 18th the pericardium was again explored, and pus obtained. An incision was then made in the fifth interspace, and eight ounces of pus evacuated. A drainage tube $3\frac{1}{2}$ inches was inserted. The operation seemed to give considerable relief, but on the following day the temperature rose to the highest point it had yet touched (104° F.). The patient lived seven days after the operation, and finally died of syncope.

At the necropsy there were found general adhesions of the lungs to the chest walls and to the pericardium; a small quantity of seropurulent fluid was in each pleural cavity. There was a patch of consolidated lung tissue in the lower lobe of the right lung. The heart was thickly covered with lymph, but was not adherent at any point to the pericardium. There was about a drachm of pus at the back of the pericardial sac.

In sharp contrast to the above case is the following, in which there was no suspicion of septic infection:

R. A., a boy, 6 years and 9 months, was brought to see me at the Children's Infirmary on May 12th, 1890. He had for a fortnight suffered from cough, feverishness, and pain in the left side. His pulse was 120, respirations 40 per minute, and temperature 102.8° F.

On examining his chest it was found he had the usual signs of pleuritic effusion on the left side, dulness on percussion, distant respiratory sounds, etc., and his heart appeared to be pushed to the right of its normal position. An exploratory puncture was made into the left pleural cavity with a hypodermic needle, and pus obtained. The patient was sent to one of the wards as a case of empyema. On the following day I made a free incision an inch or more below the inferior angle of the scapula, and evacuated 10 ounces of pus, along with large masses of thick lymph. A large rubber drainage tube was inserted, and the wound dressed with perchloride gauze and perchloride wood wool.

After the operation the temperature became normal, the pulse fell to 96, and the respirations to 24 per minute. On the second day, however, the temperature rose a little, still more on the fourth and sixth days. At first this was thought to be due to some defect in the drainage, and this was carefully attended to. No improvement taking place, the heart was now more carefully examined. The cardiac dulness seemed decidedly enlarged, but the heart sounds were distinct and clear. Percussion, on subsequent occasions, showed an increasing præcordial dulness, and on May 24th it reached, at the level of the nipple, from one inch to the right of the right border of the sternum to an inch beyond the left nipple. I therefore determined to explore the pericardium, which I did in the fourth interspace, one inch from the left border of the sternum, and drew out pus. An incision was made at the same spot, and a director passed into the pericardial sac. On pus appearing in the groove, a knife was passed down the groove, and the deeper part of the wound enlarged. Several ounces of creamy pus flowed out. A moderate-sized drainage tube was inserted.

The operation was immediately followed by a fall of temperature, of pulse, and of rate of respiration. On the third day after opening the pericardium the temperature was 98°, pulse 96, respirations 24 per minute, and these figures remained more or less constant during the next five weeks, except during an attack of diarrhœa, and again after a premature attempt to remove the drainage tube. The empyema took about five weeks to heal, so also did the pericardium. The patient was discharged from the hospital on July 13th.

I showed him on February 12th, 1891, at a meeting of the Liverpool Medical Institution, and he was then in excellent health, having no symptom referable either to the heart or lung. He had been attending school during the winter.

In this case effusion of lymph probably occurred over the

pleural and pericardial surfaces about the same time, but formation of pus took place sooner in the pleural cavity than in the pericardial. I have observed this sequence in other cases.

I think it must be a rare event for pus to make its way from the pleural sac into the pericardial, as has been suggested by Dr. Bronner. I had under my care some time ago a boy, aged 7, who had 10 ounces of pus within the pericardium, and there were good grounds for believing from the history of the case that the pus had been there nearly three months. If the pericardium can so successfully retain pus probably it will still more successfully resist the invasion of pus.

In the case of R. A. recovery was much less rapid than in the cases reported by Rosenstein and West, but in this case the presence of an open empyema of the left side may partly account for the delay in the adhesion of the pericardium.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

PUERPERAL PNEUMONIA.

PNEUMONIA is a very rare and a very grave complication of the puerperal state. That it is rare may be gathered from the fact that Grisolles, who has directed attention to the subject, was able to collect only fifteen cases, and that it is dangerous, by the statistics, which show that of these fifteen eleven ended fatally. The report of the Collective Investigation Committee, which deals with more than a thousand cases of acute pneumonia, does not include one intercurrent with pregnancy; and there is a singular absence of pneumonia among pregnant women in the recorded epidemics of this disease. Even in two volumes of the *Medical Digest* reference to a single instance of puerperal pneumonia is not to be found, but possibly in the third instalment of this interminable work Dr. Neale has indexed the condition. Four cases were reported in the BRITISH MEDICAL JOURNAL in 1889; one patient died, the others recovered, but all presented serious and severe symptoms. Dr. Angel Money has reported[1] from the wards of University College Hospital a case of pneumonia complicating parturition, but as in this instance purulent pericarditis—which possibly was the first factor in the morbid process—existed, the case can hardly come into the category of puerperal pneumonia, pure and simple.

The following example of puerperal pneumonia is remarkable chiefly for the absence of acute or serious symptoms. The patient was a primipara, aged 32. She complained of violent headache and short hacking cough. No rigor had occurred. There was no rise of temperature, and the pulse was not over 80. The urine was free from albumen. She was exceedingly nervous and despondent. No evidences of pneumonia were observed for two days, when she complained of stabbing pain under the right breast, and began to expectorate copious rusty-coloured sputa. On this day the temperature rose to 102° F., and the pulse to 100, but throughout the remainder of her illness temperature and pulse were scarcely affected.

Two days later I was able to detect definite physical signs of pneumonia. An area of well-marked tubular breathing was then found near the seat of pain. The temperature was now 99° and the pulse 80. Next day labour at full term set in, and, finding the head in the cavity of the pelvis, I at once gave chloroform and delivered with forceps, the operation lasting about three minutes only owing to the great elasticity of the perineum, which allowed the head to pass without the slightest laceration. The placenta followed quickly. Immediately after delivery the general condition was excellent, and twelve hours later the pulse rate was 76, and the temperature 99.2°. Loud pleuritic friction, which lasted several days, was heard, after the lung consolidation was resolved, over the same area. The mother made an uninterrupted recovery, and the infant showed no signs of transmitted pneumonia.

Broadstairs. THOS. F. RAVEN, M.R.C.S., L.R.C.P.

[1] *Lancet*, October 18th, 1890.

AN EFFECTUAL AND EASY METHOD OF PLUGGING FOR EPISTAXIS.

CUT a ribbon of lint 7 inches in length and 1 in width. Place this on a table with one end at the edge of it. Take a director and place it on one half of its length, with a probe placed in its groove; now fold the other free half of the lint over both probe and director. Grasp the whole firmly and pass them through the nostril downwards and backwards as far as they will go. Liberate the probe from the director and press its point backwards, so as to prevent the lint following the director during its extraction. By a rotatory motion the probe itself can then be easily withdrawn. The lint may remain twelve or eighteen hours before it is removed. It is highly important to arrest epistaxis as speedily as possible, as it is often so profuse that life may be endangered; the aged may never be able to recoup the loss of blood.

Sutherland Avenue, W. H. A. RAWLINS, M.R.C.S.

A CHARACTERISTIC ORGANISM OF CANCER.

OF late pathologists have devoted much attention to the finding of a specific organism of carcinoma. In our own country, as the reports of the Pathological Society will show, allusions have on several occasions been made to these protozoic organisms found in carcinoma. Jonathan Hutchinson, jun., I think, was the first to draw the attention of the Society to these bodies. He investigated especially cases of so-called Paget's disease of the nipple. Lately a paper was read by Dr. Russell, who describes such moneric organisms in carcinoma, and considers them to be "characteristic."

Against such a view, I feel myself justified to raise a decided protest. I have, of course, not seen Dr. Russell's specimens, but, from his clear description and illustrations, have no doubt that his organisms are absolutely identical with those demonstrated at Berlin, and with what I have seen at other times previous to the Congress.

These organisms—whether we call them protozoa, or psorospermiæ, or sporocysts, or what not—occur, and even frequently, in other diseases, even in apparently healthy tissues.

1. Kölliker years ago found them in and amongst the tissues of the skin, under healthy and diseased (not carcinomatous) conditions.

2. In rodents these organisms are very common, and not infrequently found in large masses, especially in the liver, but also in the intestines. They react beautifully to Gram's method of staining. However, in most cases they apparently do not affect the general condition of the animal, or cause any local disturbance histologically to be compared with carcinoma. While working in Koch's laboratory I found that most rats, guinea-pigs, or rabbits were affected in this manner.[1]

3. In and between the fasciculi of the pig's muscle they are not infrequently found. Here, again, they apparently cause no trouble. In Oscar Israel's *Practicum* a good illustration is given; and Virchow, when discussing actinomycosis, never fails to demonstrate the psorospermiæ in the pig's muscle to his listeners. It was in his laboratory that I first became familiar with these monadinæ. The objection may be raised that these are different species. However, having seen and studied them, and having benefited by their comparison with the specimens of others, I do not consider this objection valid as far as the microscope can decide. The artificial cultivation of them has as yet not succeeded.

4. Dr. D. Cunningham, in Part 1 of the *Scientific Memoirs by the Medical Officers of the Army of India*, gives a lucid and well-illustrated description of a peculiar parasitic organism in the tissues of a Delhi boil. Anyone reading this paper will at once perceive that here we have the same protozoon, which reacts to aniline dyes in the same way as Dr. Russell's "characteristic organism of cancer." Dr. Cunningham's drawings should be compared with the coloured plate appended to Dr. Russell's paper. Dr. Cunningham's "sporocysts" are absolutely identical with the specimens shown at the Berlin Congress, and, as far as I can see, with Dr. Russell's fuchsine bodies.

5. In ordinary chronic ulceration I have from time to time observed the same organisms.[2]

[1] *Cf.* also *Baumgarten*, vols. i and ii.
[2] *Cf.* also Dr. Russell's paper.

6. Identically the same bodies as described by Dr. D. Cunningham were also found by Dr. Bomford in cases of rhinoscleroma.[3] This statement was corroborated by Dr. Cunningham (personally, in conversation); and he also endorses further statements by Dr. Bomford—namely, that the same organisms are found

7. In elephantiasis Arabum. Dr. Bomford[4] says: "Precisely similar forms are constantly present in elephantiasis Arabum, in small number and of small size, it is true, in the ordinary fibrous condition of the disease, but abundant and of every variety and form, just as in rhinoscleroma, in some unusually cellular specimens of elephantiasis.....They were also undeniably present, although they were not very conspicuous, in two distinct cases of carcinomatous tumour from the same hospital, one of the face and the other of the breast: and Dr. Gibbons, of the Medical College, Calcutta, has found them in a papilloma at the orifice of the urethra." Dr. Cunningham fully concurs with me that the bodies found in the specimens of rhinoscleroma were identical with those of the Delhi boil.

8. Dr. Bomford mentions Dittrich, of Prague, as having found these bodies, which he calls "Mikuliczsche Zellen" (=psorospermiæ), not only in rhinoscleroma, but also in leprosy and glanders. As far as leprosy is concerned, I can fully corroborate this statement.

9. Lastly, similar organisms have been described in molluscum contagiosum, apparently of the same nature as the psorospermia found in rodents.[5]

We see, then, that these monadinæ occur in many morbid and apparently normal conditions. Can we in the face of this consider them "characteristic organisms of carcinoma?"

A. A. Kanthack, B.A., B.Sc., F.R.C.S.,
Calcutta. Member of the Leprosy Committee.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ST. VINCENT'S HOSPITAL, DUBLIN.

RESECTION OF THE PROSTATE GLAND FOR ENLARGEMENT CAUSING RETENTION OF URINE.

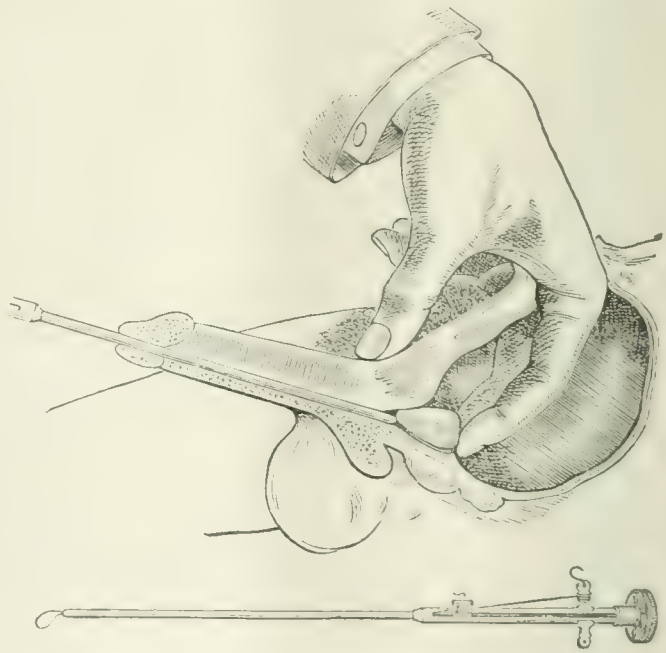
(By R. F. Tobin, F.R.C.S.I., Surgeon to the Hospital.)

Clinical and pathological experience has, I think, settled the following points: First, that there may be considerable enlargement of the prostate without any stoppage of urine; secondly, that when there is permanent retention, it is due in nearly all cases to a prominence which, when pressed upon by the urine, closes the internal orifice of the urethra. It follows that to do away with the obstruction it is necessary to remove as much of the gland as is in the way and no more. This can, I think, best be done in the manner adopted by me for the relief of the patient whose case I here relate.

J. K., aged 60, was admitted on May 3rd, 1890, into the hospital, for retention of urine due to an enlarged prostate. For eleven years he had suffered more or less from this ailment, and had been treated for it both by me and my colleagues. On the last of these occasions, about four years ago, I made a digital examination of his bladder through a perineal incision; but not being able to ascertain thereby anything more definite than what was already known—that there was an enlargement of the prostate—I used the incision merely to drain the bladder and cure thereby a cystitis that was then adding greatly to his suffering. The history of the years that intervened between that operation and his admission on this present occasion is the ordinary one of a poor man who cannot make water without the use of an instrument; a rough catheter and a raw urethra sketch it sufficiently.

When admitted he was emaciated and in a bad state of health; there was a tendency to the formation of bed sores on every prominence; the urine was fœtid; he had hourly calls to micturate, and could do so only through an instrument, the passage of or retention of which gave intense pain.

The following operation was performed on May 9th. A suprapubic cystotomy having been done in the usual way, a digital exploration showed the middle and left lobes of the prostate to be much enlarged. The enlargement was a ridge about an inch in height and an inch at its base, surrounding and overlapping two-thirds of the urethral orifice. Although the whole appeared to be one mass, it was only so by contact, for the finger could be passed between the lobes. The instrument used to shave off this protuberance was an *écraseur* extemporised in this way. A wire doubled and bent to a suitable curve was passed through the urethra into the bladder; a silver catheter was then slipped up along it, but its point, instead of being passed into the bladder, was made to impinge against the urethral obstruction. Next the double wire lying in the bladder was opened out into a loop and slipped over the enlarged middle lobe, and was kept imbedded round its base by means of two fingers passed through the abdominal incision. While this wire was being made to cut its way through the part it encircled, the inserted fingers, helped by the point of the catheter, which was depressed to the spot it desired to reach, regulated its direction. I was surprised how little resistance there was to its progress. As the lateral lobe was not of a shape to be encircled by the wire, it was necessary to divide it into two by nicking it deeply with scissors. Each half was then dealt with as had been the middle lobe.



The surface left was found to be smooth, and to slope into the urethra. There was little or no bleeding. Copious irrigation with warm boracic lotion, and a partial bringing together of the edges of the wound (the low vitality of the patient gave no prospect of immediate union) completed the operation. Throughout its performance my colleagues, Mr. McArdle and Mr. Patteson, gave me, as they always do, most valuable assistance and suggestions. The chief points noted during the subsequent progress of the case were sloughing of cellular tissue in the immediate neighbourhood of the abdominal incision, extension of the bed sores noted as existing when admitted, uræmic delirium for ten days, with a large amount of albumen in urine—about one-sixth. These complications notwithstanding, the patient made a good recovery. Most of his urine passed away through an india-rubber tube to a vessel alongside his bed. What urine overflowed was absorbed by large peat moss cushions placed under the patient. The house diaphoretic mixture, containing liq.

[3] *Scientific Memoirs by the Med. Off. of the Army of India*, Part v, 1890.
[4] *Loc. cit.*
[5] *Cf.* also Dr. Russell's paper.

ammon. acet., pot. nit., and spirit. æther. nit., seemed to favourably influence the uræmic condition.

On the twenty-second day after the operation the tube (a smaller one than that originally inserted) was withdrawn from the abdominal wound, now nearly healed, and a catheter was passed by the urethra and left in.

On June 16th the patient was allowed up, and a few days later, about seven weeks after the operation, on being asked how he was, he answered, "I can make water as when I was a boy of sixteen." This sentence must be taken rather as expressing his wonder at the change that had been effected in him than as an accurate statement of his condition. As a matter of fact, he could then contain about half a pint of water, and pass it without pain or difficulty in the usual way. A week later he was discharged. The parts removed are three masses, each about the size of a small walnut. Mr. Patteson, who has microscopically examined them, has found in them nothing but hypertrophied prostatic tissue. An *écraseur* which I have made for use in future cases is here delineated. It requires no explanation except that it is straight, so that its point may be accurately fixed against the obstruction to be removed.

The method of resecting the prostate gland here set forth has, I think, the following advantages:—

1. As much of the gland as interferes with the escape of the urine is removed and no more.

2. The portion that blocks the urethra is removed in a satisfactory manner, for the wire cuts up to the point where the instrument has been stopped by the obstruction.

3. A smooth surface sloping into the urethra is left instead of the more or less rough one that must result from taking away the gland piecemeal with forceps.

4. There is very little hæmorrhage.

I do not know that in all cases a wire would cut its way through an enlargement as easily as it did in the instance now related, but this difficulty could be overcome by preparing a bed for it with the point of a knife or scissors: only in the covering of the gland need any resistance be expected, its friable substance is easy of division with any instrument.

November, 1890. It is now six months since the performance of the operation; the outlet from the bladder continues quite free, and the power of retention improves with the lapse of time. The general condition of the patient is also much improved.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 10TH, 1891.

TIMOTHY HOLMES, M.A.Cantab., President, in the Chair.

Two Cases of Idioglossia.—Dr. HALE WHITE and Mr. C. H. GOLDING-BIRD brought forward two boys, brothers, thought by their parents to be suffering from deaf-mutism. This was not so; they heard well, and expressed themselves in articulate sounds. These sounds were unlike those of any known language, but the same sound was always used by the same child to express the same word. Each child had thus a language of its own, and consequently the authors had (at the suggestion of Dr. Perry) named the condition "idioglossia." The elder sister of these boys was slightly affected. All the children were remarkably intelligent, and could read any book and understood what they read, and wrote English correctly. There was no observable physical defect. One of them was left-handed. There were traces of insanity in the family. The treatment adopted had been careful training, and the boy who had been longest under treatment showed the most marked improvement. Owing to the kindness of the Edison Phonograph Company the authors were able to show the phonograms of the children, taken before any treatment was adopted. These exactly reproduced the original speech. The following tables showed the speech recorded phonetically:

TABLE I.

A. P.—(A). The alphabet (when not otherwise indicated, the letters have their usual value).

a	b	c	d	e	f	g	h	i	j
ah	b	c	d	e	ahth	yee	ahsee	ah	eeyah

k	l	m	n	o	p	q	r	s
tah	ahl	ahm	ahdī	ū (u as in frugality)	p	tū	ah	ahsee

t	u	v	w	x	y	z
t	u (as in few)	yee	dahbeyew	aht	eeyah	yahddī

(B) The Lord's Prayer:

Our	Father	which	art	in	Heaven,
Ah	sahyee	yee	ahtee	ee	ahyah,

hallowed	be	Thy	name.	Thy	kingdom
hahdō (o as in hero)	bee	dah	ah	Dah	tdō (o as in hero)

come.	Thy	will	be	done	in	earth
tōm (o as in son)	Dah	yee	bee	dah	ee	ahtsee

as	it	is	in	heaven.	Give	us
ah	eet	tee	ee	ahyah.	Yee	ahtsee

this	day	our	daily	bread.
deesee	dah	ah	dahdī	bahdī

Forgive	us	our	trespasses.
Dōsōyee (o as in hero)	ahsee	ahee	sahpeedee:

as	we	forgive	those
ah	yee	dōsōyee (o as in hero)	dō (hero)

who	trespass	against	us.
ū (as in frugality)	sahpee	ahdahthō (o as in hero)	ahsee:

Lead	us	not	into	temptation,
Leedī	ahsee	out (ou as in loud)	eetō (hero)	tahptahsī

but	deliver	us	from	evil.
baht	dēēdī	ahsee	soum (ou as in soul)	eeew (ew as in Matthew)

For	thine	is	the	kingdom,
Soud (ou as in soul)	Dahdī	ee	dee	teedō (o as in hero)

the	power,	and	the	glory.
dee	pardī	ahd	dee	dondī (ou as in loud)

for	ever	and	'ever.	Amen.
sō (hero)	ahyah	ahdī	ahyah	ahyah.

TABLE II.

R. J. P. P.—(A) The alphabet (unless otherwise stated, the letters have their usual value):

a	b	c	d	e	f	g	h	(a as aye, i as eye)
ahee	b	c	gee	e	f	dzee	aisee	

i	j	k	l	m	n	o
nee (a as aye)	zaee (a as aye)	kee	l	m	n	o

p	q	r	s	t	u	v
p	q	ah	ees	kee	ū (u as in frugality)	wee

w	x	y	z
dahbeeyew	ĕs	y	z

(B) The Lord's Prayer (the words are spelt the same when he pronounced them the same as ordinary persons do):

Our	Father	which	art	in	heaven,	hallowed
Ah	fahwee	wis	aht	ee	eewee	hahdee

be	Thy	name.	Thy	kingdom
be	dī (i as eye)	nahim	Di (eye)	keedom (o as in got)

come.	Thy	will	be	done	in	earth	as
come	Di (eye)	wĕll	be	gahd	ee	ef	ahsee

it	is	in	heaven.	Give	us	this
eet	ees	ee	eewee	Zwivī (first i as eye)	ahsee	dis

day	our	daily	bread.	Forgive
gace (a as aye)	ahee	gayee (a as aye)	bĕd	Forgive

us	our	trespasses,	as	we	forgive	those
ahsee	ahee	sahpeeses	ahsee	we	forgive	dōsee (o as in hero)

who	trespass	against	us.	Lead
who	sahpis	agaeesee (both a's as aye)	ahsee	Eedee

us	not	into	temptation,
ahsee	not	eekew (ew as in Matthew)	keekasōm (a as aye)

but	deliver	us	from	evil.	For	Thine
baht	geewee	ahsee	vŏm	eewil	For	dahee

is	the	kingdom.	the	power,	and
is	dee	keedou (ou as in loud)	dee	pahdī	ahd

the	glory,	for	ever	and	ever.	Amen.
dee	gōrī (or as in anchor)	for	ewee	and	eewee	Ahmee.

The paper gave in detail many interesting points in connection with these cases, and finally discussed the nature, treatment, and origin of the affection and referred to some other recorded cases.—After the reading of the paper the children were shown to the Society, and they repeated the alphabet and the Lord's Prayer to show their condition at the present time.

A Case of Defective Articulation.—Dr. Frederick Taylor reported a case similar to those communicated by Dr. Hale White and Mr. Golding-Bird. The patient was 8½ years old, and had no physical defect beyond a very slight arching of the palate. He had three fits at the age of 8 months, and had measles and scarlatina at 4 years. He had never talked properly, and when he came first under observation was almost unintelligible. He, however, understood what was said to him, could read little words, and could write in a child's round hand. When he first came under notice his pronunciation of many consonants, especially p, t, k, s, was defective, and he added the syllables "idā" and "ēdā" to nearly every word that he spoke. He had been submitted to a modified oral instruction, and was after some months much better. His pronunciation, of two kinds, of the Lord's Prayer, on December 20th and February 3rd, was shown.

	Our	Father	which	art	in	heaven,
Dec. 20th.—	Ouarda	farada	id	arda	a	haïda
Feb. 3rd.—	Ouer	faerda	we	ad	a	evven

	Hallowed	be	Thy	name.
Dec. 20th.—	Howarda	beda	adarda	dene
Feb. 3rd.—	Alloēda	be	Thy	name

The author regarded the case as mainly one of defect of articulation, the centres for which might be regarded as less apt for education than those of average individuals. Dr. Taylor then brought his case before the Society, and got him to repeat the alphabet and the Lord's prayer.—Dr. Pye-Smith agreed with Dr. Taylor that the term "idioglossia" was not the best way to express the condition, which was not a language but an imperfect form of English, or rather English imperfectly pronounced. He thought that the alphabet was not a good test, as the names of the letters were not well fitted for recording sounds. He noticed that with labials and gutturals differences well known to philologists were used as "d" for "l," "g" for "y," etc. The prefixing of initial vowels was, he said, curious, and compared the French word "espèce" with the Latin word "species." The addition also of terminations was well known. They seemed to him to be extreme cases of what was called in America "baby language," complicated perhaps in some of the cases by some physical defect, as nasal obstruction. The vocal apparatus, and also probably the central organs, were in these cases perfect. He complimented those who had had charge of the children on the great improvement obtained.—Dr. Hadden showed one of his three cases which had been referred to; they were all deficient in a similar manner to those before the Society. He suggested that the best treatment was by isolation. To understand the nature of the defects one must remember that all children began to acquire language by oral education; the first words learnt were "dada," "tata," etc., in which the mouth mechanism was obvious; whereas such words as "gee," where the mechanism was not so obvious, were only learnt later. He asked if any of Dr. Hale White's cases could trill their "r's." His first boy was left-handed, and the father had died in an asylum. The second was not left-handed, but some relations stammered. He mentioned a case recorded by Dr. Sainsbury of a child whose speech was imperfect, and one of whose relations had six fingers. He agreed with Dr. Taylor and Dr. Pye-Smith that the term "idioglossia" was not a satisfactory one. Mr. Spencer Watson thought that the cases under discussion might belong to the class of deaf-mutes, and that there might be errors of hearing comparable to errors of refraction, and that the condition could be removed by education. The defects could be attributed partly to defective hearing, partly to imitation, and partly to adenoid growths in the posterior nares. It was not necessary to assume any central nervous defect.—Dr. Wilks thought it was a question of speech rather than of language, and referred to the various theories of the origin of language; but he thought that occasionally the origin of the difficulty must be deeper. He mentioned four children that never spoke, though otherwise intelligent. The father of one of these was left-handed, and so was the child.—Dr. Langdon Down considered that Mr. Spencer Watson's idea that the defect was due to a want of correct hearing was probably correct.—Mr. Matheson attributed the condition to nasal obstruction. In his experience defective phonation was due to two causes—a neurosis and some obstruction or other exciting cause, such as rhinitis or even bad teeth.—Dr. Hale White, in reply, stated that Dr. Perry had suggested the name "idioglossia." As to the children not suffering from what the name implied, it was merely a question of terms, as many languages, recognised as distinct, resembled each other more closely than some of their own *patois* resembled them. If the condition was due to a defective hearing it would probably be much commoner than it was. He was sorry that nobody had been able to associate the condition with the left-handedness that was present in so many of the cases. In answer to Dr. Hadden, there had been no trilling of the "r's" in his cases, nor, in answer to Mr. Matheson, had there been any rhinitis or other physical defect, except possibly some slight nasal obstruction in one of the cases.—Dr. Taylor had considered the possibility of some physical defect in his case, but had found nothing except slight arching of the palate. The child seemed not to have the same capacity as other children to express by means of articulation the words which he had in his head.

MEDICAL SOCIETY OF LONDON.

Monday, March 9th, 1891.

R. Douglas Powell, M.D., President, in the Chair.

This being the first meeting under the new President, Sir Joseph F. Fayrer proposed a cordial vote of thanks to the retiring President, Mr. J. Knowsley Thornton, and a like vote was moved by Dr. Lauder Brunton, to the other retiring officers. Both votes having been agreed to by acclamation, the new President expressed his sense of the honour conferred upon him by his selection to the post he then occupied, and promised to do his best to further the interests and uphold the dignity of their ancient Society.

Adjourned Discussion on Angina Pectoris.

Dr. Lauder Brunton, in reopening the discussion, observed that in discussing the subject much help might be obtained from the analogy pointed out by Professor Grainger Stewart between the heart and the bladder. Both were hollow muscular organs, contracting and dilating at fairly regular intervals, and expelling liquid contents. In both slight distension formed a stimulus to contraction, but, if the distension became excessive, it might cause pain, varying in amount from slight discomfort to extreme agony. The sensation of pain, he said, was always central, for it depended on a condition of the brain which might be excited by a peripheral irritation like a diseased joint, but might exist quite apart from any peripheral disease, as in hysteria. A mixed condition might exist which was both central and peripheral, as in the vesical crises of locomotor ataxy, and possibly a similar condition might occur in the heart. Usually distension, either of the bladder or the heart, not only caused contraction in them, but, through the nervous system, lessened the resistance of the sphincter in the case of the bladder or of the arterioles in the case of the heart. Disturbance of this nervous relationship might cause excessive distension or pain in either organ apart from organic disease, giving rise to spasmodic retention or vasomotor angina. But while the spasmodic character of angina pectoris indicated its nervous origin, it was so frequently associated with diseased coronary arteries and fatty heart, that these evidently played a great part in its causation. Angina pectoris might be said to be due neither to high tension alone, nor to weak heart alone, but to weakness of the heart in relation to the resistance it had to overcome; and it might be brought on either by weakening the heart or increasing the resistance, or both together. In tracing out its pathology, the analogy with the bladder was useful. The resistance which the heart had to overcome depended upon the contraction of the systemic arterioles. Of these there were three subdivisions—cutaneous, visceral, and muscular—and the latter was the most important in relation to the attacks of angina. One of the most striking symptoms of angina was

the ease with which it was brought on by muscular action. The first effect of this was to prevent the passage of blood through the muscles and to raise the tension, although afterwards the vessels of the muscles dilated and the tension fell. To this primary rise Dr. Brunton attributed the occurrence of anginal attacks on exertion; and their passage off, if exertion could be continued, was, he considered, due to the subsequent dilatation of the vessels of the muscles, with consequent fall of blood pressure and lessened resistance. He thought that atheroma of the coronary arteries was so powerful in causing angina because it prevented the supply of blood to the heart being increased on exertion, as it ought to be in muscles generally. The pain of angina he considered to be due to distension of the heart, and its more common occurrence in the left than the right side of the heart to be due to the greater ease with which the tricuspid valves became incompetent than the mitral when the ventricles became dilated. Angina pectoris was very rare in children, but one case was recorded of a boy, aged 14, in which there was aortic regurgitation and mitral stenosis; and another in a boy, aged 11, where there was ossification of the auriculo-ventricular groove, conditions which would prevent dilatation of the mitral orifice and insufficiency of the valves. He agreed with the previous speakers in regard to the necessity for the elimination of waste products, and also for restricted diet in gout, and for the use of iron and arsenic in feeble heart; but he regarded the nitrites as the most efficient remedy during a paroxysm, and, on the whole, iodide of potassium as the most useful in the interval. He showed a tracing which appeared to indicate that it lessened the rise of blood pressure in exertion, and mentioned a case illustrative of its remedial action.

Dr. J. Mitchell Bruce said he should confine his remarks to a few practical points, the first being what was called vasomotor angina. He had seen a great many cases answering to the description that had been given of this vasomotor angina, but he did not think that they were really cases of this kind; indeed, he was of opinion that such cases were very rare, and the term as generally employed was not only unfortunate but misleading. He pointed out that in most instances the malady occurred in elderly people, between 40 and 50, inclined to be stout, and who had led an anxious but not over-active life—men who had achieved an independence and felt entitled to enjoy themselves a little. They sooner or later had symptoms of irregular gout, and he insisted upon the fact that such patients were unlikely to present a hard pulse, for they were generally weak and nervous. Moreover, there was very frequently a history of cardiac strain, and the first attack of angina was often referred to a particular instance of over-exertion. When men with this gouty disposition strained their heart there was a tendency for the gout to attack the heart, just as it tended to attack other parts of the body that had been subjected to strain. If an attack of acute gout supervened it might be associated with a rise in the blood pressure, but its effect was not to make the patient worse, but to relieve him. They were thus confronted with the observed fact that an attack of angina was relieved by a condition which might be expected *a priori* to aggravate it or to bring it about. He maintained, therefore, that high tension was not a usual factor in the production of angina pectoris. In the matter of treatment he recommended muscular exercise, attention to diet, iodide of potassium, and the use of purgatives. He suggested that the use of the term "vasomotor angina pectoris" should be abandoned in favour of some such description as "gouty heart," which described a pathological condition, and not a mere collection of symptoms. With regard to the classical angina, he had been struck by the large proportion of minor cases as compared to the severe ones. He remarked incidentally upon the involuntary passage of a copious motion at the onset of a severe attack, and he concluded by expressing surprise that nothing should have been said in reference to the so-called pseudo-angina.

Dr. F. de Havilland Hall observed that gout of the heart was a not uncommon cause of death. The condition described as "gout of the stomach" was often due to angina, the cause in other cases being gall-stone colic. He mentioned that angina pectoris and gall-stone colic were often confounded, relating a case in support of this view in his own practice. He alluded to the effect of cold in precipitating the attack of angina in certain patients, and mentioned that these were precisely the cases in which nitroglycerine did the most good.

Dr. Seymour Taylor said he had made a special study of heart spasm, and divided cases of angina into cardio-vascular, neurotic, and reflex. He called attention to the fact that angina was mostly met with in patients belonging to the better classes.

Dr. Fletcher Little related three cases illustrating various clinical features of the malady.

Dr. J. Ross (Manchester), who was not able to be present, had written a letter to suggest a theory to account for the distribution of the pain in angina. His idea was that the local pain was conducted to the portion of the spinal cord corresponding to that from which the diseased viscus derived its splanchnic nerves, and then spread through the posterior horns of the grey matter and led to eccentric projections referred to the terminations of the somatic nerves derived from the same segment of the cord.

Professor Gairdner, of Glasgow, also wrote expressing his inability to recognise the angina pectoris vasomotoria of Nothnagel as a true clinical description, and he thought that the term was positively misleading. He admitted that there might be a vasomotor element in Heberden's angina, but urged that this was distinctly subordinated to organic structural changes in the heart.

The President, in reply, said he was unable to divest himself of the view that the cause of the pain was spasm of the heart resulting in distension, and he could not rally to the idea of its being due to neuralgia. He pointed out that neurotic affections were invariably associated with disturbance of function, and yet it was a matter of observation that in certain cases of angina the action of the heart was not interfered with even during the attacks. This militated strongly against the neuralgic theory. He dissented from the view that angina was not usually associated with lesions of the mitral orifice, and observed that this was at any rate not his own experience. Moreover, it was generally at the mitral orifice that evidence of degenerative changes were first met with in elderly and gouty people. With reference to the relative value of nitrite of amyl and nitroglycerine, he usually gave preference to the former. He mentioned a case in which the dose had been carried to 7 minims three times a day, rising to 35 drops during an attack, the dose being repeated after a short interval. Special attention had been paid to ensure the solution being of the proper strength. He observed, however, that such doses could only be safely resorted to with the patient under close observation, and very gradually. With regard to the exercise treatment, he said he would be very sorry to advise it in what he still regarded as a definite class of cases, namely, the vasomotor anginas. In these cases muscular exercise would be likely to prove injurious. He concluded with an expression of gratitude to those gentlemen who had joined in the discussion, regretting that time did not permit of a fuller reply to their very interesting remarks.

HUNTERIAN SOCIETY.

Wednesday, February 25th, 1891.

Stephen Mackenzie, M.D., President, in the Chair.

Urochrome.—Dr. Thudichum read a paper on urochrome, its alleged derivation from the pigments of the blood and bile, and on the bearing of the alkaloids and extractive acids of the urine in gout, etc. A demonstration was given of the precipitation of the alkaloids of the urine by phosphomolybdic acid, and the separation of the pigment (urochrome) by ferric chloride. When urochrome was subjected to chemolysis several products were obtained—as a black substance, uromelanin; omicholine, which produces the intolerable smell of burnt urine; and uropittin, called by Proust urinary resin. Uropittin was recognised by a special band in the spectrum, something like that of hydro-bilirubin, but not the same. The prevailing opinion of the identity of uropittin and hydro-bilirubin was an error. It was stated in modern works on chemistry that the hydro-bilirubin was derived from hæmatin. He maintained this to be wholly mistaken. The urinary colouring matter was an alkaloid and a synthetic product of kidney action, not merely discharged by that organ. The alkaloids and organic acids in the urine normally balanced each other,

but, if the alkaloids were deficient, the synthesis of colouring matter was not equal to that of the uric acid; the latter regurgitated into the blood, and gout ensued. As to uræmia, urea was so diffusible a substance that it could easily be got rid of—sweated out of the skin, in cholera, for example, as he had proved. But with the colouring matter it was different; poisonous products were retained if the synthesis was insufficient. Uro-theobromin was another of these alkaloids, isomeric with the base contained in cacao. It was precipitated by copper oxide as a green precipitate, and if boiled again, with excess of copper oxide, it reduced it just like sugar. This probably accounted for some of the statements that healthy urine contained sugar.

Permanganate of Potash as a Urinary Test.—Mr. F. R. Humphreys read a paper on this subject. Instantaneous decoloration occurred in a solution of permanganate when urine was added rapidly to it. After testing the known organic and inorganic constituents normally present, he came to the conclusion that a phenol was the only one which could produce this effect. The phenol might be present in such a form as to admit of ready oxidisation. Baumann had proved that phenol, besides being made in the intestine, was also formed during the decomposition of albumen. The reducing body corresponded in its diurnal variations with urea and the uncombined sulphates; it was therefore certain that it was, like them, a product of the metabolism of the tissues. If the reducing body was a phenol compound it ought when retained to produce cerebral and nerve effects. It was remarkable that the forms, degrees, and symptoms of carbolic acid poisoning bore the very closest resemblance to those of uræmia, and that several of the most useful drugs in the latter condition were antidotes in the former. It was found that when the excretion of the reducing body was much diminished or increased, symptoms of uræmia were generally present. One cubic centimetre of a 5 per cent. solution of permanganate was diluted with 4 or 5 parts of water in a test tube, and the urine rapidly run in from a pipette marked in cubic centimetres. The normal amount of the reducing body excreted in the twenty-four hours was found to be from 17 to 34 grains, reckoned as permanganate, being highest in the first urine of the morning, in that passed four or five hours after a meal, and in fine warm weather. It was much increased in all febrile cases, except when marked cerebral symptoms were present; much diminished during a sick headache, but increasing rapidly as it passed off. The author claimed to have discovered the presence of a powerful reducing body in the urine, whose daily history showed it to be a product of the metabolism of the tissues, whose reactions corresponded to a certain extent with those of a phenol, and whose suppression or excess corresponded closely with febrile cerebral symptoms, and with those of uræmia.—Dr. W. Hunter said the views of Proust and Thudichum on urine pigments were foremost down to 1870; since then Jaffé had opened a new era. The colouring matter was no longer looked on as an independent body, but as a variety of pigments whose genetic relation to those of the bile and blood was established. Bilirubin was, without doubt, of the same nature as hæmatoidin; the relation was illustrated in old blood extravasations where blood was found in the centre; then an area of hæmatoidin crystals, and outside the green colour of biliverdin. The modifications of urobilin found in urine (MacMunn) were almost precisely the same as those found in the bile. Urinary pigments were extremely unstable, and readily passed from one body to another when exposed to the air or to a few drops of acid. He viewed, then, with suspicion the results of such heroic methods as the use of phosphomolybdic acid, and relied more on the spectroscope and simple extraction with ether, etc. These methods led to the belief that all the pigment was derived from the blood, and was hence an index of changes in the body.—Dr. Lewis Jones had found a red body in febrile urine, giving a band at F, the junction of green and blue; this was urobilin, the uropittin, he supposed, of Dr. Thudichum. The colour of normal urine was due to a yellow body, which gave no characteristic spectrum, and was unknown.

Yellow fever is said to be increasing in Brazil, and intending emigrants are warned of the fact.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of State Medicine.

Friday, February 13th, 1891.

A. W. Foot, M.D., President, in the Chair.

The Education of Midwives.—In the absence of Dr. Atthill, his paper on the education of midwives, considered in connection with the Midwives Registration Bill, was read by Dr. Cosgrave, Honorary Secretary of the Section. The President thought it would be the duty of the General Medical Council to lay down regulations for the education of midwives. The chief interest of the discussion would lie in the direction of the points of contact between the proposed educated midwives and the general practitioners.—Dr. Quinlan said that as the Bill did not extend to Ireland, it appeared to him that the principal point was to protect the right of practising in England and Scotland, now belonging to the diplomated midwives and nursetenders who had been licensed by the two chartered Dublin hospitals, and also by the Royal College of Physicians of Ireland. At present these Irish diplomates were legally authorised to assume the title of midwife in any part of England and Scotland. If this Bill were passed, the right of these diplomates would be swept away in the two sister kingdoms.—Remarks were also made by Drs. Falkiner, J. W. Moore, and Mr. Horne.

Illness caused apparently by Aniline Coloured Sweetmeats.—Sir Charles Cameron, after pointing out that numerous cases of illness had been attributed to aniline colours used in clothing and for colouring food, explained that the toxic action of the dyes was generally attributed to the arsenic used in the preparation. He had investigated three distinct cases of illness in which the symptoms were attributed to the use of coloured confections. The children in three distinct families were taken ill with vomiting and purging after eating coloured comfits and sugar balls. Analysis revealed no mineral poison in the confections, but it was noted that the colouring matter was very large in quantity. It proved to be fuchsin. These cases rendered it not improbable that fuchsin might be toxic even when free from arsenic.—The President thought the injurious effects of aniline dyes, especially fuchsin, might be due to the affinity for this colouring matter on the part of the protoplasmic matter of cells, which imbibition and staining might reasonably be expected to interfere with their physiological or biological action, and therefore be detrimental to various bodily functions.—Dr. Quinlan said one of his earliest recollections was the banquet given in Dublin to the soldiers coming from the Crimea. On that occasion the tables were decorated with confectioned edifices, which, perhaps, contained as much plaster-of-paris as sugar; in compliment to this country, they were mostly coloured green, that colour being due to Scheele green. Through a window left open for ventilation the boys of the locality got in after the banquet, feasted on the confectionery, and as a result there was extensive arsenical poisoning. Fortunately none of these cases proved fatal, but they gave great anxiety. He thought that the use of aniline colours in confectionery was much to be deprecated. There were vegetable and animal colours available which were absolutely safe. Cochineal gave a fine red, saffron a yellow, litmus a blue, and turmeric a brown. Furze blossoms gave a nice yellow, which was often used for colouring eggs in boiling, and with these resources he thought that aniline colours ought to be left alone. The use of metallic pigments by the confectioner was a crime which ought to be severely punished in all cases where it was detected.—Dr. Falkiner and Mr. Lentaigne also spoke.

Civil Service Insurance Scheme.—Dr. E. MacDowel Cosgrave read a paper on the recently instituted Civil Service Insurance Scheme. The Committee of the Civil Service Insurance Fund had arranged with the North British and Mercantile Insurance Company to insure, up to £1,000, the lives of all civil servants applying within two years, without any medical examination, without any declaration of health, and without any reference to friends. After the two years had expired, all joining the Civil Service would be insured on the same terms any time within five years of having passed the medical examination made on entering the service. In both cases a reduction of 15 per cent. on the first premium and on renewals was given. The author pointed out the probable

result that whilst bad lives—that is, those rejected or required to pay higher premiums by other offices—would be certain to take advantage of this chance, first-class lives would probably prefer offices taking only healthy lives, and so more likely to pay good bonuses. Several lives rejected or loaded by the author, which had since entered under the new scheme, were cited. If the scheme succeeded, it would cause other companies to relax their medical examinations, and would tend to place insurance in the hazardous condition it occupied early in the century.—Remarks were made by Dr. FALKINER, Mr. LENTAIGNE, Mr. HORNE, the PRESIDENT, and Mr. DOYLE; and Dr. COSGRAVE replied.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, FEBRUARY 26TH, 1891.

W. DALE JAMES, M.R.C.S., President, in the Chair.

Lupus Verrucosus.—The PRESIDENT showed a case of lupus verrucosus, which originated in crushing of the foot ten years before. The dorsum of the right foot, the toes, and the instep presented patches of papillary warts on ulcerated bases. The case had been treated several times for eczema. Improvement had taken place under salicylic and carbolic acids.

Vesical Calculi.—Mr. H. T. WIGHTMAN showed (for Mr. G. H. SHAW) four calculi, of a total weight of 2 oz. 2 drs. 22 grs. They had been removed from a woman, aged 69, through the urethra, by means of simple dilatation. The largest calculus measured 1½ by 1¼ inch, and 1¼ inch thick.

Cystic Degeneration of Ovaries.—Mr. R. FAVELL showed two ovaries undergoing cystic degeneration from a married woman, aged 27. The left one was situated behind the uterus, low down in Douglas's pouch, and was the size of a small orange. It was adherent to the back of the uterus, to the rectum, and side of the pelvis. The tumour contained a number of small cysts. The right ovary was found to be cystic and also adherent to the side of the pelvis.

Extrauterine Fœtation.—Mr. R. FAVELL also showed (for Mr. LAVER) the contents of the sac of an old extrauterine fœtation, which the latter had removed from a patient on February 13th last. The fœtus had probably been quiescent in its sac for ten years. In 1881 the patient did not menstruate for twelve months, the abdomen enlarged, the breasts filled with milk. She thought she was pregnant, and said she felt movements. She was in bed for fifteen weeks with pains in the region of the umbilicus of a tearing, twisting kind. After the pains passed off, menstruation began again. Two years later she aborted of a three months' fœtus. Since then she had been regular in her periods, but scanty. For the last twelve months she had complained of pain. When operated on the sac was found intimately adherent to the bowel, bladder, and pelvis. The bones of the skull were loose in the sac: the right side of the fœtus was fairly preserved: the left side had become completely macerated. The opening into the sac was stitched to the abdominal incision. The patient was then doing well.

Diffuse Scleroderma.—Dr. ALFRED ROBINSON showed a patient suffering from scleroderma diffusum, a man, aged 28. The disease commenced in November last during the severe frost, the first symptoms appearing in the skin of the neck, and spreading to the lower extremities. The body weight increased from 10st. 7lbs. to 11st. 1lb. There was no history of insanity, and the urine was normal, having a specific gravity of 1025. The treatment consisted in the administration of arsenic in five-minim doses, and pilocarpin one-tenth grain three times a day, with friction, cod-liver oil, and tonics. Under this treatment the patient had improved somewhat.—Mr. JAMES, Dr. SIDNEY ROBERTS, and Mr. R. J. PYE-SMITH made remarks.

Laparotomy for Intestinal Obstruction.—Mr. R. J. PYE-SMITH read notes of an unsuccessful case of laparotomy for acute intestinal obstruction. A married woman, aged 32, of good general health, had borne two children the last two years previously, when, in reaching up to a shelf, she was seized with pain in the abdomen, which became constant after two days. After six days the bowels, regular before, ceased to act, and bilious vomiting set in. The patient was brought to the Sheffield Public Hospital and Dispensary on the eleventh day of her illness. The abdomen was greatly distended, and resonant everywhere, except over the uterus (five months' pregnancy). The pain was distinctly paroxysmal, with visible peristalsis during the attacks. There was no hernia, and the rectum was unobstructed. The diagnosis of internal strangulation of the small intestine being made, laparotomy was at once performed under ether. A twisted band was found, passing across the pelvis behind the gravid uterus, and consisting of the right Fallopian tube attached to what appeared to be the left ovary. Behind this tightly stretched band the ileum was nipped about four feet above the ileo-cæcal valve. The band was doubly ligatured, and divided: the ends, when thus freed, retracting rapidly, the left one out of sight. The patient regained consciousness, but lived only sixteen hours after the operation. *Post mortem* it was found that the ligature on the left half of the band was not, as had been supposed, close to the left ovary, but on the right ovary; and that in connection with this was an ovarian cyst as large as a cocoanut. The cyst was lying perfectly free in the left hypochondrium, in contact with the spleen and behind the stomach. In the earlier part of the operation a glimpse of it had been caught, but it was hastily concluded to be the stomach. The left ovary was normal in size and position. The ileum was denuded of peritoneum at a spot four feet above the ileo-cæcal valve, and the whole of the small intestine above was distended and inflamed, the coils being adherent to the parietes.—Dr. HARGREAVES, Mr. C. ATKIN, Mr. A. JACKSON, Dr. KEELING, and Dr. SIDNEY ROBERTS took part in the discussion.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, FEBRUARY 18TH, 1891.

W. ROSS JORDAN, M.R.C.S., in the Chair.

Recurrent Aphemia.—Dr. STACEY WILSON showed a man aged 51, who was suffering from a third attack of aphemia. The first, which occurred in 1885, was accompanied by a slight degree of word blindness, and he remained dumb for eleven months. He then suddenly and completely recovered his speech, and remained well till January, 1890, when he again lost speech; on this occasion there was as before much headache and some fever. He regained his speech in three weeks, thanks to a sudden fright. He lost it again for the third time in August, 1890, and his condition at the date of report was one of absolute mutism, although he was in the possession of his other faculties. Dr. Stacey Wilson pointed out that the case at the present time might be considered to be practically one of hysterical mutism, and that some sufficiently powerful and correctly directed external stimulus was all that was necessary to put the patient's motor speech centre once more under his control.

Rodent Ulcer of Eyelids.—Mr. WOOD WHITE showed a man, aged 53, who five years before had been struck on the upper eyelid by a piece of wood. The wound never healed, but, according to the patient's statement, "seemed to ulcerate and go on wasting." It continued thus for two years before it spread to neighbouring parts. All previous wounds healed readily. Three months ago the patient was first seen by Mr. Wood White. The eyelids were then much thickened and infiltrated, especially near their margins. The palpebral aperture was reduced in size and the eyeball pushed backward, but there was no sign of ulceration. Various opinions were expressed as to the diagnosis, some regarding the condition as epithelioma. The patient was again seen a week ago, when the appearances were much altered, the lesion having spread upward as far as the eyebrow and downward for some distance on the cheek. Its margin was well defined, and it left the skin in an atrophic and scarred state, but there was still a remarkable absence of ulceration.

Foreign Body in the Eyeball.—Mr. WOOD WHITE also showed a patient who had received a penetrating wound of the eyeball from a piece of bell metal. The vitreous was perfectly clear, and the details of the fundus could be well seen. The foreign body was adherent to the retina on the inner side, a short distance behind the ciliary process, and was projecting into the vitreous: the reflex from it was bright and glistening. It had been in the eye for several days, but there was no sign of redness or inflammation. Bell metal being a composition of iron, brass and glass, and the piece being firmly fixed in the globe, the electro-magnet had not been used.

Rickety Pelvis.—Dr. PURSLOW showed a patient with rickety deformity of the pelvis, for whom he had performed

craniotomy. She had been in labour twenty-four hours; version had been performed, and when seen by Dr. Purslow the feet of the child were protruding and the cord pulseless, but the head not engaged in the brim. The occiput was lying to the left side. The head was perforated behind the right ear, and delivered by the aid of the crotchet, though not without difficulty. The patient made a rapid recovery. She was 28 years old, had been pregnant three times previously, delivery taking place in each pregnancy at the seventh month, all the children being dead; on two occasions the forceps was used. There was a marked projection forward of the sacral promontory, and the symphysis pubis was depressed backwards in the median line. The diagonal conjugate measurement by the hand was 3⅛ inches. True conjugate, allowing for shape of pubes, not more than 2½ inches. The fœtus from the above case was a male, fully developed with a large well ossified head. Attention was drawn to the difficulty in piercing the head with the perforator, owing to the thickness of the skull at the point which had to be selected.

Hernia into and Cysts of Umbilical Cord.—Dr. Purslow also showed a fœtus with the above conditions, born between the seventh and eighth months. The labour was complicated by hydramnios, and the child lived a few hours. The hernia contained a coil of intestine covered only by peritoneum and amnion through which it could be clearly seen. Dr. Purslow drew attention to the possibility of the ligature being applied on the distal side of the hernia, and to causing death from obstruction on separation of intestine and intestinal fistula.

Paper.—Dr. Foxwell read a paper on the Heart Murmurs in Anæmia.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Wednesday, March 4th, 1891.

C. Haydon White, L.R.C.P.Lond., M.R.C.S., President, in the Chair.

Anæsthesia and Anæsthetics.—Mr. Joseph White read a paper on this subject, based on experience gained from 4,500 administrations. In order of frequency the anæsthetics used were chloroform, ether, A C E mixture, bichloride of methylene, and amylene. The physiological effects of anæsthetics might be divided into four stages: (1) the stage of continued consciousness; (2) the stage of semi-consciousness; (3) the stage of sleep; (4) the stage of coma and threatened death. The special phenomena and dangers attending each stage were discussed. It was very rarely necessary to push anæsthesia beyond the third stage. In the fourth stage the pupil dilated, the eyeball became fixed; the breathing became slow, stertorous, and irregular; the heart beat more and more feebly; clammy sweats broke out and death ensued, respiration generally ceasing before the pulse. The results of the committee appointed by the Royal Medical and Chirurgical Society, in 1863, and the Glasgow Committee appointed by the British Medical Association, in 1877, were shown to be in substantial harmony. The Glasgow Committee pointed out the influence of chloroform—far more than that of ether—in lowering blood pressure, and that such lowering might occur with great rapidity. They also insisted on the importance of watching the pulse as well as the breathing, and on artificial respiration as the most efficient treatment of threatened syncope. The first and second Hyderabad Commissions were then referred to, and the conclusions of the latter carefully examined. Professor McWilliam, of Aberdeen, observed the effect produced on the exposed heart of animals in inhalation of anæsthetics, and found that under chloroform all the cavities became dilated, whereas, with ether, dilatation was slight or inappreciable. Mr. White gave a detailed description of the views of the second Hyderabad Commission upon the order of cessation of respiration and pulse, and, contrary to their advice, emphatically advised attentive watching of both pulse and respiration. The paper concluded with practical directions for administration, among them being a warning not to push the anæsthetic during the struggling stage; the importance of carefully watching pupils, pulse, and respiration; and, in cases of danger, immediate resort to artificial respiration. The President urged, where possible, the careful preparation of the patient before giving an anæsthetic, and avoidance of hurried measures. He commented on the frequency of death during anæsthesia for slight operations.—Dr. Elder expressed a preference for ether.—Dr. Hunter advocated keeping the patient's head low, with the neck extended and the lower jaw well raised.—Dr. Neilson referred to some observations by himself on the state of the pupil during anæsthesia.—Dr. W. B. Ranson alluded to the fact that several animals about to be experimented on by the Hyderabad Commission died before the experiment began, and wished to know what explanation of this was offered. He thought a needle inserted into the heart would exhibit wavy movements, but this was no proof of general effective contraction of heart muscle. Again, artificial respiration was capable of stimulating a feeble heart as well as feeble respiration.—Mr. Kingdon quoted a fatal case in which the pulse undoubtedly stopped before respiration.—Mr. Pryce thought that in giving A C E mixture on a mask there was danger of giving excess of chloroform, owing to the different degrees of volatility of the two fluids.—Dr. Boobbyer mentioned a case in which chloroform was given for many consecutive hours for the relief of puerperal eclampsia, and in which, after death, *ante-mortem* clot was found in the aorta and carotid arteries.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Thursday, February 12th, 1891.

David Drummond, M.D., President, in the Chair.

Cases.—Dr. Geo. Murray showed a woman, aged 46, who had been suffering from myxœdema for four years. He had determined to try the effect of injection of extract or juice of the thyroid.—Dr. Gowans said a history of uterine hæmorrhage was always to be obtained in these cases; improvement was often due to changes in the weather. As regards the duration of life, one of his present cases had been under observation for thirteen years.—Dr. Arnison showed three cases illustrating different methods of excising the wrist, viz., Lister's, transverse dorsal incision, and longitudinal dorsal incision. He preferred Lister's method as being capable of more rapid and easy performance, and less likely to be followed by matting of the tendons.—Mr. Page showed a case of excision of the wrist by Langenbeck's method, giving a very good result.—Mr Black drew attention to the ulnar incision advocated by Watson, of Edinburgh.—Mr. Page showed a girl on whom he had operated for an aggravated form of cross-legged deformity, resulting from inflammation of both hip-joints six years previously. He divided the neck of each femur with Adams's saw; the wounds were dressed only once, and the patient rapidly recovered, and now walked with ease and comfort, the two limbs being now parallel, though ankylosed at the hips. Mr. Page also showed two boys suffering from lupus, who had been treated for two weeks by Koch's method. Both were improved, but neither were cured; in one boy in whom the fluid now produced no action the disease was still spreading.—Professor Philipson showed a boy treated for lupus by Koch's fluid; he was greatly improved, reaction still followed the injections.—Dr. F. Rutherford showed a boy with lupus of the nose, who had had seven injections of Koch's fluid. He considered the result so far was good, and expected to be able to cure the case. The boy had become thinner and anæmic during the treatment. Dr. Shaw showed a girl exhibited by Dr. Hume at last meeting. She suffered from a small patch of lupus on the nose; it had been scraped and treated by iodoform, and was now perfectly healed.—Drs. Embleton, Ridley, Geo. Murray, Redmond, Martin, J. Rutherford, and Mr. Page joined in the discussion on these cases. Dr. Lyon showed a woman suffering from floating kidney. She had had a large family. No symptoms were complained of.—Mr. Page showed a boy who had lost the arm, scapula, and part of the clavicle in a machinery accident.—Mr. Black showed a child, aged 3 years, on whom he had performed arthrectomy for tuberculous disease of the knee. He recovered very rapidly, the anterior incision healing by first intention.—Mr. Page said he had performed a similar operation seventeen days ago. In that case he did not take off Esmarch's bandage till the dressings were on, and the latter had not been removed since the operation. Dr. J. Rutherford showed a man suffering from phthisis whom he had treated by Koch's method; the man had been in bad

health for two years, and had a cavity at one apex. Under the treatment expectoration had greatly diminished, and sixteen pounds in weight had been gained.—Dr. BRAMWELL showed a woman with an unusual form of cancer of the breast.

Specimens.—Dr. GEO. MURRAY showed three specimens of Endocarditis in the Pig with microscopical specimens. The vegetations were as large as walnuts, affecting in two chiefly the left heart, in the third chiefly the right. The superficial layer of the vegetations was crammed with bacilli, no micrococci being visible. It was a question whether these were the bacilli of swine fever. The symptoms were quite different from the symptoms of swine fever.—Dr. REDMOND showed Renal Calculi passed under the influence of belladonna.—Dr. BENINGTON showed a Tooth from an Ovarian Dermoid which he had lately removed.—Mr. RUTHERFORD MORISON showed the Tubes and Ovaries removed from a case of Pyosalpinx, with uterus bicornis and hæmatocele of the broad ligament. The patient made a satisfactory recovery. Mr. Morison also showed a large soft Œdematous Fibroid removed by enucleation. The uterine mass before operation reached from the umbilicus to the anterior superior iliac spine. He also showed the Uterus and its Appendages from a case of Myxœdema.

Card Specimens.—Mr. PAGE: *Débris* of Vesical Calculi removed by crushing from bladder of boy, aged 6.—Mr. RUTHERFORD MORISON: Patient after Gastrostomy. — Dr. LIMONT: (1) Strumous Kidney, (2) Villous Tumour of Bladder, with microscopic sections.—Dr. HOWDEN: Human Muscle showing Trichina Spiralis.

Exhibits.—Dr. ARCH. PERCIVAL pointed out the disadvantages of the round prisms which were generally used, and showed some Square Prisms with a light frame which he had devised. The prisms could be quickly slipped into the frame, their shape insuring a correct position at once and preventing the possibility of any subsequent displacement. He recommended such prisms to be worn on trial by patients before definitely prescribing them. He had found them useful in detecting lateral faulty tendencies of the ocular muscles by associating convergence and accommodation, for example, when homonymous diplopia was induced by a prism of 5° dev., edge out, an upward tendency of one eye was revealed by a displacement downwards of the corresponding image. Similarly, on inserting a prism of 3° dev., edge up, simple vertical diplopia should be produced. If any lateral displacement was also observed it indicated a tendency of the eyes to convergence or divergence. The extent of these faulty tendencies could be roughly ascertained by guiding the prism, which would correct the displacement. Dr. Percival also showed some Coloured Crosses, made of red and blue paper pasted on a black background. When the right eye was proved with a red glass and the left eye with a blue glass, the right eye could only see the red limbs of the cross and the left eye the blue; so that binocular vision being rendered impossible, the eyes assumed the position of minimum tension, and faulty tendencies were revealed by separation of the limbs of the cross.

Papers.—The following papers were taken as read:—Mr. PAGE: Large Retroperitoneal Dermoid Cyst, successfully removed through an incision across the perineum, midway between the anus and coccyx.—Dr. Limont and Mr. Page's case.—Dr. EMBLETON: The Newcastle Medical Society One Hundred Years Ago.—Dr. PERCIVAL: Faulty Tendencies of the Ocular Muscles. Dr. REDMOND: Treatment of Infantile Convulsions by Anæsthetics.

CORK MEDICAL AND SURGICAL ASSOCIATION.

WEDNESDAY, FEBRUARY 11TH, 1891.

J. COTTER, M.D., President, in the Chair.

Specimens.—Dr. MORIARTY exhibited a small Tumour which he removed from the parotid region. On microscopic examination it proved to be a cystic enchondroma. Dr. Moriarty also exhibited a Blood Cast of the interior of the uterus from a patient who ceased to menstruate three months previously. An early abortion was suspected, but no trace of ovum could be found in the clot.—Dr. COTTER (for Dr. HOBART) exhibited a submucous Fibroid of Uterus removed by wire écraseur. The tumour, which was about the size of a large orange, was examined microscopically, and proved to be a fibromyoma.—Dr. COTTER exhibited a chronically enlarged Bursa Patellæ removed by excision. The tumour was pear-shaped. The walls of the sac were much thickened and indurated, and the contents were purulent. A discussion ensued on the various methods of treatment of chronic bursitis, in which several members joined. Antiseptic incision with drainage was the operative method advocated by the majority of the speakers.

WEDNESDAY, FEBRUARY 25TH, 1891.

J. COTTER, M.D., President, in the Chair.

Specimens.—Dr. SANDFORD exhibited the Brain of a child, aged 6, who died of acute meningitis. A considerable quantity of fluid escaped from the ventricles. Inflammatory lymph was also deposited over the surface of the pia mater, particularly at the base. There were numerous adhesions, and no tuberculous deposits were present.—Dr. H. R. TOWNSEND showed an Ovarian Cystic Tumour removed some time previously. The patient made a rapid recovery.—Dr. E. TOWNSEND exhibited an Aneurysm involving the ascending and transverse portion of the arch of the aorta. The tumour protruded through the sternum, which was eroded. The recurrent laryngeal nerve was flattened from pressure of the tumour. The sac was nearly filled with laminated fibrin. There was complete absence of pain and pressure symptoms, except on the recurrent laryngeal nerve.—Dr. DONOVAN exhibited the Brain of a man who was found lying unconscious in the street. Twelve hours after admission to hospital he died. He was quite comatose the whole time, with contracted pupils and paralysis of the sphincters. There was extensive effusion of blood at base of brain, over the pons and medulla, extending along the fissure of Sylvius on each side, especially on the right. The abdominal organs were healthy, except the liver, which was enlarged and congested: the lungs were healthy.—A discussion took place on the preceding specimens, in which several members took part.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, FEBRUARY 20TH, 1891.

PATHOLOGICAL MEETING.

T. CHURTON, M.D., President, in the Chair.

Cases and Specimens.—Dr. ALLAN showed (1) Cancer of Suprarenal Bodies: there were malignant growths in the lungs, extending to the pericardium (which were also shown), and a small mass in the right ascending parietal convolution, causing hemiplegia and death. (2) Skull from case of Rickets, showing spongy and vascular outgrowths from the frontal bones. (3) A method of Opening the Cranium was recommended and illustrated, by which the usual circular incision was carried only as far as the beginning of the occipital region and the ends joined by a cut at an obtuse angle. (4) Cancer of the Stomach.—Dr. BARRS showed a photograph of a remarkable case of Retroperitoneal Hernia.—Professor BIRCH showed (1) a Double Monster Kitten, with two bodies and one head, and discussed the formation, which he thought to proceed from a fusion of ova; (2) Minot's Ribbon-cutting Microtome.—Dr. BRAITHWAITE showed (1) a Cancerous Growth attached to the Liver; (2) "Fungosities" of Uterus, a series of sections prepared by Mr. Croft; (3) Uterus Extirpated for Cancer.—Dr. BRONNER showed (1) a series of growths (Post-nasal Adenoids) removed by Hartmann's curette to illustrate the different forms of hypertrophy of the pharyngeal tonsil and the formation of the so-called Toonwald's Bursæ; (2) Fibromucous Polypi of the Nasopharynx; (3) Parts of the lower Turbinated Bones removed by the dental trephine; (4) Caries of the "Attic" (or upper part of the tympanum) causing cerebral abscess; (5) Caries of the "Attic" and upper Mastoid Cells, which had caused phlebitis of the lateral sinus. In answer to a question by Mr. MAYO ROBSON, Dr. BRONNER thought one was not justified in opening the mastoid antrum, unless in face of serious symptoms pointing to suppuration, but that in case of obstinate otorrhœa, which would not yield to the usual remedies, it was becoming the practice in America to remove the ossicles and scrape out the "attic," removing for the purpose a small bridge of bone above the meatus, but this

region was dangerously near to the brain.—Dr. RABAGLIATI showed a large Hydronephrotic Cyst. Eight years ago it had been tapped, being supposed to be parovarian. The fluid which was drawn off was nearly pure water (urea not being looked for). It was not till after removal that it was found to be renal. There was no obstruction to the ureters, and he thought that interstitial nephritis might be the cause of the dilatation.—Dr. JACOB cited cases in which, though there was no apparent obstruction *post mortem*, there had certainly been during life.—Dr. BARRS pointed out that interstitial nephritis was usually the result of the dilatation. He referred to a case where there was a double hydronephrosis, apparently due to the insertion of the ureters obliquely somewhat high up into the pelves. One important peculiarity of these cases was that they spontaneously emptied themselves. In the case he referred to the pelves were found flaccid when examined *post mortem*.—Dr. JOHNSTON, who attended the patient in her confinement, said the abdomen was then flaccid. After her previous confinement she had had a severe illness, and her abdomen had been large since that time, so that she wondered if she were pregnant.—Dr. TREVELYAN referred to a case of death with suppression of urine, where there was a double hydronephrosis, but no obstruction was found.—Dr. T. WARDROP GRIFFITH described the *post-mortem* examination of a case of Congenital Malformation of the Heart associated with transposition of the thoracic and abdominal viscera. The patient had been shown at the Society two months previously. He also showed some specimens recently added to the Anatomical Collection at the Yorkshire College, including a dissection by Mr. Ellison and Mr. Hughes of the vagus and sympathetic system.—Dr. TREVELYAN showed a series of microscopic sections illustrating Tract Disease in the Spinal Cord by the structure of the cord of a five months fœtus; also sections of Nerves from a case of Peripheral Neuritis, with microphotographs by Mr. Secker Walker.—Dr. JACOB gave a demonstration by the lantern microscope of Tuberculous Growths in various organs, and showed microscopic sections of Actinomycosis from a Cow's Tongue; 2, a series of preparations recently placed in the Pathological Museum of the Yorkshire College.—Mr. MAYO ROBSON showed a Fibrous Polypoid Growth removed from the Knee-Joint.—Mr. JESSOP showed: 1, Extrauterine Fœtation: 2, Villous Growths of Bladder (the third operation for removal); 3, Scirrhus of Breast; 4, Ovaries from two cases of Oöphorectomy.

REVIEWS AND NOTICES.

STUDIES IN STATISTICS: SOCIAL, POLITICAL, AND MEDICAL. By GEO. BLUNDELL LONGSTAFF, M.B., M.A.Oxon. London: E. Stanford. 1891. Roy. 8vo. Pp. 440, with maps and numerous diagrams.

To the common saying that "You can prove anything by statistics," Dr. LONGSTAFF replies that "Without statistics you can prove nothing;" and appropriately prefixes to this volume a Shakesperian motto, "You apprehend a world of figures here." The first three chapters, dealing with the calculation of birth, death, and marriage rates are of an elementary character, and do not call for special remark, though we may notice his very clear exposure of the common fallacy originated by the late Dr. Letheby, that a high death rate necessarily follows from a high birth rate, whereas the latter tends in fact, after a few years, to increase the proportion of young adults at ages of the lowest mortality and greatest productive and reproductive power.

With Chapter IV on the Growth of Population in England the real business of the work begins. This is illustrated by two maps, indicating by colours the density of population in each of the counties of England and Wales in the years 1831 and 1881. Should the present rate of increase continue—and as yet there is no appearance of a decline, we shall by the year 1901 have to provide for an addition to the population of 7 millions. Some idea of what this means may be gathered from Dr. Longstaff's calculation of the additional accommodation required in schools, churches, hospitals, etc., and of the probable increase of the local indebtedness, which has risen in fifteen years by little short of £100,000,000. More than half of these 7 millions will be added to the populations of towns having already 50,000 or more inhabitants, and the influence of this growing preponderance of dwellers in towns over those in the country may lead to a serious deterioration of the general physique of the nation. The causes of this current from the country to the towns is ably discussed in a subsequent chapter.

The statement, however, that "in the three registration counties of which London is made up the additional numbers crowded upon each square mile (between 1831 and 1881) were no less than 6,000, 18,000, and 26,000 respectively," is open to misapprehension. True of each county taken as a whole, it does not necessarily imply any increased density of population in the areas already occupied, for the building over of what were green fields may be attended by actual relief to the overcrowding of the town. Estimates of density which do not distinguish West Ham and Wanstead Flats, Bermondsey and Wimbledon Common, are utterly misleading, and for such areas separate calculations should be made.

The migrations of the nineteenth century are briefly considered in the next chapter. Dr. Longstaff distinguishes between movements of the population within a country as from the rural districts to the towns: those from one country of Europe to another: and emigration, properly so called, from the old countries to the colonies or other places "beyond the seas." The first he calls intra- and the second inter-migration. Since no records of the movements of a people within their own land are possible, the net results only can be ascertained by comparing the actual with the natural increase or decrease of the population of each county or other division. The net results, of course, understate the real numbers of migrants, many more having, so to say, "paired" or exchanged places. In a map, the counties of England and Wales are distinguished by colours into three groups, namely, those in which the population has decreased, those in which it has increased by a number less than the excess of births over deaths, and those where the increase has been greater than this "natural increase." The first group, fourteen in all, are, as might have been expected, exclusively agricultural, with the single exception of Cornwall: but as the total decrease in their population during the ten years, 1871-80, does not exceed 82,000, of which 38,000 is contributed by Cornwall, and was owing to the exodus consequent on the closing of the mines, there does not seem to be much evidence of the alleged "depopulation of the rural districts." Intermigration can be estimated only by the birthplaces of individuals as ascertained in the census, but the results in some cases are highly instructive. As regards England, for instance, the influx of Scotch and Irish, and to a much less extent of foreigners, has been such as greatly to alter the quality of the population, though not its quantity. Indeed, the net increase in the population after forty years ending in 1881, during which the great communities of Australasia had been created, to say nothing of the enormous migration to the American continent, was only 88,000 less than it would have been had no emigration or immigration taken place. The population of Ireland has fallen off, and that of Scotland has slowly increased, but 5.8 per cent. consists of persons of Irish birth, and of course a much larger proportion are of Irish blood. In France, again, 18 per cent. of the increase in the population is the direct result of immigration, and the foreign element, especially the Belgian, Italian, and in a less degree the German, must in time materially affect the constitution of the nation. Emigration is determined by the laws of supply and demand.

The growth of new nations is, perhaps, the ablest chapter in this remarkably able work, and well deserves the earnest study of statesmen and economists. No fewer than seventy pages are devoted to the ethnography and growth of the United States, while the localisation of the negro, and the Irish, German, Scandinavian, and British immigrants is exhibited in five maps, showing chromatically the proportion which the foreign-born element bears to the native in each State. American statistics are extremely imperfect, and many of the estimates are avowedly conjectural. The growth of the population from all causes is astounding, having risen in fifty years from 17 to 62 millions. In another ten it will probably be four times as great as it was in 1840. American

estimates of immigration are certainly overstated, especially as regards the immigration from Canada. So much, however, is certain, that 13½ per cent. of the population is foreign born; that there are at present over 2 millions who were born in Germany, as many in Ireland, and about 1 million in Great Britain, these together constituting 9.5 of the whole people. The black or coloured population, being the product of slavery, is thinly spread along the middle zone, but densely in the south, constituting over 50 per cent. of that of South Carolina, Mississippi, and Louisiana, little less in Georgia, Virginia, Alabama, and Florida, and over 15 per cent. from Delaware in the east to Texas in the west. The pure negro, though short-lived, is extremely prolific under the southern sun, but the mixed or coloured race, shunned by and shunning both black and white, is rapidly deteriorating and dying out. Dr. Longstaff speaks of intermarriages between white and coloured persons as being less frequent since than before the emancipation.

Treating of the "Growth of Modern Cities," Dr. Longstaff's observations are well worthy of attention on the part of a a certain class of politicians. "The tendency of people to flock into cities is," he says, "observed alike in old countries with increasing populations, such as England and Germany, and with a stationary population like France, in a new but populous country like the United States, but, perhaps, most strikingly of all, in very newly settled countries with small populations, such as Victoria, New South Wales, and even Manitoba, the very newest." "The causes," he adds, "are manifold. On the one hand, the application of machinery to agriculture has diminished the demand for agricultural labourers; and, at the same time, the increased use of meat as an article of diet (itself, he might have added, an indication of the growing prosperity of the working classes) has greatly augmented stock farming, which requires few hands. On the other hand, the application of machinery and steam have led to an unexampled development of manufacturing industries attracting labour from all parts to the chief centres of industry, the migration. . . . being immensely facilitated by improved means of communication." In Manitoba one-fifth, in Queensland over a fifth, and in New South Wales a fourth, of the population lives in the capital; while in New Zealand one-third, and in Victoria two-fifths, is to be found in the four largest towns.

In France the natural increase of the rural population greatly exceeds that of the towns, in many of which the deaths actually outnumber the births; yet, in the twenty-five years 1861-1886, the population of Paris has increased 38 per cent., Lille 42, Bordeaux 47, Marseilles 44, and of others from 25 to 30 per cent.

Discussing the growth of London, Dr. Longstaff shows, by comparing the natural increase of the population with the census returns of 1871 and 1881, that though the population of the central area declined by 74,000, *at least* 152,000 must have migrated from it: in like manner *at least* 260,000 settled in the inner and 198,000 in the outer ring. He says *at least*, since we know not how many "paired" or exchanged with others moving in the opposite directions. Our statistics of the foreign population of London are very imperfect; 60,000 at least are foreign born aliens, and an unknown proportion of the 19,000 "British subjects born abroad," many being British only by naturalisation; half of the total foreigners in England are found in London.

Passing over a chapter on Food Supplies and Some Suggestions for the Census, we come to the chapters dealing with medical statistics. He finds the decline in the death rate to be mainly owing to the greatly reduced number of deaths from fever and phthisis, concurrently with which there has been a real rise in those from diseases of the lungs, heart, kidneys, and cancer. The increased mortality from respiratory diseases is, however, not sufficient to account for the decrease in phthisis by different diagnosis, and this gain is the more valuable on account of the age of the lives saved and the health of their progeny. The tendency is to the prolongation of useful working life, but not, he thinks, to greater longevity, and the present increased mortality at advanced ages cannot be explained by the recent diminished mortality in early life, since half a century must elapse before the latter can come into operation in such a way. He also makes the striking and somewhat paradoxical observation that as a falling rate can only sink to zero, and a rising one may rise indefinitely, the ultimate result of the changes in the mortality from different diseases may conceivably be a higher total death rate than the present.

Again, since the sanitary conditions of towns are in many respects better than those of villages, and the age constitution of urban populations is such as, *cæteris paribus*, should be accompanied by a lower death rate than that of rural communities, the actual higher mortality of towns is connected with conditions of town life *per se*, of a nature not amenable to sanitary improvements.

The discussion of the causes of summer and infantile diarrhœa and of the distribution of diphtheria present a mass of facts, evidence positive and negative, and exposure of fallacies for the further investigation of these problems rather than any decided conclusions. His mathematical demonstration of the probability of a certain number of husbands and wives dying of phthisis within a few years of one another as a mere matter of coincidence irrespectively of its communicability, is capable of wider application to such questions as the alleged heredity of cancer.

A remarkable outcome of Dr. Longstaff's study of the seasonable prevalence of fevers in London is the striking correspondence between the curves of typhus and so-called "simple continued fever," which the highest authorities believe in most cases to imply obscure and unrecognised enteric fevers, though the curve of this last is totally different.

Such books as Dr. Longstaff's appear but rarely, and if the selected writings of Dr. Farr constituted the basis of the science of vital statistics, Dr. Longstaff's essays exhibit it in its highest present development, and provide a mass of facts and materials indispensable to the medical statist, and of others which claim serious attention on the part of the statesman and the economist.

NOTES ON BOOKS.

Studies from the Physiological Laboratory of Owens College, Manchester. Vol. I. Published by the Council of the College, and edited by Professor WILLIAM STIRLING. (Manchester: J. E. Cornish. 1891.)—Professor Gamgee, during his tenancy of the chair of Physiology in Owens College, published a volume of *Studies from the Physiological Laboratory of Owens College.* His successor has now issued another volume under the same title, which is, somewhat strangely, numbered I. The volume consists of a series of papers written by investigators who carried on their researches in the Physiological Laboratory of Owens College. The majority of them have already appeared in various journals, but one or two have not previously been printed. Among these is a paper by Dr. Stewart on Loss of Heat by Radiation, and another by the same author on the Electrolysis of Animal Tissues.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SUGGESTION FOR A NEW TOURNIQUET.

I WISH to offer a few remarks on the disuse of tourniquets—the too prevalent practice of using Esmarch's tube in amputations and to submit to the profession a form of tourniquet which I think offers many advantages.

Since Professor Esmarch first introduced the practice of employing an elastic bandage from the end of a limb to above the seat of amputation, and an elastic tube in place of a tourniquet, this tube has, on account, I suppose, of its easy application, almost superseded other methods of controlling hæmorrhage. Now this I think is a retrograde step, for though in practice it has been found that when the full Esmarch is employed a great loss of blood takes place from the vessels apparently being unable to contract after the strong compression, yet it is surely desirable, by the applica-

tion of a suitable tourniquet, to have perfect control of the main artery, whilst leaving the collateral circulation as free as possible, which the elastic cord simply stagnates, leading to great loss of venous blood during the operation and when subsequently relaxed. This cannot be avoided if an elastic cord be used, be it Esmarch's, Cousins's, or Maw's.

Of tourniquets, only Pettit's and Signoroni's require notice here, for none other have ever been generally used. Now Pettit's—excellent in many ways—is objectionable on account of its webbing admitting of the absorption and retention of septic matter, and Signoroni's—admirable in principle—is awkward in use if a small limb has to be operated upon.

I have accordingly had a tourniquet made by Messrs. Salt and Son, of 69, Corporation Street, Birmingham, which, being a steel band nickel-plated, with polished wooden pads, offers I think these advantages: With ordinary cleanliness it is quite aseptic, it cannot rust, and is of easy application, whether to a large or small limb, the segments gliding smoothly and closely over one another, whilst the opposing pad, which fixes the bands, can always be placed opposite the arterial pad, as it slides in a slot and the band is slotted for eight-ninths of its circumference.



The plate will explain its construction. The one I have will encircle and efficiently compress limbs, from 2½ inches to 8 inches in diameter, and a tourniquet of similar pattern, but capable of encircling a larger limb, might be made, though in that case I think a stouter band would be required.

Dover. ASHBY G. OSBORN.

TRIANGULAR BANDAGE.

SURGEON R. R. SLEMAN, of the 20th Middlesex (Artists') R.V., has recently brought out, for use in the Volunteer Ambulance School of Instruction, an illustrated triangular bandage. This is a modified and improved form of Esmarch's well-known handkerchief bandage, being a little larger and presenting much more variety in the illustrations. There are thirty-seven of these, depicting not only the different methods of applying the bandage, but also methods of performing artificial respiration, the displayed contents of a surgical haversack and a medical field companion, and the different ways of forming with the upper extremities a seat for a sick or wounded person. There is also a clear print of the human skeleton, in which the course of each of the large arteries is marked out, black dots being placed at different parts to show where these vessels can be compressed. Apart from its value as a surgical appliance, this triangular bandage, together with an accompanying printed key, will, we have no doubt, prove of service for purposes of reference to those who have been instructed by lectures and demonstrations in the many details which are here so well illustrated.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1891.

SUBSCRIPTIONS to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MARCH 14TH, 1891.

THE NEW FACTORY BILL.

IN two previous articles we have discussed the proposal of the Home Secretary to abolish the office of certifying surgeon under the Factory Act—an office instituted at the outset of factory legislation, and maintained, during the several alterations and extensions that Act has undergone, as an integral part of essential importance. Whilst crediting Mr. Matthews with great talents as a counsel, we consider we do him no injustice in regarding him as but little acquainted with manufactures and those employed in them, or with the processes of manufacture, or with the sanitary requirements of factories, or with the medical organisation of the Factory Act, its purpose and its uses. The remarks made by him in the House of Commons bear out this inference, and point to some strong influence brought to bear upon him from outside, which he designated "an authority of experience." Who this authority may be that is thus deemed sufficient to justify the destructive policy he proposes we are not told. But it was assuredly a rash step to listen to apparently one person, and to omit to gather from past history and experience the ample motives for organising a system of medical supervision over youthful candidates for labour. The same "authority of experience" undoubtedly also led him to make the fallacious statements as to the proved inutility of certifying surgeons, which we have already controverted. But if we do not know the name of the individual who got the ear of the Home Secretary, there is no obscurity as to the origin of the movement against the employment of certifying surgeons. It comes almost solely from the towns of Lancashire and Yorkshire engaged in the cotton trades; that is, in those very trades in which the glaring abuses of uncontrolled work of the young were first brought to light, and for the suppression of which the factory laws were passed.

It may be granted that in those textile districts there is so considerable improvement in the physical health and well-being of the operatives and their families that the duties of the surgeons are less onerous than formerly. How will this fact help the argument for their abolition? Is it not rather evidence of the efficiency of the Factory Act, as worked conjointly by the inspectors and the medical men, and suggestive of the danger of a relapse into the deplorable state of things that existed before factory legislation came into operation? And inasmuch as the professed end and aim of Mr. Matthews's Bill is the improvement of the sanitary condition of factories, its introduction, coupled with that of the Bill of Sir H. James, is an admission that the sanitary state

of mills and of mill-hands is not satisfactory and needs the amending powers of the Legislature. And, in passing, it is well to observe that the latter Bill is practically the outcome of a movement among the textile operatives of Lancashire and Yorkshire to secure more attention to their hygienic surroundings. In other words, the same textile districts from which originates the proposal to disband the medical officers of the Factory Act (the most qualified people to look after sanitary matters), are those also which call by the mouth of the working classes for additional attention to sanitation. No place has so distinguished (?) itself in the clamour against certifying surgeons as the comparatively inconsiderable town of Keighley, so far as represented by its small chamber of commerce—a town, by the way, too well known by its rebellion against sanitation and the vaccination laws. For in the deputation which waited upon the Home Secretary in February last year the leading spokesmen came from that borough, and, curiously enough, made precisely the same wild statements respecting the factory surgeons and their work as were advanced in his speech by the Home Secretary. The fallacy and gross exaggeration of those *ex parte* statements were immediately afterwards demonstrated by facts and figures in a document sent to the Home Office.

We all well know that in associations, great and small, resolutions not engaging the vital or special interests of the members can be carried at a meeting by the dominating and persevering action of a few individuals. A grievance may be set up and, though not felt, be listened to and voted upon if speciously put and vigorously insisted upon; and so we are persuaded it has happened where chambers of commerce have passed resolutions adverse to the employment of certifying surgeons. As asserted before, the movement is not a spontaneous, genuine, and general one on the part of the whole of the trades of the country. Moreover, it is not a question only for manufacturers, but for operatives and the public, whose health interests are concerned in it.

How imperfectly manufacturers understand the purposes of the clauses of the Factory Act relative to the functions of certifying surgeons becomes apparent by the resolution adopted at a recent meeting by the Associated Chambers of Commerce. The resolution, moved by Mr. Clough, of Keighley, is thus worded: "That this association again expresses its strong opinion that the visits of certifying surgeons to factories and workshops are no longer necessary, inasmuch as in all cases of employment of children in factories and workshops a labour certificate from the school board or local educational authority must be presented showing the date of birth, and that the prescribed standard of the educational code has been passed. That a memorial be presented to the Home Secretary embodying the resolution."

This resolution proves a want of knowledge, both of the law and of logic. Of the law, in that the visits of certifying surgeons to workshops is not required; of logic, in that a certificate from a school authority does not fulfil the purpose decreed by law, namely, that certifying surgeons are called upon to certify not as to age, but as to physical fitness and freedom from disease, or any condition incapacitating children for work. Besides, in the case of young persons above 14, no certificate from a school authority is required: hence this imaginary safeguard against improper employment is deficient in their case.

Another manufacturer who spoke in favour of the resolution was equally distinguished by his ignorance of the existing law. He was possessed with the notion that factory laws were made only for textile works, for he remarked that, "if physical unfitness was to be regarded, then it should be made to apply all round, and not only to one or two industries." We recommend this gentleman to read the Factory Act, 1878, and to learn what is its scope.

Another manufacturer followed on the same side with the profound argument that, at the present day, children are "much better tended, both at home and in the public schools," *ergo*, certifying surgeons are not at all necessary. We do not appreciate the logical force of this argument. If children are better tended at home (a proposition with numerous exceptions, as the Children's Protection Society can show) and if the arrangements for education are improved these, if facts, do not demonstrate that all children brought for work in factories are sound in wind and limb; and, as for the physical benefits to them arising from modern school regulations, considerable scepticism is allowable, for it is the contention of many qualified judges that the pressure produced by the present method of administering the law as to compulsory education is proving hurtful to the health of the rising generation, and, in the near future, it will become a question whether schools shall not be placed, out of regard to the physical and mental fitness of their pupils, under the supervision of medical men.

Another circumstance to be borne in mind with reference to the question under discussion the utility of certifying surgeons—is this, that, with comparatively few exceptions factory owners and occupiers of themselves know nothing of their registers, or of the entries of examinations and rejections contained in them. For almost always, excepting in very small places of work, the register is put in the hands of and kept by a junior clerk, a warehouseman, or a lodge-keeper, who has to look to the certifying surgeon for instruction and direction, without which registers would be total failures for every purpose the law intends them for. In this absence of knowledge on the part of factory occupiers of what the surgeons have to do, or actually do, may be found an explanation of their passive acquiescence in resolutions propounded by others professing to understand, and sufficiently obtrusive with their opinions. We may proceed farther, and say that manufacturers can give no reliable opinion on the healthfulness of their *employés* generally. Every medical man attached to hospitals or dispensaries situated in manufacturing towns is well aware of much sickness due to occupation, and of much which of itself bears witness to employment prosecuted for a longer or shorter time after it ought, out of regard to the well-being of the patients, to have been given up. Of what value is the opinion of a manufacturer on any considerable scale regarding his workpeople's health, when one or more hundred, or it may be thousands, are present in his mill, and he has the absorbing task of looking after his business, his books, his orders, and the working of his machinery? Again, it is to be remembered that in many manufactures the young "hands" are not the immediate servants of the factory occupier, but of his workpeople, by whom they are hired or discharged, and to whom they look for wages. In this fact, if it stood alone, a reason would be found for a staff of medical officers to protect the young against unreasonable conditions of labour, possibly imposed

on them without the sanction of the occupier, and regarding which he may shirk all responsibility.

The truth of our proposition follows from all this, namely, that the opinions of factory owners or occupiers respecting the healthiness of their workpeople are of no substantial weight; they amount merely to general impressions. Our observations, moreover, show that factory masters often do not hold in their hands a control over the hiring of their youthful operatives, and cannot be held responsible for their physical condition; and, therefore, that an independent officer or officers of medical experience are requisite to stand between the hirer and those hired, in the interests not only of the latter but also of the masters themselves, on whom the law casts the onus of not employing the unfit.

Mr. Stuart Wortley, in the debate, made much of the largeness and importance of the deputation of February, 1890; but an analysis of those present scarcely bears out his laudation, though it confirms our view as to the limited number of trades and the limited locality represented by it. Mr. Broadhurst, whose strong common sense all admire, had been captured for the occasion to appear as a representative of a working-class agitation against the employment of certifying surgeons. He was probably inveigled into occupying that position by some specious representations that did not bear his subsequent scrutiny; for at the debate on the second reading of the Amendment Bill under consideration, he receded from his previous ground of objections, and was prepared to admit that the doctors could show cause for their existence.

At the interview referred to the operatives certainly failed to make out any real objection. The only one attempted was that the doctors' examinations caused them inconvenience. We fail to see good grounds for this complaint. There is this much, indeed, in it, that they must suffer inconvenience by the rejection of children they bring forward for work; but this inconvenience is precisely what the law aims at bringing about. But if the inconvenience intended be that it is an annoyance for their young ones to appear for examination, it is one of a sentimental character, unless all registration of names, ages, parentage, and residence be given up; for attendance to see the surgeon is no more trouble than attendance to exhibit their certificates and to be registered—a business largely done, in fact, by the certifying surgeons, without whose aid and supervision registration itself would be void. But this plea of inconvenience might be as fitly urged against the visits of inspectors, who are not always welcome, and, with equal reason, be made an argument for their abolition.

The gist of the matter as to the operatives' objections is discoverable in the admission made that there was a certain proportion of workpeople who would be in favour of abolishing all inspection, whether as to age or education. It was not said that an abolition of inspectors was desired, for the very reverse wish is entertained—namely, that a very large increase of inspectors and sub-inspectors shall be made from among operatives; and it is conceivable that the idea may be entertained that, if certifying surgeons can be dispensed with, then so much the better will be the prospect of the operative classes for Government employment. We commend the alternative indicated to the consideration of the owners and occupiers of factories.

As things at present work, much that the surgeons do is equivalent to inspectorial agency. We cannot in this article illustrate this statement; but it may be taken as a fact that, if certifying surgeons are set aside, the masters have to look forward to a vast addition to the present number of inspectors, selected from among their workpeople, with a goodly company of outside skirmishers in the shape of sub-inspectors, both male and female.

THE ROYAL COMMISSION ON VACCINATION.

The Third Report of the Royal Commission on Vaccination, to which we have already referred, is however so full of interest to all who wish to investigate the question of the efficacy of vaccination, that it would be well to examine some of the evidence rather more fully. The Report contains the views and, what is more important, the foundations on which these views are based, of several of the best known opponents of compulsory vaccination, such as Dr. Alfred Russel Wallace, Mr. Tebb, and Mr. Wheeler. Each of these gentlemen was examined by the Commissioners at great length.

The evidence of Dr. Wallace is that to which most of us will turn, owing to the distinguished position in science that he deservedly occupies as a naturalist of the highest order. It was felt by many that surely such a man must have good reasons for being an active opponent of compulsory vaccination. We learn from his evidence that he would not be opposed to compulsory isolation: it is not the interference of the State in protecting the population from small-pox that he objects to so forcibly, but rather the nature of the interference; the fact that vaccination is the remedy enforced. Dr. Wallace explained to the Commission that his evidence was statistical, and that with this object he had prepared a large number of tables and diagrams, some taken from his publications on the subject, and some prepared for the Commission.

These diagrams were apparently very conclusive, showing amongst other things that vaccination and small-pox had increased together. Dr. Wallace, curiously enough, refused to believe that the vaccinations were caused by the small-pox—that is, that they were revaccinations at the time of epidemics—yet declined to take the other logical position that vaccination was a cause of small-pox. As Dr. Foster pointed out, either the connection was real or unreal; if the latter, the cause of the unreality must be discussed: if the former, one might be the cause of the other. But Dr. Wallace preferred not to give a decided opinion on the question. He pointed out that as his tables referred to such large numbers and to such long periods of time, they were much more likely to be accurate than statistics drawn from shorter periods and from a smaller number of cases. However, as the sequel showed, there were several errors in this conclusion. For example, the average former mortality was deduced from 23,596 cases as being 18 per cent., but the maximum mortality, 36 per cent., was drawn from a large number, whereas the minimum, 10 per cent., from a very small number, that is, 268 cases. Again, a large proportion of the statistics were drawn from the reports of doctors, and, as was said by one of the commissioners, these are scarcely on a par with hospital statistics. Dr. Wallace averred that he had not paid much attention to the Metropolitan Asylums Board's returns. Another point strongly urged by the witness was that probably about a quarter of the population were vaccinated in 1822, that the number of vaccinations doubled in 1853 and again in 1867, and hence he assumed that

by that time a very large fraction of the population must have been vaccinated, and that notwithstanding this a great epidemic occurred in 1871. This, however, left out of consideration the relationship of births to population—an obvious fallacy, because, as the chairman remarked, the vaccinations might be doubled in one year and again doubled without materially increasing the total number of vaccinated persons. However, as regards the London and England tables, the greatest fallacy was that previously to 1838 the death-returns were taken from the bills of mortality, a return dependent upon burials, whereas since then the returns were obtained from the Registrar-General's statistics. It is clear that an increase in the small-pox mortality may be due to more accurate returns or to a real increase. Dr. Wallace accepts the latter as the true explanation, shutting his eyes completely to the gross errors that must have existed when the returns were obtained from the bills of mortality. Some of these errors came up before the Commission subsequently. Again, Dr. Wallace had no evidence that the bills of mortality were compiled from the same area as that to which his estimate of the population applied. It is obvious that with these errors the whole table must be valueless, notwithstanding that it deals with large numbers and a long series of years.

Dr. Wallace seems always to see only one side of a question. Thus, in the epidemic in Scotland he showed that the mortality in the towns was the highest, that of the country less, and that of the islands the least. This difference in the mortality he considered to be due to the different conditions of hygiene, quite overlooking the question of greater liability to contagion in the towns. Similarly, with reference to the army and navy mortality, he regards the difference as due to hygiene, and not to the different time at which vaccination was made compulsory in the two services. Again, Dr. Wallace does not dispute the fact that since vaccination has been compulsory the small-pox mortality of children has been far lower than formerly, whereas the mortality of other acute specific diseases in children has shown no such striking diminution. This fact the witness does not explain. It is, however, with regard to the tables applying to France that the most gross fallacies were present. In one case an addition sum was wrong to the extent of producing a mortality of 35 per cent., instead of 50 per cent.; then, again, the same town was included twice in the same table, and, owing to some mistake in the figures, it did not occupy the same position in the diagram on the two occasions. Further, the existence of "dots" in the returns was taken as meaning no deaths, whereas it meant no returns. In one case where this had been done, it turned out in the body of the report that in one town alone (Le Mans) there had been 832 deaths. Dr. Wallace finally admitted that if the existence of dots meant, as the chairman expressed it, that sometimes there had been nothing to report, and that at other times nothing had not been reported, the whole table was valueless. Again, the fact that tuberculosis—an inoculable disease—had not increased, whereas cancer, a disease that was not proved to be capable of inoculation, had increased, was very strong evidence against the cancer mortality being due to vaccination. In all these cases of increase of diseases like cancer, syphilis, etc., Dr. Wallace neglected the advances made in diagnosis, whereby the range of cases in which these diseases are recognised has been greatly extended.

We have pointed out enough to show that Dr. Wallace's statistics cannot be accepted, and that in itself is a very serious blow to the view he espouses, and a conclusion perhaps rather unexpected, seeing the scientific position that the witness occupies. He has, in fact, spent an enormous amount of time and labour in compiling tables, diagrams, etc., from imperfect data.

OFFICIAL REPORTS ON KOCH'S TREATMENT.

In another column will be found a brief outline of the large volume of the *Klinisches Jahrbuch*, which contains a long account of the observations made on the action of Koch's "tuberculin" by the heads of the clinics, policlinics, and pathological institutes of the various Prussian universities. In it are contained the reports of nearly sixty physicians and surgeons; and though, as might be anticipated, these reports are of very unequal value, we have in the collected series a most valuable fund of facts and information on which to base argument and from which to draw up statistics. One cannot help feeling, however, that some of the reports are so scanty and contain so little accurate information that they might with advantage have been entirely omitted, as they unprofitably occupy the time and attention of any reader who wishes to get at the gist of the matter. On the other hand, some of the groups of cases are exceedingly carefully recorded, and a painstaking study of these will well repay those who can afford to devote sufficient time to them. For most people, however, a perusal of the abstract contained in the last 60 pages (out of 900), with its complete set of tables and condensed opinions of those who have had most cases under their charge, or who have given most time to the treatment and study of their cases, will have to suffice. On reference to these tables, it will be found that the various workers have treated their patients in very different fashions; for instance, whilst the number of injections in some clinics averaged 3 per patient, in others it ran as high as 10, or even 18 and 19, so that these sets of cases must be put on a very different footing, and there can be little doubt from this that it is as yet absolutely impossible to give any definite opinion on the merits of tuberculin, from the simple fact that in most cases so far as one can gather from the reports before us, the treatment has not been exhibited for a sufficiently long period—a fact that is borne in all the more forcibly when even the best of the work on which the German reports are based are compared with the work that has been carried on in some of our home hospitals. In the supplement are given in tabular form the results of the treatment up to a comparatively recent date, and one is able to see at a glance the number of patients who have been treated, the number still under treatment, and those that are no longer in the hands of the physician. Then come headings under which are placed those who are practically cured, those considerably improved, those in whom slight improvement has taken place, those in whom there is no alteration of condition, and lastly, those in whom there has been only change for the worse or who have died. Thus it may be seen at a glance what is the effect of Koch's tuberculin in the early stages of phthisis, in more advanced cases where there is considerable solidification, and again in cases where there is a regular cavity formation. In connection with this portion of the work a short account of the alterations in the body

weight, of the expectoration, the physical signs, night sweats and general condition of the patient is given.

There seem to be marked divergences of opinion as to the efficacy of the remedy in combating these conditions, but there can be little doubt that under the treatment considerable improvement has in certain instances taken place. Then come tables in which laryngeal tuberculosis is considered, and in turn tuberculosis of the pleura and peritoneum, and of the urinary tract and testicles. Of course lupus, bone and joint disease and tubercle of the lymphatic glands form a large proportion of the cases that have been under treatment: and although there have been a considerable number of cases in which the conditions have remained unchanged, there are some in which healing has taken place, and a large number of others in which there has been very marked improvement. A striking feature shown by the tables reproduced on another page (600) is that in spite of the reports of death in so many cases as the result of the injection of this material, out of 1,769 cases in which the treatment has been followed from beginning to end, there have been only 55 deaths, and these appear to have been patients in whom the disease was very far advanced. In early pulmonary phthisis there has not been a single fatal case: in more advanced cases there have been 6 deaths, whilst in tuberculosis in which cavities were present, and where there was tubercle in other internal organs, there were 40 deaths: in cases of joint disease, 6 deaths: and in joint disease complicated with tubercle of the internal organs, 3 deaths. On the other hand, the number of absolute cures is comparatively small, being 13 in cases where the internal organs were tuberculous and 15 where the bones, joints, and skin were affected. There have, however, under the first group been 171 cases markedly improved and 194 slightly improved, leaving 586 in which there has been no change for the better. In the second group, 148 were considerably improved, 237 have improved, and there were 298 in which there was no evidence of any improvement.

It is, of course, scarcely necessary to point out that in the early history of a treatment such as that introduced by Koch, the statistics must necessarily bring out the worst side of the method; the grave and intractable cases remain in evidence, whilst the slighter cases, or those in which recovery may ultimately be expected to result, have not yet been sufficiently long under treatment to allow of recovery taking place. All the worst cases come to the *post-mortem* table, and consequently special stress must necessarily be laid on the conditions found after death, whilst in the cases where improvement is taking place, the progress of the reparative process must be slow. Even when the actual progress of the disease has been checked, there is nothing to guide the observer but physical signs and general symptoms and conditions, which in the early stages of improvement can seldom afford anything but very unsatisfactory evidence.

Mr. J. G. Adami, M.A., M.B., John Lucas Walker Student in Pathology, late University Demonstrator in Pathology, has been elected to a Fellowship at Jesus College, Cambridge.

The committee of the Brown Institution have recommended to the Senate of the University of London, for the appointment of Professor-Superintendent of the Brown Institution, Mr. C. S. Sherrington, M.A., M.B.Cantab, Fellow of Gonville and Caius College, and Lecturer on Physiology at St. Thomas's Hospital. There were seven candidates for the post.

At a meeting of the Special Committee of the Senate of the University of London on March 11th, it was resolved to recommend the Senate to have a draft charter prepared upon the lines of the last revised scheme. It was further recommended that this draft should be completed in time to be submitted to Convocation at its next meeting.

In the German Reichstag, on March 11th, Herr Schröder urged, in the course of a discussion in favour of the admission of women to the liberal professions, that it was the duty of the Government to pave the way for women to practise medicine. Dr. Orterer opposed this view. The House declared against the petition.

The Conference of Paris Advocates have recently discussed the following question: —Should a person who, not being a member of the medical profession, performs hypnotic experiments on another, be prosecuted for illegal practice of medicine? After full debate the question was decided in the affirmative.

SCOTCH AND IRISH DIPLOMAS IN AUSTRALIA.

It would appear that, owing to a very literal interpretation of the by-laws of certain hospitals in Australia—among others the Melbourne Hospital—Licentiates of the Royal Colleges of Surgeons and Physicians are ineligible for appointments, because they do not hold "the diploma of Member of such College," whereas Members of the Royal College of Surgeons are eligible. This exclusion of "Licentiates" upon purely technical grounds is obviously an injustice, and is in violation of the principle upon which all such by-laws should be founded, namely, that diplomas granted upon similar conditions should be placed upon the same footing.

THE COOPER MEDICAL COLLEGE.

A recent number of the *Occidental Medical Times* contains a report of the proceedings at the ceremony of opening the annexe recently presented to Cooper Medical College, San Francisco, by Dr. L. Cooper Lane. In another column we print a letter from Professor Samuel O. L. Potter, who gives an interesting account of the magnitude of Dr. Lane's benefactions to the college. Dr. Lane is Professor of Surgery in the college, is the nephew of Dr. Cooper, its founder, and for the last quarter of a century has devoted himself to the task of consolidating the position and extending the usefulness of the institution. The faculty of the college took advantage of the occasion mentioned to present to it a bust of Dr. Lane, which has been placed in the lecture hall.

EPIDEMIC INFLUENZA AND THE LOCAL GOVERNMENT BOARD.

When the epidemic of influenza of 1889-90 was at its height in this country the Medical Officer to the Local Government Board instructed Dr. H. Franklin Parsons to prepare a report: a series of questions were issued, to which a large number of replies were, we have reason to believe, forwarded. Much additional valuable information was at Dr. Parsons's disposal, and his report is, we understand, now complete, and will be published as a supplement to the Medical Officer's Report for 1890. His Report for 1889 is, however, not yet issued, so that the profession, it is to be feared, will be kept waiting yet another year before the Stationery Office will deign to place the results of Dr. Parsons's researches in its hands. Why this portentous delay in the publication of the Medical Officer's Report should recur year after year is quite inexplicable to the unofficial mind. Dr. Buchanan dates his report for 1888 "March, 1889," yet the volume which it prefaced was only

published in February, 1890. Under the present dilatory method of publication, the value of the Reports is sensibly diminished; their contents are to a large extent of a scientific character, and ought to be placed in the hands of scientific workers for their guidance and instruction after a reasonable interval. Premature publication of scientific researches is to be deprecated, but the Treasury or the Stationery Department, or whatever department is responsible for these vexatious delays, certainly goes to the other extreme.

DINNER OF THE LONDON MEDICAL SOCIETY.

The 118th anniversary dinner of the Medical Society of London took place at the Whitehall Rooms, Hôtel Métropole, on March 7th, Mr. J. Knowsley Thornton, President, in the chair. The number of Fellows and their friends present was probably quite unprecedented. After the dinner, the usual loyal and patriotic toasts were drunk. The toast of "The Medical Society" was proposed by the President in a speech containing humorous allusions to his own surgical proclivities in early life on domestic animals, and was responded to by Mr. Durham. The health of the retiring President was proposed by Sir Joseph Lister, who took advantage of the occasion to insist upon his social and professional qualities. The toast of "The President-elect" (Dr. Douglas Powell) was given by Sir Andrew Clark. The toast of "The Honorary Fellows," proposed in a very original and successful speech by Sir James Crichton Browne, was responded to by Sir James Paget and Sir G. Humphry. Several of the speakers referred in feeling terms to the fact that Mr. W. E. Poole, who for upwards of twenty-five years has been the esteemed registrar of the Society, attended that dinner for the last time in his official capacity, the advance of years and failing health having necessitated his handing over his functions to younger hands. The musical arrangements were organised by Dr. Charles Beevor and Dr. Charles Sheppard.

INFANT LIFE INSURANCE.

There is not a little danger that, owing to the absence of any especially exciting case and the counter-attractions of other legislation, the paramount claims of infants and young children to protection against evil-minded insurers may be forgotten or overlooked; and yet there is no subject which more urgently calls for remedial legislation than this. It is, however, we fear an undoubted fact that the public conscience has not really yet been stirred. The agitation against the so-called undertaker's clause in the Bishop of Peterborough's Bill last year was a sufficient proof that a considerable section of the public had not grasped the whole bearing of the case. Instances of actual violence will always command a certain amount of public sympathy with the injured party, but the neglect of daily and incessant care which an infant requires both in health and illness, though often criminal, is never regarded as such, even when the case is most clearly demonstrated. It is often said that if there has been neglect the doctor has only to refuse a certificate, and the inquest will secure that the guilty parent will meet his deserts. As a rule, nothing of the sort happens, and the inquest in these cases is almost invariably a farce. No amount of legislative interference can prevent that neglect in little matters which is certain to end in marasmus, but at least we can prevent the parents from enriching themselves in such a way, and we trust that before long some such measure as that introduced by the Bishop of Peterborough last year will have been added to the Statute Book.

CULTURE AND TOOTHACHE.

It would seem that at Kirkintilloch there exists a trust which combines in a ludicrous manner the encouragement of culture and of tooth extraction. There is a Lecture Committee, which owns a double function; in the first place, it arranges for courses of lectures, which it is to be feared are only modera y appreciated, since "several people have not paid for th ickets yet." Nevertheless, though there is a deficit on the intellectual side of the account, it would appear that, owing to the sympathetic munificence of a Mr. Mackay, there is an annual sum of £20 which the Lecture Committee, in its second capacity, has determined to devote to the good work of gratuitous tooth drawing. This department of the Lecture Committee's work is more appreciated in Kirkintilloch than the lectures. It does not appear whether the members of the Lecture Committee give the lectures themselves, but they at least modestly admit that teeth may be better extracted by others. This has given rise to an unexpected difficulty: the idea of having a tooth out for nothing is far more popular in Kirkintolloch than listening to lectures: the tooth extraction is sooner over and not much more disagreeable. Was there ever "yet philosopher that could endure the toothache patiently?" Kirkintilloch answers No! it is impossible to "charm ache with air, or agony with words." The mere whisper of a proposal to pay for surgical interference in such cases led to so many applicants that the Lecture Committee, at its first subsequent meeting, found reason to fear that even at the reduced price of sixpence a tooth—it is easy to be generous at other people's expense—the annual income would not last many months. However, two surgeons in the town have been persuaded to undertake the duty for six months, and then, if the next course of lectures turn out more popular and people pay more promptly, it may be possible perhaps to give a bonus with the tickets for the next course, say at the rate of two teeth for each lecture ticket, arrangements being made that the tickets shall be purchasable before the lectures, so that patients may be in a condition patiently to listen to the philosophers.

LEEWARD ISLANDS BRANCH.

As will be seen from a report in another column, a Branch of the British Medical Association was inaugurated in the Leeward Islands on January 22nd, under circumstances which appear to promise very well for its success. The inaugural meeting, which was held in the Colonial Council Chamber at St. John's, Antigua, was attended by all the leading officials of the colony, and was addressed by Sir William F. Haynes-Smith, K.C.M.G., Governor of the Leeward Islands, who showed that he took a keen interest in the work which the Branch proposes to do. Striking evidence of this was afforded by his suggestion that papers and discussions before the Branch on subjects affecting the public health of the colony should be published in pamphlet form at the Government expense. This suggestion has been adopted by the Branch, and Dr. Nicholls, who is at present engaged in an investigation into the prevalence of leprosy in the Leeward and Windward Islands and the Island of Tobago, was appointed editor. After the meeting the members were entertained at dinner by the Governor. The Branch was recognised at a meeting of the Council of the Association held on July 16th, 1890, when there were twenty-four members, and several have since been added. Dr. H. A. Alford Nicholls, of Dominica, took a very large part in the formation of the Branch.

DOUBLE CONSCIOUSNESS.

"Double consciousness" is one among the states of psychical abnormality which are always worth the study both of the physician and the psychologist, for it may give valuable hints as to what is the normal working mechanism of the mind, as to how it may get out of order, and, perhaps, as to how it may be put right again. Dr. Trowbridge, physician to the State Hospital for the Insane, Danville, Pa., gives us a recent instance.[1] A German, aged 52, with no family history of epilepsy or insanity, began to suffer from epilepsy when stoker on a transatlantic steamer nearly thirty years ago. He had several fits of violent convulsions within a day or two, with complete absence of both *haut* and *petit mal* for about four or five weeks, followed by regular recurrence. No treatment proved of any avail, and the symptoms, when they first came

[1] *Philadelphia Medical News*, February 21st, 1891.

under Dr. Trowbridge's notice, showed more interesting complexity. A pain in the left groin, of which the origin and conditions were obscure, came as an aura, preceding the group of fits by about twenty-four hours, or rather more. Then followed several attacks of *haut mal*, spread over two or three days, and the patient slowly lapsed into his "second self," a condition of sullen and abusive violence, in which he at first rejected all nourishment, but afterwards submitted to be fed. This lasted from five to ten days, and from it he recovered completely in about twenty-four hours, and remained cheerful and well till the same cycle recurred after about a month or six weeks. In the normal states there was no recollection whatever of the abnormal. The two conditions seemed sharply separated. The complete loss of identity and the regular periodicity of the attacks were the points of chief interest to Dr. Trowbridge. There was apparently, however, no recollection of one abnormal state in another, no double memory, implying a double continuity of existence with an alternating personality, a "hidden self," as Professor W. James has called it, which forms such a remarkable feature in Dr. Azam's classical case of Félida X., and of the cases which have been published by Dr. Dufay, by Professor Ribot, by Professor Beaunis, and also by Professor Pierre Janet, in his striking work *L'Automatisme Psychologique*. At the same time there may be more to notice, for Dr. Trowbridge has not as yet recorded any observations on the memory in the abnormal state, or any experiments by means of hypnotism such as all the French observers have found so useful as well as instructive in recalling in one state the memory and psychical conditions of the other.

THE NOTIFICATION OF MEASLES.

In a report to the Sanitary Committee of the Corporation of Newcastle-upon-Tyne, Mr. H. E. Armstrong, medical officer of health, expresses himself in favour of the inclusion of measles amongst the diseases which are compulsorily notifiable, and recommends a trial of its notification in Newcastle for a period of five years. The chief objection, namely, the inutility of preventive measures owing to infectivity of the patient before the disease is recognisable, is considered by Mr. Armstrong to be hardly a valid one, "for there can be no question of the public advantage in the authorities having full and early cognisance of the disease, for the purpose of preventing children suspected of incubating it from having the chance of infecting the air of crowded schools." Also if energetic measures were taken at the outset of an epidemic, the disease would never attain the dimensions it now does when left to itself. The need for greatly extended hospital accommodation, therefore, would not arise. With regard to the ignorance and carelessness displayed by the lower classes in respect of measles, and the frequent failure to call in medical assistance, Mr. Armstrong thinks it is reasonable to hope that with increasing general intelligence and willingness to make use of public measures on the part of individuals, almost as much might be done for measles as is now done for scarlet fever. Although amongst medical officers of health opinions are divided upon the desirability of compulsory notification of measles, yet those medical officers who have this measure in force in their towns are distinctly in its favour. These towns are Birkenhead, Brighton, Jarrow, and Edinburgh. It was formerly in operation at Blackburn and Preston, but is not so at present. There is also the question of expediency to be considered, namely, as to whether public opinion is sufficiently ripe for the inclusion of a disease so common and so seldom considered serious as measles. It is certainly not expedient, in a public sense, to arouse irritation and discontent over a measure which is likely to be regarded by the public as a hardship because its immediate uses are not plainly apparent. Still every town must be the best judge of the public feeling of its inhabitants in this matter, and if the sanitary staff is sufficiently numerous and enlightened to produce good work, and show satisfactory results in the prevention of measles outbreaks as a consequence of the compulsory notification of the disease, the measure ought certainly to be given a trial, and the public would not be slow to appreciate the blessings they derive from it.

EXHIBITIONS OF HYPNOTISM.

Although the exhibitions of hypnotic phenomena before miscellaneous audiences for the purpose of gain or amusement have been unanimously condemned by resolution passed at the annual meeting of the British Medical Association, as tending to degrade public morality, we regret to find such exhibitions are still countenanced and supported by members of the profession. In the *Standard* of March 7th a paragraph appears which commences as follows: "An explanatory lecture with illustrations of hypnotism was given at the Hôtel Métropole by Dr. Stanley, a young physician. Dr. Bond, Dr. Robertson, Dr. Carpenter, and other medical men were on the platform, *giving countenance to the entertainment*." The italics are ours. This entertainment was promoted by Messrs. Vert, Abud, and Moul, who sent us an invitation card to witness "Dr. Stanley's" performance, and we noticed that the name of M. Charcot was given on the card as one of the authorities under whom "Dr. Stanley" had studied, thus following the lead of the "Dr. Vores" to whose entertainment we lately called attention. A representative who attended the entertainment found, upon inquiry addressed to a gentleman who was distributing bills among the arrivals, that the name of the exhibitor was not "Dr. Stanley," but that he was "a brilliant student of Dublin University," and that his name was "Daniel Robert O'Sullivan." Another lay contemporary, giving an account of the entertainment, states that, after an explanatory introduction, "soon he began to illustrate these views on the batch of subjects he had brought along, a group of beings of apparently the lowest type of human intelligence. . . . Some fell all over the platform in such sort as to cause the spectators to expect to find several broken necks around," and our contemporary concludes the notice with these words: "The clever and handsome Doctor is sure to become popular. *He is certainly a refined and fascinating showman!*" As the outcome of such exhibitions as these, can we wonder that the showmen should find imitators? Under the heading of "Court and Society," another contemporary has the following paragraph: "Lady —— had a pleasant and numerously attended afternoon party at her pretty house in —— on Monday, and provided a somewhat novel entertainment in the shape of an amateur hypnotic *séance*. Some very curious feats were gone through by a couple of youths whom the amateur hypnotiser brought with him to experiment upon." Doubtless such an exhibition may be termed a "novel entertainment," but it is nevertheless a degrading one, and we trust the day is not far distant when it will be made illegal in this as it is in some other countries.

SCOTLAND.

GLASGOW OPHTHALMIC INSTITUTION

The consent of the subscribers of this institution has been obtained to an amalgamation with the Royal Infirmary. The amalgamation will provide the Royal Infirmary with an ophthalmic department, whose financial resources are estimated to be equal to £11,000 capital, and whose annual income is £1,400; while, on their part, the Royal Infirmary managers agree to erect on infirmary ground, equip and maintain in all time coming, a building containing an amount of accommodation equal to that of the present Ophthalmic Institution. As the Royal Infirmary subscribers have already agreed to the amalgamation, it now only remains for the managers of the two institutions to arrange the details. The Ophthalmic Institution, it may be noted, was one of the few institutions which was blessed with an annual income exceeding its expenditure. The balance in favour of the institution was last

year over £150. Two-thirds of the entire annual revenue was made up of contributions from public works. During the past year 2,818 new cases were admitted for treatment, of whom 438 were in-door patients.

GLASGOW VOLUNTEER MEDICAL STAFF.

The Secretary of State for War has intimated that Government recognition will be granted to this corps as from April 1st. This intimation will revive the drooping spirits of those who have been interested in the establishment of such a corps in Glasgow, and who have had serious difficulties to contend with during the last two or three years. The corps will consist of two bearer companies, of which one will be recruited from the University. The University Company has been in existence for several years, but in the absence of recognition, now happily granted, has not had a complete organisation or equipment such as will now, it is expected, be rapidly proceeded with.

HONORARY DEGREES AT ABERDEEN UNIVERSITY.

The honorary degree of LL.D. has been conferred on Dr. William Bruce, Dingwall, the representative of the medical practitioners of Scotland in the General Medical Council. On his recent appointment as medical officer for Ross-shire, Dr. Bruce retired from general practice. The same degree was also conferred on Emeritus Professor Daniel Oliver, F.R.S., University College, London; and on Mr. R. Bowdler Sharpe, F.L.S., of the Zoological Department of the British Museum.

SCOTTISH UNIVERSITIES COMMISSION.

The fifty-second meeting of the Scottish Universities Commission was held on March 5th, when Dr. Henry Alleyne Nicholson, Professor of Natural History in the University of Aberdeen, gave evidence with regard to the faculties of arts and medicine in the universities with which he has been connected. The fifty-third meeting was held on March 9th, when Professor Steggall, of University College, Dundee, and Mr. R. Franklin Muirhead, M.A., gave evidence with regard to the faculties of arts. Mr. J. Avon Clyde, advocate, was also heard in support of a memorial presented by members of the General Council of the University of Edinburgh holding the LL.B. degree.

RECTORIAL ADDRESS AT ABERDEEN.

The Marquis of Huntly delivered his inaugural address as Lord Rector to the students in the Music Hall on March 6th, in the presence of an audience of about 3,000 persons. Principal Geddes in the absence of the Chancellor, the Duke of Richmond and Gordon presided, and introduced Lord Huntly, who spoke for over an hour on the probable course of development of modern socialism. The Lord Rector analysed the principles of socialism as advocated by early writers from the time of Sir Thomas More, dwelling especially on the influence of Rousseau. He discussed the teachings of Karl Marx, and traced the influence of Carlyle on the movement. The duty of universities in the training and teaching of the students was plain. No mere cramming would ever teach young men how to deal with the ever-changing situation. State socialism had become a recognised principle in Great Britain. The assurance of individual and personal liberty, the remedy of abuse, the assistance of the distressed and the security of the public health and safety were subjects of social interest requiring an education of the highest academic training. State socialism was the safest and only practicable means of bestowing equal benefits on all classes of our race. The address was followed most attentively, and at the close of the proceedings the carriage containing Lord and Lady Huntly was drawn through the streets of the city by the enthusiastic undergraduates.

IRELAND.

No fresh cases of small-pox have been reported in Belfast, and the fears of an epidemic are subsiding.

PROPOSED AMALGAMATION OF INFIRMARIES AT CORK.

At a special meeting of the trustees of the South Charitable Infirmary, Cork, held for the purpose of receiving the report for last year, the heavy debt on the institution was discussed. As the North Infirmary is making an appeal for £900, it is believed that if an amalgamation of the two institutions took place, it would conduce to greater efficiency and a more economical management.

A STONE EATER.

A patient of the Cork Asylum died recently under peculiar circumstances, which are worthy of being referred to. One of the inmates, a man aged 29, in good health, refused one morning to eat his breakfast, and, having been brought into hospital, it was noticed that, when drinking, the throat appeared to be obstructed. A probang being used, some pieces of wood were removed, but below this point a hard substance was detected, which it was found impossible to remove with a throat forceps. An operation having been considered necessary, Mr. Horace Townsend performed œsophagotomy, and took away a stone weighing 630 grains. Deceased was doing well, but an attack of acute maniacal excitement set in, and he died about a week after the operation from exhaustion. On performing a *post-mortem* examination, eight stones were removed from the intestines. One was about an inch and a quarter in length, and about half an inch thick; two others were rectangular in shape, and almost as big; and the rest—with the exception of two, which were about the size of peas—were as large as big marbles.

ULSTER MEDICAL SOCIETY.

The meeting of this Society, held in the Museum, Belfast, on March 4th, was devoted to a discussion upon intestinal obstruction. The President, Dr. Dempsey, occupied the chair, and there was a large attendance. Professor Sinclair opened the discussion. He was of opinion that the cause of the obstruction was often incapable of recognition before operation. He quoted cases to show that the urgency of the symptoms was not a safe index of the gravity of the case, some patients, who presented all the symptoms of acute obstruction, recovering spontaneously, while others, in whom the symptoms were slight, sometimes died suddenly and unexpectedly. Vomiting, though an important sign, might be entirely absent. Some idea of the seat of the obstruction might be obtained from the result of enemata and the characteristics of the vomited matter. While laparotomy, with a view to diagnosis, was greatly increasing in favour, he advised the use of enemata and calomel and opium before operative measures were attempted. Such treatment was often effectual. He had never tried Mr. Hutchinson's succussion treatment, and did not incline to that method. He thought opening the bowel, squeezing out the contents, and securing the wound with a Lembert's suture was often preferable to endeavouring to force back the distended intestines into the abdomen. He had seen little advantage from aspiration of the bowel, with the view of relieving distension. At the commencement of his address he exhibited a patient upon whom he had operated for obstruction caused by fibrous bands, the result being perfectly satisfactory. He was not prepared to say how long medicinal measures should be persevered with, or at which stage operative intererence was imperatively called for. In the discussion which followed, the following members took part: Mr. Fagan, Professor Whitla, Dr. O'Neill, Dr. Byers, Dr. Lindsay, and the President.

OFFICIAL REPORT ON THE RESULTS OF KOCH'S TREATMENT IN PRUSSIA.

THE official report on the results of Koch's treatment of tuberculosis, as observed in the University clinics and "polikliniks," and other public institutions of Prussia, has just been issued in the form of a Supplement to the *Klinisches Jahrbuch*, a publication which owes its existence to Cultus Minister von Gossler.[1] The editor of the volume is Professor Albert Guttstadt, Lecturer on Medical Statistics in the University of Berlin. It includes 55 reports, of which 43 are from University clinics and "polikliniks," 2 from non-clinical departments of the Charité Hospital, 2 from the Moabit City Hospital, and 8 from pathologico-anatomical institutes of universities. The period to which the reports refer comprises, as a rule, the eight weeks from the beginning of November to the end of December, 1890; in some few cases, however, it goes down to the middle of January, 1891. The reports of Professor Fräntzel and Dr. R. Köhler begin from September 12th and October 11th respectively. The total number of patients injected during the period covered by the reports was 2,172, the total number of injections being more than 17,500. The greatest number of injections in any one case was 54. This patient was under the care of Dr. Paul Guttmann, suffering from very advanced pulmonary phthisis, and he received in all 3.345 grammes of the mother liquor. He is now in a relatively favourable condition, but there is no appreciable change in the objective symptoms. The largest quantity of tuberculin administered in any one case was 3.826 grammes. This patient (a man with pulmonary phthisis, under the care of Professor Fräntzel) received in all 43 injections. In this case remarkable improvement in the physical signs and in the general bodily condition followed the treatment, and was maintained when last heard of (in February).

The volume contains reports from Professors Leyden, Gerhardt, Senator, Fräntzel, Bardeleben (with Dr. A. Koehler), Olshausen, Jolly, Henoch (with Dr. Goerne), Lewin, Schweninger, Schweigger, Lucae, E. von Bergmann, B. Fränkel, and R. Virchow, and Drs. R. Köhler and Westphal, of the University of Berlin; Professors F. Schultze, Trendelenburg, Doutrelepont, Walb, Finkler, and Koester, of Bonn: Professors Biermer, Mikulicz, Fritsch, Neisser, and Ponfick, of Breslau: Professors Ebstein, König (with Dr. Hildebrand), and Orth, of Göttingen; Professors Mosler and Strübing (with Dr. Peiper), and Helferich, of Greifswald; Professors Weber, von Bramann, Schwartze, and Ackermann, of Halle; Professors Quincke, Edlefsen, von Esmarch, and F. Petersen, of Kiel: Professors Lichtheim, J. Schreiber, Braun, von Hippel, and Neumann, of Königsberg; Professors Mannkopff, Rumpf, Küster, Barth, and Marchand, of Marburg; besides supplementary reports from Professor Julius Wolff, of the Berlin Orthopædic Poliklinik, Professor A. Heller, of the Pathological Institute at Kiel, and Dr. Paul Guttmann and Professor Sonnenburg, of the Moabit Hospital, Berlin. Professor Koch's two papers on his remedy are published in an appendix. Finally, there is an elaborate analysis of the reports, with tabular statements of the clinical details, number and doses of injections, and results in most of the cases, by Professor Guttstadt. We hope to publish full abstracts of the reports in the WEEKLY SUPPLEMENT; at present only a rapid summary of some of the principal inferences than can be drawn from them as to the diagnostic value of the remedy and its therapeutic effects can be given.

DIAGNOSTIC VALUE OF TUBERCULIN.

Internal Tuberculosis.—Leyden looks upon tuberculin as of essential service in confirming the diagnosis of tuberculous disease, but in the absence of definite symptoms would not rely on it alone for that purpose. Gerhardt thinks it is not absolutely to be depended on, inasmuch as cases have occurred in which, though tubercle bacilli were undoubtedly present, the injection caused no reaction. It may, however, be useful for the differentiation of tubercle from syphilis in the larynx and lung. Schultze thinks it, within certain limits, a reagent for the detection of tubercle. Biermer expresses himself with some reserve, as he has met with two cases of certain tuberculosis with bacilli in the sputum in which continued injections produced neither general nor local reaction. Ebstein thinks the detective action of the fluid uncertain: this opinion is shared by Mosler, Strübing, and Peiper, who, nevertheless, think tuberculin may help to show whether previously existing tubercle is cured or not. Weber says it is not a sure diagnostic agent for internal tuberculosis, and it does not give certain results in doubtful cases; it is more useful in external disease. Quincke is at present unable to conclude that in all cases in which the fluid causes reaction there are latent foci of tuberculosis. Finkler and Schreiber place more reliance upon it, and Rumpf thinks it of service in doubtful cases. P. Guttmann speaks in the tone of an ardent believer. In pregnant women Olshausen says tuberculin has failed to produce any reaction when the existence of phthisis was certain. Fritsch thinks the fluid is of high diagnostic value in the differentiation of tubercle from cancer.

External Tuberculosis.—Bardeleben and A. Köhler admit that tuberculin occasionally fails to produce reaction in cases of external tuberculosis; they think this may possibly be accounted for by individual idiosyncrasy or by slight differences in the fluid itself. Von Bergmann thinks it is a valuable means of differentiating tubercle from syphilis and cancer; Trendelenburg considers it reliable except in tubercle of the testis; Mikulicz places confidence in it: König and Hildebrand do not value it highly; Helferich thinks it an important aid to diagnosis; von Bramann says it is "apparently" a sure reagent for tubercle; von Esmarch also thinks highly of it in lupus and in bone and joint disease; von Braun and Küster think it extremely useful though not infallible: R. Köhler and Westphal look upon it as superior to all known aids to differential diagnosis: Lewin considers it useful; Doutrelepont and Neisser think it of high diagnostic value; von Hippel has found it of service in two cases of doubtful eye disease.

THERAPEUTIC RESULTS.

Commencing Pulmonary Phthisis.—Leyden treated 9 cases of commencing pulmonary phthisis, but no statistics are given as to results. Gerhardt treated 15 cases, of which 4 were discharged improved and 11 are still under treatment; of the latter 3 are said to be materially improved, 1 is improved, while in 7 there is no change. Senator reports 39 cases, of which 10 have been discharged and 29 are still under treatment; of those belonging to the former category, 3 were materially improved, 3 were improved, and 4 were *in statu quo*. Of those still under treatment, 2 are greatly improved, 3 improved, 20 are unchanged, and 4 have been made worse. Schultze has treated 9, of which 1 has been discharged unrelieved, while of the 8 still remaining under treatment, 2 are materially improved, 2 improved, and 4 unrelieved. Biermer has had 12 cases, of which 2 have been discharged unrelieved, while of the remaining 10, improvement is recorded in 6 and no improvement in 4. Ebstein reports 3 cases, of which 1 was discharged unrelieved, while of the 2 others, 1 is not improved and 1 is described as worse than before the injections were begun. Of 7 cases treated by Mosler, 2 have been discharged materially improved, 1 improved, and 2 unrelieved: of the 2 still under treatment, both are improved. Of 9 cases still under treatment by Weber, 3 are materially improved and 6 are improved. Quincke reports 10 cases, of which 2 have been discharged improved, while the 8 still under treatment show no change. Lichtheim has 9 cases under treatment, of which 2 are greatly improved, 4 are improved, and 3 are unchanged. Mannkopff has 9 cases under treatment, of which 1 is greatly improved, 2 are improved, and 6 are unrelieved. Finkler has had 10 cases, of which 4 were discharged cured and 3 greatly improved: the 3 remaining under treatment were all improved. Edlefsen has 2 cases under treatment, both of which are materially improved. Schreiber reports 12 cases, 1 of which was discharged cured and 2 unrelieved: of the 9 still under treatment, 2 are greatly improved, 1 is improved, and 6 are unchanged. Of 19 cases under Rumpf's treatment, 13 are greatly improved, 5 are improved, and 1 shows no change. Of 3 cases under Fräntzel's care, 1 is greatly improved and the other 2 show no change. Of 54 cases treated by P. Guttmann, 4 have been discharged cured, 8 greatly improved, 1 improved, and 1 *in statu quo*. Of the 40 cases still under treatment, 21 are greatly improved, 10

[1] Die Wirksamkeit des Koch'schen Heilmittels gegen Tuberculose. Amtliche Berichte der Kliniken, Polikliniken, und pathologisch-anatomischen Institute der Preussischen Universitaten. Berlin: Verlag von Julius Springer. 1891.

are improved, and 9 are unchanged. Neisser reports 2 cases, both improved. Henoch has 5 still under treatment, of which 1 is improved and 4 unchanged. B. Fränkel has 4, all of which show great improvement.

Moderately Advanced Pulmonary Phthisis.—Leyden has had 23 cases, of which no particulars are forthcoming. Gerhardt has had 34, of which 2 have been discharged unrelieved, 2 have died, and of the 30 still under treatment 3 are materially improved, 4 improved, and 23 unchanged. Senator has had 32 cases, of which 1 has been discharged greatly improved, 6 improved, and 14 unrelieved, while 1 has died; of the 10 cases still under treatment 1 is greatly improved, 3 are improved, and 6 show no change or have been made worse. Schultze has 26 under his care, of which 2 are greatly improved, 4 improved, and 20 unrelieved. Biermer reports 17 cases, of which 1 was discharged unrelieved, 1 died, and of the remaining 15, 5 are improved, and 10 show no change. Ebstein records 18 cases, of which 6 have been discharged unrelieved, and 12 are still under treatment without showing any improvement. Mosler has had 25 cases, of which 4 have been discharged much improved, 4 improved, and 14 unrelieved; of the 3 still under treatment all are much improved. Of 13 cases under Weber's care, 2 are much improved, 4 improved, and 7 unrelieved. Of 21 under Quincke not one shows any improvement. Of 16 under Lichtheim, 1 has died; and of the 15 still under treatment, 9 are improved and 6 unchanged. Of 13 under Mannkopff, 1 is greatly improved, 5 are improved, and 7 are unchanged. Of 27 cases reported by Finkler, 2 have been discharged materially improved, 5 improved, and 13 unrelieved; of the 7 still under treatment, 2 are improved, and 5 show no change. Of 4 cases under Edlefsen, 1 has been discharged much improved, and 1 has died; of the 2 still under treatment, 1 is improved, the other not. Of 11 cases treated by Schreiber, 1 has been discharged improved, and 4 unrelieved; of the remaining 6, there is material improvement in 1, while 5 show no change. Of 20 cases treated by Rumpf, 3 have been discharged unrelieved, and 1 has died; of the 16 still under treatment, 6 are much improved, and 10 *in statu quo*. Of 16 under Fräntzel, 3 have been discharged improved, and 1 has died; of the remainder, 4 are greatly improved, 2 are improved, and 7 are unchanged. Of 112 cases under P. Guttmann, 16 have been discharged much improved, 4 improved, and 5 unchanged; of the 87 still under treatment, 14 are greatly improved, and 73 unchanged. Henoch has had 1 case, which was discharged unrelieved or rather worse than before. B. Fränkel has had 14, of which 1 has been discharged cured; the 13 still under treatment are all greatly improved. Lewin has had 1 case, which was discharged unrelieved.

Very Advanced Pulmonary Phthisis.—Leyden has had 20 cases, of which 4 have died; as to the remaining 16 no details are furnished. Gerhardt has had 8, of which 1 has died, and 7 are still under treatment without showing any improvement. Senator has had 8, with 5 deaths, the remaining 3 being unrelieved. Schultze reports 14, in none of which has there been any improvement; Biermer 7, with 1 death and 6 unrelieved; Ebstein 6, of which 2 have been discharged unrelieved, while 4, which are still under treatment, show no improvement; Mosler 28, of which 3 have been discharged greatly benefited, 6 improved, and 14 unrelieved, while of the 5 still under treatment 1 is improved and 4 unchanged; Weber 22, of which 2 have died, 2 are improved, and 18 unchanged; Quincke 5, of which 1 is improved and 4 not; Lichtheim 9, with 1 death, 4 improved, and 4 unrelieved; Mannkopff 8, of which 1 is improved and 7 unchanged; Finkler 32, of which 3 have been discharged improved, and 11 unrelieved, and 2 have died, while of the remaining 16, 2 are improved and 14 *in statu quo;* Edlefsen 3, all unchanged; Schreiber 6, of which 1 has been discharged improved, 3 unrelieved, and 1 has died, while the 1 still under treatment shows no improvement; Rumpf 7, of which 1 has been discharged unrelieved, while of the 6 still under treatment 2 are improved and 4 *in statu quo;* Fräntzel 17, of which 1 has been discharged improved, 1 unrelieved, 4 have died, whilst of the 11 still under treatment 1 is greatly improved, 3 are improved, and 7 are unchanged; P. Guttmann 30, of which 5 have been discharged unrelieved and 8 have died, while of the 17 still under treatment none show any improvement; Sonnenburg 7, of which 3 are greatly improved, 3 are improved, and 1 is unrelieved; Olshausen 3, of which 2 have been discharged unrelieved, while 1 is *in statu quo;* Henoch 1, discharged unrelieved; and B. Fränkel 5, with 1 death, 1 improved, and 3 unrelieved.

On the whole Leyden is fairly satisfied with the results so far, while Senator thinks them better than could have been produced by any other treatment; Schultze is not enthusiastic; Ebstein is inclined to be pessimistic; Biermer states that in 3 cases the tuberculous process made distinct headway during treatment; Mosler, Strübing, Peiper, Weber, Finkler, and Schreiber all speak with reserve; P. Guttmann claims decided "improvement" in 38 per cent. of all his cases (164), and in 81 per cent. of the "incipient" cases taken alone.

Effect of Treatment on Symptoms in Phthisis.—1. Body weight: Of 61 cases under Gerhardt, 22 have gained weight, 17 remain as before, and 22 have lost. The gain ranged from $\frac{1}{2}$ to 5 kilos., the loss from $\frac{1}{2}$ to $8\frac{1}{2}$ kilos. In one of Senator's cases 4.4 kilos. were gained in a week, and on several occasions there was an increase from $1\frac{1}{2}$ to 2 kilos. in the same space of time. Eight patients in a very advanced stage of phthisis, with cavities, chronic diarrhœa, etc., gained weight, in some cases as much as $2\frac{1}{2}$ kilos. Biermer found increase in 11 cases, the average gained being from 2 lbs. to 3 lbs., and in one case as much as 10 lbs. In 17 cases there was progressive loss of weight to the extent of 1 lb. to 6 lbs.; in the other cases there was neither loss nor gain. Weber noted increase in 16, and loss in 28, while in 12 it remains stationary. P. Guttmann says the weight increased in a large number of cases under his care, the maximum gain being $7\frac{1}{2}$ kilos. 2. Expectoration: Gerhardt says expectoration mostly increased at first, in 5 cases it became bloodstained. Afterwards it gradually decreased, and became more mucous. In several cases the bacilli seemed to diminish at first; in particularly favourable cases they disappeared from the sputum. Senator found that the bacilli diminished in favourable cases, but in no instance disappeared altogether. Ebstein has seen no improvement either in the quantity or the quality of the sputum, and no diminution of bacilli. Mosler on several occasions noticed that the expectoration was bloodstained, but he did not see actual hæmoptysis. Weber says cough was improved in 14 cases, increased in 15, and remained *in statu quo* in the rest. The expectoration was diminished in 18, increased in 12, and unchanged in the remainder. Lichtheim says that in almost all cases after the subsidence of the reaction both cough and expectoration were lessened. In one case expectoration and the appearance of bacilli followed the commencement of the injection, and ceased on their discontinuance. Mannkopff noticed little or no change in the quantity or quality of the expectoration. 3. Respiration: Gerhardt says that vital capacity increased in 5 out of 10 cases. 4. Physical signs: Gerhardt says that in many cases there was diminution of dulness and *râles*. Senator noticed in some favourable cases a complete disappearance of catarrhal signs and *râles*. Neither Ebstein nor Mannkopff observed any particular change in the physical signs. Fräntzel says that after treatment had been continued for a certain time the *râles* almost disappeared in some cases. 5. Night sweats: Senator records the cessation of night sweats even in cases where before the treatment they had been considerable in amount. Weber says that in 11 cases the night sweats diminished, while in three they increased. Lichtheim, Mannkopff, and Fräntzel also say the injections had a good effect on night sweats. 6. General condition: Gerhardt says that 3 patients felt so well that they insisted on leaving the hospital, though the physical signs showed that they were not cured. In 10 cases the treatment had to be discontinued by reason of weakness, persistent fever, or progressive loss of weight. Senator says the treatment had a favourable effect on the subjective feelings of a large number of patients; they looked better, and were stronger and more cheerful. Biermer, on the other hand, found that many patients complained that the treatment made them feel weaker and lower. Mosler notes an improvement in the appearance of patients. Weber says that the general condition became worse in 22 cases, while 33 patients expressed themselves as satisfied with the effects of the remedy.

Other Tuberculous Diseases.—The general results of the treatment in laryngeal phthisis, lupus, and other forms of tuberculous diseases will be seen in the table here appended, which is literally translated from pages 904, 905:—

TABLE I.—*Statistical Statement of the Action of Koch's Fluid in Tuberculosis of Internal Organs.*

Diseases.	Number of Cases Treated.	Cured.	Substantially Improved.	Improved.	Unimproved.	Died.
I.—PULMONARY TUBERCULOSIS:						
1. Early pulmonary phthisis ...	242	9	72	59	93	0
(*a*) With laryngeal tuberculosis	30	0	10	6	13	0
(*b*) With tuberculosis of other internal organs	7	0	1	2	4	0
(*c*) With other diseases	8	0	0	1	6	0
2. Moderately advanced pulmonary phthisis	444	1	68	68	278	6
(*a*) With laryngeal tuberculosis	85	1	10	11	37	2
(*b*) With tuberculosis of other internal organs	15	0	1	1	5	2
(*c*) With other diseases	14	0	0	0	7	2
3. Very advanced pulmonary phthisis (cavities)	246	0	7	31	162	30
(*a*) With laryngeal tuberculosis	60	0	1	4	45	5
(*b*) With tuberculosis of other internal organs	24	0	1	2	17	1
(*c*) With other diseases	16	0	0	1	7	5
I.—PULMONARY TUBERCULOSIS (all grades taken together)	932	10	147	158	533	36
(*a*) With laryngeal tuberculosis	175	1	21	21	95	7
(*b*) With tuberculosis of other internal organs	46	0	3	8	26	3
(*c*) With other diseases	38	0	0	2	20	7
II.—LARYNGEAL TUBERCULOSIS ...	63	1	18	23	15	4
With pulmonary tuberculosis...	45	0	16	13	12	4
III.—PLEURISY	13	1	0	3	9	0
IV.—PERNICIOUS ANÆMIA	1	0	0	0	0	1
V.—TUBERCULOUS MENINGITIS ...	4	0	0	1	1	2
VI.—PERITONEAL TUBERCULOSIS ...	14	1	3	3	4	2
VII.—INTESTINAL TUBERCULOSIS ...	1	0	1	0	0	0
VIII.—RENAL TUBERCULOSIS	4	0	0	0	4	0
IX.—URETHRAL and VESICAL TUBERCULOSIS	10	0	0	4	5	1
X.—TESTICULAR TUBERCULOSIS ...	18	0	2	2	14	0
XI.—DOUBLE TUBERCULOUS PYOSALPINX, with incipient pulmonary phthisis	1	0	0	0	1	0
Totals	1,061*	13	171	194	586	46

* The difference between the total number of cases and the number in which the result of treatment is given is due to the fact that a few reporters give no information as to the result.

TABLE II. —*Statistical Statement of the Action in Koch's Fluid in External Tuberculosis.*

Diseases.	Number of Cases Treated.	Cured.	Substantially Improved.	Improved.	Unimproved.	Died.
I.—LUPUS	188	5	78	84	21	0
With tuberculosis of internal organs	27	0	5	6	3	0
II.—TUBERCULOSIS OF SINGLE BONES AND JOINTS	397	9	51	119	211	6
With tuberculosis of internal organs	48	0	1	4	22	1
III.—TUBERCULOSIS OF SEVERAL BONES AND JOINTS	40	0	3	12	23	2
With tuberculosis of internal organs	10	0	0	1	7	2
IV.—TUBERCULOSIS OF LYMPH GLANDS	38	0	9	7	22	0
With tuberculosis of internal organs	8	0	1	0	7	0
V.—TUBERCULOSIS OF SOFT PARTS ...	8	0	1	4	3	0
VI. TUBERCULOSIS OF SCARS	4	0	0	3	1	0
VII.—SCROFULODERMA	6	1	2	3	0	0
VIII.—LEPRA	2	0	0	1	1	0
IX.—RODENT ULCER	2	0	0	1	1	0
X. TUBERCULOUS ANAL FISTULA ...	3	0	1	0	1	1
XI.—TUBERCULOSIS OF SHEATHS OF TENDONS	1	0	1	0	0	0
XII.—SCROFULOUS ECZEMA	1	0	0	1	0	0
XIII.—SCROFULOUS KERATITIS OF BOTH EYES	2	0	2	0	0	0
XIV.—EAR DISEASES	16	0	0	2	14	0
With pulmonary tuberculosis...	7	0	0	1	6	0
To'als	708	15	148	237	298	9

FACTORY LEGISLATION.

MR. OSBORNE MORGAN will preside at the meeting of the Standing Committee on Trade for the consideration of the Factories and Workshops Bills.

The first meeting will be held on March 19th. As only one more sitting can be held before Easter, and as a large number of amendments have already been placed on the paper, it is highly improbable that Clause 19 can be reached till after the Easter recess.

The following letter has been forwarded to members of the Standing Committee:—

Leeds, March 3rd, 1891.

"Dear Sir,—As the certifying surgeons under the Factory Act for the borough of Leeds, we beg to solicit your powerful aid in obtaining the rejection of Clause 19 of the Factories and Workshops Act, recently introduced by the Home Secretary. In doing so, we desire to place before you the subjoined statement, trusting that it will strengthen any opinion you may have formed in our favour.

"If time were given us, it would not be difficult to tabulate the number of rejections we are compelled to make in the exercise of our duties, yet we can at once place before you, as examples, certain striking though not uncommon cases, and we think they will demonstrate the imperative need of skilled service to protect the welfare of children and young persons employed in factories and workshops.

"The list of examples is appended to this statement.

"It must not be thought that the number of rejections does at all measure our influence for good. In some trades, such as the flax and ready-made clothing, we occasionally stop 'hands' for short periods, to clear them from lice, itch, ringworm, and sore eyes.

"When a weak or rickety 'hand' is presented to us, whom we do not think it needful absolutely to reject, we insist upon 'sitting half the working hours' being afforded: we also order the 'hand' to come before us again after a short interval. We frequently, too, suggest a change of employment to young persons when we think their present occupation unsuited to their physical capacity. In some trades we find that growing lads need careful supervision of this kind to prevent their permanent deformity. This remark applies also to girls; and with regard to these more especially, advice is often given as to their dress and the arrangement of their hair, so as to prevent them becoming entangled in the machinery.

"Convalescents from scarlet fever and other infectious diseases often return to work before they are free from infective danger to others, and we do frequently delay them on this account. Such cases do not appear on the books as rejected, and it is precisely in such cases that our professional knowledge is so serviceable.

"We claim that our deterrent influence is powerful for good in other ways. For example: we have not often to deal directly with the employer, but with his manager, foreman, or taker of piece work, who in too many instances is dominated by self interest, or in perhaps as many by oblivion of, or by indifference to, the fitness of his 'hands' from a health point of view. We find also that he will accept a written statement of age without consideration as to its veracity. It is impossible for the inspectors to decide upon such matters, even if they were so increased in number (and it would require an army of them) that they could examine these cases *seriatim*. They do not possess medical skill.

"The inspectors are paid by the State; we cost the State next to nothing, the people next to nothing, and in most cases the employer is glad to pay the small fees the present Act allows for our assistance in helping his subordinates to obey the law. We know nothing of the large sums mentioned by the Home Secretary; they are not paid in our district.

"As to a deputation of employers and employed suggesting the needlessness of our office, that may be natural from their point of view; but our long experience convinces us that if our services be dispensed with, the young factory 'hands' will retrograde in physical condition to the wretched state

they were in when factory surgeons were called upon to look after them many years ago.—We are, dear Sir, yours truly,

"ALFRED RICKARDS,
"WILLIAM HALL,
"JNO. A. NUNNELEY,
"CHAS. J. WRIGHT,
} Certifying Surgeons for the Leeds district."

EXAMPLES OF RECENTLY REJECTED CASES

Amongst children and young persons presented for examination to the Leeds certifying surgeons under the Factory Acts:—

Six cases of syphilitic sores of the mouth have been detected in glass-bottle blowers.

As the men and boys alternately use the same blowpipe, this loathsome disease would have spread through numerous families, and would have left its mark upon more than one generation.

A case of scarlet fever, fully developed, has been prevented working amongst a large number of women and children.

A convalescent from small-pox, still infective, has been likewise rejected.

A girl who had previously lost one eye has been prevented working amongst dust; her remaining eye, though unhealthy, yet not appearing so to her parents or to the foreman.

A girl in an early stage of consumption has been prevented working in a dusty flax mill.

Two epileptics have been prevented working amongst machinery.

In one of these cases the parents and the foreman urgently solicited "a trial," and in this case the fact of epileptic tendency had been concealed, but was detected by the certifying surgeon.

N.B.—These are only sample cases.

Mr. JOHN BARR, M.B. and C.M., certifying surgeon at Rishton, near Blackburn, gives the following examples of rejections:—

A case of scarlet fever, fully developed, has been prevented from working among a number of other children.

Two children with inflammation of the eyes have been prevented from working in a dusty shed.

Two children suffering from debility, who had started work in a weaving shed for which they were physically unfit, have been stopped, and put to lighter employment.

Three children, each of them had previously lost one eye, were prevented working in weaving shed, where, from the tendency of shuttles to fly out of the looms, there was danger of injury to the other eye.

One girl suffering from weak heart was presented, though unfit for work.

Three children in a febrile state, with a temperature of over 101° in each case, have been rejected.

One boy suffering from disease of the hip-joint has been presented for a "certificate of fitness" at four different mills, and in each case has been rejected, or put to work as a "reacher," where he could sit during work, and so not injure the joint.

One girl suffering from ringworm was prevented working among a lot of other children.

A boy suffering from spinal disease was taken from work for which he was unfit.

It should be explained that very many cases are dealt with which do not appear on the books, such cases having been dealt with outside the mills; and many cases not fit for employment are postponed for one or more weeks till fit, and no entry of refusal made. The knowledge that a medical examination has to be passed, in numberless instances, prevents unhealthy children being presented.

Some additional examples have been forwarded to Sir Walter Foster, from which we are able to select the following:—

Dr. W. Hugh Hughes (Ashton-under-Lyne) states that in the years 1889-1890 he refused 101 certificates in 21 mills, and that, of this number, 71 were refused in consequence of physical unfitness, due to the following, among other diseases: Ophthalmia, anæmia, gastro-enteritis, pulmonary catarrh, influenza, alopecia, suppurating glands, bronchial catarrh, peeling after scarlatina, eczema, itch, phthisis, spinal curvature, tonsillitis. Cases such as spinal curvature were frequently taken directly into the hospital or treated at home, and, after a jacket had been adjusted, returned to the mill again.

Dr. A. Emrys-Jones (Fallowfield, Manchester) states that rejections in his district number no fewer than 50 or 60 a year. Many such refusals are due to phthisis and chorea, and some to defective sight. Recently a case of diffused interstitial keratitis, with very imperfect vision, was refused, and it would have been obviously dangerous to allow the boy to work among machinery. Special notes are taken of cases of corneal opacities, granular lids, blepharitis, and visual defects, such as myopia, hypermetropia, and strabismus, the rule being that such children are requested to attend at the Eye Hospital, in order that it may be ascertained whether the defect can be remedied. To this hospital many cases are referred by other certifying surgeons for examination and treatment.

Dr. Alexander Scott (Physician to the dispensary of the Glasgow Royal Infirmary; Certifying Surgeon, Tolleross, Glasgow) states that in an article in the *Glasgow Medical Journal* (July, 1887) he called attention to cases of chronic lead poisoning in persons employed in extensive dye works in his district, and suggested certain alterations which in his opinion would tend to diminish the liability to this insidious form of poisoning. The symptoms in many of the cases were exceedingly ill-defined, and it was only after prolonged and careful study that the true cause of the number of cases, sometimes of cachexia, at others of sudden illness, was unravelled by the certifying surgeon. The subject was subsequently brought prominently before the notice of Mr. Maitland, Her Majesty's Inspector of Factories, who took up the matter warmly. In consequence, the proprietors of the dye works were induced to make the alterations in their works recommended by Dr. Scott; and in the two years which have since elapsed, only one case of lead poisoning has been heard of in connection with their works. This is a good instance of the valuable services which may be rendered not only to the operatives themselves but also to employers of labour.

Dr. H. R. Oswald (Camberwell New Road) writes to point out that the number of rejections is not a criterion of the influence for good exercised by the certifying surgeon. "Employers and employed," he writes, "do not bring or come forward with unhealthy workers, knowing that I should reject them if I discovered the fact of their unfitness."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT the recent meeting of the Birmingham and Midland Branch of the Society of Medical Officers of Health, Mr. J. H. MANLEY (West Bromwich) drew attention to provisions in one of the Factory Bills now before Parliament, by which it was proposed to add to the duties of medical officers of health duties connected with the inspection of factories, which had hitherto been outside their province. It made the medical officers by one clause the servants of the Factory Acts inspectors, because the latter were authorised to inform the local authorities of anything they thought ought to be done, and if they did not do it the inspectors could get the work done and charge the sanitary authority to which medical officers belonged with the cost. He moved, and it was carried: "That the Factory Bills be referred to the Council of the Branch for consideration, and that the attention of the Council of the Society be called to the Sanitary clauses of those Acts."—Dr. BOSTOCK HILL moved: "That, as the majority of the people in this country are under the Infectious Diseases Notification Act, in justice to those, as well as in the interest of scientific statistics, the Act ought to be made compulsory, and that a copy of the resolution be sent to the Local Government Board and county councils of England."—This was seconded by Mr. MANLEY, and unanimously agreed to.

THE HOSPITALS COMMITTEE.

Metropolitan Hospital.—Lock Hospital.—Hospital for Consumption, Brompton.

THE Lords' Select Committee for inquiring into the administration of London hospitals and dispensaries resumed their sittings on March 7th, under the presidency of Lord SANDHURST.

Mrs. ALISON was the first witness, and, in answer to the CHAIRMAN and other members of the Committee, stated that she desired to state, in answer to the evidence of Sister Cecilia (the head of the nursing establishment at the University College Hospital) that it was not correct to say that no distinction was made on account of their religious profession. She (the Witness) was a Scotch Presbyterian, and when that was known her application was declined.

Mr. C. H. BYERS (secretary of the Metropolitan Hospital, Kingsland Road) stated that he had been four years secretary. The hospital was first called the Metropolitan Free Hospital, but the word "Free" had been dropped soon after it was removed from the previous situation in Devonshire Square, Bishopsgate, to Kingsland Road. The building there was completed in 1886, and in 1887 the change was made. Each ward was isolated, and great precautions were taken with a view of safety in case of fire. Urgent cases were free. The provident department was intended for persons living in the district, and unable to pay the ordinary fees of medical men. A single person who earned more than 21s. weekly on the average, or, if married, the total earnings of the family were not more than 35s., could become a member of that department. Originally the wage limits were for single persons 25s. and married persons 40s. There was a system of regular payments; for adults 1d. a week, and children 2d. a month; but 6d. a month would include all the children in a family under the age of 16. There were also small entrance fees, from which, however, members of benefit societies were exempt. The contributing members did not receive benefits until they had made two months' payment. The district of the hospital was considered a mile radius.

The CHAIRMAN: When this idea was first started, were the medical men of the district consulted?—There were about ninety medical men in the neighbourhood invited, but only seven of them took the trouble to come.

Did they acquiesce in the system?—They did object at first, and wrote letters to the papers, but lately we have had no complaints. The whole object of the committee of the hospital was to try and prevent the abuse of the out-patient departments, which they knew did exist. They did not say that this provident system was absolutely the proper one, but they were trying to do what was right, and he thought

th at the medical men in the neighbourhood were beginning to see, more especially since the wage limit had been reduced, that the provident department was not taking money out of their pockets. There were 14,000 new cases last year, and the total attendances 23,000. There were no subscribers' letters. The provident system was not confined to the out-patient department. The population in the district was a very shifty one. The amount received in provident payments last year was £670 4s. 7d., and the previous year £653. The total expenses of last year were £7,500. The Jews had been very good to the hospital when in Devonshire Square, and it was decided that, out of 160 beds, 40 should be always reserved for members of the Jewish faith. There were separate kitchens, so that the food could be cooked as their rites demanded. At present there were 12 beds in use for the Jews—that was out of 78 now occupied. There was £3,400 received in donations, £2,400 from City corporations, and other special receipts.

Lord KIMBERLEY: Is not your system a sort of assisted medical club standing between those who obtain their relief gratuitously from the Poor Law and those who pay for it individually to medical men?—I have never heard it called so. The medical clubs never take in-patients.

Lord CATHCART: Your provident system is really still in its experimental stage, and cannot be taken as any safe guide until it has been carried further?—Yes, a great deal further. But we have done a great deal of work and have done no harm to the medical men, and we have persuaded these poor persons to pay something for which in the past they paid nothing. The Witness continued that he was the head of the hospital and responsible to the committee, but he had nothing to do with the nursing department. In his absence his representative would be his assistant, who lived in the hospital and was paid £60 a year. His (the Witness's) salary was £300 a year. One physician and one surgeon were on the house committee. Patients were admitted by the resident medical officer on duty. If there were two cases, priority would be given to one if it were a provident member. The honorary surveyor was responsible for the sanitary state of the hospital, and he had paid three lengthy visits in the last nine months. The head of the nursing department was Sister Dorothea, of All Saints' Sisterhood. The system of nursing was precisely the same as that of the University College Hospital. The committee contracted with the All Saints' authorities for the nursing. The arrangement had been in operation for more than two years, and it had worked most admirably without the slightest hitch. There were one ward for men with 24 beds, one for women with 24 beds, one for children with 17 cots, and two small wards for 12 beds. There was no nursing committee. The whole gross payment for the nursing last year was £384, and, with some deductions for receipts, the net payment was £135. In case of requiring additional special nurses the All Saints' Sisterhood would be communicated with and they would be paid for.

In reply to Lord CATHCART, the WITNESS stated that the nurses were not by any means all of extreme views. That he was satisfied of from his experience.

The CHAIRMAN: Have you had any remonstrances from the medical men in the neighbourhood of robbing them by taking part payment?—Not lately. There were no students.

Mr. T. H. GOODSALL, F.R.C.S., said he had been seventeen years connected with the Metropolitan Hospital. He considered it now as a very efficient hospital, and that it was built on the best possible lines. Unless a serious case (which would be admitted), a patient would be seen by one of the house-surgeons, and after a week's attention, if he refused to join the provident society, he was told that he must not come again. The wage test which was adopted he considered fairly reliable, because of the inquiries made and checks adopted. The out-patient department was kept quite within reasonable limits, and was not anything like so crowded as before the provident principle was adopted. All the surgeons must be Fellows of the Royal College of Surgeons, and the physicians must be Members of the Royal College of Physicians of England. He was in favour of the out-patient departments of hospitals, but on the combined principle such as was in force at the Metropolitan. There were at first some complaints from the medical men in the neighbourhood, but not lately. Some students attended the Metropolitan Hospital, but their attendance was not recognised by the licensing bodies.

The WITNESS further stated that the accommodation for the relief of the sick in the district of the hospital was very deficient. To some extent the provident system drove some persons from the Metropolitan to other hospitals, where the attendance and treatment was free.

Lord CATHCART: You think your system would work better if it were generally adopted in other hospitals?—Yes.

The CHAIRMAN then read a letter received from the Sister Superior of the University College Hospital as follows:

Dear Sir,—In reply to your letter I beg to state that on April 6th, 1889, the Mother Superior of All Saints' decided that it would be well to admit nurses of all creeds to the paid staff of the hospital. Mrs. Alison, of whom I have no recollection, must have applied previous to this decision. Prior to April 6th, 1889, we trained nurses of all creeds, but did not take them on to our pay staff.

Mr. ALGERNON COOTE, secretary of the Lock Hospital, Harrow Road, said,—There were two departments—the female, in Harrow Road, and the male, near Soho Square—both under one management. There were 140 beds in the hospital, and in the male portion 20 beds. There was also a rescue home, in which there were 56 persons, but 70 could be accommodated. The working number of beds in 1890 was about 100, but there was nothing like funds enough to fill the whole number of beds. More cases were now being received than a year ago. After the repeal of the Contagious Diseases Act in 1886 the number of cases fell off for a time. As to the constitution of the hospital it had been altered this year and from next month the board would be elected at the annual meeting. There was a quarterly court and an annual meeting. There was a ladies' committee connected with the female department of the institution. When the committee was not sitting he had supreme control of the hospital, but would have to report to the board. Up to the present any medical man who was a governor could attend the fortnightly meetings of the board, but in future two medical men would be nominated for the board. Admission to the beds was practically free on application. The out-patient department was now specially crowded. Since the treatment of cases in the evening the number had doubled—from 11,000 to 22,000 in the 2½ years. There were 731 cases admitted last year to the female hospital and 231 to the male hospital. In the out-patient department there were 3,276 new male and 415 new female cases. There were 19,600 males altogether, and 2,450 females, of which 3,278 were new male and 415 new female cases. He believed that the cost per bed was as economical as at any hospital in London—16s. 3d. per week and from £40 to £45 a year. There was a plan of the drains of the hospital kept up to date. The hospital had its own nurses, and perhaps one reason why the cost of the beds was small was that 75 per cent. of the patients were able to assist the nurses, and there was in consequence a staff of only 7 nurses 3 head and 4 assistant nurses—under the matron. There was no investment and no endowment, and since the repeal of the Acts the hospital had lost all Government support. But now the different unions paid the same rate for cases as the Government did, and that payment was an increasing item. There was a resident medical officer at Harrow Road and at Dean Street, a consulting physician, two consulting surgeons, three visiting surgeons, three surgeons to the out-patients, and the council were now about to appoint a consulting ophthalmic surgeon.

In reply to Lord CATHCART, the WITNESS said that since the repeal of the Contagious Diseases Act there was no power to keep the women in the hospital, and from one ward as many as 43 per cent. of the women left of their own accord before they were cured. From the whole hospital about 31 per cent. left at their own request.

In answer to Lord ZOUCHE, the Witness stated that there had been a large spread of the disease since the repeal of the Contagious Diseases Act. When he went to the hospital he thought the repeal of the Acts would be a benefit to the community, but he had modified his opinion since then.

The Committee then adjourned.

THE select governors and medical officers have agreed to recommend Mr. A. F. Stabb, M.R.C.S., L.R.C.P., late of St. Thomas's Hospital, as House-Physician at Addenbrooke's Hospital, in succession to Mr. F. W. Burton, M.B.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of the session will be held at the Town Hall, Walthamstow, on Thursday, March 19th, at 8.45 P.M. A paper on Rest and Food in the Treatment of Anæmia and Anorexia Nervosa will be read by J. F. Goodhart, M.D. Visitors will be welcomed.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, N.E.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next meeting will be held at Pontypridd on Wednesday, April 15th. Mr. Emil Behnke will give an address on the Nature and Treatment of Stammering and Stuttering. Members desiring to read papers, etc., are requested to send titles to Dr. Sheen, Cardiff, before March 30th.—A. SHEEN, M.D., Cardiff; D. ARTHUR DAVIES, M.B., Swansea, Honorary Secretaries.

GLOUCESTERSHIRE BRANCH.—The next ordinary meeting will be held at the General Hospital, Cheltenham, on Tuesday, March 17th, at 7.30 P.M., under the presidency of Dr. Watters. Agenda: A discussion will be opened by W. R. Buckell, Esq., Cheltenham, on Antiseptics in Relation to Surgery.—G. ARTHUR CARDEW, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—An ordinary general meeting of the Branch will be held at 1, Crown Street, Aberdeen, on Wednesday, March 18th, 1891, at 8 o'clock P.M., the President, Dr. Garden, in the chair. Business: 1. Minutes, etc. 2. Ballot for the admission of Dr. P. J. Howie (Strathdon), as member of the Branch. 3. Remarks on 19 cases treated by Koch's lymph, by Dr. Fergusson (Banff). 4. Exhibition of action of fluorescine in the diagnosis of corneal ulcers, by Dr. McKenzie Davidson. 5. Notes on a case of traumatic papillitis, by Dr. George Ferdinands (Aberdeen). 6. Exhibition of renal calculus, by Dr MacGregor. 7. Note on harmless passage of sharp body through the alimentary canal of a child, by Dr. Beveridge.—J. MACKENZIE BOOTH and C. THISELTON URQUHART, Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A conjoint meeting of the above Districts will be held at the Grand Hotel, Brighton, on Wednesday, March 25th. Mr. Seymour Burrows will preside. Meeting at 3.30 P.M., dinner at 5.30 P.M. Charge 6s., exclusive of wine. Mr. A. G. Mossop will read short notes on a case of Double Serpiginous Ulcer cured by Scraping. Dr. A. J. Richardson will show some patients who have been under Dr. Koch's Cure for Tuberculosis. Gentlemen who desire to contribute papers or cases are requested to write to one of the Honorary Secretaries—W. AYTON GOSTLING, West Worthing; or T. JENNER VERRALL, Brighton.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this Branch will be held at Guildford on Thursday, April 2nd, Mr. C. J. Sells in the chair. Members willing to bring forward cases or papers please communicate with the Honorary Secretary, J. P. A. GABB, M.D., Guildford.

BORDER COUNTIES BRANCH.—A meeting of this Branch will be held at Carlisle at 3 P.M. on Friday, March 20th, when the following papers will by read:—Dr. Mason (Windermere): A Case of Strangulated Obturator Hernia: Recovery. Dr. Palm (Wigton): On a Fatal Case of Purpura Hæmorrhagica with *Post-Mortem* Appearance. Dr. T. Kay Tomory (New Abbey, Dumfries): On the Treatment of Whooping-Cough by Ouabain. Dr. Hamilton (Hawick): On Treatment by Hypnosis. Dr. Thomson (Penrith): A Case of Symmetrical Gangrene, with photograph. Messrs. Richardson and Co., of Leicester, will show specimens of recent drugs and preparations.—JAMES ALTHAM, M.B., Honorary Secretary, Penrith.

LEEWARD ISLANDS BRANCH.

THE first annual meeting of this Branch was held in St. John's, Antigua, on January 22nd.

Election of Officers.—The following officers were elected: *President:* Dr. W. H. Edwards (Antigua). *Vice-Presidents:* Dr. A. G. McHattie (Antigua), Dr. W. Branch (St. Kitts). *Honorary Secretary:* Dr. G. E. Pierez (Antigua). *Honorary Treasurer:* Dr. A. Edwards. *Members of Council:* Dr. J. Freeland, senr. (Antigua), Dr. A. Boon (St. Kitts), Dr. Williams (Dominica), Dr. C. Edwards (Nevis), Dr. J. S. Gabriel (Antigua). The chair was taken by Dr. MCHATTIE, in the absence in England of the President. Drs. Boon and Williams were elected Island Secretaries for St. Kitts and Dominica respectively.

Inaugural Ceremony.—The Council Chamber was placed at the disposal of the Association by His Excellency Sir William F. Haynes-Smith. The opening ceremony was attended by the Governor and Lady Haynes-Smith, the Bishop and Mrs. Branch, Justice Baynes, the Attorney-General, and numerous ladies and gentlemen.

The Chairman's Address.—Dr. A. G. MCHATTIE delivered an address, in which he congratulated the members present on the formation of the Branch, which, he said, would promote a greater interest among them in their profession, and it would form a bond of union between them that would strengthen their hands in the carrying out of any general object for the benefit of the profession or the communities in which they may reside. He then dwelt upon the subject of medical ethics, in which he pointed out several instances of unprofessional conduct he had noticed in the country, and concluded by pointing out that if the medical profession, the minority as well as the majority, would accept the golden rule and follow it to the letter in their dealing with each other, and always, under every circumstance, do to others as they would that others should do to them, the evils of which he had spoken would be rendered almost impossible, confidence would be restored in their own ranks, and their profession would soon command the respect and esteem of the public, and take its legitimate position in every community.—A vote of thanks to Dr. McHattie, proposed by Dr. NICHOLLS and seconded by Dr. ARTHUR EDWARDS, was carried unanimously.

The Governor's Address.—Sir WILLIAM F. HAYNES-SMITH, K.C.M.G., Governor of Leeward Islands, delivered an address, in which he expressed his pleasure in being able to take part in the inauguration of the Leeward Islands Branch of the British Medical Association. He said that more than one sixth of the total revenue of the colony was now expended on the maintenance of the Government Medical Service, and of the Government hospitals and asylums of the country, that great efforts were being made to improve the buildings, and to train a staff of skilled nurses and attendants. He especially recommended that attention should be given to the study of leprosy. The Government, he said, proposed to submit the question of compulsory segregation of leprosy to the consideration of the general Legislature, and he hoped that no opportunity would be allowed to pass by for the investigation which appeared to afford even a reasonable prospect of yielding a further knowledge of the disease. The disease of yaws was one which demanded investigation, and he mentioned that Dr. Nicholls had already been appointed to conduct a special investigation, both in the Leeward and Windward Islands, and in the Island of Tobago.—On the motion of Dr. NICHOLLS, seconded by Dr. J. FREELAND, a vote of thanks to the Governor was adopted.

Demonstration.—A demonstration of microscopical specimens, including bacilli of tuberculosis, leprosy, and anthrax was given by Dr. PIEREZ, who also exhibited the electric light for the examination of the throat.

Members Present.—After the general meeting an ordinary meeting was held, the members present being: *Vice-Presi-*

dent, A. G. McHattie, M.D.; *Honorary Secretary*, G. E. Pierez, M.D., C.M.; *Honorary Treasurer*, A. E. Edwards, F.R.C.S.; and Messrs. H. A. A. Nicholls, M.D., F.L.S. (Dominica); J. S. Gabriel, M.R.C.S. (Antigua); F. J. Freeland, M.D. (Antigua); J. Freeland, sen., M.R.C.S. (Antigua); A. Mackie, M.B., C.M. (Antigua); G. H. Mapleton, M.B., C.M. (St. Kitts); W. H. Fretz, L.R.C.P. and S. (St. Kitts); A. C. Gomes, M.R.C.S. (Antigua); and William Branch, M.B., C.M. (Montserrat).

Medical Reports.—A suggestion by the GOVERNOR that all papers and discussions of interest to the colonies should be published in pamphlet form at the Government expense was considered, and it was resolved to accept the Governor's offer, and Dr. Nicholls was elected editor.

Resolutions.—Resolutions on the following points were adopted, and have been transmitted to the Governor: (1) On the necessity of having properly trained midwives. (2) On the necessity for a proper hospital for the reception of surgical cases in Montserrat. (3) Instructing the Honorary Secretary to order copies of Styrap's *Code of Medical Ethics*: and (4) with regard to leprosy as follows: "Whereas leprosy prevails in different degrees of intensity in the Leeward Islands, and whereas some difference of opinion exists in regard to the causes and treatment of the disease: Resolved, that it is most desirable to institute a Government inquiry into the various questions relating to the cause, degrees of prevalence, and cure of the disease. Resolved, further, that a copy of this resolution be forwarded by the Honorary Secretary of this Association to His Excellency the Governor, for transmission to Her Majesty's Principal Secretary of State for the Colonies, and to the Leprosy Investigation Committee." This was moved by Dr. PIEREZ, seconded by Dr. F. J. FREELAND, jun., supported by Dr. NICHOLLS, and carried unanimously.

Papers.—Papers were subsequently read On Strychnine Poisoning, by Dr. A. EDWARDS; On Bilious Remittent Fever, by Dr. J. FREELAND; On Endemic Fevers of Dominica, by Dr. NICHOLLS; On Dysentery, by Dr. NICHOLLS.

Adjourned Meeting.—The adjourned meeting was held on January 26th, when the following papers were read: On Scrofula in Dominica, by Dr. JOHN ARMSTRONG; On the Education of Midwives in the Leeward Islands, by Dr. BOON; On Six Months' Surgery in Montserrat, by Dr. M. P. DUKE.

Further Adjourned Meeting.—A further adjourned meeting was held on January 27th, when the following papers were read: By Dr. McHATTIE: On Bilious, Remittent and Yellow Fever; by Dr. BOON: On the Treatment of Infantile Diarrhœa. A paper by Dr. BOON, On Treatment of Elephantiasis Scroti, was taken as read.

GLOUCESTERSHIRE BRANCH.

AN ordinary meeting was held at the General Infirmary, Gloucester, on Tuesday, February 17th, 1891, under the presidency of Dr. WATTERS. The minutes of the last meeting were read and confirmed.

Communications, etc.—Dr. WATTERS read notes on the Treatment of Ingrowing Toenail, and a discussion followed.—Mr. E. D. BOWER made some remarks on the Treatment of Nasal Polypi, which was followed by a discussion.—Mr. CARDEN exhibited a specimen of Spindle-celled Sarcoma removed from the male breast, and showed some sections under the microscope.

BATH AND BRISTOL BRANCH.

THE fourth ordinary meeting of the session was held at the Grand Pump Room Hotel, Bath, on February 25th, A. B. BRABAZON, M.D., President, in the chair. Thirty-eight members were present.

New Members. The following gentlemen were elected members of the Association and the Branch: P. P. Johnson, M.B., C.M.Edin., of Yatton, J. B. Webb, M.R.C.S. and L.R.C.P., of Sheffield, and H. L. Ormerod, M.R.C.S., L.R.C.P., of Westbury-on-Trym.

Lateral Curvature of the Spine.—Mr. T. D. RANSFORD opened a discussion on lateral curvature of the spine, which was continued by the PRESIDENT and Drs. SPENDER, GOODRIDGE, MICHELL CLARKE, MARKHAM SKERRITT, and Messrs. GREIG SMITH, PAGAN LOWE, MUNRO SMITH, LANSDOWN, R. J. H. SCOTT, SWAYNE, and CARR.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

A MEETING of this Branch was held in the Crown Hotel, Falkirk, on March 3rd. Dr. HALDANE, President of the Branch, presided, and there were also present Drs. Peake, Linton, Highet, Smith, Wickham, Cribbes, and Lewis. Apologies for absence were intimated from Drs. Oswald, Leslie, Spence, Macpherson, and Kirkwood.

The minutes of last meeting were read and approved.

New Members.—It was announced that the following gentlemen had been elected members of the Branch: Drs. Fergusson (Alloa), Smith (Falkirk), and Baird (Bonnybridge).

Sale of Poisons Bill.—A letter was read from the Parliamentary Bills Committee of the Association forwarding a memorandum on the Sale of Poisons Bill. This was read to the meeting, and it was resolved that as more time was required for its proper consideration the Branch should in the meantime offer no suggestions on the subject to the Parliamentary Bills Committee.

Direct Representation on General Medical Council.—A discussion on the increase of direct representation on the General Medical Council was postponed, in the absence of Dr. Macpherson, who was to have introduced it.

Communications. Dr. PEAKE delivered an address on the Treatment of Wounds, and advocated a more general use of dry dressings in all kinds of wounds, referring to burns treated in this way and exhibiting a new form of protective tissue and gauze recently introduced by Dr. Crawford Renton, of Glasgow. In the discussion which followed all the members present took part, and Dr. Peake was thanked for his address.—Dr. LEWIS read a short paper on Ureometry, maintaining its value to the general practitioner, and exhibited the simple ureometer of Doremus and Thursfield, made by Messrs. Southall, Birmingham, and the method of using it was demonstrated.—Dr. HALDANE referred to the subject of Jaundice, and recommended highly the use of the mistura agrimoniæ co. in obstinate cases. Dr. Haldane also related particulars of certain anomalous cases of Typhoid Fever.

Annual Meeting.—It was resolved to hold the annual meeting of the Branch in June at Bridge of Allan.

SPECIAL CORRESPONDENCE.

BERLIN.

The Cantharidin Treatment of Tuberculosis.—Professor Pfuhl.—Society for Nursing the Sick and Wounded in War.

THE meeting of the Berliner Medicinische Gesellschaft on March 4th was entirely taken up by a discussion on Liebreich's cantharidin remedy, and demonstrations in connection with it. Stabsarzt Landgraf Dr. Lublinski, and Professor P. Fraenkel gave an account of their experiences with cantharidin. They were all three unanimous in their opinion (with which Professor Liebreich entirely coincided) that the point of importance which had to be ascertained was whether the remedy can and does make its way to a diseased spot in the body, there exercising or at any rate leading up to, a therapeutic action. They all came to the conclusion that this was the case. Professor Liebreich said he had been repeatedly asked whether his remedy was a specific or not, and that the answer depended upon the sense attached to the word "specific." If the word were taken to mean a remedy that, when used in a certain disease, exercised a therapeutic action on the affected part, then cantharidin could be called a specific. But if by the word was meant a remedy with a beneficial action on one disease alone, then cantharidin could not be called a specific, as its therapeutic action would probably be found to extend to other diseases besides tuberculosis.

Professor Pfuhl, director of the chemical and hygienic laboratory of the Friedrich-Wilhelm Institute, has been granted a year's leave from his duties, so that he may be able to assist his father-in-law, Professor Koch, in his further researches on tuberculosis.

On the evening of Thursday, March 5th, the large concert hall of the "Philharmonie" presented a curious spectacle: 600 young men from all parts of Prussia—members of the Society for Volunteer Nursing of the Sick and Wounded in War—stood up to show what they had learnt in the healing

art, their examiners being thirty-nine surgeons, among whom were Bardeleben, von Bergmann, Leuthold, and other distinguished men. The Society, which has branches in almost every university town of Prussia, recruits its members chiefly from among the students, but artisans, merchants, teachers, and even clergymen are to be found in its numbers. Sixteen towns had sent deputations to the "demonstration." The proceedings, which were honoured by the presence of the German Empress, began with a sort of review. Double columns were formed, and the Empress, accompanied by a brilliant staff, passed along the ranks. The leaders of the different deputations were honoured by an introduction, the Empress speaking a few words to each one separately. Then began the examination, which was conducted partly by questions and answers, and partly by actual ambulance work performed on the persons of forty "supers" especially engaged to play the part of wounded soldiers. These unfortunate victims, though to all appearance enjoying the most robust health, had to submit to have their clothes ripped up mercilessly, that their wounds might be laid bare, to be examined, bound up, ligatured, bandaged, etc., in the most approved fashion. The amateur surgeons' assistants acquitted themselves most creditably, and their proficiency was recognised in a speech by the Prussian Minister of War, Herr von Kaltenborn-Stachau, who said that the heads of the army were fully aware of the good work that was being done by the Society, and that should occasion arise, the help of the Society would be considered as of the greatest importance.

MELBOURNE.

Proposed Amalgamation of the Victoria Branch of the British Medical Association with the Victoria Medical Society.—Dr. Jackson's Valedictory Address.

THE subject engaging the most attention in medical circles is the proposal to amalgamate the Victoria Branch of the British Medical Association with the Medical Society of Victoria. The initiative has been taken by the latter society, and has been warmly responded to by members of the Branch. The reasons urged on behalf of the scheme are: (1) the desirability of uniting the profession into one body, so that any action on its part in the realm of medical politics will have due weight; (2) a greater incentive will be given in the production of original work owing to more largely attended meetings; (3) as a matter of economy to those who are members of both societies. Although there is undoubtedly plenty of room for two societies, and hitherto the rivalry has been of a healthy and friendly character: still, the feeling has grown that the time has arrived when a fusion of the two societies—having practically the same objects and consisting largely of the same members—might, without affecting the dignity of either, be brought about. The movement is at present but a little beyond the preliminary stage, although a wish has been expressed by the President of the Branch, Dr. Le Fevre, to have this historical event completed during his term of office. There are, however, a number of preliminaries to be settled. In the first place, the consent of the Council of the Association will have to be obtained, and such is the loyalty of the members of the Branch that they have decided to refer the whole matter to the home Association for approval before committing the Branch to an irrevocable step. The Branch now numbers 163 members, about 80 of whom are also members of the other society. On the other hand, the Medical Society has close on 100 members who are not connected with the Association, and it is considered very probable that the union will be the means of inducing them to join the Association. The Branch is determined to maintain its individuality and title as a distinct body, and the new subscribers to the BRITISH MEDICAL JOURNAL will have to go through the same forms of election as hitherto, so that there will continue to exist a kind of special administration, which will deal specially with British Medical Association matters. The first official recognition of this new scheme took place recently, when the president of the Medical Society gave a dinner to which the leading representatives of the Victoria Branch of the British Medical Association were invited. There were only a few speeches, but they were all indicative of the enthusiasm that exists with regard to the amalgamation. Dr. Neild, in proposing "The Health of the Host, Dr. Jackson," spoke of the honour the Medical Society did itself when it elected a physician of such high professional standing, and so expert a specialist as its president. During his year of office he had performed his duties most admirably. In his reply, Dr. Jackson declared himself pleased to count amongst his guests so many distinguished members of the British Medical Association, and hoped that this social gathering would in some measure contribute towards the speedy completion of the proposed scheme. He then proposed "The Health of the President of the Victoria Branch of the British Medical Association," in felicitous terms. In responding, Dr. Le Fevre expressed his satisfaction at the progress already made in the negotiations, and he thought great praise was due to Dr. J. W. Barrett for the diplomatic skill he had shown in what had already been done; he hoped to see the movement ratified by the home authorities. The only other toast proposed was that of "Dr. Gresswell," who during his short stay here has already made himself popular both with the profession and the public.

The President of the Medical Society, Dr. Jackson, in his valedictory address on the completion of his year of office, said that the hopes of an amendment of the Medical Act had again been dissipated owing to political changes which brought a new Government into existence at the end of the session, and this was all the more to be regretted as they had been waiting for that piece of legislation for twenty-six years. He went on to say that on the evidence taken by the Charities Commission a difference of opinion seemed to exist as to the advisability of removing the Melbourne Hospital to another site. Its hygienic conditions were not modern. It had been built piecemeal and had outlived its term of existence. On the question of charitable relief, he said half of the patients at the Melbourne hospitals were undeserving of the gratuitous benefits they demanded, and the charities of the colony were to a large extent an unnecessary burden upon the common benevolence. The attendance on club patients was next touched on, and the opinion was expressed that the friendly societies were absolute masters of the situation and dictated their own terms. This was mainly owing to the overcrowding of the profession. Dr. Jackson objected to pay wards in charitable institutions, and favoured the establishment of pay hospitals. He dealt very severely with the composition of the new Board of Public Health, which consisted previously of persons selected by reason of their presumed special knowledge of hygiene, but was now composed of individuals representing and elected by the municipal councils of the colony. As a set-off, however, to this, the Act provided for an adviser and executive officer of the Board, and in the selection of Dr. Gresswell for this very important office, the Government had been exceptionally fortunate.

EGYPT.

Professor Koch.—Luxor Hospital.—Sanitary State of Luxor.

THIS season has been the most successful that Egypt has ever known, the number of visitors from all parts of the world having greatly exceeded that in any previous year. Among the distinguished personages who have sought the banks of the Nile for rest or relaxation is Professor Koch, who is now on his way to the second cataract in one of Messrs. Cook and Sons' newly established postal steamers. The great bacteriologist, who, on arrival, looked weary and work-worn, is apparently much enjoying his well-earned holiday, and seems to appreciate with the utmost zest the wondrous relics of the mighty past. While visiting the remains of the ancient Lycopolis, near Assiout, an incident occurred which proves that though a devotee to the laboratory, the professor is none the less an accomplished pedestrian, or one might say athlete. The Arab guide having declared that access to a certain point was impracticable without first descending to a lower level, the professor merely remarked "We will try," and proceeded to tackle the sloping ledge which was pronounced impassable. Once over it seemed a simple matter enough, but the Arab on the proximate side evidently thought otherwise, for after one or two offers he retreated in company with some more of the party, who preferred a securer if a longer route.

Some time ago a native hospital at Luxor, founded by Messrs. Cook and Sons, was inaugurated with great pomp and

ceremony by H.H. the Khedive. So far so well, but in addition to founding a hospital it is also necessary to endow it, and great fears are entertained that in the present case the necessary income will not be forthcoming. The building, designed apparently by local talent, is not in accordance with recent ideas on the subject, but is, nevertheless, much better than nothing at all. The medical officer, Dr. Selim Zeidan, M.R.C.S., L.R.C.P., is a most accomplished surgeon and physician, who received his early training at Kasr-el-Aini Hospital under Dr. Milton; but, unfortunately, he has neither apothecary, nurse, steward, or writer to assist him, and has consequently to fulfil all these duties himself, in addition to teaching the two servants placed at his disposal how to sweep, cook, and wash. His supply of medicines is most limited, and, worst of all, he has not been supplied with adequate surgical instruments. From forty to sixty poor people present themselves every day, the majority requiring operative treatment either for eye affections or other infirmities, but for lack of the necessary equipment they cannot be relieved. This is a very lamentable state of affairs, and should at once be remedied.

The sanitary condition of Luxor is simply disgraceful. No attempt whatever is made to remove filth, and the smells are consequently atrocious. The banks of the river are habitually resorted to by the inhabitants, so, as all the public offices are here situated, the resulting inconvenience is much felt. Considering the numbers of visitors who flock to Luxor yearly and spend their money freely, it would not be unreasonable to expect Government to do something towards establishing a system of conservancy.

DUBLIN.

Banquet at the Royal College of Surgeons.—Death of Dr. Henry J. K. Gogarty.

On March 7th Mr. Henry Gray Croly, President of the Royal College of Surgeons, Ireland, entertained His Excellency Lord Zetland and about 200 other guests at a grand banquet in the Museum of the College. The room was most handsomely decorated, and as all officers appeared in uniform the scene was a very bright and attractive one. Amongst those present were General Lord Wolseley, Lord Crofton, Lord Longford, Judge Boyd, Sir George Porter, Bart., Sir C. Cameron, Sir W. Stokes, Sir Andrew Reed, Surgeon-General Sinclair, P.M.O., Sir R. Jackson, C.B.; Dr. Finny, President of the College of Physicians; Dr. Gordon, President of the Royal Academy of Medicine; the Provost of Trinity College; Dr. Carte, Vice-President, Royal College of Surgeons, etc. In reply to the toast of his health, the Lord Lieutenant spoke at some length, and referred to the work which was being carried on for the relief of the distress in the West of Ireland, where no fewer than 90,000 individuals are being helped either by employment on the new railways and Government roads or by food provided by the relief funds. In proposing the toast of "The Army and Navy," the President said they had always in the past great Irishmen in the army, and it was a great thing to see that reputation perpetuated. In Ireland people believed there was nothing to be got without agitation, and they should agitate until the grievances of the army medical officers were remedied. They wanted them to get, amongst other things, shorter periods of foreign service. He (the President) went to London a short time ago with the President of the Royal College of Physicians there, and they put before Mr. Stanhope the grievances of which they complained. Some of these had, he believed, been dealt with, but a good deal yet remained to be done. Lord Wolseley responded, and said the President, he regretted to find, had drawn some distinction in his remarks between the combatants and non-combatants of the army. That was a distinction unknown in the army. They looked upon the doctors as the most valuable members of their profession. They never drew a distinction between combatants and non-combatants in Her Majesty's army. This fact was particularly brought to his memory at present because he saw seated there a comrade of his own, with whom he had served in all parts of the world, who had been not only a good friend and comrade, but, if he might venture to say, one of the best and ablest soldiers he had ever known—he referred to his friend Sir Robert Jackson. The members of the army owed and owned a deep debt of gratitude to the members of the medical and surgical profession, not merely because some of them owed to them the fact that they were alive to-day—he himself was one of these—but because they had done so much for the army in times of peace. It was a well-known fact—known, he did not doubt, to all present—that it was owing to the members of the medical profession the question of the housing of the soldiers had come to be considered. The barracks in this country and England had been a disgrace to civilisation and to the British Government, and he was glad that this reform had been brought about without the agitation to which the President had referred. It had not been by coercing or bringing great pressure to bear upon the Government, but was owing to the outspoken manner in which the question had been treated by the medical officers of the army that the question had been taken up. And when the soldiers before long were better housed than they are now and in a manner that becomes the great nation which has the privilege of paying for those houses, it would be a great satisfaction to men like himself that in bringing about this state of things they were largely indebted to the profession which was so well represented that evening. Surgeon-General Sinclair also responded, as did Dr. Macaulay on behalf of the navy. The other toasts included: "The Bench and the Bar," to which Judge Boyd and Judge Purcell responded; "The Medical Licensing Bodies," acknowledged by the Rev. Dr. Stubbs, Dr. Finny, President of the College of Physicians, and Dr. Creed Meredith; "The Guests," responded to by Sir Andrew Reed, Inspector-General of Royal Irish Constabulary; "The Press," etc.

We regret to announce the sudden death of Dr. J. H. K. Gogarty, of Rutland Square, Dublin, at the early age of 49. Dr. Gogarty had been out of sorts for a few days, but he still continued his work. On Saturday afternoon he came in from visiting some patients, and was about to dress to attend the banquet at the College of Surgeons, when he suddenly expired from disease of the heart. Immediate help was obtained, but it was of course unavailing. Dr. Gogarty enjoyed a very large general practice, and he was deservedly popular in the profession, for he had a kindly and generous nature. He was a Fellow of the College of Surgeons and a Licentiate of the College of Physicians. He held no public appointments.

LEEDS.

Dust and Fresh Air.—Football and Hospitals.—Trained Nurses' Institution.—The General Infirmary.

The President of the Leeds Literary and Philosophical Society (Mr. T. Pridgin Teale, M.A., F.R.S., F.R.C.S.) delivered a lecture in the Society's Hall, Park Row, on March 4th, on "Dust and Fresh Air; How to Keep Out the One and Let In the Other." The lecturer, after a few introductory remarks on the multiform evils of dust, pointed out that the crucial point was to keep out the fine particles of dusty matter and yet admit the air, which Mr. Teale suggested should be done by a filter screen, for which he considered cotton wool best adapted. The paper was illustrated by diagrams, and Mr. Teale explained the method of fixing the filter screens to rooms, cabinets, and other enclosed spaces.

The proceeds of the recent football match played in Leeds, in which the members of the Grand Theatre Pantomime Company opposed the Leeds Club, have just been handed over to the Workpeople's Hospital Fund. The statement of accounts shows that the gate money amounted to £189 8s. 7½d., sale of tickets £42 9s., and sales by ladies of the pantomime and "side shows" £28 2s. 7½d., giving a total of £260 0s. 3d. The expenses amount to £34 4s. 11d., leaving a balance of £225 15s. 4d. £210 of this amount was handed to the Hospital Fund, the remainder being kept as a reserve fund in order to make the match an annual affair.

The report presented at the fifteenth annual meeting of the Leeds Trained Nurses Institution stated that the work of the institution continued to be carried on with thorough efficiency in every department. The number of cases attended during the year was 759. At the close of the year the staff consisted of eighty-two nurses engaged in private nursing, seven in district nursing, and twenty-one probationers in training at hospitals.

The annual meeting of the General Infirmary was held on

March 4th. The Chairman stated that an appeal would have to be made to the public of the West Riding of Yorkshire especially for funds to defray the cost of furnishing the new wing, which he hoped would be ready for occupation next year. An appeal would also have to be made for additional annual subscriptions in view of the increased cost of maintaining the infirmary when thus enlarged.

MANCHESTER.

Owens College.—Court of Governors and Extension of the Medical School.—Bust of Dr. Greenwood.—Monsall Hospital.—Saturday and Sunday Hospital Funds.

The Council of Owens College, with a view to utilise for the best advantage of the public of Manchester, and for increasing the efficiency of the medical school, recently made some propositions to the managers of the Royal Infirmary in connection with the gift of a large plot of land which the college has recently received for hospital purposes. Committees of the two institutions met and discussed the proposals of the college authorities. Ultimately the whole question was remitted to a small joint committee composed of six members, three as representing the Royal Infirmary, and other three the Council of the college.

At the half yearly meeting of the Court of Governors of Owens College, it was reported that the number of students attending the medical classes during the present winter session is 348. A committee was appointed to endeavour to raise by public subscription a sum of £50,000, required for the extension of the medical department of Owens College. Mr. Waterhouse, R.A., has prepared the necessary plans of the new extension.

The Associates of Owens College have presented to the college a marble bust of Dr. Greenwood, lately Principal of the college. The bust is the work of Mr. E. Onslow Ford, R.A. Unfortunately Dr. Greenwood was unable to be present when the bust was publicly unveiled.

In connection with the large fever hospital at Monsall, it has been resolved that the use of this hospital for infectious diseases shall, as far as possible, be confined to the inhabitants of the city as now extended.

Up to date, the total amount received for the Hospital Sunday Fund is £4,710 10s., and for the Hospital Saturday Fund £3,469 17s.

CORRESPONDENCE.

THE MIDWIVES BILL.

Sir,—As much of your space has recently been occupied by letters on this Bill, will you allow me to reassure any members of the profession who may be still alarmed at the possibility of the Bill becoming law? The Bill is dead for this session, and has practically been so from the beginning of the year. In its present form it is never likely to be passed. At present it is impossible to say what will be the outcome of the discussion of the Bill. The danger is that wider proposals with reference to the registration of nurses of all classes may be made. For the present, however, the profession need not be troubled.

While writing, may I occupy your space with a personal matter? My attention has been called to a recent letter in which it is stated that "a number of us general practitioners have been rather severely maligned by Sir W. Foster and Dr. C. Holman, both of whom have said that our motives in opposing the three Bills have been 'sordid,' and based on 'cupidity.'" This is, as far as I am concerned, absolutely untrue. In the debate at the British Gynæcological Society I said exactly the contrary—namely, that I did not think any medical man would allow sordid interests to influence him. I thought so then. I think so now. If anyone has been maligned, I have been, but it is of little consequence; for no general practitioner who knows me would suppose for a moment that I would libel a body of gentlemen with whom and for whom I have worked loyally for the last quarter of a century in all movements for the elevation of the general body of the profession.—I am, etc.,

House of Commons. Walter Foster.

Sir,—I regret that I cannot compliment my friend Dr. Rentoul on the result of his further legal studies. He appears to think that he proves his original assertion that, in order to practise any branch of medicine, a person must have three registrable qualifications, by quoting a subsection of the Medical Act of 1886, which distinctly says, as I had already told him, that a triple examination must be passed in order to obtain "a diploma or diplomas," conferring the right of registration. More unfortunately still for his contention, he descends to particulars, and cites the case of the Colleges of Physicians and Surgeons combining to hold joint examinations, and says they then give three diplomas, and that if this were not so, their qualifications are not registrable. This will be news, I fancy, to hundreds of registered practitioners who have, since 1886, found the L.R.C.P.Lond., and M.R.C.S. Eng., quite enough to admit them to the *Register*, as well as to those L.S.A.'s, who have during the same period found one registrable diploma an open sesame. As against facts like these, assertions, however confidently made, weigh as nothing in the balance.

Dr. Macnaughton Jones admits I am correct in supposing that he includes under a midwife's duties at the present time the examination of the urine, the treatment of abortion (what does Dr. Rentoul say to that?), the treatment of convulsions, the administration of laudanum, bromide, and chloral (which by the way is quite illegal, under the Apothecaries Act of 1815), stitching up the perineum, etc. While encouraging midwives who have given no proof of having had any regular training to perform these medical and surgical duties, far beyond any claimed for them by the promoters of the Bill, he and those whom he claims to represent object to pledge themselves to the principle of registration, on the ground (or grounds if he prefers it) of great public danger. Dr. Jones sees no inconsistency in this, nor on reflection do I, beyond what is involved in straining at a gnat and swallowing a camel.—I am, etc.,

Dulwich, S.E. H. Nelson Hardy.

Sir,—I beg to comment on the remarks made by my neighbour, Dr. Braidwood, of Halkirk, regarding the *questio vexata* of our midwives.

Having had seventeen years' experience of their ways and doings in this remote but by no means unimportant locality, I have formed the opinion that they are as a whole very much improved of late.

When I commenced practice here, the fact of a doctor being called to a childbed case was a town's talk for days. I well remember being at one case in 1873, and at once informed the nurse that I would deliver with the forceps in a very short time, which I was enabled to do, the patient being actually limp from exhaustion; that nurse never gave me the light of her countenance again, but what was much better the lady frequently did. Another objection these nurses have is the doctor's ideas of cleanliness, not to mention antiseptics; in those days I have often found a patient wet to the neck and heels with fœtid lochial, etc., discharges, and the atmosphere of the room simply Stygian. All this has now passed away, but the giving of advice in children's and female complaints continues, as also in a measure the feeling of having to acknowledge need for aid.

I may mention that during the last fortnight I have had four cases where midwives sent for a doctor, three being forceps, and one retained placenta, and in none was there unnecessary delay. Midwives are a necessary evil, and can do much harm to medical men as well as to patient, but let us hope their higher education will remove this entirely.

Another very important matter for consideration is the fact that midwives go from houses where they have been visiting cases of scarlatina, typhoid, etc., direct to the lying-in bed, and also from dressing bodies of those who have died of such and similar complaints.—I am, etc.,

Thurso, N.B. John Craven, L.R.C.P., L.R.C.S.Ed.

Sir,—In the British Medical Journal of February 28th, Dr. Braidwood informs us of the condition of things with regard to midwifery in Caithness, where "nearly the whole of the midwifery department of our profession is in the hands of midwives." Perhaps it will not be uninteresting to have a statement on the same subject from a rural practitioner at the

other extremity of Great Britain. Fifteen or twenty years ago there were probably half a dozen midwives in this district. Now there is not one who styles herself a midwife, or practises as such, preference being given to general country practitioners and Poor-law medical officers. Many a time have my lying-in patients informed me that they would "rather trust themselves in the hands of a man (namely, a medical man) than a woman," and no doubt this feeling is general among women everywhere. But it is not solely a matter of preference which has caused midwives to become extinct. The fact that a medical man's services at the present time are known to be available for the poorest as well as the richest has had much to do with it. When called to one of the poorest class I attend generally on a Poor-law order previously obtained, but if not so obtained I find no difficulty in getting the order subsequently on application to the relieving officer and explaining the circumstances. This confirms what has been already stated by correspondents, that there is no woman so situated that she need be without a medical attendant during her confinement.

It is my experience that all above the pauper class can pay fees ranging from half a guinea upwards, for I find they do so. Nineteen times out of twenty the fee is forthcoming at the time of attendance, and no money is more willingly paid.

Personally, I fail to see that there is such a demand for midwives as is suggested by the promoters of the Midwives Registration Bill. Our greatest want in rural districts is better trained nurses, not only for the lying-in room, but also for general cases of sickness, and any Bill which would make such nurses equally available to the poor as are the Poor-law medical officers would be much more worthy of support.

The General Medical Council are, rightly I think, putting pressure on principals to employ only qualified assistants. Qualified assistants relieve their principals morally by taking the midwifery cases, and were it not for the midwifery fees many a country doctor would not be able to comply with the wishes of the Council.—I am, etc.,

St. Agnes, Cornwall. WM. WHITWORTH.

TAPPING THE VENTRICLES.

SIR,—Sir Risdon Bennett has rightly enough said that tapping the ventricles is an old procedure, but I apprehend the operation proposed by Mr. Mayo Robson is of another kind in accordance with modern cerebral surgery, that is, trephining the skull and piercing the brain to reach the interior. The cases referred to by Sir R. Bennett were those of hydrocephalic children, and the paracentesis was done by passing a trocar through the anterior fontanelle or coronal suture, and so reaching the ventricles through the corpus callosum. Dr. Conquest's cases, to which he alludes, were four in number. Their publication led others to attempt the operation, and it is now nearly thirty years ago that I tapped the ventricles in two children at the Royal Infirmary, Waterloo Road. A large quantity of fluid was removed, and no ill effects followed, although the children subsequently died. I found it impossible to restrain the formation of fresh fluid. An elastic band, tight enough to threaten coma and to produce abrasion of the scalp, did not suffice to prevent a renewed secretion. Dr. West collected more than fifty cases of the kind, and the results were so unsatisfactory that the operation seems to have been long abandoned. The present proposal to tap the ventricles in older children and adults by trephining stands altogether on a different footing.—I am, etc.,

Grosvenor Street. SAMUEL WILKS.

SIR,—In the BRITISH MEDICAL JOURNAL for March 7th, Sir James Risdon Bennett is so good as to point out that in 1827 Dr. Bedor, of Troyes, and in 1830 Dr. Conquest and others successfully punctured the brain for chronic hydrocephalus. On reference to my paper it will be noticed that it specially referred to trephining and tapping the ventricles in acute cases where pressure was threatening death from coma, and only incidentally at the end of the paper did I remark very briefly that I had also found Professor Fraser's photographs to assist me in puncturing the brain in a case of chronic hydrocephalus. I knew that the latter simple though seldom successful operation had been frequently done, but it will be noticed, in my remarks appended to my paper in the BRITISH MEDICAL JOURNAL for December 6th, 1890, that I said I wanted it to be clearly understood that the paper was intended to illustrate the advantage to be gained by the relief of pressure in acute cases, which so often end fatally by pressure.—I am, etc.,

Leeds. A. W. MAYO ROBSON

AN IMPERIAL UNIVERSITY.

SIR,—Is it not sad to see the continued abortion of the so-called university schemes? Could not the whole question be solved by the establishment of a great Imperial university, such a university as this great empire should possess? Let the university have its site in London and affiliate all the teaching and qualifying bodies in the empire; let its degrees be obtainable only by those who have already passed the examinations of the universities or corporations in the empire; the examination of the new university to take the place of the "Staats-examen," and give the sole right of admission to the *Register*; the General Medical Council enlarged, and those representatives to form the senate of the university; the degrees to be as in all other countries—the M.D.—and this to cover all branches of professional knowledge.—I am, etc.,

Birmingham. WILLIAM DONOVAN, L.R.C.P.

THE TREATMENT OF TUMOURS BY ELECTRICITY.

SIR,—In his paper in the BRITISH MEDICAL JOURNAL of February 14th, Dr. Keith states (Case VII): "About the end of June she was taken by a nurse to Mr. Lawson Tait, of Birmingham. The diagnosis, given in writing, was that there was a uterine tumour of about 7 pounds, rapidly growing, and fatal to life at no distant date." As a matter of fact, I never give patients opinions in writing; when opinions are given in writing, they are sent direct to the medical attendants, and in this case no medical attendant was mentioned. All my business writing is done by a secretary and a typewriter, so that my correspondence can easily be produced. My secretary asserts that there is no trace of such a written opinion, and I find the alleged opinion to be absolutely contradictory to the notes of the case in my consulting room book. Dr. Keith says I recommended removal of the ovaries in this case. I did nothing of the kind; I recommended removal of the tumour. He says that I estimated the tumour to weigh 7 pounds, but I do not remember ever having been called upon to estimate the weight of any tumour still untouched within the body. I do not remember ever attempting such a futile proceeding, and I cannot imagine what mere weight can have to do with any question of operation, at least till we get to such enormous weights as are over 40 or 50 pounds. That the question of any operative proceeding should be determined by the weight being between 2 and 7 pounds is too ridiculous for discussion.

I saw the patient once only—not at the end of June, but on the 20th of July, 1889—and the interview was a long and very unsatisfactory one, for it became evident at the very first that her visit to me was against the wish of her medical attendant and unknown to her friends. I greatly dislike such visits, and I was, therefore, unusually reticent and guarded. The patient gave no history of hæmorrhage at all. She described no menorrhagia, and said she had had great menstrual pain all her life. She was not anæmic, but a fair, florid, and very fat woman. She complained of great distress, and of hindrance to her work by the presence of a very large, solid, ovoid, uterine tumour, reaching, according to my notes, above the umbilicus. Dr. Keith says a "small uterine fibroid reached to within two or three inches of the umbilicus," and it is perfectly possible that both of these statements may be true; for I have seen greater fluctuations than are involved in these two discrepancies during the progress of the one and the same tumour of the same class as this was the soft œdematous myoma. Whatever it may have been when Dr. Keith saw the case, when the patient was in my presence I wrote down what I saw at the time, and the notes of the case are there as they were made. They were written before Dr. Keith was mentioned in the case, and, therefore, without any reference whatever to the present differences of statement; and on that day anyone who estimated the tumour at 2 or even at 7 pounds would have been properly the subject of laughter.

The patient was uncomfortable owing to the presence of this big mass in her abdomen, and she desired to continue her work, and was determined at any risk to be relieved of

her trouble. In my opinion that could only be accomplished by the removal of the tumour, and that I advised. What Dr. Keith says I said about the electric treatment is perfectly accurate. I said it all, and now I could say a vast deal more.

The patient went through the electrical treatment, and then sent me a long account of her condition. Up to that time I was waiting with real anxiety to get favourable accounts of the results of the electrical treatment of myoma, for though I would have nothing to do with it myself, I had freely declared that I was perfectly willing to hand over all my myoma cases to someone who would cure them by a means having results as permanent as those of surgery, but in itself safer. But this patient's letter gave me no such assurance. What happened was: "Figure quite natural instead of being unwieldy and fat." "Periods are now quite regular and painless, and only last two days, disappearing on the third; before the electrical treatment they had been for twenty years the bane of my life." It becomes perfectly clear from the last sentence that what was cured was something causing dysmenorrhœa, and not the tumour, for that certainly could not date back twenty years. The patient greatly comforted herself that as the symptomatic cure of her condition was all that was claimed for the electrical treatment, inasmuch as she had got that everything was quite right. In reply I wrote, on December 7th, 1889, as follows:—

My Dear Miss M., Your account of your case so far is most interesting, and if I had not heard a story almost as satisfactory before with subsequent disappointment, you would have persuaded me already to alter my belief. Of course, as you very well know, it is our duty to divest ourselves of prejudice as much as possible, and to recommend to our patients what is best for them. I should never undertake the kind of treatment that we are discussing, because my line of life is abundantly occupied in another kind altogether, and the two will not mix satisfactorily. I should be perfectly content to leave the electrical treatment of cases of tumour suitable for it in other hands, and to send all such cases as are suitable for it to those who practise it; but then comes the question, Which are the cases that are suitable? Now, the nature of your case I know exactly—that is, I know what your tumour was and all its particulars when I saw you. What I want you to do—not so much as an obligation to me as a duty to your fellow-sufferers—is to come and see me about twelve months from now, and let me determine whether a permanent change has been effected. Your case belongs to a particular group of uterine tumours, and even if the permanent good effected is confined to them a great good will arise; but unfortunately it is being adopted for many others for which it is certainly unsuitable, as they come back to me after they have undergone it in far less favourable condition for operation than they were before. Clearly, then, what we want is a proper discrimination of cases. Meantime, let me congratulate you upon the relief you have got, even if it be evanescent.—Yours very truly, Lawson Tait.

Her reply to mine was that "if nothing prevents me I shall be very glad to let you see me about November, 1890;" but when December, 1890, came she evaded her promise.

Let me, in conclusion, allude to a few points in Dr. Keith's paper where I am less directly concerned. "An ordinary case of diseased appendages was warned in the strongest terms against the electrical treatment." How rapidly things change. I had scarcely finished reading a paper written by the father of this art, Apostoli, to the effect that electrolysis was curing all the chronic inflammations in the pelvis, was undoing adhesions, and generally playing the part of a good angel towards the pelvic organs, when lo! and behold, Keith makes me an unbeliever once more.

Finally, Dr. Keith writes: "Many years ago I had to do with an extreme case ..... where the tumour reached the enormous weight of two hundred (pounds)." Many of your readers are familiar with my personal appearance. I weigh 210 pounds. I have just had a good long look at myself in a cheval glass, and have tried to imagine myself (less the odd 10 pounds) as a tumour in a woman. I once removed a soft œdematous myoma which took two people to carry it to the scales, and this was found to weigh 70 pounds. A witty visitor made the comment: "You peeled the woman off that tumour very nicely." But 200 pounds! That must be a fishing story.

In August, 1889, I concluded my lecture by challenging Dr. Keith to describe the details by which he obtains the marvellous results by his electrical treatment. He passively declined to give the information. I again challenge him in the same subject.—I am, etc.,

Birmingham. Lawson Tait.

Successful Vaccination.—Mr. W. H. Kerbey, of Charmouth, has been awarded for the second time in succession the Government grant for successful vaccination.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

The following appointments have been made at the Admiralty:—Alexander R. Joyce, Staff Surgeon to the *Thunderer*, March 17th; Robert H. J. Brown, Surgeon to the *Thunderer*, March 17th; Walter Reid, M.D., Fleet-Surgeon to the Royal Artillery Barracks, Eastney, March 16th; James Trimble, Fleet-Surgeon to the *Camperdown*, March 16th; Horatio S. R. Sparrow, Surgeon to the *Rapid* for the *Mildura*; Henry G. Jacob, Surgeon to the *Curacoa* for the *Wallaroo*; Thomas Austen, Surgeon to the *Curaçoa*; Henry S. Jackson, Surgeon to the *Katoomba*.

MEDICAL STAFF.

Surgeon Robert Hippisley Cox has resigned his commission, which was dated January 30th, 1886. Surgeon Cox was appointed to the 1st Battalion Coldstream Guards, which position he vacated on February 25th.

ARMY MEDICAL RESERVE.

Surgeon Philip Barnett Bentlif, Royal Jersey Artillery Militia, is appointed Surgeon, ranking as Captain, March 11th.

INDIAN MEDICAL SERVICE.

Surgeon-Major J. Lewtas, M.D., Bengal Establishment Joint Civil Surgeon of Simla, is directed to take medical charge of the Army Headquarters Staff and Establishment at Simla, *vice* Surgeon-Major C. Owen, C.M.G., C.I.E., who is placed on the sick list.

Surgeon J. C. Marsden, Madras Establishment, and Surgeon-Major C. T. Peters, M.B., Bombay Establishment, are allowed privilege leave for three months.

Surgeon-Major C. J. W. Meadows, Bengal Establishment, Civil Surgeon of Moorshedabad, is granted leave of absence on private affairs for one year and 133 days.

Surgeon Alfred Henry Pierson, Medical Officer Chaman Extension Railway, died of typhoid fever and pneumonia, at Shelabagh, in the Khojak Pass, Beloochistan, on January 29th, aged 33. He entered the service October 2nd, 1880, and served in the Egyptian War in 1882, where he was present at the battle of Tel-el-Kebir, receiving the medal, with clasp, and the Khedive's bronze star.

THE VOLUNTEERS.

Acting-Surgeon E. W. Barnes, 6th Volunteer Battalion King's Liverpool Regiment (late the 19th Lancashire), is promoted to be Surgeon, March 7th.

Acting-Surgeon T. P. Greenwood, 2nd Volunteer Battalion Lincolnshire Regiment (late the 2nd Lincoln), has resigned his appointment, which was dated May 25th, 1885.

Acting-Surgeon H. O. F. Butcher, 1st Volunteer Battalion Bedfordshire Regiment (late the 1st Hertfordshire), has also resigned his appointment, dated March 5th, 1879.

Surgeon H. G. Dyer, M.D., 4th Volunteer Battalion Hampshire Regiment (late 4th Hampshire), is granted the rank of Surgeon-Major ranking as Major, March 7th.

Mr. Edgar Alfred Hughes is appointed Acting-Surgeon to the 1st London (City of London Rifle Volunteer Brigade), March 7th.

Acting-Surgeon D. McMillan, M.B., 5th Volunteer Battalion Argyll and Sutherland Highlanders (late the 1st Argyll), is promoted to be Surgeon, March 7th.

EXAMINATION FOR ACTING-SURGEON OF VOLUNTEERS.

Acting-Surgeon of Artillery Volunteers asks what books it is necessary to read to pass the regulation examination as acting-surgeon to the volunteers.

"*" The books required are *Army Medical Regulations*, Parts I and II; *Regulations for Encampments*; Parkes's *Hygiene*; and the *Surgeon's Pocket-book*, by Surgeon-Major Porter.

CANDIDATES.

A Correspondent writes: A striking and significant fact, illustrative of the ruinous policy which is being followed by Mr. Stanhope towards the Army Medical Staff, may be seen on a comparison of the number of marks relatively obtained by the successful candidates for the British and Indian Medical Services. At the recent examination for commissions held at Burlington House, the papers and examiners in each instance being the same, a glance at the two lists will at once show that the last man for the Indian Service would have been third for the home appointments. A still more startling illustration of the inferior character of the candidates who are now offering themselves owing to the existing discontent in the department, caused by the refusal of the War Minister to do justice to the reasonable claims of the medical officers, is found by comparing the marks of the successful candidates at the London examination held last August with those at the recent examination. It is at once seen that the last man in that batch—a batch so inferior that at the final examination at Netley no fewer than three had to be "weeded out," a circumstance without parallel in the annals of that school—would have taken ninth place in the present list. These facts speak for themselves and require no comment; but it seems a pity that but for a few concessions, which would entail no extra expense on the State, the efficiency of a department so important to the health and well-being of that very costly animal—the British soldier—should be so seriously imperilled.

MR. STANHOPE'S DIFFICULTIES.

M.S. writes: The paragraph in the British Medical Journal of February 28th should have read: "Brigade-surgeons varying in age from 49 to 55 years, and in service from twenty-six to thirty-two years, and holding only the rank of lieutenant-colonel, whereas the last promoted full colonel in the army is not yet 44," etc.

MADRAS MEDICAL SERVICE.

JUSTICE writes: In the issue of the BRITISH MEDICAL JOURNAL of January 24th, which has just reached me, I notice, under the heading "India and the Colonies," that you have at last drawn attention to the way in which the Government of India are cutting down the administrative ranks of the medical services in this country. Nine months ago I endeavoured to draw attention to what I knew to be in contemplation by the Government of India, namely, the abolition of one administrative appointment belonging to the Indian Service in this Presidency on the retirement of Deputy Surgeon-General Farquhar. My letter addressed to you was never published in the BRITISH MEDICAL JOURNAL; and on the retirement of Dr. Farquhar the Madras Service lost one of its few remaining administrative appointments. On the last occasion when a reduction was made, the service was compensated by the grant of one extra pension of £100 a year, but this time no compensation of any kind has been given.

Since I entered the Madras Medical Service the number of administrative appointments allotted to it has been cut down exactly 50 per cent.: in other words, each member of the service has only half the chance of promotion he had when I entered it. Of the three remaining deputy surgeons-general in the Madras Service, only one has his headquarters in India, the others are in Burmah.

THE MARKET VALUE OF TITLES WITHOUT DEFINED RANK.

M.S. writes: Mr. Stanhope, in his reply to Sir Andrew Clark—no doubt at the instigation of his military advisers—tries to confuse titles with rank, or implies that they are synonomous terms. Let me give him a practical illustration of the value of our supposed present rank. Surgeons are supposed to rank "as" captains; but the practically alien Indian Government, under whom they are compelled to serve, coolly ignores the "as," and serves out subalterns' allowances to them for the first six years of service, thereby immorally pocketing one-fourth of their pay. But while this injustice is suffered, the surgeons are mockingly compelled to wear the valueless badges of captains on their uniforms. How can Mr. Stanhope then declare that the present indefinite rank of surgeons carries with it the allowances and privileges of captains? If Royal Warrants are worth anything, why do they not run in the Queen's dominions? Or is the surgeon's rank meant to be a hollow mockery?

HIGHEST DISTINCTIONS IN THE ARMY.

M.S. writes: The Duke of Connaught is reported to have stated at Netley that the highest distinctions of the army are open to medical officers. 1. Why, then, has no medical officer ever received a G.C.B. or G.C.M.G.? 2. Why can a medical officer not attain a higher army rank than major-general? 3. Why has a medical officer never received the thanks of Parliament, or been included in such a vote? The statements of the Duke are misleading, and should be corrected.

MEMORIAL TABLET TO SURGEON GEORGE SCOTT TATE, M.D.

A TABLET has been placed in Downpatrick parish church in memory of this gentleman, who died of fever in India. The tablet, which has been erected by his brother officers, bears the following inscription: "In memory of George Scott Tate, M.D., Surgeon Army Medical Staff, who died of enteric fever at Kasauli, Punjaub, India, on July 8th, 1889, aged 26 years. This memorial tablet and the monument over his grave in the Kasauli Cemetery have been erected in loving memory by his brother officers." The scroll is surmounted by the helmet, sword, belt, etc., of the Army Medical Staff handsomely carved.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ADULTERATION WITH BORACIC ACID.

STRANGELY enough the local authorities whose business it is to administer the Adulteration Act appear to have considerable difficulty in arriving at definite conclusions about the adulteration of food with boracic acid. They seem to be unable or unwilling to make up their minds to any course of action which would result in checking the practice, or, at least, in keeping it under control. It would appear to be plain that food containing boracic acid is adulterated, and that persons who sell such food commit an offence punishable under the Sale of Food and Drugs Act. It is an offence under that Act to sell any article of food not of the "nature, substance, or quality" demanded by the purchaser. Milk or butter containing boracic acid, while they may, perhaps, be regarded as partaking of the "substance" of those products cannot correctly be described as possessing their true "nature" and "quality."

By the second section of the Amendment Act of 1879, the offence is constituted by defect in any one respect. It is not incumbent upon a prosecuting authority to prove defect in nature, and substance, and quality. It might be supposed that proceedings could already have been taken upon these grounds, amply sufficient as they appear to be. But there would seem to be a desire to attack this form of adulteration on the score of injury to health. The Kensington Vestry recently applied to Sir Andrew Clark, Sir Henry Thompson, and Dr. Lauder Brunton for their opinions on the subject. The members of the vestry were no doubt animated by the laudable desire of fortifying themselves with reports from eminent members of the profession in order to take action under the severer sections of the Act of 1875, which deal with so-called "injurious" adulterations. To prove cases and obtain convictions under these sections is, however, far more difficult than under the others, and it is singular that this perfectly well-known fact does not appear to have had much weight with the Kensington authorities.

Sir Andrew Clark, while declining to undertake an experimental investigation, expressed himself in strong and unmistakable terms on the subject: "Seeing that chemical compounds are now widely employed in the preparation and preservation of food, knowing that many of them although innocuous in small occasional doses, become in small doses continued over long periods destructive to health, and furthermore believing that many obscure and incurable disorders are begotten in this manner, I regard the inquiry proposed by your vestry as one of the greatest importance to the wellbeing of the community, and certain, if successfully completed, to prove of great public advantage."

Sir Henry Thompson, who states with perfect justice that "when the term boric acid is used it may be held to apply to the use of borax also," sets forth the question as follows: "Is boric acid injurious to health if persistently taken with the daily food? and if it be so in any known proportion, is there any limit in the quantity used which can be regarded as innocuous?" He points out that "there is no doubt, on the authority of physicians in Germany and in this country, that boric acid in what is called 'full doses' is an irritant to the digestive organs," but states that "it by no means follows that a small quantity should exercise any evil influence whatever:" and that the amount of boric acid necessary to prevent the decomposition of milk and cream for three or four days is not large, "probably about 8 or 10 grains for a pint of the former, perhaps about double for an equal portion of the latter." This amount, in Sir H. Thompson's opinion, would not be injurious to the adult who consumes a pint daily, but as regards children the case is different. He says: "On the other hand, the infant, who is a large consumer of milk, is also much more liable to injury by the admixture of boric acid, being far more susceptible than the adult to the influence of all chemical agents. The proportion already named is, in my opinion, calculated to be injurious when taken habitually, certainly to children under 3 or 4 years of age."

"Taking all the facts cited into consideration," continues Sir Henry, "I am disposed to believe that the employment of a small proportion of boric acid might be permitted in the milk trade with advantage to the consumer, on the following conditions:

First. A declaration should be required respecting all milk and cream offered for sale, whether or no any boric acid or other agent has been added thereto for the purpose of preserving it.

Secondly. A precise statement should be made upon a label bearing also the name of the salesman, to be affixed to all vessels containing milk or cream offered for sale, naming the preservative agent employed and the quantity added per pint.

Thirdly. When milk or cream thus "preserved" is sold "on draught" a ticket should be supplied to the purchaser containing the information furnished by the label above named.

Fourthly. When specimens thus certified and sold are proved by analysis to contain a notably larger quantity than that named on the ticket or label, or when specimens declared to be free from admixture with any chemical agent are found to contain one, the salesman should be proceeded against for selling milk which is adulterated, knowing it to be so.

Such regulations would ensure to each individual who might desire to exercise his own judgment on this matter the opportunity of doing so.

It is hardly necessary to point out that the suggestion of these conditions amounts to a very thorough condemnation of the practice.

Dr. Lauder Brunton regards the question as a difficult one, but states that boric acid is "known to be a poison in large doses," and "has also been found to be injurious when added to foods."

In view of these opinions it will be interesting to observe what steps will now be taken by public authorities in London and elsewhere.

SINGLE LUNACY PATIENTS.

B. J.—Our correspondent cannot take an uncertificated insane person to board in his house. The patient, for whom payment is made, must be certificated. B. J. would do well to buy, through his bookseller, or from Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., a copy of the Lunacy Act, 1890, and study Sections 4 to 16, and 28 to 46.

Certain books and entries have also to be kept and made, as laid down in the rules of the Commissioners in Lunacy. There are frequent independent visits of inspection to insane patients thus boarded.

DUTIES OF CONSULTANTS.

W. F. B. (Ireland) asks for an answer to the following: A. is attending a young man, being the usual medical attendant of the family. He asks B. to meet him in consultation. The case being an uncommon one, A. and B. request the assistance of C., who performs a necessary operation and relieves the patient. The latter goes away for change of air, and returns in about six months greatly improved. The father of the patient then writes to B., asking him to take charge of the case. Does B. violate any rule of etiquette in taking up the case?

*** The ethical duty devolving upon "W. F. B." in the case in question is, in our opinion, clearly laid down in the following extracts from the *Code of Medical Ethics*, Chapter ii, Section 4, Rule 12, and Section 5, Rule 9:

"N.B.—Should the practitioner who has been called in consultation be subsequently requested to take sole charge of the patient, he should courteously but firmly decline."

"When a practitioner is called into, or consulted by a patient who has recently been, or still may be, under the care of another for the same illness, he should on no account interfere in the case, except in an emergency; having provided for which, he should request a consultation with the gentleman in previous attendance, and decline further direction of the case except in consultation with him. If, however, the latter refuse this, or has relinquished the case, or if the patient insist on dispensing with his services, and a communication to this effect be made to him, the practitioner last consulted will be justified in taking charge of the case—on assuming which, however, he should satisfy himself that such intimation has been given by the patient or family, etc."

A NEW USE FOR A THESIS.

J. A. J.—In responding to "Dr. J.'s" strictures on our recent decision in his case, as reported in the BRITISH MEDICAL JOURNAL of February 7th, we may note that, in the fulfilment of the duties of "so responsible a position" as that to which he alludes, it has always been our wish and determination to act impartially, regardless of all conflicting personal interests other than those of the profession; and such, we would add, was the guiding principle in the case adjudicated upon. If, however, he is dissatisfied therewith, it is open to him to appeal to his University; in view of which we are prepared to hand over to the authorities thereof the correspondence which has been submitted to us in relation to the case. Meanwhile we deem it right to observe that our judgment in the matter did not justify Mr. H. in "requesting a personal written apology," as alleged, nor in seeking "to damage young Dr. J.," than which, under the circumstances, there could not well be a more professionally immoral proceeding.

LABELS.

L.R.C.P.—Although the label submitted for our opinion is less objectionable than that on which we commented in the BRITISH MEDICAL JOURNAL of February 28th, the same principle in a minor degree applies thereto; and "L.R.C.P." will, in our opinion, act judiciously in discontinuing it, more especially as the object in view can be readily attained by placing a neatly-printed card in a conspicuous position in the waiting or consulting room, notifying his home hours for the reception of patients.

ADVERTISING CARDS.

W. D. H.—If our correspondent had been a constant and observant reader of the Medico-Ethical column he could not have failed to note that the subject-matter of his communication has been repeatedly under review, severely criticised, and condemned.

Desirable, alike in the interest of the public and of the faculty as is the suppression of the professionally immoral practice of advertising low fees, etc., through the medium of cards or otherwise, the only effective remedy that points itself to our mind for such a degrading procedure is, as we have repeatedly pointed out, the persistent enforcement of the disciplinary laws of the respective colleges of which the offending practitioner is a member, and to the presidents of which we would suggest that W. D. H. should forward one of the cards in question, with a brief and courteous protest against the unprofessional proceeding, signed by himself and two or three other practitioners, with the view not only to emphasise it, but to avert the possible contingency of the step being ascribed to personal jealousy.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, March 5th.

London Public Health Bills.—Mr. MATTHEWS, in reply to Mr. S. BUXTON, said he hoped to proceed in the Standing Committee with the Factory and Workshops Bill before Easter, and the Public Health (London) Law Amendment Bill, and the Public Health (London) Law Consolidation Bill, to be introduced by the President of the Local Government Board, would be in possession of the House before much progress could be made with the Factory and Workshops Bill.

Tuesday, March 10th.

Leprosy in India.—Sir J. FERGUSSON, in reply to Mr. CONYBEARE, said there was no certain information as to the increase of leprosy in India. Lepers were counted at the census of 1881, but the results of the census taken last month were not known. The Commission now sitting would doubtless consider the question of the connection which had been stated to exist between insufficient salt and the prevalence of leprosy.

Fever in India.—Sir J. FERGUSSON, in reply to Mr. CONYBEARE, said the statistics of deaths in India, which would be found in the statistical abstract, did not show a progressive increase in each year in the total number of deaths, nor in the number of deaths from fever, and the latter depended in great measure upon the season. It should be remembered that the system of registration of vital statistics was being steadily improved, and that, as it improved, an increase of the registered deaths might be expected. Sanitary reforms were attempted in India so far as the means and sentiments of the native people permitted. In rural tracts progress was necessarily slower than in towns. The subject was engaging the constant attention of the Secretary of State and Government of India.

UNIVERSITIES AND COLLEGES.

CAMBRIDGE.

EXAMINATIONS.—The following dates have been announced:

	Names sent in.	Corrected List.	Certificates sent in.	Examination begins.
First M.B.				
Part I ...	May 25th	June 5th	June 4th	June 9th
Part II ...	" "	" "	" "	" "
Second M.B.				
Part I ...	" "	June 11th	June 10th	June 15th
Part II ...	" "	" 5th	" 4th	" 9th
Third M.B.				
I and II ...	April 29th	May 8th	May 6th	June 12th
M.C. ...	" "	" 12th	" 11th	" 15th

DEGREES.—At the Congregation on Thursday, March 5th, the following degrees were conferred:—M.B.: Robert Henry Cordeux, B.A., Caius (thesis, Conditions modifying the Forms of Cutaneous Eruptions); Laurent Antoine John Rouillard, Caius (thesis, Acute Intestinal Obstruction); Ernest Blechynden Waggett, B.A., Caius (thesis, the Developmental Origin of some Diseases of the Nervous System); Michael Grabham, M.A., St. John's (thesis, Associated Ocular Palsies); Thomas Herbert Kellock, M.A., Emmanuel (thesis, Empyema); William Stokes Griffith, M.A., Trinity Hall (thesis, Psoriasis). B.C.: Messrs. Grabham, Waggett, Cordeux, Griffith, and Kellock. M.D.: Arthur Templer Davies, M.B., B.A., Trinity (thesis, Albuminuria in apparently Healthy Persons).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations, and having now attained the legal age (25 years), was, at an ordinary meeting of the Council on the 12th inst., admitted a Fellow of the College:—

Caddy, A., L.R.C.P.Lond., of St. George's Hospital. Diploma of Member dated August 4th, 1887.

OBITUARY.

RICHARD MIDDLEMORE, F.R.C.S.Eng.

On the 1st of this month, at The Limes, Bristol Road, Birmingham, died Richard Middlemore, F.R.C.S., the accomplished and erudite ophthalmologist. He was a descendant, through the Hawkesley branch, of the ancient and distinguished family of Middlemore, lords of the manor of Edgbaston, and possessors of other manors and great estates in the counties of Worcester and Warwick.

He was born on October 12th, 1804, and so was in his 87th year. At the age of 16 he was apprenticed to a surgeon of wide local reputation, Mr. Chawner, of Lichfield. In 1823 he entered as a student at St. Bartholomew's Hospital, and had for fellow students the following well-known Birmingham men: Dr. Corrie, Dr. James Johnston, Mr. Frederick Ryland, and Mr. Edwin Bartleet, all of whom have long predeceased him. During his period of dressership for Mr. Vincent he was frequently called upon to dress for Mr. Abernethy, and he prided himself on the fact that he not only never got a

scolding from Mr. Abernethy but received several invitations from him to dine at Bedford Row.

On leaving London he carried a warm recommendation from Mr. Abernethy to Mr. Hodgson, who was then surgeon to the General Hospital, Birmingham, and by far the most distinguished surgeon in the Midlands.

For three years he acted as dressing pupil to Mr. Hodgson, and for more than ten years afterwards as his friendly assistant. His chief friend at St. Bartholomew's was the present Sir Richard Owen, K.C.B., a friendship which continued warmly cemented during his life.

After leaving St. Bartholomew's he maintained a friendly correspondence with most of his teachers, and especially with William Lawrence. Writing a year or two ago, he said, mentioning Mr. Lawrence, "his reference to my writings in the various medical journals afforded me a degree of encouragement, which, after a lapse of nearly sixty years, I think of with feelings of the deepest gratitude and pleasure."

Mr. Middlemore engaged in general practice with an especial leaning towards surgery and ophthalmology, stimulated probably in these respects by the example of Mr. Hodgson.

In 1823 the Birmingham Eye Hospital was founded, and in 1828 he was appointed assistant-surgeon, in 1828 full surgeon, and in 1849 he joined the consulting staff. In 1831 he won the Jacksonian Prize, and in 1835 he published his greatest work, *A Treatise on the Diseases of the Eye and Its Appendages*, which he built upon the foundation of his prize essay. Of this work it may justly be said that it presented, with the greatest accuracy and completeness, all that was valuable in theory and practice in the ophthalmic science of the period. So thoroughly was this recognised by contemporary ophthalmologists, that it was spoken of as "the most complete treatise on diseases of the eye with which we are acquainted;" as "constituting in itself almost a complete library of ophthalmology," and as "a work which will even be of standard authority and reference."

In 1836 he issued a prospectus of a journal of ophthalmology, but it fell through for want of support from publishers and the profession.

From his earliest days he was a steady contributor to the medical journals. His writings attracted attention on the Continent, and his name is now frequently seen mentioned by those who are dealing with the history and growth of ophthalmology.

He was active in his practice as well as in his scientific and literary work. It was no unusual thing for him to be engaged upon magazine and review work for a great part of the night, and for him to begin the seeing of free patients early, after a snatch of breakfast, and continue this till 10 o'clock, then to see his private patients till 3, after which he would enter his carriage and drive to Lichfield or Leamington, or other distant town, to consultation, taking a hasty meal on the way.

Besides being a very active practitioner, he was a willing and acceptable teacher. His courses of lectures were well attended and of intrinsic merit. He remained in active practice till 1879, when he completed his 75th year; and so great was his love of his work that he would have remained still longer in it if he could have satisfied himself that he was doing justice to his patients. To the day of his death he maintained his interest in his work, and regretted his inability to do more for his profession than he had done.

In 1877 he founded a triennial prize in ophthalmology in connection with the British Medical Association, a body which, from its earliest existence, had always his warmest support.

In 1888 he made a grant of £1,000 to endow a course of post-graduate lectures in ophthalmology in connection with the Birmingham and Midland Eye Hospital, the scene of his early labours. In 1890 he gave £2,000 to the Birmingham Asylum for the Blind, an institution which he laboured earnestly as early as 1838 to establish. The interest of this gift he devoted to helping those who, having been educated in the institution, might be prevented starting a useful life by want of books, or tools, or instruments.

Throughout the whole of his life his earnest love for and devotion to his profession, and his generous unostentatious sympathy, endeared him to those associated with him. Conscientious in his relations with his professional brethren, modest, never seeking notoriety, simple, kind, generous, sensitive to a fault, always maintaining a high standard of professional life, he has furnished his survivors an example which we shall do well to follow. Of him and his teaching it may well be said, "Memoria bene redditæ vitæ sempiterna."

INDIA AND THE COLONIES.

INDIA.

LAHORE.—The Albert Victor Memorial Hospital for Europeans at Lahore is rapidly approaching completion. The institution, which is said to be much needed, will accommodate fifty patients.

BOMBAY.—Mrs. Pechey Phipson, M.D., of Bombay, has recently been elected a Fellow of the Bombay University.

INCREASED IMPORTATION OF BEER.—Sir Wilfrid Lawson might with advantage turn his attention to British India, if the following official statistics, which refer to malt liquors alone, are correct. The number of barrels of beer and ale exported to British India was, in 1885, 42,635; in 1886, 49,397; in 1887, 50,409; in 1888, 61,571; and in 1889, 70,504.

VACCINATION IN THE PUNJAB.—The *Indian Medical Record* of February 1st, states that Dr. Dyson, Deputy Sanitary Commissioner of the Punjab, is carrying out some experiments at Amritsar on vaccination and the transmission of lymph. The Sanitary Commissioner of Madras is said to have discovered that lymph can be kept for a long time if mixed in a particular way with lanolin. Dr. Dyson is trying to improve on these results, and it is possible that his researches may lead to the abolition of arm to arm vaccination. Dr. Dyson also hopes to be able to remove the objections entertained by orthodox Hindus to the use of lymph taken directly from the calf by substituting for it lymph from donkeys and lambs.

OPIUM DENS IN MADRAS.—The abuse of opium and *ganja* by "hedonists" (to use the term which Professor Wilson applied to De Quincey) of all ages in Madras is said to be very great. There are houses in the city which carry on the trade almost the whole day and night; some devotees of these narcotics live almost exclusively by smoking their favourite poison, eating food but rarely. As many as thirty-four persons have been found in one room, each man with his hookah, and nearly crazed with the effects of it. The smokers include men of all classes from the Brahmin to the pariah, and of all ages from over 70 down to 10. It is stated that one boy of 12 has been in the habit of indulging this fatal taste ever since his sixth year.

A LABORATORY OF SCIENTIFIC MEDICAL RESEARCH.—Lord Harris formally opened, on February 17th, at the Grant Medical College, Bombay, the Avabai Bhownuggree Home for Nurses, and the Framjee Dinshaw Petit Laboratory of Scientific Medical Research, in the presence of a large and representative gathering of European and native ladies and gentlemen. Among those present were Sir Raymond West; Surgeon-General Pinkerton; Sir Jamsetjee Jejeebhoy, Bart., C.S.I.; Sir Dinshaw Manockjee Petit, Bart.; Mr. Phipson and Dr. Pechey-Phipson; Brigade-Surgeon A. N. Hojel; Brigade-Surgeon Wellington Gray; Surgeon-Majors Maconachie, Arnott, Barry, Crimmin, Meyer, and Childe; Dr. Temperly Gray. Mr. Framjee Dinshaw Petit observed that the late Governor of India had suggested that an institution which would impart and advance the requisite knowledge and experience of the virtues of Indian drugs was necessary for the cultivation of medical science; and he, Mr. Petit, being anxious to aid the accomplishment of this project, thought it a favourable opportunity to offer a sum of Rs. 75,000 to enable the Government to erect a suitable building, with the necessary accommodation and appliances.

NEW SOUTH WALES.

IN the Legislative Council of New South Wales the Medical Bill was, on the motion of the Hon. J. M. Creed, read a third time on December 11th, and forwarded to the Legislative Assembly with the usual message. It was read the first time in the Legislative Assembly, and after some opposition the second reading was fixed for December 19th. Since then the Bill has lapsed from want of time to pass it through last session.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE TRUE DEATH-RATES OF LONDON SANITARY DISTRICTS DURING 1890.

In the accompanying table will be found summarised the vital and mortal statistics of the forty-one sanitary districts of the metropolis, based upon the Registrar-General's returns for the year 1890. The mortality figures in the table relate to the deaths of persons actually belonging to the respective sanitary districts, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various sanitary districts in which the patients had previously resided. By this means alone can trustworthy data be secured upon which to calculate reliable rates of mortality.

The 130,690 births registered in London during the year 1890 were equal to an annual rate of 29.1 per 1,000 of the population, estimated at 4,421,661 persons, which showed a further decline from the rates in recent years, and was actually lower than in any of the past fifty years. In the various sanitary districts the birth-rates showed the usual wide variations, owing to the differences in the sex and age distribution of their populations. In Kensington, St. George Hanover Square, St. James Westminster, St. Martin-in-the-Fields, and London City, the birth-rates were considerably below the average; while in Fulham, Shoreditch, Bethnal Green, Whitechapel, St. George-in-the-East, and Mile-End Old-Town, where the population contains a large proportion of young married persons, the birth-rates showed an excess.

The deaths of persons belonging to London registered during the year under notice were 89,694, equal to an annual rate of 20.0 per 1,000 of the estimated population; this rate exceeded that recorded in any year since 1884, since which date, when the rate was 20.4, it had continuously declined to 17.4 in 1889, the lowest rate since the establishment of civil registration in 1837. During the decade just ended, 1881-90, the rate of mortality in London averaged only 19.9 per 1,000; in the ten years 1861-70, it was equal to 24.4, and in the following ten years, 1871-80, to 22.5 per 1,000. This marked decline in the London death-rate since 1880 implies that nearly 150,000 persons in London have survived, whose deaths would have been recorded had the rate of mortality in the ten years 1881-90 equalled that which prevailed during the preceding twenty years, 1861-80. The lowest death-rates in the forty-one sanitary districts during 1890 were 14.7 in Lewisham (excluding Penge), 14.8 in Kensington, 14.9 in Hampstead, 15.0 in St. George Hanover Square, 15.8 in Camberwell, 16.3 in Battersea, 16.4 in Hackney, 16.7 in Plumstead, and 17.8 in Islington. In the other districts the rates ranged upwards to 26.9 in London City and in Stepney, 27.0 in St. George Southwark, 28.2 in St. Saviour Southwark, 28.8 in White-

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Complete Distribution of Deaths occurring in Public Institutions, during the Year 1890.

Sanitary Areas.	Estimated Population middle of 1890.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under 1 year of age to 1,000 births.
LONDON	4,421,661	130,690	89,694	29.1	20.0	2.7	12,188	3	3,285	861	1,387	3,272	11	592	33	2,744	162
West Districts.																	
Paddington	113,215	2,903	2,109	25.2	18.3	2.4	274	-	79	7	40	80		9	1	58	155
Kensington	198,122	3,865	2,983	19.2	14.8	1.9	387	-	141	27	34	93	-	15	—	77	171
Hammersmith	103,000	2,826	1,910	27.0	18.2	3.3	346	—	95	17	49	75		11	—	96	171
Fulham	77,500	3,141	1,908	39.9	24.2	4.8	379	-	125	32	22	69	-	19	—	112	182
Chelsea	106,694	2,761	2,017	25.5	18.9	2.2	241	-	56	19	56	53		11	—	46	150
St. George, Hanover Square	87,862	1,596	1,343	17.9	15.0	1.6	144	-	47	3	13	48	—	7	1	25	155
Westminster	54,349	1,476	1,454	26.7	26.3	2.6	141	—	34	11	9	50		3	1	33	160
St. James, Westminster	26,940	550	521	20.1	19.0	1.8	49	-	13	3	3	12	—	1	2	12	178
North Districts.																	
Marylebone	149,226	4,455	3,313	29.4	21.8	2.5	375	1	123	14	27	96	-	18	3	93	143
Hampstead	59,537	1,504	899	24.9	14.9	1.8	107	-	18	11	21	21		11	—	25	122
St. Pancras	245,883	7,082	5,161	28.3	20.6	2.5	621	-	125	27	132	153		31	1	149	161
Islington	343,184	9,419	6,198	27.0	17.8	2.2	771	—	202	65	81	204		31	5	180	158
Hackney	250,078	6,751	4,178	26.6	16.4	2.4	618	-	157	58	67	178	-	36	4	118	143
Central Districts.																	
St. Giles	38,698	1,183	1,042	30.1	26.5	2.0	80	—	17	8	10	16		8	—	21	156
St. Martin-in-the-Fields	14,552	267	325	18.1	22.0	1.6	24	-	8	1	1	6	-	5	-	3	210
Strand	28,489	598	730	20.6	25.2	2.0	58	-	20	2	4	13	-	2	1	16	211
Holborn	29,395	916	967	30.7	32.4	4.1	122	1	22	15	18	28	-	7	—	31	223
Clerkenwell	71,102	2,204	1,645	30.1	22.7	3.0	216	—	34	22	19	65	-	8	—	68	175
St. Luke's	52,000	1,961	1,308	37.1	24.7	3.6	189	-	48	20	16	58		6	—	41	146
London City	35,636	764	975	21.1	26.9	1.5	53	—	11	5	11	11	—	3	—	12	147
East Districts.																	
Shoreditch	125,284	4,469	3,164	35.1	24.8	4.2	533	-	121	45	58	170	1	20	3	115	175
Bethnal Green	132,815	4,811	3,199	35.6	23.7	3.7	502	-	111	39	116	115	-	29	1	91	162
Whitechapel	66,416	2,782	1,947	41.2	28.8	4.2	282	—	70	19	51	57		17	—	68	185
St. George-in-the-East	46,055	1,844	1,618	39.3	34.6	5.5	259	-	68	20	30	56	—	9	1	75	234
Stepney	58,975	1,904	1,611	31.8	26.9	4.6	278	—	100	13	28	73	-	15	—	49	195
Mile End Old Town	117,353	4,087	2,517	34.3	21.1	3.1	368	-	79	25	14	122	-	24	—	74	161
Poplar	193,636	5,932	3,883	30.1	19.7	3.1	619	—	199	41	70	154	1	40	1	113	168
South Districts.																	
St. Saviour, Southwark	26,938	895	773	32.7	28.2	4.5	124	-	51	11	5	34	—	3	—	20	185
St. George, Southwark	60,104	2,051	1,659	33.4	27.0	3.6	218	-	57	15	14	69	1	4	1	57	209
Newington	125,456	3,992	2,757	31.3	21.6	2.8	362	-	103	37	32	87	1	18	—	84	171
St. Olave, Southwark	14,500	448	317	30.4	21.5	3.0	44	—	4	6	4	13	1	2	—	14	145
Bermondsey	90,817	3,082	2,046	33.4	22.2	3.0	280	—	75	30	19	76	3	10	—	67	152
Rotherhithe	45,068	1,416	931	30.9	20.3	3.1	144	—	38	7	8	50	—	6	—	35	170
Lambeth	294,261	9,017	5,862	30.1	19.6	2.3	698	—	183	57	76	194	—	31	3	154	152
Battersea	174,709	5,105	2,899	28.7	16.3	2.9	520	—	160	19	40	148	—	27	4	122	169
Wandsworth	133,542	4,113	2,471	30.3	18.2	2.4	323	—	89	9	22	99	—	20	—	84	148
Camberwell	276,585	7,298	4,435	26.0	15.8	2.2	613	—	165	51	51	198	1	28	—	119	152
Greenwich	162,697	5,375	3,235	32.5	19.6	2.6	423	—	127	27	47	94	1	19	—	108	159
Lewisham (excluding Penge)	69,952	1,722	1,042	24.2	14.7	1.5	108	—	17	4	15	39	—	6	—	27	141
Woolwich	37,326	1,266	905	33.4	23.9	3.0	112	—	52	4	5	28	—	4	—	19	171
Plumstead	82,750	2,856	1,407	34.0	16.7	2.2	183	1	41	15	19	67	1	6	—	33	129

chapel, 32.4 in Holborn, and 34.6 in St. George-in-the-East. In the East group of sanitary districts the rate of mortality during 1890 was equal to 23.8 per 1,000, while in the rest of London it did not exceed 19.2 per 1,000.

During the year under notice 12,188 deaths resulted from the principal zymotic diseases in London; of these, 3,285 were referred to measles, 3,272 to whooping-cough, 2,744 to diarrhœa, 1,387 to diphtheria, 861 to scarlet fever, 636 to different forms of fever (including 592 to enteric fever, 33 to simple and ill-defined forms of continued fever, and 11 to typhus), and 3 to small-pox. These 12,188 deaths were equal to an annual rate of 2.7 per 1,000; this rate exceeded by 0.5 the rate from the same diseases in 1889, which was the lowest on record, but was 0.3 below the mean rate in the preceding ten years—1880-89. The zymotic death-rate during last year in the various sanitary districts ranged from 1.5 in Lewisham and in London City, 1.6 in St. George Hanover Square and in St. Martin-in-the-Fields, and 1.8 in St. James Westminster and in Hampstead, to 4.1 in Holborn, 4.2 in Shoreditch and in Whitechapel, 4.5 in St. Saviour Southwark, 4.6 in Stepney, 4.8 in Fulham, and 5.5 in St. George-in-the-East. Compared with the preceding year the mortality from diphtheria showed a decline, while that from each of the other zymotic diseases showed an increase. Only 3 deaths from small-pox were recorded in London during the year under notice, and in the preceding three years—1887-8-9—only 19 fatal cases of this disease were registered. Of the 3 deaths from small-pox last year 1 belonged to Marylebone, 1 to Holborn, and 1 to Plumstead sanitary areas. Thirty-two small-pox patients were admitted to the Metropolitan Asylum Hospitals during the year under notice, but no patients remained under treatment at the end of December last. Measles showed the highest proportional fatality in Fulham, Whitechapel, St. George-in-the-East, Stepney, Poplar, St. Saviour Southwark, and Woolwich; diphtheria in Hammersmith, St. Pancras, Shoreditch, Bethnal Green, Whitechapel, and St. George-in-the-East; whooping-cough in St. Luke's, Shoreditch, St. George-in-the-East, Stepney, Mile-End-Old-Town, St. Saviour Southwark, St. George Southwark, and Rotherhithe; and diarrhœa in Fulham, Holborn, Clerkenwell, Whitechapel, and St. George-in-the-East. The rate of mortality from scarlet fever and from "fever" showed no marked excess in any of the sanitary districts, but the number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 1,609 at the beginning of 1890, declined to 1,067 in May, increased to as many as 2,122 in November, and afterwards declined to 1,593 at the end of December last. The admissions during the year were 7,108, the numbers in each quarter being 1,082, 1,445, 2,162, and 2,419 respectively.

Infant mortality in London during 1890, measured by the proportion of deaths under 1 year of age to births registered, was equal to 162 per 1,000, against an average rate of 151 in the preceding ten years—1880-89. While the rate of infant mortality last year did not exceed 122 in Hampstead, 129 in Plumstead, 141 in Lewisham, 143 in Hackney, and 145 in St. Olave Southwark, it ranged upwards in the other sanitary districts to 182 in Fulham, 185 in Whitechapel and St. Saviour Southwark, 195 in Stepney, 209 in St. George Southwark, 210 in St. Martin-in-the-Fields, 211 in Strand, 223 in Holborn, and 234 in St. George-in-the-East.

CERTIFICATION OF LODGING HOUSES.

In his report to the Aston Rural Sanitary Authority Dr. Bostock Hill calls special attention to two cases of typhoid fever imported from watering places as showing the importance of making sure that the sanitary arrangements at lodging houses are above suspicion. If people would insist on the production of a certificate from the health authority, stating the sanitary condition of the premises, before taking rooms, a great improvement would soon be manifest, and security would be established against contracting diseases from which visitors are now by no means safe.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, March 7th, 6,149 births and 4,547 deaths were registered in twenty-eight of the largest English towns, including London. The annual rate of mortality in these towns, which had increased from 19.8 to 24.1 per 1,000 in the preceding four weeks, declined again to 23.7 during the week under notice. The rates in the several towns ranged from 16.6 in Brighton, 17.3 in Wolverhampton, 17.4 in Nottingham, and 17.6 in Hull to 31.6 in Newcastle-upon-Tyne, 32.5 in Huddersfield, 33.1 in Cardiff, and 33.9 in Halifax. In the twenty-seven provincial towns the mean death-rate was 23.9 per 1,000, and exceeded by 0.5 the rate recorded in London, which was 23.4 per 1,000. The 4,547 deaths registered during the week under notice in the twenty-eight towns included 470 which were referred to the principal zymotic diseases, against numbers increasing from 332 to 431 in the preceding four weeks; of these, 161 resulted from whooping-cough, 160 from measles, 55 from diphtheria, 36 from scarlet fever, 32 from diarrhœa, 25 from "fever" (principally enteric), and 1 from small-pox. These 470 deaths were equal to an annual rate of 2.4 per 1,000; in London the zymotic rate was 1.8, while it averaged 3.0 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Wolverhampton, and 0.5 in Norwich, in Derby, and in Birkenhead to 4.4 in Halifax, 6.0 in Salford, 7.5 in Blackburn, and 10.8 in Huddersfield. Measles showed the highest proportional fatality in Sheffield, Portsmouth, Salford, Bristol, Blackburn, and Huddersfield; whooping-cough in Hallifax, Huddersfield, Birmingham, and Salford; and "fever" in Halifax. The mortality from scarlet fever showed no marked excess in any of the large towns. Of the 55 deaths from diphtheria in the twenty-eight large towns, 31 occurred in London, 7 in Liverpool, 4 in Manchester, and 3 in Birmingham. One death from small-pox was registered in London during last week, but not one in any of the twenty-seven provincial towns, and no small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday, March 7th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital was 1,184, and showed a further decline from recent weekly numbers: 87 new cases were admitted during the week, against 113 and 80 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 7.9 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 808 births and 628 deaths were registered during the week ending Saturday, March 7th. The annual rate of mortality in these towns, which had risen from 21.4 to 23.8 per 1,000 in the preceding three weeks, further increased to 24.1 during the week under notice, and exceeded by 0.4 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Perth and Leith, and the highest in Glasgow and Paisley. The 628 deaths registered in these towns included 79 which were referred to the principal zymotic diseases, equal to an annual rate of 3.0 per 1,000, which exceeded by 0.6 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Edinburgh, Glasgow and Paisley. The 290 deaths registered in Glasgow included 16 which were referred to whooping-cough, 7 to scarlet fever, and 4 to measles. Three fatal cases of diphtheria, and 7 of whooping-cough were recorded in Edinburgh, and 10 of measles in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.6 per 1,000, against 7.9 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, February 28th, the deaths registered in the sixteen principal town-districts of Ireland were equal to an annual rate of 26.7 per 1,000. The lowest rates were recorded in Sligo and Galway, and the highest in Londonderry and Lurgan. The death-rate from the principal zymotic diseases averaged 1.7 per 1,000. The 199 deaths in Dublin were equal to an annual rate of 29.4 per 1,000 (against 26.9 and 27.3 in the preceding two weeks), the rate for the same period being 23.7 in London and 24.6 in Edinburgh. The 199 deaths in Dublin included 9 which were referred to the principal zymotic diseases (equal to an annual rate of 1.3 per 1,000), of which 4 resulted from diarrhœa, 3 from typhoid fever, 1 from diphtheria, and 1 from whooping-cough.

FEES FOR FRACTURES.

Enquirer, who is a district medical officer in attendance on a patient with simple fracture of one leg and compound fracture of the other, asks whether he is entitled to the full fee for each fracture—namely, £3 and £5.

*** A district medical officer is only entitled to a special fee for one of any number of fractures in the same patient which have occurred at the same time and from the same cause; he is entitled to make his claim for that which carries the highest fee.

HOSPITALITY AND ELECTIONS.

North Country Members.—Probably the Local Government Board could refuse to sanction the appointment supposing the circumstances preceding the election were brought to their knowledge, though we doubt whether they would approve. In our opinion the tactics adopted by A. to secure B.'s election were reprehensible and undignified. We are inclined to think that the unsuccessful candidate should congratulate himself on having failed to establish any connection with a local board of the moral fibre described.

Suppression of Quackery in Italy.—During the first half of 1890 the number of complaints of "illegal exercise of the healing arts" brought before the authorities was 843. In 325 of these a conviction was obtained; in 145 the accused were acquitted. What the result was in the remaining 373 cases does not appear, but it is satisfactory to see that at least a considerable proportion of the offenders were brought to justice. It is to be hoped that the penalties inflicted will be sufficient to deter not only the guilty persons themselves, but others from pursuing their evil ways.

MEDICAL NEWS.

Mr. A. C. Knight, a Sixth-Form scholar at Epsom College, has obtained an open Classical Scholarship at Oriel College, Oxford, value £80.

The Duke of Connaught will preside at the dinner on behalf of the funds of the North-Eastern Hospital for Children, Hackney Road, on May 15th.

Bequests to Medical Charities.—Under the will of the late Mr. Jacob Vincent, of Highbury Place, the London Fever Hospital, Islington, and the Seamen's Hospital Society, Greenwich, receive £100 each.

Litholapaxy.—At the meeting of the Medical Society of London on Monday, March 16th, Surgeon-Major Keegan, of Indore, will read a paper on Litholapaxy in Children, and demonstrate his instruments and collection of calculi.

Medical Practitioners in Paris.—The number of medical practitioners in Paris is stated to be 2,200. As the population of the French capital is 2,300,000, this gives a proportion of about 1 medical man to every 1,000 inhabitants.

An epidemic of typhus fever has broken out at Moscow among soldiers employed in the transport of prisoners. In a detachment of 160 men, 60 were attacked within a few days. Up to the present only 2 deaths have occurred.

Typhoid Fever in the French Army.—During 1890 the typhoid mortality in the whole French army was 49 per cent. less than in the previous year. In the military Government of Paris the diminution was 75 per cent. This satisfactory result is attributed to the measures adopted by the Minister for War for the purification of the water supply to barracks.

Proposed Memorial to Dr. Armitage.—A proposal is under consideration for raising a memorial to the late Dr. T. R. Armitage, whose excellent work on behalf of the blind is well known. The memorial will take the form of a fund to be expended in cheapening the publications and extending the useful work of the British and Foreign Blind Association, which Dr. Armitage founded.

Paisley Infirmary.—The Directors of Paisley Infirmary have been offered £1,000 towards the urgently needed additions and improvements, on the understanding that these will be immediately proceeded with. The offer has been made by a townsman, who for the present wishes his name withheld, through Dr. Fraser, the senior physician to the hospital.

Hygienic Congress.—At the last meeting of the Court of Common Council of London, it was resolved to give a *conversazione* in Guildhall in connection with the forthcoming International Congress of Hygiene and Demography, in August next, at an expense not exceeding £2,000, and Mr. Alderman Knill, Mr. J. Beck, and Mr. Deputy Halse were appointed delegates to attend the meetings of the Congress.

Medical Appointments in Carrickfergus.—The various appointments vacant through the death of Dr. J. W. Patrick have now been filled up. Dr. Killen has been appointed medical officer of the Carrickfergus dispensary district, urban sanitary authority, and medical officer under the Factory Acts. Dr. McAllister has been appointed medical officer to the Antrim Artillery, to the Coastguards, and to the Royal Irish Constabulary.

Fire at a Hospital.—An outbreak of fire occurred on Sunday last at Stannes House, the Bowden Branch of the Manchester Hospital for Consumption. There were but two patients in the old portion of the building, which was the seat of the fire, and these were speedily removed. Some of the male patients rendered signal service in assisting to extinguish the flames. Much damage was done to the building and lower rooms.

Hospital Saturday Fund.—Contributions are now being received by this fund from about 4,000 workshops and other industrial centres, from which over £15,000 was paid in last year, in addition to £5,000 collected on Hospital Saturday. The cost of organising and extending the weekly collection in workshops, etc., in the metropolis has been considerable, but it is now possible to make economies which will result in an annual saving of £500.

National Pension Fund for Nurses.—The report presented at the fourth annual general meeting of this fund was of a very satisfactory character. It showed that, since the commencement of the fund, 1,475 policies had been issued for pensions, and 309 policies in the sickness branch. The investments amounted, in December 1890, to £73,766; the Donation Bonus Fund to £40,000. During the year a savings' bank scheme had been introduced; also a general scheme of federation had been prepared, the object of which was affiliation with the hospitals.

An inquiry, directed by the Local Government Board, into allegations of maladministration of the Eastern hospitals, Homerton, was opened by Mr. Hedley and Dr. Bridges, at the offices of the Metropolitan Asylums Board, on March 3rd. Evidence was given by a patient to the effect that the food supplied was of an inferior quality, and the clothes in bad condition. On the following day, Miss Halkin, who had been at a hospital for four years, gave evidence to the effect that the food was of bad quality, instancing especially bread and milk. The inquiry was continued on March 5th and 9th, when further evidence was given by Miss Halkin and certain patients.

The Guinness Trust.—The first annual report of the trustees, Lord Rowton, Mr. Ritchie, M.P., and Mr. Plunket, Q.C., M.P., has been issued. The value of the securities handed to the trustees by Sir Edward Guinness to provide dwellings for the poorer classes in London and Dublin amounted to £250,000, of which £200,000 was allocated by him to London and £50,000 to Dublin, under separate trust deeds. In London three sites have been purchased situated in Walworth, Bethnal Green, and Clerkenwell. Lord Cadogan has also presented to the trustees a site in Chelsea. Buildings are in course of erection on the Walworth, Bethnal Green, and Chelsea sites at an estimated cost, including the prices paid for the two sites purchased, of £100,000. These will contain about 1,300 rooms, and, it is hoped, will be ready for occupation in the summer of 1891. In Dublin a site has been leased in Thomas's Court, near the Meath Market, on which 120 tenements for families will be built at an estimated cost of £7,000. These, it is hoped, will be ready for occupation this year.

MEDICAL VACANCIES.

The following Vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester Street, S.W.—House-Surgeon. Board, lodging, fuel and light provided. Applications endorsed on envelope—"House-Surgeon," to the Honorary Secretary, by March 23rd.

BETHLEM HOSPITAL, S.E.—Two Resident Clinical Assistants; double qualifications. Apartments, rations, and attendance provided. Applications, endorsed "Clinical Assistants," to the Treasurer by March 25th.

BOROUGH AND PORT OF PLYMOUTH.—Medical Officer of Health. Salary as Urban Medical Officer, £400 per annum; and as Port Medical Officer, £100 per annum; must be under 45 years of age. Applications to the Town Clerk, Guildhall Buildings, Plymouth, by March 19th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Medical Officer. Salary, £80 per annum, with board and residence. Applications to A. C. Davies, Secretary, by March 31st.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Must be qualified. Fee of £3 3s. for three months. Forms of applications and regulations to be had at the hospital. Applications to the Board of Management.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary, £100 per annum to commence with, furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

DENTAL HOSPITAL OF LONDON.—Four Demonstrators. Honorarium, £50 per annum. Applications to Morton Smale, Dean, by March 16th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Obstetric Physician. Applications to William T. Grant, Secretary, by March 24th.

HEREFORD COUNTY AND CITY LUNATIC ASYLUM.—Hereford.—Assistant Medical Officer. Salary, two guineas per week, with board, attendance, and washing. Applications to the Medical Superintendent.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, near Birmingham.—Resident Medical Officer: double qualifications. Salary, £150 per annum, with board, residence, and washing. Applications to Dr. J. D. M. Coghill, House Governor, by March 28th. Election on April 3rd.

KING'S COLLEGE, London.—Demonstratorship of Physiology, vacant at Easter. Applications to J. W. Cunningham, Secretary, from whom full particulars can be obtained.

KING'S LYNN HOSPITAL—House-Surgeon and Secretary. Salary, £80 per annum rising to £100, with board, lodging, and washing. Applications to the Chairman of the Weekly Board by March 24th.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon: double qualifications. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman of the Committee by March 23rd.

LODDON AND CLAVERING UNION, Loddon, near Norwich.—Medical Officer for No. 4 District; will be also appointed Public Vaccinator. Salary, £55 4s. per annum and fees. Applications to James Cole Copeman, Clerk to the Guardians, by March 16th.

METROPOLITAN ASYLUMS BOARD.—Clinical Assistant for South-Eastern Fever Hospital, New Cross Road, S.E. Double qualifications. Board, lodging, and washing provided. Applications to the Medical Superintendent at the hospital, of whom further particulars can be obtained.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Officer; double qualifications. Salary, £120 per annum. Applications to the Honorary Secretary by March 23rd.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—Junior House-Surgeon; double qualifications. Appointment for nine months at a salary of £5 per month. Applications to Alfred Dixon, Secretary, 27, Clement's Lane, E.C., by March 14th.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—House-Surgeon and Secretary; unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications endorsed "Applications" to the Chairman of the Committee by April 1st.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Junior Resident Medical Officer; double qualifications. Board and residence provided in the Hospital. Applications to Conrad W. Thies, Secretary, by March 18th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Resident Medical Officer; double qualifications. Salary, £70 per annum, with board and residence. Applications to R. Garrard Kestin, Secretary, by March 24th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge, S.E.—Anæsthetist and Registrar. Appointment for one year; honorarium, seventy guineas. Applications, with not more than three testimonials, to the Secretary, R. Garrard Kestin, by March 24th.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King Street, Regent Street, W.—Surgeon. Must be F.R.C.S.Eng. Applications to the Secretary.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Honorary Physician; must be M.R.C.P.Lond., or a graduate of Medicine of one of the universities of Great Britain or Ireland, and not practising pharmacy. Applications to H. Peter Bodkin, Honorary Secretary, 23, Gordon Street, Gordon Square, by March 21st.

ST. PETER'S HOSPITAL FOR STONE AND URINARY DISEASES, Henrietta Street, Covent Garden, W.C.—House-Surgeon; must be M.R.C.S. Appointment for six months. Honorarium, 25 guineas, board, lodging, and washing. Applications to Walter E. Scott, Secretary, by March 14th.

ST. THOMAS'S HOSPITAL, S.E.—Resident Assistant Physician. Applications to E. M. Hardy, Treasurer's Clerk, by March 28th.

TEIGNMOUTH, DAWLISH, AND NEWTON DISPENSARY AND CONVALESCENT HOME.—House Surgeon; double qualifications. Salary, £40 per annum, with board and lodging. Applications to the Honorary Secretary by March 21st.

TOWNSHIP OF MANCHESTER.—Assistant Medical Officer for the Workhouse at Crumpsall. Double qualifications; unmarried. Salary, £100 per annum, with furnished apartments, fire, light, washing, and attendance. Must reside in the workhouse, and devote his whole time to the duties. Applications, endorsed "Assistant Medical Officer," to George Macdonald, Clerk to the Guardians, Poor Law Offices, New Bridge Street, Manchester, by March 18th.

TOWNSHIP OF MANCHESTER. Visiting Surgeon for the Workhouse Infirmary at Crumpsall. Salary, £160 per annum. Will be required to attend the workhouse at least four days in each week. Applications, endorsed "Visiting Surgeon," to George Macdonald, Clerk to the Guardians, Poor Law Offices, New Bridge Street, Manchester, by March 18th.

UNIVERSITY OF LONDON.—Examiners in the following departments: Two in Comparative Anatomy and Zoology, salary, £120 each; Two in Medicine, salary, £150 each; Two in Surgery, salary, £150 each; Two in Anatomy, salary, £150 each; Two in Physiology, salary, £120 each; Two in Obstetric Medicine, salary, £75 each; Two in Materia Medica and Pharmaceutical Chemistry, salary, £100 each; Two in Forensic Medicine, salary, £50 each. Present examiners are re-eligible. Applications to Arthur Milman, M.A., Registrar, Burlington Gardens, by March 31st.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in the hospital. Applications to the Secretary, W. H. Laban, by March 17th.

WEST HAM UNION.—Assistant Resident Medical Officer for the Workhouse. Salary, £100 per annum, with usual extra fees. Applications (on specified forms to be obtained at the Clerk's Office) to Fred. E. Hilleary, Clerk's Office, Union Workhouse, Union Road, Leytonstone, E., by March 18th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Board and lodging provided. Applications to R. J. Gilbert, Secretary Superintendent, by March 19th. Election on March 23rd.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Surgeon. Must be F.R.C.S. of London, Edinburgh, or Dublin. Applications to R. J. Gilbert, Secretary Superintendent, by April 2nd. Election on April 6th.

MEDICAL APPOINTMENTS.

ADAMS, W., F.R.C.S., appointed Consulting Surgeon to the Great Northern Central Hospital, Holloway Road.

ALLEN, James D. C., M.B., C.M.Ed., appointed House-Surgeon to the Wirral Children's Hospital, Birkenhead.

ARMSTRONG, James, L.R.C.P., L.R.C.S.Ed., appointed Medical Officer for the Workhouse and District, Medical Officer to the Brampton Union, Cumberland, *vice* Dr. T. A. Wotherspoon, deceased.

BERRY, Frederick Charles, B.A., M.D., M.B., B.Ch.Dub., reappointed Medical Officer of Health for Lynton.

COKE, Wm. Harriott, L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health to the Ashton Local Board.

COOKE, Robert Thos. E. B., L.R.C.P., F.R.C.S.Edin., M.R.C.S.Eng., reappointed Honorary Consulting Medical Officer to the Royal Northern Sea Bathing Infirmary, Scarborough.

DE BUTTS, Stanley, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Chichester Infirmary, *vice* Mr. C. Butler, resigned.

EVANS, Maurice Griffith, M.D.Aberd., L.R.C.P.Lond., M.R.C.S.Eng., appointed Consulting Physician to the Brecon County and Borough Infirmary.

FULLER, Andrew, L.R.C.P.Edin., M.R.C.S.Eng., appointed Certifying Factory Surgeon to districts comprising Heyford, Stowe, Muscot, Bugbrooke, and Dodford (Weedon).

GILLETT, Jermyn F., B.A., M.B., B.C.Cantab., appointed Assistant House Surgeon to the North Staffordshire Infirmary and Eye Hospital, *vice* Mr. C. S. Woodd.

GRACE, Henry, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Kingswood Urban Sanitary District of the Keynsham Union.

HARPER, J. Maurice, M.R.C.S.Eng., appointed Honorary Medical Officer to the Eastern Dispensary, Bath, *vice* Mr. H. G. Terry, F.R.C.S.Ed., resigned.

HICKMAN, Herbert Vigers, L.R.C.P.Lond., M.R.C.S.Eng., appointed Ophthalmic Assistant to Guy's Hospital.

HINDE, S. L., L.S.A., appointed House-Surgeon to the London Temperance Hospital, Hampstead Road, N.W.

HODGSON, Victor, L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Scarborough Hospital and Dispensary.

HODSON, Thomas, L.R.C.S.Eng., L.S.A., appointed Medical Officer and Public Vaccinator to the Sixth District of the Chelmsford Union, *vice* Clement Winstanley, deceased.

JAMIE, Robert Wyatt, M.A.Aberd., M.B., C.M.Edin., reappointed Medical Officer of Health to the Ashby-de-la Zouch Rural District.

JOHNSON, Raymond, M.B., B.S.Lond., F.R.C.S.Eng., appointed Surgeon to the out-patients, Great Northern Hospital, Holloway Road, *vice* H. Percy Dean, M.B.

KYLE, Thomas Wm., M.D., Q.U.I., reappointed Medical Officer of Health to the Ashby-de-la-Zouch Rural District.

LANGSTON, T. A. Ollivant, L.R.C.P.Lond., M.R.C.S.Eng., appointed Surgeon Royal Mail steamship *Spartan*.

LOVE, Jaskerr, M.D., M.B., C.M.Glas., appointed Aurist to the Deaf and Dumb Institution, Longside, Glasgow.

LUND, Theodore, M.B., B.S.Durh., appointed Surgeon and Secretary to the Royal Victoria Hospital, Bournemouth.

LYCETT, John Allan, M.D.St.And., L.R.C.P.Lond., M.R.C.S.Eng., appointed Acting Surgeon to the Hospital for Women, Chapel Ash, Wolverhampton.

MALCOLM, W. A., M.B., C.M.Edin., appointed Casualty Officer to the Great Northern Central Hospital, Holloway Road.

MORTON, Charles A., F.R.C.S.Eng., appointed Registrar to the Bristol General Hospital.

SAVAGE, Thomas, M.D.St. And., L.R.C.P.Lond., appointed Honorary Consulting Surgeon to the Hospital for Women, Chapel Ash, Wolverhampton.

SAWYER, Jas. Albert Frederick, L.R.C.P., L.R.C.S.Irel., reappointed Medical Officer of Health to the Clevedon Local Board.

SMITH, C. Robert, B.A., M.B.Cantab., M.R.C.S.Eng., appointed Acting-Surgeon to the Hospital for Women, Chapel Ash, Wolverhampton.

SMITH, Frederick J., B.A.Oxon., M.R.C.P.Lond., M.R.C.S., appointed Assistant Physician to the Royal Hospital for Diseases of the Chest, City Road, *vice* Dr. Edward Stewart.

STEWART, W., M.D.Glas., L.R.C.P.Lond., appointed Medical Superintendent, Damaree Hospital, New Zealand.

SYMINGTON, William, M.B., C.M., appointed Medical Officer of Health to the Brampton Union Rural Sanitary Authority, *vice* Dr. T. A. Wotherspoon, deceased.

TAYLOR, John Wm., M.D.St.And., M.R.C.S.Eng., reappointed Honorary Consulting Medical Officer to the Royal Northern Sea Bathing Infirmary, Scarborough.

TAYLOR, J. W., F.R.C.S.Eng., appointed Consulting Surgeon to the Hospital for Women, Chapel Ash, Wolverhampton.

VERNON, Arthur Heygate, L.R.C.P.Lond., F.R.C.S.Eng., appointed Honorary Surgeon to the Boscombe Hospital and Provident Dispensary.

WEBB, Frank, L.R.C.P.Lond., M.R.C.S.Eng. appointed House-Surgeon to the Doncaster Infirmary, *vice* Mr. T. Lund, resigned.

WILLIAMS, Chas. Roberts, M.B., C.M.Edin., reappointed Medical Officer to the Ashby-de-la-Zouch Local Board.

WOOD, Wm. Dyson, L.R.C.P., L.R.C.S.Edin., L.S.A., reappointed Medical Officer of Health for the Combined Districts, Thame.

WORBOYS, Thos. Sanders, M.R.C.S., L.R.C.P., appointed Medical Officer and In-door Dispenser to the Leeds Union, *vice* Jos. Buck.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Edmund Owen: A Fatal Case of Litholapaxy in a Child. Surgeon-Major Keegan, of Indore: Litholapaxy in Children, illustrated by specimens of Calculi and by various Instruments.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, 8 P.M.—Mr. T. Charters White: New Method of demonstrating Cavities in Dental and Osseous Tissues.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. Stewart: On Secondary Sexual Characters, and some new Additions to the Museum. Lecture IV.

TUESDAY.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. Broadbent: The Lumleian Lectures on Structural Diseases of the Heart from the Point of View of Prognosis. Lecture II.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Lauriston Shaw: Malignant Disease of the Œsophagus. Mr. A. A. Bowlby: Symmetrical Periostitis with Peculiar Formation of New Bone. Dr. A. F. Voelcker: Scurvy Rickets. Dr. S. West: Liver with Two Hydatids, the sacs communicating, but not the cysts. Mr. A. E. Barker: Malignant Polypus of Nose. Dr. Galloway: Syringomyelia. Mr. E. Solly: Myeloid Tumour of Tibia with Secondary Growths. Mr. J. Hutchinson, jun.: Syphilitic Disease of Occipital Lobe with Perforation of Cranium. Mr. Roger Williams: Median Supernumerary Nipple in Male. Card Specimens:—Dr. S. West: Plastic Bronchitis. Mr. Edgar Willett: Secondary Scirrhus of Bone. Dr. A. F. Voelcker: General Peritonitis after Perforation of Vermiform Appendix.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. Stewart: On Secondary Sexual Characters, and some new Additions to the Museum. Lecture V.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 8 P.M.—Dr. Edward F. Willoughby: A Retrospect of the Successive Epidemics of Cholera in Europe and America, from 1829 to 1889.

THURSDAY.

ROYAL COLLEGE OF PHYSICIANS, 5 P.M.—Dr. Broadbent: The Lumleian Lecture on Structural Diseases of the Heart, from the point of view of Prognosis. Lecture III.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor C. Stewart: On Secondary Sexual Characters, and some new Additions to the Museum. Lecture VI.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

AMBLER.—March 7th, at Ampthill, the wife of Mr. Richard Ambler, L.R.C.P., etc., of a son.

MARRIAGES.

FASKEN—NEGUS.—March 3rd, at St. Andrew's, West Kensington, by the Rev. Bernard Spink, E. R. Drummond, surgeon, R.N., youngest son of the late William Fasken, Deputy Inspector-General, R.N., to Lucy, youngest daughter of the late Fysher Negus, Deputy Inspector-General, R.N.

RODEN—JOPP.—At St. Andrew's Church, Aberdeen, on March 4th, by the Rev. J. Myers Danson, M.A., Percy Austin Roden, M.B., second son of S. S. Roden, M.D., Droitwich, Worcestershire, to Minnie Abercrombie, youngest daughter of Keith Jopp, M.D., Aberdeen.

DEATH.

PIERSON.—On January 29th, at Shelabagh, Khojak Pass, Baluchistan, of typhoid fever and pneumonia, Alfred Henry Pierson, surgeon, Indian Medical Service, eldest son of the late Henry C. Pierson, of the India Office.

NATIONAL ASSOCIATION OF MEDICAL COLLEGES IN AMERICA.—The following gentlemen have been elected to form the Committee on Organisation and By-laws of the National Association of Medical Colleges in the United States: Dr. P. H. Millard, of St. Paul, Chairman; Dr. William Osler, of Philadelphia; and Dr. Samuel Logan, of New Orleans. This Committee will report to the general meeting of the Association which is to be held at Washington.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, (Tu., 4. Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.45; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1½; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

PUZZLED asks for a remedy for psoriasis of the hands in a lady, aged 40 for which nearly everything has been tried.

QUALIFIED ASSISTANT asks to be recommended the most suitable country to emigrate to for a man holding the M.R.C.S. and L.S.A. qualifications, and possessed of small capital—"a country where he would be most likely to obtain a situation as assistant, and where he would have a prospect of commencing practice."

M.D. DEGREES.

L. N. asks to be informed which is the better degree—M.D.Brux. or M.D.Toronto. Is either registrable?

*** For M.D.Brussels an examination only is required of medical practitioners already qualified. For M.D. University of Toronto and M.D. Trinity College, Toronto, a certain amount of residence and study at one of the affiliated institutions is apparently necessary. In Canada the latter degrees would probably be held in higher esteem. In this country it is difficult to decide. None of these degrees are registrable in England.

ANSWERS.

PERSONA is recommended to consult a physician.

MEMBER.—We believe all diplomas in sanitary science or State Medicine granted by medical corporations of the United Kingdom are now registrable. We are unable to appraise the relative value of various degrees and diplomas.

"X. Y. Z" and "One who Subscribes to Charities" have omitted to enclose their names.

COLONIAL MEDICAL SERVICES.

J. B.—A memorandum on the conditions of service in the colonial medical service can be obtained on application to the Colonial Office.

ELEMENTARY WORKS ON DISEASES OF PLANTS.

J. G. H. will find the following books useful:—*Diseases of Plants*, G. H. Marshall Ward, 2s. 6d. (Society for the Promotion of Christian Knowledge); *Diseases of Field and Garden Crops*, Worthington G. Smith (Macmillan and Co.); also, *Manual of Injurious Insects*, by E. A. Ormerod.

TREATMENT OF DIPHTHERIA.

DR. J. F. BRISCOE.—The question as to the mode of administering the formula recommended by Dr. W. Soltau Fenwick[1] has been referred to him. He writes: The formula should run, for an adult: R. Liq. ferri perchlor., ʒvj; pot. chlor., gr.xl; glycerin., ʒiv; aquæ, ad ʒviij. M. Two tablespoonfuls to be taken undiluted every hour, according to the directions given.

"ALOPECIA AREATA."

MR. CHARLES HIRSCH, L.S.A., etc. (South Hampstead) writes: In answer to Mem. Brit. Med. Assoc., I beg to suggest his trying the following modification of Erasmus Wilson's formula, which answered very well in a rather bad case lately under my care: R. Liq. ammon. fort., ʒij; acet. cantharidis, ʒij; sp. rosmarini, ʒiv; olei amygdalæ, olei olivæ, ãã ʒij. In addition to this local treatment, tonics (iron and arsenic) were given, and the patient was advised to take plenty of exercise.

DR. C. R. ILLINGWORTH (Accrington) writes: In answer to Mem. Brit. Med. Assoc., permit me to inform him that one application of the solution of the biniodide of mercury of the strength of 1 in 8, full directions for the preparations of which are contained in my pamphlet on the *Treatment of Specific Febrile Disorders* (Lewis, of London), is sufficient for the cure of both ringworm and alopecia areata.

[1] BRITISH MEDICAL JOURNAL, February 14th, p. 353.

NOTES, LETTERS, Etc.

A MAGNIFICENT ENDOWMENT.

PROFESSOR SAMUEL O. L. POTTER, A.M., M.D. (Jeff'n), Prof. Practice of Med., Cooper Med. Coll., writes from Cullompton, Devon: I notice in the BRITISH MEDICAL JOURNAL of January 3rd the statement on page 47 that the value of Dr. L. C. Lane's endowment of the Cooper Medical College of San Francisco "amounts to about £20,000." In justice to that noble surgeon, it should be stated that the value of his gift to Cooper Medical College amounts to fully 250,000 dollars, or £50,000. His first gift, ten years ago, of a new building and its site was worth £30,000, and only a few weeks ago I sat with him and his help meet for him—his grand, good wife—on the platform of the new Commencement Hall and Laboratory Building at the dedication of the same for ever to medical education. This is an annex as large as the main building, and was completed two months ago at an additional cost of £20,000. Besides this, Dr. and Mrs. Lane have recently recorded a deed giving to the College in fee simple the entire square of ground upon one quarter of which the College stands. They gave three-fourths of the square, and the other quarter was bought by a gentleman, a friend of Dr. Lane's, for the sum of 30,000 dollars, and given to the College. At this rate, and considering the building on it as worth 5,000 dollars, the two one-fourths just given by Dr. and Mrs. Lane would be worth 40,000 dollars (inside lot), or £8,000 more, making a total of £58,000. And this, let me say, is done in the evening of Dr. Lane's professional life, after he has had all the honours and rewards that his brethren and his *clientèle* could bestow on him, so that it is not for anything that "there may be in it" that this princely pair have thus given of their plenty back to the people of the young State of California, from whom Dr. Lane received it for his professional services during an active career of thirty-five years. It was no trust funds which they thus disbursed, but the increment of Dr. Lane's earnings and of Mrs. Lane's savings. Such an example may challenge repetition, and may, perhaps, testify to the fact that all American medical education is not the sham it is here supposed to be.

PROFESSOR VICTOR HORSLEY AND THE "ECHO."

THE following leaderette, recently published in the *Echo*, seems to indicate a little irritation:—

"There are three classes of men from whom we instinctively shrink, namely, wreckers, hangmen, and vivisectors. We would as soon shake hands with a wrecker as we would take tea with a hangman, and we would as soon take tea with a hangman as we would walk arm in arm with a vivisector."

We are informed that the explanation of this somewhat mysterious paragraph is, perhaps, to be found in the fact that, in consequence of a little correspondence which had passed between the Editor of the *Echo* and a Miss Walker on the one hand, and Professor Horsley's lawyer on the other, the following paragraphs had just previously been published by the Editor of that paper:—[1]

"*Professor Horsley and Vivisectors.*

"On November 14th, 1890, we inserted in our 'Hear All Sides' column a letter from Miss E. Edith Walker in which Professor Horsley's conduct was impugned. On December 4th, 1890, we inserted a much longer letter from Professor Horsley, in which he completely vindicated himself, and removed every shadow of imputation cast upon him: and on December 6th we inserted another letter from Miss Edith Walker, in which she spontaneously expressed regret for the incorrect statements in her first letter. But Professor Horsley is not satisfied; he thinks that the *Echo* should also express regret for having inserted the letter which contained the defamatory attack on him, and which now and hereby we do most ungrudgingly."

Miss Walker's apology, published on March 4th, 1891, runs in much the same strain, and consists of "a full and unreserved apology." "This apology" she "hereby tenders to him, and expresses her regret that she should have done him an injustice, of which," she admits, "that he has had just cause for complaint."

After this experience, there is little room for wonder that the Editor of the *Echo* should "shrink" from the person and persons concerning whom he first published an admittedly defamatory statement, and to whom, later, he has humbly to apologise.

As to the proposed afternoon teas and promenades with hangmen and wreckers, we fear that the Editor of the *Echo* will never enjoy such invitations if he has to wait for a scientific man to offer him his arm as a prelude.

VIRCHOW TESTIMONIAL FUND.

THE following gentlemen have joined the committee: Dr. Priestley and Dr. Samuel West. The following subscriptions have been received in addition to those already acknowledged in the BRITISH MEDICAL JOURNAL:

	£ s. d.		£ s. d.
Thos. Barlow, M.D.	1 1 0	Sir John Simon, K.C.B.	
E. Klein, M.D.	1 1 0	F.R.S.	1 1 0
P. W. Latham, M.D.	1 1 0	T. Sympson, F.R.C.S.	0 10 6

HYPNOTIC SUGGESTION.

MR. R. ARTHUR, M.B., writes: I ask no one to accept the results I obtained from treatment by hypnosis and suggestion, though they were carefully tested both by my own observations and the statements, not of the patients only, but of those who attended them. Still it is intolerable that these results, when recorded, should be received only by sneers and epithets of "tomfoolery," etc., by men who are probably quite ignorant of the phenomena of hypnotism, and believe them to be mostly the outcome of simulation or humbug. Yet last week I was able to show to a number of medical men about twenty-five cases which had

[1] *Echo*, February 23rd, 1891.

been successfully treated by hypnotic suggestion. While writing, I feel compelled to express my surprise and regret that some medical men should be found ready to countenance and support the public exhibition of hypnotism given last week by a "Dr. Stanley." Demonstrations to prove the genuineness of the hypnotic state are quite uncalled for at the present time, and can only be harmful by inducing unskilled and ignorant persons to meddle with it from curiosity, and thus discredit it in the eyes of the public. What is needed is a serious attempt to ascertain its value as a therapeutic agent, and this the present attitude of the majority of the profession will not further.

The Medical Defence Union.

Dr. F. L. Milburn (London) writes: The recent vexatious prosecution instituted against me by the vestry of Clerkenwell, which has been fully reported, shows the necessity and great advantage of belonging to such an institution as the Medical Defence Union. On my informing one of the honorary secretaries (Dr. Bateman, of 64, Longridge Road, S.W.) that a summons was about to be issued against me, he immediately took steps for my defence, and neither trouble nor expense was spared to make the case a winning one.

It frequently happens that medical men are saddled with heavy costs in defending their professional reputations and private characters against unfair prosecutions, necessitating their appealing to their professional brethren for assistance, whereas by belonging to this excellent society they would be saved much of the anxiety attending such prosecutions, and the humiliating position of having to appeal under such circumstances.

Long Interval between Birth of Twins.

Dr. H. Hine (South Cave) writes: On February 8th I attended Mrs. W. in her confinement, when she was delivered of an apparently full-time living female child at 6 P.M. After delivery I felt there was another, which the uterus did not make the slightest effort to expel. I waited some time, and then left, leaving instructions to be called if pains returned. It was not until the morning of February 10th that the pains returned, and at 11.15 she was delivered of a second female child, living. The mother made a good recovery, and the children are living. There was only one placenta.

I note Meadows recommends in such cases to rupture and deliver by turning or forceps, while Leishman recommends leaving to Nature, which treatment I followed.

Odium Gynæcologicum.

F.R.C.S. (Edinburgh) writes: I venture to address you on a subject which I think demands attention. This is, the incessant quarrelling which goes on between eminent members of the profession. One never takes up a copy of the British Medical Journal without seeing a letter in which one distinguished gynæcologist—for the gynæcologists are the chief offenders—contradicts the statement made by a fellow practitioner in the British Medical Journal of the week before with regard to statistics and results of treatment. This, I venture to say, is very unseemly indeed, and I think, as a member of the Association, I may ask you to put a stop to it. It is bad enough when the members merely contradict one another, but it is quite shameful when patients are called on to assist one in putting down another, and letters and telegrams, essentially of a private nature, are quoted.

Besides all this, the British Medical Journal is often looked into by members of other professions, from whom I have repeatedly heard expressions of astonishment, and even horror, at the open quarrelling and vilipending which is thus publicly carried on.

Lastly, to the general body of the profession these disagreements are wearisome and uninteresting.

A Case of Neuralgia

Dr. Beardmore (Upper Street, N.) writes: The following case may be of interest to your readers: A lady, about 60 years of age, has suffered from persistent acute neuralgia for about fourteen years. She was hardly ever free from pain. At times the attack was so severe that she was unable to open her mouth, so that she had to be fed with fluids, sucked between the teeth. She has consulted well known physicians in London and the chief provincial towns without obtaining any relief. A little over six months ago she was going upstairs to bed when she, as she says, lost consciousness, and fell down a flight of six or eight stairs. Her friends heard the fall, and on finding her unconscious carried her to bed and sent for me. On arriving, I found her in bed, pupils normal, and breathing very quietly. In the early morning consciousness returned, and when I saw her she expressed herself as quite well again. The peculiar feature of the case, however, was that the neuralgia had left her, and from that time to the present has not returned. She is now better than she has been for the past fourteen years, and is putting on flesh.

The Value of Revaccination.

For the last two years the management of the Chemin de Fer de l'Est has made revaccination a necessary condition for all who wish to enter the service of the company. About forty medical men are employed for the purpose. Since this measure has been in operation only four persons have contracted small-pox, the disease in all of them having been very mild in character. The average annual number of cases before revaccination was insisted on was 15, of whom 2 or 3 died, with a total loss of about 400 days of work.

Influenza.

Mr. S. Wellesley Coombs, F.R.C.S.E. (Worcester) writes to say that he has treated recently quite a number of cases—at least eighteen—of illness quite indistinguishable from those occurring during the influenza epidemic of last spring. It would be interesting to know whether this experience is solitary or whether a return of the disease is really amongst us.

Erratum.—In the Sheffield Correspondence in the British Medical Journal of March 7th, p. 552, line 3, should read: "The control of the sick wards under (not indeed) the direction of the medical staff."

Lisping.

A great deal is written in medical works, especially in professional newspapers, on stammering, but far less is said about lisping. Possibly the latter infirmity is included with the former, under "impediments in the speech." Yet lisping is a most distinct habit in itself, long familiar to general literature, the drama, and the people in all civilised lands. It is generally held to be a sign of affectation, inviting ridicule, rather than a physical infirmity deserving pity. A child lisping in numbers may be a fine spectacle, but a young man who lisps in prose is apt to be thought ridiculous.

A case of lisping has been under discussion at the Berlin Medical Society. Dr. Freitel exhibited a youth who lisped very badly. The infirmity ran in his family. Of his four brothers and sisters, two, his elders, did not lisp; the remaining two, his juniors, lisped badly. Dr. Freitel admitted that this history showed how the habit is contracted, but he attempted to make out a primary cause, which was traced to this patient, the eldest of the lispers in the family; indeed, it seemed clear that the younger brethren caught the trick from him. The arch of the lower jaw was oblong or trapezoid, rather than semicircular; the left upper canine was directed inwards, on account of a defect in the development of the superior maxilla. When the mouth was closed, the teeth of the lower jaw lay in front of their fellows above. These abnormalities caused a kind of ataxy in the muscles of the tongue. This affection of the tongue, combined with slight deafness, which renders the hearing of sibilants, *s*, *z*, *sh*, difficult, is the direct agent in establishing a lisp. Deaf-mutes can only learn to utter a sibilant with extreme difficulty, and the telephone conveys these letters worse than it transmits any other. This may be proved, by the way, by asking a friend to repeat through the telephone words such as "seal," "zeal," and the delicate *zh* sound of *s* in "pleasure," and of *j* in the French language. Dr. Gutzmann noted that he had observed a family of five children who all lisped, but none had malformation of the teeth, yet that deformity was a frequent cause of lisping. Dr. Freitel replied that in examining 200 children, he found that one-third lisped. In only three of these lispers could a dental defect be found to account for the lisping. As a rule, the lisp was due to ataxy of the tongue and slight deafness.

Coroners' Inquests.

Dr. Frederic C. Wood (Nottingham) writes: My reply to Mr. Browne's letter will be very brief. I did not tell his officer I could not state the probable cause of death, but only admitted one or two facts. I met the coroner's officer in the street the same morning, and he informed me only that the coroner had decided to hold an inquest, and that he did not intend to call me as a witness. No mention whatever was made by the officer about "any useful evidence which would guide the jury to a verdict;" had he done so, I should most certainly have proffered myself as a witness. The second case mentioned occurred, I believe, at Lenton about a week previous to my first letter.

I have been resident in Nottingham just two years, and am glad to say I have not yet had occasion to appear before the coroner; but now Mr. Browne has told me he does not make use of a medical man's opinion before the jury without payment of the fee, I have much pleasure in telling him that I shall be happy to render him any possible assistance I can.

Death from Exposure.

Mr. H. N. Baron (Pailton, near Rugby) writes: At 2 P.M. on January 15th, 1891, I was sent for to see J. C., aged 67, who for many years has lived in a filthy pigstye in this village, denying himself the necessities of life that he might hoard money. I found him lying in his pigstye covered with a few old rags. He sat up and pointed to his mouth when spoken to but could not speak himself. His skin was icy cold and I could hear no cardiac sounds. There was no cyanosis, no cough or struggle for breath, but he breathed stertorously at intervals and puffed out his cheeks. He was able to swallow some hot brandy and water and sat up while he was carried on a door to a room where there was a fire. As soon as we could cut his foul rags off we applied hot water bottles, and a hot linseed poultice to the heart. Unfortunately, I had no hypodermic syringe with me. While I was applying the poultice he stared hard at me with bright eyes the pupils accommodating for the purpose. He then lay back frothed at the mouth and ceased to breathe. There was no *post-mortem* examination, the coroner's inquest resulted in a verdict of death from syncope due to exposure from extreme cold. The body was quite plump and £1 6s. was found sewn up in the rags. He also had more than £150 in the bank which was placed there by order of the police after he had been robbed by some boys a year ago.

New Drugs and Old Remedies.

Tunica Vaginalis writes: I was much struck, I may say "very much," with your report of the meeting held at Shanklin, in which the virtues of "piperazidine hydrochloride" were so much extolled. It reminds me of an old book published in 1661, in which the author says: "The testes being virous, especially after coiture are hard and not easily connected, those of lambs are not disconnected, and help decayed bodies and cause manly vigour. The testicles of cocks, fed with a serose meat steeped in milk are desired by the delicate as promoters of vigour, and some say that being kept from the hens they will every day add so much weight to the body, as the testes themselves are in weight. The right testicle of an ass causeth youthful vigour, being drunk in wine, or worn, so the foam taken in a red cloth, or inclosed with silver, so the ashes of the genital. If they are kept with salt, and powdered and put upon drink they help the falling sickness." Now here we have the treatment of senile and other forms of debility in a nutshell, and we have not to wait for the exact formula of this new drug, as subcutaneous injections are at times, in their effect, a little erratic. I believe that a certain pie about the lambing period, is a sure and safe cure for restoring manly vigour.

Could not some of our young pathologists make a series of experiments with grey cerebral matter, and inject the same subcutaneously, so that idiots and fools might be things of the past! I forget whether it was Dickens who said we might extract sunshine from cucumbers, but I feel that all science is advancing at so great a rate that any fresh suggestions must be of value.

Apomorphine as an Emetic.

Mr. Vernon Jones, M.B., B.Ch. Dublin (Bedford Square) writes: In view of Dr. Murrell's valuable paper on the therapeutics of apomorphine I should like to state that I have found it unsuitable as an emetic in alcoholic poisoning. In two cases I gave one-tenth of a grain hypodermically, and in both these supervened marked symptoms of collapse, whilst the emetic action was not satisfactory, the vomiting being feeble and incomplete, in fact the stomach was in neither case properly emptied. I believe I am not alone in this experience. So that though apomorphine is undoubtedly the best and speediest emetic in suitable cases it is decidedly contra-indicated in alcoholic poisoning, which is disappointing, for at first sight nothing seems more suitable than a hypodermic emetic when the patient is insensible and cannot be roused to swallow. Of course I am aware that Dr. Murrell was treating of apomorphine simply as an expectorant, otherwise I have no doubt he would have reminded us of the pitfall.

Drink and Insanity in Norway.

From statistics given by the late Dr. Dahl, in his work *Spirituous Liquors as Causes of Disease and Death in Norway*, it appears that the number of cases of insanity attributed to drunkenness has shown a gradual diminution in recent years. Thus, while among the admissions to the Gaustadt Lunatic Asylum at Christiania, between 1856 and 1860, drink was alleged to be the principal, if not the only, factor in 13.7 per cent., the proportion fell to 2.4 per cent. for the period 1886-88. In the other Norwegian asylums the percentage of cases of insanity attributed to alcoholism was 8.4 per cent for 1872-75, and 3.5 for 1886-88. In Denmark, where the consumption of brandy is said to five times as great as in Norway, there is also a decrease, though not nearly to the same extent, the percentage of drunkards among lunatics having been 11.9 for 1872-75, and 10.3 for 1886-88. Not less notable is the diminution of alcohol as a cause of death in Norway. Of 10,000 deaths recorded in 1853-55 alcoholism or delirium tremens was returned as the cause in 33.8 per cent., while in 1881-5 the percentage had fallen to 10.1, and in 1886-88 to 6.9. The statistics of suicide are said to show similar results. English travellers who, following an illustrious example, would rather see men free than sober, have, no doubt, often chafed under the ultra-paternal restrictions on the sale of ardent liquors in Norway, but these figures bear eloquent testimony to the beneficial effect of such legislation on public health.

A Large Fee.

Professor Grube, of Charkow, has received a fee of 5,000 roubles (nearly £800), besides travelling expenses, for an operation which he performed on a rich fishmonger of Astrachan. Dr. Grube was in Astrachan one day and one night.

A Medical Countess.

The Countess Wanda von Szeawinska has just taken the degree of Doctor of Medicine in the University of Geneva. The learned lady is said to intend to practise her profession in her native country, Poland.

The Oldest Inhabitant of St. Petersburg.

A. S. Bololin, a retired tea merchant, who was literally the "oldest inhabitant" of St. Petersburg, recently died at the age of 106. Since 1819 the deceased centenarian had constantly resided in the Russian capital, and he had never had a day's illness. He died of mere old age, in the full possession of all his faculties.

LETTERS, COMMUNICATIONS, Etc., received from:

(**A**) W. Allen, M.B., Hawkshead; Dr. M. Altdorfer, St. Ann's Hill, Cork; Mr. R. André, Bushey; Professor J. Attfield, London; Dr. Arlidge, Stoke-on-Trent; Mr. R. Ambler, Ampthill; R. Arthur, M.B., London; Mr. G. Abbott, Tunbridge Wells; James Allen, M.B., Birkenhead. (**B**) Dr. George Buchanan, Glasgow; J. M. Barbour, M.B., London; Dr. L. Brunton, London; Dr. W. G. Barras, Govan; Mr. G. Bate, London; Dr. J. S. Bolton, Nottingham; Dr. G. A. Ballingall, St. Leonards-on-Sea, Mr. F. F. Burghard, London; Dr. H. T. Bewley, Dublin; Mr. A. Belling, London; Mr. W. P. Barrett, Folkestone; Mr. T. G. Bayliss, Levenshulme; Dr. Balding, Royston; Mr. Ernest Birt, London; J. F. Bon, M.B., Salop; Dr. Cresswell Baber, Grasse; Dr. J. Mackenzie Booth, Aberdeen; Dr. John Brown, Bacup. (**C**) Mr. S. W. Coombs, Worcester; Mr. J. Craven, Thurso; C. H. Clabburn, M.B., Ketton; Mr. J. W. Carr, London; Messrs. T. Christy and Co., London; Cheir-ergon; Mr. A. Claxton, London; Mr. W. R. E. Coles, London. (**D**) Mr. A. C. Dove, London; Dr. G. Dock, Galveston, Texas; Mr. G. M. Dent, Southport; Mr. E. Duke, St. Leonards; Mr. Alban Doran, London; Mr. F. A. Davis, London; Mr. L. F. Dods, Weedon; Mr. E. Da Silva, Halifax; Dr. C. Digby, Hednesford. (**E**) Enquirer; Editor of *The News Paper*, London; Mr. E. W. Emtage, Holsworthy. (**F**) Dr. D. J. Flynn, Cork; Dr. H. Fox, London; Dr. W. S. Fenwick, London; Mr. E. R. D. Fasken, London. (**G**) P. Rhys Griffiths, M.B., Cardiff; Mr. E. Goodall, Wakefield; Dr. J. W. B. Gunning, Bethulie, O.F.S.; Mr. T. L. Gunn, New York; Mr. L. C. Gill, London; Dr. J. P. A. Gabb, Guildford; Dr. L. G. Guthrie, London. (**H**) Mr. H. Nelson Hardy, London; Mr. A. C. Hartley, Liscard; Mr. G. H. R. Holden, Birmingham; Dr. D. Hooper, London; Mr. C. Hirsch, South Hampstead; Dr. Holmes, Radcliffe; Honorary Rank; Half Pay; Dr. H. A. Hare, Philadelphia; Mr. Victor Hodgson, Scarborough; Mr. G. H. Hawkins-Ambler, Kirkburton; Mr. Wm. Hall, Leeds; Mr. H. Hind, South Cave; Dr. G. H. Hume, Newcastle-on-Tyne; Dr. A. H. Hassall, San Remo; Mr. H. V. Hickman, London. (**I**) Dr. C. R. Illingworth, Accrington; I. M. S.; Mr. J. A. Irvine, Liverpool. (**J**) Mr. R. S. Jaynes, Kirkburton; Mr. W. R. Jones, Senny Bridge; Mr. Jacobson, London; Mr. R. Johnson, London. (**K**) Mr. J. Knight-Coutts, Manchester. (**L**) Mr. C. A. S. Ling, Brightlingsea; Mr. J. R. Lunn, London; Mr. T. Langston, London; Dr. C. J. Lewis, Stirling. (**M**) Mr. J. Y. W. Macalister, London; Dr. Mickle, London; M.B.; F. W. Mann, M.B., Edinburgh; Mr. F. L. Millburn, London; Member; Mr. St. V. Mercier, London; Mr. Wm. Marriott, London; Mr. J. MacMunn, Crouch End. (**N**) J. B. Nias, M.B., London. (**O**) Mr. D. C. Lloyd Owen, Birmingham; Dr. T. Oliver, Newcastle-on-Tyne; Dr. Henry O'Neill, Belfast; Mr. E. A. Onyon, Eye; One who Subscribes to Charities; Dr. C. Orton, Florence; Mr. A. G. Osborn, Dover; Surgeon A. O'Connor, Newbridge. (**P**) Mr. R. W. Pendleton, Hove; Dr. C. B. Plowright, King's Lynn; Mr. H. H. Pain, Bromley Park; Mr. O. Pritchard, London; Mrs. E. Pritty, Ipswich; Persevere; Mr. G. F. Pink, London; Dr. Philpots, Parkstone; Dr. R. W. Pendleton, West Brighton; Dr. Louis Parkes, London; Persona. (**Q**) Mr. R. W. Quennell, Brentwood. (**R**) Dr. J. A. Rigby, Preston; Dr. R. Ruttle, Accrington; Registrar of the General Medical Council; Mr. C. E. Richardson, Manchester; Mr. B. Roth, London; Messrs. Root and Co., London; Dr. R. R. Rentoul, Liverpool; Mr. A. W. Mayo Robson, Leeds; Dr. George Reid, Stafford; Mr. W. G. Rushbrooke, London; Sir Wm. Roberts, London. (**S**) Dr. J. T. Skrimshire, Holt; Dr. R. J. H. Scott, Bath; Secretary of the London Sanitary Protection Association; Mr. E. A. Slaughter, Brighton; Dr. W. A. Shillito, Wolverhampton; Mr. W. J. Smith, London; Rev. T. N. Hart Smith, London; Mr. R. R. Sleman, London; Mr. C. W. Shaw, Bethulie, O.F.S.; Dr. Alfred Sheen, Cardiff; Mr. J. R. Salter, London; Senior Medical Officer; Dr. C. S. Sherrington, London; Mr. A. Sutton, Beenleigh, Queensland; Subscriber; Dr. W. R. Smith, Edinburgh; Mr. J. Bland Sutton, London; Mr. J. H. Sealy, Kilbrittain; Mr. W. G. Spencer, London; Dr. Graham Steell, Manchester; Secretary of the West London Medico-Chirurgical Society; Mr. E. Noble Smith, London. (**T**) Mr. W. Tibbles, Nottingham; Dr. J. J. Tuohey, Dublin; C. H. Taylor, M.B., Derby; Dr. Thorne Thorne, London; Mr. A. P. Thayer, Wiesbaden; Mr. G. Turner, Broxbourne. (**U**) Dr. Upatowski, London; Dr. C. T. Urquhart, Aberdeen. (**V**) Mr. T. Jenner Verrall, Brighton; Vive ut Vivas; Messrs. Vert, Abud, and Moul, London; Dr. E. Videnich, Pola. (**W**) Dr. O. Wood, London; Mr. J. Walker, London; Dr. Samuel Wilks, London; Messrs. Waters and Son, London; Mr. E. Wood White, Birmingham; Dr. F. H. Walmsley, King's Langley; Mr. James West, London; Dr. E. Willoughby, London; Sir H. Trueman Wood, London. (**X**) X. Y. Z. (**Y**) Dr. G. E. Yarrow, London, etc.

BOOKS, Etc., RECEIVED.

Manual of Clinical Diagnosis. By Dr. Otto Seifert and Dr. Friedrich Müller. Translated by W. B. Canfield, A.M., M.D. Second English Edition. New York and London: G. P. Putnams' Sons. 1890.

The Pocket Pharmacopœia. By C. E. Armand Semple, B.A., M.B.Cantab. London: Baillière, Tindall, and Cox.

Lectures on Diabetes. By Robert Saundby, M.D. Bristol: John Wright and Co. 1891.

Surgery. By C. W. Mansell Moullin, M.A., M.D.Oxon. London: J. and A. Churchill. 1891.

Transactions of the American Orthopœdic Association. Vol. III. Philadelphia: Published by the Association. 1890.

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THE LUMLEIAN LECTURES

ON

STRUCTURAL DISEASES OF THE HEART CONSIDERED FROM THE POINT OF VIEW OF PROGNOSIS.

Delivered before the Royal College of Physicians of London.

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MR. PRESIDENT, CENSORS, AND GENTLEMEN,—When your friendly compulsion and that of my then colleagues on the Censors' Board imposed on me the duty of delivering these lectures, my first impulse was to take up a subject which was one of the earliest to engage my attention, and in which I have never ceased to take a deep interest—that of chemical constitution and therapeutical action. In this, however, I have been anticipated by Dr. Lauder Brunton in his valuable Croonian Lectures, and I had, moreover, undertaken to give an address on Therapeutics before the British Medical Association in which I could not ignore this question. With regard to the nervous system, again, the ground had been effectually cut from under my feet by Dr. Hughlings Jackson and Dr. Ferrier, and it would have been the height of presumption in me to challenge comparison with the admirable and suggestive courses of lectures in which they have so recently instructed the college and the entire medical world. I have had, therefore, to fall back upon the subject of heart disease.

More than twenty years ago, in 1866, I read a paper before the Harveian Society on Prognosis in Valvular Disease, and in 1884 I took this as the subject of the Harveian Lectures before the same society. I have naturally had continually before my mind all this time the affections of the walls and cavities of the heart from the point of view of prognosis, but the question is one of such difficulty and complexity that I have never felt to have obtained so complete a grasp of it as to be in a position to place my conclusions before the profession. If I make the attempt now it is not from choice but of necessity, and I ask your indulgence for the many imperfections which you cannot fail to detect.

The muscular walls of the heart are liable to changes of various kinds, some of which constitute diseases which shorten life and give rise to much suffering. Of these structural alterations, some are extremely common—hypertrophy, dilatation, fatty degeneration; others rare—cancer, syphilitic gumma, abscess, aneurysm, localised fibrotic induration. We shall concern ourselves only with those which are comparatively frequent; the others, obscure as well as uncommon, are very seldom recognised during life, and a diagnosis is only made when an exceptionally clear case comes under the notice of an exceptionally acute observer.

Even when the common and familiar affections—hypertrophy, dilatation, and degeneration—only are taken into consideration, we find ourselves on much less secure ground than when dealing with lesions of the valves. The latter we can localise with great confidence; and knowing, partly by experience, partly by the application of mechanical principles, their effects and tendencies, we can, by making out how far such effects are manifest, form an opinion as to the probable course of the symptoms and as to the future of the patient. On examination after death, again, we can understand the connection between the lesion and the symptoms, and can follow the sequence of secondary changes in the heart and vessels which are set up by the original valvular defect. In the case of structural changes, on the contrary, we are often left in some degree in the dark even by a *post-mortem* examination. In one patient fatty degeneration has apparently proved fatal at so early a stage that the naked eye characters of the condition are scarcely perceptible, and it is only by the microscope that its existence is definitely established; in another the change has proceeded so far that the fingers sink into the pale greasy walls, and the muscular fibres have almost disappeared, so that it is scarcely conceivable how the heart has been able to impress any movement whatever on the blood, or how life has been sustained through the intermediate stages of disintegration. So with regard to dilatation, there is no fixed relation between the degree of enlargement of the cavities and thinning of the walls found after death and the interference with the circulation observed during life. One man will live for years with a heart which has reached the extreme limits of dilatation, while another succumbs when it is but moderately advanced. If, therefore, we could make out with great exactness the dimensions of the heart, the size of its separate chambers, and the thickness of their respective walls, which is no easy task, we could not on these grounds alone compare one case with another, and decide upon the relative danger.

Many other considerations of extreme importance will come into the estimate: the functional vigour of the muscular walls as well as their thickness, the liability to palpitation, the state of the vessels, the degree of peripheral resistance, the presence or absence of reflex irritation of the heart from gastric or other derangement. The question of prognosis thus becomes extremely complicated, and is beset with uncertainty. An element of chance or luck even comes in—the subject of advanced disease is at the mercy of the slightest accident; many a patient lives for years with a dilated or fatty heart who would be killed by an attack of influenza or by tripping over a stone or a mat. A serious obstacle to the attainment of the minute and definite knowledge which alone is of real use in arriving at a sure prognosis in structural disease of the heart is the fact that a very large proportion of the cases occur in private and consulting practice, and comparatively few come under observation in hospital. How often does it happen that a patient presents himself a certain number of times in the consulting room at irregular and perhaps long intervals, and then ceases to attend, and nothing more is heard of him. Or he is seen once or twice in consultation, and his medical attendant is too busy to inform us of his further progress or to report his death; still less has he time to obtain and make a *post-mortem* examination.

While, however, the great difficulty of prognosis in structural diseases of the heart is acknowledged, it is of the utmost consequence that such approximation to a forecast of the prospects of life as is possible should be an object of serious endeavour. The cases are numerous, far more numerous at and after middle age than those of valvular disease, and everything which has been said as to the importance of prognosis in general applies here. An early recognition of these changes, indeed, is often of greater service to the subject of them than in the case of valvular affections, since it reveals also the tendencies which are in operation, and often at a time when they can be successfully combated by treatment.

Too commonly, however, no attempt is made to recognise the existence and extent of degeneration or dilatation. The symptoms due to derangement of the circulation force themselves upon the attention of the medical man, but no murmur being detected, the only diagnosis ventured upon is that of "weak heart," a vague term which covers the entire ground, from temporary functional debility to disease inevitably and imminently fatal. Such a diagnosis reacts unfavourably upon the mind of the observer who rests upon it, and makes him less exact and trustworthy, while it may be full of danger to the patient.

These considerations alone would justify an attempt to render the prognosis of structural diseases of the heart more definite, but a study of these affections from the point of view of prognosis also leads to closer observation, and to the recognition of the importance of details which do not force themselves upon the attention so long as diagnosis in the ordinary and limited sense of the word only is the object.

A further justification of the prominence given to prognosis is that the grasp of all the facts of the disease and of the individual case, which is necessary to the formation of a just forecast of the result, is the best guide for treatment, whether this may demand chiefly patience and caution, or must be energetic and prompt. Prognosis is not merely a well-instructed conjecture as to the ultimate issue, it is a deliberate judgment as to the processes and tendencies of the disease, and as to the constitutional soundness and strength of the patient. The foresight relates to the dangers which attend the attack, to the course it will run, and to the influences and contingencies which make for or against the sufferer. To this

there has only to be added a knowledge of the therapeutic measures by which the tendency to death or structural injury can be antagonised, and by which the patient can be guided and helped, together with skill, courage, and promptitude in applying it, and we have all the requisites for successful treatment.

Treatment, therefore, will form a natural sequel and corollary to prognosis.

Hypertrophy.—This condition of the heart will not detain us long. The prognosis of cardiac hypertrophy, like the symptoms, is that of its cause, and the character and degree of hypertrophy are important, not so much in themselves or on account of danger likely to arise out of them, but as indicating the existence of some condition which has given rise to hypertrophy, and which is serious, possibly, in proportion to the hypertrophy which it has provoked.

The causes which give rise to hypertrophy must be enumerated. The left or right ventricle may be affected alone or predominantly, or both may have undergone change. The causes which bring about hypertrophy of the left ventricle are in the first place valvular diseases, stenosis, or insufficiency of the aortic valve, or mitral insufficiency. With these we are not now concerned. Next in frequency will be protracted high arterial tension. When high pressure in the systemic arteries is recognised, and especially when there are evidences of its having been habitual for some time, such as large, thickened, tortuous, radial, and temporal arteries, or a dilated ascending aorta, the underlying condition to which it is due must be identified, and according as this is found to be renal disease more or less advanced, or gout, incipient or confirmed, or one or other of the affections, organic or functional, which are capable of inducing high arterial tension, will be both prognosis and treatment.

Left ventricle hypertrophy, again, may in rare instances have no other assignable origin than adherent pericardium, a condition which is difficult to diagnose, and with regard to which prognosis is extremely indefinite. Adherent pericardium may, however, be a factor in the causation of sudden death, and its recognition, therefore, is a matter of interest.

If hypertrophy is at any time produced by a mode of life entailing sustained muscular exertion, it is physiological and not pathological, and has no claims on our attention; unless, indeed, the initial change has been dilatation caused by violent and sustained effort, such as racing, the hypertrophy being secondary to this; but even here it is the dilatation and not the compensatory process which has to be considered. Hypertrophy of the right ventricle, as of the left, has its most common cause in valvular disease, in this instance chiefly mitral stenosis or insufficiency, and after valvular disease in conditions which give rise to obstruction in the pulmonary circulation.

Emphysema and bronchitis are the lung affections which most frequently give rise to hypertrophy of the right ventricle, but the hypertrophy is rarely dissociated from dilatation, which is the primary effect of the obstruction in the pulmonary capillaries. Collapse of a portion of the lungs, contraction of a lung from pleural adhesions, fibroid phthisis, or any condition which throws a considerable area of lung surface out of gear will in a certain degree give rise to overwork and consequent hypertrophy of the right ventricle.

The diagnosis of cardiac hypertrophy must be briefly described, if only for the purpose of pointing out the distinctions between it and dilatation. Taking first hypertrophy of the left ventricle—as regards the pulse, it is that of the condition which has given rise to the hypertrophy. When this has been arterio-capillary obstruction from renal disease, gout, lead poisoning, pregnancy, or other cause, the pulse will be that of high tension. The artery will be full between the beats, will not be easily flattened under the fingers, and can be followed some distance up the forearm like a cord. The pulse wave will not have a violent ictus, but will rise gradually and subside slowly, and as it makes little impression on the fingers it is sometimes described as weak, but when the attempt is made to arrest the wave very firm pressure is required. The description given applies strictly only when the artery is contracted and small, or of moderate size; when it is large, whether from physiological relaxation of its muscular coat or from distension by protracted high pressure within it, while the vessel can still be felt very distinctly between the beats, the pulsation is more conspicuous and abrupt.

Physical Signs.—On inspection, there may or may not be recognisable bulging over the cardiac area; the impulse is not extensive or violent in uncomplicated cases; the apex beat, if visible, is seen below the normal point, frequently in the sixth, sometimes even in the seventh, space, and is probably also displaced somewhat outwards; it is a circumscribed gentle heave. Occasionally one or more of the intercostal spaces above and to the inner side of the apex line may be seen to be retracted, but this is very rare, and is never so well marked in hypertrophy without valvular disease as it may be seen in aortic regurgitation.

By palpation, which is always an extremely important part of the physical examination of the heart, the apex beat is further defined, and is felt as a powerful but deliberate thrust in the space, sometimes distinctly lifting the adjacent ribs. The more the fingers are pressed into the space, the more distinctly is the thrust recognised. When the flat of the hand is laid over the cardiac region, a general heaving impulse can usually be felt, but when the left ventricle is alone or mainly affected, it is not very conspicuous. As a rule, no impulse is felt to the right of the sternum except when the aorta is dilated, in which case pulsation may be felt when the fingers are thrust into the second and third spaces near the sternum. It must be added that sometimes neither apex beat nor impulse can be seen or felt when the hypertrophy is considerable. Mostly this is in deep-chested individuals with large, overlapping lungs, but occasionally hypertrophic enlargement takes a direction which carries the heart away from the chest wall.

Percussion maps out more or less accurately the enlargement of the heart downwards and to the left. This demarcation should be done with extreme care, but it must not be taken for granted that the outline drawn on the surface corresponds exactly with that of the organ, or gives a trustworthy idea of its size. To say nothing of the difficulty of defining deep dulness, the heart may enlarge backwards instead of laterally. The results of percussion must be correlated with all the other evidence as to the size of the heart.

Auscultation, besides teaching the character and intensity of the sounds, must be made to contribute to the information on this point by careful noting of the seat of maximum intensity of the sounds in the apex region.

The left ventricle first sound as heard at the apex is less distinct than in a normal state of the heart; either the mass of muscle enters into contraction less simultaneously, and the muscular tension being less sudden yields a duller sound, or the thickness of the walls masks the sound produced by the sudden tension of the valves and tendinous cords. The second sound, which at the apex is aortic only, is, on the contrary, usually louder than normal, and is often heard at or near the apex more distinctly than in the right second space.

When the first sound is prolonged and muffled, and especially when it can be described as "impure" (a very objectionable term) or murmurish, careful examination will usually reveal that it is reduplicated, the two first sounds of the right and left ventricles not coinciding. This indicates that the left ventricle is no longer quite equal to the extra work imposed upon it, and marks the supervention of a tendency to dilatation.

At the base of the heart the left ventricle first sound is still less distinct than at the apex, and is, indeed, frequently quite inaudible, while the accentuation of the second is rendered more evident by the absence of a first sound. As has already been said, however, the aortic second sound may be even more distinct at the apex than in the aortic area. When this sound is not only accentuated but low pitched and ringing, the root of the aorta is more or less dilated, and the sound will be heard for some distance to the right of the edge of the sternum, perhaps over a great part of the chest and along the spine.

The sounds of the right ventricle undergo no modification of sufficient importance to require notice.

Various symptoms are described as resulting from hypertrophy of the heart—discomfort from the violence of the impulse, or actual pain in the region of the heart, tenderness on pressure in the neighbourhood of the apex, throbbing sensa-

tions in the head and neck, pulsatile noises in the ears, or audible pulsation in the carotid and other arteries. The action of the heart may be unduly frequent, or too easily excited, or abrupt and irritable, or irregular with falterings and bounds, which are very disturbing to the subject, and the heart may be prone to palpitation. There may be a sense of respiratory oppression, with sighing and desire to fill the chest with air.

Some of the symptoms are simply the result of the size of the heart and of the vehemence of its beat; others are due, not to the hypertrophy itself, but to its cause, whether in the valves or in the vessels, or in external influences which have given rise to it; others, again, are common to various affections of the heart, functional or organic, besides hypertrophy. They have no such direct or definite bearing on prognosis as would warrant a discussion of their significance, though a sustained frequency of the pulse is an unfavourable sign.

The question of prognosis in relation to hypertrophy mostly resolves itself into this: whether the compensation which it establishes is adequate and efficient, and how far it promises to be durable. The danger that the hypertrophy may go beyond the requirements of the occasion which has called for it does not, in my opinion, need consideration.

Compensation is efficient when there are no symptoms of embarrassment of the circulation, and when the heart responds to all ordinary calls upon it without undue shortness of breath or respiratory distress. The effects of exertion are an important criterion, due allowance being made for the greater liability to breathlessness which is natural to some individuals, or is produced by bodily conformation or results from a sedentary mode of life.

But the sounds of the heart usually give notice when it is overtaxed by the resistance to the onward movement of the blood. The interval between the first and second sound may be prolonged, the systole requiring more time than under ordinary circumstances to complete itself. So long as the normal proportion between the systolic and diastolic pauses is not disturbed there is no indication that the heart is unequal to its work or is suffering from the stress put upon it: but when the systolic pause is lengthened at the expense of the diastolic, so that the sounds are equidistant, the period of repose and reconstitution of the muscular fibres of the ventricle is shortened, and their nutrition must in time suffer. During systole the blood is squeezed out of the walls of the heart, and it is during the diastolic relaxation that it obtains free access to the cardiac fibres.

Another evidence that the heart is yielding to the strain of overwork is reduplication of the first sound. That is, as I have argued elsewhere, due to want of synchronism between the two ventricles in the act of contraction, or rather in arriving at that point in their contraction when their valves and tendinous cords and muscular walls are all made tense. This reduplication is at first very slight, the two sounds are separated by the briefest possible interval, and are distinct one from the other only at one spot, just to the inner side of the apex; elsewhere there is only a slurring or prolongation of the first sound. Later the sounds of the right and left ventricles are quite distinct, and the duplex first sound is recognised over a considerable area, usually in the direction of the ensiform cartilage, but sometimes upwards. Sometimes the dislocation of the ventricular first sound is so considerable that it is a task of extreme difficulty to identify the sounds of the heart at all, and associate them with the systole or diastole respectively so as to say which is first and which second. The most striking and confusing examples are met with in aortic stenosis, but they occur also in high arterial tension. The prognosis becomes serious when the first sound is broken up in any very considerable degree.

But when the cardiac hypertrophy has been brought about by high arterial tension, whether associated with renal disease, or gout, or other cause, there must be taken into consideration the possibility that the powerful heart may rupture diseased vessels in the brain, and if the arteries are conspicuously degenerated it is better for the patient that the heart also should undergo some degree of degeneration, and fortunately this usually takes place.

Treatment.—Treatment for hypertrophy as such has always appeared to me to be out of place. The functional vigour and energy of the overgrown and overstrong heart could no doubt be reduced by various means—low diet, enforced rest, and such drugs as aconite—but unless it is clear that the hypertrophy has gone beyond the requirements of the condition which has given rise to it, the advantages of this procedure would be more than doubtful. Even in the attempt to relieve the incidents of hypertrophy, palpitation, throbbing sensations in the chest or head, irritable or irregular action of the heart, præcordial oppression, the employment of direct cardiac depressants is rarely of service, and is at times attended with danger. In aortic stenosis, for example, I have known aconite, given with a view of quieting tumultuous action of the heart, so far reduce the contractile energy of the left ventricle that it was no longer able to cope with the obstruction, and death quickly followed from cardiac asthenia, the pulse becoming imperceptible, the extremities livid, and the surface of the body cold and damp. This would be less likely to occur where the cause of the hypertrophy was obstruction in the peripheral circulation, as the arteries and capillaries are relaxed by such agents as depress the action of the heart.

To speak of the treatment of the causes of hypertrophy would be out of place on this occasion, and would take up much time. All that we have really to consider, then, is not the treatment of hypertrophy or its causes, but treatment suggested by the hypertrophy. We shall recognise, for example, the necessity of diminishing the volume and improving the quality of the blood by appropriate diet and hygiene, and, if necessary, by tonics. We shall recognise, also, the desirability of diminishing the resistance to the onward movement of the blood in the arterio-capillary network by care in diet again, by aperients, and by eliminants of various kinds. In some cases the resistance in the peripheral circulation may be further lessened with advantage by the physiological relaxants of the arterioles and capillaries such as nitroglycerine and the nitrites. By these means the work thrown upon the heart is reduced, and, if necessary, the heart may be strengthened by such remedies as strychnine and digitalis.

All these measures are specially required when the hypertrophy is no longer quite equal to the task which it had originally been developed to perform, and the reduplication and other modifications of the sounds are present. It is now that the incidents of hypertrophy, palpitation, and the like, are most commonly complained of, and they will be best alleviated or removed by the measures just sketched out, by relieving the heart of work on the one hand, and by helping it on the other.

Dilatation.—The word dilatation requires no explanation as applied to the cavities of the heart. Individual cavities may be dilated, as for example the left auricle in mitral stenosis or regurgitation, the right ventricle in pulmonary emphysema or mitral disease, but when spoken of as a form of heart disease, dilatation usually means dilatation of the left ventricle, mostly with, but sometimes without, dilatation of the right ventricle. Together with the expansion of the cavity of the ventricle there may be more or less thickening of its walls representing an attempt at hypertrophy, compensatory of the dilatation itself, or of the difficulty in the circulation which has led to it. Not infrequently the hypertrophy has preceded the dilatation. Or the walls of the heart may have an approximately normal thickness, which will really imply a certain degree of hypertrophy, or they may be distinctly thinned. The parietes may have a normal colour, consistence, and structure, or they may be pale, flabby, and degenerated, or dense and tough from fibroid substitution. But even more important than the anatomical condition is the physiological or functional condition, the special characteristic of which is that the ventricle does not complete its systole, but only expels a portion of its contents.

Dilatation of the heart may be contrasted with hypertrophy rather than compared with it. Hypertrophy is compensatory and an evidence of vigour in the heart; dilatation is, for the most part, a confession of failure on the part of the heart muscle and an aggravation of other causes of interference with the circulation which may be in operation. In hypertrophy the augmented mass and increased strength of the muscular walls enable the ventricles to complete their contraction in the face of difficulty. The result of dilatation is that the ventricles habitually fail to expel the whole of their contents. Very frequently it is only a very small proportion of the blood

which is projected into the great arteries. In well marked cases the chambers of the heart are always full, and little blood being received and expelled there is a stagnation in the auricles and ventricles which may allow of the deposition of fibrin among the fleshy columns and pectinate muscles. It has seemed to me that the imperfect emptying of the ventricles has not always been fully realised as the special feature of dilatation, but it will be seen that if a dilated ventricle launched the whole of its contents into the arterial circulation, the amount being much larger, the rate of movement of blood would be greatly accelerated, whereas the contrary is the case.

The dilatation attending aortic regurgitation belongs to a different category, and, instead of aggravating the difficulties of the circulation, it is a part of the compensatory arrangement. It is clear that if a certain proportion of the blood projected into the aorta at each systole returns to the ventricle during diastole, it is an advantage, and indeed a necessity, that the capacity of the ventricle should be increased, so that, in spite of the reflux, a normal amount of blood may remain in the arteries and be distributed to the tissues. The dilatation, however, in aortic regurgitation is accompanied by hypertrophy which enables the ventricle to contract perfectly, so that the characteristic of dilatation—the partial and imperfect emptying of the ventricle—is not present.

It is probable, again, that the dilatation of the left ventricle met with in mitral regurgitation may have a similar compensatory effect. It would seem to be an advantage, since some of the blood regurgitates into the auricle, that the ventricle should contain sufficient to allow for this, and yet discharge a due amount into the aorta. In dilatation consecutive to mitral regurgitation, moreover, there is a certain degree of hypertrophy, and the systole is carried through. The dilatation of mitral regurgitation stands, then, on a totally different footing from primary dilatation.

The mode of production of dilatation of the heart is highly complex; it is, I think, usually understood to be the result of a gradual yielding of the walls of the ventricles, either from their own inherent weakness or from undue resistance to the onward course of the blood. It is often supposed also, when dilatation exists, that it is an established and more or less unvarying or progressive condition. Both these ideas require modification.

All violent or protracted exertion is attended with temporary dilatation of the heart, which may go so far, even in strong and healthy persons, as to give rise to temporary murmurs. Loud murmurs so produced I have heard at the apex, over the tricuspid area and over the pulmonary area, in individuals who had no evidence of cardiac weakness at the time, and who developed no valvular or other cardiac disease for many years afterwards. A personal friend always had a loud systolic pulmonary murmur after hunting, which sometimes, when there had been a severe run, lasted two or three days. It is, again, not very uncommon for young and strong men to return from climbing in Switzerland with more or less dilatation of the heart, which may persist for weeks. This is usually when little exercise has been taken during the year, and considerable ascents or very long walking excursions have been made without sufficient preliminary training. Boat races no doubt give rise to temporary dilatation, but no instance has come under my own observation. I have, however, met with it as a result of training for races. It might, perhaps, be better to speak of distension of the cavities of the heart in these instances, rather than of dilatation.

But the circumstances which are capable of producing a temporary distension of the ventricles in a sound and vigorous state of the organ will be competent to give rise to dilatation when it is weak and flabby, and other conditions are present which tend to dilatation, and it is more likely that the weakly ventricles give way from time to time under stress and fail to recover perfectly, than that the yielding is gradual and continuous. In contracted granular kidney with persistent and often extreme arterial tension, dilatation at an early period is comparatively rare, which would scarcely be the case were continuous resistance to the emptying of the ventricle the most efficient cause.

In violent exercise the pulse in becoming extremely frequent also becomes extremely soft and short, the arterioles and capillaries are relaxed in order to facilitate the rapid movement of the blood which is necessary to supply fuel and oxygen to the muscles during exertion and the arterial tension is low. The resistance to be overcome by the ventricles is thus reduced to a minimum, which diminishes the liability to over-distension.

In the production of dilatation a common and important, if not a constant, factor is habitual high arterial tension. A second factor, less constant perhaps but more important, is inherent weakness in the ventricular walls. Sometimes one will predominate, sometimes the other. With these proximate causes, to use an old fashioned term, will co-operate very varied influences—exertion, excitement, chills, imprudence in eating and drinking, constipation, augmenting the stress on the heart: anæmia, anxiety and depressing emotions diminishing its power of resistance.

Acute dilatation of the heart is more common than is generally supposed.

In a very large proportion of the cases admitted into hospital suffering from symptoms due to cardiac dilatation, there has been an acute aggravation of the affection from work or exposure, and under treatment a considerable diminution in the size and capacity of the heart is commonly observed. But cases occur in which there is ground for supposing that dilatation has been induced at once in a heart not previously affected. The following are examples selected as illustrations.

A gentleman at the age of 70, in vigorous health and capable of any ordinary amount of exercise, overtook a labourer pushing a heavily laden wheelbarrow uphill, who had to stop and rest every few yards. Proud of his strength, he told the man to stand aside, and himself wheeled the barrow for some distance at a good pace. He lost his breath and found that he did not recover it as he expected, but that he continued to pant and to be conscious of violent action of the heart, accompanied by a sense of oppression in the chest. He got home with difficulty, the least exertion was attended with shortness of breath, and he could not rest at night. After a few days he sent for his medical man, when the physical signs of dilatation of the heart were found to be present. Mitral insufficiency was quickly established and when I saw him considerable dropsy existed. He died shortly afterwards.

A gentleman, aged about 55, remarkably strong and active, who was said to have had a slight attack of pleurisy shortly before, ran quickly up a long flight of stairs in the City. On arriving at the top he was found gasping for breath, unable to speak and scarcely able to stand. He was soon sufficiently recovered to be sent home, and a few days later he was brought by his medical attendant to my consulting room, chiefly in order that I might aid in enforcing the rest and care which were considered necessary. The patient admitted that he was weak and soon out of breath, but declared that he was quite equal to business. The pulse was irregular in force and frequency, the apex beat of the heart diffuse, devoid of the impulse or thrust, and displaced downwards to the sixth space and outwards beyond the nipple line, and the other physical signs of a considerable degree of dilatation were present. With great reluctance a certain amount of rest and treatment was submitted to, and the heart and pulse became stronger and steadier, and the apex beat came in towards its normal situation about an inch.

Two months later the patient ran down from a committee-room in the House of Commons for a bag of papers which he had forgotten, and back again. An attack of the same kind as that just described came on, and this time lasted longer. The evidences of dilatation of the left ventricle were more marked, and œdema of the ankles soon came on. The patient was kept in his room, and as far as practicable at rest in bed or on a couch. Improvement was again obtained but much more slowly than before, and as my visits were the chief restraint upon him, after a brief attendance at short intervals, further consultation was put off indefinitely.

Within a few days the exertion of going downstairs and a serious imprudence in diet brought on a return of symptoms, and the œdema of the lower extremities was shortly complicated by thrombosis of the deep femoral vein of the left side, which extended along the iliac vein to the vena cava and down the right iliac and femoral veins. A tedious illness followed, which finally proved fatal by extension of the

thrombosis to the renal veins, the heart itself appearing to improve somewhat.

Another case was that of a boy who was admitted into St. Mary's Hospital with extreme dilatation of both ventricles. He had had no previous illness, but had been underfed. Most of my hearers, in driving about London, will be familiar with the appearance of lads in the scanty attire of the cinder-path, who are making use of the streets as a training ground for races, usually in the dusk of the evening, after working hours; perhaps, also, this time is chosen to avoid police interference. I have myself often been astonished at the pace and endurance of these athletes under difficulties. The patient had been training in this way, and had persevered in spite of shortness of breath, till severe symptoms set in. He died soon after admission, and the ventricles were found to be greatly dilated.

A certain degree of dilatation of the left ventricle usually occurs at the onset of acute renal disease, under the combined influence of the resistance in the peripheral circulation and of the enfeeblement of the heart. In other acute diseases this may happen. I have twice seen considerable dilatation of the heart in mumps attended with collapse and cerebral disturbance; in one case it was fugitive; in the other, seen with Dr. George Coates, it lasted some time and recurred afterwards. In both the arteries were tightened up, giving rise to high tension and great resistance to the onflow of the blood. Whether the severe collapse and delirium which sometimes supervene as the acute symptoms are subsiding in mumps are always associated with dilatation of the heart it is not in my power to say.

A common cause of dilatation of the heart is anxiety. Nothing is more certain than the influence of prolonged mental depression upon the heart, and the sensation of aching, oppression, and weight which attends grief and anxiety, and which was considered to point to the heart as the seat of emotion generally, is indicative of an injurious effect upon this organ. It is almost literally true that people die of a broken heart. The combination of overwork, excitement, worry, and trouble often met with in City life, especially on the Stock Exchange or in mercantile or financial circles during a commercial or financial crisis, brings us many cases of cardiac dilatation among men, and it is needless to say that domestic anxieties—grief on account of children who have died or given trouble—have the same effect among women.

Among the special causes of dilatation of the heart—acting, no doubt, on pre-existing tendencies—which have come under my notice are injudicious hydropathic treatment, the so-called Banting method of reducing obesity, and inhalation of the fumes of Himrod's powder for the relief of asthma.

In one case a gentleman suffering from dyspeptic symptoms, probably due to cardiac weakness and consequent sluggish circulation in the abdominal viscera, underwent a routine treatment by baths, wet cold packs, and compresses, under which attacks of dyspnœa came on and œdema set in. He had previously been under the care of competent observers, who had not found any serious degree of dilatation. The dropsy advanced in spite of treatment, and when I saw the patient it was considerable, and the physical signs gave evidence of extreme dilatation and thinning of the left ventricle. Death occurred suddenly during a paroxysm of dyspnœa.

Another patient came straight to my consulting room from a hydropathic institution, where he had undergone vigorous treatment for digestive and liver derangements attributed to long residence in India. He was very anæmic, and breathless; the heart was greatly dilated and its action irregular, and there was incipient œdema. Fortunately he recovered.

One of the most extreme cases of dilatation I have ever met with was in the case of a lady who had undergone an amateur course of Banting treatment for obesity. She had lost some of her fat, but had become extremely breathless, so that to walk across a room or put on an article of clothing with the assistance of her maid caused her to pant and gasp for breath in a very painful way. The pulse was weak, small, and very irregular; no impulse or apex beat could be felt, and the size of the heart, as mapped out according to the deep dulness, was incredibly large, had not the results of percussion been confirmed by the sounds being audible over the entire area of dulness, and, later, by a feeble apex beat in the seventh space near the mid-axillary line. Apparently habitual high arterial tension had been exaggerated by an exclusively nitrogenous diet, and, under it, the ventricle had given way.

It may, perhaps, be well to add that in the treatment of obesity by beef steak and copious draughts of hot water there has not been, according to my experience, increase of arterial tension, but the reverse.

The following case is the most serious of several attributable to Himrod's powder:—

In December, 1883, I saw with Dr. Andrews, of Hampstead, a gentleman, aged about 36, apparently of sturdy constitution, who, after an attack of bronchitis, suffered from several nocturnal attacks of asthmatic dyspnœa. A month at Hastings had apparently restored his health; but, after a fortnight of work in London, his nocturnal asthma and shortness of breath were as bad as ever. For the asthmatic attacks he had inhaled immoderately the fumes of Himrod's powder, obtaining relief for the time, but with disastrous after-effects. The whole house was reeking with the odour of the fumes at the time of our consultation. Dr. Andrews had witnessed the rapid development of the condition of the heart which existed. The area of cardiac dulness was greatly increased; no apex beat was recognisable; there was a doubtful systolic murmur (mitral) in the region of the apex, a loud systolic murmur (tricuspid) near the ensiform cartilage, and a faint systolic aortic murmur. Tricuspid incompetence was further distinctly manifested by great enlargement of the liver, and by marked jugular pulsation. There was nothing in the patient's habits, or mode of life, or previous history which was at all calculated to give rise to dilatation of the heart, and I had the less hesitation in attributing it to the solanaceous fumes from having seen similar effects in other cases. In about a fortnight, after free purgation by calomel and the administration of digitalis, the patient was much better, free from asthma and able to walk upstairs, while the liver had gone down to its usual size. The heart remained very large, gave no defined apex beat and only a diffuse general impulse, while a high pitched mitral murmur, a louder tricuspid murmur of low pitch, and a faint aortic murmur, all systolic, were audible. The action of the heart was curious; now and then there was a sudden bump against the palm of the hand placed over the right ventricle, and it was found that the beats of the heart were in pairs, only the first of which was accompanied by a systolic apex murmur, the second having a loud first and second sound, but scarcely reaching the pulse. Within both beats the loud tricuspid murmur was present. The improvement continued, so that the patient resumed his duties before the end of January, and attended regularly to business through the month of February. In March came another relapse which led to dropsy, and the patient died early in April. Fortunately an examination of the body was permitted, notes of which are as follows:—

There was much œdema of the legs and right arm, but no fluid in the abdomen. The heart was enormous, measuring six inches and a half from base to apex, and sixteen and half in circumference. It was flabby, lying flat, pale, fatty looking, not lacerable. The right auricle was greatly dilated and very thin, the wall being translucent at one part; the appendix was filled up by solid clot and stained black by blood. The tricuspid valve took four fingers easily; there was no roughness. The right ventricle was enormously dilated, and would almost have held a duck's egg; the walls were thin, soft, and flabby, the valve stained black; the flaps were thin and the cords delicate. The pulmonary artery and valves were normal. The left auricle was not at all dilated, the appendix contrasting with the right, and compared with the other cavities curiously small. The mitral orifice would admit two fingers. The left ventricle, like the right, was enormously dilated, and looked as if it would hold a fist; the walls were thin, mottled, and flabby, but not lacerable; the papillary muscles were small, the mitral valve and cords quite normal, and remarkably free from thickening. The aorta was very small and the valves normal.

Physical Signs.—The diagnosis of dilatation of the heart is comparatively easy to anyone who has had a fair amount of experience, and is prepared to exercise sufficient care in making the requisite physical examination. Certain

precautions are necessary which will be pointed out later. When, however, the dimensions of the heart have been made out, and an estimate has been made of the relative degree of dilatation and hypertrophy, and of the comparative condition of the two ventricles, a small step only has been taken towards the attainment of the knowledge which is necessary in order to forecast the course and issue of the case, and to direct the treatment. This may be illustrated by a reference to experience which must have been met with by most of the physicians here present. A patient is seen on account of dropsy and other severe symptoms due to dilatation of the heart. Under treatment he gradually recovers, and is, apparently, much in the same state of health as before. After a shorter or longer time—months in some cases, years in others—a relapse of the symptoms indicative of cardiac failure takes place. The general conditions may not apparently be worse, there may be no marked difference in the physical signs, or in the state of the pulse; but the patient's chances of recovery are not the same. Besides the fact that he is older by so much, a change has taken place in the muscular structure of the heart which is not appreciable by means of physical signs. There is not the same reserve of force or nutritional vigour, and the response to treatment is not the same. If a second attack does not prove fatal, a third or fourth will, and the briefer the interval, the more serious is the significance of the relapse, unless it is accounted for by some sufficient cause. But the defective vital energy, which in one case becomes manifest only after one or more serious derangements of the balance of the circulation with dropsy and other symptoms, may in another be present from the first. There may be hereditary tendency to weakness of the heart, or the heart may be worn out by an unhealthy mode of life, or by protracted emotional strain; or the patient's tissues generally may lose their nutritional vigour early. Facts of this class are not revealed by physical signs; some of them may be known to the family medical man, but otherwise they are ascertained only by persevering and careful inquiry. It is obvious, then, that many other considerations enter into a true and thorough diagnosis of dilatation of the heart besides its anatomical condition.

With this introduction, the physical signs which reveal dilatation may be described together with the pulse.

The pulse in advanced dilatation of the heart is usually irregular in rhythm and unequal in force of beat, and is sudden, short, unsustained, and usually easily compressed; the artery at the wrist may be large or small. It will be specially large when there has been antecedent high tension which has dilated the arteries. The significance of a pulse of this character is not absolute, as all these characters may be present when there is no recognisable change in the walls, cavities, or valves of the heart, apparently from disordered nervous influence only. The pulse, again, need not be irregular in advanced dilatation of the heart so long as the patient is in repose and the breathing is tranquil and easy. The regularity, however, is easily disturbed by exertion or effort, or by bronchitis, or merely by deep breathing. In moderate and slight dilatation the pulse may be regular, but, while irregularity is the rule, there is no such constant relation between the degrees of regularity or irregularity of the pulse and the amount of dilatation of the heart as to make one diagnostic of the other.

In the examination of the heart, inspection and particularly palpation will be of the greatest importance. The visual examination will be directed to the situation and character of the apex beat and to the impulse of the right ventricle. Retraction or bulging of intercostal spaces, elsewhere than at the visible apex beat, will be noted. The apex will be displaced outwards and downwards, and it may be visible over a large area. Very commonly it cannot be seen at all, and the point of maximum visible impulse does not necessarily belong to the true apex. The right ventricle impulse will be diffuse, if recognisable at all, and as a rule it is inconspicuous.

Palpation in most cases of dilatation furnishes information which contributes more to precision of idea as to the actual state of the heart than any other branch of physical exploration. The right hand should be applied closely over the entire cardiac region, the palm over the right ventricle, the fingers, spread out and close together alternately, over the apex region. Distinct impulse over the right ventricle, while it indicates more or less obstruction in the pulmonary circulation, indicates also some degree of vigour in this ventricle available for compensatory work. A mere vibration has a converse significance. The first object of attention, however, will be the identification of the point of maximum impulse in the apex region, and a careful estimation of the area over which the apex beat extends, and of its force and character; whether, for example, it is a mere concussion of the chest wall or a more or less distinct thrust at any point. Further exploration will be made by pressing the fingers into the intercostal spaces around and beyond the point of maximum impulse, and it must be borne in mind that this impulse may not be the real apex beat, but the impulse of the right ventricle. Sometimes impulse is detected much above the normal situation, in the fourth space perhaps as far outwards as the anterior axillary fold or behind it, or it may be concealed by the female mamma. It may be the left edge of the right ventricle resting on the interventricular septum which is here felt, or a part of the rounded apex of the left ventricle. According as the apex is capable of giving a distinct thrust or communicates only a diffuse shock, and, according as the beat is well defined and steady, or vaguely felt over a considerable area, will be the estimate of the degree of dilatation and of the thickness or thinness of the heart wall. Not infrequently neither impulse nor apex beat can be detected, or the impulse is so vague that it cannot be localised; unless this is due to overlapping lung, it indicates great weakness of the muscular walls of the heart.

By deep percussion the outline of the heart can be mapped out. It is more rounded in the apex region than normal, and the area of dulness is greatly extended to the left. When no impulse of any kind can be felt we may have to depend entirely on percussion for information as to the size of the heart. I have found continuous deep dulness outwards as far as the mid-axillary line and downwards to the seventh space, shown to be cardiac by the intensity of the sounds at the extreme limits, and, when the heart had gained strength, by an apex beat recognisable by palpation at the farthest point.

The characteristic modification of the sounds of the heart produced by dilatation is that the left ventricle first sound becomes short; usually it is also louder than normal. Probably from this change in the character of the left ventricle first sound it is almost always audible in the aortic area, contrasting in this with hypertrophy. It is audible also to the left of the apex beat. When no impulse or apex beat can be felt, the sounds, and especially the first, must be made use of to ascertain how far to the left the left border and apex of the heart have been carried by the dilatation, and in what degree the enlargement is due to dilatation or hypertrophy. Percussion, of course, maps out the deep dulness, and shows approximately the limit of the heart and its extension to the left, but the point of maximum intensity of the sounds and the area over which they are audible will corroborate or correct the idea formed as to the size of the heart from percussion, and percussion yields no information whatever as to the kind of enlargement, but leaves it to be supplied by the character of the sounds on auscultation.

Not uncommonly dilatation of the left ventricle is accompanied by and gives rise to a systolic apex murmur, obviously due to mitral incompetence. This is induced by imperfect accomplishment of the constriction of the orifice, which is part of the normal contraction of the ventricle, and which cooperates with the curtains of the valves in preventing regurgitation into the auricle. Now mitral valvular disease is attended with precisely the same combination of conditions—incompetence of the valve and dilatation of the ventricle—and of physical signs—a systolic murmur and displacement of the apex beat with increased cardiac dulness. The prognosis is very different in the two cases, and it is therefore extremely important to distinguish between them. This cannot be done with any degree of confidence by means of physical signs alone, and the discussion of the diagnosis must be reserved, but it may be said that the presence of the left ventricle first sound in primary dilatation and its absence in primary valve lesion will sometimes be of great service as a factor.

There is nothing in dilatation of the cavities of the heart to

affect specially and directly the second sound, but, in proportion as this condition of the ventricles impairs the propulsive energy of the systole the second sound will be enfeebled and the aortic second sound is usually weak as compared with the left ventricle first sound. The relative loudness of the sounds therefore enters into the considerations from which may be calculated the efficiency of the ventricle.

Very important information is often supplied by observation of the intervals between the first and second and the second and first sounds, the short and long pauses respectively. When, with dilatation of the left ventricle there is resistance in the arterioles and capillaries, which is very commonly the case, the interval between the first and second sound may be prolonged, and as this marks the duration of the systole it shows that the ventricle is endeavouring to cope with the difficulty and to complete its contraction. The short or systolic pause may be so prolonged as to equal the diastolic, or long pause, and the sounds thus become equidistant, the first also having become short and sharp, the only difference between the sounds is one of emphasis or of pitch, and it is often difficult to say which is which. The sounds may be compared when the heart is acting slowly to the ticking of a clock, when rapidly to the puffing of a distant locomotive.

On the other hand, the first and second sounds may be approximated, and as we cannot suppose that a dilated and enfeebled ventricle completes its systole in a shorter time than normal the only possible explanation is that it is quickly brought up short by the resistance in the arterial system and expels but a small proportion of its contents. This abbreviation of the systolic pause is therefore a serious indication of failure of the ventricles, and when carried to an extreme, so that the second sound follows the first immediately and almost seems to overtake, it is significant of immediate danger.

In two successive attacks of symptoms due to dilatation of the heart when the degree of dilatation appears to be exactly the same, a difference in the length of the systolic pause is sometimes the chief, if not the only, point which makes a difference in the prognosis. The first and second sounds are spaced in the first attack, which is survived and approximated in the second, which proves fatal.

GOULSTONIAN LECTURES

ON

LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians of London.

By THOMAS OLIVER, M.A., M.D., F.R.C.P.,

Physician to the Royal Infirmary, Newcastle-upon-Tyne; and Professor of Physiology, University of Durham.

[*With Coloured Lithographic Plate.*]

LECTURE II.

Analysis, Symptoms, and Physical Signs of Plumbism. Anæmia: Blue Lines on Gums: Lines Caused by other Substances. Colic: Nature and Cause of: Pulse during Attacks of Colic and in Intervals. Difference in Radial Pulses.—Difference in Pupils.—Disordered Menstruation.—Liability of Female Lead Workers to Miscarry. Forms of Lead Paralysis. Is the Lesion Peripheral or Central?—Sensory Disturbances.—Lead Poisoning and Optic Neuritis: Two Forms met with.—Transient Amblyopia.—Loss of Eyesight for Twenty-one Weeks: Recovery.—Plumbism and Insanity.

Of all the symptoms and physical signs of lead poisoning, the one physical sign above all others which indicates that the system is becoming impregnated with lead and is suffering in consequence, is the development of anæmia, which becomes gradually confirmed, and is spoken of as saturnine cachexia. Almost from the first day of exposure to lead, hæmatosis is interfered with. I have never found in any lead workers the normal number of red blood cells. The average range varies from 2,500,000 to 4,000,000 in one centimetre. There is no marked increase in the number of white cells, but the colouring matter falls as low as 45 or 50 per cent. of the normal. Not only does the face assume the appearance of anæmia, but the features become rounded and expressionless. The first effect of lead upon the system, in my opinion, is to disturb the functions concerned in the making of blood, and closely following upon this comes interference with nutrition. The bones have, in some of my cases, contained lead, and to this fact the anæmia may be partially attributed. Raimondi observed atrophy and degeneration of the bone marrow in lead poisoning.

The physical sign of plumbism, however, which is most looked for and generally met with is the presence of a blue or slate-coloured line on the gums, noticed by Burton, but previously described by Tanequerel. When present it is a valuable sign, but it may be absent: it generally is so when the teeth and gums are perfectly sound and the mouth is kept cleansed. And yet there may be colic and no blue line, or a girl may die from acute encephalopathy, with no blue line on the gums characteristic of the poison present from first to last. There are two blue lines on the gums that must be distinguished from each other: one is a delicate line just at the margin of the gums and teeth, but not involving the gum; it is a deposit in the interstices between the teeth, and is seen in workers who have been exposed to white-lead dust for a few hours. This is removed by rinsing the mouth and cleansing the teeth; it is simply a deposit of lead sulphide on, and not in, the gum. The other and characteristic line (see coloured lithograph, Fig. IV) is bluish-black, and occurs also at the margin of the gum, where it is not in complete apposition with the teeth. There the gum is frequently ulcerated and irregular in outline. The teeth are discoloured, and are covered with a brownish, soft, pulpy fur; the odour of the breath is disagreeable, and the patient complains of a metallic taste in the mouth. Where the teeth are absent there is no blue line. I have seen this line develop the day after a large dose of acetate of lead had been taken; the line persisted for a few days, and then disappeared. Out of several scores of cases examined by me, I find when the blue line is absent in one gum that it is more frequently found in the lower than the upper; if present in both gums, that it is usually more deeply developed in the lower. The deepest tint is observed underneath the outer incisors and canines. The fact of the line being absent where the teeth are perfectly white and the gums healthy suggests as a necessity for the development of this physical sign that there must be a broken surface of the gum; this alone, rather than bad teeth, although as the two are generally associated it is difficult to assign to each its proper share. That the gum, however, contributes most to this is shown by the fact that in girls who have been most exposed to lead dust for a few hours or a day or two, and in whom no blue line has been observable, I have on several occasions found the gums swollen and red, but not painful, as if they were the seat of irritation. It is in gums such as these that we subsequently meet with the blue line. An interesting point about blue line in the gums is that I have never found it in animals poisoned by lead. The blue line, however, though noticed most frequently, and as being most highly developed along the outer margin of the gum, is also seen running along the inside towards the molar teeth. The blue line may be present for months, and yet no other evidence of lead poisoning may be present save that of saturnine cachexia, general malnutrition, occasional constipation, and slight colic. It is difficult to say positively how long the blue line of plumbism will remain after removal of the individual from the influence of lead; in some of my own cases it has disappeared very quickly—in one within eight days—but usually from two to three weeks in its minor forms, and three months or longer in the severer cases. This is the limit which I expressed at a meeting of the Royal Medical and Chirurgical Society two years ago, in answer to a question of Dr. Stephen Mackenzie, who, with Gowers, regarded a year as the period during which the line may be present. Since that date I have carefully watched the disappearance of this line, and can confidently say that within three months all traces of it may have disappeared, whilst ulceration might still remain.

In addition to the blue line on the gum there are occasionally to be noticed discoloured patches of mucous membrane (see coloured lithograph, Fig. V), varying in size from a split pea to a shilling, inside the cheek—most frequently met with oppo-

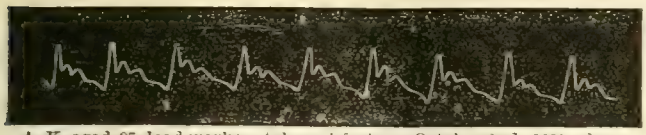
site the lower canine and outer incisors. It is said by some authors that the administration of potassium iodide will develop a blue line in plumbism when absent. I have never succeeded in doing so, nor has Inglis, who has repeatedly tried the experiment, managed to develop it by these means. The other metallic poisons which give rise to a line on the gums are copper and bismuth. I show you, however, a black line due to some form of carbon met with in a miner, who was under the care of Professor Philipson (see coloured lithograph, Fig. VI). The man, aged 40, was admitted into the infirmary complaining of pain in the back and loss of power in the legs, of three years' duration. He was cachectic, had drunk largely of beer, but never out of a metallic vessel. He came from Cumberland, where he had been working in a 20-inch seam; the coal was soft, and there was much dust. In this man there was a distinct bluish-black line at the margin of the teeth which struck observers differently, as being black or bluish according to the light in which it was examined. That on the lower gums, when looked at from above, appeared as a delicate line, bluish-black in colour, but on careful examination it was noticed that the line depended upon a deposit of dark pigment upon the teeth, and underneath the gum was retracted and exhibited a slight red line. There was no deposit in the gums. In diseased conditions attended by marked deterioration of health, as, for instance, phthisis, a delicate red line is occasionally noticed on the gums, and in copper poisoning the gums are ulcerated and a greenish blue coloration is noticed depending upon a deposit in the depth of the ulcer.

One of the earlier symptoms complained of by patients suffering from plumbism is sudden and severe pain in the abdomen. Generally it is preceded by such prodromata as a metallic taste in the mouth in the morning, with vomiting, or only by a feeling of sickness with loss of appetite and constipation and occasional diarrhœa. Colic occurs early after exposure to lead; in one of my cases seven days after. The pain is frequently so very acute and severe, that the patient rolls about in bed in agony, generally obtaining relief by pressure and warmth, but frequently he is unable to bear the slightest pressure. Sometimes localised, the pain, when paroxysmal, is felt in the neighbourhood of the umbilicus, or a little above it and to the left; at other times it is felt in two or three different places in the abdomen, or it may be generalised. Occasionally in males, the pain radiates into the testicle. These attacks are varied by remissions during which the pain is lessened in severity, but never quite disappears. Constipation and pain, as a rule, go together, but in a few cases there is no constipation, the bowels are regular, or there may even be diarrhœa. The pain has no special relationship to the colon, nor can it altogether be regarded as simply ordinary colic. Pressure is said by most writers to relieve it, but sometimes the patient cannot bear to have the abdomen touched. There are two kinds of pain—the paroxysmal or acute pain, which is the true lead colic, and which is generally relieved by pressure; and the other is the dull continuous pain which follows it in the intervals. It is this pain which is usually aggravated by pressure. Where repeated attacks of colic have been experienced, there generally remains a degree of tenderness limited to the half of the abdomen, which was the primary seat of pain. Deep pressure on that side is not only opposed by increased resistance, but pain is felt. On the whole, I am inclined to think that this occurs more frequently on the left than on the right side of the body. In one of my cases, a painter in a shipyard, who is the subject of recurrent lead colic with its attendant depression of spirits, firm pressure can be made on the right side of the abdomen which remains perfectly limp, but the moment similar pressure is applied on the left, that side of the abdomen becomes resistant, and severe pain is felt. It is difficult to say what produces the acute pain in lead colic. In a guinea-pig that had lead mixed with its food, I found the small intestine in a state of varicosity, portions of normally-distended intestine alternating with other portions so extremely contracted as to have their calibre almost completely obliterated, and the piece as hard as whipcord. There existed a contraction, which pressure, when applied to the more widely-distended tube, could not overcome. In other words, a veritable stricture amounting to tetanic contraction existed for several inches, due to extreme shortening of the circular muscular fibres of the bowel. A spasmodic constriction of the small intestine occurring at irregular intervals appears to me to be the cause of the pain in lead colic by pressure upon the nerves, and this is aggravated by the efforts made by the distended portions of the intestine to propel their contents into the contracted tube below. Lead is regarded by some, particularly Gusserow, as having a special affinity for unstriped muscular fibre—more particularly that of the intestine, no matter the channel by which it has been introduced into the system—as, for instance, when Moreau injected solution of lead acetate into the crural vein of a dog whose abdomen he had at the same time opened, so as to watch the intestines. Blue patches are occasionally noticed in the intestine.

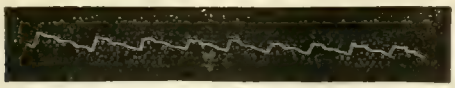
We cannot quite easily dismiss the question of colic, it being part of another and much larger problem. During the attack of colic the pulse becames hard and resistant, and is very decidedly retarded. A pulse which has been beating at the rate of from 70 to 80 in the minute and has exhibited no character other than normal will, during an attack of colic, sink as low as 40, and become extremely hard and incompressible. The average rate of pulse beats during lead colic is rather less in the male than in the female, and a few hours after the attack of colic has passed off, the beats will return to their normal number and the pulse resume its softness. I would not call the pulse of lead colic a feeble one, it is rather hard than feeble. It is interesting to note the slowing of the heart's action as part of this process. It is explained I think as Eulenburg and Guttman have shown, by reflex inhibition through the mesenteric and cœliac plexuses of the abdominal sympathetic; the fibres which convey the impression being sensory and running, according to Bernstein, along the mesenteric artery. I agree with Riegel that colic, high arterial tension, and retarded action of the heart are all present together. Are they coincident? The high arterial tension only lasts at first during the colic, hence the absence in the early stages of lead poisoning of the hypertrophy of the heart which is noticed in the later stages. It is difficult to separate in point of time the three states, colic, high tension, and slowed action of heart, but it seems to me as if lead first irritated the sympathetic and intestinal ganglia; this is followed by spasm of portions of intestine and arteries, and by inhibited heart's action. That such is the course of events is confirmed by a consideration of the functions of the kidney. During lead colic very little urine is secreted. In some of my own cases there has been suppression of urine, or from 6 to 12 ounces of urine only have been secreted daily. Wherever there was severe colic and heightened arterial tension, just in proportion was the amount of urinary secretion diminished, and correspondingly its specific gravity increased. The interesting point observed in my cases is this: that after an interval of freedom from pain, which had been accompanied by high tension and its attendant deficiency of urination, when the colic had returned days after arterial tension again rose, and the same deficiency was observed in the amount of urine secreted. The facts here enunciated were also observed by Riegel. The following sphygmograms indicate this.

Dealing still with this question of colic I have been much interested in the following facts which I have lately observed, and which, in my opinion, help to prove that lead acts primarily upon nerve tissue and not upon muscular fibre. In nearly every instance where lead colic has been experienced, and the minor degrees of it keep returning, there will generally be noticed a slight inequality of the two pupils: sometimes the right is the larger, sometimes the left. This is interesting when looked at in the light of Dr. John Ogle's observations upon the altered state of the pupil, and its relation to pressure upon the thoracic ganglia. My idea is that deranged function of certain parts of the abdominal sympathetic or of sympathetic fibres coming, as Gaskell has shown, from the thoracic part of the spinal cord, passing to the solar plexus, and through it to the intestine, causes inequality of the pupils. I have observed this inequality in abdominal aneurysm, where there was no positive sign of pressure upon the thoracic sympathetic; and the other interesting fact is that where there have been repeated attacks of colic, or where there has been one severe attack, and sphygmographic tracings have been taken of the radial pulses, there will nearly always be found higher arterial tension in one than in the

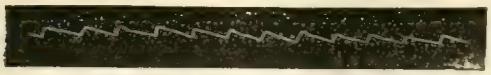
Sphygmograms showing heightened Arterial Tension during Lead Colic; also Inequality of Pulses in and after Attacks of Lead Colic.



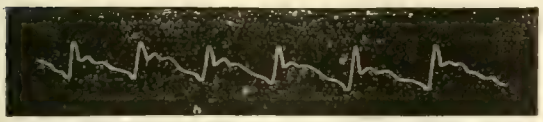
A. K. aged 27, lead worker, taken at factory, October 2nd, 1890, shows normal tension.



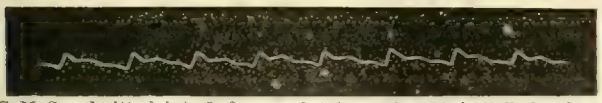
A. K., right radial, has recently had colic, is still occasionally pained, December 24th, 1890.



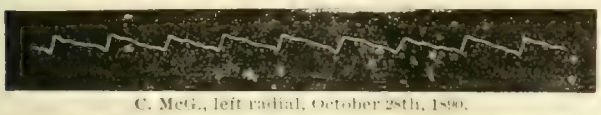
A. K., left radial, December 24th, 1890.



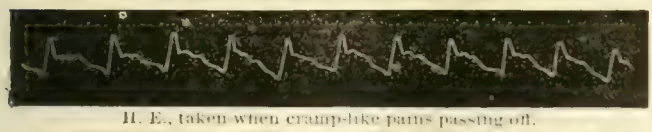
C. McG., aged 19, October 2nd, 1890, taken at factory, never had colic.



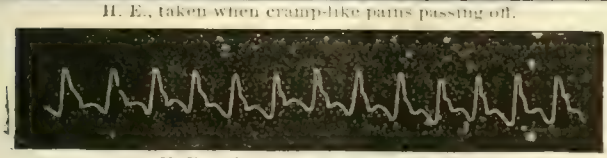
C. McG., admitted into Infirmary October 28th, 1890, is suffering from lead colic, right radial.



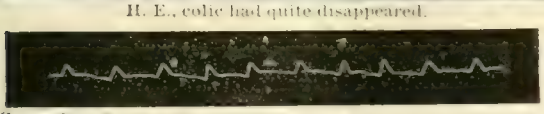
C. McG., left radial, October 28th, 1890.



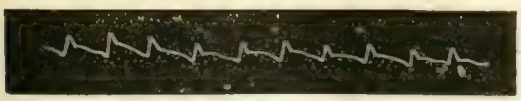
H. E., taken when cramp-like pains passing off.



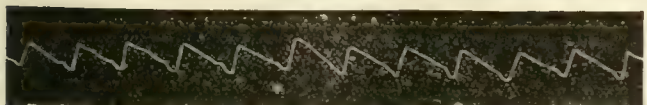
H. E., colic had quite disappeared.



M. C., aged 17, is experiencing her first attack of lead colic, right radial, shows difference between the two radial pulses noticed in colic, November 21st, 1890.



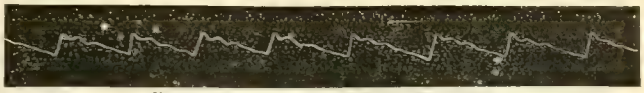
M. C., left radial, November 21st, 1890.



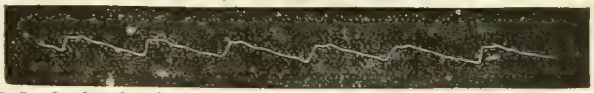
W. McF., a paint mixer, severe colic, left radial, December 29th, 1890.



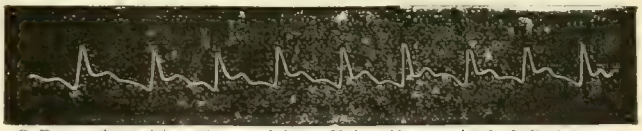
W. McF., right radial, December 29th, 1890.



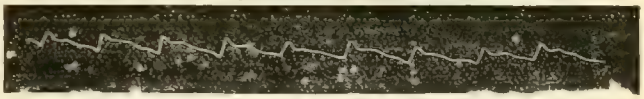
E. B., lead poisoning, October 31st, 1886.



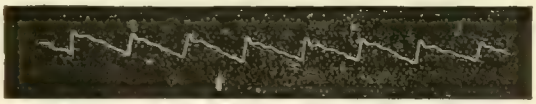
E. B., lead poisoning, shows increased tension, since last tracing; November 7th, 1886.



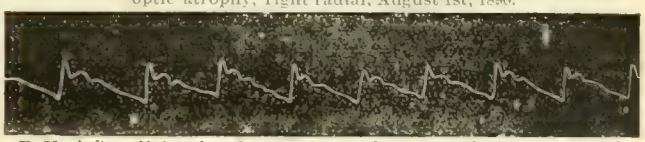
C. B., aged 34, ship painter, right radial, colicky pain in left abdomen only, December 20th, 1890.



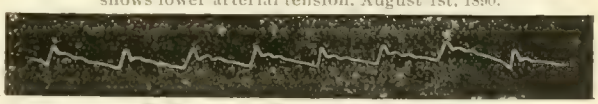
C. B., left radial, pulse of higher tension on same side as abdominal pain.



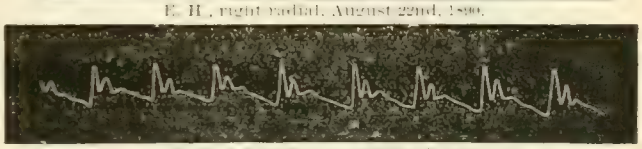
E. H. (Mr. Dodd and Dr. Bowlan's case and series of tracings), lead optic atrophy, right radial, August 1st, 1890.



E. H., left radial pulse, has profuse palmar perspiration left hand, shows lower arterial tension, August 1st, 1890.



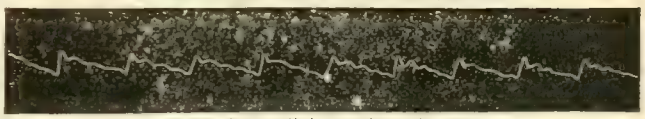
E. H., right radial, August 22nd, 1890.



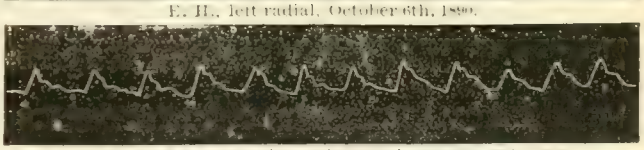
E. H., left radial, August 22nd, 1890.



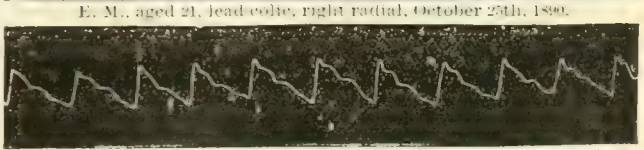
E. H., right radial, October 6th, 1890.



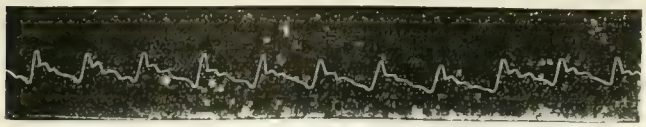
E. H., left radial, October 6th, 1890.



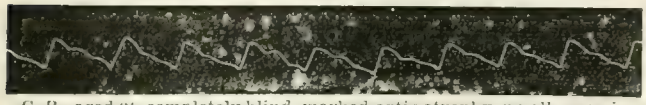
E. M., aged 21, lead colic, right radial, October 25th, 1890.



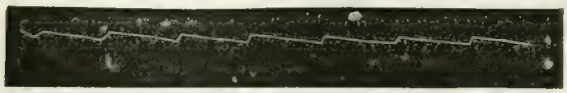
E. M., left radial, shows pulses to be unequal in the radials, October 25th, 1890.



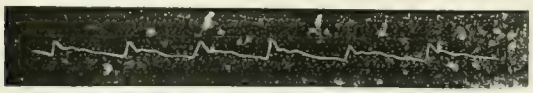
C. R., aged 23, severe headache, lead poisoning, June 28th, 1889, made good recovery, returned to lead works, followed her employment (*vide* next tracing).



C. R., aged 24, completely blind, marked optic atrophy, no albumen in urine, July 16th, 1890.



B. R., aged 33, acute lead encephalopathy, convulsions, tracing taken few hours before death, patient comatose, urine contained albumen, December 5th, 1890.



T. L., a white lead worker, aged 25, taken a few days after convulsions, had lost all memory, shows high tension, no albumen in urine, February 22nd, 1890.



M. W., aged 39, lead encephalopathy, optic neuritis, April, 1889.

other. Admitting that even in health there is a degree of difference in the fulness and tension of the two radial pulses, this difference in lead colic is so pronounced as to stand out prominently as something peculiar to the illness, and it differs from the healthy tracings in so far as it is not always the pulse of the limb that is most used that shows the higher tension. Like the inequality of the pupils, it stands in some way related to primary disturbance of the abdominal sympathetic fibres, and through them of the vasomotor centre. In a female inmate of the Newcastle Workhouse Dr. Bowlan noticed not only the difference in the radial pulses already alluded to, but he found that the left hand was always in a state of profuse perspiration.

A very early symptom noticed in lead poisoning is alteration of the menstrual function; the menses become either excessive or deficient. A very large number of female lead workers suffer from menorrhagia, even young girls of from 17 to 24—I find nearly 50 per cent. of those engaged at the works; and, whilst regarding this as a condition which furthers the development of the anæmia so often present, it is not the cause, for the cachexia affects men equally with women. Other women, again, suffer from scanty menstruation. Lead disturbs the utero-ovarian function, and the earlier this occurs the more likely is the individual to suffer from plumbism. Lead workers miscarry in a much larger percentage than other women. Dr. Barnes[1] alludes to the subject of abortion and lead poisoning. He quotes the experience of M. Paul as to the 15 pregnancies of four women who had worked in a type foundry; 10 of these ended in abortion, 2 in premature labour, 1 in stillbirth, and 1 child died within twenty-four hours. In a second series, five women had borne nine children before working at lead, without one abortion. After exposure to lead there was a total of 36 pregnancies; of these, 25 ended in abortion, 1 in premature labour, 2 in stillbirths, and 5 children died, 4 in the first year. A woman had 5 pregnancies, all ending in abortion; she left the factory and bore a living child. Another, having ceased work at the factory, had 2 children; she returned, had 2 abortions. This is also my experience: In one of my cases (E. C., aged 27) there was first a living child, then one miscarriage; she left the lead works and went into the country; there her second child was born; she returned to the lead works and had two miscarriages. M. W., aged 39, lead worker for eighteen years, has had 12 children, of whom 4 are now alive; the remaining 8 died at ages varying from 5 days to 4, 6, and 14 months from convulsions. She suckled her children whilst following her employment at the lead works. She has had in addition 5 miscarriages; 3 of these were in succession. There is no specific history, no albuminuria, but she is anæmic. In another case, M. A., aged 40, whose mother, too, had been a lead worker, we have a history of 8 children, all of whom died of convulsions. M. C., aged 24, was healthy until four months ago, when she became a lead worker. She is married, and until a few months ago lived in Scotland on a farm, where she had one child. She entered the lead works four months previous to my seeing her, and she aborted in the third month of pregnancy. M. A. T., aged 25, had one living child at full term eight years ago; she then became a lead worker, since which she has had two miscarriages.

The pernicious influence of lead affects equally the reproductive organs of the male, and through the spermatozoa cause abortion, or, if a child is born, it is ill-nourished, and dies almost immediately after its birth, generally from convulsions.

The nervous system suffers severely in lead poisoning, ill-defined pains and cramp-like sensations in the limbs, particularly in the calves of the legs, and dull aching pains in the joints, which are regarded as rheumatic, are complained of. The muscles are tender to the grasp. There is a sensation of tingling or numbness in the fingers, and soon afterwards certain muscles become suddenly or slowly paralysed, undergo atrophy, or cerebral symptoms supervene, including convulsions and coma. Boerhaave was amongst the first to associate paralysis with saturnine poisoning, and following him Stockhusen, van Swieten, and de Haen, but it is to Tanquerel des Planches and to Duchenne of Boulogne that we turn for the earliest and most complete clinical description of paralysis in lead poisoning. Duchenne was the first to utilise electricity in the investigation of this form of paralysis, a method which had already furnished him with wonderful results in his researches upon infantile spinal paralysis and progressive muscular atrophy. To Duchenne also belongs the honour of having localised the paralysis, and of describing the order in which the various muscles are affected. He observed the immunity of certain muscles, particularly the supinator longus. Regarded in the light of a peripheral lesion by Duchenne, Vulpian and Raymond reported cases of lead poisoning in which the paralysis was general, and thus they threw upon Duchenne the responsibility of establishing a differential diagnosis between it and subacute general anterior poliomyelitis.

As a matter of experience, we may say that paralysis as a sign of lead poisoning is met with almost always in the chronic, seldom in the acute, form. It occupies in Tanquerel's collection of cases the third place in the order of succession of the symptoms met with in plumbism. Before paralysis arises there has generally been experienced one or more attacks of colic, headache, vomiting, or the patient has had lead encephalopathy, but in some of my cases paralysis of the extensor muscles of the arms occurred without the patient ever having suffered from colic. Gowers[2] divides the local muscular paralysis with wasting met with in lead poisoning into two classes, one, the more frequent, where the loss of power precedes wasting.

We are all familar with the classical form of paralysis met with in lead poisoning—the ordinary double "wrist-drop"—(Fig. VII) double, for it is generally symmetrical, although, as a rule, it is more pronounced on one side than on the other. It also develops on one side earlier than on the other. The patient at first complains of weakness in the hand—the right hand as a rule—and it is noticed that his grasp is not so firm as it used to be. The disease may proceed no further. Generally the weakness becomes more intense; suddenly, or, it may be, gradually, it deepens into a paralysis, which affects principally the extensors of the fingers—usually those of the middle fingers (Fig. VIII).

Whilst the poison has a special predilection for the muscles already described, these may escape and the muscles of the other arm may be involved—those which constitute the Duchenne-Erb group, namely, the deltoid, biceps, brachialis

[1] *Obstetric Medicine and Surgery*, vol. i, p. 496.

[2] *Diseases of Nervous System*, vol. ii, p. 70.

anticus, and the supinator longus, and to these are generally superadded paralysis of the supra- and infraspinatus. This form of paralysis, usually bilateral, occurs in the more inveterate types of lead poisoning. Of the muscles enumerated,

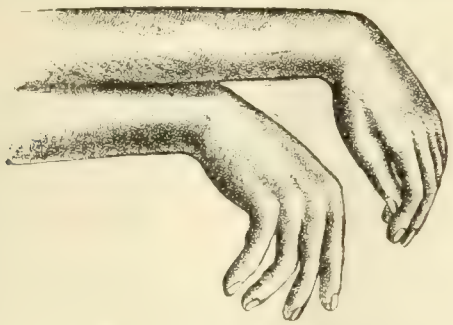


Fig. VII.—Double wrist-drop.

the deltoid is generally the first to become affected, and, in not a few cases, it is the only muscle of the Duchenne-Erb group that is paralysed—as in a case reported by Buzzard.

Occasionally certain muscles of the legs are paralysed: this occurs, according to Tanequerel, in 13 per cent. of all cases of lead paralysis as a complication of the other forms. If it is part of a general paralysis, the muscles which emerge from the pelvis, for example the psoas, may be affected. The paralysis, under these conditions, is slight and lasts no length of time. In the leg, as in the arm, there is the same predi-

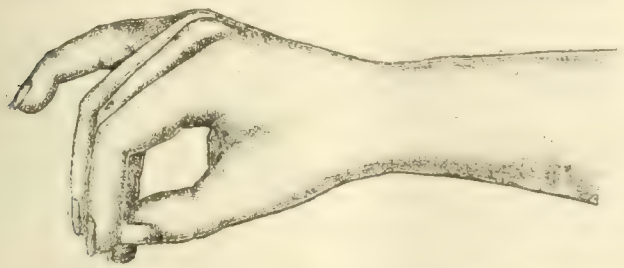


Fig. VIII.—Paralysis of extensors of fingers; little finger has escaped.

lection for certain muscles, those that are homologous with the muscles of the forearm—particularly the peroneal muscles—and the long extensors of the toes, which are supplied by the peroneal nerve, the tibialis anticus, supplied by the same nerve, escaping. I have only met with this peroneal paralysis in cases where there was wrist-drop. Tanequerel alludes to laryngeal paralyses, and Sir Morell Mackenzie points to lead as a cause of paralysis of the adductors of the vocal cords.

There is a form of generalised paralysis of rapid development occasionally met with in lead poisoning. The muscles are paralysed in their whole length and *en bloc*, the muscles of any region, sometimes within a day, becoming absolutely powerless. The subjects of other forms of paralysis may thus suffer, and in them the malady may invade rapidly and in succession muscles that have hitherto escaped. Sometimes, indeed, a generalised paralysis is induced, either in an ascending or descending form, which extends rapidly day by day, always invading *en bloc* the whole length of the muscles of the limbs, the trunk, abdomen, and thorax. The patient occupies the dorsal decubitus, unable to move a limb, and is incapable even of eating; the intercostals, the diaphragm, and muscles of the larynx are involved. The patient suffers from dyspnœa and loss of voice. The noteworthy feature in these cases is that the muscles of the head and neck are respected. Rapid as is the development of this form of paralysis, it just as rapidly begins to mend, and it is exceptional for death to come about by asphyxia, as occurs now and then in acute ascending paralysis. Whilst recovery is the rule, death has occurred by respiratory paralysis, as in the case reported by Strauss and Heugas.[1]

[1] Heugas, *Contributions a l'Etude de la Paralysie saturnine*, p. 54.

The following case, which was under the care of my colleague, Professor Philipson, is an illustration of this type of paralysis: J. F. A., aged 29, single, a white lead worker, was admitted complaining of symptoms of lead poisoning of seven weeks' duration. Patient has followed his occupation for the last three years and a half; has been engaged principally in the drying department. This work consists of drying powdered white lead in an oven. It was not until the end of two years and a half that he experienced his first attack of lead poisoning, namely, colic and constipation. After fourteen days he returned to work quite well, where, after working for three months, he had a second attack of colic, from which he recovered in five weeks. After this second attack of colic the patient drank large quantities of beer and water acidulated with sulphuric acid, and was extremely careful as to cleanliness. Seven weeks before admission the patient went to work in his usual health, and whilst in the factory was suddenly seized with griping pain in the umbilical region. In a short time it became so severe that he had to sit down and press his hands into the abdomen for ease. He was conveyed home. Three days subsequently the patient had epileptiform convulsions; he became unconscious, and remained thus for twelve days. On regaining sensibility, the bowels were opened for the first time since the illness, and the paroxysmal pains decreased in severity, ultimately ceasing on the following day—that is, sixteen days after the commencement of the attack.

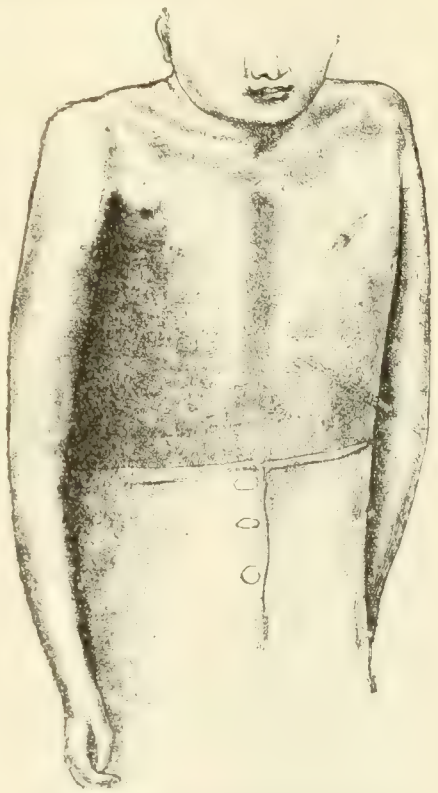


Fig. IX.—Complete paralysis of both arms. (Professor Philipson's case.)

Paralysis suddenly appeared. It attacked first the right leg. At 6 A.M. the patient was out of bed and could walk unsupported; but on rising five hours later he was surprised to find that his legs gave way under him; they helplessly crossed and he fell to the ground. The right leg was most affected, but before morning they were equally paralysed. The next day the arms became paralysed with the same suddenness, the right again being the worst. Other muscles of the body quickly followed, but the patient was unable to state the order in which they were attacked. He

never suffered pain in the limbs or trunk. On admission, the temperature, pulse, and respirations were found to be normal; face was pale, well-marked blue line along the gums. Patient lay in bed quite powerless. The only movement he could perform with freedom was elevation of the head from the pillow and its movement from side to side. The pupils were widely dilated, but reacted slightly to light. Both discs were swollen, red, very irregular around the margin, with small hæmorrhages at places. The veins were large and full, and the retina surrounding the disc looked cloudy in places, obscuring the vessels; a few hæmorrhages were seen in it.



Fig. x.—Complete paralysis of both arms and muscles of back. (Professor Philipson's case.)

On examining the muscles, the deltoid, triceps, and extensors of the wrists and fingers in both arms were found to be completely paralysed. The other muscles, with the exception of the long supinator, were much weakened, almost amounting to paralysis. In the legs and thighs all the muscles, both flexors and extensors, were powerless. The muscles of the back, with the exception of the trapezius, were also paralysed, but those of the abdomen, chest, head, neck, face, and eyes appeared to be unaffected. (Figs. IX and X.)

Patient steadily improved under treatment, and when discharged, three months subsequently to his admission, power had returned to all the muscles excepting the extensors of the wrists and fingers.

Minor degrees of this general form of paralysis are also met with. Sir Dyce Duckworth[4] reports the case of a woman, who, after using a cosmetic for five years, exhibited the anæmia and blue line of lead poisoning, and suffered from paralysis of arms and legs, also the subcutaneous nodules and gout. The muscles of the upper parts of the arms and scapulæ, but particularly the deltoids, were affected; in the legs the muscles were much wasted and flabby and were the seat of tremors.

Sensory Symptoms.—Pain frequently precedes the various forms of paralysis, but seldom continues after the muscles are affected. In my notes I find it a very frequent symptom preceding paralysis of the legs. Sensation, as a rule, is unaffected, but in a very large number of cases patches of analgesia and anæsthesia[5] are met with over the inner and posterior parts of the forearm in wrist-drop, and are also met with on the leg. A few authors are inclined to regard these as illustrations of hysterical anæsthesia, but they differ very distinctly from it, if in nothing else, in the very marked readiness with which the skin bleeds when pricked. Hyperæsthesia amounting to actual pain has been noticed by Baigent, and described by him in his thesis on peripheral neuritis.

Of the rarer forms of lead paralysis I would mention paralysis of the third nerve as in a case successfully treated and reported by Buzzard in *Brain*, part 11, 1890, where there was ptosis of the right eyelid, with abolition of movement of the upper, lower, and internal rectus; the pupil was dilated and did not react to light. In many of my own patients there has been diplopia without any apparent muscular defect; in others, slight internal strasbismus, and in two cases very marked nystagmus in the acute stage of neuro-retinis.

In a small percentage of cases of plumbism there are disturbances of bladder function. A few women who have come under my observation have not been able to retain their urine, they have in the absence of any local cause suffered from incontinence; others are unable to empty the bladder. Mr. Hurry Fenwick has reported to me almost a similar case of atony of the bladder occurring in a man who was a painter, and in whom there was residual urine to the extent of six ounces. There was no blue line on the gums, nor was any form of paralysis detected. Without positively asserting that this was lead paralysis, the fact is of some importance taken in conjunction with my own observations and the trade of the patient.

How far are we to regard the various forms of paralysis in lead poisoning as due to a peripheral or a central cause? We have seen that the characteristic features of lead paralysis are that it attacks certain groups of muscles which are functionally related to each other—that the nerve loses its response to both kinds of electrical stimulation, whilst the muscles retain their voltaic or galvanic irritability, having lost their faradaic. Any theory, therefore, proposed to account for these characteristics must be a comprehensive theory. Is lead paralysis primarily a nervous or a muscular disorder? Changes are undoubtedly detected both in muscle and nerve. In which of these did the change first begin? Charcot, Leyden, and Westphal support the neuropathic theory, whilst the myopaths, amongst whom may be mentioned Gusserow, Henle, and Hitzig, maintain that the affected muscles are the primary seat of the alteration. The predominating idea in Gusserow's mind was that in whatever organ the largest quantity of lead was found *post mortem* that organ must have had the greatest affinity for lead, and, on the basis of this observation, Gusserow arrived at the conclusion that the muscles, bones, liver, and spleen contained the greatest quantity of lead, whilst the brain and spinal marrow contained the least. To him, therefore, lead paralysis depended upon a diseased state of the muscle substance. Admitting for the moment that most lead is found in muscle, are we at liberty to reckon upon absolute values, or are relative values only to be conclusive? Equal weights of tissue only can be compared. Friedländer also pleads for the myopathic theory, on the ground that in one case of lead poisoning, which lasted over four years, the spinal cord was healthy, whilst the substance, not only of the extensor muscles, but of all the muscles of the body, was affected.

Influenced by the results of Harnack's experiments on rabbits and frogs, Friedländer concluded that lead causes primarily a functional disturbance of muscle, which is soon followed by a failure of nutrition; this is succeeded by exuberant growth of connective tissue, which reduces the size of the nervo-muscular fibres, and is followed by a degeneration of the nerve. Paralysis would thus ensue, possessing all the characteristics of the peripheral variety; and close upon paralysis would supervene atrophy. Is the pathological connection between muscle and nerve so close? Remak[6] has questioned the validity of Harnack's opinions drawn from the injection of ethylate of lead into rabbits, in which an acute and generalised paralysis had been developed. After all, this acute saturnine paralysis can scarcely contrast with the partial and more chronic form which occurs in man, and in nearly every instance affects the extensor muscles. The predilection of these muscles for lead is after all only relative. How are we to dispose of the careful examinations made by Bernhardt, which showed conclusively that the flexors and the supinator longus, which usually escape, contained exactly the same quantity of lead as the extensors, the amount in

[4] *Clinical Society's Transactions*, vol. xx, p. 266.
[5] Oliver, British Medical Journal, 1885, vol. ii, p. 732.
[6] *Archiv. für Psychiat.*, vol. ix, part iii, p. 510.

each instance being very small? The myopathic theory, however, need no longer detain us; for Heubel has also demonstrated that with equal weight of material the muscles are of all the tissues of the body those which contain the smallest quantity of lead in saturnine poisoning. Recent opinion has been partly in favour of the neuropathic theory, which assumes that in lead paralysis the intramuscular terminations of nerves become affected, and this, as the primary lesion, is followed by an ascending atrophy of the nerve trunk. The nerve trunk is composed of both sensory and motor fibres. Why, then, should the motor fibres, which are descending nerves, suffer from an ascending lesion whilst the sensory nearly always escape? This part of the neuropathic theory, which claims the intramuscular terminations of nerves as the primary seat of the lesion, must share the same fate as that which regarded the muscle substance itself as the first to be affected.

If, therefore, peripheral conditions do not adequately explain lead paralysis, does a study of the central nervous system throw any light upon it? Oeller, Romberg, and Erb claim the spinal cord as the primary seat of the lesion in lead poisoning, and in many respects it is difficult to distinguish lead paralysis from subacute anterior poliomyelitis. There are two things which we must remember, both of which were forcibly driven home to me by a study of cases of acute infantile spinal paralysis made by my colleague, Dr. Drummond. I employ these to support my argument, and they are these. In the early stages of lead paralysis the pathological changes must be slight; time has not yet been given for destructive processes to be developed. And the second point is that very many victims of lead paralysis recover, particularly those of the generalised type. Many writers state that no pathological change is detected in the spinal cord. That is true, but when we know that these functionally-related groups of muscles are paralysed and atrophied, and that in the cord only a limited area is allotted to these groups, it is an easy matter for the investigator not to discover precisely that part of the spinal marrow where the lesion is located.

Before leaving the nervous system, I should like to say a word or two upon the effect of lead upon the optic nerve and retina. Two kinds of neuro-retinitis are met with in lead poisoning: one the acute, in which the borders of the disc are swollen, ill-defined, and irregular; the disc itself hyperanæmic, and mottled or generally reddened; the vessels obscured, or if observable, they are seen to be narrowed, and have delicate white lines running along their borders; the veins are distended; occasionally hæmorrhages are seen just at the border of the disc or in the retina. This is the form of neuritis most frequently met with in cases of acute encephalopathy, and may either precede or follow the attack. It is accompanied by loss of sight, often absolute, and is followed by partial or complete restoration of sight. Optic atrophy is a frequent consequence. Gowers, in his *Medical Ophthalmoscopy*, page 233, says these ocular changes commonly occur in chronic cases of lead poisoning which have presented toxic symptoms for some time, often several years, and they coincide with an increase of the other symptoms. Such is not altogether my experience. This is, in short, a form of optic neuritis which may be rapidly developed: it occurs in people who have only worked a few weeks or months in the lead factory, and after suffering from acute headache and vomiting, suddenly lose their sight and become convulsed. Sight may be regained, or it may be permanently destroyed. The coloured lithograph (Fig. III) represents the conditions in question.

Optic atrophy frequently follows. The disc, with its slightly irregular borders, is then seen to be extremely pale, small, and the vessels contracted. The changes in the fundus oculi occur in cases in which there is no albumen present in the urine, and where no special changes are detected in the brain or meninges after death.

The second form of neuro-retinitis met with in lead poisoning is in old cases where the kidneys have become affected and there has been albuminuria. Here the disc is swollen and there are extensive patches of exudation around the vessels. The appearances presented are simply those of albuminuric retinitis, and have nothing to do, in appearance at least, with the simple form of acute optic neuritis first alluded to.

In not a few cases, on the other hand, transient loss of sight is complained of, and in these no retinal changes are observed capable of explaining the transient amblyopia. Here the poison has in all probability acted more upon the nerve centres than the peripheral expansions, very much as in the temporary blindness in other forms of poisoning. The patient soon recovers sight, although the blindness may have been complete whilst it lasted.

The subject of lead optic neuritis is extremely interesting, on account of the discussion which has centred around it. Some observers, notably Jeaffreson,[9] do not regard the optic neuritis which arises in the course of saturnine poisoning as in any way specially related to lead. Lead only plays, it is said, a secondary part. Optic neuritis may develop, but that is due, we are told, to lead acting mechanically, and inducing sudden and rapid effusion into the ventricles and sub-arachnoid spaces, and the nerve sheaths become distended. Disordered menstruation, particularly amenorrhœa, is by Jeaffreson regarded as a strong predisposing cause of the neuro-retinitis. Other observers again maintain that the neuro-retinal changes are uræmic, and due to albuminuria. My argument is that long before any changes are developed in the kidney sufficient to give rise to albuminuria, optic neuritis is present and that it may pass through all its stages—the acute, in which blindness is complained of, to death; or complete recovery or to optic atrophy, followed by permanent blindness—without the least trace of albumen having appeared in the urine.

Acute Lead Poisoning: Blindness: Recovery: Fresh Exposure to Lead: further Loss of Eyesight for Twenty-One Weeks: Recovery of Sight: Atrophy of Discs.—C. R., aged 25, single, a white lead worker, was seen by me along with Dr. Bowlan at the Newcastle Workhouse in July of last year, suffering from blindness of eight weeks' duration. In the previous year she had been under my care in the Royal Infirmary suffering from acute lead poisoning, colic, headache, and vomiting, with slight blindness, and after three weeks she was discharged feeling quite well. She returned to the lead factory, where she had worked with more or less regularity for six years. After following her employment for several months she began to experience great weakness, headache, and pain in the bowels and right wrist, with slight wrist drop, but at this time her vision was quite good. Acting upon medical advice she went into the workhouse hospital, where, two days after her admission her eyesight suddenly left her not completely, but the partial blindness gradually deepened, so that in a day or two she was totally blind. Mr. Dodd and Dr. Bowlan found the urine to be quite free from albumen on the date of her admission—May 14th, 1890. She had not menstruated, however, for two months. She complained of severe headache. Two days after admission she began to menstruate, and on the third day she found she had lost her eyesight; she could not see the medicine when it was handed to her. The headache had not only continued but increased in severity. Her pupils were widely dilated, and the discs appeared woolly. Right knee-jerk was absent; the left was exaggerated. On the fourth day, when I saw her with Dr. Bowlan, nystagmus was well marked; the movements were chiefly vertical. There was still the partial wrist drop, also hyperæsthesia of arms and legs. Before blindness came on she had diplopia.

On examining the discs, which were hazy, the veins were seen to be enormously engorged (coloured lithograph, Fig. I), and there were retinal hæmorrhages. By degrees the pains in her limbs subsided, and headache disappeared, but she remained quite blind, the nystagmus still being as pronounced as formerly. The left pupil was on May 30th noticed to be very much larger than the right. On July 30th I brought her into the Newcastle Infirmary. This was eight weeks after the onset of her illness, and she was still totally blind, otherwise she was well; the urine did not contain albumen. The discs were now observed to be passing into a state of atrophy. Potassium iodide was prescribed. After a week or two she was able to see, but very indistinctly, the nurses. At the end of August she was able to see a window at the end of the ward, and could see the medicine glass when held out to her. All this time the blue line on her gums was well marked. On October 10th, that is, exactly twenty-one weeks to the day on which she became

[9] Clinical Lecture, Optic Neuritis, *Lancet* May 3rd, 1890.

blind, I made the following note:—"'This patient was totally blind on admission. The condition continued for some little time afterwards. For weeks past her sight has been gradually returning, and she is now able to enumerate correctly the number of clerks and nurses collected round her bed, and to discriminate between the various nurses." Here, then, is a case of complete restoration of eyesight which had been lost for more than four months. The discs as seen in the coloured lithograph (Fig. II) are atrophied. In one of Mr. Baumgartner's cases sight was restored after a period of five weeks' blindness.

It is difficult to say positively what is the cause of optic neuritis in acute lead poisoning. Occurring without any albumen being present in the urine, it has no resemblance to the albuminuric retinitis met with in the chronic form of plumbism with advanced kidney lesion. It may be a descending neuritis, or it may possibly depend upon a distension of the sheath of the nerve; but in no case has the sheath of the nerve appeared to me distended. In nearly all cases with acute brain symptoms arising in the course of lead poisoning there is increased intracranial pressure. The convolutions are flattened, and this may not be without its influence, although possibly lead itself may have some special effect upon the disc and retina. Leber and Deutschmann have propounded the theory that optic neuritis may be caused by irritating or infective particles carried by means of the subarachnoid fluid from the cavity of the brain to the vaginal sheaths surrounding the nerve. This is a likely cause, but as there are many conditions in operation at one and the same time in lead poisoning, it is impossible to fix definitely upon one thing to the exclusion of others. Meningitis, however, I do exclude. Lead salts, or the consequences of their presence in the system, have a special irritant action upon the retina, optic nerve, and brain, and with this there is well-marked intracranial pressure, which cannot but play an important part in the development of neuro-retinitis. On examining the brain in cases of acute lead poisoning, I have been struck by the dryness, firmness, and pallor present, and the decidedly contracted state of the arteries, that therein may lie an explanation of the causes of optic neuritis. As bearing upon this, the observation of Schreiber[10] is interesting. A patient lay for several days in a state of profound coma, with retracted abdomen, in lead poisoning. On ophthalmoscopic examination the retinal arteries were seen to be extremely narrowed. After inhalation of nitrite of amyl this contraction of the arteries disappeared, as also some of the other symptoms. Each time the nitrite of amyl was inhaled this change in the calibre of the vessels occurred.

Occasionally lead encephalopathy is ushered in by hysteria. When this occurs the medical attendant may be entirely thrown off his guard. I have seen a young woman, a lead worker, who was the subject apparently of ordinary hysterical convulsions, die from acute lead encephalopathy within two days. Mr. Baumgartner, who has medical charge of lead factories in Newcastle, tells me that he has seen this on a few occasions. It was Jaccoud who introduced the comprehensive term of cerebro-spinal saturninism, so as to include the great variety of nervous symptoms met with in lead poisoning. The presence of anæsthesia has rendered the diagnosis of lead poisoning difficult. George Guinon has collected several cases of hysteria occurring in saturnine poisoning. In these there have been the combination of symptoms of organic and functional disease. Hysteria may be the only symptom, therefore, of saturnine poisoning. Charcot has drawn attention to the hysterical nature of a large number of the so-called anæsthesias, even when they occur in the male. It was Debove and Achard, however, who first employed the term toxic hysteria to indicate cases in which the neurosis was developed under the influence of intoxications. To them hysteria was only a symptom of saturnine poisoning. Letulle, admitting the identity of saturnine and ordinary hysteria, maintains that lead only prepares the soil for the development of the neurosis in subjects already predisposed. That predisposition, according to Guinon, is heredity.

Of the mental symptoms produced by lead poisoning, I would mention delirium met with during the course of acute encephalopathy, sometimes so violent as to amount to acute mania, and noticed, too, in the late stage of the disease when the kidneys are affected. This delirium, as Dr. Alexander Robertson noticed,[11] is not attended by rise of temperature, and is therefore not due to meningitis. In one of my own cases there were the symptoms and delusions of general paralysis and distinct meningitis with subarachnoid effusion was found, *post mortem*, in the neighbourhood of the fissure of Rolando. Dr. Hale White has reported similar cases. I may safely say that saturnine poisoning sends few patients to the asylums. In the Waterford Asylum Report for 1871, Dr. Maccabe[12] recounts a case of monomania and depression arising from lead poisoning in which the symptoms of mental derangement disappeared as the patient recovered from the effects of the poison. The patient was a woman, aged 50, who was a white lead worker. She exhibited the blue line on her gums; the extensors of her wrists were weak. Admitted into the asylum suffering from monomania, her insanity was disregarded, and she was put upon treatment for lead poisoning by iodide of potassium. The blue line began to fade and her hallucinations disappeared. She made a good recovery. In this case it is impossible to say whether any predisposition to insanity or other neurosis existed, but the fact that treatment was successful shows the imperative necessity of attending to the bodily conditions that underlie insanity. Dr. Campbell Clark, in the *Journal of Mental Science*, October, 1883, reports a similar case, but with an alcoholic as well as with a saturnine history, in which partial recovery took place. In one of my own cases there was a striking loss of memory, a circumstance which has also been noticed by Dr. Campbell Clark in one of his cases. My patient, a man aged 25, was admitted after having colic and a few epileptiform convulsions; there was no albumen in the urine; he had a well-marked line on his gums, but there was neither paralysis, anæsthesia, nor hyperæsthesia; his knee-jerks were diminished. Several days after he had recovered from the convulsions he was unable to tell me what his occupation was, nor could he name the factory in which he was employed. On mentioning to him, however, a list of the factories in Newcastle, he was able to fix upon his own. As regards the name of the street he lived in and the part of the town in which the street lay, he was equally unable to express himself. He was quite conscious of this defect in his memory, and always asked for time to consider questions before replying to them. He regained his memory.

[10] *Deutsches Archiv für klin. Med.*, 1878, p. 99.

[11] *Journal of Mental Science*, July, 1886.

[12] *Ibid.*, 1872-73, p. 233.

EXPERIMENTS WITH TUBERCULIN ON CATTLE.[1]

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A FEW weeks since I had sent to me for examination a tumour excised by Mr. Douglas, veterinary surgeon, Kilmarnock, from the cervical region of a cow. On section this tumour presented the usual macroscopic appearances of a lymphatic gland in an advanced stage of tuberculosis, and a cover-glass preparation from it showed a large number of tubercle bacilli. Mr. Douglas suggested that the cow would form a suitable subject upon which to test the effect of Koch's fluid, and the animal was accordingly sent by rail to the Veterinary College, where she arrived on February 19th.

The cow was of the Ayrshire breed, rather under-sized, and in poor condition. Pulse (56) and temperature (fluctuating between 100° and 102° F.) were almost normal. The appetite was good. The animal coughed occasionally, but the respiratory movements were not otherwise notably abnormal. In front of the right shoulder there was a large suppurating wound marking the site of the tumour above referred to; at the corresponding point on the left side there was a firm tumour as large as the two fists, and a similar but somewhat smaller enlargement was present in the parotid region on the left side. These tumours had the usual characters of hyperplastic tuberculous lymphatic glands.

First Experiment.—On February 21st the cow received 20 milligrammes of Koch's fluid.[2] The injection was made on the chest wall immediately behind the left elbow, the hair

[1] A more detailed report will appear in the *Journal of Comparative Pathology*.

[2] For the lymph used in these experiments I am indebted to Professor Greenfield and Dr. Felkin.

having previously been clipped closely, and the skin then washed first with a saturated solution of corrosive sublimate, and afterwards with distilled water. For thirty-six hours after the operation the condition of the animal was noted every two hours. The record of the pulse and temperature (rectal) showed a steady ascent of the temperature during the fourteen hours following the injection of the lymph. The temperature remained high for four hours more; forty-eight hours after the injection it had returned to the normal level. The frequency of the pulse was increased, and the disturbance was maintained even after the temperature had nearly returned to the normal. The heart's action was decidedly irregular, and the pulse was intermittent between the tenth and sixteenth hours after the injection. The cough was notably more frequent during the febrile reaction, and the enlarged glands were distinctly more sensitive to pressure. The general appearance of the cow did not denote any serious disturbance; the appetite appeared good throughout, fæces and urine were passed normally, and the animal ruminated and licked herself as in health. A slight inflammatory tumefaction formed at the seat of injection, and this had not quite disappeared on the third day after the injection.

Second Experiment.—On February 23rd, at 9 P.M., the same cow received 40 milligrammes of Koch's fluid. The effect in this case was the same as in the first experiment save that the rise of temperature was somewhat delayed, and the maximum temperature recorded was 104.8° as compared with 105.6° after the first injection. The cough became more frequent, the enlarged glands more sensitive, but appetite and rumination remained undisturbed. Slight inflammatory swelling followed at the seat of injection.

Third Experiment.—On February 25th, at 11 A.M., the same cow received 80 milligrammes of Koch's fluid. The effect in this case was almost identical with that produced in the first experiment. In both cases the maximum temperature was reached about eighteen hours after the injection of the fluid; the frequency of the pulse was decidedly increased, and the heart's action was irregular for some hours. The cough was more frequent, and the enlarged lymphatic glands were very sensitive to pressure. The inflammatory swelling at the seat of inoculation was much greater than in the other two experiments, but, as in these, it gradually subsided without suppuration. This cow is still alive and under observation, and the precise extent of the tuberculous lesions in the viscera is not yet known.

The reaction obtained in this cow after each injection was so decided that I felt very hopeful that Koch's lymph would prove a most valuable aid in the diagnosis of tuberculosis in cattle. Unfortunately the results obtained in another case were decidedly disappointing. This cow, purchased for experiment by my colleague, Professor Walley, received three separate injections of the same sample of Koch's fluid as that used in the first and third experiments with the cow above referred to. The injections were made on February 21st, 23rd, and 25th, the quantity of lymph employed being respectively 10, 40, and 80 milligrammes. The animal was a small Ayrshire, only slightly heavier than the first cow.

There was practically no reaction as regards the temperature. The same may be said of the pulse. After each of the three injections, however, there was a notable increase in the frequency of the cough, and the respirations were more laboured, and occasionally oral. The animal was killed on February 28th, and the *post-mortem* revealed most extensive tuberculous lesions. The lung was the seat of scattered patches of tuberculous catarrhal pneumonia, the bronchial glands were greatly enlarged, and both parietal and visceral pleura and peritoneum were literally covered with *perlsucht* nodules. Not the slightest trace of any reaction in the tuberculous parts could be detected.

Had the experiments with this cow stood alone it might have been urged that the non-reaction was due to the dose of Koch's fluid having been too small. But the experiments with the first cow showed that even 20 milligrammes sufficed to elicit a decided reaction, whereas the second cow received in the third experiment 80 milligrammes. As further evidence that the result was not ascribable to the smallness of the dose, the experiments recently published by Dr. Stricker[3] may be cited. In these experiments 1 cubic centimetre of a 1 per cent. solution sufficed to determine in four tuberculous cows a rise of temperature amounting in one of the animals to 105.8°.

Only a few experiments with Koch's fluid on cattle have yet been published, but in almost all a reaction was obtained in the tuberculous animals, while in no case was there any rise of temperature in the control non-tuberculous animals. In all the experiments yet published the tuberculous animals appear to have been in rather an advanced stage of the disease, but it still remains to be proved whether any discernible reaction will follow the injection of Koch's fluid when the lesions are of small extent.

[3] Stricker's *Archiv f. animalische Nahrungkunde*, No. 4, and *Oester. Monatschrift für Thierheilkunde*, March, 1891.

NOTE ON SOME FUNCTIONS OF THE CERVICAL SYMPATHETIC IN THE MONKEY.

By C. S. SHERRINGTON, M.A., M.B.,
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In the BRITISH MEDICAL JOURNAL of March 7th, in the Physiological Section of the SUPPLEMENT, appeared an excellent notice of some "Recent Experiments on the Cervical Sympathetic." In connection with this subject it may prove not without interest to mention some results which (with Mr. J. B. Lawford) I have recently noticed to occur, upon stimulation of the cervical sympathetic, in the monkey. In that animal, if weak induction shocks be thrown into the upper end of the divided sympathetic of one side of the neck (the animal being of course thoroughly under the influence of an anæsthetic), the following effects, on the corresponding side of the head, can be seen to follow:—

a. The palpebral aperture is slightly enlarged, chiefly by a lifting of the upper lid.

b. The pupil dilates.

c. The pinna of the ear is drawn a little backwards, so as to project less from the side of the head.

d. The pinna, if previously flushed, as often happens during the inhalation of the alcohol-ether-chloroform mixture, becomes blanched.

e. The skin of the nostril of the corresponding side becomes, in a similar way, slightly blanched.

f. The hair on the forehead—front half of the scalp, temple, cheek, and of the upper part of the whisker—slowly erects itself, lending to the face an expression of surprise and fright.

The converse of the above effects follow upon section of the nerve, and, in addition there appears a slight flushing of the gum over the superior maxillary bone on the same side as the section. These effects are due to fibres in the nerve, which can be easily traced by the stimulation method back to an exit from the spinal cord *per* the anterior roots of the second thoracic and especially of the third thoracic nerves.

The symptomatology of lesions of the cervical sympathetic in man is not without its points of obscurity. The above observations on an animal type, widely removed from man than are the rabbit and cat, may possibly be possessed of some interest, from a clinical as well as from an experimental standpoint.

A further point suggests itself. Dr. Hale White, after careful microscopical examination of sympathetic ganglia, has been led to conclude that the collateral ganglia (for example, the superior cervical and the semilunar) of the sympathetic system are, in adult man, atrophied and degenerate organs, "like the coccyx or appendage cæci."[1]

In view of the connection in the monkey between the cervical sympathetic and the hair on the front of the scalp, the question suggests itself: Is the loss of hair from the front of the human scalp, which constitutes so common a form of baldness, a phenomenon attendant, perhaps dependent, on the degeneration of the superior cervical sympathetic ganglion in man, for which Dr. Hale White contends?

[1] *Journal of Physiology*, vol. x.; *cf.* Hale White, *Journal of Physiology*, vol. viii.

APPLICATION has been made to the Board of Trade for a licence to the British Institute of Preventive Medicine to be registered with limited liability without the addition of the word "Limited."

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A METHOD OF ADMINISTERING IRON IN LARGE QUANTITIES.

With a view of seeing how much iron an anæmic person could take, and also whether the rapidity of progress would be hastened, I determined to try on a suitable case the effect of an almost continuous administration of the perchloride of iron.

I took a very extreme case of anæmia which presented itself in a girl of 19 years, who worked in a tailor's shop, and who had been getting gradually worse for two years. She lay in bed, hardly able to move without causing dyspnœa, and showing lips and eyelids almost as bloodless as her cheeks. Having improved her digestive organs a little I began to administer the iron. I placed by her side a quart bottle of a solution of the tinct. ferri perchlor. with some sp. chloroformi and a tumbler, telling her to sip at it as much as she could day and night. This method of taking medicine she entered into with much zest, taking nearly three pints in the first twenty-four hours. The strength was gradually increased from 5 minims per ounce to 25 minims, and she continued to get through about a quart a day.

She improved most rapidly, and before she left the hospital, which she did in four weeks, was able to busy herself in the ward for the whole day without fatigue. The amount of iron consumed in twenty-seven days was exactly 30 ounces of the *British Pharmacopœia* tinct. ferri perchlor., and that large quantity without upsetting the stomach or necessitating the use of any stronger purgative than a pill of aloes and nux vomica administered daily. If on the other hand she had taken the iron three times a day in doses of 20 minims, the amount consumed in the same period would have been 3 ounces 3 drachms.

It is generally held in the treatment of anæmia that small doses are as efficacious as large, owing, I believe, to the fact that large doses so frequently upset the digestive tract, and so prevent absorption. Now by the continuous method, with a tractable patient, one gets a very large amount taken, but in a very dilute form, and also the patient's stomach is able to decide when, and how much at a time, it is willing to receive.

Chas. H. Taylor, M.B.Lond.

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ABDOMINAL SECTION IN PUERPERAL FEVER.

I have recently seen in consultation three fatal cases of puerperal fever, all presenting similar symptoms to one that has been under my own care, and which I believe might have been saved by opening the abdominal cavity and washing out the pus therein contained and possibly making provision for the escape of any further effusion by drainage.

My case was a woman with a deformed pelvis, for whom I induced labour at the eighth month. She also had placenta prævia. She did well until the fifth day, when she had a rigor, and her temperature ran up to 105°, and in spite of antipyretics she maintained a high temperature until her death on the eighth day. She had frequent attacks of diarrhœa, great abdominal pain with distension of the abdominal walls, and a gradually increasing dulness in both flanks.

The *post-mortem* examination revealed a sloughy appearance of the lining of the uterus, and inflamed and thickened condition of both Fallopian tubes, and at least one pint of pus occupying the position of each flank and corresponding to the dulness observed during life.

When the first bad symptoms arose this patient's uterus was thoroughly washed out, but with only very slight benefit. My opinion is that when, under circumstances like I have detailed in my case, there is no sufficient cause to be found by a vaginal examination, and when the symptoms persist in spite of washing out the uterus, antipyretics, etc., then the abdomen should be opened by a small incision just enough to pass in two fingers, which should rapidly be passed into the sides of the abdominal cavity, and a tube be carried in, and a good stream of warm boracic lotion allowed to run in by means of a siphon apparatus, and to thoroughly wash out the abdominal cavity in the manner well known to all who practise abdominal surgery. I believe had this been done in my case I might have saved my patient. It is all-important that in these fatal cases we should see *post mortem* if anything could have been done, and when a similar case occurs again then to put in practice what we have learnt. It is with this view I publish this short note.

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FRACTURE OF THE BASE OF THE SKULL.

On Tuesday, February 24th, a boy, aged 6, at school, standing on a form to get his cap, fell forwards on to a wooden floor. He returned home at 5, and complained of not feeling well, but ate some tea, and went to bed at 7. He was not sick. At 8 he became delirious, and then sank into stupor about 9, and died at 10, just as I entered the room. I observed a thin clear fluid flowing from the right ear, a little from the nose, but no blood, and marks of bruising about the nose and forehead. The *post-mortem* examination revealed a fracture at the base of the posterior fossa on the right side, and leading to the internal auditory meatus. There were also about two teaspoonfuls of blood effused in the posterior fossa. The fluid was still flowing from the right ear unmixed with blood. The nasal bones, frontal bone, and rest of the skull was free from fracture, and I could not discover any further injury. All the organs were sound.

Two other doctors were present at the *post-mortem* examination, and saw the fracture with myself. Unfortunately, under the circumstances, it was impossible to preserve the bone, which I should like to have done; as the youth of the patient and the rarity of such a lesion would make the specimen of great interest.

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Westbourne Terrace, W.

HÆMOPHILIA IN A NEWLY BORN CHILD.

The rarity of this condition I think warrants me in reporting the following case. Mrs. R. was delivered of her third child, a female, on January 27th, by a student. Labour was normal with very little hæmorrhage. The child was weakly looking, and had the appearance of being somewhat premature. In a day or two it became jaundiced. On the eighth day the cord separated and no bleeding occurred, but on the ninth some oozing was noticed. This ceased for three days, but began again more profusely on the thirteenth. On the eighteenth day hæmorrhage from the nose, mouth, and anus was noticed, and, when washing it, bruises, as the mother thought, were noticed on the right side of the chest, and also on the right knee and elbow. I saw the child on the nineteenth day, and found all the above indications of hæmorrhage, and also ecchymoses, all over the palate. The joints, especially the right elbow, were distended. It was very feeble and apparently dying, but lived fully another day. Before death another spot appeared on the left breast, and one on the back of the same side.

The mother is not a bleeder, but she states that her other little girl bleeds very profusely from the nose at times. The father is also troubled in the same way. I regret very much that I was unable to obtain a *post-mortem* examination.

Robert Jardine, M.D., M.R.C.S.,
Outdoor Physician to the West End Branch,
Glasgow. Glasgow Maternity Hospital.

TAPPING THE VENTRICLES.

As so many are advancing claims of priority in the case of the operation of tapping the ventricles of the brain, I have been urged by my friends, although I do not consider it as of great importance who was the first to do this operation, to advance my little claim, which, as far as one can at present judge, is decidedly before any of the others. But, in the first place, Sir J. Risdon Bennett misses the point in his letter, for it is not tapping the ventricles which is the vexed question. That has been frequently done in past ages. The advance on this procedure (and a great advance it is) is the maintenance after tapping of drainage, so that a continuous flow may be kept up.

To illustrate Dr. Oliver's Goulstonian Lectures.

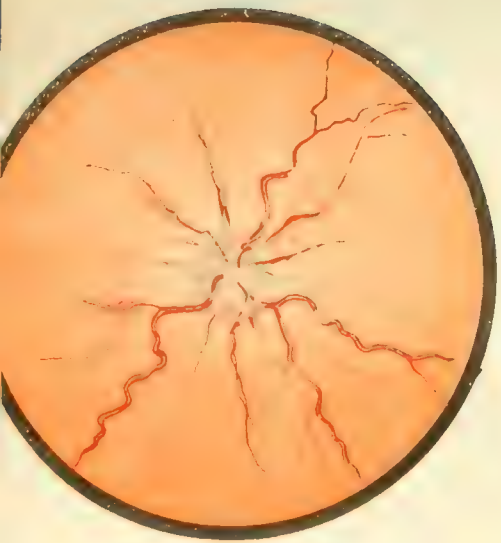


Fig. I.—Acute Optic Neuritis in Lead Poisoning.
Cath. R., June 26th, 1890.

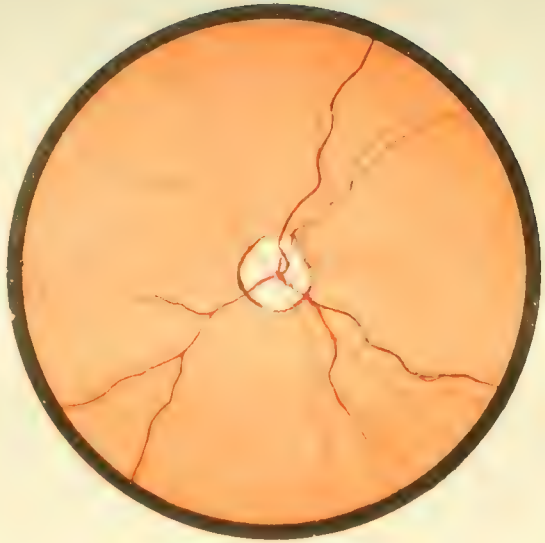


Fig. II.—Optic Atrophy in Lead Poisoning.
Cath. R., Sept. 20th, 1890.



Fig. III.—Acute Neuro-retinitis in Lead Poisoning.
John F. A., aged 29.



Fig. IV.—Blue line in gums in lead worker.
Rapid development, 12 days' exposure to lead dust.
J. K., male.



Fig. V.—Blue line, ulcerated gums, and blue patch inside lower lip in lead worker. Female.



Fig. VI.—Black line on teeth at margin of gums, probably carbon, in a miner.
(Prof. Philipson's case).

The following condensed report of a paper I read on April 10th, 1885, on cases of cranio-cerebral surgery at a meeting of the East York and North Lincolnshire Branch of the British Medical Association was taken by Mr. Hardey, the secretary, and appears in the minute book:—"A case was related of a boy with hydrocephalus, aged 7 years. He was paralysed, blind, in constant pain, had occasional epilepsies, but with unimpaired intellect. The skull was drilled, the fluid aspirated, and a constant drain established, and rapid improvement took place, with some movements of the limbs and some vision. In his sleep he pulled out the cannula on two occasions, and it could not be found on the last. He died comatose on the eighth day. The cannula was found in the ventricle."

My own notes on the same case are as follows:—B. D., a boy, aged 7, had hydrocephalus. He was blind, had paralysis of all his limbs, and agonising pain in the head. His intellect was unimpaired, but he had occasional epilepsies. It was plain the end of his career was not far off. His parents said everything had been tried except tapping, which someone had mentioned to them, and which they were anxious to try the effect of.

The fontanelles being closed, I drilled a hole with the bone drill a little to one side of the sagittal suture, and pushed the trocar of a Potain's aspirator into the ventricle, and drew off a quantity of watery fluid. Aware of the usual failure of tapping, I left half of the cannula in, attached to it a piece of Southey's drainage tubing, and dropped the other end into a bottle with carbolic acid swung to the iron framework of the bed at a level lower than the head, thus establishing drainage between the ventricles and the bottle. The cannula was surrounded by cotton wool soaked in styptic colloid in order to keep it in its place. Rapid improvement took place. Weak movements of the limbs were followed by recovery of power and voluntary control. The vision also improved, the patient maintaining he could distinguish easily the bars of the window frame.

On the night of the fifth day, all having gone well so far, he pulled away the tube in his sleep. It was replaced, and all again went well until the seventh day, when the same thing again took place, and this time the cannula could not be found. The drainage ceased, and he died in coma on the eighth day. At the *post-mortem* examination the cannula was found in the ventricle. The ventricles were enormously distended, and their walls were shreddy from hydrocephalic softening. The aqueduct of Sylvius was large enough to admit the little finger. There had been no hæmorrhage and no signs of inflammation.

Of course, the mistake in this case was to use a cannula without a collar, but the idea of drainage occurred to me at the time of the operation, and I had to use the means at hand. In hydrocephalic cases it is a very easy matter to tap a distended ventricle, but in acute cerebral inflammation it is more difficult to find, and I am not at all sure that the directions given and the route chosen for the trocar or drainage tube to travel are the best. I have often thought that the easiest way to command the fluid in the brain is to approach the spinal fluid at its very lowest point in the spine. In some cases, of course, the communication between the two at the back of the medulla is closed, but still this way of reaching the cerebrospinal fluid ought to be remembered. Led away by interest in the subject, I am afraid I have taken up your space with more than my claim of priority, but you will see that so far this is the first case of tapping and drainage of the ventricles.

Hull. D. Lowson, M.D.

LOUD PERICARDIAL FRICTION SOUND.

A. G. S., a well-developed, intelligent, fair-haired girl, aged 11½, applied to me on February 23rd to have a tooth extracted: after its removal I noticed she was making a well-marked leather-creak sound, and on asking her if she wore braces, she replied, "No, it is my heart."

On examination I found a violent impulse, extending, with a radius of an inch and a half, from a point half an inch below and half an inch internal to the nipple, and a well-marked friction fremitus over this area, with two distinct blows of the heart against the chest wall. The sound is most intense over the centre of the apex beat; it has a sharp leather-creak character, but is not harsh in tone; it is systolic in time; it occurs for five or six beats of the heart, and then ceases for three or four beats; and it can be heard distinctly with the stethoscope over any point of the body excepting the head, arms, and legs. When the child is undressed it can be heard at nine yards' distance, and when dressed in ordinary clothes at three yards' distance. The ordinary sounds of the heart are normal in character. When 2½ years old she had a severe attack of scarlatina, and later a mild attack of measles. Her family history is good, and the only symptoms she complains of are slight pain over the præcordial region and palpitation after violent exercise or excitement. The sound was first noticed by her parents three years ago.

Hednesford. Cecil Digby, M.D.

REMOVAL OF PEA AFTER PROLONGED LODGMENT IN THE EAR.

In connection with the case recorded by Mr. Foxwell, in the British Medical Journal of February 28th, the following may be of interest.

On October 10th, 1888, T. W., aged 24, assistant relieving officer of the parish in which I then practised, came to me complaining of slight pain and deafness of the right ear, which had lasted for some few weeks. On examining with a speculum I saw inside the meatus what at first appeared to be a ball of dark-coloured wax; this I tried to remove by syringing, but without effect. The body now moved about pretty freely in the ear when touched with a scoop, and I said to the man that it looked exactly like a pea. He then told me that when a boy at school a playfellow had pushed a pea into the ear, and that it had never been removed, although he thought it had probably "melted" away, as until quite lately he had never had any trouble from it.

I now introduced a thin wire behind the body and tried to break it up, which after a while I succeeded in doing. Again syringing, the skin of a pea, followed by the two cotyledons separately, came away. The man took them home, and next day I saw his parents, who told me that he had left school at about 13 years of age, and that the pea had been put into the ear at least two years before, so that altogether it had been there for thirteen years.

The father was relieving officer of the parish, and I am sure his statement was correct. Up to a few weeks before I saw him the man had no trouble from the ear, except for slight deafness now and again, followed by a slight thick discharge. The pea was almost perfect, skin and all, and was nearly black in colour.

Warrenpoint, co. Down. Theodore Bell, M.B.Dublin.

FRACTURE OF UPPER THIRD OF FEMUR BY MUSCULAR ACTION.

On December 29th, 1890, R.B., aged 36, a very muscular man, while unloading a waggon containing pieces of frozen sand, stooped down to raise a block weighing about 3st. After straightening himself up without moving his feet, he endeavoured to throw the piece of sand over the edge of the waggon, which was about on a level with his hands. When in the act of twisting his body on his lower extremities, which acted as a pivot, to throw the sand out, he felt his right thigh crack. It appears that he then immediately leaned his weight on his left leg, and supported himself by grasping the waggon side. He did not fall, but remained leaning against the waggon. Any kind of natural motion was now found to be impossible in the right lower limb, as it merely swayed to and fro like a piece of india-rubber. He was removed to his home on a stretcher, and was then examined for the first time by a medical man.

The examination showed this limb to be 2 inches shorter than the sound one, and there were the usual symptoms and signs present of fracture in this region, but owing to the great amount of swelling and excessive muscularity of the part, no precise definition of the bone or fragments was possible. Subsequent examination showed the fracture to have been an oblique one, and the lower end of the upper fragment could be found slightly overlapping, to the outer side, the upper portion of the lower fragment. Extension by weight and pulley reduced the shortening entirely in a few hours. The limb was kept in a long splint, with extension as before, until complete union

took place, which was in seven weeks, the patient then being able to raise the limb altogether from the bed without any difficulty.

The surroundings, sanitary and otherwise, were exceptionally bad, and during the progress of the case one of the children in the home upset the weight and caused one of the extension tapes to be broken. This produced severe pain at the time, and shortening was noticed in the limb two days after the tape had been broken. No mention of this accident to the tapes was made to the surgeon in attendance, and the injury done was "repaired" by the man's wife.

Nothwithstanding the foregoing, complete union has resulted with 1¼ inch of shortening. The patient's personal history is very satisfactory, and nothing but muscular action can be discovered to account for the fracture.

Knottingley, Yorks. BASIL G. EWING, M.B., C.M.

CRAMP IN PREGNANCY.

I HAVE found a very simple remedy most effective in this troublesome condition, and, as it does not appear to be mentioned in the textbooks, perhaps publication of it may be useful. Sulphate of copper ½ grain given in water at bedtime takes effect at once, the patient getting a good night's rest after the first dose. It may be repeated nightly, as no bad effects are observed with so small a dose.

Nottingham. JOSEPH S. BOLTON, M.D.

THE DIAGNOSIS OF LEPROSY.

I FIND that the rapid method of staining tubercle bacilli, described by me in the BRITISH MEDICAL JOURNAL of April 2nd, 1887, answers very well for leprosy bacilli, and is convenient for diagnostic purposes. Cover-glasses smeared with serum from a nodule, and dried and heated as usual, are floated on the warm carbolic solution of magenta (magenta 1 part, 5 per cent. watery solution carbolic acid 100 parts, alcohol 10 parts) for two minutes, and then transferred to the solution of methylene blue in 25 per cent. sulphuric acid, where they are left for one minute and then washed. Sections should be left in the magenta for three hours.

Eastbourne. HENRY S. GABBETT, M.D.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 13TH, 1891.

Sir DYCE DUCKWORTH, M.D., LL.D., F.R.C.P., President, in the Chair.

Atrophic Spinal Paralysis and Multiple Neuritis.—Dr. GOWERS read an account of a case of acute atrophic paralysis (acute anterior poliomyelitis), in which there was also a primary multiple neuritis. The patient was a boy, aged 7, in whom the paralysis developed after several days of constitutional disturbance. The first symptoms of this commenced within twenty-four hours of a quite cold bath, to which he was unaccustomed. The weather at the time was very hot. The atrophic paralysis involved the whole left arm and shoulder muscles and the right deltoid, triceps, and biceps. At the end of a fortnight these muscles, and all those of the left arm presented the reaction of degeneration, and their paralysis and wasting proved permanent. Simultaneously with their palsy, the legs became weak, although all movements could be performed. The knee-jerks were preserved throughout, and when the palsy had existed for a week, they had become excessive, and a foot clonus had developed on each side. This continued for some months, although the legs gradually regained power, so that the child was able to walk in two months from the onset, and the legs ultimately became quite strong. The symptoms thus showed cervical anterior poliomyelitis, extensive and severe on the left side, and on both sides involving slightly the adjacent white substance, so as even to cause some secondary descending degeneration in the pyramidal fibres, transient and due to damage that passed away. The interest of the case, however, rested in the indications of neuritis. Even before the palsy was discovered the arms and legs became extremely tender, chiefly in the neighbourhood of the elbow-joints and knee-joints, and thought to be in these because every movement of them and manipulation of the joints caused great pain. Careful examination showed, however, that it was entirely in the nerves: in the sciatic and politeal nerves of the legs, and the ulnar and median especially in the arms. The tenderness lessened upwards and downwards, and was much slighter at the brachial plexus. The nerves of the left arm were more tender than those of the right. There was no anæsthesia or other evidence of damage to the conducting fibres of the nerves. These symptoms lessened in the course of a few weeks, and passed away entirely, although the atrophic palsy persisted in almost its initial degree. They were certainly due to a multiple perineuritis, affecting the nerves in the middle of their course, primary and developing simultaneously with the spinal lesion, and in consequence of the same cause. In commenting on the case, Dr. Gowers remarked on the probability that the pain and tenderness met with in other cases of poliomyelitis, and usually referred to the joints, was really seated in the nerves, which suffered mechanical disturbance at every movement of the joints. Although poliomyelitis was probably produced through the agency of a blood state, the latter was certainly often generated by exposure to cold, effective chiefly in the hot season of the year, which in some way predisposed either to the susceptibility of the individual or to the production of a toxic influence. Exposure to cold was capable also of causing the other and more common form of multiple neuritis, the parenchymatous variety, in which the nerve fibres suffered primarily, the sheaths scarcely or not at all, except in their nerves, and the incidence of the effect was peripheral and more perfectly symmetrical. A difference must exist in the blood state due to cold in the two classes of neuritis, and it was important to note the associations of the two forms thus produced. In this connection the author referred to the leading features of the two forms of neuritis, the parenchymatous and the adventitial, using the latter term as a designation for the variety in which the connective tissue elements were primarily affected. Recent researches were referred to which suggested that there were two varieties of poliomyelitis, the primary affection in one being of the nerve cells, in the other the basis substance of the grey matter, the former being analogous to the parenchymatous, the latter to the adventitial forms of neuritis, and reasons were given for regarding the poliomyelitis in the case described as of the second class. The paper concluded with an allusion to the probability that an actual organised virus sometimes produced the adventitial form of neuritis by the direct influence of the organisms on the connective tissue elements, and especially on the sheath, as was seen in leprosy and might be the case in syphilis, while, on the other hand, the parenchymatous form was certainly often due to a product which the organisms produced by their growth in the body, as one active agent, alcohol, was produced out of the body. The question was suggested as deserving study in this connection, whether the diphtheritic neuritis commencing during the primary disease was not chiefly adventitial, and that which began when the disease was over in greater degree parenchymatous, and the contrast was noted between the adventitial neuritis of the active stage of syphilis, and the parenchymatous later form which often constituted part of the lesion of tabes.—The PRESIDENT desired to know more about the treatment of the case.—Dr. BEEVOR had never seen a similar case. He inquired if there was any anæsthesia of the affected limbs, and whether Dr. Gowers regarded the neuritis as following inflammation of the anterior cornua, or as something quite distinct; also if the supinator longus muscle was affected. He remarked that, if the deltoid and biceps were paralysed, the supinator longus almost always followed suit in cases where the lesion was central, whereas the supinator usually escaped when the lesion was not central.—The PRESIDENT inquired of Dr. Gowers whether the pain associated with the early stage of atrophic spinal paralysis was due to neuritis.—In reply, Dr. GOWERS mentioned one point in treatment often neglected, the importance of not permitting the spinal cord, when the seat of acute inflammation, to be the lowest part of the body. The evidence was conclusive that the neuritis was primary and not secondary to the spinal lesion, and also that the conducting fibres of

the nerve were not involved. In regard to the grouping of the muscles affected as bearing on the central or peripheral nature of the lesion, he stated that the rule of association according to function in poliomyelitis was one to which exceptions were met with, in which the distribution of the palsy was more or less random, and indicated an irregular position of the lesion in the grey matter, by which groups of cells were partially and irregularly damaged.

Symmetrical Gangrene of the Feet from Obliterative Disease and Thrombosis of the Arteries and Veins: Amputation through Knee-joint: Recovery.—Mr. A. Pearce Gould described this case. The patient was a man, aged 43, who after an attack of influenza had developed melancholia and mania, and who on January 9th complained of severe pain in the right knee extending to the foot. Two days later the foot became cold and blue, and no pulsation could be felt in either posterior tibial artery. Then he complained of pain in the left foot, and in a short time both feet became gangrenous. Transferred to Mr. Gould on February 22nd. The mania had disappeared with the onset of the pain in the feet. The legs were amputated through the knee-joint at a week's interval, and the patient made a good recovery and was shown at the meeting.—Dr. Mickle, under whose care the patient had first been, said that in addition to brain lesion attributable to syphilis there was cardiac mischief due to the same cause. The patient had had a severe attack of influenza just before his admission to the infirmary, followed by great depression and much worry. This culminated in a severe attack of insanity. When admitted he had bruises on the limbs and trunk, but, though he was very restless, he incurred none afterwards, as he was placed in a padded room.—Dr. T. Churton (Leeds) said he had at the present moment in the Leeds Infirmary under his care a case which had given him a good deal of anxiety, and as to the treatment of which he had been in a good deal of doubt. The patient was a woman, aged 42, married, exceedingly stout, full blooded, and strong. She was admitted complaining of loss of power and sensation in the left knee, the skin only of which was discoloured. She had had one child twenty years ago, and none since, no miscarriage, and no signs of syphilis. The femorals could scarcely be felt on account of her obesity. The radials could be felt, and were not atheromatous. The heart was not enlarged, but there was a systolic *bruit* at the apex, and at the base there was a slight aortic clank. There was no œdema or disease of the veins, but a little albumen in the urine. The attack began on February 1st, and she was admitted on February 4th. A fortnight before admission she had an attack of bronchitis. On February 1st she had pain in the right foot, with numbness and tingling. The limb was rubbed, and the sensation disappeared. The same day similar sensations were felt in the left foot, and did not disappear on rubbing. There was distinct thickening in the line of the femoral artery, and the foot began to grow discoloured. He waited for eight days, supposing that there was endarteritis of the femoral artery above the profunda. But it was not until February 12th, when the skin was becoming mummified and the foot was shrinking, that the leg was amputated. A few days later the right foot again began to show symptoms of gangrene, but this gradually passed off. The patient had been ordered blue pill, and this seemed to have some effect in causing the symptoms to clear up.—Mr. Lunn mentioned a case which he had formerly exhibited to the Society for diagnostic purposes. The patient was a man with cold feet, of a dark colour, associated with agonising pain, requiring large doses of opium for its relief. The opinion was generally expressed that the symptoms were those of Raynaud's disease. One foot became black and swollen, so he amputated it, and the man improved much. Recently, however, pain had returned, and the stump was extremely cold, facts which had inspired him (Mr. Lunn) with some apprehension.—Mr. Longhurst thought the symptoms pointed to a complaint having a nervous origin.—Mr. Gould, in reply, thought the precise cause of the case must remain a matter of doubt. He inclined to the view that a blood dyscrasia first produced inflammation of the arteries in the lower limbs, and, subsequently, thrombosis. There was nothing to indicate a nervous origin. When the patient was admitted to the hospital his memory was so imperfect that he could give no details of his past history, so that he (the speaker) was unaware of his having suffered from influenza—a very important detail. As to the coldness of the stump, he was not inclined to lay stress on it, as it was of common occurrence.

Septicæmia due to Sewer Gas.—Mr. C. Mansell Moullin read notes of three cases. The first was associated with a compound comminuted fracture into the ankle-joint in a healthy boy, aged 12; the second, with a large, cold, subgluteal abscess (probably originating in the bursa) in a man, aged 52; the third, with a compound dislocation of the metacarpus in a boy, aged 17. The three cases were admitted: the first on October 9th, the second on November 6th, and the third on December 2nd, 1889. They occurred in the same bed in the same ward, and there was no other case in the ward either then or since, although at the same time and in beds immediately opposite (but on the windward side) with such injuries as compound fractures of both legs, and primary amputation of the leg, trephining for injury to the frontal bone, and fractured jaw. The first and the last case (those in which the injury was confined to the limbs) were treated by prolonged immersion in baths of perchloride of mercury (1 part in 10,000), the first for two hours twice a day, the last continuously. The abscess was drained thoroughly, and irrigated with carbolic lotion. In all three the symptoms presented a striking resemblance. In the first (treated by baths twice a day) the temperature rose at once, and rapidly assumed a severe remittent character. In the second it rose, not when the abscess was opened, but two days later when the wound was exposed and followed the same type. In the third it remained normal so long as the limb was immersed, but each time an attempt was made to leave the bath off it rose at once. The first recovered after amputation; tetanus set in on the twelfth day after the injury, and the symptoms rapidly increased in severity until the limb was removed; then they began to fall at once, although it was nearly a fortnight before they disappeared. The second and the third died, the latter of the two suffering for the last week before death from rigors, which recurred twice a day with the regularity of ague. The cause was found out by Dr. Parkes in the course of an independent investigation ordered by the hospital committee. Underneath the flooring close by the bed was a cistern with an overflow pipe running straight down, without trap or bend, into an old sewer. This had formed part of some long since forgotten system of drainage, and had many years before been (very inefficiently) adapted to the wants of the hospital. The pipe acted as the ventilating shaft, and under the flooring there was a strong current of air setting in the direction of the bed. The pipe was sealed and no case had occurred since. Mr. Mansell Moullin pointed out that the poison must have been absorbed through the wound without causing any local inflammation; there was no cellulitis, lymphangitis, or phlebitis; there was no sign of any secondary abscess or of any visceral inflammation (although one patient suffered from diarrhœa), and no gross lesions of any kind (other than slight granular disease of the kidneys) were found in the *post-mortem* examination of the second case. Unfortunately, permission could not be obtained for the third.—Mr. Bruce Clarke stated that some years ago several cases of tetanus had occurred at the West London Hospital in two or three beds at one corner of one of the wards; and when attention was directed to the sanitary conditions, a dustheap was found outside the window, upon which bones were flung and on to which a pipe from the *post-mortem* room drained, whilst the air from it passed into the window. When the condition of things was rectified no other case of the kind afterwards occurred.—Dr. D. Hood described a series of cases that showed the deleterious effects of sewer gas in producing inexplicably high temperatures. In another set of cases also sewer gas markedly prolonged and aggravated simple illnesses such as measles, though the patients all quickly recovered when removed to the country. He considered it very necessary to recognise the effect of sewer gas upon the natural courses of disease.—Mr. Mansell Moullin, in reply, remarked that he had seen many outbreaks of tetanus in which only one person was attacked in the same ward. There was no doubt that tetanus could be caused by external agents acting upon wounds.

Errata.—In the report of the proceedings of the Northumberland and Durham Medical Society published in the British Medical Journal of March 14th, page 587, line 38, for "lateral" read "latent;" line 39, for "associating" read "dissociating;" line 47, for "guiding" read "finding;" line 51, for "proved" read "provided."

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MARCH 17TH, 1891.

W. H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Malignant Disease of the Œsophagus.—Dr. LAURISTON SHAW showed two cases of malignant disease of the œsophagus. The first was a sarcoma, which appeared as an ulcer, with well-defined margin, destroying an extensive area of the mucous membrane of the gullet and perforating the posterior wall of the trachea, just above its bifurcation. There were secondary deposits in the neighbouring mediastinal lymphatic glands, and other deposits were found in the lungs and kidneys. The patient from whom the specimen was taken was a female, aged 38, who had suffered from dysphagia for six months, and died from exhaustion. The histological characters of the growth were those of a sarcoma with round and oval cells, and as such was a rare condition, only one other primary sarcoma of the œsophagus having been shown at the Pathological Society. The second specimen shown was an ordinary squamous-celled epithelioma, which was worthy of notice on account of the existence of a large mass of growth protruding into the lumen of the gullet, and thus producing œsophageal obstruction. The growth, which was cylindrical in shape, was 2½ inches long by 1½ inch broad, and completely filled the tube, so that a small probe could barely be passed by its side. The growth was attached to the posterior wall of the œsophagus by its lower and posterior surface, and for the rest was free and presented a sloughy appearance. There was a ring of ulceration around the œsophagus below the attachment of the tumour. The patient was a male, aged 55, who was admitted into Guy's Hospital under Mr. Charters Symonds, for dysphagia of five months' duration. When admitted he was quite unable to swallow, and no bougie could be passed into the stomach. He died 14 days after his admission, and at the necropsy the lungs were found partially consolidated by broncho-pneumonia. No secondary deposits were found. The specimen illustrated an unusual variety of obstruction of the œsophagus and one which would be peculiarly difficult to overcome by intubation.—Dr. GALLOWAY had recently seen a large number of malignant growths of the abdomen and many he had found to spread in two ways: 1, under the serous coat and along the lymphatics: 2, by involving the muscular structures. Both carcinomata and sarcomata spread in these ways. He mentioned a specimen of sarcoma of the stomach which had spread over the organ in the same way as Dr. Shaw's had over the trachea, and he also mentioned a somewhat similar condition in which the growth was a carcinoma. In sarcoma the muscular fibres of the organs were not destroyed to the same extent as in carcinoma. The specimen was then referred to the Morbid Growths Committee.—Mr. SHATTOCK stated that most sarcomas in connection with the stomach and intestines belonged to the small-celled classes.—Dr. SHAW said that his specimen was a small round and oval-celled growth.

Symmetrical Periostitis with Peculiar Formation of New Bone.—Mr. ANTHONY A. BOWLBY showed a specimen of this nature. The patient from whom it was taken was a male infant aged 1 year, and had been ill for about a week previous to admission into the Metropolitan Hospital. There was slight pyrexia; the legs were swollen from œdema; the lower part of each thigh was greatly swollen, the right being the larger. On this side there was fluctuation, on the other there was none, and an incision liberated pus from the former. The child suffered from bronchitis, and died eighteen days after admission. A *post-mortem* examination showed a complete ring of new bone on the right side, separated by a large interval from the shaft of the femur, to which, on transverse section, it bore the same relation that the tyre of a wheel does to the axle. On the left side there was a similar but smaller formation. The complete ring of bone was evidently due to a separation of the periosteum in an intact state from the shaft of the femur. The ring was of great thickness. It had apparently been formed with great rapidity, as the whole duration of the illness did not exceed four or five weeks. There was no evidence of any constitutional disorder.—Mr. JONATHAN HUTCHINSON asked if there had been a microscopical examination of the pus made for micro-organisms. He mentioned a case of pyæmia in an infant in which the joints at both ends of the clavicles were full of pus. Although the condition had only existed for three weeks, there was a considerable wall of bone around the ends of each clavicle where the abscesses had been, the wall of new bone being distant as much as half an inch.—Mr. SHATTOCK asked Mr. Bowlby if his case had been one of acute periostitis. He suggested that it might have been a case of scurvy rickets, as that would explain the wide separation of the periosteum by hæmorrhage and the fact that the shaft of the bone had not necrosed.—Mr. BOWLBY said that no examination of the pus for organisms had been made. The pus looked healthy to the naked eye. When he first saw the case he had immediately thought of scurvy rickets, but had been able entirely to exclude its possibility. The pus that came away was not blood-stained. Necrosis of bone in acute necrosis was not due to the periostitis, but to the osteitis. In his case the inflammation had not been very acute, and the periosteum had been lifted, he suspected, by a passive effusion.

Liver with Two Hydatids.—Dr. S. WEST showed a liver with two hydatids, in which the sacs communicated but not the cysts, taken from a girl, aged 16, who had been in good health until two years before she came under treatment. At her first admission to hospital she was tapped, and was much relieved, but she returned seven months later with an enormous abdominal swelling, there being a prominence in the epigastrium, which was soft, boggy, and fluctuating. The girl, who was much distressed, was tapped in one of the right intercostal spaces, and a large quantity of fluid was removed, which was clear, and of hydatid character; then something appeared to burst, and the fluid became bile stained. At three successive tappings large quantities of fluid were evacuated, but as it re-collected, an incision was made and a cyst connected with the liver emptied of decomposing membrane. There were found to be two cysts, one in the liver and one above it. Drainage was found to be very difficult, and a fortnight after the operation the patient sank and died. At the *post-mortem* examination there were found two sacs, one in the substance of the liver and one beneath its capsule below the diaphragm. There was a communication between the two large enough to admit a finger, but the cyst in the upper sac was quite separate. The pleura was not obliterated, and hence the upper cyst could not have been opened through the intercostal spaces.—Mr. ROGER WILLIAMS referred to a case of hydatid of the liver, so large that it had become firmly fixed in the pelvis, and its real nature was only discovered after it had been removed by an operation, which had been undertaken under the idea that it was a large ovarian cyst.—Dr. OPENSHAW remarked that it was very usual for large hydatids to be situated between the liver and the diaphragm. He suggested that it might be a good plan to cause local adhesions between the surfaces of the pleuræ at the base of the right lung, and then to attack the hydatid through the thoracic wall and diaphragm.—Dr. STEPHEN MACKENZIE stated that the removal of a small quantity of fluid from a hydatid cyst generally caused the death of the hydatid, and this treatment had been very successful before the introduction of aspiration. If, however, a large cyst in a non-collapsible organ like the liver had a considerable quantity of fluid removed from it by aspiration, the vacant space would be refilled by serum or by pus, but slow absorption, with cure, often followed. He asked Dr. West for the basis of his assumption that the cyst was still alive after aspiration. On the Continent multilocular hydatids were frequently described, but in this country they were very rare.—Dr. VOELCKER mentioned a case of hydatid of the liver in a child, in which Mr. B. Pitts had first stitched off the cavity of the pleura, and then opened the cyst through the diaphragm.—The PRESIDENT mentioned a case of a child in which a large hydatid cyst was aspirated. Suppuration in the cyst followed with all the symptoms of acute peritonitis, but at the *post-mortem* examination no peritonitis was found, but the cyst was full of sero-pus.—Dr. S. WEST, in reply to Dr. Stephen Mackenzie, said that at the first and second tappings the fluid was non-albuminous, but at the third tapping it contained albumen.

Malignant Polypus of Nose.—Mr. A. E. BARKER gave an account of a peculiar polypus of the nose which he had met with in a lady, aged 40, in the autumn of 1888. The polypus had been present for about a year, according to the history of the symptoms. The tumour, when seen *in situ*, appeared to be an ordinary polypus of the nose, except for some small

hæmorrhagic spots on the surface. At the operation for removal it was found to be friable and inelastic, and came away in little pieces; it could not be torn away *en masse*. There was very profuse hæmorrhage, 13 ounces of blood being lost altogether. After the operation the patient remained well for six or eight weeks. In November, 1888, the nose was again completely blocked, and death occurred in February, 1889, when there were secondary growths in the cheek and throat. The growth had not penetrated through the ethmoid bone. The tumour consisted of two kinds of cells—ciliated epithelium and stroma. There was epithelium both on the surface and in the interior. The whole was supported and mounted on a stroma. There was no limiting membrane. The epithelial elements were irregular but not columnar. In places the epithelial cells had undergone degeneration, especially where they were packed most closely together. The stroma was fibrous and myxomatous. The specimen was a very uncommon one, and he thought agreed most nearly with the class of carcinoma myxomatodes.—Mr. BOWLBY mentioned two cases in which the clinical history was somewhat similar. The first was in a lad of about 19 or 20, who had been admitted into St. Bartholomew's Hospital for nasal polypus. At the operation for its removal there was considerable hæmorrhage. Recurrence occurred in thirteen months, the nose being entirely blocked. Meningitis and death supervened. The growth, when examined microscopically, was found to be a sarcoma with a myxomatous basis. The second specimen occurred in a man in the Metropolitan Hospital who was admitted with high fever, swelling of the nose, and the bulging of the sinuses. The tumour was removed and there was profuse hæmorrhage. Meningitis by extension through the ethmoid shortly afterwards caused death. The tumour was a sarcoma. In a third case which had been in St. Bartholomew's Hospital there was a myxomatous polypus. This was removed, and at the time of the operation there was profuse hæmorrhage. The growth was a sarcoma. Recurrence followed, and this was again very completely removed, followed by recovery. There had not been any further recurrence so far as was known since the last operation. He also referred to an account of these tumours of the nose which had been published by Sir W. Savory. The specimen was then referred to the Morbid Growths Committee.—Mr. ROGER WILLIAMS would wish to call these tumours adeno-myxosarcoma.—Mr. BARKER believed the tumour was carcinomatous, but was not certain.

Syringomyelia.—Dr. J. GALLOWAY had brought his case forward partly on account of the rare condition of which it was an exceptionally good example, and partly on account of the increased interest which had been shown in the clinical aspects of syringomyelia. The patient, a man, aged 43, suffered during life from general paralysis of the insane, and died on account of exhaustion from acute mania complicating this condition. He suffered also from alterations of sensation, which, being probably exaggerated on account of his mental condition, caused him to tear his skin in various places, and to inflict severe injuries on himself, his complaint being that he had been placed in cayenne pepper baths, or that the devil was inside of him and wanted to get out. On *post-mortem* examination it was found that the brain showed the ordinary appearances associated with general paralysis of the insane, and in addition showed dilatation of the lateral ventricles. The spinal cord, to naked eye appearance, seemed normal, except in the dorsal region, where it appeared flattened antero-posteriorly. On making transverse section, however, it was found that a central cavity extended along the cord from the upper cervical to the upper lumbar region. In the dorsal region the cavity was most extensive, and on this account allowed of the flattening of the cord, like a collapsed tube. In the cervical, lower dorsal, and upper lumbar regions, the cavity was small, and did not materially affect the shape of the cord. This cavity was surrounded by a ring of tissue, firmer and whiter than the surrounding cord substance, and which, on being teased out and examined under the microscope, proved to be composed of characteristically branched neuroglia cells; the interlacing of the fibres radiating from these cells gave rise to the mass of dense tissue. This morbid ring of neuroglia varied in amount inversely with the size of the cavity, being almost inappreciable in the mid-dorsal region, where the cavity extended into and replaced most of the grey substance of the cornua. The rod of morbid neuroglia, with its cavity, was situated posterior to the cerebral canal of the cord, which was normal except in the dorsal region, where it was absorbed in the widely-extended cavity. The primary lesion seemed to have been the formation of the rod of neuroglia at the base of the posterior median fissure of the cord, below the central canal, probably as a relic of the embryonic filling up of the posterior extension of the original central canal. The usual explanation—that the cavity was formed by the subsequent liquefaction and absorption of the central parts of the column of neuroglia—was difficult to accept in this case, as the cells of the neuroglia showed no sign of degeneration at any point, and the growth was well supplied with blood vessels. The spreading of the cavity into the grey matter of the cornua to such an extent in the dorsal region was probably due to a secondary myelitis followed by absorption of the inflamed grey matter. A characteristic feature of the neuroglia tissue surrounding the abnormal cavity was that its inner layers seemed to be condensed, and formed a sort of lining membrane, which showed a very contorted outline, resembling somewhat the elastic coat of an artery.—The PRESIDENT had seen dilatation of the central canal of the spinal cord in two or three nervous conditions, and instanced chorea.

Syphilitic Disease of Occipital Lobe with Perforation of Cranium.—Mr. J. HUTCHINSON, jun., showed the calvaria and brain from a case of inherited syphilis, the right occipital lobe being almost entirely replaced by a gummatous mass, which was adherent to the dura mater. The parietal bone had thinned over this, and an oval aperture at its posterior part, one inch and a half in long diameter, had been formed, through which the membrane and subarachnoid fluid had protruded. There had never been ulceration over this, though the scalp was extremely thin. During life the swelling had pulsated. The ventricles were much dilated, and the left lateral one was continued back into the perforation of the skull. The left lobe of the cerebellum was implicated by extension of the gummatous process through the tentorium. There was no general meningitis, and the progress of the disease had been very slow, the cranial aperture having formed five years before the patient's death, when she was 16 years old. The symptoms during life were, in addition to the peculiar form of meningocele, (1) paraplegia, incomplete, and varying from time to time, no doubt due to intra-ventricular pressure of fluid; (2) double optic neuritis, leading to atrophy and blindness; (3) albuminuria and anæmia. Sections showed that the left occipital cortex was replaced by fibrous and characteristic gummatous material with considerable calcareous degeneration. The patient was under the care of Dr. Buncombe in the City of London Infirmary, and the case had been diagnosed as syphilitic, although her teeth and eyes presented no characteristic features of inherited syphilis. She had some years before suffered from gummatous ulcers on the back and neck, which had healed with extensive scarring. Allusion was made to the rarity of extensive perforation of the skull apart from necrosis, and from cranio-tabes occurring in infantile periods, and a similar case was referred to, under the care of Dr. Hughlings Jackson, in which an aperture formed in the frontal region of a man over the site of a gumma in the cortex. During life a similar pulsating swelling had been observed, owing to protrusion of the dura mater, etc. Both specimens were in the London Hospital Museum. The diagnosis of such cases from sarcoma was necessarily attended with some difficulty, although the long duration (over five years) left no doubt in the case now reported.

Supernumerary Median Nipple and Areola.—Mr. ROGER WILLIAMS read a paper on a living specimen that he had shown at the preceding meeting of the Society. The patient was a tall man who presented the following pathological conditions: (1) A median supernumerary nipple and areola, the size of a shilling, over the lower part of the sternum, two inches below the level of the normal nipples. (2) At a point four inches below the left nipple, and rather internal to it, there was a small rudimentary nipple, devoid of areola. (3) A normal pectoral pair of nipples, and breasts of great size. (4) Recurrent epithelioma of lower lip and glands of neck. He said that median mammæ were of very rare occurrence in human beings, only three other cases having been recorded.

In each of these the supernumerary structure was rudimentary, and occupied the same position as in the present case. Amongst mammals median mammæ were almost unknown except amongst marsupials. The occasional appearance of supernumerary median mammæ in human beings was regarded as due to reversion to an ancient ancestral arrangement. There was no evidence that redundant mammary structures could arise anywhere, as mere sports, from ordinary sebaceous follicles. They were only met with in certain definite situations, which corresponded with those normally occupied by the glands of polymastic animals.—Mr. JONATHAN HUTCHINSON, jun., considered the object referred to as situated over the sternum to be a simple pigmented mole. He said that Mr. Williams had brought forward no evidence that it was a supernumerary mamma, such as expression of milk from it.—Mr. ROGER WILLIAMS emphatically asserted his own opinion, and the PRESIDENT suggested that the specimen should, if possible, at a future date be again brought to the notice of the Society.

Card Specimens.—Dr. SAMUEL WEST: Plastic Bronchitis.—Mr. EDGAR WILLETT: Secondary Scirrhus of Bone.—Dr. A. F. Voelcker: (1) Rickets, with Acute Tuberculosis; (2) General Peritonitis after Perforation of the Vermiform Appendix.—Dr. NEWTON PITT: (1) Anthrax Œdema of Stomach; (2) Gangrene of Lung Secondary to Bronchiectasis.

MEDICAL SOCIETY OF LONDON.

MONDAY, MARCH 15TH, 1891.

R. DOUGLAS POWELL, M.D., President, in the Chair.

Fatal Case of Rupture of Boy's Bladder during Lithotrity.—Mr. EDMUND OWEN reported the case of a pale and cachectic boy, just under 5 years of age, who had had symptoms of stone in the bladder for about two months, the urine being thick and offensive. On sounding him a small stone was discovered, and slight bleeding took place. He was kept at rest in bed for twelve days, with the view of improving his general health, after which chloroform was administered, a No. 6 lithotrite was introduced, and the stone was easily crushed. The bladder was washed and the fragments removed by a No. 9 evacuating tube. The operation was practically at an end, and a final washing was being performed, when an ominous gurgling was heard. All resistance to the flow from the evacuator ceased, and an unmistakable wave ascended behind the anterior abdominal wall. On detaching the wash-bottle only a trifling amount of water escaped by the tube. There could be no doubt that the bladder had given way, and that the only chance for the boy's recovery lay in sewing up the rent. Without a moment's delay, therefore, the abdomen was opened by a 3-inch incision in the linea alba above the pubes. There was some difficulty in finding the rent in the collapsed bladder; it was, however, eventually detected at the root of the urachus, but in front of the peritoneum. It was then clearly made out that the hot boracic lotion which had escaped from the bladder had diffused itself along the subperitoneal connective tissue, none of the fluid being found in the peritoneal cavity. The rent in the bladder which was about one-eighth of an inch long—was closed with sutures; the abdominal wound was also sutured and dressed. It was deemed expedient to open the bladder and drain it through the perineum. That incision being made, the finger was introduced, and a few insignificant fragments of stone, which were about to be removed by the evacuator, were recognised. The boy did not rally from the severe operation, and, though everything was done to diminish collapse, he sank in about eight hours. The calamity was attributed to the fact that the operator, in the absence of a wash-bottle of a size appropriate to childhood, was using one designed for the adult. He had no extenuating circumstances to urge in his own behalf. The case had been a great grief to him; and he thought that the only way in which he could, in however slight degree, atone for the misadventure was by duly reporting it. Thus, being placed on record, it might perchance be the means of averting a similar catastrophe at the hands of others.

Litholapaxy in Children.—Surgeon-Major KEEGAN showed his large collection of calculi removed from the bladders of male infants and boys by litholapaxy, comprising 117 calculi, all removed at one operation. The total number that he had performed was 125, in boys below 15 years of age. Their ages varied from 1 year and 9 months to 14 years, the average being 6.38 years. Average weight of calculi removed, 89.15 grains. Average number of days spent in hospital after operation, 4.6; the percentage of mortality, 3.2 per cent. The four deaths were all due to organic disease of the kidneys. There was only one case of recurrence out of the 125 cases. He observed that recurrence did not follow litholapaxy in male children any oftener than lithotomy, that is, when properly performed. By this he meant when no *débris* was left behind in the bladder. Two reasons led him to prefer this operation to any form of lithotomy, namely, rapidity of cure and its freedom from the dangers incidental to all operations in which the knife was used. The more he practised it the more convinced he was of its value. Nevertheless, he thought that surgeons unprovided with special experience in this department would perhaps do well to keep to lithotomy, though he himself would no more dream of cutting a boy aged 8 for a stone weighing a drachm than he would think of cutting a man aged 70 under similar circumstances. He described in detail the different steps of the operation, and the special points to be attended to in selecting instruments, explaining their use by giving notes of a number of typical cases in which he had operated. In conclusion, he recommended the following rules to be observed in carrying out this operation in male infants and boys: (1) to use fully fenestrated lithotrites suited to the calibre of the urethra; (2) all cannulæ to be fitted with serviceable stylets; (3) no cannula to be withdrawn from or introduced into the bladder unless fitted with the stylet; (5) four or five ounces of water to be the maximum quantity in the bladder at any given time; (6) the aspirators to be used gently and methodically, and water never to be injected into the bladder while the patient was straining. He insisted particularly upon the necessity for gentleness and carefulness in manipulations of the bladder and urethra, the avoidance of hurry, but thorough washing out of the bladder. If these conditions were fulfilled, he said, a large measure of success would be obtained.—The PRESIDENT asked whether the cases comprised in the second paper were from a limited area or from a large district, whether the author could account for the prevalence of stone in certain parts, and whether he enjoined any dietetic precautions after operations.—Dr. LEWIS W. MARSHALL (Nottingham) said that in spite of a very favourable experience with lateral lithotomy he had been converted to litholapaxy by the cases that had been published, which proved the case with which the operation might be carried out in suitable cases and the shortness of the period of convalescence. He was convinced that it was the operation of the future. The convalescence was three days with litholapaxy as compared with three weeks after lateral lithotomy. He declared himself utterly unable to appreciate the advantages which had been claimed for suprapubic lithotomy, which, he thought, could only be justifiable in a very restricted class of cases. He discussed the objections that had been urged against lateral lithotomy, and said he had been unable to find upon what data the allegation of danger of emasculation had been based. The statistics of the suprapubic operation only comprised about a dozen cases, a number which, he maintained, was utterly inadequate to enable one to form an opinion as to its risks. He had only had one case of recurrence after litholapaxy, and that was his second operation of the kind, and was possibly due to imperfect removal of the fragments.—Mr. JOHN MORGAN urged that there were undeniable disadvantages and dangers associated with and inseparable from lateral lithotomy, and emasculation was one of them. He admitted that the suprapubic operation should be restricted to cases in which the stone was either too large or too hard to be removed by the other operations. He spoke highly of the operation of litholapaxy, and regretted that the paucity of cases rendered it impossible for home surgeons to attain the dexterity of their Indian *confrères*. He did not admit that leaving a few fragments of the crushed calculus in the bladder was likely to give rise to recurrence, seeing that they would probably be expelled in the course of a day or two. He thought Mr. Keegan's cases proved this. Mr. G. BUCKSTON BROWNE commended Mr. Owen for his surgical frankness in bringing his case before the Society, and confessed that he would not have expected to find the rent extra-peritoneal.

He asked, however, whether Mr. Owen had not noticed any water in the cellular planes on making his incision through the parietes, because if so he might have spared the patient the peritoneal incision and by converting the rent into a suprapubic operation he might have avoided the perineal operation. He insisted upon the importance of deep anæsthesia in the operation of washing out the bladder, a point which was borne out by Mr. Keegan's injunction never to inject water while the patient was straining. He thought the tubes employed by Mr. Keegan were unnecessarily long for infants.—Mr. Reginald Harrison said that although when litholapaxy was introduced he had behind him a record of 35 lateral lithotomies, with only one death, he had been gradually brought to see the advantages attending the new operation in certain cases. He had performed litholapaxy in some 13 or 14 cases, with results which compared very favourably with those of lateral lithotomy. He would not, however, attempt it as yet in cases of large stone in infants.—Mr. Owen, in reply, thanked the Fellows for their sympathetic remarks. He admitted that on looking back he thought that water was present in the cellular tissue, and that had he known as much before as he did after the operation he would not have felt obliged to cut into the peritoneum or resort to the subsequent perineal operation. He mentioned a case recently under his care of a child, aged 4, in which he had experienced the greatest difficulty in introducing a No. 6 lithotrite. Even then he was unable to break up the stone, which had to be removed by lateral lithotomy. He urged that there were really no statistics of the suprapubic operation, for the simple reason that men were afraid to publish them.—Surgeon-Major Keegan, in reply, said there were probably many factors in the production of the prevalence of vesical calculi in certain districts in India, such as diet, geological conditions, clothing, etc. It had happened to him to be unable to crush the stone in some cases, and then he resorted to lateral lithotomy.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, March 4th, 1891.

J. Watt Black, M.D., President, in the Chair.

Specimens.—Mr. Bland Sutton: A Case of Tubal Pregnancy. —Dr. Hayes: (1) An Intrauterine Sessile Polypus; (2) Subperitoneal Pediculated Fibroid Tumour of the Uterus.—Dr. Crawford: Ovarian Tumour, with a Polypus in the Uterus and a Small Tumour and a Fibroid Tumour.—Dr. Grigg: (1) Cyst (Tubo-ovarian ?); (2) Pyosalpinx complicating Pregnancy; (3) Double Pyosalpinx, with Tubo-ovarian Cysts; (4) Matted Appendages.

President's Address.—The President thanked the Society for the honour conferred upon him, and congratulated them upon the prosperous condition of the Society. He then dealt with the subject of puerperal fever and septic poisoning. In ancient times puerperal fever had been described as suppression or retention of lochia. It had been referred to in the seventeenth century. According to Copland, the first satisfactory account of it was contained in Halle's *Dissertatio de Febre Puerperum*, published at Leyden in 1689. The first writer who had given an adjective name to puerperal fever was Richard Morton. Edward Strother was the first writer who used the name "Puerperal Fever." The numerous outbreaks of puerperal fever which had occurred in the second half of last century had led to the production of a considerable number of monographs on the subject, especially in this country. The chief of the writers were John Hall, 1755; Thomas Denman, 1768; Nathaniel Hulme, 1772; Charles White, 1773; John Leake, 1773; Thomas Kirkland, 1774; William Butler, 1775; Philip Pitt Walsh, 1787; John Clarke, 1793; and Alexander Gordon, 1795. In these writings puerperal fever was referred to as erysipelas, putrid fever, putrefactive fever, pituitous fever, bilious fever, gastro-bilious fever, typhus fever, typhoid fever, nervous fever, inflammatory fever, peritoneal fever, hysteritis, uterine phlebitis, lymphangitis, and many different diseases such as existed under other circumstances but modified by the puerperal state. References were then made to the writings of Dr. Nathaniel Hulme and Dr. William Butler. Puerperal fever had been attributed to many causes. Amongst them might be mentioned suppression, retention, and putrefaction of the lochia, retention of secundines, retention or metastasis of milk, severe labour, tight binder, rising too soon after delivery, mental emotions, errors of diet, use of stimulants, exposure to cold, epidemic influences, miasms, and hospital air. Veson attributed the mortality at the Hotel Dieu to the fact that the lying-in ward was over the ward for the wounded. Also that the number attacked with puerperal fever was greater when the air was moist. Dr. Kirkland had recommended that the patient should sit up two or three times a day in order to facilitate discharge of the lochia clots, etc. Charles White, F.R.S., Surgeon to the Manchester Infirmary, was the first to assert the infectiousness of puerperal fever (1773). Other writers had previously discovered it but only to discard it. Some supported the view, but it was Dr. Alexander Gordon, of Aberdeen, who brought facts to prove its infectiousness. He also had given an admirable account of the relation of erysipelas to puerperal fever. In 1831, when 45 cases of puerperal fever occurred in the practice of one man, while none of the patients of the other practitioners in the same place had been attacked, no other explanation had been required than that it was a dispensation of God's providence. A belief in its infectiousness had led to precautions being taken, and thus outbreaks had been frequently arrested or checked. The next most important advance was the tracing, by Semmelweis, of the infection to the introduction of decomposing animal matter into the genital passages by the attendant. The revelations of bacteriology and the proved prophylactic efficacy of antiseptics had set the question at rest. Many interesting facts in bacteriology were then given. The experiments of Ahlfeld were related, in which he showed that the inner surface of the uterus possesses its greatest absorbent power on the third, fourth, fifth, and sixth days after labour. Edmund Falk had also shown that the endometrium possessed remarkable absorbent powers, while the vagina had very little, and the mucous membrane of the cervix scarcely any. It had not yet been ascertained to what cause was due the great diversity in the anatomical changes produced by puerperal fever in different cases. In all cases of puerperal fever microbes of the coccus order were to be found, and, most frequently of all, the streptococcus pyogenes. As the microbes came from outside, the autogenetic origin had been virtually abandoned. Of late, however, it had been revived in a modified form. Czerniewski had examined the uterine lochia of eighty-seven perfectly healthy women, and had found no microbes of any sort except in one case in which there were streptococci, and in two cases in which there were the bacillus subtilis and sarcinæ. He had examined the uterine lochia of seventy-seven women suffering from slight illness, and had found streptococci in forty-nine, staphylococci in two, and non-pathogenic forms in a few others. He had examined the uterine lochia in ten women who were suffering from severe illness, and had found streptococci in all. Thomen found the number of bacteria much greater in the first day of menstruation than before menstruation had begun. Dr. William Taylor, of Edinburgh, believed that he could trace certain cases of puerperal fever to the want of proper cleanliness on the part of nurses who happened to be menstruating at the time. The results of experiments by several observers were then given. Hausmann had found that serum from the body of a person who had not died of septicæmia did not produce fatal results when introduced into the vagina of gravid rabbits; while pus from the abdomen of a woman who had died of puerperal fever had proved rapidly fatal when similarly injected in the second half of pregnancy. It had no effect when injected into the vagina of rabbits only two weeks pregnant. The conversion of non-pathogenic into pathogenic microbes under altered conditions was then referred to; also the relative resistances of healthy and diseased or injured tissues to the influence of microbes. The influence of microbes on the production of mastitis and of various infantile diseases was fully described. Natural immunity was next discussed, as well as acquired immunity, on the exhaustion theory.—A vote of thanks was given to Dr. Watt Black, on the motion of Dr. Playfair, seconded by Dr. Champneys.

A few rooms in the Western North Carolina Hospital have been set apart by the North Carolina Legislature for the treatment of inebriates.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, MARCH 12TH, 1891.

HENRY POWER, F.R.C.S., President, in the Chair.

The Glands of the Ciliary Body in the Human Eye.—Mr. E. TREACHER COLLINS read this paper. He first briefly referred to the experiments of Deutschmann, Schoeler, Uhthoff, Leplat, and Nicati, as proving that the aqueous humour and the nutrient fluid of the vitreous were secreted in the ciliary region. He then described a method of bleaching sections of the eye with chlorine. From the examination of sections thus treated, he found that the uveal pigment layer from the root of the iris to the ora serrata was composed of a single row of somewhat flattened cells, projecting from the outer surface of which were numerous processes each composed of a group of cells. These were largest and most numerous at the junction of the plicated and non-plicated parts of the ciliary body, where they were pear-shaped. Examination of sections of them cut transversely showed them to be tubular, with a small central lumen. These tubular processes, he thought, could be nothing else than secreting glands concerned in the elaboration of the aqueous humour and nutrient fluids of the vitreous. So-called serous iritis he regarded as primarily a catarrhal inflammation of these glands. The whole course of the disease, he thought, pointed in this direction, and the histological appearances of eyes lost from it were quite in keeping with this view—there being some increase in the size of the glands, some irregularity and proliferation of their epithelium, enlargement of the blood vessels in their vicinity, and a variable amount of round-celled infiltration about them. When inflammation of the ciliary body had been of a more plastic character, there was considerable overgrowth of its uveal pigment layer, in which overgrowth the cells were arranged in the form of cylindrical tubes just like tubular glands. He mentioned a case of tumour of the ciliary body described by Alt, which he regarded as an adenoma, and another growing in the same region which he considered to be a glandular carcinoma. The histological points referred to in his paper were afterwards illustrated by lantern slides made from photographs of microscopical sections.—The PRESIDENT thought Mr. Collins's paper was one of very great interest, and showed that there were parts of the eye which would still repay careful investigation; he thought such an investigation as that reported might lead to an increase in our knowledge of glaucoma.—Mr. PRIESTLEY SMITH referred to the early descriptions of the ciliary body, and stated that Mackenzie, as long ago as 1835, gave an account of its functions which had since been confirmed by experiment. He suggested the advisability of using the term serous cyclitis instead of serous iritis.—Mr. JESSOP drew attention to the difference in the character of the fluid obtained from the anterior chamber by a first and subsequent tapping, that obtained by the second tapping containing more proteid material.—Mr. COLLINS, in reply, said that he had examined a large number of glaucomatous eyes in reference to ciliary body changes, and had found no obvious alteration in the glands described, except in cases of long standing, in which they shared in the atrophy of the ciliary body.

Hydrophthalmos.—Mr. F. R. CROSS (Bristol) read a paper on this subject, in which he first made reference to recorded cases and descriptions by writers of fifty years ago, and commented upon the gradual development of knowledge of the subject. In recent textbooks but little space is given to any variety of hydrophthalmos. Some authors deal with the condition as only congenital, others as though its consideration could be adequately completed by treating it under the head of secondary glaucoma. Excess of intraocular pressure produces some expansion in any healthy sclerotic coat, but the maximum of expansion is soon reached. During the growth of the eyeball, and to some extent up to early adult life, continuous high intraocular pressure is accompanied by distension and thinning of the fibrous coats, with stretching and modification of the uveal tract and retina, while in later years, after senile and retrogressive changes have occurred, the sclera resists a high degree of intraocular pressure for months without progressive distension (P. Smith). Glaucoma before the age of 30 is rare, and before the age of 20 extremely so. A few cases have been published, several in eyes distinctly microphthalmic, and in others the corneal measurement has been found below the normal standard (11 to 12 millimetres. P. Smith). On the other hand hydrophthalmos almost always commences, whatever be its cause, in childhood. It may begin in early adult life, while the tissues of the eye are still extensile. It never commences in middle life, but when it is protracted to this period the symptoms tend towards the glaucomatous type. Anything which causes excess of blood in the eye, venous or arterial, or imperfect lymphatic outflow, tends to raise the intraocular pressure, and such conditions produce in the adult eye glaucoma, in the youthful eye hydrophthalmos. Dufour regards the condition as one of primary glaucoma, and he accounts for the open filtration angle and deep anterior chamber by weakening of the zonule of Zinn, and yielding of the corneo-scleral ring, thus allowing of easy passage of the intraocular fluids, and an equal pressure in both aqueous and vitreous chambers. The author considers that the cases apparently congenital in origin may depend upon error in development, or upon intrauterine inflammation, but thinks that in some the morbid condition really commences after birth, or may be a true primary glaucoma during childhood, and that undoubtedly many which can only be classed as hydrophthalmos are true cases of secondary glaucoma, traumatic or otherwise. Several observers have described the microscopical characters found in buphthalmos, but the pathological changes are probably as much the result of intraocular pressure as its cause. The primary seat of inflammation seems to be in the ciliary body, at the base of the iris, with implication of the limbus corneæ and the filtration channels. Weakness of the zonule, distension of the lens capsule and lenticular trouble might also easily arise, with modification of the intraocular fluids and interference with their proper transudation. Dürer and Schlegtendal, in a recent account of the microscopical examination of five eyes affected with congenital (so-called) hydrophthalmos, draw special attention to the condition of the uveal tract. In all these cases both choroid and ciliary bodies were found markedly atrophied; the venæ verticosæ were extremely narrowed in their passage through the sclerotic, while their tributaries in the suprachoroidea were dilated and varicose. In some of the cases dilatation of the large veins and atrophy of the tissues alone existed, whilst in the others there was distinct evidence of inflammation, especially in the region of the posterior aqueous chamber. Increased vascularity and round-celled infiltration were found in the corneo-scleral margin. Schlemm's canal, Fontana's spaces, and the anterior ciliary veins were usually narrowed or obliterated. The term "buphthalmos" should only be applied to cases in which the prominent cornea is surrounded by a thinned blue-tinged sclera, while the term "megalophthalmos" might be retained for cases in which the hypertrophied staring eye is otherwise normal. The history of the case will determine when it should properly be called congenital. Mr. Cross read histories of two cases of hydrophthalmos, one associated with a high degree of myopia, the other dependent on blockage of the filtration angle by a dislocated lens; and of five cases of buphthalmos (the exaggerated form of hydrophthalmos), one probably congenital, one commencing in early life, and three secondary to *iris bombé*, or perforating wounds of the cornea.—Dr. ARGYLL ROBERTSON said that under the heading of Mr. Cross's paper were included cases which differed in some particulars, although they had in common the distension of the anterior parts of the eyeball. He mentioned a family under his care in whom the mother and three children were affected by hydrophthalmos; in one child the disease was unilateral.

Card Specimens.—Mr. LANG: Hunterian Chancre on Ocular Conjunctiva. Mr. TWEEDY: Result of Operation for Ectropion of Lower Lid following Burn.

HUNTERIAN SOCIETY.

WEDNESDAY, MARCH 11TH, 1891.

STEPHEN MACKENZIE, M.D., President, in the Chair.

Phonographic Illustration of Disease. Dr. HUGHLINGS JACKSON and Dr. RIVERS showed a phonogram recording the abnormal speech of a man, aged 26, the subject of disseminated sclerosis. In the course of about five months the patient had

become affected in an extreme degree with oscillation of the head, nystagmus, coarse jerking of the arms and legs on voluntary movement, increased knee jerks, and ankle clonus, as well as a typical high-strained jerking and syllabic utterance, which was very well reproduced by the phonograph.

Specimens.—The PRESIDENT brought forward a microscopical specimen of Tumour of the Brain from a man, aged 48, who died with grave cerebral disease, surmised to be syphilitic. There was a tumour of sarcomatous structure, the size of a nut, situated between the medulla and the cerebellum, apparently arising from the floor of the fourth ventricle.—Dr. J. LANGTON HEWER showed a specimen of Chronic Osteomyelitis of the Tibia in a young man, aged 20. Two operations had been performed at seven years' interval. At both times the diseased bone was thoroughly removed, and the medullary canal fairly cleared out and flushed. The first operation was done under strict antiseptic precautions, and the large aperture left in the bone was allowed to fill with blood clot, which in due time organised. The second operation was done entirely without antiseptics, and the wound filled with granulations. Recovery on both occasions was equally speedy and good, but in the first case a tender scar was left, which gradually became again painful and broke down; the cicatrix left after the second operation remained firm and sound. Dr. Hewer's suggested inference was that sounder tissue was obtained by the method which involved some inflammation and granulation, than by the aseptic method which excludes inflammation. Remarks were made by Mr. J. POLAND and Dr. F. J. SMITH.—Dr. TURNER showed two specimens of Ulcerative Aortitis from surgical cases in elderly women; one of injury (run over), one of gangrene of the toes. It was common to find slight ulceration of the aorta in cases of injury, but not, as in these cases, extensive lesions. Sections were made of the aorta in one case, but no micrococci were discovered, contrary to expectation. Drawings were shown by Dr. Turner of other specimens, in one of which there were masses of micrococci in the inner coat of the vessel, and in another fibrinous coagula attached to the wall. The PRESIDENT, Mr. G. J. B. STEVENS, Dr. GALLOWAY, and Dr. PITT took part in the discussion.—Dr. G. NEWTON PITT showed two specimens of Hydronephrotic Kidneys, one of them illustrating how aberrant renal vessels might, when the pelvis was slightly distended, cause a kink or bending in the ureter, and obstruct the passage of urine. Massage might be useful in such a case. The second specimen was from an infant which died from some other disorder; one ureter was found to open into the pelvis by a mere pin-point orifice, and the pelvis was somewhat dilated; the condition was apparently congenital. In stricture of the urethra, attended with backward pressure, it was not uncommon to find the pressure exerted unequally upon the two kidneys, one pelvis being distended.—Mr. F. R. HUMPHREYS referred to a case of congenital stricture in a boy, where one kidney was hydronephrotic, the other granular.—Mr. J. HUTCHINSON, jun., showed a small Pedunculated Fibrolipoma from the inside of the cheek of an infant. He suggested that it was really a protrusion of a portion of the pad of fat (Cloquet's pad, or the sucking pad) which lay behind the buccinator. (2) A Soft Periosteal Sarcoma, removed from a man aged 35. The disease had recurred. (3) A Microscopical Section showing the structure of a Polypus of the Rectum.

The Phonograph.—At the close of the meeting, Mr. COLE, of the Edison United Phonograph Company, kindly gave some interesting illustrations of the phonograph, and explained its mechanism.

MANCHESTER PATHOLOGICAL SOCIETY.

WEDNESDAY, MARCH 11TH, 1891.

G. A. WRIGHT, M.B., F.R.C.S., President, in the Chair.

"*Spontaneous Combustion.*"—Dr. E. S. REYNOLDS read a paper on "so-called spontaneous combustion," with details of a recent case. All the reported cases of so-called spontaneous combustion might be divided into five classes—(*a*) hysterical, (*b*) spurious, (*c*) true spontaneous combustion, (*d*) increased combustibility, (*e*) homicidal. Probably no such thing as true spontaneous combustion had ever occurred, and almost every case was merely one of increased combustibility, the body being first set on fire, and then going on burning independently like a candle. The presence of fat in the body was a great aid, although some patients had been thin; alcohol seemed to play a more important part, but how it acted was unknown. In a recent case a thin woman, aged 40, had, while drunk, fallen near a hearth, where she was found next morning with the flesh still burning. The femora were carbonised, the knee-joints open, but the stockings entire. The abdominal wall was burnt away, and the intestines and stomach protruding, the latter being burnt through: the hands, head, and hair had escaped. The surrounding furniture was merely scorched.

Papilloma of Kidney.—Mr. T. JONES showed sections of a papilloma removed from the pelvis of the kidney. The patient, aged 55, had suffered for eighteen months from almost constant hæmaturia without pain. He, however, complained of a throbbing sensation confined to the region of the right kidney. This led to exploration of this organ and the removal of the growth. Three days later the hæmaturia completely ceased, and the man made a good recovery.

Cerebral Hæmorrhage and Arterial Degeneration in Early Life.—Dr. T. HARRIS showed preparations from a case of cerebral hæmorrhage which had occurred in a lady aged 20. The hæmorrhage was a profuse meningeal one, which had arisen from the rupture of an aneurysm, the size of a small pea, of the left middle cerebral artery. At exactly the corresponding position of the right middle cerebral artery was another aneurysm, somewhat larger than the first, which had not ruptured. There was no sign of degeneration in the vessels at the base of the brain evident to the naked eye, but microscopically they were found to present the changes of endarteritis. The kidneys presented very few changes to the naked eye, the most notable one being that on separating the capsules small portions of kidney substance were torn away at various parts, but between these torn-out portions the kidney surface was quite smooth, and different to an ordinary granular kidney. Microscopically there was found to be no general interstitial nephritis, but marked changes in connection with the arterioles. The arteries presented marked perivascular fibrosis, and decided hyaline changes in the intima. Some of the glomerular capsules were slightly thickened. The aorta presented small patches of atheroma, and the small vessels in the loose tissue round it showed both periarterial and endarterial changes. The endarteritis in some of these vessels had led to nearly complete obliteration of the lumen. The left ventricle of the heart was much hypertrophied. There was no valvular disease. Other organs healthy. There was no trace of a syphilitic history in the family, and the girl had no idea that there was anything seriously the matter with her before the fatal attack came on. For the last few years she had complained of headaches, which would last only a few hours, but during the last four months she had not complained at all. During the recent frost she had been taking a great deal of violent exercise, walking and skating. The evening of the fatal termination she was at a dance, but the attack commenced before any dancing had been indulged in. Dr. Harris regarded the case as probably one which, if life had been prolonged, would have gone on to the development of a cirrhotic kidney, and which probably corresponded clinically to the prealbuminuric stage of Bright's disease.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, MARCH 4TH, 1891.

THOMAS JONES, M.B., B.S., F.R.C.S., President, in the Chair.

Excision of Head of Humerus.—Mr. WILLIAM THORBURN exhibited a case in which he had excised the head of the humerus for the results of an injury thirteen weeks previously. There was a subclavicular dislocation with comminuted fracture of the head of the humerus, the arm being absolutely fixed and almost useless. After excision of the upper end of the bone the shaft was reduced into the glenoid cavity. The operation was performed a year ago and had left a useful limb, in which the only deficiency was that the arm could not be raised quite to the horizontal.

Postero-lateral Sclerosis (Ataxic Paraplegia).—Dr. T. HARRIS exhibited a patient, aged 58, suffering from postero-lateral sclerosis. The affection had commenced eighteen months before with incontinence of urine and occasional incontinence of fæces. About sixteen months ago he first noticed dif-

ficulty in using the legs, and since about twelve months he had had very great difficulty in walking. Some ten months ago he first noticed that he could not balance himself when closing his eyes whilst washing his face. The patient at the present time exhibited well-marked ataxia. He could not stand with his eyes closed, and only after several attempts was he able to touch the tip of his nose when the eyes were closed. He had an ataxic walk, but associated with it was a certain amount of spasm of the muscles of the legs, so that he scraped the ground to a slight extent with his toes as he walked. The patellar tendon reflex was markedly increased, and on the left side a slight ankle clonus could be developed. The triceps and supinator longus tendon reflexes on the left side were not excessive, but on the right they were. The muscles were well nourished. There was no atrophy, but the muscles of the calf on both sides were rigid and in a condition of spasm. There was no loss of sensation nor any hyperæsthesia. There was incontinence of urine and occasionally of fæces. No tremors were present, and the pupils, which were equal, responded to both light and accommodation. No nystagmus. Optic discs normal. The man was very intelligent and presented no morbid mental symptoms. Articulation natural. Cremasteric and epigastric reflexes absent, sole reflex being slightly marked. There was no pain except a slight aching one in the sacral region. He had had no lightning pains, and there was no history of syphilis. The only serious illness which the patient ever had was nephritis accompanied by anasarca nine years ago, which necessitated a stay in the infirmary for five months, and his attendance at the out-patient department for two years subsequently, during which time the albuminuria persisted. At the present time his urine was free from albumen. Dr. Harris regarded these cases of postero-lateral sclerosis as forming a connecting link between the systemic diseases of the spinal cord on the one hand and the focal diseases on the other. Whilst they formed a distinct clinical group, presenting symptoms closely resembling the systemic diseases, the microscopical examination of the cord in the recorded cases showed that the lesions were commonly not limited to the postero-median column and the pyramidal tracts, but were more diffuse, extending beyond those tracts.

Purpura Hæmorrhagica.—Dr. R. B. WILD related a case of purpura hæmorrhagica. A lady, 70 years of age, was exposed to unusually excessive heat (in conducting a family baking during the illness of her servant), and retired for the night in her usual (not very robust) health. The next morning she found herself covered with purpuric spots, and bleeding from the nose, mouth, and bowels. The face, arms, trunk, and thighs were covered with closely-set spots of purpura, up to a shilling in size; the forearms presented large, irregular ecchymoses, entirely surrounding the limb, while the legs and feet were of a uniform purple colour, resembling the appearance of limbs affected by gangrene. The dorsum of the tongue and mucous membrane of the mouth also presented irregular ecchymoses. The temperature was normal, the patient cheerful, and feeling well. No further eruption took place in any part of the body, and she made a complete recovery in about a fortnight. The treatment consisted in rest in bed, nutritious diet, and full doses of tinct. ferri perchlor., with quinine and arsenic. The interesting points in the case were: 1. The possible relation of the attack of purpura to unusual exposure to excessive heat. 2. The single outbreak of the hæmorrhages. No fresh spots appeared after the first day, and the patient during her whole life had no other purpuric attack; evidently the lesion (whatever its nature) was of a very temporary character, and therefore could not be due to vascular degeneration (senile purpura), or to a permanent blood change. 3. The rapid and complete recovery from such a severe attack in a patient of advanced age.

Hysteria in Children.—Dr. H. R. HUTTON read notes of seven cases of hysteria occurring in children. Of there, three were examples of hysterical paraplegia; one of asthma; one of melancholia, with refusal of food; one of paraplegia, with spasm of adductors of thighs; and one of simulated cerebellar tumour.

Case. Mr. ASHWORTH showed (for Dr. RAILTON) a case of Infantile Spastic Diplegia.

The *Medical Register*, the *Dentists Register*, 1891, and the *Medical Students Register*, 1890, were issued on March 19th.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

CLINICAL EVENING.

FRIDAY, MARCH 6TH, 1891.

T. GUNTON ALDERTON, M.R.C.S., L.R.C.P., President, in the Chair.

Cases.—Mr. STARTIN showed a case of Morphœa.—Dr. CAMPBELL POPE exhibited a case of Skin Affection in a woman with scorbutic symptoms.—Mr. BRUCE CLARKE showed a case of Extensive Skin Grafting with long strips of epidermis, shaven off with a razor and applied to the granulating surface of a wound on the leg of a child. A tramcar had passed over the part and stripped two-thirds of the circumference of the leg.—Mr. F. S. EDWARDS showed two cases of Operation for Strumous Disease of Joints after inoculation by Koch's tuberculin.—Dr. ABRAHAM showed a case of Extensive Facial Lupus treated by tuberculin. No trace of tubercles could be discovered.—Mr. KEETLEY showed a case of Healed Tuberculous Ulceration of Index Finger in a boy in whom the disease had been incurable for six years. The finger healed after the sixth injection with tuberculin. A discussion followed the exhibition of this case.—Dr. BALL showed a case of Lupus of the Tip of the Nose and Nasal Septum treated by scraping once only. The patient's appearance before treatment was illustrated by a coloured sketch.—Mr. PICKERING PICK showed a case of Trephining for Traumatic Epilepsy in 1884. No fits since fourteen weeks after operation.—Dr. HERRINGHAM showed a case of Multiple Neuritis of alcoholic origin.—Dr. MCADAM ECCLES showed a case of Syphilitic and Multiple Epiphysitis in a child.—Dr. BATTEN showed a case of Disseminated Sclerosis.

BOURNEMOUTH MEDICAL SOCIETY.

FRIDAY, MARCH 6TH, 1891.

W. V. SNOW, M.D., President, in the Chair.

Midwives Registration Bill.—Mr. T. W. BLAKE, Vice-President, introduced a discussion on the Midwives Registration Bill, and proposed that a requisition be forwarded from the Bournemouth Medical Society to its local and county members of Parliament to oppose the Bill in its present form. The following resolution was put to the meeting by Mr. T. W. BLAKE, seconded by Dr. FRASER, and carried unanimously by a fully-attended meeting of the members, three of these being Fellows of the Obstetrical Society of London, namely: "That in the opinion of this Society midwifery nurses should not be certified and registered as such until they have undergone practical training and probation in a maternity institution of not less than six months' duration, and the certificate for registration should only be given by medical officers of such institutions. That they should be called maternity nurses, not midwives, in future." A copy of the resolution was forwarded with the requisition to the members of Parliament referred to by the next post.

Koch's Treatment in Lupus.—Dr. P. W. G. NUNN read notes on a case of lupus of the nose, treated by Koch's method, and exhibited the patient (a girl, aged 17), also some photographs taken at the commencement and various stages of the treatment, showing marked improvement as this advanced. At the suggestion of the CHAIRMAN, Dr. Nunn promised to bring the patient before the Society again six months hence.

Hæmorrhage from Tooth Socket.—Dr. E. F. BRIGHT read notes on the occurrence of persistent hæmorrhage from a tooth socket in a case of splenic leucocythæmia, which resisted all other treatment and stypties, including the actual cautery, but yielded to a continuous stream of hot water. A discussion followed relating to the good effects of this treatment in *post-partum* hæmorrhage.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, FEBRUARY 4TH, 1891.

C. HAYDON WHITE, M.R.C.S., L.R.C.P., President, in the Chair.

Abdominal Section for Pelvic Inflammation.—Dr. H. MICHIE read a paper on abdominal section for inflammatory diseases of the pelvis, and gave, among other statistics, particulars of twenty-nine recent cases in his own practice, with but one death.

Plastic Bronchitis. Mr. F. M. WRIGHT exhibited fibrinous

casts expectorated by a man, aged 20, still under his care with plastic bronchitis. A shrill whistling sound was occasionally to be heard over affected patches of the lung.

Thrombosis of the Vertebral and Basilar Arteries.—Dr. H. Handford showed this specimen, which was taken from a man, aged 60, who had had syphilis many years ago. Failure of sight had been coming on for ten years. There was commencing atrophy of both discs, considerable atrophy of the choroid with pigmentation, some retinitis pigmentosa, and a few bright spots, probably cholesterin. There were no hæmorrhages, no hemianopsia or ocular paralysis. The pupils were equal, and reacted to light and accommodation. Six weeks before admission he had what he thought was a bilious attack in the evening, accompanied by headache, but without vomiting. He slept fairly, and while walking in the garden the following morning noticed commencing weakness of the right arm and leg. He was obliged to go to bed, and within forty-eight hours the paralysis of the right side had become complete, without any loss of consciousness. The face was not affected. There was not the slightest aphasia of any form, and no shortness of breath, but for about a week much difficulty in swallowing. On admission he could stand and walk with assistance, and the arm was gaining power. The urine was free from albumen and sugar, and of specific gravity varying from 1012 to 1020. There was no heart murmur or sign of enlargement. The radial and temporal arteries were not much thickened. The very gradual onset pointed to thrombosis rather than embolism or hæmorrhage. The marked difficulty of swallowing localised the lesion to the medulla and pons. The history of syphilis and his choroiditis suggested syphilitic arteritis as the cause. He was treated with iodide of potassium and saline aperients, but after a fortnight he had a sudden attack of unconsciousness, and died in twenty minutes. At the *post-mortem* examination the left vertebral, which was in the same straight line with, and formed the main supply of, the basilar, was blocked by an old standing, adherent, partially decolorised thrombus. The right vertebral was blocked by a quite recent thrombus, as also was the basilar just before its division into the two posterior cerebrals. There was some opacity of the membranes, subarachnoid effusion, and a small quantity of fluid blood under the arachnoid on the posterior part of the cerebellum. No softening could be detected by the naked eye. The kidneys were somewhat granular. All the vessels at the base of the brain were more or less thickened by syphilitic arteritis. The cause of his rapid death was apparently the blocking of the second vertebral and of the basilar, depriving the respiratory centre of its blood supply.

Chronic Sanguineous Pericardial Effusion: Aspiration.—Dr. Handford related the case of a miner, aged 20, who was admitted complaining of vomiting and pain in the stomach. There was never any precordial pain or difficulty in swallowing. His illness began four months previously, and kept him in bed nine days. After that he worked a fortnight. Subsequently he kept his bed more or less till admission. The sickness was soon relieved, but he continued to complain of pain and distension at the epigastrium. The liver was greatly enlarged but not tender. Vertical dulness 6½ inches. Slight cough; pulse very small and irregular; dulness extending from the first intercostal space to the sixth rib, and from a varying distance to the right of the sternum to the mid-axillary line. Over this the breath sounds were audible in varying degrees of intensity, and the heart sounds were feeble and distant. There was no impulse and the apex could not be localised. The left back was hyper-resonant and the respiration bronchial. The urine was free from albumen. The temperature continued normal. Pericardial effusion was diagnosed, and he was treated by rest and iodide of potassium. After a month general œdema of the extremities and ascites came on. The abdomen was tapped, digitalis was added to his medicine, and in ten days all the œdema was gone. For some time he improved in general condition, but the physical signs did not alter. On January 10th, he rapidly became faint and pulseless. In two days, by the assiduous use of warmth and stimulants, he had considerably improved, and it was decided to aspirate the pericardium. A fine needle was pushed in in the fourth space, about 1 inch outside the nipple and on the same level. Eleven ounces of coffee-coloured fluid were removed, when the pulse began to flutter and it was thought wiser to withdraw the needle. He was much relieved for two days, but became collapsed again and died three days and a half after the tapping. At the necropsy the pericardium occupied almost the whole of the left chest, the lung being invisible from the front, collapsed, and pushed to the back. The pericardium was much thickened and the sac contained over 40 oz. of fluid as described, making more than 50 oz. in all. The heart was small and covered with shaggy lymph. The mark of the puncture could not be traced, and there had been no leakage of pericardial fluid into the pleura. There was extensive perihepatitis. As the pericardium was evidently quite incapable of absorbing, Dr. Handford regretted that he had not aspirated much earlier and had not removed more fluid.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Pathological and Clinical Section.

Friday, February 27th, 1891.

Priestley Smith, M.R.C.S., in the Chair.

Double Exophthalmos.—Mr. H. Eales showed a case of double exophthalmos in an engine-cleaner, aged 20, which had come on first in the left eye, and a few days later in the right eye, some months ago, the onset being accompanied by headache, but no vomiting. When first seen, a week or so after the commencement, there was considerable proptosis of both eyes, with chemosis, and great injection of the conjunctiva, but no pulsation nor *bruit* was then, or at any time since, noticed, nor had optic neuritis ever been observed; but the retinal veins throughout were remarkably distended and tortuous. There was no history of head injury. A sister was said to suffer from caries of the ankle. The patient was throughout anæmic. Under treatment by iodide of potassium and Blaud's pills the condition had much subsided during the last six weeks. Mr. Eales thought thrombosis of the left cavernous sinus, spreading to the sinus on the right side, the probable cause of the proptosis; and thought this might either be due to anæmia, or possibly to local bone disease.

Periosteal Sarcoma of the Shaft of the Femur.—Mr. F. Marsh showed this specimen. The patient, a healthy-looking man, aged 36, having a good family and previous history, was admitted into the Queen's Hospital on June 4th, 1890. About Christmas, 1889, he suffered from an aching pain in the lower part of the left thigh, and shortly afterwards he noticed that the thigh was slightly swollen, and felt harder than the other. He could not remember any distinct injury, though he might have had it knocked. It continued much the same until March; he then consulted a medical man, who attributed the pain to rheumatism. Early in April the pain got worse, and the swelling and hardness became more marked. From that time, in spite of complete rest, the swelling steadily increased in size, the pain was more constant, and often of a bursting character, and the patient began to lose flesh. Dr. Conway, of Brierley Hill, considered the swelling to be a sarcoma, and recommended him to obtain admission into hospital. On admission, a hard oval swelling was found reaching from about two inches above the condyles of the left femur to above the middle third of that bone. It seemed to surround the femur, and was most prominent on the outer side; the soft tissues above were œdematous for some inches. A periosteal sarcoma of the shaft of the femur was diagnosed, and amputation at the hip-joint advised. The operation was performed on June 12th by a modification of Furneaux Jordan's method, an incision was made down to the bone on the outer side of the limb, anterior and posterior skin flaps were formed, the muscles circularly divided, pressure forceps applied to the chief bleeding vessels, and the limb disarticulated. The hæmorrhage was controlled by the method described by Mr. Jordan Lloyd.[1] In this case it was not altogether satisfactory, several of the larger arteries spurting when divided, and the limb being full of venous blood, although previously emptied by elevation. The patient rallied fairly well from the shock, and the wound healed by first intention, with the exception of the drainage tube tracks. Dry boracic dressings were used throughout. In a month he was up and out of doors, but he was kept in the hospital until September 10th

[1] *Lancet*, 1883, vol. i, p. 897.

for the sinuses to finally close. He then went home quite well and strong, with an excellent stump, and having gained considerably in weight. It had been incidentally heard that he remained well until the commencement of winter, when he got "bronchitis," which rapidly terminated fatally. The growth proved to be a large periosteal sarcoma of the shaft of the femur, of firm consistence—a rare combination. It was in these cases especially that the diagnosis from "quiet necrosis" often extremely difficult, and almost impossible in the earlier stages. The history was seldom of much assistance, but a steady increase in size, and little or no diminution of pain, with the limb completely at rest, were indicative of sarcoma. The comparatively short time the patient lived subsequent to his recovery from the operation was a matter of regret. The mode of death, too, was suspicious, recurrence in the lungs being a frequent termination of periosteal sarcomata of the femur.

Specimens.—Mr. BARLING showed Kidneys from a case of Pyonephrosis and Latent Renal Calculi.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, MARCH 6TH, 1891.

T. CHURTON, M.D., President, in the Chair.

Metrostaxis in Pregnancy.—Dr. J. B. HELLIER read a paper on this subject, confining his attention to those cases where the hæmorrhage was not the result of abortion or premature labour. This was predisposed to (1) by the physiological increase in vascularity so characteristic of pregnancy; (2) by the presence of any disease in the uterine tissues, as, for instance, a granular condition of the interior of the cervix or body, the existence of a pelvic tumour, and, *a fortiori*, cancer. Some of the cases which showed an irregular or continuous oozing found sufficient explanation in these two conditions. (3) In other cases the persistence of the menstrual impulse was an essential factor, and, under certain conditions, the suspension of the menstrual function during pregnancy was apt to be imperfect, and, in brief, it seemed that if pregnancy occurred in a diseased womb, or under abnormal conditions, there was a tendency to metrostaxis during gestation, which might be irregular or periodic, and which, if it were not true menstruation, was at least very liable to be mistaken for it, and so lead to important errors in diagnosis. The frequency with which ectopic gestation was overlooked in its earlier stages, owing to the occurrence of more or less periodic metrostaxis, was now well recognised. Dr. Hellier knew of a case in which the coexistence of pregnancy with fibroid tumour had been overlooked for a similar reason. He then quoted several cases where more or less uterine disease had existed before pregnancy, and where, during gestation, there had been marked metrostaxis—sometimes showing a distinct periodicity. In one case the patient asserted that she had "menstruated" regularly every month throughout pregnancy, the periods lasting as much as nine days. The moral was that the existence of metrostaxis, or the fact that a patient declared herself "regular," must never, by itself, lead them, in the diagnosis of abdominal tumour, to exclude the possibility of ectopic gestation or of the coexistence of pregnancy with another tumour, or the existence of an ordinary pregnancy, because the metrostaxis might really be a symptom of it. As to treatment, he recommended rest, a trial of hamamelis, and local treatment to granular cervix in certain cases.—Mr. WILLIAM HALL thought that menstruation was so common in pregnancy and so frequently absent from other reasons that the symptom might be altogether disregarded in deciding the question of the pregnancy. He related a case where a lady after the suppression of menses believed herself pregnant, and had engaged a nurse. He found, however, there was no pregnancy but a small fibroid on the posterior wall of the uterus; six months later menstruation recommenced, but the abdomen continued to enlarge, and she became pregnant.—Dr. G. BLACK related a case where profuse hæmorrhage occurred in a woman five months pregnant. She was kept in bed and safely delivered at term. He strongly advised complete rest in these cases.—Mr. OAKLEY thought the children in these cases were generally very large. In one case he remembered the child weighed 13 lbs. 2 ozs. He related a case in which there was great enlargement of the abdomen, accompanied by severe hæmorrhage, where a tumour was diagnosed and laparotomy performed. The case, however, proved to be pregnancy, and ended fatally. He thought hamamelis of use in these cases.

Hæmorrhagic Pericarditis with Effusion treated by Repeated Aspiration: Recovery.—The PRESIDENT related this case.—Dr. S. SMITH suggested that perhaps there would be less danger and risk in a free incision than in repeated aspiration, especially as it was difficult to remove the fluid entirely with the aspirator.—Dr. GRIFFITH, in discussing the best point for paracentesis of the pericardium, said it was very difficult to ascertain the real condition of the pericardium during life from experiments on the cadaver. He thought there were no "pockets" for accumulation of fluid during life.—Dr. ALLAN related a case of hæmorrhagic pericarditis, diagnosed only on *post-mortem* examination, where there were numerous adhesions, having spaces filled with blood. The heart was fatty.—Mr. LITTLEWOOD thought the making of an opening from the pleura into the pericardium, as sugested by the President, was hardly practicable. He once opened the pericardium, after failing to obtain fluid by puncture, but the patient died.—Dr. A. BRONNER referred to a case lately published by his brother.[1]—Dr. EDDISON recalled two cases under Trousseau, in which the pericardium was opened, with fatal result; but in later cases aspiration was used, with recovery. He asked if any of the hæmorrhage could have been caused by the scraping of the heart with the needle which had been described.—Dr. TREVELYAN referred to the tapping of the auricle by aspiration, which had occasionally been done without bad effects.

Four Cases of Tuberculous Peritonitis, Three being treated by Operation.—Mr. HAWKINS-AMBLER related these cases. I. A girl, aged 5, taken seriously ill with symptoms of pneumonia, and later peritonitis. Operation was refused, but recovery took place after discharge of pus from the peritoneum. II. A girl, aged 5, was seized with vomiting and pyrexia (103° F.). There was no abdominal tenderness, but on opening that cavity a large amount of pus escaped. The peritoneum was flushed with warm boiled water, and a glass drainage tube inserted. There was a profuse discharge, which gradually diminished, and the patient was now perfectly well. In Cases III and IV operation was followed by a fæcal fistula. In the third case, operated on by Dr. Kilner Clarke, of Huddersfield, a papillomatous tuberculous condition of peritoneum was found. Great relief followed the operation, and the patient got out for a time, but eventually succumbed to general tuberculosis. IV. A patient, aged 22, suffered from cough and emaciation, and later from pains in the abdomen and sickness. Friction could be felt with the hand on the abdomen. By operation about 6 pints of fluid were drawn off, and the peritoneum seen to be covered with nodules. The wound healed badly, and finally the cicatrix burst, with a discharge of fæcal pus. The bulk of the food taken passed half-digested through the fistula. Death occurred from exhaustion. Mr. Hawkins-Ambler reviewed the recent literature of the subject, and referred to the general good results from operation, which was a very simple proceeding. Tubercles on the peritoneum had been seen to disappear after operation.—Dr. BLACK asked if tubercle bacilli were found in these peritoneal growths. He related a case where a girl, aged 15, seized with symptoms of acute pulmonary tuberculosis, seemed to have a sudden change of the inflammation from the lung to the peritoneum, which rapidly filled with fluid. Operation was followed by great relief and speedy recovery. He thought that removal of pressure largely contributed to this. Dr. TREVELYAN had cut sections of peritoneal growths of tuberculous appearance, and though they anatomically resembled tubercles he had found no bacilli. Dr. BRONNER said bacilli had been found by some Continental observers.—Dr. BARRS pointed out that peritoneal inflammations of chronic character, whether tuberculous or not, might be divided into "wet" and "dry." In the former the prognosis was better than in the latter. He referred to a case which was frequently tapped with good result, but died at last from unrelieved pressure. He thought there was hardly any evidence to show that the first two cases described were tuberculous.

Specimens.—Dr. CHURTON: Sarcoma of Lung and Bronchial Glands causing Stenosis of Œsophagus.—Mr. MAYO ROBSON:

[1] BRITISH MEDICAL JOURNAL, February 14th, 1891, p. 350.

Stricture of Urethra with Hypertrophied and Sacculated Bladder.—Mr. LITTLEWOOD: 1. Sections of Trichinous Muscle; 2. Traumatic Aneurysm of Ulnar Artery successfully removed. —Dr. T. W. GRIFFITH: Cartilaginous Tumour pressing on Spinal Column.—Dr. ALLAN: 1. Cirrhosis of Liver, with Gallstones; 2. Heart, with Great Dilatation of Aorta and Pulmonary Artery; 3. Calculus from Pelvis of Kidney.—Mr. E. ATKINSON: Large Condylomata from Vulva.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

FRIDAY, FEBRUARY 27TH, 1891.

E. STAMER O'GRADY, F.R.C.S.I., in the Chair.

Koch's Treatment of Tuberculosis.—Mr. KENDAL FRANKS gave the results obtained in 27 cases which he had treated since December 11th. He divided them into four classes. Class 1 included 9 cases, which illustrated the diagnostic value of the lymph. Class 2, which included 2 of the cases under Class 1, contained 7 cases in which he considered that a cure had been effected. Among these were 2 of incipient phthisis, 1 of cervical caries, 1 of sinus round an excised knee-joint, 1 of tuberculous ulcers on a stump, 1 of suppurating glands in the neck, and 1 of incipient hip disease. Class 3 comprised cases in which distinct improvement had been noted. This group contained 8 cases, in 5 of which the treatment was not yet concluded. Class 4 contained 5 cases in which the treatment had resulted in no improvement, and in 1 of which the symptoms had been aggravated. The cases were 2 of advanced phthisis, with high temperature previous to the employment of the lymph; 1 case of extensive tuberculous disease of the knee and wrist, still under treatment; 1 case of enlarged glands in the neck, which were subsequently excised; and 1 case of incipient phthisis, which reacted to the injections, but no bacilli were discovered in the sputa. At the end of the treatment the patient was in the same condition as previously. Mr. Franks then read a series of conclusions he had come to, which were favourable to the employment of the lymph in suitable cases. Mr. TOBIN said that, with the exception of one case of erythematous lupus, he had seen no benefit result from injections of Koch's lymph.—Mr. MYLES said Mr. Franks might have added a fifth class, namely, those who had died from the lymph, and he feared that, judging from the published results, this class would, like Pharaoh's lean kine, soon swallow up all the others.—Remarks were also made by Mr. LENTAIGNE and Mr. M'ARDLE; and Mr. KENDAL FRANKS replied.

REVIEWS AND NOTICES.

A NEW THEORY OF CHLOROFORM SYNCOPE, SHOWING HOW THE ANÆSTHETIC OUGHT TO BE ADMINISTERED. By ROBERT KIRK, M.D.Edin., F.F.P. & S.G., Physician to the Dispensary for Diseases of Women, Glasgow Western Infirmary. Edinburgh and Glasgow: J. Menzies and Co. 1890. Pp. 1–58.

THIS is a clever pamphlet written by one who has convinced himself that he can explain the cause of syncope during the administration of chloroform, especially in the early stages, and who upholds the teachings of Syme and Simpson, that chloroform is a safe anæsthetic, if plenty of it is given in all cases. Dr. KIRK is unsparing in his criticisms of the investigations both of the Glasgow Committee and of the Hyderabad Commission, and he evidently has a poor opinion of the knowledge, scientific acumen, or logical ability of the members of these committees. On the whole, perhaps, he is the hardest on his friends in Glasgow, but the following sentences, with which he concludes his book, are rather in favour of his impartiality: "Not a single member of the Commission, or of the Glasgow Committee, could answer a number of simple questions which could be put to them on anæsthesia. The most interesting and instructive fact in connection with the Commission is that it has been a stupendous failure."

There is so much throughout the book in the way of exposing the blunders and shortsightedness of previous experimentalists, as Dr. Kirk thinks, that one naturally expects to find a statement of at least a few carefully recorded experiments on which a theory might be founded. In this, however, the reader will be disappointed. Only one experiment upon a cat is recorded by Dr. Kirk, in which the animal, recovering from stupefaction, had "a complete pause in the heart's action lasting sixty seconds." An experiment on a rabbit gave negative results. From such slender experimental data, Dr. Kirk constructs a new theory which it is somewhat difficult to understand by reason of the curiously involved metaphorical language in which it is stated. One would imagine that the author was expounding a problem in dynamics when he describes the action of chloroform on the pulmonary mucous membrane "as two forces, acting at two several points, one without and the other within the circulation, and the resulting phenomena are to be ascribed to the action and reaction of these two forces, and to the varying degrees of intensity with which they operate at different stages of the inhalation." Stripped of these mechanical expressions, what is Dr. Kirk's theory? He supposes that when chloroform is inhaled it acts locally on the pulmonary mucous membrane, and at the same time it passes into the blood. By acting on the mucous membrane, it influences in a reflex way the systemic circulation, but whether it causes dilatation or contraction of the smaller systemic vessels, Dr. Kirk does not expressly state. At one place, page 15, he states that "the action of the force must be the ordinary anæsthetic effect of the agent, causing retardation and stagnation of the corpuscles on the vessels, and a diminution of all the processes going on there, attended, through reflex action, with corresponding results on the systemic circulation." We may presume, according to Dr. Kirk's view, that the local action on the pulmonary nerve filaments is to inhibit the peripheral vessels and thus influence the systemic circulation. If this inhibition is suddenly removed, as by stopping the administration and allowing the patient to breathe air, "the force [that is, the inhibitory action] ceases to act with remarkable suddenness, for after a few inspirations it is gone. The result is a violent reaction a violent rebound or whirl of the circulation terminating, in its most pronounced form, in syncope." This is the cause of "primary chloroform syncope." If, however, sufficient chloroform gets into the blood, by the inhalations of an atmosphere containing plenty of it being continued, this inhibitory influence on the pulmonary mucous membrane is counteracted. Then there is no danger of syncope even although the inhalations are now stopped and the patient is allowed to breathe pure air. Such is the theory. To prove it, Dr. Kirk must show (1) that irritation of pulmonary nerves does influence the systemic circulation in a reflex manner, that is, by acting centripetally through the central nervous organs; (2) that removal of irritation of pulmonary nerves does cause a "violent rebound or whirl of the circulation;" and (3) that such a "rebound or whirl" is likely to cause syncope. Dr. Kirk's theory may be right or wrong; at present it is not supported by any statement of experimental facts.

Founding on this theory, Dr. Kirk makes a good many valuable suggestions with which, on the whole, we agree. There may often be excellent practice founded on false theory. For example, we think it is safer to give chloroform—or, indeed any other anæsthetic—freely than in small driblets, because a full anæsthetic effect is thus sooner obtained. In the early stages, especially if operative procedures are begun too soon, there is a danger of reflex irritations acting on the heart through the vagi, thus causing sudden failure and syncope. Dr. Kirk's general rules for giving chloroform are excellent. We entirely dissent from his observation on ether as compared with chloroform. There is no proof that "on the side of an overdose it [chloroform] is the safer agent of the two." Dr. Kirk says: "It could be shown that chloroform produces deeper anæsthesia before death ensues than ether can do." And again: "It could be demonstrated that when anæsthetic equivalents are used, the time which elapses between a given depth of anæsthesia and death is much longer with chloroform than with ether." We cannot admit either of these statements. It is not easy to understand what Dr. Kirk means by "anæsthetic equivalent" or by a "given" depth of anæsthesia. The state of anæsthesia cannot be measured precisely in this way.

We also differ from Dr. Kirk in the criticisms he makes on the warnings of the Committees as to care being taken in the

administration of chloroform. There is no blinking the fact that a person deeply under any anæsthetic is in a condition perilously near a stoppage of either the respiratory or the cardiac mechanism, and it is simply puerile to say, as Dr. Kirk does, "I incline to the opinion that he is rather safer than the average individual exposed to the ordinary casualties of life." There is a danger soon after the beginning of administration, and there is more or less of danger throughout the whole operation. That is no reason, however, for being timid in its administration, but rather for lynx-eyed watchfulness, so that the first faint indications of failure of either pulse or breathing may be noticed, and, if possible, averted.

In conclusion, we wish to say that while we cannot accept Dr. Kirk's theory on the simple ground of want of evidence, and while we object to many of his criticitms, we cordially recommend a perusal of his little book. It is a fresh, vigorous contribution from a man who thinks clearly, hits hard, and has a fairly good opinion of his own powers.

THE ELEMENTS OF OPHTHALMOSCOPIC DIAGNOSIS. By GEORGE A. BERRY. Edinburgh: Young J. Pentland. 1891.

THE lectures, of which this little book is to some extent a reproduction, must have been exceedingly useful, if they were illustrated by diagrams. These are entirely wanting in the book, and to attempt to teach ophthalmoscopic diagnosis without illustrations of some kind is surely to court failure. The author seems to have taken an erroneous view of what constitute the "elements of diagnosis." They should surely consist of simple facts, a knowledge of which should enable the student to recognise them when they are met with in combination in complicated conditions. We cannot but think that descriptions of such rare conditions as embolism, cysticercus, rupture of choroid, and such like are rather out of place in an elementary treatise. On the other hand, such elementary matters as venous pulsation deserve a fuller description. To one who has never seen this phenomenon, the statement that it consists in "an alternate visible emptying and refilling of a small portion of the larger trunks on the disc," though perfectly accurate, would convey an erroneous idea of the appearance presented with the ophthalmoscope while the explanation that it is caused by the vein twisting round the artery is not that generally accepted. We miss any reference to such common physiological peculiarities as congenital crescent of the disc and the existence of a connective tissue ring, forming part of the disc and quite distinct from the scleral ring. Connective tissue on the disc is referred to as if it were always the result of intrauterine inflammation; considering its great frequency, this explanation seems most improbable.

NOTES ON BOOKS.

A Compend of Gynæcology. By HENRY MORRIS, M.D., late Demonstrator of Obstetrics and Diseases of Women and Children in the Jefferson Medical College, Philadelphia. With forty-five Illustrations. (Edinburgh and London: Young J. Pentland. 1891.) The practical anatomy of the female organs is a subject which was placed too much in the background by teachers of anatomy until recent years. A strong reaction has set in, owing to the triumphs of specialists. Hence textbooks on the once neglected subject now abound. Dr. Morris's manual is well prepared, clearly printed, and portable in form. He rightly dwells more upon inspection and methods of examination than on complicated operations on pelvic tumours. The author is also fairly judicious about instruments. A well selected armoury is indispensable to the gynæcologist, and it need hardly be added he must know how to use his tools. A habit of buying and trying every new instrument is, on the other hand, most perilous to the principles of the doctor and the welfare of his patients. The nomenclature is well managed; the author distinguishes between a uterine probe and a uterine sound, and has not cumbered his pages with bastard Græco-Latin words of Teutonic manufacture. The pages on pelvic cellulitis and peritonitis need thorough revision. "In pelvic cellulitis," the author writes, "palpation reveals nothing more than in pelvic peritonitis." This may be true during the first few hours, but the practitioner rarely sees or examines a case in its earliest stage. It would be well if certain terms peculiar to American medical schools were altered in British editions of transatlantic works. Thus the expression "quiz-compend," which appears on the heading of the first page, must be almost unintelligible to the student and practitioner in the United Kingdom.

Venereal and Generative Diseases. By M. K. HARGREAVES, M.D. Second Edition. (London: R. Kimpton. 1890.)—In a notice of the first edition of this work some of the reasons why we were unable to recommend it to "the senior student and general practitioner," for whose instruction it was said to have been written, were given. We also pointed out inaccuracies which we thought even a junior student might have avoided. We are sorry to find that our remarks on the former edition apply equally to the present one.

The Relation of Athletic Sports to Public Health. By HENRY HOOLE, M.D.Lond. (London: H. Renshaw. 1890.)—This is the reprint of an address delivered before the Sunday Lecture Society, and deserves, indeed, to rank as a very useful lay sermon. The first part contains a brief sketch of the evolution of muscular exercise from prehistoric times up to the middle of the present century when modern athleticism may be said to have had its birth. While always careful to point out the advantages which accrue both to the individual and to his race from the rational encouragement of physical exercise, Dr. Hoole is not sparing in his exposure of the evils which attend the modern excesses of athleticism, and his advice to the young aspirant for fame is practical and pertinent. Within the modest 40 pages of this pamphlet much useful information is furnished in an interesting guise, and there are probably few parents and few children of either sex who would not be the wiser for its teachings.

The Daughter: Her Health, Education, and Wedlock. By WM. M. CAPP, M.D. (Philadelphia and London: F. A. Davis. 1891.)—This small book consists of a number of somewhat disconnected, but on the whole judicious, paragraphs which, with a few obvious exceptions, would be equally applicable to "the son." Its style is popular; and in many instances the advice given is so general, not to say vague, that it could become of practical value in any particular case only by the direct interpretation of the doctor; this, however, can scarcely be imputed as a fault, and is decidedly preferable to the too precise directions and hard and fast rules which stud the pages of some other popular manuals professing a similar aim. The book is excellently printed, and is provided with a very necessary index.

A Series of Chemical Problems, with Key. By T. E. THORPE, B.Sc., Ph.D., F.R.S., and W. TATE, Assoc.N.S.S., F.C.S. (London: Macmillan and Co. 1891.)—This work comes before the public with a hearty recommendation from Sir H. E. Roscoe, who expresses his intention of making use of it in his own classes. This alone is a sufficient guarantee that the problems, etc., have been judiciously selected. The subjects dealt with include thermometric and barometric corrections, corrections of volumes of gases under varying temperatures and pressures, questions on specific gravities and vapour densities, molecular and atomic weights, calculations of empirical formulæ, chemical equations, and gas analysis calculations. The book will certainly prove useful to both teachers and learners of chemical and physical science.

Local Option in Norway. By T. M. WILSON. (Bergen, Norway, 1890.)—This interesting pamphlet gives an account of the establishment and working of the Society for Retailing Ardent Spirits in Bergen, which differs from the Gothenburg system in applying all profits beyond 5 per cent. on the capital of the shareholders to institutions and charities of public utility dependent on voluntary support, instead of to a reduction of public burdens. The municipal council fixes the number of licences required to meet the reasonable convenience of the public, and grants a monopoly generally for five years at a time to the society. The council has full con-

trol over the operations and the right to inspect the books. The managing committee is made up partly of the council nominees and partly of representatives elected by the shareholders. No compensation was awarded for previous licences extinguished in the process of reduction as the result of legal proceedings. The results claimed for the thirteen years' work of the society are a diminished consumption of spirits, a decrease of drunkenness, and £78,965 distributed among institutions of public utility, such as reformatories and theatres.

Koch's Remedy in relation specially to Throat Consumption. By LENNOX BROWNE, F.R.C.S.Ed. Pp. 114. (London: Baillière and Co. 1891.)—The wild rush to Berlin that took place in November last on the part of medical men of all nations who were anxious to learn the details of Koch's "remedy" at first hand has been followed during the last month by a perfect flood of publications in all languages on the part of those whose zeal for the diffusion of knowledge has been too great to permit them to withhold the first fruits of their experience from the public eye. Mr. Lennox Browne has taken the wind out of the sails of some of the writers, who, like himself, have seen a few cases in Berlin, and have treated a few more on their own account, by boldly publishing his ideas on the subject in an attractive form, handsomely bound, instead of burying them in the overcrowded pages of the journals. He tells us incidentally that the final revision of his proof sheets had been completed before January 15th, and we are thus enabled to gauge with some pretence to accuracy the amount of actual experience which he can have had and the amount of time that must have been expended in recording it. The cases quoted in the book are for the most part those which the writer saw in passing through the wards of the Berlin hospitals on December 4th and 5th. Some of those related from personal experience in London were injected for the first time on January 5th, and others, begun about the middle of December, had only received from three to six injections. One case alone is related with sufficient appearance of completeness to warrant positive deductions being made from it. It is from such materials as these that Mr. Browne has made up his book. Under these circumstances, we cannot regard the work as a serious contribution to medical knowledge, but rather as an ephemeral commentary on passing events, which may in many respects be out of date before it can reach the hands of the general reader. The rapid accumulation of solid fact has already begun to oppose a stubborn obstacle in the way of the acceptance of some of Mr. Browne's confident generalisations; even the method of using the fluid, for which he gives full instructions, has already been modified considerably by those who have watched its effects on a large scale. To those, if any there be, who have not read the medical journals of the past few months, this work will present many features of interest.

Kelly's London Medical Directory, 1891. (London: Kelly and Co.)—This annual publication appears this year for the third time. It contains alphabetical lists of medical practitioners, dentists, and public analysts practising within the great province of houses which extends from Isleworth to Walthamstow and from Croydon to Barnet. It contains also a street list, somewhat inconveniently split up into a series of sections for each postal district and suburb, lists of learned societies, hospitals, nursing institutions, and other matters of interest to dwellers within the metropolitan area. So far as the main list is concerned, we have found it very accurate, but some of the subsidiary lists and tables appear to require revision.

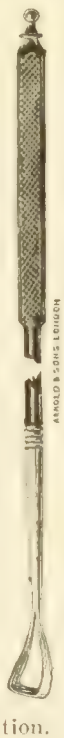
La Série Aromatique en Thérapeutique. Par le Dr. DE BUCK. (Gand: A. Siffer. 1890.)—A large number of our older and new remedies belong to the aromatic series of chemical substances, and in his book Dr. de Buck gives a connected account of the chemistry, action, and therapeutic uses of these bodies, which will be found extremely useful to those who have not been able to follow the somewhat scattered literature of the subject. The author begins with a general review of the importance and uses in medicine of the substances, and discusses their value as disinfectants and antiseptics, as antipyretics, and as curative agents generally in various infectious and other diseases. In the second part of the work the substances are taken in detail, beginning with benzene, which is, from a chemical point of view, the simplest in structure, and passing on to phenol, creoline, antipyrin, kairine, camphor, and others of more complex constitution. A short and concise account of each is given, quite sufficient in most cases to act as an efficient guide to their use in practice.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN OVUM CURETTE.

IT has always appeared to me that the treatment of early miscarriages has been unsatisfactory and incomplete in the majority of cases, and this opinion has been confirmed since practising in the colony, where patients may be fifteen or twenty-five miles from skilled assistance. If the patient is within easy reach, the ordinary method of plugging and administering ergot may be satisfactory enough and direct interference not called for. But there are many cases, as I have instanced, to which a medical man is called, and on arrival he finds the fœtus escaped, a mass of placental tissue remaining, and more or less severe hæmorrhage taking place; the distance and the urgency of the case render it imperative that everything should be removed at one sitting, and the choice hitherto has laid between removal by the fingers or forceps; in the former case a considerable amount of unnecessary force is apt to be used, and in addition the operator is frequently tantalised by feeling the placental mass and yet is not able to remove it without considerable difficulty owing to insufficient dilatation. With regard to the ovum forceps, I consider it requires a somewhat callous operator to use them with any confidence, owing to the impossibility of forming any idea of the substance held by them.



It was this unsatisfactory choice which suggested to me the advisability of trying the curette, and in my next cases I used a Sims's improved with considerable success and much greater satisfaction than heretofore, the result being that I left my patient feeling satisfied that the whole of the embryonic tissue was removed. As I consider there is still room for improvement in the instrument, I offer to my medical brethren what I have christened an "ovum curette."

As will be seen from the woodcut, in general appearance it resembles an ordinary curette; but the raspatory portion, as it may be termed, is of steel, and on section is comma shaped, with an edge sufficiently sharp to remove the tissue and yet not to injure the underlying structure; by means of the flexible stem this edge may be directed upwards, forwards, or downwards, according to the placental site, which is first ascertained by digital examination. After the operation the cavity is gently washed out with a warm antiseptic fluid. I think with such an instrument the whole uterine cavity may be successfully searched and cleared of placental tissue without difficulty or injury to the uterus, and also it will have the advantage over the forceps of communicating to the operating hand the nature of the particular part with which it is in contact.

Since sending my first description and sketch to Messrs. Arnold and Sons, I notice in the *Australasian Medical Gazette*, October, 1890, that the subject of curetting in miscarriages has been advocated in a discussion before the South Australian Branch of the British Medical Association, and that an instrument was suggested by Dr. A. A. Hamilton.

Pitone, N.Z. A. MEREDITH WHITEHEAD, M.B., C.M.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MARCH 21st, 1891.

THE LAWS AS TO HOSPITAL CHARITIES.

The important and very urgent subject of the removal of the restrictions now imposed, by an accident of the law, upon gifts to medical and other charities has made a great advance since it was discussed in these columns in the months of October and November. The letters of Lord Herschell and Sir Horace Davey, which were read at a recent meeting of the Parliamentary Bills Committee, and the paper read by Mr. Bristowe before the Hospitals Association, form an argument so unanswerable upon the legal aspects of the question, that it is difficult to see why Parliamentary action should now be any longer delayed. We have already discussed and illustrated the anomalies that arose out of the ill-advised Act of George II, commonly known as the Statute of Mortmain, which, for some inscrutable reason, were consolidated and re-enacted by the Mortmain and Charitable Uses Act of 1888; but we doubt if anybody outside a limited legal circle would have believed that the laws of this country could have created on any subject such wild and unintelligible confusion as that which is set forth with chapter and verse in Mr. Bristowe's pamphlet.

It will be remembered that one of the most vexatious portions of the enactments complained of was that by which they rendered it illegal to dispose by will in favour of a charity any property which was an "interest in land." In the memorandum which Mr. Ernest Hart laid before the Parliamentary Bills Committee in October last on this subject, the legal puzzles which have arisen under these words were illustrated and discussed; but Mr. Bristowe, by a little patient research on the same lines, has put together a collection of anomalies which it is impossible to read without derision.

We need only here cite as an example that large and important class of cases in which the question arises whether bonds or debentures issued by various public authorities, and secured upon rates, tolls, and other public property, are or are not such an "interest" in land as the owner is prevented by the statute from leaving to a hospital by will. The wisdom of the law decided as long ago as 1801 that a mortgage bond secured on county rates was an interest in land, and could not be bequeathed to charity. On the other hand, in 1880 it was decided that a bond by which money was charged upon police rates was not an interest in land. Still more recently it has been held that a similar instrument charged on the district local rate is likewise free from the operation of the statute. The unwary reader might suppose that the original case was therefore overruled, but this is not so, for it was reaffirmed by the highest legal tribunal only two years ago, and was expressly followed by the Courts in 1889.

If the matter is put to the test of the actual investments which have been submitted to the consideration of the Court, the impossibility of continuing the present system must be clear to everyone. The ordinary bonds of the Leicester corporation may be bequeathed to a hospital, but not its 3½ per cent. stock. The consolidated stock of Manchester may not be bequeathed, nor the bonds of the corporations of Salford and Oldham, but the bonds of Dewsbury and Wakefield have been allowed by the Court to be outside the limitation as to interests in land. The consolidated stock of the London County Council cannot be bequeathed to a hospital, though East India stock might be. If a man bequeath Mersey Dock Bonds to a charity he does well, but if he bequeaths Swansea Harbour Bonds he offends against the law. Such a state of things, condemned as it is by the highest legal authorities, cannot be allowed to continue; and in the interests alike of hospitals and of the public, it is clearly necessary that an immediate effort should be made to introduce an Amending Bill.

THE PUBLIC HEALTH (LONDON) BILLS.

The Government Bills for consolidating and amending the public health law of the metropolis have at last been issued, and Londoners have thus been brought one step nearer the acquisition of an intelligible sanitary code. Such a code was enacted for the provinces in the Public Health Act of 1875; but since then one Government after another, and one session after another, have passed away without the boon being extended to the metropolis.

Mr. Ritchie's new Bills are of a comprehensive and liberal character. The Consolidation Bill does not include any amendments of the existing law, except some of a minor character which may be generally agreed upon, and do not raise any contentious matters. It will take the place of the Nuisance Removal Acts, the Sanitary Acts, part of the Metropolis Management Acts, the London Smoke Acts, the Infectious Disease (Notification and Prevention) Acts, so far as they relate to London, and various other statutes. Altogether, some fourteen Acts will be entirely repealed by it, and important portions of some seventeen others will be superseded. Much has been borrowed from the Public Health Act, 1875, but at the same time several important provisions not contained in that Act are included, such, for instance, as the clauses relating to smoke consumption, refuse removal, etc.

The Amendment Bill contains many proposed alterations in the law of vast importance, but none more nearly touching the medical profession than the provision contained in Clause 35, which relates to the appointment of officers. It is proposed that "a medical officer of health or sanitary inspector, appointed or reappointed after the commencement of this Act, shall be removable by the sanitary authority with the consent of the Local Government Board, or by that Board, and not otherwise, and shall not be appointed for a limited period only."

Security of tenure has always been claimed by medical officers of health as a most important principle, but, until the Local Government (Scotland) Act, 1889, was passed, practical recognition of the claim could not be obtained. It is to be hoped that Parliament will endorse Mr. Ritchie's

sensible though tardy recognition of the value of the principle, and will thus place health officers in a position fearlessly to perform their arduous and frequently very unpleasant duties. This is to be desired as much in the interest of the community at large as of those practitioners who have selected the public health service for their career, but who are frequently subjected to much mental anxiety and pecuniary loss by reason of the personal antagonism of members of vestries or sanitary authorities who are affected or offended by his conscientious discharge of duty.

The Infectious Disease (Notification) Act is to be amended so as to provide for the notification of hospital cases, and the notification certificate is in future to specify the full name, and the age and sex of the patient, his full postal address, and other particulars. In the case of hospital patients, the medical officer of health of the district from which a patient has come is to be informed of the circumstance. Returns of the certificates under the Notification Act are to be sent by the Metropolitan Asylums Board "to every sanitary authority in London, to the London School Board, and to the managers of every public elementary school in London." This should have an excellent result if properly and judiciously utilised. Further, the County Council are to have power, "as respects London," to add to the diseases at present notifiable.

The two Bills now before Parliament will be amalgamated in due course, and amendments will doubtless, on careful consideration, be found necessary in them. But on their merits, and apart from political or party prejudices, they should become law during the present session. Their preparation on broad and comprehensive lines reflects great credit upon Mr. Ritchie and the department over which he presides. A noticeable feature of the Bills is the more frequent use of "shall" instead of "may" than has hitherto been the case in measures of this kind. In another article we propose to indicate some of the most important remaining provisions of the Amendment Bill.

"PRIMARY" AND "SECONDARY" IN MEDICAL CERTIFICATES OF THE CAUSE OF DEATH.

Those who have reason to deal with causes of death as they are entered in the Death Register from the medical certificates furnished by medical practitioners, in accordance with the provisions of the Registration Act, must come to the conclusion that the terms "primary" and "secondary" in the form for the medical certificate are not always understood in the same sense. There should be no doubt about the word "primary" being intended to describe the originating cause of death that gives rise to the "secondary" cause; this "secondary" cause, although it may be the immediate cause of death, would be improperly described as the "primary" cause. Take, for instance, a very simple and ordinary case of death from pneumonia supervening upon measles. Although pneumonia is the immediate cause of death, the "primary" cause is intended to be returned as measles, while the pneumonia should be certified as the "secondary" cause. The same rule is intended to apply to all cases in which there is an originating as well as a supervening cause or disease, which causes should invariably be described as "primary" and "secondary" respectively—such as heart disease and apoplexy, kidney disease and convulsions, whooping-cough and bronchitis, scarlet fever and renal dropsy. It is even still more important in cases of disease supervening on cases of violent injury. The true "primary" or originating cause should not be omitted from the certificate. This is essential, not only from the point of view of mortality statistics (the accuracy of which depends, in the first place, upon the means afforded by the medical certificate for correct classification), but, still more, as affording a satisfactory means for bringing to the notice of the coroner cases in which death has been directly or indirectly due to violence. Medical practitioners are, unfortunately, sometimes tempted in such cases to disregard the injury as the true originating and "primary" cause of death, with a view to spare the relatives of the deceased patient the intervention of the coroner. Such is not infrequently the cause of complaint on the part of coroners, who, it cannot be too generally known, have power in such cases, when they come to their knowledge, to order exhumation of the body, in order that the requisite inquiry may be held.

To omit, therefore, from a medical certificate all mention of violence which may have given rise to a secondary cause or disease, is not only contrary to the public interest in more than one direction, but may result in action which would necessarily be more painful to the relatives of the deceased patient than would have been the inquest in the first place. It is very seldom, however, that we find a coroner complaining, on the other hand, of a medical practitioner who, in a case of disease supervening upon injury, in strict accordance with public interest and with instructions printed in the Book of Forms of Medical Certificates, returns the injury as the "primary" and the supervening disease as the "secondary" cause.

Recently an inquest was held at Worthing concerning the death of a gentleman, aged 65 years, who slipped and fell down the steps of his house about six weeks before his death, and broke his leg; he progressed satisfactorily for about three weeks, when he was attacked with pleurisy, from which he had almost recovered, when he suddenly developed alarming symptoms, and died in less than half an hour. The medical practitioner attributed the death to pulmonary embolism, and in accordance with his diagnosis of the case, returned the fracture of the leg as the originating or "primary" cause of death. This certificate, coupled with further information furnished by the medical practitioner, induced the holding of an inquest. The coroner, however, by some almost inexplicable mental process, came to the conclusion that the death was "actually due to natural causes," and that "the injury had only a very indirect bearing" upon the cause of death.

It is true that the deceased did not die directly from the shock of the injury, but if the blood clot resulted, as the practitioner very naturally asserted, from the injury, it is curious to speculate upon the course of reasoning by which the cause of death could be described as "natural." The coroner, indeed, attempted to argue the matter, and asserted that the actual and principal cause, by which he meant the last or immediate cause, should have been described as the "primary" cause, which in that case he declared was a "natural cause." It appeared from the evidence, extraordinary as it may appear from a coroner's standpoint, that the coroner in this case would have preferred that all refer-

ence to the accident had been omitted from the certificate, in which case no inquest would have been held. The coroner instructed the jury that they would not be justified in returning a verdict of "accidental death," and after much discussion the following cumbrous verdict was returned: "That the deceased died from natural causes, namely, pulmonary embolism, consequent upon confinement to the house, the result of an injury to his leg, sustained by accidentally falling down."

We sincerely hope medical practitioners will, in the best interests of the profession and of the public, not on this account be induced to omit to enter in their certificates the originating as the "primary" cause of death. We may safely aver that where one coroner, as at Worthing, may object to a faultless certificate such as that in the case above mentioned, there are twenty of those officers who would reasonably complain if the originating or "primary" cause in the case of injury were omitted from the certificate.

THE NEW FACTORY BILLS.

In the previous articles on the proposed alterations in the Factory Act (1878), we have discussed the objections urged against the office and duties of the certifying surgeons, and have shown how worthless are those objections, and how largely they are founded on exaggeration and misrepresentation. It now remains for us to review the propositions relating to sanitation contained in the Bill of the Home Secretary, postponing further discussion of the propriety of Clause 19, whereby the abolition of the office of certifying surgeon is decreed.

At the outset, we may observe that the clauses of Mr. Matthews's Bill which have a sanitary character add in a very small degree to the truly sanitary provisions of the existing Act. The clauses of most consequence are those which extend the scope of sanitary inspection to workshops, hitherto more or less exempt from it, and bring under the same regulations domestic workshops, and especially those concerned with the so-called "sweating system."

"Sanitary provisions" stand in the forefront of the Bill, and furnish matter for seven clauses. "Safety" is dealt with in one clause, the eighth. The first-named group virtually adds nothing to the category of sanitary requirements over and above what the "principal Act" (1878) called for; in fact, the summary given is less complete and emphatic than that contained in the latter. Their principal aim is to define the executive for administering the sanitary scheme proposed, and to extend its application to workshops formerly exempt from the supervision of factory inspectors in matters of sanitation. The first clause thus reads: "If the Secretary of State is satisfied that the provisions of the law relating to public health with respect to cleanliness, ventilation, overcrowding, or lime-washing, are not observed in any workshops or class of workshops . . . . he may, if he thinks fit, by order, authorise and direct an inspector or inspectors, under the principal Act, to take, during such period as may be mentioned in the order, such steps as appear necessary or proper for enforcing the said provisions."

A subsection provides that inspectors so authorised shall have the same powers in the case of workshops as they possess with regard to factories; and shall possess the like authority to punish or remedy defaults as is bestowed upon the sanitary authority of the district in which the workshops are situate.

By Clause 4 of the principal Act, a factory inspector could call upon the local sanitary authority, on giving due notice, to take the necessary action to remedy the insanitary circumstances reported. By the new Bill an inspector may act *per se* where his notice of sanitary defects is disregarded by the local authority, and can recover from the latter any expenses incurred by his action. By this clause inspectors of factories become the final referees in sanitary questions, and can override the opinions and actions of a local sanitary authority, and of its medical officers. Reasons may be urged for this proceeding arising from the unwillingness of local sanitary boards whose members are wholly, or for the most part, manufacturers, and who are unable to perceive, or, at least, to acknowledge, remediable sanitary evils in their establishment.

We say such a court of final appeal may be required, but we are indisposed to regard factory inspectors as being the right class of persons to constitute it. If sanitary authorities are to have their views set aside, the action should proceed from an officer or officers specially instructed and engaged in sanitary work; qualifications which inspectors of factories cannot be expected to possess. Indeed, the author of the Bill foresees that his opinion and that of his factory staff in regard to sanitary matters and questions of safety in the construction and working of machinery is likely to be disputed by manufacturers; he therefore arranges for the adoption of the principle of arbitration as a means of settlement. But here, again, in establishing a court of reference to determine sanitary questions in dispute, he has, in the appended schedule of rules for arbitration, taken no steps to secure arbitrators competent by special knowledge to arrive at a just judgment.

Turning now to Clause 3, we must confess that we do not perceive its purpose as an amendment to previous legislation. It repeals Sections 3 and 33 of the Factory Act, 1878, and Section 19 of the Sanitary Act, 1866, which "relate to cleanliness, ventilation, and overcrowding," and also to limewashing and painting, and replaces them by far less definite provisions. The repealed clauses called for workshops to be kept clean and free from effluvia arising from any drain or other nuisance. They also required that every factory and workshop shall not be overcrowded, and that it "shall be ventilated in such a manner as to render harmless, so far as is practicable, all the gases, vapours, dust, or other impurities generated in the course of the manufacturing process or handicraft carried on therein that may be injurious to health."

On searching for provisions presumably superior in an amendment Bill, we find only such as are less comprehensive and efficient. Thus we encounter the old provision that every workshop shall be kept free from effluvia, limewashed, and cleansed; and by Clause 8 we gather that ventilation is to be satisfactory, but no special allusion is made to the propriety of removing gases, vapours, and dusts as ordered by the Act of 1878. Now, extensions and amendments in regard to these things would be particularly looked for in a Bill which is recommended to Parliament as an amended sanitary measure. We may be wrong in this interpretation of the third clause: for this Bill, like its fellow Parliamentary productions, seems so constructed as to afford exercise for legal subtlety and argument.

The next clause of sanitary purpose is the tenth, which permits women to work for twelve hours a day less one hour and a half allowed for meals. In many occupations such rules are too general, for they take no account of the enormous differences existing in the character of the employments pursued by women. This want of recognition mars this present Bill, and, doubtless, arises from the fact that the Home Secretary has pretty exclusively had placed before him the conditions of labour found in textile works, the owners of which have had a chief voice in framing the measure.

To proceed:—Clause 18 shows an advance in factory legislation by providing that "An occupier of a factory or workshop shall not knowingly allow a woman to be employed therein within four weeks after she has given birth to a child." Such a clause has been long advocated by all well wishers to women and their offspring, and we hope to see it adopted, but no idea is given as to the source whence the occupier is to get his information. Women whose aim it is to work as soon as possible after confinement will not be the informers, and it seems to us necessary to enact that the woman on returning to work shall submit a certificate from the registrar of births as to the date of her delivery, or else one from the medical man or midwife who attended her.

Another highly commendable new clause is that fixing a maximum fee of sixpence for a copy of birth obtained from a registrar up to the age of 16. This enactment is most desirable in the interests of factory operatives. A great amount of oppression, legally justifiable, has been exercised on the part of registrars. The Act of 1878 secured sixpenny fees for children employed, but left the amount undefined in the case of those 14 years of age and upwards. This absence of a fixed fee encouraged registrars to get the maximum amount for copies of birth certificates, and the result has been that poor youthful workers have had to pay from two shillings to three and sixpence to obtain the necessary proof of age.

During the long and happy years, therefore, that have elapsed since 1878, registrars of births have rejoiced in the gain of several shillings for filling in each formal copy of the date of birth, while the certifying surgeons have, in the meanwhile, been required by the wisdom of an economical Parliament, to give certificates of fitness for the fee of sixpence each.

Clause 22, prescribing the rules for reporting accidents, is a very inconsiderable amendment upon its predecessor in the existing Act. The accident it is necessary to report must be "of such a nature as to prevent the person injured by it from returning to his work in the factory or workshop, and attending to it during a period of five working hours within three days after the occurrence of the accident." How and by whom all this information respecting the presence and doings of the injured party, and the hours occupied, is to be got, does not appear. The reporting of accidents is very imperfect in many places, and at times the obligation to report is avoided by arranging for the return of the individual injured to the mill within the period allowed for sending notice, although he is practically unfit to follow his customary employment.

Clause 25 is a much needed amendment, and the same must be said of Clause 29. They are intended to reach operatives employed outside registered factories and workshops, in doing work given out from them; and to give the right of access to all those places of work which have hitherto escaped inspection, on the plea that premises or rooms were private. Now none are to be so considered unless solely used for the purpose of sleeping. It is hoped, therefore, that, for the future, the carrying on of work illegally and in secret may be abolished, and a mortal blow inflicted upon the "system of sweating," that is, the subletting work to people outside factories engaged in so-called "domestic workshops" or in their own homes..

The first six clauses of the Factory and Workshops Act Amendment Bill were passed by the Grand Committee on Trade at its first meeting on March 19th. The next meeting of the Committee will be held on April 9th.

At an investiture held by the Queen on March 18th, Brigade-Surgeon Thomas Edwin Burton Brown was decorated with the Order of the Indian Empire.

Dr. Nencki, Professor of Medical Chemistry in the University of Berne, has been offered a post in the Institute recently founded in St. Petersburg by Prince Alexander of Oldenburg.

The appointment of Mr. C. S. Sherrington as Professor-Superintendent of the Brown Institution was formally confirmed by the Senate of the University of London at its meeting on March 18th.

The dates of beginning of the next Third M.B. and M.C. Examinations at Cambridge were in our last number given in error as June 12th and 15th. The correct dates are: Third M.B., May 12th; M.C., May 15th.

An official notice has been issued by the Foreign Office to the effect that the epidemic of typhoid fever at Florence is now at an end, and that the condition of water supply is occupying the urgent attention of the local authorities.

In the Chamber of Deputies on March 17th, M. Deroulède introduced a measure excluding foreign dentists from France. "I demand," he said, "that Frenchmen's teeth shall be extracted by Frenchmen." The French deputies, however, did not desire that privilege, and rejected the ex-Boulangist's proposal without a division.

The Photographic Society of Great Britain have arranged to hold an exhibition of collotype printing on April 14th. In this process, as is perhaps generally known, photography plays the part of the lithographic artist, and a sensitive gelatine film that of the lithographic stone. It presents certain advantages for the reproduction of scientific drawings and photographs.

The medical officer of health for Oxford contradicts the statement that scarlet fever is "making progress in the various colleges." An outbreak of the disease has occurred in the city since the beginning of the year, but has been chiefly confined to one district. Nine cases occurred among undergraduates at four colleges; the patients were removed, their rooms disinfected, and no fresh cases have been notified since March 5th.

OPHTHALMOLOGY AS A COMPULSORY SUBJECT.

At a special meeting of the Ophthalmological Society of the United Kingdom, held after the ordinary meeting on March 12th, Mr. Tweedy brought forward the motion referred to in the British Medical Journal of March 7th, page 540. This was seconded by Mr. Macnamara, and supported by Dr. Macnaughton Jones and others, and after some discussion

was voted upon by the members present and carried. The following gentlemen were then nominated as delegates from the Society to urge the opinions expressed in the motion upon the General Medical Council: Sir William Bowman, Drs. Ord, Argyll Robertson (Edinburgh), and Little (Manchester), and Messrs. Power, Swanzy (Dublin), and Tweedy.

SIR GEORGE BIRDWOOD.

An influential Committee headed by Sir Dinshaw Petit has been formed in Bombay to commemorate the services of Sir George Birdwood, M.D., who entered the Bombay Medical Service in 1854. Before becoming attached to the Commercial and Statistical Department of the India Office in London, Sir George Birdwood was for many years Professor in the Grant Medical College and Curator of the Bombay Museum. He had a large share in bringing about the formation of the Victoria and Albert Museum and the Victoria Gardens in Bombay.

PROPOSED EPILEPTIC COLONY.

A bill has been introduced into the Legislature of the State of New York to authorise the formation of a colony for epileptics. It is proposed to purchase a site of 300 acres, and to erect buildings on the cottage or pavilion system. Provision is ultimately to be made for between 1,000 and 2,000 patients. In addition there will be, if the Bill passes, schoolrooms, workshops, a hospital, a pathological laboratory, and outbuildings for agricultural, floricultural, and dairy purposes. The scheme appears to be well conceived: the need for some institution of the same class is often keenly felt in this country.

BABY FARMING.

The woman Alice Reeves, alleged to have kept a baby farm in Camberwell, was formally charged at the Central Criminal Court, before Mr. Justice Hawkins, on March 13th, with causing the death of a boy, Stephen Simmons. The child, 18 months old, weighed only 10lbs. Mr. Justice Hawkins, in passing sentence, said it appeared to him that the prisoner, simply for her own cupidity, had taken charge of the children, and afterwards grossly neglected and left them, utterly callous and indifferent to their fate. He sentenced her to ten years' penal servitude.

RAIN GAUGES.

At the usual monthly meeting of the Royal Meteorogical Society on March 18th, Mr. G. J. Symons, F.R.S., read a paper on the history of rain gauges. He stated that the first rain gauge was designed by Sir Christopher Wren in 1663, but the rainfall was first systematically measured in Paris in 1668. In England the first observations were made in Lancashire in 1677. The lecture was illustrated by a large collection of rain gauges, evaporation gauges, and new instruments, arranged in the rooms of the Institution of Civil Engineers.

METROPOLITAN HOSPITAL SATURDAY FUND.

The annual meeting of the subscribers to the Hospital Saturday Fund was held at the Mansion House, under the presidency of the Lord Mayor, on March 14th. The report showed a considerable increase, the total workshop collection reaching nearly £15,000, as against £8,000 in the previous year; the outdoor collection on July 15th (in spite of the unfavourable weather) amounted to £5,096, as against £4,644 in 1889. The Council had been enabled to discharge a debt of nearly £1,000 from last year; to award to the various hospitals and dispensaries of London £16,000, as against £12,000 in 1889; and to carry forward a substantial balance. By an arrangement made last year with the Invalid Transport Corps of the St. John Ambulance Association, wherever a serious case of illness required removal to one of the London hospitals, collectors of the fund might, upon application at the offices of the fund, obtain an order which would entitle the patient to immediate removal within the four-mile radius by the Invalid Transport Corps in a horse ambulance carriage with attendant, on the understanding that the patient was free from infectious disease. The report and balance-sheet of the Surgical Appliance Committee showed a large increase of useful work. The report was adopted.

DEGREES FOR LONDON MEDICAL STUDENTS.

At the meeting of the Senate of the University of London, on March 18th, the recommendation of the Special Committee as to the preparation of a draft charter, to which reference was made last week, was adopted. The charter will be submitted to Convocation at its next meeting on May 12th. Both the draft charter and the scheme upon which it is founded will be circulated among members of Convocation before the meeting. If adopted by Convocation it will be with the least possible delay forwarded to the Privy Council by the Senate.

THE RANK OF ARMY MEDICAL OFFICERS.

Mr. Stanhope, in answer to a question by Dr. Farquharson in the House of Commons, has promised to print and circulate for the information of members the letter from Sir Andrew Clark, President of the Royal College of Physicians, in continuation of previous correspondence with reference to the rank of army medical officers, together with a communication recently addressed to him by the Parliamentary Bills Committee, and signed by Mr. Sibley, Deputy-Chairman, and Mr. Macnamara, who it will be remembered was a member of Lord Camperdown's Commission.

THE ROYAL COMMISSION ON TUBERCULOSIS.

The Local Government Board, on behalf of the Royal Commission on Tuberculosis, have just issued a circular letter to medical officers of health throughout the country, inviting their co-operation, and through them that of the medical profession generally, in collecting information as to the apparent communication of tubercle from animal to man or from man to animal. Information is asked for under the following heads: (1) a history, with particulars, of any case of tuberculosis in man which has appeared to the observer to be caused by the use of tuberculous food (meat or milk), or by attendance on tuberculous animals: (2) a history, with particulars, of any case of tuberculous infection of animals which has appeared to the observer to have been contracted from human subjects suffering from tuberculosis: (3) a history, with particulars, of habitual use of animal food believed by the observer to be tuberculous in cases where individuals or communities have kept free from tuberculous disease. Information on any of these points will be welcomed by Mr. Leopold Hudson, the Secretary to the Commission, at 7, Whitehall Place, London, S.W.

THE IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The Irish Medical Schools' and Graduates' Association, which has done so much since its foundation in 1878 to further the best interests of medical men possessing the degrees and diplomas of Irish universities and corporations, gave a dinner at the Holborn Restaurant on St. Patrick's day. The chair was taken by Dr. Gilbart Smith. Sir George Murray Humphry, in responding for The Guests, referred to the ready wit and the ready tongues of the hosts; and his reference to the last-named quality was received in serious silence, for the success of the evening was somewhat endangered by the undue length of some of the speeches. Canon Teignmouth Shore, who followed Sir G. M. Humphry, gave immediate proof that an Irishman can appreciate and obey the aphorism that brevity is the soul of wit. Surgeon T. H. Parke, who followed Director-General Dick, R.N., in responding for Our Defenders, observed that he left the Army Medical Service

with regret, but that he had become convinced that the service, with its "compound comminuted titles," offered a very unsatisfactory and unsatisfying career. Surgeon Parke has just accepted the appointment of Vice-Consul in the Oil Rivers Protectorate.

DEATH FROM SUFFOCATION WHILE RECOVERING FROM ETHERISATION.

Dr. Walter W. H. Tate, resident medical officer, University College Hospital, has sent us the following particulars of a case upon which an inquest was recently held; some of the reports published have incorrectly attributed the death to chloroform. "H. P., aged 20, came up to this hospital on March 12th, to have the operation of circumcision performed, which was rendered necessary owing to the presence of phimosis. He had been instructed in the morning to have no food after 2 o'clock, the time for the operation being fixed for 8 P.M. Ether was administered, and the patient took it well all the time, and the operation was completed without any trouble. The anæsthetic had been suspended for five minutes when the patient began to vomit, and during the vomiting he became suddenly cyanosed and stopped breathing. The operator then passed his finger to the back of the pharynx and removed a large piece of undigested meat, which was found fixed in that region. This did not relieve the breathing, so laryngotomy was performed, and an attempt was made to clear the trachea, but without success. Artificial respiration was employed, but the patient never rallied. At the subsequent *post-mortem* examination it was found that a large mass of partially digested meat was fixed in the lower part of the trachea, extending into the two bronchi, and completely closing the lumen of the tube, and the stomach was found to be loaded with semidigested food. At the inquest the patient's friends informed us that he had a large meal at 4 o'clock in the afternoon; and it is probable that if he had carried out his instructions with regard to abstinence from food the accident would not have occurred. The death was certainly not in any way due to the anæsthetic used."

FRENCH SURGICAL CONGRESS.

As has already been announced, the fifth meeting of the French Surgical Congress will be held at Paris under the presidency of Professor Guyon from March 30th to April 4th. The first general meeting will take place in the large amphitheatre of the Faculty of Medicine on Monday, March 30th, at 2 P.M. The principal questions proposed for discussion are: 1. Surgical Interference in Affections of the Nervous Centres (primary trephining of the skull being excluded); among the speakers on this subject will be Professor Ollier, of Lyons, and Mr. Victor Horsley. 2. Remote Results of the Removal of the Uterine Appendages in Non-neoplastic Affections of these Organs; Drs. P. Reclus, G. Richelot, and Pozzi, of Paris, Sir Spencer Wells, and Mr. Lawson Tait will take part in the debate. 3. The Different Kinds of Suppuration considered from the Bacteriological and Clinical Point of View; on which Professor Verneuil and others will speak. Among the other communications promised are the following: Dr. J. Boeckel (Strassburg), Resection of Knee based on Eighty Personal Observations; Dr. E. J. Moure (Bordeaux), Thyrotomy in Cancer of the Larynx; Dr. P. Reclus (Paris), Treatment of Pelvic Suppurations; Professor Thiriar (Brussels), Laparo-enterotomy for Intestinal Obstruction caused by a Calculus; Dr. Pozzi (Paris), Wounds of the Ureter in Laparotomy; Dr. A. Broca (Paris), Varieties and Radical Cure of Inguinal Hernia: and Dr. Poirier (Paris), Extroversion of Bladder.

VITRIOLIC FOGS.

The Special Committee previously referred to in the British Medical Journal, consisting of Dr. G. H. Bailey, Dr. J. B. Cohen, Mr. P. T. Hartog (of Owens College), and Mr. Tatham (medical officer of health for Manchester), appointed to report on the air of Manchester, have presented a preliminary report. The report shows how the number of deaths from respiratory diseases increased during the prevalence of fogs impregnated with sulphurous acid and other injurious matter. Taking the normal number of deaths per week in Manchester from the above causes at 60, they found that during the period of the exceptionally dense fog which preceded Christmas this number went up to over 200. In like manner, in London, the number of deaths from diseases of the respiratory organs increased during those fogs from 300 to over a thousand. The sulphurous acid of the air arises wholly and solely from the combustion of coal (which contained from 1 to 2 per cent. of sulphur). Experiments were made simultaneously at the Owens College and at the Town Hall. During three days' fog there was carried down per square mile in the neighbourhood of the infirmary (by no means the worst part of Manchester) nearly 6 cwt. of sulphuric acid, while at the Owens College the amount was over 4 cwt.: the "blacks" even at the latter station were over 2 tons, and the hydrochloric acid about 2 cwt. Some idea may be formed of the injurious nature of such deposits on the leaves from the fact that the sulphuric acid formed often 6 to 9 per cent, and the hydrochloric acid 5 to 7 per cent. of the whole deposit.

PROFESSOR KOCH'S RESEARCHES.

The Budget Committee of the Prussian Chamber of Deputies has approved of a grant of 165,000 marks (£8,250) towards the establishment of an Institute for the study of infective diseases, under the direction of Professor Koch. On March 12th the Berlin Municipal Council voted the sum of 200,000 marks (£10,000) towards the erection, on ground belonging to the Corporation, of a Convalescent Home for tuberculous patients who have been relieved or cured in any of the city hospitals. The resolution is so worded as not to limit the benefits of the institution to patients treated by any particular method. The committee of six medical men charged with the investigation of Koch's treatment in the Madrid hospitals, has issued an announcement to the effect that in consequence of the unsatisfactory results of the injections the experiments have been discontinued. In no single case has cure, or even appreciable improvement, been observed. The Imperial School of Medicine at Constantinople recently addressed a petition to the Turkish Government, asking it to prohibit the use of Koch's tuberculin in private practice.

TREATMENT OF INEBRIETY IN ENGLAND.

The seventh annual report of the Dalrymple Home for the Treatment of Inebriety abounds with encouragement to all who regard the inebriate habit as the outcome of a diseased condition. The home is really a hospital for the special treatment of a definite disease. The patients are under constant medical care and observation, and the reports furnish full particulars of each case, with the result of treatment and the after-history of the cases so far as that can be ascertained. Two hundred and twenty-four patients have been discharged since the institution was opened, after an average term of residence of between six and seven months. Of these, 42 per cent. have done well—a remarkable fact, considering that the period of addiction prior to admission had averaged nine years. Several points of interest are touched by the records of the cases. More than half the total number admitted were between 30 and 40 years of age, the average being 36. While the patients came from every quarter of the globe, more than three-fourths were from England, 5 per cent. from Scotland, and 7 per cent. from Ireland. Nearly all were well educated, almost one-fourth having had a college training. The learned professions were well represented, the clerical sending 6, the legal 12, and the medical 19. Idleness seems to have operated as a factor, 57 having been gentlemen of no occupation; 16 were beer or wine inebriates, the great majority having been addicted to ardent spirits; and 11

were morphine takers. Constant inebriates were in proportion to periodic as 2 to 1. The chief complicating diseases were chest affections, rheumatism, gout, and syphilis. A feature worthy of special note is that a family history of inebriety or insanity was obtained in exactly one-half of the cases. The satisfactory record of improvement ought to stimulate the medical profession to bring every legitimate pressure to bear upon members of Parliament to give practical effect to the repeated declarations of the British Medical Association and the Society for the Study of Inebriety by the passing of a measure for the compulsory reception and detention of inebriates, for the simpler and less forbidding mode of admission in the case of voluntary applicants, and for free care and treatment of the poor.

THE POPULATION QUESTION IN FRANCE.

This subject naturally continues to exercise the minds of French statisticians and scientists. Dr. Jomileff discusses it in the February number of the *Archives de Tocologie*. The true cause of the stationary population appears undiscovered—perhaps the theory that the race is naturally not prolific, or that climate and habits are against fertility is correct. Levasseur, Dr. Jomileff notes, has recently shown that the question of professions and socio-religious ideas has little direct influence on fertility. Thus statistics make members of the liberal professions less prolific than farmers and business men, but the liberal professions best allow celibacy, or often enforce it, and late marriages are common. Social and religious ideas seem to have little influence, contrary to what might have been supposed. In strictly religious communities Protestant as well as Catholic—a large family is held to be an honour, if not a blessing, and checks to impregnation are deprecated. Yet statistics show that the fertility of such communities is not higher than that of large bodies of men and women, chiefly labourers, where the religious element is weak and where checks are openly tolerated. Britanny, the Maritime Alps, and Corsica are fertile in children, and the population are strict in religious observances and almost free from corrupting influences; yet the inhabitants of the valley of the Garonne, also a strict and pious folk taken as a whole, have very few children. Lastly, some districts where the peasants are comfortably off, have a low fertility, others show an increasing population, whilst the same irregularity is seen in different departments where the country people are poor and ill-fed.

SCOTLAND.

An additional £1,000 has been added to the funds for building an addition to Paisley Infirmary by two subscriptions of £500 each from Mr. Archibald Coats, of Woodside, and Mr. W. B. Barbour, M.P.

The directors of the Royal Edinburgh Hospital for Sick Children have elected Mr. R. D. Rudolf, M.B. and C.M., and Mr. Henry Greville Huie, M.B. and C.M., resident physicians in the hospital, for a period of six months from and after May 1st next.

Dr. Alexander Black has been appointed by the managers of the Eye, Ear, and Throat Dispensary one of the surgeons to that institution, vice Dr. Maxwell Ross, who has resigned, on his appointment as medical officer of health for the county of Dumfries.

The Winter Session of the Aberdeen School ended on March 13th; and the Professional Examinations for the degrees of M.B. and C.M. began on March 16th. A large number of candidates have presented themselves for the examinations.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

In terms of the bequest made to the Royal College of Physicians of Edinburgh by the late Dr. John Parkin, Fellow of the College, a prize has been offered for the best essay "On the Curative Effects of Carbonic Acid Gas or other forms of Carbon in Cholera, the different forms of Fever, and other Diseases." The prize is of the value of £100 sterling, and is open to competitors of all nations. Essays must be received by the Secretary of the College not later than December 31st, 1891.

PROPOSED CONSUMPTION HOSPITAL FOR EDINBURGH.

At a public meeting, which was well attended, held on March 16th, the President of the Royal College of Physicians (Dr. T. Grainger Stewart) moved, and Professor Henry Drummond, of Glasgow, seconded, a resolution to the effect that it was desirable to provide hospital accommodation where suitable cases recommended from the dispensary might be treated indoors. By a second resolution, moved by the Rev. Thomas Nicol, and seconded by Dr. Halliday Croom, an acting committee was appointed. The Victoria Dispensary was opened on November 22nd, 1887, and from that time till now 1,583 separate patients have been treated. Many of the individual patients have attended on many separate occasions—in some cases more than a hundred times. The average daily attendance has for some months been over 50; on some occasions lately it has reached 70 and upwards.

LORD RECTOR'S ASSESSOR AT ABERDEEN UNIVERSITY.

By the lamented death of Mr. James Murray Garden, who, unfortunately, was never able since his appointment to be present at a University Court meeting owing to his illness, the Assessorship to the Lord Rector is vacant. Lord Huntly has invited the Students' Representative Council to suggest to him some suitable men, in order that he may select one who might have the confidence of the students as well as his own.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

At the monthly meeting of the Society, Emeritus Professor Struthers read a paper on "Medical Education," in which he advocated a higher preliminary education, a wider development of practical teaching, a stringent cutting down of the lecturing system, which in Scotland had grown till it overshadowed all else, and a care that the fifth year which is to be added to the curriculum be actually spent in practical work. An interesting discussion took place on the address, and on the motion of the chairman, Dr. Rodger, a vote of thanks was given. The Society has granted the medical students of the Aberdeen University the liberty of attending its monthly meetings and the use of its library and reading-rooms for a nominal fee. This innovation is the outcome of negotiations that have been taking place for some time between the medical students and the Society, and it is to be hoped that it may prove a mutual benefit.

GLASGOW UNIVERSITY CLUB.

A movement has been initiated, which already has every prospect of success, for the establishment in Glasgow of a social club in connection with the University, to be called the "Glasgow University Club." There is a club already in existence bearing the same name, which was founded during the stormy period that preceded the passing of the Universities Act, when its functions were mainly polemical. It has done good work; but as it cannot undertake the social side of club life with any likelihood of success, it is expected that the name would willingly be given up if a club for social purposes receiving the approval and support of all parties in the University were founded. Already over 300 gentlemen, among whom are the Principal, many of the

professors and lecturers of the Universty, representatives of all the professions, and prominent business men who have been connected with the University, have signified their intention of supporting the scheme. A committee of these has been appointed to make the necessary arrangements.

IRELAND.

A NEW JOURNAL OF SANITARY SCIENCE.

Dr. Edgar Flinn is the editor of a new journal—the *Health Record*—which is to be devoted to the cause of sanitary science in Ireland. The venture is a bold one, but the editor is energetic and capable, and he has given proof in the first number that he deserves success. Sanitary matters are not placed in Ireland on the high level that they have reached elsewhere. Boards of guardians and town authorities are hard to move in the right direction, but a journal like this will serve to help in the general education. The contributors are men of well-known position, among them being Sir Charles Cameron, Dr. E. McDowel Cosgrave, the Editor, and Mr. W. Kaye Parry.

ETHER DRINKING IN IRELAND.

The evidence recently given before Sir Lyon Playfair's Committee on British and Foreign Spirits fully confirms the statements made in Mr. Ernest Hart's address on ether drinking.[1] Some of these statements were questioned at the time in the public press, but it is now clear that the prevalence and injurious nature of the practice was under- rather than over-estimated. The Rev. Dr. Carter, Rector of Cookstown, stated in his evidence on March 10th that in his district ether drinking was not a rarity, but a common practice, and was on the increase. It had even extended to children, who obtained it from beggar women who tramped the country with a bottle of ether in their pockets. They exchanged the drug for eggs, and it thus came about that children frequently came to school smelling strongly of ether. On market days, the witness stated a great number of people kept themselves drunk all day for sixpence. They took two pennyworth of ether at 10 o'clock, again at 1, and again at 4. He also stated that ether was now sold more by grocers than by chemists, who were to some extent deterred by the Sale of Poisons Act. Mr. Wilkinson, Secretary of the Irish Temperance League, and Mr. Thomas M'Kenzie Ledlie, a Dublin journalist, gave similar evidence.

LORD WOLSELEY ON THE MEDICAL SERVICES.

General Viscount Wolseley was a guest at the recent banquet of the Royal College of Surgeons of Ireland, and, in response to the toast of the Army and Navy, replied, according to the report in the *Irish Times*, as follows: "It was to him a great pleasure to have to speak of the profession to which he had the honour to belong, and especially on an occasion like the present, when he spoke at the table of the most distinguished members of a profession so intimately allied to that of arms as the surgical and medical professions were. The President, he regretted to find, had drawn some distinction in his remarks between the combatants and non-combatants of the army. Well, that was a distinction unknown to the army. They looked upon the doctors as the most valuable members of their profession. They never drew a distinction between combatants and non-combatants in Her Majesty's army. . . . . He thanked them most cordially for the army, and he begged to include in that thanks the medical officers of the profession to which he had the honour to belong." We take it for granted his lordship was correctly reported; and, if so, there is not a word in the above speech to which we do not accord hearty applause. We sincerely trust these are now the gallant soldier's permanent sentiments. But the profession and the medical officers may well ask. Is this the veritable Lord Wolseley of the *Pocket Book* and the Camperdown Commission? If the army knows no distinction, and "they never drew a distinction between combatants and non-combatants," how was it that, in reply to Q. 1408 at the Commission, Lord Wolseley was unable to say whether the men of the Army Medical Department were soldiers or not? Is he able to reconcile his late generous speech on this point with the recorded evidence of Mr. Stanhope's other "military advisers" as given before the Commission?

[1] British Medical Journal, October 18th, 1890.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

A meeting of the General Committee of this Congress was held at the rooms of the Royal Medical and Chirurgical Society, on March 16th. His Royal Highness the Prince of Wales presided, and there was a large attendance.

His Royal Highness announced that the Queen had consented to act as Patron.

The list of Vice-Presidents, already published, was read, with the addition of the name of the Duke of Edinburgh.

Sir Douglas Galton read the report of the Organising Committee. It stated that the inaugural meeting would take place at St. James's Hall, on August 10th, under the presidency of the Prince of Wales, and the sectional meetings would be held on the five following days in the rooms of the learned societies at Burlington House.

Sir Spencer Wells (Chairman of the Reception Committee) read the report of that committee, in which it was stated that the Corporation of London had voted £2,000 for an entertainment in the Guildhall; that the Zoological Society had granted the free use of the gardens during the week to all members of the Congress; that Messrs. Agnew had placed their gallery at the disposal of Mrs. Priestley and the Ladies' Committee; and that the Parkes Museum had arranged for a reception. Several residents in London and its neighbourhood proposed to invite members to garden parties, and other entertainments. A useful handbook to London, chiefly descriptive of the sanitary and educational objects of interest, would be issued.

Surgeon-General Cornish read the report of the Finance Subcommittee, in which it was estimated that the necessary expenditure would not fall short of £6,000; of this amount £1,492 8s. had already been promised or paid.

Dr. Corfield (the Honorary Foreign Secretary) stated that invitations had been sent from the Foreign Office to foreign Governments, and from the Colonial Office to the governors of the colonies, requesting them to send delegates to the Congress; letters had also been sent to foreign ambassadors in this country asking them to direct the attention of the Government of their countries to the importance of the matter. The Governments of France, Italy, Switzerland, and the British Colonies of Victoria, New Zealand, Hong Kong, and Strait Settlements, had already appointed delegates. They had opened up correspondence with eminent hygienists and demographers throughout Europe, the United States, Canada and the British Colonies.

Mr. Digby (Honorary Secretary for India) stated that the Secretary of State for India was fully sensible of the importance of the Congress. Letters were about to be forwarded to the Presidents of the Chambers of Commerce of Bengal, Bombay, Madras, Rangoon, and the leading municipalities. Quarantine was one of the subjects which would be discussed.

Sir Henry Roscoe, in moving the adoption of the reports, congratulated the Congress on the fact that Her Majesty the Queen had consented to become Patron. He had lately been in Berlin and other university towns, and he found that great interest was expressed by the leading German scientific men, and he believed that the German element of science would be well represented on this occasion. The resolution was seconded by Dr. George Buchanan. The Lold Provost of Edinburgh, in speaking to the resolution, referred to the interest which the Congress had excited in Scotland. The resolution was carried.

Dr. Poore reported that the following, among others had

consented to become members of the Honorary Council:—The Secretary of State for India; the Presidents of the Royal Colleges of Physicians and Surgeons of England, Edinburgh, and of Ireland; the Faculty of Physicians and Surgeons, Glasgow; the Governor of the Apothecaries' Hall, Ireland; the Presidents of the Royal College of Veterinary Surgeons, the Royal Society, the Statistical Society, the Royal Medical and Chirurgical Society, the British Medical Association, the Chemical Society; the President-elect of the British Association for the Advancement of Science; the Director-Generals of the Army and Navy Medical Departments; the Presidents of the Society of Medical Officers of Health, Public Health Medical Society, Epidemiological Society, University College; the Principal of King's College; Sir Lyon Playfair, Sir James Paget, Sir Henry Acland, Sir Thomas Crawford, Sir George Paget, Sir Frederick Abel, Sir Guyer Hunter, Miss Nightingale, Professor Frankland, Dr. Cameron, M.P., Mr. Shirley Murphy, Dr. Alfred Carpenter. One hundred and sixty-five delegates had already been appointed by municipal and other bodies throughout the country, and from some of them preliminary invitations had been received to view the sanitary works under their care.

The Lord Mayor, in moving a vote of thanks to the Prince of Wales for presiding, said that he felt confident that the deliberations of that Congress would be fraught with the very best results, and that its success was already assured, from the fact that His Royal Highness had accepted the post of President. The motion, which was seconded by Sir John Coode, was carried with acclamation.

The Prince of Wales returned thanks. His duties had been light, but he thought the meeting had been successful—a good start had been made. The list of the organising committee contained the names of many able men, and any services he could render to that committee were entirely at their disposal. The Queen had given her sanction and approval. Nothing was more important than enterprises for the amelioration of the health of the people generally. This Congress, which was the seventh International Congress of the kind, would, he had little doubt, be as successful as, and even more successful than, than the preceding ones.

Preliminary programmes have been issued by the Sections. In the Section of Preventive Medicine, after a short address by the President, Sir Joseph Fayrer, a discussion on "The Mode of Preventing the Spread of Epidemic Disease from one Country to the other" will be opened by Surgeon-General McNab Cunningham, C.S.I., and Dr. Taylor, of New York. A discussion on "Diphtheria, with special reference to its Distribution and to the need for comprehensive and systematic Inquiry into the Causes of its Prevalence in certain countries or parts of countries," will be opened by Dr. Edward Seaton, of London, and by Dr. Hewitt, of Minneapolis. A discussion on "The Relation of Alcoholism to Public Health, and the Methods to be adopted for its Prevention," will be opened by Sir Dyce Duckworth, M.D., of London. The honorary secretaries are; Dr. Sidney Martin, 10, Mansfield Street, Portland Place, W.; Dr. Isambard Owen, 40, Curzon Street, W.; Dr. Edward Seaton, 35, George Street, Hanover Square, W.

The two main topics selected for discussion by the Section of Bacteriology are: (1) Immunity—Natural Occurrence and Artificial Production; (2) Tuberculosis in Man and Animals. This second discussion will be held in conjunction with Section III (Relation of the Diseases of Animals to those of Man). Papers are also invited on the general characteristics—morphological, biological, and chemical—of micro-organisms; on the relation of micro-organisms to specific infective diseases, and on the action of disinfectants. Special arrangements will be made for demonstrations on these subjects, and every facility will be given to readers of papers who desire to illustrate their remarks by microscopical preparations, cultures, photographs, or lantern slides. A museum and laboratory will be arranged by a special committee appointed for the purpose. The President of the Section is Sir Joseph Lister; communications should be addresseed to one of the secretaries: Dr. William Hunter, 61, Wimpole Street, W.; Dr. M. Armand Ruffer, 19, Iddesleigh Mansions, Westminster, S.W.; or Mr. C. S. Sherrington, 75, Lambeth Palace Road, S.E.

In the section on The Relations of the Diseases of Animals to those of Man, papers will be read on Meat Infection, by Dr. E. Klein, F.R.S., and Professor Gaffky, of Giessen; on the Inspection of Meat, by Dr. Francis Vacher; on Animal Parasites Communicable to Man, by Professor G. T. Brown, C.B., and Professor Rudolph Leuckart, Leipzig; on the Regulation of Milk Supplies, by Mr. Shirley Murphy, M.O.H., London; on the Intercommunicable Infectious Diseases of Animals and Man, by Professor Crookshank and Professor Perroncito, of Turin; on the Propagation and Prevention of Rabies, by Dr. George Fleming, C.B.; on Anthrax, and its Relations to Workers in Various Trades, by Mr. W. Duguid and Professor Chauveau. A discussion will also be held on "The Relations of the Consumption of Milk from Dairy Cows suffering from Infectious Udder Disease to Epidemic Disease in the Human Subject. Communications should be addressed to Mr. Ernest Clarke, 12, Hanover Square, W.

In the Section of Infancy, Childhood, and School Life, the subjects to be discussed are: The Classes of Children to be dealt with, the Modes of Distinguishing these Classes, and of Observing and Studying their Conditions. All communications should be addressed to Mr. T. A. Spalding, London School Board Office, Victoria Embankment, W.C.

In the Section of Architecture in Relation to Hygiene, the main topics to be discussed will be the Laying out and Extension of Towns, and the methods of construction of private dwellings, of artisans' and labourers' dwellings, common lodging-houses, trade premises, and public buildings. All communications relative to this section should be addressed to Mr. Ernest Turner, 246, Regent Street, W.

In the section of State Hygiene a large number of topics have been selected, including the Organisation of a State Health Department, Relative Duties of Individuals and Communities; the Education, Position, and Duties of Health Officers of all Grades; the Notice of Infectious Diseases, the Disposal of the Dead, and the Position of Sanitary Science and Practice in Different Countries. All communications should be addressed to Mr. John Lithiby, Local Government Board, Whitehall, S.W.

In the Division of Demography the topics suggested for discussion are: Marriage and Birth, Disease, Death, Occupation, Race and Locality; Change in Population, Food, Anthropometry. All communications relative to this division to Mr. Stephen N. Fox, 13, Bruton Street, London, W. Foreign correspondence to be addressed to Dr. Corfield, Hon. Foreign Secretary, 20, Hanover Square, London, W.

EPSOM COLLEGE.

Dr. C. Holman (Reigate) treasurer of Epsom College, has issued the following appeal to all local secretaries: The rapid increase in the number of pupils at Epsom College, due to the excellent work of the head master and his staff of assistants, has resulted in more than filling both chapel and dining hall. Last year the school passed six boys through the preliminary scientific examination for the degree of M.B. of the University of London; sixteen passed through the London matriculation examination, and eight passed last January. In July, 1890, seven boys (all who entered) obtained higher certificates in the examination of the Oxford and Cambridge Board: and since January 1st, three open scholarships have been gained—two directly from the school—one at Cambridge of £30 for natural science, and one of £80 at Oxford for classics.

The Council have almost immediately to face the necessity of enlarging the chapel and of building a new dining hall, the present hall being required for school purposes: and they must also consider the question of extension of the school accommodation. The great object of enabling the pensioners to have augmented incomes with residence amongst their friends must never be lost sight of.

Allow me most earnestly to entreat you to use your heartiest endeavours to enlist direct support for these objects, and also to secure fresh donors and fresh subscribers to the institution as a whole, so as to enable the Council to undertake these pressing and onerous responsibilities, and to extend the great advantages offered by the school.

FACTORY LEGISLATION.

The following petition has been presented to the House of Commons by the President and Fellows of the Royal College of Physicians of Ireland:—

The Petition of the President and Fellows of the Royal College of Physicians of Ireland

Humbly Sheweth—

That the President and Fellows of the Royal College of Physicians of Ireland have had under their consideration a Bill to amend the Law relating to Factories and Workshops, prepared and brought into your Honourable House by Mr. Secretary Matthews, Mr. Ritchie, and Mr. Stuart Wortley, and ordered to be printed, February 10th, 1891.

Your Petitioners do not approve the proposal contained in Clause 19, subclause 1, of the said Bill, which provides for the abolition of certificates of fitness for the employment of children and young persons in factories and workshops, heretofore required in pursuance of Section 27 of the principal Act.

This provision is, in the opinion of your Petitioners, objectionable and dangerous to the public health, inasmuch as it abolishes the safeguard of a medical examination in the case of children and young persons seeking employment in factories and workshops.

Evidence has been laid before your Petitioners of the exceeding value of that medical examination, and your Petitioners cannot but think that the public health will be seriously menaced should the medical certificate of physical fitness no longer be required in pursuance of Section 27 of the principal Act as aforesaid.

Wherefore your Petitioners humbly pray that your Honourable House will be pleased to omit the objectionable subclause in question from the Bill.

And your Petitioners will ever pray.

John Magee Finny, President.
John William Moore, B.A., M.D. Univ.Dubl.,
Fellow and Registrar.

We are enabled to furnish again this week a number of interesting pieces of evidence with regard to the utility of the present system of certifying children and young persons which have been received by Sir Walter Foster in response to his letter published in the British Medical Journal of March 7th.

Dr. George Dougan (Portadown, Co. Armagh) observes that many parents show great anxiety to have their children working full time before they attain full age. In the absence of a certificate of birth, one of the parents is required to make a declaration before a magistrate; and he gives a striking instance of the length to which some parents will go. The case was that of a boy who was brought up with a statutory declaration, in which the father "solemnly and sincerely" declared that the boy was over 14 years old. Dr. Dougan refused to certify, and, having been at the pains to discover the union in which the boy was born, procured a birth certificate, which showed that so far from being 14, as his father alleged, he was only 10 years and 8 months old.

Dr. Robert Roberts (Blaenau-Festiniog) states that he has been the means of preventing young persons, qualified by age and school certificates, from apprenticing themselves as slate quarriers on account of physical unsuitability for that branch of industry. The work consists of splitting and dressing the slate rock by the aid of machine power in closed mills; the concussion and vibration of the machine causing the floating of a great quantity of minute dust particles. He further points out that over and above the good certifying surgeons may do by declining to pass applicants, and by postponing or suspending those unfit for work the surgeon may, as a natural outcome of the examination, guide the parents as to the most suitable occupation for their more weakly children. Lay inspectors could not profess to do this.

Dr. George Newstead (Eccleshill, near Bradford), who has held the appointment since 1841, believes that he has on an average rejected 7 or 8 a year. The principal causes have been spinal curvature, defective eyesight, incurable and disqualifying lameness, scrofula, and cutaneous disease. He considers, however, that more stress should be laid upon the indirect influence of the surgeons than upon their direct interference to reject.

Dr. Henry S. Purdon (Belfast) observes that when, on a former occasion, Belfast was threatened by an epidemic of small-pox, the certifying surgeons, acting upon instructions given by the late Mr. Baker, chief inspector, did good service in looking after vaccination. Recently, in view of the reappearance of small-pox, he has examined the arms of everyone brought before him in mills and factories, and he found that some 14 children had never been vaccinated, and that a great many presented very doubtful vaccination marks. In such cases the necessity for vaccination and revaccination was strongly urged both upon employers and upon employed.

Dr. E. S. Machin (Erdington, Birmingham) writes with reference to proofs of age that he has found that alterations are very commonly made, evidently by the parents, who desire to make the children appear older than they really are. Rejections on account of physical unfitness are by no means rare: and, further, he frequently points out to the employers that a child who does not appear in robust health might be passed if they would undertake that the work to which he should be put should be some light employment.

Dr. W. F. Marsh Jackson (Certifying Factory Surgeon, Smethwick, Staffordshire) writes: It has of late years been less frequently necessary to reject children on account of physical unfitness or insufficient age. He attributes this to the three following main causes:

1. The production of a certificate of birth being now compulsory.
2. Its being *known* that children will be subjected to the "doctor's examination."
3. The marked improvement that has taken place in the health and physique of children of late.
4. The discretion and judgment he has used in passing candidates for employment, and the *personal influence* he has been able to bring to bear through this long period to ensure attention to his suggestions as to the employment of children.

Since January 1st, 1889, there have been 16 rejections in his district—4 for falsification of certificate of birth, 1 for failure to produce such certificate, 11 for physical unfitness, and 1 in consequence of contagious disease. He considers that there is a manifest fallacy in attempting to appraise the utility of the certifying surgeon by the number of rejections that appear in the register. It would be as reasonable to measure the value of the inspectors by the number of prosecutions instituted by them. The knowledge that the surgeon must be passed acts in various ways as a deterrent. Thus it is a common practice for parents to bring their children to the surgeon beforehand to ascertain his opinion as to their fitness for work, and the clerks in charge of the registers have gathered some knowledge of the appearances of children in a weakly condition, and decline to submit them to the ordeal of examination. The certifying surgeon also exercises a considerable influence by regulating the employment of persons, that is to say, he is enabled to recommend the class of work which might safely be undertaken by persons not utterly unfit, but in a condition below that which would fit them to undertake general labour. Further, he finds that the certificates of birth are frequently tampered with, names and ages being altered, and that inadmissible proofs of age such as statements on scraps of paper, irregular and recent entries in family Bibles, are brought as proofs of age.

Dr. John Livy (Bolton) is of opinion that without the certifying provisions in the Factory Act the lower animals would be better protected than the human being; for, without it, a lame child might be worked, whereas no man would dare work a lame horse. He thinks that factory surgeons ought to have powers with regard to sanitary appliances, to ventilation, and to insisting upon vaccination. He thinks also it would be an advantage if they had powers to grant special certificates with reference to the class of work, as, for instance, to recommend sitting work to cases of cured morbus coxæ. Further, as to rejections, it is not merely the number actually refused that should be noted, but the number deterred. He gives a list of rejections in the south district of Bolton during 1888 and 1890. Most of the cases are half-timers, and number 77. The cases of rejections, as set out in the table, are very various. He also gives a number of instances of rejection previous to 1889.

THE HOSPITALS COMMITTEE.

The Brompton Consumption Hospital.—Seamen's Hospital, Greenwich.—Lock Hospital.

At the meeting of the Committee on March 12th, Mr. H Dobbin stated that he had been thirty-three years Secretary of the Brompton Consumption Hospital. That institution was essentially a special hospital, and dealt not only with consumption but all diseases of the chest. He received £500 a year and luncheon. The hospital now consisted of two buildings, one on each side of the Fulham Road; one building being in Chelsea and the other in Kensington. The institution was founded in 1841. There were 184 beds in the old and 137 in the new building. Of those, about 185 were for males and 136 for women. There were a good many more male than female applicants. When the hospital was full the average daily occupied beds was about 300. He was responsible to the Committee of Management. There were four meetings in the year, open to the press and the governors. The Executive Committee met once a week, and there were a number of subcommittees. The treasurer was an honorary officer. There were five auditors, business men but not professional accountants, elected by the annual meeting of governors. There were no paying patients. The out-patient department was very large. The admission of patients was upon a recommendation signed by the governors, and the out-patients came upon subscribers' letters. Acute cases, however, the medical officer had power to admit immediately, under certain restrictions. The resident medical officer received £200 a year and all found, and the assistant £50 a year and everything found. There were also 4 house-physicians. The committee of management made the contracts for food. The gross expenditure last year was £24,495. The funds were derived from the following sources: Ground rents, £932; rents from the London estate (some houses), £198; dividends, £3,590; annual subscribers, £8,050; Dr. Lambert's Fund, £18 17s.; donations, £5,206; legacies, £9,594; church

collections, £168; Hospital Sunday Fund, £1,562; Hospital Saturday Fund, £662; and incidental receipts, £3,549. There had been a considerable drop in the amount received from the Hospital Sunday Fund in the last year; the grant was in the previous year £1,718. The hospital was nursed by its own staff of nurses, and the head of the department was the lady superintendent, who received £150 a year and everything found. She also had a special fee of 20 guineas for lectures to the nurses. There were 61 regular staff nurses and probationers and 9 extra nurses. There were 7 sisters—one at the head of each gallery for day duty; and 2 night sisters or night superintendents—one for each building. The hours of the day nurses were from 7 A.M. to 9 P.M.; they were off duty for two hours thrice a week, from 2 to 10 once a month, and also 12 to 10 once a month, and one Sunday in the month from 12 to 9. They had an annual holiday of sixteen days. It was now proposed to give them some time off every day. Ward maids were employed. There were no children's wards.

The WITNESS further stated, in answer to Lord MONKSWELL, that, although sometimes out-patients were sent away, he had no reason whatever to suppose the out-patient department was abused. There was no inquiry officer, although inquiries were made when it was thought necessary. He or his chief clerk practically selected the tradesmen for the contracts. He selected those who were considered respectable and responsible persons.

In answer to the CHAIRMAN, the WITNESS stated that he had never compared the prices paid for food with those paid by other institutions. Complaints from patients as to the food were very rare. The drains of the hospital were up to date. Two years ago the whole of the drainage of the older building was overhauled and entirely reconstructed. There was a practically constant supply of water from the Chelsea Waterworks Company. The fire arrangements were most complete, and there were hydrants from top to bottom and a drill by the fire inspector. An even temperature was kept by means of hot-water pipes. The chaplain received £300 a year and a house. The Rose Charity Fund was really the Samaritan Fund. Patients came from all parts of the country and also from the Continent. There were no convalescent homes belonging to the hospital, but arrangements were made with the London Samaritan Society whereby patients were sent to the seaside. The in-patients last year numbered 1,529 and the out-patients 13,753. The estimated cost per bed was £89 1s. 3d.

The CHAIRMAN: Would you like to see a general system of accounts for all hospitals for purposes of comparison?—It might be advantageous; but we give the fullest information in as concise a form as possible to the governors, who can get any other information they desire. The Witness continued that there was a Medical Committee who dealt with anything relating to the medical department of the hospital. They took part at the weekly board meeting in the general business.

Dr. THEODORE WILLIAMS, the senior physician of the Brompton Consumption Hospital, said he had been nearly 20 years full physician and 3¾ years assistant physician. The majority of cases received were consumption—67 to 70 per cent. and the rest were cases of chest diseases (of the heart) and pleurisy, empyema, bronchitis, asthma, emphysema, congestion of the lungs, and pneumonia. Diphtheritic cases would not be admitted as they belonged to the class of general infectious diseases. There was a throat department for cases of throat affections with lung disease. Cases of disease of the liver were not knowingly taken in. If ever taken in it was in connection with lung or heart disease. There was no fear of cases which might be treated at general hospitals being treated at Brompton to the exclusion of the special consumption and chest cases. When founded the hospital was in a good situation, but he frankly admitted that his own and others' views were that the best place for consumption hospitals was not in towns, but in the country, as they ought to be in pure air. But they had to meet the difficulties of in- and out-patients.

The CHAIRMAN: Is consumption looked upon as infectious?—There are some who think it is infectious, and there is some slight ground for that opinion. But there has not been a single proved case of infection in the Brompton Hospital since it was founded. The Witness contended that stringent measures were taken there to stop infection. No chance whatever was given in the hospital for infection. The greatest care was taken in regard to securing the very best and most effective means of ventilation, and of giving the patients plenty of air, which was frequently changed. Under very unfavourable circumstances there was no doubt that, apart from this hospital, consumption was occasionally caught, where perhaps a consumptive girl slept with her sister, or a man caused his wife to catch it. Having watched for twenty years, he was not able to trace a single case of infection from one patient to another at the hospital. The medical staff were very particular there about the expectoration of the patients, as that was considered the most likely means of communicating infection, if it was communicated at all. The sputum was received into ordinary spittoons, and an antiseptic fluid put with it, and then the contents were emptied twice a day, and the whole mass mixed with the small coal which was used to heat the furnaces, and stirred in and all consumed. There was a good deal said about general hospitals having special departments for consumption, and that it was unnecessary to have special consumption hospitals; but the fact was that in the past and even now a good many general hospitals would not receive confirmed consumptive cases. Besides, the general institutions had not all the appliances which they had at the Brompton, and it would be a very costly experiment for the general hospitals to attempt it. The need for special consumption hospitals was shown by the spread of them of late years throughout London, and there were no fewer than eighteen in different parts of the United Kingdom. He was very much struck by the anxious inquiries from foreign countries about the Brompton Hospital, and medical men had come there from Paris, Berlin, St. Petersburg, and America, to study the arrangements at Brompton, with the view to imitate them. On the whole he was in favour of special hospitals, but if he had been asked many years ago, before any special hospitals had been built, and if the general hospitals had been ready to offer those opportunities for special departments which they were ready to do later on, he should have said decidedly it was much better to have special departments. But it had got too far, and there must be special hospitals now.

In reply to Lord CATHCART, the WITNESS said that there had been a satisfactory decline (about 50 per cent.) in consumption mortality in the past forty years, since the Consumption Hospital had been established, owing doubtless to the great improvement in sanitary matters. There was not much analogy between consumption and cancer. He was quite satisfied with the food supply at Brompton, which was excellent. Under certain circumstances there was a fear of infection from contiguity. It was through the marital relations that a man would infect his wife.

In answer to Lord ZOUCHE, the WITNESS stated that he would not say the majority of the patients at the Brompton Consumption Hospital were cured, but they were greatly improved.

Lord CLIFFORD OF CHUDLEIGH: You improve them to such an extent that they live long enough to die of something else?—Yes.

In reply to Lord SAYE AND SELE, the WITNESS said that when the Chelsea site was adopted it was considered one of the best in London, and it was adopted on the advice of the Medical Committee. As regarded London they could not have done better.

Lord MONKSWELL: Do you think it desirable that the London qualification should be necessary for medical men at hospitals?—Yes; I think it is highly desirable that you should have some corporation or some body to which to be able to go for counsel and advice in certain cases, and which should also have some authority over the members of the medical staff if and when, they misconducted themselves, and also to see that they were properly qualified.

Dr. FOWLER, senior assistant physician at the Brompton Hospital, said there were about 77,000 attendances annually in the out-patient department. Some of the cases were dyspeptic, who were treated until they got better; they came under the impression that they were suffering from consumption. He was also senior assistant physician at the Middlesex Hospital. The consumptive out-patients might be equally well treated at a general hospital, but the in-patients could certainly be better treated in the wards of a special consump-

tion hospital. He was in favour of the existence of special hospitals. The out-patient department at Brompton was not, in his opinion, abused. At general hospitals he considered the out-patient department essential for educational purposes. If one were beginning the hospital system anew, no doubt it would be better to group the special departments around the general hospitals. Patients were not admitted to the out-patient department without letters. He doubted whether there would be any great advantage in having an inspecting officer to inquire into the circumstances of the patients. In the case of the Brompton Consumption Hospital it would require a travelling inspector to go all over the country.

Dr. TAYLOR, assistant physician to the West London Hospital, said the out-patient department was very overcrowded, the number of the patients being about eighty a day. The competition for subscriptions in London was so keen that the hospital authorities must of necessity publish a report showing that they received so many out-patients every year. If the hospitals were independent of the Hospital Sunday and Saturday Funds and of voluntary contributions, the number of out-patients would diminish. The crowding of the out-patient departments acted prejudicially to the patients themselves. He was not complaining of the management of any particular hospitals. The out-patient departments were also very injurious to the poor practitioner, because many of the patients could afford to pay a small sum. A number of the out-patients came with the most trivial ailments, and ought not to receive hospital treatment gratuitously. There should be a fixed limit of new cases, but there should not be a hard and fast line so as to exclude urgent cases. There was an abuse in giving governors' letters when not required. Women were the great offenders in going to hospitals for medicine when they did not require it.

The Committee then adjourned.

On March 16th, Mr. P. MICHELLI, the secretary of the Seamen's Hospital, Greenwich, stated that the hospital was entirely free. There were several branches and dispensaries connected with it. The special function of the hospital was to treat seamen, and every class of disease or accident was taken in except small-pox and typhus cases. There were 225 beds at Greenwich, and 14 beds at the branches. The Seamen's Hospital Society was supported chiefly by voluntary contributions. Funded and landed property brought in an income last year of £3,600, of which £700 was from land. He received a salary of £400 a year, with a house and also a small commission, which averaged for the last two years £47 a year. Besides seamen, urgent cases of landsmen, women, and children were taken in. The hospital was governed under its own Act of Parliament. There was no medical committee. The charity was peculiar in that being so far from London their resident surgeon was an eminent medical man who resided on the spot. There were 195 working beds in the hospital last year. The receipts included £3,605 from annual subscribers, £1,321 donations, £708 Hospital Sunday Fund, £126 Hospital Saturday Fund, £1,137 from collections on board ships, and £7,094 from legacies. So far as legacies were concerned last year was a good one, the average for the last ten years having been £1,700. The total of receipts last year was nearly £18,000, and the expenditure for ordinary purposes was £12,765. That did not include expenditure for building. The accounts were audited by a professional auditor. Greater uniformity was desirable with regard to hospital accounts in general. It would be a good thing to have a central body to audit the accounts. The Charity Organisation Society's memorandum did not convey a fair comparison of the accounts and costs of beds at hospitals. It was difficult to find out how much was spent on the out-patients. He did not think such a system of audit and inspection as he suggested would cause a falling off of subscriptions from the public. The auditory body he would like to see should be in some way in conjunction with the Charity Commissioners. All trust funds should be placed in the hands of the Charity Commissioners, as was now done in some cases. He thought that the proposal of a central body made by Sir Henry Longley (of the Charity Commissioners) was a very good one, but their duties should be confined to inspection and audit, and they should have no control.

The CHAIRMAN: Would the control go so far as licensing institutions?—Yes, so far as new hospitals are concerned.

You wish to preserve the individuality of the hospitals?—Yes, and at the same time to keep some little check on the accounts. It is also important to check the numbers of patients.

Lord KIMBERLEY: Might not a body be appointed from the hospitals themselves without bringing them under Government control?—Yes; I have thought of that, but there is such a rivalry between the different institutions.

In answer to Lord CATHCART, the WITNESS stated that there were twenty-eight beds in the hospital for venereal cases, and they were usually full.

Lord THRING: Are you not aware there is the greatest possible resistance throughout the provinces to placing money in the hands of official trustees, on the ground, as is alleged, that it dried up the sources of charity?—I know it is not popular, but I cannot see how it can dry up charity. I can only say that if there were some such licensing body as that suggested, we might have a hospital where it is wanted in Camberwell.

In further examination by the CHAIRMAN, Mr. MICHELLI stated that the principal medical officer admitted patients. There were no governors' letters. The nurses were trained at the hospital. The head of the nurses was the matron under the principal medical officer. She received £100 a year, with board and residence. The staff of nurses consisted of the matron, four sisters, eleven nurses, eight probationers, two paying probationers, three mission and two male nurses—the latter being specially to attend to the venereal cases. After giving details of the hours and pay of the nursing staff, the Witness stated that there was a chaplain for the hospital, and he was paid £200 a year.

The CHAIRMAN: What are your medical officers?—There is a principal medical officer, who receives £350 a year and a house; and there is a house-physician and a house-surgeon, the former receiving £70 and the latter £50 a year. They are not allowed to take private practice. The resident medical officer was, the Witness added, responsible for the sanitary condition of the hospital. There were a very large number of out-patients treated at the hospital. Last year the number of new out-patient cases was 8,552. They were all treated free.

The WITNESS, at the close of his examination, said he should like to draw the attention of the Committee to the want of proper arrangements at the London hospitals for the out-patients, who were allowed to remain out in the wet and cold for half an hour before they were attended to.

Mr. BUXTON SHILLITOE, F.R.C.S., surgeon of the Lock Hospital, said that the cases taken in there were more serious and important on the female than the male side. According to his statistics for the years 1870, 1880, and 1890, it appeared that there were 385 in-patients in 1870, 627 in 1880, and 691 in 1890. The hospital was very poor in 1870, and a certain portion of the hospital was taken up by the Government cases. No doubt the beds would be full if the authorities could have afforded it.

Lord CATHCART: There is a great want, you think, of lock hospitals?—The difficulty is to get persons to go into the hospital.

Do you not think it is a horrible thing that there should be a number of women going about suffering with and spreading this disease?—Yes; it is the most horrible thing imaginable, and one cannot speak too strongly against it.

What suggestions have you to make?—The only suggestion is to enlarge the hospital and to keep the patients in until cured.

But you cannot do that; public opinion will not allow it?—I hope to see the day when the public will see the necessity of allowing us to shut up the women. The public are not sufficiently alive to the danger from the spread of the disease.

The CHAIRMAN: What is the average of your mortality?—Very slight indeed. I do not think we have more than three or four deaths in the year—under 1 per cent.

Mr. A. C. COOTE (the secretary of the Lock Hospital) was recalled, and gave some further statistics as to the receipts of the hospital, stating that the grants from the Hospital Saturday Fund had considerably increased during the last three

years, the chief reason for the increase being the fact that the institution was opened in the evening in order to enable working men to be treated without having to leave their employment, as would otherwise be the case. The hospital had now lost about £1,300, which used to be received from the War Office. About £1,500 more was required annually to carry on the work of the hospital.

The WITNESS continued that last year 731 patients were admitted to the female hospital, and 83 entered the asylum home; 181 were sent by the committee to other homes, and 390 were received by their friends; so that, out of 731 cases last year, they only lost sight of 177. There were 1,200 men under treatment who came probably only once a week, there were only 150 women. As to the in-patients, whilst there were 20 beds for men, there were 140 beds for women.

The CHAIRMAN: Are inquiries made into the circumstances of the patients with the view of ascertaining whether they can pay?—Yes; we do not take in cases if they ought to go to a medical practitioner. Cases are sent to the hospital from all parts of the country.

THE MIDWIVES BILL.

AT a meeting of the Hospitals Association held on Wednesday, March 18th, at the Hospital for Women, Soho Square, the registration of midwives was the subject of two papers read by Mrs. Henry Smith, the President of the Midwives' Institute, and Dr. A. D. Leith Napier. The chair was taken by Dr. FARQUHARSON, M.P., and subsequently by Dr. STEELE, of Guy's. Among those present were Drs. Cullingworth, Gilbart Smith, and Ritson, the Rev. J. Mahomed, and a large number of midwives and nurses.

Dr. FARQUHARSON, in some introductory remarks, said that the Bill before Parliament had many defects, which he hoped to see removed. He was not very sanguine of the success of the Bill this session, but hoped that Government might be induced to bring in a Bill of their own in some future session.

Mrs. SMITH expressed the opinion that midwives should either be abolished altogether, or instructed in their duties, and be under proper legislation and control. It should not be possible for any woman to style herself "midwife" unless she could produce evidence of her capability and proper education. There should be a register which would enable the public to assure themselves that the midwife was duly qualified. Women of the highest respectability taking up midwifery as a profession ought to be able to feel they had a recognised position sanctioned by legislation. All women who qualified as midwives should be trained in sick nursing beforehand, as they were often called upon to act in the double capacity of midwife and nurse. During the last thirty years there had been considerable improvement both in the numbers and in the social position of those who presented themselves at the Obstetrical Society's examinations.

Dr. A. D. LEITH NAPIER dealt with the subject first from the general practitioner's point of view; he then considered it from the point of view of the obstetric physician; and then entered upon a general consideration of the requirements regarding the education and registration of midwives. He contended that the Bill would not, as had been alleged, create a new class of midwifery practitioners; difficulties attending registration would weed out the inferior midwives who now practised, and the total number of midwives would vastly decrease within the next ten or fifteen years. His experience had been that the better the midwife the more readily did she recognise her responsibility, and the more prompt and willing was she to solicit medical aid. Many ignorant women were now afraid to summon medical assistance. He expressed his strong conviction that raising the general class of midwives would benefit medical men in poor neighbourhoods financially, professionally, socially, and morally. The evils of ignorant midwifery were well known, and while the great majority of independent midwives were absolutely uneducated, he thought the majority of medical men were practically agreed on the following broad principles:—

(*a*) The education and compulsory registration of midwives.

(*b*) The careful consideration of the fair interests of women practising midwifery without certificate at the time of passing a Registration Bill. (Not less important was due consideration of the interests of the public amongst whom they practised.)

(*c*) The establishment of some system of control, of supervision, of discipline, in cases of immorality or proved incompetency.

With reference to Clause 3 of the Bill, which provided that County Councils should direct the execution of the Act, he suggested that two or more members of the medical profession should be appointed by the Medical Council to act as members of the board. Further, it would meet all requirements for examinations and such like functions to have combinations of county councils making territorial boards. In Clause 3, section 2, which required a certificate of good conduct from a registered medical practitioner, the words "and clergyman or magistrate" should be added. In Clause 3, section 3, the words following "indicating the" should be omitted, and instead, thereof, the words "any certificate enabling such person to be registered" be only inserted. This alteration would abolish any fear that the terms "qualification" or "diploma" might suggest the creation of an inferior grade of medical practitioner. In Clause 4 it would be desirable to embody more defined provisions for the supervision of registered midwives, and for the granting of annual licences to practise, subject, if need be, to some form of re-examination at stated intervals. Licences might be granted for a nominal fee, say one shilling per annum.

Dr. FARQUHARSON said that an effort would be made to get a Select Committee, before which everything could be threshed out and opponents heard: practical proposals would thus be elicited, which would enable a private member to draft a new Bill, or might induce the Government to take it up, which would be better.

Dr. CULLINGWORTH did not think they should make the penal clause in this Bill more stringent than the penal clause in the Medical Acts. A Midwives' Register should acquaint anyone who looked into it with the fact that a midwife had submitted herself to an examination and been found competent. Diplomas had been granted in Manchester in the same way as was done by the Obstetrical Society of London, and that city had become an important centre for the education of midwives. Year by year an improvement had been noticeable in the class of women who presented themselves for examination. A great deal had been made by the opponents of the Bill of the vagueness of the phrase "natural labour." The whole question of defining "natural labour" was one of education; the better a midwife was, the better she would know what was understood by "natural labour." The Bill had many flaws and would have to be amended before it could be accepted by the profession.

Dr. GILBART SMITH thought midwives certainly ought to be registered. It was not what was best for the poor practitioner, but what was best for the public. It was a question whether, in some country districts, the improved midwife would not seriously affect the position of the medical man—he thought it quite possible.

Miss WILSON, speaking from her experience in workhouses, said that at one of the largest workhouses in England, midwives were allowed to take abnormal cases, simply because the doctor lived at a distance. They used forceps, and took cases entirely without any training and without diploma. Their only experience was obtained in the workhouse. It was only natural that those who knew these facts should wish for some form of State legislation for midwives. Switzerland set England an example which she would do well to follow.

After some remarks from Miss PAGET, Mr. BURDETT, and others, the following resolution was passed: "That in view of the important questions involved in the legal registration of midwives, this meeting of the Hospitals Association request the Council of the Association to memorialise the Government in favour of a Select Committee with the view of securing the early registration of midwives."

BELFAST CORPORATION AND COMPULSORY NOTIFICATION.—At a recent meeting of the Belfast Corporation, specially convened for the purpose, it was unanimously agreed to adopt the Compulsory Notification of Infectious Diseases Act.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 15th day of April next, at 2 o'clock in the afternoon.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next meeting will be held at Pontypridd on Wednesday, April 15th. Mr. Emil Behnke will give an address on the Nature and Treatment of Stammering and Stuttering. Members desiring to read papers, etc,, are requested to send titles to Dr. Sheen, Cardiff, before March 30th.—A. SHEEN, M.D., Cardiff; D. ARTHUR DAVIES, M.B., Swansea, Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A conjoint meeting of the above Districts will be held at the Grand Hotel, Brighton, on Wednesday, March 25th. Mr. Seymour Burrows will preside. Meeting at 3.30 P.M., dinner at 5.30 P.M. Charge 6s., exclusive of wine. Mr. A. G. Mossop will read short notes on a case of Double Serpiginous Ulcer cured by Scraping. Dr. A. J. Richardson will show some patients who have been under Dr. Koch's Cure for Tuberculosis. Dr. Hollis: Short Notes of a Case of Diaphragmatic Hernia. Gentlemen who desire to contribute papers or cases are requested to write to one of the Honorary Secretaries—W. AYTON GOSTLING, West Worthing; or T. JENNER VERRALL, Brighton.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this Branch will be held at Guildford on Thursday, April 2nd, Mr. C. J. Sells in the chair. Members willing to bring forward cases or papers should communicate with the Honorary Secretary, J. P. A. GABB, M.D., Guildford.

WEST SOMERSET BRANCH.—The spring meeting will be held at the Railway Hotel, Taunton, on Thursday, April 9th, at 5 o'clock; dinner at 5.30. The subject settled by the Council to be discussed after dinner is, "What, in your opinion, is the best method of disposal of the dead in England?" Members intending to read papers or to be present at the dinner are requested to communicate with W. M. KELLY, M.D., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.—A meeting will be held on Friday, April 3rd, at the Lyric Hall, Ealing Broadway. The chair will be taken by Sir William Mac Cormac, surgeon to St. Thomas's Hospital and President of the Branch, at 8.30 P.M. Business: 1. Minutes of preceding meeting. 2. A Clinical Demonstration of Typical Orthopædic Cases and their Treatment, by Mr. Noble Smith, F.R.C.S.Ed.—C. A. PATTEN, Honorary Secretary.

BATH AND BRISTOL BRANCH.—The fifth ordinary meeting of the session will be held at the Museum and Library, Bristol, on Wednesday evening, March 25th, at half-past seven o'clock, A. B. Brabazon, M.D., President. The following communications are expected: C. F. Pickering: Cases of Arthrectomy. J. M. Clarke, M.B.: Modern Diagnosis of some Stomach Affections. A. E. Aust Lawrence, M.D.: Midwifery Forceps—their Use and Abuse. C. H. Walker, M.B.: Central Amblyopia. H. Waldo, M.D.: Arterio-Capillary Fibrosis.—E. MARKHAM SKERRIT, R. J. H. SCOTT, Honorary Secretaries.

MIDLAND BRANCH: LINCOLNSHIRE DISTRICT.—A meeting will be held at Louth on Thursday, April 16th. Members desirous of reading papers, exhibiting cases, etc., are requested to communicate, before Monday, April 6th, with W. A. CARLINE, M.D., Honorary Secretary.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—The next meeting will be held at the Bath Arms, Warminster, on Wednesday, April 1st, at 3.45 P.M. Business: Mr. Sharpin: A paper on the Antiseptic Treatment of Wounds. Mr. Kingscote: Three Cases of Pyelitis. Mr. Willcox and Mr. Davis: Cases in Surgery. Mr. Manning will move a resolution respecting the working of the Lunacy Act of 1890. Dinner at 6 P.M.; tickets (not to include wine) 5s. Members intending to be present are requested to communicate with H. J. MANNING, Honorary Secretary, Laverstock, Salisbury.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A MEETING of this District was held at the London Temperance Hospital, Hampstead Road, N.W., on March 12th, 1891, Dr. BRIDGWATER, J.P., in the chair. The minutes of the last meeting were read and confirmed.

Communications.—Dr. RADCLIFFE CROCKER read a paper on The Early Diagnosis of the Acute Exanthemata.—A long discussion ensued.—Dr. CROCKER also showed some cases of Lupus Vulgaris and Lupus Tuberculosis, which had been most successfully treated by Koch's method.—Dr. W. J. COLLINS, Dr. EDMUNDS, and Dr. RIDGE showed some cases from the wards.

Votes of Thanks.—Votes of thanks were accorded to the Chairman, the reader of the paper, and to the House Committee for their kind reception.

JAMAICA BRANCH.

A GENERAL meeting of this Branch was held on July 30th, 1890, at the Public Library, Kingston, the President, Dr. G. C. HENDERSON, in the chair. Drs. Strachan, F. H. Saunders, Plaxton, Bronstroph, Robinson, Maunsell, Fowler, Wade, and Da Costa were present. The minutes of the last meeting were read and confirmed, and signed by the President.

New Member.—Dr. Donovan was admitted a member.

Specimen.—Mr. PLAXTON exhibited a Thickened Skull-cap with great ossific deposit in the dura mater.

Medico-Military History of Jamaica. — Brigade-Surgeon MAUNSELL read a paper on the Medico-military History of Jamaica, showing the gradual decrease in sickness among the European troops in Jamaica during the last seventy years. Commencing at 1817—about the time when a first attempt was made to compile statistics of disease and classify under various heads the several causes of non-efficiency amongst soldiers—the annual mortality from all causes in the military stations in Jamaica was over 121 per 1,000, while at some of them it mounted to over 178 per 1,000; and for years the mortality ranged from 15 to 150 per 1,000. The average for the twenty years ending 1836 was 101 per 1,000. During this period, and for many years after, there were no stations in the hills over 150 feet in elevation. The military were collected in masses or in small parties—in every case overcrowded—in the hottest and most enervating stations in the plains. Sanitation was unknown or held in small estimation. The soldiers had no amusement of any kind provided for them, and indulged freely in cheap rum, which was to be had in abundance. During the ten years ending 1847 the strength of the military was considerably reduced, with a corresponding reduction in the mortality per 1,000—the result of giving the soldiers more barrack-room accommodation—and fell to one-half, or 63 per 1,000, from all causes, and 39 per 1,000 from fever. During 1848-59 a still greater reduction of the force—which fell from over 2,500 to a little over 730—was followed by a reduction in the mortality to 32 per 1,000, and for fevers 19 per 1,000. A great deal of this was due to the European troops having, in 1842, been removed to Newcastle, at an elevation of 4,000 feet from the unhealthy lowland stations. During 1860 the dress of the troops was

changed from thick cloth European clothing to woollen of light, loose texture, and by the end of ten years the mortality had fallen to 21 per 1,000 from all causes, and for fevers to 11 per 1,000. In 1856 and 1867 two very severe yellow fever epidemics occurred at Newcastle, due to neglect of hygiene. During the twenty years ending 1889 the death-rate had sunk to 11.36 for all diseases, and 4.30 per 1,000 for fevers; while at Newcastle alone the mortality during 1889 was only 8 per 1,000, and for fevers *nil*.

Multiple Warty Growths, possibly Frambœsia.—The PRESIDENT read a paper on this subject.

STAFFORDSHIRE AND SHROPSHIRE AND MID-WALES BRANCHES.

A JOINT meeting of these Branches was held at the Swan Hotel, Stafford, on Thursday, February 26th, Mr. JOHN ALCOCK, President of the Staffordshire Branch, in the chair. There were fifty-two members present. At a preliminary meeting of the Staffordshire Branch the usual routine business was transacted.

New Member.—Mr. Alfred E. Vaughan, Crewe, was elected a member of the Branch.

Specimens.—Mr. SPANTON exhibited: 1. A Hypertrophied Spleen, weighing 5½ lbs., removed by abdominal section from a married woman, aged 52, who eighteen months before had typhoid fever, and was never well after. The tumour had been noticed more than twelve months. There was no albuminuria. Splenectomy was performed by an incision through the left linea semilunaris, the pedicle secured in five portions by double ligatures of silk and the suspensory ligament separately. She recovered well from the operation, but died about twelve hours afterwards. *Post mortem* there was found a considerable quantity of clot in the abdominal cavity, but no loose ligature nor open vessel. 2. A Tumour weighing 2 lbs., and photographs, from the arm of a man, aged 37. Of twelve years' growth, it had lately developed rapidly an outgrowth nearly as large as the tumour, It extended nearly to the condyles of the humerus, and to within 3 inches of the acromion, and the brachial vessels traversed it; circumference 14 inches, sound arm 9½ inches. The tumour was removed without difficulty, having burrowed between all the muscles, and consisted of a large amount of pure fibrous tissue, with myoma in the new portion containing nests of small round-celled sarcoma in its meshes. It appeared to be a good example of a simple chronic tumour undergoing rapid changes into sarcoma. The patient made a rapid recovery, and was shown at the meeting having perfect use of the arm. 3. A large Sarcomatous Left Kidney, removed by left abdominal section from a child about eighteen months old. The operation occupied only a few minutes, was almost bloodless, and the child rallied completely, but died a few days afterwards from persistent sickness. *Post mortem*, nothing was found, except a little organised lymph around the pedicle—no general peritonitis nor hæmorrhage.—Dr. EDWARD TYLECOTE exhibited an Anencephalous Fœtus. Pregnancy had advanced normally (apparently) up to the fourth month, when the woman was frightened by a man in the road, to which, as usual, she attributed the malformation. From that time she kept gradually getting less instead of increasing in size, up to the seventh month, when the membranes suddenly ruptured in the night. She had one or two sharp pains, and the stillborn fœtus, with placenta and membranes attached, was expelled. There was no excessive quantity of liq. amnii, nor hæmorrhage. The mother had continued to suckle her first child during the first four months of her second pregnancy, the child being then 1½ year old. There was no evidence of heredity. There was entire absence of the vault of the skull and of the brain, the base of the skull being covered by tough fibrous membrane and very thin integument. Posteriorly an irregular opening existed, leading into the spinal canal, which did not appear to contain any spinal cord, but the spine was so contorted that it was difficult to trace the different parts. The cervical and vertebral spines seemed to be absent, but the dorsal spines could be counted. The different viscera were all misplaced. Out of a total of between 2,000 and 3,000 midwifery cases, Dr. Tylecote had met with six or eight such specimens of humanity.—Mr. THOS. S. WEBB (Ironbridge) exhibited microscopic sections of the growth in three cases of Rodent Ulcer, demonstrating the origin of the disease in the outer root-sheath of the hairs. Also specimens of ordinary Epithelioma, showing the different character of the cell masses compared with the same structures in rodent ulcer.

Papers.—The following papers were read: Dr. ALFRED CARTER: Cases of Phthisis personally treated by Koch's Method, with observations thereon.—Dr. CHARNLEY (Shrewsbury): Types of Ocular Inflammation, in which he limited his remarks to inflammations of the anterior part of the eye, which were accessible to observation without the aid of the ophthalmoscope. He divided them into five classes for clinical purposes: (Class 1) the conjunctival type of inflammation, characterised by muco-purulent discharge, gritty feeling, and mobile pupil, and curable by astringents; (Class 2) the ciliary type of inflammation, characterised by flow of tears, neuralgic pains, and fixed pupil, and curable by atropine; (Class 3) circumscribed inflammation of the eye, the phlyctenular type, curable by yellow oxide of mercury, with or without atropine; (Class 4) traumatic inflammation of various kinds (in all these atropine should be used); (Class 5) glaucoma. The difficulties of separating acute glaucoma from iritis, etc., and chronic glaucoma from optic atrophy, cataract, and toxic amblyopia, were pointed out. In the acute disease the symptoms to be relied upon were not so much the tension of the eye as the vascularity, the state of the pupil, vision, and age. In the chronic disease the chief reliance was to be placed on the ophthalmoscope. The paper concluded with a few rules for practitioners who had not had opportunities of making a special study of eye diseases. The principal of these were (1) always to examine the cornea, state of the pupil, and state of the vision; (2) in cases of gradual failure of vision in patients over 50 to suspect glaucoma: (3) to be careful in making a diagnosis in cases of gradual failure of vision, if the observer was not familiar with the ophthalmoscope.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN ordinary general meeting of the Branch was held at Aberdeen on Wednesday, February 18th, 1891, Dr. GARDEN, the President, in the chair. The minutes of last meeting were read and approved, and Dr. P. el Howie, Strathdon, was nominated for ballot.

New Member.—Dr. A. R. Cushney, Strassburg, was admitted an ordinary member of the Branch.

Club Appointments.—A letter was read from Dr. Stephen (Peterhead) containing two medico-ethical questions. On the motion of Dr. ANGUS FRASER, it was resolved to transmit to Dr. Stephen the following answers: (1) "That the Branch is of opinion that clubs and other such societies are entitled to change their medical attendants if they see fit; but that any canvassing or solicitation on the part of a medical man tending to bring about such a change would be a breach of professional etiquette." (2) "That such appointments do not stand on the same footing as public medical appointments."

Perforation of Soft Palate.—Professor OGSTON showed a young woman in whom the soft palate had been lost from specific disease, and in whom it had been restored by a new operation. A flap of the mucous membrane with the periosteum of the hard palate was turned down, and fixed in the position of the lost soft palate, base to back and apex to teeth. The result was excellent, speech and swallowing being greatly improved.

Koch's Treatment.—Dr. BLAIKIE SMITH gave details of a number of cases of tuberculosis of lungs, skin, and joints, which had been treated by him with tuberculin.

Specimens, etc.—Dr. HALL, for Dr. OSBERT WILSON (Huntly), exhibited the Anterior Half of the Foot of a patient, aged 76 years, which had been separated by dry gangrene.—Dr. MACKENZIE BOOTH exhibited a number of Nasal Electrodes; and also the Harvard Chair for Surgical Work.

Parliamentary Bills Committee.—Professor OGSTON moved the reconstruction of the Parliamentary Bills Committee of the Branch, which was unanimously agreed to by the meeting.

THE Lord Lieutenant and the Countess of Zetland visited the Richmond District Lunatic Asylum recently, and attended a vocal and instrumental concert given by the male and female patients and the school teachers.

BRITISH MEDICAL ASSOCIATION.

FIFTY-NINTH ANNUAL MEETING.

THE fifty-ninth Annual Meeting of the British Medical Association will be held at Bournemouth on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1891.

President: WILLOUGHBY FRANCIS WADE, B.A., M.B., F.R.C.P., J.P., Senior Physician, Birmingham General Hospital, 27, Temple Row, Birmingham.

President-elect: JOHN ROBERTS THOMSON, M.D., F.R.C.P., Consulting Physician, Royal Victoria Hospital, Bournemouth, Monkchester, Bournemouth.

President of the Council: WITHERS MOORE, M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Burgess Hill, Sussex.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital.

An Address in Medicine will be delivered by THOS. LAUDER BRUNTON, M.D., F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, London.

An Address in Surgery will be delivered by JOHN CHIENE, M.D., F.R.C.S.Ed., Professor of Surgery at the University of Edinburgh.

An Address in Public Medicine will be delivered by EDWARD COX SEATON, M.D., Lecturer on Public Health at St. Thomas's Hospital, London.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

A. MEDICINE.—*President:* P. H. PYE-SMITH, M.D., F.R.S. *Vice-Presidents:* WILLIAM GEORGE VAWDREY LUSH, M.D.; THOMAS BARLOW, M.D. *Honorary Secretaries:* WM. FRAZER, M.D., "Elmhurst," Madeira Road, Bournemouth; H. MONTAGUE MURRAY, M.D., 27, Savile Row, W.

B. SURGERY.—*President:* JOHN WARD COUSINS, F.R.C.S. *Vice-Presidents:* J. D. G. DOUGLAS, M.D.; WM. WATSON CHEYNE, F.R.C.S. *Honorary Secretaries:* A. GUNTON TURNER, M.R.C.S., "Holmwood," Bournemouth; A. A. BOWLBY, F.R.C.S, 43, Queen Anne Street, W.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President:* W. J. SMYLY, M.D. *Vice-Presidents:* ALLAN MACLEAN, M.D.; A. H. G. DORAN, F.R.C.S. *Honorary Secretaries:* H. A. LAWTON, M.R.C.S., 74, High Street, Poole, Dorset; MONTAGU HANDFIELD-JONES, M.D., 24, Montagu Square, Hyde Park, W.

D. PUBLIC MEDICINE.—*President:* J. BURN RUSSELL, M.D. *Vice-Presidents:* H. F. PARSONS, M.D.; JOHN COMYNS LEACH, M.D. *Honorary Secretaries:* C. H. W. PARKINSON, M.R.C.S., Wimborne Minster; P. W. G. NUNN, L.R.C.P., "Maplestead," Christchurch Road, Bournemouth.

E. PSYCHOLOGY.—*President:* P. MAURY DEAS, M.B. *Vice-Presidents:* HENRY JOHN MANNING, M.R.C.S.; D. NICOLSON, M.D. *Honorary Secretaries:* P. W. MACDONALD, M.D., Dorset County Asylum, Dorchester; WILLIAM HABGOOD, M.D., Belmont, Sutton, Surrey.

F. PATHOLOGY.—*President:* W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* KINGSTON FOWLER, M.D.; W. RUSSELL, M.D. *Honorary Secretaries:* W. G. SPENCER, M.B., 94, Wimpole Street, W.; E. HYLA GREVES, M.D., Rodney House, Poole Road, Bournemouth.

G. OPHTHALMOLOGY.—*President:* N. C. MACNAMARA, F.R.C.S. *Vice-Presidents:* ROWLAND W. CARTER, M.D.; MALCOLM M. MCHARDY, F.R.C.S.Ed. *Honorary Secretaries:* J. B. LAWFORD, M.D., 55, Queen Anne Street, W.; BERNARD SCOTT, M.R.C.S., "Hartington," Poole Road, Bournemouth.

H. DISEASES OF CHILDREN.—*President:* J. F. GOODHART, M.D. *Vice-Presidents:* T. W. TREND, M.D.; T. B. SCOTT, M.R.C.S. *Honorary Secretaries:* SIDNEY PHILLIPS, M.D., 62, Upper Berkeley Street, W.; DENNIS C. EMBLETON, L.R.C.P., "St. Wilfred's," Michael's Road, Bournemouth.

I. THERAPEUTICS.—*President:* WM. VICARY SNOW, M.D. *Vice-Presidents:* SIDNEY COUPLAND, M.D.; A. G. BARRS, M.D. *Honorary Secretaries:* CHRISTOPHER CHILDS, M.D., 2, Royal Terrace, Weymouth; JOHN ROSE BRADFORD, M.D., 52, Upper Berkeley Street, W.

Honorary Local Secretary: JAMES DAVISON, M.D., "Walderslow," Bournemouth.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 28TH, 1891.
9.30 A.M.—Meeting of 1890-91 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
4 P.M.—Sermon by the Right Rev. the Lord Bishop of Winchester.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address.

WEDNESDAY, JULY 29TH, 1891.
9.30 A.M.—Meeting of 1891-92 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Dr. T. LAUDER BRUNTON, F.R.S.

THURSDAY, JULY 30TH, 1891.
9.30 A.M.—Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery by Professor J. CHIENE.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 31ST, 1891.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Public Medicine by Dr. EDWARD C. SEATON.

SATURDAY, AUGUST 1ST, 1891.
Excursions.

SPECIAL CORRESPONDENCE.

BERLIN.

Bacilli in Tuberculin.—The Koch Institute.—Women and the Medical Profession.

DR. LIBBERTZ has published the following statement: "In the preparation of tuberculin it is impossible to prevent isolated tubercle bacilli now and then, though very rarely, from finding their way into the liquid. These bacilli, however, have been killed by the action of long-continued boiling heat, and are thus rendered perfectly harmless. It is true that Koch, in his last publication, says that killed tubercle bacilli cause suppuration when introduced under the skin. But this applies only to suspensions of cultivations—that is, of a very great number of tubercle bacilli. Isolated bacilli produce neither local nor general reaction. They cannot enter the blood stream from the subcutaneous cellular tissue—unless, indeed, they be injected directly into a vessel. Tuberculin is obtained from pure cultivations of tubercle bacilli, therefore no other bacteria are present in it. Of course it is possible that while the bottles are being filled, or, later on, when they are opened, atmospheric germs may get in by accident. These will, however, almost always be harmless micro-organisms—for instance, yellow sarcinæ—which may be at first mistaken for bacillus tetragenes or staphylococcus aureus. These micro-organisms cannot multiply in the fluid, on account of the large proportion of glycerine it contains. Tuberculin always shows an alkaline reaction." Professor A. Fraenkel's two assistants at the Urban Hospital have made experimental injections into the anterior chamber of the eye and into the auricular vein with tuberculin in which tubercle bacilli were found; these injections were entirely without result. This proves the correctness of Dr. Libbertz's statement.

In the Budget Commission of the German Reichstag, the Government delegate, Dr. Althoff, introduced the demand for the new Koch Institute for Infectious Diseases by a speech, in which he dwelt on the good results hoped for from the Institute. In the course of his remarks he said: "We are at present on the threshold of a new therapeutic era, introduced by the general pathological researches of Virchow and Koch's bacteriological work." And further: "Koch's discovery of a specific for tuberculosis is but the first step in the new direction. The theory of infectious diseases has passed the stage at which prophylaxis and disinfection (that is, hygiene in a wide sense) were its chief outcome; it now joins clinical medicine in striving after a common goal—therapeutic action. For its further development, therefore, it is necessary that theory and medical practice should work together; and this can only be the case in an institute for infectious diseases, with both a clinical and a scientific department."

The largely-signed petition, praying "That the study of medicine at German universities be thrown open to women,

and that women duly qualified be allowed to practise the medical profession," was contemptuously dismissed in the German Reichstag. That the petition would be rejected was a foregone conclusion. But it might have been expected that the question—which is everywhere acknowledged to be a burning one—would have been seriously discussed. It seems, however, that this was thought quite unnecessary by the opponents. The arguments against the petition were of the familiar, well-worn description, more suitable to a provincial debating club than to the Parliament of the German Empire. "Women should keep house, and not meddle with science. Women who study are objectionable." This was the gist of the opponents' speeches; the discussion did not rise above this level, and the petition was quietly thrown out.

CORRESPONDENCE.

THE MIDWIVES BILL.

SIR,—Although it has been evident for some time that the advocates of the Midwives Registration Bill had not, figuratively speaking, a leg to stand on, it is satisfactory to learn, through Sir Walter Foster, that they realise their position. Whilst such a result is satisfactory in itself, it behoves those who recognise the fallacy of proposals of this description to now put forth more energy than before, and to demonstrate that the dangers and difficulties which have been paraded as the evils to be remedied by such legislation are either non-existent or can be more satisfactorily met by other means. It would be fatal to allow the interest aroused to subside under the false impression that the proposed legislation was definitely abandoned.

The one great and central evil which is said to exist is the inability of the poorer women to obtain proper medical attendance in childbirth. Now, if anyone will take the trouble to look through the letters which have appeared in the BRITISH MEDICAL JOURNAL during the past six months he will find this point met and answered by several correspondents. In the BRITISH MEDICAL JOURNAL for February 7th, Dr. H. D. Palmer, of Colchester, not only shows how the charitable can aid, without pauperising, the necessitous poor, but touches the real source of all the difficulty, which is, that it is too common a practice to *do* the doctor out of his fee altogether. The idea of getting the doctor's services gratis comes as often from the well-to-do, who pose as dispensers of charity, as it does from the poor themselves.

The poorest women can obtain proper medical attendance in either of two distinct ways. If they like to apply to the parish there is the district medical officer, or his substitute, to attend them and to recommend the provision of any necessaries required. On the other hand, they can appeal to the lying-in club and have part of the expense paid for them.

The charitable would find the lying-in club system more economical and far more satisfactory than supporting district nurses or midwives, as in all parts of the country medical practitioners would be only too glad to attend, provided the fee was safe.

In part of the Poor-law district of which I am medical officer a district nurse has been maintained for some years, but I am not aware that corresponding advantage to the outlay incurred has resulted. Several have held the position during the last ten years or so, and have been fairly successful, but, when difficulty arises, the doctor must come, fee or no fee. All, I believe, have done a good deal of prescribing, the honours of which, in strict justice, must be divided between the nurse and some of the advanced lady philanthropists who support her.

There are some other minor reasons which have been mentioned in support of the proposed Bill, all of which are equally amenable to common-sense treatment under the present law and the resources of charity. Now that the profession is aroused, it is most desirable for their own interests that the members of it keep awake and help the public through with this as well as some kindred subjects which affect them. I am, etc.,

Pembroke. W. B. WALL.

SIR,—Again Mr. Nelson Hardy misrepresents my position. I have never objected to pledge myself to "the principle of registration" on the ground of "great danger to the public safety." I have, on that ground, objected to the present "impossible Bill," as the Lord President of the Council recently styled it. Mr. Nelson Hardy says that "I include under a midwife's duties, at the present time, the examination of the urine, the treatment of abortion, the treatment of convulsions, stitching up the perineum, and the administration of certain medicines," and that I thus "encourage midwives, who have given no proof of having had any regular training, to perform these medical and surgical duties." Mr. Hardy knows, as stated on the title page, that these "hints" are epitomised notes from the abstracts of lectures delivered by me, some years since, at the Midwives' Institute and trained Nurses' Club, to trained nurses and educated midwives. He takes care to omit the fact that in my reference to abortion there is a special note, that in "threatened abortion" the midwife should insist on the advice of a physician. Also, that with regard to convulsions, having pointed out that they are one of the "most serious complications a nurse has to deal with," I direct that the midwife should "immediately summon medical assistance," and that only in "emergency" (if there be delay in obtaining a physician) have I indicated that an enema of bromide of potassium and chloral might be administered, specifying its strength.

As to the perineum, Mr. Hardy finds its convenient to forget that while I say that a midwife ("in case she is alone") should be competent to sew it up herself, I direct that when the rent is "deep and extensive," she should send for a doctor. In my note on a bad train of symptoms in labour, I again distinctly say, that on the recognition of these by the midwife, medical aid should be summoned at once. Elsewhere I lay it down that in the case of rigors, or head symptoms with a rise of temperature following labour, medical advice should be sought at once, also that the midwife should loyally support the physician throughout the whole course of a case of labour, giving to him all the help in her power, in a quiet and unostentatious manner, ever ready to assist, but never officiously interfering or mysteriously suggesting.—I am, etc.,

H. MACNAUGHTON JONES.

Harley Street, W.

SIR,—In the BRITISH MEDICAL JOURNAL of March 14th Sir W. Foster asks space to reassure the profession that the above Bill is dead for this session. If Sir Walter wishes to give us any satisfaction, will he convey to us officially the information that the Bill has been withdrawn from the House? So long as the Bill is down for second reading it is not dead, but can be brought on for discussion. Let the Bill be withdrawn. Those acquainted with the Midwives Bills can remember how the second Bill was kept before the Commons until the very last days of the session. Dr. Farquharson, M.P., can bear me out in this. I believe the present Bill will not be withdrawn, but that an opportunity will be taken when the opponents of the Bill are off their guard so as to take a snatch vote, and so to rush the Bill through.

I would urge that more petitions be sent in, as this is the only way the Government can know the feeling of the profession. Sir Walter says the statement made by me that he suggested "sordid motives" is absolutely untrue. His words, as reported in the BRITISH MEDICAL JOURNAL of December 10th, 1890, page 1,302, are, "We hope that no medical man would allow merely sordid interests to interfere with his support of such a movement." Does this not infer that anyone who opposes the Bill will be influenced by "sordid motives?"—I am, etc.,

Liverpool. ROBERT REID RENTOUL.

P.S.—The following telegram has been received by me from Mr. H. Fell Pease, M.P., who introduced the Bill. I fear it shows that either he or Sir W. Foster are somewhat astray in their facts: "Bill remains on the notice paper awaiting promise of Select Committee. Should second reading be obtained no further stage will be attempted without Committee. —PEASE."

THE INVESTIGATION OF HYPNOTISM.

SIR,—I see from time to time notices in the newspapers of exhibitions of hypnotism by various "professors" and "doctors." These showmen conduct their exhibitions for purposes of gain before miscellaneous audiences, and as you correctly point out in your notice at page 596 of the BRITISH MEDICAL JOURNAL of March 14th, they are already finding imitators among society amateurs.

I wish to point out as strongly as possible the mistake medical men make in lending their countenance to such performances. I would especially draw the attention of your readers to the fact that the phenomena of hypnotism are at the present time being investigated by a committee appointed for the purpose by the British Medical Association at the annual meeting at Birmingham last year.

If any medical men have cases which they think might be benefited by hypnotism, I shall feel obliged if they will communicate with me on the subject, as we are anxious to have as many cases as possible treated and recorded, with the view of thoroughly testing the value of hypnosis as a therapeutic agent.—I am, etc.,

T. OUTTERSON WOOD, M.D., M.R.C.P.,
Honorary Secretary to the Committee appointed to Investigate Hypnotism.

21, Margaret Street, W.

HALVIVA.

SIR,—I see, in the BRITISH MEDICAL JOURNAL of March 7th, that kreat is recommended by Brigade-Surgeon Hunter as a new remedy for ague.

Kreat is the dried plant of Andrographis (also called Justicia) paniculata, Nat. Ord. Acanthaceæ. It is so similar in its properties to our official chiretta (Ophelia Chirata, Nat. Ord. Gentianaceæ) that it passes under the same names in the Indian vernaculars, and is more particularly confounded with Ophelia angustifolia, the stem of which is, like that of kreat, quadrangular throughout, while the stem of the ordinary chiretta is round in the lower part. Agathotes is the name given by Don to the chiretta genus, but that of ophelia, introduced by Nees von Esenbeck, is generally preferred, both names referring to its beneficent properties.

To those who are not acquainted with the action of a hot infusion of any bitter herb, especially if also aromatic, in a paroxysm of ague, the virtues of these plants may seem surprssing, but similar indigenous remedies for ague are found all over the world, for example, in our own country most of the Labiatæ and Gentianaceæ, together with the chamomile, sweet flag, and many others. The common germander (Teucrium chamædrys) bears in France the popular name of *chasse-fièvre*. But such medicines are used by natives, not because they are the best, but because they can comprehend nothing better: their standard of perfection is not so high as that of a European. It is therefore as much a mistake to try to replace quinine by these remedies as to rely on sarsaparilla for the cure of syphilis to the exclusion of mercury and iodides. The thing can be done, but at a quite disproportionate amount of trouble.

Warburg's tincture is a celebrated sudorific of the same class, being nothing more than the old *Elixir ad longam vitam* with the addition of a little quinine. All such succedanea are very useful in the treatment of ague, the cure being by no means the simple and straightforward matter generally represented. Like all stomachic and laxative tonics, they are also to some degree prophylactic.

I would like to know the meaning of halviva. Chiretta was, I believe, made, a short while ago, the basis of a proprietary article.—I am, etc.,

Brook Street, W. J. B. NIAS, M.B.Oxon., M.R.C.P.

HOSPITALS FOR THE INSANE.

SIR,—It will be in the recollection of many that last year a committee of the London County Council reported that a Lunatic Hospital would be likely materially to increase the present knowledge of the nature and causes of insanity, and, therefore, ultimately to increase the means available for its prevention and cure. There can be little doubt that there prevails an uneasy feeling that the places in which the insane are received are too much asylums and too little hospitals. Our asylums, as at present constituted, are, and must inevitably be, "refuges" for stowing away all the wreckage of our social system. The greater proportion of the inmates are made up of chronic and incurable cases; a large number of the most curable cases, those, in fact, which make up a considerable percentage of the recoveries, are patients suffering from different phases of acute melancholia. To brand such cases as "mad" in the ordinary acceptation of the term is unscientific, misleading, and obviously not in the best interests of the patient. The physical explanation of his condition is found in the disorder of his "highest nerve centres," and is a condition calling for treatment as active, and watching as close, as is given to a case of diphtheria or typhoid fever.

The BRITISH MEDICAL JOURNAL has advocated the provision of small "detached lunatic asylum hospitals for the reception of the acute and recent cases more on the lines of general hospitals, fitted with every appliance that science can suggest, and with an ample staff of physicians and surgeons."

With the view of utilising for clinical study the enormous mass of material at our command, I would urge the extreme importance of impressing upon governing bodies the desirability of throwing open our asylums on one day, at least, in each month. This would be warmly welcomed by the resident medical staff; such a course would lead to a friendly interchange of views between the profession at large and the permanent staffs of our asylums, which, manifestly, must result in benefit to both.

Further, it is most desirable that special and systematic training by a course of lectures and demonstrations should be given to asylum attendants. This is strongly advocated by the Medico-Psychological Association. By putting into practice such measures, our lunatic asylums would approximate more and more in character to the hospital type. I venture to say that if a poll of the medical officers comprising the permanent staffs of our lunatic asylums were taken, it would be found that, despite minor disagreements, the vast majority are united by the one common desire to see the establishment of lunatic hospitals on the lines of general hospitals.

After all, the question is one which will be finally settled by an appeal to that "large, sound, roundabout sense"—as Locke puts it—the heritage not alone of any particular section of the community.—I am, etc.,

FRANCIS H. WALMSLEY, M.D.
Leavesden Asylum, Metropolitan Asylums Board.

THE RECONSTRUCTION OF THE UNIVERSITY OF LONDON.

SIR,—The Royal Commissioners advised the establishment of a teaching university in and for London only; the new scheme admits as Constituent Colleges, with representation on the Senate, teaching institutions in all parts of the kingdom, each one with the power of examining for degrees in arts and science, subject to the control of an unwieldy Senate of 52 members. The Royal Commissioners rejected the request of the Royal Colleges to be allowed to constitute themselves a one-faculty university, but under the provisions of this latest scheme[1] it is evident that the medical examinations for the pass M.B. will fall practically into the hands of the corporations.

Apparently the Preliminary Scientific and M.D. examinations are unaltered, in which case "the medical grievance" will be unredressed, as the former is the one against which the most bitter outcries have been directed, whilst the M.B. will be a poor substitute for the much coveted doctorate. With a Senate of such squeezability, both these examinations must soon be whittled down, whilst their intactness may serve as a sop to facilitate the acceptance of the scheme by Convocation. The Royal Colleges may well like the scheme, for it gives them, if not the nominal, the real power of conferring degrees, and also gives the prestige belonging to the university, which their own degrees could never have. Moreover, we may be sure that whatever financial alterations may result, the students will not gain nor the colleges suffer. Already, however, come threats of opposition from University and King's Colleges, and complaints that the representation of the provincial colleges is inadequate. Nor does the Senate seem very hopeful as to the attitude of Convocation.

[1] BRITISH MEDICAL JOURNAL, February 21st, p. 428.

When may we hope that the Senate will be guided by the three teaching members of the Royal Commission, and allow the university to continue the work which it has hitherto carried on so successfully, whilst permitting the creation of another university, to bring together the teaching appliances of the metropolis, and give degrees in such a way as to redress the medical grievance?—I am, etc.,

Bloomsbury Square, W.C. J. WALTER CARR.

SURGICAL TREATMENT OF GRANULAR CONJUNCTIVITIS.

SIR,—At the meeting of the British Medical Association, held in Edinburgh in 1875, I brought before the notice of the profession a new method of treating trachoma. It consisted in scarifying the conjunctiva of the eyelids to allow free exit to the sago-like deposit, and by the use of friction of the conjunctival surfaces to get rid of any of the deposit which may still remain. The applications used were syrup of tannin and borax lotion. I then showed one case of double extraction of cataract after the cure of granulations, and another case of traumatic cataract also complicated with granular conjunctivitis and opacity of the upper segment of the cornea, successfully extracted after getting rid of the granulations by the above method.[1] I was therefore very much gratified to read in your SUPPLEMENT of October 25th, 1890, page 31, that Drs. Gust and Otto Keining advocate a method of treating trachoma which they have employed for about two years, their method being essentially the same as my own.

The last contribution, however, to the treatment of that affection by M. Darier, given in your SUPPLEMENT of February 28th, 1891, page 72, does not appear to me to be of a commendable nature, for, in addition to scarification and friction, M. Darier recommends the splitting of the palpebral fissure, which is an unnecessary mutilation of the eyelids, for we rarely meet with a case in a grown up person in which the scarification cannot be carried so far as the *cul-de-sac* by simply everting the eyelids.—I am, etc.,

Glasgow. J. R. WOLFE.

FLORENCE.

SIR.—In view of the exaggerated and misleading statements which have been lately in circulation with regard to the public health and sanitation of Florence, will you allow me space for a few words on the subject?

About the beginning of December an epidemic of enteric fever declared itself in the city, the specific poison having apparently been introduced in the water of an aqueduct which derived its supply from an open stream in a mountain valley, at a distance of about three miles from the city boundary. It is true that, before entering the aqueduct, the water had to filter down from the bed of the stream through a layer of gravel of about three metres' depth, but this was obviously insufficient to ensure its purity. A case of typhoid having occurred in a house near the banks of the stream above the point of commencement of the aqueduct, the germs presumably found their way into the open stream, and thence, by the aqueduct, into the city. The distribution of the disease in the city corresponded very accurately with the line of the pipes which derived their water from the aqueduct. From December 1st, 1890, to February 25th, 1891, a total of 1,477 cases has been reported at the Public Health Office, of which 232 have proved fatal. The population of the city and Communes is close upon 181,000. The cases occurred almost exclusively among the native Florentines of the lower classes, only two cases, so far as I can learn, having occurred among the large Anglo-American community. I know of no case as having occurred in any hotel or *pension*.

It is fair to the municipal authorities to state that they acted with decision and promptitude. As soon as the source of the disorder became apparent, the water in question was completely cut off from the city. The Director of the Public Health Office had printed and distributed among the people a handbill entitled "Hygienic Precautions to be observed by Families, Public Institutions, Cafés, Restaurants, and other Shops against Typhoid Fever." This dealt with the importance of boiling water and milk and avoiding raw vegetables. Another sanitary tract gave rules for the disinfection of closets and dejections. A public furnace was erected in the outskirts of the city, at which clothing and bed linen were disinfected at the municipal expense. It is thus evident that far from being callous and indifferent to the condition of the public health, the municipality has done its utmost to mitigate the evil, and for some weeks actually distributed boiled water gratis to the poor in various quarters of the city.

As for the existence of typhus fever, as reported in some papers, I can only suppose that an error of translation must have been committed in rendering the Italian "*tifo addominale*" by "typhus." I have never seen or heard of such here, nor do I find any mention of it in the public health statistics.

The number of fresh cases of typhoid is very rapidly decreasing, and the general condition of the public health is satisfactory. The other and quite distinct sources of the municipal water were found to be sufficient to supply the immediate needs of the city, and are pure and safe. The municipal engineers are now occupied with a scheme for an additional water supply from one of the adjacent mountains.

For the last month we have enjoyed glorious sunshine and blue skies, and the severity of the north wind has much diminished.—I am, etc.,

Florence. ALEX. R. COLDSTREAM, M.D.Edin.

WHAT IS "MILK OF SULPHUR?"

SIR,—Some prosecutions at the Marlborough Street Police Court for selling "milk of sulphur" adulterated with sulphate of calcium have recently terminated in the adjournment of the cases *sine die*. Several previous decisions were brought forward on the side of the defendants, and, having regard to these, the magistrate decided to adjourn the cases *sine die* without calling the evidence for the defence, in order that the prosecutors might, if they chose, carry the case to a higher court. This, I believe, they are not likely to do, and I will therefore make a few remarks on this subject.

The whole question turns on the meaning of the term "milk of sulphur." In many standard works it is defined as containing sulphate of calcium, while in others it is regarded as a synonym for "precipitated sulphur." The name does not occur in the *British Pharmacopœia*. If "milk of sulphur" is asked for at shops the greater number of samples obtained are precipitated sulphur, but a considerable percentage consists of the precipitate obtained by the use of sulphuric instead of hydrochloric acid. If pure precipitated sulphur is synonymous with milk of sulphur, then those who supply a mixture containing sulphate of calcium are liable to a fine; whereas, if the substance precipitated by sulphuric acid is the true "milk of sulphur," then those who supply *pure* precipitated sulphur when asked for "milk of sulphur" are liable to penalties.

It seems to me that "milk of sulphur" should be taken to mean any of the precipitates produced by the addition of an acid to the pentasulphide of calcium solution (prepared by boiling together slaked lime and sulphur), while the term "precipitated sulphur" ought always to mean pure sulphur prepared by precipitation.

It is absurd to regard the sulphuric precipitate as a fraudulent imitation, because, as a matter of fact, the sulphate of calcium is in many respects desirable as an addition to the sulphur, rendering the powder more readily miscible with liquids such as milk. The action of calcium sulphate, according to my experiments, is that of a mild laxative, like sulphur without much of the unpleasantness of the latter. I think it would be found very useful in medicine *per se*, and it certainly is by no means an injurious addition to precipitated sulphur, as might be supposed when it is spoken of as a fraudulent addition of a large percentage of "gypsum," which suggests to the lay mind a dread of plaster-of-paris casts in the intestines.

To avoid all difficulty in future I should suggest that chemists and others add to the term "milk of sulphur" the explanatory word (sulphuric) or (hydrochloric), as the case may be, and that medical men should always order "precipitated sulphur," with or without the suffix (*B. P.*) or (pure), when they want the pure sulphur. In the meantime it is

[1] See BRITISH MEDICAL JOURNAL, 1875; *Medical Times and Gazette*, April 1876; also *Diseases and Injuries of the Eye*, p. 18.

well for analysts to note that prosecutions for selling "milk of sulphur" containing sulphate of calcium will certainly fail.—I am, etc.,

Highgate. HUGH WOODS, M.D.

NAVAL AND MILITARY MEDICAL SERVICES.

THE VOLUNTEER MEDICAL SERVICE.

BRIGADE BEARER COMPANIES.

II.

It is interesting to see what has been done with regard to the formation of these volunteer brigade bearer companies, bearing in mind what assistance the regulations offer. One of the first, if not the first, brigade, to put the matter to the test of field service was the Severn Brigade, which encamped to the number of 3,500 of all ranks at Minehead in Somersetshire. Opposite the headquarters' camp, and on the summit of the mountain, the bearer company was located with a non-dieted field hospital. The company was formed from the various regiments in camp, and was rationed regimentally. This plan, however, caused inconvenience and loss of time, for a camp which is composed of several regiments must be of considerable length. Experience therefore taught that the men should be provided for by the nearest regiment, for which purpose it should be attached to that regiment; or, failing this, the company should exist as a regimental unit, and therefore do its own commissariat and supply work.

On each day of the camp brigade field days were held and the bearer company took part in them, soon getting into shape. Few cases were admitted to the field hospital, and only two of these gave rise to much anxiety. One was an incised wound of the knee, the other a case of pneumonia which terminated fatally. The patient was soon taken out of camp and removed to the cottage hospital at Dunster, for which purpose a detachment of the bearer company had to carry him on a stretcher a distance of at least four miles during a hot day. Other cases which could not be well nursed in a non-dieted field hospital were carried considerable distances. It seems strange that a brigade-surgeon is not authorised by regulations to draw such necessary transport as an ambulance wagon, especially where proper hospital accommodation is some distance from the camp.

From these particulars it will be gathered that there is much to be done before bearer companies of infantry volunteer brigades can be a success. In the first place, it would appear that there should be a recognised capitation grant for regimental stretcher bearers as such; there would then be some encouragement for commanding officers to have two men per company properly trained to act as bearers, whereas now numbers of men may be seen with their companies who wear the Geneva cross but who do no ambulance work.

In the second place, one ambulance sergeant should be allowed on the establishment of an infantry regiment of eight companies, and such sergeant should be allowed to earn the proficiency grant for his regiment in the usual manner. The bearer company would then have a reality, and would not consist as now of one warrant officer and six staff-sergeants, or sergeants who are only corporals.

Lastly comes the important question of equipment and transport. Each brigade-surgeon of volunteers ought to be authorised to obtain by requisition such *matériel* as ambulance wagons, cacolets, litters, and medical and surgical equipment. How much these are required is shown when, as at Minehead, there was a large brigade camp formed at a considerable distance from any recognised hospital. Surely it is not too much to ask that when a brigade is mobilised, field hospital equipment, as laid down in *Medical Regulations*, Part 1, Appendix 10, should be issued on loan.

In a similar way, the medical and surgical equipment of regiments requires to be improved. The public purse provides every efficient volunteer with arms, and a capitation grant from which he must be properly clothed and possess certain articles of equipment; but if a regiment requires stretchers or such necessities as surgical havresacks or field companions, it can only obtain them by purchase. In some instances commanding officers do this, but they are quite the exception. The position of volunteer regiments, if called out for active service, at the present time would be very serious. Large quantities of medical and surgical equipment are stored at Woolwich. Why not, it is asked, apportion to each battalion the quantities as laid down for field service in *Medical Regulations*, Part 1, Section I, para. 275? Too much centralisation of stores is always fatal.

A volunteer gives his time and often his money as well for his country's benefit. The least he can expect is a fair amount of attention and comfort should he have the misfortune "to go sick."

THE ALEXANDER MEMORIAL PRIZE.

THIS triennial prize, which was founded as a memorial of the late Mr. Thomas Alexander, a former director-general, and is open for competition to executive officers of the Medical Staff, has just been awarded for the second time to Surgeon R. H. Firth for his essay on "The Use of Drugs in the Treatment of Disease in the Army, the Principles on which Medicines should be Selected so as to Meet the Requirements of the Field Service." It consists of £50 and a gold medal of the value of £10. Essays for the next competition must be despatched so as to reach the Director-General on or before December 31st, 1893. The subject of the next competition is "The Treatment of Wounds and Injuries of the Abdominal Viscera, as likely to be met with in Military Practice." Further particulars will be found in an advertisement published last week.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:

		From	To
Brigade-Surgeon	A. A. Gore, M.D.	Egypt	Dublin.
,,	T. Maunsell	Bengal	Aldershot.
,,	J. Maturin	Woolwich	Curragh.
Surgeon-Major	H. W. A. Mackinnon, D.S.O.	Dover	Canterbury.
,,	J. S. M'Cutchan, M.B.	Kilkenny	Bengal.
,,	J. P. Rooney	Fermoy	Gibraltar.
,,	R. C. Eaton	West Africa	Dublin.
,,	P. J. M'Quaid, M.D.	Malta	Portsmouth.
,,	J. J. Morris, M.D.	Parkhurst	Bermuda.
,,	J. I. Routh	Madras	Netley.
,,	H. J. M'Laughlin, M.B.	St. Helena	Birmingham.
Surgeon	A. W. P. Inman, M.B.	Dublin	Mullingar.
,,	T. M. Corker, M.D.	Fermoy	Limerick.
,,	S. J. Flood	Belfast	Enniskillen.
,,	O. Todd, M.B.	Harwich	Malta.
,,	R. D. Donaldson, M.D.	Bermuda	Dublin.
,,	P. H. Fox	Dublin	Madras.
,,	H. W. Murray, M.B.	Woolwich	Gibraltar.
,,	W. Dugdale	Curragh	Bengal.
,,	D. L. Irvine	Sunderland	Gibraltar.
,,	E. R. Cree	Bengal	Chatham.
,,	H. J. R. Moberly	C. of Good Hope	Portsmouth.
,,	R. Jennings, M.D.	Portland	Bengal.
,,	S. C. B. Robinson	Devonport	Malta.
,,	C. J. Addison	Netley	Aldershot.
,,	F. A. Harris	Chatham	Bombay.
,,	E. J. E. Risk	Gravesend	Bengal.
,,	J. Carmichael	Curragh	,,
,,	W. W. Pike	Barbadoes	Dublin.
,,	J. M. Irwin, M.B.	Dublin	Gibraltar.
,,	G. Nelis	Fort George	Edinburgh.
,,	W. Kelly, M.D.	Bengal	Aldershot.
,,	G. B. Russell, M.B.	Limerick	Madras.
,,	J. R. Forrest	Colchester	Malta.
,,	H. A. Haines, M.D.	Sheerness	Bengal.
,,	J. D. Moir, M.B.	Bombay	Dublin.
,,	W. E. Berryman	Newcastle-on-Tyne	Bombay.
,,	E. Davis	Bengal	Jersey.
,,	J. Meek, M.D.	,,	Dublin.
,,	J. W. F. Long	,,	Chatham.
,,	W. T. Swan, M.B.	,,	Dublin.
,,	J. H. Curtis	,,	Kilkenny.
,,	R. G. Hanley, M.B.	,,	Dublin.
,,	A. L. H. Dixon	Woolwich	Bombay.
,,	A. A. Sutton	Golden Hill Fort	,,
,,	L. P. Mumby, M.B.	Barbadoes	Newcastle-on-Tyne.
,,	J. Fallon	Demerara	Barbadoes.
,,	W. C. Poole, M.B.	West Africa	Limerick.
,,	W. T. Mould	Pirbright	Bengal.
,,	H. E. Winter	Devonport	,,
,,	J. W. Beatty	Sierra Leone	C. Coast Castle.
Quartermaster	J. Horn	Aldershot	N.W. District.
,,	E. Thowless	Jamaica	Dublin.

THE NAVY.

STAFF-SURGEON JAMES LONG SWEETNAM, M.D., has been promoted to be Fleet-Surgeon, February 27th. He was appointed Surgeon, February 16th, 1870; and Staff-Surgeon, June 21st, 1880.

Surgeon HERBERT P. SHUTTLEWORTH has been appointed to the Royal Marine Artillery, Eastney, undated.

MEDICAL STAFF.

SURGEON-MAJOR (ranking as Lieutenant-Colonel) THOMAS O'FARRELL, M.D., is promoted to be Brigade-Surgeon, *vice* J. Wilson, M.B., F.F.P.S. Glas., who has retired, February 14th. His previous commissions were dated: Assistant-Surgeon, March 31st, 1868; Surgeon, March 1st, 1873; and Surgeon-Major, March 31st, 1877. He served in the Afghan war in 1878-80, and has the medal for that campaign.

Surgeon JOHN LEES HALL is placed on temporary half pay on account of ill health, March 3rd. He was appointed Surgeon, March 6th, 1880.

Deputy Surgeon-General A. F. BRADSHAW, who is serving at Rawul Pindee, in the Bengal command, has been appointed Honorary Surgeon to the Governor-General of India.

Deputy Surgeon-General A. ALLAN, M.D., has assumed duty as Principal Medical Officer at Edinburgh, *vice* C. G. Irwin, M.B.

Brigade-Surgeon J. MATURIN has assumed charge at the Curragh as Senior Medical Officer, *vice* J. Wilson, M.B.

SURGEONS J. MAHER and J. F. MCMILLAN, who are serving in the Bengal command, have leave of absence for six months on medical certificate.

A correspondent of the *Times* says that Surgeon T. H. PARKE, who served in Mr. Stanley's African Expedition, has been appointed a Vice-Consul in the Oil Rivers Protectorate.

Brigade-Surgeon WILLIAM CURRAN died at West Kensington on January 6th last. He entered the service as Assistant-Surgeon, March 10th, 1858; became Surgeon, March 1st, 1873; and Surgeon-Major, April 1st, 1873. He retired, January 21st, 1882, with the honorary rank of Brigade-Surgeon. He served in the Hazara campaign of 1868, and was present with the Field Hospital at Oghee during the advance of the troops into the Black Mountain (medal with clasp).

ARMY MEDICAL RESERVE.

SURGEON-MAJOR WALTER DURET AUBIN, M.B., 1st or West Regiment Royal Jersey Militia, is appointed Surgeon-Major, ranking as Major, March 18th.

Acting-Surgeon THOMAS LYNDON, M.D., 4th Volunteer Battalion Queen's Royal West Surrey Regiment, is appointed Surgeon, ranking as Captain, March 18th.

INDIAN MEDICAL SERVICE.

SURGEONS C. H. BEDFORD, F. M. STILES, and C. N. C. WIMBERLEY, all of the Bengal Establishment, have passed the examination in Hindustani by the lower standard.

Surgeon-Major C. W. OWEN, C.M.G., C.I.E., Bengal Establishment, Surgeon to the Commander-in-Chief in India, has leave of absence for one year on private affairs.

Surgeon J. W. EVANS, Madras Establishment, acting district surgeon of Ganjam, is granted furlough for ten months.

Surgeon-Major H. ARMSTRONG, Madras Establishment, Superintendent of the Lunatic Asylum at Madras, is appointed to be second medical officer at Ootacamund.

Surgeon J. GARVIE, Bengal Establishment, is transferred from the officiating medical charge of the 19th Punjab Infantry to the medical charge of the 2nd Punjab Cavalry, *vice* Surgeon-Major C. J. McCartie, appointed to the medical charge of the 29th (Garhwali) Regiment of Bengal Infantry.

Surgeon H. B. LUARD, Bengal Establishment, is appointed to the officiating medical charge of the 11th Bengal Lancers, *vice* Surgeon G. T. Lane, proceeded on field service with the Meranzai Expedition.

Surgeon J. K. CLOSE, Bengal Establishment, is appointed to the officiating medical charge of the 3rd Bengal Infantry, *vice* Surgeon S. Hassan, proceeded on field service with the Meranzai Expedition.

Surgeon F. P. MAYNARD, Bengal Establishment, is appointed to the officiating medical charge of the 13th Bengal Infantry, *vice* Surgeon S. C. Nandi, proceeded on field service with the Meranzai Expedition.

Surgeon H. SMITH, Bengal Establishment, is appointed to the officiating medical charge of the 20th Punjab Infantry, *vice* Surgeon P. W. O'Gorman, proceeded on field service with the Meranzai Expedition.

Surgeon C. N. C. WIMBERLEY, Bengal Establishment, is appointed to the officiating medical charge of the 33rd Bengal Infantry, *vice* Surgeon P. J. Lumsden, proceeded on field service with the Meranzai Expedition.

Surgeon W. J. BUCHANAN, Bengal Establishment, is transferred from the officiating medical charge of the 15th Sikhs to the officiating medical charge of the 1st Battalion 1st Gurkhas, *vice* Surgeon-Major T. Robinson, proceeded on field service with the Meranzai Expedition.

Surgeon A. J. O'HARA, Madras Establishment, is appointed to act as District Surgeon and Superintendent of the gaol at Cuddapah, *vice* Surgeon-Major F. H. Blenkinsop on other duty.

The services of Surgeon C. ADAMS, Madras Establishment, are placed temporarily at the disposal of the Government of India in the Home Department.

Surgeon C. M. MOORE, M.D., Bombay Establishment, in officiating medical charge of the 23rd Infantry, is appointed to the medical charge of the wing of the 16th infantry at Sumbulpore.

Surgeon-Major BERNARD CALLAN KEELAN, Bombay Establishment, has retired from the service, which he entered as Assistant-Surgeon, April 1st, 1867, attaining the rank of Surgeon-Major twelve years therefrom. He was engaged in the Abyssinian war in 1867-68, in medical charge of a field hospital at Delanta, and was present at the capture of Magdala (medal).

Surgeon-Major SEPTIMUS JESSE GOLDSMITH, of the Bombay Establishment, has also retired from the service. He was appointed Assistant-Surgeon, April 1st, 1873, and Surgeon-Major, April 1st, 1885.

THE MILITIA.

THE 5th Battalion of the Derbyshire Regiment (formerly the 1st Derby Militia) having been amalgamated with the 3rd Battalion (formerly the 1st Derby Militia) from April 1st, Surgeon-Major A. O. FRANCIS is, with the other officers, transferred to the 3rd Battalion, and is considered to have received a commission of the same rank and date as that held in the 5th Battalion.

THE VOLUNTEERS.

ACTING-SURGEONS H. P. LEECH and A. W. ALDRICH, 2nd Volunteer Battalion Suffolk Regiment (late the 6th Suffolk) have resigned their appointments. Surgeon Leech's commission was dated July 10th, 1878; Surgeon Aldrich's, June 4th, 1887.

Surgeon P. M. DAVIDSON, 5th Volunteer Battalion Cheshire Regiment (late the 5th Cheshire), is granted the rank of Surgeon-Major, ranking as Major, March 14th.

Surgeon C. S. YOUNG, 3rd Volunteer Battalion Royal Highlanders (late 3rd Forfarshire), has resigned his commission, which was dated February 5th, 1888.

Mr. JOHN DEWAR, M.B., is appointed Acting-Surgeon to the 1st Volunteer Battalion Queen's Own Cameron Highlanders (formerly the 1st Inverness-shire).

THE TITLES MUDDLE.

SURGEON-MAJOR draws our attention to the fact that, at page 786 of the official monthly *Army List* for March two surgeon-majors (*sic*) of the Medical Staff Corps are promoted to be quartermasters, with the honorary rank of lieutenant. Of course, sergeant-majors are meant; but if such absurd mistakes over titles of medical officers are actually made in an officially revised list, can we wonder that the ordinary civilian mind is sorely puzzled over the army designations of these officers? We hope Mr. Stanhope will cast his eye over page 786 of the list published "by authority."

RANK AND TITLES.

PERSEVERE trusts that the Parliamentary Bills Committee of the British Medical Association will not be satisfied until substantive rank with military title is granted to army doctors. Nothing else will safeguard them. Royal Medical Staff Corps will always distinguish the medical from other officers, just as Paymaster, Inspector of Schools, added after the military title, do these officers.

I. M. S. asks: Why is the Indian Medical Service more popular, judging from the higher standard of those competing for entrance: and why are the proportion of retirements from it fewer at twenty years than in the Medical Staff? The answer seems to be, the haven of refuge which the civil branch affords to Indian medical officers. The seniors are able to pass to it when military service becomes, in the absence of defined status, unpleasant or intolerable. Many of the best Indian medical officers seek civil employ on that ground, which, however, is a distinct loss to the military service. Cannot military advisers at home and abroad see this? The Medical Staff have no civil outlet, and are, therefore, driven to retire early. Men as they advance in years will not stand being placed in an anomalous and undefined position. The true remedy is substantive rank with military titles.

HONORARY RANK contends that to agitate for honorary rank would be the wisest and safest policy. The formation of a Medical Staff Corps into a regimental body would mean loss of allowances and exceptional rates of pension, which he maintains has been the experience of the commissariat in recent changes. He thinks the advice to the schools to boycott the Medical Staff is suicidal, as it would keep out good men, and fill the service with the inferior. The continued supply of well-educated candidates is of vital importance in all attempts to raise the medical service.

RANK writes: I have met with a retired army officer who cannot credit that the relative rank of medical officers has been abolished, and that they have now no rank. Could you refer me to numbers of the BRITISH MEDICAL JOURNAL which will supply convincing information on this point?

*** Relative rank was abolished as an army rank by the Royal Warrant, Pay, etc., in January, 1887. Medical officers had no other. See articles in the BRITISH MEDICAL JOURNAL, September 14th, 21st, and 28th, and October 5th, 1889, on the report of Lord Camperdown's Commission.

THE AGE OF CANDIDATES.

X.Y.Z.—The limit of age at which candidates can present themselves for examination for entrance to the army and navy medical services is from 21 to 28 in both services.

RESTITUTION OF HALF-PAY SERVICE.

HALF-PAY writes: Now that Mr. Stanhope has, after mature consideration, consented to assimilate the sick leave of medical officers to that of their combatant brethren, all medical officers now serving, and who have been on temporary half-pay through sickness under one year, should at once make application to him under paragraphs 30 and 1208B, Royal Pay-Warrant, that he may order their names to be reinstated in their former positions in the *Army List*, and that their half-pay service may be accredited to them towards promotion and retirement.

SOLDIERS ON FURLOUGH.

A CORRESPONDENT takes exception to our remarks on the question—Who pays for medical attendance on soldiers on furlough, and to whom should the bill be sent? We merely pointed out the regulation on the subject, without going into details. We fear our correspondent will find that a soldier on ordinary furlough is not entitled to medical attendance at the public expense unless, possibly, under exceptional circumstances. We would remind him, also, that so-called "contract rates" do not and cannot apply to individual bills, which must vary according to the circumstances of the attendance. A visit on a soldier living at a distance would obviously require a larger fee than on one next door to the practitioner; so, also, in minor and major operations, and so forth.

MEDICO-LEGAL AND MEDICO-ETHICAL.

DETENTION CERTIFICATES FOR PAUPER LUNATICS.

L.R.C.P. writes: I am qualified assistant to a medical officer (visiting) of a workhouse; he has named me as his deputy, and I have been accepted as such by the board of guardians, etc. I visit the workhouse on alternate days, but do not receive any pay from the said board. Can I certify and sign the second certificate required for the detention of a pauper lunatic in the workhouse, and charge the guardians for the same?

*** Although against the general spirit of the Lunacy Laws, and illegal as regards the reception of a lunatic into an institution for lunatics, or as a "single patient," for "L.R.C.P." to sign one of the medical certificates of unsoundness of mind, his principal signing the other, yet there does not (as far as we find in our reading of the recent Act) appear to be an express prohibition of this course in relation to the detention of a lunatic in a workhouse. But in all cases the guardians are to fix the remuneration at what "they think fit." So the Act states.

PARTICULARS OF ACCOUNTS.

T. C. B. writes: Having given some explanation of a disputed account—alleged to be excessive—I am asked to furnish full particulars. This I decline to do, except in the usual way in the county court, which I enter. The debtor's solicitor requests particulars after I have entered the claim in the county court, and I furnish them; whereupon the full amount and costs of entering are paid into court, and the matter settled.

1. Later the debtor sues me for costs incurred through my refusal to supply particulars (out of court). Can he recover?

2. Can he recover any alleged overcharge after he has had particulars (supplied to his solicitor after entering my claim in county court) and paid my claim and costs of action into court?

*** 1. We are advised that such an action will probably not be successful, but we cannot speak authoritatively, not being aware of any case bearing directly on the subject. If the point had been taken in the action brought for the account, the present plaintiff might have had a greater prospect of success, but even then it would have been doubtful. The case of Lovelock *v.* Cheveley, *Holt's Reports*, 551, and Quartz Hill Gold Mining Company *v.* Eyre, 11 Q. B. D. 674, may assist our correspondent.

2. We are advised that the defendant is precluded by the course adopted from now raising the question suggested, and the reply to this question is, therefore, in our opinion in the negative.

AN IMPERFECT AGREEMENT.

THE PARIAH.—We are advised that the case of Pearson *v.* Pearson 27 Ch. Div. (in which it was held by the Court of Appeal that the vendor of a business is not, in the absence of express agreement, to be restrained from soliciting his old customers) governs the case referred to by our correspondent, and that, therefore, having regard to the omission in the contract for sale in question of any clause restraining the vendor from practising in the neighbourhood, he cannot now, we think, be prohibited as of right from so doing. To rectify the omission now, and to make an agreement on the part of the vendor (restricting his right to practise in the neighbourhood) a valid one, some valuable consideration would, we are advised, be required in order to support the promise.

DUTIES OF CONSULTANTS.

VIVE UT VIVAS.—The principle involved in the case is analogous to that on which we commented in the BRITISH MEDICAL JOURNAL of March 14th, p. 611, under the heading of "Duties of Consultants," and to which we would refer "Vive ut Vivas."

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, March 12th.

Elementary Education (Blind and Deaf) Bill.—This Bill, on the motion of Viscount CRANBROOK, was read a third time and passed.

HOUSE OF COMMONS.—Thursday, March 12th.

Opium Smoking in India.—Sir J. GORST, in answer to Sir G. CAMPBELL, said the Secretary of State had received no reports which led him to the belief that the practice of opium smoking, as distinguished from opium eating, was increasing. Special attention had been given to the subject in the North-West Provinces and Punjab, with the result that the number of licensed saloons had been greatly reduced.

Vaccination.—In reply to Mr. CHANNING, Mr. RITCHIE replied that he had received a copy of the entry in the register of deaths in the case of the child Punshon. The cause of death, as certified by the medical man, was vaccinia and pyæmia. The case had been brought under the attention of the Royal Commission on Vaccination, and it was, he understood, to be investigated by one of the medical men employed by the Commission for such inquiries.

The Interment of Stillborn Children.—Dr. CAMERON asked the President of the Local Government Board whether his attention had been called to the statement published by Dr. Robert R. Rentoul, of Liverpool, to the effect that he had ascertained by inquiry that, during the year 1889, 6,321 stillborn children were interred in seventy-one Burial Board cemeteries, that there were 1,100 board cemeteries in England, and that the larger number of such interments took place in parish churchyards; whether he could present to Parliament a return of the total number of infants interred as stillborn in all England in 1890; and whether it would be possible in such return to show the proportion of such infants born respectively in and out of wedlock.—Mr. RITCHIE said his attention had not previously been called to the statements which had been published by Dr. Rentoul. The births of stillborn children were not registered by the registrars of births and deaths, and consequently no returns of these births were made to the Registrar-General. He was, therefore, not in a position to give a return to the number of infants interred as stillborn in 1890, nor to state what proportion of these infants were born respectively in and out of wedlock.

Friday, March 13th.

Local Government in Rural Districts.—Notice was given that Mr. A. Acland would on that day four weeks call attention to the unsatisfactory condition of local government in the rural districts, and would move a resolution.

Public Health Bills.—Sir WALTER FOSTER suggested that as the public health Bills were very voluminous, they should be postponed to give an opportunity for further consideration of them.—Mr. W. H. SMITH said that there were two Bills relating to the subject of public health, and as it was very desirable that the law on the subject should be amended, he hoped that the Bills would, as soon as possible, be sent before the Standing Committee. One of these Bills contained a great many provisions for the consolidation and amendment of the law, and if a strong disinclination to proceed with that Bill on Tuesday should be manifested, the Government would not bring it forward. He hoped, however, that they would be allowed to take it.

Monday, March 16th.

Water Supply from the Thames.—In reply to Mr. LENG, Mr. RITCHIE said his attention had been drawn to Professor Frankland's report. With regard to the analysis of the water supplied by the Grand Junction Water Company on February 5th, he had recently stated the facts. As to the analysis of the water supplied at a later date in the same month by other metropolitan water companies, the abnormal amount of vegetable matter, although much less than was the case with the water from the Grand Junction Water Company on February 5th was occasioned by similar causes. Dr. Frankland informed him that the exceptionally impure condition of the river-derived waters supplied to the metropolis in February had now passed away, and that these waters had apparently returned to a condition approaching the normal at this season. As to the existence of microbes, Dr. Frankland stated that the number was not large for filtered river water, and that, as no pathogenic organism was observed among the microbes, their presence did not afford any ground for alarm.

Tuesday, March 17th.

Custody of Children Bill.—The ATTORNEY-GENERAL, in moving the second reading of this Bill, explained that its object was to enable children to be taken out of the custody of parents who were not treating them properly. Judging from the representations received from all parts of the House, there appeared to be a unanimous feeling that the Bill should be speedily passed into law. The Bill was read a second time.

Midwives Bill.—The following is a list of petitions presented to the House of Commons against the Midwives Registration Bill, with the names of members:—January 22nd. Medical practitioners in and about London (Mr T. Bolton); medical practitioners in Mosley (Mr. Mowbray). January 26th. Medical practitioners in Gainsborough (Colonel Eyre); President and Fellows of the Royal College of Physicians of Ireland (Mr. Madden); Provost, Fellows, and Scholars of Trinity College, Dublin (Mr. Plunket). January 27th. Medical practitioners in and about Westminster (Mr. Burdett-Coutts); medical practitioners in Glasgow (Mr. Caldwell); medical practitioners in Weymouth (Colonel Hambro); medical practitioners in Warrington (Sir Gilbert Greenall); medical practitioners in Accrington (Mr. Hermon Hodge); medical practitioners in East Toxteth (Baron Henry de Worms). January 29th. Medical practitioners in Blackpool (Sir M. White-Ridley); Governors and Members of the Court of the Apothecaries' Hall of Ireland (Mr. T. W. Russell). February 2nd. Medical practitioners in Bury (Sir Henry James). February 3rd. Medical practitioners in and about North London (Mr. Bartley); medical practitioners in and about Keighley (Mr. Holden). February 4th. Medical practitioners in and about Colchester (Lord Brooke). February 6th. Medical practitioners in and about Dalton-in-Furness (Mr. Ainslie). February 10th. Medical practitioners in and about Westmorland (Mr. William Lowther); medical practitioners in and about South Manchester (Sir Henry Roscoe). February 16th. Medical practitioners in and about Ashton-on-Mersey and Sale (Sir W. C. Brooks); medical practitioners in and about Enniskillen (Mr. W. Redmond). February 18th. Medical practitioners in and about South Shields (Mr. James Stevenson). February 20th. Medical practitioners of Chesterfield (Mr. Barnes); medical practitioners of Tamworth (Mr. Muntz). February 23rd. Medical practitioners of South Sligo (Mr. James O'Brien). February 24th. Medical practitioners of Pendleton (Mr. Knowles); medical practitioners of Carndonagh (Mr. Maguire). February 25th. Medical practitioners of Birmingham (Mr. Jesse Collings). February 27th. Medical practitioners of Salford (Mr. E. Hardcastle); medical practitioners of East Birmingham (Mr. Secretary Matthews). March 2nd. Medical practitioners of South London (Mr. Bristowe); medical practitioners of Norwood (Mr. Herbert). March 3rd. Medical practitioners of Battersea (Mr. O. Morgan); medical practitioners of Portsmouth (Sir Samuel Wilson). March 4th. Medical practitioners of Stretford (Mr. Maclure); members of the Woman's Franchise League of Great Britain, in public meeting assembled, Ursula M. Bright, Honorary Secretary, and another (Mr. Jacob Bright). March 6th. Medical practitioners of Altrincham and Bowden Districts (Sir W. Hart Dyke).

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE WATER SUPPLY OF RURAL ESSEX.

THE greatly deficient rainfalls of the past autumn and winter, and more especially the unparalleled drought of February—a month usually relied upon to fill the dykes and reservoirs—are already beginning to create in many places a fear of water famine, with all its attendant miseries. The foreboding is a natural one, for if a warm spring were to stimulate the growth of vegetation, percolation into the soil, except to a slight extent, will be prevented, and the underground reservoirs must go unreplenished, unless we have a cold and wet summer, until autumn again comes round.

The inhabitants of some of our large towns are not unfamiliar with a diminution in their usual water supply consequent upon a period of drought, but it is probably chiefly in the rural districts that the phrase "water famine" is completely justified in its ominous significance. And of the rural districts the Eastern Counties—owing to their low average rainfall, the general flatness of large areas of their surface, the absence of considerable rivers, and the nature of the soil and rocks—are in average years less favourably circumstanced than other parts of England, and in abnormally dry years are the first to feel the pinch. The discomforts, the danger to health, and we might say the misery attendant upon want of water are difficult of realisation by those who, living in London or other towns, have never had experience of it. When water is not only scanty, but is grossly impure as well, a condition of things is reached which is incompatible with civilisation as understood at the end of the ninteenth century.

A report has just been issued by Dr. John C. Thresh, medical officer of health, on the water supplies of the various villages and hamlets in the Chelmsford and Maldon rural sanitary districts, which constitute a considerable proportion of the total area of Essex. From this report may be learned what are the conditions of water supply of some 40,000 people under normal circumstances, and how they are likely to be affected should the prolonged drought continue throughout the spring and summer.

The various sources of supply for this population are thus given: Ponds, used by about 5 per cent. of the population in the Maldon district, by about 4 per cent. in the Chelmsford district; streams, used by about 3 per cent. in the Maldon and in the Chelmsford districts; rain-water tanks, used by 1 per cent. of the population in each district; springs, used by 15 per cent. of the Maldon population and by 50 per cent. of the Chelmsford; shallow wells, used by 58 per cent. of the Maldon and by 38 per cent. of the Chelmsford population; artesian wells through the London clay, used by 18 per cent. of the Maldon and by 4 per cent. of the Chelmsford population.

The rain-water tanks—owing to the absence of any effort to store the water in a clean condition—supply water of the filthiest description. The pond water is less impure, but too often the ponds are used to water cattle, or collect the drainage from manured lands. The streams and brooks are much polluted, and those found in districts on the London clay—which covers a large area of this portion of Essex—contain a large quantity of sulphate of magnesium. "Such waters," says Dr. Thresh, "generally cause diarrhœa amongst families who have just moved into the neighbourhood; but in a very short time the system seems to accommodate itself to the change, and the water ceases to produce any apparent effect." These brooks are generally dry in summer, and then the people resort to the rain-water butts and tanks.

The springs are what are known as "land" springs, found in the more undulating portions of the district along the line of junction of limited areas of permeable gravels and sands with the impermeable London clay, and the waters they supply contain but little unoxidised organic matter, but the majority of them are very hard, and not a few contain magnesium salts in excess. The spring water is preferred to that from any other source, and carts are regularly employed to fetch it distances of two or even three miles, especially in summer when the ponds and shallow wells are becoming dry. The water from the shallow wells, from which so large a population derives its water supply, varies much both in character and quality. Not only do the well waters differ amongst themselves, but water from the same well taken at different times often shows marked variations. In many of the villages all the wells show signs of more or less serious sewage pollution. Most of the wells, but especially those sunk into the drift gravels, contain much saline matter, the total solids varying from 30 to 200 (or even more) grains per gallon; and they are all excessively hard, on account of the quantity of lime and magnesia salts held in solution. Although these shallow well waters are so impure, the death-rates of several of the large villages which exclusively use them are not uniformly high. In one village indeed, Tolleshunt D'Arcy, where the water is excessively polluted, there has not been a single death from either typhoid fever or diarrhœa during the past ten years. This immunity is very likely due to the isolated position of the village, and the consequent absence of any importation of specific infection, but it explains why the villages themselves are too often perfectly satisfied with their existing supplies, and are disinclined to allow any money to be spent to obtain water from better sources. Local medical practitioners, however, ascribe much of the excessive prevalence of certain forms of indigestion and stomach derangement which prevail in portions of the district to the use of the hard and polluted water.

In several parts of the district, where there is no porous gravel or sand capping the London clay, wells are sunk through this stratum to tap the water-bearing strata in the lower London tertiaries (sand) and chalk beneath. Nearly all are private property, having been bored to supply farms and cottages to replace the collection of rain or surface water in tanks and ponds. In south-east Essex the similarity in composition of the waters derived from the sands immediately beneath the clay and from the chalk is very marked. Both are exceedingly soft, and contain large quantities of chlorides (chlorine = 20 to 26 grains per gallon; hardness usually less than 3 grains per gallon). Although this water from beneath the London clay is so soft and pure as to be eminently fitted for domestic use, the supply in the underground reservoirs appears to be limited. Formerly when there were but few wells sunk into the strata, the supply was abundant, and the water rose to the surface, but this is not the case now, and Dr. Downes, who was Dr. Thresh's predecessor, warned the Essex people that they were drawing upon their capital in regard to the wells in the lower tertiaries, the extent of catchment area at the outcrop being too limited and too steeply graded to allow of sufficient water reaching the strata to replenish all that was withdrawn by the wells. Dr. Thresh thus classifies the waters in each district:

	Chelmsford.	Maldon.
Good	42 per cent.	28 per cent.
Usable	14 ,,	17 ,,
Unsafe	18 ,,	22 ,,
Dangerously polluted	26 ,,	33 ,,

The question of providing better supplies for several of the villages is under consideration, but it will be seen that it is a problem of no inconsiderable difficulty. The streams, ponds, and shallow wells are quite inadmissible as sources of supply, and unless special precautions are taken for collecting and storing rain water from roofs, this mode of supply is hardly better. The water available from the water-bearing strata beneath the London clay is too limited to furnish an adequate supply for the entire population, and the question of bringing in water from a distance will probably have to be considered.

The amount of water used per head per diem in the villages is, says Dr. Thresh, often astonishingly small; few town dwellers have any conception how far a single bucketful of water can be made to go. In Burnham, where the water is laid on to many houses and to standpipes in the street, and where hand-flushed water-closets have almost entirely superseded the privies, the amount of water used daily does not reach five gallons per head. This, however, is not an argument to be adduced in favour of retaining the present limited supplies. If more water was available, no doubt more would be used, and the cleanliness, health, and comfort of the consumers would be increased.

A great difficulty arises in connection with the supplies to

single cottages or small groups of cottages lying at a distance from the villages. In many instances good water is not obtainable at a reasonable cost, and Dr. Thresh evidently means to raise the question whether such cottages are fit for human habitation.

We sincerely hope it may not be necessary to do so. To compulsorily close a number of cottages in a county so close to the metropolis would surely mean the arrival in London of the displaced cottagers with their families, to increase the poverty of the East End, and the already congested labour market. All social reformers are now agreed that every effort should be made to keep the existing rural population where it is, both for its own sake, and to check the increase of overcrowding in the cities.

ZYMOTIC DEATH-RATE.

THE following are the death-rates for 1890 per 1,000 persons living in England and Wales for the principal zymotic diseases: Small-pox, 0.00; measles, 0.42; scarlet fever, 0.23; diphtheria, 0.18; whooping-cough, 0.45; fever, 0.19; diarrhœa, 0.56.

ELECTION OF MEDICAL OFFICER OF HEALTH.

L. K. C. asks whether it is legal for a board of guardians to elect a medical officer of health before they advertise the post?

*** The reply to our correspondent's question depends, we think, on whether or not the salary of the medical officer of health referred to is in part paid out of money voted by Parliament. If it is, an order of the Local Government Board of March 16th, 1880, seems to require that in every case of a vacancy an advertisement specifying the salary to be assigned and the day fixed for the appointment shall appear at least seven days before the appointment. If, however, no part of the salary is repaid out of money voted by Parliament an advertisement is apparently unnecessary; a notification only of the appointment has to be made to the Local Government Board by the medical officer of health when appointed.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, 5,818 births and 4,237 deaths were registered during the week ending Saturday, March 14th. The annual rate of mortality in these towns, which had been 24.1 and 23.7 per 1,000 in the preceding two weeks, further declined to 22.1 during the week under notice. The rates in the several towns ranged from 15.7 in Norwich, 17.7 in Derby, 19.2 in Wolverhampton, and 19.3 in Bradford to 27.6 in Oldham, 28.1 in Manchester, 29.9 in Huddersfield, and 31.1 in Blackburn. In the twenty-seven provincial towns the mean death-rate was 23.2 per 1,000, and exceeded by 2.5 the rate recorded in London, which was 20.7 per 1,000. The 4,237 deaths registered during the week under notice in the twenty-eight towns included 413 which were referred to the principal zymotic diseases, against numbers increasing from 332 to 470 in the preceding five weeks; of these, 137 resulted from measles, 134 from whooping-cough, 42 from scarlet fever, 42 from diarrhœa, 32 from diphtheria, 26 from "fever" (principally enteric), and not one from small-pox. These 413 deaths were equal to an annual rate of 2.2 per 1,000; in London the zymotic rate was 1.6 per 1,000, while it averaged 2.6 in the twenty-seven provincial towns, and ranged from 0.0 in Wolverhampton, 0.5 in Derby, 0.7 in Hull, and 0.8 in Brighton to 4.7 in Bristol, 6.3 in Halifax, 6.7 in Huddersfield, and 7.0 in Blackburn. Measles showed the highest proportional fatality in Sheffield, Leeds, Portsmouth, Bristol, Huddersfield, and Blackburn; scarlet fever in Sunderland, Bolton, and Halifax; and whooping-cough in Sunderland, Newcastle-upon-Tyne, Cardiff, Salford, Huddersfield, and Halifax. The mortality from "fever" showed no marked excess in any of these large towns. Of the 32 deaths from diphtheria in the twenty-eight large towns, 18 occurred in London and 2 each in Manchester, Salford, Norwich, and Newcastle-upon-Tyne. No fatal case of small-pox was recorded last week in any of these large towns; one small-pox patient was under treatment in the Highgate Small-pox Hospital, but not one in the Metropolitan Asylum Hospitals on Saturday, March 14th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 1,143, and showed a further decline from recent weekly numbers; 84 new cases were admitted during the week, against 80 and 87 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 6.7 per 1,000, and exceeded the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, March 14th, 876 births and 684 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 21.4 to 24.0 per 1,000 in the preceding four weeks, further rose to 26.2 during the week under notice, and exceeded by 4.1 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Perth and Aberdeen, and the highest in Glasgow and Paisley. The 684 deaths registered in these towns included 79 which were referred to the principal zymotic diseases, equal to an annual rate of 3.0 per 1,000, which exceeded by 0.8 the mean zymotic death-rate in the large English towns during the same period. The highest zymotic death-rates were recorded in Glasgow and Paisley. The 321 deaths registered in Glasgow included 20 which were referred to whooping-cough, 8 to measles, and 4 to diphtheria. No fewer than 13 fatal cases of measles were recorded in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 7.7 per 1,000, against 6.7 in London.

HEALTH OF IRISH TOWNS.

IN the sixteen principal town-districts of Ireland the deaths registered during the week ending Saturday, March 7th, were equal to an annual rate of 26.2 per 1,000. The lowest rates were recorded in Lisburn and Armagh, and the highest in Galway and Dundalk. The death-rate from the principal zymotic diseases averaged 1.4 per 1,000. The 191 deaths in Dublin were equal to an annual rate of 28.2 per 1,000 (against 27.3 and 29.4 in the preceding two weeks), the rate for the same period being 23.4 in London and 21.8 in Edinburgh. The 191 deaths in Dublin included 4 which were referred to the principal zymotic diseases (equal to an annual rate of 0.6 per 1,000), of which 2 resulted from diphtheria, 1 from measles, and 1 from diarrhœa.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ST. MATTHEW, BETHNAL GREEN (Population, 131,000).—*Improved Sanitary Administration: Dwellings of the Poor.*—Dr. G. P. Bate confines his annual report to a plain record of the events of the year, with a brief reference to the statistics of other metropolitan districts for purposes of comparison. In 1889, Bethnal Green shared in the general improvement which marked the year, but was unfavourably distinguished for its high proportional fatality from measles, and, in a somewhat less degree, from diphtheria. This latter disease showed a mortality just double that of 1888, and nearly four times that of 1887. The influence of insanitary surroundings may be judged from the fact that out of 156 houses examined on account of diphtheria, 115 were found to be in a more or less unsatisfactory state, about half of them being very bad indeed. During the last few years, and more particularly since the inquiry made on behalf of the Home Office by Messrs. Shirley Murphy and Cubitt Nicholls, sanitary administration in Bethnal Green has been more energetic than formerly. Early last year the staff of sanitary inspectors was increased, and was placed—as it long ago ought to have been placed—under the control of the medical officer of health. An exhaustive code of rules was drawn up by Dr. Bate for the direction of the sanitary staff, and the new arrangement seems to work without friction and to the distinct advantage of the community. The slums of Bethnal Green, too, which have long been a disgrace to London, are now likely soon to disappear under the improvement scheme of the London County Council and the beneficial application of the Housing of the Working Classes Act of 1890.

STRETFORD (Population, 21,000).—*Diphtheria: Unwholesome Ashpits and Privies.*—The general death-rate of this district for 1889—14.6 per 1,000—was favourable, and the lowest of the past five years, but the zymotic rate showed an increase (2.4 per 1,000, against 1.6 in 1888). Mr. Heslop's report says little about the prevalence of infectious disease during the year, but concerns itself chiefly with sanitary matters. It is evident, however, that diphtheria was the most fatal disease of its class, 13 deaths being recorded from it. In none of the cases could the infection be traced to any antecedent cases of diphtheria, and sanitary defects were met with in several instances. There was no death from small-pox, nor were any cases reported. Scarlet fever caused 5 deaths. The unwholesomeness of many of the ashpits and privies in the district appears to be a serious source of danger. In one locality especially is the danger acute, and, in Mr. Heslop's opinion, the only remedy is the substitution of water-closets for the condemned structures. In other respects, much good sanitary work seems to be carried on.

BATTERSEA (Population, 154,595).—*Compulsory Notification of Measles and Whooping-cough: Progressive Fall in Death-rate.*—There is reason for satisfaction in the progressive improvement in the public health of this parish, as shown in the annual reports of Dr. Kempster and Mr. Oakman. The death-rates are low, and the very small zymotic mortality recorded for 1889 speaks well for the energy and persistence with which preventive measures have been carried out. Diarrhœa was the most fatal disease of its class, measles and whooping-cough coming next on the list, though by separating the subdivisions this order is reversed in East Battersea, where measles headed the list. The omission of these last-named diseases from the list of notifiable diseases is, in the opinion of the medical officers, very inadvisable, for, as they state, rather more than one-half the total zymotic mortality was caused by them. [The new Public Health (London) Amendment Bill will contain some special provisions in regard to

this matter.] The sanitary operations of the year were very numerous and successful, and it is due to the activity with which nuisances are dealt with that so much of the recorded improvement is due. The annual death-rate was 14.4 per 1,000, as against 15.83 in 1888. For the period 1874-1880 the rate was 22.98, and for the period 1880-87 it fell to 20.32.

WILLESDEN (Population, 57,158).—*Hospital, Disinfecting Chamber, and Mortuary required.*—The returns for this district show a gradual but not uniform decrease in the death-rate, and the year 1889 must be regarded as decidedly favourable in point of statistics. The deaths registered give a death-rate of 12.0 per 1,000, being 3.78 less than in the previous year and being also less than in any year since 1875. The deaths from zymotic disease were also comparatively few. There was some prevalence of diphtheria irregularly distributed over the district, for which Dr. Skinner could ascribe no satisfactory reason. Scarlet fever was of very mild type and caused only two deaths. Dr. Skinner specially urges upon the local authority the pressing need of a permanent isolation hospital for infectious cases. A disinfecting chamber and a mortuary are also very urgently required.

WITHINGTON (Population, 24,000).—*Diphtheria, Diarrhœa, and "Diet Diseases."*—Dr. Railton's report, though dealing with a noteworthy increase in the deaths from diphtheria, does not contribute anything in the way of evidence or conjecture as to the etiology of the disease. Fourteen deaths out of 28 cases recorded occurred at various periods of the year, but beyond a remote possibility of personal contagion in one or two cases, no light is thrown on the origin of the outbreak. Its adverse influence is shown by the increased death-rate from zymotic diseases, which was higher than it had been since 1882. Diarrhœa also caused more than the usual number of deaths, thus affecting both the zymotic and the infantile mortality. The influence of improper feeding upon the latter is remarkable, no fewer than 26 deaths out of a total of 69 being ascribed to "diet diseases." The death-rate for the year was about the average—13.2 per 1,000.

GLANFORD BRIGG (Population, 31,458).—*Scarlet Fever and Measles: Absence of Small-pox.*—The prevalence of certain zymotic diseases during 1889—scarlet fever, whooping-cough, and measles—had its effect upon the death-rate of this district. From 14.4 and 14.9 per 1,000 in 1887 and 1888 it rose in 1889 to 16.0, and a comparison of the zymotic rates of the same years affords an immediate explanation of the sources of the increase. It is noteworthy that of 24 deaths from scarlet fever 22 occurred in the village of Kirton. Measles and whooping-cough, the other fatal diseases, are but little amenable to sanitary control. In the fourteen years of Mr. Moxon's experience there has never been a death from small-pox in the district. The history of diphtheria and typhoid fever was a singularly barren one, though several cases of the latter disease in the village of Barrow afforded a motive for overhauling the street sewers. As a proof of the excellent results ensuing from improved drainage and sewerage Mr. Moxon instances the large decrease in the mortality from phthisis.

POTTERSBURY RURAL (Population, 12,652).—*Decrease of Enteric Fever: Increase of Diphtheria.*—In comparing the mortality statistics of 1889 with those of the preceding year, Dr. Maguire calls attention to the following points—the reduction in the deaths from enteric fever, the large number of deaths (16) from whooping-cough, the prevalence of diphtheria and diphtheritic croup, no deaths from scarlet fever or measles. An increase in the deaths of children under 5 years is of some importance, though an examination of the returns shows that no less than 20 died from causes having no connection with public sanitation, namely, premature birth, convulsions, and wasting diseases. The death-rate (16.75 per 1,000) may be regarded as satisfactory, and Dr. Maguire questions whether the population be not under-estimated. He points to the dangers arising from the primitive type of sanitary arrangements in vogue in certain villages, and cites instances.

HOSPITAL AND DISPENSARY MANAGEMENT.

COUNTY ANTRIM INFIRMARY.

MR. GEORGE ST. GEORGE, in his annual report to the governors of the County Antrim Infirmary, states that 362 in-patients were treated during the past year, the daily average number of patients being a little over 30. The number of out-patients was 315, being a decrease on previous years; 16 deaths occurred in the institution.

EDINBURGH MATERNITY HOSPITAL.

AT the annual meeting of this hospital the chair was occupied by the President of the Royal College of Physicians of Edinburgh (Dr. T. Grainger Stewart). It was stated that during 1890, 293 indoor and 661 outdoor patients had been treated. It was urged that a hospital of this kind ought to be much more liberally supported by the benevolent public, and that a new wing ought forthwith to be added to it if it was to meet the demands put on it.

MEDICAL NEWS.

A FIRE broke out on March 13th in the State Insane Asylum at Nashville, and six of the inmates were burned to death.

PROFESSOR RINDFLEISCH, of Würzburg, has been elected a Foreign Member of the Paris Academy of Medicine.

A PUBLIC meeting was held in the Portsmouth Hospital on March 16th, under the presidency of Dr. J. Ward Cousins, when Mr. H. Rundle, F.R.C.S., delivered the inaugural lecture of a course of lectures to nurses.

PRESENTATION.—At the close of the "First-Aid" course of lectures (St. John Ambulance Association) given at Ballymena, Co. Antrim, a presentation was made to Dr. Alexander D'Evelyn by the members of the ladies' class in testimony of their appreciation of his services as a lecturer.

THE BRADSHAW LECTURE.—The Charity Commissioners have given formal notice of their intention to issue an order varying the terms of the trust for the Bradshaw Lecture, and empowering the Royal College of Physicians to appoint August 18th, "or such other day in every year," for the delivery of the lecture.

THE INTERNATIONAL MEDICAL CONGRESS AT BERLIN.—We are requested to announce that the first volume of the *Transactions* of the Tenth International Congress comprising the general proceedings is now ready. Foreign members desiring to have it forwarded to them should communicate with Herr August Hirschwald, 68, Unter den Linden, Berlin, N.W. The postage to this country is 90 pfennigs. All inquiries should be addressed to the office of the Editorial Committee, 38, Jerusalemerstrasse, Berlin, S.W.

FOREIGN MEDICAL DEGREES IN ILLINOIS.—The Illinois State Board of Health has decided that in future no foreign diploma shall be recognised that does not confer the right to practise medicine in the country in which it was granted. This rule applies to the holders of Austrian, German, Russian, or Swiss diplomas who have not passed the State examination required in their respective countries, and to the holders of Canadian diplomas other than the licences of the Colleges of Physicians and Surgeons of Ontario and Quebec.

GLASGOW SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS.—The Glasgow and West of Scotland Society for the Prevention of Cruelty to Animals held their annual meeting recently, under the presidency of Colonel Sir Donald Mathieson, K.C.B. This Society's business seems to be carried on in a most practical manner. Judging by the report, the subjects which chiefly occupied their attention during the past year were the abolition of the practice of doctoring and plugging cows' udders, the inadequate arrangements for the transit of cattle by sea, cruelty inflicted upon ponies in coal mines and upon tramway horses, and the enforcement of the Wild Birds Protection Act. The cases investigated numbered 646; 160 prosecutions were instituted, and 141 convictions obtained.

MEDICAL PRACTITIONERS IN RUSSIA.—In July, 1890, the number of medical practitioners in Russia was 12,812, of whom 12,112 were men, and 700 women. The number of surgeons in the military and naval medical services was 2,629. The proportion of doctors to population in the Russian Empire is about 8 to 100,000. The total number of persons who received licences to practise medicine from the various medical faculties of the Russian Empire during 1890 was 775. Of these 90 obtained the degree of Doctor of Medicine, and 685 the diploma of "Medical Practitioner."

TUBERCULOSIS IN CHILDREN.—Boltz, in an inaugural dissertation presented to the University of Kiel, gives statistics respecting the relative frequency of tuberculosis in children. Among 2,576 children whose bodies were examined after death, in Kiel, between 1873 and 1889, there were 424, or 16.4 per cent., cases of tubercle. The following figures show the percentage at different ages: Stillborn children, 0.0; up to 4 weeks, 0.0; 5 to 10 weeks, 0.9; 3 to 5 months, 8.6; 6 to 12 months, 18.3; 1 to 2 years, 26.8; 2 to 3 years, 33.0; 3 to 4 years, 29.6; 4 to 5 years, 31.8; 5 to 10 years, 34.3; 10 to 15 years, 30.1.

INDUCED MORPHINOMANIA.—The *Journal de Médecine* of March 1st, with reference to a recent case in which it was proved that a husband had induced his wife to become a morphinomaniac, calls upon magistrates to put in force a clause of the penal code which punishes all persons inducing another to take any substance detrimental to health. The writer of the article, Dr. Guimbail, mentions a case personally known to him of a husband who induced his wife to indulge in morphine in order to obtain a divorce. He regrets that the *secret professionel* prevented him from giving evidence on the point.

SALE OF NARCOTICS IN AMERICA.—At a meeting of the American Association for the Cure of Inebriety held at New York on February 28th, Dr. J. B. Mattison proposed resolutions to the effect that it should be made illegal for retail druggists to sell morphine, chloral, or cocaine except in a medical prescription, or to make up such a prescription again except on the written order of a physician. The resolutions were unanimously adopted, and a committee, consisting of Drs. Mattison, Crothers, and Wright, was appointed to promote legislation in the direction indicated.

DEATHS IN THE MEDICAL PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Eugen Jendrássik, the distinguished Professor of Physiology in the University of Buda-Pesth, aged 67; Dr. Franz Chimani, of Vienna, a well-known orthopædist, aged 58; Dr. Wilhelm Stricker, of Frankfort-on-the-Main, author of numerous works on medicine and subjects more or less related thereto, aged 76; Dr. C. de Meis, Professor of the History of Medicine in the University of Bologna; Dr. L. Fasce, Professor of General Pathology at Palermo; and Dr. H. A. Johnson, the leading physician of Illinois, who, in conjunction with Dr. N. S. Davis, founded the medical department of Lind University (afterwards Chicago Medical College), aged 69; and Dr. Karl Blodig, Emeritus Professor of Ophthalmology in the University of Graz, aged 74.

AT the present time there undoubtedly exists a wide-spread interest in physical education. The projectors of *Physique, a Journal of Physical Education*, believe that the demand is so great as to call for what the editor describes as "a high class journal which will deal with physical education in all its branches." A periodical of this kind, ably conducted upon broad and not too exclusive lines, is likely to prove of service to many directly interested in the subject. But some of us may doubt whether it is altogether wise thus to accentuate and to seem to sanction the antagonism which still exists, in the popular view at all events, between intellectual and physical training. These are for all civilised races "the great twin-brethren" which must fight beside the nation in the life-battles of the future; moral education has its part in each of them. In the true interests of the individual, both must be cultivated in the closest harmony—scarcely even in friendly rivalry. And for these reasons we would deprecate the consideration of physical training as an end in any way separable from moral and intellectual culture, so closely interwoven are they all in the perfect realisation of true education.

MEDICAL VACANCIES.

The following Vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester Street, S.W.—House-Surgeon. Board, lodging, fuel and light provided. Applications endorsed on envelope—"House-Surgeon," to the Honorary Secretary, by March 23rd.

BETHLEM HOSPITAL, S.E.—Two Resident Clinical Assistants: double qualifications. Apartments, rations, and attendance provided. Applications, endorsed "Clinical Assistants," to the Treasurer by March 25th.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensing Surgeon, double qualifications, unmarried. Salary, £100 per annum, with board. Applications, endorsed "Dispensary Surgeon," to William Maw, Secretary, by March 24th. Election April 3rd.

BRIDGWATER INFIRMARY.—House-Surgeon, Salary, £80 per annum. Applications to Mr. John Coombs, Honorary Secretary, by April 10th.

CANCER (FREE) HOSPITAL, Fulham Road, S.W.—Assistant-Surgeon; must be F.R.C.S., and reside within the four mile radius. Applications to the Chairman of the House Committee by April 18th.

DISTRICT INFIRMARY, 120, Stamford Street, Ashton-under-Lyne.—House-Surgeon, double qualifications. Salary, £90 per annum, with board and lodging. Applications, marked "Application for the office of House-Surgeon," to the Honorary Secretary, by March 26th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Medical Officer. Salary, £80 per annum, with board and residence. Applications to A. C. Davies, Secretary, by March 31st.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Must be qualified. Fee of £3 3s. for three months. Forms of applications and regulations to be had at the hospital. Applications to the Board of Management.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary, £100 per annum to commence with, furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

DEACONESSES INSTITUTION AND HOSPITAL, Tottenham.—Resident House-Surgeon. Salary, £90 per annum, with board and residence. Applications to the Secretary by March 31st.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Obstetric Physician. Applications to William T. Grant, Secretary, by March 24th.

GUY'S HOSPITAL DENTAL SCHOOL.—Two Anæsthetists. Applications to the Treasurer, Guy's Hospital, S.E., by April 6th.

HEREFORD COUNTY AND CITY LUNATIC ASYLUM, Hereford.—Assistant Medical Officer. Salary, two guineas per week, with board, attendance, and washing. Applications to the Medical Superintendent.

HULME DISPENSARY, Manchester.—House-Surgeon. Applications to Dr. F. H. Collins, Honorary Secretary, Medical Committee, by March 31st.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, near Birmingham.—Resident Medical Officer: double qualifications. Salary, £150 per annum, with board, residence, and washing. Applications to Dr. J. D. M. Coghill, House Governor, by March 28th. Election on April 3rd.

KENT COUNTY ASYLUM, Chatham, near Canterbury.—Junior Assistant Medical Officer. Salary, £125 per annum, with furnished apartments, board, and attendance. Applications to Allen Fielding, Solicitor, Canterbury, by April 6th.

KING'S COLLEGE, London.—Demonstratorship of Physiology, vacant at Easter. Applications to J. W. Cunningham, Secretary, from whom full particulars can be obtained.

KING'S LYNN HOSPITAL—House-Surgeon and Secretary. Salary, £80 per annum rising to £100, with board, lodging, and washing. Applications to the Chairman of the Weekly Board by March 24th.

LIVERPOOL DISPENSARIES.—Assistant-Surgeon, unmarried. Salary, £80 per annum, with apartments, board, and attendance. Applications to R. R. Greene, Secretary, Leith Offices, 34, Moorfields, Liverpool, by March 23rd.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon; double qualifications. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman of the Committee by March 23rd.

METROPOLITAN ASYLUMS BOARD.—Clinical Assistant for South-Eastern Fever Hospital, New Cross Road, S.E. Double qualifications. Board, lodging, and washing provided. Applications to the Medical Superintendent at the hospital, of whom further particulars can be obtained.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Officer; double qualifications. Salary, £120 per annum. Applications to the Honorary Secretary by March 23rd.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

PADDINGTON INFIRMARY, 285, Harrow Road, W.—Resident Clinical Assistant. Board and residence. Honorarium of twelve guineas at end of six months' satisfactory service. Applications to the Medical Superintendent.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer. Appointment for four months. Salary at rate of £60 per annum, with board and residence in the hospital. Applications to G. Owen Ryan, Secretary, by March 23rd.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—Resident Secretary and Dispenser. Salary, £80 per annum, with board, lodging, and washing. Applications endorsed "Application" to the Chairman of the Committee by April 8th.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, London.—Milroy Lecturer. Applications to the Registrar by April 8th, of whom all information can be obtained.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Resident Medical Officer; double qualifications. Salary, £70 per annum, with board and residence. Applications to R. Garrard Kestin, Secretary, by March 24th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge, S.E.—Anæsthetist and Registrar. Appointment for one year; honorarium, seventy guineas. Applications, with not more than three testimonials, to the Secretary, R. Garrard Kestin, by March 24th.

ROYAL SOUTH LONDON DISPENSARY, St. George's Cross, S.E.—Honorary Surgeon. Applications to the Committee of Management by March 28th.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King Street, Regent Street, W.—Surgeon. Must be F.R.C.S.Eng. Applications to the Secretary.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Resident Medical Officer, double qualifications. Salary, £105 per annum, with furnished apartments, attendance, coals, and gas. Applications to Frank Stokes, Secretary, by April 4th.

ST. MARY'S HOSPITAL, Paddington.—Surgeon. Appointment for five years. Applications to Thomas Ryan, Secretary, by April 6th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Honorary Physician; must be M.R.C.P.Lond., or a graduate of Medicine of one of the universities of Great Britain or Ireland, and not practising pharmacy. Applications to H. Peter Bodkin, Honorary Secretary, 23, Gordon Street, Gordon Square, by March 21st.

ST. THOMAS'S HOSPITAL, S.E.—Resident Assistant Physician. Applications to E. M. Hardy, Treasurer's Clerk, by March 28th.

TEIGNMOUTH, DAWLISH, AND NEWTON DISPENSARY AND CONVALESCENT HOME.—House Surgeon; double qualifications. Salary, £40 per annum, with board and lodging. Applications to the Honorary Secretary by March 21st.

UNIVERSITY OF LONDON.—Examiners in the following departments: Two in Comparative Anatomy and Zoology, salary, £120 each; Two in Medicine, salary, £150 each; Two in Surgery, salary, £150 each; Two in Anatomy, salary, £150 each; Two in Physiology, salary, £120 each; Two in Obstetric Medicine, salary, £75 each; Two in Materia Medica and Pharmaceutical Chemistry, salary, £100 each; Two in Forensic Medicine, salary, £50 each. Present examiners are re-eligible. Applications to Arthur Milman, M.A., Registrar, Burlington Gardens, by March 31st.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Board and lodging provided. Applications to R. J. Gilbert, Secretary Superintendent, by March 19th. Election on March 23rd.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Surgeon. Must be F.R.C.S. of London, Edinburgh, or Dublin. Applications to R. J. Gilbert, Secretary Superintendent, by April 2nd. Election on April 6th.

WINDSOR ROYAL INFIRMARY.—House-Surgeon. Salary, £100 per annum, with apartments; no board. Applications to G. P. Cartland, Secretary, by March 25th; election April 2nd.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM. Third Assistant Medical Officer, unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to Dr. Cooke, the Asylum, Powick, near Worcester, by April 2nd.

MEDICAL APPOINTMENTS.

CARDEW, Boyd, M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Cheltenham General Hospital, *vice* Albert Francis Richards.

CLIBBORN, William, B.A., M.D.Dub.Univ., L.R.C.S.I., appointed Medical Officer of Health for the Borough of Bridport; also Certifying Surgeon under the Factory Acts for Bridport and the surrounding districts.

CLUTTON, Henry Hugh, M.A., M.B.Cantab., F.R.C.S.Eng., appointed Surgeon to St. Thomas's Hospital.

COEN, John Augustus, L.R.C.S., L.M., L.K.Q.C.P.I., appointed Medical Officer to the Castlerea Union, Frenchpark Dispensary, *vice* Dr. Roughan, resigned.

CORNER, Harry, M.B., L.R.C.P.Lond., M.R.C.S.Eng., appointed Second Assistant Medical Officer at the Bethlem Royal Hospital.

DODWELL, P. R., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, *vice* Dr. Spencer.

EVANS, C. H., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. John's Hospital for Diseases of the Skin, *vice* G. W. Damman, M.B., B.Ch.

FAICHNIE, F., M.R.C.S., L.R.C.P.Lond., elected Clinical Assistant to the St. Marylebone Infirmary.

FENWICK, Wm. Soltau, M.D.Strasburg, L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, *vice* Dr. Carter.

FRY, Wm. Wr. Baldock, M.B. and C.M.Edin., appointed Medical Officer and Public Vaccinator for the Builth Union and Medical Officer of Health to the Builth Rural Sanitary Authority.

GOODALL, Edwin, M.D., appointed Demonstrator in Pathology at Owens College, Manchester.

GRATTE, C. Brooke, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Inspector of Seamen for the Board of Trade (Newport, Mon.).

HORDEN, H. H., M.B., L.R.C.P., appointed Resident House-Surgeon to the Brixton, Streatham, and Herne Hill Dispensary, *vice* S. Dukes Ashley, M.R.C.S.

HORDEN, J. O., M.B., C.M., L.R.C.P., L.M., appointed Honorary Physician to the Brondesbury and West Hampstead Crèche, *vice* F. A. Hill, M.D., resigned, and Resident Medical Officer to the Brixton and Herne Hill Dispensary.

HUNTER, R. Rankin, M.B., C.M.Glas., M.R.C.S.Eng., appointed Chief Medical Officer to the new hospital at Mount Morgan, Queensland.

LEES, E. Leonard, M.D., C.M., M.R.C.S., appointed Medical Registrar to the British Hospital for Sick Children and Women.

MACDONALD, C. R., M.D., appointed Medical Officer of Health for the County of Ayr, under the Local Government (Scotland) Act.

MACKINNON, Nicol, M.B., M.S., appointed Medical Officer to the Parish of South Uist, *vice* Dr. Maclachlan.

MACLEOD, John Norman, M.A., M.B., C.M.Glas., appointed House-Surgeon to the Royal Infirmary, Dundee.

MALCOLM, W. A., M.B., C.M., appointed Casualty Officer, Registrar, and Assistant Anæsthetist to the Great Northern Central Hospital.

MILNER, E. T., F.R.C.S.Eng., appointed by the Salford Guardians Visiting Medical Officer to the Hope Hospital.

MORRIS, Charles Arthur, M.A., M.B.Cantab., F.R.C.S., appointed Surgeon to the Grosvenor Hospital for Women and Children, *vice* R. W. Parker.

OGILVY-RAMSAY, Maxwell, M.A., M.B., C.M.Edin., appointed House-Surgeon to the Liverpool Infirmary for Children, Myrtle Street, *vice* Mr. H. A. Burrowes.

PRICHARD, Robert David, L.R.C.S., L.R.C.P.Edin., L.F.P.S.G., appointed Surgeon to the Resolven and Ynisarwen Collieries.

RING, Charles Gore, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health for the Keswick Local Board.

ROUSE, Mr. E. L., appointed House-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, *vice* Dr. Bird.

SHAW, Ernest Albert, B.A., M.B., B.C.Cantab., appointed by the Salford Guardians Assistant Medical Officer to the Hope Hospital.

SOUTTER, James, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator to the Sproatley District of the Skirlaugh Union, *vice* William Kirk, deceased.

WINSHIP, Wm. Algernon, M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Wetherall District of the Carlisle Union.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. B. Ward Richardson: Peroxide of Hydrogen, and Various Methods for its Administration and Use. Mr. Alban Doran: Fibro-Sarcoma, or "Desmoid Growth" of the Abdominal Wall.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Mr. C. B. Lockwood: On the Treatment of Strangulated Hernia when the Intestine is Gangrenous or Ulcerated. Mr. W. Arbuthnot Lane: Chronic Traumatic Arthritis.

WEDNESDAY.

HUNTERIAN SOCIETY, 8 P.M.—Dr. Galabin: Modern Methods of Cæsarean Section.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, 8.30 P.M.—Dr. Edis: Specimens of Uterine Polypi. Paper.—Dr. Robert Bell: The Treatment of Chronic Disease of the Uterine Adnexa.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

CRITCHETT.—On March 16th, at 21, Harley Street, W., the wife of G. Anderson Critchett, of a daughter.

DUKE.—On March 9th, at Locksley, St. Leonard's-on-Sea, the wife of Edgar Duke, M.R.C.S., of a daughter.

GRAHAM.—At Seaview House, Leven, Fife, N.B., on March 12th, the wife of R. Balfour Graham, F.R.C.S., L.R.C.P.Ed., of a son.

SYMPSON.—On March 14th, at 3, James Street, Lincoln, the wife of E. Mansel Sympson, M.D., B.C.Cantab, M.R.C.S., of a son.

MARRIAGE.

MANLEY—DUNDAS.—At St. Simon's, Rockley Road, W., on March 12th, Herbert Manley, M.A., M.B.Cantab., etc., only son of John Manley, of West Bromwich, to Alice Dundas, of London.

DEATH.

SYMES.—On March 7th, at the County Asylum, Rainhill, George Dickinson Symes, Assistant Medical Officer, second son of J. Gustavus Symes, of Southfield, Weymouth, late Medical Superintendent Dorset County Asylum, aged 30. Greatly loved, deeply lamented. Australian and Indian papers please copy.

BEQUEST.—The Mater Misericordiæ Hospital, Dublin, has been left £500 by the late Mrs. Emily Fitzgerald.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2, Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.15; females, Th., 8.15. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 1, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1, Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

WARM CLIMATE writes: Would you or any of your readers kindly inform a member of the Association of the way to go about getting a medical post in a warm climate, such as Australia? Would Australian or other papers be of use?

HOME FOR HYSTERICAL PATIENT.

R. S. will be glad if any member would kindly give him the address (and terms) of a home where a lady, suffering from an aggravated form of hysteria bordering on melancholia, but not actually insane, could be received for a time, with a view to treatment and an entire separation from friends. The terms must not be high, as the lady's husband is a clergyman with a small income and large family. Is there any such institution where the Weir-Mitchell treatment is carried out?

ANSWERS.

DR. HENRY CORBY.—The only Roman Catholic institution we know of is St. George's Retreat, Burgess Hill, Sussex.

PALMAR PSORIASIS.

MR. CHARLES HIRSCH, L.S.A., etc. (South Hampstead), writes: In reply to "Puzzled," I beg to suggest that many cases of apparently incurable palmar psoriasis are of specific origin, and that perhaps if he tried iodide of potassium either alone or in combination with liq. hydrarg. perchlor., a good effect might be produced. Of course should the history point more to gout than syphilis iodide of potassium with potass. bicarb., vin. ipecac., and some bitter like inf. cinchonæ would be indicated. In addition some local treatment, like the following ointment, is to be recommended: R liq. bitumin. co. ʒss., ung. hyd. ox. rub. (*B.P.*), ung. petrolei ää ʒss. Ft ung.

MR. W. LAIRD-COX (Southborough, Tunbridge Wells) writes: In answer to "Puzzled," I beg to suggest the use of a wash of a teaspoonful of liq. carbonis detergens to a pint of hot water, the hands to be then carefully dried, and the application of the following ointment—liq. carb. deterg., mx; acid. chrysophan., grs. x; lanolin, ʒss; adipis benzoat., ʒjss. He will find the result most gratifying.

IN answer to "Puzzled," M.R.C.S. would suggest: aristol, 1 part; lard, 12 parts; mix and make an ointment; a little to be well rubbed into the hands night and morning, the effect watched. M.R.C.S. would like to hear the result after a fortnight's use of the remedy, which in his hands has been successful combined with internal treatment.

MR. FREDERIC T. B. LOGAN (Bristol) recommends R Aristol ʒss; vaseline ʒiv. "Puzzled" will find the psoriasis soon disappear. He has found it efficacious when everything else had failed.

THE COCKADE.

M.R.C.S. writes: Does my appointment as surgeon and agent to the Admiralty entitle my coachman to wear a cockade?

*** It is difficult to say nowadays what entitles to wearing the cockade. Formerly, only commissioned officers of the army and navy and certain county officials were entitled to sport cockades of divers shapes and colours. We fancy an acting appointment would not carry the use of the cockade.

ITCHING AFTER GURJUN OIL.

J. R.—The occasional irritating effect of gurjun oil on the skin has been noticed. Unless the patient is highly eczematous, the itching should disappear if the part is kept smeared with zinc ointment. Any irritation that remains for longer than a few days after the cessation of the treatment should be regarded and treated as ordinary eczema.

IODOFORM EMULSIONS.

I.E.—The following is the formula for the iodoform emulsion recommended by Mr. A E. Barker for the treatment of large abscesses:—Iodoform in finely crystalline form, 10 parts; rect. spt., enough to damp the iodoform, placed in a clean mortar; dist. water, 20 parts, stirred in gradually; glycerine added last by degrees, 70 parts.

NOTES, LETTERS, Etc.

THE *Lazaretto* of St. Kitts, to which we referred in the BRITISH MEDICAL JOURNAL for January 31st, p. 265, is edited by Mr. C. H. Boon, and not by Dr. Boon, as we supposed.

COCAINE IN DENTISTRY.

Mr. C. R. SALISBURY, M.R.C.S., L.R.C.P. (St. John's, Wakefield), writes: In reference to the action of cocaine as a local anæsthetic, I should like to mention a fact which I have not seen recorded before. Thinking that I would try the action of cocaine for the purpose of annulling the pain during the process of cleaning out a hollow molar tooth in the lower jaw, preparatory to having it stopped, I injected half a grain of cocaine on either side of the tooth into the gum.

After waiting three or four minutes the dentist proceeded with his operation, but the pain was only very slightly lessened. We then made a 10 per cent. solution, with the intention of applying it locally to the exposed dentine. The first solution was used warm. Directly it touched the tooth it gave rise to most exquisite pain, extending into the temple along the course of the fifth nerve. Thinking that colder water might be more suitable we used a tepid solution (nearly cold). This also gave rise to similar pain. At this time the gum was quite insensitive and there was diminished sensibility to pain on touching the exposed dentine.

This is interesting (1) showing that cocaine is of very little use for the purpose of stopping teeth. (2) that although the sensation to pain was certainly diminished the sensation to heat and cold is certainly not diminished, and if anything is increased.

DIURETIC ACTION OF MERCURIALS.

DR. A. HAIG (Brook Street, W.) writes: With reference to the abstract of Jendrássik's article on the above subject in the SUPPLEMENT of February 28th, p. 70, may I remind your readers that I have endeavoured, in the BRITISH MEDICAL JOURNAL, vol. i, 1890, p. 1241, to give an explanation of this action of mercury? My explanation amounts shortly to this: 1. Uric acid in the blood contracts the arterioles all over the body.[1] 2. Therefore all substances which clear uric acid out of the blood relax the arterioles. 3. Other things being equal, contraction of the arterioles of the kidney causes the urine to be scanty; and their dilatation produces diuresis as long as the blood contains any water that can be drained off. 4. Mercury, in common with other drugs, clears the blood of uric acid; therefore it relaxes the arterioles, producing a low tension pulse and diuresis (Q.E.D.). Jendrássik's experiments with regard to the endosmotic powers of mercurialised serum are interesting, but I hardly see now how they explain the passage of excess of water out of the blood by the kidney, and they certainly do not explain the low tension pulse of mercury, which—thanks to Dr. Broadbent—is well known. But taking Jendrássik's explanation as standing good for the case of mercury, what shall we say about the diuresis of opium, salicylate of soda, acids, and numerous other drugs, or the diuresis which is well known to follow after attacks of migraine (uric acid headache), epilepsy, hysteria, all of which, from my point of view, are simple instances where (with the exception of salicylates, which act by altering the solubility of uric acid (see *Medico-Chirurgical Trans.*, vol. lxxi, p. 135) drugs which clear the blood of uric acid produce diuresis? In headache, epilepsy, and hysteria a rise of acidity clears the blood of uric acid, and I have spoken, in the BRITISH MEDICAL JOURNAL, November, 1889, and June, 1890, p. 1243, of opium and its mode of action.

HYGIENIC TRAM CARS.

AN ordinance has recently been passed in Indiana making it compulsory for all railroad companies to put storm doors on all railroad coaches and street cars for the carriage of street passengers, to keep the temperature from 68° to 70° F. in the cars, and to provide spittoons partly filled with bichloride of mercury for the use of persons suffering from chronic cough and expectoration.

PUERPERAL PNEUMONIA.

DR. R. NEALE (South Hampstead) writes: At p. 579 of the BRITISH MEDICAL JOURNAL of March 14th, Mr. Raven states that the *Medical Digest* contains no reference to puerperal pneumonia. A glance at Sections 646:5 and 1583:5 will show that the valuable paper by Dr. R. Barnes in 1882 was not missed; and the edition now passing through the press will include cases by Drs. Falkner, John Phillips, and others.

AN UNMERITED ATTACK.

THE part which well-known clergymen have taken at so many annual meetings of the Association is of itself ample proof of the cordial relations existing between the professions of theology and of medicine. The self-denying and disease-preventing work of medical men has been ungrudgingly acknowledged by the best representatives of the clerical world. A remarkable exception is, however, to be found in a recent number of the *Church Times*. In the article in question, medical practitioners and "the unphilosophical teetotal craze" are equally anathematised for an alleged favouring of the consumption of animal food. Teetotalism is denounced as leading to an undue craving for food to atone for the loss of the sustenance from good beer; the truth being that narcotics lessen the natural appetite, and their abandonment is conducive to a healthy and vigorous desire for food. Physicians are accused of neglecting to advise their patients to fast, because the cure of diseases is more lucrative than their prevention. No body of men in the world have done so much as the medical profession in teaching the people how to avoid disease, and in enjoining moderation in even the most useful foods.

[1] BRITISH MEDICAL JOURNAL, February 9th, 1889.

HOUSE OF LORDS' COMMISSION ON HOSPITALS.

MR. ALGERNON C. P. COOTE (Secretary London Lock Hospital) writes: I see in your otherwise admirable report of my evidence given before the House of Lords last week, you state that I said "there had been a large spread of the disease since the repeal of the Contagious Diseases Act."

I made no such statement, and cannot think upon what it was founded. The question was not asked; and, if it had been, I should have referred it to our medical representative to reply to when he came before the Committee.

LICENTIATE OR MEMBER?

L.R.C.S. write: A short paragraph on this subject in the BRITISH MEDICAL JOURNAL of March 14, is another instance of the great disadvantages that Licentiates of the College of Surgeons of Edinburgh and Ireland have to undergo. The curriculum for the Scotch and Irish diplomas is precisely the same in duration as that required for the Membership of the College of Surgeons of England, and I maintain that the examinations are quite as searching. Under these circumstances I think we ought to be entitled to call ourselves Members, and our diplomas ought to bear testimony to that effect. It is well known to the profession that the *Medical Directory* is frequently consulted by the laity for the purpose of knowing a medical man's qualifications, and the question has been put to me more than once, How is it that Mr. So-and-So is a Member of the College of Surgeons whereas you are only a Licentiate? How is this vexed question to be answered? Surely, if some influential Licentiates were to take the matter up, and petition the Scotch and Irish Colleges, this grievance might be removed.

INCREASING MORTALITY FROM DIPHTHERIA: A REASON SUGGESTED.

DR. F. P. ATKINSON (Surbiton) writes: I see Dr. Thorne, in his first lecture on diphtheria, mentions that there is an increasing mortality from this disease in the country generally, and that this is most noticeable in urban districts. Now the number of deaths no doubt, as he says, has of late years increased, but I fancy that the proportion of deaths to persons attacked has materially diminished, otherwise it would speak very badly for our present methods of treatment as well as our sanitary improvements, while it would be contrary to the state of things prevailing as regards other septic diseases. I would assign as the cause of the increase of diphtheria, more especially in urban districts, the mild and unrecognised character of many of the cases that present themselves for treatment, and the consequent absence of all sanitary precautions. Many of the so-called "diphtheritic looking cases" are no doubt cases of the real disease, and allowed to spread the infection without let or hindrance, as do those persons who manage to get through their illness without calling in a medical man at all. As a proof that this affords some reasonable explanation of this increasing mortality, I beg to quote from the BRITISH MEDICAL JOURNAL of February 14th, 1891.

The Manchester correspondent says: "The medical officer of health for Salford reports the origin of the outbreak of diphtheria is not clear, but there is good ground for believing that the epidemic commenced in the last quarter of 1887, and spread by reason that a large number of cases of the disease were of so mild a type as to escape recognition of their true nature, and were allowed to pass on to convalescence without any precautionary measures having been adopted to prevent their serving to spread the disease."

Dr. Littlejohn, medical officer of health for the city of Edinburgh, states that, during the last ten years, the death-rate from scarlatina has continued to diminish, while that from diphtheria has a tendency to increase, but he does not suggest any explanation. He only hopes that notification in the future will afford some clue. Surely a little consideration would have thrown some light on the subject, for in the case of scarlatina the disease is more or less under supervision during its most infectious period—namely, that of peeling—whereas in diphtheria the disease, in its early and infective stage, is often unrecognised, even by the person affected by it. These views I have advanced before, with the object of showing how little notification is likely to effect in stopping the progress of this disease.

EMBALMING IN AMERICA.

A BILL has been introduced into the New York State Legislature to establish a Board of Embalming Examiners, and to regulate the practice of embalming human bodies in that State. In Massachusetts the Medical Examiners have issued an order that no body is to be embalmed nor any embalming fluid used on the body until a medical certificate of the cause of death has been obtained.

UNQUALIFIED ASSISTANTS.

DR. G. D. MACKINTOSH (Manchester) writes: Taking a moderate computation, there are at the present day about 10,000 unqualified men in actual practice of the medical profession, some of them merely acting as dispensers, attending an occasional midwifery case, and visiting only in urgent cases, in the absence of their principals; but in the majority of large practices, both in the lower parts of London and of all our great cities—and especially in the mining and manufacturing districts—these totally untested men, so far as examination goes, do the greater part of the work. For example, I know a practitioner whose average of daily visits is from 100 to 140, and of these he attends to about 20 himself, leaving the rest to be divided between one qualified and one unqualified assistant; the latter, with the assistance of a dispenser, has also to make up from 150 to 180 prescriptions every day, and to keep the books of the practice. This he does for 35s. per week outdoor. In another case, an unqualified man in the East End of London works a sixpenny dispensary, bringing in £1,500 a year, the principal only attending for four hours a day, and visiting some special cases and those who are supposed to be about to die. I merely cite these two cases, for the facts of which I can personally vouch. Pages might be filled with similar instances.

That this state of affairs is a crying evil nobody can deny, but there is one still greater in connection with this subject. I refer to the management of branches by unqualified men; we all know of cases where the principal, residing at a distance of one to six miles away, puts up a

brass plate bearing his name and title, employs an unqualified assistant, and leaves all the work of the branch to him, only interfering in dangerous cases where a death certificate may become necessary, for the "covering" practitioner and his wily deputy have a very wholesome dread of a coroner's inquest and the consequent exposure of the self-styled "doctor's" right to practise.

Why are these unqualified assistants preferred by many principals to young qualified men? In the first place, because they are cheaper—they will do more work for less wage; in the second, because they are less independent; and in the third place, they often know the work they have to do better than any newly-fledged practitioner: they have learnt their lesson in the school of general practice, they are used to dealing with patients, they have acquired "tact." Many of them are really excellent practitioners, well up in their practical work, capable and attentive to their duties; they have attended a full curriculum, and passed all but their final examinations; and at this they have stuck and drifted into one of the most unenviable positions on the face of the earth—an unqualified assistancy.

Can nothing be done for these men to raise them, at least, to a position in which self-respect would be possible, and remove them from their life of deceit and imposture? The Medical Council has been so active of late that it is just possible that it might be induced to authorise one or more of the corporations to institute a practical final examination for men who have been in practice five years or more, after a full curriculum and who have passed their primary examinations, having passed which, they would receive a certificate enabling them to act as "visiting medical assistants" to registered medical men, and giving them the right to sign death certificates, to be in every instance countersigned by their principals, although the latter need not have seen the case, and merely signs to prove that the signer is his *bonâ fide* assistant and not practising upon his own account.

Of the medically uneducated class of assistants I do not now speak. They have no right to act as assistants in any case, and in many instances are not fit to be trusted as dispensers, for which position a qualified chemist is surely the most suitable man, whilst general practitioners still find it necessary to carry on their own dispensing. I hope that a day will come when all dispensing will be in the hands of chemists, and all medical work in those of registered medical practitioners; when, by a strict enforcement of penal measures, quacks and counter prescribers will be no more, and when every registered medical man and chemist will be able to gain an honourable livelihood by the exercise of his own vocation, without trenching upon his neighbour's rights.

The "Revised Scheme" for the Reconstitution of the University of London.

A London Graduate writes: The revised scheme proposes that University and King's Colleges shall together elect six members of the Senate (that is, have direct representation), and shall, with the other constituent colleges, have an indirect representation on the Senate through the faculties. As these two Colleges are, under the present scheme, the only London constituent colleges in all faculties, it is clear that, directly or indirectly, they have a voice in the election of eighteen members of the Senate. The whole of the provincial university colleges together are to elect four senators only. In the medical faculty we find that all the London medical schools are to be constituent colleges, and are to elect all together five senators only, indirectly through the faculty of medicine.

We find, therefore, that of the medical schools of London, University and King's are singled out as distinct from the rest, and allowed not only indirect representation through the faculty, but also direct representation on the Senate. What is the reason for this difference? Are University and King's Colleges, as medical schools, in any way superior to the purely medical institutions? A good answer to this question will be found by analysing some of the recent "pass lists." At the intermediate M.B. examination recently held, 8 students from St. Bartholomew's were successful, 7 from Guy's, 4 from University College, 4 from King's College, 4 from St. Mary's, 1 from St. Thomas's, 1 from Middlesex, 2 from the London, and 1 from St. George's.

One fails here to find any conspicuous superiority of University and King's Colleges. Perhaps, however, it may be found in the pass list of the recent preliminary scientific examination. In this pass list we find that 12 students from St. Bartholomew's passed, 12 from University College, 10 from Guy's, 7 from St. Thomas's, 4 from St. Mary's, 3 from King's College, and 3 from the London. Here, again, the result is not more favourable to the claims of these colleges, but perhaps it is that the January preliminary scientific examination is only intended for candidates rejected in the previous July, and that these colleges will be conspicuous in the July pass-list, their students, no doubt, taking the highest honours. The following table shows the number of students from the various schools who passed the preliminary scientific in July, 1890, in honours, first division, and second division respectively:—

School or College.	No. in Honours.	No. in 1st Div.	No. in 2nd Div.	Total.
University College	2	8	5	15
St. Bartholomew's	5	6	3	14
Guy's	2	3	5	10
St. Thomas's	0	3	2	5
King's College	0	1	2	3
London	0	1	2	3
St. Mary's	1	1	0	2

This table also disappoints us. We look in vain for evidence of the vaunted superiority in science of these two Colleges. King's can claim not a single place in honours, and University College (one of whose professors only a few years since spoke in strong terms of the incompetency of the London medical schools to teach preliminary science) can only show 2 in honours, whilst St. Bartholomew's have secured 5 places. In the more purely professional examinations the same facts are seen. At the last M.S. examination 4 candidates passed: 2 were from Guy's, and 1 each from St. Thomas's and Westminster. At the last B.S. examination there were 8 men from Guy's successful, 5 from St. Bartholomew's, 4 from University College, 3 from St. Thomas's, and none from King's College. In the pass-list of the last M.B. examination we find that 10 successful candidates owe their education to each of St. Bartholomew's, Guy's, and University College, 8 to the London School of Medicine for Women, 6 to King's College, 5 to the London Hospital, and 2 to St. Thomas's. In other faculties than medicine the case against the preposterous claims of these colleges is just as strong.

The only conclusion which can be drawn from the facts is that there are no just grounds for assigning to these colleges a share in the management of the University out of all proportion to that of any other college or school, and they form a strong argument against the selection of these colleges, and these only, as deserving direct representation on the Senate.

For the sake of medical education in London, I hope that this scheme for the resuscitation of University and King's Colleges will neither be supported by the medical schools nor passed by Convocation.

Sunny Falmouth.

Mr. Edwd. Kitto (Superintendent, the Observatory, Falmouth) writes: On several occasions during the past 12 months the attention of the medical profession has, through your courtesy, been drawn to the salubrious climate of Falmouth and to the suitability of this neighbourhood as a winter health resort for patients suffering from pulmonary complaints, more particularly by the letters which have appeared in the British Medical Journal from the pen of Sir E. H. Sieveking, M.D., F.R.C.P., etc.

At the suggestion of that gentleman I venture to ask for space in your valuable Journal for a brief statement as to the weather recently experienced at Falmouth. During the exceptionally severe weather of November, December, and January the mean monthly temperature was (roundly): For November, 45°; for December, 39°; and January, 39°; the mean daily range for those months being 6.9°, 7.6°, and 8.0° respectively. The absolute minimum temperature recorded was 22.4° on November 29th, 1890, and again on January 18th, 1891. This was the lowest temperature ever recorded at the observatory since its establishment in 1868, so that we have never had quite 10° of frost during the past 22 years. Slight falls of snow occurred on three days in December and once in January; in no case was it sufficient to remain on the ground, but vanished very quickly. In January we had 82.4 hours of bright sunshine, occurring on 26 days; rainfall for the month 3.43 inches.

It is to the month of February, however, that I wish to call particular attention. From observations made daily at 9 A.M., local time, with thermometers placed in a Stevenson screen, in a perfectly exposed position on the observatory lawn, the mean temperature of the month has been 43°; mean of daily maxima, 48.1°; mean of daily minima, 39.6°; mean daily range, 8.5°. Absolute maximum, 53.5°, on the 28th; absolute minimum, 31.3°, on the 10th, giving an extreme range of 22.2° for the month.

The amount of bright sunshine enjoyed at Falmouth during February has been remarkable. The record is:

For the week ending February 7th	15.7	hours
,, ,, ,, 14th	30.3	,,
,, ,, ,, 21st	41.7	,,
,, ,, ,, 28th	38.6	,,
Making a total for the month of	126.3	,,

The sun shone on 23 days; only 5 were sunless.

Whilst London and the eastern counties have suffered much from dense fogs we have been almost free from such disagreeable experience. True the bay has frequently been enveloped in mists and sometimes actual fog, but on two occasions only have I had to record fog at the observatory, namely, on Feb. 24th and 25th, then only in the morning, sunshine to the amount of 2 and 2.7 hours respectively being recorded on those days. The rainfall for February was very small, namely, 0.06 inches, which fell on 2 days, the remaining 26 days were perfectly dry.

Nurses at Infectious Hospitals and the Spread of Infection.

Dr. Fred. Foord Caiger (South Western Fever Hospital) writes: I should be glad if you will give me the opportunity to correct a statement in the report of the meeting of the Society of Medical Officers of Health on February 13th, which appeared in the British Medical Journal of February 28th. In a discussion following on Mr. Wynter Blyth's paper on the Present Position of Disinfectants, I am reported to have said that "there were regulations as to bathing and change of clothing by nurses going out of the hospital, but that they were practically a dead letter." What I did say was that there were times when it was practically impossible to expect a woman to take a bath before going out on pass, and therefore that with regard to bathing the regulation was in many cases a dead letter, or words to that effect. In the matter of change of clothing the same objection does not apply, and to allow any laxity in that respect would be to disregard a most elementary and obvious precaution, whatever degree of risk might be attaching to its infringement. As a matter of fact the regulation as to change of clothing is rigidly enforced in the case of every officer of the hospital, male or female.

The Hymen in its Relation to Rape and Carnal Knowledge.

Dr. John T. Hartill, L.R.C.P.L., M.R.C.S.Eng. (Willenhall) writes: A girl under 16 consulted me on August 5th, 1890, and alleged she had been criminally assaulted by a married man on June 16th. Her statement seemed to show that she was more or less a consenting party to whatever took place, and proceedings against the man had already commenced at the police court.

Before the magistrates I stated the appearance of the external genitals was consistent with virginity, the hymen being perfect. I further said that in consequence of the girl's statement that she had morning sickness, sickness after meals, and had had no menstrual flux for two months, I examined her more fully than is usual in such cases, and finding the breasts large, the areola round the nipples large and dark, and the womb large, I had concluded it was extremely probable she was pregnant. The man was committed to Stafford assizes on a charge of

having carnal knowledge of a girl under 16. He was tried and acquitted on December 18th. The evidence justified acquittal, although there seemed little doubt of the pregnancy of the girl, as it was perfectly clear that some one other than the prisoner had had carnal knowledge of her unless gross perjury had been committed. I am told she was delivered of a living child on February 11th, 1891.

I have more than once delivered a married woman at the full period of gestation in whom the hymen was perfect up to the moment of delivery. The record of this case is instructive, as with the others it seems to show the possibility of complete sexual intercourse with persons whose vaginæ are capacious without rupture of the hymen, and to have an important bearing on the possibly of rape without rupture.

The Turkish Bath in Phthisis.

Dr. M. Altdorfer (Resident Physician, St. Ann's Hill Hydropathic Establishment, co. Cork) writes: Will you allow me to corroborate the statement of Dr. Wilberforce Smith with regard to the efficacy of the Turkish bath in pulmonary phthisis? I have only had occasion to use this mode of treatment in the incipient stage of the disease, but in these cases the results have been most satisfactory. The improvement could always be proved objectively by the physical signs; but the most marked effects were observed in regard to night sweats, appetite, and body weight. The latter always increased. One patient gained 7 lbs. in four weeks, although he had lost 14 lbs. during the preceding twelve months.

Concerning weight, I would like to state that I find it generally much more difficult to reduce the body weight by means of the Turkish bath than the reverse, and I have seen delicate patients taking one bath daily gain as much as 5 lbs. in one week—a fact which is, in my opinion, principally due to the improved appetite and the better assimilation of food.

I am, however, not inclined to attribute the beneficial effect of the Turkish bath in cases of tuberculosis to the direct action of the high temperature on the bacilli. Mosso and Bondelli have proved by experiments that the temperature in the larynx of a dog inhaling air heated to 320° F. rises only to 100.4°, and in the bronchial tubes to 100.0°;[1] and the blood temperature of a person staying in the hot room of a Turkish bath is only raised by a few degrees owing to the evaporation of the perspiration. The highest temperature measured by myself in a man who had stayed for half an hour in a room of 160° was 102°; as a rule the temperature was one or two degrees less.

My belief is that the curative action of the Turkish bath must be explained by the assistance given to the cells in their struggle with the invading bacilli. By the moderately raised temperature of the blood the cells, especially the phagocytes, are roused to a greater activity, similarly as in a feverish state; at the same time, the toxic products of the bacilli—the "ptomaines" or "toxines"—are partly eliminated through the greater activity of the organs of excretion, the skin, kidneys, lungs, and partly destroyed or made innocuous through more lively oxidations within the body. That the processes of oxidation as well as the absorption of oxygen into the blood are greatly increased, not only in the hot room, but more especially after the applications of cold water with which we wind up the Turkish bath, I have pointed out in a paper published some time ago.[2]

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BOOKS, Etc., RECEIVED.

Die Peptone. Von Dr. Med. v. Gerlach. Hamburg and Leipzig: Leopold Voss. 1891.

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[1] *Arch. Ital. di Biolog.*, 1889, p. 259.

[2] *Medical Press and Circular*, May 2nd, 1888, The Hot Air Bath in Relation to Ptomaines and Leucomaines; *Deutsche med. Zeitung*, 1888, No. 76, Heilfieber und Heissluftbad, ein Vergleich.

REMARKS
ON
THE TREATMENT OF THE PYREXIA OF PHTHISIS.

By C. THEODORE WILLIAMS, M.A., M.D., F.R.C.P.,
Senior Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

PYREXIA is often a most troublesome symptom in both acute and chronic phthisis, though it is not a necessary accompaniment—certainly not of the chronic forms—and it has been known to be absent even in the acute ones. It is, however, in a large proportion of cases, the principal unfavourable symptom. When it is persistent it is impossible for the medical man to give a hopeful prognosis, and when it subsides the case assumes a most hopeful aspect. Its absence has generally been assumed to indicate quiescence of tuberculous disease, and its presence, activity; and while the latter proposition is usually true, the former is not to be always relied on, for in many cases tubercle forms and undergoes excavation without pyrexia.

The pyrexia of phthisis never reaches very high figures—a record of 105° F. is very seldom attained, and the charts rarely run higher than 103°. A chief feature is the unformity of the afternoon rise. On the other hand, the temperature descends, as in the early morning, very low indeed, and I have registered a reading of even 91.6°. This case was one of acute lung excavation, and the range of temperature in twenty-four hours amounted to 10°.

A rise of temperature above 100° in a case of phthisis ought always to lead to a careful search for the cause of such elevation, and it generally is to be found in extension of tuberculous disease, or in softening and excavation of old tuberculous masses, or, if a cavity be present, in its further extension; or, again, it may be traced to commencing tuberculosis in some other organ, as the lymphatic glands, the joints, the testicles, or the intestines. In a very few cases it is due to pulmonary congestion, generally affecting the bases of the lungs, though pulmonary congestion in phthisis means, as a rule, extension of tuberculation.

Various theories have been put forth of late years to explain the process of fever, and, on the whole, I am inclined to adopt that of Dr. Donald MacAlister,[1] as best meeting the many difficulties which surround the subject, and as being particularly suited to the requirements of phthisical pyrexia.

Dr. MacAlister divided the factors of fever into three: 1, the thermolytic or heat-discharging mechanism; 2, the thermogenic or heat-producing mechanism; 3, the thermotaxic or heat-adjusting mechanism.

Heat is discharged throughout the whole of fever—during its rise, its continuance, and its defervescence, the discharge taking place through the skin by evaporation, conduction, and radiation in the ratio of 80 per cent., and through respiration in the ratio of about 20 per cent.

Heat is produced in the body by the oxidation of tissues, chiefly of muscles, which may be regarded as the furnaces of the body, the heat-producing or thermogenic function of muscle being quite independent of the contractile function, and continuing during rest, though in some degree increased by contraction. This thermogenic metabolism of muscle continues as long as blood and nerve supply are intact. If the nerve be stimulated, muscular contraction and increased production of heat result, but muscular contraction outlasts heat production. When a muscle is poisoned with curare, which abolishes the function of the nerve endings, and thus blocks the way for the transmission of impulses from the nerve trunks to the muscle, both effects are lost, and the thermal behaviour of an animal, whose thermogenic tissues are thus cut off from the influence of the nervous system, is remarkable. The vasomotor system is intact, but the animal can no longer maintain its temperature. If plunged into a cooler medium the temperature falls, if transferred to a warmer one, it rises. Moreover, the practical cessation of oxidative metabolism is shown by the consumption of oxygen and the exhalation of carbonic acid falling to a fraction, showing how much these processes are due to the thermogenic action of muscles, and how much this latter is due to their innervation.

Heat production in the muscle is, according to Dr. MacAlister, carried on under the influence of a twofold nervous mechanism, the one part exciting to thermogenesis, accompanied by destructive metabolism, and the other part staying thermogenesis and subserving contractive metabolism. The thermogenic tonus is the manifestation of the normal balance between these parts.

Experiments show that by the stimulation of a particular region to the inner side of the corpus striatum the thermogenic function of the muscle is abnormally increased, and this without encroaching on the motor tract, without exciting the motor function, and without any action that can be fairly called vasomotor being brought into play.

The temperature of phthisis is, as I have shown in a paper in the *Medico-Chirurgical Transactions* (vol. lviii), due to a combination of fever and collapse influence. If these are equally balanced, a chart hardly differing from the normal results: if collapse prevails, subnormal temperatures appear, and if the febrile process be in the ascendant, pyrexia shows itself.

The formation of tubercle may not cause great variation in the temperature chart from the normal, but any variations which occur take a particular form, which is visible in apyrexial cases, but is accentuated in pyrexial ones. Thus, the temperature of tuberculisation is characterised by a considerable range of temperature, varying from 94° F. to 103° F., by afternoon pyrexia and subnormal early morning temperatures. For tuberculisation without fever the curve is similar, but not so marked, the collapse influence prevailing.

Now we may look at the subnormal temperatures as instances of the thermolytic agency, where heat is being discharged in the form of night sweats. Then in the afternoon pyrexia we see the thermogenic influence giving rise to that wasting of tissues, especially of muscle, which is so characteristic of phthisis. When we examine the hectic temperatures of acute excavation we see there all the features of suppurative fever in the afternoon and evening pyrexia, followed by the rapid fall during night and early morning, and the recovery in the later morning hours. Here we appear to have more thermogenic influence in the afternoon and evening, and more thermolytic in the night and early morning, while the whole chart seems sadly to lack the thermotaxic control shown in the thermogenic tonus, and this is still more marked in the records of advanced phthisis.

The treatment of the pyrexia of tuberculisation, if the latter be limited in extent and do not amount to acute tuberculosis of the lung, may often be dealt with, and dealt with successfully, by general measures. In some cases the addition of arsenic or quinine to the tonic will suffice to reduce temperature: in other cases derivative measures in the form of free application of counter-irritation to the chest wall succeed, if combined with the promotion of large secretion from the whole bronchial tract by saline expectorants, to which the addition of aconite or digitalis is often desirable. With regard to counter-irritation, vesication, and specially with the preparations of cantharides, if applied so as to produce a large blister over the affected lung, is far more efficacious in reducing temperature than any amount of poulticing or iodine painting. The best form of expectorant in these cases is the effervescing carbonate of ammonia draught, to be given two or three times a day, to which may be added 4 to 5 minims of antimonial wine, and the same dose of tincture of aconite. This, with the ordinary precautions of rest in bed during the fever rise, reduces the heat in a great proportion of cases of tuberculisation. Where these measures fail, quinine, given in an effervescing form in 3 to 5-grain doses, just before and during the rise of the temperature, is advisable. Salicylate of soda, or salicin, may also be tried. Professor Jaccoud's plan of giving hydrobromate of quinine in doses of 15 to 30 grains every night for three consecutive nights, which, he states, lowers the temperature in this stage of phthisis for

[1] Goulstonian Lectures, 1887.

four days, failed entirely in my hands in two cases in which a fair trial was given to it, though cinchonism and great mental excitement were thereby induced.

The treatment of the pyrexia of softening and excavation of tubercle is encompassed by far greater difficulties, as here we have to deal with suppurating surfaces out of surgical reach, from which reabsorption of pus and septic products with our old enemies, the tubercle bacilli, is continually taking place, and consequent infection of fresh tracts of the lung, so that we have to treat suppurative fever and the pyrexia of tuberculisation in the same individual.

Small wonder is it that our efforts to reduce such fever result, for the most part, in temporary, and rarely in permanent, success. The temperature falls under treatment, but rises directly that treatment is suspended, and generally the pyrexia only subsides when excavation is for a time complete, or a cavity has still further extended and the patient's vital powers have become more and more collapsed.

The number of medicines which have been tried to reduce the temperature of this stage is an almost endless list, which I shall not attempt to exhaust, but will enumerate those of which I have most experience. *Quinine* in doses of from 5 to 20 grains dissolved in acid, undoubtedly will temporarily reduce temperature, but as cinchonism is soon produced, it is impossible to persevere for any length of time. The effervescing quinine draught before mentioned, combined with digitalis tincture (10 minims) is far more effectual because it can be continued longer, and I have had the best results from this antipyretic. Heim's pills, often called Niemeyer's, containing a grain of sulphate of quinine and digitalis, combined with half a grain of opium given three or four times a day, also exercises a good temporary effect. Salicylate of soda and salicylic acid reduce temperature, but cannot be continued long on account of the lowering influence of the drugs. Of the two, salicylate of soda is preferable, and, when given in 20 grain doses every four hours, soon has the desired effect, and may be afterwards taken twice in the afternoon to control the pyrexia.

Salicin if added in 10-grain doses to the effervescing carbonate of ammonia draught already mentioned, considerably strengthens its antipyretic effect.

Iodoform in doses of 3 to 5 grains, three or four times a day, I tried in a number of cases, but with no good result whatever.

Kairin and *chinoline* were both so nauseous, that I cannot say I succeeded in persuading the patients to make a fair trial of them.

Antipyrin I have used very largely, and for a long time it was my principal febrifuge. It generally reduces the temperature if given for a few days in 15 to 30-grain doses every four hours, by inducing perspiration, but if persisted in, is followed generally on the eighth day by a measly rash, which disappears on the drug being omitted. Anorexia and vomiting, and sometimes collapse, have been noted in cases where antipyrin has been continued for a lengthened period, as is necessarily the case in phthisical pyrexia. Its action is very rapid, the temperature often falling within an hour of the first dose, and the fall is often very great. I have known the thermometer fall from 103° F. to 96° F. in a few hours, where 20 grains were administered every two hours for a day, but it rose again when the doses were only repeated every six hours. This is the great difficulty—we have often to choose between pyrexia and saturating the patient with antipyrin, and in the end generally prefer even the former.

Resorcin, a derivative of benzol, in 10 to 25 grains has a similar effect to antipyrin, and was very successful in reducing the temperature of one case of acute consumption under my care.

Thallin is a very powerful antiseptic derivative of coal tar, of which I have used the sulphate and tartrate in two cases for reduction of temperature according to the recommendation of Ehrlich and Laquer.

In a case of cavity with high pyrexia, which hydrobromate of quinine had failed to reduce, but which had temporarily subsided under antipyrin when carried to the extent of producing the measly rash, after its omission thallin was tried in 1-grain doses every hour, with speedy reduction of temperature from 101.5° F. to 97° F., but, unfortunately, with symptoms of collapse, rigors, and a feeble pulse, and the thallin had to be discontinued.

In another cavity case 1 grain was administered every two hours, and the temperature was lowered in eight or ten minutes. The medicine was continued in 1½-grain doses three times a day, but here again collapse followed, and the drug had to be omitted. For rapidity of cooling action thallin, even in small doses, surpasses all other drugs, but its effects are nearly as alarming as those produced by pyrodine, which I strongly recommend all members to have nothing to do with.

Antifebrin or *phenylacetamide* has given me, on the whole, good results in phthisical pyrexia. Its action is rapid, and the lowering of the temperature appears due to diaphoresis, which is sometimes long continued and may be exhausting. The great advantage of antifebrin over antipyrin and other antipyretic coal tar derivatives are (1) the small dose (5 to 7 grains dissolved in warm water, it being insoluble in cold), and (2) the few doses required in the twenty-four hours—as a rule, two doses a day, given at noon and 4 P.M., will suffice to keep the temperature within moderate bounds; (3) that it can be easily suited by the patient to his or her own requirements. A record of the temperature is kept, and if the chart rises above 100° F. or 101° F. a powder is at once taken, but if the record remains below this it is omitted. Much has been said about the danger of antifebrin in causing collapse of the circulation; all I can say is that I have administered it in the above doses to hundreds of consumptives without the slightest evil result; and I regard it, on the whole, as one of the best antipyretics available for the pyrexia of phthisis. It speedily lowers the temperature 2 or 3° F., which effect remains as long as the antifebrin is taken.

Phenacetin has been found useful in some few cases where antifebrin failed. The dose is smaller and the sweating not so profuse. I once tried hypodermic injections of *carbolic acid* of strength varying from 1 in 30 to 1 in 50, in accordance with the advice of M. Léon Petit, of Paris, who informed me that the reduction of phthisical pyrexia by these means was complete. Two female patients, with well-marked third stage pyrexia, were selected, and 15 minims of a 5 per cent. solution of carbolic acid were injected before the fever rise every day for a fortnight, the dose being gradually increased to 30 minims. The result was purely negative, but the patients did not complain of the proceeding.

In another case the hypodermic injection of *guaiacol* was performed on a hospital patient of mine by a German physician, who reported most satisfactory results from this treatment in his own country. The dose was 18 minims of an alcoholic solution, and it was injected under the skin of the thigh, the temperature being then 101.8°. The patient complained of a slight burning pain over the puncture spot, which soon passed off. Half an hour later she felt very hot and perspired profusely, the temperature falling to 97.4°. Two hours later symptoms of collapse came on, and for two hours the temperature was so low that the thermometer failed to register it. By 10.30 P.M., under stimulating measures, the patient had recovered, and the temperature rose first to 96.4°, and by 12.30 to 101.4°. I need hardly say the experiment was not of a character to encourage or justify repetition.

Cold Applications.—Some eighteen years ago I published[2] three cases of pyrexia of phthisis treated by cold baths, where consumptives with high fever were immersed in water at 90° F., which was rapidly cooled to 60° F. The reduction in all cases was very decided, and in one case amounted to 6°. In all three cases the temperature rose again, but in two of them the bath seemed to be the starting points of improvement in appetite and strength, breathing, and physical signs, and moreover, in these two, the records were never so high after the bath, and the pyrexia gradually subsided. The third case was an advanced one, with double cavities, and the temperature was lowered, but not permanently. In neither of the patients was any congestion of the lungs or bronchial catarrh induced by the baths.

However, cold baths are at best a clumsy arrangement, and quite inadmissible in many instances, and so I next tried tepid sponging of the body in several cases, with great refreshment to the patient. The ice pack was also tested in some instances of severe pyrexia, and found effective for reduction of temperature, though difficult of frequent application. Finally,

[2] *Clinical Transactions*, vol. vi.

at the suggestion of the late Dr. Wilson Fox, I tried Chapman's spinal ice bags, arranging that the patient should wear one of these for a few hours each day whenever the temperature rose above 100° F. This reduced the temperature decidedly for the time, and added greatly to the patient's comfort.

A natural question arises here: Is it advisable to reduce the pyrexia of phthisis at all? We do not thereby stop the tuberculous process; and as regards the wasting, I have shown elsewhere[3] that pyrexia in phthisis is compatible with gain of weight, provided the diet be of a sufficiently abundant and nutritive character. In most cases the reduction of temperature is attended with a certain degree of comfort to the patient. But even to this statement there are exceptions, for occasionally patients, when the pyrexia is reduced by antifebrin or antipyrin, experience such uncomfortable sensations—chiefly of oppression—that they prefer the high fever to the effect of the antipyretic.

Two agencies which sometimes prove powerful antipyretics must be mentioned. One is confinement to bed. This I have seen by itself reduce temperature to the extent of 2° or 3° F. The other is sleep, which will reduce temperature 2° and more at a time without any medicines.

My conclusions as to the treatment of pyrexia in phthisis are:

1. The pyrexia due to tuberculisation is best dealt with by derivative measures, such as counter-irritation, salines promoting secretion from other organs, and assisting expectoration.

2. That in the treatment of the pyrexia accompanying softening and excavation, measures which hasten these processes are found to be most successful, especially if combined with antiperiodics, such as quinine, salicin, salicylate of sodium, to moderate the fever.

3. That the use of medicines solely directed to lowering the temperature of the body without promoting increase in the natural secretions is generally inadvisible.

4. That our object in the treatment of phthisical pyrexia should be, not the reduction at all hazards of the temperature, but its lowering to the limits compatible with the comfort and well-being of the patients, and for this end that much may be done, in addition to the discriminating use of medicines, by the simple means of frequent food combined with stimulants and rest in bed.

THE LUMLEIAN LECTURES
ON
STRUCTURAL DISEASES OF THE HEART CONSIDERED FROM THE POINT OF VIEW OF PROGNOSIS.

Delivered before the Royal College of Physicians of London.

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Lecture II.—Dilatation: Symptoms: Treatment.

The symptoms which attend the earlier stages of dilatation are extremely varied and very vague. An imperfect and fluctuating supply of blood to the brain will give rise to impairment of bodily and mental energy, and to irresolution and vacillation of purpose; the memory is liable to fail, especially in regard of recent events, and the power of sustained attention and consecutive thought is diminished. The frame of mind will often be despondent, and the temper may be irritable. There may be attacks of giddiness or faintness; in one case the patient, a vigorous old gentleman, aged 78, fell down from time to time as if he had been shot, with momentary loss of consciousness, getting up again at once apparently none the worse; sleep is usually disturbed, and sometimes almost absent, and, whether the nights are good or bad, there may be sopor at any period of the day, the patient dropping off to sleep even over his morning newspaper. For the same reason, the irregular and imperfect blood supply and the back pressure in the veins, digestion, and the action of the liver will be deranged. The appetite is usually bad, and food is followed by discomfort and by flatulent distension, which latter again reacts on the heart, and gives rise to oppression, or palpitation, or irregular action. The bowels are usually torpid. The urine is usually deficient in amount and high coloured, and there is often an habitual deposit of urates. Turbidity of the urine day after day, whatever the food and drink, or weather, or mode of life, should direct attention to the state of the circulation.

There is no one, and scarcely any combination, of the symptoms enumerated, however, which may not occur independently of weakness and dilatation of the heart, especially in states of system attended with high tension; and it would be waste of time to attempt to disentangle those directly due to the state of the heart from those which are merely accidentally associated with it.

The special symptom which calls attention to the heart as the probable starting point of a number of ailments is breathlessness on slight exertion, but even this may be produced by other causes—by anæmia, for example: after middle age, pernicious anæmia may often give rise to extreme breathlessness, which may excite a suspicion of heart disease. High arterial tension alone, which has not yet given rise to dilatation, simple debility, very sedentary habits, may also cause great shortness of breath. These facts are mentioned in order to warn against a too ready inference that heart disease exists simply because the breath is short in speaking. An interesting fact in connection with breathlessness due to dilatation of the heart is that it is often relieved by exercise of the voice. I have met with numerous instances in which a clergyman has climbed into the pulpit with the utmost difficulty, and has not only preached a sermon comfortably, but has been all the better for it. A sense of breathlessness coming on during repose, and inciting the patient to make frequent deep inspirations, is usually a symptom of nervous depression, and has no necessary relation to heart disease. For the most part, as the disease advances, symptoms arise which are indicative of back pressure in the systemic veins, a gradually advancing œdema, and the like.

Prognosis.—But the problems which come before us in the prognosis of dilatation of the heart will best be elucidated by discussing them as they present themselves at different stages of the disease, and we may first take the fully developed effects. The patient is dropsical, œdema invading the thighs, loins, and abdominal parietes, as well as the legs, and there may be fluid in the abdomen and perhaps in one or both pleural cavities. The feet and legs will be cold and pale, or purple and livid, especially if hanging down; the hands also will be cold, and are often crimson or purplish, and the nails of a deep or dusky, instead of a bright pink. A white patch on the hand, produced by pressure, is very slowly invaded by returning colour. The sufferer is probably unable to lie down in bed, and is propped up by pillows, or he must have his legs down, and therefore spends days and night seated in his chair. Remarkable exceptions, however, are met with in this respect, some sufferers, while extremely ill, being able to lie down without distress. The face is pale, and perhaps puffy, especially under the eyes, with injected capillaries over the cheeks, and wears an expression of distress, and the eyes are watery. The lips are pale or bluish; the breathing is more or less laboured, even in repose, and the sufferer constantly supplements his reflex respiration by voluntary deep breaths. When he speaks it is in fragmentary sentences, and with evident effort and aggravation of the respiratory distress. The least movement brings on shortness of breath, which is often painful, even to witness. The pulse is frequent, irregular, and probably greatly deficient in tension, but not always. The urine will be scanty, of a deep colour, and probably high specific gravity; it most commonly throws down a copious deposit of brickdust lithates, and it may contain albumen. The appetite will be very bad, and there may be nausea; the tongue probably furred, the bowels constipated or irregular. One of the most distressing symptoms is sleeplessness, and when, after hours of weary shifting of position, the sufferer is overcome by fatigue and drops off, he has painful dreams, and wakes suddenly in affright and suffocation for lack of voluntary help to his respiration.

[3] British Medical Journal, vol. ii, p. 262, 1872.

The longest and best sleep will be obtained while sitting in a chair, and sometimes by day rather than in the night.

Pursuing the examination, the jugulars will be found full, but not, as a rule, greatly distended or pulsating forcibly. The liver will be enlarged, coming down sometimes as low as the umbilicus, and extending across the epigastrium into the left hypochondrium. It will often be jogged by the right ventricle, but does not usually exhibit true expansile pulsation. There may be fluid in the peritoneal or pleural cavities, more commonly not, and there may be physical signs of œdema and congestion of the lungs, or the percussion note may be good and the entry of air free and unattended with adventitious sounds of any kind to the very base of both lungs. By means of the physical signs of dilatation, as already described, we know that this is the condition underlying the symptoms of embarrassment of the circulation. We are called upon to answer the question, Has the patient a chance of recovering from the condition described, or will he die?

The first element in the judgment to be formed will be the urgency of the symptoms, and special importance will attach to two of the series—the nausea, and loss of appetite and the sleeplessness—from the effects which they have on the patient's strength. Frequent vomiting of food is of very grave import, not only because the patient does not get the benefit of the nourishment, but because it shows that the stasis in the abdominal circulation has reached a point which interferes seriously with the digestive secretions. Attacks of faintness and of extreme exhaustion, or of severe dyspnœa, are also very serious.

An observation is here necessary. It is not always when the dropsy is excessive that the condition of the patient is worst. From the late appearance or entire absence of dropsy in fatty degeneration of the heart, in aortic disease, and mitral stenosis, it would appear that a certain degree of pressure in the arterial system is required to co-operate with the back pressure in the venous system for the full development of dropsical effusion; and when the œdema remains moderate in amount, while other symptoms—such as breathlessness, faintness, and muscular weakness—the latter especially, indicate great cardiac inefficiency, it may be because the left ventricle propels the blood with very little force. Degeneration may be a factor in the case. A frequent, short, unsustained pulse and heart beat, without much œdema, may thus indicate a more grave condition than extreme dropsy. Long-continued excessive frequency of the pulse is an unfavourable sign.

The urgency of the symptoms being about the same, a larger degree of dilatation (as indicated by a more extended area of dulness, displacement, and especially by greater diffuseness and weakness of the apex beat, and impulse and greater shortness of the first and weakness of the second sound) will add gravity to the prognosis, and it will be borne in mind that approximation of the first and second sounds is always a very serious indication. Favourable points in the physical examination will be a good right ventricle impulse, and it has appeared to me that there is a greater margin for treatment when the liver is considerably enlarged.

When the symptoms and physical signs have been well weighed, the first question to be asked in view of prognosis is whether there has been any adequate exciting cause of the symptoms. If there has been recognisable overexertion or excitement, or grave anxiety—any mental or bodily strain—or if there has been a chill, giving rise to bronchitis or other affection of the lungs, or deranging seriously the liver and digestive organs, it may be hoped by means of rest and treatment to undo the ill-effects and restore the balance. If, on the other hand, the symptoms have crept on gradually without traceable cause of the kind mentioned, and especially when due care has been exercised, and there has been no habitual error of regimen or neglect of bowels, the probabilities are that the symptoms are the outcome of conditions which cannot be reversed—of radical inherent weakness of the heart.

The previous mode of life, active or sedentary, careful or imprudent, and especially the habits with regard to alcoholic stimulants, will have a very important bearing on the probable issue of the attack, as will also the general soundness and the absence or existence of disease of any other important organs, especially of the kidneys and liver. The patient's cheerfulness, hopefulness, and courage under his sufferings, or his despondency, will make powerfully for or against him, not only as direct influences, but because the state of mind is often an index of the state of the system.

Another inquiry of great prognostic weight will be as to the patient's family history. It is through this that we obtain an idea of his vital tenacity and of the trustworthiness of his tissues, and sometimes of the special liabilities of his heart. There are few tendencies which run more strongly in families than those which are manifested in the heart and vascular system, whether to high arterial tension with the effects on the vessels and heart, which follow from this, or to dilatation and weakness, or to degeneration, and a prognosis, otherwise not unfavourable, might have to be instantly revised on learning that the father and an uncle or two, or a brother, had died at about the patient's age from heart disease. Finally the response to treatment will speedily afford an indication of the utmost value, and this, the treatment, may be described at once.

In the treatment of advanced symptoms due to dilatation of the heart, we have to deal at the same time with defective propulsive power on the part of the ventricle, and damming back of blood in the venous system—the former being the primary and principal difficulty—and the indications are to relieve the ventricles of work and give them strength, and at the same time to deplete the venous engorgement.

This last object must, indeed, be taken first. We must undo the consequences of the original departure from the normal condition backwards and reach causes through effect; the venous stasis and the distension of the right side of the heart being the ultimate effects.

Venesection, the most effectual means of relieving the right side of the heart, is very rarely applicable in dilatation. It is conceivable that under some pulmonary complications resulting from chill, the engorgement of the right ventricle and auricle might be such as to make blood-letting the less of two dangers; but, the initial fault being weakness of one or both ventricles, we cannot trust the heart to adjust itself to a rapid change of any kind, and the right ventricle may not be in a condition to take advantage of the relief afforded it. Usually, however, the venous engorgement is developed slowly, and the indications for venesection do not arise.

The application of six or eight leeches over the liver is safer, and it will usually effect all that can be done by direct abstraction of blood. The indication for this local bleeding is enlargement of the liver and, when this is considerable, it rarely fails to afford striking relief. Very frequently, for example, the patient, who has previously been tortured by sleeplessness, will sleep at once and sometimes for a night or two afterwards. The reason for selecting the hepatic region for the application of the leeches is simply that pain and tenderness felt there are relieved; it is not supposed that blood is drawn from the liver, or that the same amount abstracted elsewhere would not be equally efficacious. The leeches will be followed by a hot poultice, which, besides encouraging the bleeding, will bring blood to the surface. When the liver is not enlarged, and especially if the right ventricle impulse and sounds are weak, there is no advantage to be gained by leeching.

Concurrently with the application of leeches a purgative will be given, which will deplete the portal system at the same time that the leeching depletes the systemic veins. Afterwards this will be the principal means of keeping down the venous engorgement. In a large majority of cases, indeed, we have to depend entirely upon purgatives for this purpose, as abstraction of blood by any method is inadmissible. It is not a matter of indifference what purgatives are employed. The object of a purgative is not simply to carry off as much fluid as possible and so drain the tissues. This may be the case, perhaps, in ascites from cirrhosis of the liver; but in heart disease of any kind, and especially in dilatation, much more is to be gained by rectifying the balance of the circulation, when the kidneys will resume their function and remove the excess of liquid.

Purgatives, then, may be made to contribute to this; and before considering them further we must refer to the first object of treatment, the relief of the heart from work and the increase of its vigour. Of these we can be much more sure of

the first than of the second; we can more easily and certainly diminish the resistance in the arterioles and capillaries than we can lend strength and efficiency to the action of the heart, and, without removing the obstruction in the peripheral circulation, it might only do harm to incite the heart—weakened as its structures are—to greater effort to overcome it. Now, mercurial purgatives have this effect of diminishing arterio-capillary resistance and of lowering arterial tension, and therefore of relieving the heart. The hypothesis by which, as it seems to me, this observed fact is best explained, is that mercury influences the liver chemistry and promotes the elimination of impurities which, when retained in the blood, give rise to resistance in the capillaries. But, whatever the explanation, the fact that the arterial tension is notably lowered by mercurial aperients is one which is confirmed by daily experience. It is remarkable how frequently the statement recurs in works on heart disease that other remedies often fail to act until a dose of calomel or other mercurial preparation has been given.

Mercurial purgatives, then, have the double effect of depleting the portal system, which relieves the enlargement of the liver and the distension of the right side of the heart, and of diminishing the resistance in the peripheral circulation, and so relieving the left ventricle of stress. Very commonly the best of testimony as to the beneficial character of the result is given by refreshing sleep. The disadvantage, if such it be, that less fluid is carried off than by hydragogue cathartics is often compensated by an increased flow of urine; and elaterium, gamboge, pulv. jalap. co., and the like, when repeated, give rise to great exhaustion.

Calomel, then, or blue pill or grey powder, should be given in doses of from 1 to 5 grains, according to the urgency of the case, with colocynth and hyoscyamus or rhubarb, followed by some mild saline. After one or more full doses at the outset, a moderate dose may be given every second or third night. The acid tartrate of potash will often co-operate beneficially, both by its action on the bowels and on the kidneys.

The heart being relieved of work may be urged to more vigorous contraction by digitalis, strophanthus, spartein, squills, caffeine, convallaria, apocynum, the special heart tonics, with which strychnine may usually be combined with advantage. In a case of extreme suffering, digitalis may be given with ammonia, ether, and nux vomica; in a more chronic stage, with iron and perhaps strychnine. Sometimes an effect can be obtained by giving citrate of caffeine in a pill, at the same time with digitalis in a mixture, when singly neither seems to be efficacious. Squills, again, may be given with digitalis, as in the well-known pill with mercury, or in some liquid combination. Next to digitalis stands strophanthus, which is a most valuable alternative when digitalis seems to produce sickness, as is sometimes the case, or when it fails to exercise a favourable influence on the heart. Sulphate of spartein I have seen to be of great service when digitalis and strophanthus appeared to have exhausted their influence. Of convallaria I have little to say. Apocynum has, in one or two cases, seemed to carry off dropsy in a remarkable way, but one patient died suddenly when apparently just well.

It is not necessary to go into greater detail with regard to these remedies. Throughout a case of the kind the medical man has to fight, so to speak, with both hands, and continuous watchfulness will be necessary to meet the vicissitudes which occur, and many changes in method may be required, while the same principles are held in view.

The prognosis, as has been said, will be greatly influenced by the response to treatment. This will be energetic, especially in the matter of purgatives, in proportion as the symptoms are urgent, and if no favourable effect is produced, the prospect of recovery is very poor. Very commonly improvement takes place up to a certain point, and then progress seems to come to an end. This is a trying stage both to the patient and to the medical man. Change of remedies and new combinations must be tried, both in regard of the aperient and of the tonic, not frequently and capriciously, but with careful study of the results and due allowance of time for obtaining them. Sometimes it does good to suspend all medicines for a few days and start afresh. Under these circumstances, again, it may be of the greatest service to drain the fluid from the legs, even when the extent of the œdema is not such as actually to call for it. The good result of removing an ascitic accumulation, should this be present, may be still more striking. Even a moderate amount of effusion in the pleural cavity, such as we should not think of dealing with under ordinary circumstances, should be aspirated. A straw may turn the balance either way, and a very slight obstacle may prevent the heart from regaining control over the circulation. It is not always desirable to postpone the removal of fluid till the particular conjuncture described arrives; it may be an urgent necessity at a very early period. Usually, however, it is prudent to give remedies a chance before resorting to puncture or paracentesis. As regards the method of drainage to be employed, Southey's tubes are, in my opinion, much the best, whether for œdema or ascites, but particularly in case of ascites.

The feeding of the patient through the long course of treatment will be a task of extreme difficulty. We have to contend with nausea and distaste for food amounting to disgust; sometimes the sufferer positively cannot swallow anything requiring mastication. The object to be held in view is to keep down the volume of the blood while maintaining its quality. A small amount of solid or semisolid food should be taken about every three hours; when the patient is not too ill to take his meals at the accustomed times it is a great encouragement to him to be allowed to do so, and he may then eat what he can of fish, fowl, tender meat, game, milk puddings. When the amount is small the regular meals may be supplemented by intermediate nourishment, such as a beaten-up egg, a little milk, or perhaps a small cup of strong soup or beef-tea, or a little beef or chicken jelly, or meat extract. Soups and jellies have the disadvantage of containing little proteid and much liquid, but they are stimulants to the flagging heart. Potted meat sandwiches are a great resource, and the pulp of raw beefsteak can be given in this form, disguised by cooked meat or concentrated gravy. A German physician of my acquaintance tells me that he frequently feeds his patients, suffering from cardiac dropsy of the kind under consideration, entirely on raw ham, and has great success.

The amount of fluid must be restricted as far as possible, especially that taken with food. Stimulants are usually imperatively necessary, but should be kept within limits known to and defined by the medical man. The patient is under a great temptation to resort to them for the relief of faintness, exhaustion, and nausea. Cream of tartar drink may be taken to quench thirst between meals, and in some cases a copious draught of hot water once or twice a day will run through the system rapidly and wash out the organs and tissues without augmenting permanently the volume of the blood or adding to the dropsy. When this is tried it must be ascertained definitely that the amount of urine is correspondingly increased.

A question which arises in almost every severe case is whether the patient must be urged to remain in bed or allowed to get up. Bed is undoubtedly the best place for him at first, during what may be called the crisis of the attack, for many reasons; the rest and warmth protect the heart from the strain of exertion and changes of temperature. On the other hand, the dyspnœa is usually worse in the recumbent posture, even with the shoulders raised, and may be intolerable unless the legs are allowed to hang down; not infrequently it is simply impossible for the patient to remain in bed. A suitable chair, therefore, is always necessary, with support for the elbows, shoulders, and head, which can be taken advantage of in turn in the frequent changes of position to which the patient has recourse to ease his breathing or elude discomfort, and the quickness and ingenuity of the medical man or nurse in devising expedients may greatly alleviate his sufferings. A bed table or other form of support, upon which the patient may rest his arms or elbows and head when leaning forwards while sitting in his chair, will often be very useful. A patient will frequently sleep better in this position than in any other. Perhaps the most common state of things is that the patient is up during the day, and tries to spend more or less of the night in bed. When he cannot at once bear to go to bed at night, he may undress and sit in his chair wrapped in blankets near the bed for a time, when he will often, after a nap or two, be able to lie down and sleep.

We may now come to the prognosis and treatment of dilatation of the heart at a period when it has not given rise to the serious consequences just described, and an enormous degree of dilatation may be arrived at before such effects are developed.

As regards physical signs, the most important evidence will not be as to the actual size of the heart, but as to the strength remaining in its walls. A greatly dilated heart which is capable of giving a recognisable apex beat and fair impulse of right or left ventricle is more to be trusted than one which has apparently undergone less change in its dimensions, but the movements of which can scarcely be felt at all. There is always a possibility that degeneration may enter into the causation of the symptoms. It is better, again, that the sounds should be strong than weak, spaced than approximated, and it is important that the second sound of both ventricles should be well marked. Irregularity of action is, according to my experience, of less consequence than frequency, and I have learnt not to attach serious importance to the regular alternation of a strong and weak beat, so long as there is no great frequency with it.

The pulse is of importance chiefly as an indication of the vigour with which the blood is propelled into the arterial system. Dilatation of the heart presupposes high arterial tension at the time of its production, and it is a favourable sign that a certain degree of this tension persists. When we find a short, small, low tension pulse, unless this is the result of treatment, it means that the heart has not sufficient strength to maintain the pressure in the arteries.

The probability of improvement or of prolonged immunity from ulterior consequences will next depend on the general condition of the patient, on the soundness and nutritional vigour of his tissues and organs, and especially of his blood-vessels; if he is weak and anæmic, on the cause and character of the impairment of health—whether it is inherent or accidental, whether, in effect, it is remediable or not. When the state of the heart and of the general health is attributable to alcoholic or other excesses, including the abuse of tobacco, to habits or mode of life or external conditions adverse to health—whether or not the patient is willing and able to renounce his self-indulgence, and relinquish his vices, or alter his ways and surroundings. Considerations of this kind are of the utmost importance, but there is not time to enlarge upon them here.

When we come to consider the treatment of cardiac dilatation in this stage, the first question to be asked is, What object may we venture to set before ourselves? What assurance can we give our patients? Can we ever reduce existing dilatation? Can we even arrest the tendency to increase, and avert or postpone the evil consequences? To no question can we return a more confident answer. Every day we see dilatation reduced in some degree in favourable cases, and, at the worst, much can be done to prevent the development of its ill effects. It has already been stated that in the acute aggravation of dilatation which gives rise to symptoms, the apex and extreme limit of dulness may be seen to return towards the normal position day by day, and the well named "curable mitral regurgitation" of Dr. George Balfour is a form of dilatation incident to anæmia.

The means to be taken are in the first place the removal of any recognised cause in the habits, mode of life, and surroundings so far as this is practicable. Next, to improve the general health by favourable hygienic influences and by suitable remedies. The amount of exercise to be taken will be a most important question, but no rule can be laid down applicable to all cases. Speaking generally, exercise is good, and whatever amount of walking can be done without breathlessness or exhaustion, and especially with enjoyment, that will be safe and beneficial, and, provided due prudence is exercised, walking up hill need not be forbidden. It is injurious as well as cruel to insist on an amount of exercise which distresses the patient. The exercise should be regular and daily, not spasmodic with intervals of inaction. A walk may be taken day by day with advantage which, taken only once a week, would be injurious. The exercise, again, should not come immediately after food, and it is better taken early in the day than in the afternoon or evening. A walk into the City, for instance, might do good, when a walk back after the day's work would do harm.

In some cases the treatment may have to be begun by actual rest in bed for two or three weeks, perhaps with massage, and the patient may have to resume exercise with just the same caution as food is resumed after hæmatemesis from gastric ulcer.

The question will now come before us whether we should recommend the systematic graduated walking up hill at high altitudes known as the "Oertel" treatment for heart disease. In my judgment the idea is good, inasmuch as many people will submit to and carry out strict regulations, to which a certain amount of mysterious virtue is attached, who will not obey common sense instructions. I doubt very much whether any good will be done in fatty degeneration of the heart. Fatty overloading of the heart in connection with obesity, and some cases of early dilatation will be benefited, and an enormous number of imaginary cases of heart disease will be cured; the class of patients who come to us saying they have heart disease will be attracted by the treatment. A few patients will be killed.

But it is not always possible either to modify the patient's life in such a way as to put an end to the conditions which tend to produce and aggravate dilatation of the heart, or to secure for him all the desirable hygienic influences. It would be useless, for example, to recommend a city clerk to relinquish the sedentary occupation which is his only possible livelihood, and little less vain to order a lady who has never walked in her life to take regular exercise. We can, however, do much to keep down the arterio-capillary resistance or high arterial tension, which plays such a fatal part in the production of dilatation of the heart: we can regulate the diet and warn against habits and occasions which are injurious, and, by securing efficient and continuous elimination from the liver and bowels, we can often make just that difference which is required for the safety and comfort of the patient. This can usually be effected by an aperient pill, containing a small dose of one or other of the appropriate mercurial preparations, taken twice a week, and we must not be afraid to order patients, whose hearts have given way under protracted arterial tension, to go on with such a pill for years. Tonics of various kinds may be given with advantage from time to time with acids or alkalies. It is not often that digitalis or remedies of the same class will be required continuously, though they may render service occasionally.

GOULSTONIAN LECTURES
ON
LEAD POISONING IN ITS ACUTE AND CHRONIC MANIFESTATIONS.

Delivered at the Royal College of Physicians of London.

By THOMAS OLIVER, M.A., M.D., F.R.C.P.,
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LECTURE III.

Channels by which Lead is Introduced into System.—Respiratory and Digestive Organs. — Digestive Experiments. — Saliva, Gastric Juice, Bile, Pancreatic Juice.—Experimental Production of Lead Poisoning: Pathology.—Relationship of Gout and Lead Poisoning.—Treatment.

LEAD gains entrance into the human body by the skin, by the lungs, or by the digestive organs. The mere handling of lead in its metallic state develops a peculiar odour, indicating the escape of metallic particles in a state of fine division. It is thus that we seek to explain the wrist-drop met with in leather cutters and type setters. Tanequerel does not admit that any absorption of lead occurs through the skin. I regard the skin, however, as a very suitable surface for the absorption of lead. I have seen lead amaurosis in an actress from the use of cosmetics, and the reason why actors and actresses do not suffer more frequently is, in all probability, owing to the action of the fat in the paste blocking up the pores in the skin. In my own experiments I found that the application

of lead oleate mixed with lanolin to the skin of rabbits more quickly produced symptoms than when lead salts were ingested by the mouth. In two of my patients lead was found by Professor Bedson in the perspiration. If lead is capable of being eliminated by the skin, it must be capable of entering the system by the same channel.

As regards the entrance of lead by the respiratory organs there is no doubt. People who have slept a few nights in newly-painted rooms have suffered from colic. Colic has been experienced by naval officers whose sleeping cabins have been but recently painted. To this circumstance—namely, lead dissolved in a volatile agent such as turpentine—we attributed part of the *colique sèche* noticed on board the French men-of-war. Lead dust disseminated through the atmosphere, whilst entering by the digestive organs, may also pass into the system by the respiratory mucous membrane. The insoluble lead carbonate is carried into the trachea and bronchi, and probably into the air cells of the lungs, but in whatever part of the respiratory passages it is deposited it comes under the influence of heat and moisture; it is moistened by alkaline fluids rich in carbonic acid coming from the lungs, and the lead carbontate is converted into bicarbonate, which is fairly soluble. A similar chemical change in all probability occurs with the fumes of the molten metal. Alderson says that statistical observations have shown that absorption by respiration is more productive of deleterious consequence than any other method of receiving the metal into the system. On this point I offer no opinion.

The chief channel by which lead is passed into the system is the digestive canal. As lead is never present in the blood or tissues to any great extent, we must admit that very little of the poison is absorbed, and that when absorbed it is eliminated immediately by the kidneys and skin, and that the insoluble lead is thrown out in the fæces. That it is eliminated freely by the kidneys is shown by its presence in the urine of lead workers and those who are suffering from colic. Most of it, however, is unabsorbed, as is shown by the infrequency of symptoms in those who are exposed to the metal or its compound.

With the object of determining the chemical conditions under which lead enters the system through the digestive canal, I had a series of experiments carried out for me by Mr. Best—under the direction of my colleague, Professor Bedson, of the College of Science, Newcastle—with basic lead carbonate or "lead white," as lead poisoning is more frequently due to this compound than to any other. Throughout all the experiments the same quantities of lead carbonate and animal juices were as nearly as possible employed.

Saliva.—During the digestion of starch by saliva in the presence of lead carbonate, we found that less of the metal was dissolved than where saliva operated upon lead alone. The minced tonsils of a dog and carbonate of lead were digested together, but no lead was dissolved, either when these two substances were alone or during the additional digestion of starch.

Gastric Juice.—Two double sets of experiments were performed with gastric juice—artificial and natural. The natural juice was obtained through the gastric fistula of a dog, the experiments being performed in test tubes and also in parchment tubes. When lead carbonate was simply digested by the gastric juice for three hours at blood heat, we always found that more or less of the lead was dissolved. These experiments were repeated in parchment membrane with varying amounts of pepsine, but with the same percentage of hydrochloric acid. The greatest proportion of lead carbonate was dissolved when hydrochloric acid was alone. When pepsine was alone present with lead carbonate none of the metal was dissolved. The active agent, therefore, is the acid, and the influence of pepsine is rather to diminish than increase the amount of lead dissolved. The presence of proteid in gastric digestion was found to reduce considerably the amount of lead dissolved—a circumstance to be explained by either the acid of the gastric juice acting upon the lead carbonate, converting some of it into lead chloride—which, as a fairly soluble compound of lead, would unite with the albumens to form an insoluble albuminate—or the acid is first used up in the conversion of peptone, leaving, therefore, the lead carbonate unacted upon, and which, being insoluble, would pass out of the stomach with the chyme. In all probability it is in the form of lead chloride, which is a soluble and diffusible salt, that lead chiefly passes into the system from the stomach, and the reason why herbivorous animals, such as the rabbit, are not so quickly poisoned by lead as the carnivorous animals, is due to the deficiency of hydrochloric acid in their gastric juice. Chloride or basic acetate of lead, when mixed with albumen, forms at once a dense coagulum, just as mercuric chloride does. Albuminate of lead is a very insoluble and indiffusible compound. Peptone also is precipitated by lead. It cannot be, therefore, either as lead albuminate or peptonate that lead is absorbed from the stomach. When lead is taken into the system by means of drinking water, it is probably in the form of the bicarbonate. This is a soluble salt, and it might pass at once into the system as such from the stomach or be converted first into chloride by the gastric juice. In whatever form lead reaches the stomach, what these experiments have shown is that during proteid digestion less lead is dissolved than when the stomach is empty. Employers have frequently noticed that it is the ill-fed who suffer, and that if the workers have breakfasted before beginning their toil they practically run no risk whatever. The giving of a free breakfast or the allowance of a reasonable quantity of milk to the workers is likely to postpone or prevent lead poisoning. A few hours' work at a time in a lead factory and frequent meals are the corollaries to be drawn from these experiments, and that no worker should be allowed to enter the lead factory without having first had a substantial meal.

Pancreatic Digestion.—The action of the various juices that normally assist in duodenal digestion, namely, the bile and pancreatic juice, were next examined. When lead carbonate was alone digested with bile a relatively large quantity of lead was dissolved compared with the gastric juice. Bedson and Best found three times the amount of lead dissolved. When bile was allowed to act upon fat at the same time as upon lead less of the metal passed into solution. In order to illustrate what would occur in normal digestion when the acid chyme passes from the stomach into the duodenum and is brought into contact with the bile and pancreatic juice, we first of all digested lead carbonate with albumen in gastric juice for three hours, then bile and pancreatic juice were added and digested for another hour, the result being that the amount of dissolved lead was greater than in ordinary gastric digestion, but was less than in biliary digestion alone.

During pancreatic digestion, either when artificial or natural pancreatic juice was employed, no lead carbonate was found to be dissolved, and this applies to the action of this juice upon lead alone, or when, in the process of digestion, there were also present peptone, fat, or starch. When combined with bile it was noticed that there was an amount of lead dissolved which practically agrees with the effects of bile alone; the experiment also confirming what has already been shown, namely, that during the digestion of food products the amount of lead dissolved is always lessened.

In some respects lead poisoning in animals differs from that in men. Heubel[1] says that it has been found impossible to produce fully-developed lead paralysis in an animal. It is extremely difficult, but an animal, after exhibiting symptoms of paresis, may become paralysed in all its limbs, if only time is given. This occurred in a rabbit which had first paresis, then inco-ordination—so that if the animal was laid on its side it could not rise again—and ultimately paralysis of all its limbs, particularly of its extensor muscles, developed. The ordinary phenomena of lead poisoning are readily induced, but in some animals more quickly than others. The rat is not easily poisoned by lead. Whether this immunity has been acquired—rats having for long been known to gnaw through leaden pipes with impunity—I cannot say. The plan adopted was to give rabbits and rats small quantities of lead with their food—rectal injections of a solution of acetate of lead or of the chloride; hypodermic injections of a 1 per cent. solution of acetate of lead, and the inunction of lead oleate into the skin of the back of the neck, where the chances of the animal rubbing off the ointment by its paws and eating it were reduced to a minimum. In nearly every instance the first effect that was noticed was emaciation and anæmia, both of which were progressive. If, however, the lead was withheld from the food for a day or two the animals soon be-

[1] *Pathogenic und Sympt. der chron. Bleivergiftung*, p. 28.

gan to put on flesh. One or two of the rabbits exhibited a distaste for food. The food consisted of bran mash, and green vegetables principally. Other animals retained their appetite almost to the end. They all drank water greedily. Some remained lively for a length of time; others early lost this natural characteristic, and became dull and apathetic. One or two of the rabbits became extremely nervous and seemed to be afraid of being handled, but did not resent it, whilst another would not allow herself to be caught. The length of time required to develop symptoms of lead poisoning ending in death varied. The shortest period was nineteen days, and this was in a rabbit which had a limited patch of its skin anointed with lead oleate.

In the rabbit that lived the longest blindness occurred, depending upon neuro-retinitis, paralysis of the extensor muscles of all the limbs, and albumen was found in large quantity in the urine. Some of the animals suffered from lead colic—a symptom which was noticed by Heubel to be present in a very severe form in dogs fed upon lead. Rabbits and guinea-pigs alike miscarried when pregnant, and so violent must have been the uterine contractions that in one case the uterus ruptured, causing death of the rabbit. The others died evidently in convulsions. Anæmia, with deficiency of hæmoglobin, early appeared; the blood exhibited a very rapid tendency to coagulate. Popp found in the blood of a man, aged 27, suffering from lead cachexia, that the quantity of fibrin was considerably increased, whilst the blood corpuscles had undergone a diminution. Heubel also noticed this rapid tendency for the blood to coagulate. The decrease of red blood corpuscles generally amounted to 20 to 40 per 1,000 only, so that briefly what occurred in Heubel's case was a decrease of solid constituents of the blood by 24 to 50 per 1,000, a corresponding increase of water, a decrease of red blood cells in the ratio just stated, a decrease of albumen by 4.5 to 7.5 per 1,000, and finally, an increase of the extractive substances and soluble salts.

In the later stages of lead poisoning in animals, just as occurs in man, and particularly where optic neuritis is developed, the pupils are dilated. Constipation was present in most of the animals, but in a few there was diarrhœa. The fæces were generally dark, due to the unabsorbed lead passing out in the form of sulphide. The temperature was, as a rule, normal throughout. In some it rose a few degrees a day or two before death.

On *post-mortem* examination, generally made immediately, I was always struck by the peculiar odour of decomposition which escaped, and also by the physical signs of rapid decomposition. The blood was greatly diminished in each instance, scarcely more than a few drops being detected. Beyond the extreme emaciation, which affected mostly the muscles and the subcutaneous fat, nothing, as a rule, was observed by the naked eye. The small intestines were pale, generally contracted and empty; the large were discoloured, bluish-black, and contained liquid or solid dark fæces. In every instance the left ventricle was firmly contracted as in systole, and completely empty, but the auricles and the right side of the heart were full of dark clot. The lungs were all healthy, with the exception of those of the rabbit that died from rupture of the uterus. In her lungs were several discrete hæmorrhages. Beyond the softness of the walls of the stomach and the presence of a thick layer of tough mucus around the food which lay in that viscus, there was nothing discovered. Beyond pallor there was nothing noticed in the other organs by the naked eye. Microscopic examination of the stomach and intestines, the lungs and the heart, the spleen, brain, and spinal cord failed to reveal anything abnormal. In the liver of animals and in the liver of lead workers there will be found an atrophied, cloudy, or granular condition of hepatic cells, amounting at times to a true fatty degeneration. The columns of cells become irregular and slender, and thus become separated from each other by spaces of considerable size. In nearly all the specimens, both of human beings and ruminants, these spaces between the individual cells and rows of cells were occupied by small round cells. There was an increase of connective tissue elements, derived in all probability from the capillaries or the sheath which surrounded them. In other words, there was an intercellular cirrhosis, not unlike that met with in congenital syphilis.

The kidneys presented alterations not less interesting. In the early stages of lead poisoning the renal epithelia of the convoluted tubules become enlarged, their protoplasm exhibits cloudy swelling and becomes fatty granular, and they soon break down, their *débris* being found lying in the interior of the tubules. There is, however, not the rapid shedding of cells seen in ordinary cases of desquamative nephritis. It is noteworthy that, whilst the renal epithelia of the convoluted tubules thus exhibit alteration, those of the straight tubules of the medulla exhibit almost no change from first to last. I have observed this early stage of parenchymatous nephritis in girls who have died from lead encephalopathy; it was also observed in rabbits. In addition, there is generally to be detected an increased leucocyte exudation underneath the capsule of the kidney, and the same is noticed around the afferent vessels of the Malpighian glomeruli. This accumulation of small round cells around the entering vessel of the glomerulus is very interesting, as I found it in nearly every instance, and with the alteration next to be described, seemed to me to be uniformly present in lead poisoning. Bowman's capsule becomes thickened and laminated, and the cells composing its internal lining are seen to have multiplied greatly, and to lie in irregular heaps at places within the capsule. The capillaries in the glomerulus are noticed to be at places distended with blood cells, and at others constricted, whilst in not a few the thicked capsule has pressed so completely against the coil of capillaries that they appear attenuated and shrunken.

In addition to the increase in the number of cells lying within the capsule of Bowman, the cells which lie between the coils of capillaries are seen to have undergone extensive proliferation. Where accumulation of leucocytes has occurred around the afferent arteriole of the glomerulus, the cells on the outside of Bowman's capsule are also noticed to have increased in number, and from this as a focus they seem to have penetrated between the neighbouring convoluted tubules, causing a distinct increase in the connective tissue framework of this portion of the kidney. Lying in some of the tubules may be observed homogeneous and granular tube casts. From the first, therefore, I would say that lead poisoning produces an acute parenchymatous nephritis as observed in the cloudy and fatty granular degeneration of the renal cells of the convoluted tube, and concurrently with this, a proliferation of cells around the afferent vessels of the glomerulus, also inside Bowman's capsule, and in the inter-capillary spaces within the glomeruli. After this has existed for a time, a true interstitial nephritis is developed, in which not only is the interstitial tissue increased, but the walls of the small blood vessels are thickened, the walls of Bowman's capsule thickened and laminated, and the glomeruli compressed. As these are, apparently, the primary conditions occurring in the early stages of acute lead poisoning, alike in man and animals, I regard them as characteristic of plumbism.

Lead acts directly upon hepatic cells. Some lead is eliminated, but very little, by the bile, part is deposited in the liver tissue, generally a good deal. Circulating in the blood lead is being constantly eliminated by the kidneys. Thus, owing to the peculiar function which is thrown upon the protoplasm of the renal cells, the cells soon degenerate, and owing to the irritating action of the lead as it circulates in the blood vessels and through the glomerulus there is hyperplasia of the surrounding connective tissue. The strain upon the kidney from the first is great owing to the increased diuresis which is present for a period, but as the disease advances and involves all the elements of the renal tissue, urinary secretion diminishes. So long as the kidneys are eliminating lead the patient runs little risk from poisoning, but when the kidneys become defective the individual is no longer free from all the risks of plumbism.

It is difficult to say exactly how lead acts upon the normal structure of secreting cells. Potter and I found, when amœbæ were brought into contact with a weak solution of plumbic acetate, say from 1 to 10 per cent. solution, that almost immediately the active movements previously exhibited by the organism ceased. The amœbæ at once became suddenly elongated and seemed stiffened, and if carefully watched no further movement would occur. We were able, however, to poison amœbæ only for a period, for if we quickly removed, by washing away, the lead solution with

which the amœbæ had become surrounded, movements would return and the organism would be found active next day. If, however, even a weak solution of lead remained in contact with amœbæ for several minutes, no amount of washing was capable of restoring lost vitality.

How plumbism is brought about in man and animals it is difficult to say. It seems to me that it primarily affects the organs of elimination, such as the liver and the kidneys, and that whatever consequences follow, they are due to the presence in the blood of secondary poisons, arising out of the imperfection of liver and kidney function.

The Influence of Lead upon Metabolism.—Anæmia is an early symptom, and progressive up to a certain stage. It depends rather upon a fault in the formation of the blood than in the disintegration thereof. Most writers have observed a deficiency of urea and uric acid in the urine of those suffering from lead poisoning. In the London hospitals, the administration of a few grains of acetate of lead to those who have been previously exposed to the influence of the metal has been followed by pains of a distinctly gouty nature. I have noticed the association in the North, but it has generally been in subjects with an hereditary taint of lead poisoning. Workmen from the South develop it in the North of England. The natives of the North, though equally exposed, seldom become gouty, even when the kidneys are affected. Gout, as a disease, is not met with in the North with anything like the frequency that it occurs in London. When uric acid is deficient in the urine in lead poisoning, it is not meant to be inferred that it is in excess in the blood. It may ultimately be present in excess in the blood, but this is due to the fact that, under the employment of alkalies, the uric acid, which was retained in the tissues owing to the action of lead, has passed in solution into the blood, and, when present there in excess, passes in excess into the urine. In other words, the measure of uric acid in the blood is the amount of uric acid in the urine; if in the blood it will be thrown out by the urine, and the one circumstance in particular which determines the amount of uric acid thrown out is the alkalinity of the blood. Lead, by diminishing the alkalinity of the blood, as Ralfe has shown, lessens the solubility of uric acid, and must, therefore, diminish its excretion in the urine.

The absence of gout amongst the lead workers in the North of England is a point of great interest, physiologically as well as pathologically. Sir William Roberts has coined the word "uratosis" to designate the precipitation of crystalline urates in the tissues or fluids of the body, and has raised a most important question. "It is not easy," he says,[2] "to believe that lead poisoning produces really and truly the same constitutional diathesis as that which exists in true gout.....the gouty diathesis and lead poisoning, while differing in all other respects, have one tendency or vice in common, namely, the tendency to uratosis." He regards uratosis, therefore, as a gouty tendency, which may be reinforced by lead poisoning, and saturnine uratosis as one in which saturnine poisoning is reinforced by a previously existing gouty tendency. My observations go strongly to support this conclusion. Here I may state the elimination of urea in lead poisoning is diminished, and that this circumstance stands related to the violent headaches complained of by lead workers.

From the analysis of the urine in lead poisoning, we cannot state that any absolute relationship exists between the elimination of urea, uric acid, and lead. Occasionally it would seem, however, as if uric acid and lead stood inversely related to each other. What analyses show is that metabolism is much deranged, and, as nearly all cases of lead poisoning, both in the stages of colic and encephalopathy, exhibit extremely deficient renal function, I cannot but regard many of the symptoms of plumbism as due to the retention in the system of animal poisons, depending upon imperfection of liver and renal function caused by lead.

It is a well-known fact that intemperance and the use of alcohol determine attacks of plumbism. Combemale and François[3] found that when they had fed animals up to the point at which nerve symptoms were about to show themselves the admixture of alcohol was always followed, a few hours afterwards, either by indications of great fear or by epileptiform attacks, which would be repeated for two or three days and then disappear, even though alcoholic intoxication was not suspended. Alcohol was not the only determining cause of these events—fear, a prospect of chastisement, and a simple catheterisation induced them. These observers lay considerable stress upon the influence of drunkenness in causing convulsions in plumbism. In one of my guinea-pigs the administration of small quantities of alcohol with lead in the food undoubtedly precipitated death.

Lead has been found in the brain by many chemists. Its presence in the brain is supposed by many writers to be the explanation of the convulsive seizures and death in saturnine poisoning. Lead-saturated cells would be incapable of high function; in fact, so far as their capability of conduction, inhibition, and volition are concerned, such cells would be practically dead. In not one of my cases was a whole grain of metallic lead found in the brain; I do not think that lead encephalopathy is to be attributed to the presence of lead in the brain, intimately combined as it may be with the protoplasm of nerve cells. One of the worst cases that I have seen was that of C. Y., who was attended by Dr. Inglis, of Hebburn, and in the brain no lead was found on most careful chemical analysis. The absence, too, of albuminuria removes the case from simple uræmic poisoning, but not altogether from the pale of imperfect renal function.

Metabolism is not only imperfectly carried on, but the elimination of waste products is interfered with. Add to this the fact that before the explosive outburst there has been a gradual failure in renal activity owing to arterial spasm—and thus not only are waste products not eliminated, but even the water itself is not removed from the system—and we must admit that, such conditions being present, they are quite capable of causing convulsions. My colleague, Dr. Drummond, has observed perivascular dilation of the small cerebral arteries amounting to varicosity. The most careful microscopical examination of all parts of the brain has hitherto failed to demonstrate the existence of any well-defined lesion. This remark, however, does not apply to the naked-eye appearances of the brain. The surface of the brain is dry and flattened, just as if it had been pressed; the brain tissue is dry, or it is hydræmic; it is firm, as a rule, to the touch, and always extremely pale. Many conditions, therefore, are present at the time when death occurs. A primary poisoned blood, due to the presence of lead alone, or more probably to animal poisons of a much more subtle and dangerous character, and depending upon deranged liver and kidney function, may explain the severe headache which is complained of before the attack; but if the kidneys perform their work well, this and the other symptoms may subside. On the other hand, if the case is progressive, the urine is noticed to be daily becoming scantier—sometimes even it ceases to be secreted—and then, owing to retention of animal poisons, eclampsia occurs.

Treatment.—To the treatment of lead poisoning I have little to add. Preventive measures are provided at all the lead factories, but the workers are frequently careless in regard to them. From the fact that during proteid digestion in the stomach less lead is dissolved, no man or woman should be allowed to engage in any work where lead is handled without first having had a good meal. I shall not deal with the measures that ought to be adopted to correct lead contaminated waters, or as to how the solvent influence of water upon lead may be avoided. To the treatment of lead colic I have but little to add—opiates and belladonna, castor oil and sulphate of magnesia, enemata, external applications and warmth are called for. Paralytic conditions improve but slowly under electrical treatment, sometimes they disappear without ever having had any electrical application at all, iodide of potassium giving, on the whole, the best general results. If the patients are anæmic, iodide of iron will be found useful. Lithia has little influence upon the pains either in joints or muscles, but it steadily increases the amount of urine. For the attacks of acute lead encephalopathy nothing gives such good results, in my opinion, as inhalation of nitrite of amyl, the slow pulse under its influence becomes quickened, the arterial tension is reduced, and convulsions are undoubtedly warded off. In other cases, particularly where there is complete suppression of urine in addition to the convulsions, pilocarpin has been followed by most successful results.

[2] British Medical Journal, 1890, vol. ii, p. 1161.
[3] *Recherches Expérimentales sur les Phénom., etc., dans le Saturnisme Chronique.*

A CASE OF INTRINSIC CANCER OF THE LARYNX TREATED BY THYROTOMY.

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G. B. L., aged 50, was admitted under my care on August 23rd, 1890, complaining of loss of voice. He is a tall thin man, somewhat pale and anxious-looking, but on the whole fairly well nourished. He had had no previous disease of any seriousness, but at the age of 18 began to suffer from palmar eczema, which lasted for five years. His occupation, that of an undertaker, had led to considerable exposure in all kinds of weather, resulting in many slight catarrhal attacks. In youth he was a tobacconist's assistant, but he does not smoke. He had always been very abstemious in regard to alcohol. There was no evidence of gout, rheumatism, or specific disease. His family history is good; his father, aged 74, being still alive and healthy, his mother having died of paralysis at the age of 68, his brothers and sisters being all healthy.

His present illness commenced at Christmas, 1889, with a slight cold. This was followed by hoarseness, which gradually increased till his voice was completely lost, about six weeks before admission. There has been no cough or sweating, but he has lost 14 lbs. in weight since April, when he weighed 11 stone. He has not experienced any difficulty in breathing nor swallowing, neither has there been any pain until within the last few weeks, during which he has noticed a "shooting" pain running up to the left ear.

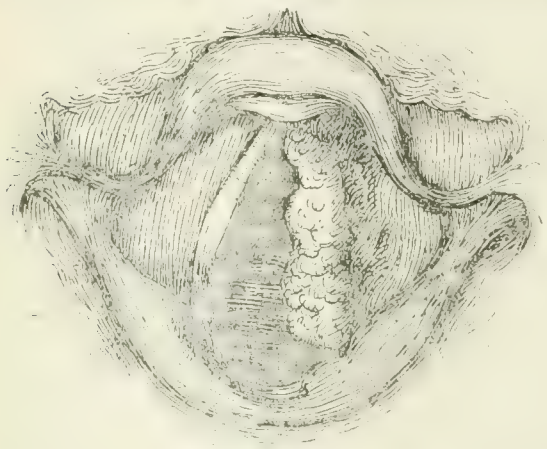


Fig. 1.

On admission his voice was a mere whisper; he had no cough, and his respiration and deglutition were normal. His weight was 10 stone. On palpation of the larynx there was just sufficient fulness of the left ala of the thyroid cartilage to enable one to suspect that there was disease of the left half rather than of the right half of the larynx.

On laryngoscopic examination, the whole of the left vocal cord was seen to be replaced by a nodular mass of a pale coral pink colour. This extended also to the ventricular band, which was much swollen and congested. The mass projected beyond the middle line, and was quite immobile during pronation and inspiration. Apparently the disease extended some distance below the glottis. The right cord was somewhat congested, but moved well, and the ventricular band was thickened and congested, apparently in continuation with the disease on the opposite side (Fig. 1). There was a very slight sensation of fulness in the region of the glands over the carotid artery at the level of the thyroid cartilage on the left side.

On August 25th I removed, with forceps, a small portion of the growth, about the size of a split pea; this was frozen and cut, six hours afterwards, by Mr. W. Wingrave, and was found to consist of well-marked "cell-nest" formation of stratified epithelioma, confirming the diagnosis first made by Dr. Gordon Holmes, who had previously seen the case (Fig. 2).

Operation.—On August 27th, at 8 A.M., chloroform being administered by Mr. Wingrave, I performed tracheotomy through the two upper rings of the trachea. This was accomplished, with Dr. Orwin's assistance, almost without hæmorrhage, after the principle—so prominently laid down by Mr. R. W. Parker—of lifting up the tissues by means of two pairs of dissecting forceps used at the corresponding position on the two sides of the middle line. Hahn's "tampon cannula" was then inserted, and left in position for twenty minutes to allow for its expansion. This, however, took place only imperfectly, as the sponge had been prepared too long in advance. The patient was noticed to breathe to some extent through the nose during the operation, but by far the greater volume of air passed by the tube. A considerable quantity of blood was inhaled into the air tubes. I then proceeded to perform thyrotomy with the aid of Mr. Lennox Browne and other colleagues. The thyroid cartilage was exposed by means of an incision continuous with the tracheal wound. The soft tissues above the notch having been redressed, the angle was divided with pliers, the alæ separated, and a complete view of the interior of the larynx was obtained, showing that the growth was (as suspected) more extensive than was indicated by the laryngoscope. It occupied the greater part of the left ventricular band and vocal cord, extending below the latter. There was also much thickening of the right band and cord, highly suggestive of extension to that side, so that it was deemed expedient to

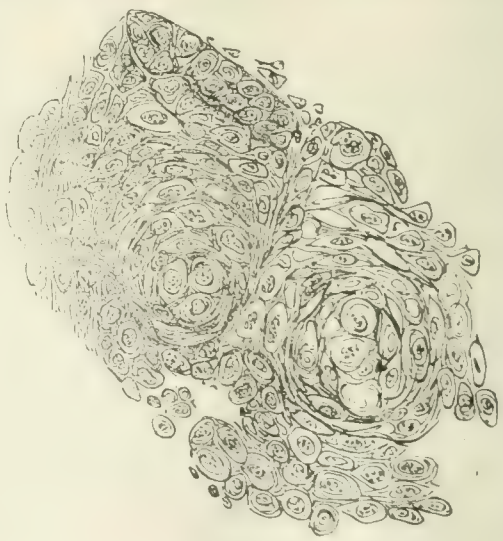


Fig. 2.

remove the whole of the interior of the larynx, as recommended by Mr. Butlin. This was done by means of a raspatory and blunt-pointed scissors, care being taken to preserve intact the laryngo-pharyngeal orifice. The crico-thyroid artery was divided, but there was no other hæmorrhage of much importance. The cartilages were scraped quite bare, the whole interior of the larynx was thoroughly swabbed with a strong solution of chloride of zinc, and then insufflated with iodoform. After the alæ were wired together, a drainage tube was placed so that it projected through the upper and lower extremities of the incision, and the wound was closed by four sutures. The surface of the wound was dusted with iodoform, and blue sal alembroth wool dressing was applied. The patient was under chloroform nearly two hours, and bore it very well, but towards the end he appeared somewhat collapsed. However, he speedily recovered after the hypodermic injection of ether. He was then put to bed, a restorative dose of brandy and beef-tea was administered *per rectum*, and a steam kettle containing some eucalyptus oil was kept playing in the room.

At 3 P.M. he was very comfortable, and was fed by means of an œsophageal tube with brandy and beef-tea mixture. A small gum elastic tube *à boule* was first used, but it caused great discomfort, coughing, and hæmorrhage;

therefore a thick india-rubber (Jaques) tube was substituted, and the feeding was accomplished with ease and comfort. He complained of slight soreness of the throat, his temperature was 100.5°, and the pulse 72. At 8 P.M. he was fed *per rectum*; temperature 101.5°, pulse 84.

August 28th. He slept fairly well, again fed by tube. Hahn's cannula was removed, and replaced by an ordinary tracheal tube, which was more comfortable to the patient. He spat up large quantities of bloodstained mucus, and had a slight cough. He complained of great thirst, which was relieved to some extent by the very small quantities of ice he was allowed to suck. Every four hours 20 drops of solution of hydrarg. biniod. (1 per 1,000) was administered by the mouth, as a local and general antiseptic, a few drops entering the larynx during deglutition. *Râles* were heard over the left base. Morning temperature 99.5°, evening temperature 101°.

August 29th. Slept well; was again fed by tube and an enema; thirst very troublesome; chest clear; expectoration mucus very slightly stained; morning temperature 99°; evening temperature 100.8°.

August 30th. Enjoyed the lean part of a mutton chop, which, with some water, he swallowed with ease; he takes milk freely; tracheal tube changed, and drainage tube removed; thirst less; morning temperature 98°; evening temperature 99.2°.



Fig. 3.

August 31st. Slept well: thirst relieved entirely; abundant muco-purulent expectoration; morning temperature 98°; evening temperature 99°.

September 1st. A restless night; cough very troublesome; a few *râles* over the left base: feels depressed and dislikes food. Urine contained an excess of phosphates, otherwise normal. As bowels had not been relieved since the operation, he was ordered hydrarg. subchlor gr.ij. The tube was changed. Morning temperature 98°; evening temperature 99.8°.

September 2nd. Slept better. Bowels not having been relieved, hydrarg. subchlor. gr.iij was ordered.

September 3rd. Slept six hours. Cough less troublesome: expectoration fœtid; bowels relieved; appetite better. The superficial stitches were removed. Morning temperature 98°; evening temperature 99.6°.

From this date his recovery was uninterrupted. On the 5th he coughed up a small portion of necrosed cartilage. The cough and expectoration gradually decreased, the temperature remained normal, and the patient rapidly regained his health and spirits. On the 8th the tube was permanently removed, and the cough ceased almost immediately. On the 14th the tracheotomy wound was closed, and on the 19th the patient went out for a short walk.

He was discharged from the hospital on the 22nd in the following condition: His weight 10 stone 1 lb., felt strong and hearty; his complexion good, his expression bright and cheerful. Laryngoscopic examination showed on the right side an arrangement of the lining membrane singularly like a new vocal cord, and which moved on phonation; the left side was occupied by a cushionlike fulness covered with a healthy-looking mucous membrane (Fig. 3). The voice was a good strong whisper, his deglutition was perfect. The glandular swelling was certainly no larger, and the pain running up to the left ear no longer felt.

The parts removed were examined by Mr. Wingrave, with the following results: The right band and cord were hyperæmic, but showed no signs of growth, which was confined to the left side, and in this situation was composed of rapidly growing stratified epithelioma, involving the sacculus and ventricle, but not extending beyond the left arytenoid cartilage in the direction of the middle line.

In this case the difficulties in diagnosis were comparatively slight, as the typical appearance of the unilateral ulceration, accompanied by immobility of the vocal cord, offered a laryngoscopic picture which hardly admitted of doubt. The age of the patient, the pain shooting up to the ear, and the progress of the disease, strongly favoured the idea of carcinoma, which was absolutely confirmed by the result of the microscopical examination of the fragment removed with the forceps. It is true these microscopical appearances were not utterly incompatible with the possibility of the portion examined being the apex of a papilloma. This was, however, excluded by the laryngoscopic signs, and notably by the fixation of the vocal cord. In the same way tubercle and syphilis were eliminated.

The comparative inefficiency of Hahn's admirable tampon-cannula was unquestionably due to the long time that the sponge had been kept in a compressed state, and much anxiety was occasioned by the knowledge that a considerable quantity of blood and discharge, as well as some of the fluid food administered even by a carefully used tube, must have entered the bronchi during the period which elapsed prior to the re-establishment of the function of the sphincter laryngis. How far the satisfactory progress of the case, in spite of this defect, was due to the minor details of after-treatment, is difficult to decide. The free use of antiseptic dressings in the form of iodoform and of alembroth gauze, the frequent use of iodide solution by syringe through the drainage tube as well by the mouth, the continual impregnation of the inspired air with steam charged with eucalyptus, no doubt were important factors. As regards feeding the combination of alimentation by œsophageal tube in the middle of the day, with that by enema night and morning, appeared to satisfy the nutritive requirements of the patient with a minimal disturbance of the affected parts, it being generally agreed that rectal feeding alone is insufficient.

The question of recurrence can only be answered by a further observation. Meanwhile, the patient has steered clear of the dangers immediately incident to the operation.

Note on March 9th, 1891.—The patient continues well and hearty and pursues his ordinary avocation. He is free from pain, and as regards breathing and deglutition is apparently well. The glandular enlargement is no longer perceptible. His voice, a gruff whisper, is louder than on the occasion of the last note. On laryngoscopic examination, the appearance is as before, with this difference: that during phonation the tissues forming the side walls of the infundibulum of the larynx bulge more towards each other, especially in their anterior parts, so that a better approximation to a vibrating glottis is obtained and a louder vocal sound is produced. The left arytenoid cartilage still remains fixed. There is no sign of ulceration, and so far—six months—the patient seems free from recurrence.

Some particulars of the affray in which Dr. George Baird, one of the best known physicians in Wheeling, West Virginia, was shot and almost instantly killed by Dr. George L. Garrison, "ex-city health officer and a physician of high standing," are given in the *Medical Record of New York* (March 14th). The two physicians had been intimate friends, and when Dr. Garrison was appointed health officer Dr. Baird performed his duties without remuneration while Dr. Garrison was absent at the College. About a year ago Dr. Garrison obtained a warrant for the arrest of Dr. Baird, charging him with violation of the law as to a death certificate. The feud thus originated had a tragic end in the murder of Dr. Baird.

SPORADIC CRETINISM.[1]

By T. C. FAILTON, M.D.Lond., M.R.C.P.,
Honorary Physician to the Manchester Clinical Hospital for Women and Children.

THE two children whose portraits are here given afford good examples of this disease. The boys were brought to the Clinical Hospital last September, with the hope that something might be done for them, and perhaps, in the case of the younger patient it may still be possible for a proper course of education to ameliorate his mental condition; and with this object he is about to be sent to the Royal Albert Asylum, Lancaster. As regards the elder boy, however, there appears to be no prospect of any improvement.

Both patients are natives of Manchester, and have lived there since birth. Their family history, which is as follows, throws no light upon the etiology of the disease: their maternal grandfather was intemperate, but the other grandparents were temperate, and the parents are perfectly sober and healthy people, not related to one another except by marriage, coming, in fact, from different parts of England. No general causes of ill-health, no goitres in the family are known, and of five other children of the same parents none have shown the slightest symptom of cretinism or goitre.

The elder of the two boys, G. B., is 11 years old, 32¼ inches in height, and weighs 34 lbs. He is the first child, and was born naturally. As not uncommonly happens in this disease, nothing roused the suspicion of his parents during his first year that he was not as other children. He was brought up at the breast, cut his first teeth at eight months, "noticed" tolerably early, and learned one or two of the usual childish words. When, however, he arrived at the age of twelve months, to use his mother's words, "he seemed to stop short;" his development (both mental and physical) ceased almost completely. He did not walk until he was 3½ years old.

At the present time he may be described in the following terms: His stature—and one might almost say, his intelligence—are those of a child of two years of age. He is very apathetic, and will sit for hours staring vacantly before him, or following with his eyes the other children in the ward, or poring over a picture book of which he has not the least comprehension. If he is compelled to walk he does so with a deliberate waddle, his legs wide apart, but it is patent that he is not only disinclined to exertion, but that, from his mental inertia, he would, if allowed, remain in one position (sitting or standing) for an indefinite time rather than take the initiative of changing. His expression is calm and disposition contented, but occasionally he has prolonged fits of sulkiness which are simply unconquerable. When pleased he has the smile common in cretins, slowly appearing and as slowly dying away; if highly delighted he laughs with a kind of grunt. His voice is guttural, but he rarely utters a word, and has never spoken a connected sentence. All animals of which pictures are shown to him are either "dog" or "cat."



G. B., 11 years. D. B., 6 years 3 months.

His head, though large in proportion to his height, is not so for his age (51 centimetres circumference), and is well shaped, with the exception of some flattening at the vertex. The anterior fontanelle is closed. His hair and eyelashes are normal. His features are broad and coarse, the eyes are set widely apart, the root of the nose being flattened, while the alæ and septum are thickened, and the nostrils are somewhat dilated. His thick everted lips are habitually open, with a large tongue protruding between them. There is no flow of saliva from the mouth. The face looks œdematous, the normal depression between the lower eyelid and the cheek being almost obliterated, but the skin is quite firm to the touch. There is a deep naso-labial line on either side of the mouth. His complexion is a dull yellowish white. He has only the blackened stumps of his milk teeth, worn down to a level with the gum in the front of the upper jaw, and in the lower his first teeth, set widely apart, are decaying, and some permanent incisors are making their appearance behind. A point of great interest lies in the fact that the thyroid gland is present and can be felt in his short neck as a small, firm, and unsymmetrical body. A common feature in sporadic cretinism consists in the presence of lobulated masses of fat (pseudo-lipomata) in the supraclavicular regions or elsewhere, but in this case these swellings are entirely absent. The body is very bulky and the abdomen prominent. He has a small umbilical hernia. His chest is unsymmetrical, and he has a well-marked lateral curvature of the spine in the lower dorsal and lumbar regions. There is also a considerable lordosis, reminding one of pseudo-hypertrophic paralysis. The viscera of the chest and abdomen appear to be healthy, but his cir-

[1] Read before the Manchester Medical Society.

culation is defective, his extremities being almost invariably blue and cold. He has a tendency to bronchitis in the winter months. His limbs, with their bony framework, are short and thick, but there is no absolute distortion except a bowing of the tibiæ with the convexity forwards. The hands and feet are short and broad, with stumpy fingers and toes. The feet are flat, and the second toe on each foot is smaller than normal and overrides the rest. His skin is universally harsh, dry, and resistant, and his muscles are firm, but not larger than normal. There are no local swellings about the body. His senses of touch, sight, and hearing, so far as can be ascertained, are normal, though perception is distinctly retarded. He has occasionally suffered from slight hæmorrhages from the bowels, and once, when he had two teeth drawn, he bled considerably. His tendon reactions and superficial reflexes are active. He has never had convulsions.

D. B., aged 6 years and 3 months, is 33 inches in height, and weighs 32½ lbs. He is the fourth child (a healthy boy and girl intervening between him and G.). He cut his first teeth early, and is said to have been bright as an infant, but he did not walk until he was 2 years and 3 months old. Although still characteristic of cretinism, his expression appears to denote more alertness than that of his brother. He talks very little and usually wears an air of contentment, smiling very readily. He is subject to fits of sulkiness, exactly similar to those mentioned in the case of G. He waddles when he walks, but can move much faster than his brother. He can even run. His head is fairly well shaped, somewhat flattened at the vertex, with a depression in the region of the anterior fontanelle, which is closed. His hair is normal. The root of the nose is broad and flat and the tip is rather turned up, the alæ and septum are thickened and the nostrils are broad. He has rather a big mouth, which shows a tendency to remain open, but he only occasionally protrudes the tongue. The lips are not everted, but the lower lip is larger than usual. His cheeks are not puffy and there is the normal furrow beneath the lower eyelids. He has a pale yellow complexion, the cheeks being rather more yellow than the rest of the face. He has his first set of teeth, which are set widely apart. His neck is short and thick, and he has a small thyroid gland of very much the same character as that of his brother. There are no pseudo-lipomata about the neck or body. His abdomen is prominent and has a small umbilical hernia, and his chest is remarkable in the fact that it quite retains the circular form of infancy. There is a slight beading of the ribs. A faint systolic murmur is audible at the apex of the heart, but not at the angle of the scapula, and there is no increase in the area of cardiac dulness. The rest of his viscera appear to be normal. His limbs show the same peculiarities as his brother's, including that of the second toe in each foot. His perceptive faculties are probably somewhat more acute than his brother's, but it is difficult to determine to what extent; there can be no doubt of his being at the present moment of extremely limited intellectual capacity. His skin is harsh and firm to the touch, and his circulation is sluggish. His tendon reactions are active. During his stay in the hospital he has passed blood from the bowels on one occasion. This however may have been due to the constipation from which he has constantly suffered.

A distinction has recently been drawn by Dr. Bourneville[1] between endemic and sporadic cretins, which appears to be somewhat unnecessary. He lays stress on the fact that endemic cretins are descended from goitrous parents, while sporadic cretins are not. Speaking generally, this statement may be correct, but Dr. Bourneville also proceeds to separate the two forms on the ground of their anatomical quite as much as of their etiological differences. He points out that endemic cretins have brachycephalic heads, are very frequently goitrous, and have no "pseudo-lipomata;" while, on the contrary, sporadic cretins have dolichocephalic heads, are invariably without thyroid glands, and present the "pseudo-lipomata." It may be that the etiological conditions of the two forms of disease are different; our knowledge at present is so limited that we are hardly in a position to discuss the question, but when we turn to the clinical features we scarcely find the difference between them sufficiently great to warrant our accepting them as two totally distinct diseases.

[1] *Progrès Médical*, Nos. 29, 30, 33, and 34, August, 1890.

In the first place, it must be acknowledged that, although in the endemic form the disease appears able to go a step further in its effects, that is, the mental and bodily degeneration may be greater than is known to occur in sporadic cretinism, the two forms not only present the closest identity of symptoms, but have now been conclusively proved to depend upon the same fundamental pathological conditions—namely, loss of function of the thyroid gland. Then as to details—not more than two-thirds of endemic cretins are affected with goitre,[2] while cases have been described in which the thyroid gland has been entirely absent. On the other hand, as regards the statement that all sporadic cretins are destitute of thyroid gland, the patients described above are instances of its presence, and the late Dr. Hilton Fagge mentioned one case in which there was a goitre. Dolichocephalic heads, as seen in the above cases, are the rule in sporadic cretins, but brachycephalic heads have been described. Finally, the "pseudo-lipomata," though frequently met with in sporadic cretins, are not invariable, and when present are not always permanent, and as regards their presumed invariable absence in endemic cretins, it has been plausibly suggested that they have not been systematically looked for.

Minor points of difference between the two forms are mentioned by Dr. Bourneville, but as they are still more differences of degree rather than of kind than the above, they need not further be dwelt upon. For my part, I am satisfied that the distinction between the two forms is sufficiently marked by the terms endemic and sporadic cretinism.

EXPERIMENTAL RESEARCH AS TO THE PHYSIOLOGICAL ACTION OF PARA-CRESOTIC ACID.

By M. CHARTERIS, M.D.,
Professor of Therapeutics and Materia Medica, University of Glasgow.

In accordance with the promise made in a letter to the BRITISH MEDICAL JOURNAL of December 6th, 1890, I instituted a further series of experiments with regard to para-cresotic acid. This acid was forwarded to me by Messrs. Hopkins and Williams, London, and with it there was also sent at my request a sample of ortho-cresotic acid. Both these acids had been prepared from the corresponding cresols. I also obtained from another source samples of these acids, but, except for confirmatory purposes, they were not used, as their characters and melting points were identical with those obtained from Messrs. Hopkins and Williams.

Physical Characters.—*Para-cresotic acid*, melting point 150° C. to 151° C., a whitish powder, resembles the para-cresotic acid isolated from commercial salicylic acid by Professor Dunstan. The physiological action of this para-creosotic acid was stated at the meeting of the Pharmaceutical Society of London. *Ortho-cresotic acid*, melting point 163° C., distinct crystals. The only difference between it and the specimen of the ortho-cresotic acid received from Professor Dunstan was that in the latter the crystals were somewhat larger.

Physiological Experiments with Para-Cresotic Acid.—For this purpose two strong healthy rabbits were selected—(*a*) weighing 2½ lbs., (*b*) weighing 3½ lbs.

(*a*) To this animal an injection of 6 grains dissolved in rectified spirit was given. Fifteen minutes afterwards the fore-limbs slipped down, and the animal was unable to move easily. In forty-five minutes the hind limbs were stretched out, and a prone position was assumed. At the expiration of an hour and a half from receiving the injection the symptoms noted were "a prone position, great prostration, the head resting between the fore limbs, the breathing hurried and short." Three hours after the injection was given it died, the paralysis being complete half an hour before death.

(*b*) To this animal an injection of 8 grains similarly dissolved was given, and at the expiration of an hour other 4 grains. The result of the first injection was distinct disturbance, which deepened after the second injection into complete paralysis. Death occurred at the expiration of three hours. The same results followed upon injections of the two acids obtained

[2] Baillarger and Krishaber, *Dic. Encycl. des Sci. Méd.*, Art. "Crétin."

from another source, the animals being of similar weight to *a* and *b*.

These experiments show that 6 grains of para-cresotic acid proved fatal in three hours to an animal weighing 2½ lbs., and that 12 grains in the same time were fatal to an animal weighing 3½ lbs. The lethal dose deduced from these experiments is thus about 3 grains per lb. weight of the animal. Smaller doses would doubtless cause death after a longer interval.

Physiological Experiments with Ortho-Cresotic Acid.—Two grains of this acid similarly dissolved were injected into a rabbit weighing 2½ lbs. The animal from the time of receiving the injection remained in a dazed condition, with its eyes closed. Three hours afterwards paralysis of the fore-limbs commenced, and it died twelve hours after the injection had been given. The lethal action of this acid in no way differed from the specimen of the ortho-cresotic acid received from Professor Dunstan, and from other experiments unnecessary to detail I conclude that 1 grain per lb. weight of the animal is sufficient to cause death at intervals varying from twelve to thirty-six hours. After the completion of these experiments I resolved to try the ortho- and para-cresotic acids combined in certain proportions, and I found that the action was more immediate and pronounced than when they were given separately. Thus 1 grain of ortho-cresotic acid and 2 grains of para-cresotic acid caused death in three hours to an animal weighing about 2 lbs. This experiment repeated three times gave the same result in the same interval of time.

I further tried the combination of these acids with natural salicylic acid; 1 grain of para-cresotic acid, and 1 grain of ortho-cresotic acid were dissolved with 20 grains of natural salicylic acid and crystallised. Five grains of this powder dissolved in rectified spirit caused immediate action, and death occurred in the course of twelve hours, or, in other words, rather less than ¼ grain of para-cresotic acid, ¼ grain of ortho-cresotic acid, 4½ grains natural salicylic acid were fatal to an animal weighing 2 lbs.

Chemical Experiments.—From these physiological experiments of the ortho- or para-cresotic acids, alone or combined, in the manner indicated, I was induced tentatively to try a few chemical experiments. I therefore added these acids respectively to the beautiful crystals of the natural acids, and dissolved and crystallised them from hot aqueous solutions.

1. By the above procedure it was found that when to 20 grains of natural salicylic acid (melting point 157°) was added 1 grain of ortho-cresotic acid, the result was a white powder (melting point 152.3°).

2. Twenty grains of natural salicylic acid with 1 grain of para-cresotic acid resulted in a white powder with a few distinct crystals, melting point 154°.

3. Guided by these facts, I tried the addition of 1 grain of ortho-cresotic and 1 grain of para-cresotic acids respectively to 60 grains of the natural acid. I subsequently tested the result of solution and crystallisation, and compared these with dissolving 60 grains of the natural acid without the addition of any foreign acid.

It was found that after two crystallisations the natural acid regained its original crystalline form, and that its melting point was unaltered. On the other hand, after two crystallisations, the natural acid with ortho-cresotic acid had a melting point 154.3°, and the natural acid with the para-cresotic acid a melting point 154°. In both cases there was a non-crystalline powder.

Further crystallisations, five in all, of the natural acid and the ortho-acid resulted in the formation of distinct crystals, somewhat smaller than those of the natural acid. Melting point, 156.0°, which is one degree less than the original melting point of the natural acid. Six crystallisations of the natural acid with para-cresotic acid showed a few distinct crystals, but by far the greater portion remained non-crystalline. Melting point, 154.5°. To the last solution in each case a little spirit was added.

The melting points were taken first at the Chemical Laboratory of the University of Glasgow, and subsequently the different samples were submitted to Mr. Tatlock, city analyst for Glasgow. The results were exactly the same, and for convenience of illustration and comparison are given in a tabular form.

Tabular Statement as to Melting Points.

	Melting Point.
1. Hopkins and Williams (natural salicylic acid) ...	157.0° C.
,, ,, (artificial ,, ,,) ...	156.0° C.
Characters of each distinct crystals.	
2. Equal parts of natural salicylic acid and ortho-cresotic acid	136.0° C.
Dissolved and crystallised.	
Equal parts of natural salicylic acid and para-cresotic acid	128.5° C.
Dissolved and crystallised.	
3. 20 grains natural salicylic acid and 1 grain ortho-cresotic acid	152.5° C.
Dissolved and crystallised.	
4. 20 grains natural salicylic acid and 1 grain para-cresotic acid	152.0° C.
Dissolved and crystallised.	
5. 60 grains natural salicylic acid and 1 grain ortho-cresotic acid	156.0° C.
Dissolved and crystallised five times.	
6. 60 grains natural salicylic acid and 1 grain para-cresotic acid	154.5° C.
Dissolved and crystallised six times.	
7. 97 grains natural salicylic acid, 2 ,, para-cresotic acid, 1 ,, ortho-cresotic — Dissolved together and crystallised	About 155.0° C.
Characters similar to those of the *British Pharmacopœia*.	
8. Merck's artificial salicylic acid, melting point 157.0° C., similarly dissolved with ortho- or para-cresotic acids, and the different combinations crystallised gave the same results as regards the melting points.	

The explanation of these melting points belongs more to the province of the chemist than the physician, but whatever explanation may be offered by those competent to deal with it, the broad deduction cannot be minimised, that the presence of ortho- and para-cresotic acids in salicylic acid, renders it impure and lethal to small animals such as were experimented on. Their removal is a *sine quâ non* before commercial salicylic acid can be termed "physiologically pure."

In a research which has been carried on for some time at this laboratory, we find that there is a great difference in the physiological action of ordinary carbolic acid melting point 33°, and pure carbolic acid melting point, 40° to 42°. While their antiseptic properties remain the same, the lethal action on animals is twice as great in the impure as when the acid is pure, and I am satisfied that salicylic acid can be obtained pure from carbolic acid which has a melting point of 40° to 42°. So prepared the acid has a melting point of 157°, and its crystalline form is similar to that of the natural acid. Its physiological action is also equally harmless when injected in 15 grains into an animal weighing 2½ lbs. All these researches and experiments have strengthened the view expressed at the Royal Medical and Chirurgical Society on February 11th, 1890, that similarity of crystalline form in the artificial and natural acids seems to be absolutely essential to secure uniform and harmless physiological action when administered to animals in similar doses.

It is gratifying to note, with reference to these remarks, that the new German *Pharmacopœia* has altered the melting point of salicylic acid from about 155° to 157°. Further, the admirable commentary of this *Pharmacopœia* by Haser, Fischer, and Hartrich, states that the crystalline form of the acid should alone be employed in pharmacy. I presume that this acid and the sodium salt prepared from it will alone be supplied to the English market by German manufacturers, for I would be loth to believe that they would sell to us preparations which are not officially sanctioned in their country.

These facts show that our *Pharmacopœia* is not up to date. Its description of acidum salicylicum refers to a bygone period, and now represents neither the characters nor the melting point of the natural or the pure artificial acid.

It is not my intention to prosecute this research further. I close it by stating that sufficient evidence has been adduced to show, that in cases where poisonous symptoms have been evoked by the administration of large and repeated doses of the artificial salicylate of sodium in rheumatism, they are dependent upon its containing the impurities mentioned. Further experiments may be necessary to determine whether the amount of para-cresotic acid contained in some samples of commercial salicylic acid is sufficient to produce poisonous effects on a human subject. My experiments show that when injected into small animals it is poisonous, though in a less degree than the ortho-acid, and that its poisonous effects are

intensified when combined with the ortho-acid, and still more so when incorporated with this acid and salicylic acid.

The question which has been raised as to the therapeutic value of the sodium salt of para-cresotic acid is beyond the scope of this research. The acid from which it is prepared is poisonous, yet its salt, judiciously given, may be of benefit in certain diseases. The information as yet afforded with regard to this is meagre, and requires to be supplemented; but whatever the decision as to its value may be, the presence of para-cresotic acid cannot be desired by anyone who impartially considers the subject from a chemical, a physiological, or a therapeutic standpoint.

A CASE OF ACROMEGALY.[1]

By ROBERT RUTTLE, L.M.& S.Univ.Dub.,
Vice-President Blackburn and District Medical Society.

The first of the accompanying photographs is that of the patient just before her marriage in 1876; at that time she was 24 years of age. The second, taken recently in the same position, affords a striking contrast.



A. H., 1876.

I saw the patient in May, 1879. She was not then or since, until October 11th, 1890, a patient of mine, but at that casual meeting her face, hands, and feet at once attracted my attention. I thought of cretinism, but the woman was clear, cool, intelligent, though certainly in a peculiar condition, and she let fall the remark that she had been under Dr. Popjoy for a considerable time. She is now 38, has been married fourteen years, has had no family. She had been accustomed to heavy farm service, describes herself as "strong and healthy, with cheeks like roses," up to the time of first symptoms. She had no severe illness nor any irregularity, except that her menstrual periodicity varied slightly, but without pain or any other inconvenience; she menstruated once after marriage, never since then. Soon after she began to experience severe pains about vertex, back of head, and in the cervical region, which increased gradually in intensity; she also complained of a feeling of "numbness" all over her body; the headache became "dreadful," and she then noticed that her hands and feet were "swelling," because No. 7 gloves no longer fitted her hands, and 5 in boots also became too small. This enlargement went on gradually. When she was twelve months married she was suddenly seized in the mill with an attack of vertigo followed by total loss of consciousness. She was taken to a friend's house, and from there removed home with difficulty, kept her bed for nearly three weeks, hanging apparently between life and death. Her convalescence was slow, alternating with relapses of agonising pain, accompanied by vertigo and loss of consciousness. These attacks seem of late years to have somewhat decreased in severity. Treatment always was powerless to relieve her, rest and quiet alone doing any good; she appeared better when idle in the country.

At the time of the severe explosion her extremities rapidly enlarged, so much so that her left ring finger burst her wedding ring, a moderately stout one. She also began to experience failure of sight at this time, which has gone on to total blindness in the right eye from atrophy of the optic nerve. In the left eye the temporal half of the field of vision is gone, and the activity of the upper limit at the nasal side slightly encroached on; the hemianopsia is very clearly defined; refraction is emmetropic, the pupils always somewhat dilated; the optic axes are divergent.



A. H., November, 1890.

Heart, liver, kidneys, etc., appear sound, no albumen or sugar present; occasionally a slight cloud of phosphates in urine.

Digestion fairly good, bowels inclined to constipation; she eats little, often not till evening. She can sleep well, but wakens often during the night. I might add that her pain now generally comes on at night and wakens her; but sleep and rest afford relief, stimulants rather increase pain. She does not use tea. Coffee gives some slight relief; coffee and cocoa are her usual beverages.

Her face is pale, with skin smooth and few wrinkles, but not very marked; slight puffiness under lower lids certainly varies, while eyes are somewhat divergent and lids large; the cartilages are enlarged, nose long and very large; both lips hypertrophied, especially the lower one; the lower jaw and chin enlarged, prominent, prognathous; teeth separated, tongue large; the face does not appear at all broadened nor the frontal sinuses enlarged. Her head measures 23½ inches in circumference round the brows.

She has become somewhat stooped, and complains of

[1] Shown at the Blackburn and District Medical Society.

sciatic pains, especially on the left side, which compel her to walk lamely. Her left hand measures 8¼ inches in length and is 8¾ inches round the knuckles; the second joint of left forefinger is 3½ inches in circumference; no women's gloves or boots fit her; she wears 8½ boots. She can now close her hand and make a fist. Both radius and ulna are enlarged, so are the malleoli and head of tibia. The vertebræ appear normal in size, but the sternum is certainly larger than normal; the pelvis also is certainly larger, the ileum feeling most massive. She says she "hardly had any hips before." She has had dyspareunia for two years; the vaginal orifice appears contracted spasmodically, though it allowed the passage of the finger, when the os tincæ and the canal of the vagina appeared normal. She had slight eczema of external auditory meatus, but no appreciable enlargement of the ears. She complains of great sensitiveness over the lower cervical and first dorsal vertebræ. A playful slap on the shoulders has often produced unconsciousness. She cannot bear the least noise; a sudden noise as of a door slamming will often act like a blow.

I can elicit no family history of gout, syphilis, or tubercle. Her father is still living; her mother died at 68; brothers and sisters are healthy. Her intelligence is clear, and quite above the average of women in the lower stratum of midland rural life. She presents no deterioration of faculty save that of sight. The thyroid is enlarged, and I believe the thymus also. I may here be permitted to point out the most noteworthy features of this particular case:—

1. The stoppage of catamenia.
2. The enlargement of extremities without pain.
3. Pain in the head (vertex without enlargement).
4. The eye symptoms: R, atrophy; L, temporal hemianopsia.
5. The abnormal sensitiveness to sound.
6. The tenderness and sensitiveness over her cervical and upper dorsal regions.

I think that we have here enough to point to derangement of a neurotrophic character, of the precise characters of which we are as yet, I fear, ignorant. The atrophy and hemianopsia certainly favour Dr. Marie's views respecting an enlarged pituitary body.

The only drug which I have found to give her any relief has been exalgine, in doses of 3 grains repeated every eighth hour. This almost completely relieves the migraine, and has given her great ease from the sciatic pain.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PERITYPHLITIS COMPLICATING TONSILLITIS.

This case is of interest, as it bears on the connection between these two complaints.

Mrs. F., aged 63, taken with the ordinary signs of acute tonsillitis on November 5th last. She was very bad for a week, suffering from great weakness. The left tonsil was especially affected, and the glands along the front border of the left sterno-mastoid were swollen and tender for some fourteen days. On November 19th she complained of severe intermittent pain along the brim of the pelvis on the right side to the anterior superior spine. There was great tenderness along the region of the transverse colon, and the flanks were dull to percussion. On the 21st there was a well-defined tumour 1½ inch in diameter, whose edge was ½ inch from the anterior superior spine; it was dull to percussion. The pain extended to the front of the right knee, and she had some trouble in micturating. On the 22nd, as previously, she complained much of the free perspiration, and now had erythema of the face and forehead. Up to December 1st she suffered from pain down the leg; the tenderness lasted till November 27th. She suffers from aortic regurgitation and stenosis, is liable to attacks of acute bronchitis, and was attended by me in 1887 for acute tonsillitis.

F. Rowland Humphreys, L.R.C.P.Lond.

Queen's Crescent, N.W.

ANALYSIS OF THE FREQUENCY OF SYMPTOMS OCCURRING IN 50 CASES OF GERMAN MEASLES.

Age.		Invasion.		Appearance of rash in.		Order of first appearance of rash.		Duration of rash.		Duration of sore throat.			
No. of Cases.													
41	Up to 12 years	25	Malaise	15	12 to 24 hours	32	Head	35	24 hours	34	12 to 18 hours	18	Enlargement of neck glands subsequent to appearance of rash
6	12 to 20 "	20	Nausea	6	24 to 36 "	10	Body	15	36 "	14	18 to 72 "		
3	Above 20 "	5	Vomiting	3	36 to 72 "	1	Limbs	3	48 "	2	72 to 120 "	38	History of pernicious attack of measles
	No invasion	3	Catarrh	1	After 3 days		Simultaneously over all parts	1	4 days				
		13	Sore throat.										
		18	Enlarged neck glands										
		1	Rigors										

This epidemic was evidently of mild type. The throat symptoms were mild in all cases. The rash appeared to be thicker and darker in proportion to age. In no case did the rash assume definitely the crescentic form seen in measles. In young fair patients having a mild attack the rash appeared particularly like that of scarlatina at its commencement, and was in some cases accompanied by a temperature of 103° F. One case ushered in by rigors and other severe symptoms, in which the rash did not appear for three days, remained four days and did not assume a crescentic form, may have been measles, but occurred in a house with other cases of rötheln. Enlargement of the neck glands will be seen to be a valuable diagnostic point.

Hednesford. Cecil Digby, M.D.

CO-EXISTENCE OF SCARLET FEVER AND CHICKEN-POX.

On January 9th last, I was asked to see L. N. and G. N., both suffering from well marked symptoms of scarlet fever. They both had a temperature of over 102°, sore throat, typical tongue and rash, L. having been taken ill on January 7th, and G. on the 8th.

On January 10th, F. N., another brother was attacked. The three children were isolated, the remaining child of the family not contracting the disease. The fever ran an ordinary and favourable course, peeling commencing freely around the neck, chin and chest, in L. and G., on my visit to them on January 14th. On January 16th my attention was especially directed to G., who was said to have been feverish and complaining of headache, sickness, and general *malaise* on the morning of the previous day (15th), a few ill-defined spot appearing on his body in the evening, but who at the time of my visit presented all the characteristics of a severe attack of chicken-pox. Not only had he a very numerous crop of vesicles all over his body, scalp, and face, but on his tongue and soft palate, causing considerable difficulty in deglutition. He, however, recovered, together with his brother and sister, without any other unfavourable symptom, differing in no respect from them, except that in his case the peeling process was rather delayed.

On January 28th, or exactly thirteen days after G., F. was attacked with chicken-pox, the sister up to the present escaping. The children I found had been attending a public elementary school in which there had certainly been one if not more cases of scarlet fever, and several of chicken-pox, and had doubtless contracted both diseases there. G. probably catching the chicken-pox on the 2nd, and scarlet fever on or about the 5th.

It must remain a matter of conjecture how far the fact of having the specific poison of one disease in the system affected the course or seriousness of the other; it is plain that having one disease did not prevent him catching another: the second disease (scarlet fever) remaining as in the other children of the "benign" type.

The chicken-pox, on the other hand, was decidedly severe, especially if judged by the character of F.'s attack (which did not develop until eighteen days after the scarlet fever, and was mild and with slight eruption), but whether this

severity was due to any incompatibility of the presence of the two germs, or is only consistent with the lessened vitality or resisting power caused by having just recovered from an acute disease, it is difficult if not impossible to say.

Lydd. RICHARD BEVAN, D.P.H. and L.R.C.P.Lond.

EMPYEMA OF THE ANTRUM.

As to the etiology, etc., of the above disease, experience teaches me that the dental factor so widely supported by no means fulfils the promise we might hope for in aiding us to a diagnosis. On the other hand, a case of nasal polypus inveterately recurring after operation, and more especially co-existent with hypertrophy of the middle turbinated bone would certainly make me suspicious of antrum disease. There is one other indication added to the above, namely, the existence of a line of white, creamy exudation lying along the middle turbinated bone, which I rely upon as of some diagnostic value in this connection. In such cases, treatment of the antrum disease fulfils every expectation that can be hoped for. I need not refer here at length to the excellent service the electric light offers in clearing up the diagnosis, not only of disease of the antrum, but also of the frontal sinus, implication of which no doubt gives rise to disease of the nasal mucosa situated higher up, leading thus to the formation of polypus equally obdurate to treatment if the sinus affection is overlooked. The use of the electric light in the mouth and one placed over the frontal sinus in the usual way is one easy of application, and fairly reliable. As to the form of procedure in empyema of the antrum, a considerable aperture from the canine fossa made first with a small trephine worked by the dental engine and then enlarged with forceps gives every satisfaction. In this way the floor of the sinus is reached with precision, and any necessary manipulation or illumination is easy. A large drainage tube lies securely in the cavity effecting its purpose, and is kept in position there by the upper lip without inconvenience to the patient. It need not be remarked that perforation through the alveolus leads to an entrance into the antrum situated above the floor of this cavity, and thus, amongst other things, to imperfect drainage.

Newcastle-on-Tyne. WM. ROBERTSON, M.D.

TAPPING THE VENTRICLES.

As regards tapping the ventricles of the brain, I remember a case occurring many years since in my practice in which tapping was resorted to about six times. The child was six months old, and had fallen from the nurse's arms, in descending a stone staircase, upon the head, whereby the cranium was fractured.

The first operation was performed a few weeks after the receipt of injury, owing to convulsions setting in, the fontanelles being greatly distended from fluid. A fine trochar and cannula were introduced, and a few ounces of fluid evacuated with considerable relief to the patient. After a while it became necessary to repeat the operation; altogether six tappings were required. At length the child succumbed from exhaustion. The case was recorded and comments made thereon.

Bournemouth. SPENCER SMYTH, M.D., F.R.C.S.

TREATMENT OF DIPHTHERIA.

A GREAT deal has been said lately in favour of the use of liq. hydrarg. perchlor., and in fact there seems to be quite a rush to this most powerful and often dangerous drug. I would suggest that those who at present use the bichloride should add to it just enough iodide of potassium or sodium to form the biniodide dissolved in the iodide. They will then have even better results than they at present obtain. There will be much less risk to the patient. They will be using a much more powerful germicide. Whereas the bichloride tends to accumulate in the system, and may, from some cause, become suddenly absorbed, causing symptoms of mercurialism, the biniodide is, on the other hand, very rapidly eliminated.

My experience of the use of the biniodide has been quite in accordance with that of Dr. C. R. Illingworth, who introduced it, and the thanks of the profession are certainly due to him for his untiring endeavour to bring its use forward.[1]

Frizinghall, Bradford. A. HANBURY FRERE, M.B., C.M.

[1] *Abortive Treatment of Specific Febrile Disorders.* Lewis and Co.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GREAT NORTHERN HOSPITAL.

A CASE OF PRESUMED RUPTURE OF THE URETER FROM EXTERNAL VIOLENCE; LAPAROTOMY; CURE.

(Under the care of Mr. HERBERT W. ALLINGHAM.)

F. R., aged 16, was admitted into the hospital on Friday, July 22nd. Four days before admission, while he was wheeling a barrow, it struck the kerb and caused the handle to strike him violently in the abdomen on the left side. He was unable to work for an hour or so after. The next day at midday the pain had became so severe that he went home to bed. On the third day after the accident he was sick once and shivered. The fourth day after the accident he was admitted and was found in the following condition: The belly wall was rather tense and slightly tympanitic, rather more tender on the left than on the right side. There was also a bruise above the abdominal wall on the left side, about the level of the umbilicus. Deep respiration caused pain, and the breathing was greatly thoracic. The urine was acid and loaded with urates, no blood or albumen, nor was there any evidence of his having passed blood. The bowels had not acted since the injury. Temperature was 102° F., pulsation 120, respirations 36. The aspect was anxious: the tongue fairly moist but dirty. In the evening of the day of admission the bowels acted, stools loose and plentiful, no blood. The next day, the 24th, he was in about the same condition and passed only 14 ounces of urine in 24 hours. On July 25th the patient seemed worse, he had lost his colour, the face was more anxious, in fact every symptom was aggravated, for he had much more pain and the pain was paroxysmal, being chiefly referred to the left side of the abdomen, no pain passing to the testicle, and that organ was not retracted. The abdominal walls were very tense and tender, so that it was impossible to make a thorough examination.

In the afternoon of the 25th, four days after admission, and eight since the accident, I had a consultation with my friend Dr. Burnet, and we agreed that in order to make a thorough examination chloroform had better be given. We saw that the boy was seriously ill, his temperature varying from 103° F. to 101° F. since admission, and the lesion being evidently abdominal. Under chloroform we found that there was greater resistance on the left than on the right side and moreover there was greater dulness on deep percussion on left side of the abdomen and loin than on the right side. No definite tumour could be felt, although a peculiar crepitus was noticed on deep pressure towards the left kidney from the front.

On rectal examination high up I could feel a sausage-like swelling on the left side and rather towards the front; this was outside the rectal tube. With these symptoms I decided to at once operate, not knowing whether he had injured some gut and had local peritonitis or whether the ureter had been injured and had then become distended. The chloroform was continued, and a vertical incision about 3 inches in length was made in the left linea semilunaris and the peritoneum opened. I then pushed the small intestines towards the right, and kept them there with a sponge, and on lifting up the descending colon saw and felt a large sausage-shaped tumour, covered with peritoneum, extending from the kidney right down to the pelvis exactly in the course of the ureter. The swelling was very tense, in fact could have been very easily ruptured. The kidney and its pelvis, as far as I could make out, were not distended.

This state of affairs I showed to Dr. Burnet, Mr. Faulkner, and Mr. Lang, who were present at the operation. At first I was at a loss what to do, whether to aspirate the tumour from the front or open it from the loin; but I soon decided on the latter procedure. Accordingly the abdominal wound was closed with sponges, the patient was pulled to the edge of the operating table and I pushed a scalpel into the loin, direct-

ing it towards the fingers of my left hand, which were in the belly on the tumour. Along the knife in the loin I passed dressing forceps into the tumour, and out at once came more than a pint of turbid urine, the swelling instantly disappearing. The anterior abdominal wound was then closed with silkworm gut sutures, and a large drainage tube passed into the loin. I may here remark that through the loin wound I passed my finger into the tumour, which seemed smooth. On directing it upwards I thought I could feel some of the calices of the kidney, and on passing the finger downwards it extended far beyond my reach in the direction of the bladder.

The temperature after the operation immediately fell to normal, and during the convalescence never rose again above normal. The next day, the 26th, the patient had occasional attacks of pain. Pulse good, aspect much improved. Passed 28 ounces of urine. The posterior wound discharged freely.

July 28th. Pain had all gone from the abdomen; only a little pain and some difficulty in passing water.

July 31st. The abdominal wound was quite healed. The drainage tube was removed from the loin, there being only a little watery discharge therefrom. The urine passed by the penis was 28 ounces per day.

August 5th. He passed 44 ounces of urine.

August 6th. Urine passed in twenty-four hours, 54 ounces, and on this day the urine was loaded with pus.

August 18th. For the last day or two he passed from 45 to 50 ounces of urine per day, which always contained some pus, but that was diminishing in quantity. The wounds were soundly healed, and he had been up daily.

August 20th. He left the hospital quite well; there being no abdominal tumour, and the urine was nearly normal.

The patient was shown before the Medical Society of London. He was perfectly well.

Remarks.—I think this case is worthy of record, as accidents of this kind seem to be very rare, and on account of the almost impossibility of a definite diagnosis without an exploratory laparotomy. There are only two other cases of the kind that I can find on record—namely, those published by Mr. Edward Stanley, late Surgeon to St. Bartholomew's Hospital, in the *Medico-Chirurgical Transactions*, vol. xxvii. His first case was a boy, aged 9, who had been squeezed between the wheel of a cart and a kerbstone. Six weeks after the accident a fulness was observed on the right side of the abdomen. This was oblong in shape, and extended from the base of the chest downwards to within a short distance of Poupart's ligament anteriorly; it terminated abruptly at the linea alba; posteriorly it could be traced into the lumbar region, but it here presented no distinct boundary. This swelling was in those days punctured by a lancet to make out the nature of the fluid, and was followed, as might naturally be supposed, by much pain in the abdomen. The fluid upon examination was proved to be urine. The swelling from time to time was punctured by a lancet, and emptied; and, from the description, this was always followed by some peritonitis. The patient ultimately recovered. The next case was under Mr. Vincent, who allowed Mr. Stanley to publish it; and the history is as follows: A woman had been knocked down and pushed some way before the wheel of a cart. On the next day there was much febrile disorder, accompanied with severe pain and distension of the abdomen. In a few days the general distension and pain of the abdomen had subsided, but there remained a circumscribed and painful swelling in the right hypochondrium, which it was thought must be connected with the liver. A few days later Mr. Vincent punctured the swelling with a small trochar, and let out three pints of straw-coloured, urinous-smelling fluid. This was followed by evidently localised peritonitis. In ten days the fluid again accumulated and tapped again. From that period she gradually sank, and died ten weeks after the receipt of the injury. The *post-mortem* examination was as follows: A large cyst was found on the right side of the abdomen, behind the peritoneum, extending upwards to the diaphragm, and downwards to the pelvis. The boundaries of the cyst were formed by lymph and thickened cellular tissue; within it was a large quantity of fluid, presenting the characters of a mixture of pus and fœtid urine. A passage was found extending from the upper part of the cyst into the pelvis of the right kidney.

DEOLALI STATION HOSPITAL.

ENORMOUS HEPATIC ABSCESS TREATED BY FREE INCISION AND DRAINAGE: RECOVERY.

(By Surgeon-Major R. H. Quill, M.D., M.S.)

Private H., King's Dragoon Guards, an invalid on his way home, reached Deolali Depôt on October 29th, 1890, and was at once admitted. He was in the last stage of emaciation and debility; voice reduced to a whisper, orthopnœa, profuse night sweats, marked hectic temperature, facial expression distressed and anxious, with extreme pallor; racked with an exhausting cough which was accompanied with the daily expectoration of several pints of putrid sanious pus. In a word, the man did not appear to have a week to live.

An enormous liver was found extending from the level of the third rib to the umbilicus, with one or two tender spots about the seventh intercostal space, and general bulging of the entire right side. The presence of a large hepatic abscess, which was being discharged through the lung, was obvious, but the propriety of evacuating it externally was open to question, owing to the almost moribund state of the man. As, however, an early fatal issue was imminent in the man's present condition, I decided to operate, being fortified in this decision by the opinion of Surgeon-Major Corbett, M.S., who saw the case with me.

I injected half a grain of cocaine hypodermically at the seventh interspace (chloroform was out of the question owing to the prostrate condition of the patient), and with full antiseptic precautions introduced a large trochar through this space into the liver; pus immediately welled out, and now, using the cannula as a guide, I ran along it a long bistoury, and having made a free incision into the abscess cavity, introduced quickly a large flanged red rubber drainage tube over five inches long. By this time some sixty ounces of sanious pus had flowed away, to the great relief of the man, who whispered his satisfaction. A large antiseptic dressing (Sanitas gauze and boric wool) was now carefully applied, and retained by strapping and a flannel binder. Within a few hours the dressings, being saturated with fresh discharge, were removed and replaced by fresh ones.

This profuse discharge continued until November 8th, when it gradually lessened, and having finally entirely ceased on November 21st, the wound rapidly closed. In the meantime the progress of the man towards recovery was uninterrupted, and he embarked for England on January 6th, 1891, having increased three stones in weight and being in all respects strong and well, with a normal area of hepatic dulness.

Remarks.—From the date of operation all cough and expectoration of pus ceased, the night sweats did not recur, and the temperature fell to normal, never again to rise above this level, except once, when the drainage tube became blocked by a plug of tenacious pus. Removal and washing of the tube soon set this right. On the evening of the day following the operation I commenced the daily washing out of the abscess cavity with two pints of a warm iodine solution (℥j and Oj), using a Higginson's syringe. This practice was found to be very beneficial in diminishing the profuse secretion of pus, the quantity of which evacuated from first to last amounted (so it was estimated) to not less than 50 pints. The drainage tube, originally over five inches long, was first shortened, owing to the contraction of the abscess cavity, on November 5th, this was repeated on the 14th, again on the 19th, and it was removed altogether on November 21st, the discharge of pus having then entirely ceased. The recovery of this most unpromising case was very remarkable, and the lesson to be learned from it is that we are justified in operating on cases of hepatic abscess, no matter how hopeless the general condition of the patient may appear to be. I publish it as a solid piece of evidence in support of that teaching which advocates the treatment of hepatic abscess by free incision and drainage immediately the existence of an abscess is determined by the aspirating needle. This method is now, I am in a position to state, almost invariably adopted by army surgeons in India, and it gives results immeasurably more satisfactory than were ever obtained under the old plan of repeated simple aspirations.

Dr. Claude Du Bois-Reymond, son of the well known physiologist, has recently qualified as *Privat-docent* of Eye Diseases in the University of Berlin.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 24TH, 1891.

TIMOTHY HOLMES, M.A.Cantab., President, in the Chair.

On the Treatment of Strangulated Hernia when the Intestine is Gangrenous or Ulcerated.—Mr. C. B. LOCKWOOD read a communication on this subject which was based on the analysis of cases of hernia in which the intestine was gangrenous or ulcerated, collected from the records of St. Bartholomew's Hospital, and upon the details of two others in his own practice. The Bartholomew's cases were treated in the manner laid down by Sir William Lawrence, namely, "by a free incision of the mortified part in order to unload the distended intestinal canal; or, if the gut should have already given way, to divide freely the integument and sac, and to leave the subsequent process of cure entirely to Nature," the stricture being also divided, if necessary, for the proper flow of fæces. Four of the 35 Bartholomew's cases recovered, 3 of them completely; 1 had a fistula eight months after the operation. These patients only recovered after repeated operations, and the details of their cases are given. Thirty-one (88.57 per cent.) of the Bartholomew's cases died, and both of the author's. One of the latter had no proper relief from the opened bowel although there was a free passage, and the other fatal cases show that this was not at all unusual. The causation of the absence of relief was discussed and illustrated with cases, and the conclusion was arrived at that the usual operation could not be depended upon to give relief. Next the other causes of death were examined into, and it was shown that intraperitoneal or subperitoneal fæcal extravasation might occur, or that the gangrene or ulceration might continue to spread to the bowel within the abdomen, or septic peritonitis might spread from the sac to the rest of the peritoneum. Should these dangers be escaped, the patient was in danger of dying of inanition. All these accidents were illustrated from the list of fatal cases. The alternatives to performing the usual operations were next given, and the statistics of treatment by clamp, secondary suture, and of primary resection and suture were mentioned. The conclusion was in favour of primary resection and suture, and the *rationale* of the procedure was briefly described.—Two cases were communicated from Mr. MAYO ROBSON of resection and suture within the last two years, and both had been perfectly successful. The first was a small hernia, partly gangrenous, in a middle-aged woman. At the operation the gangrenous portion was resected the parts cleaned, and the bowel returned. In the second, a woman, aged 60, had a strangulated femoral hernia for seven days. The fluid in the sac was fæcal, and a good-sized piece of the omentum was also gangrenous. After the sac had been opened the bowel was drawn down and the diseased portion removed. The parts were then sutured together, washed with 1 in 2,000 sublimate solution, and the whole closed up with a drainage tube. The bowels were open on the third day, and there was no further trouble in the abdomen, although there was some subsequent bronchitis. Mr. BRYANT was struck with the large mortality. Some years ago he had had occasion to examine the statistics of gangrene of the gut in hernia, and had found that, out of 30 cases 26 were femoral. These were generally small with a narrow neck, and there would be great difficulty in enlarging freely enough to resect and reunite the gut. In the majority of cases of hernia with gangrenous gut the patients were almost moribund, and the surgeon could only do as little as was compatible with giving the patient a chance of life. In the next class of cases, in which the patients were not moribund, the bowel above the seat of stricture was usually so much overdistended that gangrene followed sometime later. This did not extend from the already gangrenous knuckle, but was due to the stasis of blood in the distended bowel. He had been much struck by the fact that out of the 30 *post-mortem* examinations of hernias with ulcerated or gangrenous intestines there had not been a single case of fæcal extravasation or of general peritonitis. The patients had all died of collapse. There was generally some union between the neck of the sac and the intestine. One would be very likely to tear away the healthy from the gangrenous portion on trying to draw the gut down to resect it. In a few suitable cases the operation would, he allowed, be likely to be a valuable one. In the old method, as described by Sir W. Lawrence, he thought it might be advisible to push back the knuckle of intestine, so as to leave as straight a road as possible afterwards. It was a mistake to draw down the bowel. In femoral hernias, if there was gangrene of the knuckle, there was probably also ulceration of the mucous membrane, and, if an attempt was made to bring down the intestine, it would be sure to tear along the line of ulceration.—Mr. BENNETT felt that the treatment advocated was an ideal one, but scarcely practicable. It had been shown that in many of the cases there was no relief of the bowel even after it had been laid open, and resection would not remedy this. Furthermore, no patient with a free opening through the abdominal wall should be allowed to die without relief, as the contents could always be drawn off by means of an ordinary tube; and he mentioned a case in which this had twice been done, and after the second time the bowels had begun to act of themselves; so that an opening in the abdominal wall might be the means of saving life. He then gave details of cases which had been successfully treated by his own method. He took no exception to resection in suitable cases.—Mr. HULKE endorsed the remarks of Mr. Bryant and of the last speaker, and said that there should be as little manipulation as possible of the gut in these cases. It would, he thought, be a mistake to combine the operations of resection and radical cure, as, if the bowel should not by chance unite, there would be no outlet for the extravasated matters.—Mr. TREVES said that when in 1885 Mr. Mitchell Banks had brought up the same subject at the Medical Society, everybody must have been struck with the remarkable differences of opinion then expressed. This was due, he suspected, to the fact that in any individual's experience these cases were comparatively rare. The statistics of mortality between the old method and primary resection were not comparable. The first series, with a mortality of 90 per cent., was absolutely perfect, being taken straight from the hospital records; but the second, derived from McCosh's tables, with a mortality of 50 per cent., were selected cases. The mortality, he suspected, after resection was at least 90 per cent. For, if the mortality after resection was only 50 per cent., it would be about the same as that of the ordinary operation. It was very unlikely that it was no more dangerous to resect than to open the sac. It was curious that surgical instinct was always opposed to resection, though the first two cases—the first by Ramdorh in 1727, and the second by Arnaud, in 1732, which represented the old method, had been perfectly successful. The Surgical Registrar at the London Hospital, Mr. Dean, had looked up for him the cases of strangulated hernia which he had operated upon—73 in number. Of these 6 were gangrenous, and all had died. Two were left as there was general peritonitis. In one he had opened the bowel and in the others he had resected the whole of the gangrenous parts 2 inches, 3 inches, and 18 inches respectively. In McCosh's tables the average duration of the operation for resection was from one and a half to two hours, and often had to be performed in a bath of putrid pus. In acute intestinal obstruction the less done he thought the better, as the patients were not dying of gangrene but of obstruction. He thought the best and simplest way was merely to open the sac and divide the stricture so as to relieve the obstruction. If the intestine was gangrenous to bring it gently down and attach it by sutures to the abdominal wall, and then, either to open the gut or to let it open itself. Pulling down the gut was a very dangerous proceeding.—Mr. ARBUTHNOT LANE agreed entirely with Mr. Lockwood. In the two cases in which he had performed the operation of resection they had been perfectly successful and had been followed by immediate relief. He then gave the details of these cases and also those of performing the operation.—Mr. LOCKWOOD thanked the various speakers for their criticisms. As to the statistics, he felt that the mortality was very high, but they had been collected out of 1,300 cases of hernia. The difficulty of resection was now-a-days not so much as formerly, as Mr. Lane had already pointed out. He only wished to call attention to the operation for those cases in which there was a reasonable prospect of success. In Mr. Bennett's plan he thought that the drainage tube might be liable to damage

the gut. As to the question of resection not giving relief, he had pointed out in his paper the extreme importance of emptying the gut before proceeding with the operation. The words "spreading gangrene," which Mr. Treves had objected to, were a quotation from the notes of a case.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MARCH 12TH, 1891.

W. CHAPMAN GRIGG, M.D., President, in the Chair.

Ectopic Gestation complicating Normal Pregnancy.—Dr. RALPH WORRALL (Sydney) read a case of ectopic gestation complicating normal pregnancy in a woman, aged 30, who had had five previous pregnancies. While enjoying perfect health, she was seized during sleep with severe abdominal pain, vomiting, and partial collapse, followed by a sanguineous discharge for several hours; the menses had been absent for six weeks. A fortnight later a lump was noticed in the left side of the abdomen, which continued to increase in size, and in which she felt movements about four months later. At the tenth month, what seemed to be an attempt at labour occurred, and from that time she decreased in size, and menstruation occurred regularly. About six months later menstruation ceased, and enlargement of the abdomen again commenced. On examination an abdominal tumour reaching 2 inches above the umbilicus was found, divided into two equal parts by a sulcus, the left half being well defined and hard, the right half ill defined and soft; further examination showed the former to be extrapelvic, while the latter was continuous with the cervix, and in it fœtal movements and heart were detected. The diagnosis arrived at was the presence of a living fœtus *in utero*, and an ectopic fœtus which had been carried for nearly two years. Dr. Worrall performed abdominal section, as it exposed the mother to no greater risk, and gave the fœtus *in utero* a fair chance. The child was delivered without difficulty, breech first, the umbilical cord ligatured close to the placenta, and cut. An attempt was made to remove the sac, but its intestinal adhesions were so many that it was ultimately left; it was therefore cleansed thoroughly, and the wound closed in such a way that the edges of the sac were turned in by the same sutures which closed the abdominal walls; no drainage tube was used. On the next evening labour began, and delivery was effected with the forceps in the dorsal posture. The sac subsequently suppurated, but was incised, and drained, and irrigated; it finally closed entirely. Dr. Worrall thought this was the only case on record in which an ectopic fœtus had been removed by abdominal section during a superadded normal pregnancy.—Remarks were made by Dr. EDIS, Dr. MANSELL MOULLIN, the PRESIDENT, Mr. BOWREMAN JESSETT, Dr. ROUTH, and Dr. INGLIS PARSONS.

Parovarian Cyst.—Dr. FENTON read notes of a case in which he had removed a parovarian cyst from a woman, aged 48. The patient did very well until the sixth day, when she suddenly became comatose, with Cheyne-Stokes respiration, contracted equal pupils, and the right side seemed paralysed. Death occurred twelve hours later, and at the necropsy the kidneys were found to be healthy, and no gross lesion was discovered in the brain. Dr. Fenton, however, thought that the symptoms pointed to a plugging of the basilar or middle cerebral arteries.—Remarks were made by Dr. EDIS, Dr. PARSONS, and Dr. ROUTH; and Dr. FENTON replied.

Hæmorrhage during Early Gestation.—Dr. EDIS read notes of a case of hæmorrhage during early utero-gestation, advancement to full term, and delivery of triplets.—After some remarks from the PRESIDENT, Dr. EDIS replied.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, MARCH 13TH, 1891.

H. E. ARMSTRONG, M.R.C.S., President, in the Chair.

Clinical Instruction in Infectious Diseases.—The PRESIDENT, in opening a discussion on this subject, insisted on the disadvantages under which young practitioners laboured from the almost entire absence of opportunities of studying infectious diseases in hospitals. Many had never seen a case of small-pox, typhus, or even scarlatina, until they met with them in their own practice. They then found that typical cases were the exception, not the rule, and inevitably fell into errors of diagnosis. Some men, from the want of early training in habits of observation, never acquired the power of differential diagnosis. To mistake varicella for small-pox was, to say the least, inconvenient, but to treat a case of small-pox as measles was disastrous. He had known eighty-five persons to have thus contracted small-pox, eight of them dying. Of sixteen cases notified at Newcastle as typhus, not one was really such. Delirium tremens had been reported as enteric fever, as had pleurisy with effusion. Several cases of pustular syphilides had been sent to the small-pox hospital, one of them twice within three weeks. Errors were sometimes unavoidable, but in some places fully half the notifications were incorrect, and at Glasgow among 429 cases 85 were not suffering from any infectious disease whatever. The Eastern Hospital in London, the Belvedere at Glasgow, and that at Newcastle were already open to students, and the only conceivable objection to the men availing themselves of them was the risk of infection to themselves or their families, but with ordinary precautions he had never known this to occur.—Dr. DUDFIELD stated that the Metropolitan Asylums Board would doubtless throw open the whole of their hospitals if medical students were only more willing to avail themselves of them than they had hitherto been. They gave board and residence for three months, with the title of Assistant Medical Officer, but very few had accepted the offer.—Dr. SERGEANT thought that the medical officer of health might see every case about to be notified with the practioner in attendance, but Dr. SYKES said in London that would be quite impossible.—Dr. WHITELEGGE, when at Nottingham, had taken a middle course, meeting the attendant at his own request whenever he was in doubt; he had thus averted the sending to hospital cases of varicella, amounting to four-fifths of the supposed cases of small-pox.—Dr. WILLOUGHBY referred to a paper he had read on Obscure and Anomalous Forms of Enteric Fever, in some of which the diagnosis had been verified *post mortem*, though every positive symptom had been absent during life.—The Society then passed unanimously two resolutions affirming the expediency of the requirement by the General Medical Council of clinical instruction in infectious diseases as a compulsory subject in the ordinary curriculum of the student; and as a means of meeting such demand the opening, for purposes of clinical teaching, of hospitals and wards devoted to such diseases in all towns where there were medical schools.

London Manure and Diphtheria.—Dr. THRESH read a paper on this subject. There could be no question as to the desirability of the speedy removal of garbage of all kinds from the metropolis, but its collection at the wharf had raised storms of opposition. Since his appointment as medical officer of health to the Chelmsford and Maldon districts he had seen much of the effects of its employment on the land. Some was brought in barges to the towns near the coast, but in his own district it came by road. The stench was horrible, and could be perceived for two miles or more. It consisted of refuse from sausage manufactories and fishmongers' shops, butchers' blood, dead cats and fœtal calves, with black slime apparently from street gulleys, and every description of filth.

Not unnaturally, the country people attributed to it every outbreak of disease, though no complaints were made of the putrid fish bought on the coast and largely used as manure. In some instances he could exonerate the London manure, since the disease had existed before its arrival; but the cases in which diarrhœa, foul sore throats, or evident diphtheria had broken out among the men employed in unloading it or spreading it on the land, among children who had played around the heaps of muck, or in the cottages adjoining fields where it was used, the families and the neighbourhoods having previously been free from such illness, were so numerous and clear that he could not doubt that the manure was a factor, whether actually a vehicle of infection or by setting up a septic condition of the blood serving to call into activity microbes already present, though in a dormant state.—Dr. SYKES observed that the materials so much used of late as litter in place of straw, such as peat, sawdust, etc., were overpoweringly offensive and pungent probably from not admitting of aëration. Several metropolitan members considered that Dr. Thresh's remarks were most valuable as bearing on the treatment of refuse and manure by the vestries and local authorities in London.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Monday, March 9th, 1891.

David Newman, M.D., President, in the Chair.

Specimens.—Dr. George T. Beatson showed a specimen of Exostosis Cartilaginea removed from the deep surface of the upper angle of the Scapula of a governess, aged over 30.—Remarks were made by Dr. Rutherford, Dr. Coats, and Mr. Maylard.—Dr. W. L. Reid and Dr. Joseph Coats showed injected specimens and microscopic sections of White Infarction of the Placenta in cases where the fœtus was stillborn. Dr. Reid had seen within the last twenty years a large number of cases in which healthy women gave birth to dead children, alive up to within a few days of birth, and actually in a good state of nutrition, and in which this condition of the placenta was present. Dr. Reid knew of one case in which it occurred three times with marked rheumatic history. Dr. Coats made a preliminary report on specimens submitted to him by Dr. Reid. The wedge-shaped areas were evidently necrosed. The conditions indicated a disease of the maternal structures.—Dr. MacPhail had also had knowledge of such cases; he had not noticed any relation to rheumatism, but had noticed that the condition was apt to occur in cases where renal inadequacy existed, especially with oxaluria. In cases of puerperal eclampsia he had never found any traces of white infarction.—Dr. T. Meighan showed a piece of Steel removed from the Fundus of the Eye with the Electro-magnet. The patient was shown at December meeting, and was now doing well.

Chronic Inflammatory Lesions of Bronchi.—Dr. A. G. Auld showed microscopical specimens illustrative of some further observations on chronic inflammatory lesions of the bronchi and bronchiectasis. He described a remarkable hyperplasia of the epithelium and mucous glands, the ducts of the latter showing frequent cystic dilatations lined with columnar ciliated epithelium. A similar appearance had been described by Raynaud in the mucous glands of the bile ducts. Reference was also made to the peculiar lesion of the tongue described by Fairlie Clark as ichthyosis linguæ, and affirmed by him to be due to inflammatory irritation, causing an epithelial exuberance as a possible parallel. Lastly, it was probable that, under certain circumstances and when of long duration, this growth tended to assume a carcinomatous character. The second or fibroid atrophic stage of bronchitis was then referred to. In the light of Thin's researches, the fibrous transformation of the cartilages were not difficult of explanation, as Thin had shown hyaline cartilage to be a structure similar to the cornea. True bony metaplasia of the cartilage, though described by some authors, was improbable, but calcareous infiltration was not infrequent. Allusion was next made to peribronchitis, and the changes which the bronchial wall might undergo in bronchiectatic fibrotuberculous lungs. In the case of fibroid changes following in the wake of the tuberculous process, the bronchial walls underwent a peculiar metamorphosis. It could be shown, however, that they were not pulmonary excavations. Though superficially resembling a pyogenic membrane, the deeper parts of the wall showed their bronchial origin in a remarkable growth of smooth muscle fibres, which extended in rays along the septa. The problem was, Did these fibres spring from pre-existing bronchial muscle cells, or were they derived from connective tissue corpuscles? The observations of Arnold, Bardeleben, and Ziegler in favour of the latter view were discussed. In the present case, their origin from pre-existing fibres was maintained on the ground that undoubted pulmonary excavations did not show them, and, further, a somewhat similar lesion was to be observed in the Fallopian tubes in chronic salpingitis. In less diseased portions of such lungs bridge-like bands were observed stretching across the lumen of the bronchus; they resulted from the junction by their summits of two granulation-tissue growths which had sprouted out from the wall. Certain lesions from a lung wherein a gangrenous cavity existed at the base were next demonstrated. The bronchi were dilated, and their proper structures were replaced by granulation tissue superficially, and by fibrocellular tissue in the deeper parts. In many the normal epithelium of the surface was replaced by a compound squamous epithelium resembling that of the skin. The basement membrane had disappeared. With regard to bronchiectasis, too much stress had been laid on the pressure of the air and inflammatory degeneration, and too little account taken of the influence of the changes in the pulmonary tissue. How were the moniliform dilatations to be explained in many cases? By placing the collapsed and atrophous lung tissue in the foreground, it was intelligible how in such cases the bronchial wall would expand to fill up the vacancy, as moniliform dilatations were in this manner formed in acquired capillary ectasis. Lastly, the histological tests whereby a bronchiectatic cavity could be distinguished from a pulmonary excavation were given. In the absence of all other traces, aberrant muscular fibres, the duct-like formations, and the basement membrane were to be sought for. The doctrine of Gairdner, that most of the so-called bronchiectases were in reality pulmonary excavations, had been totally demolished by the introduction of the histological tests referred to. The observations of Dr. Ewart on this subject were next alluded to. That the tissue of the wall of a healed tuberculous excavation was derived from the nuclei of the adventitia of the intercepted bronchi was correct, but there was no reason to exclude the alveolar walls from participating in the process.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

Friday, March 13th, 1891.

S. R. Mason, M.B., F.R.C.S.I., President, in the Chair.

Endo-Uterine Therapeutics.—Dr. More Madden said that of the cases admitted into the gynæcological wards of the Mater Misericordiæ Hospital, Dublin, during the last 15 years endo-uterine treatment was found necessary in 35 per cent. The two essential points in all such treatment were, first, that the orifice and cavity of the uterus, if not already sufficiently dilated, should be mechanically expanded; and, secondly, that whatever application was resorted to should be brought into direct contact with the diseased endometrium. For the first purpose he employed the rapid cervical dilator, for the second Duke's cervical curette, to cleanse out the entrance to the womb; and the author's adjustable uterine curette, by which the endometrium might be thoroughly denuded, the hæmorrhagic discharge thus occasioned also relieving the congestion of the hyperæmic and hypertrophied organ. In subinvolution he advocated the introduction in some instances of a small tampon saturated in a combination of tannic acid and turpentine, which he termed "tanno-terebinth." In suitable cases it was allowed to remain in the cavity from 12 to 24 hours. He deprecated the employment of the ordinary siphon syringe for any endo-uterine purpose, and believed that this should be replaced by an irrigator. In more serious cases of long standing fundal or corporeal endometritis and subinvolution, in which the disintegrated and eroded endo-uterine mucous membrane became the seat of various pathological changes, the cautery, actual or potential, might be justifiably resorted to in endo-uterine treatment.—The President thought that as to the use of caustic, the most important point was to apply the caustic directly to the mucous membrane, which was frequently very difficult on account of the mucus secretion filling the uterus and cervical canal.

Specimens.—Mr. O'Callaghan exhibited a Subperitoneal Myoma and a Submucous Fibroid of the Uterus.

Instruments.—Dr. More Madden exhibited (1) a new form of uterine support, or roller pessary; (2) an instrument for intra-uterine work, combining the action of the ordinary curette with that of a tenaculum.

Pasteurism in Buenos Ayres.—Dr. Hernandez, Subdirector of the Antirabic Laboratory of Buenos Ayres, has recently published the statistics of that institution from September, 1886, to the end of 1890. During that period the total number of patients treated was 825, of whom 11 died. The cases are divided into three categories: (1) those bitten by animals proved to be rabid by inoculation experiments; (2) those bitten by animals who had shown distinct signs of rabies or certified to be rabid by a veterinary authority; (3) "suspected" cases. The mortality in the first of these divisions was 2.74; in the second, 0.85; and in the third, 0.59 per cent.

Professor Braun von Fernwald, the distinguished Vienna obstetrician, is seriously ill, and his condition is causing his friends and pupils much anxiety.

REVIEWS AND NOTICES.

A Textbook of Chemical Physiology and Pathology. By W. D. Halliburton, M.D., Professor of Physiology at King's College, London. London: Longmans. 1891.

The author, in his preface, truly states that there was a want of a textbook on chemical physiology and pathology. The book before us is an accurate systematic treatise on these subjects, and supplies admirably, as far as it goes, the want which has been indicated. There is an immense amount of information in it: the facts are well arranged and shortly and clearly stated. It is not at all the book for a beginner, nor indeed for anyone who is not especially interested in medicine or physiology, but, on the other hand, it is one that everyone who is conversant with these subjects ought constantly to have at his side for reference. We would not advise the reader to attempt to read it straight through, for before he had got many pages on his journey his head would be quite turned by the number of hard facts and long formulæ which the author has quite rightly not attempted to present in any physiological sequence. Such knowledge is to be obtained from any good book on physiology or pathology, and no one should take up Dr. Halliburton's book who has not already a thorough ground work.

It is so large a book and the matter contained in it is so solid and so condensed that any detailed criticism is impossible. The first part consists of a short but excellent account of the various methods employed in physiological chemistry. Then there follows a full account of the chemical basis of the body. This is well up to date, and the last chapter, although a short one, will be specially useful to the student of pathology, for it gives an account of ptomaines and also of the products of bacteria. We ought to be especially thankful to Dr. Halliburton for having insisted against the present habit of attributing too much to ptomaines and to the toxic substances—toxines—produced by bacteria. It is a standing disgrace to the medical profession, which is supposed to be a scientific profession, that it is ever ready to run after the newest thing in the most childlike way.

The third part contains an account of the chemistry of the tissues and organs of the body, and this will probably be one of the most useful sections, for the physiological account is always supplemented by description of the pathology of the tissues; for example, after the physiological chemistry of the blood has been fully described, we get given us a most careful account of this fluid in different diseases. Our only complaint of this part of the book is that it is too short. The student of comparative physiology will find many interesting observations on the blood of the lower animals. The chapter on the connective tissues in disease, containing as it does descriptions of gout, myxœdema, melanosis, rickets, etc., is too brief, for all these subjects are compressed into sixteen pages. In fact, all through the book, the chief complaint of the medical student will be that too little space is devoted to the pathological section. Still, considering how scattered our information is, we ought to be thankful to Dr. Halliburton for having brought together what he has, rather than complain that he has not given us enough.

In the next section of the book, which gives an account of alimentation, the scantiness of the chemistry of disease is even more striking; we are really hardly told anything about it. There is, for example, practically no description at all of the gastric juice in dyspepsia, although this has been frequently analysed in many cases, notably those of dilated stomach; nor is there any full information about the chemical differences between obstructive and non-obstructive jaundice. Questions such as these are of intense interest to the physician; and he may fairly expect to find them discussed in a work on pathological chemistry. The chapters on the urine are excellent, and here we have a fuller account of the pathological conditions.

The author would perhaps have been better advised to have omitted the short conclusion on general metabolism. It is too sketchy to be worthy of a place in such a book; for example, fever occupies a page and a half only.

The main fault in the book is that the discussion of the many problems of chemical pathology is rather inadequate, but this may possibly be due, in part at least, to the very imperfect state of our knowledge. On the whole Professor Halliburton has given us an excellent textbook.

Suggestive Therapeutics: A Treatise on the Nature and Uses of Hypnotism. By H. Bernheim, M.D., Professor in the Faculty of Medicine at Nancy. Translated from the second and revised edition by Christian A. Herter, M.D., of New York. London and Edinburgh: Young J. Pentland.

Dr. Herter has done well in publishing his translation of Bernheim's work, at a time when it is likely to be read with interest by medical men. The position which hypnotism has hitherto held in this country has only been on the border land of permissible therapeutics, and it is by such work as this we hope to rescue it from the hands of the showmen and mystery mongers.

Hypnotism, says Dr. Herter in his preface, is no longer one of the curiosities of science; it is a therapeutic resource of unquestionable value which lies ready to the hand of every medical practitioner who is willing to take the trouble to inquire into its nature and the manner of its use. He adds that he has studied the effects of hypnotism and suggestion in a large number of persons in health and disease, and that these studies have enabled him with few exceptions to confirm Bernheim's description of the hypnotic phenomena.

The veil of mystery which has so long been allowed to hang over the subject and only too willingly held there by pseudo-doctors and professors, and the promoters of public exhibitions for the purpose of gain, is slowly but surely lifting, and it behoves the heads of the profession in this country boldly to recognise and encourage the legitimate investigation of the subject, and let fall upon it the full light of unbiassed professional opinion and judgment. The amount of ignorance displayed by the profession generally in discussing the subject is scarcely credible, and it has been left to our Continental brethren to work out the principles of the Manchester surgeon, James Braid, and to give to hypnosis the position of "a valuable therapeutic agent."

It was Liébault, of Nancy, who after years of work had recorded a mass of facts which stimulated Bernheim to undertake the investigations which are fully and fairly recorded in the work we have now before us. In his introduction Bernheim states that suggestion rules the greater part of hypnotic manifestations; it is the key to Braidism. "I owe," he says, "the knowledge of the method I use to induce sleep and certain incontestable therapeutic effects to M. Liébault, Doctor of Medicine at Nancy."

The book is divided into two parts: the first treats of the methods employed and the different manifestations which may be determined in hypnotised subjects, with observations upon the theory of the psychological mechanism of the phenomena. The second part deals more exclusively with suggestive therapeutics, and a goodly number of cases are given in detail with the author's personal observations.

The methods employed are clearly stated, and may be verified with ease by anyone who will pay attention to the rules laid down for guidance, and the degree of hypnosis produced will be found to depend upon the individual temperament of the subject or the psychical influence exercised, and not in the least upon the manipulations employed. "None of my colleagues at Nancy," says Dr. Bernheim, nor Dr. Liébault, who has hypnotised more than 6,000 persons during the last twenty-five years, "have ever observed anything to the contrary." Of course, this is opposed to the views of M. Charcot and the Salpêtrière school. Charcot, who is stated to have made his experiments principally upon hysterical cases, considers the hypnotic condition developed in them to be a real neurosis divided into three phases, which constitutes "le grand hypnotisme;" whilst Binet and Féré say that only a dozen of these cases have occurred at the Salpêtrière in ten years. "Should these cases," asks Bernheim, "opposed to thousands of cases in which these phenomena are wanting, serve as the basis for the theoretical conception of hypnotism?" Experience answers in the negative. No two cases are exactly alike—the phenomena present in one case are absent in another, and yet the state of hypnoses in both may be undoubted.

The vaunted power of magnetism is settled at once by the author, whose experiments go to prove that all the effects produced are the results of suggestion, and he quotes Braid, who says no magnetic fluid exists, and that no mysterious force emanates from the hypnotised. He pays the following tribute to Braid: "Although the doctrine of suggestion had its precursors, it was not until the year 1841 that it was definitely established and demonstrated by James Braid, of Manchester. To him is due the discovery of hypnotism, and the words Braidism and Braidic suggestion have remained in science to commemorate a new doctrine which arose in the face of mesmerism."

Dr. Bernheim's views are illustrated by the carefully recorded notes of 105 cases, and he concludes his interesting and valuable work with remarks upon the danger and abuse of hypnotism.

Dr. Herter deserves praise for the careful manner in which he has done his translation. The book is well written, well edited, and is the best work on the subject we have seen.

Air Analysis; A Practical Treatise on the Examination of Air, with an Appendix on Illuminating Gas. By J. Alfred Wanklyn and W. J. Cooper. London: Kegan Paul, Trench, Trübner and Co., Limited. 1890.

Gas analysis, in which of course must be included the analysis of air, is a very much neglected subject. It is pretty generally, although unjustifiably, regarded as tedious, troublesome, and costly, and as yielding illusory or inaccurate results more frequently than not. The analysis of air, of illuminating gas, and of "furnace gases," has, it is true, received a certain amount of attention, but the whole subject is in a state of confusion and has been inadequately studied. If for nothing else, Mr. Wanklyn may be thanked for bringing into the range of ordinary laboratory work a number of methods which have hitherto had mainly a theoretical interest for chemists, and for putting a number of known facts into terse and clear language, and into usable form.

The book before us consists of about 80 pages, and cannot of course be intended to serve as a technical manual of gas analysis. The main object would seem to be to bring the analysis of air for sanitary purposes into more general use, by showing its importance and by a description of simple and fairly accurate methods of procedure. The general scope of air analysis is stated to be, in the main, the chemical examination of the air of confined spaces with the view of considering the question: "Is the ventilation of the space dealt with sufficient?"

The apparatus recommended is the simple "gas burette" of Hempel, with the use of suitable absorption pipettes. The apparatus is fully and clearly described and figured in nine plates, as in actual use. Indeed, the illustrations given are perhaps rather too detailed, since such work as is here described is not intended to be carried out by those who have had no scientific training. Chemists are supposed to know the effect produced by raising or lowering a pressure tube connected with a gas burette.

In a short introduction the simple physical properties of air and gases are summarised in a very popular and elementary manner. Five chapters deal with the determination of oxygen, nitrogen, carbonic acid, and carbonic oxide, and with standards of pollution and purity. In the appendix are very briefly described the well known methods in use for determining the principal constituents of coal gas.

The authors distinguish two methods of examining gases, namely, eudiometry, which is concerned with those processes involving measurements of the changes of volume of gases consequent upon analytical operations; and "complementary eudiometry" in which changes consequent upon the action of gases upon different substances brought in contact with them are noted.

For the direct determination of oxygen the doubtful method of Priestley and Cavendish, namely, the addition of nitric oxide and the subsequent absorption by water of the peroxide formed, is recommended, while the pyrogallate and explosion methods are only referred to; the recommendation being based on the fact that the two latter methods are inapplicable in the presence of carbonic acid. The well known method of Pettenkofer is used by the authors for the determination of carbonic acid, the only suggested difference being the use of a particular standard solution of acid, giving the volume of carbonic acid in the quantity of air operated upon at once.

The authors make a somewhat curious and very loose comparison between the mineral matter in drinking water and the carbonic acid in air. They state that "the proportion of carbonic acid in air is about the same as the proportion of mineral matter in drinking water." It would have been more correct to state that this was the case with reference to certain drinking waters; those namely which contain from 30 to 40 parts per hundred thousand of mineral matter. The book may prove a useful one for practical work so long as it is in the hands of those who have had a proper chemical training, while on the other hand may be of interest to sanitarians generally.

NOTES ON BOOKS.

Hygiene and Public Health. By Louis C. Parkes, M.D., D.P.H.Lond. Univ., Fellow of the Sanitary Institute, Assistant Professor of Hygiene and Public Health at University College, etc. Second Edition. (London: H. K. Lewis.)—The need for such a work as that of Dr. Louis Parkes, which we reviewed in the British Medical Journal about a twelvemonth since, is amply proved by the fact that within six months of its issue a second edition was called for. Since that date two other works of merit have been published, and having examined them all we can say that the value of Dr. Parkes's volume is in no way diminished by the appearance of recent publications on the same subject. Its chief merit is that it treats in a lucid and comprehensive manner subjects which are considered of fundamental importance in the science and art of preserving health. It chief defect is that like most of the other manuals on public health it deals inadequately with the subject of the communicable diseases. But in other respects it goes far to meet the requirements of candidates for public health diplomas. Moreover, the volume is one which general medical practitioners will find it useful to have at hand.

Materia Medica, Part I, Catechism Series. (Edinburgh: E. and S. Livingstone. 1891.)—This booklet is intended for the student preparing for examination to "enable him to run over the work the night before," and "to suggest questions that otherwise might have escaped his notice." Such a method of preparing for examinations is of very doubtful value even if looked at solely from the standpoint of passing. For a written examination the amount of information given is insufficient; while, in an oral examination, it is extremely improbable that an experienced examiner would ask questions in the formal manner here laid down.

A Manual of Organic Materia Medica for the Use of Students, Druggists, Pharmacists, and Physicians. By John M. Maisch, Ph.M., Phar.D. Fourth edition, with 259 illustrations. (London: Hirschfeld Bros.)—This is a work more useful for the purposes of the pharmacist and dealer in drugs than for those of the medical student or practitioner. It embraces a description of the physical, histological, and chemical characters of the organic drugs of the *British* and *United States Pharmacopœias*, together with a very large number of non-official substances. Their medicinal uses and doses are simply indicated in a line or two, and no mention is made of their preparations, nor is it stated in which *Pharmacopœia* the drug is included, or whether it is non-official. Although, therefore, such a work is little useful to the medical practitioner who seldom sees crude drugs, yet sufficient praise can hardly be given for the conciseness, accuracy, and general excellence of the descriptions. The woodcuts are also well executed. We can most heartily recommend the book to teachers of materia medica and others interested in crude drugs.

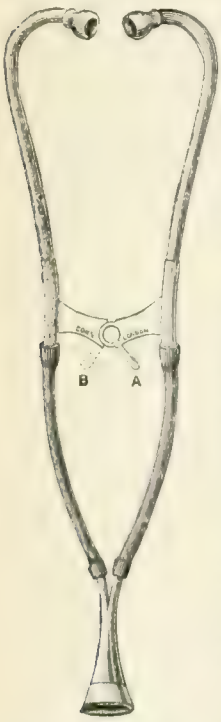
An Elementary Text Book of Physiology. By Vincent T Murché, Head Master of Boundary Lane Board School. (London: Blackie and Son. Enlarged edition.)—This book is not

written for the medical student and is not suited to his requirements. It is written for use in schools and for classes studying the first stage of the science and art course in physiology, and for this purpose it is a most admirable work. It is evident that its author has a practical acquaintance with his subject; it is written in clear and interesting style, and though difficulties felt by more advanced students are smoothed over a little too much this is no doubt necessary for the class of readers for whom the book is written. So far as it goes the book is wonderfully free from mistakes, the illustrations are well drawn and well executed, and on the whole the book is one which we can confidently recommend to lay readers wishing to obtain a preliminary insight into the science of living things.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN IMPROVED BINAURAL STETHOSCOPE.

The weak point of the binaural stethoscope as usually constructed is the spring. If strong enough to keep the instrument in position, its constant pressure hurts the ear; and if made weak enough to be harmless to the user, it fails to keep the stethoscope properly applied to the auditory meatus. These remarks apply equally to the common elastic loop and to the metal spring which is now in more general use, besides which the former has the fault of always slipping out of position, while the latter invariably causes loud musical sounds which materially hinder accurate diagnosis.



I venture to think that I have succeeded in overcoming these drawbacks to the use of the binaural stethoscope by doing away with the spring, and substituting a clamp at the joint; this is actuated by a hanging tailpiece or lever, moved by the second finger of the right hand, the arm being held between the first finger and thumb; the other arm is held between the corresponding fingers of the left hand. When the lever is in the position A the hinge is loose, and the instrument can be applied to the ears, and adjusted to press as lightly or as heavily as desired; the lever being then moved into the position B, the instrument is fixed and remains in position; it can then be easily removed from the ears and closed by merely touching the lever.

A minor improvement consists in enlarging the orifices in the ivory ear pieces, so that the bore of the instrument may remain in continuity with the axis of the auditory meatus during the rotatory movements round the said axis made in altering the position of the stethoscope.

Messrs. Down Brothers, of St. Thomas's Street, have carried out my idea completely to my satisfaction, and produced an instrument which does everything that I anticipated.

GEORGE HERSCHELL, M.D.Lond.

West Street, Finsbury Circus, E.C.

CAFFYN'S LIQUOR CARNIS.

We have examined specimens of this preparation, and find that the statements made by the proprietors as to its composition are substantially correct. It is a brownish-red fluid of very sweet taste and slight acidity, and is rich in unaltered albuminoids, having, no doubt, been obtained from flesh by a cold process. It is preserved by means of glycerine, which we find to be present in considerable amount. It is practically an uncooked meat juice mixed with glycerine. The value of such a preparation as a food, and its fitness for use in certain diseases, are matters which can only be determined by actual experience, and it may be said that it deserves a fair trial. We have also examined a specimen of the same preparation which has been flavoured with celery for the purpose of making it more palatable. The preparations are made by Caffyn's Liquor Carnis Company, 50, Holborn Viaduct, E.C.

IMPROVED DIASTASE MALT EXTRACT.

We have examined some new specimens of Kepler's Diatase Malt Extract. It is claimed that it has been improved both in colour and taste, which we think is the case. The extract, which is highly concentrated, possesses a very high diastasic power. The free acidity calculated as lactic acid is low. It is entirely free from chemical preservatives, the presence of which would, of course, render the diastase inactive; and it may be recommended as a thoroughly sound and reliable preparation. It is manufactured by Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings.

G. B. DIABETES WHISKY.

It is claimed for this whisky that its freedom from sugar makes it especially suitable for diabetic patients. The results of our analyses of the samples submitted to us enable us to state that it is a whisky of good quality and of proper strength (10.9 under proof), and that it is free from sugar. The whisky is very light in colour, does not possess any strong flavour, and the total extractive matter is very low. It is sold by Messrs. G. Back and Co., 14, Devonshire Square, Bishopsgate, E.C.

PATENT EAR CAP.

This appliance, devised for the prevention of distorted and prominent ears in young children, will, it is claimed, when worn in the nursery, keep the ears in contact with the head, and thus may prevent disfigurement in after-life. The ear cap, which has been invented by Miss A. Claxton, and may be obtained at 62, Strand, is adapted to meet many requirements. It is light and not unsightly, and will, we imagine, be found effectual and also very comfortable. It consist in a network of narrow black tape with elastic material inserted here and there to ensure close fitting.

SOLUBLE ARSENIATE OF IRON.

Dr. Leopold Zambeletti, pharmaceutical chemist, Milan, has prepared a combination of arseniate of iron with citric acid and ammonia, which he terms ammonio-citro-arseniate of iron. This preparation is soluble in water, and contains such a proportion of iron and arsenic as to render it an excellent therapeutic combination. This soluble arseniate of iron appears to have been used with success in Italy, and there is no doubt that it is a decided advance in the pharmacy of this drug. We have received samples of the soluble arseniate of iron in the form of pills and solution; the latter is a dark red liquid miscible with water, and possessing a slight ferruginous taste. This preparation can be obtained of B. A. Legg, 59, Wilton Road, S.W.

TRIANGULAR BANDAGE.

We are asked to state that Messrs. Savory and Moore, 143, New Bond Street, W., have designed and issued a key to the General Service Triangular Bandage and Instructor, of which we published a notice in the British Medical Journal of March 14th, page 590.

AN OVUM CURETTE.

Dr. Alexander Duke, F.R.C.P.I., etc. (Gynæcologist Steevens's Hospita Dublin), writes: I observe in the British Medical Journal of March 21st a description and illustration of an instrument with the above heading, designed by Dr. Whitehead.

Surely the use of the curette in the treatment of incomplete abortion has been practised for years past (in Dublin, at least), and I have been using a similar instrument to that described for a considerable time past. In the British Medical Journal for April 19th, 1890, will be found figured and described a curette designed by me, with the additional advantage of combining flushing and curetting, and I pointed out as one of its chief uses the removal of *débris* remaining after an incomplete abortion. I fail to see anything new in the use of Dr. Whitehead's curette.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MARCH 28th, 1891.

DR. BUCHANAN'S REPORT FOR 1889.

The report of the medical officer of the Local Government Board for 1889 has at length been published. It consists as usual of three parts—Dr. Buchanan's general report upon the working of his department, a series of selected reports made by inspectors of the Board during the year, and the reports on the auxiliary scientific investigations. The magnitude of the work carried on by the medical officer's department may be gathered from the statement that the number of recorded references made to it for advice in matters relating the Local Government Board's administrative business amounted, during the year 1889, to upwards of 6,000. In addition requests for advice from the Colonial and other Government offices have been complied with. As usual a considerable number of the special local inquiries conducted by the inspectors have had to do with the prevalence of diphtheria; the facts accumulated during 1889 give additional force to observations made in previous years, which tend to prove that the urban prevalence of this disease is increasing year by year.

One of the most important of the auxiliary scientific investigations has also to do with this disease. Dr. Klein has continued his researches into the bacteriology of diphtheria, and publishes in the present report an elaborate article on the etiology of the disease; in it he discusses very fully the bacteriology of the disease, upon which, as is well known, he has succeeded in throwing much light. In particular science is indebted to him for having precisely defined the characteristics of the true pathogenic organism of this disease, which it would appear had previously in many cases been confused with other bacilli frequently, but not constantly, found in diphtherial membranes. He found that cultivations of this pathogenic bacillus were capable of producing in cats the same well-defined symptoms of feline diphtheria as result from direct inoculation of the cat with the material of human diphtheria. He found further that the feline diphtheria thus set up may infect with the same disease other cats kept in the same cage, and that from the disease thus produced by contagion new sub-cultures of the bacillus could be obtained.

The only missing link in this chain of reasoning is that it cannot be proved experimentally that feline diphtheria thus induced can be transferred to human beings; it will not, however, be forgotten that cats suffering from a disease of the same character as that observed in experimental cats have been supposed, on good circumstantial evidence, to have been the originators of epidemics of diphtheria among the human inhabitants of the households to which they belong. Some experiments with milch cows yielded results of considerable importance; it was found that on or about the fifth day after inoculation in the shoulder with pure cultivations of the diphtheria bacilli, milk drawn from the udders with aseptic precautions contained bacilli which were proved by cultivation experiments to be undoubtedly of the same species as those with which the animals had been inoculated. On the previous day in these same cows an eruption of small vesicles had made their appearance on the udders, and these rapidly passed into pustules and crusted ulcers. Dr. Klein looked upon this udder-eruption as being a local manifestation of a constitutional disease induced by the diphtheria inoculation.

The volume also contains the full text of Dr. Sidney Martin's paper on the chemical products produced by the growth of anthrax bacilli in serum albumen, an abstract of which was communicated to the Royal Society last year. An account of these researches, which it will be remembered resulted in the discovery of poisonous albumoses and the isolation of a well-defined alkaloid, was published in the British Medical Journal last May.

Dr. Klein gives also some interesting observations on the pathology of a limited epidemic of diarrhœa, which occurred in the neighbourhood of Carlisle, and was clearly traced to the consumption of pork and pork pies. His researches point very strongly to the view that these examples of food poisoning are really due to a true infective disease, the pathogenic principle of which is a bacillus. To this and to other matters of considerable scientific importance contained in the papers here mentioned and in others by Dr. Klein and Dr. Vincent Harris we hope to refer on some future occasion.

THE LONDON WATER QUESTION.

The question of London's water supply has arrived at a position whence there will be no going back as in bygone years, and, indeed, it is imperative that it be not allowed to go back. For years the question has been brought before the public from time to time, and there have been innumerable Royal Commissions and Parliamentary Committees to deal with the subject, but all without good results. The present agitation has arisen from two causes: (1) That this year the new quinquennial assessment comes into force, which means an increased water rate in many cases without an increased supply; and (2) that the London County Council have appointed a special committee to deal with the subject. As soon as the London Council set to work on the matter they stirred up the vestries and district boards, and, seeing these bodies commence an agitation on this all-important subject, the City likewise turned their attention and energies to it. The result is that this session Parliament is confronted with no fewer than six bills dealing with London's water supply, of which, perhaps, the most important are the Metropolis Water Supply Bill, drawn up by the vestries and district boards, and the London Water Commission Bill, promoted by the City Corporation. It is upon these two the greatest interest will centre and the battle rage fiercest. The vestries' Bill is a a public Bill, whilst that of the City is a private one. The London Water (Meter) Bill, which has been withdrawn; the Metropolitan Water Companies (Charges) Bill; the South-

wark and Vauxhall Water Bill; and the Croydon Water Bill, make up the six Bills dealing with the subject. The London County Council has, of course, no power to present a Bill, and, moreover, it is in the strange paradoxical position that it has to oppose any of these Bills before it can support one.

Of all the large towns in the kingdom London stands almost alone in being dependent for its water supply upon companies whose business is carried on for profit. Seeing that a copious supply of water is an absolute necessity to life, and that, in large towns especially, the use of water is largely required for public purposes such as sewer flushing, road watering, public baths and laundries, etc., it may be regarded as an axiom that the water supply should be under municipal control. Parliament has already affirmed the principle in the case of every corporate town of importance which has desired to take the water supply into its own hands. Two Select Committees of the House of Commons (1867 and 1880) have reported in favour of the supply of water being placed in the hands of a public representative body.

Now that London has its parliament it seems only natural and right that this parliament should be the water authority. The proposal is to appoint a committee of the London Council to manage the water supply (just as the companies now manage), aided by old servants of the companies, so as to maintain continuity of experience—a most important factor in administration.

There are many who oppose the Council being made the water authority, some on the ground that the Council has already enough to do—which is a childish objection—others on the ground that the existing companies supply areas outside the County of London. The latter objection may be met by the facts that when the Corporation of Bradford bought the water undertakings they supplied thirty-eight towns besides Bradford. Manchester, Liverpool, and Glasgow, and other large towns have taken over big areas and arranged terms of supply satisfactorily. No trust was created, no difficulties have arisen. With such precedents there is no reason why difficulties should arise in regard to Greater London. Purchase of the water companies' undertakings seems really the most feasible manner for Londoners to extricate themselves from the present dilemma in regard to their water supply. There is no doubt that at no distant date a new source of supply will have to be sought to supplement the present sources, but it would hardly do to obtain a new source for all London just now; this would mean laying fresh mains in the streets, which are already occupied with mains of such various kinds that great physical difficulties stand in the way of increasing their number, and, moreover, competing supplies by a public authority and wealthy companies would probably be ruinous to both. The terms of purchase of the undertakings will, of course, be a matter of negotiation, and will be adjusted by some supreme tribunal. The Council are now engaged in ascertaining the condition of the water companies' works with a view to deducting so much from the price asked on account of defects in the sources of supply. This is only just and fair. We are fast approaching the usage of 200 million gallons of water per day, and although it was estimated in 1869 that we could rely upon 300 million gallons from the Thames, Lee, and chalk sources if so required, the chief engineer of the Council is of opinion that additional information is necessary before relying on this extension of our supply. A thorough and searching chemical and medical examination of the water given by the Thames and Lee is being made before either is thought of for a further supply. The water we at present receive is fairly good and wholesome, but what would it be if any serious outbreak of infectious or contagious disease in any of the towns draining into either of these rivers were to occur? Fortunately these rivers have not been tested under such conditions. For these reasons, and further that extensive impounding reservoirs would have to be constructed to obtain an extended supply, it is not politic to draw to a greater extent upon the Thames or Lee. The upper valleys of the Severn or the Wye seem the favoured spots whence to draw our extended supply. One hundred and fifty-four million gallons of water were used in London per day in 1888, with our population estimated at 5½ millions. Forty years hence we are told we may expect a population of 12 millions in London, and shall then require 340 million gallons per day. Either of the sources mentioned above would give us 230 million gallons per day, and would have the advantage of great purity.

The Parliamentary Committee of the London Council, of which Mr. Charles Harrison is chairman, have acted somewhat ungraciously and antagonistically towards the Bill promoted by the vestries, mainly because they have failed to understand the real meaning of the proposals therein set forth. The vestries' Bill wishes the Council to be the water authority, but an alternative was bound to be inserted in the Bill to raise the issue and enable Parliament to decide. The Council's opposition on this point was needless after Mr. Ritchie's speech in the House approving the Council as the water authority. Indeed, Mr. Ritchie's speech virtually killed the City Corporation Bill. The Parliamentary Committee of the Council object to the Bill because it will multiply and confuse jurisdiction. So far from multiplication, one public authority is to take the place of eight companies. As to confusion of jurisdiction, the water authority will have no jurisdiction outside the area supplied by the eight companies. Again, the Committee object to the establishment of a new body to carry out this enormous transaction with the water companies. The answer to this objection depends upon the meaning of the word "transaction." If arbitration is meant by it, it does seem preferable to have a board to carry out all the arbitrations on one principle than for a separate set of two arbitrators and an umpire to be appointed for each of the eight distinct arbitrations. If, on the other hand, the Committee take the "transaction" as signifying the formation of a water authority, the Bill, as drawn, enables the Council, as an alternative proposal, to adopt the Act and so prevent the creation of the proposed trust.

If it should happen that Mr. Causton's Bill dealing with the water companies' charges should become law then the question of price to be paid for the undertakings will be largely affected. The companies may claim a vested interest and demand compensation. In the event of this taking place, the income might be considerably reduced by the change, and a deficit have to be provided for. Upon what basis the Council will charge when they become the water authority is not yet quite clear. The question of supply by meter raises several issues, notably that in regard to small houses. Possibly the Council may agree to supply houses of a certain size at a fixed charge with constant supply. In the case of large houses, the meter system might be found

preferable, but the scale of charge would have to receive the utmost consideration. Of course, the cost of meters is an important item.

The Special Committee on Water Supply and Markets of the London Council have appointed experts who are now thoroughly investigating the whole question chemically, and their report will be awaited with great interest.

The Committee are likewise considering the practicability, advisability, and probable cost of providing an independent and competing supply of water. Pending, however, the appointment of the Select Committee by the House of Commons, the question for the moment is at a standstill. As soon as the Committee commences work, which is expected to be shortly after Easter, persons, books, and papers will be sent for, and whatever is done will be done in public; and let us hope they will settle once for all this vital question on the first necessity of life. Fifty years of agitation ought now to reap its reward.

ON PHYSIOLOGICAL TEACHING AND EXAMINATION.

THE British system of examining medical students is still young and still capable of much improvement. In a previous issue we discussed the anatomical side of medical education. It is worth while to consider also the question of physiology.

It is no secret that a very large number of students—in fact, a good many more than half of the total number—are referred once at least in physiology. Nor is it in the least doubtful that the average pass man honours physiology with a larger share of his hatred than anatomy. Now this seems both strange and unfortunate. It is a pity that a study than which nothing can be more interesting should fail to interest, and it is strange that a subject which affords so good a scope to all the little reason we possess should be less easily mastered than anatomy, which is to ordinary students a mere exercise of memory.

The causes of this state of things lie partly in the subject and partly in the way it is taught. Though physiology is undoubtedly interesting, it is as certainly intricate and difficult beyond the common run. There is hardly a single part of it in which principles almost fundamental do not lie open to revision. Each year brings a refutation of theories which have been honoured for a lifetime, and those who have sat under an original and inquiring lecturer know well the scorn with which he regards the crystallised opinion of an author, or possibly even of an examiner. There is also hardly a part of it in which it is possible to pursue a train of reasoning more than a very little way without coming to an unknown point which bars further progress. Instances of the first difficulty will start at once into the memory. As an instance of the second, take the question of capillary resistance. It is unknown whether capillaries can actively contract or no, yet it is impossible to grasp the mechanism of the circulation without this knowledge, and opposed pathological theories are actually founded and maintained upon pure assumptions, either negative or positive, as to this unsettled point.

Another stumbling-block to the student is the immense mass of detail which he is expected to learn. What in the world is the use, even to an oculist, of knowing the various layers of the retina? Their turn may come, but at present they are a superfluity. Or what can a gynæcologist do with polar bodies? We have heard an examiner asking questions the practical bearing of which was remote, while failing to give any attention to physiological facts of the first importance.

There is no doubt that in this matter examiners are to blame. Not only students, but their teachers, who are in a position to know, feel that they are liable to be asked minute details, both in histology and in physiology. The result is that students cram this useless knowledge to the exclusion of the broader principles, till they cannot see the wood for the trees, and demonstrators, on whom falls the burden of preparing men for the examination, feel that they have to pack an infinity of small facts into their heads, lest the examiner should ask them something they do not know.

As at present carried on, our educational system is substituting the demonstration for the lecture. Lectures should deal with principles; demonstrations with the facts on which these are founded. There is a danger of insisting so much on students knowing the facts that they leave the principles unheeded. There is very little that is sure in physiology; there is a good deal that is probable; there is an immense mass of what is hardly more than ingenious conjecture. Of the first two classes, not by any means all bears upon the practice of medicine. Now, in a subject which, like physiology, possesses all the elements of education, engaging both observation and inference, there is no reason for requiring useless or uncertain learning, and, if no reason, then no excuse. If examiners would restrict themselves to what is both certain and useful, the education of the student would be far more satisfactory, and we venture to say the practice of the doctor would be every whit as sound.

"THE QUEEN'S AND MASON COLLEGE."

THE resolve taken by the Governors of Queen's College, Birmingham, at their last meeting, to transfer the Medical Faculty of that College to Mason College cannot fail to have a very important influence on the progress of medical education in the Midlands. In spite of many drawbacks, the Medical School of Queen's College has increased rapidly during the past six years, the number of students having nearly doubled during that period. The buildings belonging to Queen's College have been found for some time quite inadequate for the work of the Medical Faculty, and it has been found impossible to make extensions without incurring an expenditure which the financial position of the College did not appear to justify. The offer of Mason College to provide suitable accommodation for the Medical School, therefore, comes at a very opportune moment. For some years instruction in preliminary science and in physiology has been given at Mason College, and the advantages of this arrangement were too obvious to be lightly set aside, even if arrangements could have been made for the adequate teaching of these subjects within Queen's College. The waste of power which such a duplication of instruction in two institutions within a stone's throw of each other would entail was an obvious objection to maintaining the Medical School of Queen's College as a separate institution. On the other hand, the advantages of an amalgamation with Mason College were very clear. That institution has a large endowment and magnificent buildings containing laboratories, which are

excellently appointed; it contains, in fact, a fully equipped science faculty and its Council is prepared to erect immediately the additional buildings which will be required for the anatomical and other departments of the medical school not already represented in Mason College.

Whatever may have been the case in the past, it must be admitted that at the present day medicine has more intimate relations with a science faculty than with a divinity faculty—the only other faculty at Queen's College. The preliminary arrangements having been made, a committee consisting of the Warden of Queen's College, Dr. Carter, and Professors Pemberton, Tait, and Windle drafted a scheme which was submitted to a meeting of the governors of Queen's College held last week under the presidency of Canon Wilkinson. The scheme was discussed, and finally adopted with one dissentient—Sir James Sawyer, who had already refused to act upon the committee of arrangements. It should be added that before this, the proposal had been unanimously adopted by a meeting of the medical teachers of Queen's College. It will thus be seen that there is a very strong consensus of opinion among those best capable of judging in favour of the transference of the Medical Faculty to Mason College, which it is proposed shall in future be called the "Queen's and Mason College." Application will have to be made to the Court of Chancery, and it is hoped that the arrangements may be completed in time for the formal transference to take place at the beginning of the winter session in 1892. For the adjustment of certain details, however, it will be necessary to obtain a special Act of Parliament. Looking at the matter from the point of view of general policy, it will, we believe, be generally felt that this transference is a step in the right direction. Good laboratories are all-important in such subjects as chemistry and physiology, and a commodious dissecting room is not less important to anatomy. They render the student's progress not only more sure, but more swift. The great success of the medical faculty of the Owens College in Manchester is of good augury for Birmingham.

SENTENCE DELIVERED.

The verdict has been given at last. Mr. Stanhope has put his foot firmly down, in the hope no doubt of being able to stamp out the remains of the "regrettable agitation," to which he referred in a previous letter, and to get rid of a controversy in which he has certainly not had the best of it. We have always given him credit, however, for liberal leanings towards the Army Medical Department, and a certain amount of veiled sympathy for their aspirations, and his final communication seems to show traces of perplexing doubt and of the wish to cut the Gordian knot of difficulty by a sharp stroke of the scissors. We still believe that if he could have had his own way he would have agreed with his Permanent Under-Secretary, Sir Ralph Thompson, that: "We have gone up to such a point now that you could not make one step further without giving them titular rank. I see no other way than by calling them colonels or majors."

But unhappily the shadow of the War Office has been cast across his path, and his military advisers, whilst they praise with unvarying unanimity the services of their medical brethren, oppose those concessions which would contribute to further efficiency, and jealously refuse to share their titles with those who partake of the dangers, if they do not reap the full honours, of war. It is quite impossible for any unprejudiced person to read the correspondence which we publish to-day without being convinced that the medical officers' claims are well-nigh unanswerable, and that, in the words of Sir Donald Stewart, their concession "would be extremely popular with them, and do no harm to anyone else."

Sir Andrew Clark's letter is conceived in a high and generous spirit of perfect judicial frankness, and is marked by the sympathetic eloquence and perfect mastery of detail which characterises all that the President of the College of Physicians says or writes.

The communication from the Parliamentary Bills Committee (for which Mr. Macnamara is mainly responsible) is of no less importance, and it has the special value of wide personal experience, and accurate knowledge of the working of the Department in modern times. To these weighty documents the War Minister makes a curt reply, basing his position on arguments already used, giving a flat refusal to grant anything more, and slamming the door in the face of further official correspondence.

Before we turn away to think matters over quietly, and to concert some plan for future action, let us see where we exactly stand, and what we have actually got out of Mr. Stanhope. In the first place, let us be thankful for the mercies that have come in our way, even if they be small. The assimilation of the two branches of the service for sick leave purposes is a fair and equitable arrangement, and removes a glaring grievance which had been allowed to exist too long.

On the question of foreign service Mr. Stanhope fortunately seems inclined to give way, having based his original refusal on a misapprehension, which has been very effectually disposed of by Sir A. Clark. The extension of the time of duty abroad from five to six years is not only harassing and inconvenient, but it has been shown on statistical evidence that prolonged continuous tropical service is seriously detrimental to health, and all the medical officers ask—and it surely is not a very unreasonable demand—is that whilst the total period of foreign service shall not be reduced, it shall be less continuous. In this way the stress and strain of tropical climates will bear less hardly on the constitution, no extra expense will be incurred, and efficiency as well as true economy will undoubtedly be promoted.

After all, the question of rank is the real kernel of this controversy, and it is here that Mr. Stanhope's attitude disappoints us most. But let us say at the outset that, from his own point of view, he is able to take his stand on one bit of apparently firm ground. He has granted precisely what his own Committee asked him to grant, and there is a certain amount of plausibility in his now turning round and taunting the medical officers for their dissatisfaction with the terms which their advocates accepted in their name hardly three years ago. But the reply is obvious. Since the date of the Report evolution of opinion has rapidly progressed. Experience has been gathered of the working of the Department under the altered conditions of modern warfare, and one of the most strenuous advocates of the forward movement is Mr. Macnamara, who originally concurred in the proposals of the Committee, but whose outspoken and vigorous advocacy of a Royal Corps has done such good service to the cause. Nor must it be forgotten that the influential deputation which Sir Andrew Clark headed last summer directed its observations almost exclusively to this special point.

It has now become too evident that compound titles are mere tinkering with the full question, and that they confer little more than the expression of the exploded relative rank which admittedly meant nothing, and which was very properly withdrawn some years ago. But if this is all we are to get in the meantime, we hope that Mr. Stanhope will be pressed to define very distinctly by Royal warrant the actual rank which these titles convey, so that the experiment can be fairly tried what value they really have in expressing the doctor's military status, and in helping him to do his duty efficiently at the real time of need. We must confess, however, that we are rather sceptical as to the success of this compromise. We have over and over again expressed our conviction, which time has only deepened, that the only permanent solution of the difficulty lies in the establishment of a Royal Corps within which the medical officers should enjoy that definite and officially gazetted rank which can only in this way be made intelligible to the average military mind. It is very difficult to understand why a system which works with admirable smoothness in America and elsewhere should not be equally successful here, and we believe that in no other way can we remove the jealous friction of the so-called combatant ranks and ensure the perfect working of a machine on whose efficiency depends the full success of our army system in peace or in war. Mr. Stanhope's flimsy excuse about general military command has been completely demolished by Sir Andrew Clark. Supposing, for the sake of argument, that any doctor should so far lose possession of his senses as to claim the right to manœuvre troops in the field. Let the possibility of such a thing be forbidden in the strictest way by regulation; if, indeed—as Mr. Stanhope admits that he is "well aware command can be limited"—the prohibition does not already exist. Mr. Stanhope must know perfectly well, or, at all events, his military advisers do, that medical men have never made any such claim, and that their only wish is to be allowed to do their duty within the prescribed limits and strictly according to the rules of the service, which have distinctly laid down, or, at all events, should be made to lay down, that they can never be allowed to assume a position which they do not want and for which they must be manifestly unfit.

Finally, let us say that, although we leave the court disappointed with the verdict, we must not be discouraged. Our next appeal must be to public opinion. We believe that Sir Andrew Clark will before long publish a reply to Mr. Stanhope's letter, and we would exhort all those who have the interest of the department at heart to keep pegging away with voice and pen until justice is done and peace is restored. It may be that there is not much to be hoped for under the present *régime:* but a day will come when, under the recommendation of Lord Hartington's Commission, the Horse Guards will be brought more into touch with popular sentiment and with the spirit of modern progress; and this may be the dawning day of a firm and final settlement of the grievances of the Army Medical Department.

The French Government has appointed a special committee to ensure the co-operation of France in the International Congress of Hygiene and Demography to be held in London next August. M. Pasteur has been appointed honorary president of this committee, and Dr. Brouardel acting president.

The Italian Government is said to be about to establish in each port in the kingdom a medical committee, whose duty it will be to test the vision of all pilots.

Influenza, of which sporadic cases have occurred in various parts of Italy during the last few months, has lately assumed the character of a mild epidemic in Milan.

Mr. Ritchie, in reply to questions by Sir W. Foster and Mr. Bartley in the House of Commons, stated that the second reading of the London Public Health Amendment Bill would be put off till after Easter.

Mr. Fred. Gowland Hopkins, B.Sc.Lond., has been appointed to the studentship in pathology lately established at Guy's Hospital, by Sir W. Cameron Gull, in memory of his distinguished father, the late Sir William Gull.

Mr. William Salmon, of Penllyne Court, Cowbridge, Glamorgan, is probably the oldest living member of the medical profession. He is stated to have been born at Wickham Market, Suffolk, on March 16th, 1790, and would thus have attained his 101st birthday this month. Mr. Salmon's name appears upon the list of members of the Royal College of Surgeons under the date 1809.

Dr. Edward Seaton has been appointed Medical Officer of Health for the county of Surrey. This appointment was first made on January 20th, and was limited by a resolution of the County Council to one year. Dr. Seaton refused to accept the nomination with this condition, and his action will be generally applauded. The appointment is now made during the pleasure of the Council at a salary of £800 per annum, together with necessary expenses for travelling, etc. Dr. Seaton will continue to act as Lecturer at St. Thomas's Hospital and Examiner in Public Health, but the appointment will necessitate his resignation of the office of Medical Officer of Health for Chelsea.

A PARISIAN MEDICAL LIBRARY.

The library of the Paris Ecole de Médecine, which contains some 40,000 volumes, will shortly be transferred to its new quarters overlooking the Boulevard Saint Germain. The new building contains a large room with places for 150 readers, and other smaller rooms where anatomical models, etc., will be open to the use of students. A special section will be reserved for a collection of autographs of the Deans of the Faculty from 1324 to 1789.

NON-RESTRAINT IN GERMANY.

On April 3rd, Professor Ludwig Meyer celebrates the twenty-fifth anniversary of his appointment as Ordinary Professor of Mental Diseases in the University of Göttingen. He is one of the leading representatives of the new school of mental pathologists who base their teaching on anatomico-pathological research, and he has been a pioneer of the "non-restraint" system in Germany.

THE CHAIR OF ANATOMY AT THE ROYAL ACADEMY.

Mr. William Anderson, Assistant-Surgeon and Lecturer on Anatomy at St Thomas's Hospital, has been elected by a large majority Professor of Anatomy at the Royal Academy. Mr. Anderson, who is well known not only as a surgeon and anatomist, but as the author of a classical work upon the early Japanese artists, passed some years in Japan. He was at one time Medical-Director of the Imperial Naval Medical College, Tokio, and Medical Officer of the British Legation there.

PEROXIDE OF HYDROGEN.

At the meeting of the Medical Society of London, on March 23rd, Dr. B. W. Richardson read a paper on The Administration and Use of Peroxide of Hydrogen. In the discussion which followed, Mr. Bryant said that he had found the drug—in watery solution of the strength of 10 or 5 per cent. by volume—a useful local application in scrofulous diseases and sinuses. Mr. Marmaduke Sheild recommended it in fœtid otorrhœa, and Dr. Richardson suggested that it might be of use in intestinal antisepsis in typhoid fever.

MEETING OF THE CORPORATION OF THE COLLEGE OF SURGEONS.

The Council of the Royal College of Surgeons of England have arranged to hold a special meeting of the Fellows and Members, to consider the last revised scheme for the reconstitution of the University of London. We find, upon inquiry, that the date of this meeting has not yet been settled; but copies of the scheme will be obtainable from the secretary, at the College of Surgeons, sometime before the meeting.

THE MIDWIVES BILL.

The report of the Committee of the Royal College of Physicians on the Midwives Bill, which has been ordered to be printed and circulated among the Fellows, expresses the conviction that legislative action is desirable in order to secure the due education, examination, and registration of midwives. It suggests that the General Medical Council should frame the necessary rules and regulations, and, after proposing certain amendments in the Bill now before Parliament, recommends that a Parliamentary Select Committee should be asked for before whom the question might be fully investigated with a view to legislation.

"STILLBIRTH INTERMENTS."

Dr. Cameron has given notice that on April 9th he will move for a return showing (1) the number of stillbirths interred during the year 1890 in each of the Burial Board cemeteries in England and Wales enumerated in the Local Government Manual for 1891; (2) the number of such stillbirths interred in each such cemetery without a certificate of a registered medical practitioner; (3) the total number of interments other than of stillbirths; (4) the aggregate number of interments in the said Burial Board cemeteries under each of the preceding subheads; and (5) the total number of deaths registered in England and Wales during the year 1890.

INSANITARY STATE OF ST. BARTHOLOMEW'S HOSPITAL.

A formal complaint was made to the City Commission of Sewers on March 24th, with reference to the state of the drainage of St. Bartholomew's Hospital, by a gentleman whose daughter had been a nurse in the institution and had contracted diphtheria. Dr. Saunders, Medical Officer of Health for the City, expressed his opinion that a hospital such as St. Bartholomew's would never be absolutely safe so long as its old drainage system, which had been in operation for some hundreds of years, remained unaltered. The petition was referred to the Sanitary Committee for investigation.

THE ROYAL NATIONAL PENSION FUND FOR NURSES.

At a large meeting held on Tuesday in the Governors' Hall, St. Thomas's Hospital, presided over by Sir Andrew Clark and afterwards by Sir William MacCormac, Mr. Henry C. Burdett, the founder of the fund, was presented with a memorial in the form of a screen containing the portraits of the first thousand members and supporters of the fund in gratitude for the successful effort he had made to raise £50,000 in order to found a fund upon which nurses could rely, after joining at the lowest cost to themselves, in cases of sickness, incapacity for work, and in declining years of life. Mr. Burdett made a suitable acknowledgment of the gift and the kind expressions accompanying it. The Princess of Wales, who was represented by Colonel Stanley Clarke, showed her sympathy by sending her autograph portrait.

PROPHYLAXIS OF TUBERCULOSIS IN SCHOOLS.

In view of the ever-present danger of tuberculous infection in schools, the provincial school board for the province of Brandenburg has issued a rescript containing the following regulations: (1) A sufficient number of properly constructed spittoons is to be placed in schools, and both teachers and pupils are to make use of these spittoons (or of Dettweiler bottles) for expectoration. (2) The dust in the schoolrooms is to be removed with wet cloths. (3) Pupils who cough are to be specially observed by the teacher with regard to regulation 1. (4) Leave of absence is to be granted and special facilities given to consumptive pupils who mean to go through a course of treatment.

THE SANITARY CONDITION OF SOUTHEND.

Under the directions of the Local Board, a large number of houses in Southend have been examined as to their drainage arrangements, and it is intended to keep a record of every house in the district, but no steps have yet been taken to employ a skilled sanitary engineer to advise upon the defective conditions of the main sewers, which were shown in Dr. Thresh's report to be so intimately connected with the recent outbreak of typhoid fever. The summer holiday season is rapidly approaching, yet the chief defects in the sanitary condition of the town remain unremedied. This is not creditable to the sanitary authority, and the members of the Board must not be surprised if, as the result of their inactivity, they find that the town is less popular than usual with summer visitors. At present the health of Southend is satisfactory, the death-rate is low, and only one death from typhoid fever has been registered since the commencement of the year. But this gives no guarantee that fever will not reappear in the summer months, when the weather is warm, and the town is again filled to overflowing with visitors from London.

THE LONDON CONFERENCE ON THE HOUSING OF THE WORKING CLASSES ACT.

The second meeting of the conference was held at the Paddington Vestry Hall on March 13th, when twenty-six vestries and district boards were represented. The report of the Special Committee on Defects in Houses was received. Whilst giving every credit to the good intentions which doubtless animated the promoters of this conference, we think it cannot be denied that its efforts, if not actually abortive, have accomplished little in elucidating the issues which those who set it on foot hoped it would be able to decide. The schedule of defective conditions rendering a house temporarily or permanently unfit for human habitation is such as would suggest itself to every medical officer of health without the aid of a conference to guide him, whilst the impossibility of definition is admitted in the concluding sentence of the report, which acknowledges that each case must be dealt with on its own merits, and that questions of degree and coexistence of two or more defects must also be taken into consideration. Certain references to the executive committee were evidently incapable of solution, since sufficient time has not yet elapsed since the passing of the Act to enable actual experience of its working to determine what are the best means of carrying it out.

PUBLIC HOUSES AND COMMON LODGING HOUSES.

The question whether beer houses of the smaller or lower class, in which tramps, pedlars, and other wayfarers are in

the habit of obtaining a night's lodging, are common lodging houses, is a question which has been raised by a letter received from Dr. Richard Bevan. The point, we are advised, has never been tested. The Act nowhere defines what is a common lodging house, but Lord Coleridge and Mr. Justice Mathew last year, in the case of Booth *v.* Ferrett, said that "a lodging house open to all comers, and kept for the purpose of profit, would seem to be the kind of lodging house intended." Accordingly they held that a refuge, not kept for profit, and to which only approved persons were admitted as lodgers, was not a common lodging house. In the year 1877, Justices Grove and Lindley, in the case of Langdon *v.* Broadbent, held that a lodging house in which hawkers and tramps were received and lodged, having their meals in a common room, was a common lodging house, disregarding the allegation that the keeper held a refreshment licence. Mr. Justice Grove said, "The object of the (Public Health) Act seems to me to prevent dirt and overcrowding, and the evidence seems to me clearly to show that this is a house to which such a provision is applicable." From this decision it would seem that innkeepers whose houses are the resort of persons of such a class as to require supervision might be brought within the Act and require registration. The point, however, has never been expressly decided, and must remain uncertain until some local authority is sufficiently enterprising to bring a test case into court.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE annual general meeting of the Irish Medical Schools' and Graduates' Association took place at 11, Chandos Street, on March 17th (St. Patrick's Day). In the absence of the retiring President, Dr. Kidd, F.R.S., of Dublin, the chair was taken by Sir Thomas Crawford, K.C.B., who presently vacated it for Dr. Gilbart Smith, the President for the ensuing year. A vote of thanks was passed to the retiring President, Dr. Kidd. In the annual report of the Council, which was adopted unanimously, mention was made, amongst other matters, of the action of the Association in respect of the Midwives Registration Bill, and of the disabilities of Irish diplomates in connection with the appointment to the honorary staff of certain hospitals. It was announced that the Association now numbered more than 660 members, most of whom reside in England. Director-General Dick, C.B., R.N., was chosen President-elect; and Professor Gerald Yeo and Sir Thomas Crawford, K.C.B., Vice-presidents. Fifteen gentlemen were also chosen to serve on the Council for the ensuing year.

FUSEL OIL IN WHISKY.

IN the course of a recent discussion at the Society of Chemical Industry, the opinion was freely expressed that the importance of the so-called fusel oil as an injurious constituent of whisky had been greatly over-rated. Fusel oil is the name given to a nauseous mixture which is produced in the manufacture of spirits, and which is generally regarded as being mainly composed of normal amylic alcohol, and as containing smaller and varying quantities of butyl and propyl alcohols, and probably other impurities. Mr. Allen, who read a paper on Spirits and their Manufacture before the society, and a well-known distiller who took part in the discussion, both stated that they had specially made direct experiments upon themselves by taking regularly for a certain length of time whisky containing considerable amounts of amylic alcohol. The former gentleman stated that he had been taking every evening for a long period a mixture of whisky and amylic alcohol, containing no less than 2 per cent. of the latter, without suffering from the slightest ill effects. The only objection seemed to be that the mixture was nauseous and hence unpleasant to swallow. Personal experiments of this kind do not, after all, prove much. "Personal equations" have to be considered in all kinds of experimental work, and it is probable that in experiments of this nature they play a more than usually important part. But, having regard to the very general acceptance of the view that fusel oil in whisky and other spirits is the chief evil-working substance, and that the little information given in textbooks is invariably to the effect that far smaller proportions than that above mentioned are not only injurious but actually dangerous, the statements quoted may be looked upon as being of considerable interest. It has also been shown recently that old whisky is not necessarily free from fusel oil, as is popularly supposed, but may contain considerable amounts of it. Dr. Bell, of Somerset House, in evidence recently given before a Parliamentary Committee, quoted some results which showed that "old" whisky may even contain more amylic alcohol than "new" whisky. At the meetings to which we are referring some objection was taken to these results; but considerable weight must necessarily attach to them. It would appear, however, that in order to account for the well-known evil effects of new spirit—which cannot be laid to the door of ethylic alcohol, and which up to the present have been credited to fusel oil—we must go farther afield or await the results of further experiments and analyses.

FELLOWS, MEMBERS, AND LICENTIATES.

THE question of retaining a rule as to the restriction of hospital appointments to the diplomates of certain colleges has arisen in connection with the vacancies at the Hull Royal Infirmary. In 1885, in consequence of the promotion of four assistant-surgeons to be full surgeons, four vacancies occurred on the junior staff. The appointment of assistant-surgeon is made for five years, and these four gentlemen retire next month, but are eligible for re-election. New rules were adopted in 1886, soon after these appointments were made, and one of these was to the effect that all surgeons and assistant-surgeons should hold the diploma of F.R.C.S.Eng. The new rule appears to have attracted very little attention at the time, but its publication in the advertisement declaring the vacancies for assistant-surgeons has aroused a great deal of opposition. A meeting of the Hull Medical Society was recently held at the Royal Infirmary, under the presidency of Dr. Elliott; a resolution was adopted to the effect that the law was unjust and exclusive, and recommending the governors to alter the rule so that a honorary surgeon or assistant-surgeon would be required to be a Fellow, Member, or Licentiate of a Royal College of Surgeons in the United Kingdom, or a Graduate in Surgery of a University. The need for the modification of all hospital rules in this direction has frequently been pointed out in these columns. A curious and unfortunate effect of the exclusive rule is, if our information is correct, afforded just now in Hull: it is stated that there are, owing to this exclusive rule, only four applicants for the four vacancies, so that the committee have practically no choice. It is probable that the date for making the appointments will be postponed, in order to allow of a full discussion of the subject.

KLEPTOMANIA.

ON Saturday last the Chester justices had before them what the local papers call "a remarkable case." A middle-aged man, one John Daniel Elliott, was charged with stealing a snuff-box and three spoons from the Grosvenor Hotel, Chester, and six pocket handkerchiefs from a tradesman of that city. The prisoner was well connected, owned a fair amount of real property, and had over £96 in money in his pockets. His solicitor, in defence, rather timidly put forward the suggestion that his client was suffering from kleptomania. Apologetically, he added that "he knew that successfully to plead that defence the kleptomaniac must have a title or something of the sort." It seems that Mr. Elliott has a perfect mania for spoons. The case is interesting, as exhibiting the great gulf which divides the medical from the legal mind on the whole subject of insanity. That a solicitor should be almost afraid to use the term "kleptomania" in a case of this sort seems to argue only a sort of half-belief in the reality of

such a form of mental aberration, and a conviction that such a line of defence would be contemptuously received by the justices. Although medical men find little difficulty in mastering the elements of law, it is unfortunate that lawyers can only with difficulty be brought to study the question of criminal responsibility from the medical stand-point. To the mental pathologist there is nothing remarkable in Mr. Elliott's case, and his counsel was rather needlessly cynical when he expressed the fear that that the plea of kleptomania would not avail a poor or an unimportant individual, even though the evidence might clearly demonstrate its validity. It is just as probable that a carpenter may have a mania for "collecting" chisels by fair means or foul, as that a bibliomaniac may possess himself of Elzevirs in a similar reckless manner. We suspect that the authorities of the British Museum are quite as watchful over the latter class as over the former; it is doubtless much more likely that a mechanic would steal tools than that a gentleman would steal precious books, because the workman might be impecunious and the pawn shop inviting. The man of letters would more probably be a "collector." That Mr. Elliott was not impecunious was proved by the cash found in his pockets; that he had a mania for stealing merely for the gratification of acquisitiveness, commonly enough associated with certain forms of mental aberration, is a much more likely solution of the difficulty.

DEATHS UNDER CHLOROFORM.

Hardly a week passes without at least one death being reported as having occurred under chloroform. On March 14th a carman, aged 28, died whilst under the influence of this anæsthetic in King's College Hospital. According to the evidence given at the inquest, as reported in the public press, the patient had sustained a fracture of the ankle, and the chloroform was administered to permit readjustment of the fragments. The jury returned a verdict of death by misadventure.—Our Sheffield Correspondent writes that a death following the administration of chloroform recently occurred at the Sheffield General Infirmary. The patient was a young girl, aged 9; an iridectomy had been performed, and it would seem that recovery had to some degree taken place, when sudden heart failure supervened, and efforts to bring about recovery were unavailing. Beyond adherent pleurae nothing was found at the *post-mortem* examination. The jury returned a verdict of syncope after the administration of chloroform. A death during the administration of chloroform has also occurred in the Liverpool Northern Hospital. The patient, a woman of intemperate habits, aged 49, was admitted with pneumonia of the right base. After a few days she expectorated a quantity of fœtid purulent matter; a localised empyema was detected on the right side, necessitating free drainage, and chloroform was administered, preference being given to this anæsthetic in consideration of the state of the lung. After a few inhalations the breathing suddenly became irregular, and then ceased. Artificial respiration was at once resorted to, and persevered with for three-quarters of an hour, but without result. A *post-mortem* examination was made, and the heart was found to be in an advanced state of fatty infiltration. There was a collection of fœtid pus in the right pleura, and the lower part of the lung was gangrenous. The coroner's jury found that death was due to the inhalation of chloroform properly administered.

DANGERS OF HYPNOTISM.

An instance of the serious consequences which may follow the incautious induction of the hypnotic state is afforded by a case recently recorded by Dr. Julius Solow.[1] An amateur at a friend's house volunteered to hypnotise another visitor, and after two trials succeeded so well that the subject became extremely excited, lost the power of speech, and then passed into the condition of catalepsy; subsequently he had severe convulsions. He had been hypnotised by being made to look at a diamond ring, and afterwards the sight of anything glittering threw him into a state of violent excitement. The floor of the room in which the physician found him was covered with cushions, as he frequently threw himself from the sofa on to the floor. He performed various odd automatic movements, slept only in snatches, awaking in nightmare, and in fact was in a condition to which the French physicians would probably apply the term grave hysteria with maniacal excitement. He was treated with full doses of sedative drugs (chloral, sulphonal, bromides, and morphine), but did not at first show any signs of amendment. After ten days the convulsive attacks were replaced by periods during which he sang persistently; he would sing over song after song, apparently every song he knew, and as long as one song remained unsung nothing would stop him. After about a fortnight of this sort of thing he had an attack of fever, followed by copious perspiration and asthma; a few days later he had another feverish attack, again followed by perspiration, after which he declared himself quite well. From first to last he was seriously ill for three weeks. The cause of the fever is not very clear; his physician believed it was probably due to inflammation of the anterior part of the brain. The case ought to be a warning, both to amateur hypnotisers and to the foolish people who allow themselves to be played upon by these dangerous showmen. A demand is arising in France, in America, and in other countries that the practice of hypnotism should be placed under legal restrictions. It is a grave matter for consideration whether the Legislature ought not to be asked to interfere in this country also. There are at the present time three or four persons—some of them, we are sorry to believe, qualified medical men performing under assumed names—who travel about the country and hypnotise at public or semi-public performances any persons who are foolish enough to submit themselves to the ordeal. It ought to be understood that hypnotism thus recklessly played with is capable of doing very serious mischief, and it is the duty of the medical profession in every town to warn the public of the serious risks that are being run.

[1] *N. Y. Med. Jl.*, March 14th.

LONDON SCHOOL BOARD: SCHOOL FOR SPECIAL INSTRUCTION.

During several years the need of special provision in public elementary schools for the training of feeble children who, from weakness or mental inaptitude, are unable to profit by the educational routine instituted by the educational code has been frequently urged in this Journal. The London School Board has acted wisely in deciding by a unanimous vote to accept a provisional scheme, brought forward by Mr. R. Bourke, for the separate teaching of feeble and weak-minded children. At first three special schools will be provided, in Finsbury, East Lambeth, and Tower Hamlets, for those children who, by reason of their physical or mental defects, cannot be properly taught in the ordinary standards, or by ordinary methods. A sufficient number of rooms are to be provided at each school for special instruction, so as to enable the children to be properly classified, in order to meet their individual capacity and needs for mental development, so that when possible they may be enabled to assume their places subsequently in the ordinary schools. In these "schools for special instruction," not more than thirty children are to be assigned to a teacher; the children to be received at these centres are to be nominated by the head teachers of schools, and before being admitted they will be examined by a committee and the Board's medical officer. It is proposed that an extended kindergarten system of instruction be employed, but that a free hand should be allowed to the teacher in dealing with individual children. In taking this line of action the School Board is acting on the recommendation of the Royal Commission on Blind, Dumb, and Exceptional Children, a recommendation mainly founded upon the evidence of Dr. Francis Warner, given on behalf of a Committee of the British Medical Association, who collected evidence which was published in their Report

of 5,000 children seen in schools. It is to be hoped that this practical effort to provide for the training of the feeble children, who have been too long neglected, will receive the official sanction of the Educational Department, and that teachers may be encouraged and rewarded for special care of these weak children who have too often been allowed to be irregular in school attendance because provision was not made for their special requirements. Now that the importance of caring for the feeble children is becoming more fully recognised, and the statistics of the committee referred to show them to be at least 1 per cent. of the school population, or probably about 6,500 in the London Board schools, new questions demand immediate attention and inquiry. What is the relative distribution in the parishes of such children, and what is the causation of their conditions of weakness? An extended inquiry among 50,000 children is now being made by a Joint Committee of the Charity Organisation Society and the British Medical Association. Though the inquiry is still incomplete, it seems to indicate that poverty is by no means the only cause of low condition of development and low nutrition, with their associated inaptness for mental work and success in life, but that local hygienic conditions, the want of light and air, and other factors, tend to bring about a physical and mental deterioration of the child population in degrees varying for the different metropolitan area. This new branch of public medicine needs to be further encouraged and extended in its scope. When dealing with the education of the blind it was found necessary to take means to prevent blindness; we now need to make careful and extended inquiry into the conditions of development both bodily and mental of our child population, and the causes at work in promoting or hindering its advancement.

TUBERCULOUS MEAT.

Dr. Spottiswoode Cameron, in discussing the question of what should be the responsibility of a medical officer of health in regard to the inspection of tuberculous meat, takes up the very strong position that, although the assistance of the veterinary surgeon as an expert may be called in where any question of the nature of the disease of animals is to be decided, he must, nevertheless, hold himself entirely responsible for the determination as to whether any certain animal food is fit for human consumption or not. He may obtain advice and assistance as to the conditions which may have existed during life, and the probable results of such conditions on the flesh of the animals, but when this flesh is placed before him, it is on his shoulders that the responsibility of deciding as to its fitness or unfitness for human food must fall. This is surely sound common sense. It may be that the inspection of live stock to be slaughtered, and dead meat to be sold, in our markets may ultimately be handed over to a staff of well-educated and efficiently qualified veterinary surgeons; but even when this happens, the medical officer of health will have to be the guiding spirit and court of appeal. An expert's opinion is valuable, as Dr. Cameron says, and should be obtained wherever possible, whether it be in the inspection of meat or in the inspection and construction of drains, but in both instances it is for the medical officer of health to make his own deductions from the facts and premisses that are supplied to him. This is taking the highest, and at the same time the common sense, view of the duties and functions of a medical officer of health.

THE NEW PATHOLOGICAL DRAMA.

The modern novel has accustomed us to the interweaving of physiology and pathology with romance. The introduction of these sciences into the drama is quite a new and wholly unwelcome departure. A week or two ago, at the Royalty Theatre, the elect who hail Heinrich Ibsen, the Norwegian dramatist, as the new Shakespeare, contrived, by means of a "subscription representation" to elude the authority of the Lord Chamberlain, and produced to a crowded house Ibsen's much-talked-of play, *Ghosts*. The theme is heredity. After an instructive discussion between his mother and a clergyman on free sexual relations, Oswald Alving, the hero, is overheard in an adjoining room making advances to her pretty servant in a manner more suggestive than decorous. The maid in question turns out to be his own half-sister, and Oswald at once proceeds to discuss the rectitude of that relationship countenanced by the Pharoahs, but is happily cut short by brain disease, the result of inherited syphilis, in a manner which may be deemed natural by the playwright, but which is wholly unknown to the physician. The question of the desirability of shortening his days by poison is under consideration when the curtain falls. To take all the disintegrating views of viewy people, to make them become self-conscious in plain John and Betsy, and operative on their lives, to adorn this "psychological study" with a quasi-scientific exactitude, as absurd and untrue as it is pretentious is the *rôle* of the new great realist. There is some stagecraft but the dramatic pamphleteer is much more apparent than the artist. It is sadly to be feared that the sanity of true genius has not appeared in this latest fad of stageing grotesque pathology and ethical Nihilism. To the strict scientist such a play is an amusing travesty; to the moralist it is portentously significant. From the purely literary point of view, it would be well if admirers of novel genius should adopt Matthew Arnold's advice, and carry about with them a gem or two of the true masters to serve as touchstones in distinguishing the spurious and ephemeral from the enduring and truly great.

CHARITY VOTING REFORM.

The Charity Voting Reform Association have issued a circular letter signed by the Duke of Northumberland, Mr. F. D. Mocatta, and the Secretary (Mr. J. A. Dow), urging once more that the voting system should be entirely abolished, and that all selections should be made by the Committee based on the report of a special investigating committee who alone can have the power of properly comparing the relative needs of the candidates. It is admitted, however, that this is a counsel of perfection, and it is suggested that the following modifications would tend to remove some of the most objectionable features of the present system: 1. Reduction of the number of candidates admitted on the lists so as in no case to exceed double the number of vacancies. 2. Power to be given to the Committee to admit at the end of each election a certain fixed number of candidates who have been longest on the list. 3. Insertion on the voting list, in legible type, of a request that subscribers not personally acquainted with any particular candidate should hand over their votes for the Committee to administer. 4. A request that subscribers not wishing to be canvassed should allow an asterisk to be placed against their names on the printed list of the subscribers. As to the first, third, and fourth, there is probably a very general opinion in their favour, and they have been adopted in principle by several charities. The second recommendation appears more doubtful, as does also a further proposal that the Committee should have the power at the end of each election to make a money grant to unsuccessful candidates whose cases were most deserving. Most subscribers would, however, hail with satisfaction any plan by which the deliberate opinion of a special selection committee could be made known to them.

IDIOCY AND THE OBSTETRIC FORCEPS.

A work has recently appeared, by Drs. Winkler and Bollaan, of Utrecht, entitled "Der Forceps als Ursache von Idiotismus." They bring forward two cases to prove that the forceps may cause so much damage to the fœtal cranium as to damage both its development and the substance of the encephalon itself, the result being idiocy. In the first case, symmetrical areas of damaged cortex were found on the surface of the hemispheres. The subject had been delivered by forceps, but no depressions on the calvaria were detected.

Since the case occurred, ten brains of idiots were examined after death, and in two the same symmetrical affection of the cortex was found. The calvaria of no fewer than six of the subjects exhibited the characteristic depressions, and presumably most at least of these depressions were caused by forceps. The second of the two thoroughly investigated cases occurred in an idiot dwarf, delivered by forceps; there were deep symmetrical depressions on the calvaria close to the saggital suture. The history was well traced, for the patient died of old age at 60; she had resided for forty years in the Utrecht Lunatic Asylum, and never could say more than two words. The cortex and deeper tissues were extensively diseased immediately under the cranial depressions. The entire encephalon weighed only 742 grammes. The authors wish it to be understood that they base no fanatical doctrines against the midwifery forceps on the strength of their researches. They go further, and note that it is known that the prolonged pressure of the maternal bony pelvis on the fœtal head is certain to inflict damage, whilst the forceps carefully employed usually causes no injury of any kind to the child.

SCOTLAND.

LORD RECTOR'S ASSESSOR, ABERDEEN.

The Students' Representative Council, at a meeting held on March 21st, has unanimously agreed to recommend Mr. P. J. Anderson, M.A., LL.B., to Lord Huntly as his assessor at the University Court.

LADY STUDENTS AT THE ROYAL EDINBURGH INFIRMARY.

The medical staff of the Royal Infirmary have indicated that there are grave difficulties in the way of teaching women students in the wards under their care, that in particular the number of students is already far too large for the number of patients available for clinical purposes, and that women students could only fitly be taught by using wards twice daily, and that this could not be done with advantage to the patients. A memorial is being got up by the present male students urging the managers of the Royal Infirmary to reconsider their decision to admit women students.

UNINHABITABLE HOUSES IN GLASGOW.

The first meeting of the Health Committee of the Police Commissioners of Glasgow, sitting as a court of inquiry under Section 32 of the Glasgow Police Amendment Act (1890) was held on March 17th. That Act gave power to the Police Commissioners to close any house certified by the medical officer, sanitary inspector, and master of works, acting together, as unfit for human habitation, after due opportunity given to the proprietors to show cause why the certificate should not be acted upon. The Police Commissioners delegated their powers to the Health Committee, and from their decision there is right of appeal to the sheriff. The Commissioners have power, if the proprietor executes repairs to their satisfaction, subsequently to revoke any order. There were before the court nine tenements in respect of which the necessary certificates of unfitness for human habitation were forthcoming, and in each case the order to close was granted, to take effect in one month. The reasons for the certificate were dampness and deficiency in light and ventilation. The proprietors, through their agents, expressed their readiness to co-operate with the authorities, but pointed out that the tenants of such houses were of a very low class, and paid a very small rent, and that, if they were turned out, they would find great difficulty in finding houses anywhere else at a rate which they could pay. The court intimated their willingness to advise the proprietors as to the repairs that would be satisfactory to them, but would not permit the repairs to be effected while the tenants were still in possession.

IRELAND.

STEEVENS'S HOSPITAL.

It is reported that Mr. William Colles, Surgeon to the Queen in Ireland, has resigned his position as surgeon to Steevens's Hospital. Mr. Colles has served in this institution for a great many years, but now feels that he may yield his place to a younger man. The illness from which Mr. Colles has recently suffered, and which caused much alarm to his friends, has, we are glad to say, passed away, and he is able to leave his room.

PROPOSED HOSPITAL FOR INFECTIOUS DISEASES, BELFAST.

The Belfast press is warmly taking up the subject of the necessity of a new hospital for infectious diseases. The need for this has been long admitted, but the difficulty has been to get the corporation to move in the matter. The present accommodation is admittedly quite inadequate, and it is to be hoped that the recent visitation of small-pox, slight as it was, may be the occasion of bringing about the necessary improvements in Belfast. The adoption by the corporation of the Compulsory Notification of Infectious Diseases Bill makes the need for a new building all the more urgent.

BELFAST GRADUATES' REUNION.

The first reunion of the graduates of the Queen's College, Belfast, took place at the College on March 19th. Dinner was served in the great hall at 7 o'clock. The President of the College (Rev. Thos. Hamilton, A.M., D.D.), occupied the chair, and among those at the guest table were Lord Justice Fitzgibbon, Mr. Justice Gibson, Viscount Bangor, the Recorder of Belfast, Professor Cuming, Professor Dill, Dr. McKeown, and Dr. Dempsey, J.P. During dinner the string band of the Rifle Brigade performed a musical selection. After dinner the President gave the toasts of "The Queen," "The Lord Lieutenant," and "Her Majesty's Judges," which were duly honoured. The toast of the evening, "Floreat Collegium Reginale Belfastiense," was proposed by Lord Justice Fitzgibbon, who alluded to the distinguished place which had been taken in the mathematical world, at the Bar, and in other professions and walks of life by *alumni* of the Queen's College. He saw every reason to believe that the College was succeeding in meeting the wants of Belfast and neighbourhood. The President, in his reply, stated that, during the first decade of its existence, the College had had an average attendance of 189 students, in its second decade of 368, in its third of 400, and its fourth of 473. Professor Redfern gave the toast of "The Benefactors of the College," which was responded to by the Rev. A. H. Pakenham. Mr. Shaw, Q.C., proposed the toast of "The Town and Trade of Belfast," which was responded to by the Mayor, the Chairman of the Harbour Commissioners, and the President of the Chamber of Commerce. At this stage the Chairman read a congratulatory telegram just received from a gathering of Queen's College graduates, assembled in London under the presidency of Sir William Mac Cormac. The Moderator of the General Assembly gave the toast of "The Medical Schools of Ireland," which was responded to by Professor Cuming. Mr. Dodd, Q.C., proposed the toast of "The Press," which was responded to by Mr. James Henderson, of the *Belfast News Letter*, and Mr. Thomas Macknight, of the *Northern Whig*. Professor Purser gave the last toast, "Long Life and Prosperity to our President and Mrs. Hamilton," and the President suitably responded. In the intervals between the toasts a number of excellent songs were rendered. The proceedings throughout were of the most enthusiastic and enjoyable character, and many hopes are expressed that such reunions may be regularly held in the future. Of the 170 gentlemen present about 60 were medical men.

THE ARMY MEDICAL STAFF.

Further Correspondence between Sir Andrew Clark and the Secretary of State for War.

Royal College of Physicians, London,
March 7th, 1891.

Dear Mr. Stanhope,—Immediately on receiving the letter which you did me the honour to address to me as leader of the deputation from the Medical Corporations of the United Kingdom, on behalf of the grievances of the army medical officers, I placed myself in communication with those bodies, for the purpose of ascertaining their views of the replies which you had made through me to their representations. Having now received answers from all of them, and their views being in complete accord with my own, I venture again to address you in this letter, with the desire to promote such an issue to these negotiations as will prove at once just and satisfactory to the medical officers of the army, and of real and lasting advantage to the State.

Although I am well assured of your unaffected desire to deal generously with the army medical officers, and to grant to their just grievances every just and practicable remedy; although I fully recognise the difficulties of your position as a Minister of State, standing between the army, the Government, and the House of Commons, and can understand somewhat of the obstacles in the way of reconciling them to such a reform as we seek, I am constrained to acquaint you with the unanimous judgment at which we have arrived—that the concessions made to our representations are, with one exception, unsatisfactory, and that they fall far short, not merely of what is claimed by the medical officers, but also of what has been recommended by Parliamentary and War Office Committees and of what has been regarded as just by men experienced in public affairs.

For my own part I regard this unhappy result as due to the strange misapprehensions, and the inaccurate statements of those who have supplied you with technical information upon the subject; and I cannot understand how our arguments should have been met by replies which could be immediately refuted by reference to official regulations. This is a grave statement to make, and did I not know that in dealing one by one with the paragraphs of your letter I should be able to make the statements good, it would not assuredly have been made.

Here, in order to illustrate this allegation and to prove its accuracy, I must anticipate what I shall have to say at the close of this letter.

It is averred that "to incorporate the Medical Staff into the general army, and to give its officers substantive rank and military titles.....would have the effect of placing a medical officer in military command over troops in the field whenever one might happen to be the senior officer present."

Now this is the supreme objection made to conceding the claims of the medical officers, and, strange to say, it is absolutely without foundation; for in various places in the books of official regulations express provision is made for the granting of rank and title without command in the field, and for the granting of rank and title either with no command at all or with such a limited command as may be defined on appointment. In the Royal Warrant of 1890, paragraph A, we read as follows:—

"An officer permanently transferred from the Commissariat and Transport Staff to the Supernumerary List of our Army Service Corps shall not hold any military command outside our Army Service Corps except over such officers and men as may be specially placed under his command."

"An officer of our Army Service Corps detailed for barrack duties shall not hold any military command except over such officers and such men as may be specially placed under his command."

And again, even more explicitly, we read in Article 70 that "an officer of our army employed in any of the cases specified in Article 55 (H) or (I) shall not be entitled by virtue of his military rank to assume any military command in our regular army, unless called out for military duty by our Secretary of State."

Surely, neither the claims of reason nor the necessities of experience could require more conclusive proof that the granting of military rank and title does not necessarily imply or involve the granting of military command in the field. With your permission I will now proceed to deal with those paragraphs of your letter which have a crucial bearing upon the questions under discussion.

Paragraph 1. You state that the only way of lengthening the home service of medical officers is to increase the numbers employed at home; that this could be done only by employing them upon duties which would occupy but a small portion of their time; that they would thereby lose experience and deteriorate in professional knowledge; that an increase of establishment necessary to lengthen the period of home service would cost £27,000 a year, and that, therefore, you are unable to grant this request.

Now I must be permitted to remark that this subject has not been brought fairly before you, and that this answer is entirely irrelevant to the relief sought for by the army medical officers. They do not ask for a shorter term of foreign service, and they do not ask for a longer term of home service. They ask only for a shorter term of *continuous foreign service:* they ask only to be restored to the rule which was in operation before 1888; they ask only that, unless in cases of State emergency, the term of continuous foreign service should be limited to five instead of six years, and they allege, justly I think, that the granting this relief would not only not lengthen, but distinctly shorten, the duration of continuous service at home.

This relief is asked by the army medical officers on grounds not less important to the State than to themselves. It has been found that the additional year of foreign service imposed in 1888 upon the army medical officers more exposed than any others to the active causes of disease, has notably increased the rates of their sickness and mortality, and has, without compensating advantage to the State, added to its burden a growing list of non-effective medical officers. Furthermore, it was declared by your own committee, the Camperdown Committee, that the grounds upon which this relief was sought were just grounds, and they recommended that the new rule should be abrogated and the old rule restored.

Finally, having regard to the conduct of medical affairs before 1888, when the term of continuous foreign service, which acted well, was enlarged from five to six years, to the fact that the number of medical officers is about the same now as it was then, and to the circumstance that facilities for drafting are greater at present than at any former period, and that the services of medical officers may be utilised in the troopships so employed, there does not appear to exist any valid reason why, if this request were granted, the somewhat more frequent transport of medical officers, involved in the grant, should necessitate the introduction of new machinery, the enlargement of any existing establishment, or any material addition to present expenditure.

Paragraph 2. Your concessions as to the conditions for the granting of sick leave to medical officers have been received with uniform and grateful satisfaction, not only by the Army Medical Staff, but also by the whole body of the medical profession, which takes an active interest in the just settlement of the questions considered in this correspondence.

Paragraph 3. In reply to the complaint that the army medical officers do not receive a fair share of the honours and rewards conferred upon officers generally for exceptional services to the State in warlike and other expeditions, you observe that such rewards can hardly be made a matter of proportion, and that the granting of them must necessarily depend on the opportunities which officers, whether combatant or medical, have of distinguishing themselves.

The force of these general remarks need not be denied, but the contention of the army medical officers and the contentions and recommendations of Sir Ralph Thompson's Committee do not lie within their limits. The contention of the army medical officers is that in like circumstances of perils encountered, hardships endured, and services rendered in successful expeditions, they should obtain a fair share of the honours bestowed upon such occasions.

The contention of Sir Ralph Thompson's Committee of 1878 is that, judged by the standard about to be mentioned, the

medical officers are far below the combatant ranks in their enjoyment of the honours of the Bath, the Star of India, and the Star of St. Michael and St. George; and the Committee recommends that in regard to honours, rewards, and good service pensions, the medical department should be judged rather by the standard for combatants than by that for non-combatants.

I am aware that it is contended by the combatant officers of the army that the medical department receives more than its fair share of honours and rewards.

His Royal Highness the Commander-in-Chief asserts that the army medical officers "have absolutely got such an excess of honours and rewards at the present time that we cannot give them any now;" and he adds that the "honours and rewards are all apportioned most carefully." Sir Archibald Alison, Lord Wolseley, General Harman and other distinguished combatant officers follow in a similar strain. As a matter of fact, however, these statements are incapable of sustaining any critical examination, and a reference to official returns brings immediately to light the conclusive evidence of their complete inaccuracy.

In illustration of the gravely inaccurate information with which you have been supplied on this subject, let me compare the honours bestowed upon the Engineers with honours bestowed upon the Army Medical Staff.

Strength of the Roya Engineers. 707		Strength of the Army Medical Staff. 841
G.C.B.	2	0
K.C.B.	5	1
C.B.	7	7
G.C.M.G. ...	2	0
K.C.M.G. ...	1	0
C.M.G.	10	1
C.I.E.	2	0
D.S.O.	10	6
	39	15

Percentage of honours to strength, R.E., 5.6. A.M.S., 1.7.

Furthermore, of the Egyptian decorations conferred in 1882, the percentage to strength was:

For the Ordnance Store Department ...	57
For the Commissariat Department	27
For the Medical Department	7

Finally, in respect of the Nile Expedition of 1884, the percentage to strength of promotions among departmental officers was as follows:

Chaplains	44
Pay Department	41
Ordnance	30
Commissariat	13.8
Medical Staff	7.9

Such illustrations could be largely added to; but I have adduced already a number sufficient to show that whilst the contentions of the medical officers of Sir Ralph Thompson's Committee and of Director-General Sir Thomas Crawford are grounded on official records and are accurate, the contention of the combatant officers is grounded on merely emotional impressions and is inaccurate.

In view of these facts, and especially in view of this further fact that more than one War Office Commission has recognised the existence and acknowledged the justice of this ground of complaint, we have received with disappointment your decision on this subject.

The matters alluded to in paragraphs 4, 5, 6, and 7 are not of serious importance to the settlement of the main question at issue, and, having been mentioned more by way of illustration of the chronic attitude of mind preserved by combatant officers and high officials towards the medical officers than for the purpose of making any present claim for their reform, are herewith set aside.

Nevertheless such matters have some importance, and men of the world acquainted with military organisation, the drift of social opinion, and the general tendencies of the age, will think it neither wise or safe entirely to ignore them.

Permit me to give two illustrations of the matters referred to in the paragraphs specified. When Surgeon-General Sir Anthony Home received the Victoria Cross for his heroic defence of the wounded in a street at Lucknow, he was the only officer decorated on the occasion who was not afterwards invited to the Palace; he felt the slight so keenly that for years afterwards he refused to wear the decoration which he had so honourably won.

Again, and in like manner, when Surgeon Reynolds received the Victoria Cross for his gallant conduct at Rorke's Drift, his companion, an officer of Engineers, was afterwards invited to the Palace, but Surgeon Reynolds was passed over unnoticed. He did not belong, one might infer, to the same caste, and he was therefore unfit to sit with any combatant officer above the salt.

To those who do not understand the ways of the world of military life these may seem to be small things, unworthy of consideration, but to those who enter into the constitution of military society, and to most persons who understand it aright, these are symbols of things which in the aggregate become serious, inasmuch as they tend to foster discord, disaffection, and distrust; and to man with growingly inferior persons a department upon which the nation depends for the safety of its army in peace and for the conditions essential to its success in war.

Paragraph 8.—In this paragraph you are pleased to concede to the army medical officers the composite titles recommended by the Camperdown Commission, and you "trust that this concession will put an end to the regrettable agitation which has obscured the true bearings of this important matter." Unfortunately, however, this is the concession of title alone and of nothing else. But it is not the title by itself for which the medical officers contend; it is for some such title as will carry with it the guarantee of rank, since they declare that without such rank they are unable to discharge in the prompt, thorough, and acceptable manner which they desire the military duties and responsibilities now imposed upon them; and they earnestly maintain that title without an accompanying guarantee of substantive military rank is absolutely worthless for the remedy of any grievance of which they have just cause of complaint.

This contention of the army medical officers has received a kind and measure of support perhaps never before accorded to any like demand for class reform. It is supported by the experience of the armies of Italy, Switzerland, Holland, Turkey, the United States, and of several other countries, by the opinion of all the medical corporations of the United Kingdom, by the conclusions of almost all bodies of men who have judicially investigated the question, and even by the approval of a rapidly growing number of combatant officers. Furthermore, this plan of incorporating the medical officers into the general army, and giving them substantive rank therein, has never hitherto failed where it has been tried, to allay dissatisfaction, to promote unity and efficiency of action, and to secure for the Medical Service higher men and better work.

But there lies in this question still another fact which, although it is at the root of the whole discussion and of the first importance in its just settlement, has been either overlooked or ignored by your military advisers.

Army medical officers are not merely doctors; they are doctors whom the progress of ideas and the march of modern warfare have made of necessity soldiers also; and the further they advance in the Service, the more important and the more purely military their duties become.

As surgeon, the army medical officer has to discharge all military duties and responsibilities, except the one of actually fighting in the field. Chief among them, I may mention, the command and discipline of the Medical Staff Corps, and of all persons attached to the corps, or else on duty in the military hospitals, the instruction of the corps in infantry and stretcher drill, the management of the pay, clothing, and general equipment of the Medical Staff Corps, the accounting of officers for hospital buildings, general supplies, and necessary stores, the study of military law, and its administration in minor offences. Furthermore, in charge of a field hospital, and responsible for 100 sick, he has military command of four officers and 171 non-commissioned officers and men; whilst in charge of a bearer company in action, and possibly under fire, he has military command of three officers and 101 non-commissioned officers and men, and he may have himself to fight in defence of his sick.

As a surgeon-general, the army medical officer has the

military command of nearly 300 officers and of 1,500 non-commissioned officers and men of the Medical Staff and the Medical Staff Corps; he has the control of, probably, 2,000 sick, and he has to settle in all its complexity of details the medical organisation which may become necessary for the injuries and diseases of 40,000 men.

It seems to me that to deal with an official having responsibilities of such moment as if he were merely a doctor, as if he were not a real officer, as if he were not entitled to rank as combatants rank, and as if he were not worthy of being incorporated into the general army, is at once a serious anomaly and a grave injustice. For if this surgeon-general were not acquainted with military organisation, if he had not studied the economy of armies, if he did not understand military strategy, if he were not capable of making adequate provision for transport, and of establishing secure bases for supplies; if he were not experienced in command of men, and if he were not in heart as true a soldier as any on the field, he would be utterly incapable of making those preparations for action, without which, in the present day, it is probable that no great battle could be fought and won.

And now, in the last place, as respects the supreme objection to the granting of substantive military rank to medical officers, the objection that it implies and involves the granting of military command in the field, I venture to remind you that, in the beginning of this letter, I have conclusively proved, from the Royal Warrant of 1890, that this objection has no valid existence, and that definite provision has been made for the granting of rank and title in special circumstances without command.

And I may be permitted further to remind you that at this time there are to be found in the army numerous officers of almost all ranks who have no combatant command. The granting of substantive rank to medical officers could, and would, do no more than confirm them in the command with which they are already invested over the Army Medical Corps, and enable them to discharge their duties unencumbered by the trials and difficulties with which they are now surrounded.

The more widely I have considered this subject of the grievances of the Army medical officers, and the more critically I have weighed what has been said on both sides of the discussion, the more deeply have I become convinced that those grievances are just, that they require but one remedy for their cure, that no other but this one remedy will succeed in curing, and that, to the adoption of it, no sound and substantial objection can be taken and maintained.

In presence of this conviction, I pursue no further the exposure of those misapprehensions and inaccuracies which have crept into the "combatant" side of the discussion. I set aside, as covered and satisfied by the main issue, all collateral questions of loss of pay, place on courts-martial, comparison with Engineers and others referred to in your letter, and I content myself with declaring, on the part of the Medical Corporations of the United Kingdoms, whom on this occasion I have the honour to represent, their unanimous judgment that the only remedy for the full and just relief of the grievances of the Army medical officers is the conversion of the whole Army Medical Department into a Royal Army Medical Corps, and the granting of substantive military rank and title to all its officers.

We firmly believe that, if this conversion were effected, agitation and disaffection would cease, frequently recurring discords and difficulties would disappear, unity and concord would be restored, the best order of men would seek the Medical Service, and the naturally high and generous instincts of the combatant officers would soon reconcile themselves to a change which could not fail to bring about increasing advantages to the soldier, and higher service to the State.—I am, dear Mr. Stanhope, yours faithfully, ANDREW CLARK.

The Right Hon. Edward Stanhope, M.P.,
Secretary of State for War.

War Office, March 17th, 1891.

SIR,—I have the honour to acknowledge your letter of the 7th instant. You refer to the concessions made in my letter of February 2nd as unsatisfactory, and again impute that condition of things to the "strange misapprehension and inaccurate statements" of those who have supplied me with the information, which you say can be immediately refuted by reference to official regulations.

In proof of this most serious allegation, you quote paragraph 8 of my letter, and you then show, from military regulations, that military rank does not necessarily carry more than a limited command, and can be, and often is, limited in its scope; and you, therefore characterise my objection to incorporate the Medical Staff into the general army as absolutely without foundation.

These are strong statements, and they are as wrong as they are strong.

In your letter of January 17th you asked for "the transformation of the whole department into a Royal Army Medical Corps, with definite rank and title to all its officers, and its *organic incorporation into the general army, on the lines followed in the case of the Royal Engineers.*" The words carry but one meaning to my mind, and to that meaning there must be the fatal objection described in my letter, and I can only conceive that you labour under a total misapprehension of the powers of officers of the Royal Engineers.

I am quite aware that the function of command can be limited, and in the same paragraph I pointed out that medical officers actually have this limited command, which they derive from the substantive rank given them by their commissions.

As regards the length of foreign service of medical officers, you say that my answer is "entirely irrelevant to the relief sought for." I should be very sorry if I had consciously or unconsciously misrepresented what these officers wish for, but I would point out to you that your mention of the subject was of the baldest possible description, and from your reference to the Camperdown Committee, I was led to suppose that your proposal was identical with the recommendation of that Committee. That recommendation was that continuous service abroad should not exceed five years, and that more home service should be given to army medical officers by employing them in posts now filled by retired medical officers (*vide* paragraph 5 of report).

It was to this that my remark as to the great expense of the change applied. If, however, what is asked for is merely a slight rearrangement of the periods of foreign service not involving longer home service, I will consider what I can do to meet their wishes. I should, however, say that such a concession would be a doubtful boon and might possibly not be appreciated by many of the officers concerned; such shortened periods of foreign service would mean more frequent changes, and each change of station means some cost to the officer.

As regards the grant of honours, I can only repeat what seems to me to be a self-evident proposition, namely, that it cannot be made a matter of proportion, but must depend on the opportunities which officers have of distinguishing themselves. The fact that the Engineer honours are for the moment in excess of those enjoyed by the Medical Staff in no way lessens the force of my statement.

The Engineers obtain rewards for service not only in the army, but in innumerable civil positions, and they have that very qualification of command which you admit should not be given to officers of the medical department. If you will eliminate from the list you give of Engineer rewards those gained in civil and colonial employ, and in high command, you will find the two lists are not disproportionate.

On the question of Court privileges, I have already said that I would consult the proper authorities.

The concluding portion of your letter rejects the concession which I made in accordance with your own suggestion. You say that medical officers "contend for some such title as will carry with it the guarantee of substantive rank, to enable them to discharge the military duties and responsibilities now imposed on them." On this point there is evidently some misunderstanding on your part. Substantive rank army medical officers already have, by virtue of their commissions, to the full extent you ask for, and no grant of military titles of any description will change or increase it.

I regret very much to be at variance on this point with the distinguished profession which you so ably represent, but I am satisfied that it is not desirable to give medical officers the power to assume active command of troops in the field or in quarters, and that were I to allow that formation into the corps you propose, and their "organic incorporation into the general army, on the lines followed in the case of the Royal

Engineers," this command could not be denied them. I am not, therefore, prepared to do more than give the composite titles which, as I have already remarked, was your own proposal, and which was also the recommendation of Lord Camperdown's Committee, of which representatives of the profession nominated by the Royal Colleges of Physicians and Surgeons were members.

Having, therefore, adopted one of the alternatives which you have yourself put forward, I do not think that any object would be gained by any further correspondence on the subject.—I have, etc.,

Sir Andrew Clark, Bart., M.D., F.R.S., 16, Cavendish Square. E. STANHOPE.

PARLIAMENTARY BILLS COMMITTEE.

The following letter has been addressed to Mr. Stanhope, by the Parliamentary Bills Committee of the British Medical Association:—

429, Strand, London, February, 1891.

SIR,—We beg to solicit your attention to the following communication on the grounds that of the 15,000 medical practitioners who form the British Medical Association, 1,450 are commissioned officers in H.M. Service; the Association has consistently advocated the claims of medical officers to army rank and corresponding titles; our reasons for holding these views could hardly be better stated than they were some five-and-thirty years ago by the Governor-General of India, the Marquis of Dalhousie.

Evidence of Lord Camperdown's Committee, Q. 1949.

We would beg to draw your attention to the evidence given before Lord Camperdown's Committee by the permanent Under-Secretary of the War Office, in which that gentleman stated that at the time to which he refers (1876) competition had ceased for appointments in the Army Medical Department; he remarks, "we could not get sufficient candidates to fill the vacancies, much less to compete for them," consequently increased pay and other privileges were then sanctioned. Sir Ralph Thompson's Committee were not unfavourable to the idea of converting the medical department into a "Royal Medical Staff;" in fact, as he observes, "we saw no reason to object to it. Anything that would make the department more palatable was the object at the time," so as to attract men into its ranks. We would beg to draw your attention to this statement, because it seems so well to describe the relations which have unfortunately existed between the military authorities and the Army Medical Service; we earnestly desire to see the end of this palliative system of treatment, and that a cure should be effected by granting the officers of the medical staff an unqualified position in the army. In our opinion the root of all the trouble has been, and still is, that certain high military authorities hold, and have expressed their opinion to the effect, that medical officers are not officers of the army, and consequently have no right to army rank and titles. The Medical Service desire to have the matter settled in the only way in which the majority of them believe it ever can be settled, and that is by granting medical officers army rank and titles. Sir Ralph Thompson states that nothing more can be done on existing lines to make their rank more definite; he remarks: "We have gone up to such a point now that you could not make one step further without giving them titular rank. I see no other way than by calling them colonels or majors."

Q. 135.

Q. 162.

Q. 181, 183, Lord Camperdown's Committee.

It is admitted by military authorities that the medical is an essential branch of the army; it is therefore reasonable that the rank of medical officers in the army should be clearly defined and free of ambiguity; and, in spite of anything that may be said to the contrary, their status is uncertain; for, as Lord Camperdown's Committee observes, they are enabled to say, "with a certain amount of logical correctness, that they now have no rank in the army;" and Sir Ralph Thompson states you cannot make their status more definite unless you grant them "titular rank."

If this question was merely a matter of sentiment, the present condition of things, although unsatisfactory, might drift on; but it is a serious matter when we are warned by medical officers of admitted ability and experience, that in existing circumstances the standard of candidates for the medical service is deteriorating, that the power of the medical service for good in time of peace is hampered, and that under the strain of any extended military operations would fail.

Q. 566.

Military authorities have expressed the opinion that the medical staff "ought to be ashamed" to ask for army rank, or, as they observe, "to appear what they are not, affecting to be combatant officers." Medical officers have no wish for any command beyond that assigned to them in their commissions, and in Section 271 of the Royal Warrant of 1887; but they have commissions, they are under military law, wear a uniform, and are exposed to all the risks and dangers of military service: they cannot understand, therefore, why they should be denied army rank. We know the mind of the service and of the profession, and we beg to assure you in the most emphatic manner that the sincere desire of medical officers of the army is to do their duty, and that it is because they are unable properly to carry on their functions in a service in which rank and titles rule everything and are essential that they urge that this question should be settled in their favour. That there is nothing absurd or unprofessional in their contention is shown by the fact that you received last summer a deputation of the heads of the profession, the leaders in our great medical educational centres throughout the United Kingdom, urging you to recommend Her Majesty to grant army rank and titles to officers of the Medical Staff. The public, if we may be guided by the expression of opinion contained in some of our leading daily papers, are in accord with the profession on this subject, and desire to see "the Army Medical Service endowed, under military authority, with an autonomy as complete as that of the Engineers."

Q. 249.

Sir Ralph Thompson observes that medical officers have a profession outside the army; but so also have the Royal Engineers, who, we are informed, were formerly refused army rank on grounds similar to those on which it is now withheld from medical officers. Royal Engineers draw their allowances under the head of "ordinary pay" and "engineers' pay," some of them leave the service to practise their profession as civilians, or on retiring from the army fall back on their profession; the scientific corps to which they belong has gained much, and the army still more, by their having been conceded army rank and titles. We contend that the same results would follow if the Medical Staff were reorganised into a Royal Medical Corps, and that any ill feeling regarding their having military titles would quickly pass away, as it has done in the case of the Royal Engineers.

The late President of the General Medical Council, as far back as 1876, wrote a memorandum for Sir Ralph Thompson's Committee with reference to the desirability of reorganising the medical department on the lines of the Royal Engineers. With regard to the pay of the officers in a medical corps of this kind, it seems to us it might be regulated under "corps" and "medical pay." No increase in the medical vote need take place by the alteration of details in the pay, etc., of the medical officers. The "corps" and "medical pay" would simply represent the consolidated pay and allowances now given, and no objection can be raised to a reduction to regimental allowances, provided the total pay and allowances are the same, only given under different headings; and so with promotion, the evidence brought before Lord Camperdown's Committee was positive and final as to the inexpediency of interfering with the total pay and allowances, rules of promotion, and pension now prevailing; if these cannot be retained under a scheme such as that referred to it will be necessary to devise some other plan, although no alternative proposal has been put forward which covers this vexed question, and which would so certainly attract a number of the most promising young medical men in the country to devote their energies to the physical well-being of our soldiers.—We have the honour to be, Sir, your obedient servants,

Sir Ralph Thompson's Committee, p. 46.

Lord Camperdown's Committee, Q. 491, 579.

Q. 490 to 491, 577.

S. SIBLEY, F.R.C.S.,
Deputy Chairman of the Parliamentary Bills Committee of the British Medical Association.
N. C. MACNAMARA, F.R.C.S.

The following replies have been received:—

War Office, 14th March, 1891.

GENTLEMEN,—I am directed by Mr. Secretary Stanhope to acknowledge the receipt of your letter of the 6th instant, enclosing a communication from the "Parliamentary Bills Committee of the British Medical Association," relative to the status, etc., of medical officers of the army, and to acquaint you that the letter will be duly considered.—I am, gentlemen, your obedient servant, RALPH THOMPSON.

Messrs. Sibley and Macnamara,
13, Grosvenor Street, W.

War Office, 18th March, 1891.

GENTLEMEN,—Adverting to my letter of the 14th inst., and with further reference to yours of the 6th inst. relative to the status, etc., of medical officers of the army, I am directed by Mr. Secretary Stanhope to transmit herewith, for your information, a copy of correspondence with the President of the Royal College of Physicians, on the subject of the alleged grievances of the army medical officers, which has taken place since the last papers were presented to Parliament.

As Mr. Stanhope has in this, and in his previous letter (which has been published), explained fully what concessions he is ready to assent to, he regrets that he is not able to reopen the question.—I am, gentlemen, your obedient servant, RALPH THOMPSON.

Messrs. Sibley and Macnamara,
13, Grosvenor Street, W.

SCHOOLS AND DOCTRINES OF HYPNOTISM.

By ERNEST HART.

The Two French Schools.—Braid and Charcot.—The Cataleptic State.—The Lethargic State.—Induced Somnambulism.—Le Grand Hypnotisme.—Le Petit Hypnotisme.—The Dangers of Hypnotism.—Action at a Distance.—Revolving Mirrors.—General Conclusions.

WHAT is actually known of the question of hypnotism was summed up recently in the published addresses and the discussions at the International Congress of Hypnotism held in Paris. This sufficed to show that all is not yet clear even as to the nature, not to say the grouping, of the phenomena which are included under this name. For, on the one hand, the school of the Salpêtrière maintains that, in what it calls *le grand hypnotisme*, there are always physical phenomena which arise independently of any suggestion; while the school of Nancy maintains that these phenomena are superadded, and only make their appearance as the result of a suggestion, voluntary or not. The discussions at this Congress served to mark off distinctly the opposition which exists between the two schools, and at the close the representatives of each held to their own opinions.

It is hardly necessary to say that many of the phenomena observed by these two scientific schools have been noticed from very early times by the professional magnetisers and mesmerists. For those who desire to follow the historical sequence of this part of the subject, complete information may be found in the work of Binet and Féré, *Le Magnetisme Animal*, published in Paris in 1887, or in the second edition issued in 1889. The literature is mainly French. It will be enough to cite the name of Bertrand, 1820; Durand de Gros, Liébault, Mesnet, 1860; Lasègue, 1865; Baillef, 1868; St. Martin, 1869.

Their writings did not, however, do much to advance the question, which remains still in the position in which it was left in 1841 by James Braid, of Manchester, who carried on researches which are deserving of all praise, and which are only now appreciated at their true value. To so little scientific status had these phenomena advanced, however, that Dechambre, in the famous *Encyclopædic Dictionary of Medical Science* which he edited, declared that the phenomena described under the head of animal magetism did not exist. Preyer, in Germany, wrote in 1878 a complete treatise on the hypnotism of animals, which deservedly attracted great attention, but it was Charcot who put the whole subject on a new basis.[1] From that moment the study of hypnotism, otherwise known up to that date by the incorrect and misleading title of animal magnetism, was definitely accepted as capable of entering into the domains of science. This impulse to the new study was felt in various countries in Europe, and it was taken up by R. Heidenhain, Grützner, Berger, Bäumler, Preyer, Schneider, in Germany; Hack Tuke, in England; Tamburini, Seppili, Lombroso, in Italy; P. Richer, Bourneville, Régnard, Dumontpallier, Ladame, Bottey, Pitrès, Brémard, Bernheim, Beaunis, in France and in Switzerland.

These names are cited in order to enable those who care to follow out their reading to refer to the writings of the most serious and best informed students. The theory of hypnotism, as it is now understood by the school of the Salpêtrière, is of course best expounded in the works, and, as far as possible in the words, of Professor Charcot. He insists that the very numerous and diverse phenomena do not answer to any one particular state of the nervous system. In reality hypnotism represents clinically a condition comprising a series of nervous states. These different states, which collectively represent the whole symptomatology of hypnotism, may be referred, according to M. Charcot, to three fundamental types: (1) The cataleptic state; (2) the lethargic state; (3) the state of induced somnambulism. Each of these states comprises a certain number of secondary forms and mixed states; any one may present itself at the outset of a case and they may appear successively in varying order.

1. *The Cataleptic State* may be produced (*a*) as a primary condition, a loud and unexpected noise, a bright light placed before the eyes, or, by the more or less prolonged fixation of the eyes on any object; (*b*) consecutively to the lethargic state when the eyes, having been left closed, are opened under a brilliant light by raising the eyelids. The cataleptic subject is immobile, the eyes are open, there is not a movement of the eyelid; the tears quickly accumulate, and roll down the cheeks. Frequently there is anæsthesia of the eyeball. There is cataleptic plasticity of the body, and complete insensibility to pain, but certain senses preserve their activity, in part at least; these are the muscular sense, vision, and hearing. This persistence of sensorial activity often permits us to produce impressions in various ways on the cataleptic subject, to develop, by means of suggestion, automatic impulse, and to introduce hallucinations. When this is so, the fixed attitudes artificially given to the limbs, or in the more general way to the various parts of the body, give place to more or less complex movements, perfectly coordinated, and in relation to the induced hallucinations and impulses. The patient afterwards falls into the attitude in which she was placed at the moment at which the suggestion was given.

2. *The Lethargic State.*—This occurs (*a*) as a primary condition under the influence of the fixation of the vision on an object placed at a certain distance; (*b*) consecutively to the cataleptic state by the simple closing of the eyelids, or on passing into a perfectly dark place. Frequently at the moment of falling into the lethargic state the subject utters a peculiar laryngeal sound, at the same time a little foam shows on the lips. The body falls into a state of relaxation as if plunged in a profound sleep. There is complete insensibility of the skin and of the accessible mucous membranes. The sensorial apparatus preserves, nevertheless, sometimes a certain degree of activity, but any attempts which may be made to impress the subject, either by intimidation or by suggestion, remain most frequently without effect.[2] The limbs are flaccid and pendent; if they are lifted they fall heavily when they are left to themselves. The eyeballs are, on the contrary, convulsed, the eyes closed or half closed, and there may commonly be observed almost incessant trembling of the eyelids.

3. *Induced Somnambulism.*—This state may be produced directly in certain subjects by the fixation of the eyes, and by various other proceedings. It is produced in subjects previously plunged into the lethargic or the cataleptic condition

[1] Essai d'une distinction nosographique des divers états compris sous le nom d'hypnotisme.—*C. R., Acad. des Sciences*, 1882.

[2] Certain subjects, however, are in this stage susceptible of being easily influenced by suggestion—more easily even than in the somnambulistic stage.

by simple pressure on the crown of the head or by light rubbing. This state appears more especially to correspond to what used to be called, and is still called popularly "magnetic sleep." The very complex phenomena which may be observed in this form can only with difficulty be submitted to analysis. They have been for the most part provisionally relegated to secondary position in the researches made at the Salpêtrière. A special effort has been to determine as far as possible the characters which distinguish the state of somnambulism from the lethargic or cataleptic states, and the relation which exists between these three states. The eyes are closed or half closed; the eyelids are in general agitated by tremors; left to himself, the subject appears to be asleep, but even then the flaccidity of the limbs is not so pronounced as in the lethargic state; the neuro-muscular hyper-excitability is absent, but the cutaneo-muscular hyper-excitability is present. There is insensibility of the skin to pain, but at the same time a very remarkable hyper-acuity of certain modes of sensibility of the skin, to the muscular sense, and to certain of the special senses—sight, hearing, and smell. It is in general easy, by command or suggestion, to induce in the subject very complicated actions; the phenomena of somnambulism properly so called. To this it should be added that it is possible to develop hemi-catalepsy, hemi-lethargy, and hemi-somnambulism. It is enough, for example, with the subject in catalepsy to close one of his or her eyes. The side of the body corresponding to that eye takes on the characters of lethargy, while the opposite side, which corresponds to the open eye, preserves the characters of catalepsy. The hypnotism characterised by the three states here described constitutes what M. Charcot calls *le grand hypnotisme*.

M. Babinski[3] observes that M. Charcot has designedly left aside the abortive and incomplete forms and the mixed states, but a study of the account which his pupil, M. Richet, has written of the incomplete and mixed forms of hypnotism will show that he recognises even that the "greater hypnotism," while corresponding to a perfect type, represents, nevertheless, a rare form. The importance which he assigns to it is, therefore, exclusively due to the fact that the most essential characters of the hypnotic sleep are here found separately. The greater hypnotism, then, constitutes the most perfect and typical form of hypnotism. The whole doctrine of M. Charcot is expressed in the following propositions of his favourite pupil, Babinski. First, the physical characters observed in the hypnotism of certain subjects allow the absence of simulation to be affirmed. Secondly, hypnotic phenomena may effect a special grouping in three distinct states (*le grand hypnotisme*). Thirdly, the physical phenomena of hypnotism may be developed independently of any suggestion. Fourthly, hypnotism in its most perfect forms must be recognised as a pathological or diseased condition. Thus it is now, after the studies of the school of the Salpêtrière, no longer permissible to consider hypnotism as a comedy of the hysterical individual, male or female. The physical phenomena are, as all the world acknowledges, real enough. Their starting point, according to the school of Nancy, MM. Liébeault, Bernheim, and Liégeois, lies altogether in the power of suggestion. M. Bernheim said at the International Congress that all is suggestion and nothing but suggestion. Thus it is easy enough to sum up the doctrine of Nancy, which is contained in this one word "suggestion." M. Beaunis has separated himself somewhat from this school, for he has recently declared that he is convinced that suggestion is not capable of explaining everything. M. Bernheim holds that there may be hypnosis without sleep, and at the International Congress he asserted that in all the procedures of hypnotisation what causes sleep is suggestion. Thus he gives the following definition: The hypnotic state is that peculiar induced psychical state which augments in divers degrees suggestibility—that is to say, the aptitude to be influenced by an idea accepted by the brain, and to realise it.[4] Such is in a few words the fundamental doctrine of Nancy. But though that school denies the theory of the Salpêtrière, the latter, on the contrary, fully admits the existence of what it calls *le petit hypnotisme*. It makes the following distinction between the greater and the lesser hypnotism: that the greater hypnotism is a neurosis which is only developed among the full-blown hysterical cases. Moreover, the school of the Salpêtrière holds that in any case healthy well-balanced individuals cannot be hypnotised; and that those who are capable of undergoing special psychical transformation are persons who have a neuropathic constitution. It is difficult not to think that in this point in particular M. Charcot must be right; for Bernheim's book[5] seems to show that the latter does not understand very well either hysteria or neurosis. In the discussion which took place upon the communication of M. Bernheim, M. Gilles de la Tourette put forward a tolerably strong argument in favour of the doctrine of the Salpêtrière by pointing out that M. Bernheim himself admits that in catalepsy there is always a slowing of the pulse and the respiration, and that these phenomena are evidently not commanded by suggestion. Moreover, M. Bernheim extends the field of suggestion so far that he attributes to it the greater number of the effects produced by massage, hydrotherapy, electrotherapy, and even the suspension of tabetic patients. Now, it is certain that in ataxic patients suspension is capable of producing good effects, whilst in spinal cases with exaggerated reflexes, on the contrary, the results are often bad. This is certainly an argument which, on this point, demolishes the doctrine of Nancy. How, moreover, does this school explain the existence of catalepsy in animals (Danilowski)? Hypnotism may give rise to accidents in certain cases, directly or indirectly; and, after hearing Ladame, the Congress demanded that public displays of it should be forbidden, and that it should be considered as a therapeutic method, and reserved for physicians alone. M. Delbœuf, of Liége, has opposed this view, and claims absolute liberty for study, and considers that a medical diploma is only an illusory guarantee. However this may be, it is certain, from the records of cases which have come to light, that persons possessing a medical diploma have not always shown adequate discretion in the employment of this dangerous method. The two schools of Nancy and of Paris are not in accord as to these dangers of hypnotism. At Nancy, the doctrine is held which was expounded on its behalf at length in court in the case of Bompard, that crime might be committed by a person under the influence of suggestion as the result of such influence. M. de la Tourette declares his belief—and I am of the same opinion—that the only possible crime which might be committed is on the person hypnotised. For my part, I am led to believe that hypnotism is a proceeding directly dangerous, because it may end in completely upsetting the intelligence of the subject, and indirectly by the excessive influence which it gives to the operator over the subject, of which the limits have not yet been determined. As a set-off against the danger and inconvenience of hypnotism, there are some cases, far more rare than is generally considered, in which it may be useful among hysterical subjects. Liébault, Bérillon, Auguste Voisin, De Jong, Velander, Seglas, and Fontan, have reported cases of cure under the influence of hypnotism. A certain number of these cases must be accepted with extreme doubt, especially when the subjects are insane, like those of M. Auguste Voisin. It is equally difficult to determine up to what point this proceeding can with advantage be employed to correct the morals of children, or evilly disposed or criminal persons. Doubt is still very permissible on this point, notwithstanding the long list of observations which are found in Bernheim's book. Beyond doubt, however, hypnotism is capable of rendering services to the study of experimental psychology, and here again it is at the Salpêtrière that the idea of this scientific application of it was first worked out. It is only necessary to cite the following remarkable works to indicate the advantage which may be drawn from this procedure. Binet et Féré, *La Magnétisme Animal*, Paris, 1887; Binet, *La Psychologie Raisonnée*, 1886; *Etudes de Psychologie Expérimentale*, 1888; Féré, *Sensation et Mouvement*, 1887; *Dégénérescence et Criminalité*, 1888; Féré, Binet, et Pierre Janet, *De l'Automatisme Psychologique*, Paris, 1889.

[3] "Revue critique sur le grand et le petit hypnotisme." *Arch. de Neurologie*, 1889, Nos. 49 and 50.

[4] *Comptes Rendus du Premier Congrès International de l'Hypnotisme*. Paris: Doin, 1890, p. 81.

[5] *De la Suggestion et de ses Applications à la Thérapeutique*. Paris: Doin, 1886.

Action at a Distance.—A great deal has been written and said rather noisily and publicly on the action of medicinal substances at a distance from the body. The experimenters on this subject have been chiefly Bourru, Burot, Berjon, Fontan and Segard, and M. Luys. The experiments, however, are subject to numerous and obvious causes of error which have been too easily overlooked by the experimenters. M. Jules Voisin has well shown,[6] in experimenting on the same hypnotic subject as Messrs. Bourru and Burot, that this pretended action of *médecine à distance* did not exist. M. Luys, notwithstanding this demonstration, renewed these experiments in the much talked of lecture which he gave in the following year at the Hôpital de la Charité.[7] These phenomena, however, of so-called extraordinary character, described by M. Luys, are simply experiments badly made. M. Luys has used mental suggestion without knowing it, inasmuch as he did not take the rigorous precautions which are necessary, such for example, as absolute silence. These actions of medicines, these productions of emotion by the sight of coloured objects, the influence of the extraordinary attraction of the magnet, all these "influence experiments" are due to suggestion, and very little attention suffices to show that there are present no phenomena worthy of attention. M. Luys has also presented to the Société Médicale des Hôpitaux a case of paralysis agitans, which he had "cured" by hypnotising the patient by means of his revolving mirrors. This paralytic was in reality a mere hysteric.

General Conclusions.—To sum up, then, in a few words the actual state of the question, an impartial observer might, in my opinion, conclude that hypnotism is a pathological modification of the nervous system, which always indicates that the subject belongs to a neuropathic class. The complete and typical form of hypnotism described by Charcot is rare. Suggestion plays a considerable part in hypnotic phenomena, but there are somatic phenomena which are independent of it. Hypnotism may frequently be dangerous, and very rarely useful. It may be the cause of crime, or of mental disorder: it can really cure no disease not more easily curable by simpler and less dangerous methods. A considerable number of facts attributed to it which have most impressed the public imagination, such as the actions of medicines at a distance, the so-called telepathic communications or communications made without speech, and the *clairvoyant* phenomena sometimes described, are mere errors of experiment arising from insufficient precautions and a too vivid imagination. Precisely those phenomena which have been most publicly talked about and excited most interest in "psychical circles" so-called, are the least real. The hopes which the therapeutic hypnotist aroused have not been realised, and any expectations of producing by hypnotic methods any desirable moral or mental effect rest upon a totally inadequate basis of fact, and are far from being promising.

THE HOSPITALS COMMITTEE.

The Brompton Consumption Hospital.—King's College and King's College Hospital.

At the meeting of the Committee on March 19th:

Mrs. Taylor, who, until a fortnight ago was matron of the Brompton Consumption Hospital, was examined. She stated that previously she had been associated with hospital work in Sydney and Tasmania. The nursing staff at Brompton was about 70. Nurses were sent out to all sorts of private cases, both surgical and medical. There was very little surgical training at the Brompton Hospital, but some of the nurses came to her already trained, and others had had experience in general hospitals. She had never sent out an inefficient nurse. Although she might have taken a nurse out of a ward to send to a private patient it was certainly not the practice. The nurses were perfectly satisfied with their pay. Although no pensions were given to the nurses those who had been a long time in the service of the institution would receive special consideration at the hands of the committee. They did not take part in the National Nurses Pension Fund. After giving details of the hours of work, rest and recreation, food, and pay of the nurses, the Witness stated that during the nine years she was at the hospital she had not heard a single complaint from the nurses. The nurses attended lectures given by the resident medical officer.

Lord Clifford of Chudleigh: Is it your experience that nurses break down in health more than women in other walks of life?—No; as a rule, nurses are a most healthy set of women, and they are seldom overworked. Generally those who retired did so to get married.

The Rev. Dr. Wace (Chairman of the Council of King's College Hospital and Principal of King's College) said he had acted as chairman for a number of years. The hospital was founded in 1839 for the purpose of providing material for instruction; its constitution was laid down by Act of Parliament, and the property was vested in the Council of King's College. The hospital was maintained by annual subscriptions, donations, and legacies; the annual subscriptions reached £2,292 last year, general public donations, £5,150; grants from the Craven Charity Trustees and the Holborn Estate Charities, £300 each; church collections, £103; Hospital Sunday Fund, £1,406; Hospital Saturday Fund, £232; poor boxes, £104, which, with other miscellaneous receipts, made the total receipts £11,288. The expenditure last year was £17,126; the deficit was made up by the sale of stock and from legacies. Last year the legacies received amounted to £2,464, which was used to make up the deficit. The hospital had some property in the vicinity of the hospital which had cost £10,500, but it was, and had been for some years, idle. There were 220 available beds, and 215 were occupied last week. There were 90 surgical and 90 medical beds, and the remainder were ophthalmic and other special beds. The secretary was also chaplain and warden, and his salary was £500 a year. There was a Medical Committee of about 25, and on the General Committee there were 8 physicians and surgeons of the hospital. Although all the wards were now filled, a large number of cases came who could not be admitted for want of room. The nearest hospital was that at Charing Cross. There were Finance, Nursing, Works, Dispensary, and Samaritan Fund Committees. The drainage question had been carefully gone into, and a new system introduced in 1882. The plans were kept up to date. The resident medical officers admitted patients. There were governors' letters in use, and anyone who had a letter had a *primâ facie* claim to be attended to. There was, however, no priority in point of urgency. The principal resident medical officer was the house-physician. There were a very large number of out-patients. As to patients admitted, there were 2,578 treated during the past year. There were 9,650 treated in the ordinary out-patient department, and in the casualty department 10,337. In addition to that, there were 607 poor married women attended during confinement; that made a total of 20,000 out-patients, and they were all new cases. The total number of attendances during the year was 29,556, but that did not include the casualties. During the last six years the nursing of the hospital had been one of its departments, and entirely under the control of the Committee of Management. Previous to that the nursing was done by the St. John's House Sisterhood, but some difficulties arose owing to the dual control. All the nurses must be members of the Church of England. There was a children's ward in the hospital. Every description of disease, except small-pox, was taken into the hospital, with this proviso, that there should not be more than ten cases in the hospital at one time.

Lord Cathcart: Do you think it fair to have a religious test as to the nurses?—Perfectly fair, if it is known beforehand.

Miss Monk (the sister-matron of King's College Hospital) said she had been the head of the nursing department for nearly six years, and had had previous experience at St. John's House Sisterhood and at Edinburgh. Her salary was £200, and she resided at the hospital. The total staff of nurses was 68, and in addition 8 ward sisters and 8 ward maids. The rule of the hospital was for the nurses to have three months at day and three at night work. Nurses were sent out to private cases, but not until they were fully trained. Those who worked on the private staff had 15 per cent. of their earnings. They belonged to the National Pension Fund, and the hospital paid half of the £22 premium.

[6] *Arch. de Neurologie*, 1887.

[7] J. Luys, The Latest Discoveries in Hypnotism, *Fortnightly Review*, June, 1890, p. 896. *Les Emotions dans l'Etat d'Hypnotisme et l'Action à Distance des Substances Médicamenteuses ou Toxiques.* Paris. 1890.

The nurses who had left had only gone to get better positions. The Witness then gave particulars of the pay and hours of work of the nurses. She would be in a position to know if they were discontented, but she had never heard of a complaint. Paying probationers were received. The nurses at King's College had no menial duties. Their health was exceedingly good.

Dr. CURNOW, the Dean of the Medical School of King's College Hospital, next examined, said he was professor of anatomy and physician to the hospital. Since 1864 he had been at work at the hospital and at the college, so that his whole professional life had been passed at those institutions. In 1875 there was a reorganisation of the out-patient department, and the numbers of the out-patients had been reduced. At one time inquiry was made as to the circumstances of the patients. Inquiries were made as to the wages, but owing to the number of the family and the circumstances, the wages limit was very fallacious, and the dress of the applicant was no criterion. The majority of the patients lived in or were employed in the locality. Casualties were admitted at once and would be seen by the house-surgeon or house-physician who were the resident medical officers. There were no inquiries made into the casualty cases. The students did not deal with serious cases. There were seven resident medical officers, who had board but were not paid. The visiting staff had to have the qualification of the Colleges of Physicians or Surgeons of London, and he considered that a great advantage, from a disciplinary and examination points of view.

In reply to Lord ZOUCHE, the WITNESS said that the students at King's College Hospital had a better chance of studying infectious diseases than those of any other hospital in London. It was rather difficult to take advantage for educational purposes of the Metropolitan Asylums hospitals because of the great distance to go to and from them.

The WITNESS further stated, in answer to Lord SPENCER, that, as the General Medical Council had now insisted upon another year being added to the curriculum, no doubt a part of that year would be given to instruction in the fever hospitals. There were no provident dispensaries in the immediate vicinity of the hospital.

Replying to Lord MONKSWELL, the WITNESS said that most of the recent special hospitals were unnecessary now that special departments were established at general hospitals. There were so many children suffering from infantile diseases, and there were so many consumption cases, that special hospitals for both those cases were of use.

Further examined by the CHAIRMAN, the WITNESS said that all the students' fees were paid to the secretary of King's College. Since he had been appointed dean of the medical school the receipts had averaged from £2,500 to £3,500. The highest total receipt was £3,700. It had been increasing the last two or three years since the whole of the hospital wards had been open. The fees of the lecturers and teachers were paid by the college, but the fees were derivable from the school. The council of the college selected the teachers and lecturers. The medical men had no control over this question.

In answer to Lord SPENCER, the WITNESS said that the medical school of King's College Hospital differed very much from the schools of other general hospitals, except that of University College Hospital. He infinitely preferred the system to that of the other general hospitals. King's College Hospital medical school was a medical department of the college, which was managed by the council of the college. The other medical schools were purely associations made by themselves for teaching purposes.

The Committee then adjourned until after the Easter holidays.

ROYAL COLLEGE OF PHYSICIANS.

AN extraordinary comitia of the College was held on Monday, March 23rd, Sir ANDREW CLARK, Bart., in the chair, when there was a large attendance of the Fellows.

A communication from the Medical Society of London was read.

The following were appointed a committee to prepare a new edition of the by-laws and regulations of the College, namely: Sir Henry Pitman, Dr. Munk, Sir Dyce Duckworth, Dr. Liveing, Dr. Church, and Dr. Allchin.

A report was received from the committee on the Midwives Registration Bill, and after a brief discussion it was agreed that it should be printed and circulated amongst the Fellows.

A letter was read from the Association of Certifying Surgeons taking exception to Clause 19 of the Factory and Workshops Act Amendment Bill, relating to the abandonment of the certificate of fitness for the work in the case of children, and asking the College to support them in opposing the clause. The matter was left in the hands of the President to take such action as he should deem best.

On the motion of Sir JOSEPH FAYRER, it was resolved to hold a reception at the College for the members of the International Congress of Hygiene, on the occasion of the meeting in London in August, and after a brief discussion it was left to the President to nominate a committee to make the necessary arrangements.

The PRESIDENT then delivered his annual address. After mentioning the losses by death and the additions to the lists of Fellows, Members, and Licentiates, he enumerated the honours that had been conferred upon Fellows of the College by the Queen. The new examination hall, which was now completed, had cost the College £31,644, of which all but a fractional part had been defrayed. He next paid a warm tribute to the Registrar, Dr. Liveing, for his indefatigable services, and alluded to the successful reorganisation of the Fellows' Club, the affairs of which had been previously languishing. The death-roll included the names of the following deceased Fellows, of each of whom appropriate and feeling mention was made, namely: Drs. Lochée, Julius Pollock, Fincham, Matthews Duncan, Handfield Jones, Graham Balfour, Gulliver, and Markham. These notices were, as usual, singularly just and free from the least suspicion of flattery. Well-deserved compliments were paid to the lecturers of the past year—Drs. Hughlings Jackson, Ferrier, Thorne, Oliver, and Broadbent. The President then referred to the various phases through which the schemes for the reconstruction of the University of London had passed, and to the line of action adopted throughout by the College, and then, owing to the lateness of the hour, withheld the remainder of his address.

A unanimous vote of thanks was accorded to him for the address, and at the special request of the Fellows he consented to print this and the former addresses.

The ballot for the election of President then took place, when Sir Andrew Clark received 96 votes, 7 votes being distributed amongst five other Fellows.

Sir ANDREW CLARK having returned thanks, the comitia was dissolved.

FACTORY LEGISLATION.

MR. J. A. CAMPBELL, M.P. for Glasgow University, Dr. Farquharson, Sir Frederick Milner, and Mr. Howard Vincent have all put down amendments to reject Clause 19 on the second reading of the Factory and Workshops Act Amendment Bill. This is the clause, it may be remembered, by which it is proposed to abolish the whole system of certifying the fitness of children and young persons for employment in factories. There are, we have reason to believe, good grounds for hoping that the Government will not be indisposed to reconsider their position in this matter, if it can be clearly shown to the satisfaction of the Standing Committee on Trade that the existing system has worked for the good of the factory children.

UNIVERSITY OF ABERDEEN.

THE following resolution was passed unanimously at a meeting of the Medical Faculty of the University of Aberdeen, held on March 17th:

"The Medical Faculty observe with grave apprehension that it is proposed by Clause 19 of the Factory and Workshops Act Amendment Bill, now before the House of Commons, to abolish the certificate at present required of fitness for employment of children and young persons in factories and workshops. The Faculty are of opinion that a certificate of age alone is no criterion of fitness, and, whereas defective physical development, and more especially disease of the heart and lungs, which renders work injurious at an early age, can be ascertained only by medical examination, the doing

away with medical certificates will result in many children being set to work who are certain to suffer thereby. The Faculty therefore instruct the Dean to communicate with the members of Parliament for the University and the city, and to urge upon them to use their influence to prevent the said clause being passed."

Society of Medical Officers of Health.

At the annual meeting of the North Western Branch of the Society of Medical Officers of Health, held at Manchester on March 20th, Dr. Barr, of Bury, drew attention to Clauses 18 and 19 in Mr. Matthews's Factories and Workshops Bill. After some discussion, it was resolved that it was desirable that the following words should be added to Clause 18, which deals with the employment of women after childbirth: "Without a certificate of fitness from the certifying surgeon of the district." As to Clause 19, there were, he said, in Lancashire and Yorkshire last year 139,000 half-timers, and over 300,000 full timers, that is to say children over 13 years of age. It was found that there were some 1,319 children per annum who had been returned as not physically fit for work. The diseases from which they suffered included scarlet fever, measles, whooping-cough, small-pox, etc., and skin and blood diseases. These young persons were now to be left to the tender mercies of millowners and employers, and to the will of their parents in the matter. He considered that Clause 19 ought to be omitted. Dr. Kenyon, Chester, seconded the resolution. Dr. Niven, Oldham, observed that the whole drift and tendency of modern life was towards socialistic restrictions of the people from doing harm to themselves, and to withdraw a restriction such as it was now proposed to do would probably be to injure the public health.

Society for Prevention of Cruelty to Children.

The Central Committee of the National Society for the Prevention of Cruelty to Children has presented a petition to the House of Commons against Clause 19, which it describes as retrograde and contrary to public interest.

Evidence of Rejections.

Dr. John Barr, M.B., Certifying Surgeon (Rishton, Blackburn), writes: In Clause 19 of his Factory Bill, Mr. Matthews proposes to abolish the office of certifying factory surgeon; and, if our services are to be retained, an immediate and united effort must be made by certifying surgeons everywhere throughout the country. An appeal has been made by the Association of Certifying Surgeons, and circulars have been sent to hundreds of certifying surgeons, asking them to send to the Secretary of the Association a list of rejections made by them in their various factories. And with what result? Although there are nearly 1,200 certifying surgeons in the country, yet only 37 have taken the trouble to send lists of rejections. This carelessness is disheartening, when we consider how our opponents are using every possible means for our extinction. If our office is abolished, it will certainly be in a great measure due to the apathy of the mass of certifying surgeons themselves. The Standing Committee who have the Bill in hand do not meet again till April 9th, so there is still time for useful action. I would urge all certifying surgeons to do two things: (1) send at once to the Secretary of the Association (Dr. Holmes, "Ouslehurst," Radcliffe, near Manchester) a list of cases rejected during the past five years; and (2) bring all the pressure they can to bear on members of Parliament to oppose Clause 19 of the Factory and Workshops Bill.

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Fourteenth List.

Presented by the WIDOW of the Late Dr. R. C. R. JORDAN, Manchester.

Andral. Clinique Médicale, translated by Spillan. 1836.
" Précis d'Anatomie Pathologique. 3 vols. 1829.
Armitage. Hydropathy as Applied to Acute Disease. 1852.
Beale. On Life and Vital Action in Health and Disease. 1875.
Bell (Sir C.). The Hand, Bridgewater Treatise. 1833.
" " A System of Dissections. 1798.
Billing. First Principles of Medicine. 5th edition. 1849.
Birmingham (Report of the Health of). 1881.
Bowman (W.). Lectures on the Parts Concerned in the Operations on the Eye. 1849.
Bowman (J. E.). Practical Handbook of Medical Chemistry. 1850.
British and Foreign Medico-Chirurgical Review. 7 vols.
British Pharmacopœia. 1885.
Burns. Principles of Surgery. 1838.
Carpenter. Principles of Human Physiology. 1853.
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Daniell. An Introduction to the Study of Chemical Philosophy. 2nd edition. 1843.
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Donovan. Treatise on Chemistry. 1839.
Earle. On Flooding after Delivery. 1865.
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Holden. Human Osteology. 4th edition. 1869.
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Pereira. Elements of Materia Medica and Therapeutics. 3rd edition.
Quain. Elements of Anatomy. 4th Ed. 1837.
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Sharpe. Treatise on the Operations of Surgery. 10th edition. 1782.
Smith (Priestley). Glaucoma, its Causes, Symptoms, etc. 1879.
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Annals of Influenza.
Hasse's Pathological Anatomy.
Hewson's Works.
Kölliker's Human Histology. 2 vols.
Louis on Phthisis.
Rokitansky's Pathological Anatomy. 4 vols.
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Tate. Treatise on Hysteria. 1830.
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Toynbee's Museum, Catalogue of. 1857.
Vogel. Pathological Anatomy of the Human Body. 1847.
Wilson, Erasmus. Diseases of the Skin. 3rd edition. 1851.
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And other volumes.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 15th day of April next, at 2 o'clock in the afternoon.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

Meetings of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

South Wales and Monmouthshire Branch.—The next meeting will be held at Pontypridd on Wednesday, April 15th. Mr. Emil Behnke will give an address on the Nature and Treatment of Stammering and Stuttering. Members desiring to read papers, etc., are requested to send titles to Dr. Sheen, Cardiff, before March 30th.—A. Sheen, M.D., Cardiff; D. Arthur Davies M.B., Swansea, Honorary Secretaries.

WEST SOMERSET BRANCH.—The spring meeting will be held at the Railway Hotel, Taunton, on Thursday, April 9th, at 5 o'clock; dinner at 5.30. The subject settled by the Council to be discussed after dinner is, "What, in your opinion, is the best method of disposal of the dead in England?" Members intending to read papers or to be present at the dinner are requested to communicate with W. M. KELLY, M.D., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.—A meeting will be held on Friday, April 3rd, at the Lyric Hall, Ealing Broadway. The chair will be taken by Sir William Mac Cormac, surgeon to St. Thomas's Hospital and President of the Branch, at 8.30 P.M. Business: 1. Minutes of preceding meeting. 2. A Clinical Demonstration of Typical Orthopædic Cases and their Treatment, by Mr. Noble Smith F.R.C.S.Ed.—C. A. PATTEN, Honorary Secretary.

MIDLAND BRANCH: LINCOLNSHIRE DISTRICT.—A meeting will be held at Louth on Thursday, April 16th. Members desirous of reading papers, exhibiting cases, etc., are requested to communicate, before Monday, April 6th, with W. A. CARLINE, M.D., Honorary Secretary.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—The next meeting will be held at the Bath Arms, Warminster, on Wednesday, April 1st, at 3.45 P.M. Business: Mr. Sharpin: A paper on the Antiseptic Treatment of Wounds. Mr. Kingscote: Three Cases of Pyelitis. Mr. Willcox and Mr. Davis: Cases in Surgery. Mr. Manning will move a resolution respecting the working of the Lunacy Act of 1890. Dinner at 6 P.M.; tickets (not to include wine) 5s. Members intending to be present are requested to communicate with H. J. MANNING, Honorary Secretary, Laverstock, Salisbury.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The next ordinary meeting will be held on Thursday, April 9th, at 4.30 P.M., at the Grosvenor Hotel, Queen's Gate, Southsea. Gentlemen desirous of exhibiting specimens or reading papers are requested to communicate with the Honorary Secretary, J. WARD COUSINS, Southsea.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will take place on Thursday, May 28th, at Gravesend, Mr. O. R. Richmond in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, Mr. A. W. Nankivell, St. Bartholomew's Hospital, Rochester, not later than May 2nd, 1891. Further particulars will be duly announced.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this Branch will be held at Guildford on Thursday, April 2nd, Mr. C. J. Sells in the chair. Members willing to bring forward cases or papers should communicate with the Honorary Secretary, J. P. A. GABB, M.D., Guildford.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

A MEETING of the above District was held at the Cottage Hospital, Faversham, on March 12th, Dr. BOSWELL in the chair.

Communications.—Dr. ALEXANDER read Notes of Three Cases of Lupus, in which he advocated the local treatment by salicylic acid ointment.—Dr. HALSTEAD read Notes of Two Cases of Orbital Abscess.—Dr. FREDERICK EASTES read a paper on the Medical Defence Union. Many cases were quoted in which the Union had been useful either to the profession at large or to individual members. At the close of the meeting nine members showed their approval of the Union by joining its ranks.—Mr. WHITEHEAD READ read Notes of a Case of a Boy, aged 14, who accidentally shot himself in the left axilla; the gun was loaded with four pieces of fence wire and two stones. The wire was removed at the time, and the stones came away subsequently. The scapula was broken in several places. Seven hours after the injury serious hæmorrhage came on, and the third part of the subclavian artery was tied. With the exception of a stiff shoulder-joint, the boy made a perfect recovery.

Luncheon, etc.—The members present were entertained by Dr. BOSWELL at his house in East Street at luncheon between 1 and 2, and again at tea between 5 and 6. At the latter a vote of thanks was passed to him for his warm hospitality.

BRITISH GUIANA BRANCH.

THE quarterly general meeting of this Branch was held on January 8th, at the Colonial Hospital, under the chairmanship of Dr. R. GRIEVE, President. There were also present: Drs. Wallbridge, Veendam, Anderson, Williams, Hill, Delamere, Ozzard, Godfrey, Ozanne, Barnes, Law, Neal, Egan, Kennard, and Rowland (Secretary).

Presidential Address.—The minutes of the last meeting having been read and confirmed, the PRESIDENT congratulated the society on its position. Of the 43 original members, 7 had resigned from one cause or another, 1 had left the colony, and they had lost by death 6 during the four years. That made 15 who had left the society. The number that had joined was 13, so that they had 2 fewer than in 1886. During the year the meetings had been held regularly once a quarter. Passing then to the health of the colony, he said the year 1890 began favourably, and continued most satisfactory until the middle of July, when suddenly the amount of sickness increased rapidly. He exhibited charts which showed that the ill-health of the colony—which he was told by practitioners who had been in the country for a great many years was greater in the later part of last year than it had been in their recollection or knowledge—was dependent, not upon any very extraordinary increase of ordinary diseases, but upon the prevalence at the same time of two epidemic diseases, measles and influenza. Up to the end of the year the outbreaks of those epidemics persisted, and though they had decreased very much, they had not yet completely disappeared from the colony, and now there were cases which showed that influenza was producing effect upon the health of the colony until the present. Measles was gradually disappearing. The President concluded by referring to Koch's treatment of tuberculosis.

Vote of Thanks.—Dr. GODFREY proposed, and Dr. WALLBRIDGE seconded, a vote of thanks to the President, which was heartily accorded.

Paper.—Dr. ROWLAND read a paper on Artificial Feeding. After some remarks on artificial food, nutrient enemata, etc., he said that in ulceration of the intestines milk alone was the diet; also in enteric fever, where fatal hæmorrhage had followed disobedience to the medical instructions—the last case he had seen being that of a young man who had eaten some grapes unknown to the nurse, death following a few hours after from hæmorrhage. At the New Amsterdam Hospital he treated all cases of diarrhœa with a purely milk diet, which was necessary for months when there was chronic ulceration of the intestines. In such cases the only other substance permissible was raw beef juice prepared after the method of the famous French physician Trousseau. In the milk it might be necessary to give some flavouring matter, and for that purpose no more than two ounces of brandy or whisky might be advantageously used. There was often considerable difficulty in persuading patients to live on such a diet. Some other points in connection with artificial feeding he would reserve for a future occasion.—The paper was discussed by Dr. LAW, Dr. GODFREY, and the PRESIDENT; and Dr. ROWLAND replied.

BRITISH MEDICAL ASSOCIATION.

FIFTY-NINTH ANNUAL MEETING.

THE fifty-ninth Annual Meeting of the British Medical Association will be held at Bournemouth on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1891.

President: WILLOUGHBY FRANCIS WADE, B.A., M.B., F.R.C.P., J.P., Senior Physician, Birmingham General Hospital, 27 Temple Row, Birmingham.

President-elect: JOHN ROBERTS THOMSON, M.D., F.R.C.P., Consulting Physician, Royal Victoria Hospital, Bournemouth, Monkchester, Bournemouth.

President of the Council: WITHERS MOORE, M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Burgess Hill, Sussex.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital.

An Address in Medicine will be delivered by THOS. LAUDER BRUNTON, M.D., F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, London.

An Address in Surgery will be delivered by JOHN CHIENE, M.D., F.R.C.S.Ed., Professor of Surgery at the University of Edinburgh.

An Address in Public Medicine will be delivered by EDWARD COX SEATON, M.D., Lecturer on Public Health at St. Thomas's Hospital, London.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

A. MEDICINE.—*President:* P. H. PYE-SMITH, M.D., F.R.S. *Vice-Presidents:* WILLIAM GEORGE VAWDREY LUSH, M.D.; THOMAS BARLOW, M.D. *Honorary Secretaries:* WM. FRAZER,

M.D., "Elmhurst," Madeira Road, Bournemouth; H. Montague Murray, M.D., 27, Savile Row, W.

B. Surgery.—*President:* John Ward Cousins, F.R.C.S. *Vice-Presidents:* J. D. G. Douglas, M.D.; Wm. Watson Cheyne, F.R.C.S. *Honorary Secretaries:* A. Gunton Turner, M.R.C.S., "Holmwood," Bournemouth; A. A. Bowlby, F.R.C.S, 43, Queen Anne Street, W.

C. Obstetric Medicine and Gynæcology.—*President:* W. J. Smyly, M.D. *Vice-Presidents:* Allan McLean, M.D.; A. H. G. Doran, F.R.C.S. *Honorary Secretaries:* H. A. Lawton, M.R.C.S., 74, High Street, Poole, Dorset; Montagu Handfield-Jones, M.D., 24, Montagu Square, Hyde Park, W.

D. Public Medicine.—*President:* J. Burn Russell, M.D. *Vice-Presidents:* H. F. Parsons, M.D.; John Comyns Leach, M.D. *Honorary Secretaries:* C. H. W. Parkinson, M.R.C.S., Wimborne Minster; P. W. G. Nunn, L.R.C.P., "Maplestead," Christchurch Road, Bournemouth.

E. Psychology.—*President:* P. Maury Deas, M.B. *Vice-Presidents:* Henry John Manning, M.R.C.S.; D. Nicolson, M.D. *Honorary Secretaries:* P. W. Macdonald, M.D., Dorset County Asylum, Dorchester; William Habgood, M.D., Belmont, Sutton, Surrey.

F. Pathology.—*President:* W. Howship Dickinson, M.D. *Vice-Presidents:* Kingston Fowler, M.D.; W. Russell, M.D. *Honorary Secretaries:* W. G. Spencer, M.B., 35, Brook Street, Grosvenor Square, W.; E. Hyla Greves, M.D., Rodney House, Poole Road, Bournemouth.

G. Ophthalmology.—*President:* N. C. Macnamara, F.R.C.S. *Vice-Presidents:* Rowland W. Carter, M.D.; Malcolm M. McHardy, F.R.C.S.Ed. *Honorary Secretaries:* J. B. Lawford, M.D., 55, Queen Anne Street, W.; Bernard Scott, M.R.C.S., "Hartington," Poole Road, Bournemouth.

H. Diseases of Children.—*President:* J. F. Goodhart, M.D. *Vice-Presidents:* T. W. Trend, M.D.; T. B. Scott, M.R.C.S. *Honorary Secretaries:* Sidney Phillips, M.D., 62, Upper Berkeley Street, W.; Dennis C. Embleton, L.R.C.P., "St. Wilfred's," Michael's Road, Bournemouth.

I. Therapeutics.—*President:* Wm. Vicary Snow, M.D. *Vice-Presidents:* Sidney Coupland, M.D.; A. G. Barrs, M.D. *Honorary Secretaries:* Christopher Childs, M.D., 2, Royal Terrace, Weymouth; John Rose Bradford, M.D., 52, Upper Berkeley Street, W.

Honorary Local Secretary: James Davison, M.D., "Walderslow," Bournemouth.

Programme of Proceedings.

Tuesday, July 28th, 1891.
9.30 A.M.—Meeting of 1890-91 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees: and other business.
4 P.M.—Sermon by the Right Rev. the Lord Bishop of Winchester.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address.

Wednesday, July 29th, 1891.
9.30 A.M.—Meeting of 1891-92 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Dr. T. Lauder Brunton, F.R.S.

Thursday, July 30th, 1891.
9.30 A.M.—Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery by Professor J. Chiene.
7 P.M.—Public Dinner of the Association.

Friday, July 31st, 1891.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Public Medicine by Dr. Edward C. Seaton.

Saturday, August 1st, 1891.
Excursions.

Literary Intelligence.—The German Gesellschaft für Kinderheilkunde has published the *Transactions* of its eighth meeting held in connection with the sixty-third meeting of German naturalists and physicians at Bremen. This is the first time that the society has published its *Transactions* separately. The volume, which is edited by Dr. E. Pfeiffer, of Wiesbaden, contains papers by Thomas on Scarlet Fever, and by Ranke and Steffen on the Treatment of Laryngeal Diphtheria, besides communications by Flesch, Hochsinger, Meinert, Dreier, Mayer, and others. The publisher is J. F. Bergmann, of Wiesbaden.

CORRESPONDENCE.

THE LONDON DEATH-RATE.

Sir,—The table published in the British Medical Journal for March 14th, giving the true death-rates of London for 1890, is deserving of careful study. The few remarks which, with your permission, I propose to make upon it, are put forth in a spirit of inquiry, and in the hope that they may elicit comments from skilled statisticians.

The death-rate of London for 1890 was 20, which contrasts favourably with 24.4, the rate for 1861-70, and 22.5, the rate for 1871-80. But is the "London" of 1861-70 in any way comparable with the "London" of 1890? The population has risen in the thirty years, 1861-90, from 2,800,000 to 4,400,000, while the population in the central districts (*i.e.*, the night population), has decreased by about 100,000. These figures show that about 1,700,000 of the inhabitants of the "London" of 1890 are living in newly-developed districts and in new houses.

If we examine the death-rates of some of the central districts for the past year, it will be found difficult to extract much satisfaction from them. Thus:—

District.	Population.	Death-rate.
St. George's-in-the-East	46,055	34.6
Holborn	29,395	32.4
Whitechapel	66,446	28.8
St. Saviour's, Southwark	26,938	28.2
St. George's, Southwark	60,404	27.0
London City	35,636	26.9
Stepney	58,975	26.9
St. Giles	38,698	26.5
Westminster	54,537	26.3
Strand	28,489	25.2
Shoreditch	125,284	24.8
St. Luke's	52,000	24.7
Total	622,857	

Here, then, is a city in a ring fence, with 622,857 inhabitants, and larger than any other city in the country, except the "London" of which it constitutes the centre. In this city in 1890 there occurred 17,248 deaths, which gives a death-rate of 27.7.

In Fulham, Marylebone, St. Pancras, Clerkenwell, St. Martin's, Bethnal Green, Mile-end, Newington, St. Olave's, Bermondsey, Woolwich, and Rotherhithe, with a population of over 1,100,000, the death-rate ranged from 24.2 as a maximum, to 20.3 as a minimum.

The able compiler of the table from which I am quoting states that his figures are the result of a "complete distribution of deaths occurring in the public institutions of London among the various sanitary districts in which the patients had previously resided." "By this means alone," he says, "can trustworthy data be secured upon which to calculate reliable rates of mortality." In this way the deaths of persons who come from the country to die in London are eliminated; but, I would ask, Is any allowance made for those who fall ill in London, and go out of it to die?

The birth-rate of London was the lowest on record (29.1). Compared with the average birth-rate of 1877-86, this gives us a deficit of over 23,000 births for the year. In Kensington, St. George Hanover Square, St. James Westminster, Hampstead, St. Martin's, Strand, City, and Lewisham, the birth-rate was under 25; and in St. Martin's, the Strand, Holborn, and the City, the deaths exceeded the births. It is generally admitted that the population of London is largely recruited by selected adults imported from the country, and that London contains less than its due proportion of persons under 15 and over 60. In order that the death-rate can be appreciated at its true value, or be compared with that of other places, a very careful correction for age-distribution is essential.

A very disturbing factor in the calculation of the London death-rate, and for which no allowance is possible, is to be found in the seasonal fluctuations of population. What is the difference between the population when "everybody" is in town (say June) and when "everybody" is away (say the last two weeks in August)?

The large death-rate of 1890 in the central districts of Lon-

don was largely due to the influenza at the beginning of the year, and to the severe weather at its close. The influenza was, so to say, an accident; but it is certain that the high mortality at the end of the year was largely due to a foul atmosphere of our own making.

What were the diseases which produced this large death-rate? The "principal zymotic diseases" were answerable for less than one-seventh of the 89,694 deaths. But has not the time arrived for the inclusion of tuberculosis and pneumonia among the "principal zymotic" and probably preventable diseases?—I am, etc.,

Wimpole Street. G. V. POORE.

PROPOSED RECONSTITUTION OF THE UNIVERSITY OF LONDON.

SIR,—In common with other members of Convocation, I have received a communication, signed by some 56 graduates, in which the scheme of the Senate is severely criticised in eleven different points, and which concludes with the following paragraph: "Should you, after due consideration of the scheme and the objections we have pointed out, agree with us that a reconstitution of the University of London upon such lines is undesirable, we ask you to be good enough to sign and return the enclosed expression of dissent, which we will convey to the Senate in an appropriate manner."

I wish briefly to urge upon members of Convocation the desirableness, at any rate, of seeing the scheme itself, a copy of which each member will shortly receive from the clerk of Convocation, before deciding for or against it. A mere sense of fairness and justice prompts such a course. Surely delay for the purpose of enabling a correct judgment upon the pros and cons of this weighty question is preferable to the formation of a preconceived prejudice fostered by the *ex parte* statements of these fifty-six opponents of the scheme. The whole question, indeed, and its possible issues are so momentous to the University that the verdict of Convocation should be the outcome of nothing less than a calm, deliberate consideration of the scheme itself. No one pretends that that as now propounded it is perfect, but it may be improved; that the question is one of great difficulty is evidenced by the length of time already expended upon it by the Senate and its committees at numberless meetings.

Finally, members of Convocation should remember the probability there is that rejection of the present scheme, or of a modification thereof, would entail a severe shock to the University itself, and would tend to lower the future standard of higher education in England, since the rejection in question would almost certainly lead to the formation in the metropolis of a second university, which would compete in all the faculties with the present University of London.—I am, etc.,

Gloucester place, W. GEORGE EASTES, M.B.

THE PRESENT POSITION OF ANTISEPTIC SURGERY.

SIR,—As Sir Joseph Lister has usually ignored Mr. Tait's attacks, and as there seemed no reason why he should make the last one an exception, I ventured to reply to it, being impelled thereto not by any sense of peculiar fitness for the task, but by profound respect and warm personal regard for the author and exponent of the antiseptic theory and by an abiding faith in the truth of that great surgical principle. A specific and utterly groundless charge contained in Mr. Tait's article as to the "deadly and dangerous" character of the double cyanide dressing, with which I have had a fairly large experience and the use of which I have been teaching to hundreds of young men at the University of Pennsylvania, supplied a further motive for the reply. My assertion was that "the fluids and tissues of the healthy living body are practically sterile."[1] Mr. Tait says, in contradiction, "the germs of decomposition exist already in the blood and elsewhere in the body, and are ever present." In support of my position, I may cite, in addition to the experiments of Hauser and Cheyne already mentioned, those of Pasteur, Meissner, Koch, Zahn, Fodor, Chiene, Ewarts, Rosenbach, Crookshank, and others, all of which are familiar to bacteriologists, but are useless in an attempt to instruct Mr. Tait on account of his partiality for what he calls "the every-day facts of the housekeeper's room." If he will consent to accept the every day facts of the surgical ward instead, and will recall the almost invariable absence of putrefactive changes in simple fractures, in uncomplicated synovial effusions, in ovarian cysts, in contusions without solution of continuity, in pleural effusions, etc., he will realise that the germs of decomposition can scarcely be omnipresent, as he claims, as it would be "diametrically opposed to every-day experience" if their unvarying presence did not oftener give rise to the form of fermentation that we know as putrefaction.

Possibly, when Mr. Tait refers to the occurrence of abscesses in closed cavities in support of his position, he allows the difference between the germs of putrefaction and the microbes of suppuration temporarily to escape his memory, or possibly he purposely ignores this differentiation of such insignificant objects, as it rests upon the evidence of gentlemen who waste their time in looking through microscopes and in comparing their observations and testing their results by biological experiments.

There can be no doubt that pathogenic microbes do now and then gain access to the tissues of a healthy organism, but they are immediately and almost invariably eliminated by the excretory organs or destroyed by the action of the cells and fluids of the body. The interesting fact (I think, on the testimony of Rosenbach, Kocher, Becker, Krause, Ribbert, Steinthal, and Krönlein, I may venture to call it a fact, though it is not an every-day one) that osteomyelitis occurs in a simple fracture after micrococci have been injected into the circulation, although previously the "omnipresent" germs have exerted no influence, would seem to emphasise the difference between the occasional and accidental admission of pathogenic microbes into a healthy body (which is not denied), and the effect of an increased dose of such microbes upon an organism in which there has been established a *locus minoris resistentiæ*.

Possibly in the few cases of empyema, joint abscess, etc., which are not tuberculous (and therefore dependent upon a specific organism, which I suppose not even Mr. Tait would claim to be "omnipresent") some such infection does occur, but at present demonstrative proof of the exact channel of contamination is wanting. It is, however, equally beyond doubt that in many of them an infection atrium exists communicating with the cavity through the interstices of the tissues or through the lymphatics. At any rate, it is a matter of common experience that such abscesses are exceedingly rare in non-tuberculous patients. Their occurrence, therefore, offers not the slightest justification for the sweeping assertion of Mr. Tait, who insists that we must either reject the germ theory of suppuration altogether, or admit the "omnipresence" of the germs.

As to the "beef and pickle" argument, Mr. Tait surely did not realise that he was offering a "biological experiment" in evidence. If he did so deliberately, I would ask him to let me have the exact antiseptic value of the "powerful" pickle in its influence on both bacteria and spores; the methods used for disinfecting the cleaver and sterilising the hands of the experimenter; the precautions taken in transferring the "bed and silverside" (whatever that may be) from the ox to the pickle, and such other information as may enable me to defend my major premiss properly, or to renounce it if the "facts of the henwife and housekeeper" are really facts, and are overwhelmingly against me.

The progressively improving results obtained by such experiments as Meissner and Rosenbach in the preservation of portions of healthy animal tissue, by placing them with great quickness and scrupulous cleanliness in previously sterilised flasks show the usual absence of germs in the healthy body, and serve at the same time to explain the failures of some earlier observers. As they acquired dexterity, they became able to preserve in this way, and without the use of any antiseptic solution, nearly every specimen.

In the face of such evidence as this, confirmed by other investigators and reinforced by bacteriological study of the blood and tissues, statements as to the omnipresence of the germs and the consequent inability of antiseptic treatment based on such insufficient grounds as those Mr. Tait advances are puerile. They would be laughable if the question involved was not one affecting human life.—I am etc.,

Philadelphia, Pa. J. WILLIAM WHITE.

[1] Address before the University of Toronto, December 19th, 1890; *Annals of Surgery*, January, 1891.

THE ELASTIC CORD TOURNIQUET.

SIR,—I regret to see the BRITISH MEDICAL JOURNAL of March 14th contained a serious indictment against Esmarch's bandage and the elastic tourniquet. In a paper entitled "Suggestions for a New Tourniquet," Dr. Ashby Osborn expressed the opinion that the modern practice of employing an elastic bandage and cord for controlling hæmorrhage during an operation was a retrograde step, as it caused a great loss of blood from vessels apparently unable to contract after such strong compression: and then, with the hope of avoiding this serious complication, he recommended a modification of the old pad and screw instrument for compressing the main artery alone, without any pressure on the collateral circulation.

The progress of our science will probably never remove all risk from the practice of surgery. We have often to combat the danger of nervous shock, the risk arising from loss of blood, and also that special risk which must always attend the administration of an anæsthetic. Surely if the statement made by Dr. Ashby Osborn be correct, that a great loss of venous blood cannot be avoided whenever an elastic cord is used, it becomes our paramount duty to assist him in his bold effort to shatter the reputation of this little instrument.

My experience in the practice of arresting the flow of blood along a limb by elastic pressure has long convinced me that venous hæmorrhage is always due to faulty manipulation of the cord. Whenever the elastic tension is relaxed and a partial arrest of the circulation is established, the cord acts just like the ligature which used to be applied around the arm in phlebotomy for the purpose of quickening the purple stream. In performing an operation, as soon as the main vessels are secured, the elastic cord tourniquet ought not to be loosened, but removed altogether from the limb. General oozing can be immediately checked by sponge pressure and hot antiseptic irrigation.

In cases of unhealthy inflammation and septic infiltration, the preliminary bandaging must of necessity be omitted. Still, under these circumstances, the return of venous blood can be greatly promoted by gentle manipulation and elevation of the limb before the application of the cord.

May I venture to express the hope that Dr. Ashby Osborn will give the elastic bandage and the elastic tourniquet another trial before he decides to cast them away for ever.—I am, etc.,

Southsea. J. WARD COUSINS.

OBLITERATIVE ARTERITIS.

SIR,—In the very condensed report of a discussion at a meeting of the Clinical Society of London, in the BRITISH MEDICAL JOURNAL of March 21st, page 639, I am made to speak of a case, reported by Mr. Gould, as having been one in which there was syphilitic disease of brain and heart. I wish to be allowed to state that that portion of my remarks concerned another, and entirely different, case; and, like some others, mentioned in contrast with the case under discussion.—I am, etc.,

Grove Hall Asylum, Bow. W. JULIUS MICKLE.

THE MIDWIVES BILL.

SIR,—It has been asserted that it is desirable in the interests of the public that there should be a compulsory, or State, registration of midwives. If this assertion could be proved a strong case would be made out in favour of such a measure; but neither at the recent meeting of the Hospitals Association nor elsewhere have any arguments been brought forward which are at all likely to convince a Select Committee of the House of Commons, if such were granted.

It seems to me that the lines on which the discussion of this question should proceed are somewhat as follows:—1. Is the mortality connected with childbirth in England so exceptionally high, or showing such tendency to increase, as to require special legislation? 2. Is the mortality connected with childbirth in countries where a system similar to that proposed already exists so much lower than in England and other countries without such system as to encourage the adoption of the system? 3. What are the chief causes of excessive mortality in childbirth, and what is the best practical method of combating these? 4. If registration of midwives is the measure best calculated to reduce the mortality connected with childbirth, what is the best method of carrying out such registration?

In discussing question 1, I am at once met by the figures which Dr. Aveling brought before the Gynæcological Society, and afterwards before the Parliamentary Bills Committee of the Association. His figures are confusing, but I understand that he tells us that the death-rate throughout the country is one mother's death in 200 confinements. If this is true, we have great reason for satisfaction. I have before me a table showing that in the practices of ten prominent obstetricians in the United Kingdom, attending persons in the middle and upper classes of society, the average death-rate was 1 death in 116 confinements. The death-rate in New York Maternity Hospital, which used to average 4 in 100, has now, of late years, sunk down to 1 in 103. In my opinion, 1 in 100 is not an unreasonable average. Dr. Aveling also stated that the mortality among lying-in women attended by trained nurses connected with lying-in institutions was only 1 in 729. Now, inasmuch as with a general death-rate of 20 in 1,000 1 person in 729 dies on an average in each period of twenty-five or twenty-six days without any special danger such as that of parturition, it becomes obvious that the success of Dr. Aveling's midwives is almost miraculous, or else founded on fallacy.

I maintain that if the total deaths during the parturient period are not more than 1 in 200, we have a state of affairs which we may well be proud of, and revolutionary legislation is out of the question under such circumstance.

As it would be well to settle these first principles before going more deeply into the matter, I will defer discussing the remaining questions.—I am, etc.,

Highgate. HUGH WOODS, M.D.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

FLEET-SURGEON J. TRIMBLE, has been appointed to the *Camperdown*, and succeeded at Eastney by Fleet-Surgeon WALTER REID, M.D., from the same ship.

Surgeon HERBERT P. SHUTTLEWORTH has been transferred from the *Excellent* to the Royal Marine Artillery Division at Eastney, *vice* Surgeon H. S. R. Sparrow, whose time expired in October last.

Surgeon EDWARD H. M'SHERRY is appointed to the *Duke of Wellington* additional, temporarily, March 20th.

MEDICAL STAFF.

SURGEON R. PORTER, who is serving in the Bengal command, has leave of absence for six months on private affairs.

The undermentioned Surgeons, serving in the Madras command, are posted as follows:—T. B. A. TUCKEY, doing duty Station Hospital, Wellington, to do duty Madras and Southern Districts; W. H. BENNETT, M.B., doing duty Station Hospital, Wellington, to do duty Station Hospital, Bellary; F. T. SKERRETT, doing duty Madras and Southern Districts, to do duty Station Hospital, Wellington; J. E. DONEGAN, doing duty Station Hospital, Bellary, to do duty Station Hospital, Wellington; J. F. BURKE, doing duty Madras and Southern Districts, to do duty, Station Hospital, Bangalore; G. B. RUSSELL, M.B., on arrival from England, to do duty Secunderabad District; H. J. WALLER, M.B., on arrival from England, to do duty Station Hospital, Bellary; Surgeon WAY, on arrival from England, to do duty Madras and Southern Districts; R. E. KELLY, M.D., on arrival from England, to do duty Madras and Southern Districts.

THE INDIAN MEDICAL SERVICE.

SURGEON C. ADAMS, M.B., Madras Establishment, officiating medical officer 15th Native Infantry, is appointed to officiate as Civil Surgeon of Coorg, during the absence on privilege leave of Surgeon J. C. Marsden.

The services of Surgeon-Major W. A. GILLIGAN, Bengal Establishment, Civil Surgeon of Durbhunga, are replaced at the disposal of the Government of India, in the Home Department.

Surgeon-Major E. BOVILL, Bengal Establishment, Civil Surgeon of Chumparun, is appointed to act, until further orders, as Civil Surgeon of Moorshedabad.

Surgeon-Major R. MACRAE, Bengal Establishment, Civil Surgeon of Shahabad, is appointed to act as Civil Surgeon of Chumparun, until further orders.

The services of Surgeon-Major D. M. DAVIDSON, Bengal Establishment, officiating Civil Surgeon of Sealkote, are replaced at the disposal of the Government of India, in the Home Department.

Surgeon-Major J. MAITLAND, M.D., Madras Establishment, Civil Surgeon of Coconada, is appointed to be Senior Medical Officer of Ootacamund, in succession to Surgeon-Major J. North.

Surgeon S. C. SARKIES, Madras Establishment, Civil Surgeon of Cananore, is appointed to act as District Surgeon of Chingleput, and Superintendent of the Reformatory School at Chingleput, *vice* Surgeon-Major H. A. F. Nailer, on other duty.

Surgeon A. T. L. PATCH, Madras Establishment, Acting District Surgeon of Chingleput, is appointed to be Civil Surgeon of Coconada, *vice* Surgeon-Major J. Maitland.

Surgeon E. JENNINGS, Bengal Establishment, has passed the examination in Hindustani by the lower standard.

Surgeon J. F. KEITH, M.D., Bombay Establishment, is appointed Substantive Civil Surgeon, Superintendent of the Lunatic Asylum and of the Medical School at Hyderabad, *vice* Surgeon-Major B. C. Keelan, who has retired.

Surgeon-Major A. W. F. STREET, Bombay Establishment, is allowed special leave on urgent private affairs for six months; and Surgeon-Major J. P. GREANY, M.D., of the same establishment, has privilege leave for three months.

THE VOLUNTEERS.

SURGEON W. BARTER, M.D., 2nd East Riding of Yorkshire Artillery (Western Division Royal Artillery), has resigned his commission, dated May 29th, 1889.

Acting Surgeon H. COOPER, 3rd Middlesex Rifles, has also resigned his commission, which was dated April 29th, 1874.

Mr. CHARLES SWABY-SMITH is appointed Acting Surgeon to the 2nd Battalion of the Queen's Royal West Surrey Regiment, March 21st.

GLASGOW VOLUNTEER BRIGADE BEARER COMPANY.

A BEARER company is being formed in connection with the Glasgow Volunteer Brigade of Infantry. The Brigade-Surgeon, Surgeon-Major James Dunlop, will be in command, assisted by Surgeon-Major J. E. Brodie; and the other surgeons of the company will be Surgeon-Major John Dunlop and Surgeons Quintin, Chalmers, and St. Clair Gray. As soon as the company has been fully enrolled, they will go into training to be in readiness for camp duty in July.

MEDICO-LEGAL AND MEDICO-ETHICAL.

QUALIFIED ASSISTANTS.

ROTHERHAM writes: I am qualified assistant to Dr. A., of this town; aged 27, registered December, 1885; a member of the local medico-chirurgical society; have been with Dr. A. a year and eight months, and hold the position more of a salaried partner than an assistant. Dr. A. is sent for to a case one night; he sends me in his place. I treat the patient, and the patient takes two doses of my medicine, getting some relief. For some reason or other he has no confidence in me, and perhaps two hours afterwards sends for Dr. B., another established practitioner. In the course of a conversation with my principal afterwards, Dr. B. says that he ignores me in the case. Dr. B. knows that I am qualified, and knows me personally.

1. Can Dr. B. thus ignore me?

2. Apart from any particular case, what position does a qualified assistant hold in relation to other qualified men?

3. Ought I to take up the matter and request an explanation from Dr. B.?

*** The alleged attempt of Dr. B. to ignore a fully qualified and registered practitioner in the case in question simply because he chances to be in the position of an assistant is, in our opinion, professionally indefensible, and should be respectfully but firmly protested against, and an explanation of the ungracious act courteously solicited. Further, the relative position of a legally qualified assistant with practitioners in independent practice is, as we view it, correlative with that which obtains in social life, *plus* the age and status of the respective practitioners.

CONSULTATION IN AFRICA.

Mr. G. W. SHAW (Bethulie, Orange Free State).—Professionally regrettable as is the assumed cause of the death of the Kaffir woman, we are not in a position to express any opinion as to the culpability or otherwise of the attendant practitioner, or to do more than seek to impress upon one and all the principle enunciated in the following extract from the *Code of Medical Ethics*, chap. 2, sect. 5, rule 4, foot-note:—

"What, it has been critically asked by an eminent practitioner (the late Sir Robert Christison) since the preceding rule was penned, should be the conduct of the consultant when he finds that the ordinary medical attendant has misunderstood the case, or, it may be, has committed a grievous error? We reply that, in obedience to the "royal law" (James, ch. ii, v. 8) he should, while striving to do his duty to the patient, at the same time endeavour judiciously to shield his brother practitioner from the obloquy and prejudice which are always, in a greater or less degree, attached by patients to an error in judgment by their doctor; for who, it may be replied, has not in the course of his professional life committed like grievous errors, of which the 'still small voice within' is alone cognisant and the sole accusant?"

DR. GUNNING (Bethulie, Orange Free State).—The extreme pressure on our columns, and the necessarily limited space at our disposal for ethical questions, preclude the insertion of our correspondent's lengthy communication.

In reply to the following questions on which he specially solicits our opinion, namely:—(1) "Has 'V. W. T. W.' any right to refuse a consultation with me or my partner, who are all three licensed by the same and only licensing power in this State?" (2) "Has a M.R.C.S., L.R.C.P. any but the fullest right to enter into partnership with a fully qualified man in the State, in which his partner (incorrectly expressed in the original) as well as he are practising?"—we may note that (1) Inasmuch as Dr. G. and his partner are not only legally qualified to practise in their respective native lands, but are also duly authorised by the supreme licensing body to practise in the Orange Free State, we consider that, although "V. W. T. W." has legally a right to decline to meet them in consultation, he is, in our opinion, morally bound to assent thereto, and especially in cases in which life is imperilled. Moreover, we fail to comprehend his hesitation in the matter in view of the fact that he has heretofore not only willingly done so, but even solicited and thankfully accepted Dr. G.'s professional services in the case of his own child when he himself had resigned all hope of saving her life. (2). Under the circumstances related, we are clearly of opinion that "M.R.C.S., L.R.C.P." had a perfect right to enter into partnership with Dr. G. in the State in question.

CONSULTANTS AND GENERAL PRACTITIONERS.

M.R.C.S., L.S.A. writes: A., a general practitioner, and B., an M.D., have perfectly independently of each other attended the members of a family for at least sixteen years—A. considerably more so than B. A. is in attendance on one of them; B. is called in; in consultation A. and B. meet, and a second consultation is agreed upon for the following morning. A. sees the patient late at night. In the morning A. receives a note stating it is the wish of the family that B. should be the sole attendant. B. sees the patient, and then writes to say he thinks A. "has been badly treated, but he does not feel justified in not seeing the patient out of this." Is this the correct etiquette for a consultant?

*** Personally annoying as are such incidents as that alluded to by our correspondent, they are, unhappily, of more or less frequent occurrence in professional life, and, hard though the lesson be, we would venture to impress upon him the expediency of accepting the inevitable in a calm, philosophic spirit, and thus seek to avoid the heart-burning and jealousy which such proceedings otherwise too often engender in the superseded practitioner. Moreover, inasmuch as the family in question communicated to A. their wish that B. should be the sole attendant, and also that the latter wrote to him to the effect that he regarded their conduct in the case as unjust, and so far loyally conformed to the rules of the profession, we, in view of the fact that both A. and B. had for years been independently attending the family, fail to see that exception can fairly be taken to the course pursued by B. In further illustration of our views on the point involved, we would refer "M.R.C.S., L.S.A." to the last paragraph in the comments which appeared in the BRITISH MEDICAL JOURNAL of March 14th, page 611, under the heading of "Duties of Consultants."

SUBSTITUTES.

M.B.A. writes: A. is attending a case at the house of C., but has to leave home for a few days. He requests B. to visit C.'s house for him. C. is well pleased with B., and requests him to continue the treatment of the case. This B. refuses to do, and hands the case over to A. upon his return home. Question: If at a future time in another illness C. should send for B., ought B. to go, or would he be guilty of any breach of etiquette towards A.?

*** In responding to "M.B.A.'s" question, we would observe that, although the right of a patient to change or discard his medical adviser is unquestionable, B. cannot, under the circumstances related, be too guarded in consenting to supersede A., even in the case of a fresh illness, though in the latter event, he would not *de facto* commit a breach of professional etiquette. It would, nevertheless, be a matter for B.'s serious consideration how far such an additional patient to his list could compensate for the loss of the existing good feeling, and mayhap of the friendship, of A.

CHARACTERS AND CERTIFICATES.

FIAT JUSTITIA asks whether the law can compel a principal to give a character of an assistant when the former refuses to do so out of mere spite and personal dislike at the latter's leaving. Also, will the law compel a teaching professor at a medical school to sign a candidate's certificate when the latter refuses to do so out of personal dislike only and without reasonable cause?

*** In answer to our correspondent's first question, it seems clear that (in the absence of any express agreement to the contrary) there is no legal obligation binding an employer to give any character at all, and that no action will lie against him for refusing to do so.

With reference to the second question, the circumstances are not given with sufficient detail to enable us to express any opinion other than on general principles. The maxim is "*Ubi jus ibi remedium*," but there must be taken into consideration the numerous cases in which there may be damage without occasioning what the law esteems an injury. In this case we think the onus would lie on the plaintiff to prove malice and an absence of reasonable and probable cause, assuming him to have an enforceable right. It would, however, be desirable to lay all the facts before a solicitor prior to commencing any proceedings to assert the alleged right.

LUNACY CERTIFICATES IN IRELAND.

IOTA.—The forms of certificates, the documents, and the methods of procedure in Ireland differ entirely from those in England. For example, in Ireland pauper patients, and patients whose friends pay a small sum for them amounting to a portion or the whole of the bare cost of their maintenance, may be admitted into district lunatic asylums on application to the Board of Governors if the friends present, completed and in proper order, certain declarations, certificates, forms, and engagement to remove. Thus, in the former case there is a stamped declaration made before a justice, by the person acting in the matter, a form of particulars filled up by the patient's friends, a certificate of a magistrate and clergyman or Poor-law guardian, a medical certificate, an engage-

ment to remove. In the latter case—that of a paying patient in a district asylum—the documents are somewhat different, and there are two medical certificates, or a certificate signed by two medical men.

Another method deals with dangerous patients. These, if apprehended and brought before two justices, and certified by the nearest available medical officer of the dispensary district to be dangerous, may, by warrant under the hands and seals of the said justices, be directed to be taken, by the police authorities, to the asylum for the county or town. There are provisions for their removal from the asylum by friends, which provisions are extremely loose and ill-guarded in practice.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, March 20th.

Custody of Children Bill.—The House agreed to the Commons's amendments to this Bill.

HOUSE OF COMMONS.—Thursday, March 19th.

Custody of Children Bill.—This Bill passed through Committee.

Friendly Societies.—The CHANCELLOR of the EXCHEQUER, in answer to Mr. H. VINCENT, said a Bill was in preparation for carrying into effect some of the recommendations of the Select Committee of 1889.

Hospital Medicines in Ireland.—Mr. E. STANHOPE, in answer to Mr. J. F. O'BRIEN, said the recent competition for the supply of drugs and medicines had reference to the whole army, including the force in Ireland. The contract for the supplies in Ireland, estimated at about £1,700 a year, would, as a result of the competition, remain with the Apothecaries Hall at Dublin.

London Water Supply.—The following motion, moved by Mr. RITCHIE, was agreed to: "That it be an instruction to the Committee on the London Water Commission Bill that they have power to inquire into all matters connected with the nature, price, management, sources, and sufficiency of the water supply of London and its suburbs, and to insert in the Bills such provisions in connection therewith as in their judgment are expedient."

Friday, March 20th.

New Bills.—Leave was obtained to introduce the following Bills, which were brought in and read a first time:—Sir J. Lubbock: Bill to confer power upon the London County Council with respect to the supply of water.—Sir H. Roscoe: Bill to amend the Pharmacy Acts.

Monday, March 23rd.

The Consumption of Chlorodyne.—Mr. H. SMITH asked the Secretary of State for the Home Department whether his attention had been drawn to the large consumption of chlorodyne, especially among women, and the grave evils which resulted from the practice; whether the fact of chlorodyne being a patent medicine and protected by a stamp exempted it from the operation of the Sale of Poisons Act; and whether the Government would take into consideration the expediency of classing chlorodyne with other narcotics, and only allow it to be sold under the same restrictions.—Mr. MATTHEWS said he received last year a representation from a coroner's jury that some restriction should be placed on the sale of chlorodyne. He forwarded this representation to the Privy Council Office, which was the department concerned. The answer to the second paragraph depended upon the proper construction of Sections 16 and 17 of the Act, to which he referred the hon. member. Section 2 of the Pharmacy Act, 1868, prescribed the manner by which any article might be added to Schedule A of that Act—namely, by a resolution of the Council of the Pharmaceutical Society. The hon. member should address any representation to that Society in the first instance.

Baby Farmers' Advertisements.—Mr. CHANNING asked the Home Secretary whether his attention had been called to the evidence in several recent baby farming cases, in which convictions had been obtained for manslaughter; whether it appeared that the children were largely obtained by means of advertisements in daily and weekly newspapers published in London and the provinces; and whether he would take into consideration the advisability of legislating with a view to control or prevent the insertion of such advertisements.—Mr. MATTHEWS observed that the evidence in these cases showed that children were obtained by means of advertisement. He did not see his way to legislative interference with these advertisements, which did not invite to anything necessarily illegal. Neither the Infant Life Act of 1872, nor the amending Bill of last year, which was considered by a Select Committee of this House, proposed to control or prevent the insertion of such advertisements, which were, moreover, found by the police to be a useful clue to the whereabouts of the baby-farming establishments.

OBITUARY.

RICHARD G. H. BUTCHER, F.R.C.S.I., M.D.DUB. (HON. CAUSÂ).

MR. RICHARD G. H. BUTCHER, of Dublin, died at Sandymount, near that city, on March 21st, in his 71st year. For several years he had retired from practice owing to ill-health, but in his time he filled a prominent place in the surgical profession, and his death will be very generally regretted.

Mr. Butcher was born at Danesfort, Killarney, on April 19th, 1819, his father being an admiral in the Royal Navy. He was the fifth son, and his elder brothers also arrived at great distinction in their several professions. The first became a Fellow of Trinity College, and afterwards Bishop of Meath; the next a captain in the navy; the third a major-general; and the fourth a colonel in the marines.

The subject of this notice received his preliminary education in Cork, and then came to Dublin, where he joined the Peter Street School of Anatomy, and subsequently he went to London, where he studied under Sir Astley Cooper. He became a member of the English College of Surgeons in 1838, and in 1841 joined the Irish College, of which he became a Fellow in 1844, under the new charter, and President in 1866-7. For several years he was surgeon to the Mercer's Hospital, but on his being made Lecturer on Operative Surgery in Trinity College he joined the staff of Sir Patrick Dun's Hospital, where he remained up to the period of his retirement.

Mr. Butcher was a very copious writer, detailing his cases with great elaboration. Coming into practice just as many of the brilliant surgeons of the period in Dublin were passing away he rapidly passed to a position of great eminence and popularity, so that his practice became very extensive and he was able to accumulate a considerable fortune. He was a very energetic surgeon, and he helped to resuscitate the operation of excision of the knee by the successes, although numerically few, which he was able to record. It was in connection with this operation and the resection of other joints that he devised the saw which is now known by his name. His collection of casts and specimens was very good, and some years ago he presented it to the College of Surgeons, where it now is.

Although he had for so long withdrawn himself from the active work of the profession Mr. Butcher still took an interest in what advances were being made. In some branches, including ovariotomy, he had worked enthusiastically at an early date under circumstances less encouraging than we now have. He was one of the surgeons of his time whose work and name were best known, and he has left behind him a reputation which will not soon be forgotten.

INDIA AND THE COLONIES.

INDIA.

"MADRAS VACCINE PASTE."—Vaccination with animal lymph has a further difficulty to contend with in India, that is the hot climate. It has been shown that stored animal lymph cannot be trusted to retain its efficacy for more than a few days at the longest. In order to use this lymph it has been necessary for the vaccinator either to perambulate the district with calves, or else for a much larger number of animal vaccine institutions to be organised than hitherto, a procedure entailing of course great expense. If neither of these courses is followed and the lymph is obtained from a distant place, the percentage of failures in the vaccination is of course greatly increased. Under these circumstances, Surgeon-Major W. G. King, Acting Sanitary Commissioner for Madras, has lately conducted a series of experiments on the possibility of mixing the vaccine lymph with some preservative that will retard or prevent its putrefaction, and will not at the same time impair its activity. With this object Dr. King has tried a variety of substances, such as glycerine, boroglyceride, vaseline, etc., and finally lanolin. His conclusions, embodied in a Government report, are as follows: In a tropical climate the storage of lymph in capillary tubes is untrustworthy; even when they are surrounded with non-conducting media it is only exceptionally that such lymph will retain its efficacy for more than three days. Specimens of lymph mixed with glycerine were inoperative after seven days. The addition of boroglyceride enabled the lymph to be preserved for fifteen days, but many of the specimens had deteriorated, and hence this method was found to be too uncertain for use. Dr. King next experimented with the pulp of the vaccine vesicle instead of with the lymph. If the pulp was mixed with glycerine and distilled water to the consistence of mucilage, the resulting mixture was inoperative after some nine or twelve days. When, however, lanolin was used instead, the pulp resisted deterioration much longer; if the lanolin was mixed with the vesicle pulp in the proportion of one of the latter to four of the lanolin, the "paste" will retain its efficacy for forty days. Dr. King recommended the

paste to be made with pure lanolin, and of three strengths: No. 1 of the strength of 1 to 4, capable of lasting forty days; No. 2, 1 to 6, lasting three weeks; and No. 3, 1 to 10 of lanolin lasting fifteen days. He is inclined to think, however, that perhaps the most diluted paste only is requisite, and that the failures observed with it after a fortnight were due to too little of it having been used. Dr. King concludes his report [Government of (1890) Madras Local and Municipal] with directions for the preparation, storage, and transport of the "paste."

Legislative Council.—The Age of Consent Bill and the Factories Act Amendment Bill have been passed by the Indian Legislative Council. The former Bill raises the age of consent to 12 years, and provides that only a magistrate of the highest class shall take cognisance of offences under the Act. The Factories Bill, as amended, provides that no children below the age of 9 are to be employed in factories, and all persons below the age of 14 are to be treated as children in certain industries. Great interest was manifested by the public in the proceedings of the Council, and its decisions were awaited anxiously by a large gathering, mostly composed of native gentlemen.

New Lunatic Asylum in Bombay.—His Excellency the Governor has had placed at his disposal the sum of Rs.1,00,000, to be applied to the construction of a new lunatic asylum for females in Bombay. In accepting this munificent gift his Excellency expresses himself as pledged to proceed at the earliest possible moment with the erection of a new asylum.

HONG KONG.

College of Medicine.—His Excellency Li Hung Chang has consented to become patron of the College of Medicine for Chinese, Hong Kong. The College is now entering its fourth year and shows every sign of continuing to flourish.

Bearer Company.—At the recent review of the troops, naval and military, held on the occasion of the celebration of the jubilee of Hong Kong (it being now fifty years since it was ceded to Great Britain) two detachments of stretcher-bearers, consisting of the students of the College of Medicine, marched past with the local artillery volunteers. Their pretty uniform excited admiration, and they were complimented on their appearance and work by the General commanding.

Epidemic of Influenza.—Influenza has been very prevalent in Hong Kong, all varieties met with in England being present. Dengue fever, bronchial catarrh with fever, and epidemic fever are some of the names which have been frequently applied, all in harmony with the conflicting opinions met with throughout the world. The following are some of the diseases which accompany it: Sore throat, varying from severe catarrh to malignant ulceration; jaundice to a slight and to a marked extent; torticollis; hepatitis and perihepatitis; typhlitis; fever, with bright rose rash, sometimes accompanied by, but frequently without, sore throat; basal pneumonia. The usual course of disease is as follows: Fever for three days, varying from 100° to 104°, with aches and pains, headaches, cough, with but little or no coryza. Fourth day, temperature normal. Fifth day, relapse. Sixth day, temperature normal, but the cough continues for three weeks longer. A few children and persons suffering from lung troubles have succumbed.

BRITISH COLUMBIA.

Leprosy.—While the Chinese were being driven out of their quarters in Victoria, British Columbia—the ground being required for the erection of a market—six lepers in a filthy state were found concealed. There is great complaint at the apathy of the authorities.

NEWFOUNDLAND.

Diphtheria.—During the past two years there have been 2,499 cases of diphtheria in St. John's, Newfoundland. As the population of the city is 30,000 the proportion of persons attacked by the disease was about 1 in 12. The rate of mortality was 1 in 5 of those attacked.

The King of Italy has given 160,000 lire (£6,400) to the city of Turin, on the occasion of his birthday, towards the erection of a hospital for infectious diseases.

HOSPITAL AND DISPENSARY MANAGEMENT.

SOUTH CHARITABLE INFIRMARY, CORK.

At a recent special meeting of the trustees to receive the annual report, it was stated that the hospital was in a high state of efficiency, and last year 979 patients were treated in the wards and 12,198 at the extern department. The trustees being of opinion that the nursing arrangements might be improved, entered into arrangements with the Dublin Nursing Institution for the complete nursing of the hospital, and as a result it has supplied three skilled lady nurses and seven partially trained probationers to assist them in their duties, the result so far being very satisfactory. The expenditure last year has been considerably over the income, the result being that a sum of about £600 had to be taken from the reserve to make up the deficiency. An appeal has been made for the sum required—namely, £600—and a fair amount already subscribed.

The question of amalgamating the North and South Infirmaries has, for some reason or other, been dropped, which is a matter to be regretted, inasmuch as the working expenses—payment of officials, etc.—would be very much less than for two separate institutions if amalgamation were to take place, and in all probability the single amalgamated hospital would be more efficient than two separate institutions.

ABERDEEN SICK CHILDREN'S HOSPITAL.

The annual report of this institution states that there were treated in the hospital during 1890 484 patients. The daily average number of patients in the hospital was 55, and the average stay of each patient was 41 days. During the summer season 54 children were under care at the various convalescent cottages connected with the institution. Mr. Charles McDonald, Froghall Granite Works, Aberdeen, has generously given to the hospital a villa at Culter, which cannot fail to form a most valuable convalescent home. Of the 484 patients the results were: cured, 313; improved, 71; removed at desire or unfit, 22; died, 25; remaining December 31st, 1890, 53.

UNIVERSITIES AND COLLEGES.

OXFORD.

Examinations in Medicine and Surgery, 1891.—The Regius Professor of Medicine gives notice that the final examination for the degree of Bachelor of Medicine will commence on Monday, June 1st, at 9.30 A.M., in the Examination Schools. The examination for the degree of Master in Surgery will take place on Thursday, June 11th. The first examination for the degree of Bachelor of Medicine will commence on Monday, June 22nd, at 9.30 A.M. The Secretary of the Boards of Faculties gives notice that he will be in attendance at his office in the Clarendon Building on Saturday, May 16th, from 9.30 to 10.30 A.M., and from 2 to 3 P.M., for the purpose of receiving names of candidates for the second examination for the degree of M.B.; on Wednesday, May 27th, from 2 to 3 P.M., for the purpose of receiving names of candidates for the examination for the degree of M.Ch.; and on Saturday, May 30th, from 9.30 to 10.30 A.M., and from 2 to 3 P.M., for the purpose of receiving names of candidates for the first examination for the degree of M.B. Names, with the statutable certificates and fees, may be sent to him by letter at any time not later than the abovementioned days.

EDINBURGH.

University Court.—At the last meeting of the University Court, Lord Stormonth Darling took his seat on his appointment as Lord Rector's Assessor. The Financial and Statistic Reports for 1889-90 were approved, and ordered to be transmitted to the Secretary for Scotland. Amongst the other items of business that came up were the draft ordinances for Science Degrees in the Department of Public Health, sent back to the Court as revised by the Senatus and Draft

Ordinances Committee. They were formally approved of. The Court also expressed its approval of the proposal of the University Field Committee to acquire ground for cricket and football.

STUDENTS' REPRESENTATIVE COUNCIL.—At the statutory meeting, an invitation from the students at Lausanne for delegates from the Council to be sent to celebrate the transformation of the Academy there into a University was read: the Executive recommended that the importance of the matter did not call for an acceptance. Notice was received from the Senatus stating that the Editorial Committee of the Students' Council would have the same facilities for obtaining information as was granted to the general press. It was agreed to memorialise the Universities Commission to take steps to have Saturday examinations abolished in the Faculty of Medicine. A proposal to have a students' summer excursion to St. Andrews was well received. It was reported by the committee in charge of *The Student*, the journal of the Council, that there was a sum of £9 at their credit.

GLASGOW.

THE Winter Session of the Medical Schools of Glasgow University closes on March 27th current. The examinations for Degrees in Medicine begin on the 31st, and go on for about ten days. For the first examination there are 84 candidates, for the second 93, and for the third 75.

VICTORIA.

FACULTY OF MEDICINE.—Second Examination.

First Division.—H. Ainsworth, Owens College; E. L. Compston, Owens College; R. S. Hardman, Owens College; P. McDougall, Owens College; D. Seaton, Yorkshire College; W. W. Stoney, Yorkshire College; P. Thompson, Owens College.

Second Division.—R. Alcock, Owens College; H. C. Cadman, Owens College; D. H. Cheetham, Owens College; E. A. Goulden, Owens College; E. Harrison, Owens College; S. H. House, University College; J. Jones, Owens College; A. Leigh, Owens College; E. S. Miller, University College; J. P. Nixon, University College; G. M. Y. Whittingham, Owens College; R. L. Wood, University College.

Distinguished in Anatomy.

H. Ainsworth, Owens College; P. Thompson, Owens College.

Final Examination (Part I).

G. F. Chadwick, Owens College; J. G. Clegg, Owens College; S. Crawshaw, Owens College; A. J. Edwards, Owens College; A. Harris, University College; S. R. Knight, University College; R. W. Marsden, Owens College; G. Stowell, Owens College; J. H. Taylor, Owens College; J. H. L. Tylecote, Owens College; W. H. Waddington, Owens College; W. B. Warrington, Owens College.

Final Examination (Part II).

First Division.—H. A. Beaver, University College; W. Griffith, Owens College.

Second Division.—J. H. Bailey, Owens College; S. H. Fairrie, University College; W. J. Howarth, Owens College; C. K. Rawes, Owens College; F. Robinson, Owens College.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF IRELAND.—The following is the official statement of the results of the Conjoint Examinations held in January and February, 1891:—Final Examination: Total number examined, 21; passed 10, including two who entered for a portion of the examination only; rejected, 11. Diploma in State Medicine: One candidate presented himself and passed. Supplemental Examination in Physics: Total number examined, 39; passed 27, including one candidate in Mechanics; rejected, 12.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, March 21st, 6,343 births and 4,196 deaths were registered in twenty-eight of the largest English towns, including London. The annual rate of mortality in these towns, which had declined from 24.1 to 22.1 per 1,000 in the preceding three weeks, further fell to 22.9 during the week under notice. The rates in the several towns ranged from 12.6 in Derby, 16.5 in Birkenhead, 17.0 in Derby, and 17.4 in Nottingham to 29.2 in Portsmouth, 29.5 in Preston, 33.5 in Huddersfield, and 36.0 in Blackburn. In the twenty-seven provincial towns the mean death-rate was 23.1 per 1,000, and exceeded by 2.8 the rate recorded in London, which was 20.3 per 1,000. The 4,196 deaths registered during the week under notice in the twenty-eight towns included 449 which were referred to the principal zymotic diseases, against 470 and 413 in the preceding two weeks; of these, 181 resulted from measles, 117 from whooping-cough, 52 from diphtheria, 39 from "fever" (principally enteric), 38 from diarrhœa, 22 from scarlet fever, and not one from small-pox. These 449 deaths were equal to an annual rate of 2.3 per 1,000; in London the zymotic rate was 1.8, while it averaged 2.7 per 1,000 in the twenty-seven provincial towns, and ranged from 0.5 in Derby and in Hull, 0.6 in Wolverhampton, and 0.8 in Brighton and Sunderland to 4.6 in Salford and Huddersfield, 6.1 in Portsmouth, and 10.4 in Blackburn. Measles showed the highest proportional fatality in Bristol, Plymouth, Leeds, Huddersfield, Portsmouth, and Blackburn; and whooping-cough in Huddersfield, Liverpool, Leicester, and Salford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. Of the 52 deaths from diphtheria in the twenty-eight large towns, 33 occurred in London, 5 in Manchester, 3 in Salford, 2 in Liverpool, and 2 in Newcastle-upon-Tyne. No fatal case of small-pox was recorded last week in any of these large towns; two small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and one in the Highgate Small-pox Hospital on Saturday, March 21st. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on the same date was 1,126, and showed a further decline from recent weekly numbers; 91 new cases were admitted during the week, against 87 and 64 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 6.5 per 1,000, and slightly exceeded the average.

HEALTH OF SCOTCH TOWNS.

IN eight of the principal Scotch towns, 826 births and 676 deaths were registered during the week ending Saturday, March 21st. The annual rate of mortality in these towns, which had increased from 21.4 to 26.2 per 1,000 in the preceding five weeks, declined again to 25.9 during the week under notice, but exceeded by 4.0 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest death-rates were recorded in Leith and Aberdeen, and the highest in Paisley and Glasgow. The 676 deaths registered in these towns included 73 which were referred to the principal zymotic diseases, equal to an annual rate of 2.8 per 1,000, which exceeded by 0.5 the mean zymotic death-rate in the large English towns. The highest zymotic rates were recorded in Glasgow and Paisley. The 330 deaths registered in Glasgow included 19 which were referred to whooping-cough, 10 to measles, 3 to scarlet fever, and 3 to diphtheria. Thirteen fatal cases of measles were recorded in Paisley, and 4 of whooping-cough in Leith. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 7.4 per 1,000, against 6.5 in London.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, March 14th, the deaths registered in sixteen of the principal town-districts of Ireland were equal to an annual rate of 26.9 per 1,000. The lowest rates were recorded in Drogheda and Dundalk, and the highest in Armagh and Lurgan. The death-rate from the principal zymotic diseases averaged 2.0 per 1,000. The 190 deaths in Dublin were equal to an annual rate of 28.1 per 1,000 (against 29.4 and 28.2 in the preceding two weeks), the rate for the same period being 20.7 in London and 22.3 in Edinburgh. The 190 deaths in Dublin included 8 which were referred to the principal zymotic diseases (equal to an annual rate of 1.2 per 1,000), of which 4 resulted from typhoid fever, 3 from whooping-cough, and 1 from diarrhœa.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

WAVERTREE (Population, 14,500). — *Measles: Hospital required.*—There is not much of general interest to be gathered from Dr. H. Harvey's report for 1889. A brief record of the incidence of zymotic disease shows that there was no undue prevalence of infectious sickness, except, perhaps, of measles. The death-rate for the year—16.0 per 1,000—shows an increase of 2.0 per 1,000 upon the rate of 1888, but a favourable feature of the mortality is the decreasing percentage of infantile deaths. There was one death from typhus fever. Hospital accommodation for infectious cases is specially needed for this district.

HARTISMERE RURAL. — *Cerebro-Spinal Fever: Influenza.*—Dr. E. G. Barnes reports that the death-rate of 1889—15.0 per 1,000—is about the same as that of 1888, and compares very favourably with that of former years, the average of the ten years 1870-79 being 18.0 per 1,000, and of the nine years 1880-88 being 15.8 per 1,000; and it is also considerably lower than the general death-rate in rural districts in England and Wales in 1889. The mortality from zymotic diseases was much below the average of former years. The infant mortality (as shown by the proportion of deaths of infants under one year to total deaths and to registered births, and by the proportion of deaths under five years of age to the total deaths) is in all cases satisfactorily below the average also. For 1890 the death-rate was 17.8 per 1,000. Small-pox was entirely absent, there were a few cases of scarlet fever and of diphtheria and five cases of enteric fever. An outbreak of cerebro-spinal fever occurred in the parish of Oakley in July, 1890, there were ten cases and one death, all in children under 10 years of age. The result of an exhaustive inquiry showed the probably infectious nature of the malady, but its origin was not satisfactorily traced. Influenza also

variously attacked this district in January, 1890. Four deaths were attributed to it, but no estimate could be formed as to the number of cases. The water supply of this district evidently requires the Sanitary Authority's serious attention. A good amount of continuous sanitary work is carried on in this district.

HEALTH REPORTS AND THE LIBEL LAW.

M. O. H.—We are advised that the report of a medical officer of health to the sanitary authority which employs him is *primâ facie* privileged, and no action could be maintained against the medical officer for anything contained in it, unless it could be shown that defamatory statements in it were made not *bonâ fide* but maliciously. If such a report is read at a meeting of the local authority for whom it is made, the publication of such report in a newspaper is privileged under Section 4 of the Law of Libel Amendment Act, 1888. Statements reflecting on the sanitary condition of a town which is a holiday resort are so much matters of public interest, that we hardly think a jury would give damages against the person who made them, even where he was not protected by privilege.

MEDICAL NEWS.

The Duke of Westminster will preside at the annual meeting of the Church of England Burial, Funeral, and Reform Association on June 2nd.

An exhibition of apparatus, models, methods, etc., relating to the hygiene and training of children, is to be held at Milan in May next.

It is announced that a club has been formed in the Johns Hopkins University, Baltimore, for the study of the history of medicine.

Unqualified Assistants.—At an inquest recently held at West Bromwich, the Coroner (Mr. E. Hooper) expressed his intention to hold an inquest in every case where an unqualified man gave a certificate of death.

Medical Magistrate.—Mr. Alfred Sutton, M.R.C.S.Eng. L.S.A., Government Medical Officer of Health at Beenleigh, Queensland, has been appointed a Justice of the Peace for the Colony of Queensland.

In view of the present prevalence of small-pox in Vienna, the Superior Sanitary Council has called the attention of the executive authorities to the necessity of taking steps to secure more general and more efficient vaccination and revaccination among the inhabitants.

Leith Hospital.—At a meeting of the Board of Management of Leith Hospital, held on March 19th, Dr. Alice McLaren was appointed resident medical officer. Miss McLaren was a distinguished student of the London School of Medicine.

Epidemiological Society.—At the meeting of this Society, on March 18th, 1891, Dr. Edward F. Willoughby gave an interesting retrospect of the successive epidemics of cholera in Europe and America from 1830 to 1890. A brief discussion ensued, in which Sir William Moore, Mr. Shirley Murphy, Inspector-General Lawson, and the President (Dr. J. Ewart) took part.

After a trial, extending over four days, at the Central Criminal Court, Charles Lyddon, the medical student charged with the wilful murder of William Reeks Lyddon, L.R.C.P.Edin., L.R.C.S.I., his half-brother, by the administration of poison, was found "not guilty." Dr. Stevenson, in his evidence, said "the result of his analysis pointed to a large dose of morphine having been taken by the deceased, and this accounted for the death."

Transactions of the International Medical Congress.—We are requested to state that arrangements have been made with Mr. Kolckmann, of 2, Langham Place, for the sale of the *Transactions* of the Tenth International Congress (Berlin). Members can receive them free on payment of a nominal sum for carriage. Country members can have theirs forwarded on application. Non-members can obtain them at the net price at which they are published in Berlin.

Devon and Exeter Medico-Chirurgical Society.—A meeting of this Society was held at the Devon and Exeter Hospital, on March 20th, Dr. Woodman, Vice-President, in the chair. Two new members were elected, and two others proposed for election at the April meeting. Mr. C. E. Bell read an intesting paper on Trephining the Skull, and gave particulars of four cases operated on by him. A discussion followed, in which many members present took part. Dr. Blomfield showed microscopic sections illustrating the pathology of the lung. The next meeting of the Society will be held on April 17th.

North of England Obstetrical and Gynæcological Society.—A meeting was held at Sheffield on February 20th, 1891, under the presidency of Dr. James Braithwaite. Specimens were shown by Dr. Keeling, Sheffield, Dr. Sinclair, Manchester, and Mr. Laver, Sheffield. Dr. Hellier, of Yorkshire College, read a paper on three cases of pelvic abscess treated by abdominal section in the Hospital for Women and Children at Leeds. Dr. Burton, of Liverpool, introduced a discussion on the electrical treatment of uterine fibroids. The discussion was adjourned to the next meeting of the Society.

Presentations.—On March 20th, at Westminster Medical School, Mr. James Black, Lecturer on Anatomy, was presented with a handsome marble clock bearing an exquisitely wrought plate with the following inscription: "Presented to James Black, Esq., B.A., M.B., F.R.C.S., etc., as a token of esteem and gratitude from his Anatomy Class, Westminster Hospital, 1889-91."—Dr. George McMurdo Brown, of Tunstall, formerly assistant surgeon to the Lodges of Shepherds at Hanley, has been presented by them with a purse of gold and an illuminated address as a token of esteem.

Diphtheria at Milan.—Diphtheria appears to be becoming increasingly prevalent in Milan. A report of Dr. Dell' Acqua, Chief Municipal Physician, shows that while the mean monthly number of cases of diphtheria in 1890 was 49, the number of cases notified during the present year up to February 24th was 108. Of these only 15 occurred in 12 of the 58 schools of the commune, and these were distributed in such a way as to negative the idea that the spread of the disease is due to the schools.

New Medical Journals.—A periodical devoted to orthopædic surgery, entitled *Deutsche Zeitschrift für orthopädische Chirurgie*, has recently appeared. The editor is Dr. Hoffa, of Würzburg, who will have the collaboration of most of the leading representatives of orthopædic surgery in Germany. The publisher is F. Enke, of Stuttgart.—The first number of a new Spanish medical journal—*El Heraldo Medico-Farmaceutico*—has just appeared at Madrid. The editor is Dr. Pi y Arsuaga.

Bequests.—The following sums have been bequeathed to medical charities under the will of the late Mrs. Entwistle, of Tunbridge Wells and Tamworth:—Tamworth Cottage Hospital, £200; Surgical Aid Society, London, £200; Queen's Hospital, Birmingham, £200; Women's Hospital, Birmingham, £150; Eye Hospital, Birmingham, £150; National Hospital for the Paralysed and Epileptic, Queen Square, £200; Hospital for Sick Children, Great Ormond Street, £200—all free of legacy duty.

Combe Lectures in Scotland.—Dr. Andrew Wilson concluded his labours as Combe Lecturer by the delivery of closing lectures on "Health" at Mossend, Saltcoats, Denny, and Markinch. The previous lectures of the session were delivered at Derby, Bathgate, Newmilns, and Strathaven. The object of the lectures, given free to each town under the auspices of the trustees of George Combe, is that of providing plain instruction in the laws of health, personal and public. For the past nine years Dr. Andrew Wilson has lectured in nearly all the principal towns in Mid and Southern Scotland, and large and enthusiastic audiences welcome the instruction he provides and illustrates. Each town receives eight systematic lectures in each course; and this form of instruction, by presenting to the people a story, as it were, in eight chapters, is most successful in interesting public audiences in sanitary matters. At Saltcoats and Mossend Dr. Wilson was the recipient of presentations, given in recognition of the ability with which he discharged his duties as Combe Lecturer.

MEDICAL TEACHING IN THE UNIVERSITY OF MADRID.—To judge from a letter which appears in one of the Spanish medical papers, the medical students of San Carlos, the Medical Faculty of the University of Madrid, have just reason to complain of the indifference to their interests displayed by the authorities who rule the destinies of that seat of learning. Of twenty-four chairs, no fewer than twelve are vacant; and as among these are the Chairs of Histology, Anatomy, Physiology, Pathology, Medicine, Clinical Medicine, Surgery, and Operative Surgery, it will be admitted that as regards nearly all the more important parts of the medical curriculum the Madrid students are at present like a flock without a shepherd. The duties of the vacant chairs are indeed discharged after a fashion by substitutes, but even these are continually changing, and sometimes, it is alleged, are so little familiar with the subject on which they are supposed to give instruction, that they are driven to borrow a hint from certain sacred orators, and read discourses "conveyed" bodily from the pages of a textbook. Even of the chairs which are not vacant, four are, according to the authority from which we are quoting, filled by men who are too old, too infirm, or too busy to discharge the duties of their office efficiently. Under these circumstances it is not surprising to learn that the Madrid Medical Faculty is becoming a vanishing quantity, and that students are seeking the more bracing air of provincial schools.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOROUGH LUNATIC ASYLUM, Portsmouth.—Clinical Assistant for six months; qualified. Board, rooms, lodging, washing, and attendance provided. Applications to the Medical Superintendent.

BRADFORD CHILDREN'S HOSPITAL. House-Surgeon; double qualifications; not over 30 years of age. Salary £80 per annum, with board, residence, and washing. Applications to C. V. Woodcock, Secretary, Albany Buildings, Market Street, Bradford, by April 11th.

BRIDGWATER INFIRMARY.—House Surgeon. Salary, £80 per annum. Applications to Mr. John Coombs, Honorary Secretary, by April 10th.

BURTON-ON-TRENT FRIENDLY SOCIETIES' MEDICAL ASSOCIATION. —Junior Medical Officer. Application to Abraham Blant, Secretary, Shobnall Road, Burton-on-Trent.

CANCER (FREE) HOSPITAL, Fulham Road, S.W.—Assistant-Surgeon; must be F.R.C.S., and reside within the four mile radius. Applications to the Chairman of the House Committee by April 18th.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Honorarium £100 per annum. Applications to Stanley Boyd, Dean, by April 20th.

CHARING CROSS HOSPITAL.—Surgical Registrar. Salary £40 per annum. Applications to Arthur Reade, Secretary, by April 6th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Medical Officer. Salary, £80 per annum, with board and residence. Applications to A. C. Davies, Secretary, by March 31st.

COUNTIES OF MIDLOTHIAN, WEST LOTHIAN, AND PEEBLES.—Medical Officer. Salary £600 per annum, besides travelling expenses. Applications to the County Clerk, County Buildings, Edinburgh, by April 4th, from whom full particulars can be obtained.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary, £100 per annum to commence with, furnished apartments, board, washing, and attendance. Applications to the Medical Superintendent.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer, not over 27 years of age. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing. Applications to the Medical Superintendent by April 4th.

DEACONESSES INSTITUTION AND HOSPITAL, Tottenham.—Resident House-Surgeon. Salary, £90 per annum, with board and residence. Applications to the Secretary by March 31st.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare, Ipswich.—House-Surgeon; double qualifications; unmarried. Salary £100 per annum, with board, lodging, and washing. Applications to the Secretary, by April 1st.

GUY'S HOSPITAL DENTAL SCHOOL.—Two Anæsthetists. Applications to the Treasurer, Guy's Hospital, S.E., by April 6th.

HULME DISPENSARY, Manchester.—House-Surgeon. Applications to Dr. F. H. Collins, Honorary Secretary, Medical Committee, by March 31st.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, near Birmingham.—Resident Medical Officer: double qualifications. Salary, £150 per annum, with board, residence, and washing. Applications to Dr. J. D. M. Coghill, House Governor, by March 28th. Election on April 3rd.

KENT COUNTY ASYLUM, Chartham, near Canterbury.—Junior Assistant Medical Officer. Salary, £125 per annum, with furnished apartments, board, and attendance. Applications to Allen Fielding, Solicitor, Canterbury, by April 6th.

KING'S COLLEGE, London.—Demonstratorship of Physiology, vacant at Easter. Applications to J. W. Cunningham, Secretary, from whom full particulars can be obtained.

LONDON LOCK HOSPITAL, Harrow Road, and 91, Dean Street, W.—Registrar. Applications to the Secretary, by April 6th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Physician (M.R.C.S.Eng.) for one year. Salary at the rate of £60 per annum for the first and £70 per annum for the second six months. Applications to the Secretary, by March 31st.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Surgeon (M.R.C.S.Eng.) for one year. Salary at the rate of £60 per annum for the first and £70 for the second six months. Applications to the Secretary, by March 31st.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant House-Surgeon (M.R.C.S.Eng.) for six months. Applications to the Secretary, by March 31st.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

ONGAR UNION.—Medical Officer and Public Vaccinator for Fourth District. Salary £83 per annum, with usual fees. Applications to Charles Smith, Clerk's Office, Town Hall, Ongar, Essex.

PADDINGTON INFIRMARY, 285, Harrow Road, W.—Resident Clinical Assistant. Board and residence. Honorarium of twelve guineas at end of six months' satisfactory service. Applications to the Medical Superintendent.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—Resident Secretary and Dispenser. Salary, £80 per annum, with board, lodging, and washing. Applications endorsed "Application" to the Chairman of the Committee by April 8th.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—House-Surgeon and Secretary; unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications endorsed "Applications" to the Chairman of the Committee by April 1st.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, London.—Milroy Lecturer. Applications to the Registrar by April 8th, of whom all information can be obtained.

ROYAL SOUTH LONDON DISPENSARY, St. George's Cross, S.E.—Honorary Surgeon. Applications to the Committee of Management by March 28th.

ROYAL VICTORIA PATRIOTIC ASYLUM FOR GIRLS, Wandsworth Common, S.W.—Medical Officer. Salary £100 per annum. Applications to Secretary, Royal Commission Patriotic Fund, 53, Charing Cross, S.W., by April 9th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Resident Medical Officer, double qualifications. Salary, £105 per annum, with furnished apartments, attendance, coals, and gas. Applications to Frank Stokes, Secretary, by April 4th.

ST. MARY'S HOSPITAL, Paddington.—Surgeon. Appointment for five years. Applications to Thomas Ryan, Secretary, by April 6th.

ST. THOMAS'S HOSPITAL, S.E.—Resident Assistant Physician. Applications to E. M. Hardy, Treasurer's Clerk, by March 28th.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary; double qualifications. Salary £130 per annum, with furnished apartments. Applications, endorsed Assistant Medical Officer, to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by April 7th.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth—Assistant House-Surgeon; double qualifications. Applications to the House-Surgeon, by April 4th.

STOCKPORT INFIRMARY.—Qualified Assistant to House-Surgeon. Appointment for six months, with board and residence. Applications to the Honorary Secretary, by March 31st.

UNIVERSITY OF LONDON.—Examiners in the following departments: Two in Comparative Anatomy and Zoology, salary, £120 each; Two in Medicine, salary, £150 each; Two in Surgery, salary, £150 each; Two in Anatomy, salary, £150 each; Two in Physiology, salary, £120 each; Two in Obstetric Medicine, salary, £75 each; Two in Materia Medica and Pharmaceutical Chemistry, salary, £100 each; Two in Forensic Medicine, salary, £50 each. Present examiners are re-eligible. Applications to Arthur Milman, M.A., Registrar, Burlington Gardens, by March 31st.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Surgeon. Must be F.R.C.S. of London, Edinburgh, or Dublin. Applications to R. J. Gilbert, Secretary Superintendent, by April 2nd. Election on April 6th.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM. Third Assistant Medical Officer, unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to Dr. Cooke, the Asylum, Powick, near Worcester, by April 2nd.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary £100 per annum, with board, washing, and attendance. Applications, addressed to the Committee, under cover to the Secretary, R. D. Horne, by April 6th.

MEDICAL APPOINTMENTS.

ALEXANDER, Peter, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Whitley and Monkseaton Urban Sanitary District of the Tynemouth Union.

ANDERSON, William, L.R.C.P.Lond., F.R.C.S.Eng., appointed Professor of Anatomy at the Royal Academy of Arts.

BARWISE, Sidney, M.B.Lond., M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health for Derbyshire.

BATE, H. H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Biddenden District of the Tenterden Union.

BEVERIDGE, Alex. Thos. Gordon, M.A., M.B., C.M. Aberd., appointed Medical Officer to the Aberdeen General Dispensary.

BLACK, Alexander, M.B., C.M., F.R.C.P.Edin., appointed Surgeon to the Ear and Throat Dispensary, Edinburgh, *vice* Dr. Maxwell Ross.

BRIAULT, E. H. L., L.D.S.Eng., appointed Demonstrator to the Dental Hospital of London.

CALCOTT, Lewis B., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health for the Oundle Rural and Urban Districts.

CHAMBERS, Dr., appointed Public Vaccinator to Clerkenwell (Holborn Union).

CLARE, John, L.R.C.S.Edin., L.S.A., appointed Medical Officer of Health for the County Borough of Hanley.

COLYER, Arthur, L.D.S.Eng., appointed Demonstrator to the Dental Hospital of London.

CULLIN, Richard B., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health for Tiverton.

DA COSTA, Francis X., F.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to St. Peter's Hospital for Stone and Urinary Diseases, *vice* J. Penny, L.R.C.P., resigned.

DANIELL, G. H. S., M.B., B.C.Cantab., appointed House-Surgeon to Guy's Hospital.

DOLAMORE, W. H., L.D.S.Eng., appointed Demonstrator to the Dental Hospital of London.

ELLIOT, Edmund, L.R.C.P., L.M.Edin., M.R.C.S.Eng., appointed Medical Officer for the Bromsgrove Union.

EMERSON, D. N. B., B.A., M.B., B.Ch., B.A.O.Dub., appointed Senior Resident Medical Officer to Victoria Dock District Dispensary, *vice* C. H. Burtchaell, resigned.

FAWCETT, J., M.B., B.Sc.Lond., appointed House-Physician to Guy's Hospital.

FREW, William, M.D.Edin., appointed Physician to the Kilmarnock Infirmary, *vice* Dr. McVail.

GABRIEL, A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Borough of Donolly, Victoria, Australia, *vice* Dr. Manson, resigned.

HARRIS, John Russell, M.D.Brux., appointed Medical Officer of the Bear Yard Workhouse, Strand Union.

HART, F. J. Lovimer, M.B.Edin., C.M., L.M., appointed Honorary Assistant Medical Officer to the Home and Infirmary for Sick Children, and South London Dispensary for Women, Lower Sydenham, S.E., *vice* R. H. Gwynn, M.R.C.S., resigned.

HAWKINS, Herbert P., M.B., M.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Physician to St. Thomas's Hospital.

HILL, Thos. Eustace, M.B., C.M., B.Sc.Edin., appointed Medical Officer of Health for the County Borough of South Shields.

HOCKRIDGE, Thomas Granville, M.D., C.M.Montreal, M.R.C.S.Eng., appointed Medical Officer by the Holborn Guardians for the South District of Clerkenwell, *vice* Dr. Hudson, resigned.

HORDEN, J. O., M.B., C.M., L.R.C.S., L.R.C.P., L.M., appointed Honorary Physician to the Brondesbury and West Hampstead Crèche, *vice* F. A. Hill, M.D., resigned.

HUIE, Henry Greville, M.B., C.M., appointed Resident Physician to the Sick Children's Hospital, Edinburgh, from May 1st.

JAMES, F. Percy R., L.R.C.P.I., appointed Medical Officer of the Fourth District of the Hunslet Union.

LANSDOWN, Francis Poole, M.R.C.S.Eng., L.S.A., reappointed Surgeon to the Bristol General Hospital.

LISTON, L. H., M.R.C.S., L.R.C.P.Lond., L.S.A., appointed Assistant Medical Officer to Coton Hill Hospital for the Insane, Stafford, *vice* J. Herbert Walker, M.A.Oxon., M.R.C.S., L.R.C.P., resigned.

LITTLETON, Philip Richard, M.R.C.S.Eng., reappointed Medical Officer of Health to the Ashbourne Local Board.

MCALISTER, James, L.F.P.S., L.M.Glas., appointed Honorary Consulting Surgeon to the Kilmarnock Infirmary.

MCALISTER, William, M.B., C.M.Glas., appointed Surgeon to the Kilmarnock Infirmary, *vice* Dr. James McAlister, resigned.

MACDONALD, Dr., appointed Medical Officer of Health to the Ayrshire County Council.

MCOSCAR, John, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., appointed District Medical Officer to the Chinnor Parish, Wycombe Union.

MORRISON, C. S., L.R.C.P., L.R.C.S.Edin., appointed Assistant Medical Officer to the Hereford County and City Lunatic Asylum, *vice* Dr. E. Morris, deceased.

MORTON, Edwin, M.D.Edin., appointed Medical Officer of Health for the Redditch Urban Sanitary District of the Bromsgrove Union.

NASMYTH, Thos. Goodall, M.D., C.M., D.Sc., F.R.S.Edin., appointed Medical Officer of Health for the County of Fife.

PEAKE, Wm. Pemberton, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the No. 4 District of the Leicester Union.

REYNOLDS, Ernest Septimus, M.D.Lond., M.R.C.S.Eng., appointed Superintendent Medical Officer at the Royal Infirmary, Manchester.

RICHARDS, J. S., M.B., B.S.Lond., appointed Assistant House-Physician to Guy's Hospital.

ROSS, Maxwell, M.A., M.B.Edin., appointed Medical Officer of Health for the County of Dumfries.

RUDOLPH, R. B., M.B., C.M., appointed Resident Physician to the Sick Children's Hospital, Edinburgh, from May 1st.

RUSSELL, James Wm., M.A., M.B., B.C.Cantab., appointed Medical Officer to the Birmingham Eye Hospital.

SCOTT, Patrick, M.B.Cantab., appointed Physician to the Miller Hospital and Royal Kent Dispensary, Greenwich, *vice* Dr. Thomas Creed, resigned.

SHERRINGTON, Charles S., M.A., M.B.Cantab., appointed Professor-Superintendent to the Brown Animal Sanitory Institution, *vice* Victor Horsley, M.B., F.R.S., resigned.

SMITH, J. Percy, M.R.C.S., L.R.C.P. and L.D.S.Eng., appointed Demonstrator to the Dental Hospital of London.

SPACKMAN, Coniston, L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer to the Union and No. 1 District of Faringdon, *vice* F. C. Spackman, M.R.C.S., resigned.

STYLE, Frederick Wm., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for Hucknall Huthwaite.

SUNDERLAND, Oliver, L.R.C.P., L.M.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health for the Bexley Urban District of the Dartford Union.

SWAYNE, F. G., M.B., B.C.Cantab., appointed House-Surgeon to Guy's Hospital.

SYKES, John Herbert, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Workhouse at Crumpsall of the Township of Manchester, *vice* Arthur E. Giles.

THOM, James M., M.B., C.M.Edin., appointed Medical Officer and Bursar of Trinity College, Glenalmond.

THOMSON, Theodore, M.B.Lond., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health for Sheffield.

TYNDALE, Wentworth R., M.B., C.M.Aberd., M.R.C.S.Eng., reappointed Medical Officer of Health for the Hampton Urban Sanitary Authority of the Kingston-on-Thames Union.

VERNON, Richard, M.D., C.M.Glas., L.S.A., appointed Medical Officer of Health to the Audley Local Board.

WALLACE, Edward Jas., M.D., M.B., C.M.Glas., appointed Honorary Physician to the Royal Portsmouth, Portsea, and Gosport Hospital.

WEBB, Chas. Frere, M.D.Durh., F.R.C.S.Edin., reappointed Medical Officer for the First District of the Basingstoke Union.

WEBBER, H. A., M.B., B.Sc.Lond., appointed House-Physician to Guy's Hospital.

WELCH, John Burges, M.B.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Handsworth Urban Sanitary District.

WILEY, Arthur Ormsby, L.R.C.P.Edin., L.R.C.S.I., appointed Medical Officer for the Rural Sanitary District of the Knaresborough Union.

WISE, Nicholas Vincent, L.R.C.P., L.R.C.S.Irel., appointed Medical Officer of Health for Trowbridge.

DIARY FOR NEXT WEEK.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Mr. Targett, Mr. Alban Doran, Dr. William Duncan, and others. Mr. John W. Taylor: Case of Extrauterine Pregnancy at Full Term; Removal of Child and Placenta by Abdominal Section; Recovery. Dr. W. S. A. Griffith: (1) Case of Obstructed Labour in which a Large Fibroma of the Ovary was mistaken for the Head of an Extrauterine Fœtus; (2) Case of Extrauterine Gestation, the Sac being situated in the Right Broad Ligament; Pregnancy advanced to the early part of the Fourth Month. Mr. Marmaduke Shield: Case of Extrauterine Gestation associated with Sloughing of the Abdominal Wall, and attempted Extrusion of a Matured and Putrid Fœtus near the Umbilicus.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. Guthrie: On a case of Post-hemiplegic Spasm. Dr. Seymour Taylor: On Bradycardia; the Slow Heart.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 P.M.—Mr. Percy Dunn will show some pathological specimens. Papers.—Dr. Alderson: A case of Attempted Suicide by Chloroform. Mr. Swinford Edwards: Observations on Lithotrity, with a series of forty cases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is *3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.*

BIRTHS.

BRUNTON.—On March 22nd, at Oatlands Park Hotel, Weybridge, the wife of T. Lauder Brunton, M.D., F.R.S., of 10, Stratford Place, of a son.

ROBERTS.—On March 20th, at 261, Glossop Road, Sheffield, the wife of Sidney Roberts, M.A., M.B., B.C.Cantab., M.R.C.S., of a son.

MARRIAGE.

DUNLOP—DUNCAN.—On March 19th, in St. Giles's Cathedral, Edinburgh, by the Very Rev. James Cameron Lees, D.D., Dean of the Thistle, James Craufurd Dunlop, M.B., M.R.C.P.E., to Mary Isabella, elder daughter of J. M. Duncan, advocate.

DEATHS.

BRUNTON.—On March 24th, at Oatlands Park Hotel, Weybridge, the infant son of T. Lauder Brunton, M.D., F.R.S., of 10, Stratford Place, W.

DE LISLE.—On March 20th, at Hélouan, Cairo, Albert De Lisle, M.R.C.S., L.R.C.P., son of the late Albert De Lisle, of Teignmouth, aged 26.

EDMONDS.—On March 16th, at No. 11, Peckham Grove, Camberwell, S.E. John William Edmonds, L.S.A.Lond., aged 74, from diabetic coma.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

TRAFFORD asks: Is it possible for British doctors to obtain employment under the Turkish Government; and, if so, how must they go about getting such employment?

SENIOR asks to be informed of a recent work on midwifery containing detailed management of pregnancy and normal parturition. A small work, if authoritative, would suffice.

*** Galabin's *Midwifery* would probably meet our correspondent's requirements.

THE FIFTH YEAR.

N. F. asks for references to all public discussions and opinions and proposed legislation for the fifth year of medical study.

*** Much information will be found in the volume of the *Minutes of the General Medical Council* for last year, together with the Appendices to the Report of the Education Committee. Several articles and addresses and letters on the subject have appeared in the BRITISH MEDICAL JOURNAL for 1890. The Minutes and Reports of the Medical Council may be obtained on application to the Registrar, at 297, Oxford Street, W.

ANSWERS.

BOOKS ON VIVISECTION.

M.B.—Yeo's *Physiological Cruelty*, and Landois and Stirling's *Physiology* will give the information required

VACCINATION COMMISSION.

QUIRA.—Any person desiring to give evidence before the Royal Commission on Vaccination should apply to the Secretary of the Commission, at 8, Great George Street, Westminster, stating exactly and briefly the nature of the evidence he would propose to give.

EXAMINATION FOR F.R.C.S.EDIN.

J.M.E.—A man "who easily passed" the M.R.C.S.Eng. examination five years ago, and has held several hospital appointments since, ought to find the F.R.C.S.Edin. examination a reasonable task. The examination is essentially practical. It embraces the principles and practice of surgery, clinical and operative surgery, surgical anatomy, surgical pathology, and some special subject (such as aural, ophthalmic, or orthopædic surgery) to be selected by the candidate. Full details can be had on application to the clerk, Mr. James Robertson, 1, George Square, Edinburgh.

NOTES, LETTERS, Etc.

ST. JOHN AMBULANCE ASSOCIATION AND ITS LECTURERS.

MR. F. M. MCJANNET, M.B., C.M. (Middlewich) writes: I should like to have the opinion of those members of the profession who have had ambulance classes on the way in which the examinations are conducted. I have just concluded two large classes (male and female) and the examinations have taken place.

Our local secretary wrote me saying that the examinations would take place at such a time and hour. I was there when the examiner arrived, but he took little or no notice of me, and proceeded at once, with the assistance of the local secretary, to call the class roll. This completed, he made the class go through the practical work of bandaging, etc. He then took the class in batches of six into another room for the oral examination, and at the same time told me that he must be alone, and that no one but the examiner was allowed to be present. At this I protested, as I was naturally anxious to hear how my pupils would conduct themselves. I wrote to the Chief Secretary, St. John's Gate, on the subject, and he replies that "the resolution to exclude teachers from the examination became necessary, in consequence of the frequent very painful scenes which took place between lecturers and examiners," etc. Now why should there be any occasion for such painful scenes? If lecturers and examiners be gentlemen, as I suppose they are in almost all cases, there would be no difficulty in their agreeing; and if the lecturer be dissatisfied by the line of examination, he ought to appeal to the Association direct. But in the Association passing a resolution excluding the lecturers from the examinations is, in my opinion, a direct slur on the former. If a lecturer is not fit to be present at the examination, he is, I am afraid, not fit to conduct a class.

CONSTITUTIONAL ANTAGONISMS.

DR. ARCHIBALD D. MACDONALD (Liverpool) writes: It may help Dr. Eddowes and some others a little out of the fog on the subject of Acute Rheumatism *versus* Tuberculosis, to have the not very important fact mentioned that this time ten years ago, in Exeter, I treated a case of pulmonary tuberculosis with lactic acid on the assumption that lactic acid was the rheumatic poison, and that by its aid I might be enabled to provoke the antagonism referred to. A note was inserted at the time in one of the journals, but my interest was not sufficiently aroused to cause keeping of the reference. At the time I fancied that here was one of the real gems of scientific truth; afterwards it only appeared as a bit of the theoretical paste with which medical "science" is rather freely adorned, and it will take a very wide induction indeed to convince me that the latter view of the matter was the erroneous one.

HÆMORRHAGE FROM RUPTURED HYMEN.

MR. F. HAROLD CARLYON, M.B., C.M. (Truro), writes: On Sunday morning I was asked to see a woman who had been married the previous day. The husband had experienced great difficulty in having connection with his wife, and used a good deal of force, but eventually succeeded in penetrating the hymen, after which he found that his wife was bleeding. This bleeding went on all through the night and until the time I saw her—in all about twelve hours. I found the patient perfectly blanched and almost pulseless, extremely weak and faint. The blood had soaked through the mattress, and a great amount of clot had been removed. On examination, I found the vulva obscured by clotted blood. This I removed, and at once saw the source of the hæmorrhage. On the right side, at the lower and posterior part of the torn hymen, I saw an artery, which I should judge to be about the size of an average "digital," spouting feebly. This I secured with a catgut ligature, and all bleeding at once ceased. The patient was in a very collapsed condition, but, by the evening, had rallied somewhat, after a stimulating treatment. On questioning her, I found that she always bled very freely from any slight cut, etc. I could find nothing of interest in her family history. Her tendency to free bleeding is probably accounted for by the anæmia from which she always suffered. In this instance it was caused by the rupture of an artery, which was of abnormal size, in that region, and which probably was the "inferior external pudic artery," or a branch thereof, crossing the posterior fold of the hymen from right to left. In ten days the patient was able to return home, though still in a very weak state.

DUST AND PHTHISIS.

IN a circular setting forth the precautions which should be taken against consumption, issued by the State Board of Health of Pennsylvania, the following advice is given: "The duster, and especially that potent distributor of germs, the feather duster, should never be used in a room habitually used by a consumptive. The floor, woodwork, and furniture should be wiped with a damp cloth. The patient's clothing should be kept by itself, and thoroughly boiled when washed. It need hardly be said that the room should be ventilated as thoroughly as is consistent with the maintenance of a proper temperature."

MEDICAL STUDY IN THIBET.

THE course of study for a medical degree in the Buddhists' Lama University in Thibet is said to be ten years, a period which would probably more than satisfy the most sweeping reformers of medical education in this country. The General Medical Council may, however, take comfort. On closer inspection the years of this model curriculum fade away *in tenues auras*, like Falstaff's men in buckram. The first four years are devoted to the study of language tempered by a little theology. Another year or two are given to astrology and other abstruse matters which, however edifying in themselves, can hardly be classed among the medical sciences. "Physiology" is only studied in the last two years. No mention is made of such trifles as anatomy, medicine, surgery, etc.; perhaps they are all included in the term "physiology." One would like to know something of the results of the practice of these learned philosophers, if they ever do condescend to exercise their art on mere men of mould.

VACCINATION IN 1804.

E. H. B. sends the following extract from the *Moniteur* of the 12th Vendémiaire, Year xiii of the Republic (October 3rd, 1804):—"Six black children, the first who had ever been vaccinated at the Island of 'Réunion,' and from whom 5,000 people were vaccinated, were shipped on board the vessel *Jeune Caroline*, bound for one of the Seychelles Islands to perform quarantine for small-pox. The six children were three months on board the ship, eating, drinking, and sleeping with the sick; during the time of quarantine they were inoculated with the virus taken from the pustules of the diseased passengers, by large incisions made on both arms. From the report made at the time and communicated to the Central Society of Vaccine by the Minister of the Home Department, it was found that, although these six children had slept under the same blankets, and in contact with the pustules of the sick, eating and drinking out of the same vessels, and having been inoculated with pus from the patients who ultimately died of the disease, they were all preserved from the contagion, and were during the whole time in perfect health. The proof and counter proof is one of the most severe tests ever performed, and ought to have a marked place in the history of vaccination. The fact of six children having lived in perfect

health on board a small ship infected with small-pox, having on board twenty blacks with confluent small-pox—six of whom died—twenty to twenty-five others with dry crusts all over the body, with seven deaths before their arrival at the quarantine station, all packed in a small space between decks, is perhaps the most crucial test ever witnessed of preservation by vaccination."

A "Record" in Twin-Bearing.

Napoleon, in answer to Madame de Staël, said the greatest woman that ever lived was in his opinion the one who had borne most children. On this principle he would no doubt have given a conspicuous niche in the temple of Fame to the American lady whom, according to the *New York Medical Record* of February 21st, Dr. M. H. Turner, of Hammondsville, New York, lately delivered of a fifth pair of twins. The citizens of the great republic seem to be somewhat disappointed at the result of the recent census; it is to be hoped that they will duly honour the prolific matron who is certainly doing her share in the work of doubling the population.

Paracentesis Pericardii.

Surgeon-Major Maurice Smith, I.M.D., writes: With reference to the interesting case of pyo-pericarditis related by Dr. Hermann Bronner, in the British Medical Journal of February 14th, I venture to bring to notice that in addition to the two cases of incision and drainage of the pericardium on account of purulent distension which are cited by him as being the only successful ones on record, a third case was detailed by Dr. Dickinson, at a meeting of the Clinical Society, somewhere about two years ago. This case was under Dr. Dickinson's care at St. George's Hospital, and the chief point about it, in addition to its successful termination, was that the site selected for incision was to the right of the sternum and at a somewhat lower level than in Dr. Bronner's patient. The case will, I believe, be found recorded among the *Transactions* of the Clinical Society.

Ascaris Lumbricoides.

Dr. Wm. W. Shrubshall (English Methodist Mission, Tientsin, China), writes: On reading in the British Medical Journal (just to hand) of October 25th Dr. Bryden's note on "Curious Symptoms produced by Ascaris Lumbricoides," I am reminded of a case recently seen at my dispensary. Similar symptoms to those described by Dr. Bryden are of common occurrence here, and by no means considered curious; the natives speak of such an attack as "ch'ung tzu têng," that is, "worm-pain," and their facility in diagnosis is not to be wondered at in a country of which it is said that every native becomes the habitat of worms at some period of his life.

The case I am about to mention is a curiosity, so far as my experience goes, even in this worm-frequented country. Chang Shih Fa, 9 years of age, was brought by his father to the out-patient department. The boy complained of pain in his bowels, loss of appetite, constipation alternating with diarrhœa, frequent nausea, but no vomiting. Temperature was slightly raised, and for several nights the father said the lad had been hot and restless. On examination, the abdomen was found very protuberant, and in the umbilical region, about an inch to the left of umbilicus, was an area of dulness, painful on pressure. It was ten days since he first noticed hardness and pain in this region. I gave him powders containing santonin and pulv. scam. co.

So far there is nothing curious about the case. In a week he returned, saying that two large worms had been vomited, about a dozen passed *per anum*, and that a small sore had burst at the navel and a worm about eight inches in length had "come out" there. The father confirmed the patient's statement, asserting that he saw the worm before it had left the abdominal wall. I examined the umbilicus, and found a minute opening, through which, on pressure, a little clear fluid exuded, but there were no signs of active inflammation. The boy stated that previous to the bursting of the "small sore" he had had great pain and tenderness at the navel. He lost a very few drops of blood after the worm had passed out. The previous symptoms had almost entirely subsided, and he went away with another dose of santonin to complete the cure.

LETTERS, COMMUNICATIONS, Etc., received from:

(**B**) Messrs. Baillière, Tindall, and Cox., London; Messrs. P. Blakiston, Son, and Co., Philadelphia; Mr. E. Burd, Shrewsbury; Dr. C. Bäumler, Freiburg; Mr. Brierley, Tattenhall; Mr. Gilbert Barling, Birmingham Mr. G. S. Bigg, London; Dr. A. G. Blomfield, Exeter; Dr. J. Berry, London; Mr. B. P. Bartlett, Bourton; Mr. F. A. Barton, Beckenham; Dr. W. Boulting, Hampstead; Mr. J. Bell, Paris; Mr. C. H. Byers, London; Mr. T. G. L. Baretti, Clifton; A. R. Barnes, M.B., Boreham. (**C**) Mr. W. C. Clarkson, Ripley, Yorks; Mr. J. Coombs, Bridgwater; Sir Andrew Clark, London; Mr. H. Clements, Stafford; D. Carmichael, M.B., Durness; Messrs. T. Christy and Co., London; J. Cameron, M.B., Dundee; Mr. W. B. Clarke, London; Messrs. Cooper and Morris, Ross; Dr. Clippingdale, London; Dr. H. E. Crook, Margate; Dr. E. Crossman, Hambrook; Mr. E. T. Clifford, London; Dr. James Cagney, London; Mr. F. J. Charlton, Salisbury; Messrs. J. and A. Churchill, London. (**D**) Mr. G. L. Drewe, London; Mr. N. C. Dobson, London; Mr. Alban Doran, London; Dr. P. T. Duncan, Croydon; Dr. A. Duke, Dublin; Mr. J. A. Dow, London; Dr. C. Digby, Hednesford; Mr. R. A. Davis, Swansea. (**E**) Mr. W. G. A. Edwards, London; Mr. C. G. Edmonds, New Maldon. (**F**) Dr. W. S. Fenwick, London; Surgeon-Major J. P. Freyer, Moradabad; Messrs. Fannin and Co., London. (**G**) Dr. Garrington, Botley. (**H**) Dr. G. E. Herman, London; Mr. K. Hebbeler, London; Mr. N. R. Haswell, Helston; Mr. L. Hudson, London; Dr. Halliburton, London; Messrs. Hertz and Collingwood, London; Dr. J. O. Horden, West Hampstead; Dr. J. Hutchison, Shawlands; T. J. L. Hart, M.B., Sydenham; Mr. G. Y. Hunter, London. (**I**) I.V.R.C. (**J**) Mr. F. B. Jessett, London. (**K**) Mr. F. W. Kirkham, Downham. (**L**) Mr. C. A. Lumley, Birmingham; Mr. C. J. Lyons, Belize, B. H.; Dr. T. P. Lucas, Brisbane; Mr. Arthur Long, London; Mr. W. Laidlaw, West Kirby. (**M**) Dr. H. J. Manning, Salisbury; Dr. Myers, London; Mr. P. Martin, Abingdon; Mr. W. Mackie, Elgin; Mr. W. Mackenzie, Rounds; Mr. J. McOscar, Chinnor; Dr. J. Macwilliam, Aberdeen; Mazawattee Ceylon Tea Company, London; Mr. G. S. Mahomed, Bournemouth; Dr. W. J. Mickle, London; Mr. J. N. Macarthur, Paisley; Mr. L. Mark, London. (**N**) Mr. R. G. Naylor, Audlem; Nemo; Dr. J. F. Nicholson, Hull; Mr. A. W. Nankivell, Chatham. (**O**) Dr. J. O'Connor, Manchester. (**P**) Mr. R. Pratti, Hampton Court; Dr. G. V. Poore, London; Dr. G. Piccinini, Rome; Mr. J. Panting, London; Mr. J. F. Pink, London; Dr. L. Parkes, London. (**R**) Mr. Wm. Robinson, Gateshead; Registrar of the Royal College of Surgeons in Ireland, Dublin; Mr. G. O. Ryan, London; Mr. L. Roberts, Liverpool; Dr. R. R. Rentoul, Liverpool. (**S**) Mr. J. Dee Shapland, Exmouth; Mr. W. Johnson Smith, London; Dr. W. Stephenson, Aberdeen; Secretary of the Animals Institute, London; Mr. W. H. Sturge, New Eltham; Secretary of the Royal Academy of Arts, London; Dr. S. W. Smith, Cheltenham; Dr. R. Wade Savage, London; Dr. J. C. Simpson, London; Dr. J. Shaw, Liverpool. (**T**) Mr. W. W. H. Tate, London; Mr. Towers-Smith, London; Mr. T. J. Tonkin, Everton. (**W**) Mr. G. F. Webb, London; Dr. Willoughby, London; Dr. Whitla, Belfast; Professor B. C. A. Windle, Birmingham; Rev. B. Waugh, London; Dr. Hugh Woods, London; Dr. F. H. Walmsley, King's Langley; Mr. S. Wheeler, London; Mr. C. H. Wells, London; Messrs. A. Wilkinson and Sons, Liverpool; Dr. A. Whitelegge, Wakefield, etc.

BOOKS, Etc., RECEIVED.

Botany. By Alex. Johnstone, F.G.S. Edinburgh and London: Young J. Pentland. 1891.

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LECTURES
ON THE
PATHOLOGY OF TUBERCULOUS DISEASES OF BONES AND JOINTS.

Delivered at the Royal College of Surgeons of England.

By W. WATSON CHEYNE, M.B., F.R.C.S.,

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Lecture I.

Characters and Seats of Tuberculous Disease in Various Bones and Joints—Hip, Knee, Ankle and Tarsus, Shoulder, Elbow, Wrist, Ribs, Sternum, Clavicle and Scapula, Flat Bones of the Skull, Bones of the Face, Vertebræ, Sacro-Iliac Synchondrosis.—Evidence that the terms "Tuberculous" Bone and Joint Disease and "Strumous" Bone and Joint Disease are synonymous—from Cases of Accidental Infection, from the Microscopical Structure of the Affected Tissues, from the Presence of Tubercle Bacilli.

Mr. President,—In my lectures here last year I described in detail the morbid anatomy of tuberculous diseases of bones and joints, and in the present lectures I propose to continue this subject, and afterwards to consider their etiology. It will be remembered that I laid special stress on the distribution of the disease, and pointed out that, in my opinion, it usually begins at one or more points, and spreads from these points over the rest of the joint, and I also drew attention to the large amount of inflammatory thickening which accompanied even a small amount of tuberculous disease.

I shall now, in the first place, consider as shortly as possible the common seats of the primary deposits, and the usual character of the disease in the various bones and joints, and shall again illustrate the points by photographs made by Mr. Pringle from sections of my own, and also from some which have been kindly lent me by Dr. H. A. Thomson, of Edinburgh. I shall also show a few of the sections which I exhibited last year.

Hip-Joint.

In the hip-joint, as in all diarthrodial articulations, the disease may begin in the bone or in the synovial membrane, but it is by no means easy to make out the relative frequency of each form in the hip, for the joint is deeply placed, and probably a larger proportion of cases of hip-joint disease recover under expectant treatment alone than of any other of the large joints. In my own cases, at any rate, the great rarity of operative procedures such as excision has presented an accurate determination of this point.

König examined 15 museum specimens at Göttingen, and found that the disease was primarily osseous in 8, and primarily synovial in 7. An investigation of this kind is, however, not a true criterion, because only typical cases, and most probably chiefly cases of bone disease, would be placed in a museum.

Haberern found in 132 cases of excision of the hip which were carefully examined that 80 were certainly primarily osseous, 23 certainly synovial, and 29 doubtful. Blasius, on the other hand, states that primary synovial disease is more frequent than primary osseous disease, and, as regards the femur, he gives the proportion of synovial and osseous disease as 3 to 1.

Of 12 cases in which I have made sections of the bones there was primary bone disease in 5, but I cannot say that in all the remaining cases the disease was primarily synovial, because I had not the opportunity of examining the acetabulum in all instances. My own impression is that while the disease is more often primarily osseous in the case of the hip-joint than in the knee-joint, for example, it begins oftener in the synovial membrane than Haberern's statistics would lead us to believe.

As regards the seat of the primary osseous deposits, most authors agree that they are more frequently acetabular than femoral. In Haberern's 80 cases of primary bone disease, the acetabulum alone was the seat in 50, the femur alone in 23, and both together in 7. In my experience the proportion of acetabular diseases is much less. In the femur the usual seat is in the lower part of the neck just outside the epiphysial cartilage. In some cases it is further out in the neck of the bone, and even in the trochanter, but it is very seldom that primary deposits are found in the epiphysis itself. In the acetabulum the disease generally commences in the neighbourhood of the Y-shaped cartilage, and in some cases this cartilage may be completely destroyed.

The relative frequency of soft caseous deposits and of sequestra varies much according to the age of the patient, but in any case apparently sequestra are most common. Thus, to refer again to Haberern's work, we find that of 50 cases where the primary seat was in the acetabulum, 31 were associated with sequestra, and 19 were not, while in the femur sequestra were present in 14 and absent in 9, and in the 7 cases where there were primary deposits in both bones sequestra were found in 6 and absent in 1. The total result then of Haberern's 80 cases of primary osseous disease is 51 sequestra, and 29 soft caseating deposits.

I may now shortly describe what happens in a case of hip-joint disease when the primary seat of the trouble is in the bone as an example of what happens in tuberculous disease of any diarthrodial joint. When the primary deposit is in the usual situation, namely, at the lower part of the neck just outside the epiphysial cartilage, it spreads, on the one hand, towards the surface, and on the other towards the epiphysial cartilage. When the deposit reaches the cavity of the joint the whole surface of the synovial membrane becomes affected. The new tissue then spreads from the point of reflection of the synovial membrane over the articular cartilage, destroying it, and afterwards attacking the surface of the bone, producing caries, and the affection of the cartilage begins not only from the sides, but also from the points of attachment of the ligamentum teres.

As I have said, when the deposit is in the above situation it not only extends into the joint but also towards the epiphysial cartilage, which gradually becomes destroyed, at first at the lower part, and subsequently, it may be, throughout its whole length: in the latter case the head or its remains may be completely detached from the neck of the femur. When the deposit is situated further out in the substance of the neck or in the trochanter, it may not open into the joint at all but outside the capsule, and thus lead to the formation of extra-articular abscesses; in these cases, however, the synovial membrane is very apt to become involved during the progress of the disease.

The disappearance of the head and neck of the femur and portions of the acetabulum is partly due to the destruction of the bone by the tuberculous tissue, but chiefly to the rarefying osteitis which accompanies the disease, and which is generally very extensive; and this absorption of the bone may go on rapidly, and lead to shortening and bending of the neck of the femur and to enlargement of the acetabular cavity. This absorption is to a great extent brought about by pressure on the parts softened by the inflammation, this pressure being a very potent factor in keeping up the rarefying osteitis, and in causing the destruction of the bone. The pressure is not necessarily the result of standing, for even in bed, and with retentive apparatus, such as Thomas's splint, the tonic contraction of the muscles around the joint keeps the upper part of the head of the femur constantly in contact with and exercising pressure on the upper and back part of the acetabulum. As a result, the head of the bone gradually disappears, more especially at the upper and back part, where it becomes flattened, while the opposed part of the acetabulum becomes absorbed, new bone, though often only in small amount, being constantly formed from the periosteum around, and thus maintaining a buttress. This enlargement or "wandering" of the acetabulum, as it is termed in Germany, often goes on to a great extent, and marked shortening and apparent dislocation on to the dorsum ilii may result from the two processes. In fact, as is of course well known, this is by far the most common cause of shortening in hip-joint disease, true dislocation being rare.

True dislocation usually occurs as the result of some sudden movement which causes the shortened head and neck of the bone to slip out of the enlarged acetabulum; but it may some-

times occur even where the articular surfaces have not been much affected. Under such circumstances, however, there is usually marked synovial disease, and the ligamentum teres has become softened and converted into a tuberculous mass, which may fill up the cavity of the acetabulum. A partial dislocation of the head of the bone is more common, and is often associated with destruction of the margin of the acetabulum without the formation of an efficient buttress, or with destruction of the ligamentum teres without complete softening of the capsule. In this case the centre of the head is apt to be caught on the edge of the acetabulum, and a groove may be formed in it at the point of pressure.

While the enlargement of the acetabulum and the absorption of the head of the femur are going on, caseation of the tuberculous tissue is taking place, and the joint cavity generally contains a quantity of caseous material derived from the surface of the synovial membrane and bone. About this time, also, chronic abscesses form around the joint either inside or outside the pelvis, and the frequency of chronic abscess in hip-joint disease depends on the treatment, the general condition of the patient, and various other more or less unknown factors.

Without going further into the pathology of hip-joint disease, these few remarks will serve to illustrate the various parts played by the tuberculous disease, the osteitis, the pressure, etc., in the production of the deformities, and the other results of tuberculous disease of joints; and, therefore, I need not discuss the matter with regard to the other joints. The primary cause of the whole trouble is the tuberculous disease, but the main changes which occur are brought about by the chronic inflammation which is set up by the tuberculous growth, and which is often very extensive.

Knee-joint.

The knee-joint is, after the spine, the most frequent seat of tuberculous disease of bones and joints, and young adults are the most liable to attack. In this joint there is also a larger proportion of cases of primary synovial disease than in the hip, the proportion varying, however, according to the age of the patients. The following are the results of Willemer's statistical observations as to the primary seat of the disease at different ages. Below 10 years of age, 39 per cent. were primarily synovial, and 61 per cent. primarily osseous: between 10 and 20, 49 per cent. were synovial and 51 per cent. osseous; above 20 years of age, 33 per cent. were primarily synovial and 65 per cent. primarily osseous. These numbers bring out the most important fact that during the time when this disease is most common (between 10 and 20 years of age), primary synovial and primary osseous disease are practically equal; while as age advances, primary synovial disease passes more and more into the background; and this, perhaps, explains to some extent the greater obstinacy of these affections in old people, more especially as in them of the two forms of osseous deposits sequestra are much the most common.

The following table gives the facts in greater detail:

	1 to 10.	10 to 20.	Above 20.
Sequestra	19.4 per cent. ...	19 per cent. ...	49 per cent.
Caseous bone deposits	41.6 ,,	32 ,,	16 ,,
Pure synovial	38.8 ,,	49 ,,	33 ,,

König also states that, in his experience, primary osseous and primary synovial disease are about equally frequent in youth, but in old people there are three times as many osseous cases as synovial. In 114 museum specimens he found that 69 were primarily osseous, 33 synovial, and 12 doubtful.

In 43 cases, of which I have made microscopical sections, I found 16 certainly synovial, 5 very probably synovial, 2 doubtful, and 20 osseous. Of the osseous deposits, in 2 cases there were more than one, in the remainder the deposit was single, and of these 11 were soft caseating deposits and 7 sequestra. My own opinion as to the relative frequency of the two forms is very much the same as that of Willemer and König, except that, in my experience, pure synovial disease is the most common form in youth. In the cases from which the sections referred to above were made, those where primary osseous disease was present were mainly adults.

The situation of these deposits varies considerably, but, in contrast to the upper end of the femur, they occur, at the lower end, by far most frequently in the epiphysis itself. In none of the specimens of disease, either in the femur or the tibia, of which I have made sections, have I found a deposit beyond the epiphysial line, but I have seen two or three bottle specimens showing this, and König states that it sometimes occurs in children, especially in the form of soft deposits.

As to the parts most commonly affected, these deposits occur generally, as in the case of other bones, at the most exposed parts, and also in the neighbourhood of the points of attachment of tendons or ligaments. In the knee-joint the lower end of the femur, more especially the internal condyle, is most usually primarily affected, then the head of the tibia and, much more rarely, the patella. It is not at all uncommon for the primary osseous deposit, especially if soft, to be quite small and situated immediately beneath the articular cartilage, which it destroys; and in these cases the deposits are often multiple. The more deeply-placed deposits may also make their way into the joint, but they may, especially in the tibia, when extra-epiphysial, and also in the femur, when situated towards the posterior and upper part of the condyles, form a communication with the surface outside the capsule, and lead to the production of extra-articular abscesses. It is in this joint also that Kocher thinks that he has observed primary disease of fibro-cartilage, and that the rare forms of disease, such as localised synovial growths, hydrops tuberculosus, etc., most frequently occur.

In my lectures last year I referred so often to the knee-joint that it would be merely repetition to go further into the matter. Here, as in the hip, the main destruction is due to the inflammation which accompanies the tuberculous growth, and also to pressure. I shall now show a few specimens to illustrate the ordinary seats and extent of these deposits in the bones.

Ankle and Tarsus.

In the case of the foot the disease occurs most often in those parts which transmit the weight of the body to the ground, namely, the ankle-joint, the os calcis, the head of the astragalus and the proximal end of the first metatarsal bone.

As regards the relative frequency of primary synovial and primary osseous disease in the case of the ankle-joint, Münch states that in 28 cases where this joint was alone affected the disease was primarily synovial in 23, affected the tibia in the first instance in 1, and the astragalus in 4. Erasmus, on the other hand, found in 11 cases that only 2 were primarily synovial, in 3 sequestra were present, and in 6 there were caseous deposits in the bone (tibia alone in 2, astragalus alone in 2, astragalus and scaphoid in 1, and still more extensive in 1). My own impression, from my own experience and from various statistics which I need not go into, is that in the ankle-joint primary synovial disease is decidedly more common than primary osseous disease, and that the latter form begins most frequently in the astragalus, and next most frequently in the upper part of the malleoli. In some cases the deposit in the tibia is extra-epiphysial.

As regards the frequency with which the various tarsal bones are the primary seats of disease, statements differ very much, and it is by no means easy in an advanced case to tell where the disease commenced, for generally several bones show destructive changes. Czerny found in 52 cases that the astragalus was affected 15 times, the os calcis 13, the cuboid 16, and the scaphoid and cuneiforms 8 times; but, as before said, more than one bone was usually affected, and it was not always certain in which the disease had commenced, or whether more than one bone may not have been attacked at the same time.

I need not mention a number of other statements which are more or less contradictory, but we may take it that the os calcis is most frequently attacked, and next to it the proximal end of the first metatarsal bone; the cuboid probably comes next in order, then the astragalus, and the scaphoid and cuneiforms last. In the os calcis soft caseating deposits are more frequent than sequestra, and as a rule the projection of the heel escapes, though not invariably. Where there is disease of one of the tarsal bones the others are very apt to become affected with rarefying osteitis, and in some sections which I have made where the tuberculous disease was limited to one part of the tarsus I found the other bones so softened that they were merely shells of osseous tissue. In the tarsal

bones also we often find, instead of a limited osseous deposit, a diffuse tuberculous osteomyelitis involving the whole bone.

Shoulder-joint.

Disease of the shoulder-joint is almost entirely a disease of adults, though it is sometimes observed in children. It is most often primarily osseous, and caries sicca is not uncommon. The disease commences perhaps most frequently in the great tuberosity of the humerus, and next in the neck of the scapula.

Elbow-joint.

Disease of this joint is essentially an affection of young adults, and begins much more frequently in the bone than in the synovial membrane. Of the bones, the olecranon is the favourite seat, then the lower end of the humerus: the head of the radius only rarely. To mention some statistics: König found in 62 cases operated on, that the disease was purely synovial in 10, and osseous in 42; of these 42 cases the ulna, more especially the olecranon, was the primary seat in 22, the humerus in 17, the humerus and radius together in 2, and the radius in 1. Middeldorpf found in 137 cases that the disease was primarily synovial in 30, and osseous in 107. Of the bones, the ulna, chiefly the olecranon process, was attacked primarily in 49, the humerus in 33, the external condyle in 12, the internal condyle in 4, the humerus and ulna together in 18, the radius in 3, the humerus, radius and ulna in 2, and the radius and ulna in 2. Primary synovial disease was more frequent below 14 years of age than afterwards; the proportion between synovial and bone disease in childhood being as 29.5 to 70.5.

Wrist-joint and Carpus.

Disease of the wrist-joint is, I think, often primarily synovial; but it is most difficult to determine this point on account of the number and small size of the bones. Primary osseous deposits occur in the lower end of the radius, and also—and perhaps most often—in the proximal ends of the metacarpal bones, especially of the second and third metacarpal bones. In the specimens which I have myself examined I have not met with primary deposits in the carpal bones themselves, but I show here a specimen lent me by Dr. Thomson, in which there is primary disease of the trapezium.

Of other bones I may mention the following:—

Ribs.

Tuberculous disease of the ribs is mainly a disease of adults, and is, perhaps, most frequently associated with pulmonary phthisis or tuberculous pleurisy, although it frequently occurs independently of these affections; or it may be secondary to tuberculous axillary glands or to chronic abscess associated with spinal disease, and pointing in the side. The disease commences either as a tuberculous periostitis or a tuberculous osteomyelitis, most frequently as a periostitis. Where the seat of the disease is in the periosteum it affects the surface of the bone, leading to tuberculous caries, and most frequently it commences on the deeper surface. The surface of the bone thus comes to have a worm-eaten appearance, and this superficial erosion of the bone steadily progresses till a more or less marked defect is formed; indeed, such a bone not uncommonly fractures. At times, and especially in children, the part affected may be the perichondrium over the costal cartilages, and the result may be extensive necrosis of the cartilage. Wherever it begins, the carious process tends to spread along the same rib, or it may extend from one rib to another, or a number of ribs may become affected simultaneously or in succession. The rib may be denuded of periosteum, either in its entire circumference or only on one side, and the disease is almost always associated with abscess. These abscesses may spread towards the skin or towards the pleura, or they may pass along between the muscles and point further in front or behind, or, if the posterior end of the rib is the part affected, they may extend into the loin, or even form typical psoas abscesses. Much more rarely the disease commences in the interior of the bone and causes enlargement of it, just as in strumous dactylitis.

Sternum, Clavicle, and Scapula.

The sternum is not infrequently the seat of tuberculous disease, and as in other bones it may commence as a periostitis or as an osteomyelitis. Superficial caries of the sternum is often very extensive, especially on the posterior surface, because the abscess formed in connection with the diseased part spreads upwards and downwards behind the bone for a considerable distance before it makes its way forwards between the ribs or upwards into the neck, and it infects the periosteum and the surface of the bone along its course. Deposits in the substance of the bone are not uncommon, and in 2 cases which I had not long ago, I found in one a caseous deposit and in the other complete necrosis of the lower segment of the bone. In the specimen which I show, from a child, where ossification was still incomplete, there is a defect in one of the cartilages, the result of the tuberculous process.

The clavicle is very rarely the seat of tuberculous disease, but it may occur, especially towards its outer end. The sterno-clavicular articulation is also occasionally affected.

The scapula also, apart from the neck and glenoid cavity, is very rarely the seat of tuberculous disease, and then usually as a part of a multiple bone tuberculosis. The part affected is generally the acromion process, and the disease spreads more readily towards the clavicle than towards the spine of the scapula.

Flat Bones of the Skull.

Tuberculous caries and necrosis of the mastoid process is, of course, a well known and common affection, but tuberculosis of the flat bones of the skull is very rare, and only a few cases have been placed on record. This disease affects young adults, and generally commences with dull pain in the head and pain on pressure over the affected part. These symptoms are presently followed by the formation of a fluctuating or semifluctuating swelling—in fact, a chronic abscess; in some cases, however, the first symptoms after the pain are those of pressure on the brain, due to the formation of a collection of pus between the dura mater and the skull. When the abscess is external, it bursts after a time or is opened, and then, on probing the wound, the bone is felt to be bare, soft, and breaking down under the probe, and usually one or more small necrosed fragments are present.

The bone most commonly affected is the frontal, especially in the neighbourhood of the orbital margin and the external angular process; sometimes, however, the parietal, and more rarely the occipital, bones are the seat of the disease. As a rule, the affection only affects one part of the bone at first, but it not uncommonly appears afterwards in other parts of the same bone or in other bones. The disease apparently more often commences in the diploë than in the periosteum. In the diploë we find the usual two forms, namely, soft caseating areas or one or more sequestra; the latter are most common. These sequestra are generally small, about the size of a pea or bean, but they may be more extensive, and in one or two cases they have been as large as a five-shilling piece; they generally involve the whole thickness of the skull, and in Volkmann's cases the inner table was more extensively necrosed than the outer.

As a rule, tuberculous disease of the flat bones of the skull only occurs in the course of very severe tuberculous bone disease; it may be the first affection, but generally it only commences after other bones have become involved. Thus in a case which I have seen lately, there was previously disease of the spine, disease of a rib, and disease of the left elbow-joint, with abscess formation in each instance, and the upper part of the sternum has lately become affected. The occipital bone was the part involved, and there was a considerable fluctuating swelling over the region of the external occipital protuberance. In one case mentioned by Israel, the disease followed a compound fracture of the skull, and there was no previous tuberculous disease elsewhere, so that it was in all probability a case of infection of the wound from without.

Bones of the Face.

Tuberculous disease is more frequent in the bones of the face, and the most common seats are the lower margin of the orbit or the malar bone, and also, though rarely, the lower jaw. In the upper jaw the disease usually commences in the periosteum or in the soft tissues over the bone, affecting it secondarily, but it is not usually extensive; it generally leads

to marked ectropion. In some cases of ozæna the bones of the nose are affected, either primarily or secondarily to disease of the mucous membrane. Where sequestra are found, we generally have to do with primary bone disease.

Vertebræ.

The most common seat of tuberculous bone disease, espepecially in children, is the vertebræ. The favourite seat of disease is the dorsal vertebræ, chiefly the middle and lower ones, then the upper lumbar, and then the cervical, especially the upper cervical. The greater frequency of dorsal disease is generally attributed to the greater number of the dorsal vertebræ, but apparently independently of the number of the bones the disease seems more often to attack this part of the spine. As in other bones, the disease commences on the surface as a tuberculous periostitis, or in the substance of the bone. In the latter situation we have the usual two forms, namely, circumscribed soft deposits and sequestra: in rarer cases the process may present the form of a more diffuse tuberculous osteomyelitis. The deposits in the interior of the bone usually begin close to the intervertebral cartilages, and rarely affect more than one or two vertebræ. They may make their way outwards in front or behind, generally in front, and then spread in the periosteum, leading to superficial caries. Whether the latter process commences in the periosteum or occurs secondarily to a deposit in the interior, it spreads along the surface, and generally extends over a considerable number of veterbræ. When it reaches the intervertebral cartilages, it spreads inwards in the bone immediately above and below them, and destroys them. This superficial form occurs more especially in adults, and is naturally most often associated with abscesses, while if it alone is present, there may be no curvature, or, in the first instance, only a gradual bend due simply to the loss of a number of intervertebral cartilages. On the other hand, the deposits in the interior of the bones are less frequently associated with abscesses, occur chiefly in children, and are accompanied by acute curvature and the other displacements which are sometimes present. In some rare cases the disease begins in the transverse or spinous processes in the form usually of tuberculous periostitis.

I may, in conclusion, mention the sacroiliac synchondrosis. Here the disease begins, either in the substance of the adjacent bones, the sacrum or the ilium, as a deposit which spreads towards the fibrocartilage, or, on the surface, as a periostitis, and, in the latter case, it is often an extension from the lower lumbar vertebræ. It apparently never begins in the fibrocartilage itself, but, as in the case of the intervertebral cartilages, the disease extends from the surface or from a deposit in the adjacent bones, and thus destroys the cartilage secondarily.

In all that I have previously said I have assumed that the term "tuberculous" disease of bones and joints was synonymous with the older term "strumous" disease, and though at the present time few will dispute this assumption, nevertheless I may mention the chief reasons for regarding strumous joint disease as being in reality tuberculous.

In the first place, many cases are now on record where wounds have become accidentally infected with tuberculosis, and where, subsequently, various diseases known as "strumous" affections have developed. A large number of these cases was mentioned by Mr. Barker in his lectures in this place, and therefore I need not repeat them, but I may call attention to one or two where bone and joint disease developed after the injury. Verneuil mentions the case of a student who injured the fold of the nail of his right ring finger at a *post-mortem* examination with the result that a *post-mortem* wart developed. This was treated in various ways without permanent improvement, and, after three years' treatment, there was still a tuberculous ulcer on the finger and a tuberculous abscess on the back of the hand. This abscess was opened and the ring finger was amputated, but chronic abscesses formed from time to time, and the patient ultimately died, six years after the injury, of spinal meningits, due to suppuration in connection with tuberculous disease of the vertebræ.

Czerny mentions two cases where skin-grafting was employed in large ulcers, the skin being taken from limbs just amputated on account of tuberculous bone disease, and these patients afterwards became subjects of tuberculous disease. In the one case the surface of the wound, which extended from the foot to above the knee, became covered with croupous unhealthy membrane, and the granulations became weak and œdematous. After some time a communication formed with the knee-joint. This sinus closed and opened again several times, and the patient died of phthisis fourteen months later, but there were no definite signs of disease of the knee-joint. In the other case the sore was over the thorax, and, after a time, the patient developed spinal disease with curvature and psoas abscess.

In Middeldorpf's case the patient, a male aged 16, healthy and with no hereditary tendency to phthisis, received a penetrating wound of his knee-joint, to which he applied his handkerchief, and which healed in eight days. Fourteen days after the accident swelling of the joint was noticed with great pain on movement. During the following four weeks he suffered great pain, and had starting of the limb at night, etc., and his condition six weeks after the accident was that there was a scar below the patella, great thickening of the synovial membrane, and slight dulness at the apex of the right lung. Excision was performed, and the synovial membrane was found to be greatly thickened, but there was no disease of the bone. Tubercle bacilli were found in the synovial membrane. Middeldorpf assumes this to be a case of inoculation, either from the axe or the handkerchief, chiefly because the patient's previous health was good; because the course was rapid, and because the time which elapsed between the injury and the commencement of the symptoms fourteen days is about the usual period of incubation.

Pfeiffer's case was quoted by Mr. Barker. It was that of a healthy veterinary surgeon, with a good family history, who, while dissecting a tuberculous cow, punctured the phalangeal joint of his left thumb. The wound soon healed, but induration of the scar took place, and later the whole joint became swollen and presented the typical appearance of a scrofulous synovitis, but without the formation of sinuses. Some months later the patient began to show signs of pulmonary phthisis, which rapidly increased, and he died of this disease a year and a half after the injury. The thumb, which was much swollen, but with unbroken skin, was removed for special examination. The joint on being laid open showed all the destructive changes of scrofula, both in the bones and synovial membrane; and in the latter, as well as in the broken down material which filled the intervals between the bones, an unusually large number of tubercle bacilli was present. The microscopical appearance of the diseased tissues was also typically tuberculous.

Barker has also published a case of joint-disease secondary to a *post-mortem* wart on the hand. His case was that of an assistant in the *post-mortem* room, aged 54, with good family history, who first contracted these warty growths ten to fourteen years previously, and at that time they healed. Seven or eight years before the date of admission he acquired another wart, which, however, disappeared under treatment, but had previously extended to the carpo-metacarpal joints. This was followed by tuberculous disease of the carpus, for which excision was performed.

A second proof that these strumous diseases are truly tuberculous is afforded by the microscopical structure of the tissues affected. In all these affections, tubercles and tuberculous tissue are constantly present in the thickened synovial membrane, the osseous deposits, etc., and present all the characteristics described in my lectures last year, in which I went so fully into this matter that I need not refer to it further. The results which I have obtained are similar to those of other observers.

The tuberculous nature of these diseases of bones and joints is further and definitely shown by the presence of the tubercle bacillus. As is now well known, tubercle bacilli are never found except in connection with tuberculous tissues; and when we bear in mind the experimental evidence and the *rôle* which this organism plays in the production of tubercle when inoculated on animals, we must assume that whenever we find tubercle bacilli in a morbid tissue, the disease with which we have to do is tuberculosis. Search has accordingly been made for these bacilli in the diseased tissues and in the caseous material or pus, with the following results:

Koch, in his first work on tuberculosis, stated that he had

found tubercle bacilli in small numbers in four cases of strumous disease of joints, in three cases of strumous glands, and in lupus. Schuchardt and Krause were the first to make an elaborate investigation on this subject, and they carefully examined 40 cases of surgical tuberculosis in patients of various ages with and without hereditary taint, the diseases to which they directed their attention affecting bones, joints, sheaths of tendons, skin (including lupus), walls of tuberculous abscesses, lymphatic glands, tuberculosis of tongue, testicle, uterus, and Fallopian tubes. Tubercle bacilli were found in all these parts, but in the great majority of instances they were few in number and only found after a long search. These authors thought that the small number of the organisms was due to the fact that these diseases are very chronic, and they supposed that the bacilli are most numerous in the early stages, although, as a matter of fact, they had no absolute evidence in support of this view. These observations have been repeated by several other observers with varying results. Thus Bouilly always succeeded in finding bacilli, though only after a long search. Mögling examined in all 53 specimens, of which 28 were from joints or bones; and he also obtained positive results, though the bacilli were, as a rule, present only in small numbers, nor were they specially limited to the giant cells, as had been asserted by earlier observers. Kanzler confirmed these statements. Schlegtendal, employing Ehrlich's method, examined the contents of 23 abscesses connected with bones and joints, and obtained 8 positive and 15 negative results, but he did not examine the walls of the abscesses. In all, including abscesses and sinuses unconnected with bone, 17 positive results were obtained with the pus of 40 unopened abscesses, and 9 with the discharge of 60 fistulæ or ulcers.

Müller examined from 30 to 35 cases of tuberculous disease of bones and joints, the specimens being chiefly obtained by excision, and he confirmed Schuchardt and Krause's statement, that with patience it is possible in most cases to find bacilli; in several cases, however, where recovery was taking place he looked for them in vain. His investigations do not add any support to the view that the bacilli are most numerous in the early stage of the disease, but he adds that in many preparations, whether bacilli were present or not, there were peculiar bodies, like drops of oil, which retained the red stain, and which he looks on as probably remnants of bacilli.

I have on repeated occasions examined the bones, synovial membrane, and pus from strumous joints, for tubercle bacilli, but as I have not always kept notes of the cases I cannot give the precise figures. The general result of my examinations has been that after sufficiently careful and prolonged search bacilli could always be found, but that in most cases they were extremely few in number. That the bacilli are present even when difficult to demonstrate by means of the microscope is evident from cultivation experiments, and from the results of inoculation of animals, but it is not easy to explain their apparent small numbers, and various theories have been advanced. As I have already mentioned, some authors suppose that the bacilli are most numerous at the commencement of the disease, and subsequently decrease in numbers. According to others they rapidly pass into the spore stage, and are then no longer recognisable by means of the microscope. My own belief is that we do not as yet possess a method by which we can stain all these bacilli at all stages of growth. I found very early in working with the tubercle bacillus that if we took sections in which large numbers of bacilli were present, and stained them in a simple watery solution of fuchsine, without any aniline oil, carbolic acid, or other similar body, a considerable number took up the stain and a few retained it even after a short immersion in the dilute nitric acid. Thus it was evident that the staining reactions of these bacilli differ even in the same specimen, and this is I think due to differences in the age and stage of growth of the organisms. At a certain age or stage of growth the sheath is probably more easily penetrated by the stain than at another age, and this corresponds with what we know with regard to other organisms. As showing that the external conditions cause differences in the staining reactions, I may recall the fact that the bacilli in smegma stain like tubercle bacilli, but after being cultivated on the ordinary culture media they lose this reaction. Similarly various bacteria, when grown on solid culture media covered with a layer of butter, show the same reaction as tubercle bacilli in retaining the primary stain in spite of washing in nitric acid.

In sections of tuberculous synovial membrane stained by Ehrlich's method (bacilli red, tissues blue) I have not uncommonly found that while a few red stained bacilli were present there were also some which were blue, but which nevertheless presented the same microscopical appearance as the tubercle bacilli, and bore the same relations to the giant and epithelioid cells, and I have no doubt whatever that these are in reality tubercle bacilli in a different stage of development. The first case where this idea occurred to me was that of an undoubted tuberculous ulcer of the tongue, in which I failed to find any red stained bacilli, but, on the contrary, considerable numbers of faintly stained blue organisms resembling tubercle bacilli both in situation and in microscopical characters. Since that time I have paid great attention to this matter, and have seldom failed, in well stained sections from tuberculous joints, to find blue stained bacilli often in larger numbers than those stained red. I believe, therefore, that the apparently small number of tubercle bacilli in these local tuberculoses is often mainly due to the fact that they are growing slowly and with difficulty, and that their staining reactions differ at different periods of their existence. We require further research as to the methods of staining before we can conclude because we fail to find them by the ordinary methods of staining that they are therefore either absent or in the spore stage.

In connection with this matter it is interesting to note that I have found the same difficulty in finding tubercle bacilli in the synovial membrane of animals in which I have set up typical tuberculous joint disease by the injection of pure cultivations of tubercle bacilli, although they were easily demonstrated in the tubercles in the internal organs.

To sum up, we may take it that only few bacilli can as a rule be demonstrated in tuberculous joints and abscesses, but that they can usually be found in cases where the disease is progressing if the search be sufficiently careful and prolonged; and further, that our present methods of staining do not permit us to draw conclusions as to the numbers present.

THE LUMLEIAN LECTURES

ON

STRUCTURAL DISEASES OF THE HEART CONSIDERED FROM THE POINT OF VIEW OF PROGNOSIS.

Delivered before the Royal College of Physicians of London.

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Lecture III.—Fatty Degeneration.

No form of heart disease is regarded with so much apprehension as fatty degeneration. More than any other, it carries with it the danger of sudden death and the liability to angina pectoris, and, although happily it is not very common, it would be a most important acquisition to be able to make the diagnosis with certainty at an early period.

Its causation, which must be considered as it bears upon the prognosis, is in some cases clear, that is, when there is disease of the coronary arteries or obstruction of these vessels by any other means. The heart—perpetually at work—cannot afford to be mulcted of its full supply of blood. When, from any cause, this is defective the wear and tear of the muscular fibres, which must go on, is not repaired and their structure breaks down. Whether the *débris* actually forms the fatty granules and globules which are found within the sarcolemma or the fatty particles are substituted for the atrophied sarcous elements is not, perhaps, a settled question. The important point is that the primary change is atrophy of the muscle substance, the invasion of the fibres by fatty matter being secondary to this and consequent upon it.

Disease of the coronary arteries being thus a cause of fatty degeneration of the heart, the existence of conditions which

may lead to the implication of the coronary arteries or their orifices in morbid processes will warrant a suspicion that cardiac weakness, which may be recognised, is the result of degeneration. For example, an aortic murmur coming on after middle age may not indicate serious valvular lesion, but, as it is probably the result of atheromatous changes in the valves or arterial walls in close proximity to the orifices of the coronary arteries, there is reason to apprehend that the disease may cause obstruction here or may have extended to the vessels themselves, and progressive weakness of the heart, were this to supervene, would be attributable to degenerative change in its walls. Acute aortitis is recognised mainly by a train of effects on the heart, produced in the same way, for example, by blocking of the mouths of the coronary arteries.

But there may be fatty degeneration of the heart when the coronary arteries are healthy. It is usually present—sometimes in a very advanced degree—in pernicious anæmia, and granular degeneration, which is an acute form of the disease, is a constant effect of severe typhoid fever and of fatal phosphorus poisoning. Cases occur from time to time in which a patient convalescing from typhoid dies suddenly on sitting up in bed. Here, again, in fatal anæmia and enteric fever the process must be the resultant of a balance on the wrong side, as between the catabolic and anabolic operations, disintegration and repair, but it is now the quality of the blood which is at fault, not the supply, and in typhoid fever there is also the injurious effect on the nutritional processes of long-continued high temperature. It is not to be wondered at that in pernicious anæmia and fever the heart suffers more than the voluntary muscles, since these are at rest and there is no functional wear and tear, whereas in the heart this is continuous and excessive. From what takes place in typhoid fever again, it is seen how rapid degeneration may be.

Diabetes, alcoholic excess—tippling rather than drunkenness—a sedentary mode of life, may conduce to fatty degeneration of the heart, probably through deterioration of the blood, or it may be secondary to myocarditis. Cases are met with for which no explanation can be found, and we are almost compelled to assume that there may be a defective assimilative action in the muscle cells of the heart, or possibly some unrecognised blood condition.

There is very little that is characteristic in the symptoms. In a large proportion of cases the subject of this affection has had no ailment which has led him to consult a medical man, when he is overtaken by sudden death during exertion or excitement, or the administration of chloroform, or after a full meal. Or the excitement or exertion may be passed through safely, and death follow some hours later, next day even. Rupture of the heart is one mode of termination, and this may take place on very slight provocation. Sometimes the patient has been engaged in his usual avocation up to the moment of its occurrence. In one case which came under my observation, an old gentleman of quiet retired habits, with nothing beyond the weakness incident to age, was heard to knock at the wall against which his bed was placed, and was found dead, the bedclothes scarcely being disturbed. A neat slit was found in the left ventricle near the apex close to and parallel with the septum.

The bearing of such occurrences on prognosis is direct and simple. No doubt in many cases of sudden death there have been warnings which the patient has ignored or has not spoken of. These will sometimes be acknowledged in the course of examination when they have not been mentioned.

When the course of the disease has been sufficiently chronic to permit of the recognition of symptoms, which in my experience is chiefly when the degeneration is secondary to change in the coronary arteries or to old-standing hypertrophy, with or without dilatation, they will be such as are produced by a slackening circulation, and they are not so different from those attending dilatation as to permit of any distinction being drawn between the two conditions in an early stage without physical examination. There may, perhaps, be greater fluctuations in dilatation, though even in degeneration there may be great temporary improvement under care and treatment. In advanced stages characteristic differences make their appearance. The symptoms of advanced dilatation have already been described; those attending degeneration are evidences of heart failure of another kind. A noteworthy point is that well-marked dropsy is rare, and probably never occurs in uncomplicated degeneration. The significance of this is that the special effect of the disease is defective pressure in the venous system: and it is to this are due the syncopal, apoplectic, and epileptiform attacks, which, together with angina pectoris, are the most characteristic later effects of fatty degeneration.

The syncopal attacks vary greatly in intensity. So far as they have come under my observation, they have been marked rather by duration than intensity, and have rarely been so complete as to be attended with absence of consciousness; they have usually been accompanied by prolonged coldness of the extremities and of the surface. I have not met with instances of sudden and complete loss of consciousness and immediate recovery as in dilatation. These syncopal attacks are very significant, and are often premonitory of fatal syncope.

The apoplectiform seizures are very remarkable, and in the absence of history and without examination they are not distinguishable from the apoplectic condition resulting from cerebral hæmorrhage. The patient is unconscious: the respiration, if he is allowed to lie flat on his back, may be stertorous—though stertor, after the teaching of Dr. Bowles, ought to be eliminated from the symptomatology of apoplexy—and there may be hemiplegia, though this will be fugitive. Cheyne-Stokes breathing, which was first observed in connection with fatty degeneration of the heart, has not been present in the few cases which I have actually seen in the apoplectiform state, while I have met with it in a very large number of cases of uræmic coma and in connection with serious consequences of high arterial tension. On examination of the pulse and heart, however, it will be clear that there cannot have been sufficient pressure in the arteries to rupture even the most degenerate vessel, and, on the other hand, thrombosis or embolism is not competent to produce unconsciousness of the character and duration of these attacks. According to my experience, the patient is never quite the same after an apoplectiform attack: he is feebler in mind and body, and sometimes increasingly liable to syncopal attacks.

The epileptiform attacks are not often violent, but resemble *petit mal* rather than a typical epileptic fit; while, however, the convulsion may not be severe, there is profound unconsciousness—not like epileptic coma, but of a syncopal character—and the pulse may be extremely infrequent, sometimes less than 20 in the minute. In my judgment, the heart failure manifested by the slow pulse and the consequent arrest of the cerebral circulation are the cause of the fits, and it is not the epileptiform attack that affects the action of the heart.

By the time any of these forms of attack occur the diagnosis of fatty heart is usually sufficiently clear; but I have had under observation a case of very slow pulse with *petit mal*, in which the strength and volume of the pulse and the degree of impulse of which the heart was capable precluded the idea of advanced degeneration.

Is there anything characteristic in the appearance of a patient suffering from fatty degeneration of the heart? A greasy state of the skin with a sallow pallor of the face has been described, but nothing of the kind is present in a large majority of the cases. Many of the subjects of the disease retain the look of health for a long time, and even up to the moment when the heart ceases to beat. The cause may be local, and, even if a tendency to general deterioration of the tissues is present, the change mostly advances so much more rapidly in the heart than elsewhere, that there is no time for it to become conspicuous in the skin. The picture appears to have been drawn from cases of a universal chronic degeneration of vessels and heart.

Pulse and Physical Signs.—The most constant and significant feature of the pulse is that it is short and unsustained. The size of the artery at the wrist and the condition of its walls may vary greatly. When the arterial coats are healthy they are apt to feel extremely thin. The pulse rate may be regular and about normal, or extremely irregular both in force and time, and it may be frequent or slow. A very slow pulse with extreme low tension is most characteristic, but then it is the most rare.

The physical signs may be described as negative. Unless

degeneration has attacked a heart already enlarged the size will be normal. If the fatty change is at all advanced impulse can neither be seen nor felt, or, if perceptible, it is only as a faint vibration. A heart in this condition is incapable either of giving a distinct push or of maintaining continuous pressure in the arteries. The sounds are weak, sometimes so weak as to be almost inaudible: but except that the first is short, there is nothing abormal about them; the intervals, again, are usually normal. The very absence of murmur, or of conspicuous modification of the sounds or intervals, and of disturbance of the relation between the two sides of the heart, or of increase of dimensions, when symptoms of serious slackening of the circulation are present, and especially when there have been anginal, or syncopal, or apoplectic attacks, adds gravity to the case.

But a weak, short, unsustained pulse is common as a constitutional peculiarity, or may at any period of life be simply a result of general debility, and impulse and apex beat may be entirely absent, and the sounds may be short and weak. In young people there is no danger of such weakness being taken to be indicative of degeneration of the heart, but it may arouse anxiety after middle age, especially if there is also irregularity.

It is important to be able to distinguish between functional weakness of this kind and weakness arising from organic disease. Usually this is accomplished by making the patient walk briskly. A few steps will often be sufficient. If the heart is sound it rises to the occasion. The pulse, and beat, and sounds are all more distinct, and strong, and regular, whereas the fatty heart "goes to pieces," and the pulse becomes irregular and shorter than ever, or may even disappear.

Until the disease is far advanced the diagnosis of fatty degeneration of the heart is not easy, and is scarcely to be made without more than one opportunity of examination. When the diagnosis has once been made the prognosis, for the most part, can contemplate only one result; a fatal termination is merely a question of time and circumstance. Excluding cases in which death has been sudden without warning, the shortest period in my experience over which characteristic symptoms have extended, together with recognised physical signs, has been about six weeks; several patients have survived the diagnosis two years before justifying it by dying suddenly. But circumstance as well as time enters into the question; a slight effort, or a fall, a little hurry or excitement, too hearty a meal, an attack of flatulent indigestion or constipation, a chill, may hurry on the fatal termination and, on the other hand, judicious care may postpone it till the heart is completely worn out and comes to a standstill.

The question must be asked, Is fatty degeneration of the heart ever cured or arrested? If the granular disintegration which is produced by typhoid fever is to be included under the term, the answer must undoubtedly be Yes. The heart may ultimately regain structural soundness and functional vigour when during the fever the first sound has been completely lost and the impulse has been scarcely perceptible; and when degeneration has been the result of other forms of blood poisoning or deterioration it ought to be possible, and now and then to occur, that recovery of the heart should follow a return to a healthy state of the blood.

More than ten years ago I came to the conclusion that a gentleman still living, aged at that time about 55, was suffering from fatty degeneration of the heart. Spare in habit, strictly moderate in eating and drinking, regular in taking exercise, and a great pedestrian, he rapidly lost strength without recognisable cause, became breathless on very slight exertion, so that he could scarcely walk slowly one hundred yards without actually stopping, either to get his breath, or on account of anginoid pain. On one occasion at least while sitting in his chair he became suddenly pale and unconscious, his head fell on his chest, and the jaw dropped. With this change in his health, the pulse and heart were extremely weak. He would never relinquish exercise, but continued to walk, however slowly and at whatever cost of pain and distress every day, exercising great self-command and measuring his strength very exactly. Little by little he gained ground, and he is now in fair health, but capable of very little in the way of work. It should be added that never at any time were his intellectual faculties at all affected.

This case may have been an instance of arrest and partial recovery.

There is not much to be said on the subject of treatment. Life should be made as easy as possible for the sufferer. He should have as much sun and fresh air as his strength and the weather will permit, but on no account must he be exposed to severe cold. Such exercise as he is capable of is good for him, but he should never incur angina or extreme breathlessness. His food should be simple and his meals strictly regular, and the bowels should be kept well open. The rectification of functional derangements will be of service and tonics may do good.

Disease of the Right Ventricle.

Little has been said about the right ventricle in the discussion of the different structural diseases of the heart for the reason that affections of this ventricle have been reserved for special consideration.

It has seemed to me that our ideas of the effects of disease of the right ventricle have been too much based upon a study of the symptoms which attend affections of this ventricle secondary to disease of the left ventricle or its valves, which therefore are really attributable to the original disease.

Undoubtedly the supervention of dilatation of the right ventricle and of reflux through the tricuspid orifice allows back pressure to be brought to bear upon the veins, but this only intensifies pre-existing symptoms and makes no change in their character.

We are perhaps justified in assuming that the venous back pressure, to which insufficiency of the tricuspid valve will give rise, will in some degree produce the same results, whatever the state of the left side of the heart, and whether or not the tricuspid regurgitation has been caused by obstruction in the pulmonary circulation; but the conditions are fundamentally different when the tricuspid reflux is primary. It is not impossible, for example, that a sound and strong left ventricle may come to the aid of the right ventricle, just as the right ventricle so constantly comes to the aid of the left, notwithstanding the great length of the systemic as compared with the pulmonic circuit and the weak blood pressure in the systemic veins. The pressure which will cause the blood to spurt for two or three feet in venesection might carry a current through the capillaries of the lungs aided by the respiratory movements and the valves of the pulmonary artery.

It has, moreover, seemed to me that weakness of the right ventricle—the left ventricle being in a normal condition—in some cases has given rise to symptoms due rather to inadequate supply of blood to the left side of the heart than to damming back of blood in the veins. I have, for example, met with several instances of primary tricuspid regurgitation, either as a constant condition or coming on under very slight provocation. When any effect of this has been traceable it has not been breathlessness on exertion, but tendency to syncope. Perhaps this is what we ought to expect, since the occurrence of tricuspid regurgitation in the breathlessness of violent exertion has been regarded as a safety valve action, since also shortness of breath results from mitral regurgitation. A difference of symptoms ought to attend mitral and tricuspid insufficiency, one giving rise to turgescence and high pressure in the pulmonary circulation, the other to deficient supply of blood and low pressure. If mitral disease produces pulmonary symptoms, tricuspid disease may well produce systemic symptoms.

In a few cases which have come under my notice, in which the right ventricle has appeared to be predominantly or almost exclusively affected by asthenia or degeneration, the effects have been similar to those of tricuspid regurgitation.

A master in a public school, who had been accustomed to vigorous exercise, received a severe blow on the chest. He had for some time great pain in the cardiac region, and when he walked he soon felt faint. When I saw him some time after the injury he had had slight but distinct syncopal attacks. On examination, no valvular disease was present, and the heart was of normal size. There was a fair apex push in the normal situation, and the left ventricle first sound and the aortic second sound were normal in character. No right ventricle impulse, however, could be de-

tected, and the first sound and pulmonary second sound were very weak.

What had happened exactly cannot be stated, but from the contrast between the action and sounds of the two sides of the heart, it seemed as if the right ventricle had been in some way injured, and that its contractile energy was impaired.

The patient regained the power of taking exercise, and with this the sounds of the right ventricle became normal.

A patient, aged 72, who had never had a day's illness in his life, consulted me in 1879 complaining of failing vigour, giddiness on running to catch a bus, tendency to fall asleep in the day. He was constipated; the pulse, which was not more than 60, was sometimes tense, sometimes soft. The heart sounds generally were weak, the aortic second accentuated. In April, 1881, symptoms, which had previously been relieved, returned, and it was now found that over all parts of the right ventricle, and even over the pulmonary area, there was absolute silence. No impulse or apex beat could be detected, but at the apex the sounds were normal; the aortic second sound was accentuated. The pulse was 72, a little irregular, but fair in force and length. A month later he was much better. The pulse was 60, fair in strength and length; the left ventricle sounds were good, the right ventricle sounds faintly audible. From this time neither the right ventricle first nor the pulmonary second sound were ever at any time audible. The pulse varied considerably both in frequency and in tension, but it was usually well sustained, indicating considerable vigour of the left ventricle, and the left ventricle sounds were good. He had from time to time severe fainting attacks, which sometimes threatened to prove fatal. He was always worse when the bowels were not kept freely open. In June, 1883, the pulse is described as large, full, and tense; the aortic second sound was accentuated at the apex and in the right second space; there were no right ventricle sounds. Towards the end of 1884, when not under my care, the bowels were allowed to get confined, and he fell into a condition of stupor, with incontinence of urine and fæces. He recovered from this condition after free purgation, and was again able to go about, though his mental faculties were impaired and he was childish; but in November, 1885, thrombosis of the left middle cerebral artery took place, giving rise to hemiplegia and aphasia, of which he died.

The entire absence of right ventricle sounds in this case was very remarkable, and I cannot doubt that there was really no action of this ventricle. As it seemed to me impossible that the pulmonary circulation could be maintained without its aid, I formed a very unfavourable prognosis; and when this was belied I watched the case with extreme care, first to make sure that my observation was not at fault, and next in order that I might arrive at some comprehension of the problem presented by the facts. The conclusion appeared to be unavoidable that the left ventricle was carrying on the circulation through the lungs; it was throughout capable of maintaining high tension in the arteries. The amount of blood passing through the pulmonary vessels under these conditions and reaching the left auricle would be easily influenced, and would vary greatly, and the fluctuating supply of blood to the left ventricle would account for the varying character of the pulse.

One of the most serious effects of weakness of the right ventricle is met with in disease of the mitral valve. When the mitral valve from thickening and shrinking of the curtains and tendinous cords becomes inefficient, the right ventricle is for a time the rampart by which the reflux of blood is arrested and a reinforcement to the crippled left ventricle. When we hear a systolic apex murmur telling of mitral regurgitation, the murmur itself gives no trustworthy information as to the amount of blood which is carried back into the auricle. We gather this mainly from the effects upon the right ventricle. The first of these is accentuation of the pulmonary second sound, indicating increased pressure in the pulmonary circulation, and following on this hypertrophy of the right ventricle, by means of which the obstruction to the passage of blood through the lungs is overcome. It is by the augmented strength of the right ventricle that the mitral leakage is neutralised and a working equilibrium established. The greater the regurgitation the greater the amount of hypertrophy required to compensate for it. The change in the right ventricle thus becomes, together with the accompanying dilatation of the left ventricle, a measure of the regurgitation.

When, therefore, we detect a mitral systolic murmur, we at once examine the right ventricle in order to gather from its condition information as to the amount of reflux which is not yielded by the murmur itself. This is specially the case when symptoms of failing compensation have set in; but if the right ventricle is in a state of degeneration or great weakness, these indications fail us altogether; while dropsy and other evidences of serious stasis and back pressure in the venous system are rapidly developed for lack of hypertrophy or compensatory effort on the part of the right ventricle.

Under these circumstances the prognosis is extremely grave. The right ventricle is unable to come to the aid of the left, the mechanism of compensation makes default, and the back pressure bears at once upon the venous system. The fulcrum for some of our most efficacious therapeutic measures is missing. We dare not open a vein however great the respiratory embarrassment and cyanosis; the effect of leeching over the liver is less certainly good, and a dose of calomel is not well borne. Recovery is rare, and twice it has happened in my experience that during apparent convalescence, when an unfavourable prognosis seemed to have been belied, the patient has died suddenly when beginning to walk about.

Similar conditions result from time to time from adhesion of the pericardium. The right ventricle suffers much more than the left from pericarditis. During the attack the muscular fibres immediately subjacent to the serous membrane, which are paralysed by the inflammation, form an appreciable proportion of the thin wall of this ventricle, which is thus weakened and prone to dilate; whereas, although the superficial layer of the muscular fibres of the left ventricle is similarly paralysed, they constitute a relatively unimportant part of the mass of the ventricular muscle. Again, the right ventricle is much more hampered by adhesion of the pericardium than the left, partly because its superficial area is relatively large, but chiefly because of the thinness of its walls; and when the adhesions are general, and especially if there is also adherence of the pericardium to the chest wall and diaphragm, efficient contraction of this ventricle must be impossible. Cases of this kind, then, are not uncommon. There is valvular disease, mitral or aortic. From the size of the heart, the position and character of the apex beat and impulse, the persistence of sounds in spite of the murmurs, there are grounds for concluding that the valvular lesion is not very great, but there is a premature development of symptoms. Under such circumstances, we may often confidently infer adhesion of the pericardium when it cannot be demonstrated by physical signs. The right ventricle may be obviously labouring, and the pulmonary second sound may be less definite and pronounced, which will tend to corroborate the conclusion arrived at.

The right ventricle is undoubtedly sometimes the cause of sudden death, and when the heart is embarrassed or stopped by pressure upwards of the diaphragm by a distended stomach or colon, it must be on the right ventricle that the pressure takes effect. This part of the heart rests upon the diaphragm, and will be directly compressed when it is pushed up. Probably it is the diastole which is mostly interfered with, and it would seem that the proper expansion and filling of the ventricle must be impossible when the pressure upon it is such that the heart is carried up bodily by the diaphragm, especially when the ventricle is dilated and over-distended. A melancholy illustration of this occurred in my experience in the case of an eminent artist. He was suffering from mitral stenosis and regurgitation, and had overthrown the compensation established by hypertrophy of the right ventricle by serious imprudence in the form of over-exertion and exposure undertaken to remedy the effects of overwork. He was suffering in an extreme degree from distension of the right side of the heart, with tricuspid regurgitation, and especially from sleeplessness and dyspnœa, so that his misery was insupportable, and life was despaired of. The application of leeches over the liver, which was enormously swollen, and the administration of calomel, at once gave him sleep, and by a repetition of the leeches and regular employment of mercurial aperients, with the usual heart tonics, he so far recovered as

to be able to leave his room, and his convalescence seemed to be assured.

One morning after a hearty breakfast in bed, the nurse was about to wash his face and hands as usual, but he impatiently bade her give him the basin, and stand aside. He sat up in bed with the basin between his knees, and, when the time came for washing his face, bent forwards over it. The pressure upwards of a full stomach caused by this movement brought the weak right ventricle to a standstill, and the patient fell back dead.

One cannot help being reminded in relating this incident of the rough and ready, but effectual, way in which a man is brought to who faints after the frightful exertion of a boat race. He is seated on the ground, and his body is bent forcibly forwards, so that his head almost comes to the ground between his knees, or, if he has fallen forwards over his oar, it is done while he is in the boat. The *modus operandi* of the remedy is pressure on the distended right heart, and, when emetics are resorted to in bronchitis, which has gone on to the production of cyanosis, the good effect is due, not only to the emptying of the bronchial tubes, but to unloading of the right auricle and ventricle by compression in the act of vomiting.

Angina Pectoris.

While heart disease generally, of whatever kind, is remarkable for the almost entire freedom from pain—so that, when patients come complaining of pain in the cardiac region it is a presumption against the existence of any serious organic affection of the heart rather than an indication of any such change—there is one form of pain in and around the heart, angina pectoris, which is very definite and constant in its significance of disease and of danger.

In a characteristic attack of angina, there is intense pain in some part of the cardiac region in the left breast, or behind the sternum, or across the chest, at its upper part usually, but occasionally lower down, with radiation down the left arm. Accompanying the pain is a sense of utter powerlessness and extreme fear and dread. The patient stands still, not daring to move or breathe, and feels as if he were in the act of dying. He will say afterwards that if the pain had lasted another moment he must have died. In no other condition is the physical agony of dying realised in anything like the same degree. The two elements of pain and sense of dying coexist in a true paroxysm of angina, and are almost equally characteristic.

The pain differs in character and situation and in intensity in different cases. Some sufferers will say it is indescribable—nothing in their previous experience suggests even a comparison; others speak of the pain as severe cramp in the heart, or as if the heart were gripped by an iron claw: while pain of a shooting neuralgic character, sometimes intermittent, sometimes persistent, seems to radiate from the chest to the left shoulder, the inner side of the arm, the forearm, and the ring and little fingers. Occasionally there is a sensation as of the wrist being grasped so tightly as to cause pain. With the pain in the heart there may be pain down both arms or shooting up into the left side of the neck, very rarely in the right arm only. Occasionally the pain may be felt first in the arm and seem to travel up to the chest, or may come in the inner side of the arm as a kind of warning of an attack. Another description of the pain is that it feels as if the sternum were being crushed back to the spine, or, again, as if the whole chest were being held in a vice. In other cases the pain is compared to a bar of iron across the upper part of the chest: in others, again, to a ton weight upon the lower part of the chest. The ramifications of the cardiac plexus and its communications with other nerves make the radiation of pain in all the various directions enumerated comprehensible, and the nerve of Wrisberg has been specially instanced as explaining the pain in the left arm, but no explanation can be given why in one case the pain is felt in one part of the cardiac region, and has some particular character, and takes a given direction down one arm or both or through to the back, while in another case the seat, character, and extension of the pain are quite different. It is not a pressure effect on the plexus outside the heart, neither heart nor aorta being necessarily enlarged, and extreme fusiform dilatation of the arch of the aorta being common without confirmed pain; and there can be no stretching or mechanical irritation of the ramifications beneath the endocardium at all comparable to that which takes place in acute dilatation of the heart. It seems to me probable that the pain is really central, and that the radiation of irritation giving rise to its extension takes place in the spinal cord.

An interesting point is that at the end of a paroxysm there is usually flatulent eructation from the stomach. The attacks are therefore very commonly attributed to flatulence, and distension of the stomach by food or gases may undoubtedly be, and often actually is, an exciting cause, but more frequently the sensation as of wind on the stomach is only a part of the general commotion, and is due to communicated or sympathetic irritation of the gastric distribution of the vagus, the cardiac branches of which are primarily implicated. The escape of gas from the stomach is often a signal that the paroxysm is over rather than the means of bringing it to an end. Occasionally there is a vehement necessity to pass urine, although the bladder may at the time be empty.

The duration of the attacks is very varied; sometimes it can be reckoned in seconds. Most frequently, perhaps, a paroxysm will last a few minutes, but I have known a patient sit in the same position almost through an entire night, not venturing to make the slightest movement and scarcely seeming to breathe, while the perspiration rolled off his forehead and came through his clothes. According to my experience, it is when the attack comes on in the night, without provocation by exertion or exposure, that it is protracted. When it is started by exertion it generally ceases soon after the exertion is left off.

While it would not be justifiable to say that a patient was the subject of angina pectoris unless he had had one or more paroxysms of intense radiating pain, associated with a sense of immediately impending death, it must be admitted that attacks of true angina occur which fall short of the typical development. For example, when a patient has been taught prudence by one or more bad attacks, he may, by standing still on the first warning, or by taking remedies, cut short the paroxysm, which will then have been represented only by the initial pain in the breast or arm without the mortal dread. It is possible, therefore, that before any characteristic attack has occurred, pains of a similar kind and intensity, disregarded by the patient or relieved by rubbing the chest or arm, may have the same significance as a fully-developed paroxysm.

Again, a patient who has had had attacks of true angina may cease to suffer pain, but may have attacks of what he calls faintness, in one of which he ultimately dies. These, which have lost their title to the name angina, have an equally serious significance.

The aspect of the patient is one of extreme anxiety or alarm. He is usually pale and often livid round the mouth, but it is said that sometimes the colour does not change. A cold perspiration usually bursts out on the forehead, and may be so copious as to drip off the face. The pulse, in the rare instances in which I have had the opportunity of examining it during a paroxysm, has been irregular, small, and weak. In some cases it has been reported to be very small from contraction or spasm of the arteries. In others, again, it has scarcely been affected at all.

Great importance attaches to the exciting cause of the paroxysms. In the first instance they are almost always brought on by exertion. The patient while walking perhaps more sharply than usual, or up-hill, or against a wind, is more or less suddenly arrested by pain in the chest, with a feeling as if the heart were about to stop and he to fall down dead. On standing still the pain gradually passes off, and he is able to resume his walk, but only feebly and gently. For a while the attacks only occur when provoked by exertion, but more and more easily as time goes on, and they tend to become more severe. They are more readily induced when a walk is taken, or any imprudent exertion such as stooping, pulling open a drawer, pushing up a window, is made soon after a meal, especially after breakfast. External cold, again, predisposes to an attack, and exercise, which can be taken with impunity in mild weather, brings on a paroxysm if the air is cold and damp. Attacks, again, may be brought on by indigestion or constipation, apparently either through reflex disturbance of the heart, or as a result of pressure from the distended stomach or colon carrying the diaphragm upwards and

obstructing mechanically the action of the heart and the expansion of the lungs.

They are also liable to occur during the night, and may be induced in various ways. The contact of cold sheets may have this effect by causing contraction of the peripheral arterioles, and thus throwing increased work on the heart; or the upward pressure of the abdominal viscera, on assuming the horizontal position, may embarrass the heart. Not infrequently an attack comes on after sleep, when the vigour of the circulation has run down.

It is clear that the great exciting cause is a demand for increased effort on the part of the heart to which it is not equal, or, what is equivalent to this, interference with the movements of the heart by a dilated stomach and colon.

The conditions of the heart associated with angina pectoris are varied, but perhaps the most remarkable and significant point in the relations between heart disease and angina is that angina does not attend the chain of events through which stenosis or incompetence of the mitral valve proves fatal, and is not among the symptoms which arise out of the valve lesion and its effects upon the heart. This fact was duly emphasised by Dr. Walshe, in his classical work on the heart, and no exception to it has occurred in my experience. I have, indeed, known instances in which, after attacks of angina have occurred at intervals for many months, mitral regurgitation has supervened with dilatation of the left ventricle, and concurrently with the establishment of so-called mitral symptoms—pressure in the pulmonary circulation, dilatation of the right side of the heart, and dropsy—the angina has ceased. In these particular circumstances Dr. George Balfour's view, that the giving way of the mitral valve may be an advantage to the sufferer from aortic disease, is justified.

Aortic stenosis may be attended with true angina, as may also, but less frequently, aortic incompetence and a combination of the two conditions of the aortic valve. In association with aortic valvular disease angina may be met with in early adult life, and may continue for many years without proving fatal. The sense of impending death is, however, not fully pronounced in many aortic cases.

Adherent pericardium appears in some cases to be a factor in the liability to anginoid attacks when it coexists with aortic valvular disease, but in my experience it has not given rise to angina when no other lesion was present.

Injury to the root of the aorta has been known to give rise to angina. I have had a case under observation for several years, in which a severe crush of the chest gave rise to a double aortic murmur and to distressing attacks of angina. For a time the attacks came on very frequently, even while the patient was kept in bed, and they continue to occur on very slight provocation, requiring frequent recourse to nitroglycerine, which the patient takes in considerable quantity. There has been scarcely any compensatory hypertrophy and dilatation in this patient, and he has never been able to work.

In aortitis there is usually angina, the attacks at first slight, increasing in intensity and duration, and coming on more frequently as the disease advances. The heart rapidly becomes weaker without notable enlargement, the impulse more feeble, the sounds weak and short. Both the angina and the weakness of the heart point to interference with the coronary circulation, and the orifices of the coronary arteries are found small and contracted by the swelling of the walls of the aorta.

A perfectly characteristic attack of angina has been described to me as having occurred in intermittent fever, and serious weakness of the heart was left behind for some time. Angina, again, has sometimes been an incident of diabetes, possibly from high arterial tension, which is commonly present in this disease late in life. Occasionally, however, a series of severe anginoid attacks, occurring at short intervals, has been followed by rapid heart failure and dropsy, suggesting that the angina was symptomatic of myocarditis.

Attacks of pain in the region of the heart of various kinds, some being true angina, are spoken of as gouty, sometimes, no doubt, in order to disguise the real nature of the paroxysms from a nervous patient to whom the knowledge might be dangerous or fatal.

In a very large proportion of the cases in which angina has proved fatal, the heart has been found, when examined after death, to be in a more or less advanced stage of fatty degeneration, and in most of these again there has been disease of the coronary arteries, very commonly so far advanced as to have reached the stage of ossification or calcification. Sometimes these vessels can be dissected out from the auricular grooves as rigid calcareous tubes. The fatty change in the walls of the heart may be so far advanced that the fingers sink into its substance on very slight pressure, and that scarcely a trace of muscular fibres can be found on microscopic examination. On the other hand, the degeneration may be comparatively slight, being evident to the naked eye only as yellow striæ or patches in the ventricular walls and in the papillary muscles. The microscope, however, will show fat granules in those parts of the heart which to the eye and touch seem normal, as well as advanced fatty change when degeneration has given rise to yellow striæ.

In some cases the morbid condition found is fibrosis, general or local, apparently from myocarditis. Sometimes a distinct history of an attack of myocarditis is obtainable by questioning the patient. There may, however, be little or no recognisable change in the walls of the heart, especially when the first attack has proved fatal, or death has supervened after only a few paroxysms. It is probable, however, that in such cases something will be discovered on minute examination, perhaps the obliteration of a branch of a coronary artery by endarteritis, or its obstruction by an embolus or thrombus. Something certainly must have happened.

If we now try to bring to a focus the more important conclusions regarding angina pectoris:—First as to the condition of the heart during the attacks. This has been generally supposed to be one of spasm, but there are great difficulties in accepting this view, and probably ideas as to what is meant by spasm of the heart in the anginal paroxysm by those who have employed the term have been diverse and very often vague. If by spasm of the heart is understood tonic contraction or an unrelaxing systole, this is certainly not the condition present. The heart has never been found in this state after death, and in most cases is absolutely incapable of such contraction from the state of its walls. No pulse would be possible were the heart in a spasm of this kind, and the pulse, though small and often irregular, can usually be felt. It has, indeed, in some cases been apparently unaffected by the paroxysm.

But by spasm may be meant an irregular and partial contraction like cramp in voluntary muscles, or a fibrillar contraction, such as is sometimes induced by faradic currents in muscle under experiment. The late Dr. Matthews Duncan, in the last conversation I had the honour to hold with him, suggested that the state of the heart in angina pectoris might be like hour-glass contraction of the uterus. He had probably at that time experienced the pain. Views of this kind cannot be proved to be wrong, but objections might be raised, and, for my part, I have to admit that I have no clear and definite idea of the state of the heart during the paroxysm.

The central fact and essential significance of angina is that stress is put upon the heart, to which, for the moment, it is unequal.

One of the main causes of such stress is persistent resistance in the peripheral circulation, or, in other words, habitual high arterial tension, and we owe to Dr. Lauder Brunton the knowledge that in many attacks of angina there is an aggravation of habitual high tension by a general contraction of the arterioles. But the habitual state of the arterial circulation may possibly be one of relaxed arterioles and capillaries and low tension, so that the heart has no abnormal resistance to overcome. Here sudden general arterial spasm would put the heart to greater stress than if the habitual tension were high, since the contrast between the work demanded would be greater.

When the paroxysms of angina can be distinctly traced to arterio-capillary resistance, or, when in the case of a patient subject to angina the usual condition of the circulation is one of high tension, the term "angina vasomotoria" may, perhaps, be appropriately employed. It is easy to imagine that stretching of the muscular fibres of the heart in the endeavour to overcome the resistance in the arteries might cause pain. But even when the vasomotor element is most potent,

another factor must enter into the causation. Nothing is more common than high arterial tension, and it is met with in an extreme degree and produces fatal results without angina by ruining heart or arteries, or both, in hundreds of cases for one in which angina is present. Acute dilatation of one or both ventricles, again, in which stretching of the muscular fibres is obvious, frequently occurs without angina.

The importance, and even dominance, of this second factor becomes clear when the cases of advanced fatty degeneration are borne in mind, when the fibres must be incapable of producing anything like actual mechanical tension.

It has been assumed that the other element is neuralgic, and in a sense this is true, but not in the sense of a predisposing neurotic tendency. It must be remembered that angina is much more common in the male, which is the least neurotic sex.

Mechanical stretching and neuralgic predisposition being put out of the question, there remains the fact that the existence of the patient is threatened at the moment of the attack by arrest of the heart's action, and were it not for the warning given by the pain and for the cessation of exertion enforced by it, the subject of the particular condition of the heart would die. We must, it seems to me, assume that angina is one of the defensive arrangements by which the adjustment of internal reactions to external conditions is secured.

The prognosis of angina is beset with uncertainty. We can never tell when the next attack will come on, or whether it may not be the last. We are not, however, altogether without guidance, the elements of which will be an estimate of the relative predominance of the two chief factors in the production of the attack—whether inherent weakness of the heart wall, or obstruction in the circulation or other cause of embarrassment of the heart's action.

While the attacks only come on when provoked by exertion or excitement, or by flatulent indigestion (not, of course, taking the patient's word for the last-named cause), the hope may be entertained that by care in avoiding all known occasions they may be postponed indefinitely. The patient, for example, must not take exercise immediately after food, must never hurry or walk against a wind, and even on level ground must adapt his pace to his condition, and if compelled to go uphill must do so very gently and circumspectly. If, further, there is habitual high tension in the pulse, this is at the same time evidence of obstruction in the arterioles and capillaries, which may be capable of mitigation and of some degree of vigour in the heart. So also will be accentuation of the aortic second sound, and still more any recognisable impulse or apex beat.

Angina, again, in connection with aortic valvular disease, may run a very protracted course. It is when the pulse is soft and the heart is normal in dimensions, with imperceptible impulse and weak sounds—when, in fact, the results of careful examination are negative—that the greatest uncertainty and danger exist. The occurrence of unprovoked attacks and of nocturnal angina will emphasise this conclusion.

Treatment.

The hygiene and general treatment for angina will be such as has already been described in speaking of dilatation and degeneration, which, indeed, mostly underly the angina, and the special precautions against the provocation of attacks have been sufficiently indicated.

Arsenic has long been held to exercise some influence preventive of the paroxysms, and my experience leads me to agree with this view. Phosphorus, which belongs to the same chemical and therapeutical series as arsenic, has a similar influence, which has, in some instances, seemed to be superior.

The great means of cutting short the attacks is that placed in our hands by Dr. Lauder Brunton—nitrite of amyl or nitroglycerine; and a patient subject to angina should never be without one or other of these remedies. They are, no doubt, greatly abused, and many persons, feeling secure of obtaining relief, neglect the important precautions by which the real disease, of which angina is only a symptom, may be held in check; and so, if they escape suffering, hasten on a fatal termination.

ON THE IMPORTANCE OF GONORRHŒA AS A CAUSE OF INFLAMMATION OF THE PELVIC ORGANS.[1]

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When, in 1872, Dr. Noeggerath for the first time published his views on this question under the title *Latent Gonorrhœa in the Female Sex*, so obviously exaggerated were some of his statements that, as he himself subsequently admitted, they "were not received very favourably by the medical press." Four years later, namely, in June, 1876, he returned to the subject by reading a paper before the American Gynæcological Society, entitled, "Latent Gonorrhœa, especially with regard to its Influence on Fertility in Women." This was apparently a reproduction of his original views, and the same exaggeration of statement characterised it. It will be convenient to give here his conclusions as the formulated expression of his views. They are as follows:—

1. "Gonorrhœa in the male as well as in the female persists for life in certain sections of the organs of generation, notwithstanding its apparent cure in a great many instances.

2. "There is a form of gonorrhœa which may be called latent gonorrhœa in the male as well as in the female.

3. "Latent gonorrhœa in the male, as well as in the female, may infect a healthy person either with acute gonorrhœa or gleet.

4. "Latent gonorrhœa in the female, either the consequence of an acute gonorrhœal invasion or not, if it pass from the latent into the apparent condition, manifests itself as acute, chronic, recurrent perimetritis or ovaritis, or as catarrh of certain sections of the genital organs.

5. "Latent gonorrhœa, in becoming apparent in the male, does so by attacks of gleet or epididymitis.

6. "About 90 per cent. of sterile women are married to husbands who have suffered from gonorrhœa either previous to or during married life."

These conclusions were at the time of the reading of the paper severely criticised by men who represented city and country practice. One gentleman used the naïve but pertinent argument that "he had ascertained in conversation with twenty different physicians who acknowledged having had gonorrhœa in early life, that in no single case had any such symptoms as had been referred to been developed in their wives, and all had had large families of children."

Before the publication of this second paper, the late Dr. Angus Macdonald reported some cases in support of Noeggerath's views. Regarding these I will only say that while Sinclair quotes them with full acceptance, Sänger refers to them as instances of wrong diagnosis.

After the detailed criticism of Noeggerath's second paper by Chadwick, the first to enter the field was the late Dr. Thorburn, of Manchester, who took up the challenge in a paper read before this Association in Manchester in August of the following year, on "Latent Gonorrhœa as an Impediment to Marriage." In contradiction to the conclusions arrived at by Noeggerath, Dr. Thorburn "appealed to the statistics of 81 private families carefully collected by himself. He showed that there had been 33 per cent. of male gonorrhœic infections previous to marriage, 26 in all; and, taking all the cases of abortion, sterility, uterine and pelvic inflammations and living births that had occurred in these 81 families, he showed conclusively that there had been the merest fractional difference in their proportion between the previously and not previously infected classes. As regards inflammatory pelvic affections, the balance was fractional in favour of the non-gonorrhœic."

Hitherto opinions on the subject of gonorrhœa were based on clinical investigation, but with Neisser's publication of his observations on the gonococcus (in 1879), which had been discovered ten years previously by Hallier, the question entered upon a new phase; the literature of the subject soon assumed large proportions, and the microscope usurped the place of clinical observation. The fortune of war fluctuated between

[1] Read in the Section of Obstetric Medicine and Gynæcology at the Annual Meeting of the British Medical Association held at Birmingham July, 1890.

the supporters and the opponents of Neisser's views, yet so much in favour of the opponents that Neisser himself has, in the meantime, been compelled to modify his original views, just as, according to Sinclair, "Noeggerath has lived to greatly modify his first impressions." Confusion entered upon the scene when Bumm, of Würzburg, announced the discovery of more than one diplococcus—five in all—exactly similar to, and indistinguishable by the individual form alone, from Neisser's gonococcus. This state of confusion was not diminished when Kammerer stated that he had found the gonococcus in the fluid obtained from a knee-joint affected with gonorrhœal rheumatism. Nor did it tend to clear up the subject when Kroner, of Breslau (in 1884), formulated his conclusions as the result of his observations on 92 cases of ophthalmia neonatorum that there are two forms of blennorrhœa, between which he is unable to make out any clinical difference. On the same occasion Sänger, of Leipzig, stated that the hope aroused by the discovery of Neisser that in the gonococcus we should find a means of diagnosing chronic gonorrhœa had proved to be vain, that it was established as a fact that gonorrhœa could exist without the demonstrable presence of gonococci, and that while the absence of gonococci proved nothing against the gonorrhœal nature of the disease, the presence of diplococci, "seeing there were several varieties indistinguishable from one another," did not prove the gonorrhœal nature of the disease. (Here Sänger distinctly throws over the microscope in favour of clinical observation.) Such is the force of Sänger's statements, that Sinclair is constrained to say "that there can be little doubt as to the difficulty of finding the gonococcus in chronic gonorrhœa in women. In cases of only a few months' standing, most certainly gonorrhœal in their nature, which have been under treatment, it has been almost invariably impossible to discover the gonococcus, however numerous other bacterial forms might be. If this be established as a fact by general experience, the sooner it is recognised as a fact the better." This has an important bearing on Noeggerath's statements as to the incurability of this affection. Fortunately, at the present day, we are spared the trouble of refuting these and other statements, for Noeggerath has now (that is, since 1887) given up those pessimistic opinions on the question of incurability, which Sänger, in 1884, had declared to be no longer tenable, as to the proportion in which married men who have this disease infect their wives, and the frequency of sterility.

But as if to render confusion worse confounded, in the following year (1885) Fränkel published his observations on non-gonorrhœal colpitis in children, in which he found diplococci which were in every respects identical with the gonococcus. In this he was confirmed by Cséri, of Budapesth, who, in the examination of the discharge in twenty female children from 2 to 10 years of age, found in every case a large diplococcus, bearing a striking resemblance to Neisser's gonococcus. In his opinion both cocci appeared to be biologically identical. The discharge also was very contagious, and he mentions a case in which a nurse lost her eye through accidental infection in the act of syringing a child affected with the disease.

Such, then, is the confusion in which a reliance on the microscope has landed us, and, although we are told that a method has been discovered by which the true gonococcus can be distinguished with certainty, yet the test is so delicate and complicated that it is practically of little use. It is evident, then, that we must fall back on rigid clinical observation in order to arrive at definite and exact results.

In the study of this subject contradictions meet us on every hand. When we come to the question of the manner in which the disease spreads from without inwards, opinions are equally divergent. Observers are even at variance as to the part played by the gonococcus itself. Thus Bumm affirms that gonorrhœic para- and perimetritis cannot be explained by the action of gonococci; he says there must be another agent, and to account for these conditions he starts the theory of "mixed infection," that is, the addition to the gonococcus of one or more forms of bacteria. It would be unprofitable to dwell on this question.

Again, to account for the obscurity surrounding so many cases of supposed gonorrhœal infection, and to explain away the absence of direct clinical evidence, the theory of "latent gonorrhœa" was advanced by Noeggerath, and it may be assumed that it was this idea which led him to adopt those pessimistic views and make those exaggerated statements from which he has since been obliged to recede. Sinclair has warmly espoused this theory, and, in my opinion, to such an extent as not merely to weaken, but in many respects to effectually destroy, his argument. After describing the chief points in a fairly typical case, he tells us that the "symptoms and signs of the disease vary greatly." These are reached either through a more or less acute attack subsiding into the chronic form, or by a gradual development of the creeping form of gonorrhœal invasion, in which, be it observed, "an acute stage either does not exist, or altogether evades observation." The explanation, he says, "is sought in Noeggerath's idea of latent gonorrhœa in the male." The virulence of the gonorrhœal infection appears to depend upon the number and vitality of the gonococci contained in the infecting matter. In an acute attack the number of the gonococci in the secretion is at its highest "with corresponding vigour and vitality of the organism." Hence the infection is conveyed quickly and with certainty." "At the other end of the scale you have the sort of attack produced by the infecting matter, from a man who had been the subject of an acute attack many months, perhaps years, before. Yet we have heard that in cases of only a few months' standing, and after treatment, it has been almost invariably impossible to discover the gonococcus." To explain away this absence of the gonococcus in old-standing cases we find the most extraordinary theory we have yet come across advanced, namely, that "the gonococci are few and decrepit, probably altogether absent from the periodic emissions of a continent man. It is only the post-nuptial sexual excess that rouses them into sufficient vigour to be harmful." To say that this is a mere speculation, and totally opposed to all analogy, is a mild way of expressing dissent, and one is inclined to re-echo the words of Angus Macdonald, when, in speaking in general terms of Noeggerath's views, he said: "I must confess, however, that I cannot help feeling convinced that he proves too much." I have already called attention to the difficulties surrounding the task of demonstrating the presence of the gonococcus, and although Neisser says he has discovered it as long as three years after the acute attack, yet most investigators have failed to find it a comparatively short time after the disappearance of the acute symptoms.

Once more, to account for the signs and symptoms of the disease in the absence of the gonococcus, Sänger has advanced another speculative idea, namely, that of "a spore as the permanent form of the contagium." Even Sinclair characterises this as "a mere hypothesis."

Coming now to the more practical aspect of the question, the same divergence of views is observed. Taking Dr. Sinclair's monograph as an excellent summary of this subject, we find the following. Speaking of the acute form, he says: "In the female the urethral form never occurs without other portions of the genital tract becoming involved," a very strong statement, on a par with what follows, namely: "but the converse proposition is not true: the uterus may be affected, and the most serious complications may develop in the pelvis without the patient ever having noticed any discomfort in micturition." That is a proposition to which I am unable to accord my assent; for it seems to me a strange doctrine that, while the disease extends with the greatest facility from the urethra upwards to the uterus, it meets with obstruction in the opposite direction, in both cases the vagina merely serving as the impartial channel of communication. For it is acknowledged to be "still" a question whether there is any such thing as a "gonorrhœal vaginitis." The very opposite conditions commend themselves to my mind as at least more reasonable. But inconsistency follows upon inconsistency, for he maintains that in the acute form of gonorrhœa in women the ordinary typical attack extends to the cavity of the uterus, but there is still room for doubt whether, in the ordinary typical case, the process also involves to some extent the tubes, "ovaries, and pelvic peritoneum," but he firmly believes that such an extension of the disease is by no means unusual, though it ordinarily disappears without recognition. "We sometimes find that the peritoneum has been reached in a remarkably short period from the time of patient's first contact with the infecting discharge, but as a rule the process takes from two to three months, while it

still may be considered in the acute stage." Yet he admits that a general peritonitis, as a result of gonorrhœal infection, must be a very rare occurrence.

How very forcibly this contrasts with his opening sentences, in which he says: "Gonorrhœa, as it occurs in the female sex, is still in this country strangely neglected by general practitioner and specialist alike. Its symptoms, the ravages which are its immediate or remote results, are hardly recognised or understood." Yet the virus of this disorder gives rise to a group of diseases, a series of pathological conditions, which, by reason of their social and moral consequences, surpass in importance any other class of affections with which the gynæcologist is call upon to deal." Surely this is the language of exaggeration, which seems to be fatally connected with this subject. Would that Dr. Sinclair had been more mindful of the sentiment thus expressed in his own words. "It is necessary to guard against exaggeration, for there is a danger that in rousing from long ignorance and neglect of the subject, the professional mind may sway to the other extreme, and, amidst the phenomena of disease, obscure in their nature and as yet inexplicable, be tempted to accept gonorrhœal infection as an easy and sufficient explanation of morbid processes with which it has no kind of causal relation."

Now I would not for a moment have it even suspected that I am desirous of minimising the importance of this disease, much less of denying its power of evil, or that it is capable of producing salpingitis, with its various results, ovaritis and pelvic peritonitis, even to a fatal termination, yet I must insist on a more rigid adherence to the teaching of facts actually observed.

It is at least a strange fact that I have never seen a case in which I could obtain incontestable confirmatory evidence that a case of salpingitis, pyosalpinx, much less hydrosalpinx, ovaritis, or ovarian abscess, was of gonorrhœal origin, although I take every precaution so that the history of each case of disease of the appendages where I operate should be as complete as possible. But there is no reason why I should refuse to accept the well authenticated evidence of other observers. Even Sänger, who admits the frequency of gonorrhœal salpingitis, goes so far as to say that "gonorrhœal salpingitis" is never followed by a "destructive suppuration" of the uterine appendages; it remains invariably a disease of the surfaces of the mucous and serous membranes. While engaged in the special study of this subject for the purpose of this discussion, in which I acknowledge my special obligation to the labours of my friend Dr. Sinclair, already referred to, I have met with several cases of interest.

About the same time I was consulted by two patients, whose conditions and symptoms were such as to lead me to make special inquiries. In both there was a copious greenish yellow discharge, with redness of the orifices of the vulvo-vaginal glands, and well marked evidence of tubo-ovarian mischief, in the tenderness, enlargement and apparent fixation of the appendages; in A, on both sides, in B, on the left side only. Sterility existed in both cases, four years in one and nine years in the other. In the case of A., the following facts were obtained. A great deal of "whites" before marriage; after three or four months discharge became more abundant, and instead of being white became yellow; about the seventh or eighth month first experienced pain on sexual connection; on one occasion the act performed in the early morning was more than usually painful; in the course of the day while out walking was seized with some pain in the left ovarian region, felt sick and fainted; was laid up for a week and has never been well since. She was the second wife of her husband. He had had gonorrhœa three times before his first marriage, his wife bore him two children without any untoward result, but died from heart disease in her third pregnancy, undelivered at 8½ months. He had not even exposed himself to disease after his first marriage.

In the case of B., the physical conditions were very similar with the exception that the pelvic disease was limited to the left side. On the question of gonorrhœa I requested her usual medical attendant to obtain information for me. His answer is emphatic. He (the husband) completely denies ever having had any ailment whatever of this nature and, what is more strange still, tells me that "he was virtuous, never having known woman until his marriage."

In both these cases we have a train of signs and symptoms which tallies very closely with those which are to be found in cases quoted as undoubted examples of gonorrhœal infection, even to the redness of the orifices of the vulvo-vaginal glands, the copious, greenish-yellow leucorrhœa, dysmenorrhœa and pelvic mischief. But he would be a bold man who would assert that gonorrhœa played any part even in the first case.

On the other hand, I have recently seen with Dr. Campbell Pope, a patient who had contracted gonorrhœa from her husband, and at the time of her first confinement some years ago had an abundant crop of syphilitic warts, not only on the external parts, but also in the vagina. She was very ill with pelvic mischief for many weeks, but ultimately got well. At the time of our consultation she was ill again with pelvic symptoms (threatened puerperal fever) after a premature confinement, the fourth pregnancy since her first illness. Here the symptoms following her first confinement may fairly be set down as the result of gonorrhœal infection, but this did not produce sterility; and I am not prepared to accept Sinclair's dictum that "the woman who has suffered from gonorrhœal perimetritis is barren."

It is to my mind very strange how Noeggerath and those who think with him ever could have come to the conclusion that gonorrhœa plays such an important part in the production of sterility in the face of the large number of cases of ophthalmia neonatorum that are due to gonorrhœal infection. If this view were well founded, then the infection must have taken place after the pregnancy had begun. Otherwise we must assume that it is only a coincidence or an accident that gonorrhœa and sterility ever stand in the relation of cause and effect.

My own observations fail to supply me with a single instance in which gonorrhœa has produced sterility in the male. One striking example comes before my mind of a gentleman whose wife was barren. This fact might be seized on as a case in proof were it not for the fact that he was anything but impotent or sterile in the case of another woman, to my certain knowledge.

As the result of my inquiries at the Lock Hospital and amongst numerous general practitioners, I have failed to find any evidence to support the statement that this disease "gives rise to a group of diseases, etc., which surpass in importance any other class of affections with which the gynæcologist has to deal." In the Lock Hospital I was informed by the house-surgeon that he was unaware of a single instance of pelvic disease following gonorrhœal infection. General practitioners tell pretty nearly the same tale of numerous examples of gonorrhœa in young men marriage, no evil consequences. Listen to what the late Dr. Bumstead said in the fifth edition of his work on *Venereal Diseases*, in a very short notice of Noeggerath's extreme views, and in which he employed a weapon which, according to the French proverb, is so deadly—namely, ridicule. He said that at one of the annual meetings of the British Medical Association one of the speakers announced that Dr. Noeggerath's views were so generally known and accepted in America that one of the first questions asked by the parents of every young lady to whom marriage was proposed by a gentleman, was whether he had ever had the clap: "In short," he adds, "even if 800 out of 1,000 men have had the clap, the human race did not die out long ago, but still exists, and shows no tendency, as far as I know, to diminution." But a more sober testimony—and it is the last quotation I shall trouble you with—on the authority of Sinclair, is that offered by Martineau, who, after a very long experience and an enormous amount of material from which to form conclusions, says: "You will find by a close examination of the material that primary uterine blenorrhagia is extremely rare. In about 2,000 cases I have seen it only ten times at most. You will find, further, that ovaritis and salpingitis are so rare that I have not been able to pick out a single case. As to pelvic peritonitis, I have found it only twice." My opinion, then—an opinion founded on my own observation and on a study of the literature of the subject—is that "the importance of gonorrhœa as a cause of pelvic inflammation" consists in the fact that in a few or limited number of cases it seems to be capable of producing most serious symptoms, rarely, however, terminating in death, and that this importance is diminished by the fact that these cases are comparatively very rare.

SPASMODIC WRY-NECK CURED BY EXCISION OF A PIECE OF THE SPINAL ACCESSORY, AND OF THE POSTERIOR BRANCHES OF SOME OF THE CERVICAL NERVES.

By NOBLE SMITH, F.R.C.S.Ed.,
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The well-known case in which excision of the spinal accessory nerve was first performed for spasmodic wry-neck by Mr. Campbell de Morgan was published in 1866. That case was an unusual one, because the spasms existed in the sterno-mastoid and trapezius muscles on the right side, and yet the head was drawn into the position which is usual in contraction of the muscles on the left side; that is, the face was turned towards the right shoulder. The splenius and other rotatory muscles on the same side were also affected, and this overcame the action of the sterno-mastoid and trapezius muscles, so that, as the report states, the posterior muscles were "drawing the face round in opposition to the actions of the trapezius and sterno-mastoid." The fact that section of the spinal accessory had the effect of entirely removing the spasms of muscles which were not dependent upon this nerve for their action is very important, and it is one which in reports of such cases has not been, I think, sufficiently noticed.

The lady whose case is the subject of this communication was 41 years of age, and was sent to me by Dr. Mahomed, of Bournemouth. She had suffered for sixteen years from severe spasmodic wry-neck, commencing a few weeks after a strain of the neck. It was spasmodic from the beginning, increased after the first few years, and got very much worse about a year and three months before I saw her, when it had become so bad that a plastic felt jacket was applied, which, however, did no good.

When I first saw the patient (October 30th, 1889) the head was bent laterally towards the right, so that the cervical part of the spine was curved very severely to the left. There was constant and very violent spasmodic action of the left sterno-mastoid and upper part of the left trapezius muscles, drawing the face towards the right shoulder. There was also spasmodic action in the splenius capitis and other muscles on the right side of the neck, these producing the same inclination of the head as the muscles already named of the opposite side. For four months I tried fixation and medicinal remedies. The effect of a supporting instrument was decidedly beneficial, but it only partly controlled the spasmodic action. I then proposed to stretch the spinal accessory nerve.

On March 6th, 1890, I made an incision two inches long from below the lobe of the left ear downwards over the anterior edge of the sterno-mastoid muscle; I exposed the posterior belly of the digastric and also the stylohyoid muscle. I found the nerve with my finger in front of and beneath the muscle, and passed a blunt hook behind the nerve and drew it forward into sight. I separated the nerve upwards and downwards about a quarter of an inch each way, severed some filaments that were entering the muscle, and then stretched the nerve firmly. The wound healed in four days, the temperature never rising above normal. The patient experienced no pain, only a little stiffness in the neck and a weakness in this part upon attempting to move.

The immediate result of this operation was decidedly favourable, but soon began to wear off, and it became evident in about a week that further measures were necessary. Excision of a part of the nerve was then determined upon.

On April 22nd I excised a piece of the spinal accessory nerve, a third of an inch long (Mr. Campbell de Morgan excised a quarter of an inch), the two cut ends retracted, leaving a wider gap between them. The wound healed as before, in a few days, without any rise in temperature. The result of this operation was complete paralysis of the sterno-mastoid and trapezius, and a feeling of immense relief to the patient, as the spasms were very greatly lessened. The patient was up and about in a week after the operation, and could now turn the head easily to the left side, and control it in that position; in fact, she could hold it for a short time in any position she liked, but the spasms upon the right side continued, the splenius capitis being the greatest offender.

After waiting a few weeks and finding there was no further improvement, it was determined to operate upon the posterior branches of the cervical nerves upon the right side.

On May 28th, 1890, I made an incision from the occiput downwards for about three inches, parallel to and about an inch to the right of the spinous processes, through the trapezius down to the edge of the splenius, some of the fibres of which muscle I had subsequently to divide to enlarge the wound; then through the complexus, and eventually exposed the posterior branches of the cervical nerves. The great occipital nerve then came into view, and this I had to separate from its attachments and draw aside. I excised a piece of the external division of this nerve, also of the third and fourth posterior branches. Considering the extensive connection of nerves in this part, I thought it well to separate the splenius from the parts beneath it, and search for and excise any filaments of nerve passing into that muscle. I also acted in the same manner as regards the complexus. I had intended to try and excise a piece of the suboccipital nerve, but having already made a rather deep dissection, and found that some veins interfered with such further operation, I desisted from doing any more. This operation was recovered from as rapidly and as satisfactorily as the others, and to the great satisfaction of the patient and myself all spasmodic action was practically put an end to. The night of the operation the patient, for the first time for sixteen years, was able to rest her head on her pillow without spasmodic action. This good result has continued.

A very important point in respect to these operations is one which I had all along been anxious about, and that was the loss of power from the muscular paralysis. This loss of power has proved to be very slight indeed, and the patient expresses herself as experiencing no discomfort or disability. She cannot lift the left hand quite as high above her head as she can the right, nor quite so far backwards, but she can use it as freely to any part of head, or in any way that she usually requires. The paralysis on the right side of the neck from the last operation appears to cause no loss of power whatever. Upon this point it may be stated that these operations may be freely undertaken without fear as to any weakness or loss of power that they might occasion.

Since writing the above, I have received a letter from the patient, of which the following are extracts:

"All at home are very pleased.....I have returned to the days of my youth and began croquet again.....my left hand I can do anything with now, and use dumb-bells.....I can do everything for myself; my father is especially pleased, as he had lost hope for a long time.....I thought you would like to know.....that the operations have been so successful."

PUTREFACTIVE DECOMPOSITION IN THE INTESTINAL TRACT.

By FREDK. W. BURTON, M.B.Camb.,
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Much attention has of late years been directed to certain poisonous bodies which are derived from our food during its passage along the alimentary tract. Many of these are the result of putrefactive decomposition of albuminous matters, which is brought about by the numberless bacteria always found in the small intestine. The excessive production of these poisons is probably accompanied by such symptoms as flatulence, disordered digestion, irregular action of the bowels, offensiveness of stools, anæmia, and malnutrition, while some of the effects produced by their absorption into the general circulation have been described by Dr. Lauder Brunton in his *Disorders of Digestion*.

The most trustworthy means we possess for estimating the amount of putrefaction going on in the intestine is by observing the excretion of the "aromatic sulphates" in the urine, and by comparing their weight with that of the "free sulphates." The "aromatic sulphates" are combinations of such bodies as phenol, iodol, skatol, and cresol with sulphuric acid. Baumann's experiments seem to show that this combination takes place in the liver, where the poisonous

bodies absorbed from the intestines are transformed into innocuous combinations before entering the general circulation.[1]

The "free sulphates" are the salts of the ordinary bases found in the urine.

The proportion in which these two groups are met with in healthy urine is said to be 10 of the "free sulphates" to 1 of the "combined," the ratio changing with varying amounts of putrefaction in the intestine. Thus an increased excretion of "aromatic sulphates" has been observed in cases of intestinal obstruction, peritonitis, pyæmia, etc.; and Dr. William Hunter has lately recorded a case of pernicious anæmia in which the proportion was considerably altered, the departure from the normal corresponding closely with the general condition of the patient. In three observations made by myself on the urine of a case of typhoid, the average ratio of "free" to "combined sulphates" was as 4 to 1.

Conversely Baumann, by clearing out and disinfecting a dog's intestine with calomel, has caused the "aromatic sulphates" to disappear entirely from the urine.

The particular point to which, at Dr. Hunter's suggestion, I directed my attention was the effect of different diets on the excretion of these bodies. The method employed was that of Salkowski, which consists in dividing the sample of urine into two portions, and in one precipitating the "free sulphates" at once with a solution of barium hydrate, while the other portion is first boiled with strong hydrochloric acid to split up the "combined sulphates," both forms being then precipitated by a mixture of baryta water and barium chloride. The two precipitates are filtered off, washed, and ignited, the ashes are weighed and give respectively the amount of "free sulphates" and of "free" and "combined sulphates."

A dog whose urine was collected every day was put on a mixed diet, namely, meat biscuits, and the following results obtained:

Date.	Quantity of Urine.	Free Sulphates.	Combined Sulphates.	Ratio.
	c.c.	Grammes.		
February 8th	431	0.978	0.106	9 to 1
,, 13th	420	1.386	0.105	13 ,, 1
,, 18th	470	0.639	0.0775	8 ,, 1
,, 20th	340	0.720	0.1258	5½ ,, 1

Average ratio = 9 to 1.

The dog was now placed on a diet consisting only of milk, bread, and oatmeal.

Date.	Quantity of Urine.	Free Sulphates.	Combined Sulphates.	Ratio.
	c.c.	Grammes.		
February 24th	410	0.673	0.0396	17 to 1
,, 25th	410	0.776	0.0481	16 ,, 1
,, 27th	300	0.757	0.0540	14 ,, 1
,, 28th	260	0.824	0.0572	14 ,, 1

Average ratio = 15 to 1.

These tables show then that a more farinaceous diet reduced the amount of "aromatic sulphates" excreted, indicating a corresponding reduction of the amount of intestinal putrefaction, and afford a probable explanation of the advantages of an exclusively milk diet in typhoid, Bright's disease, etc.

The above experiments were carried out in the pathological laboratory of this University, and I am indebted to Professor Roy for his help and for apparatus kindly placed by him at my disposal.

In the rational treatment of this condition of increased intestinal putrefaction, we should first exclude proteids from the patient's dietary as far as possible; the bowel should be cleared out, preferably by calomel, which will also exercise its influence as an antiseptic.

There are many drugs which can be administered, either by mouth or by rectum, with a view to checking excessive putrefaction in the intestine, but I wish here to cite a few instances only in which one, namely, β-naphthol, has proved useful. This drug, introduced by Bouchard, is an active germicide, but owing to its insolubility it can be given in large enough doses to check intestinal putrefaction without producing a toxic effect on the patient. I have occasionally known it to cause vomiting, which may be due to the hindering effect of the drug on digestion, but Dr. J. Michell Clarke has discovered that hydronaphthol exercises only a very slight retarding influence on the digestion of milk by the stomach, and has no effect on pancreatic digestion.[2] The β-naphthol has been used in doses of from 2 to 8 grains every few hours in 16 cases of typhoid in this hospital; its administration has been constantly followed by a lessened amount of diarrhœa, and of offensive odour in the stool. In 7 cases the abdominal distension was apparently reduced, and in 3 cases the temperature became lower by about a degree during its use. It is improbable that it exercises any influence on the local lesions, for 2 cases died of peritonitis (without perforation) who had been taking the drug to within two days of death. In cases of typhoid with constipation, I could not satisfy myself that it produced any definite effect.

Five cases of tuberculous ulceration of the bowel were treated with β-naphthol with marked benefit. In three cases it stopped the diarrhœa, in the other two it lessened it, and in all improved the character of the stools and the general condition of the patient. While in all cases it reduced the temperature somewhat, in only one did it have a marked effect, the maximum effect being usually obtained on the third day. It was tried in several cases of chlorosis and of gastric ulcer without success, but in the following case it proved of signal service:

A woman, aged 36, was admitted under the care of Dr. Latham, suffering from diarrhœa, with extremely offensive slimy stools, emaciation, irregular pyrexia, and prostration. She had the appearance of pernicious anæmia, but the examination of the blood excluded this—hæmoglobin, 10 per cent.; red corpuscles, 22 per cent. of normal. Her diarrhœa and anæmia persisted in spite of treatment by diet, bismuth, chalk, arsenic, iron, etc. She was then given β-naphthol (gr. iij) every four hours, and in a week the bowels acted but once a day, naturally, and the anæmia, pyrexia, and weakness gradually disappeared.

[1] *Pflüger's Archiv*, vol. xiii, p. 285.

[2] *Practitioner*, July, 1890.

ON A NEW FORM OF PORCELAIN FILTER.

By E. H. HANKIN, B.A.,

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From the Pathological Laboratory, Cambridge.

Filtering through porous earthenware is so constant a stage in the study of the metabolic products of the life of microbes, that I think the following description of a porcelain filter is worth recording. It includes nothing new in principle, but seeks to combine efficiency and cheapness to a greater degree than is the case with the filters in general use.[1]

It consists of three essential parts: (A) a cylindrical vessel of porous biscuit ware closed at one end, which is rounded off so as to be able to resist pressure. The other end is open, and provided with a flange as shown in A, Fig. 1.; (B) a glass tube, the inside diameter of which is a trifle larger than the outside diameter of the earthenware pot, and which is about twice the length of the latter. Both ends are open, and one of them is provided with a flange, as shown in B, Fig. 1. This form of tube is used in ordinary gas analysis, and can readily be obtained from any chemical apparatus manufacturer: (C) a funnel made of non-porous earthenware. Its greatest inside diameter must be equal to that of the porous vessel, and it must be provided with a flange, as represented at C, Fig. 1. Fig. 2 indicates how these three pieces of apparatus are put together. B is the porous pot surrounded by the glass tube A; underneath is seen the funnel C; at D are shown the flanges separated from one another by a pair of india-rubber rings. Umbrella rings answer very well in the smaller form of the apparatus that I employ. By pressing the upper and lower flanges together

[1] The apparatus was shown at a meeting of the Physiological Society.

by means of a clamp, a perfectly watertight joint is produced. The clamp is composed of two brass rings, connected together by three nuts and three screws, as shown in Fig. 3. To apply it the nuts ars taken off the screws, and the two

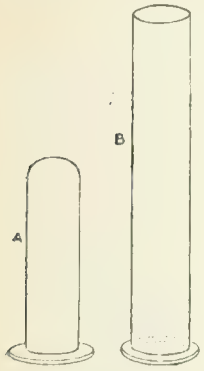


FIG 1.

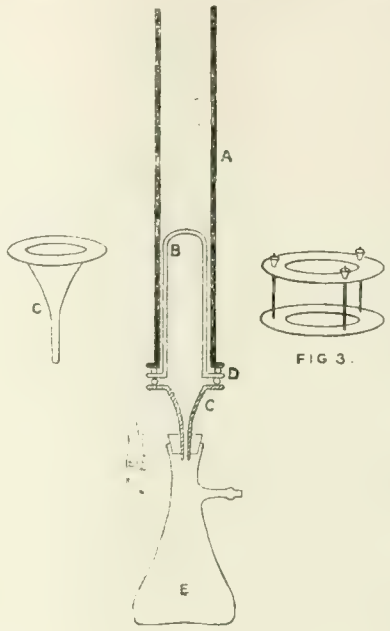


FIG 2.

FIG 3.

rings separated. The upper ring is passed round the tube A, and rests on its flange. The lower ring is placed under the flange of the funnel. The three screws attached to the outer edge of one ring pass through holes placed in corresponding

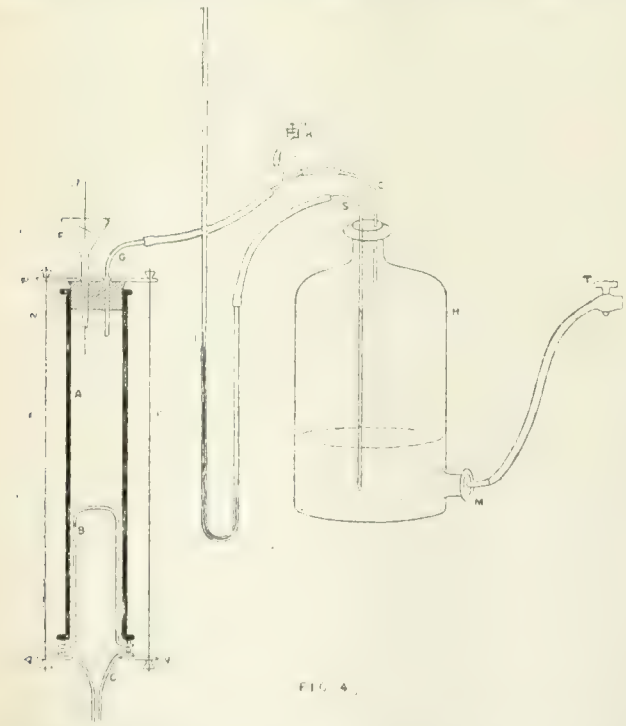


FIG 4.

positions in the other ring, and by putting on the nuts the two rings can be pressed together, and in this way the india-rubber rings between the flanges can be subjected to a considerable pressure. Nothing more remains to be done but to attach the tubulure of the funnel C to an ordinary filtering bottle, as shown at E, Fig. 2, by means of an india-rubber cork. The liquid to be filtered is placed in A, and will pass through the porous wall of B into E when the latter is connected with the filter pump.

The advantages of this form of filter are: (1) Its cheapness, for since the porous vessel, the funnel, and the clamp are the only parts that require to be specially made,[2] and the other parts can be found in any laboratory or readily obtained, the whole can be put together for a few shillings. (2) Owing to the open form of joint used a leak between the india-rubber rings can be easily seen and at once remedied by tightening up the screws. (3) It is obvious from the shape of the filter that very nearly all the liquid to be filtered will pass through, and any solid matter present will settle to the bottom of the space between the inside of the tube A and the outside of the porous cylinder, instead of clogging the filtering surface, as would be the case if a flat slab of porous earthenware was used. (4) The filter can readily be taken to pieces and cleaned. When at length the porous pot becomes clogged it can be easily cleaned by scraping the surface with a file and sterilising in an autoclave or steam steriliser.

Although this filter will remove any germs present in the liquid to be filtered, it is difficult to prevent microbes from finding their way into the flask E from the surrounding atmosphere, especially as a quantity of air will be sucked back into it when the vacuum produced by the filter pump is removed. For some work this does not matter, as when the object of the filtering is merely to remove a pathogenic microbe and when the liquid filtered is immediately subjected to further treatment. In other cases, however, it is advisable to diminish this risk as far as possible, which can be done by using positive instead of negative pressure for the filtering. In this modification the filter is arranged as in Fig. 4. The glass cylinder containing the liquid to be filtered is closed at its upper end by an india-rubber bung N. This is provided with two holes, through one of which is passed a small funnel F, by means of which the liquid to be filtered is poured into the cylinder. The funnel can be closed by means of a thin glass rod *l*, whose lower end is thickened and covered by a piece of india-rubber tubing. By pulling this rod upwards so that the part covered with the tubing jambs into the lower end of the funnel, a reliable stopper is formed, which can withstand any amount of inside pressure. The other hole in the bung is filled by a glass tube through which pressure is transmitted to the surface of the liquid. The different parts of the filter are kept together by means of a brass ring *q*, on which rests the flange of the funnel C and a brass plate *p*, which lies on the top of the india-rubber bung. The ring and the plate are pressed towards one another by three brass rods (of which two are drawn *r r*), provided with nuts, as shown in the illustration. Naturally two holes are cut in the brass plate corresponding to those in the india-rubber bung.

Pressure could be transmitted to the filter by any form of pump attached to the tube G; but I have found it more convenient to use the pressure from the ordinary water main for this purpose.[3] A water tap T is connected with a tubulure bottle H by an india-rubber tube T M, which, in addition to being made of pressure tubing, must be further strengthened by a wrapping of tape. The other connections of the tubulure bottle are made by ordinary pressure tubing, and sufficiently clearly indicated by the diagram. On opening the tap T—which must be done cautiously—water enters the tubulure bottle and compresses the air contained in it. The pressure thus produced is transmitted by one tube to the filter, by another to the mercury manometer J. By means of a Y tube the escape pipe K is inserted. It is closed by a screw clamp, which can be opened to allow the compressed air to pass out when the filtering is finished. It will be noticed that in the diagram the tube S connecting the manometer with the tubulure bottle is represented as passing to the bottom of

[2] These pots and funnels were made for me by Morlent Frères, 8, Rue Martel, Paris, in two sizes. The larger sized pots are 2½ inches in outside diameter, and 8§ inches high. The smaller are 1 inch by 6§ inches. They and the funnels cost between 1 and 2 francs each.

[3] This very simple way of obtaining pressure was suggested to me by Professor Roy, who tells me that the safety-valve arrangement described below has been already employed by Ludwig.

the latter. By this means the manometer not only indicates the pressure but also acts as a safety-valve; for as soon as the mercury is forced down the shorter arm of the U tube to the bend at the bottom, the water coming from the tube S flows past the mercury column up the longer tube of the manometer J, and thus the pressure is relieved. Any tendency the mercury column may have to be carried bodily up the tube J by the advancing water can be decreased by inserting into J a thin glass thread. This decreases the stability of the mercury column and renders the passage of the water more easy. I ordinarily work with enough mercury in the manometer to form a column 300 millimètres high; consequently, on opening the tap the pressure slowly rises to this limit and stays constant. By adding to or removing the mercury the pressure can be increased or diminished at will. It is obvious that the two india-rubber corks in the tubulure bottle must be firmly wired in. When testing the apparatus it is advisable to first fill it with water by turning on the tap T while the funnel F is open: then, on closing the lower opening at F, the pressure will begin to rise.

I owe my best thanks to Professor Roy for many valuable suggestions relating to various practical details of this apparatus.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

TAPPING THE VENTRICLES.

DR. LOWSON'S remarks upon the importance of drainage after tapping induce me to record a case.

A. H., a boy, aged 3 years, had hydrocephalus from the age of nine months, slowly increasing, but not interfering with intellectual development. The parents consulted me in May, 1890. I found the head markedly affected, with a circumference of 24 inches, and the anterior fontanelle enlarged and visibly pulsating.

I tried the derivative effect of mercurials with chloral and bromide for the sleeplessness and pain from which the child suffered and for a time with benefit; but he then became so much worse that I urged the parents to submit to tapping the ventricles.

On June 29th I passed a Southey's trocar through the anterior and outer corner of the anterior fontanelle, downwards and inwards deeply, the child having first been anæsthetised. On reaching the ventricle a jet of clear serous fluid spouted fully two feet from the cannula. Two ounces were withdrawn, and a collared cannula was then inserted, to which tapes could be attached. The dressing employed was a 1 in 2,000 solution of the biniodide of mercury on lint, covered with gutta-percha tissue, and occasionally changed by the mother of the patient.

The drain continued for a few days, but in about a week's time the cannula was forced out by the healing process. The bulging of the anterior fontanelle was replaced by marked depression, and the child recovered without a bad symptom.

Accrington. C. R. ILLINGWORTH, M.D.

MYXŒDEMA IN THIBET.

A THIBETAN, suffering from myxœdema, died in Camp Gnatong, Sikkim, on November 17th, 1888. This man was taken prisoner after an engagement with the Thibetan army. The *post-mortem* appearances were as follows: Extremities much enlarged. A depression was easily made by pressure on the skin, disappearing at once when the pressure was removed. Over the chest this effect was extremely well marked. On dividing the skin a gelatinous substance was found, separating the former from the subjacent tissues. A considerable amount of serous fluid came from the wound. The thyroid gland was greatly enlarged, extending from the lower maxilla to about an inch under the sternum. The normal structure of the gland, as far as could be ascertained, was absent. Its place was taken by fibrous tissue. There was great congestion of the vessels of the neck and head, caused by pressure of the gland. Gelatinous tissue was found also on dividing the skin of the neck; serous fluid came from the wound. The face was much swollen, especially about the eyes.

Another prisoner, presenting the appearance of myxœdema, was also seen. The thyroid gland could not be felt. A cystic tumour, about the size of a pigeon's egg, was situated near the normal position of the left lobe of the gland. This man was liberated and returned to Thibet.

Sixty-three Thibetan prisoners were examined by Surgeon I. K. Close, Indian Medical Service, and myself, as to the condition of the thyroid gland in each. The result of this examination is shown in the attached table.

Result of Examination of Sixty-three Thibetan Prisoners as to Condition of Thyroid Gland, on December 24th, 1888.

—	Slightly Enlarged.	Moderately Enlarged.	Greatly Enlarged.	Total.
Right side	2	—	—	2
Left side	7	1	—	8
Both sides	9	3	3	15
Reduced in size both sides	—	—	—	2
Normal	—	—	—	36
				63

H. A. CUMMINS, M.D., Surgeon M.S.
Camp Gnatong, Sikkim.

PUERPERAL PNEUMONIA.

ON Saturday, January 3rd, 1891, I received an urgent message to see Mrs. P., aged 29, who was in her seventh month of pregnancy, and was thought to be in labour. Since December 31st she had been feeling very ill, with a troublesome cough, repeated shivering fits, bad headache, and pain in the right side.

On arriving I found her sitting upright in bed, with a very drawn and anxious expression; her face was dusky and her extremities cold. She complained of acute stabbing pain in the right axilla, intensified on coughing and taking a deep breath; she had a short dry frequent cough, and no expectoration.

On examination I found a few scattered dry *râles* over the right base, behind and in the axilla; harsh breath sounds at seat of pain; normal vocal resonance and fremitus; slight impairment of note on percussion in right axilla; no rub; pulse small, compressible, 112; respirations shallow, 46; alæ nasi working; temperature in axilla 101.2°; tongue dry, covered with thick white fur; no motion of bowels for three days; no vaginal discharge and no abdominal pain. The uterus reached one inch above the umbilicus. I ordered milk diet; poultices to right side; calomel, grs. 4; and a mixture of vin. ipecac., spirit amm. co., spirit. etheris, syrup. tolutan.

January 4th. Orthopnœa very marked, patient leaning forwards on her knees; patch of dulness, tubular breathing, and fine crepitations in right axilla; pain in side very acute; temperature 102°; pulse small, weak, 140. Ordered brandy, 6 ounces.

From this time the patient went from bad to worse in every way. On the 5th the physical signs of pneumonia had spread all over the right base, up to the fourth rib behind. On the 6th she had a patch of dulness at the left base, and on the 7th the left base was dull up to the sixth rib behind, and covered with fine crepitations, while all over the right base bubbling *râles* had almost entirely replaced the fine crepitations. At this time there was profuse expectoration of muco-purulent blood-stained sputa. On the eighth I had increased the brandy to 24 ounces per diem, and the patient seemed to be dying, though quite intelligent and conscious. She had no abdominal pain till the 9th, when she was taken rather suddenly at about 10.30 P.M. with fairly strong bearing-down pains and slight discharge of blood and water. On the 10th, at 12.30 A.M., a dead child was born, the placenta following immediately, and there was very little hæmorrhage. Afterwards she seemed to rally for a little time, but soon got unconscious, and died at 5.30 A.M. on January 10th, the eleventh

day of the disease. She had not felt the movements of the child since the 9th.

The prognosis was very grave, almost hopeless, from an early period in the case, and I believe that it was only the large amount of brandy and other stimulants which kept the patient alive for the last two days. I had anxious doubts all through the case as to the advisability of inducing labour, to give the mother some slight hope of recovery; but her asthenic condition, coupled with the knowledge that the child was not viable, deterred me from doing so. Medical literature gave me no help, for which reason I am induced to send the case for publication.

Bristol. H. F. Devis, M.R.C.S., L.R.C.P.

SCARLET FEVER AND CHICKEN-POX.

On February 20th I was called to see E. B., aged 9 years, and G. B., aged 2¾ years. I found them both suffering from a very severe form of scarlet fever, with well marked diphtheritic patches on the tonsils, and discharge from nostrils, with enormously enlarged cervical glands. Both the children had been taken ill on the 18th, within an hour or so of each other, with headache and sickness, followed by sore throat. The rash appeared on the following day.

In the same bed as G. B. I found a third child, F. B., aged 6 years, who, to all appearances, was in good health, but was kept in bed, as it was thought that as she had been sleeping with her sister she was not likely to escape infection. I had her removed at once, and placed in a room by herself. On the 22nd G. B.'s illness terminated fatally. On the 24th I was asked to see F. B., who was feverish, with headache, and had been sick during the night. On careful examination there was no sore throat or rash to be seen. There were, however, a few scattered spots of an indefinite character about her body. The next day it was evident the child was suffering with chicken-pox. On the 26th a third child was attacked with scarlet fever, and later on a fourth.

The only children in the house who escaped were F. B., who had been exposed to infection of scarlet fever for forty-eight hours, and an infant three months old. It is necessary to add that F. B. has never had scarlet fever. This case is unlike that reported by Dr. Richard Bevan in the British Medical Journal of March 28th, where scarlet fever and chicken-pox co-existed. In Dr. Bevan's case the exposures to infection of the two diseases were within a few days of each other, while here the exposure to scarlet fever must have been some ten or twelve days after chicken-pox was contracted. Whether this fact explains the difference of behaviour I do not know.

Walthamstow. St. Clair B. Shadwell.

COEXISTENCE OF MEASLES AND CHICKEN-POX.

The publication of Dr. Bevan's letter in the British Medical Journal of March 28th respecting the coexistence of varicella and scarlatina induces me to record the co-existence of measles and chicken-pox.

A boy returned on February 2nd to a school where measles had broken out; he developed the rash of varicella on February 14th, and that of measles on February 17th, the rash in both diseases being profuse, and attended, in the case of the latter, with a temperature of 104.2° and slight broncho-pneumonia.

The source from which chicken-pox sprang could not be discovered, but the boy was exposed to the infection of measles on February 4th or 5th, making the interval to the appearance of rash 13 or 12 days, which barely exceeds the average of incubative and prodromal periods together. In the cases, however, of seven other boys who had just recovered from measles, the interval from infection to the first appearance of pocks was 16 days in four cases, 17 to 19 days in one, and 19 days in two others. Thus it appears that an attack of measles just previously prolonged the incubation stage of chicken-pox, and that directly proportionate to the severity of the measles in the several cases.

From these particulars it appears that the rash of measles is not delayed in a subject already infected with chicken-pox, but whether the fact of having taken measles delayed the eruption of varicella I am unable, from want of information, to determine. However, from the above particulars it may be inferred that the incubation of the latter is prolonged through the influence on the system of an antecedent attack of measles.

Newbury. W. T. Parker Douglas, M.B.

LACTATION IN INFANTS.

Seeing a few cases of the above lately recorded in the British Medical Journal, it may not be uninteresting to some of your readers to know that nearly all of the children in this country, both male and female, have at birth developed breasts. The development is greater in the negro than in other races. When they are about two days old the mothers are in the habit of drawing off the secretion, which to all appearance is like milk; this they continue to do for four or five days, but sometimes to as many weeks, when the secretion ceases spontaneously. I am unaware whether this is the case in other tropical countries or not.

Charles J. Lyons,
Colonial Medical Service, Corazal, British Honduras.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GUY'S HOSPITAL.

EXCISION OF THE LARYNX.

(Under the care of W. Arbuthnot Lane, M.S.)

H. A., aged 51 years, was admitted in February, 1891, suffering from carcinoma of the larynx. As the upper aperture of the larynx was almost completely covered by a flexed condition of the epiglottis, but a small portion of the growth could be seen, and that only very imperfectly. The mucous membrane covering the inner aspect of the left arytenoid cartilage was infiltrated, and the cartilage itself did not move. The right arytenoid moved freely, and a portion of the false cord on that side was seen to be free from growth. At times, and with much difficulty, the surface of an ulcer which occupied the position of the left cord could be observed momentarily. There was a lump as big as a marble beneath the left sterno-mastoid. It could be moved freely laterally, but not from above downwards, suggesting that it was adherent to adjacent structures, probably the sheath of the large vessels. The man had been under observation for three or four weeks, but would not for some time be induced to come into the hospital. He was at last persuaded to do so, but only with a view of being watched. He would not give his consent to any operative interference. During the time that he was in the hospital the dyspnœa from which he had suffered for about five months became more marked, and on one occasion in particular so severe as to cause him much distress. On the following day, his breathing being still very difficult, he consented to be operated on. The operation was performed without any delay. The trachea was opened, a Trendelenburg's cannula inserted, and the larynx removed without any difficulty. Since the growth did not extend beyond the upper aperture, the mucous membrane covering the larynx posteriorly was preserved intact. The mass beneath the sterno-mastoid was exposed. It was found impossible to remove it, as it was firmly adherent to the surrounding structures. It was, therefore, incised, and its soft contents carefully removed with a sharp spoon. The internal jugular vein was infiltrated by the growth, and formed, with other adjacent structures, a portion of the wall.

Feeling that owing to the extent and adhesions of this secondary growth the patient could not live for any considerable time, and that it would be useless to attempt to obtain any sort of voice, it was determined to make the rest of his life as comfortable as possible, and to save him from any of the inconvenience which so frequently follows excision of the larynx from the passage of food, saliva, or serous discharge into the trachea, as well as from the risks of pulmonary complications which result from the same. For these reasons the mucous membrane which had been separated from the larynx was carefully sutured to the hyoid bone and

along the middle line, so that the pharynx was no longer in communication with the trachea.

The patient's progress was most satisfactory. On the day following the operation he wrote on a slate that he had experienced no pain whatever, and that he was very comfortable. During the several days following the operation he appeared to suffer even less pain and discomfort than is entailed by an ordinary tracheotomy. He had little or no cough, and only expectorated a small quantity of mucous, the Trendelenburg cannula being removed and cleaned twice daily. Within forty-eight hours of the operation he was able to swallow his milk with much relish, and none of it escaped from the wound in his neck. A small leak formed later immediately below the hyoid bone owing to his suddenly tearing off the dressing when in a passion. This closed quickly under treatment.

By operating in this way in cases where it is possible to preserve the anterior wall of the pharynx intact, the operation is deprived of the great discomfort and risks which usually accompany it. Most patients after excision of the larynx are, for a time at least, in much more pain, and experience considerably greater difficulty in swallowing than before operation.

SUNDERLAND INFIRMARY.

CASES OF ABDOMINAL SURGERY.

(Recently treated in Dr. JAMES MURPHY'S Wards.)

CASE I. *Nephrolithotomy: Recovery.*—J. C., male, aged 39; sent in by Dr. Coke Squance. A complete invalid for nine months from repeated attacks of renal colic, which morphine failed to relieve; chloroform had to be administered, sometimes as often as six times in a day to relieve the paroxysms. Blood in small quantities in urine from time to time, also triple phosphates. On April 2nd the kidney was freely exposed. Manipulation failed to detect any abnormality. A hare-lip pin at once struck stone, which was cut down on, and a very small stone about the size of a hemp seed escaped with a gush of blood. Urine came from wound for a week, left infirmary in three weeks, and in two months took up the duties of a rate collector, which he has since pursued.

CASE II. *Suppurative Puerperal Peritonitis: Abdominal Section: Drainage: Recovery.*—A. C., female, aged 17; sent in by Dr. Norie on June 24th. She had been confined three weeks previously of an illegitimate child in the absence of an attendant, did well for a week, then rigors, pyrexia, hectic, vomiting, diarrhœa set in, with great distension of abdomen from pus. On admission, temperature 104.5° F., in advanced hectic condition, abdomen as large as at term. Abdominal section was at once performed, when fully a gallon of stinking pus escaped. The intestines were so matted together it looked as if a suppurating cyst had been opened. Adhesions freely broken down and the intestines freed. Several gallons of warm boracic lotion were used in washing out the abdomen, and a large india-rubber drain left in, through which the abdomen was irrigated twice daily. Convalescence retarded by obstinate diarrhœa and vomiting. Temperature gradually fell, and in six weeks she left quite well, and has recently been seen in most robust health.

CASE III. *Complete Intestinal Obstruction of Twenty-two Days' Duration: Anterior Median Colotomy: Recovery.*—E. B., female, aged 35, sent by Dr. Norie. Good health till twenty-two days before admission, when she passed a good-sized solid motion, since which time neither fæces or flatus had been passed. In great distress; constant fæcal vomiting; abdomen enormously distended; intestines clearly mapped out and movements visible. On July 9th abdomen opened in middle line. Manual exploration revealed a malignant tumour the size of a Tangerine orange about the juncture of the colon and rectum, completely blocking the lumen of the intestine, and incapable, from its position and attachments, of being removed. Colon brought out through wound and secured there, as in inguinal colotomy. Colon opened. Convalesced rapidly. Has now, eight months after operation, gained much in weight and health. Practically no protrusion of gut (owing to strain on mesentery). A truss prevents any escape of fæces.

CASE IV. *Suprapubic Lithotomy: Recovery.*—J. F., boy, aged 7. Bimanual exploration (one finger in rectum) revealed this to be a large mulberry calculus, so suprapubic lithotomy was preferred to lithotrity, which was performed on May 10th. Patient left quite well in three weeks.

CASE V. *Hernia Strangulated by Band in Scrotum: 12 inches of Gangrenous Intestine Removed: Death.*—J. B., aged 67, sent by Dr. Berkley Martin on May 24th. Enormous old-standing hernia reaching below knees. Strangulated for six days before he sought advice. On cutting down, the ring was large enough to admit hand. No strangulation there; incision over scrotum enlarged; tight band constricting 12 inches of intestine—quite gangrenous—perforated in two places. Enterectomy. Patient died next day.

CASE VI. *Ovarian Abscess: Abdominal Section: Recovery.*—M. C., aged 29, sent by Dr. Weir, of Jarrow. Had had one child, four years previously. In more or less bad health since. For past few months increased; great pain in pelvis, menorrhagia, vomiting, etc.—a complete invalid. On examination, what was regarded as a pyosalpinx was found on right side. Abdominal section revealed (September 29th) an ovarian abscess firmly matted down; removed with difficulty; drainage four days. Left infirmary well on fourteenth day. The left ovary being normal was left alone.

CASE VII. *Cholelithotomy: Recovery.*—J. L., aged 45, male, sent by Dr. Coke Squance. History of hepatic colic for months. Quite unable to work. Indistinct tumour in position of gall bladder. Never had jaundice. Abdomen opened (November 29th) over tumour externally to rectus; tumour aspirated of 4 ounces of opalescent fluid and then opened. A solitary gall stone, size of pigeon's egg, found fixed in cystic duct; removed with scoop. Bile at once flowed into gall bladder; gall bladder washed out; stitched with catgut to abdominal wound. A drain for four days. Highest temperature 99.6°. No vomiting after operation, bile flowing freely. Left hospital quite well in a month.

REMARKS.—The above cases are selected to show the advantages of some of the recent advances in abdominal surgery, as only a very few years ago not one of them would have been treated as here recorded. Had there been a piece of india-rubber available in the infirmary at the moment to perform Senn's operation in the case of enterectomy the result might have been different.

REPORTS OF SOCIETIES.

HUNTERIAN SOCIETY.

WEDNESDAY, MARCH 25TH, 1891.

STEPHEN MACKENZIE, M.D., President, in the Chair.

Modern Methods of Performing Cæsarean Section.—Dr. GALABIN said that at some hospitals craniotomy had a high mortality, 16 per cent. or more. This he ascribed largely to the adverse effect of previous attempts to deliver by forceps, etc. Porro's operation (1876) was described and discussed. Sänger's object (1882) was to close the uterine wound by a system of deep (muscular) and superficial (peritoneal) sutures, and so keep the uterine and peritoneal cavities shut off. Success depended much on the operation being a primary choice. In a multipara one need not wait for labour to commence, but it was usually best to puncture the membranes. The use of an elastic ligature around the neck of the uterus was on the whole good. Silver wire was preferred for the deep sutures, the superficial being so arranged as to bring flat surfaces of peritoneum in contact. A specimen was shown in which the uterine wound had closed well on this method; the patient died from accidental opening of the abdominal wound on the ninth day. Cameron, of Glasgow, used no superficial sutures, thus shortening the operation, and had only 1 death in 10 cases. Sterilisation of the patient by removing ovaries or tying the Fallopian tubes near the outer end was often advisable. Notes of a successful case were read: A woman with a contracted and flattened pelvis, none of whose children had survived. Sänger's method was followed, and except for inertia of the uterus, hæmorrhage, and later on a sinus at one part of the wound which gave a little trouble, she did well and recovered. The use of Delta metal for pins and wires for the pedicle in Porro's operation was noticed. The mortalities of the two operations respectively to the end of 1889 were: Sänger's, 23 per cent.; Porro's, 58 per cent.—

Dr. HERMAN read notes of a recent case in the London Hospital. A woman, aged 37, had been in labour eighteen hours. A hard mass was felt in the left iliac fossa, there was œdema of the perineum, and the pelvis was filled with a hard elastic tumour; catheterism was impossible. On opening the abdomen this tumour was found to be the full bladder. The uterus was opened, and the placenta on its anterior wall cut through, and the child extracted by the feet; free hæmorrhage occurred. The abdominal walls were held close during extraction and the application of sutures of silk and catgut. The child survived. Paroxysmal abdominal pains and vomiting continued, and the patient died on the third day. At an imperfect necropsy, a large osteosarcoma was found in the iliac fossa; the uterine wound was well healed. Cæsarean section could never, Dr. Herman said, supplant craniotomy, the mortality from which ought not to be higher than from natural labour. Exposure of the bowel was a frequent cause of death, as probably in his own case, and this was the chief drawback of Cæsarean section as compared with Porro's operation.—Dr. HORROCKS preferred Cæsarean section to Porro's operation as much less mutilating and involving less shock. In certain cases, as rupture of the uterus or cancer, Porro's might be preferable. In a case operated on a year ago he found it very difficult to apply the elastic ligature before opening the uterus. On another occasion he would follow Cameron, and not put in sutures at all, except about two for the peritoneum; this shortened the operation by one-half. In his own case he tied the Fallopian tubes with kangaroo tendon. The lumen was by this means well occluded.

Exhibition of Patients.—1. Dr. S. H. APPLEFORD showed a case of rapidly-growing Cervical Tumour in a man.—2. Dr. HINGSTON FOX showed a boy, now aged 6¾ years, who recovered from well-marked Hydrocephalus present at 9 months. The head was well ossified; some lateral nystagmus existed, but sight and hearing were fairly good; intellect rather baby-like.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

FRIDAY, MARCH 6TH, 1891.

J. M. FINNY, M.D., President, in the Chair.

Specimens.—Dr. WALTER G. SMITH exhibited, as a card specimen, Elephantiasis of Penis and Scrotum.—Dr. J. O'CARROLL showed a Boy the subject of Molluscum Contagiosum, and also exhibited a Microscopic Slide of a Section of one of the Tumours.—Remarks were made by the PRESIDENT and Dr. J. F. M'VEAGH; and Dr. O'CARROLL replied.

The Diagnostic Significance of Venous Hum in the Neck: a Study in Statistics.—Dr. BEWLEY read a paper on this subject.—Dr. WALLACE BEATTY remarked that he had, in some cases, heard cervical venous murmurs in patients who certainly did not appear anæmic. In one patient under his care, who suffered from persistent headache for months, and who had not an anæmic appearance or symptoms, the discovery of an anæmic murmur led to treatment by administration of iron, which brought about a rapid cure—a great number of other remedies having been previously tried in vain.—Dr. WALTER SMITH expressed his general concurrence with the views put forward by Dr. Bewley.—Mr. PATTESON had long ceased to attach any importance to the presence or absence of a venous hum from a diagnostic standpoint in cases of anæmia.—The PRESIDENT called attention to the existence of venous murmurs under the first bone of the sternum, which, by position, was removed from the fallacies of extraneous influences. They were very much more rare in this situation than in the neck, and were, as far as he could depend upon his memory, invariably associated with some of the graver and more pronounced forms of anæmia.—Dr. BEWLEY replied.

Myelogenous Leucocythæmia.—Dr. WALLACE BEATTY reported a case of myelogenous leucocythæmia.—Dr. GRAVES made remarks, and Dr. WALLACE BEATTY replied.

Malignant Endocarditis.—Dr. O'CARROLL read a paper, the object of which was to show, first, that malignant endocarditis was a name for a variable group of clinical phenomena, and not, so far as was known at present, for a constant pathological condition; secondly, that "malignant" did not signify that there was necessarily a fatal form of endocarditis which differed in kind from all non-fatal forms; thirdly, that probably many cases of endocarditis in which the acute disease came to a favourable ending, and which were never thought of as having any causation in common with malignant endocarditis, were really due to septic infection, and would have set up a secondary septic infection from the heart, if the proliferative process had gone so far as to end in necrosis. In support of the view that recovery from so-called malignant endocarditis was possible, a heart was shown which bore all the marks of having been affected by a malignant endocarditis, but had been obtained from an apparently healthy young man who died suddenly. Death had been caused by blocking of the right descending coronary artery by a large oval mass with calcareous core, which had been dislodged from a collection of such oval masses in the chordæ tendineæ of the anterior mitral valve.—Dr. WALTER SMITH expressed his belief that so-called "malignant endocarditis" was but a localised expression of general pyæmia. There was no single specific cause for malignant endocarditis, hence malignant endocarditis should be removed from the category of cardiac diseases, and be described in connection with pyæmia.—Dr. O'CARROLL replied.

SECTION OF ANATOMY AND PHYSIOLOGY.

FRIDAY, MARCH 20TH, 1891.

Professor J. M. PURSER, M.D., President, in the Chair.

Specimens.—Dr. W. H. THOMPSON showed a Skull, and some Specimens illustrating the Anatomy of the Middle and Internal Ears, and remarked upon the inaccurate description of these parts found in some textbooks.—Professor BIRMINGHAM exhibited a Malformed Skull with an enormous foramen magnum (2½ inches diameter), the cervical vertebral with incomplete neural arches, and several other peculiarities.—The PRESIDENT, Professor CUNNINGHAM, and Professor BIRMINGHAM made some remarks.

Collective Investigation.—Reports were presented from the Anatomical Departments of Trinity College and the Catholic University Medical School giving the results of systematic examination of bodies. These were as follows: 1. Distance of the Lower Border of the Kidney from the Iliac Crest, by (*a*) W. H. THOMPSON, F.R.C.S.Eng.; (*b*) J. H. M'GEE (Melbourne). 2. Formation of the Thyroid Axis, by (*a*) J. J. LONG, B.A.; (*b*) P. BRADY and J. DUNNE. 3. The Distribution of the Last Dorsal and First Lumbar Nerves, by MONTAGUE GRIFFIN, B.A. 4. The Occurrence of Meckel's Diverticulum Ilii, by (*a*) HUGH HUNTER, B.A. Sixty-two subjects were examined. In one (a male) the diverticulum was found. Its distance was 49 inches from the ileo-cæcal valve, and it sprang from near the mesenteric attachment of the bowel. It, with a good length of the ileum, formed part of the contents of a large femoral hernia. It hung quite free and had no connection other than its root. (*b*) A. J. M. BLANEY, B.A. Twenty-eight subjects were examined; no trace of a diverticulum was found. 5. Distribution of Cutaneous Nerves on the Dorsum of the Foot and Toes, by (*a*) F. A. DIXON, B.A.; (*b*) J. M. REDINGTON.

Attachment of Lower Limb.—Professor BIRMINGHAM read a paper on the variability of the level of attachment of the lower limb to the vertebral axis in man.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

CLINICAL EVENING.

FRIDAY, MARCH 20TH, 1891.

T. CHURTON, M.D., President, in the Chair.

Cases, etc.—The PRESIDENT showed: 1. A patient suffering from, apparently, Obstruction of the Femoral Arteries.[1] One leg had been amputated, and the other showed signs of gangrene. 2. Two patients under treatment for Phthisis by Cantharidinate of Potassium. 3. A case of Paramyoclonus affecting the Rhomboidei, Trapezius, and Pectoral Muscles of the Left Side, in a youth aged 19. 4. A Rheophore for Faradisation of the Stomach, the wire being passed through an œsophagus tube.—Referring to the first case, Mr. MAYO ROBSON, who had amputated the leg, said that the clinical symptoms denoted a case of severe gangrene. He took from the artery a small clot, which he thought denoted a blockage of the artery higher up.—Dr. JACOB said he had examined the

[1] BRITISH MEDICAL JOURNAL, March 21st, 1891, p. 639.

amputated leg. It differed greatly from an ordinary case of gangrene. The muscles of the foot were ashen in appearance, and the foot rather dry, but the mottling of the skin was quite superficial, and the artery and vein perfectly healthy both to the naked eye and microscopic investigation. He did not question for a moment the propriety of its removal, but doubted as to the cause of the phenomena noted being arteritis.—Dr. EDDISON had seen the case, and thought amputation was urgently required.—The PRESIDENT, in reply, said atheroma was very uncertain in its location, and the absence of it in the lower part of the leg was no contraindication of its presence above as a cause of the blocking.—Dr. BARRS showed two cases of Hemiatrophia Facialis (with photographs). In one patient the condition had existed seven or eight years. The atrophic change corresponded to the second division of the fifth. The second patient, a man, aged 41, showed wasting corresponding to the distribution of the left supraorbital nerve. 2. Atrophia Striata Cutis occupying the dorsal region. 3. Morphœa of the Limbs. The condition had existed from early childhood, and affected both upper and lower extremities.—Dr. BRONNER showed (1) Two Cases illustrating "Dry" Rhinitis; (2) a case of Congenital Ectopia Lentis, the result of a malformation of the suspensory ligament.—Dr. JACOB showed (1) a case of Chronic Laryngeal Thickening, probably specific, with considerable paresis of the abductors; (2) a Woman with a Rough Polypoid Growth in the interarytenoid region.—Dr. TREVELYAN showed (1) a Man with Atrophy of the Interosseous Muscles, and partly of the Shoulder Muscles, which he considered to be due to an atheromatous condition of the arteries; (2) a case of Recovery from Broncho-pneumonia followed by very Fœtid Expectoration, due either to a small empyema or to localised gangrene. The sputum resembled that found in cases of bronchiectasis. The treatment had consisted of terebene and eucalyptus. Dr. BARRS said he had had good results in cases of fœtid expectoration from creasote inhalations.—Dr. W. GRIFFITH showed: (1) Two cases of Raynaud's Disease, with contraction of the hands. (2) Case of Myxœdema. (3) Ophthalmoplegia Externa. All the muscles were paralysed, except the right external rectus and the left superior oblique. There was iridoplegia, but accomodation was not affected. There was slight double facial palsy. There was a history of syphilis fourteen years before. The symptoms were probably due to a degeneration of the nucleus of the third nerve. The symptoms might be premonitory of locomotor ataxia.—Mr. MAYO ROBSON showed a case of Spina Bifida in a man aged 36, in which he had successfully removed the sac. At the time of operation the tumour contained more than four pints of fluid.—Mr. LITTLEWOOD a case of Amputation of the Penis by a modification of the flap operation—a long dorsal and shorter inferior flap. The urethra was slit up on the under surface, and stitched to the skin, and the edge of the dorsal flap to the upper edge of the urethra. This gave a good, nearly centrally placed, urethral opening. The hæmorrhage from the cut corpora cavernosa, which could not be arrested by pressure, was stopped by stitching the cut surfaces together with catgut, the sutures being passed from above down, transfixing the whole thickness of the erectile tissue.—Mr. W. H. BROWN showed: (1) A case of Hydrocele of the Cord, with Undescended Testis. (2) A Drawing of a case of Varicose Veins of the Arm from a woman aged 40. Mr. ATKINSON: A case of Removal of Half the Tongue for Epithelioma. Mr. E. O. CROFT: A case of Epispadias.—Mr. SECKER WALKER showed two cases of Tobacco Amblyopia.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

TUESDAY, MARCH 3RD, 1891.

W. G. BURNIE, M.R.C.S., President, in the Chair.

Papers.—Mr. HORROCKS read a paper on Ferment Poisoning in Burns.—Dr. RABAGLIATI read notes of Two Cases of Oöphorectomy for Pelvic Pain. In both cases the right ovary was found enlarged and cystic, and accordingly removed. Temperature charts of both cases were shown. Dr. Rabagliati thought these operations were too frequently performed, and mentioned a case where ovaries were removed without relieving the pain.—The paper was discussed by the PRESIDENT, Mr. HORROCKS, Mr. MERCER, Dr. HIME, Dr. H. BRONNER, Dr. S. JOHNSTON, and Dr. GOYDER.—Dr. ADOLF BRONNER read notes of a Case of Multiple Fibromata of the Vocal Cords, and showed specimens of the growths removed, drawings of the vocal cords after the various operations, and the instruments used. Nine operations were performed under cocaine, which he preferred to apply frequently in a weak solution.—In answer to the PRESIDENT, Dr. BRONNER stated that the cords acted well now, but that the voice was rather hoarse.—Mr. BISHOP read a Case of Empyema in a Child, in whom a Large Dissecting Abdominal Abscess was also found. There was no communication between the empyema and the abscess.—Dr. RABAGLIATI thought that the empyema was secondary to the abscess, and that if the latter had been drained the case would have recovered.

CLINICAL MEETING.

TUESDAY, MARCH 17TH, 1891.

W. G. BURNIE, M.R.C.S., President, in the Chair.

Cases.—Dr. FIRTH showed a case of Pseudo-hypertrophic Paralysis in a man, aged 23. The symptoms appeared three years ago.—Dr. HIME showed a case of Facial Lupus treated by Koch's method. This patient was shown at the meeting held on January 13th, 1891, when lantern photographs of him in the various stages of reaction, etc., were exhibited. He had had in all 27 injections, commencing with 1 milligramme and gradually increasing to 7 decigrammes, or a total of 6 grammes of the fluid. The sores had completely healed over in five weeks from commencing treatment, the skin was now soft and supple and the patient perfectly cured.—After remarks by the PRESIDENT, Mr. HORROCKS, Dr. FOSTER, and Dr. BAMPTON, Dr. HIME, in reply, stated that the patient now showed no reaction with 6 decigrammes.—Mr. ALTHORPE showed a boy, aged 15, who had suffered from Lupus since the age of 2 years, treated by Koch's method. Photographs of his condition on admission to the infirmary and during the treatment were also shown. Commencing with 1 milligramme and rising to 8 cubic centigrammes, he had received in all 16 injections. Dr. BERRY said he had known the boy for many years, there was a most marvellous improvement in his appearance. Dr. HIME also made some remarks.—Mr. ALTHORPE also showed a case of Fracture of the Olecranon with bony union, and two cases of Suppuration of the Knee-joint in Young Children, which had been treated by freely incising and draining. The cases were discussed by the PRESIDENT, Dr. BAMPTON, Mr. HORROCKS, and Mr. MOSSOP; and Mr. ALTHORPE replied.—Dr. ADOLF BRONNER demonstrated the use of (1) the Keratoscope in the diagnosis of conical cornea, regular and irregular astigmatism; (2) he showed cases of Convergent Strabismus treated by advancement of the external recti, describing the operation and giving rules regarding operation; (3) also a case of extensive Disease of the Choroid with almost normal vision. The disease in the right eye was near the macula, but in the left eye was mostly in the periphery. On admission to the Eye and Ear Hospital his vision was $\frac{1}{72}$, it had now improved to $\frac{6}{9}$; (4) a case of Chronic Hypertrophic Rhinitis with Polypi, treated with trichloracetic acid. The acid was not so painful as chromic acid during the application, nor did it cause the severe after pain sometimes complained of after that acid. In reply to Dr. S. JOHNSTON, Dr. BRONNER stated that he removed one or two of the larger polypi with the snare, but the remainder were treated with the caustic named: and in answer to Mr. MOSSOP, he stated that the application was perfectly safe in the treatment of aural polypi.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, MARCH 4TH, 1891.

M. A. MESSITER, M.R.C.S., President, in the Chair.

Papers.—Dr. SUCKLING read notes on a case of Abdominal Aneurysm.—Mr. MARSH read a paper on Adenoid Vegetations of the Nasopharynx.—Dr. CAMERON KIDD read notes of a case of Suprapubic Lithotomy in a girl, aged 8, who had suffered for three years from incontinence of urine; latterly micturition occurred about every ten minutes. A large calculus was struck. On January 12th, an attempt to extract through the dilated urethra completely failed. On January 24th suprapubic lithotomy was performed. The stone weighed half an ounce all but 8 grains. The bladder was sutured

with catgut and a catheter inserted. The high operation was preferred to lithotrity, because in children it is most simple and sure in its results. It was feared that, owing to the recent dilatation of the urethra, a difficulty might be experienced in keeping the bladder distended during the manipulation of the lithotrite.

Case.—Mr. BAILEY showed a young man who had been successfully operated upon by Nephro-lithotomy.

Specimens.—Mr. CHRISTOPHER MARTIN showed Two Cysts removed by Mr. Lawson Tait from a woman, aged 44. The cysts were equal in size, each being as large as a five months' pregnancy. The left one was an ordinary ovarian cyst; that on the right side an embedded cyst of the broad ligament. During enucleation there was exposed a thin-walled dilated tube, between four and five inches long, and almost as thick as the little finger, and running across the base of the broad ligament from behind forwards and inwards. It terminated in a blind extremity just beneath the inner end of the right Fallopian tube. It was believed to be the dilated unobliterated Wolffian duct. The patient made an uninterrupted recovery. Mr. Christopher Martin also showed a specimen of Ruptured Tubal Pregnancy. The patient was married, and 33 years of age. She had one child eleven years ago, but no miscarriages. Her menses were regular, but profuse and painful. Whilst menstruating she was suddenly seized with severe colicky or cramp-like pains in the hypogastrium. When Mr. Martin saw her on January 24th she was profoundly anæmic, the pulse was rapid and weak, and the abdomen was tympanitic and tender. On examination the uterus was found to be enlarged, and there was a large, soft, irregular, ill-defined, tender mass behind and to the right of the uterus. The patient was removed without delay to Mr. Lawson Tait's Hospital, and the abdomen opened. The peritoneal cavity contained a quantity of old and recent blood clots. The right Fallopian tube was found to be ruptured, and was removed. It contained a quantity of placental tissue and distinct fœtal membranes, but the fœtus could not be found. The abdomen was washed out, a drainage tube inserted, and the wound closed. The patient made a good recovery, and returned home very anæmic but otherwise well. The pregnancy was probably about two months advanced.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, MARCH 5TH, 1891.

EDWARD MACKEY, M.D., President, in the Chair.

Bradycardia.—Mr. GERALD HODGSON read notes of a case of bradycardia with asystole in a man, aged 44, and showed the patient. He was first admitted in February, 1887, to the Sussex County Hospital, for cirrhosis of liver and possibly kidneys (probably due to excess of alcohol), associated with ascites, œdema, and slight jaundice, occasional vomiting, and fever. The pulse fell steadily in the first three weeks after admission from 108 to 52, and subsequently after seven weeks to 48, becoming irregular, with tendency to intermit for two seconds or so, and after eleven weeks falling to 28, and fourteen weeks to 24, when vomiting was common. He then developed pericardial effusion, with a pulse of 36, but eventually recovered and left the hospital. Just before this he had two slight fits in the night. He was readmitted twenty-seven weeks from first admission, suffering from "fits" associated with syncope. When the pulse stopped for fifteen seconds he was faint only, when it ceased for thirty seconds an epileptiform fit occurred. For six months he was subject to these attacks, varying in number from one a week to a number daily so great as to be practically uncountable. On one day they occurred every quarter of a minute for ten hours. The attacks varied in degree from slight ones perceptible only to himself, to a condition of apparent death. They were most severe severally when most frequent. The average pulse at this time was 21, the slowest recorded pulse being 6; this lasted only for a minute or so. Sphygmograms were shown traced during the syncopal pauses, showing length of pause and fall of blood pressure. These, with auscultation at the time, and the condition of the patient were taken to prove that the heart was in a condition of asystole. Latterly the attacks were regularly heralded by vomiting and a feeling of intense illness. There was severe headache on one occasion only, relieved by icebag. At first the usual cardiac restoratives relieved the asystole, but later hypodermic injections of strychnine alone did so. Tracings taken by Dudgeon's sphygmograph after injection seemed to show increased systole power of heart. But neither strychnine nor any other drug improved the usual 36 rate of beat. During the subsequent four years the patient had never had a faint, but had been again in the hospital for gumma of the fourth rib, and for what appeared to be a syphilitic testicle. He showed great idiosyncrasy to mercury. At these and many other times his pulse has been taken, and found never to be above 36.—The PRESIDENT examined the patient, and noted pulse 32.—Mr. SANDERSON, Dr. WHITTLE, Mr. VERRALL, and Mr. WILLOUGHBY FURNER discussed the case.—Mr. HODGSON replied that nitrite of amyl and nitroglycerine had not been tried. He thought the case might be one of tertiary syphilis throughout.

Specimen.—Dr. BLACK showed a Neuroma of Thigh, with microscopic section, showing structure to be a pure fibroma.

Cases.—Dr. PALEY showed a case of Talipes Equino Varus successfully treated by tenotomy of the anterior and posterior tibial tendon, and subsequently of the tendo Achillis, and by wearing Gumpel's night-shoes as an after-treatment.—Dr. PALEY showed a case of Testicle in the Perineum in a child aged 7 months. Mr. WILLOUGHBY FURNER advised an attempt at replacement, and, if this failed, removal.

REVIEWS AND NOTICES.

REPORTS FROM THE LABORATORY OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH. Edited by J. BATTY TUKE, M.D., and D. NOEL PATON, M.D. Vol. III. Edinburgh and London: Young J. Pentland. 1891.

THE laboratory of the Royal College of Physicians, Edinburgh, has already more than justified its existence, and the third volume of reports now before us supplies further proof that the opportunities offered by this College are taken advantage of to the full by those who are desirous of carrying on original and independent investigation.

As was to be expected, the papers in this volume are somewhat more varied in their nature than those contained in the first two, and some of them bear internal evidence that the work on which they are based has extended over a considerable period; consequently they are marked by a completeness and finish which can only be obtained by long and careful research and patient investigation of facts and literature. Although it may be objected that "laboratory reports" can have but little interest for practitioners of general medicine, one cannot help feeling that, in this instance at least, every practitioner should be able to derive something of interest and much of profit from the admirable papers here given; for, though every paper in the volume is essentially scientific as regards method and treatment, each has its own bearing on practical medicine.

The first paper, by Dr. Stockman and Mr. Dott, is a most valuable contribution to the Pharmacology of Morphine, and to the relation between physiological action and chemical composition; it was published in the BRITISH MEDICAL JOURNAL, vol. ii. 1890, p. 189. Dr. Stockman also contributes a paper on the Excretion of Balsams in the Urine, in which the important practical points are brought out that "balsams can be given in as large a dose as is ever desired in practice without any risk of producing albuminuria or nephritis. The amount of irritation which they cause is never sufficient to injure the healthy kidney, although it may irritate seriously one which is already diseased." This paper also, like the other, was a report to the Scientific Grants Committee, was published in the BRITISH MEDICAL JOURNAL, vol. i, 1890, p. 1365. Dr. T. Arthur Helme continues in this volume his contribution to the Physiology of the Uterus, taking up specially the physiological action of drugs, such as the various forms of ergot and ergotin, chloral hydrate, and camphor. He also discusses the action of heat, cold, mechanical irritation, the effect of interruption of the blood current, and other conditions that may exert an influence on the physiological behaviour of this viscus. Dr. G. Lovell Gulland contributes two very interesting papers

—one on the Nature and Varieties of Leucocytes, the other on the Development of Adenoid Tissue, with special reference to the tonsil and thymus—in both of which are discussed certain questions relating with the formation and function of leucocytes and adenoid tissue. Dr. Charles Kennedy gives an account of a case of Cystic Disease of the Liver and Kidneys, of which he was able to make a diagnosis during life.

Drs. Noel Paton and J. M. Balfour, in a paper on the Composition, Flow, and Physiological Action of the Bile in Man, give results that will serve to control the experiments that have been made on dogs, and should therefore prove of considerable value. Their conclusions differ from those of previous observers in several important points, but especially, that the quantity of bile is not nearly so large as is usually believed; that the amount of fluid bile secreted is largest during the day, but the amount of solids during the night; that salicylate of soda and calomel appeared to exert a marked influence on the bile flow; that a considerable quantity of fat is absorbed even when bile is excluded from the intestine; that the proteids and carbohydrates may be absorbed even when bile is excluded from the intestine; that the pressure under which bile is secreted is higher than the blood pressure in the capillaries of the liver; that the bile must be looked upon as an excretion rather than a secretion, playing no essential part in digestion; and that the beneficial action of the so-called cholagogues is due to the influence of the general metabolism of the liver, and not specially to its biliary function. Dr. Paton also contributes a record of an experiment on the Influence of Muscular Work in the Proteid Metabolism of the Animal Body, as a result of which he believes that the conclusions arrived at by Argutinsky and Krummacher are totally inaccurate, and that those of Hirschfeld will have to be revised. Mr. J. C. Webster describes the Nature of the Nerve-endings in the Labia Minora and Clitoris, with special reference to the Pathology of Pruritus Vulvæ. He is of opinion that only radical treatment can do much good. Dr. Berry Hart records some most suggestive observations on the Anatomy and Mechanism of Early Abortion. An Improved Method of Preparing Large Sections of Tissues for Microscopic Examination, by Mr. J. C. Webster; a paper on Bacterio-therapeutics, by Drs. G. S. Woodhead and G. E. Cartwright Wood, in which a summary of the literature on the subject is given and in which they conclude, from their own observations, that neither Metschnikoff nor Hankin's explanations of theories of immunity are sufficient to explain the results recently obtained; and one by Drs. Cartwright Wood and J. Maxwell Ross, on the Influence which the Process of Inflammation exerts on the Course of Infection, as exemplified in Anthrax and Erysipelas, completes the list of papers contained in this volume. In the last-mentioned paper are given indications for the treatment of erysipelas which should prove invaluable if the results are equal to what the writers appear to anticipate. The treatment is certainly rational.

It will thus be seen that the amount of ground covered in these *Reports* is very considerable, and that each paper has an interest, not merely from the scientific standpoint, but from the far wider and more important point of view of the practitioner of medicine. We feel that the Curator, the Superintendent, and the individual workers must be warmly congratulated that the functions of the laboratory are being so fully and accurately performed. The volume is exceedingly well "got up."

JOURNAL OF THE LEPROSY INVESTIGATION COMMITTEE, No. 2. London: Macmillan and Co. 1891.

THE second number of the *Journal of the Leprosy Investigation Committee* contains much interesting matter. We find statements by some well-known authorities on the pathology of leprosy, much of which, although not expressed now for the first time, is conveniently brought together for the use of English readers.

A considerable number of reports to the Government of India by local authorities are referred to, and many of them are freely quoted in connection with the proposal to frame a Bill dealing with leprosy in that country. The result of these reports is a statement that, in regard to the proposed Bill for the isolation of lepers in India, the Government has been advised by local governments and administrations that there is no safe basis for an enactment, in consequence of the doubts that exist as to the contagious character of leprosy, and it is therefore considered expedient to postpone legislation until more definite information has been obtained. It is evident from a perusal of these reports that unanimity of opinion will be very difficult to obtain in India. Mr. Smeaton, for example, suggests in reference to the above subject (1) that all the lepers in each district should be compelled to live by themselves in selected villages; (2) that intermarriage between lepers and healthy people should be discouraged by the infliction of heavy fines on persons contracting such marriages; whilst Mr. MacDonnell considers these proposals impracticable. In order to enforce them he states that an inquisition would have to be made throughout the country for the purpose of discovering who were lepers: these people would then have to be forcibly taken from their friends, and made to live in the selected villages. The proposals, therefore, amount to compulsory seclusion in leper retreats; they could not be carried out without causing much misery and discontent, and the cost of them would be prohibitive.

A most interesting paper is contributed by Dr. Hansen, who with no less clearness than boldness states once more his well known views regarding the best means of dealing with leprosy. Dr. Hansen remarks that "on all points of which we do not know anything with certainty men are very inventive, and there is no end to the inventions men have made as to the etiology of leprosy. I for my part prefer what is plainest and most intelligible, and that is the contagion hypothesis. But we may quarrel about this as much as we like if we can only find a way of preventing the spread of the disease. As to this point there can be hardly any doubt that segregation is the only right way, at least after our experience here in Norway. In 1856 we had 2,871 lepers in Norway, now we have hardly 800." In 1885 he states a law was enacted in Norway giving the sanitary commission or board of health in each district the right to order a leper, if he will live at home, that he must have his own room, at least his own bed, that his clothes shall be washed separately, that he must have his own eating apparatus, spoon, fork, knife, etc.

Dr. Kaurin, Medical Superintendent of the Molde Asylum, Norway, remarks that leprosy "is transmitted by infection, and each leper, especially one who suffers from the tuberous form, may become the source of infection to everyone who comes in contact with him. It is still an unsolved question how and by what means the infection spreads. It seems as if the bacillus lepræ requires special concurrent circumstances which are still quite unknown to be able to infect the human organism and to be able to live there. I have had several cases of transmission of the disease among persons sleeping together in the same bed. On the whole I believe that as a rule the disease will only be transferred if a person lives together with lepers for some time without observing due precaution in his intercourse with him."

We learn from Dr. Oscar V. Petersen that in 1888 there were 817 lepers in Russia, but since then numbers of new cases have been reported. This year three cases are announced from Moscow, in the heart of Russia. Dr. Ross, late Medical Superintendent Robben Island Asylum, writes an interesting letter on leprosy in South Africa. Dr. Blanc, of New Orleans, remarks that it has become his habit to ask all lepers with reference to a raw meat diet, and he has been not a little surprised to find that a large number of patients have eaten raw meat, chiefly hog meat, at some time previous to the beginning of their malady. It may be said in passing, he adds, that the custom of eating raw ham is common among the poorer German population of New Orleans; and out of a list of 63 cases observed in that city during the past six years, there are 24 who are themselves, or whose parents were, natives of Germany.

A translation is given in full of an interesting summary by Dr. Arning on the present position of the Leprosy Question, read at the Berlin Congress, and published in the Vienna *Archiv.* for January, 1891. Dr. Arning's views and contributions to the study of leprosy are familiar to readers of the BRITISH MEDICAL JOURNAL, and those who are specially interested in the subject will do well to consult either the

original article, or the excellent translation in the *Journal* of the Leprosy Investigation Committee.

Those readers who were recently harrowed by the distressing account of the condition of the lepers at Robben Island will be glad to find that Sir Somers Vine, who has recently visited the asylum there, states that, so far as his opportunities enabled him to form an opinion as to the treatment of the patients, he arrived at the conclusion that they were as well cared for, and as happy in their miserable condition, as those he had seen in similar institutions in other parts of the world. The arrival one day of a large number of cases containing useful and varied gifts, presented by Her Royal Highness the Princess of Wales, was a joyous event in which all shared.

MEMORIAL OF O. W. WIGHT, A.M., M.D., SANITARIAN, LAWYER, and AUTHOR. By J. S. WIGHT, M.D., Cambridge, U.S.A. Cambridge: Riverside Press. 1890.

THIS is an affectionate memorial, from the pen of Dr. J. S. WIGHT, of his brother, whose life was eventful and useful enough to deserve such a record. The book is interesting though too diffuse, and, not unnaturally, it shows very pronounced marks of the *lues biographica*.

Dr. Orlando Williams Wight was born at Centreville, Alleghany County, New York, in 1824. His father was a descendant of Thomas Wight, who in 1635 emigrated to America from the Isle of Wight. He received his preliminary education partly at Pike Academy, Wyoming, and at Westfield Academy, Chautauqua, but for the most part, we are told, "he was his own teacher." For some time after he reached the age of manhood, Wight was principal of Geneva Academy, where he made for himself the reputation of a successful teacher. About this time he made an attempt at novel writing, which seems, at least, to have had the excuse of being like the "unnecessary" infant in the story, "a very small one." His biographer informs us that this first work "seems to have entirely vanished," a fact which will scarcely eclipse the gaiety of nations. From Geneva young Wight went to New York, where, we are told, "he set out as one of the knight-errants of literature"—in plain prose, he wrote for the press. Next we find him at Newark, New Jersey, where he "taught religion for about three years," besides contributing to current literature and lecturing in various places. During this period he translated Victor Cousin's *History of Philosophy*; his translation was approved by the author, and well received by the public. He also collected and edited the miscellaneous philosophical papers of Sir William Hamilton, and the work was used as a textbook in some American schools. At the special request of Cousin he translated his book on *The True, the Beautiful, and the Good*, dedicating the translation to Sir W. Hamilton, who had incurred the wrath of the French philosopher by a slashing review of his previous publication. By this adroit dedication Wight acted as a peacemaker between the two irate celestial souls.

In 1853 he turned from these serious labours to fiction for the second time, and wrote a *Romance of Abelard and Heloïse*. Soon afterwards he came to this country, where he was entertained by Hamilton, and met several men of light and leading in the Northern Athens. He was asked to dine with De Quincey at Lasswade, and his description of the Opium Eater is worth quoting. Wight was conversing with his host's two daughters, "when there glided noiselessly into the room a little weird-looking old man, saffron coloured, with unkempt hair, dirty collar, long snuff-brown coat, feet sliding about in large india-rubber galoshes, and extended to me a wee fleshless hand, more like a bird claw than the 'prehensile organ of man's supremacy.' The daughters seated him in one corner of a large armchair, where he sank almost out of sight." After dinner De Quincey "took from his vest pocket a pill of opium as large as a small hickory nut and swallowed it. Soon his large head began to waver on his small neck, and he laid it down on his thin arms folded over one corner of the table." On awaking De Quincey read aloud Wordsworth's "Ode on Immortality," imitating the author's voice, and "as he closed the book a strange light seemed to glow through his eyes and illuminate his face. He began to talk with a voice that seemed to flow out of the unknown.....On, on he discoursed as I have never heard mortal discourse before or since.....When the monologue ceased the poor exhausted old man of genius had a tallow dip lighted to show me through the trees to the roadside gate." In London Wight came across many other celebrities, and seems to have achieved the daring feat of interrupting Carlyle in one of his customary harangues on the superiority of silence to speech. Interesting reminiscences of other literary celebrities—English and French—are also given, which make the reader feel like Oliver Twist when he "asked for more."

After further wanderings in various parts of Europe, Wight settled at Brooklyn, and resumed his literary work. When the Civil War broke out he was, as his biographer expresses it, "doing business with five publishing firms." Four of these failed, and Wight then sought fresh fields and pastures new in the practice of medicine. His professional education had the quality that is said to be the soul of wit, for in 1864 he attended "a course of lectures" at the New York College of Physicians and Surgeons, and in the following year he attended "another course of lectures" at the Long Island College Hospital, from the portals of which he emerged in 1865 as a full blown Doctor of Medicine. He then began the practice of his profession at Carbondale, and was successful from the outset. In 1867 he settled at Oconomowoc, Wisconsin, where "he undertook the arduous duties of a country practice." In 1871, however, we find him again at Brooklyn, writing for the newspapers. He "stumped" the State of Wisconsin in the interests of political reform, leading the Democrats, "after years of defeat.....to a new victory."

In 1875, Wight was appointed Chief Geologist of Wisconsin, and not long afterwards health officer of the city of Milwaukee. He laboured in his new vocation with the ardour which had marked all his previous work in so many different fields. He was a most active and painstaking officer, and did much for the improvement of the public health. The following story (which he tells) shows that one of the chief difficulties with which he, like every other sanitary reformer, had to contend was the apathy of the people themselves. He says, "In the city of Milwaukee I spent a month as Commissioner of Health in making a careful and faithful inspection of the dairies from which the milk supply came. The conditions of food of the cows, cleanliness and ventilation of stables, drainage, water, surroundings, etc.; whether the animals were healthy, turned out to pasture in summer, constantly confined in winter, etc.; whether the proprietors were filthy, negligent, etc. All the facts were written out separately for each dairy, tabulated, and indexed. The index alone made over two hundred and fifty pages of manuscript. When all was completed I invited citizens through every newspaper in the town to call at the health office and read a detailed description of the places from which they obtained milk for their households. Out of one hundred and twenty thousand inhabitants, the population at that time, just eleven came to see the record.'

Wight's reputation as a sanitarian brought him in 1881 an invitation from the Detroit Board of Health to become the health officer of that city. He accepted the appointment, but found it "a heavy task to conserve the health of a great city when the people were indifferent, when there was opposition from medical men, when the authorities were not liberal with means and power." Here too, however, he toiled for the greatest good of the greatest number, and was not unsuccessful.

Not content with the manifold forms of intellectual activity in which he had hitherto exercised his powers, Wight next turned to the law. Already in 1873 he had been admitted "an attorney and counsellor at law, and solicitor in all the Courts of Record in the First Judicial Circuit of Wisconsin." In 1882 he was admitted to similar privileges in the courts of the State of Michigan, and in 1885 he was admitted an attorney and counsellor of the Supreme Court of the United States. He practised this new profession "to some extent," and in particular won much credit by his defence, without fee or reward, of a poor woman indicted for infanticide. In this case Wight's combination of medical and legal knowledge enabled him triumphantly to confute the public prosecutor, and secure a verdict for his client.

In 1886 he resigned the office of Health Officer of Detroit owing to "irreconcilable difference of opinion as to methods and aims" between him and the Board of Health. He travelled through Europe, Australia, and New Zealand, em-

bodying his experiences and impressions in a book entitled, *A Winding Journey Round the World*. He was contemplating further wanderings when, in the autumn of 1888, he was summoned to undertake a journey to that country from whose bourne no traveller returns, and the strange eventful history of his life came to an end. When on his death-bed, he told his brother by signs that his life had been all labour and that he wished to go.

Dr. Wight was certainly a man of great intellectual endowment, and but for an unfortunate marriage, would no doubt have attained great and lasting fame both as a writer and as a sanitary reformer. As it is, no one can read this book—incoherent, turgid, and overladen with scraps and tags of verse of uncertain authorship though it be—without feeling that the man whose career it records was a remarkable, and in some respects fascinating, personality.

FONCTIONS DU FORCEPS: NOUVEAU FORCEPS ET NOUVEAU TRACTEUR: DÉFENSE DU PÉRINÉE. Par le Dr. CHASSAGNY. Paris: Baillière et Fils. 1891. Pp. 388.

THIS is a great book on a small subject. The author has devoted enormous labour to the study of the action of the obstetric forceps, and to testing by experiment the theories he has formed. He points out that from the crossing of the blades of the ordinary forceps at the lock it results that if the head be larger than the space contained between the blades of the forceps when the handles are parallel, approximation of the handles will bring closer together the part of the blades near the handle, and so tend to press the head upwards, so that were it not for the incurving of the tips of the blades it would escape from their grasp. To prevent this upward slipping, the blades of the ordinary forceps are more rigid, and have a greater inward curve at their ends, than Dr. CHASSAGNY thinks desirable. In consequence they press more on the head at the extremities of the blades, and less at the centre. Chassagny's forceps are not crossed, but are articulated to a transverse bar at the extremity of the handles, and the blades are approximated by shortening this bar. Hence when the blades are brought close together the tips are approximated, not the part of the blade nearest the handle. Hence a better grasp of the head, with a less curved and more elastic blade.

Dr. Chassagny also thinks that it is not possible by manual traction to pull with a constant force exactly in the right axis and let the head accommodate its diameters to the most suitable diameters of the pelvis. Therefore he has devised an elaborate mechanical apparatus for axis traction.

Lastly, he describes an apparatus for the support of the perineum—a moleskin pad secured by a band round the patient's waist so that it cannot slip forward, and having fingerstalls in which the accoucheur is to insert his finger, and give manual support by means of the moleskin pad; the advantages of the pad being that, however much the patient may move about, the band and pad ensure that the pressure is always applied in the proper place.

The book is very interesting, and all praise is due to Dr. Chassagny for his thoughtfulness and ingenuity. Without disputing the merit of his inventions, and the superiority of them to the ordinary instruments, we trust he will pardon our thinking that the simplicity and convenience of the instruments at present in use will make them still hold the field.

NOTES ON BOOKS.

Annual of the Universal Medical Sciences for 1890. Edited by CHARLES E. SAJOUS, M.D., and seventy associate editors. Vols. I—V. (Philadelphia and London: F. A. Davis. 1890.)—The last issue of this voluminous annual is compiled upon the same plan as that followed in the issue of 1889. Several sections have undergone modifications which it is believed will be found improvements. In particular, considerably more space has been devoted to the department of bacteriology, and additional attention has been given to orthopædics. The names of the editors in charge of the various departments are, in most cases, well known on both sides of the Atlantic, and afford a guarantee for the general excellence of the articles and for the exercise of well-trained judgment in the selection of the various subjects to be dealt with. The number of periodicals to which references are made is 830, and the actual number of references is some large multiple of this number. In addition, some 400 separate books, monographs, theses, and transactions are quoted. Dr. Witherstine, of Philadelphia, has compiled a general index, which is in itself a monumental work extending to 104 pages of small type. Altogether the work reflects the greatest credit upon the industry and power of organisation of Dr. Sajous and upon the enterprise of the publisher.

The Year-Book of Treatment for 1891. A Critical Review for Practitioners of Medicine and Surgery. (London, Paris, and Melbourne: Cassell and Co.)—The seventh issue of this now well-known year-book will maintain the position gained by the previous volumes. It has been increased considerably in size, but the original plan has not been departed from. The contributors include the names of many men well known as students of the department entrusted to their care. Thus Dr. Mitchell Bruce contributes a most interesting series of notes upon Diseases of the Heart and Circulation; Dr. Markham Skerritt writes on Diseases of the Lungs and Organs of Respiration; Drs. Ross and Reynolds on Diseases of the Nervous System; Mr. Walsham on Orthopædic Surgery; Mr. Stanley Boyd on General Surgery; Dr. Berry Hart on Gynæcology; Dr. Herman on Midwifery; Mr. Malcolm Morris on Diseases of the Skin; Mr. Field on Diseases of the Ear; and so on. Professor Walter G. Smith, of Dublin, again contributes a summary of therapeutics of the year. This will be to many readers the most valuable article in the book. The reader is reminded that the object of the year-book is to supply a concise epitome of the chief articles of the year with a short criticism of the more important subjects, together with full reference. It may fairly be said to succeed in reaching this standard.

The Urine in Health and Disease. By H. AUBREY HUSBAND, M.B. Second edition. (Edinburgh: E. and S. Livingstone.)—This very condensed guide to the chemical examination of the urine has apparently fulfilled a want, as it has reached a second edition. It is, however, difficult to see the precise value of such little books: it would not furnish a practitioner with the data necessary to investigate any difficult case, and we should imagine that most practitioners are acquainted with sufficient clinical chemistry to enable them to investigate ordinary specimens of urine without recourse to a text-book. Perhaps we are wrong in this latter supposition, and hence the success of Dr. Husband's little manual. We must do it the justice to say that it is very correct. If a third edition is ever called for we should recommend that the plates should either be altogether omitted or replaced by a few good drawings on a larger scale.

Materia Medica. Part II. Catechism Series. (Edinburgh: E. and S. Livingstone. 1891.)—This volume of the series deals with the first part of the inorganic materia medica. The information contained in it is fairly accurate so far as it goes; but, like its predecessor, it is simply a "cram" book. Although published this year, it does not take cognisance of the additions made in 1890 to the Pharmacopœia. Elegance of diction is scarcely to be looked for in a production of this kind, but it is surely going too far to describe the urine as having "a violet smell," when an odour of violets is presumably meant: nor is "oil of French turpentine" a proper way of designating French oil of turpentine.

DERMATOLOGY IN PORTUGAL.—A museum of dermatology is in active course of formation in the University of Coimbra, under the direction of Dr. Lopes Vieira. A number of models of skin diseases, exact copies of those in the famous museum of the Hôpital S. Louis in Paris, and executed by the same artist, M. Baretta, are already in place; and the Faculty of Medicine is said to be disposed to make an annual grant of money for the maintenance and enlargement of the collection, which is the only one of the kind in Portugal.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NURSING CHARTS.

Two simple inventions, designed to facilitate the working together of medical attendant and nurse, were recently received by us on the same day. The one manufactured by Messrs. Fannin and Co., of Grafton Street, Dublin, is a slate framed after the manner of the slate of our schooldays, with varnished labels at top and side. Upon the labels are printed headings, such as "medicine," "stimulants," "diet," "general directions," "pulse," "respiration," "temperature," and "sleep;" there are vertical lines grooved on the slate which give space for the entries opposite each hour of the twenty-four. The slate will undoubtedly be convenient in serious cases where a careful record of the patient's condition from hour to hour is desirable.

The other invention is designed to facilitate the work of nurses either engaged in district work, or likely to be left for long periods out of reach of the patient's medical attendant. It is a printed form which fits into a convenient case. The form contains space for the physician's directions upon almost every point which is likely to arise in the management of an acute case; upon the same form the nurse can make notes of points coming under her observation. The form is designed by Nurse M. Pincoffs, and is published by Messrs. H. Gilbertson and Sons, 11, St. Andrew Street, Holborn Circus, E.C.

MEDICINE CACHETS.

THE specimens of wafer medicine cachets sent by Messrs. Burroughs, Wellcome and Co., Snow Hill Buildings, London, E.C., appear to be well adapted for the administration of unpalatable powders or liquids. They can be easily filled; the cachet is spread out in a metallic folder and the medicine placed in the cap. The lid of the cachet is then wetted and brought over by means of the lid of the folder. When pressed it is completely sealed, so that the contents cannot escape into mouth. The cachet is dipped into water just prior to taking. It can then be swallowed quite easily with a little water.



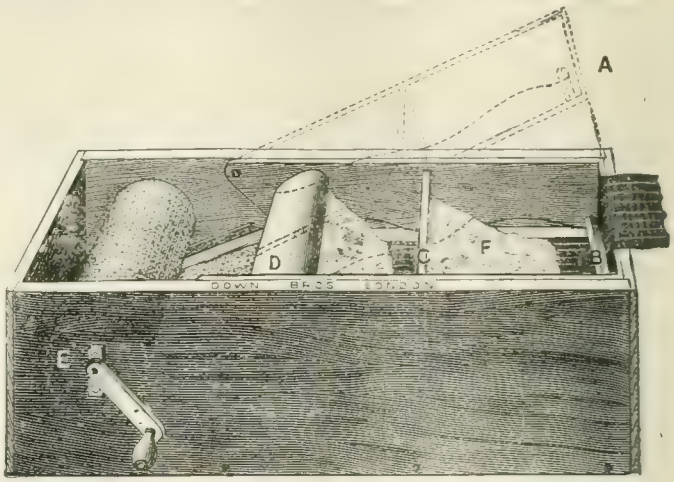
AN IMPROVEMENT IN TONGUE DEPRESSORS.

WHILE working in Professor von Schrötter's clinic in Vienna, I was struck by the enthusiastic way in which he contrasted the effect on mucous membranes of a metallic and that of a hard rubber instrument, greatly to the advantage of the latter. Finding it impossible to procure anything but a very clumsy tongue depressor made entirely of vulcanite, I decided to try the experiment of having a thin coating of guttapercha put over the blade of "Fränkel's tongue depressor." I therefore sent my "Fränkel" to Vienna, and a few weeks ago received it back coated as above described. It has quite come up to my expectations, and is a great improvement on the nickel blade, as it never strikes so cold to the tongue, nor is there any metallic taste produced, which is so disagreeable to many people.

Sutherland Avenue, W. GEORGE C. STEPHEN, M.D.

A NEW PLASTER-OF-PARIS BANDAGE ROLLER.

HAVING experienced the trouble and difficulty of rolling plaster-of-paris bandages by hand, I endeavoured to make a machine which I think will be found useful for hospital practice, and surgeons practising in mining and manufacturing districts. The advantages I claim for it may be summed up as being simple, moderate cost, rapidity with which the bandages may be rolled: the plaster-of-paris is laid evenly on the bandage; it can be used as an ordinary bandage roller: and last, but not least, there is nothing to get out of order. The only loose part connected with it is the spindle E, on which the bandage is rolled. The accompanying diagram gives a very clear idea



how the machine is worked. When about to roll a bandage raise the frame A (dotted line), pass the end of bandage under B, C, and D, then shut down A. Put plaster-of-paris F on to bandage, as illustrated, and wind the end of bandage on to spindle E with the right hand, holding the bandage in the left. The drawing represents a bandage just finished. In order to remove the bandage when finished draw out the spindle E with the right hand, holding the bandage in the left.

Before concluding, I should like to acknowledge the care which Messrs. Down Brothers, St. Thomas's Street, London, have taken in copying my machine.

Brighton. ERNEST A. SLAUGHTER, B.A., M.D.

NON-ADHESIVE OIL SILK PROTECTIVE.

OUR attention has been directed to two samples of green oil silk protective, which we find, after repeated subjection to heat and pressure, to be non-adhesive. There is good reason to believe that it will remain so during our own summer season, and also in hot climates. It will thus meet a want that has been long felt with regard to this somewhat costly adjunct to antiseptic dressings, for many specimens of protective that have hitherto been used certainly have a tendency to form a compact adherent mass after being overlooked for a time and kept in a warm place. The two samples of this new protective, which can be supplied by Krohne and Sesemann, vary in thickness, one being thin and very transparent. Both are soft, flexible, and not to be easily torn, and the materials used in their manufacture seem to be good and pure.

TRIANGULAR BANDAGE.

MESSRS. SAVORY AND MOORE, referring to a note on page 706 of last week's JOURNAL, write to point out that they do not claim to have designed the "key," but only to have designed and issued the bandage, which they have also registered. The key was drawn up by Surgeon Sleman, M.A.

OVUM CURETTE.

DR. J. WALTERS (Reigate) writes: The ovum curette described by Dr. Whitehead is not, I think, by any means new. I have had a similar one, only more rounded in shape, for some years. The "immediate treatment" of abortion is certainly more generally practised than he imagines, and in my hands has proved most satisfactory. The operator's fingers are the best curette, and if the os is previously dilated with Hegar's dilators, when required, no difficulty is usually experienced. If any portion of placental tissue is firmly adherent, the use of some such curette as he describes may be necessary as well. I do not think any danger is to be apprehended from the use of properly constructed ovum forceps, and I find them very useful in removing projecting tags of membrane which cannot otherwise easily be got hold of. By such means as these we may in many cases save our patients from much pain and danger and ourselves from much anxiety.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, APRIL 4TH, 1891.

THE HOUSING OF THE WORKING CLASSES IN RURAL DISTRICTS.

Among the many sanitary problems which the "law of supply and demand" has conspicuously failed to solve to the satisfaction of the public conscience is that of the decent and wholesome housing of agricultural labourers. Little has yet been done in rural districts to remedy the deplorable conditions set forth in the Report of the Royal Commission on the Housing of the Working Classes, although they affect the safety of the community as well as the moral and physical well-being of the class more immediately concerned. Sir Walter Foster, Mr. Ernest Fordham, and the other speakers at the recent Conference upon the Housing of the People have rendered a public service by their clear and forcible exposition of the magnitude of the evil. It will be agreed on all hands that dwellings which are unhealthy, whether from age or faulty construction, should be condemned as unfit for human use, and sanitary authorities are empowered and required to see that this is done. How the inmates are to be housed is a question which must be faced at whatever cost; and, if no other solution presents itself, the sanitary authority has power, under Part III of the Housing of the Working Classes Act, to provide suitable dwellings. When an unhealthy area in a town is cleared by the sanitary authority, or houses are demolished to make room for railways, provision has to be made for the tenants displaced. The same necessity, in an even more urgent degree, exists in many rural districts, and Mr. Fordham's contention that every "closing order" ought to be coupled with an order to provide new dwellings commends itself as reasonable and practical. The impossibility of finding suitable accommodation elsewhere has often deterred medical officers of health from condemning houses really unfit for habitation.

Mr. Fordham estimates that cottages can be built in pairs at a cost of £100 each, including land; but, even so, the low rate of agricultural wages makes it impossible for labourers to pay a fair rent, and he proposes that the deficiency should be made up from the probate duty, or by a special local tax upon land, or by letting with each cottage sufficient land (two or three acres) to enable the tenant to pay a rent covering the outlay upon both house and land.

Defects of construction or drainage are unfortunately by no means confined to old houses. Many rural authorities have no by-laws as to new buildings, and their control is limited to the right of insisting upon a proper water supply. Many more have—with the sanction of the Local Government Board—adopted by-laws, but take no care to enforce them. In such districts houses are still being built which are from the first more or less unhealthy.

Those who have had experience of "parochial committees" in rural districts will scarcely look hopefully upon the proposal to institute "parish councils" as a means of stimulating sanitary reform. They have in too many cases been found in opposition to the most necessary measures of sanitation, their desire to avoid expense at all cost being more powerful than their appreciation of the elements of sanitary science. When, as in the present instance, it becomes necessary to adopt a broad and enlightened view of the duties of the community, it is not to small local committees that we must look for "light and leading," but rather to the larger and stronger bodies who are comparatively free from petty personal interests. Among other practical suggestions brought forward at the conference were the transference of rural sanitary administration to district councils, the extension to all districts alike of powers which at present are optional, improved status, and more secure tenure of office of sanitary inspectors, and legislation upon the lines of the Labourers (Ireland) Act of 1883, which gives power to private persons to set the sanitary authority in motion in respect of the provisions of dwellings for agricultural labourers. The great difficulty, however, is not lack of statutory power, but simple inertia; and it is a question whether the most ready and effective means of applying the requisite pressure is not to be found in strengthening the present shadowy controlling power of county councils. District councils for rural districts may or may not be close at hand. Parochial committees and formal representations by local ratepayers have already been tried and found wanting. The central control of the Local Government Board has upon the whole been powerful for good, but it has not succeeded in the gigantic task of detailed supervision of the work of sanitary authorities throughout the kingdom

Whether the provision of suitable dwellings for farm labourers will, as Sir Walter Foster anticipates, have the effect of checking the migration from country to towns is, perhaps, doubtful. Agriculture can only support a limited and practically inelastic number of persons, and the surplus population must seek other work, which at present is rarely to be found in rural districts.

FACTORY LEGISLATION.

In the several preceding articles in the British Medical Journal on the subject of the Home Secretary's Factory Acts Amendment Bill, we have had no difficulty in demonstrating the fallacy of the statements and views respecting the office and duties of certifying surgeons by which Mr. Matthews had been led to propose to abrogate the clauses of the Factory Act, 1878, which established the present medical organisation. But since those articles appeared, much additional direct evidence has flowed in from certifying surgeons residing in all parts of the kingdom.

A grievance put forth in previous years was again heard from the members of the deputation of textile millowners which waited upon Mr. Matthews just before the recess. It is one that sounds strange coming from the mouth of a company of "cotton lords," of whose general success in trade, and whose wealth every textile town in England bears ample witness. Yet, though strange, the fact remains that these

gentlemen are sorely distressed by the cost they are put to in paying the fees of the certifying surgeons. Those fees are fixed by Act of Parliament on the scale of 6d. for a certificate and examination of each youthful candidate for employment. If the surgeon has to make a visit to a factory he is entitled to 2s. 6d. for his visit; but for that sum he can be called upon to examine and certify five children. If, on the other hand, he examines a child at his own house, he can demand no more than 6d. Moreover, in all cases it is in the power of the factory occupier to recoup himself to the amount of 3d. from the purse of the examinee.

Now this prescribed standard of payment, namely, that five children may be brought forward for examination where the surgeon visits a factory at the cost of half-a-crown, furnishes a basis for determining the amount to be paid where, for the sake of convenience and for the full carrying out of the Act, an agreement is come to between the factory occupier and the medical officer. A weekly visit where five or under are produced, costs the occupier six guineas a year; but so large a number changing weekly implies a large factory, and therefore one the occupier of which is not likely to be impoverished by having to part with six guineas in the course of twelve months; and the less so inasmuch as he can recover one-half of the expenditure from the pockets of his *employés*. What, then, can be thought of the grievance put forward? We constantly hear of the distressed agriculturist, and receive the intelligence with a sympathetic smile. Is he in future to lose his position of sympathy with all mankind in favour of the distressed cotton manufacturer? No; the public are not prepared to sympathise with a "cotton lord" because he is mulcted of a few sixpences for the execution of the provisions of a law which make for the sanitary well-being of his countrymen. We regret to have had to reopen this small question of fees; but it was advanced at the last interview of manufacturers with the Home Secretary as the best reason they could find for the abolition of the office of certifying surgeons.

From the Home Secretary's most recent observations, as addressed to the deputation spoken of, it appears that, although conscious of the formidable opposition to his mistaken views, he still clings to them. Not one of the arguments advanced by him in favour of his abolition scheme holds good. His representations were that certifying surgeons were out of date, that they did nothing towards protecting the physical well-being of youthful factory operatives, and had nothing to do except to affix their names to a register of the age and schooling of the examinees, as proved by independent authority. Abundant proof is forthcoming that the health of young workpeople in this country has not reached such a Utopian condition that none are sick, nor weak, nor deformed; and that, instead of doing nothing, the officers in question are perpetually active in stopping unfit candidates for work, besides ensuring correct registers, detecting documents which have been tampered with, and directly and indirectly promoting the sanitary state of factories and of all those employed in them. It therefore appears that the only reasonable course for the Home Secretary to pursue is to consent to the withdrawal of the 19th Clause of his Bill. It would be contrary to all sound rules of action to persevere in a proposition the reasons for which are no longer tenable.

In the article on the new Factory Amendment Bill, published in the BRITISH MEDICAL JOURNAL on March 14th, we put it as a problem to Mr. Matthews how he proposed in the future, should he succeed in abolishing certifying surgeons, to get the work carried on which is now accomplished by those officers. We pointed out that they in practice fulfilled many other salutary ends than those prescribed by the existing law; and that, in short, they, by their labours, performed the functions of auxiliary factory inspectors, yet without intrusion upon the special duties of those officials.

It is worth while to add some other illustrations of this fact; we will begin by saying that they do so by their weekly, or if not weekly, at least very frequent, visits to factories. Those visits keep prominently before all concerned the existence and persistence of factory legislation, which otherwise is seldom made very obvious. Like the fly wheel of a machine, they give steadiness and continuity of action. To the primary requirements the registration of age, and the other particulars connected with it, such as the date of commencing work and of its discontinuance, and the entry of parentage and residence, although minor particulars not delegated by law to their supervision, they contribute accuracy and regularity. For, as before asserted, without the attention of those officers, the registers and the certificates of age and education would fall into neglect and confusion, and miss the purpose the law intended them to serve.

Again, the surgeons play a most important part as educators and instructors in the observance of the provisions of the Factory Act. We have already stated that the keeping of the registers in a vast majority of factories is placed in the hands of a subordinate, often not well educated nor very sharp. Such men have to look to and depend upon the help they get from the visiting medical man. They have in a great measure to learn from him the work imposed upon them, and they need his constant oversight. Again, these subordinates of factories are constantly being changed, and each newcomer has in his turn to be trained for his duties by the same visiting officers. Other advantages accrue both to masters and men from the visits of the certifying surgeons. Though every manufacturer is presumed to know the law, it very frequently happens that he does not, and is glad to submit to the surgeon questions of interpretation and the like, concerning which he is in doubt. The workmen are at times similarly placed. This is no imaginary matter, but one of perpetual occurrence. Moreover, the sanitary knowledge of the officers in question is often made available. Factory occupiers will ask their opinion respecting plans of ventilation, of lessening dust, and of avoiding noxious vapours and gases and other insanitary circumstances, and they readily obtain the advice sought. The surgeon by law, indeed, has no right of entrance into the working departments of factories; nevertheless he must be a dullard who, in the course of time amidst factories and factory workers, does not learn much of the character of the machinery in use and of the processes employed. Perhaps it may be that the value of the visiting medical man is less visible in textile mills than in non-textile factories, where the processes in operation have less to do with machinery, and are more dust-producing and concerned with chemical materials.

A LADY whose name has not been made known, has forwarded £1,000 to the Portsmouth Eye and Ear Infirmary, to be devoted to increasing the accommodation for out-patients.

THE WATER SUPPLY PROBLEM.

Some Suggested Solutions.

Amongst the various sources which have been suggested as capable of furnishing an abundant supply of pure water to the metropolis, Mr. J. Thornhill Harrison proposes one which has the obvious, though possibly dubious, merit of being close at hand. In a paper lately read by him before the Institute of Civil Engineers, he claimed that from the subterranean reservoir existing in the chalk formation of the upper Thames abundant quantities of water—"a daily supply of 100,000,000 gallons"—might safely be withdrawn for centuries to come without interfering with local supplies and without impairing the volume of the upper Thames, which is partly derived from this source.

His argument is that the only escape seawards for the water in the chalk basin is over the surface of the London clay at Datchet, from which point a great bed of water-saturated gravel, from 12 to 30 feet in thickness and a mile in width, extends westward as far as Maidenhead, like a kind of weir. A second gravel bed was described as lying to the north of the London clay barrier between Slough and Kingston, covering an area of 50 square miles, between Burnham and the eastern part of London, and equally available for the supply of the metropolis.

With regard to both these schemes, it may at once be said that grave doubts attend any project for supplying London from the underground reservoirs in its immediate neighbourhood. Having regard to the reasonable prospect of the not distant needs of its great and growing population, provision for a supply of at least 300,000,000 gallons a day is an essential in any complete scheme for the adequate water supply of London; and, before it is decided to abstract this quantity from the chalk basin of the Thames—dependent as it is on a comparatively small average rainfall and still smaller percolation—it must be made quite clear that the district representing the whole catchment area involved is not likely to suffer from the drought thus artificially induced. The great Essex district, at all events, has dire need of an abundant water supply, which cannot be much longer ignored.

Yet another scheme, propounded by Messrs. Hassard and Tyrrell, proposes that London should be supplied by impounding the water of several streams in a mountainous and very sparsely populated district in rain-blessed Mid-Wales. They claim that the water thus obtainable is pure, uncoloured, singularly free from risks of contamination, and that, as delivered in London, it would have only about 4 degrees of hardness. Their scheme involves the construction of various necessary dams and embankments for collection, the building of an aqueduct—partly of masonry and partly consisting of a fourfold line of 6 feet steel pipes—starting at 516 feet above ordnance datum, and having a total length of 162½ miles; and the construction of five service reservoirs on the high ground to the north of London, whence the water would have a sufficient fall to furnish a constant supply to all the metropolitan districts, except the elevated localities of Hampstead, Highgate, and Sydenham, without any need for pumping, and at ample pressure. Provision is to be made for ultimately securing a daily supply of 300,000,000 gallons, but the total cost of obtaining a first supply of 210,000,000 gallons per diem, as against the present daily consumption of 168,000,000 gallons, is estimated at £15,250,000. On the other hand, these engineers calculate that such a scheme, by ensuring a concentration of the present separate and competing managements, by its dispensing to a great extent with the necessity of pumping, by the absence of any need for filtration, and by the partial cessation of the payments now made to the Thames and Lee Conservancies, would effect a total saving of nearly £600,000 per annum—an amount which, capitalised at 3 per cent., would represent an outlay of more than nineteen and a quarter million pounds as available for the new works proposed. Whatever judgment may be formed as to the feasibility and the desirability of these proposals, the two pamphlets in which they are clearly set forth are very instructive reading for anyone who is interested in the great and pressing question of how to furnish London with an abundant and reasonably extensile supply of pure water.

Meanwhile another great town, Birmingham, is awakening to the fact that its present demands have very closely reached the maximum supply available from local sources. Mr. Mansergh, in consultation with the Corporation Engineer, has drawn up a report, in accordance with which the Water Committee have resolved to recommend a scheme for impounding the waters of the Elan and the Claerwen, tributaries of the Wye, and for conducting these to Birmingham, at an estimated cost of some four millions sterling. Every day it seems to be growing more clear that great centres of population must be prepared to spend larger sums, and to go further and further afield in order to furnish themselves with an adequate supply of the first necessity of life. England is in process of becoming a land of aqueducts; and when Macaulay's famous New Zealander does come to view the evidences of our departed greatness he will have the choice of a great many arches to sit upon besides that of London Bridge.

ROYAL COMMISSION ON VACCINATION.

II.

In a previous number we analysed at some length the evidence given by Dr. Alfred Russell Wallace, whose eminence as a biologist gave to his statements an importance which they would not otherwise have possessed. The evidence of Mr. Wheeler and of Mr. Tebb does not possess much medical interest, and does not on any other account call for prolonged notice. The latter detailed a number of cases where untoward results have happened, or have been alleged to have happened, from insufficient care in selecting lymph. Mr. Wheeler's evidence was, like Dr. Wallace's, purely statistical. He also did not explain the remarkable diminution in infant small-pox mortality. This witness held the view that if persons escaped small-pox they lived to die of some other disease, and hence that the mortality of a given year would not be much affected by the elimination of small-pox. He apparently overlooked the egregious fallacy that if the death-rate was high in a year when the small-pox mortality was low an outbreak of small-pox would have made the high mortality still higher

Although the bulk of the evidence offered to the Commission was antagonistic to vaccination, we meet with some in favour of the practice, more especially the interesting facts detailed by Surgeon Parke, as observed by him during the expedition of Mr. Stanley, and the evidence of Dr. Waylen, as

to the means by which small-pox has been kept out of Western Australia. In the experience of this witness, extending over 31 years, there had been but one case of small-pox in the colony. In his opinion quarantine alone would probably not be efficacious, whereas quarantine and vaccination had been so. Surgeon Parke's evidence was very important and definite. A case of small-pox occurred on board ship just previously to landing; this infection was prevented from spreading by isolation and immediate vaccination in all cases where it was probable that the person was not already protected either by previous vaccination or by presenting small-pox scars. Subsequently the expedition passed through a severe epidemic in Central Africa, which attacked nearly all the unvaccinated Manyema carriers, and was attended with a high mortality. The members of the expedition, however, escaped, as there were only some four cases with one death, that being due to suicide.

This immunity Surgeon Parke puts down to the vaccination, and although some members of the Commission laid stress on the fact that small-pox is very fatal among negroes, yet, as was pointed out, the Zanzibaris were physically and hygienically the same as the Manyemas. The one were vaccinated and protected; the others unvaccinated, and they suffered terribly. It was interesting to hear from Surgeon Parke that even in Africa vaccination is appreciated, and that the natives on the coast at any rate are eager to be vaccinated, as they evidently consider it a protection to a disease which is very fatal and common amongst them. We should have thought that this experience of Surgeon Parke's was as near being a crucial experiment as any that could be desired, notwithstanding the doubts cast on it on the ground of the Manyemas being the more susceptible constitutionally, and that the Zanzibaris were protected from having previously suffered from small-pox. No doubt a certain proportion of them had suffered from small-pox, still that proportion would be too small to outweigh the general result of almost total immunity of the Zanzibaris, and the heavy mortality of the Manyemas.

The third report of the Commission is one of extreme interest, but the evidence of the opponents of vaccination does not seem to us to be anything more than sweeping generalisations, based on data that will not bear examination.

The number of *Nature* for March 26th contains a sympathetic notice, illustrated by an excellent portrait, of the life and work of M. Pasteur, by Sir James Paget.

The German Emperor has ordered that the street at the back of the Friedrichshain Hospital in Berlin shall in future bear the name of Professor Virchow, to whose untiring exertions the hospital in large measure owes its existence.

At the annual meeting of the Imperial Royal Society of Physicians of Vienna on March 20th, Sir Henry Thompson was elected an Honorary Member. The other Honorary Members elected at the same time were—H.R.H. Archduke Carl Theodor, of Bavaria; M. Pasteur; Professor E. von Brücke, of Vienna; Professor A. von Kölliker, of Würzburg; and Professor Ollier, of Lyons. At the same meeting Dr. Felix Semon was elected a Corresponding Member.

At a meeting of the Paris Académie de Médecine on March 24th, M. Deroubaix of Brussels and Sir Spencer Wells were elected Foreign Associates. M. Deroubaix is Professor of Descriptive Anatomy and Clinical Surgery, and senior member of the professorial body of the University of Brussels. Sir Spencer Wells has been a Corresponding Member of the Academy since 1867. The only other Associates in this country are Sir Richard Owen, Sir James Paget, Sir Prescott Hewett, and Sir Thomas Longmore. The number of Foreign Associates of the Academy being limited to 20, it can hardly be said that English surgery, which now supplies one-fourth of the whole, is inadequately represented in that illustrious body.

THE "MEDICAL REGISTER" AND THE COMING ELECTION.

The General Medical Council are now issuing the usual notice as to medical registration, and the attention of every practitioner ought to be given to their inquiry. It is always important that the address on the *Register* should be correct, but it is especially so this year, in view of the coming election of direct representatives next autumn. Voting papers will be forwarded by post to each registered practitioner at his registered address, and should this be incorrect the blame must attach to the practitioner who fails to attend to the notice now issued.

THE GERMAN SURGICAL CONGRESS.

The twentieth annual meeting of the Congress of the German Surgical Society commenced in Berlin on April 1st. The subject of Dr. Koch's treatment for tuberculosis was introduced by Professor von Bergmann, who dealt especially with the effect of tuberculin on local tuberculous affections. The method, he said, was in its infancy, though it opened up a new path, the ends of which were as yet veiled even from the prophetic eye of science. He insisted that the utmost care should be taken in the administration of the remedy. Professor König, of Göttingen, spoke favourably of the value of the remedy, though he feared that years might elapse before the best method of using it was thoroughly understood. He also insisted upon the necessity of the most extreme care in its applications.

INFLUENZA IN AMERICA.

Epidemic influenza, which appeared in several towns in the United States early in March, seems now to have attained very serious proportions. In Chicago, Pittsburg, Cleveland, and in several other towns in Ohio and in Iowa, the number of cases has been very large, and the proportion of deaths apparently unusually high. New York and other eastern cities have also suffered, but apparently to a less extent. In addition to the deaths directly attributed to influenza, the general death-rate, as is usual during an epidemic of influenza, has gone up to a very high figure.

THE WELSH BRANCH OF THE QUEEN VICTORIA NURSES' INSTITUTE.

Owing mainly to the efforts of Dr. Sheen, the central provisional committee of the Queen Victoria Jubilee Nursing Fund sanctioned the establishment of a Welsh branch with its training centre at Cardiff, and promised to contribute an annual sum of £60, provided sufficient additional funds were obtained locally. A gentleman in Liverpool offered £100 a year for three years; and at a meeting held in the Town Hall, Cardiff, in July, 1889, it was resolved to take steps to raise the necessary sum. The provisional committee of the branch have now issued their first report, which deals with the work of the Nurses' Institute from March 1890, when the home for nurses was opened in Cardiff, down to the end of the year. By the end of November work had so much increased, and funds had come in so satisfactorily, that the staff was enlarged; it now consists of a lady superintendent and three nurses. "It may now," the report adds, "be confidently stated that district nursing is being fully understood and appreciated by the sick poor and by those who come most fre-

quently in contact with them." The training of nurses for other parts of Wales will now be undertaken, and the Central Council has granted a sum of £50 towards the training of two Welsh-speaking nurses. It is thought that the scheme ought now to be extended to other towns, and Penarth, Merthyr, Aberdare, and Pontypridd are mentioned as places in which a system of district nursing is wanted. The success of the scheme in Cardiff is largely due to the untiring efforts of Dr. Sheen, who is the treasurer and honorary secretary of the Welsh Council, the president being the Marquis of Bute.

YELLOW FEVER.

This is one of the two diseases which are still subject to quarantine in British waters, and it is very seldom that any occasion arises for putting the quarantine regulations in force. The last report of the medical officer to the Local Government Board states, however, that in June, 1889, the steamship *Nera* arrived at Southampton from Brazil with yellow fever on board. Accordingly the vessel was placed in quarantine at the Motherbank. Dr. Blaxall was detailed to watch and investigate the matter, and his opinion is that the case shows that medical inspection with powers to deal with the requirements of individual cases, similar to the powers in the cholera order, might with advantage be substituted for quarantine in regard to yellow fever. Four deaths from yellow fever occurred on board the Royal Mail Company's steamer *Trent* during its voyage from Brazil. The vessel is now in quarantine at Southampton.

ANOTHER CURE FOR CANCER.

Professor Adamkiewicz, of Cracow, is said to have been making researches into the nature and treatment of cancer which have led to results of great practical importance. His method has been tried in three cases of epithelioma of the lip in the clinics of Professors Obalinski and Korczynski, and, although sufficient time has not yet elapsed to allow of a definitive judgment being formed as to its value, the effects have been sufficiently remarkable to justify further trial. The size of the growths has been markedly diminished and the enlarged glands in relation therewith have become much smaller—even "entire disappearance" is spoken of. Coincidently with these local effects the patients have gained weight. Professor Adamkiewicz's paper is published in the *Anzeiger der königl. Akademie der Wissenschaften zu Wien*, No. VII, 1891, and we hope to give an abstract of it in an early number of the weekly Supplement.

OBSTETRICAL SOCIETY OF LONDON.

The meeting of this Society on Wednesday last was unusually interesting. Mr. Targett, Pathological Curator of the Museum of the College of Surgeons, exhibited a specimen of that very rare pelvic deformity—spondylolisthesis. The specimen will be carefully examined by a special committee. Four papers on extrauterine gestation and allied subjects were read by Mr. J. W. Taylor, of Birmingham, Dr. W. S. A. Griffith (two communications), and Mr. Marmaduke Sheild, and their substance in abstract will shortly be published in the British Medical Journal. Mr. Alban Doran exhibited the appendages from a case in which he operated for rupture of the left Fallopian tube. Symptoms of rupture of the right tube had occurred ten months previously, and that tube was found much dilated and full of clot. The patient recovered. There was reason to believe that in this case extrauterine pregnancy occurred, but was arrested at a very early stage. Dr. William Duncan showed microscopical sections of diffuse malignant disease of the uterine mucous membrane.

THE LATE LORD GRANVILLE.

By the death of Earl Granville on March 31st the University of London loses its Chancellor at a time when his services can ill be spared. He had filled the office for thirty-five years, and his frequent appearances on degree day and at other University functions had rendered him a familiar figure to many generations of London graduates. His addresses on these occasions were always well conceived, and afforded opportunities for the exhibition of the genial humour and keen good sense which were so remarkably characteristic of him. His great knowledge of men and affairs, and his wide intellectual sympathies would have rendered a continuance of his advice and assistance peculiarly valuable in the present momentous crisis in the affairs of the University. The Senate of the University of London, at its ordinary meeting on Wednesday, adopted a resolution expressing its desire to be represented at the funeral of the late Chancellor. After transacting some necessary formal business the Senate adjourned in recognition of the loss sustained by the University in his death. It is a remarkable fact that since the foundation of the University more than fifty years ago there have been but two Chancellors, the Duke of Devonshire, who happily still survives, and Earl Granville.

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

The members of Convocation of the University are now in possession of an authorised copy of the revised scheme, finally adopted by the Senate as the basis upon which the new charter will be prepared, together with a memorandum drawn up by the Senate in explanation of the scheme. It is further the intention of the Senate, if possible, to present the draft of the proposed new charter for the consideration of Convocation, at its meeting on May 12th next. It is to be hoped that in view of the important issues which this vote will undoubtedly determine members of Convocation will consider the subject thoroughly in all its bearings before recording their decision. University and King's Colleges have first accepted and then (on the question of admitting provincial colleges) deferred their action. The Royal Colleges of Physicians and Surgeons have completely and absolutely assented. All the London medical schools have cordially accepted. Of the two legal bodies one has accepted the scheme, the other has not yet decided. The Inns of Court are unwieldy bodies, but one, Lincoln's Inn, has decided in favour of accepting, and none have refused.

HOSPITAL ADMINISTRATION IN ITALY.

The ways of hospital committees in their relations to the medical staff are not always remarkable for "sweet reasonableness" in this country, but in Italy those humble necessary persons, the physicians and surgeons, seem to be sometimes dealt with in a manner never attempted here by the most masterful of treasurers or the most active of secretaries. The treatment recently meted out to the medical staff of the Tortona Hospital can only be compared with the methods of "firm government" which used not long ago to be practised by autocratic presidents in Lincoln's Inn Fields. A new administration had come into power, and a sudden thought seems to have struck the members of it: "Let us get rid of the doctors." Accordingly the staff was dismissed on the spot. This high-handed proceeding was not approved by the "Superior Provincial Administrative Committee," which reinstated the doctors. The hospital managers were, however, equal to the occasion, and when the medical officers, strong in the justice of their cause and in the support of superior authority, presented themselves at the hospital to make their ordinary visits, they were removed from its precincts under the escort of a strong body of Municipal Guards summoned for the purpose by the defiant management. It now remains to be seen what steps the Superior Provincial Administrative Committee will take to vindicate its authority.

THE PROPOSED UNIVERSITY FOR WALES.

At a meeting of the Court of Governors of the University College of North Wales on April 1st, a committee was appointed to confer with similar committees of the Aberystwith and Cardiff Colleges as to the best means of obtaining a degree-conferring university for the Principality. On the

same evening Professor T. F. Roberts, of the University College of South Wales, read a paper before the Honourable Society of Cymmrodorion, at their library in Chancery Lane, on the advantages which would accrue from the establishment of a Welsh university. He thought that the university should comprise the three national University Colleges at Aberystwith, Bangor, and Cardiff, associated together for the creation of a system of higher education, and testing the same by examinations which should be strictly subordinate to the teaching. He maintained in particular that great freedom should be given to the professors in the constructive and examination work of education.

A NON-COMBATANT.

It is really very annoying that our friend the enemy will not take the trouble to understand the official view as to the status of medical officers of the British army. We all know that they are non-combatants, and that no self-respecting War Minister would ever dream of recommending them for the honours or rank which fall to the lot of those other officers who build the bridges or have charge of the baggage mules. Yet somehow or other we never have a little war or a horrible massacre but one of these medical officers is killed or wounded. It is true that, being a non-combatant, he ought not, according to the rules of war as understanded of the Horse Guards, to have been wounded or killed; and this reflection must be a great source of consolation to him or to his widow, as the case may be. It is, however, mortifying to find how backward the Manipurs are; even after enjoying the advantages of British protection for more than half a century, they have entirely failed to distinguish between the combatant and the (officially) non-combatant. One combatant officer has been killed, and, so far as appears, the only other officer touched was the only "non-combatant" officer present—Surgeon Calvert.

MEDICAL APPOINTMENTS IN THE COLONIES.

A new edition of the memorandum on the conditions of service in the Government Medical Service in the Colonies has been prepared by the Colonial Office. It contains a brief sketch of the Medical Department in those Colonies which possess such an organisation, indicating the total number of appointments, the tenure of office, the general character of the duties, the amount of pay, and, where such is granted, of pension. All applications for medical employment in the tropical Colonies must be addressed to the Private Secretary, Colonial Office, Downing Street, S.W., during the month of April in each year. Out of the total number so applying a list of candidates is made who will be eligible to fill any vacancies which may occur during the year, but no promise is given that any appointment will eventually be made, and it is not possible to forecast either the number or the nature of the vacancies which will arise in the course of any given year. The list of eligible candidates applying in April, 1890, contained between 50 and 60 names, but the number of vacancies for 1890-1 was only 17. Copies of the Memorandum can, we understand, be obtained on application to the above address.

THE EASTER MANŒUVRES.

The Easter Manœuvres of 1891, in which some 20,000 troops were engaged, have been characterised by severe and wintry weather, and have not passed off without several accidents to the men. At Portsmouth two volunteers were severely burnt by the explosion of blank cartridge; one man, a private in a Hampshire corps, had a considerable portion of his right ear blown away by the force of the explosion. These accidents took place when the regiment was out skirmishing, and were caused by the rear rank men not locking up sufficiently close to the front rank. A civilian who had been run over by a gun carriage sustained a compound fracture of the femur. Diarrhœa was also prevalent, no doubt due to the cold weather and the change of diet. As an instance of pluck we may mention the case of a reverend gentleman who is well known amongst London volunteers as "The Marching Chaplain." A church parade of the North London Brigade had been arranged at which this officer was to officiate; on his way to service, however, he slipped in walking over an embankment, and sprained his ankle, notwithstanding which he conducted the entire service. On examination it was found that the external lateral ligament of the ankle was ruptured, and that there was considerable œdema of the parts. At the conclusion of the service the patient had to be carried back in an exhausted condition to the fort. At Dover the medical arrangements appear to have been more complete than elsewhere, the principal medical officer having issued explicit instructions to all medical officers concerned. Dressing stations and field hospitals were erected for both attacking and defending forces, the base hospital for the former being the station hospital, Shorncliffe, and for the latter the station hospital, Dover. On such occasions as these, medical officers of volunteers would do well to remember that enrolled members of the force are entitled to pension under Royal Warrant in the event of their being incapacitated by reason of wounds or injuries received in the actual performance of military duty. We have reason to believe that this regulation is not sufficiently well known, and have, therefore, thought it right to call attention to the same. At Dover the only accident of consequence happened to a sergeant of the Lincolnshire Regiment, who was shot in the face by a cyclist whom the sergeant was endeavouring to make prisoner; some of the troops, however, suffered considerably from that invention of modern cruelty—the barbed wire fence; amongst these were the London Scottish.

TOBACCO FOR BOYS.

No one questions the harmfulness of juvenile tobacco smoking, and few of those who go about the world with their eyes open can doubt that the habit is markedly on the increase amongst the young, and especially so in towns. The eminently sensible remarks with which the Mayor of Manchester opened a conference recently held in that city contrast favourably with the somewhat extravagant assertions and suggestions made by several other speakers. Smoking in excess—always a relative term—is always bad for the smokers; but it is at least an open question whether the moderate indulgence in tobacco by adults is really more harmful than moderate indulgence in tea and coffee, to say nothing of alcohol. It may be true that, in the words of the President of the Anti-Narcotic League, "10 lbs. of tobacco contains as much poison as would kill any person"; but the most extravagant smoker does not consume 10 lbs. of the "filthy weed" at a sitting, and it is quite probable that results equally startling would be achieved by the immediate consumption of the active principles of 10 lbs. of tea. On the other hand, an adult Kafir will beg for the "nicotine" which the English smoker diligently cleans out of his foul pipe, and the greedy delight with which he sucks up every trace of the brown poison is only a little more remarkable than the entire absence of any observable ill-effects, physical or otherwise. It is true that what the Kafir relishes is an effective and fatal poison to cobras and cats, but, as pointed out by a great apologist for tobacco, this is another proof that "we are not as tabbies are." Has the British nation "stunted its growth, blunted its nerves, and become altogether bad" since the spacious days of Sir Walter Raleigh? But on the subject of smoking by young and growing lads there can hardly be two opinions. It obviously stands in the same category with every other precocious indulgence which deadens or dissipates that vital energy which should be wholly available for the complete development and consolidation of the immature organism. We have not much sympathy, however, with the ardent enthusiasts who contend that the habit of smoking by the clergy is an almost insuperable obstacle to the improvement of youth, and who ask, "How can a father who smokes discourage smoking amongst

his boys?" The obvious reply is, "By inculcating the habit of self-control in this as in other matters." If the principle implied in the question is a good one it is worthy of more general application; and if clergymen and fathers are to do nothing which their children should not do, the world would soon come to a standstill, and all true education would be abandoned for a disastrous levelling down. There is a field of good work open to the operations of the Anti-Tobacco League; but its members will needlessly cramp their opportunities if they begin by quite unnecessarily provoking the reasonable antagonism of the clergy and of fathers who might otherwise render them something even more effective than a benevolent neutrality. A good deal might probably be done by lessening the temptations which are nowadays abundantly present to the boys who want to seem men before they have outgrown their youth. There is a large class—most abundant in the great commercial and manufacturing centres—who can, perhaps, only be effectually reached by some such enactment as that nominally in force in the United States, which prohibits smoking in the streets by lads under 16 years of age. But in numberless cases a frank confidence between father and son will accomplish more than legislation.

CHILD LIFE INSURANCE.

We have received from the Reverend Benjamin Waugh a pamphlet entitled *The Results of Child Life Insurance*, issued under the auspices of the National Society for the Prevention of Cruelty to Children, as a reply to an article by Captain Pembroke Marshall in the *Fortnightly Review* for December last. Captain Marshall's article was an attack on a previous paper by Mr. Waugh, so that the rejoinder now before us is of a distinctly polemical character. We shall endeavour to call attention only to some of the chief points on which Mr. Waugh lays especial stress, and in the first place it should be clearly understood that it is only the children of the poorer classes who are in need of protective legislation; the children of the well-to-do are already protected. The children for whose better protection he pleads "include the children of the drunkard, the gambler, and the better; the immoral, the loafer, and the idle; the avaricious, the permanently hard-hearted, and those in straits as to the business of living." In his former paper Mr. Waugh claimed that a statement of his made two years previously to the effect that a thousand children a year were murdered for the sake of the insurance money had received official confirmation before the House of Lords Committee, Captain Marshall replied that it had received no confirmation whatever; to this assertion Mr. Waugh replies by quoting a few of the opinions given by medical men, coroners, and judges before that committee which confirm his statement in the most precise manner. As he very justly says, it is of no use to search the Criminal Calendars for evidence, because no cognisance is ever taken by the Court of whether an insurance had been effected or not; indeed, it is not always an easy matter to get at the truth in these cases; during life it is denied that the child is insured, and the insurance agent does not make it his business to render assistance. Captain Marshall appeals to the Registrar-General's reports to confirm his assertion that there has been a great decline in the death-rate, especially in children under five years of age; and would have us infer that, therefore, insurance has had the effect of prolonging children's lives; to which Mr. Waugh rejoins by giving a table of the deaths of children under five years of age between 1868 and 1888, from which we learn that, though "during this twenty years the proportion of deaths under five years of age from all causes was going down (that of young children most of all), there is a most important significance in the fact that all this while the proportion of deaths of children at the same age from violence, from negligence, from suffocation (excluding bronchitis and zymotic diseases), from convulsions, from debility, and atrophy, and cases of sudden death, have been going up. Whatever the significance of the fact, the fact remains that side by side with this increase was the great development of the present system of child life insurance." There are other points on which Mr. Waugh's rejoinder is no less effective; as, for instance, when he points out that the number of policies issued and the number of children insured are very different things, it being by no means uncommon for one child to be insured in three different offices. But we must content ourselves with the reflection that in publishing his pamphlet Mr. Waugh has done good service to the cause he has at heart; and we trust that those legislators whose minds are not already made up will profit by the important information it conveys on the subject of a great and crying evil.

ANTIVACCINATORS AND THE LAW.

The objection which some persons have to the law requiring vaccination has recently manifested itself in a new form. A case heard recently before the Croydon borough magistrates shows, however, that the modern doctrine that a law which you do not like should be disregarded and treated as if it had no existence finds favour in this country among the opponents of vaccination. The Rev. Joseph Hocking was summoned to show cause why his two-year-old daughter should not be vaccinated. The maximum penalty which can be imposed in such cases is the absurdly low one of twenty shillings; but, instead of submitting to a fine or resolving to obey the law, the defendant was represented by a solicitor from Dewsbury, in Yorkshire, whose fees presumably would far exceed in amount any possible fine that could be imposed. This advocate's argument was amusing for its effrontery. He argued that as the Royal Commission might possibly—he could not even say probably—report in favour of altering or repealing the Acts now in force, the Bench should adjourn all cases which came before them under those Acts until the decision of the Commission was made known. Fortunately such an extraordinary suggestion was not accepted by the magistrates, and an order was made for the vaccination of the child within a month. The reports of the evidence given before the Commission show that very little real evidence has been given to prove that vaccination is at all injurious, while there is a great mass of testimony proving its operation to be most beneficial. It is, of course, impossible to say beforehand what the report will be; but there is certainly no reason to anticipate that it will propose in any way to weaken or do away with the protection given to the community by the present Acts. This country has profited so greatly by the prevalence of vaccination now for several generations that the ravages of small-pox in an unvaccinated population are here practically unknown; and those who cry out loudest against possible communication of other diseases do not realise how much more fatal is the one against which they refuse to protect their children. The records of other countries where vaccination is not practised, and of this country prior to its introduction, show that the danger to be avoided is very serious. If ever the enforcement of vaccination should cease in this country, the step will be a retrograde one, and the consequences will probably be disastrous.

THE CENSUS.

Before these lines can reach our readers, every householder and lodger in the three kingdoms and the principality of Wales ought to have received a census schedule, which it will be his duty to fill up on Sunday. It is to be hoped that the people at large are sufficiently impressed with the importance of the enumeration which is about to be made, but the doctor on his rounds may have many opportunities of impressing upon those he meets the necessity for following the instructions clearly set out upon the schedule papers. The uses of a census are, of course, very numerous, but perhaps the most important of all is its influence on public health. The study of death-rates has been in the past, and will be in the future, the great motive power of sanitary progress; an accurate census is of almost equal importance from the point of view of education, for unless the child population is

correctly known, it is impossible to make adequate school provision. Special pains have been taken on the present occasion to obtain an accurate return of lunatics in asylums; and a special circular has been issued through the Lunacy Commissioners to superintendents of asylums, asking them to direct their attention particularly to obtaining facts as to the previous occupations of their patients. In hospitals the duty of making the return is assigned, according to the Act, to the principal resident medical officer. The vagabond population is, of course, a considerable source of difficulty to the enumerators, but special directions, which it is hoped will obviate these difficulties, have been issued. The shipping population is another element of uncertainty. The enumerators appointed are the collectors of customs at the various ports, who will make special inquiry of ships entering during this and the next few weeks, and special enumerators have been appointed for the canal population. Acting in conjunction with the Admiralty, the customs officers will have the assistance of the coastguard, and a special inquiry as to the mercantile marine will be carried out by the Registrar-General acting in conjunction with the Registrar of Seamen. We understand that the census officers are opposed to the premature publication of any estimates of the population whether of towns or of the whole country, but that it is hoped that provisional totals for the twenty-eight largest towns will be issued at an early date. After the last census these numbers were published in June, and it is hoped that this year they may be got out a few weeks earlier. The census will be taken simultaneously, or as nearly as possible on the same date, in all the colonies and dependencies except in India, where the census was taken six weeks ago.

SCOTLAND.

Additional subscriptions, amounting to £2,560, have been announced in aid of the Paisley Infirmary fund. The donors are all well known Paisley townsmen—the Coats family, Mr. Stewart Clark, Messrs. Brown and Polson, and Mr. Young of Priory Bank.

SCOTTISH UNIVERSITIES COMMISSION.

The fifty-fourth meeting of the Scottish Universities Commission was held on Tuesday, March 31st. In addition to other business before the Commission, further evidence with regard to graduation in medicine and surgery was received from Emeritus Professor Struthers, Aberdeen, and from Professor Cossar Ewart, of the University of Edinburgh, with regard to graduation in science in the Department of Natural Sciences.

NEW HOSPITAL FOR CHILDREN AT EDINBURGH.

The directors of the Royal Edinburgh Hospital for Sick Children have practically resolved to build a new hospital on the site of the old one in Lauriston Lane, adjoining the Royal Infirmary. The feeling seems to be to build in the same style as the Royal Infirmary, two pavilions, each containing two wards, with a main building behind for administrative purposes. The new building, it is contemplated, will contain 100 to 120 beds. It is thought by many, however, that the new hospital should be capable of receiving from 150 to 200 patients, which would not be too large for the wants of the district or for the importance of the Edinburgh Medical School. It is hoped that the directors will carefully weigh this matter before making their final decision. Three wards could easily be made in each pavilion.

OVERCROWDING AND TYPHUS FEVER IN GLASGOW.

Dr. J. B. Russell, in his report on February 30th to the Health Committee of the Town Council of Glasgow, states that since February 1st 29 cases of typhus fever had occurred in fourteen distinct houses, of which eight were overcrowded. The aggregate space in the overcrowded houses was under 11,000 cubic feet; in them 44 adults were found instead of 26, the number allowed, so that the cubic space per head was reduced to 240 cubic feet. Since the outbreak 50 single-apartment houses were inspected at night in one of the infected districts, and 19 were found overcrowded, chiefly by lodgers. Several of these cases had been before the police magistrate, one of them of an extreme kind, a house, namely, of 736 cubic feet, containing two men, three women, and five children, besides the householder, reducing the space to 86 cubic feet per head, yet the magistrate dismissed the cases without even an admonition. Of the cases, 27 were removed to hospital, and 44 persons were kept in the reception house for 17 days, so that the ratepayers are being heavily fined, the outbreak costing the community, it is anticipated, £300 or £400. Dr. Russell pointed the moral of his figures with some pungency. He reminded the council that the lesson of former epidemics was that it was overcrowding, with the personal filthiness that invariably accompanied it, that carried typhus throughout the city; that overcrowding was a vice, dangerous not only to those who practised it, but to the community in which they lived; and that if magistrates, forgetful of the terrible lessons taught a former generation, persisted in treating such cases as trifling, a more grim and remorseless inspector was abroad in the city who imposed his own punishment, the only drawback being that it involved alike the innocent and the guilty.

IRELAND.

DEATH OF DR. FRANCIS W. O'CONNOR, OF LIMERICK.

Dr. F. W. O'Connor died in Limerick on March 26th, after a short illness, from inflammation of the lungs. The deceased gentleman, who was in his 50th year, was esteemed for his professional abilities and courteous demeanour, and enjoyed a considerable practice in the city in which he resided. Dr. O'Connor was formerly visiting surgeon to Limerick Workhouse, and afterwards medical officer of No. 1 Dispensary District, a post which he held to the time of his death. He was also consulting surgeon to Barrington's Hospital, consulting physician to the Lying-in Hospital, and visiting physician to St. John's Hospital. He was a Fellow of the Royal College of Surgeons in Ireland.

ROYAL ACADEMY OF MEDICINE, IRELAND.

At the annual meeting of the Royal Academy of Medicine in Ireland, next October, Dr. Gordon's tenure of office as president will expire, and it is generally understood that he will be succeeded by a surgeon. Several names have already been mentioned, but we understand that there is a strong feeling that either Sir George Porter, Bart., or Mr. Colles, who has recently retired from the surgeoncy of Steevens's Hospital, should be invited to become candidates for this honourable post.

THE IRISH CENSUS.

Dr. T. W. Grimshaw, Registrar-General for Ireland, and his fellow Commissioners, Mr. Brady and Mr. Matheson, have completed the arrangements for the Irish census, which will be taken on April 6th. The buildings of Charlemont House have been specially prepared with a view to expedite the enumeration: and a staff of 240 extra clerks will be employed, of whom 35 will be women. The full returns will not probably be available for two years; but an abstract will be published early in June of the present year at latest, although it is believed that it may be presented to Parliament at an earlier date. The vital statistics will be more complete than those in England. Diseases are classified in detail, and under these headings will be included all persons who may be patients in hospital on next Sunday night. The vital statistics were begun by the late Dr. (afterwards Sir William)

Wilde in 1841, and they have since been continued with increasing elaboration. Dr. Grimshaw has taken special precautions with regard to returns coming from infected houses. The return will be placed in a marked envelope, which will be almost hermetically sealed, and then in another also marked, which will be closed as completely as possible. Pains will be taken to have such returns transmitted with every precaution, and, on their arrival at Charlemont House, they will be placed in Dr. Scott's hot-air disinfecting chamber. His Excellency the Lord Lieutenant will visit the offices on Saturday, when Dr. Grimshaw will explain the arrangements which have been made. There will probably be a decrease of half a million in the population of Ireland.

FOREIGN CONGRESSES.

The French Surgical Congress.

On March 30th the fifth French Surgical Congress, which is still in progress, was opened by an introductory address from the President, Professor Guyon. There was a very large attendance of surgeons, both French and foreign. In the earlier part of the proceedings the surgery of the brain and spinal cord occupied the place of honour. On March 31st Mr. Boyce, of University College, in the absence of Mr. Horsley, who was unable to be present, described that gentleman's method of trephining in focal epilepsy and in cases of cerebral tumour, showing photographs and specimens illustrating the incision, the size of the flaps and of the pieces of bone removed, the method of determining the situation of the Rolandic line, etc. A summary of Mr. Horsley's results was given from the British Medical Journal of December 16th, 1890; to that list two further successful cases had now to be added. In discussing the time at which surgical interference should take place in the case of tumours, Mr. Horsley said that expectancy and medicinal treatment should never be prolonged beyond six weeks. Even when it was impossible to remove the growth, improvement in the symptoms often followed operation, owing to the removal of the compressing substance. In one case, after exploratory trephining, a tumour ceased to grow and became atrophied. A partially successful case of trephining for Jacksonian epilepsy was related by Dr. Jeannel, of Toulouse. One case of compression by effusion of blood and one of traumatic epilepsy were mentioned by Dr. Duret, of Lille; trephining had been successful in both, but in the former case the patient was seized with acute cerebral congestion on the 23rd day, after a drinking bout, and died with convulsions of all his limbs. Dr. Girard, of Grenoble, related a case in which an epileptic woman shot herself in the right temple with a revolver; trephining was performed, the bullet and some chips of bone were removed and the skin wound stitched up, no drainage tube being left in: healing was complete on the seventh day, and for five months the great epileptic crises have ceased, attacks of vertigo have become rare, and consciousness has been lost only once. Menstruation, which formerly was almost constant, is now regular. In fact, the operation which was undertaken for the injury seems to have cured the epilepsy. Dr. Reynier, of Paris, brought forward the case of a girl, aged 10, who was the subject of a cystic tumour situated at the lower extremity of the pre-Rolandic sulcus and extending into the grey matter. M. Charcot having diagnosed "partial sensori-motor epilepsy corresponding to a probable lesion of the middle and lower parts of the Rolandic convolutions," trephining was performed on August 19th, 1890, but it was found impossible to remove the whole tumour. A second attempt on December 15th was more successful, and the child is now practically cured, no epileptiform attacks having occurred since December 22nd. A case in which a serous cyst of the brain was successfully removed was related by Dr. E. Doyen, of Reims, and another in which a cerebral abscess following a gunshot wound was cured by operation was communicated by Dr. Picqué, of Paris. Dr. A. Broca discussed the general indications for trephining, excluding the immediate effects of injury. Dr. P. Michaux, of Paris, related a case of non-traumatic meningeal hæmorrhage, due to alcoholism or uræmia, which he cured by trephining. M. Lannelongue presented a communication on craniectomy in microcephalus in backward children, and in young subjects presenting various symptoms of cerebral disorder, with or without epileptic crises, based on twenty-five cases, of which twenty-four were "operative cures;" there was one death from acute septicæmia. As to the definitive results, in a very large proportion of the cases there was improvement both in the intellectual power and in power of walking. Cases of craniectomy were also related by Drs. M. Anger (of Paris), G. Maunoury (of Chartres), and de Larabrie (of Nantes), and Dr. Toison (of Douai), described some experiments made by him on "temporary resection" of the skull. Professor Verneuil related a case of old-standing fistula of the sacral region, giving issue to cerebro-spinal fluid; and Dr. Bazy (of Paris) described a case in which he had opened the spinal canal, with the object of relieving pressure on the cord. The operation, which was performed on November 9th, 1886, seven months before Mr. Horsley's first case, was, according to M. Bazy, the first of the kind on record. The patient was a lady, aged 45, in whom the cauda equina was compressed by a hydatid cyst, causing motor and sensory disturbances in the lower limbs. The patient died three weeks after the operation of nephritis, but nothing is said as to the effect of the surgical interference. M. Bazy operated again in a case of a very obscure nature, on October 2nd, 1888, but the result was negative.

The German Balneological Congress.

The thirteenth public meeting of the German Balneological Society was held at Berlin from March 5th to the 8th. Professor Liebreich, the President, stated that the Society now numbered 233 members, and was in a flourishing condition generally. He congratulated it on the good work it had already done in bringing about important reforms in the sanitation of many health resorts. The first day of the meeting was chiefly occupied with discussions on tuberculosis. No new discoveries were announced, nor was even a new "cure" forthcoming, a circumstance worth recording in the present state of the therapeutical atmosphere. Professor Leyden, in a discourse on tuberculin, spoke very guardedly of its value, even as a diagnostic test, while looking upon it as of very doubtful value as a remedial agent. Dr. Paul Guttmann took up the cudgels in defence of the famous "Mittel," arguing somewhat in the manner of Sangrado, that if it had occasionally failed to detect tubercle, this was because insufficient quantities had been employed. To Professor Leyden's objection that tuberculin often caused general reaction when no sign of tuberculosis could be discovered, he replied that small foci of disease were frequently found in the lungs, glands, etc., after death in cases in which there had been no symptoms during life. Dr. Guttmann also tried to show by statistics from the Moabit Hospital that the dangers which were supposed to be connected with the use of tuberculin had been observed with equal frequency before the introduction of that substance. He maintained that the inflammation set up around the tuberculous foci speedily subsided. He quoted figures from his own practice which showed that with tuberculin the percentage of cases of undoubted improvement was 54 as against 29 in previous years. Finally, he stated that he now always began with a dose of 0.0001 g. Drs. Markus, of Pyrmont, and Wolff, of Görbersdorf, and Professors Ewald and Liebreich also took part in the debate. Dr. Römpler, of Görbersdorf, delivered an address on the prophylaxis of phthisis. He said that Koch's discovery had not changed the nature of the problem, which was still how to destroy the morbific agency outside the body, and how to make the soil inside the body unsuitable for its development. He attached considerable weight to stringent measures of precaution, which, however, could only be carried out under conditions of administrative discipline, as in hospitals and other public institutions. It was more important to strike at the roots of the disease by improving the food, dwelling, and other conditions of life among the masses. Among the other papers was one by Dr. Goldschmidt, of Reichenhall, on the Necessity of Legislation for Health Resorts and Sanatoria, with special reference to the validity of their pretensions and their sanitary condition; one by Dr. Paul Heymann, on the Spanish Fly Treatment in Laryngeal Tuberculosis; and a "New Theory" of Diabetes, by Dr. Lennée, of Neuenahr, who believes the seat of disease to be the nervous system.

FACTORY LEGISLATION.

University of Glasgow.

The Senatus Academicus of the University of Glasgow have forwarded to Mr. James A. Campbell, M.P., for presentation to Parliament a petition against the above Bill, setting forth that the certificate of fitness for employment of children and young persons in factories and workshops is a valuable safeguard, that the requirement of it is in accordance with other legislative enactments for the protection of the young, and that its abolition (as proposed by the 19th clause in the present Bill) would be a retrograde step.

The Silk Trade.

On March 24th Mr. Matthews received a deputation of representatives of the silk trade of England on the subject of the employment of children. Mr. Bromley-Davenport, M.P., said that they desired to protest against the proposed amendment raising the limit of age for the employment of children from 10 to 12 years. If some check were considered necessary to prevent the children being injured by the carelessness or neglect of employers, or by the greed of parents, he suggested that that check should be provided, not by raising the limit of age, but by strengthening the hands of the factory inspectors, by giving them power to reject unhealthy children. In his reply, Mr. Matthews said that he felt confirmed in the view that the raising of the age was not advisable. He recommended the deputation to take an early opportunity of making its opinion known to the Standing Committee on Trade.

Laundries.

At the first meeting of the Standing Committee on Trade for the consideration of the Factories and Worshops Bill it was agreed, on the motion of Mr. Fenwick, to bring laundries within the scope of Clause 1, which gives the Home Secretary summary powers of sanitation where it has been neglected by the local authorities.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 15th day of April next, at 2 o'clock in the afternoon.

BRANCH MEETINGS TO BE HELD.

South Wales and Monmouthshire Branch.—The next meeting will be held at Pontypridd on Wednesday, April 15th. Mr. Emil Behnke will give an address on the Nature and Treatment of Stammering and Stuttering. Members desiring to read papers, etc., are requested to send titles to Dr. Sheen, Cardiff, before March 30th.—A. Sheen, M.D., Cardiff; D. Arthur Davies M.B., Swansea, Honorary Secretaries.

Thames Valley Branch.—The next meeting will be held at the Talbot Hotel, Richmond, on Wednesday evening, April 15th. A paper will be read by R. Marcus Gunn, M.B., on Eye Symptoms in their Bearing on General Medicine. Members willing to read papers or contribute cases are requested to communicate with the Honorary Secretary, Charles C. Scott, St. Margaret's, Twickenham.

Oxford and District Branch.—The next meeting will be held on Friday, April 24th, in the Radcliffe Infirmary, Oxford, at 3.15 o'clock in the afternoon. Gentlemen are requested to give notice of papers, cases, etc., to W. Lewis Morgan, the Honorary Secretary, 42, Broad Street, Oxford, on or before Friday, April 10th.

Metropolitan Counties Branch: East London and South Essex District. The next meeting will be held, by the kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, April 16th, at 8.30 P.M. Dr. Stephen Mackenzie will show patients illustrating various interesting forms of skin diseases. Visitors will be welcomed.—J. W. Hunt, 101, Queen's Road, N.E., Honorary Secretary.

West Somerset Branch.—The spring meeting will be held at the Railway Hotel, Taunton, on Thursday, April 9th, at 5 o'clock: dinner at 5.30. The subject settled by the Council to be discussed after dinner is, "What, in your opinion, is the best method of disposal of the dead in England?" Members intending to read papers or to be present at the dinner are requested to communicate with W. M. Kelly, M.D., Honorary Secretary.

Southern Branch: South-East Hants District.—The next ordinary meeting will be held on Thursday, April 9th, at 4.30 P.M., at the Grosvenor Hotel, Queen's Gate, Southsea. Gentlemen desirous of exhibiting specimens or reading papers are requested to communicate with the Honorary Secretary, J. Ward Cousins, Southsea.

Midland Branch: Lincolnshire District.—A meeting will be held at Louth on Thursday, April 16th. Members desirous of reading papers, exhibiting cases, etc., are requested to communicate, before Monday, April 6th, with W. A. Carline, M.D., Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.

A conjoint meeting of the above Districts was held at the Grand Hotel, Brighton, on March 25th, under the presidency of Mr. Seymour Burrows.

Communications.—Dr. Richardson showed three patients under treatment by Tuberculin. The first, a Child with Lupus of the Cheek of some years' duration, showed characteristic necrotic spots on the patch, but there had not at present, after ten injections, been any decrease in the affected area. The second patient, a man aged 30, with Caseous Pneumonia, had received twenty injections. There were bacilli in the sputum before treatment, but there were none now to be seen. The third, a lad with Rapid Phthisis, had shown no marked improvement after seventeen injections.—Mr. Mossop related a Case of Serpiginous Ulcer of Both Corneæ, cured by scraping.—Dr. Hollis read notes of a Case of Diaphragmatic Hernia.—Dr. Whittle showed a specimen of Cystic Disease of the Testis.—Dr. Starling related a Case of Cerebral Tumour, presumed to be a gumma, in which the patient, after becoming almost paralysed with impaired hearing and double open neuritis, so far recovered as to be doing light work. The treatment was salivation followed by potassium iodide in half-drachm doses every four hours.

Next Meeting.—It was agreed to hold the next meeting at Hastings.

BOMBAY BRANCH.

A general meeting of this Branch was held on February 13th, 1891, Surgeon-General Pinkerton in the chair. The following members were present: Brigade-Surgeons Banks, Wilson, Maconachie; Surgeon Meyer, and Assistant-Surgeon S. V. Kantak, with Surgeon M. Collie, Honorary Secretary.

New Members.—The minutes of the last meeting having been read and confirmed, Brigade-Surgeon Wilson, A.M.S., and Surgeon-Major Lowdell, I.M.S., were elected members of the Branch and Association.

Vesical Calculus as a Cause of Prolapse of Uterus.—Two cases were communicated by Surgeon-Major Bartholomeusz, in which the presence of vesical calculi was the cause of prolapse of the uterus, the prolapse disappearing on the removal of sixteen calculi in one case, and calculi weighing 3½ drachms in the other: dilatation of the urethra was the procedure followed in both cases.—Dr. Meyer mentioned one case in his experience where there was prolapse of the bladder, anterior wall of the vagina and uterus due to the presence of calculi. A mesial incision was adopted in this case, which did well, the prolapse disappearing with the aid of a pessary.—Brigade-Surgeon Banks said he preferred the mesial incision to dilatation of the urethra in vesical calculus in the female.

Mycetoma. Two cases of mycetoma, one of the hand and one of the foot, were communicated by Assistant-Surgeon Nanavatty. Both resembled melanotic sarcoma or epithelioma.

Tetanus.—A case of tetanus supervening on chronic ulcer of the leg of six months' standing was communicated by Assistant-Surgeon Nanavatty. No active exciting cause could be traced. The patient recovered under chloral hydrate and bromide treatment, belladonna having been previously tried without effect.

Stokes-Gritti Amputation.—Surgeon Collie showed the temperature chart of a case in which a "Stokes-Gritti" amputation was performed on the supervention of pyæmic symptoms on osteomyelitis. Pyæmic symptoms having been well marked for five days before the patient assented to amputation, and purulent changes having began in the knee-joint, it was anticipated the operation would not do well. However,

the temperature gradually and steadily fell from 104° F. before the operation to normal on the fourth day after. With a falling temperature the dressings were not changed, but on the fourth day, when it was normal, the outer dressings were found to be stained, and on their removal about four ounces of pus escaped from the tubes; union was well advanced everywhere. Although numerous abscesses and erythematous inflammations frequently occurred, the case eventually did well, neither the portion of the patella left nor the femur becoming affected.

Congenital Lipoma of Cheek.—Surgeon W. H. BURKE communicated notes and showed the specimens and microscopic sections of a congenital lipoma of the cheek in a child 2 years of age. At birth a small growth was observed over the right malar bone, which gradually increased until it attained a length of 1½ inch; it was conical and bony at the base, but soft and movable in all directions. It became turgid and erect when the child cried or when tickled; when quiescent it lay on the cheek. Circumferentially it measured 2½ inches at the base and 2 inches at the apex. A small opening existed at the apex down which a silver wire could be passed. On removing it the base was found to consist of unusually hard ivory-like bone, in the centre of which was a small pit, lined with what appeared to be fibrous tissue, which communicated with the air by the duct. There was no communication with the malar bone proper. There was no history of similar growths amongst the families of the parents. There were no abnormally placed nipples. The sections made by Professor Windle, of Birmingham, showed the distal part to consist chiefly of fatty tissue containing some muscular striæ and ill-defined glandular tissue. The blood vessels were numerous.

SPECIAL CORRESPONDENCE.

SHEFFIELD.

Nursing at the Workhouse Infirmary.—Poisoning by "Fish Liver."—The Price of Quinine.

THE proposed alterations in the management of the infirmary of the Sheffield Workhouse, whereby the infirmary matron is to have the control of the nurses, and as far as possible of the sick in the wards under the supervision of the medical staff apart from the master and matron of the workhouse, is to come into force. The project has been discussed over and over again, but has ultimately received the approval of a majority of the guardians.

A singular series of cases of apparent poisoning is reported from Kilnhurst. Two families, numbering ten persons, have suffered. They had purchased "fish liver" from the same hawker, and to this article of diet the symptoms of irritant poisoning appear to be due.

The drug question has cropped up again at the Rotherham Workhouse in a manner not very agreeable to the guardians. It may be remembered that they had been paying 12s. 6d. an ounce for quinine. The auditor has now allowed the sum of 8s. for the 4 ounces supplied, and disallowed the remainder, £2 2s., because the trade price of Howard's quinine at the time payment was made was only 1s. 10d. per ounce, or 1s. 9d. per ounce if a larger quantity was purchased. The sum disallowed was surcharged on three of the guardians.

CORRESPONDENCE.

THE MIDWIVES BILL.

SIR,—In order to show the necessity of insisting by legislation upon the training of all women who call themselves midwives, I have frequently drawn attention to the following figures: The average mortality of women in childbirth is 1 in 200. The average mortality of women attended at their own homes by the trained midwives of lying-in hospitals is 1 in 600. These round numbers have been attacked in front, flank, and rear, but for the purpose they are quoted they still remain impregnable. Dr. Woods thinks the ordinary average mortality is more than 1 in 200, and in support of this he states that ten prominent obstetricians had an average death-rate of 1 in 116 confinements—a very good average for men who, owing to their prominence, must have had many difficult cases to deal with. But if it can be proved that the average mortality is more than 1 in 200, this rather improves my position, for it magnifies the contrast between the ordinary and trained midwives' death-rates. Dr. Woods also doubts whether my figures relating to the death-rate attending the practice of trained midwives are correct. Returns from the five largest metropolitan lying-in hospitals, the details of which have already been printed in the BRITISH MEDICAL JOURNAL, show that my average of 1 in 600 is too low—that the death-rate is 1 in 729. I assure Dr. Woods the returns forwarded me are accurately stated, and if he still doubts, he must fight it out with the secretaries of the charities.

My opponents do not fail to see the importance of the figures I have published, for they prove (1) that trained midwives can attend ordinary labours not only with safety to the public, but with an exceptionally low death-rate; (2) that if women in ordinary labour were attended by trained midwives the valuable lives of hundreds of mothers would annually be saved; (3) that the safety of women in childbirth would be promoted by the legal prohibition of anyone assuming the title of midwife who has not been previously trained.

The report of the Committee of the Royal College of Physicians of London, expressing the conviction that legislative action is desirable in order to secure the due education, examination, and registration of midwives, and suggesting a Parliamentary Select Committee, is most satisfactory. Surely Government cannot refuse the appointment of this Committee, for it is demanded by both sides. We who are in favour of legislation court the minutest investigation of the subject. All that is wanted to enable legislators to see their way to passing a Midwives Bill is "more light."—I am, etc.,

Upper Wimpole Street, W. JAMES H. AVELING.

THE LATE MR. EDWARD BELLAMY.

SIR,—I have been watching the BRITISH MEDICAL JOURNAL week by week, expecting to see a proposal that something be done to perpetuate the memory of Mr. Edward Bellamy. When I say that personally I am indebted to Mr. Bellamy for much kindness and help, I am but echoing the feelings of many other old Charing Cross students, who would I am sure be only too glad to subscribe for the purpose mentioned above.

With the sanction of the hospital authorities, a scholarship might be founded, or a painting or memorial tablet placed in the school. I trust you will allow me to use your columns as a means of suggesting this, and that some abler and more influential pen than mine will take the matter up before it is too late. Thanking you in anticipation,—I am, etc.,

24, Southernhay, Exeter. J. M. ACKLAND.

PROPOSED RECONSTITUTION OF THE UNIVERSITY OF LONDON.

SIR,—As one of the signatories to the criticism on the scheme for the above, it strikes me as odd that Mr. Eastes, M.B., should choose to complain in the columns of the BRITISH MEDICAL JOURNAL that the circulation of this criticism is premature. More than a month ago you and your contemporary, the *Lancet*, published the full text of this scheme, which apparently has not yet been officially communicated to Convocation.

On January 20th I had the honour to move in Convocation a resolution requesting the communication of the Senate's scheme to the members of that house, which was carried by an overwhelming majority. Moreover, I have before me a letter from the registrar, dated so long back as November 22nd of last year, stating that the scheme was about to be transmitted to Convocation, pending a reply from the provincial colleges. We have been informed that this extraordinary delay in transmission to the one body which possesses the right of vetoing the scheme was due to its not having assumed a final shape. I have yet to learn what emendations have been made during the past three months.

The man in the street has been in a position to purchase for sixpence a copy of this "confidential" scheme any time during the past month; moreover, the "*ex parte* statement of the fifty-six opponents" which shocks Mr. Eastes ex-

pressly refers its readers to where the full text may be consulted, and, only "after due consideration of the scheme and the objections," invites a reply.

Members of Convocation have a right to know the reason of this prolonged delay during which they have been kept in the dark. The Royal Commissioners very properly put it upon the Senate and Convocation equally, after a "reasonable time," to produce a reconstitution scheme if they felt so disposed. The present scheme is practically the product of two or three senators, and the slender influence of Convocation through its special committee has been almost wholly inoperative.

Mr. Eastes may be interested to know that "the fifty-six opponents" are now reinforced by hundreds who regard the acceptance and not the rejection of this unwieldy scheme as fraught with the danger of "lowering the future standard of higher education in England."—I am, etc.,

Regent's Park, N.W. W. J. COLLINS, M.D., M.S., B.Sc.

OPHTHALMOLOGY AS A COMPULSORY SUBJECT.

SIR,—Everyone who has the good of his profession at heart must rejoice to see that there is a likelihood of having ophthalmology included as a compulsory subject under the new regulations recently issued by the General Medical Council. The wonder is how the subject should have been neglected so long when we consider its importance in general practice. Now that the Ophthalmological Society of the United Kingdom are about to approach the Medical Council on the matter, it is to be sincerely hoped that they will have the thanks and support of the profession generally. The delegates, no doubt, will be able to show to the Council the importance of a knowledge of diseases of the eye in general practice. They will also be able to bring forward an overwhelming amount of testimony to prove what havoc has been done in the past by the lack of such knowledge among general practitioners. I remember very well while attending the out-door department and clinics of Dr. Argyll Robertson, that there was scarcely a day passed without our having pointed out to us cases where the treatment by general principles had not only failed to do good, but had worked ruin. The application of poultices of various kinds in conjunctivitis was a frequent course of an extraordinary amount of mischief. Dr. Robertson's usual remark in such cases was: "We will never be right till diseases of the eye be made a compulsory subject."

I am glad to see that the long-desired-for wish of my old teacher is about to take practical shape, and that he has been appointed one of the delegates who are to approach the General Medical Council on the matter.—I am, etc.,

Halkirk, N.B. D. GAIR BRAIDWOOD, M.B., C.M.Edin.

THE TREATMENT OF PUERPERAL FEVER BY ABDOMINAL SECTION.

SIR—By one of those curious coincidences which so frequently occur, the same post which brought me the BRITISH MEDICAL JOURNAL of March 21st also brought me a group of notes of a case of puerperal fever which I treated exactly on the lines suggested by my friend, Dr. Aust-Lawrence: and I have no doubt the result of that treatment will be gratifying to Dr. Aust-Lawrence as confirming the soundness of his valuable suggestion. But this solitary case by no means settles the important question of the treatment of puerperal fever in its various forms, and I know of no question in obstetrics which is in so unsatisfactory a condition, nor one which is of more vital importance. My object in writing this letter is to announce that I purpose shortly communicating with Dr. Baccelli with a view of having the treatment of puerperal fever put down for discussion in the Obstetrical Section of the next International Medical Congress at Rome, and in furtherance of this object I shall be glad to have the support of Dr. Aust-Lawrence and all others interested in the subject, if they will kindly communicate with me at an early date, so that I can show how anxious English obstetricians are to have the subject discussed.—I am, etc.,

Sunderland. JAMES MURPHY.

ABUSE OF MEDICAL CHARITIES AND CLUBS.

SIR,—The resolution passed at a meeting of a body of medical men held at 29, Threadneedle Street, on February 23rd, as reported in the BRITISH MEDICAL JOURNAL, will be welcomed by many practitioners as a step in the right direction. There is no body of educated men who are so wretchedly paid for their services as those members of the medical profession who hold appointments to friendly societies and clubs: none among whom so much work, eventually proving gratuitous, is given to those unwilling to pay; none who so willingly give their services free to those unable to pay; none who are so totally at the mercy of such combinations of individuals; none among whom the competition to obtain and keep such appointments has so tended to degrade the level of their profession: and none among whom a union is so needed to protect their mutual interests.

The most glaring abuse of these societies and clubs is that they admit as members persons who are by no means entitled to medical attendance at such reduced rates, and that original members, subsequently better off, continue to receive attendance. There is no wish on the part of club doctors to raise the scale of pay above the means of members.

To one who has not had actual experience of the working of these appointments, letters convey very little idea of the duties entailed, the amount of work to be performed, and the petty annoyances which constantly occur, due in a great measure to the want of respect for advice obtained too cheaply.

It is the low scale of pay from these clubs, making it necessary to hold a number of appointments, that causes such competition to obtain them, yet it will scarcely be credited that it is on record that a medical man returned from 5s. per annum 2d. per head at the end of the year: as the appointments are yearly I leave your readers to guess his reason.

I see no other way than the formation of a general practitioners' medical union to keep the status of the club doctor up to the level proper to any member of the medical profession; and I feel sure that such a union, worked on broad and honourable principles, would receive the sympathy and support of those members of the profession who have attained more eminent positions.

Hednesford. CECIL DIGBY, M.D.

A CASE OF PRESUMED RUPTURE OF THE URETER FROM EXTERNAL VIOLENCE.

SIR,—Under the above title Mr. Herbert Allingham publishes, in the BRITISH MEDICAL JOURNAL of March 28th, page 699, a case which though rare is not, I venture to think, so rare as he imagines.

In the first place, from his own showing, there is very considerable doubt whether any rupture of the ureter existed, for he states that on passing his finger upwards he thought he could feel some of the calices of the kidney. In one of the cases to which he alludes, in which Mr. Stanley describes the result of his *post-mortem* examination, there was an undoubted communication with the pelvis of the kidney.

I have on more than one occasion alluded to injuries of this nature, and have, in my work on *The Surgery of the Kidney*, p. 30, referred to similar cases, at the same time pointing out that in most instances they are "complicated by an injury to the kidney as well." Since my remarks were published other cases have been recorded, but I cannot off-hand recall any of them in which the injury was proved to be confined to the ureter alone, and I do not think Mr. Herbert Allingham's can be regarded as by any means conclusive on this point.—I am, etc.,

Harley Street, W. W. BRUCE CLARKE.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following appointments have been made at the Admiralty:—W. R. WHITE, M.B., Surgeon to the *Hotspur*, April 26th; R. HILL, Surgeon to the *Research*, April 1st; T. ROWLAND, Surgeon to the *Triton*, April 1st; W. TAIT, Surgeon to the *Partridge*; A. G. ANDREWS, Surgeon to Bermuda Hospital; W. M. CRAIG, M.B., Surgeon to the *Severn*; H. E. L. EARLE, Surgeon to Hong Kong Hospital; J. H. WHELAN, Surgeon to the *Racoon*, April 2nd; JOHN HUNTER, Staff-Surgeon to the *Mohawk*, March 31st; ROBERT McIVOR, Staff-Surgeon to the *Daphne*, March 31st.

Mr. JAMES COWAN WOODBURN, M.D., is appointed Honorary Staff Surgeon to the Clyde Brigade of the Royal Naval Artillery Volunteers, March 18th.

THE MEDICAL STAFF.

SURGEON JOHN GEORGE STEPHEN LEWIS is placed on temporary half-pay on account of ill-health, March 6th. His commission is dated March 6th, 1880.

Surgeon T. H. PARKE will not, it is now stated, proceed to the Oil Rivers Protectorate in West Africa as a Vice-Consul.

Brigade-Surgeon F. H. WELCH and Surgeon T. DE B. WHAITE, who are serving in the Bengal command, have leave of absence for six months on private affairs; and Surgeon R. W. BARNES, serving in the Bombay command, has leave to Australia for six months on private affairs.

Surgeon-Major H. T. BROWN, M.D., serving in Bengal, is appointed to the officiating medical charge of the Peshawur District, *vice* Brigade-Surgeon R. Harvey, M.D., Bengal Establishment, appointed Principal Medical Officer to the Miranzai Field Force.

Quartermaster THOMAS WARRINGTON committed suicide on March 17th at Gibraltar. He joined the Medical Staff March 23rd, 1887, and was in his 45th year.

Surgeon J. F. BATESON, M.B., has been selected to be attached to the Coldstream Guards for his tour of home service, *vice* Surgeon R. H. Cox, who has resigned his commission.

ARMY MEDICAL RESERVE.

SURGEON CHARLES STEWART YOUNG, having resigned his volunteer appointment, ceases to be an officer of the Army Medical Reserve, to which he was appointed April 25th, 1888.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR H. HAMILTON, Bengal Establishment, is transferred from the medical charge of the 5th Native Infantry to the temporary medical charge of the Guides Cavalry during the absence of Surgeon-Major A. Duncan, M.D., with the Guides Infantry on field service with the Hazara Expedition.

Surgeon A. J. MACNAB, Bengal Establishment, is appointed to the officiating medical charge of the 4th Sikh Infantry, *vice* Surgeon-Major G. M. Davis, M.D., on field service with the Miranzai Expedition.

Surgeon H. M. HAKIM, Madras Establishment, is appointed to the civil medical charge of the Pakokku District, Burmah, *vice* Surgeon-Major E. Levinge.

Surgeon-Major H. G. HALL, Madras Establishment, medical officer 21st Native Infantry, has leave of absence for thirteen months on private affairs; and Surgeon G. E. FOOKS, Bombay Establishment, medical officer 5th Light Infantry, has leave to proceed out of India for one year on private affairs.

The services of Surgeon J. P. BARRY, M.B., Bombay Establishment, are placed at the disposal of Government for employment in the Civil Department.

Surgeon J. T. CALVERT, of the Bengal Establishment, was officiating in medical charge of the 42nd Goorkha Light Infantry when that regiment was recently assailed in Manipur. Surgeon Calvert's commission bears date March 30th, 1889, and he was appointed to the 42nd Goorkhas in August of last year. He is 27 years of age.

THE VOLUNTEERS.

SURGEON J. M. ROSS, M.B., 1st Edinburgh (City) Artillery, has resigned his commission, dated February 1st, 1889.

Acting-Surgeon W. D. GRIEVE, M.B., 3rd Volunteer Battalion King's Own Scottish Borderers (late the 1st Dumfries), has also resigned his appointment, which was dated June 14th, 1890.

MEDICAL OPINION ON MR. STANHOPE'S REPLY.

WE hear that Mr. Stanhope's first reply to Sir Andrew Clark has been received with anything but favour in India, either by the Medical Staff or the Indian Medical Service. Much irritation is felt by the continued ignoring in that country of the Royal Warrant in its application to brigade-surgeons and surgeons.

PROGRESS says: The reply is discouraging, because it shows that "my military" and other advisers are careful that the War Minister should not be fully informed regarding the Medical Service. For instance, the questions of limited command seem purposely confused, while those under Court privileges are obscured. Mr. Stanhope is simply misinformed and misled when he states that medical officers now try men of the Medical Staff Corps by court-martial; they do nothing of the kind, and are carefully prevented from doing so.

THE LETTERS OF MEDICAL OFFICERS ARRIVING FOR DUTY IN INDIA.

As is well known, all medical officers sent to India for duty arrive in Bombay, and afterwards proceed to the various stations to which they are posted in the Bengal, Madras, and Bombay Presidencies. They cannot tell their destination until posted, and their letters from home consequently often go astray. To obviate this, Messrs. Grindlev, Groom, and Co., agents, Bombay, have, Surgeon-Major Evatt informs us, kindly consented to receive, readdress, or deliver on board the letters of medical officers addressed to their care, and this without charge. We have no doubt this act of civility on the part of the firm will be much appreciated.

CHANGES IN INDIA.

AD REM writes: Rumours are current in India that the charge of native regiments is to be handed over to the Medical Staff, and the Indian Medical Service made purely civil. If this it done it will distinctly be against the wishes of a large number of those immediately concerned. The chaotic state of the rank question seriously affects the medical officers of the Indian Service in regimental appointments. They pay subscriptions according to their supposed relative rank, while paid themselves according to a lower rank; and their position at mess is of the most anomalous kind.

ARMY MEDICAL RESERVE.

A VOLUNTEER SURGEON desires to know: 1. What advantages are gained by joining the Army Medical Reserve? 2. What are the disadvantages? 3. What are the necessary steps to be taken for joining?

*** 1. (*a*) Earlier promotion to the rank of surgeon-major: this is given after twelve years' service in the Reserve, whereas a surgeon who does not belong to it gets the rank of surgeon-major after fifteen years' service; (*b*) employment as medical officer in charge of troops at contract rates, in preference to other surgeons of volunteers or to civilian medical practitioners.

2. It was thought that in time of war, officers of the Army Medical Reserve would be sent away from their practices to do duty with troops elsewhere, but Army Order No. 27 of 1888 states that this will not be done except under conditions such as would necessitate all volunteer regiments being mobilised.

3. Pass the proficiency examination, and then make an application to the commanding officer of the regiment to be recommended to the general officer commanding the district.

MEDICO-LEGAL AND MEDICO-ETHICAL.

REGINA v. THE CORONER FOR NEWBURY.

AN application for the rehearing of an inquest is an excessively rare event; and we think that, though it was not granted, few people will deny that the Public Prosecutor was, in the recent case, fully justified in making it. There have only been two instances in modern times of such an occurrence, namely, in the so-called Road murder some thirty years ago, and more recently in the Bravo case; and it may well be that the fact that no public advantage was gained in either of those cases influenced the judges in refusing the application the other day. Yet, from a medical point of view, there was ample ground for a rehearing and for saying that the original inquest was insufficient. It will be in the minds of our readers that two persons, a brother and sister, met with their deaths on the evening of January 15th last; the husband of the woman was the principal witness, and his evidence was to the effect that his wife had asked him to leave her alone with her brother as she wished to have some conversation with him, and almost immediately after he had left the room he heard a shot fired, and returned to find his brother-in-law dead, and his wife standing in front of the fireplace pointing the gun at herself; he tried to wrest the gun from her, and in the course of the struggle somehow or other he did not know how it went off, and his wife was shot in the back, and died in a few minutes. His evidence was corroborated as to the lapse of time (some four or five minutes) between the two shots by a man who was outside and came in before the wife died. At the inquest no question was raised as to the exact course of the bullet or the direction from which the shot was fired, and no *post-mortem* examination was made, though the coroner suggested one more than once in the course of the inquiry. A letter was produced, stated to be in the handwriting of the deceased and intended for her mother, intimating that she intended to commit suicide, and the jury returned a verdict that she had been accidentally killed by her husband in endeavouring to prevent her committing suicide. Shortly afterwards the Public Prosecutor applied for an exhumation of the body; Mr. Bond made an examination, and found that the wound was in the back, about an inch to the left of the middle line, and that it had passed obliquely downwards and inwards, and that the charge had entirely divided the spinal cord. In the course of his conclusions he pointed out that the wound could not have been self-inflicted, that from the characters of it he inferred that the muzzle must have been about a foot from the body when the shot was fired, that at the time the gun went off she could not have been touching it, and that as there must have been immediate paralysis of the legs she could not have fallen into the position in which the body was found. The judges, however, held that this did not constitute fresh evidence, that practically the jury had the opportunity of

considering all the points raised by Mr. Bond, and refused to grant a rehearing except for fresh evidence. It is however open, as one of the judges observed, to the police or anyone else to indict anyone on a criminal charge if they think they have enough evidence; and in the interests of forensic medicine we should certainly like to see a full discussion respecting the possibility of the accidental production of such a wound as was found in this case.

ALLEGED LIBEL ON A LEEDS SURGEON.

At the West Riding Assizes, Dr. McKane, of Leeds, sought to recover damages from Mr. F. Denison for libel. The alleged libel complained of arose out of the case of George Smith, of the Loyal Good Intent Lodge, who, whilst suffering from pneumonia and wearing poultices on his chest travelled from Sheffield to Leeds, and died after a short illness. The defendant was Smith's employer, and the libel complained of arose out of a letter addressed to the secretary of the Good Intent Lodge, alleging neglect on the part of the plaintiff. An investigation committee was formed and went into the case, exonerating Dr. McKane from any neglect. The defendant now stated that the expression he made use of in the letter was one which he felt he could not justify, and he sincerely regretted that in a hasty moment he was led to express that opinion. The judge said that the defendant had acted very wisely in doing as he had done. He was glad that medical men were so jealous of their reputation. In his experience, next to our clergy, there was no class of men who were more conscientious and more benevolent than medical men.

PUBLIC EXHIBITIONS OF HYPNOTISM.

Dr. Alfred Carpenter (Croydon) writes: Absence from home prevented my attention being drawn to the announcement in the daily journals that I was present at the Hôtel Métropole when a degrading exhibition of mental defects was openly shown. I have repudiated the act in the daily journals. I can only account for the adoption of my name as a revenge for my having denounced such public exhibitions in a paper which I read at the Church Congress at Hull in the autumn of last year. Of course I was not present at the exhibition in question.

A NEW USE FOR A THESIS.

A. H. H.—In closing (which, in the interest of the profession and the disputants alike, we feel constrained to do) the prolonged discussion between Mr. H. and Dr. J. relative to the distribution of the latter's graduation "thesis," we willingly accede to the request of the former to record his emphatic denial of the allegation that he had in any way sought "to locally damage young Dr. J.;" and, moreover, that, in submitting the case for our opinion, he had acted simply in the interest of the faculty and of the public.

THE OWNERSHIP OF PRESCRIPTIONS.

A correspondent informs us that the question of the ownership of prescriptions has been settled by law in New York, Massachusetts, and a few other States. In all the cases it has been decided that the druggist is the owner of the prescription. The following is the text of a judicial pronouncement lately delivered on the subject: "The question before the Court appears to be very simple indeed. A patient applies to a physician and receives from him certain advice for which he tenders a fee. The physician hands a piece of paper to the patient, purporting to be a written order for certain goods called drugs, which order is filled by a merchant or apothecary. The payment of the fee and the delivery of the goods or drugs terminates the verbal contract, and the druggist keeps the prescription as an evidence that the contract has been fulfilled so far as he is concerned. The druggist can, if he so please, on his own responsibility renew the drugs, for he is but a merchant, and has a perfect right to sell drugs to any one and in any shape. He need not keep the prescription, nor is he bound to give a copy; but should error occur, he has no protection in case of suit." It is said that some time ago a decision in the same sense was given by the judge of a court in Berlin.

*** The opinion here quoted does not seem to be sound; the patient receives the prescription in return for the fee which he gives to the physician, but he is under no obligation to give up the prescription to the druggist. He is bound to show it to him or else he cannot get the drugs he wants, but the document belongs to the patient, who could if he chose enforce its return by action. A publisher might as well claim to keep an author's manuscript as evidence that he had correctly printed it, as a druggist to keep the prescription as evidence that he had fulfilled his contract to supply the drugs ordered of him. Such a claim on the part of a tradesman against his customer is not recognised as valid by English law, whatever may be be laid down by the courts of other countries.

ADVERTISEMENTS IN NEWSPAPERS.

Nemo and M.B.—With the view to avoid, alike for the reader and the writer, the wearisome repetition of advice on one and the same subject, we would, in response to their communications, refer our correspondents to the advisory comments which appeared in the British Medical Journal of March 14th, page 611, under the heading of "Advertising Cards," and, in relation to the therein suggested protest to the diploma-granting authorities, would recommend them merely to substitute the newspapers in which the reprehensible advertisements appeared for the cards. With regard to the attitude which had better be assumed by the profession in Paisley towards one who so flagrantly ignores the traditional and honourable customs of the faculty, and seeks to obtain practice through the medium of advertising in the local papers, we are unwilling—in view of the fact that Dr. S. is evidently, from the date of his diplomas, a novice, and not improbably *de facto* ignorant of his real ethical duties—to suggest the extreme measure of repudiating his anticipated visit of courtesy to the resident medical men, but rather that one or more of the elder leading practitioners should courteously call his attention to his exceptionable procedure in announcing his advent through the columns of a newspaper. This would be an act of true fraternal kindness, and probably tend to avert further unethical proceedings on the part of a young practitioner.

THE FAMILY PHYSICIAN.

Med. Ett. writes: I was called in one evening by a husband to see his wife, who had been suddenly taken ill, and I continued to attend her. After three days the husband had an interview with me and expressed satisfaction at my treatment, and said he had only been married ten days and he would be pleased to make me his regular medical attendant. I then found out that his wife was taken ill at her mother's house and that her mother's family physician was first sent for but was out, and that the husband afterwards came to me. What I wish to know is whether, under the circumstances, I ought to hand the case over to the wife's family physician or treat the newly-married wife as now belonging to a different family, when, of course, the husband would have no particular claim to call in his wife's family physician. Only my first visit was paid to the wife at her mother's house, she having gone home the next day.

*** Under ordinary circumstances the following is the rule by which our correspondent should have been guided in the above case:—"When a practitioner is called to an urgent case either of sudden or other illness, accident, or injury in a family usually attended by another he should (unless his further attendance in consultation be desired) when the emergency is provided for, or on the arrival of the attendant in ordinary, resign the case to the latter, but he is entitled to charge the family for his attendance." In view, however, of his apparent ignorance that the mother's family physician had, in the first instance, been sent for, no blame can fairly attach to him. The second point which he submits will, no doubt, sooner or later resolve itself, either by a renewed request for his professional attendance upon the lady in question or that of the old family doctor. It is scarcely necessary to add that in either case her choice should be left unfettered, at least not unduly influenced by husband or mother.

"SITTING UP ALL NIGHT."

Rusticus writes: How far is it professional for a medical attendant to sit up all night in charge of a patient? The late Dr. Matthews Duncan strongly impressed upon his students that a medical man should never undertake the duties of a nurse. "Night charge of and sitting up with patient" is entered in the *Medico-Chirurgical Tariffs* as an apparently recognised procedure at a fee of 21s. to 63s. In several instances which have come lately under my notice, it is difficult not to suppose that the fee has been the chief inducement to the practice. It is only done in the case of wealthy patients, and seems to me reprehensible as one of those acts of extra attention by which some men seek to commend themselves to their patients. Under emergencies, when a nurse cannot be procured, and skilled attention is required, it is, of course, right enough, but when repeatedly and systematically practised, it seems to me derogatory to professional dignity, and opposed to the interests of the patient.

*** It can hardly be necessary to assure our correspondent that he has misapprehended the true meaning and intent of the suggested fees in the *Medico-Chirurgical Tariffs* for "night charge of and sitting up with patient," and that they simply refer to medical and surgical, and not, as alleged, "nursing" attendance. We are informed that the fees in question were introduced after careful consideration at the special request of various provincial practitioners with the view to lessen the difficulty under which not a few members of the profession have hitherto laboured in reference to the proper fees for such attendance.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Studentship in Pathology.—There will be an election to the John Lucas Walker Studentship in Pathology (which has become vacant owing to the election of Mr. J. G. Adami to a Fellowship at Jesus College) as soon as convenient after May 16th, 1891. Candidates are requested to send in their applications, and such testimonials as they may think desirable, on or before that date, to Professor Roy, Wollaston Road, Cambridge, from whom full information regarding the conditions of tenure of the studentship may be obtained. The

studentship is of the annual value of £250, is not confined to members of Cambridge University, and is tenable for three years. The student is required to devote himself to original pathological research.

UNIVERSITY OF EDINBURGH.

FINAL EXAMINATIONS.—Coincident with the close of the winter session at the University, the professional examinations for medical degrees began, the first professional last week, the second this week. Full lists of the passes will appear in the BRITISH MEDICAL JOURNAL at an early date.

UNIVERSITY OF DURHAM.

DEGREES OF B.Hy. AND D.Hy.—The scheme for the degrees of Bachelor in Hygiene (B.Hy.) and Doctor in Hygiene (D.Hy.) has been approved by the Senate of the University of Durham. The candidates for the B.Hy., who must be registered medical practitioners, will be required to have spent one year of professional study, subsequent to qualification, in attendance at the University of Durham College of Medicine, Newcastle-upon-Tyne. During the winter session they will be required to attend courses of lectures on public health, instruction in the chemical laboratory, and the clinical practice of the City Hospital for Infectious Diseases. During the summer session they will be required to attend courses of lectures on sanitary chemistry and physics, and to work for six months in the outdoor sanitary department under the medical officer of health for Newcastle. Finally an examination will have to be passed. Candidates for the degree of D.Hy. will be required to be already B.Hy., and to have been engaged for two years subsequently in practice as a medical officer of health. The degree will be granted after presentation of an essay and examination thereon.

GLASGOW EXTRAMURAL SCHOOLS OF MEDICINE.

ST. MUNGO'S COLLEGE.—The winter session at St. Mungo's College was closed on March 27th. It was stated that the number of students attending during the session just passed had been greater than during the preceding one, but no exact figures have been published regarding that—the first session. Cheering information, however, was given regarding the progress of the endowment fund. Six Glasgow merchants have offered £1,000 each, and it is anticipated that, before smaller sums are asked for, other gentlemen will take the same level of generosity. Thus the nucleus of a sufficient endowment will, it is expected, soon be provided. There can be no doubt that once St. Mungo's College is established on a sufficiently secure financial basis, the first condition of success will have been obtained; for, unless it be so established, there is little prospect of affiliation with the University, without which success is acknowledged to be impossible. In the curriculum the only change has been the addition of the class of zoology, taught with much zeal by Dr. Prince, who has also endeavoured to popularise his subject by a series of lectures delivered in various parts of the city.

ANDERSON'S COLLEGE. Anderson's College Medical School has recently experienced two changes in its staff, due to the resignation of the chair of physiology by Dr. Christie, and of the chair of medical jurisprudence by Dr. Eben. Duncan. The chair of physiology has been filled by the appointment of Dr. D. Campbell Black, and that of medical jurisprudence by Dr. T. Kennedy Dalziel.

QUEEN MARGARET COLLEGE.—Queen Margaret College Medical School (for Women) closed its first winter session on March 30th, by a meeting in the College, presided over by the President of the Faculty of Physicians and Surgeons, Dr. R. Perry. Speaking of the funds left by the late Dr. Muirhead for the establishment of a college for women, Dr. Perry urged that an amalgamation with Queen Margaret College would ensure great success, while the foundation of a second school would only prove a great waste of power and resource. Professor Young submitted the report of the session's work, which began with 13 students, 9 junior and 4 senior. He expressed himself in hopeful terms as to the prospect of an agreement with the University, necessary for affiliation, being arrived at, and acknowledged the kindness and courtesy with which the Faculty of Physicians and Surgeons had met them at every point in the arrangements for qualifying examinations. Professor McKendrick moved the adoption of the report, which was seconded by Professor Gilchrist, of Bangor.

INDIA AND THE COLONIES.

INDIA.

THE BENGAL CENSUS.—It is stated that the recent census of Bengal shows that those districts in which the population has decreased are, as a rule, those where there is much malaria due to defective subsoil drainage. This defective drainage is attributed in part to neglect of the natural drainage channels and in part to injudicious arrangement of railway embankments. The cost of the census is said to be less than one-half that of the previous census.

THE VICTORIA HOSPITAL, CALCUTTA.—At the opening ceremony of the Lady Dufferin Victoria Hospital in Calcutta a bust of the Marchioness of Dufferin and Ava was unveiled in the presence of the Governor and a considerable gathering. The total outlay for land and building the new hospital amounted to Rs. 1,07,000.

NEW SOUTH WALES.

COMPULSORY ISOLATION OF LEPERS.—Whilst the compulsory isolation of lepers in India and the West Indian Colonies has not yet passed beyond the limits of academic discussion, the Government of New South Wales has displayed the usual promptitude and uncompromising thoroughness with which it has hitherto dealt with contagious diseases. On November 26th, 1890, an Act to provide for the notification of cases of leprosy, for the detention and isolation of lepers, the appointment of lazarets, and other purposes was assented to. By this Act the law compels the householder and the medical practitioner attending the case to report to the Board of Health within the metropolitan district, and to a police officer if beyond that district, any case of leprosy that occurs in a house. The Governor is empowered to direct the establishment of a lazaret, and make regulations for the safe custody of lepers who are sent there. On a report that a case of leprosy has appeared, the Board of Health shall cause investigation to be made by two or more medical practitioners, and if it is found that the case is one of leprosy the patient is to be removed to the lazaret and detained there until released by order of the Board, or he is to be isolated in such place and manner as the Board may direct. On the written order of the President, or Secretary, or any two members of the Board a leper may be arrested and removed, and any person who obstructs the removal of such a leper is liable to a penalty. Proceedings for offences against this Leprosy Act may be taken summarily before any stipendiary or police magistrate or any two justices of the peace. It will be observed that so far as New South Wales is concerned the isolation and segregation of lepers has been provided for in the most thorough way. The Act seems to have been promptly framed and passed on account of the discovery of two fresh cases of leprosy in Europeans not far from Sydney, and shows that the Australians, at all events, have made up their minds as to the best means of dealing with the threatened spread of leprosy in that Colony.

HOSPITAL AND DISPENSARY MANAGEMENT.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.

THE report presented at the annual meeting of the Chesterfield and North Derbyshire Hospital was of a satisfactory character. The number of in-patients had exceeded by 55 those admitted in the previous year. And though the expenditure was greater by £167, the income was the highest yet recorded, namely, £2,071 11s. 3d. A large increase in the miscellaneous receipts was noticeable. This was chiefly due to the meetings of friendly societies. The movement among the working men of these societies was entirely voluntary, and was very creditable to them. It is proposed to proceed with the erection of

the new wing, at a cost exceeding £5,000, to be defrayed out of the invested funds of the hospital and by subscriptions.

BELFAST OPHTHALMIC INSTITUTION AND EYE AND EAR HOSPITAL.

The annual meeting of this institution was held on March 23rd, the Mayor of Belfast in the chair. The medical report submitted by Dr. Walton Browne showed that during the past year 1,068 cases of eye disease, 310 cases of ear disease, and 200 cases of throat affections were treated in the extern department, and 84 cases were admitted to the wards of the hospital. Clinical instruction had been given to 18 senior medical students. Extensive repairs and improvements in the sanitary arrangements of the hospital had been carried out during the year.

SCARBOROUGH HOSPITAL.

A proposal, which seems likely to be carried out, has been made to rebuild Scarborough Hospital and Dispensary on a new site. The provisional scheme provides accommodation for thirty adult patients, a children's ward, and an operating room. The wards will command views of the sea; some old buildings of a Wesleyan school are to be utilised as offices and a nurses' home. The total expenditure is expected to exceed £10,000, towards which a little over £6,000 has been received.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

TENANTS' INTEREST IN INSANITARY HOUSES.

The Housing of the Working Classes Act, 1890, was supposed and intended to codify and simplify the previous Acts, which had become so complex as to be almost unintelligible. But a case which came before Mr. De Rutzen, the metropolitan police magistrate, on March 20th, discloses a most serious defect which may make some of its salutary provisions unworkable. Part II of the Act deals with unhealthy dwelling houses, and enables the local authority to determine that dilapidated houses in its district are unfit for human habitation, and where it so determines to take proceedings against the owner or occupier for closing such houses. These proceedings take the form of a summons requiring the owner or occupier to show cause to a court of summary jurisdiction (that is, to a magistrate) why an order should not be made prohibiting the use of the house until the defects are remedied; and, if satisfied that the premises are in such a state as to be a nuisance or injurious to health, the court may make an order closing the building and prohibiting its use as a dwelling house. These powers are useful and would appear to be sufficient for their purpose; but the orders so made may of course involve a considerable expenditure of money or else the permanent closing of a house, and so practically the confiscation of its value. The immediate tenant of a house likely to come within the purview of these provisions is not likely to be able or willing to spend money in putting his house in order, and any order made on him to do more than clean premises which he has allowed to become filthy would be practically a dead letter. The ordinary principles of justice require that no man shall be deprived of his property till he has had an opportunity of being heard, and of explaining why such an order should not be made; and the Act therefore provides that a summons may be served on the owner as well as on the occupier, and where the order to be made is one to affect the owner, he must be before the court. Other persons besides the owner in fee simple may have a substantial interest in such property, and the Act recognises this by providing that the expression "owner" shall include all lessees and mortgagees of any premises required to be dealt with, "except persons holding or entitled to the rents and profits of such premises for a term of years of which twenty-one years do not remain unexpired." This definition has been found to create a difficulty. In the case before Mr. De Rutzen the premises are held under a lease for forty-one years, of which eighteen are still unexpired. The Vestry of Chelsea have resolved that they are unfit for habitation, and their medical officer has sworn that they are very dilapidated and dirty and past patching up. Lord Cadogan, the freeholder, agrees in this description of the houses standing on his ground, and apparently would be very glad to have them removed. His tenant, not unnaturally, takes a different view, but the magistrate has decided that he is neither owner nor occupier within the meaning of the Act, and therefore has no right to be heard. If this decision is good law—and it certainly seems justified by the words of the section quoted above—tenants of houses under leases which have less than twenty-one years to run, who do not themselves occupy those houses, are in an awkward position. The reversion expectant on the termination of their leases is often of great value, and landlords are often willing to buy up the last years of a lease on good terms for the tenant. But now if the premises are only sufficiently dilapidated to be condemned *ex parte* by a medical officer, they may be closed altogether, and the value of the tenant's interest may consequently be reduced to less than nothing, without his being able to defend himself effectively. The position is a curious one, and Mr. De Rutzen's final decision, or that of the superior court before whom the matter will probably be taken, will be looked forward to with interest.

VACCINATION AND SMALL-POX IN ENGLAND IN 1889.

Vaccination.—Dr. Buchanan, in his recent report, states that systematic local inspection during 1889 showed that, with few exceptions, the arrangements for public vaccination were in satisfactory order. Returns are given showing that of the 886,198 children whose births were registered in England and Wales during 1887, 733,980 were successfully vaccinated. The Medical Officer to the Local Government Board, Dr. Buchanan, has been especially struck by the large number of cases certified as "insusceptible" to vaccination. As many as 1,556 such certificates were given, or 1 for every 472 children certified as having been successfully vaccinated. In London the ratio of "insusceptible" to attempted vaccination was as 1 to 256. In Fulham, Hackney, Lewisham, Whitechapel, and Wandsworth the number of insusceptible certificates was especially large; and Dr. Buchanan points out very forcibly, in a short memorandum, that such certificates ought not to be so numerous. It is significant that, upon inquiry being made by the Board from districts where such certificates were received in greatest profusion, it was almost invariably found that no certificate of the kind had been given by any public vaccinator. The Animal Vaccine Station at Lamb's Conduit Street continues to be satisfactorily carried on by Dr. Cory and his assistants. Besides supplying lymph for distribution by the National Vaccine Establishment, 7,567 persons received primary vaccination there, five separate insertions of lymph being made in each instance. All but 49 of these succeeded at the first attempt, and in no case was a third attempt at vaccination requisite.

Small-pox.—The year 1889 was marked by a very small mortality from small-pox. In England and Wales there were only 28 deaths in a population of some 29 millions. Of these there were but 7 among the 9½ millions inhabiting the twenty-eight large towns; and of these 7, only 1 occurred in London, with its 4 million inhabitants. Whether this special immunity from small-pox enjoyed by the metropolis can in any degree be ascribed to the system of promptly removing the cases, as soon as notified, to the hospital ships at Long Reach in the Thames it is not safe to say, having regard to the small number of cases which occurred. Probably, however, that system, whereby each centre of infection was promptly eradicated and the patient was taken out of London, had a great deal to do with the satisfactory returns as to small-pox.

NEW REGULATIONS AS TO MEDICAL OFFICERS OF HEALTH.

By general orders dated November 23rd, 1891, the Local Government Board have prescribed fresh regulations as to medical officers of health to supersede those embodied in the orders of March, 1880, and November, 1872. This has been necessary in order to remove some difficulties in the procedure of appointment, and to bring the regulations into harmony

with the altered circumstances caused by the operation of the Local Government Act, 1888. The old orders have been in the main reproduced. The principal changes are the following:—

Where part of the salary is to be repaid to the sanitary authority by the County Council, every appointment is to be subject to the approval of the Local Government Board, and the sanitary authority must specify in the resolution making it the term for which the appointment is made. The article which defines the duties of a medical officer of health follows for the most part the superseded orders, but is to be observed not only by those officers whose salaries are partly repaid, but by those whose salaries are not so repaid by the County Council. In addition to the duty previously imposed on the medical officer of health, he is to advise the authority as to the adoption by them of the Infectious Disease (Prevention) Act, 1890, or of any section or sections of that Act. He is also required not only, as heretofore, to advise as to the measures which should be taken on the occurrence of an outbreak of disease, but also to take such measures for its prevention as he is legally authorised to take under any statute in force in the district, or by any resolution of the authority. He is to take such steps in cases of nuisance or overcrowding as he is legally authorised to take under any statute in force in the district, or by any resolution of the authority. The list of articles to be inspected by the medical officer of health if deemed diseased or unwholesome is extended so as to include not only "any animal, carcass, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk," but "any other article to which the provisions of the Public Health Act, 1875" in that behalf apply. Attention is called in this connection to Section 28 of the Public Health Acts Amendment Act, 1890, which may be adopted by any sanitary authority, and which extends the operation of Sections 116 to 119 of the Act of 1875 to "every article intended for the food of man." The annual report of the medical officer of health must, in addition to the particulars previously required, include in the record of action taken during the year by him or on his advice, action taken in regard to dairies, cowsheds, and milkshops. He shall also specially report to the Board the grounds of any advice which he may give to the authority with a view to their requiring the closing of schools. Further, the medical officer of health is to give to the County Council or County Councils of the county or counties within which his district is situated the same information as he gives to the Local Government Board with regard to any outbreak of infectious disease, and to transmit to them copies of his annual report and of all special reports. Hitherto he has only been obliged to forward to the county authority copies of his annual reports. The order also prescribes regulations as to inspectors of nuisances. It came into operation on March 25th, 1891.

THE PUBLIC HEALTH (LONDON) LAW AMENDMENT BILL.

We recently referred to some of the provisions of this Bill, which would place medical officers of health on a more satisfactory footing than they occupy at present, by giving them greater security in their tenure of office. The status of inspectors of nuisances is also to be improved, and they are to be called "sanitary inspectors"—a title which they have long sought, and have very generally assumed without precise statutory authority.

The other proposed amendments of the law are also of great importance. The inadequacy and complexity of the existing provisions for suppressing nuisances and keeping them in check have been recognised, and an effort has been made to fix specifically the duty of nuisance abatement on the properly responsible person. Clause 2 proposes that the law "respecting any premises, house, tent, structure for human habitation, animal, factory, workshop, nuisance, place, polluted water or thing, when injurious or prejudicial to health, shall extend to the same when dangerous to health."

Any water closet, earth closet, cistern, or dung pit, so foul, or in such a state as to be a nuisance or injurious or "dangerous to health," shall be a nuisance liable to be dealt with summarily. So also is an occupied house without a proper and sufficient supply of water, and if such house is a dwelling house it shall be deemed unfit for human habitation. Information of such a nuisance may be given to the sanitary authority by "any person," and it is to be the duty of every officer of that authority, and of every relieving officer, to give such information. Further, it shall be the duty of the sanitary authority to give such directions to their officers as will secure the existence of a nuisance being immediately brought to the notice of any person who may be required to abate it, and "the officer may do so either orally or by serving a written notice." Non-compliance with such a notice is to be punishable by a heavy fine.

It is also specifically provided that the County Council, with the sanction of the Local Government Board, "shall make laws" as to cleansing of streets, prevention of nuisances, carriage of filth, keeping of animals, etc., and every sanitary authority must "observe and enforce" such by-laws. The law as to scavenging and the cleansing of footways is made clearer and more peremptory. Provision as to unsound food is extended so as to bring within reach of the law "all articles intended for the food of man."

Amongst the clauses relating to infectious diseases is one requiring every sanitary authority to provide proper premises, apparatus, and attendance for the disinfection of infected articles. An infected person is not to engage in "milking, fruit picking, or any occupation connected with food," or carry on his trade in such a way as to spread infection; but the sanitary authority are to have power, not possessed by them at present, to make an allowance in such circumstances in case of poverty.

Under another section, every sanitary authority "shall" provide a mortuary, and, if required by the county council, "shall" provide a building for the reception of dead bodies for *post-mortem* examination. Any sanitary authority, also, "may" provide "proper accommodation for the holding of inquests." We should prefer the use of "shall" in this last case also. The existing arrangements for holding coroners' inquests in the metropolis are far from being satisfactory, and the present opportunity should be seized for securing in this huge wealthy city the provision of proper accommodation for this important public purpose. To have to resort to public houses for accommodation is not seemly or defensible on any grounds.

Cellar dwellings, or, as they are designated in this new Bill, "underground rooms," are to be very stringently regulated, and, if the proposed clauses become law, many of the present miserable, unwholesome dwellings of this class will have to be closed.

In view of the present lax sanitary administration in many metropolitan localities, Londoners will hail with satisfaction the proposal to invest the County Council with powers to supersede, with the assistance of the Local Government Board, defaulting local authorities. Doubtless when a proper system of representative district councils has been substituted for the present antiquated system of vestry government these coercive powers will lose much of their importance, but in the meantime London must look to the strength of its County Council for securing a more energetic local administration of its sanitary laws.

CREMATION OF SEWAGE AND DISTILLATION OF WATER.

Dr. Henry B. Collins, Surgeon R.N. (retired) writes: Would it be chimerical to suggest that the two great problems of modern hygiene, sewage disposal and water supply, might each provide a solution for the other?

At Ealing the sewage of 22,000 persons burns itself away in a "destructor," without any other additional fuel, the noxious fumes being afterwards consumed in a "cremator," at an expenditure of £2 10s. weekly for coke braize. The rates are lower in Ealing than in any of the neighbouring districts, and the plan is stated, and to the critical visitor appears, to be thoroughly efficient.

Here, then, is a cheap and efficient means of sewage-disposal which in its action gives forth an immense supply of heat. At Ealing this heat is used for working engines for pumping, etc., but some portion of the energy is wasted.

At Crossness and Barking we are not very far away from good clean sea water. At any rate, nearer than Bala lake, or Dartmoor. And why should not the heat evolved by destroying our sewage be used for condensing from the sea to supply London with clean fresh water. There is plenty of land at the sewage works and in the neighbourhood for erecting works and reservoirs, and I should like to ask the experts whether my suggestion is practical.

THE PUBLIC HEALTH MEDICAL SOCIETY.

At the last meeting of the council of this Society it was unanimously resolved that steps should at once be taken to have an amendment placed on the paper in connection with the Public Health Law Amendment (London) Bill, with the view of making it compulsory that medical officers of health in the metropolis should not engage in general practice. The following gentlemen holding the Diploma in Public Health of the Royal Colleges of Physicians and Surgeons of England were elected members of the Society: J. F. Braga, L.S.A.; Oliver Field, M.D.Edin.; George H. Hart, L.R.C.P.; John Holroyde, M.R.C.S.; John Norton, M.D. Durh.; F. W. D. McEachen, L.F.P. and S.G.; William H. Brodie, M.D. Edin.; Clement Mallins, M.A., M.D.Dubl., Surg.-Major I.M.D.; Henry Richard Kenwood, M.D.Edin.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, 5,819 births and 4,074 deaths were registered during the week ending Saturday, March 28th. The annual rate of mortality in these towns, which had declined from 24.1 to 21.9 per 1,000 in the preceding four weeks, further fell to 21.2 during the week under notice. The rates in the several towns ranged from 14.1 in Derby, 16.7 in Nottingham, 17.4 in Bolton, and 17.9 in Birkenhead to 29.0 in Blackburn, 29.5 in Preston, 29.9 in Portsmouth, and 34.6 in Huddersfield. In the twenty-seven provincial towns the mean death-rate was 22.8 per 1,000, and exceeded by 3.5 the rate recorded in London, which was 19.3 per 1,000. The 4,074 deaths registered during the

week under notice in the twenty-eight towns included 414 which were referred to the principal zymotic diseases, against 413 and 449 in the preceding two weeks: of these, 150 resulted from measles, 139 from whooping-cough, 39 from diphtheria, 35 from diarrhœa, 35 from "fever" (principally enteric), 25 from scarlet fever, and 1 from small-pox. These 414 deaths were equal to an annual rate of 2.2 per 1,000; in London the zymotic rate was 1.6, while it averaged 2.6 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Norwich, 0.5 in Derby, and 0.9 in Newcastle-upon-Tyne and in Cardiff to 6.3 in Halifax, 6.5 in Portsmouth, 7.2 in Huddersfield, and 7.5 in Blackburn. Measles showed the highest proportional fatality in Bolton, Preston, Bristol, Huddersfield, Portsmouth and Blackburn; and whooping-cough in Salford, Manchester, Huddersfield, Leicester, and Halifax. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. Of the 39 deaths from diphtheria in the twenty-eight towns during the week under notice, 26 occurred in London, and 4 in Salford. One fatal case of small-pox was recorded during the week under notice in Huddersfield, but not one in any other of these large towns; 3 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 2 in the Highgate Small-pox Hospital, on Saturday, March 28th. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on the same date was 1,059, and showed a further decline from recent weekly numbers; 81 new cases were admitted during the week, against 64 and 91 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 4.7 per 1,000, and was below the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, March 28th, 784 births and 689 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 26.2 and 25.9 per 1,000 in the preceding two weeks, rose again to 26.7 during the week under notice, and exceeded by 5.5 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Leith and Perth, and the highest in Glasgow and Paisley. The 698 deaths registered in these towns included 93 which were referred to the principal zymotic diseases, equal to an annual rate of 3.6 per 1,000, which exceeded by 1.4 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Glasgow and Paisley. The 336 deaths registered in Glasgow included 21 which were referred to measles, 19 to whooping-cough, 3 to scarlet fever, and 2 to diphtheria. Three fatal cases of scarlet fever were recorded in Edinburgh, and as many as 11 deaths were referred to measles in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 6.4 per 1,000, against 4.7 in London.

HEALTH OF IRISH TOWNS.

In sixteen of the principal town districts of Ireland the deaths registered during the week ending Saturday, March 21st, were equal to an annual rate of 26.0 per 1,000. The lowest rates were recorded in Kilkenny and Dundalk, and the highest rates in Belfast and Lisburn. The death-rate from the principal zymotic diseases averaged 1.8 per 1,000. The 192 deaths in Dublin were equal to an annual rate of 28.4 per 1,000 (against 28.2 and 28.1 in the preceding two weeks), the rate for the same period being 20.3 in London and 23.1 in Edinburgh. The 192 deaths in Dublin included 11 which were referred to the principal zymotic diseases (equal to an annual rate of 1.6 per 1,000), of which 5 resulted from whooping-cough, 4 from typhoid fever, and 2 from diphtheria.

MEDICAL NEWS.

The Queen will lay the foundation stone of the new Infirmary at Derby on May 21st.

M. Pasteur has been elected an honorary member of the Russian Society for the Promotion of Public Health.

The fourteenth Congress of the Italian Medical Association will be held at Siena, from August 16th to 21st, under the presidency of Professor Barduzzi.

The dinner in aid of the funds of the North-Eastern Hospital for Children, at which the Duke of Connaught will preside, will be held at the Holborn Restaurant on May 15th.

Special courses of instruction in pharmacy for women were opened on March 8th in the City Barrack Hospital at St. Petersburg. Female pupils have already taken the place of the male students in that institution.

The returns of the census in India, which are just completed, show the population of the Indian Empire to be 285,000,000, being an increase of fully 30,000,000 since 1881.

The first Mohammedan lady who has joined the ranks of the medical profession is said to be Kutlo Jaroff-Hanum, a native of the Crimea, who has just taken her Doctor's degree in the University of Odessa.

Professor M. Nencki, of Berne, to whom, as we lately announced, the post of Bacteriologist to the Institute of Experimental Medicine, founded by Prince Alexander of Oldenburg, was offered, has declined the appointment.

A course of lectures on the Prevention of Disease will be given at Gresham College, Basinghall Street, on April 7th, 8th, 9th, and 10th, by Dr. E. Symes Thompson, Gresham Professor of Medicine.

The annual report of the McGill University, Montreal, states that the total number of students in attendance last session was 854, of whom 263 belonged to the medical faculty.

The Camera Club will hold its sixth annual conference at the Society of Arts on April 7th and 8th. It may be interesting to some readers to know that an exhibition of lantern slides will take place in the theatre of the Society of Arts at 8 P.M. on the first named day.

Reports in the local press state that at a recent meeting of the Epping Board of Guardians the sanitary inspector reported that a Mrs. Barton, who was brought before the magistrates on a charge of baby-farming, had left the neighbourhood, taking the children with her.

A Livonian Leper House.—A committee of ladies, which includes the widow of the late Professor von Wahl, Baroness Stael von Holstein, Baroness Stackelberg, and several other local leaders of society, has been formed at Dorpat for the provision of the beds, ward furniture, etc., for the new leper house about to be opened in Livonia.

London Street Ambulance Service.—The Hospitals Association has established its fiftieth station, by permission of the Mercers' Company, in the portico of the Royal Exchange. The association is largely extending its organisation, and the committee have under consideration the establishment of twenty-seven additional stations in various quarters of the metropolis suggested by the Chief Commissioner of Police, on the recommendation of the superintendents of the different divisions.

International Congress of Hygiene.—The Council of the Society of Arts, acting under the provisions of the Benjamin Shaw trust, have offered two gold medals, or two prizes of £20 each, to the executive committee of the Congress of Hygiene and Demography, for any inventions or discoveries subsequent to 1885, exhibited or submitted to the Congress with respect to new methods of obviating or diminishing risks incidental to industrial occupations. Dr. Aubrey Bowen, of Melbourne, has been appointed a delegate to represent the Colony of Victoria.

Presentations.—At the close of the winter session in the Edinburgh University the students in the anatomy class availed themselves of the opportunity of presenting to Dr. R. C. Elsworth, one of the demonstrators, an illuminated address, referring in terms of high appreciation to the manner in which he has during three sessions discharged his duties in the anatomical department of the university and endeared himself to the students under his care. The address was signed by about 300 students, and was accompanied by a gift of instruments for use in medical and surgical practice, at once handsome and comprehensive. Past and present students of anatomy in Edinburgh regret the termination of Dr. Elsworth's connection with the school.—Dr. Ritchie, of Thornliebank, has been presented by the ladies who attended the nursing class of his St. John Ambulance lectures with a laryngoscope and ophthalmoscope in recognition of his services; and Dr. Strang has been the recipient of a handsome gold chain from the gentlemen members of that class.—At the recent distribution of certificates to the members of the Tyldesley Railway Ambulance Class, Dr. Neech was presented with a marble timepiece in recognition of the high appreciation of his services.—Mr. Beverley, who has been giving a course of ambulance instruction to the railway *employés* of the North-Eastern Railway at Scarborough, has received from them a gold-mounted, ivory-handled Palmyra cane as a memento of his services.—Surgeon Vincent Magrane, of the 3rd Battalion South Staffordshire Regiment, has been presented by the members of the St. John Ambulance Class at Darlaston with a Malacca cane and a silver-mounted briar pipe in gratitude for his services.

SMALL-POX IN TEXAS.—A severe epidemic of small-pox has been raging in Texas, but is now said to be rapidly subsiding. The Mexican Minister of the Interior has issued a circular to the governors of the different States of Mexico calling upon them to enforce compulsory vaccination.

LIGHT IN MOSCOW.—On March 4th the arrangements for the electric illumination of the new clinics in the University of Moscow were completed. The rooms are lighted by more than one thousand lamps of from ten to sixteen candle power, and in each of the operating theatres there are three lamps, each of one hundred candle power.

A NEW MEDICAL UNIVERSITY.—A new medical school has recently been incorporated at Columbus, U.S., under the name of the "Ohio Medical University." It is to consist of a department of medicine and surgery, a department of midwifery, one of dentistry, and one of pharmacy, with a training school for nurses. Provision is to be made for clinical teaching by a large new hospital, which is estimated to cost 200,000 dollars, and is the gift of a number of wealthy Protestants in the city. One of the prominent features of the new university is to be the substitution of "class teaching" for formal lectures. The curriculum is to extend over three years of nine months each, and the system of teaching will include daily examinations and "grading" of students, "thus," we are assured, "doing away with the necessity of a final examination." The Ohio Medical University will, it is said, be the first school organised on this new plan. The new University will probably be opened in October.

LITERARY INTELLIGENCE.—A second edition of Dr. Ramón Serret y Comin's Spanish translation of Dr. Playfair's *Treatise on the Science and Practice of Midwifery* has recently appeared under the editorship of Dr. F. Garcia Molinas. The first half of an *Atlas of the Diseases of the Mouth and Pharyngeal Cavity* by Professor J. Mikulicz, of Königsberg, and Dr. P. Michelson, *privat-docent* in the same University, is announced as about to appear. The second half will be ready in a few months. The whole work will comprise forty-four plates drawn from Nature, by H. Braune, and judging from the table of contents the pathology of the oro-pharyngeal region will be very fully illustrated. The publisher is A. Hirschwald, of Berlin, and the price of the first half is 40 marks (£2). A new medical journal devoted to neurological subjects, and entitled *Zeitschrift für Nervenheilkunde*, is about to appear. It will be edited by Professor Strümpell, of Erlangen, and published by Vogel, of Leipzig. Dr. Byrom Bramwell is about to issue by subscription, through Messrs. Constable, of Edinburgh, an *Atlas of Clinical Medicine*. The plates will include lithographs, photogravures, and reproductions in black and white.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession who have recently died in foreign countries are Dr. Emerich Regéczy-Nagy, Extraordinary Professor of Physiology in the University of Buda-Pesth, who died at the age of 38, just as the death of Professor E. Jendrássik left vacant the chair which he would doubtless have been invited to fill; Dr. G. B. Chiarella, assistant to Professor Novaro in the Surgical Clinic of the University of Bologna, aged 30, a young surgeon of the highest promise; Dr. N. P. Wassilgew, Chief Physician of the Alexander Hospital, St. Petersburg, aged 40; Dr. Johann Höppener, a well known obstetrician and gynæcologist of St. Petersburg, aged 72; Dr. Enrique Andrade, Professor of Physiology in the Medical Faculty of Valladolid; Dr. Wilhelm Schlesinger, of Vienna, a well known medical journalist, aged 75; and Dr. G. Morelli, of Bergamo, Senator of the kingdom of Italy, aged 75. He was distinguished in his profession, and still more distinguished as a connoisseur in painting and sculpture. He was believed by many competent authorities to be the best living judge of works of art, and he was the author of a valuable work on the principles of art criticism, which was published in German, a language which he wrote as fluently and as elegantly (in the opinion of Germans) as his own.

MEDICAL VACANCIES.

The following Vacancies are announced:

BIRMINGHAM CITY ASYLUM, Rubery Hill, near Bromsgrove. Clinical Assistant. Board, lodging, and washing provided. Applications to the Medical Superintendent.

BOROUGH LUNATIC ASYLUM, Portsmouth.—Clinical Assistant for six months; qualified. Board, rooms, lodging, washing, and attendance provided. Applications to the Medical Superintendent.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon; double qualifications; not over 30 years of age. Salary £80 per annum, with board, residence, and washing. Applications to C. V. Woodcock, Secretary, Albany Buildings, Market Street, Bradford, by April 11th.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary, £80 per annum. Applications to Mr. John Coombs, Honorary Secretary, by April 10th.

CANCER (FREE) HOSPITAL, Fulham Road, S.W.—Assistant-Surgeon; must be F.R.C.S., and reside within the four mile radius. Applications to the Chairman of the House Committee by April 18th.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Honorarium £100 per annum. Applications to Stanley Boyd, Dean, by April 20th.

CHARING CROSS HOSPITAL.—Surgical Registrar. Salary £40 per annum. Applications to Arthur Reade, Secretary, by April 6th.

COUNTIES OF MIDLOTHIAN, WEST LOTHIAN, AND PEEBLES.—Medical Officer. Salary £600 per annum, besides travelling expenses. Applications to the County Clerk, County Buildings, Edinburgh, by April 4th, from whom full particulars can be obtained.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer, not over 27 years of age. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing. Applications to the Medical Superintendent by April 4th.

DERBY COUNTY ASYLUM, Mickleover, near Derby.—Locum Tenens Assistant Medical Officer for 2½ months from May 1st. Terms, £2 2s., with board, lodging, and washing. Applications to the Medical Superintendent.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Physician. Board and lodging provided; no salary. Applications to Samuel Whitford, Secretary, by April 23rd.

GENERAL HOSPITAL, Birmingham.—Honorary Physician. Diplomas to be sent to the Medical Committee by April 13th. Applications to Dr. J. D. M. Coghill, House Governor. Election on April 15th.

GRANTHAM FRIENDLY AND TRADE SOCIETIES' MEDICAL INSTITUTION.—Resident Medical Officer. Salary, £150 per annum and midwifery fees, with residence, coal, and gas. Not under 30 years of age. Applications to Mr. F. Hullott, Grantham, by April 13th.

GUY'S HOSPITAL DENTAL SCHOOL.—Two Anæsthetists. Applications to the Treasurer, Guy's Hospital, S.E., by April 6th.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE.—Clinical Assistant. Board, lodging, and washing, and small honorarium. Applications to Dr. Rees Phillips, Virginia Water.

KENT COUNTY ASYLUM, Chartham, near Canterbury.—Junior Assistant Medical Officer. Salary, £125 per annum, with furnished apartments, board, and attendance. Applications to Allen Fielding, Solicitor, Canterbury, by April 6th.

LONDON LOCK HOSPITAL, Harrow Road, and 91, Dean Street, W.—Registrar. Applications to the Secretary, by April 6th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, Bowdon, Cheshire.—Resident Medical Officer. Salary, £60 per annum, with board, apartments, and washing. Applications to the Secretary by April 17th.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

ONGAR UNION.—Medical Officer and Public Vaccinator for Fourth District. Salary £83 per annum, with usual fees. Applications to Charles Smith, Clerk's Office, Town Hall, Ongar, Essex.

PADDINGTON INFIRMARY, 285, Harrow Road, W.—Resident Clinical Assistant. Board and residence. Honorarium of twelve guineas at end of six months' satisfactory service. Applications to the Medical Superintendent.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

ROYAL BATH HOSPITAL AND RAWSON CONVALESCENT HOME, Harrogate.—Resident Secretary and Dispenser. Salary, £80 per annum, with board, lodging, and washing. Applications endorsed "Application" to the Chairman of the Committee by April 8th.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, London.—Milroy Lecturer. Applications to the Registrar by April 8th, of whom all information can be obtained.

ROYAL VICTORIA PATRIOTIC ASYLUM FOR GIRLS, Wandsworth Common, S.W.—Medical Officer. Salary £100 per annum. Applications to Secretary, Royal Commission Patriotic Fund, 53, Charing Cross, S.W., by April 9th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Resident Medical Officer, double qualifications. Salary, £105 per annum, with furnished apartments, attendance, coals, and gas. Applications to Frank Stokes, Secretary, by April 4th.

ST. MARY'S HOSPITAL, Paddington.—Surgeon. Appointment for five years. Applications to Thomas Ryan, Secretary, by April 6th.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary; double qualifications. Salary £130 per annum, with furnished apartments. Applications, endorsed Assistant Medical Officer, to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by April 7th.

SHAPINSAY, Orkney.—Medical Officer. Salary, £30 from Parochial Board, £50 from Medical Association, with fees from practice. Applications to R. Rannie, Shapinsay Manse, or Chairman of Parochial Board.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth—Assistant House-Surgeon; double qualifications. Applications to the House-Surgeon, by April 4th.

SWANSEA HOSPITAL.—Resident Medical Officer; double qualifications. Salary, £100 per annum, with board, furnished apartments, coals, gas, laundress, and attendance. Applications to the Secretary by April 11th. Election April 23rd.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in the hospital. Applications to W. H. Laban, Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Surgeon. Must be F.R.C.S. of London, Edinburgh, or Dublin. Applications to R. J. Gilbert, Secretary Superintendent, by April 2nd. Election on April 6th.

WEST RIDING LUNATIC ASYLUM, Wakefield.—Pathologist and Assistant Medical Officer; double qualifications, unmarried, and not above 30 years of age. Salary, £100 per annum, rising £10 annually up to £150, with board, furnished apartments, and an additional £50 as Pathologist. Applications to W. Bevan Lewis, Medical Superintendent.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary £100 per annum, with board, washing, and attendance. Applications, addressed to the Committee, under cover to the Secretary, R. D. Horne, by April 6th.

MEDICAL APPOINTMENTS.

BAILEY, Hy. Bennett. M.D.Brux., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Spittlegate District of the Grantham Union.

BARON, Horatio Nelson, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the No. 6 District of the Lutterworth Union, *vice* G. M. Dickinson.

BLUCKE, H. F. S., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Teignmouth, Dawlish, and Newton Dispensary and Convalescent Home, *vice* Dr. James Young, resigned.

BOND, W. A., M.A., M.D., B.C.Cantab., appointed Resident Medical Officer to the Queen Charlotte's Lying-in Hospital, Marylebone Road.

COLLINGWOOD, Joseph Edward, L.R.C.P., L.M.Edin., M.R.C.S.Eng., reappointed Medical Officer for the Burton-Coggles District of the Grantham Union.

COLMAN, Walter Tawell, M.R.C.S.Eng., L.S.A.Lond., appointed one of the Surgeons on the staff of the Sherbourne Road Dispensary, Birmingham, *vice* F. W. Stokes, resigned.

DUNN, R. A., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the North-Eastern Hospital for Children, Hackney Road.

FENTEM, Philip S., M.D.Edin., M.R.C.S.Eng., reappointed Medical Officer for the Baslow Urban District.

FOX, W. Piercy, L.R.C.P., L.R.C.S., appointed Medical Officer to No. 12 District (new district), in addition to No. 6 District, in the Parish of Lambeth.

GORDON, Hy. Laing, M.B.Edin., appointed Medical Officer for the No. 6 District of the South Molton Union, Devonshire.

HARPER, Charles, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health for the Bath Rural District.

HAYDON, Wm. Rudall, M.D., M.B., C.M.Glas., reappointed Medical Officer for the Cruwys Morchard District of the Tiverton Union.

HODGE, Wm. Theodore, M.R.C.S.Eng., L.S.A., D.P.H.Glas., appointed Medical Officer for the Ellesmere Union.

HOFFMEISTER, William, M.D.Heidelb., L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer for West Cowes, Isle of Wight Union.

LEWIS, Percy G., M.D., appointed Honorary Medical Officer to the Victoria Hospital, Folkstone; and Honorary Assistant Medical Officer to the St. Andrew's Convalescent Hospital, Folkestone.

MCLAREN, Alice J., M.B.Lond., appointed House-Physician to the Leith Hospital.

MCLINTOCK, James, M.D., M.B., C.M., B.Sc., appointed Officer for the County of Lanark.

MANSFIELD, Gerald, M.B., C.M., appointed House-Surgeon to the West Bromwich District Hospital.

MANSFIELD, G., M.B., B.Ch.Edin., appointed House-Surgeon to the Belgrave Hospital for Children, *vice* R. K. Mitter, M.D., L.R.C.P., M.R.C.S., resigned.

MARGRAVE, Malcolm Llewellyn, M.R.C.S., L.R.C.P., appointed House-Surgeon to the West London Hospital, Hammersmith Road, *vice* Wm. McAdam Eccles.

MURDOCH, Andrew, M.B., C.M.Glas., reappointed Medical Officer for the Rainford District of the Prescot Union.

MURRELL, George Fred., M.R.C.S., L.R.C.P., appointed House-Physician to the West London Hospital, Hammersmith Road, *vice* Malcolm L. Margrave.

O'DONOGHUE, Patrick, L.R.C.P.I., F.R.C.S.Edin., appointed Medical Officer to the Macroom Dispensary (Macroom Union), *vice* Dr. White.

OWEN, Lewis, M.R.C.S.Eng., appointed House-Surgeon to the Denbighshire Infirmary, *vice* Dr. D. G. Evans.

PLATT, J. E., M.D.Lond., appointed Resident Medical Officer to the Convalescent Hospital at Cheadle, *vice* E. C. Lomas, M.B., resigned.

PRIESTLEY, Joseph, B.A., M.D., D.P.H., appointed by the Council of King's College Demonstrator in State Medicine and Public Health.

REYNOLDS, Ernest S., M.D.Lond., M.R.C.P., appointed Medical Officer and Visiting Physician to the Manchester Union Infirmary.

RIDDELL, J. Scott, M.B., C.M., M.A.Aberd., appointed Medical Officer by the Old Machar Parochial Board, Aberdeen, for Old Machar Parish (West Division).

SEATON, Edward Cox, M.D.Lond., appointed Medical Officer of Health for the County of Surrey.

SCOTT, Partrick Cummin, B.A., M.B.Cantab., M.R.C.S.Eng., appointed Physician to the Miller Hospital.

SHEPHERD, R. F., M.B.Edin., appointed Medical Officer and Public Vaccinator for the Hainton District of the Boston Union.

STABB, Arthur Francis, L.R.C.P., M.R.C.S., appointed House-Physician to the Addenbrooke's Hospital, Cambridge, *vice* Mr. F. W. Burton, resigned.

THOMSON, Dr. Alexis, appointed Surgeon to the Western Dispensary Edinburgh, *vice* Dr. A. W. Hughes, resigned.

WILSON, Helen M., M.B.Lond., appointed Resident Medical Officer to the Temperance Hospital, Hampstead Road.

WORGER, T. H., M.R.C.S., reappointed Medical Officer of Health for Radstock.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Alban Doran: Fibrosarcoma or Desmoid Growth of the Abdominal Wall. Mr. Stephen Paget: Three Cases of Strangulated Cæcal Hernia in Infants. Dr. de Havilland Hall: Chronic Atrophic Rhinitis (Ozæna).

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 8 P.M.—Mr. A. Pearce Gould: A Case of Tooth-plate Impacted in the Pharynx; Death from Septicæmia. Mr. Penfold: Movable Mass of Salivary Calculus, tolerated for three years as an Incurable Tumour. Mr. W. H. Coffin: Jaw and Dentition of the Irish Giant, Cornelius Magrath. Mr. Stocken: Cases of Absorption of Permanent Teeth.

TUESDAY.

SOCIETY FOR THE STUDY OF INEBRIETY, 11, Chandos Street, W., 4.30 P.M.—Dr. Norman Kerr: Presidential Address on Recent Criminal and Civil Trials, with Inebriate Complications, and the Urgent Need for a Reformed Jurisprudence.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. Aldren Turner and Dr. Campbell: Heterotopia of Spinal Cord. Dr. H. Tooth: Heterotopia of Spinal Cord. Dr. Newton Pitt: Chronic Intestinal Stricture, Secondary to Strangulation in a Hernial Sac. Mr. W. B. Robinson: Columnar-celled Carcinoma of Jaw. Mr. H. H. Clutton: Osteitis Deformans of Tibia. Mr. S. G. Shattock: Thickening of Skull in Rickets. Mr. E. C. Stabb: Tuberculosis of Tendon Sheath. Dr. A. F. Voelcker: Tuberculosis of Lymphatic Glands, Invading Lung by Continuity. Mr. S. Paget: Carcinoma of Scalp. Card Specimens:—Dr. Hale White: Hodgkin's Disease with Waxy Kidney. Dr. Newton Pitt: Pigmented Colon from a Case of Lead Poisoning.

WEDNESDAY.

HUNTERIAN SOCIETY, 8 P.M.—Clinical Evening. Dr. F. J. Smith: (1) A Case of Fibrous Growths on the Hands; (2) A Case Congenital Heart Disease. Mr. F. R. Humphreys: Two Cases of Pneumonia (migrating) with Complications. Dr. A. T. Davies: (1) A Case of Paralysis Agitans; (2) A Case of Graves's Disease.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Adjourned Discussion on Dr. Bell's paper (Treatment of Chronic Disease of Uterine Adnexa). Mr. Mayo Robson: Observations on the Menstrual Flow in Two Cases of Biliary Fistula.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. A. T. Norton: A Case of Popliteal Aneurysm in a youth aged 17. Mr. G. R. Turner: A Case of Cancellous Suppression of Urine with Double Pyonephrosis; Nephrolithotomy on Both Sides at One Sitting. Mr. W. H. A. Jacobson: Eight Cases of Nephrolithotomy, with their Lessons. Mr. Bilton Pollard: A Case of Nephrolithotomy in a boy aged 10.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BRAGA.—On March 25th, at Glen Villa, Sunbury, Middlesex, the wife of J. F. Braga, L.S.A., D.P.H., F.L.S., etc., of a son.

HAYES.—On January 31st, the wife of Alfred A. Hayes, L.K.Q.C.P.I., L.R.C.S.I., of a son.

MARRIAGE.

PAYNE—EDMUNDS.—On March 31st, at St. George's Church, Edgbaston, Birmingham, by the Rev. Chas. Mansfield Owen, assisted by the Rev. W. G. Walker, brother-in-law of the bridegroom, William Arthur Payne, B.A., M.R.C.S., of Selly Oak, Worcestershire, son of F. A. Payne, Esq., Pentre Ucha, Oswestry, to Margaret Banks Edmunds, daughter of the late Henry Edmunds, Esq., of Elmsdale, Edgbaston.

DEATHS.

FOX.—On the 12th ultimo, at Brislington, near Bristol, Edwin Fydell Fox, M.R.C.S., L.S.A., aged 76.

FRASER.—On March 28th, Alister James Gordon, aged 9 years, only son of Graeme B. Fraser, Surgeon, etc., Belvedere, Weston-super-Mare.

SALTER.—March 25th, at 18, College Road, Leeds, aged 34, Francis Joseph Salter (Frank), L.R.C.P. and L.R.C.S., second son of the late Joseph Salter, of Lyddon Terrace.—"Until dawn."—No cards.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

TREATMENT OF NÆVUS.

MEMBER asks to be recommended a simple treatment for a superficial nævus on the forehead, not quite the size of a threepenny piece. He has used the ethylate of sodium (touching simply with a piece of wood) for a long time, which does not appear to lessen the size. Does it lose its effect by keeping?

INTRAUTERINE MEDICATION.

VOX CLAMANTIS asks: 1. What is the best and safest plan of dilating the cervix uteri for exploration in cases of suspected intrauterine polypi or endometritis? The plan that is easy to pursue with a staff of assistants and a competent anæsthetist may not, perhaps, be the best for a private practitioner without an assistant, and where the patient may be unable or unwilling to pay a guinea fee to obtain the services of one.

2. What is the best and safest curette to use for villous endometritis or incomplete abortion, by one who has not had much practical experience in the matter?

YELLOW FEVER.

VOX CLAMANTIS asks for information on the following points: 1. Where to find an analysis of the blood and urine throughout the course of yellow fever?

2. Where to obtain copies of the temperature charts in cases of yellow fever?

*** We have referred these questions to Inspector-General Lawson, who delivered the Milroy Lectures on yellow fever a few years ago. He writes: "I have never seen a detailed chemical analysis of either the blood or urine throughout the course of yellow fever. Up to 1860, when I left Jamaica, I had made many observations on the changes in the urine during yellow fever, which were published in the *British and Foreign Medico-Chirurgical Review*, in 1862, but these had no pretension to being a full chemical analysis. Dr. Sternberg, of the United States Army, who has given much attention to this subject, may have put on record such evidence as "Vox Clamantis" desires, or some of the physicians at New Orleans, whose locality affords them frequent opportunities of seeing yellow fever, may have done so, and the American medical journals would afford some clue to the fact.

"With regard to temperature charts, I think Dr. Sternberg gave some few at a meeting of the Epidemiological Society many years ago, but doubtless the American journals by this time contain many more which display the characters of the disease more thoroughly."

TOBACCO SMOKE.

MR. WM. H. WRIGHT, L.R.C.P. (New Normanton), writes: It is, I think, generally known that severe "cerebral headache" is produced in non-smokers who have to attend any function where the majority of those present smoke. I have been consulted by those who have suffered to such a severe degree as to be unable to attend business for twenty-four hours or more after an attack. I myself have suffered, and have not been able to find any prophylactic. Probably some members may be able to suggest some remedy to alleviate the sufferings of a large portion of the community.

ANSWERS.

PHARMACEUTICAL SYMBOLS.

DR. E. VIVENCICH (Pola) writes: Not being accustomed to your system of prescription, as we use the more simple form of the grammata, I would feel greatly obliged to you for some explanation concerning the usual formulæ of yours, as ℥vj, g.xl, ℥iv, ℥viij, etc., in order to be able to understand every prescription which I may meet with in your learned paper.

*** The symbol ℥ is used in English prescriptions for 1 ounce (℥j = 28.3495 grammes); ʒ is the symbol for 1 drachm, which is equivalent to one-eighth of an ounce; gr. is generally used for grain (1 gr. = 0.0648 grammes). The symbols ♏ and ♎ are commonly, but not quite correctly, used for fluid measures also—♎ being taken to mean fluid ounce (1 fluid ounce = 28.397 cubic centimetres), and ♏ to mean fluid drachm (1 fluid drachm = 3.550 cubic centimetres).

BERI-BERI.

DR. JAMES MONTEITH.—The best account of beri-beri is that of Dr. Pekelharing, of Batavia, translated for and published in the BRITISH MEDICAL JOURNAL vol. ii, 1887, p. 424. Beri-beri is a specific disease—an extracorporeal contagium—present in the soil in certain localities, and capable of being introduced, through the evacuations (?) of the sick, into other localities presenting like favourable conditions. Damp ill-ventilated wooden buildings and ships—especially if used for transport of timber or raw produce—retain infection most persistently. The incubation period is about three to four weeks. Some writers—as Dr. Marshall Lamb, the latest—deny its propagation by water, but it is not enough to have shown that, in some particular outbreak, the water was not a factor; all analogy would point the other way. Infected buildings and shipping should be cleaned, dried, lighted, ventilated, and disinfected with soft soap, sublimate solutions, and perhaps copious sulphur fumigation. The essential and characteristic symptoms which distinguish beri-beri from all other tropical or endemic diseases are the progressive ascending peripheral impairment of tactile sensibility and loss of muscular power, leading to degeneration of the muscle substance. Dyspnœa, angina, collapse, etc., are "accidents."

M.D. FOR PRACTITIONERS.

INQUIRENDO.—The University of Durham holds special M.D. examination for practitioners of fifteen years' standing, without residence. For details apply to the the Registrar, College of Medicine, Newcastle-on-Tyne. In April the University of St. Andrew's has an M.D. examination for practitioners above the age of 40: apply to the Secretary of the University, St. Andrew's, N.B.

FOMITES.

M.B.—Chicken-pox, measles, mumps, scarlet fever, and small-pox are believed to be conveyed by fomites, or the poisons of these diseases may be conveyed by persons who have been in contact with other persons so suffering, though they themselves may not have contracted the disease. It is not known for what periods of time after such contact the persons may convey infection, but the period is in all probability for each disease a very short one. Small-pox and chicken-pox are likely to be transmitted by patients until all scabs have fallen off; scarlet fever, until desquamation and sore throat have disappeared (average period is six weeks); measles, until desquamation and cough have ceased (average period three weeks); mumps, until all swelling has subsided (average period four weeks). The infection in all these diseases is generally transmitted through the air, and the contagion is greatest when the diseases are at their height in the acute stages. Chicken-pox, mumps, and measles were omitted from the list of diseases rendered compulsorily notifiable by the Act of 1889, as being usually complaints causing little mortality and affecting the very young, who are not easily isolated in hospitals. In measles also, the disease being infectious in the pre-eruptive period, there is, as a rule, little hope of isolating cases before the spread of infection, but many medical officers of health are now in favour of the compulsory notification of measles.

NOTES, LETTERS, Etc.

DR. W. B. BRIERLEY (Tattenhall) desires to draw attention to the College for Daughters of Medical Men at Pelican House, Grove Park, Denmark Hill, which he does not think is as widely known and appreciated as it deserves to be. He has no personal interest whatever in the matter, but thinks the scholarships, together with the educational advantages offered, are so great that some of the profession who have daughters to educate would be glad to know of it.

PHYSIOLOGICALLY PURE SALICYLATE OF SODA.

DR. SIDNEY A. BONTOR (Great Berkhamsted) writes: The following may be of interest to the readers of the BRITISH MEDICAL JOURNAL. Some time since I obtained some salicylate of soda reputed "physiologically pure," and of this I gave an adult patient 15-grain doses every four hours. When I saw her again the next day she immediately complained of the noises in her head, saying they commenced after the first dose of the medicine, and had increased after each subsequent dose, until after four doses they had become almost unbearable; they quickly subsided on discontinuing the salicylate.

THE COCKADE.

FIELD ARGENT writes: Perhaps you will allow me to supplement your answer to "M.R.C.S." on the subject of wearing a cockade by the following quotation from Cussan's *Heraldry*, page 333: "Doctor's servants, though frequently to be seen wearing cockades, have no right to them whatever, unless their masters' names are to be found in the *Army* or *Navy List*."

ADMINISTRATION OF LARGE QUANTITIES OF IRON IN ANÆMIA.

DR. W. E. STAINTON STANLEY (Wellow, Bath) writes: I think Dr. Taylor is mixing "administration" and "absorption." It is well known that many patients can "take" enormous quantities of iron under various conditions and in many forms, and it is likely that his anæmic patient did absorb and did benefit by more iron than is usually given; but I

much doubt that half, or nearly half, of what he gave was absorbed. It will generally be found that the excreta are simply loaded with the extra quantity. As to the fact, he notes that no very strong purgative was required. I have found that when—as in septicæmia—large doses of iron are being taken, and probably producing some constipation, as soon as I have felt my way to and doubled the dose of the drug, the bowels cease to give trouble, and it may be that these doses—a great deal of ferruginous matter not being absorbed—in passing off as waste act as a slight irritant. Whatever the *rationale*, such is the fact.

Virchow Testimonial Fund.

The following additional subscriptions have been received :—

	£	s.	d.		£	s.	d.
P. W. Latham, M.D. ...	2	2	0	Joseph Coats, M.D.	2	2	0
George Johnson, M.D ...	1	1	0	Johnstone Macfie, M.D. ...	1	1	0
W. L. Reid, M.D.	1	1	0	John Lindsay Steven, M.D.	0	15	0
Charles Workman, M.D....	2	2	0	J. Cleland, M.D., LL.D., F.R.S.	1	1	0
James Finlayson, M.D. ...	2	2	0	J. Kingston Fowler, M.D. ...	1	1	0
Alex. Robertson, M.D. ...	1	1	0	J. Langdon Down, M.D. ...	1	1	0
Joshua Paterson, M.D. ...	2	2	0	R. Farquharson, M.D., M.P.	1	1	0
J. T. Kelly, M.D.	1	1	0	G. H. Savage, M.D.	1	1	0
James Lawrence, M.D. ...	1	1	0	H. Radcliffe Crocker, M.D.	1	1	0
James C. Howden, M.D....	1	1	0	F. Roberts, M.D.	1	1	0
William Frew, M.D. ...	1	1	0	R. Thorne Thorne, F.R.C.P.			
Sir G. H. B. Macleod, M.D.	2	2	0	F.R.S.	1	1	0
George Heron, M.D. ...	1	1	0	Thomas Reid, M.D.	1	1	0

Primary and Secondary Causes of Death.

Mr. A. R. Barnes, M.B.Ed. (Boreham, near Hastings) writes: Anent an article in the British Medical Journal of March 20th, there is a class of cases in which death, though perhaps apparently primarily due to an accident, may also with equal probability be assigned to a natural cause. An individual of advanced years falls down and hurts his hip, there may be no fracture, but he or she may take to bed and after a few weeks die. The primary cause of such a death is, I think it may reasonably be said, a natural one; namely, senile decay; but for senility the fall would not have happened, or if happening would not have caused a condition of things leading on to death. The injury should, I think, be described in such cases as the proximate or secondary cause of death.

Adherent Membranes.

Dr. H. T. Batchelor (Queenstown, Cape Colony) writes: Every textbook describes the adherent placenta, but I have not seen any reference to the possibilities of adherent membranes except in Spiegelberg's *Textbook of Midwifery*, published by the New Sydenham Society. On February 1st, 1888, I confined a woman, and find this note appended to the case: "Placenta removed whole; membranes adherent and left." The membranes were torn off from the circumference of the placenta, which was fibrous. Some portion of the membranes protruded through the os uteri, and were firmly attached to the uterus within the os, at the lower segment. It was found impossible to do more than get away the non-adherent portion, the attachment of the remainder being so firm. We often hear of the dangers of leaving a portion of the membranes behind, and I wish to express the belief that this accident may be due to its being adherent. In this case nearly the whole of them were adherent, and left because they could not be separated. This woman got well in about four weeks, though her safety was endangered by bad nursing.

LETTERS, COMMUNICATIONS, Etc., received from:

(**A**) Mr. E. Q. Adams, Sheffield; Dr. J. H. Aveling, London; Mr. J. M. Ackland, Exeter; A. H.; Dr. J. A. Anderson, Stranraer. (**B**) Mr. H. T. Batchelor, Queenstown, Cape Colony; Dr. J. Barr, Rishton; Mr. T. Bell, Rutland; Mr. J. J. Bryant, Monaghan; Dr. S. A. Bontor, Great Berkhamsted; Mr. G. Barling, Birmingham; Mr. J. R. Bailey, London; Mrs. E. Bond, Stareross; Mr. A. Baird, Stoke; Mr. E. Battersby, Tyldesley; Mr. E. Blacker, Midsomer Norton; Dr. R. Bell, London; D. G. Braidwood, M.B., Halkirk; Mr. A. H. Benson, Dublin; Dr. S. Barwise, Blackburn; Dr. P. Boobbyer, Nottingham; Mr. G. A. Byron, Nottingham; Mr. J. F. Brager, Sunbury-on-Thames; Mr. W. L'Heureux Blenkarne, Leicester; Messrs. Burroughs, Wellcome, and Co., London. (**C**) Professor Charteris, Glasgow; Dr. Alfred Carpenter, Croydon; Mr. H. G. Cartwright, Narborough; Mr. J. Coombs, Bridgwater; Dr. Chervin, Paris; Messrs. Cassell and Co., London; Mr. T. A. Clifford, London; Dr. M. Clifford, London; The Clerk of the West Riding Lunatic Asylum, Wakefield; Dr. W. J. Collins, London; Mr. H. B. Collins, London; Mr. J. G. Colmer, London; Dr. J. G. S. Coghill, Ventnor; Mr. R. K. Corser, Bath; Mr. Bruce Clarke, London; Dr. H. Clements, Stafford. (**D**) Mr. E. Davies, Fochriw; A Disgusted Member; Mr. H. F. Devis, Bristol; Dr. J. W. Downie, Glasgow; Dr. C. Digby, Hednesford; Mr. F. L. Davis, Lyme Regis; Dr. V. Dickinson, London; Mr. W. T. P. Douglas, Newbury. (**E**) Mr. T. F. Elton, London; Mr. C. G. Edmonds, New Malden; E. T. T.; Mr. Edward East, London. (**F**) Mr. C. M. Fegen, Brandon; Mr. W. P. Fox, London; Mr. E. A. P. Fox, Brislington; Mr. W. A. Frost, London; Mr. A. Fuller, Weedon. (**G**) L. G. Guthrie, M.B., London. (**H**) Dr. Daniel Horan, Farranfore; Dr. A. H. Hoffmann, Humshaugh-on-Tyne; Mr. J. Van Hargan, London; House-Surgeon; Mr. T. F. Hopgood, Sunderland; Dr. N. Hardy, Upper Sandusky, U.S.A.; Mr. S. S. Harwood, Hucknall Torkard; Mr. R. W. Hugo, Bedale; Dr. Halliburton, London; Mr. A. A. Hayes, Clanwilliam, Cape Colony. (**I**) Dr. C. R. Illingworth, Accrington, Indian Medico. (**J**) Mr. R. S. Jaques, Leeds; Dr. H. N. Joynt, Birmingham; Mr. Arthur Jackson, Sheffield; Dr. M. Jackson, Barnstaple; Surgeon H. D. James, Chatham; J. J. C. (**K**) Mr. B. Kuhn, London; Messrs. Kemp and Co., Bombay; Mr. D. H. Kyle, St. Andrews; Dr. G. C. Kingsbury, Blackpool. (**L**) Brigade-Surgeon H. Lamb, Carlisle; Mr. H. A. Lawson, Craiglockhart; Mr. W. A. Lofting, Bedford Park. (**M**) Dr. J. Murphy, Sunderland; Medical Etiquette: Dr. W. L. Morgan, London; Medical Staff; M.D.; A Member of Forty Years' Standing; Dr. R. C. McCullagh, Belfast; Mr. J. Morris, Swansea; M. S.; Mr. N. A. Maggs, London; M. O. H. (**N**) Mr. R. G. Naylor, Audlem; Mr. F. L. Nicholls, Fulbourn; Nineteenth Century. (**O**) Dr. L. H. Ormsby, Dublin; Observer; Dr. W. Overend, London. (**P**) Mr. C. F. Pollock, Brentwood; Mr. J. H. Perkins, Pontypridd; Mr. E. C. Perry, London; Mr. F. Parsons, Cheltenham; Mr. G. G. Parsons, Colon; A. S. Percival, M.B., Newcastle-on-Tyne; Mr. J. Pocock, Bangor; Dr. C. E. Paget, Salford; Professor C. Y. Pearson, Cork; Dr. J. M. Paris, Freetown, Sierra Leone; Dr. J. Priestley, Grantham. (**R**) Mr. Mayo Robson, Leeds; Mr. B. B. Rawlings, London; Dr. J. Rorie, Dundee; Rectus; Retired Lieutenant-Colonel; Reader; Dr. A. Ruffer, London; Dr. E. S. Reynolds, Manchester; J. S. Riddell, M.B., Aberdeen. (**S**) Dr. G. T. Sinclair, Kincardine; Secretary of the Victoria University, Manchester; Dr. Scott, Twickenham; Secretary of the Bradford Medico-Chirurgical Society; Surgeon-Major I. M. S.; P. C. Scott, M.B., Blackheath; Dr. E. Seaton, London; Mr. R. Sanderson, Brighton; Mr. W. E. S. Stanley, Bath; Secretary of the Public Health Medical Society, London; Messrs. Street Bros., London; Dr. J. K. Spender, Bath; Mr. B. Scovell, London; Mr. R. R. Sleman, London; Secretary of the Sheffield Medico-Chirurgical Society; Mr. R. J. Swan, London; A Senior M.S.; Dr. Shelly, Hertford; Rev. T. N. Hart Smith, Epsom; Mr. J. A. E. Stuart, Heckmondwike; A Senior Officer Medical Staff; Mr. St. Clair B. Shadwell, Walthamstow; Mr. W. A. Shillito, Wolverhampton; Mr. R. C. McM. Smyth, Dublin. (**T**) Mr. Lawson Tait, Birmingham; Mr. R. W. Toper, Dartmouth; Dr. G. Thin, London; Twenty-one Years; Dr. Taylor, Andover; Dr. S. Taylor, London; Truth; Mr. A. W. Thorpe, Forest Hill. (**V**) Mr. T. Jenner Verrall, Brighton. (**W**) Dr. C. Williams, Cardiff; Mr. E. W. White, Birmingham; Mr. C. V. Woodcock, Bradford; J. Watten, M.B., Reigate; Dr. T. Williams, Nice; Mr. W. H. Wright, New Normanton; Mr. L. Williams, Sidmouth; Dr. T. Walley, Liverpool; Mr. W. H. Williams, Sherborne. (**X**) X. Y. Z., etc.

BOOKS, Etc., RECEIVED.

Materia Medica and Therapeutics. By J. Mitchell Bruce, M.A.Aberd., M.D.Lond. London: Cassell and Co. 1891.

Kemp and Co.'s Prescriber's Pharmacopœia. Second Edition. Bombay and London: Kemp and Co. 1891.

Modern Abdominal Surgery (The Bradshaw Lecture). By Sir T. Spencer Wells, Bart., F.R.C.S. London: J. and A. Churchill. 1891.

The Comparative Climatology of London and the Chief English Health Resorts. By Bertram Thornton, M.R.C.S., L.R.C.P. London: H. K. Lewis. 1891.

Elements of Practical Medicine. By Alfred H. Carter, M.D. Sixth Edition. London: H. K. Lewis. 1891.

A Manual of Diseases of the Nose and Throat. By Procter S. Hutchinson, M.R.C.S. London: H. K. Lewis. 1890.

Die Tetanie. Von Dr. Lothar v. Frankl-Hochwart. Berlin: August Hirschwald. 1891.

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GROCERS' RESEARCH SCHOLARSHIP LECTURES.

ON

SOME POINTS CONNECTED WITH THE PATHOLOGY AND TREATMENT OF DIABETES.

Delivered in the Theatre of the London University.

By A. E. WRIGHT, M.D.Dubl.,

Late Grocers' Research Scholar.

Examination of the Question as to whether all Sugars are the same in their Effect on the Diabetic Organism.—Resultant Classification of the Sugars into (a) *Innocuous*, (b) *Hurtful, and* (c) *Mixed.—Examination of the Conditions under which the Hurtful Sugars are Assimilated.—"Assimilation Quantum" and "Assimilation Ratio."—Conditions pointing to Admissibility of Allowing some Carbohydrate.—Proposals for giving Maximum of Carbohydrate consistently with Minimum of Sugar Excretion.—Sugarless Milk for Diabetics.—Method of Preparation.—Exhibition of Alkalies in Diabetes.—Indications for in Certain Cases.—Phloridzin Diabetes: Resemblances to Human Diabetes.—Proof that the Sugar is Derived from Proteid of Body. Wooldridge's Coagulation Method, bearing upon Study of Conditions of Venosity of Portal Blood in Diabetes.*

[After some introductory remarks, in which he referred to the complexity of some of the questions which might be raised the lecturer first turned his attention to a simpler problem, and continued as follows:—]

The accompanying table contains a clinical classification of the most important sugars. We have to set ourselves to inquire whether that classification is of any importance to us as pathologists and physicians. We shall begin by taking first dextrose and levulose. These two sugars—dextrose and levulose—are the two halves into which ordinary cane-sugar splits up. These halves are indistinguishable from each other by our ordinary senses and by our ordinary sugar tests. The polarimeter, however, shows them to be different, the dextrose half turning the plane of polarised light to the right and the levulose half to the left. Now, the man to whom the honour belongs of having asked and answered, not only this particular question, but more of such questions in regard to diabetes than any other man, is Professor Külz, of Marburg, under whom I had the privilege of studying for some time.

CARBOHYDRATES.

I. *Monosaccharids* ($C_6H_{12}O_6$):
  1. Dextrose (*a*).
  2. Levulose (*b*).
  3. Galactose (*c*).

II. *Disaccharids* ($C_{12}H_{22}O_{11}$):
  4. Milk sugar (*c a*) = dextrose (*a*) + galactose (*c*)
  5. Cane sugar (*b a*) = dextrose (*a*) + levulose (*b*) = invert sugar.
  6. Maltose (*a*) = dextrose (*a*) + dextrose (*a*)

III. *Polysaccharids* ($C_6H_{12}O_6$) n ± m (H_2O):
  7. Dextrose group (*a*): starches (*a*): dextrins (*a*).[1]
  8. Levulose group (*b*): inulin (*b*): levulin (*b*).

(*a*) Unassimilable hurtful sugars. (*b*) Assimilable innocuous sugars. (*c*) Insufficiently studied sugars.

With respect to this particular question, Professor Külz succeeded in establishing that levulose does differ from dextrose in its effect upon the diabetic organism. Levulose is assimilated by the diabetic patient, whereas his organism has, at any rate partly, and sometimes perhaps entirely, lost the power of assimilating dextrose. The chemistry of the sugars has thus become of extreme importance to the physician. The effect of a complex carbohydrate upon the system is the sum of the effects of the factors of that carbohydrate when reduced to terms of monosaccharids. Thus cane sugar can be split up into equal quantities of dextrose and levulose. Maltose, on the other hand, splits up into two molecules of dextrose. The third disaccharid, milk sugar, breaks up into equal weights of dextrose and galactose.

[1] Placed in this category on chemical reasons alone, as there are no clinical experiments with it yet forthcoming.

The third great group of the carbohydrates, the polysaccharids, falls naturally into two great subdivisions, one which includes glycogen and the starches, and the dextrins, which are the intermediate products obtained in the course of the dissociation of starch into simple sugars. All the members of this division yield only dextrose as their ultimate resolution product; they contain no levulose at all. Over against these we may set the group of polysaccharids which yield only levulose when they are broken down into simple sugars. The principal representative of this class is inulin. Levulin may also be classed under this group.

We find that there is at present among clinicians a universal consensus of opinion that the carbohydrates in the food of the diabetic patient must be restricted in order to avoid poisoning the system by the presence of large quantities of unassimilated sugar. Further, we find (and this is but the natural outcome of the good results obtained by restriction) that some clinicians have insisted that carbohydrate food should be absolutely prohibited to the diabetic in all cases where it should prove at all practicable to carry this out. What has resulted from such absolute restriction has, however, not always been unmixed good. It has been shown that although the sugar is thus reduced to a minimum, other morbid products, such as acetone and oxybutyric acid, appear or increase in quantity in the urine. It follows, therefore, that total abstention from carbohydrate food is not always a counsel of perfection for the diabetic patient.

If I might venture to express an opinion on so intricate a subject, it would be that the ideal diet would be a diet of proteids and fats, to which the innocuous lævo-rotatory carbohydrates had been added in such quantities as were available, or in default of these the "assimilable quantum" of dextro-rotatory carbohydrates, at least whenever the bad results of a proteid diet were manifesting themselves.

I may, perhaps, remark in passing that the importance of the fats in the diabetic dietary does not seem to have been emphasised sufficiently in this country.

It will follow from what has been said about the sugars that we may divide them clinically into three classes: (1) the innocuous sugars; (2) the hurtful or relatively unassimilable sugars; (3) the mixed sugars. Such sugars as galactose, which have as yet been insufficiently studied from a clinical standpoint, must at present be referred to a kind of indeterminate limbo.

Of the entirely assimilable class of sugars, we have only two: levulose, which, as far as is at present known, does not occur by itself in Nature, and which we may, therefore, dismiss from our consideration; and inulin. Inulin is a homologue of starch, with the important difference that, instead of yielding dextro-rotatory simple sugars, as starch does, it yields only lævo-rotatory simple sugars. It occurs abundantly in dahlia tubers, in dandelion, chicory, and other roots, and, as Külz pointed out years ago, it can be baked into a good bread. Against it there is chiefly its price, some 15s. per pound; but, as Külz again suggested, there is no reason why it should not be produced at a comparatively moderate price. When the fact becomes widely known that there would be a large demand for it if it were cheaper, the first step will have been taken towards its being produced for the market. At present, I am sorry to say, an innocuous—that is, entirely assimilable—sugar for dietetic purposes remains as yet an unrealised desideratum.[2]

Not being able, therefore, to give the best thing in the way of carbohydrates to our patients, we have in certain cases to inquire what is the next to best. This I spoke of above as the "assimilable quantum" of dextro-rotatory carbohydrate. If we are dealing with a diabetic who is excreting no sugar on a diet from which all carbohydrates have been excluded, we might find his urine to be still quite free from sugar after we had allowed him, in addition to his previous diet, 25 grammes of dextrose, or its equivalent in whatever carbohydrate he might prefer. In such a case, 25 grammes would be within the patient's assimilation quantum, which might turn out to

[2] We may, however, possibly have an approach to such a food stuff in the Jerusalem artichoke, the carbohydrates of which, according to Tollens, are levulin and inulin during the spring and summer, while dextro-rotatory carbohydrates make their appearance, in the tubers only, in the autumn. Now as artichokes are stated (*Mrs. Beeton's Cookery Book*) to come into season in June, it is possible that during a few months of the year Jerusalem artichokes may contain only assimilable carbohydrates.

be, say, 30 or 40 grammes. In a case like this, if the morbid products referable to proteid metabolism were at all inclined to dominate the situation, I would urge that the patient should be allowed, as a substitute for some part of his proteid food, a certain amount of carbohydrate, provided that the quantity allowed was well within the patient's assimilation quantum. This limitation is to be observed where at all practicable, because when the patient is allowed carbohydrate to an amount at all approaching his assimilation quantum, it is found that that assimilation quantum has a tendency to diminish.

I have hitherto used the term "assimilation quantum" as if every diabetic had an appreciable quantity of dextrose he could assimilate without secreting sugar. This obviously cannot be the case in the severe form of diabetes, in which the patient continues to excrete sugar even although he may be taking none. But, on the other hand, there is reason to believe that no diabetic patient, even of the severe form, excretes all the sugar he takes in in his food. He is, in fact, almost exactly in the same position with regard to sugar excretion that the diabetic of the lighter form is when he has been given sugar in excess of his assimilation quantum. Let us suppose, to take the facts of an actual case, that we had given a diabetic patient, whose assimilation quantum we had found to lie somewhere above 25 grammes of dextrose, 50 grammes of that sugar, and then found his urine to contain 6 grammes of sugar. If we now proceeded to give him 100 grammes, his dextrose excretion would not be increased by another 50 grammes, but only by another 3 grammes. It would amount to only 9 grammes in all. Evidently therefore when we have overstepped the limits of the assimilation quantum, we have to deal with a ratio between assimilation and excretion. We may call this ratio the assimilation ratio, and we have to deal with an assimilation ratio both in the case of the slight form of diabetes, where sugar in excess of the assimilation powers is taken in in the food, and also in case of the severe form of diabetes, where the urine is never free from sugar even in the strictest diet. In the patient referred to above the assimilation ratio for 50 grammes may be represented by $\frac{44}{50}$, and for 100 grammes as $\frac{94}{100}$. The ratios in this particular case are, as will be seen, very favourable ones.

With reference now to the question of giving carbohydrates in the severe form of diabetes, I think something may be ventured in that direction as long as the assimilation ratio is moderately high, and as long as what I have called the morbid products of proteid metabolism are urgently requiring attention.

I would desire, however, not to be misunderstood on this point. It is only when there is urgency of this kind that an increase of sugar in the urine should be permitted. In other cases it is only a weak pity that would allow a diabetic unnecessary carbohydrate.

We have no knowledge of what I have from the clinical standpoint called a mixed sugar in the chemical class of the non-crystallisable polysaccharids. They either fall entirely within the class of assimilable or of hurtful sugars. When, however, we come to the group of the disaccharids we meet with two examples of mixed sugars, cane sugar and milk sugar. The third of our disaccharids, maltose, of course falls entirely into the class of the hurtful sugars. Cane sugar, on the other hand, is composed of an innocuous and a hurtful sugar. From this chemical constitution, therefore, an important practical point results, namely, that two parts by weight of cane or invert sugar contain less unassimilable sugar than one part by weight of starch. This means that we may allow fruit in diabetes a great deal more readily than we may allow bread, and it shows that in the selection of vegetables for the diabetic patient we should choose such as contain as much of their carbohydrates as possible in the form of cane sugar. With regard specially to such fruits as grapes, the sugar of which is almost entirely invert sugar, it is wonderful how little harm results to diabetic patients from eating great quantities of them.

Milk sugar consists of equal parts by weight of dextrose and galactose. If galactose is an assimilable sugar, a point which has not yet been certainly made out, milk sugar would also fall into the category of the mixed sugars. There are considerable difficulties in the way of ascertaining whether galactose is assimilated or not. To begin with: there is the difficulty of getting it pure in large quantities; and then more especially there is the difficulty of ascertaining how much of it is actually absorbed as such, seeing that it breaks down very readily into lactic acid. This source of error, which affects the determination of sugar assimilation in the case of every one of the carbohydrates, makes itself particularly felt in the case of galactose and of milk sugar. Hence the results that Külz has obtained in his study of milk sugar vary extraordinarily. Sometimes milk sugar appeared to produce very little sugar in the urine, sometimes it produced a great deal.

It is therefore plain that the question about the assimilability of galactose cannot be settled without a large number of observations. In dogs, according to Hoffmeister's observations, milk sugar appears to be the least assimilable of all sugars. The general result of the observations made in man is this: the addition of milk sugar to a diabetic diet in almost all cases seriously increases the amount of sugar in the urine. This is obviously what its chemical constitution would lead us to expect, seeing that it contains 50 per cent. of dextrose. Whether it is more or less assimilable than cane sugar must remain for the future to determine.

When we come to the practical clinical side of the matter, we find that milk, because of the 4 per cent. of milk sugar it contains, has been steadily forbidden to the diabetic by the great majority of clinicians. The treatment of diabetes by skim milk, which is proposed by Dr. H. B. Donkin, need, perhaps, not be discussed here. It has no doubt a good deal to recommend it in the fact that the proportion of fat to proteid in a milk diet, even in skim milk diet, is larger than it would be in almost any other diet, and this is an undoubted advantage. The weak point, however, of the diet is the fact that the carbohydrate of milk is milk sugar which is not a desirable element in diabetic diet.

When we come to consider, however, the very severe restrictions that have to be imposed on the diabetic in the matter of diet, we cannot help feeling some amount of regret in having to proscribe the valuable proteid and fat of milk because of the presence of the milk sugar. By putting together a few facts that have been long known about milk, I have been able to arrive at a solution of the problem. Instead of getting rid of the sugar from the proteid and fat of the milk, which I failed in doing, it was evidently possible to perform the reverse process, and to separate the proteid and fat of the milk from the sugar; in a word, to precipitate the casein and fat of the milk, to filter them off, allowing all the sugar to run away from them, and then to redissolve the washed precipitate in a solution of the normal salts of milk, to which a little alkali had been added. The process is a very simple one. Take a quantity of milk, dilute it with three or four volumes of water, to which 1 to 2[3] parts per 1,000 of acetic acid have been added. This produces a precipitation of all the casein and fat of the milk. The precipitate is allowed to settle for a few minutes, and then strained through a piece of calico. The precipitate is then washed, and redissolved in a 1 per cent. solution of the following mixture[4] of salts:—

Sodium chloride	11.5 parts	Magnesium citrate	4.4 parts
Potassium chloride	9.9 ,,	Dicalcium phosphate	8.0 ,,
Monopotassium phosphate	13.8 ,,	Tricalcium phosphate	9.6 ,,
Dipotassium phosphate	10.0 ,,	Calcium citrate	25.5 ,,
Citrate of potassium	5.9 ,,	Calcium oxide	5.5 ,,
Dimagnesium phosphate	4.0 ,,	Sodium carbonate	10.0 ,,

A trace of saccharin may be used to sweeten the milk, and the salt solution is best used at about blood temperature, and the casein and fat precipitate is to be mixed up with it, as in making cocoa, to the desired thickness. We obtain by this easy method a very fairly palatable and entirely sugarless milk. The precipitated casein and fat can also be dried without undergoing alteration, and then used for the preparation of the milk.

The indications in the occurrence of which it may be desirable to allow sugar in diabetes are the appearance in large quantities in the milk of the morbid products of proteid metabolism. Among such products are acetone, acet-

[3] 5jss to 5iij of acid. acet. fort. of the *B. P.* to Oj of water.

[4] This mixture of salts which is based upon Söldner's analyses, is, no doubt, not the best that could be obtained, but it will do tolerably well. Some amount of insoluble salts sinks to the bottom of the vessel. The salt solution may simply be poured off from this.

acetic acid, and oxybutyric acid. With regard to the conditions of excretion of each one of these bodies, a certain number of facts have been collected—facts that raise a very strong presumption that these bodies have their source in the proteid metabolism of the body. I was anxious in the case of acetone, which is, perhaps, the only one of these bodies which can as yet be accurately quantitatively estimated, to convert the presumption of origin into more of a certainty, and so I undertook while in Australia a series of estimations of the daily excretion of nitrogen, acetone, and sugar in a diabetic case which I had under my care. It was found that the acetone does not vary either directly with, or inversely as, the sugar excretion. I think also that the results afford good grounds for believing that it varies directly with the nitrogen excretion.

We may, therefore, take the acetone excretion as an indication, though it may not be a perfectly accurate measure of the irregular proteid metabolism, which we have good grounds for bringing into connection with diabetic coma. When, therefore, the acetone and the oxybutyric acid increase in quantity in the urine, it is high time to do something to restrain it by introducing an alteration in the diet. I have not yet sufficient observations to be able to state whether an increase of fat in the diet has a salutary influence in such cases. I have an impression, however, from the cases that I have watched that it has such an influence, and I hope soon to be in a position to make a positive statement on the point. In the meantime, I think we are at least bound to decrease the amount of nitrogenous food in such a case, and, having decreased it, we are equally constrained to find a substitute. We can find such a substitute only in increasing the amount of carbohydrates, unless we find it possible still further to increase the fat in the diet.

Excretion of Acetone, Sugar, and Nitrogen in Urine of Mrs. S.

Date.	Quantity of Urine in 24 hours.	Acetone in 24 hours.	Nitrogen in 24 hours.	Sugar in 24 hours.	NH_3
	cc.	grs.	grs.	grs.	grs.
Aug. 31st ...	1,134	1.08	16.8	10.2	1.29
Sept. 1st ...	1,701	1.35	24.2	10.2	1.3
,, 2nd ...	2,268	1.37	23.4	4.5	
,, 3rd ...	1,701	.89	22.8	10.2	
,, 4th ...	1,417	.79	15.8	21.3	
,, 5th ...	1,701	1.05		1.75	1.73
,, 6th ...	1,701	1.51	17.85	15.3	
,, 7th ...	1,701	1.81	18.36	8.5	
,, 8th ...	2,268	1.94	18.73	trace	
,, 9th ...	1,934	1.79	15.00	4.5	
,, 28th ...	1,701	1.34	17.13	22.1	
,, 29th ...	1,701	1.49	19.50	20.4	
,, 30th ...	2,268	1.73	19.68	22.68	
Oct. 1st ...	1,134	.75	14.14	15.87	
,, 2nd ...	1,701	1.12	15.70	23.8	
,, 3rd ...	1,701	1.11		17.0	1.08
,, 4th ...	1,701	1.14	13.8	17.0	1.01
,, 5th ...	1,134	.97	12.9	11.34	
,, 11th ...	1,134	2.08	20.16	13.6	
,, 12th ...	1,701	1.30	19.08	8.5	
,, 13th ...	1,701		24.48	11.9	
,, 14th ...	1,134	1.19	21.05	13.6	
,, 15th ...	1,417	1.18	17.46	12.75	
,, 16th ...	1,134	1.32	19.45	3.4	
,, 17th ...	1,417	.54	17.00	7.08	

The nitrogen was estimated by Kjeldahl's method. The acetone was weighed as iodoform after having been dried to a constant weight over sulphuric acid. The sugar was estimated polarimetrically by one of Schmidt and Hänsch's polarimeters. The whole day's portion of urine was collected, filled up to an even number of pints and half pints, and a sample of two pints sent daily for analysis.

I cannot now go into the question of the increase of the assimilation quantum and of the assimilation ratio of carbohydrates that is brought about by muscular exercise, or into the effect of opium upon it.

The idea that the administration of alkalies in diabetes is a good routine practice is undoubtedly incorrect. In point of fact, it generally disappoints. I happen, however, to have had the care of a case where treatment with alkalies was very successful, and which appears to me interesting as showing the indications for such a treatment. The patient, who had been rapidly emaciating, was treated only by a certain restriction of diet and by the administration of alkalies, with the result that her body weight rose from 8 st. 7 lbs. to 9 st. 1 lb. in the course of the next seven weeks.

When the patient came under my charge, I proceeded as usual to estimate the amount of preformed ammonia in the urine. The urine was only slightly acid to litmus paper. That in itself was, of course, no sort of an index to its real acidity, the real acidity of the urine being the sum of this which I may call the "visible acidity"—that is, the acidity directly determinable by an indicator like litmus—together with "the latent acidity." The latent acidity is the surplus of acid over fixed bases in the urine—less, of course, that minute fraction which is immediately recognisable as the visible acidity. The surplus of acid over the amount of the fixed bases that the organism can spare for neutralisation purposes is, as the beautiful investigations of Hallervorden have shown, always neutralised in the human or carnivorous organism by ammonia before it is excreted. Thus, the amount of preformed ammonia comes to be the index of the latent acidity of the urine.

The preformed ammonia in this patient's urine in the twenty-four hours was more than six times as great as the normal average daily quantity, which ranges somewhere about 0.75 gramme. I subjoin the daily estimations of ammonia and sugar:—

	Urine 24 hours.	React.	NH_3	Sugar.	Treatment.
1890	cc.		grs.	grs.	
Aug. 6th	2,835	acid	4.58	22.68	Restriction of carbohydrates in food from Aug. 7th, 1.6 gramme of citrate of potash t.i.d.
,, 7th	3,414	,,	4.64	6.8	
,, 8th	3,414	,,	3.63	13.6	
,, 9th	2,835	,,	2.76	11.3	
,, 10th	2,268	,,	3.08	0.0	
,, 11th	2,268	,,	3.08	0.0	
,, 12th	2,268	,,	2.79	trace	
,, 13th	2,268	,,	2.4	,,	
,, 14th	2,268	,,	2.12	,,	
,, 15th	2,835	,,		,,	
,, 16th	2,268	,,	1.93	2.25	
,, 17th	2,268*	,,	2.22	4.5	Same dieting, 3 grammes of citrate of potash t.i.d. from Aug. 17th, 1890.
,, 18th	1,701†	,,	1.59	17.0	
,, 19th	1,701	,,	.97	29.75	
,, 20th	2,268	alkaline		22.68	

* For 25 hours. † For 23 hours.

The sugar and ammonia are tabulated as grammes excreted per 24 hours. The urine was filled up daily to a fixed number of pints or half-pints, and the estimations made in a sample of the whole quantity passed in the 24 hours. This is the same case as that in which the estimations of acetone reported above were made.

Recent researches on diabetes show that it requires some patient chemical study of a case to be able to treat it to best advantage.

The discovery of the phenomena of phloridzin or, more correctly speaking, of phloretin diabetes, is due to Professor von Mering, of Strassburg. He was, I believe, investigating the effects of certain glucosides on the storage of glycogen in the liver, when, in the course of his experiments with the glucoside phloridzin, which is obtained from the bark of many of our common fruit trees, he came upon the remarkable fact that the phloridzin had made his animals glycosuric. The glycosuria is not due to a mere splitting off of the sugar contained in the phloridzin, because it can be obtained equally well when phloretin (that is, the residue of the phloridzin after the sugar has been split off) is administered. The glycosuria from phloridzin can be produced in dogs and cats and rabbits, and also in man.[5] With phloretin the diabetes occurs in dogs and cats, but I have failed to produce it in rabbits. In regard to the quantity of sugar excreted, I have obtained as much as 42 grammes (that is, more than one ounce and a third) in a dog's urine for a single day. The animals get apparently perfectly well when the administration of the drug comes to an end, and even while the sugar excretion is taking place the animals cannot be distinguished from normal ones.

Very interesting are the close resemblances between phloretin diabetes and human diabetes; for instance, the increase of the sugar excretion in the diabetic patient of the severe

[5] In connection with this last fact, it is interesting to note that in some of our popular handbooks of materia medica phloridzin is described as "a good bitter aromatic tonic," and is directed to be prescribed in doses of from 5 to 15 grains. With this last dose, twice daily, von Mering obtained as much as 6 lbs. of sugar in the course of a month from "a patient."

form when he is given more proteid food is exactly paralleled by what occurs in phloretin diabetes. In one experiment on a cat the sugar excretion was with the same dose of phloridzin, when no food was given, 2.2 grs. per kilo.; when proteid food was given, 6.34 grs. per kilo.

Above all interesting is the occurrence of "phloretin" diabetes when the drug has been administered after prolonged periods of inanition. The details of the researches I have made upon this subject under Professor Külz's guidance are, I hope, to be published by him very soon. They show, I think, beyond the possibility of a doubt that the sugar in the urine cannot be entirely derived from the glycogen that has been stored up in the body, and they therefore give countenance to von Mering's view that the sugar is derived from the body proteid.

Von Mering originally asserted that an animal becomes glycogen-free after only five days' inanition combined with phloridzin diabetes. He has in a later paper modified the statement, and added one or two additional days to his original five. Von Mering's statement that the animal becomes glycogen-free is not correct. Prolonged and repeated phloridzin diabetes combined with absolute inanition does not necessarily cause an animal to become glycogen-free; on the contrary, there is sometimes under such circumstances still a large quantity of glycogen in the body, Nevertheless, von Mering is probably right in the main in deriving the sugar in such cases of phloridzin diabetes from the body proteids, even although the particular proof he adduces can easily be invalidated. The proteid derivation of the sugar may be safely assumed from such considerations as the following: Given an animal after prolonged inanition, and given the quantity of sugar excreted in the urine during the phloretin diabetes that is now induced, and given also the amount of glycogen found in the body when the animal is killed, is it possible to assume that a quantity of glycogen equivalent to the sum of these amounts of carbohydrate can have been present in the starving animal as residual glycogen? The figures show that this assumption is impossible.

With regard to the place where the sugar that appears in phloridzin diabetes comes from, there is as yet no information; experiments, however, which I have made seem to show that the liver of an animal killed in active phloridzin diabetes, when thrown into boiling water immediately after death, may contain large quantities of preformed sugar, thus indicating that we have in the liver, at any rate, one of the sources of the sugar that appears in the urine in phloridzin diabetes.

Another point which constitutes a link between phloretin diabetes and human diabetes is the appearance in the urine in the phloretin diabetes induced during inanition of the same morbid products of proteid metabolism as are found in human diabetes. Von Mering has seen oxybutyric acid and acetone produced under these circumstances. Though I have looked for these, I have failed to find them, but I have seen in two cases the red-brown coloration in urine which is obtained by ferric chloride where acet-acetic acid is present.

There is one more subject which I desire just to glance at before concluding this sketch of the researches I have been able to undertake in connection with diabetes. This is the subject of the influence of an increased or diminished degree of venosity of the portal blood upon the glycogenic function of the liver. That the degree of venosity of the portal blood should have a great influence on the hepatic functions is *a priori* very probable, and this is borne out by Ebstein's experiments, in which he showed that the *post-mortem* conversion of glycogen into sugar was much retarded in an atmosphere of CO_2.

I think I have succeeded in finding a method by which the question can be studied. It is a method which it would take me too long to explain here in detail, and I am only desirous of mentioning it here because it is connected in a peculiar manner with the research scholarships of this Company, and with this Company's research scholar, the late Dr. Wooldridge, who when he died left behind him the beginnings of many things of which others will gather in the fruit. I refer to Dr. Wooldridge's method of coagulating the blood within the vessels of the living body. I have, in a communication which is to appear in the next number of the *Journal of Physiology*, adduced, I think, sufficient reason to believe that this coagulation takes place everywhere in the body where the carbonic acid is in excess, and only there. If it turns out that I am correct in this, we shall have at our disposal in Dr. Wooldridge's method of coagulation one more method for investigating the obscure problems of diabetes, and of seeing a little further into that darkness of our ignorance of Nature which my co-research scholar, Dr. Wooldridge, made it his life work to strive to penetrate.

LECTURES
ON THE
PATHOLOGY OF TUBERCULOUS DISEASES OF BONES AND JOINTS.

Delivered at the Royal College of Surgeons of England.

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Lecture II.

Evidence that the terms "Tuberculous" Bone and Joint Disease and "Strumous" Bone and Joint Diseases are Synonymous (continued)—From their Association with Phthisis, etc.—From the Production of Tuberculosis in Animals by the Morbid Tissues—From the Production of Similar Bone and Joint Diseases in Animals with Tuberculous Material.—Experiments with Phthisical Sputum.—Experiments with Tuberculous Pus.—Experiments with Tubercle Bacilli on Rabbits.

Another point which supports the view of the tuberculous nature of these diseases is their frequent association with phthisis, tuberculous meningitis, etc. It is a well-known fact that many patients suffering from strumous joint diseases are affected, or are very liable to become affected, with phthisis; while tuberculous meningitis and general tuberculosis are, unfortunately, by no means rare terminations of these diseases, especially after operation or injury.

It is difficult to ascertain the frequency of general tuberculosis, phthisis, etc., in cases of tuberculous joint disease; for patients who, when discharged, showed no symptoms of phthisis, may, and often do, develop it in later life. In my own statistics, many of the cases were not under observation for a sufficient length of time to be of value in determining this point; the average duration of the disease up to the termination of the treatment being about three years. Nevertheless we find that, during this period of time, of 386 patients, 42, or 10.8 per cent., had become affected with, or had died of, phthisis or tuberculous meningitis. Of a large number of statistics which have been published, I may mention the following. Billroth and Menzel found, on searching the *post-mortem* records at Vienna for a period of fifty years (1817-1867), that there had been 2,106 cases of carious disease of bones and joints, and of these more than half (1,143, or 52 per cent.) were complicated with tuberculosis of the internal organs. It must, however, be noted that these were chiefly adults, and also that the *post-mortem* examinations were made at a time when the views on tuberculosis were very imperfect. In Billroth's Zürich statistics, extending over a period of seven years (1860-67) it is stated that he operated on 71 cases, of which 26, or over 36 per cent., died of tuberculosis and phthisis. Neumeister has put together a large number of cases from the Würzburg clinic, and also from published papers; and gives a total of 438 cases, with 66, or 15 per cent., of deaths from tuberculosis and phthisis, and 10, or 2.2 per cent. from acute tuberculosis. Willemer states that, in the case of the knee-joint, 1 per cent. of the patients die of tuberculosis during the first year of the disease, 6 per cent. during the second, and 7 to 8 per cent. during the third.

I believe that, apart from the fact that the cases in the above statistics were observed for a long time, the septic condition of the wounds in many cases aided the generalisation of the disease, but this is a point to which I shall again refer.

Suffice it to say that, speaking roughly, something like 20 to 30 per cent. of the patients suffering from strumous disease of the larger joints ultimately die of internal tuberculosis. Further, there is only a comparatively small percentage of the cases—König says about 21 per cent.—in which the joint disease is the only tuberculous trouble.

Further proof that these diseases are of a tuberculous nature, and the same as tuberculous phthisis of the lungs, only modified by situation and other conditions, is furnished by the fact that inoculation of animals with the morbid products from the joints sets up tuberculosis in exactly the same manner as when material from the lungs is employed. I have on many occasions inoculated portions of synovial membrane and pus from strumous joints subcutaneously, or into the anterior chamber of the eye, in rabbits and guinea-pigs, and have invariably produced typical tuberculosis by this means. The same has been the experience of a number of other workers, though in a few cases negative results have been obtained. Much of the success depends on the care taken in introducing the material, more especially care that it shall keep its place and not slip out again through the opening made, and also on the employment of a sufficient amount of the material.

The last proof of the tuberculous nature of these diseases to which I need refer is the fact that similar affections may be induced in animals by the introduction of tuberculous material into bones and joints, and also by injury to joints in tuberculous animals. Tuberculous bone and joint affections have been produced by phthisical sputum, material from tuberculous joints, the pus of chronic abscesses, etc. I have obtained absolute proof of their tuberculous nature by setting up similar processes in animals by the injection of pure cultivations of tubercle bacilli derived from human tuberculosis. Such cultivations injected into the joints of rabbits and goats set up typical strumous disease of these joints; injected into the blood vessels supplying the bones they caused tuberculous deposits in the bones and disease of the neighbouring joints; and injected into the epiphyses or medulla of bones they caused tuberculous inflammation with, in some cases, expansion of the bone and new formation of bone from the periosteum, and, where the disease has extended to the joints, the typical disease of the articulation.

As these experiments [1] have not yet been published, as they were at the time they were performed the first which, so far as I am aware, had been made with pure cultivations of tubercle bacilli, and as they are of great importance with regard to the etiology of the disease, I propose to devote the remainder of this lecture to their consideration. In describing these experiments I shall, however, only mention those in connection with which I have photographs to show.

Attempts were made some years ago by Schüller to demonstrate the tuberculous nature of these affections by injecting tuberculous material into the air passages and at the same time, or subsequently, injuring the joints, and in his opinion some positive results were obtained in this way. For various reasons I did not follow out this line of research, and, in fact, have only performed one experiment of this kind. In it a guinea-pig was inoculated subcutaneously with tuberculous sputum, and on the same day, under chloroform, both knee-joints were contused, but without any positive result.

In the experiments which I have made as to the effects of the local injection of tuberculous material, I performed a few with phthisical sputum, and also with the pus resulting from the injection of this sputum, but the great majority were done with pure cultivations of tubercle bacilli.

I.—Experiments with Phthisical Sputum.

The sputum was obtained from a case of advanced phthisis, but did not contain many bacilli, about two or three in each field. The sputum was diluted with boiled distilled water. The syringe employed was the ball syringe introduced by Dr. Koch, and now so well-known in connection with his recent work. When the animals were killed the limbs were frozen and sawn up, one half being preserved and the other prepared for microscopical examination. The experiments with phthisical sputum were performed on rabbits and guinea-pigs. In two experiments on rabbits a small quantity of the sputum was injected into the right knee-joints. Both experiments yielded positive results, and I may describe Experiment II in detail.

Experiment II. (November 8th, 1887).—*Injection of Phthisical Sputum into the Right Knee-joint of a Rabbit.*—The knee became gradually swollen, and on November 21st there was a large fluctuating swelling in the knee-joint, chiefly at the posterior part. On November 30th this swelling had much increased; the animal was very lame, and, as it was suffering from the epidemic diarrhœa of rabbits, it was killed; it lived 22 days.

On examination of the internal organs, no tuberculous lesions were visible to the naked eye, nor were the inguinal glands swollen; the knee-joint was distended with cheesy matter, and at the upper and anterior part the pus had evidently burst through the capsule and passed upwards underneath the rectus muscle. At the posterior part of the joint there was great swelling, due to thickening of the synovial membrane, with cheesy patches scattered here and there throughout it, as well as to distension of the capsule by the pus in the joint. In front the capsule was not markedly thickened, but between the tibia and the femur there was a fold of synovial membrane, which was greatly thickened and of a gelatinous appearance, and seemed to be closely adherent to the bone.



Fig. 1.

This photograph (Fig. 1) shows the appearances on making a complete section of the joint; we see that the capsule has been greatly distended, especially at the posterior part (to the left) with cheesy material, which has fallen out during the preparation of the section. The wall of this cavity is composed of caseating tuberculous tissue. The tuberculous growth has spread to the posterior part of the femur, destroyed the cartilage, and penetrated into the bone; the posterior part of the epiphysis has, in fact, been destroyed. The cartilage over the lower part of the bone is intact, but on the anterior surface it is destroyed, and here also the tuberculous material is extending into the superficial cancelli. The remaining trabeculæ of the epiphysis of the femur are somewhat

[1] The expenses of these experiments were defrayed by the British Medical Association.

sclerosed. The epiphysis of the tibia is similarly affected. The articular cartilage over the centre of the bone has been destroyed, and the growth has penetrated into and broken up the middle part of the epiphysis. The centre of the epiphysial cartilage is also undergoing destruction. There was a considerable number of thin, feebly staining, and fragmentary bacilli in the thickened synovial membrane.

In two rabbits, holes were drilled in the upper part of the tibia and sputum introduced into the interior of the bone. In the first experiment the result was very slight; the second I may give in detail.

Experiment IV. (November 8th, 1887).—Two holes were bored, one at the upper and inner part and one on the outer side of the right tibia of a young rabbit, and sputum injected. A fluctuating swelling formed on the outer side of the upper end of the tibia in the course of about ten days, and steadily increased in size till the animal was killed on December 9th, 31 days after the inoculation.

There was no evident tuberculosis of the internal organs. There was an abscess around the upper part of the tibia, especially on the outer side. There was no pus in the knee-joint, but the synovial membrane at the posterior part was thickened; the lower end of the femur appeared healthy, but the upper end of the tibia showed the following changes. The bradawl with which the hole in the bone was made had entered the upper part of the shaft of the tibia, and had not penetrated into the epiphysis, but in the epiphysis there was a small collection of soft gelatinous material, which was in parts undergoing caseation. Beneath the epiphysial cartilage there was a line of congested bone, and the whole of the upper end of the bone was yellow, dense, and much expanded. The hole in the bone was full of cheesy material, which was continuous with the cheesy material in the external abscess.

The state of matters is best seen in photographs of complete sections of the bone. Here we see that the upper end of the bone is much enlarged, and that on one side the shell is completely absent, and its place is taken by young fibrous tissue and caseous material; this is no doubt where the hole was made by the bradawl. This material extends into the medulla of the bone, which has also completely disappeared at the upper part. On the other side of the bone there has been new formation of osseous trabeculæ, which are arranged in a fine network not unlike the bone seen in strumous dactylitis. There is also in places a considerable quantity of the same sort of bone formed from the periosteum. The meshes of the reticulum are filled with swollen fibrous tissue, and there is a layer of osteoblasts lining the trabeculæ. In places the new growth has gone on to formation of dense bone, in other parts this newly-formed bone is being invaded by, and disappearing before, the tuberculous growth. The soft mass in the interior of the bone consists in the centre of caseous material, surrounding which is tissue of new formation, in which there are here and there fresh points of caseation, just as in the wall of a chronic abscess. In this new tissue, which is cellular, we find epithelioid cells, sometimes occurring in small groups, but only very occasionally arranged in the form of definite tubercles, as in man, and there are no large giant cells, although some of the cells have several nuclei.

On examining the epiphysis we see that at one side the epiphysial cartilage has been destroyed, and the tuberculous material has spread into the epiphysis and involved more than half of it. At the point where the cartilage has been broken through, the tuberculous tissue is seen to penetrate between the cartilage and the ossifying layer, as I pointed out last year occurred in man. The joint also shows commencing changes of a tuberculous nature, especially at the posterior part, where the tuberculous disease has apparently just reached it. At that part there is thickening of a portion of the synovial membrane, which is commencing to caseate on its surface. Over the posterior part of the head of the tibia, the cartilage is being destroyed by spread of the soft tissue over it.

Here we have all the appearances of tuberculous osteomyelitis as it occurs in man set up in this case by the injection of phthisical sputum into the bone, and in the former experiments we have produced an affection corresponding to empyema tuberculosum of joints in man.

Similar experiments were performed on four guinea-pigs, but the results were with one exception imperfect, and not so typical as in rabbits.

I may give the results of these eight experiments with tuberculous sputum in the following tabular form:—

I.—Experiments with Tuberculous Sputum.

Rabbits.

No.	Seat of Injection.	Lived.	Result.
1	knee	35 days (killed)	Pus in knee-joint. Thickening of synovial membrane, commencing erosion of cartilage. Caseous mass in femur. Caries of the head of the tibia.
2	knee	22 days (killed)	Pus in knee-joint. Thickening of synovial membrane. Destruction of posterior part of femur and of part of the head of the tibia.
3	tibia	10 months (died)	Abscess over bone. Cheesy deposit in medulla. No expansion of bone.
4	tibia	31 days (killed)	Typical tuberculous osteomyelitis spreading into the epiphysis, and also commencing disease of knee-joint.
			Guinea-pigs.
5	knee	13 days (killed)	Commencing swelling of synovial membrane.
6	knee	115 days (killed)	Pus in knee-joint. Sclerosis of ends of bone. Spread of tuberculous tissue into the superficial cancelli and the upper part of the shaft of the tibia.
7	tibia	181 days (died)	Nothing found in bone on microscopical examination.
8	tibia	56 days (died)	Small whitish spots seen in bone. Nothing found on microscopical examination.

II.—Experiments with Tuberculous Pus.

Three experiments were performed on rabbits with an emulsion of the pus in distilled water from the knee-joint of the rabbit used in Experiment II. In the first an injection was made into the knee-joint of a rabbit, and a small collection of cheesy material was found in the joint seven months later. In the second, the emulsion was injected into the femoral artery of a rabbit. When the animal died thirty-five days later, a cheesy deposit was found in the upper part of the femur which communicated with the exterior by a small round aperture in the bone filled with cheesy material. The following is the third experiment:—

Experiment XI. (December 13th, 1887).—The same emulsion of pus was injected into the femoral artery of a rabbit at the groin; about one-third of a cubic centimetre was introduced. This animal died on January 2nd, 1888; lived 20 days. A large abscess was found at the seat of injection, another abscess extended down the outer side of the thigh, and a very large one occupied the outer side of the leg. On sawing up the bones of the leg nothing abnormal was seen with the naked eye in the femur, but a cheesy mass was found in the upper part of the tibia just below the epiphysial line, probably in connection with the point of entrance of the nutrient artery into the bone. The medulla of the tibia was dark red, and there were some small white spots in it. There was nothing abnormal in the bones of the foot, but there was a little pus in the soft tissues. There was no evident tuberculosis of the internal organs.

Inspection of a longitudinal section of the upper end of the tibia shows that immediately below the epiphysial line there is an irregularly-shaped, somewhat triangular caseous mass, surrounded by a layer of tissue undergoing caseation. Outside the actual caseating layer there were groups of largish cells. At one part the cellular growth has destroyed the epiphysial cartilage and is spreading into the epiphysis. There were numerous tubercle bacilli in and around the caseous mass. Throughout the medulla, both of the tibia and femur, lighter stained collections of cells were seen, some of which were undergoing caseation.

In this case we have an example of chronic abscesses in the soft parts and tuberculous osteomyelitis set up by the injection into the blood stream of pus from a joint infected by phthisical sputum. In the pus used I failed to discover tubercle bacilli in the thickened synovial membrane: they were fragmentary and feebly stained, corresponding in this respect to what is seen in man. These last experiments are also of im-

portance as showing that the disease set up by the phthisical sputum was in reality tuberculous disease with its characteristic infective properties.

III.—Experiments with Tubercle Bacilli.

I did not pursue these experiments with tuberculous material further, because the real test of the matter was whether these effects could be produced with the pure tuberculous virus—the tubercle bacillus—quite isolated from the tuberculous tissue. As I did not happen to have cultivations of tubercle bacilli, and as a year at least must have elapsed before I could get a sufficient number of removes from the first culture to do away with the objection that something besides the tubercle bacilli had been carried over, I asked Dr. Koch to send me some tubes, which he very kindly did. The following is the previous history of these tubes. In the autumn of 1886 a guinea-pig was inoculated with sputum from a patient suffering from phthisis. The guinea-pig, having become tuberculous, was killed on October 22nd, 1886, and blood serum was inoculated from the tubercles with the usual precautions. When growth had occurred a small portion was transferred to a fresh tube of serum, and so on from tube to tube of serum or glycerine agar till October 14th, 1887, when the tenth series of tubes was inoculated. It was the growth in this tenth series of tubes that was employed in the following experiments. In preparing the material for injection a few scales of the bacillary growth were removed from the tube and rubbed up with sterilised distilled water to form a fine emulsion, and from 2 to 4 minims of this emulsion were injected. All the usual precautions were of course taken, and the experiments were performed on rabbits, guinea-pigs and goats. I shall, as before, only detail those experiments of which I can show photographs.

A.—Experiments on Rabbits.

Experiment XII. (January 11th, 1888).—The emulsion of tubercle bacilli was injected into the right knee-joint of a rabbit. A week later there was considerable swelling of the knee-joint and redness of the skin over it. The animal was found dead on February 13th, 1888; lived 33 days.

No disease was visible to the naked eye in the internal organs, but the knee-joint was full of pus, which was more fluid than in the former experiments. The synovial membrane was not much thickened, and there was nothing apparent to the naked eye in the bones. The microscopical appearances of the part were similar to those previously described in connection with Experiment II, namely, infiltration of the synovial membrane with small and large cells, and spread of the soft tissue over the articular cartilages and their destruction from the surface. Patches of tuberculous infiltration undergoing caseation were seen in various parts of the epiphysis of the femur, as shown in this photograph, and similar appearances were seen in the head of the tibia, though not so advanced.

Experiment XIII. (January 11th, 1888).—A small quantity of the same emulsion was injected into the right knee-joint of a rabbit. A week later there was marked swelling and heat of the knee-joint. The animal was killed on May 10th, 1888, when the swelling of the knee was still considerable, though not so great as it had been; lived 120 days.

There was marked tuberculosis of the lungs, but in none of the other organs were tubercles visible to the naked eye. The right knee-joint was distended with cheesy material which had burst through the capsule and burrowed down the leg. In the joint there was a large quantity of pus, more especially above the patella and also behind the joint.

On making sections of the bones (see Fig. 2) several small cheesy deposits were seen in the femur just above the epiphysial line, and in front there was a small hole in the shell of the bone containing cheesy matter and communicating with the cavity of the joint on the one hand, and with these caseous deposits in the interior of the bone on the other. At one part of the epiphysis of the femur, just beneath the articular cartilage, the bone was yellow and dense. In the head of the tibia there were two small yellow tubercles, and there was pus around the upper part of the shaft of the bone. The cartilage over the head of the tibia had disappeared, and its place was taken by soft tissue.

On microscopical examination of sections of the lower end of the femur the articular cartilage was seen to be almost entirely destroyed, the surface being covered with fibrous tuberculous tissue caseating at the edge. Where cartilage

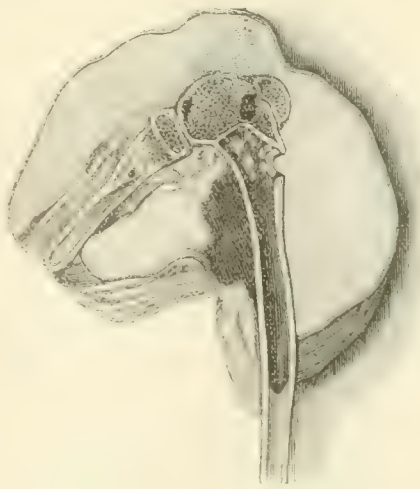


Fig. 2.

was still present it was seen to be undergoing fibrillation and destruction. Over the centre of the end of the bone the tuberculous tissue was penetrating into it, and there were one or two large tuberculous nodules in the cancelli; the trabeculæ were also thickened. Here and there were collections of epithelioid and small giant cells, but the chief form was tuberculous infiltration. In the caseating patches numerous imperfectly stained and fragmentary tubercle bacilli could be made out.

Experiment XIV. (January 18th, 1888).—An emulsion of tubercle bacilli was injected into the left knee-joint of a rabbit. The knee swelled up as usual, and on March 4th, 1888, it was still considerably swollen; but on May 10th, 1888,



Fig. 3.

this swelling was less and more to one side of the joint. The animal was killed on June 13th, 1888; lived 147 days. The lungs were found to be much infiltrated with tubercles, but the other organs appeared healthy to the naked eye. On

sawing up the limb two large abscesses were found in the thigh, and there was some pus in the joint. There were dense yellow masses in the epiphysis of the tibia, and also in that of the femur, and the articular cartilages were apparently destroyed. The synovial membrane was thickened and villous on the surface, as seen in this photograph of a drawing made at the time (Fig. 3), where the patella has been turned outwards, the pus washed away, and the surface of the synovial membrane exposed .

I may pass on next to experiments in which the parts were examined at an earlier stage after the injection.

Experiment XX.—In this experiment three rabbits (A, B, and C) were injected with an emulsion of tubercle bacilli in the following manner:—On the right side injections were made (1) into the lower epiphysis of the femur through a hole bored with a bradawl; (2) under the periosteum of the tibia. On the left side injections were made (3) into the knee-joint; (4) into the medulla of the tibia. A was killed ten days later, and on the right side there was a small cheesy deposit in the epiphysis of the femur, and an abscess behind the tibia, the periosteum being swollen and detached from the bone. On the left side there was a good deal of cheesy pus in the knee-joint; the tibia was not sawn up at the time, and has been lost. B. was killed sixteen days after the injection, and the following were the naked eye appearances: On the right side there was a carious patch in the epiphysis of the femur, and a small abscess outside the bone; there was, apparently, nothing abnormal about the periosteum of the tibia, but there was a small abscess in the soft tissues. On the left side there was a good deal of pus in the knee-joint, especially at the posterior part, and there was a patch of caseation, about the size of a small pea, in the medulla of the tibia, and a smaller point just below it.

In this photograph we see the appearance of a complete section of the right limb. The sections have been made to one side of the joint, so that the caseous deposit in the centre of the epiphysis is not shown, and the bradawl has apparently penetrated at this part quite up to, if not through, the cartilage. Hence the deposit here is at the edge, and communicates freely with the joint; in fact, the soft tissue in the defect in the bone is connected by a band of new material with the anterior part of the fibro-cartilage. There is much sclerosis of the bone around the deposit, and patches of caseation in the new tissue. The posterior part of the capsule of the joint is considerably swollen, and undergoing caseation at the surface, and other parts of the capsule also show commencing disease. As regards the tibia, a small abscess is seen in the muscles in front, but the shaft of the bone has not been hit in the sections. This abscess has, no doubt, formed along the track of the needle.

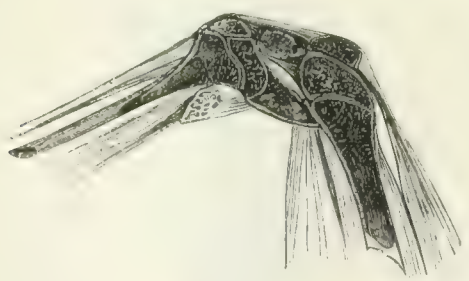


Fig. 4.

C died twenty-three days after the injection, and the following were the naked-eye appearances. On the right side (Fig. 4) there was a caseating patch, the size of a large pea, in the epiphysis of the femur, thickening of the synovial membrane of the knee-joint, and some pus in the joint. In the drawing the artist has distorted the appearances by pulling the bones apart. There was no change visible to the naked eye in the periosteum of the tibia, but, as will be immediately mentioned, changes were found on making sections. On the left side there was a good deal of pus in the knee-joint; the medulla of the tibia contained an elongated caseous patch.

The following is a table of the experiments on rabbits with tubercle bacilli, and their results:—

No.	Seat of Injection.	Lived.	Local Result.
		Days.	
12	knee	33 (died)	Pus in joint, commencing destruction of the cartilage of the femur and tuberculous infiltration in various parts of the epiphysis.
13	knee	120 (killed)	Pus in joint; destruction of the lower end of the shaft of the femur in front; destruction of the articular cartilage of the femur; caseating tubercles in the epiphysis, and thickening of the trabecula of the bone.
14	knee	147 (killed)	Pus in the joint; synovial membrane thickened and villous; extra-articular abscesses in the thigh; destruction of the articular cartilages; dense yellow masses in the epiphyses of the tibia and femur.
15	knee	197 (died)	Pus in the joint; capsule thickened and villous; pus around the joint and extending down the leg; articular cartilages destroyed; destruction of the anterior surface of the femur; a cavity containing caseous material in the epiphysis of the femur and several points of yellow sclerosed bone.
16	knee	137 (died)	No disease of the joint. The material used was extremely dilute, and possibly no bacilli were injected.
17	femoral artery	(not killed)	Apparently no effect. Very dilute material was used.
18	right knee	9 (died)	Swelling of the synovial membrane and a few specks of cheesy material in the posterior part of the joint.
,,	left knee	,,	The same.
19	right knee	10 (died)	The same.
,,	left knee	,,	Thickening of the synovial membrane, villous projections on the surface; patches of caseation in its substance and also at the surface; these characters most marked posteriorly. Articular cartilage of femur destroyed for a considerable distance.
20 A ,, *a*	epiphysis of right femur	10 (killed)	Small cheesy deposit in the epiphysis.
,, *b*	under periosteum of right tibia	,,	Periosteum swollen and detached from the bone.
,, *c*	left knee-joint	,,	Cheesy pus in the joint and swelling of synovial membrane.
,, *d*	medulla of left tibia	,,	?
20 B ,, *a*	epiphysis of right femur	16 (killed)	Cheesy deposit in epiphysis extending into the joint; sclerosis of the bone around. Posterior part of the capsule thickened and caseating.
,, *b*	under periosteum of right tibia	,,	Small abscess in the muscles along the track of the needle. Not examined microscopically.
,, *c*	left knee-joint	,,	Pus in the joint; thickening and caseation of the synovial membrane; destruction of the articular cartilages in places, and spread of the tuberculous tissue into the superficial cancelli.
,, *d*	medulla of left tibia	,,	Two small caseous patches in the medulla and a caseous mass in the muscles along the track of the needle.
20 C ,, *a*	epiphysis of right femur	23 (died)	Caseating patch in the epiphysis; sclerosis of the bone around; abscess in the thigh. Synovial membrane of knee-joint thickened and caseating in places. Articular cartilage of the femur undergoing destruction in front and behind, and commencing changes in the cartilage of the tibia.
,, *b*	under periosteum of right femur	,,	Thickening of periosteum with caseous patches in it, and sclerosis of the bone beneath.
,, *c*	left knee-joint	,,	Pus in the joint. Swelling of the synovial membrane.
,, *d*	medulla of left tibia	,,	An elongated caseous patch in the medulla of the tibia.

In all, there were 12 cases in which tubercle bacilli were injected into the knee-joints of rabbits, of which 11 yielded

a typical result, the exact changes which occurred depending on the length of time which the animals lived, and the number of bacilli injected. The earliest change which is noted is swelling of the synovial membrane, with the formation of a villous condition of the surface, and the appearance of small caseating patches here and there on the surface, especially at the posterior part, probably where the bacilli had collected in greatest numbers. Soon the joint becomes full, and often distended with caseous material, the synovial membrane being in a condition of tuberculous infiltration, and caseating at the surface. If the animal lives longer the cartilages are attacked and destroyed from the surface, as in man, and the tuberculous material extends into the bone, giving rise to soft caseous deposits, or leading to sclerosis of portions of the bone. In only 1 case did the injections fail, and in that instance an extremely small number of bacilli, and possibly none at all, was injected.

In 3 cases injections were made into the lower epiphysis of the femur, in each instance with positive results. The result of the injection was the development of a caseous tuberculous deposit in the epiphysis, with sclerosis of the bone around. In all the cases the joint had also become affected, and the changes in the synovial membrane and articular cartilages just alluded to were commencing. In 3 cases injections were made into the medulla of the tibia; in 2 of these caseous deposits were formed, 1 has not been examined. In 3 cases injections were made under the periosteum. In 1 of these there was considerable swelling of the periosteum, when the animal died ten days later. In the second the sections did not hit that part of the tibia, but the caseating needle track was seen. In the third there was great thickening of the periosteum with caseous patches in it, and sclerosis of the bone beneath. Similar changes were also seen in one of the cases where the bacilli were injected into the epiphysis of the femur. In 1 case a very dilute material was injected into the femoral artery apparently without effect.

It is thus evident that the result of the injection of pure cultivations of tubercle bacilli into the bones and joints of rabbits is the same as was obtained when phthisical sputum was employed, and corresponds in all respects with the changes in strumous diseases of bones and joints in man. We see similar thickening of the synovial membrane, similar caseation of the new tissue, similar accumulation of cheesy material in the joint, similar destruction of the cartilage, and, when the tuberculous growth has penetrated into the bone, similar formation of soft caseous deposits or thickening of the osseous trabeculæ and commencing formation of sequestra.

(To be continued.)

ON THE TREATMENT OF HYDATID DISEASE BY INCISION AND EVACUATION OF THE CYST WITHOUT DRAINAGE.

By C. J. BOND, F.R.C.S.,
Surgeon to the Leicester Infirmary.

THE surgical treatment of hydatid disease has shared in the general advances in surgery, and the incision and drainage of the cyst (supposing aspiration to be undesirable or to have failed) may now be looked upon as the usual and routine treatment.

This will probably remain so in all cases in which suppuration has taken place within the cyst, and so these cases must be excluded from the method of treatment which I am about to describe.

Before, however, dismissing the subject of suppuration in hydatid cysts, it may be well to state that, although the suppuration (apart from the shrinking and calcareous changes which the contents of cysts undergo from the death of the parasite) is probably always due to septic agencies, yet it does not appear that these need always be introduced from outside the body. Thus in a recent case in which a very large cyst between the bladder and rectum was aspirated with a fine sterilised needle, and clear fluid withdrawn, no symptoms occurred for a fortnight, and the cyst appeared to be shrinking: at the end of that time, however, the cyst began to refill, and febrile symptoms occurred, and when opened later, the contents were found to be purulent and offensive. Here, I think, there is little doubt that the needle was not to blame, but that the suppuration in the dead cyst was due to its proximity to the rectum and the osmosis of intestinal gas, the cyst being only separated from the bowel by the intestinal coats, and the pressure so great as to cause partial obstruction before aspiration.

I wish, however, in the following remarks to bring into prominence a method of treating cysts which are still living and growing, and which contain clear fluid with or without daughter cysts; and this is the method of incision and evacuation of the cyst contents without any subsequent drainage, or with only temporary drainage for a few hours after the operation in certain cases.

The first case, to which I have already referred, is that of a healthy young man, a butcher—seen with Mr. Serres, of Osgathorpe, and Dr. Hatchett—in whom there was a large cyst, situated between the bladder and rectum, beneath the peritoneum; this had grown upwards, filling the pelvis, blocking the rectum and urethra, and reaching up to the level of the umbilicus, and resembled a full-term pregnancy; the bladder was dragged up with it, and its fundus, though empty and compressed, reached to within 2 inches of the umbilicus. This caused a difficulty during the operation, for, on making a median incision, the empty bladder uncovered by peritoneum was the first thing met with. The incision was prolonged upwards and the peritoneum opened above the bladder, and thus the cyst was reached. On opening the latter—which, it will be remembered, was aspirated three weeks previously—I found the elastic cyst proper had separated from the outer cyst wall, and lay curled up loose in the cavity, together with much pus and a quantity of smaller daughter cysts; the elastic membrane and contents were removed entirely and the cavity sponged out, and to this fact I attribute the rapid closing of such a very large cavity; a large drainage tube was placed within the cavity. The more important feature in the case, however, follows. On exploring the general peritoneal cavity, I found in a reflection of the peritoneum in the right iliac fossa a small cyst, the size of a Tangerine orange. As I could not drain it, I incised the cyst and removed the elastic membrane and clear fluid, this being a growing cyst, I also scraped away some of the inflammatory adventitious cyst wall, immediately outside the elastic cyst proper; but this was, I think, unnecessary, and might lead to hæmorrhage. The remains of the cyst were then returned into the peritoneal cavity; no bad effects followed, and at a subsequent operation on the same patient—to which I shall refer—no trace of the cyst could be found. After dealing with this cyst, I discovered another much larger one in the epigastric region; but, considering the already large wound and serious character of the operation, it was decided to leave it for subsequent treatment. The patient recovered well, and at the end of three weeks the large cavity was a mere sinus, which soon healed.

He reappeared five months later, looking well, having gained a stone in weight, and without any symptoms of pressure on the bladder or rectum. On examination, however, I found that the cyst in the epigastrium had grown, and was now the size of a fœtal head, and there was another cyst or cysts at the lower part and to the left of the abdominal cavity.

A week later I opened the abdomen by a median incision passing through the umbilicus. I then discovered three cysts, the larger one referred to above, which lay beneath the transverse colon and omentum, and two others the size of cricket balls, one in the left renal region apparently in connection with the left mesocolon, and one quite movable at the lower part of the cavity, situated entirely in the omentum. The upper cyst was first dealt with, the omentum being gently teased away and the surface of the cyst bared; it was then tapped with a fine trocar and cannula, and most of the clear fluid drawn off without aspiration. I then drew the less tense cyst towards the abdominal wound with artery forceps, and incised it freely. On doing this I found that the white elastic cyst proper had shrunk somewhat away from the walls or ectocyst, and lay, together with daughter cysts, in the cavity; it was easily withdrawn with ring forceps, and came out quite clean, although, from its brittleness, in several pieces. I then wiped the cavity out dry with a sponge, and allowed the cyst to fall back into the abdominal cavity. I then dealt with the

other cyst on the left side of the abdomen in the same way, but the third or omental cyst was removed entirely after tapping, by ligaturing off the portion of omentum in which it grew. I then found, on trying to draw out and fix the openings in the cysts directly to the skin, that a good deal of dragging on the abdominal contents occurred, so I simply closed the abdominal incision in the usual way, allowing two or three of the silk sutures to pass also through the cut edges of the cyst walls; between these two drainage tubes were inserted, one into the lower and one into the upper cyst; but, as there was very little discharge, these were removed in sixteen hours, and the abdominal incision allowed to close throughout. Union occurred at once, with the exception of a small spot at the umbilicus, which continued to discharge. The temperature remained normal throughout, and in a month's time he was out of doors. Unfortunately, at this date, owing to some strain or chill or other cause, an attack of abdominal pain and violent vomiting occurred, which was followed by some discharge of pus from the incision, and Dr. Serres removed several pieces of the laminated lining of the upper cyst. This ceased in a week's time, and the patient soon became again convalescent.

It will thus be seen that the healing of the wound and recovery were not uninterrupted, and I attribute the throwing off of some pieces of the cyst wall to some attempts made in the case of the upper cyst, or that first operated on, to detach some of the inflammatory outer cyst lining in addition to the elastic cyst proper, which alone should be removed; and further, from this result also it seems desirable that the emptied cyst, after suturing the incision in it, should be completely returned into the abdomen, as was done at the first operation, and not anchored to the site of the incision in the abdominal wall.

Judging from the experience of this case, it may, I think, be concluded that certain abdominal hydatid cysts, in which there is difficulty in bringing the cyst wall up to the surface of the body, can be well treated by incision and replacement of the cyst, provided that due care be taken to thoroughly evacuate the cavity of all its fluid and elastic solid contents, and to suture the inverted edges of the incision afterwards. The hæmorrhage and other accidents which have been described as following on detachment of the cyst wall must have been due to the teasing away, not the elastic membrane, but the outer wall or ectocyst itself. The addition of a few catgut sutures in the inverted edges of the opening is to prevent the subsequent entrance of a coil of intestine. Any serum secreted by the cyst wall would, I feel sure, be rapidly absorbed.

Further, I see no reason why we should not deal with cysts of the liver and other organs in the same way, provided, of course, that suppuration had not occurred, and that sufficient length of incision into the cyst ($1\frac{1}{2}$ to 2 inches or more) could be made to allow of complete exacuation. The elastic lining shrinks on first withdrawing the fluid, and can be removed by gentle traction with the aid of ordinary ring or pile forceps. The advantages of a method which completes the treatment at one operation, and without any subsequent open drainage wound with its attendant risks, are obvious. The operation is, in fact, a supplementing and finishing of the method of aspiration which only withdraws the fluid portion, by the withdrawal of the solid portion also of the cyst contents, and is, I believe, the safer method of the two. I have myself seen alarming symptoms appear in a patient in whom I had just aspirated a large hepatic hydatid cyst.

It is also highly important, even in suppurating cysts in which drainage is necessary, to remove the solid contents at the time of incision. With regard to the individual case mentioned, multiple cysts, either sub- or intraperitoneal, are not so very frequent; the recto-vesical space seems, however, to be a somewhat favourite locality, and from the experience of this and other cases of cysts in this position, and in such close proximity to the bowel, the risk of suppuration after simple aspiration appears to be a real one. In this case, also, all four methods of treatment were exemplified, namely: (1) aspiration; (2) incision and evacuation; (3) incision, evacuation, and drainage; (4) extirpation.

It is, perhaps, needless to add in conclusion that strict asepsis must be observed—not necessarily, however, the introduction of irritating lotions.

ON CERTAIN CONDITIONS THAT MODIFY THE VIRULENCE OF THE BACILLUS OF TUBERCLE.[1]

By ARTHUR RANSOME, M.D., F.R.S.
Physician to the Manchester Hospital for Consumption and Diseases of the Throat.

It is acknowledged by most pathologists that tuberculous sputum, dried up and broken into dust, is the most common vehicle by which the bacillus of tubercle is conveyed into the body. But its power for evil is obviously modified by a multitude of conditions, some of them inherent in the animal body exposed to infection, others due to external influences. Judging from the facts relating to the distribution of tuberculous disease, its incidence in certain localities, and especially its prevalence in badly drained, badly ventilated, and imperfectly lighted dwellings, it has been surmised that the three chief external conditions that mitigate the virulence of the bacillus are (1) a dry soil, (2) abundance of fresh air, and (3) light.

But hitherto few, if any, direct experiments have been made to determine the extent to which these several influences possess mitigating powers. It is true that Dr. Candler, in his work on the *Prevention of Consumption*, affirms that light is the chief agent in destroying the bacillary virus; and Professor Koch, in his address to the International Congress at Berlin last year, lends the weight of his great authority to the same opinion; but in neither case is any proof given of the truth of this view.

It was in order to test the influence of light, air, and dry soils upon the virulence of the bacillus of tubercle that the following series of experiments were devised. It was decided to expose tuberculous sputum:

(*a*) In a locality (Bowdon) where the soil was dry and sandy—about 100 feet in thickness—and where very few cases of phthisis were known to have originated. It was to be placed in full daylight or sunlight and exposed to abundant streams of fresh country air.

(*b*) A portion of the same sputum would be exposed under similar conditions in the same place, with the one exception that it would be put into a darkened chamber.

(*c*) A third portion would be taken to a small four-roomed tenement in Manchester, on a clay soil, without cellarage and badly ventilated, but it would be placed on the window-ledge with as much light as could there be obtained.

(*d*) A portion would be placed in the same cottage, but in a dark corner of a sleeping room in which it was known that three deaths from phthisis had occurred within the space of six or seven years.

(*e*) Finally, a portion would be exposed to used air coming from a ward in a consumption hospital in Bowdon, in darkness.

Two collections of sputum were obtained:

(A) From a woman dying of phthisis, collected on April 25th. This specimen contained comparatively few bacilli.

(B) Also from a woman in the third stage of phthisis. This sputum contained abundance of bacilli.

Sputum (A) was not considered to be very suitable for the purpose owing to the sparseness of bacilli, but it was decided to use it by way of control experiment. Owing to an accident the portions exposed under conditions (*c*) and (*d*) were lost. These collections of sputum were divided into portions and placed in watch glasses marked A 1, A 2, A 3; B 1 to B 10. Some of these watch glasses were exposed without further arrangement, but others, where there might be a possibility of infection, were enclosed in cages, so arranged that air could reach them through a thin layer of cotton-wool, one kind of cage being constructed of two squares of glass, supported at their edges by cork, and surrounded by cotton-wool, the other of small flasks, the bottoms of which had been cut off, and the lower edge resting in a small circular tray fitted with wool, the mouths of the flasks being also loosely stuffed with the wool.

These watch glasses were then exposed for five weeks under the conditions already noted, commencing on April 29th, 1890, with the exception of B 9 and 10, which were started on May 2nd. Most of the specimens were withdrawn on

[1] Read before the Royal Society.

June 3rd; but one, B 10, was divided on May 12th, and a portion, B 10 *b*, was introduced into a glass bulb and exposed for several minutes each day to a current of ozonised oxygen. All the specimens were then enclosed in a box and forwarded to the pathological laboratory, Owens College, where Dr. Dreschfeld, the Professor of Pathology, had kindly undertaken to carry out the necessary inoculations. Owing to various causes some of these operations were not commenced until June 27th, 1890, others until July 10th. The animals used were rabbits, kept under favourable hygienic conditions. The dried sputum was mixed with sterilised water to form a pasty mass, and this was inserted into the subcutaneous tissue of the back. All the instruments used were made thoroughly aseptic.

The following tables give (1) the conditions of exposure; (2) the date of death, by killing or otherwise; (3) Dr. Dreschfeld's report upon the results of the inoculation.

TABLE I.—*Influence of Dry Soil, Air, and Light.*

No. of Specimen.	Conditions of Exposure.	Date of Inoculation.	Date of Death.	Dr. Dreschfeld's Reports.
A 1	In outdoor studio, Bowdon; in light and free ventilation in flask arrangement	June 27	Killed Sept. 4	Rabbit in good condition; wound completely healed; cicatrix of wound scarcely visible. All inserted sputum completely disappeared. Only a few pigmented streaks left. No caseation; internal organs healthy.
A 2	Ditto in open watch glass	July 10	Killed Sept. 4	In good condition; wound healed; good cicatrix; no caseous mass. In liver a number of disseminated firm spots. Microscopically, these consisted of fibrous tissue. No tubercle bacilli found in them.
B 6	Ditto in cotton-wool cage	July 10	Killed Sept. 4	In good condition; cicatrix healed. No trace of sputum left. No caseation; where sputum had been inoculated only a few pigmented streaks.
B 7	Ditto in open cage until May 9th, then cotton-wool added.	July 10	Killed Sept. 4	Good condition; cicatrix perfect; some fibrous induration in subcutaneous tissue where sputum had been. No caseation; internal organs healthy.

TABLE II.—*Influence of Dry Soil, Air, and Darkness.*

No. of Specimen.	Conditions of Exposure.	Date of Inoculation.	Date of Death.	Dr. Dreschfeld's Reports.
A 3	In darkened photographic room, Bowdon, in watch glass	June 27	Killed Sept. 4	Rabbit in good condition; small caseous mass beneath healed wound. All internal organs healthy. Microscopic examination of caseous mass: granular detritus; no tubercle bacilli.
B 8	Ditto in cotton-wool cage	June 27	Died Aug. 26	Moderately emaciated; wound healed, but the edges separated on pulling the skin at the sides. In the subcutaneous tissue beneath the wound a few yellowish soft spots, about the size of pin heads, surrounded by a zone of hyperæmia; internally all organs healthy; no signs of tubercle; right heart full of blood; left heart empty. Microscopic examination of the yellow spots show them to consist of granular detritus and a few granule cells; no tubercle bacilli could be detected.
B 9	Under ward of Consumption Hospital in full ventilation; in darkness; in cotton-wool cage	July 10	Died Aug. 14	Emaciated; wound healed under a scab; a thin mass of yellow caseous material just beneath the skin. Heart and lungs healthy; kidney contained a number of small cysts. In the caseous mass a few tubercle bacilli were found.

TABLE III.—*Influence of Clay Soil, Bad Air, and Light.*

No. of Specimen.	Conditions of Exposure.	Date of Inoculation.	Date of Death.	Dr. Dreschfeld's Reports.
B 3	On window sill of small cottage bedroom in Ancoats flask arrangement	June 27	Died Aug. 14	Large rabbit, emaciated. Inoculation wound completely healed. Slight scab; no caseous material or any signs of sputum. Internal organs healthy; one white spot found on surface of liver. Microscopic examination of this showed it to consist of round cells, some with one nucleus, and others which were polynuclear. At the periphery of the nodule fibrous tissue. Sections of the nodule showed no tubercle bacilli.
B 4	Ditto in open watch glass	July 10	Died Aug. 9	Emaciated; wound at back not healed, and appeared slightly sloughing at the borders. Lungs presented several small caseous nodules. Pleuræ, heart, peritoneum, liver healthy. Tubercle bacilli found in the caseous lung nodules.

TABLE IV.—*Influence of Clay Soil, Bad Air, and Darkness.*

No. of Specimen.	Conditions of Exposure.	Date of Inoculation.	Date of Death.	Dr. Dreschfeld's Reports.
B 1	On dark shelf by fireplace in small cottage bedroom, in Ancoats flask arrangement	June 27	Killed Sept. 4	Rabbit in good condition; wound completely healed; no caseation, and only a small pigmented spot where the sputum had been deposited. All the internal organs healthy.
B 5	Ditto in a dark corner near the bed, in watch glass	July 10	Killed Sept. 4	Rabbit in good condition; cicatrix where the wound was, and beneath it a caseous mass about the size of a bean. Examined microscopically, this mass contained tubercle bacilli. Nothing abnormal in any of the organs.

TABLE V.—*Influence of Dry Soil, Bad Air, and Darkness.*

No. of Specimen.	Conditions of Exposure.	Date of Inoculation.	Date of Death.	Dr. Dreschfeld's Reports.
B 10	Cotton wool cage, in ventilating shaft, from ward of Consumption Hospital, for ten days, then placed on top of bookcase in sitting room	July 10	Died Aug. 14	Emaciated; wound healed under a scab; a yellow caseous mass about the size of a small pea beneath the scab. The liver presented a few yellowish nodules. All the other organs sound. In the caseous mass a few tubercle bacilli were found; none in the liver.
B 10 *b*	A portion of the above was taken on the tenth day, and exposed to a current of ozonised oxygen for a few minutes daily for a fortnight	July 10	Killed Sept. 4	Rabbit fairly well nourished; cicatrix quite healed. No trace of inoculated matter and no trace of caseation. In the left lung one firm nodule; this was carefully examined microscopically, and showed no bacilli. It was apparently only thickened pleura.

It will be seen that none of the four specimens of sputum exposed to fresh air and light on a dry soil conveyed the disease, but one of the three portions exposed under similar conditions in darkness produced tubercle. Of the two exposed in the cottage in Ancoats in the light, one produced tubercle and the other was doubtful; and of the two specimens exposed in the same place in comparative darkness, one caused tubercle, the other did not. Lastly, the specimen placed in the ventilating shaft from a ward in the consumption hospital, Bowdon, on a dry soil, conveyed the disease; but the portion removed from it after ten days, and exposed to the action of ozonised oxygen, did not produce tubercle.

These experiments are too few in number to justify the statement of positive conclusions; but, so far as they extend, they go to prove that fresh air and light and a dry sandy soil have a distinct influence in arresting the virulence of the tubercle bacillus; that darkness somewhat interferes with this disinfectant action; but that the mere exposure to light in otherwise bad sanitary conditions does not destroy the virus. There are also some indications that the presence of a cotton-wool envelope may interfere somewhat with the action of both good and bad air respectively.

GASTRO-ENTEROSTOMY.

By T. KILNER CLARKE, F.R.C.S.Eng.,
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The following case of gastro-enterostomy, though unsuccessful, is more illustrative of the difficulties of the operation and its after-dangers than the successful one I published in the British Medical Journal, November 16th, 1889, p. 1089, the subject of which is still, ten months after the operation, in the enjoyment of good health.

Mrs. S., aged 36, a spare, dark-eyed woman, had been suffering from gastric troubles for a year, when in consultation with Mr. Haigh, of Meltham, I first saw her on May 6th, 1890. She had suffered much from vomiting, and had had several attacks of hæmatemesis. For the few days previous to my visit everything she had taken was rejected. There was a tumour the size of an orange in the situation of the pylorus, that is, on the right edge of the mesial line, and extending down to the level of the navel. The stomach was small, all the other organs of the body appeared healthy. The case seemed to us to be a very suitable one for either pylorectomy or gastro-enterostomy.

On May 13th, 1890, an anæsthetic consisting of chloroform one part and ether two parts was administered by Dr. Scougal; and, assisted by Mr. Haigh and Mr. Marshall, I operated as follows.

Making a median incision, 3 inches long, reaching as far as the lower border of the navel, I exposed the lower border of the stomach and the great omentum. The tumour, which was found to be the enlarged and thickened pylorus, was firmly adherent to everything in its immediate neighbourhood. Its size and adhesions, and the contracted state of the stomach rendering pylorectomy impossible, I proceeded to the alternative operation of gastro-enterostomy. The jejunum not being visible I pushed aside the great omentum, and, turning up the lower border of the stomach, saw it lying beneath the transverse mesocolon, rising from the spine on a level with the navel. Making a rent in the mesocolon, I brought up the intestine, emptied some six inches of it, and isolated the emptied portion from the rest of the gut. Then, dropping the jejunum back into the abdomen, I made one incision into the anterior wall of the stomach, an inch in length, parallel to and about 1½ inch above the greater curvature, and inserted the decalcified bone plate. The second plate was then fixed into the jejunum. On attempting to bring the two plates into apposition so as to tie the corresponding threads I found it could not be done, as the contracted size of the stomach and the pyloric adhesions prevented my bringing the stomach wall sufficiently outside the abdomen. I therefore took out the stomach plate, sewed up the incision with a double row of Lembert sutures of fine silk, made a new incision in the posterior wall of the stomach, introduced the plate afresh, and readily brought it into close apposition with the jejunum plate. The corresponding threads were then tied and the abdominal wound closed. A towel folded to form a pad was bound firmly over the dressings, and removed after forty-eight hours.

For three weeks after the operation the pulse kept under 100, and 99.6° was the highest temperature, everything going on favourably. On the twelfth day slight vomiting occurred at 8 A.M., but afterwards she was very well until the afternoon, when the artificial opening between the stomach and intestine seemed to close suddenly. While being fed, the trickling sound of fluid passing through the opening was distinctly audible to anyone standing by the bedside whenever the patient took any fluid food, and the patient's sensations of it abruptly ceased. At 10 P.M. she vomited some 20 ounces of fluids, and from this time till her death on the thirtieth day after the operation, all food taken was rejected. No necropsy was permitted, and the cause of the sudden closure of the artificial opening must remain uncertain.

In two at least of the failures of this operation closure of the opening has occurred. To prevent this it would be well to sew together by a continuous fine silk suture the cut edges of the serous and mucous coats of the incised viscera, and to make larger incisions into the viscera. Operators by the old method made incisions two inches in length.

ON THE DIAGNOSTIC VALUE OF VENOUS HUMMING MURMURS IN THE NECK.

Being an Abstract of a Paper read before the Royal Academy of Medicine in Ireland.

By HENRY T. BEWLEY, M.D., F.R.C.P.I.,
Assistant Physician to the Adelaide Hospital and Lecturer on Medical Jurisprudence in Trinity College, Dublin.

Very different opinions are at present entertained, even by the highest authorities, on the subject of the importance of a venous hum in the neck as a means of diagnosing anæmic conditions. Some believe it to be of considerable value. Thus Dr. Bristowe[1] writes of anæmia: "The development of abnormal sounds (among which he mentions various humming murmurs) in the heart and blood vessels is of common occurrence and highly characteristic." Gerhardt[2] considers that a venous hum is a sign of anæmia, if it can be heard when the head is held quite straight and not turned towards either side. On the other hand, Drs. Hilton Fagge, F. Taylor, and many others do not consider these murmurs to have any significance whatever from a diagnostic point of view. One of the most complete articles on this question is that by Dr. R. Apetz.[3] He examined as to the presence or absence of a venous hum in over 600 persons, and came to the conclusion that, while it is more frequently found in anæmic individuals than in others, it is not of the slightest importance in individual cases.

I have during the past two years investigated this question in a large number of young persons, between the ages of 16 and 26. They were all presumably healthy. I examined them either sitting or standing, and with the head directed straight forwards. I placed the stethoscope—an ordinary straight wooden one—as lightly as possible on the side of the neck.

I divided my cases into three classes, namely: (1) anæmic; (2) slightly anæmic; (3) not anæmic. By "slightly anæmic" I mean cases that show some of the symptoms, but none of the signs of anæmia, or *vice versâ*, that is, cases about which one cannot at once say whether they are anæmic or not. I should say that in estimating anæmia I could only use the ordinary clinical tests; time did not permit of my counting the corpuscles, etc.

I examined in all 200 persons, 51 young men and 149 young women. Of these, 22 belonged to the anæmic class, 31 to the slightly anæmic, and 147 to the not anæmic.

In the 22 anæmic there were	19 murmurs	= 86.4	per cent.
,, 31 slightly anæmic	27 ,,	= 87.1	,,
,, 147 not anæmic	85 ,,	= 57.9	,,

[1] *Practice of Medicine.*
[2] *Lehrbuch d. Auscultation u. Percussion*, 1890.
[3] *Virchow's Archiv*, vol. 107.

Dividing the not anæmics into males and females, there were:—

In 104 not anæmic females 64 murmurs = 61.5 per cent.
„ 43 „ males 21 „ = 48.8 „

that is, not a very great difference.

I noted in each case whether the murmur was loud or not. I met with in all 15 excessively loud or roaring murmurs.

In 22 anæmic ... 3 loud murmurs = 13.6 per cent.
„ 31 slightly anæmic 5 „ „ = 16.1 „
„ 147 not anæmic 7 „ „ = 4.8 „

My conclusions are the following:—

1. Venous murmurs are more common in anæmia than in other conditions.

2. They are present in about 50 per cent. of not anæmic young persons of both sexes.

3. Hence it follows that their presence in any individual case is not a matter of any diagnostic importance whatever.

4. Even the loudest murmurs are not peculiar to anæmia (though more frequent in that condition), and are therefore of but little, if any, importance. I noticed some of the loudest murmurs in very rosy, full-blooded individuals.

RESULTS OF ENUMERATION OF BLOOD CORPUSCLES IN SOME CASES OF SPLENIC ENLARGEMENT OF MALARIAL ORIGIN.

By Surgeon J. F. EVANS, I.M.S.,
Jubbulpore.

It is the generally accepted view that an increase in the number of the white blood cells occurs in malarial splenic enlargement, very similar to that which occurs in leucocythæmia. Hitherto I have failed to find an increase of the white blood corpuscles beyond physiological limits in any case of malarial splenic enlargement, whether this enlargement be of the transitory type arising during an attack of ague, or of the more permanent kind, where the organ presents itself as a firm, freely movable tumour in the left half of the abdomen. In the following table the results are given of the enumeration of the blood corpuscles in twenty-two cases of malarial splenic enlargement, in the majority of which the hypertrophy belonged to the more persistent type. The patients were men of native regiments, who sought medical aid on account of the debility induced by this disease or for ague.

Hayem and Nachet's hæmacytometer, as modified by Dr. Gowers, has been used for the work of counting the corpuscles, and Gowers's hæmoglobinometer for the estimation of the hæmoglobin.

A solution of phosphate of soda, of specific gravity 1025, was found to be the most suitable diluting fluid for use in the hæmacytometer. Solutions containing sulphate of soda, acetic acid, or common salt, produce great alteration in the appearance of the red blood corpuscles in this country, rendering the work of counting them very difficult.

The pathological change common to all of the twenty-two cases is a diminution of hæmoglobin, accompanied in the majority of cases by a corresponding diminution in the number of the red corpuscles. With two exceptions, the loss of hæmoglobin exceeds that of the red corpuscles, which have in consequence become of relatively less hæmoglobin value than that which they possess in health in a cold climate. In the number of the white corpuscles, on the other hand, no change beyond physiological limits appears to have taken place, whatever the nature of the splenic hypertrophy, whether fresh, soft, and congestive, or firm and of old standing.

It may be advanced that the number of cases given is too small to entitle any general deduction being drawn from the facts obtained. It would not, however, be difficult to increase their number very largely, and at the present stage they appear to justify the statement that the blood changes set up by malarial splenic hypertrophy and malarial cachexia have nothing in common with those which receive the name of leucocythæmia, for in the former the anæmia is due to loss of hæmoglobin, not to increased formation of the white cell element of the blood.

Number of Cases.	Age in Years.	Service in Years.	Percentage of Hæmoglobin.	Percentage of Corpuscles (White and Red).	Proportion of White to Red Corpuscles.	Previous Medical History during Service.	Remarks.
1	31	9	60	88	1 to 523	Ague twice, syphilis twice	Marked anæmia of mucous membranes; spleen reaches to within 1½ inch of middle line.
2	48	18	75	80	1 to 770	Ague 27 admissions	Spleen 4 inches and liver 2½ inches below costal margin.
3	22	5	35	44	1 to 706	Ague 4 admissions, and dysentery 1	Marked anæmia; spleen 2½ inches and liver 1½ inch below costal margin.
4	21	5	70	62	1 to 900	Ague once	Spleen to within 1 inch of middle line.
5	19	1	65	79	1 to 630	None	Spleen reaches middle line.
6	24	2	75	112	1 to 650	Ague once	Spleen reaches to middle line anteriorly, and to a point 2 inches below umbilicus inferiorly.
7	20	1	75	109	1 to 550	Ague once	Spleen hard, reaches middle line.
8	39	21	90	93	1 to 800	Ague 11 admissions, syphilis 1 ditto	Not anæmic.
9	18	1	60	64	1 to 750	Ague once	—
10	22	4	65	90	1 to 1,000	Ague once	Spleen reaches to right of middle line.
11	22	1	70	71	1 to 500	Ague 4 admissions	—
12	18	1	80	80	1 to 300	Simple continued fever once	Spleen 5 inches below costal margin.
13	17	1	80	84	1 to 670	None	None.
14	26	1	70	80	1 to 500	Ague twice	None.
15	22	2	85	99	1 to 660	Ague once	None.
16	22	2	60	100	1 to 500	Ague twice, dysentery twice	None.
17	30	1	50	68	1 to 540	Ague thrice, dysentery 4 times	Spleen reaches middle line.
18	19	1	75	82	1 to 520	None	Spleen 3 inches below costal margin.
19	37	16	75	80	1 to 750	Ague 5 admissions, remittent fever one ditto	Spleen 4 inches below costal margin.
20	23	2	70	68	1 to 270	None	Marked anæmia of mucous membranes; dysenteric tendency; spleen 4 inches below ribs.
21	40	27	70	86	1 to 688	Ague frequently, dysentery once	Spleen reaches middle line anteriorly into the umbilicus inferiorly.
22	18	1	65	96	1 to 720	Jaundice once	None.

In malarial disease the hæmoglobin is less in quantity in each cell, and it also appears to be in less stable union with the cell stroma, for it crystallises more easily, and is more readily acted on by dilute solutions of common salt, soda sulphate, and acetic acid. When using a low magnifying power, I have often found it difficult to distinguish a tuberculated, swollen, red blood cell from which the hæmoglobin had been dissolved from a white corpuscle.

These conditions may account for the difference between the observations which form the subject of this paper and those which receive general acceptance. In ague, remittent fever, and simple continued fever, which may be regarded, especially the first named, as the initial and active manifestations of malarial disease, changes have been observed in the blood similar to those above described as belonging to malarial splenic hypertrophy.

In no instance have the white blood cells been found increased after an attack of ague, but in every case examined diminution of hæmoglobin and red blood cells was the pathological condition produced by the disease. This is shown in the following table, which gives the enumeration of the blood

cells at defervescence in a fairly typical example of each of the above-named three diseases :—

Disease.	Age in Years.	Service in Years.	Percentage of Haemoglobin.	Percentage of Corpuscles. (Red and White).	Proportion of White to Red Corpuscles.	Remarks.
Remittent fever	21	1	60	83	1 to 1,000	Hyperpyrexia and delirium, with early defervescence.
Ague	18	1	55	60	1 to 720	Persistent tertian ague.
Simple continued fever	27	9	55	70	1 to 840	Defervescence on tenth day.

In connection with the subject of malarial infection, a short reference to some observations made by me on some healthy British officers and men who had never suffered from malarial fever since arrival in India one year and upwards previously, will probably be interesting.

In every case the microbe associated with malarial fever was present to a limited extent, generally in the "rosette" stage, rarely free; the number of red corpuscles was increased above the normal average of cold climates, and the hæmoglobin slightly diminished.

It only remains to add that the material for this paper was collected at different times during the past three years at Mandalay in Upper Burmah, at Mecan Meer, and Jubbulpore.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

DEATH UNDER CHLOROFORM.

ALICE M. W. was admitted into the Sheffield Infirmary on March 13th with a large leucoma of the right eye, for which an iridectomy outwards was advised and consented to by the parents, she coming into the house for the express purpose of having the operation performed.

An anæsthetic being thought advisable, I administered chloroform, which the child took very well. I then called to Mr. Snell, who was in the adjoining room. After this the child had no more chloroform. The operation was performed satisfactorily, and, the child apparently recovering well, Mr. Snell went into the other room and saw several patients. The child was not deeply under the influence, as she gave signs of feeling during the operation, putting up her hand, etc. In two or three minutes breathing suddenly stopped, and she turned very pale, when I at once began artificial respiration, and called to Mr. Snell, who came at once. The child was inverted, ether injected, brandy and the battery applied, all to no avail, for she died in about ten to fifteen minutes, although artificial respiration was continued for two hours.

In the evening I made a *post-mortem* examination, and found the heart quite normal, empty; evidence of old pleurisy of both lungs, more particularly the right, the base of the left was very adherent to the diaphragm; other organs healthy.

H. T. WIGHTMAN,
Assistant House-Surgeon, Sheffield General Dispensary.

CASE OF RAYNAUD'S DISEASE.

G. F., aged 19, a footman, first consulted me on August 5th, 1889, for severe epistaxis and bleeding from the auricles. His father is said to have suffered from a similar condition of the auricles when a young man, and his feet were also frequently livid and swollen. He is a healthy man now of about 60. The mother is healthy but has chilblains. The patient who is temperate, and gives no syphilitic history, has been subject to chilblains and cold hands and feet for many years. His present illness began definitely about three years ago after exposure to cold.

On August 4th he had profuse epistaxis, and also an abnormal amount of bleeding from a small scratch on the left auricle. Epistaxis had occurred previously four or five times during the past two years, on each occasion spontaneously, sometimes when in bed. The nose from the tip to the junction of the cartilages with the nasal bones was of a deep livid clour, cold, tumid, and slightly painful. No ulceration of the nasal mucous membrane was detected. The right ear was swollen, misshapen and livid, with small bullæ, and dilated and varicose vesicles in some places; the surface temperature lowered, but pain was slight. The whole auricle, excepting the concha, was affected both anteriorly and posteriorly. The left auricle was in a similar condition though not to such a degree. The hands were livid, tumid, and cold to the touch; the feet were not troublesome, but had been somewhat livid, tumid, and slightly tender. The condition of pallor alternating with the lividity was stated to be infrequent, and only lasted for a short time, during which there was more pain. There were no subjective eye symptoms, and ophthalmoscopic examination revealed nothing abnormal. There were abnormal subjective sensations of numbness, heat and cold and pain in the affected parts. The arteries were normal so far as could be made out; the heart was normal; there was no albuminuria. The treatment ordered was a mixture containing iron, arsenic, and digitalis, alum and quinine snuff, and protection of the parts affected.

On September 17th, the patient felt much stronger. The ears were almost of normal thickness, and livid only at the helix and its fossa, and the lobule on the right side, and the helix and its fossa on the left. There was profuse bleeding from an injury to a dilated capillary. On September 29th there was severe epistaxis in bed, nose very livid and tumid. On October 9th the ears had improved. Epistaxis again occurred; the nose was much congested; the hands were better. The interrupted current was applied daily along the course of cervical sympathetic, and in November he was much improved, but sudden severe epistaxis then occurred again.

Professor Grainger Stewart and Dr. Affleck kindly examined the patient, concurred in the diagnosis, and recommended perseverance in the electrical treatment with tonics.

In March, 1890, the patient was somewhat better, the epistaxis was less, the hands and feet were normal, but the ears still required to be kept protected.

Stoke Newington. J. CHRISTIAN SIMPSON, M.B.EDIN.

SUTURE OF TENDONS ELEVEN WEEKS AFTER DIVISION.[1]

A PATIENT came to me on December 13th, 1889, with the history that, eight weeks previously, while engaged in trimming rose trees, the knife slipped and inflicted a transverse wound on the outer side of the left wrist, just above the thumb. This wound was allowed to heal by granulation, no advice being obtained until it was found that the thumb could not be moved voluntarily. The thumb was flexed into the palm and adducted, and the patient was unable to pick up a book or to hold anything unless the thumb was first lifted up and the article to be held was placed between it and the hand. Any variety of passive movement was possible, but the only active movement which remained was extension of the terminal phalanx, the thumb being rendered motionless owing to the unopposed action of the flexor longus pollicis, adductor pollicis, and the flexor brevis pollicis. At the base of the metacarpal bone there was a transverse scar, an inch long, on the outer surface of the left wrist, while just below this the distal ends of the tendons of ext. primi internodii pollicis and extensor ossis metacarpi pollicis could be easily felt, but the position of the proximal ends could only be indistinctly made out—5 inches off on the back of the forearm.

Mr. Bates kindly saw the case for me, and advised me to try to unite the ends of the tendons, and this was done on January 8th, 1890, just eleven weeks after the accident. The patient being under chloroform and an Esmarch's bandage

[1] Read before a meeting of the Worcestershire and Herefordshire Branch of the British Medical Association.

being on the arm, an incision was made from the site of the distal ends of the tendons to the supposed position of the proximal ends. The distal ends were found at once, and it was there discovered that the synovial sheath was blocked at the site of the scar for three-quarters of an inch by a mass of connective tissue. This was cut through and the sheath followed up until the proximal ends of the tendons were found. The ends were rounded off, and had not contracted any adhesions. Unfortunately the ends of the tendons were 5 inches apart, and it was found to be impossible to bring them nearer together than three-quarters of an inch; however, the ends were pared, and, on the suggestion of Mr. Bates (who kindly assisted me with the operation), were stitched together with two catgut sutures. One or two small vessels were tied and the wound was closed by silk sutures without any drainage, the tourniquet not being removed until a wool dressing had been firmly applied. After which a special splint was put on in such a way as to keep the thumb extended. The wound healed by first intention, and all the active movements of the thumb were perfectly restored.

Worcester. T. Preston Gostling.

POISONING BY THE VAPOUR OF NITROBENZOLE, AND BY THE FUMES OF BURNING DYNAMITE.

Three cases of poisoning by substances used in the manufacture of explosives have come under my notice during the past two years.

Nitrobenzole.—On September 13th, 1888, J. H., employed at an Explosive Manufacturing Co., whose work had consisted for some hours on that day in pouring nitrobenzole from large drums into smaller vessels, came complaining of dizziness and headache. He had vomited once or twice, and staggered in his gait. His respiration was hurried (about 36), and the breath was heavy, with the peculiar sweetish fragrance of nitrobenzole. The surface of the skin was of a dark-purple hue, especially marked on the mucous membrane of the lips and beneath the finger-nails. The heart's action was very rapid and tumultuous (160 to the minute), but the pulse was full and of good quality. The pupils were sluggish. There was some tendency to coma when at rest, and the friends of the patient were therefore directed to keep him moving about, with the object of ensuring a more rapid respiration, as it was plain that much of the poison was being eliminated by the lungs. Physical examination of the chest failed to reveal any pulmonary congestion. The urine was very dark, smelt strongly of nitrobenzole, and contained neither blood nor albumen. Drs. Blaxland and Seabrook kindly saw the patient with me during the first twelve hours. The treatment we adopted was simply expectant, and was mainly directed to keeping the patient alive while assisting the lungs and the kidneys in the elimination of the poison. After four or five days the patient made a good recovery, but at this date, though no longer working with the same substance, he yet retains a peculiar complexion, as if the blood had undergone some change from which it had not yet completely recovered.

Fumes of Dynamite.—On August 5th, 1890, at 1 P.M., J. R., aged 21, and a boy, aged 12, descended a shaft 200 feet deep; they stopped on a staging 15 feet from the bottom to light their candles, and threw down the wax vesta they had used without blowing it out; it fell on a body of about 25 lbs. of dynamite which was lying loose at the bottom of the shaft, and ignited it. When this explosive is not "tamped" and meets with no resistance it does not explode, but "fizzles" much in the same way as damp gunpowder. The fumes of burning dynamite are pungent and suffocating, and are said to resemble those of burning sulphur; they are completely different in their odour and effects from the fumes of exploded dynamite. The man and the boy were in close proximity to the smoke for about one minute, but their ascent of the ladder way was much retarded by the fact that the boy was so far overcome as to require much assistance from his companion. Altogether I learn that they were inhaling smoke of differing intensity for a period of about five minutes. On reaching the surface both vomited, and complained of headache and dizziness. At 8 A.M. the following morning, when he was brought to the hospital, the boy was suffering from extreme dyspnœa with cyanosis. He succumbed two hours after admission. At 1 P.M. on August 6th, I was called to see J. R. He had remained at his work the previous day, and was not seized with serious illness till the middle of the night, some twelve or thirteen hours after inhaling the smoke. I found him lying in bed semiconscious, pulse full and bounding, and exceeding 150 to the minute, respirations 96, temperature normal. The bowels had acted during the morning, and he had passed urine of normal appearance; it had not been saved, and none was obtainable for examination. Physical examination of the chest revealed extensive and extreme congestion of both lungs. The treatment adopted consisted of free purgation by elaterium, and the promotion of diuresis by digitalis, squill, and mercury, administered in free doses. Improvement was noticeable immediately a watery drain had been established by these means. The respirations began to decrease in rate and to increase in depth, and within twelve hours the cyanosis ceased to be so extreme. This patient recovered within four days of the exposure. The *post-mortem* appearances in the case of the boy consisted of intense pulmonary œdema, with deep bluish coloration of the tracheal and bronchial mucous membrane, beneath which were numerous punctiform hæmorrhages. All the other organs were healthy.

Broken Hill, N.S.W. C. E. Thompson, M.R.C.S.Eng.

POISONING BY ROBURITE.

I was urgently called to T. G., aged 16, at 9 A.M. The mother stated that she had been recommended to sprinkle roburite upon the floor of her son's bedroom, to clear out the cockroaches. In this room slept a male friend (for the one night). I found the patient cyanosed, blue-black in hue to his very nails; tongue, lips, and mouth nearly black; body and face livid. The temperature was subnormal. He was shaky and cold. There was dyspnœa, respiration being hurried and laboured. Pulse 135, very weak; great depression. The treatment employed was removal from the room, stimulants of all kinds, medicinally and otherwise, hot milk, and beef-tea. Hot-water bottles to all parts of body, enveloping in hot blankets. The other lad was not so much affected, although slightly cyanosed. Evidently the inhalation of the fumes of the roburite caused the mischief. Gradually T. G. improved, but at 5 P.M. there was a relapse. On the third day the temperature was normal, after which recovery was rapid.

With regard to the action of this poison, we are taught that the fumes of roburite, when inhaled into the system, are exceedingly deadly, even in the smallest quantities; that when these fumes are inhaled in a coal mine, they carry with them two poisonous gases—nitric oxide and carbonic oxide; that incomplete combustion of roburite allows the deadly elements of the components nitro-benzene to escape and freely mix with the air, where it can be inhaled or absorbed by contact with the skin. Of course in this case there was no probability of combustion. W. H. Spurgin, M.R.C.S., L.S.A.

Maryport, Cumberland.

MISSED LABOUR.

Mrs. A., about 40 years of age. Husband was an old man. Her last menstruation ended June 15th; labour was, therefore, due about March 20th. She complained that she had not felt life since March 1st. On March 5th careful auscultation and palpation confirmed her fears. The child was certainly dead. At this time the objective signs were hard breasts, a soft flaccid belly and uterus; the os uteri admitted the tip of a finger, and there a white, slimy, rather fœtid discharge. She was also troubled by frequent and sudden perspirations. On April 21st labour set in naturally, and a dead child and placenta were born together. The placenta was small and fibrous. The epidermis peeled off the child, and the cranial bones were disarticulated and loose in a bag of scalp, the edges of the bones giving quite a sharp cutting feel through the scalp. The brain was soft and diffluent. The recovery of the mother was good and speedy. In this case a dead child was retained six or seven weeks *in utero*, and about four weeks after the date when the natural term of pregnancy should have ended.

Queenstown, Cape Colony. H. T. Batchelor.

A CASE OF CONGENITAL MALFORMATION OF THE PENIS.

On February 21st, while at Limon, Costa Rica, I was asked to see a male negro infant, aged about 3 months. The mother stated that the child ever since birth had passed his urine entirely by the bowel. The infant was plump and well-nourished, the prepuce was imperforate, but the genitals appeared otherwise normal. There was, however, a rudimentary sixth finger on each hand.

Thinking the case simply one of imperforate prepuce with recto-vesical fistula, I put the child under chloroform and performed circumcision. On the glans penis being exposed I found that the urethral orifice was entirely absent, the situation of the meatus being marked only by a slight dimple. I then passed a narrow Paget's knife into the glans in the direction of the urethra to the depth of about a quarter of an inch and succeeded, after several attempts, in finding the termination of the urethra and introducing a probe, on the withdrawal of which about a drachm of urine escaped. The wound was dressed with carbolised vaseline, and the mother instructed to pass a fine bougie into the urethra daily for the distance of about an inch. The additional fingers were amputated at the same time.

I had an opportunity of seeing the child again on March 4th. The wounds were then healed, and a No. 1 black French catheter could be passed into the bladder without difficulty.

Remarks. Although cases of imperforate prepuce are not very rare they usually speedily prove fatal unless relieved by operation. In this case, however, the child had reached the age of three months without any surgical interference and apparently without inconvenience. This was of course owing to the fact that the urine could escape per rectum. The recto-vesical fistula was probably congenital; it seems possible, however, that it may have been formed after birth, as the result of a slight rupture of the bladder from over-distension.

G. G. Parsons, L.R.C.P.Lond., M.R.C.S.,
Surgeon Royal Mail Steam Packet Company.
Colon.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

THE GENERAL HOSPITAL, BIRMINGHAM.

WOUND OF CHEST WALLS PENETRATING THE DIAPHRAGM, WITH WOUND OF THE STOMACH AND PROLAPSE OF OMENTUM: ABDOMINAL SECTION: RECOVERY.

(By George Heaton, M.A., M.B.Oxon., late Resident Surgical Officer.)

A girl, aged 6, was admitted into the hospital on July 5th, 1890, having been accidentally wounded in the left side of the chest by a carpenter's chisel.

On admission the child was pale and collapsed; her extremities were cold, and the pulse small and feeble. Between the eighth and ninth costal cartilages on the left side was a clean cut horizontal wound, about 1½ inch in length. The wound was vertically below the left nipple, and a mass of bleeding omentum protruded through it. The left side of the chest was motionless during respiration.

She was anæsthetised with chloroform, and an attempt was made to replace the omentum in the peritoneal cavity. This failed, owing to its being tightly grasped between the ribs. An incision, 2½ inches long, was made vertically downwards from the wound, and the abdominal cavity opened below the costal arch. By passing two fingers into the peritoneal cavity, and dilating the wound in the diaphragm, the omentum was withdrawn into the abdomen. As it was bruised and bleeding, it was again brought out—this time through the abdominal incision—and excised, after its base had been ligatured.

The stomach was next brought out through the abdominal wound and examined. A small cut, half an inch long, was found near its lesser curvature, penetrating its serous and muscular coats. This was sutured with carbolised catgut, and the stomach returned. The peritoneal cavity was thoroughly cleansed of blood and closed in the usual manner. The wound between the ribs was then enlarged, and the wound in the diaphragm exposed from its pleural side. The upper edge of the diaphragmatic wound was easily found, but its lower one could not be discovered. The upper edge was, therefore, brought down and sutured to the cartilage of the ninth rib, and the cavity of the thorax thus shut off from that of the abdomen. The external wound was finally closed, a small drainage tube being left in its outer angle. The wounds were dressed with cyanide of zinc and mercury gauze. At the close of the operation the child was extremely collapsed, but rallied slowly after a small enema of brandy.

Her after-progress was satisfactory. The temperature rose that evening to 99.8°, but never again to 99°. The wound was dressed on July 7th, and the drainage tube removed. It had united by first intention except where the tube protruded. On July 11th the wound was again dressed, and all stitches removed. It had completely healed. She was given solid food on the 13th, and ordinary diet on the 16th. She remained an in-patient until August 14th, when she was discharged, wearing a small abdominal belt.

Remarks.—The case is interesting, as it illustrates the great rallying power which children possess after severe injuries. On admission her condition seemed almost hopeless, and yet in a few days she was practically convalescent. The wound, though opening the thoracic and abdominal cavities, did not involve the pleura, and the risks of pleurisy were consequently avoided. The suture of the wound in the diaphragm will, I hope, prevent the supervention of a diaphragmatic hernia.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

SEVERE GENERAL CHOREA.

(By James Y. Totherick, M.D., Hon. Physician to the Hospital.)

[From notes taken by the House-Physician, Dr. Brown.]

E. B., a single girl, aged 24, small stature, dark complexion, well made, was admitted on November 19th, 1890, with very severe general chorea of a month's duration. She was said to have had seven previous attacks of chorea, the last ten years ago. There was no cardiac lesion. The pulse was good, the temperature normal. We found, upon examination and inquiry, that the patient was between four and five months advanced in pregnancy.

For the first three weeks she was treated by rest in bed; liquor arsenicalis was given in doses of 10 minims to 15 minims thrice daily. The chorea, however, got worse. She lost her sleep and her movements were violent.

On December 7th chloroform was given, and an attempt was made to dilate the os uteri with the finger. The external os was with difficulty dilated, but the internal os could not be reached with the finger. She was now given a mixture having the composition of "bromidia," and obtained some four hours sleep. The chorea was, however, little less severe, and on November 10th, under the strictest possible antiseptic precautions, a catheter was inserted between the uterus and the membranes, with the intention of inducing labour.

On December 11th the patient was much quieter; the temperature normal. There were slight uterine pains. The cervix was softer and very slightly dilated.

On December 12th, at 8 P.M., the chorea was much better, the cervix quite soft, admitting the finger, and pains were occasionally experienced. After this the pains gradually ceased, and the uterus acquired complete tolerance of the catheter, and it was removed, the chorea being much better, but not well.

On December 31st the patient was given a mixture containing succus conii, ℥j, increased to ℥jss on January 3rd. On January 18th labour commenced naturally, and in eleven hours a living child was born. She had no drawback. The chorea got much better, and on January 29th she left the hospital. On February 18th, she appeared to show herself in good health.

Remarks.—Here was a case of extreme gravity rescued by dilatation of the cervix of a gravid uterus, for the catheter could not be said to have accomplished more than this. In

my young days I should never have doubted the power of Simpson's simple plan of inducing premature labour, as it always succeeded with me on the three or four cases in which I used it. Then I should have probably used almost any gum catheter, washing it, of course, but not taking any precaution about disinfection, or irrigating the vagina. Septic poisoning was probably the agent of the abortion. In three cases (not primiparæ) in which I have been able to dilate the cervix efficiently with the finger, I have been able greatly to mitigate the chorea, and allow pregnancy to fulfil its term.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

CASE OF RELAPSING TYPHLITIS SUCCESSFULLY TREATED BY OPERATION.

(Under the care of G. H. Hume, M.D., F.R.C.S.Ed.)

S. W., aged 27, sent by Dr. Hardy, of Heighington, was admitted on June 5th, 1890. He was a strongly-built young man, who had been in good health till he met with the following accident in March, 1889. Working as a platelayer on the railway, he was jumping on to an engine in motion. He slipped and was thrown across the rails of the other line, striking his right side upon one of the rails. He was immediately seized with severe pain in the right side, and vomited. An illness of three or four days followed, during which he had a good deal of pain in the side, and his urine had twice to be drawn off by catheter. After getting back to work he had more or less pain in the side every day, often coming on when he was tired at the end of the day. This pain gradually increased, till, in the month of October, he gave up work and sought medical advice. He was then suffering very severe pain in the right side, frequently vomited, was constipated, and had retention of urine. After an illness of three months he was so much better that he went back to work. But in a few weeks he was again laid up, and there was now a considerable swelling in the right side. This time he was in bed two months; and afterwards, though able to get about, the pain recurred from time to time and rendered him quite unfit to work.

On admission, there was a hard resistant swelling in the right iliac region, not reaching quite to the crest of the ilium, and extending to near the outer margin of the rectus. At first, while the patient was kept under observation and partially confined to bed, there was a steady decrease in the lump; but, without any traceable cause, an attack of pain came on with rise of temperature and increase of swelling. When this attack had subsided, the following operation (June 27th) was performed. An incision was made between the outer margin of the rectus and the inner limit of the swelling. The peritoneal cavity was then opened to the inner side of the adherent structures. Throughout the area of the swelling the omentum was adherent both to the parietes and the underlying parts. After double ligaturing its connection with the bulk of the omentum, the adherent part was separated and removed. The underlying adherent structures were then found to be the cæcum, a coil of small intestine, and the summit of the bladder. These were carefully and with difficulty separated from each other. The appendix then came into view, distended, acutely bent upon itself, and adherent to the wall of the cæcum. When freed it was ligatured, a quarter of an inch from the cæcum, and cut away. In addition to the ligature of strong silk, a continuous suture of fine silk was used to bring the peritoneal coat together. An uninterrupted recovery followed.

The patient has recently shown himself, and is in perfect health. There has been no attack since the operation, and there is now no swelling or tenderness over the cæcal region.

Remarks.—The case was typically one for operation. Having a traumatic origin in a healthy subject, the localised peritonitis which followed the injury led, amongst other consequences, to the adhesion of the acutely bent appendix to the cæcal wall; it then became distended, the distension being aggravated from time to time, and inducing the recurrence of inflammation in the way pointed out by Mr. Treves. The adhesion of the cæcum, small intestine, and bladder to each other would also, especially upon any exertion, perpetuate the state of irritation, and lead to fresh attacks. That suppuration would before long time have occurred was shown by the presence of some small caseating mesenteric glands in the mass.

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REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, April 7th, 1891.

W. H. Dickinson, M.D., F.R.C.P., President, in the Chair.

Heterotopia of Spinal Cord.—Dr. Aldren Turner read a paper by Dr. C. M. Campbell and himself on heterotopia of the grey matter of the spinal cord, which occurred in a human subject. The patient, who died at the age of 29, had suffered for many years from a gradually increasing exfoliative dermatitis. Two years before his death there developed severe polyarthritis, which was followed by the signs of a transverse myelitis, and the fatal event resulted from exhaustion due to repeated attacks of bronchitis and the formation of a bed sore. The microscopic examination of the spinal cord revealed evidence of myelitis, which affected principally the segments corresponding to the tenth, eleventh, and twelfth dorsal nerve roots. Here the grey matter presented a peculiar arrangement, consisting mainly in the separation of the horns of grey substance from each other, combined with a considerable amount of atrophy. The atrophy of the left grey crescent was more marked than on the right side. The central canal and posterior median septum were absent, while the anterior median fissure was represented by a small, spur-like septum, extending a short distance into the white matter. The conditions of the skin presented some points of interest: more or less occlusion of the arteries by great overgrowth of the middle coat, while the prickle cells retained their nuclei to the periphery, undergoing no cornification. No abnormality of the dermal nerves was detected. The authors referred to the great rarity of this condition of the spinal cord, which has been called by the Germans "Heterotopie"; they further pointed out the liability to myelitis which this faulty structural arrangement possessed.

Heterotopia of Spinal Cord.—Dr. Howard Tooth showed microscopical sections with drawings of a spinal cord which had been received from Dr. Woods, of the Hoxton House Asylum. It was taken from the body of a man, aged 24, the subject of general paralysis. At the *post-mortem* examination a subdural hæmorrhage from the middle meningeal artery was found. There was excess of fluid both on the surface and in the ventricles of the brain. The convolutions were flattened and the brain was small. There was old fibroid phthisis of the lungs. The spinal cord had been hardened in a 2 per cent. bichromate of potash solution. Sections were carefully stained with picrocarmine and cut in paraffin. The sections showed patches of softening, the neuroglia was increased, and many masses of what were probably micrococci were present. The grey matter showed slight alterations in shape. The ganglion cells everywhere showed great vitality. In those sections in which the inflammatory processes were least extensive the grey matter was moved from its proper position, displaced either by altered or normal white matter. Below those parts which were most disorganised there had occurred secondary sclerosis. The posterior parts of the cord were the most affected. This was true both of the grey and white matters. The anterior and posterior nerve roots were normal. Two conditions appeared to have been confounded under the term "heterotopia," a reduplication of parts (*Doppelbildung*) and those like the present, which were probably due to extensive inflammation of the grey matter. Many, if not most, of the recorded cases had been obtained from lunatic asylums.—Dr. Newton Pitt referred to a cord with two central canals, obtained from a patient with Friedreich's disease. The cord was very small, with the characteristic sclerotic changes of that disease. There was no acute myelitis.—The President asked Dr. Tooth if there had been any skin affection in his case, and Dr. Tooth answered in the negative. The specimens were then referred to a special committee.—Dr. Tooth referred to the large number of what appeared to be micrococci in his specimens; Dr. Turner to sections of a spinal cord of a rabbit with two canals, with an accessory anterior horn, and with three anterior nerve roots, and in which there was no myelitis.

Chronic Intestinal Stricture, Secondary to Strangulation in a Hernial Sac.—Dr. Newton Pitt showed a specimen of this nature which had been obtained from the body of a woman,

aged 43. Some time before her admission she had had a difficult labour and she said she had never been well afterwards. Eleven weeks before her admission she had over-reached herself on a chair and the strain had caused her double herniæ to become irreducible. The following week, under the influence of ice, they were reduced, but the vomiting continued although the bowels were opened. Later she had colicky pains and the vomiting continued in spite of treatment. On admission the abdomen was found to be distended and lax. There was no tumour to be felt, but there was excessive tenderness in the right hypochondriac and epigastric regions. The bowels were open irregularly and blood was often passed in the stools. The diagnosis formed was either malignant disease of the large intestine or stricture of the small gut from the herniæ or from some adhesion due to the pregnancy. She got gradually weaker and died with perforation. At the *post-mortem* examination the small intestine was found to be distended and perforated at four feet from the cæcum. The cæcum was empty and so were the last four feet of the ileum. Above this there was a stricture, where the intestine had been caught in the hernial ring. At the stricture and above it the gut was ulcerated. There was no trace of tubercle in the intestine, though there was fibroid phthisis in the apices of both lungs. Strangulation leading to stenosis and stricture was very rare, and the author referred to the only two cases that he had been able to find recorded.—The PRESIDENT mentioned an unpublished case in which an old cicatrix from a hernia had caused marked constriction in the small bowel.

Sequel to a Case of Carcinoma of Eyelid.—Mr. H. B. ROBINSON referred to the original tumour as a squamous epithelioma with spheroidal cells and a few ill-formed nests. He then quoted the Morbid Growths Committee's report on the specimen. In January, 1891, he saw the patient again with a tumour in the parotid region. There had been no recurrence at the seat of the primary growth. Microscopical examination showed epithelial cells arranged in columns, and alveoli separated by connective tissue cells. The cells were columnar or cubical at the periphery, but towards the centre they were less well defined. There were no nests, though in parts the cells were arranged concentrically. The masses looked like sebaceous glands. He suggested the name of "sebaceous carcinoma," which should be included amongst columnar rather than amongst squamous forms.—Mr. BOWLBY agreed that neither this nor the primary growth had been an ordinary carcinoma. If it had commenced in a sebaceous gland, that would be against the view that it belonged to the squamous group. The specimen was referred to the Morbid Growths Committee.

Thickening of Skull in Rickets.—Mr. SHATTOCK showed two skulls from infants greatly thickened on the outer aspect by the formation of very porous new bone. In one there was no history whatever pointing to syphilis; in the other there were the typical signs of syphilis. Microscopical sections, made without any artificial decalcification, and stained with carmine solution, showed complete absence of earthy salts or a wide peripheral zone to the trabeculæ devoid of earthy salts. The appearances were like those of osteomalacia, except that in the latter bone previously calcified was decalcified and remade, whilst in rickets the bone was from the first imperfectly calcified. The author contended that the thickening of the skull cap and flat bones generally and of the shafts of the long bones was inflammatory; there was no less reason for naming such changes inflammatory than those met with as affecting the skull in osteitis deformans. The rarefaction of the original substance of the bone in rickets pointed to the same conclusion. There was nothing in the etiology of rickets that negatived such a view. There were many instances in pathology in which inflammation (apart from microbial origin) was due to morbid alterations of the blood such as rickets was commonly held to be. But the characteristic mark of the inflammatory productions in rickets was the want of proper calcification of the new osseous tissue. The second specimen of thickened skull exhibited was from an infant with congenital syphilis. That syphilis without rickets might produce widely extended osteoplastic periostitis had been now long known, but the new formations, as Parrot had stated, were of normal firmness. With the remarkable want of calcification obtained in the formations produced in a syphilitic subject, one was dealing with the two diseases. The syphilitic disease might to a certain extent determine the seats of inflammation, but it was the rachitic that determined the imperfect calcification of the new bone, and the compound condition might be expressed by the compound term syphilo-rachitis.—Mr. BOWLBY doubted if rickets was essentially an inflammatory process. The thickening of the bones of the skull was exceptional in rickets; even if the microscopical appearances were similar, it did not prove that the changes in osteoplastic periostitis and in rickets were identical. The changes at the ends of the bones in rickets were probably of exactly the same nature as those in the diaphyses of the bones. If so, according to Mr. Shattock, the changes at the cartilages at the ends of the bones would also be inflammatory, of which there was no evidence whatever. In rickets it was just as likely that there was normal growth but delayed calcification, as that there was an increased preparation for the formation of new bone.—Mr. SHATTOCK, in reply, stated that the sheath of new bone around the shaft of an old rickety bone was not hard bone without salts, but spongy immature bone tissue. He allowed that logically he ought to consider the changes at the ends of the bones to be also inflammatory, and he thought that he would prefer to do so rather than give up the idea that the changes round the shafts of rickety bones were inflammatory.

Tuberculosis of Tendon Sheath.—Mr. E. C. STABB showed a specimen of the above, and gave the following history: The patient, a widow, aged 66, two years ago ran a fork into the palmar surface of the left middle finger; the fork had penetrated deeply, so that when the hand was held up the fork remained hanging, and had to be pulled away. There was no bleeding. The finger was stiff and painful for some days, during which the part was poulticed. Two months later, a small lump was noticed at the site of the puncture, and shortly afterwards others appeared, which coalesced with the one first noticed to form a single swelling. This gradually increased in size, and rendered the finger stiff and useless. The condition was diagnosed as a compound ganglion, and punctured, but without result. An incision, however, allowed several small gelatinous lemon-seed bodies to be expressed. The wound filled up with granulation tissue, and would not heal. The finger was then amputated. After removal, the bones and joints were found to be normal, but all the soft parts were replaced by a gelatinous mass in which the tendons could not be distinguished. There was one small cavity filled with caseous material. Microscopical examination proved it to be tuberculous. There was no family history of phthisis. The patient had always been a strong and healthy woman, and there were no evidences of disease in any of her organs. There were no enlarged glands in the axilla. The history of a punctured wound, followed by swelling at the seat of puncture, and the absence, as far as could be ascertained, of tuberculous disease of any other part of the body, would suggest that the case was one of inoculation.—Mr. ROGER WILLIAMS had seen a compound ganglion in an elderly man which was tuberculous.—Mr. BARKER was glad that attention had been drawn to these cases, and said that the surgical treatment of synovial sheaths was exactly the same as that of joints. He mentioned the case of a woman, between 30 and 40 years of age, with an enlarged synovial sheath in her middle finger. This, after being dissected out, proved to be tuberculous. The woman died of phthisis fifteen months later.—Mr. ROBINSON thought that the interest of the case under discussion was the inoculation at the seat of injury.—Mr. SHATTOCK agreed with Mr. Robinson, but doubted if the infection could have been direct in this case as the skin was not implicated.

Carcinoma of Scalp.—Mr. STEPHEN PAGET showed a specimen which had been obtained from a man, aged 75. It looked like a sebaceous cyst, and possibly had originated in one. It was not a rodent ulcer in its clinical appearance, nor was it like an ordinary epithelioma, as the glands were not involved, and there were no nests of cells. Mr. Edgar Willett, who had examined the specimen microscopically for him, had suggested that it might be considered a succulent rodent ulcer. It would be interesting if it turned out to be half way between rodent ulcer and epithelioma.—Mr. ROBINSON thought that the present specimen agreed with the primary growth that he had referred to. He thought that it was a carcinoma and not

a rodent ulcer. The specimen was then referred to the Morbid Growths Committee.

Acute Intestinal Strangulation due to Volvulus in a New-Born Infant.—Dr. G. Newton Pitt read this case. The infant came under Mr. Lucas's care for complete obstruction, with a greatly distended abdomen, which was supposed to be due to an imperforate rectum. A left inguinal colotomy was performed, and the child died when two days old. The colon, rectum, and lower two feet of the ileum were normal. The three feet of intestine above this were distended, black with engorged blood, and acutely inflamed. There was a sharp line of demarcation from the healthy bowel above, but less sharp below. No trace of any band or of an intussusception could be found, and it was concluded that the acute strangulation was due to a volvulus, which was readily untwisted. The only case on record of a volvulus in a newly-born infant was reported by Mr. Harrison Cripps in vol. xxxi of the *Transactions* of the Pathological Society. In this case a Littre's operation was performed. The child died when three days old, and at the inspection a volvulus of the ileum was found. The earliest case otherwise appeared to be one of a child of 3 referred to by Keating.

Card Specimens.—Dr. Hale White: Hodgkin's Disease with Waxy Kidney.—Dr. Newton Pitt: Pigmented Colon from a case of Lead Poisoning.

MEDICAL SOCIETY OF LONDON.

Monday, April 6th, 1891.

R. Douglas Powell, M.D., President, in the Chair.

Case of Fibro-Sarcoma or "Desmoid Growth" of the Abdominal Wall.—Mr. Alban Doran exhibited a tumour of a kind to which Sänger applied the old term "desmoid." He had removed it from a young woman aged 21. It had been growing for two years and a half in the left groin. The posterior part was blended with the internal oblique muscle and the transversalis fascia, but the peritoneum was free, and the aponeurosis of the external oblique covered the tumour anteriorly. The tumour probably arose from the conjoined tendon. The wound was united by deep sutures, and drained; it healed well. Six months after operation the cicatrix was healthy, and not stretched. The patient was four months pregnant. The tumour was composed of young, rather loose, fibrous tissue, in parts indistinguishable from sarcoma, elsewhere denser, like a true fibroma. Desmoid tumours of the abdominal wall were clinically innocent, and far more frequent in women than in men. There was reason to believe that, in several alleged cases in male patients, the tumour was not of the class in question, but a true sarcoma. Any of the layers of the abdominal wall, except the peritoneum, might be the seat of origin of a desmoid tumour; those, however, which had been described as arising in muscular tissue were possibly sarcomata developed in hæmatomata. When the tumour was large and adherent to the peritoneum, the involved portion of that membrane must be taken away with the growth. The more superficial layers of the abdominal walls formed a good covering to the great aperture made in the course of the operation. Experience showed that the intestines did not adhere to the walls over the area whence the peritoneum had been stripped. —Mr. Bland Sutton expressed surprise that Mr. Doran should have made use of such an obsolete term as "desmoid," which meant fibroid growths generally without reference to their special nature. He suggested in view of the situation of the growth that it was possibly a tumour springing from the round ligament of the uterus, and he pointed out that there were several structures which might give origin to such growths, notably the layer of muscular tissue between the layers of the broad ligament, the urachus, or the ligament of the ovary. He asked whether, as a matter of fact, the growth had been shown not to be associated with the round ligament.—Sir Hugh Beevor suggested that it was possibly a pure fibrous tumour.—Dr. Cullingworth observed that it was admittedly a difficult matter to distinguish between sarcoma and fibro-sarcoma, the clinical history of the case often being the only means of clearing up the diagnosis.—Mr. Haslam said he had recently seen such a growth removed by a colleague at Birmingham from a woman, aged 30. The swelling was situated just over Poupart's ligament, and on cutting down it was found to be just external to the peritoneum. The patient did well, but it was too early yet to say anything as to recurrence. Microscopically it proved to be a fibro-sarcoma.—Mr. Doran, in reply, said he used the term "desmoid" in a strictly defined sense. The tumour sprang from the conjoined tendon, and though it was perhaps possible, he had been unable to trace any connection with the round ligament of the uterus. It belonged to the type of soft fibroma rather than sarcoma. He suggested that if the surgical registrars of the metropolitan hospitals would look the matter up, it might turn out that they were less rare in males than was supposed.

Three Cases of Strangulated Cæcal Herniæ in Infants.—Mr. Stephen Paget read notes of these cases, all of which had been under his care during the last three months at the West London Hospital. Case I. A healthy infant, 1 year old; large, tense, right scrotal hernia, no impulse: vomiting, obstipation of bowels, retention of urine. There was a perfect sac, containing a coil of small intestine and some omentum, and above these, at the neck of the sac, the cæcum. The baby did well. Case II. A feeble infant, 3 months old, a 7-months' child and thirteenth in the family; similar hernia, similar symptoms. There was a perfect sac, containing the cæcum and appendix. Operation was successful, but a few days later bronchitis set in and the child died. Case III. A feeble, half-starved infant, admitted with strangulated right scrotal hernia; it was reduced under chloroform, and for eleven days all went well; the bowels acted regularly and the baby took food greedily and put on flesh. Then, without stoppage of the action of the bowels, came renewed swelling of the scrotum, with rapid sloughing and bursting of the bowel into the tunica vaginalis. Mr. Paget made an artificial anus, but the baby died six weeks after the operation. Mr. Paget called attention to the papers by Mr. Marsh, Mr. Treves, and Mr. Lockwood, and discussed the treatment adopted in the third case. He showed specimens from Cases II and III. The President asked how it was that the cæcum was so frequently found in the herniæ of children.—Mr. Doran pointed out that sloughing of the vermiform appendix was likely to take place if the arterial supply was interfered with.—Mr. Sheild observed that they used to be taught that cæcal herniæ were usually devoid of a sac, but this had since been shown not to be the case as a rule. He insisted upon the ease with which strangulated herniæ in infants yielded to immersion in a hot bath, especially if aided by inversion.—Mr. Paget, in reply, said that, as a matter of fact, it was not common to find the cæcum involved in the herniæ of children, since Mr. Marsh had only met with this complication in one case out of thirty-seven.

Chronic Atrophic Rhinitis.—Dr. F. de Havilland Hall read a paper on chronic atrophic rhinitis. He suggested that the term ozæna commonly used as a synonym for this disease should be discarded. Age and sex were important etiological factors, the majority of cases commonly commencing before the 16th year, and females being more frequently attacked than males in the proportion of seven to two. He was of opinion that the disease was met with more especially in phthisical and anæmic patients. Though there was no distinct anatomical evidence, the majority of observers considered that the disease was preceded by a hypertrophic stage. By some authorities a congenital deficiency or an arrest in the development of the turbinated bones had been regarded as the cause of the disease, the enlarged nasal passages allowing mucus to be retained and undergo decomposition. As regarded the action of micro-organisms there was a great difference of opinion. Loewenberg had discovered a micrococcus in the mucous membrane which he considered to be the cause of the disease. Whether this was the case or not, there was no doubt that bacteria played an important part in the production of the fœtid odour. He described the symptoms and diagnosis; he said that, though not curable in the usual sense of the term, yet assiduous attention to treatment usually overcame the most disagreeable symptoms. He gave the details of the treatment he employed, insisting upon the fact that, if the medical man took care to remove the crusts in the first instance, then it would be sufficient to direct the patient to use one or other of the sprays the formulæ of which he gave. He showed how the dryness, which was the cause of the patient's greatest discomfort, could be mitigated, and said he had obtained good results from anointing the interior of the nose with vaseline containing oil of eucalyptus in the propor-

tion of a drachm to the ounce. He spoke highly of an American antiseptic known as Listerine, which, mixed with water in the proportion of 1 in 10 was very useful as a deodoriser and disinfectant.—Mr. SPENCER WATSON agreed that the malady was usually associated with some family taint, a fact which was borne out by cases under his own observation. He suggested that there was a close analogy between this disease and lupus of the interior of the nose. There was the same absence of ulceration as in lupus erythematosus, the same shrinking of the substance of the membrane and of the subjacent tisues, and the histological characters were quite in accordance with this view. He thought that very probably the same bacillus was the cause of ozæna as of lupus, and he asked whether any case had been subjected to the treatment by Koch's lymph as a means of diagnosis. He could not assent to the abandonment of the douche, though if this caused pain it was best left alone. He mentioned a case which had got well after accidental infection by gonorrhœal pus.—Dr. HALL, in reply, said the suggestion was of interest, but he had never yet met with an instance of the two diseases existing concurrently in the same person. He had not seen Koch's treatment tried in these cases, but he knew of a case of strumous rhinitis, a very analogous affection, in which most excellent results had followed the use of the lymph. He urged that if the medical man would only take the trouble to clear away the crusts in the first instance, then a spray would suffice to keep the parts clean and moist. If this were not done, then the douche might be necessary.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, APRIL 1ST, 1891.

J. WATT BLACK, M.D., President, in the Chair.

Specimens.—Mr. TARGETT: Section of Vertebræ and Sacrum from a case of Spondylolisthesis.—Mr. ALBAN DORAN: The Uterine Appendages in a case of Double Hæmatosalpinx.—Dr. WHEATON (for Dr. W. DUNCAN): Early Malignant Disease of the Uterus.

A Case of Extrauterine Pregnancy at Full Term: Removal of Child and Placenta by Abdominal Section: Recovery.—Mr. JOHN W. TAYLOR (Birmingham) read a paper on this subject. The author introduced the case by reference to somewhat similar records published in the *Transactions* of the Society, and pointed out the distinctive features which separated the present from previously reported cases. The previous history of the case was detailed, as written by Dr. Lycett, of Wolverhampton. An account was given of an operation of abdominal section for the removal of the child; of the interval between this and the second operation; of the operation for removal of the placenta on the twelfth day; and of the subsequent history of the case until the recovery and discharge of the patient. The author concluded with a short commentary on the case, to which was added Dr. Lycett's description of the child.

A Case of Extrauterine Gestation, the Sac being Situated in the Right Broad Ligament: Pregnancy advanced to the early part of the Fourth Month.—Dr. WALTER GRIFFITH read a paper on this subject. The patient, who was under the care of Mr. Rout, of Hornsey, was 32. She had been married eleven years; never pregnant before; previous health good. Severe illness began in the second month, and was followed by severe attacks of abdominal pain and faintness. Dr. Griffith, with Mr. Rout, made out the diagnosis of extrauterine gestation in the right broad ligament. The abdomen was opened, and the sac, which had ruptured, was opened and emptied, profuse hæmorrhage taking place immediately from the placental site. The bleeding was arrested with difficulty. It was impossible to remove the sac, and after the abdomen had been imperfectly irrigated, it was closed and the sac left plugged. Death occurred an hour after. The specimen removed was described in detail. Reference was made to the anatomy of the placental site, the peculiar position of the right ovary beneath the sac, and to existing disease of the left oviduct, also to analogous cases of ovarian cysts invading the broad ligaments, and to the cases of Werth and Hart.

A Case of Obstructed Labour in which a Large Fibroma of the Ovary, occupying the Pelvis, was mistaken for the Head of an Extrauterine Fœtus.—Dr. WALTER GRIFFITH read a paper on this subject. The patient was admitted into the Great Northern Hospital in labour, the tumour having been recognised and diagnosed as the head of an extrauterine fœtus. Three methods of delivery were discussed: (1) Cæsarean section, (2) vaginal section, (3) craniotomy. Craniotomy was finally chosen, as it appeared to involve least risk to the mother. Great difficulty was met with in extracting after craniotomy until version was performed. Septic symptoms gradually supervened, and the patient died on the eighth day. The characters of the uterus and placental site were described, and the author stated his opinion that in all such cases of great obstruction abdominal section provided the safest course of treatment.

A Case of Extrauterine Gestation associated with Sloughing of the Abdominal Wall and Attempted Extrusion of a Matured and Putrid Fœtus near the Umbilicus.—Mr. MARMADUKE SHEILD read a paper on this subject. The patient was a young married woman. For several weeks she had been ill with fever, and for several months had had a large abdominal tumour. The uterus was explored and found to be empty. She was a primipara. She was seen by Dr. Martin. There was a considerable circular opening with sloughy margins in the situation of the umbilicus. Through this protruded a tumour the size of a turnip, tightly girt at its somewhat constricted base; it was black and offensive and pultaceous. Under chloroform the opening was enlarged downwards, and a fœtus extracted, along with foul fluid and gas, followed by bright blood. The placenta was attached deeply behind and above, and the sac appeared to be extraperitoneal. The bleeding was stopped by hot water irrigation. The placenta was removed piecemeal, further hæmorrhage being prevented by irrigation followed by packing with sponges. The author then discussed the pathology and anatomy of the case, together with questions of the diagnosis and treatment of ectopic gestation.—Dr. CHAMPNEYS asked Mr. Taylor as to the results of auscultation of the placenta. His own case had been wrongly criticised without proper account being taken of the long interval of practically normal temperature, which entirely negatived the idea of absorption through the wound. The absorption was through the placenta. He thought the cases of Mr. Taylor and Mr. Jessop, and his own case, might have been tubal or tubo-ovarian. He also called attention to the inferior development of these fœtuses, and said the mother's life ought not to be endangered in any way for their sake.—Mr. ALBAN DORAN doubted whether the operation of craniotomy had done much more harm in Dr. Griffith's case. He had seen the case with Dr. Griffith, and had advised him to do a craniotomy. He related a case of extrauterine gestation mistaken for an ovarian cyst.—Dr. HERMAN thought the cases in which the fœtus lay in the peritoneal cavity were explained by tearing of the amnion from the movements of the child. Probably, if the vernix caseosa were examined, bits of amnion would be found in it.—Dr. GRIFFITH, in reply, thought abdominal section preferable to craniotomy in cases like the one narrated.—Mr. JOHN W. TAYLOR also replied.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MARCH 26TH, 1891.

W. CHAPMAN GRIGG, M.D., President, in the Chair.

Specimens.—Dr. EDIS exhibited specimens of Polypi removed from women, and called attention to the hæmorrhage they gave rise to and the offensive nature of the discharge, while in others there had been no symptom beyond leucorrhœa. He considered these differences in the symptoms were dependent on the position of the growth. Dr. ROUTH and the PRESIDENT joined in the discussion.—Dr. LEITH NAPIER showed a piece of what he took to be Decidua, which he had removed, and which seemed to have been the cause of secondary hæmorrhage. Flooding occurred on the sixth day after confinement, and he thereupon emptied the uterus. He called attention to the unusual date of the occurrence, and expressed the opinion that insufficient retraction was a more potent factor in the case of secondary hæmorrhage than mere inertia of the uterus. The PRESIDENT, Dr. BELL, Dr. NEDWILL, Dr. GODSON, Dr. MALTON, Dr. ROUTH, and Dr. DINGLE took part in the discussion. Dr. BELL (Glasgow) showed a Cyst which he had removed the previous day. The patient had suffered from intense pain in the region of both ovaries, which incapacitated her from performing her household duties. On lifting up the

tumour through a 2½-inch incision, he found it to be par-ovarian. The right ovary was also cystic. Remarks were made by Dr. MANSELL MOULLIN, Mr. JESSETT, and Mr. REEVES.

Treatment of Chronic Disease of the Uterine Adnexa.—Dr. BELL read a paper on this subject. He said he was now of opinion that, while many such cases were permanently cured by prolonged general treatment, there still remained certain cases in which surgical interference was necessary. The outcry against the operation was due to the fact that its benefits had been grossly abused. In his experience neither disease of the tubes nor ovaries tended to develop without some pre-existent affection of the uterus. He called attention to the importance of guarding against a loaded colon, and advocated curetting, etc., the uterus with a dredge curette, the bi-weekly application of iodised phenol to the cavity, and the use of tampons of ichthyol and boracic acid. If adhesions were present massage did good. No man was warranted in exposing a woman to the danger entailed by the process of unsexing her till he was thoroughly satisfied that no other measures were within reach; then, if he had failed to remove the cause of the disease, he was quite entitled at the patient's request to resort to surgery.—Remarks were made by the PRESIDENT, Dr. EDIS, Dr. LEITH NAPIER, Mr. REEVES, and Dr. ROUTH, and the discussion was adjourned.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, MARCH 18TH, 1891.

JOSEPH WHITE, F.R.C.S.Ed., in the Chair.

The Midwifery Contract.—Dr. ELDER read notes of cases seen in consultation, illustrating the inadequate protection to the best interests of patients and to the reputation of the medical attendants given by the present general acceptance of the obligations of the midwifery contract, and suggested, amongst other matters, the routine examination of pregnant women as to their physical fitness to go through the period of gestation, and their capacity for parturition.

Rupture of Intestine.—Mr. ANDERSON read notes of several cases of rupture of the intestine, drawing special attention to the difficulties attending diagnosis. He insisted upon the practical worthlessness for diagnostic purposes of the presence or absence of liver dulness, and strongly urged the desirability of speedy operation after the diagnosis had been established.—Dr. ELDER gave an account of a case in which an accidental rupture of the first part of the rectum took place through forcible separation of old adhesions in the course of an ovariotomy, but in which complete recovery supervened, though the opening in the gut was not sutured, a large drainage tube only being inserted in the abdominal wound.

Colotomy.—Mr. ANDERSON further read notes of cases illustrating modifications of colotomy, and strongly advised the adoption of that in the inguinal region whenever possible.

Case. Mr. TRESIDDER showed a boy, aged 12, with a Congenital Naevoid condition of the Capillaries over the whole of the left side of the body, the right side being practically free, though the port-wine stain passed across the middle line of the back to a slight extent. There was a tendency to the development of cavernous nævus at several spots, notably over the saphenous opening and in the axilla.

Specimens.—Mr. TRESIDDER showed a Heart with granulations on the auricular surface of its mitral valve. The patient, a girl aged 12, was the subject of chorea and acute rheumatism, but the fever of the latter had abated on the development of the chorea. The patient died suddenly.—Dr. BROOKHOUSE suggested that the cause of the sudden death was the involvement of the heart in the choreic movement. At the *post-mortem* examination the heart was found dilated with partially decolorised clot. There was no evidence of myocarditis.—Dr. W. B. RANSOM gave an account of a man, aged 44, under his treatment in the General Hospital, who was passing Spherules of Actinomyces in his Urine and Fæces. Dr. Ransom showed specimens of the fungus. He also exhibited the Brain of a lady, aged 62, who for twelve months before death had suffered from right hemianopia. There was marked shrinking of the left occipital lobe, angular gyrus, and superior temporal convolution.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, MARCH 6TH, 1891.

JOHN POLAND, F.R.C.S., President, in the Chair.

Present of Books.—The PRESIDENT announced another list of fifty books recently presented to the library.

Cardiac Failure.—Professor CURNOW, M.D., read a paper on cardiac failure and its treatment. He specially reviewed the onset of cardiac failure in aortic and mitral valvular disease, pointing out that precedent to failure, dilatation of the cavities of the heart must have necessarily occurred, altering the percussion dulness and more especially the position of the apex beat. He pointed out the varying position of this sign in the different forms of valvular disease, and went on to refer to the modes of dying in these forms. The dangers of any and every kind of exertion which might cause cerebral anæmia in aortic disease, and of all pulmonary complications in mitral disease, were insisted on. Fainting and giddiness in aortic affections, hæmoptysis, bronchitis, and the earliest signs of dropsy in the extremities were symptoms of grave import. The various drugs used in cardiac failure were mentioned, and the author advised a careful scepticism as to most of the newer ones. He much preferred digitalis to strophanthus, which had not benefited his patients. Morphine, hypodermically, and small doses of brandy were much praised for the relief of insomnia and dyspnœa, and special stress was laid on treatment by food and the careful watching and relief of dyspeptic and other complications.—Remarks were made by Drs. F. T. TAYLER, CABLE, MOON, HINGSTON FOX, McGAVIN, and Mr. J. MARSHALL.

REVIEWS AND NOTICES.

THE MICRO-ORGANISMS OF THE HUMAN MOUTH. By WILLOUGHBY D. MILLER, D.D.S., M.D., Professor at the University of Berlin. Philadelphia: The S. S. White Dental Manufacturing Co. 1890.

IN these days of development from the general to the special, we can never be astonished at any turn that specialisation may take; and when the specialisation is thorough, and the bearing of the specialised function is upon a wide area of general subjects, we feel that we have in it a satisfactory phase of scientific progress. Such a feeling is borne in upon the reader by the perusal of this book. We have here arranged in systematic and logical fashion, by a master hand and mind, the greater part (surely) of what is at present known of bacteria, and their influence on diseases of the teeth and of the alimentary tract. As much of this work has been contributed to various journals by Professor MILLER himself, there is a thoroughness and an individuality about the book that render it extremely attractive and interesting both to the specialist and to the general medical practitioner.

The work may be said to be divided into two parts—first, that dealing with general bacteriology, with special reference, however, to bacteria of the mouth; and, secondly, that dealing with the pathogenic mouth bacteria and the diseases associated with them. The first part, it may be said, deals with general bacteriological methods, appearing to be specially written for the benefit of those who are innocent of any bacteriological knowledge, though even experts in the culture of bacteria will find much to interest them in the first chapter, which deals with the morphology and life history of bacteria; and in the second chapter, which describes pretty fully the substances in the mouth or on its walls that may serve as nutrient media for such bacteria as find their way into the oral cavity.

Although almost every organism that has yet been mentioned has also been described as occurring in the mouth, Dr. Miller holds that not more than about half a dozen can be considered as mouth bacteria proper. He gives descriptions of these forms, rearranges the nomenclature, and points out that most of them cannot, with the means at present at our disposal, be cultivated outside the body. He adheres to his original suggestion of throwing overboard the leptothrix buccalis, as he thinks that so many organisms have been described under this term, and so much confusion has in conse-

quence arisen, that it would be better to discard the name altogether, and to start afresh. He gives an interesting account of the spiral-shaped organisms met with in the mouth and in the dental cavities, and points out that these are really the same forms that are met with in the lower part of the alimentary canal, and claims that he had mentioned them before Lewis had described his comma-shaped and spiral-shaped bacilli. He finds, however, that there are several of these spiral organisms present; that some of them cannot be cultivated at all, that others may be cultivated in broth or in gelatine, but that none of them, so far as he has observed, can be mistaken for Koch's cholera bacillus, though some of them correspond very closely in their mode of growth to the Finkler-Prior organism.

He gives an account of the bacteria of diseased pulps of teeth. In an inoculation from one tooth he found no fewer than a quarter of a million organisms, whilst in those from others not a single bacterium would grow; thus of seventeen necrotic tooth pulps that he examined with reference to this question, seven contained no living, or rather no cultivatable, bacteria. From his experiments he cannot admit that tartar is an excretion of micro-organisms, but holds that it is simply a precipitation of lime salts that goes on in the mouth, perhaps more rapidly in the presence of these micro-organisms.

The various fermentations, and their action in setting up changes in the teeth, are fully described: and the relation of these to dental caries is gone into, the author concluding that to obtain a full explanation of the changes that take place in decay of the teeth we must call in to our assistance both the chemical and the organismal theories, though the former may be said to be included under the latter in most instances. Thus, although inorganic acids may in many cases account for certain changes that are set up in the teeth, the presence of bacteria in the mouth is essential for a true and complete dental caries—different organisms carrying on different processes, several through their products setting up decalcification, others bringing about absorption of the dentine basis, and causing enlargement of the canals and gradual disintegration and pigmentation of the tooth. An exceedingly good description of the naked-eye and microscopical appearances presented in decaying teeth is given, and the chemical changes attending decay are also described. The latter part of the book deals with caries in the teeth of animals; with the etiology of dental decay, its prophylaxis, and the use of antiseptics to prevent the growth of micro-organisms around and within the teeth. We have, then, a full list of the micro-organisms that have from time to time been described as occurring in the mouth, but not specially associated with the teeth. This part of the work is, of course, more interesting to the practitioner of general medicine, who will here find laid down in a clear and succinct form the more important and interesting facts concerning these micro-organisms, and their invasion of the respiratory and digestive tracts.

The illustrations—of which there are a considerable number—are well executed, and most of them convey an exceedingly good idea of the points they are specially meant to bring out. The photo-micrographs are also well done. The index is very full, and there is an excellent list of literature, in which are included nearly 250 references. Such a work should do much to advance the science and practice of dental surgery in this country.

LECTURES ON DIABETES. By ROBERT SAUNDBY, M.D. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1891.

THIS collection of seven lectures constitutes a most valuable addition to medical literature, and one which is just now greatly needed. So much has in recent years been written on diabetes by physiologists, that the importance of the disease from a practical standpoint has been in some measure neglected. There has been some danger, as Dr. SAUNDBY remarks, of regarding a frog with its spinal cord divided, or a rabbit with its medulla injured, as really and truly a case of diabetes. Dr. Saundby is far from regarding physiological experiment as of little importance; on the contrary, he gives a full account of the physiological history of the subject, and dwells at some length on the recent experimental advances by von Mering, Minkowski, Külz, and Lépine. The book will be valuable to all physiological investigators for this reason, as well as for the extensive bibliography that accompanies each lecture. But the book is written by an acute clinical observer, and it is to those in practice that the work will be especially valuable. The lectures headed Morbid Anatomy (a republication of the Bradshawe Lecture), Clinical History, and Treatment, are more particularly addressed to practitioners, but all the other parts of the book are so interweaved with practical observations and records of illustrative cases, that one cannot afford to miss a page of this most instructive and readable manual. A praiseworthy scientific reserve pervades all that may be called theoretical as opposed to the purely practical. Those who wish to have cut and dried theories of the disease will be disappointed if they expect to find them here. Dr. Saundby recognises that although research has done much, it has still more to do, and a perusal of his book will help to lead to a more general recognition of the fact that diabetes is not a pathological entity, but that included under that name are multifarious conditions which no doubt in time will be shown to be due to distinct causes. Dr. Saundby's caution is well seen in the general conclusions he draws regarding the cause of diabetic coma; he, however, regards the toxæmic theory as the most probable explanation of the phenomena; he gives us a summary of recent research in connection with the question as to what the poison actually is, but is content for the present to say that it is some substance allied to acetone. Again, in speaking of the relation of pancreatic disease to diabetes, he says, "The most important lesion is the wasting of the pancreas: but it is not until this organ has been carefully examined in a larger series of cases that we shall be in a position to speak definitely as to its pathological position and value."

The book contains a vast amount of research, statistical, literary, and clinical, and we can confidently recommend it to all inquirers after the truth as the best account we at present possess concerning a most interesting and puzzling disease. It is a book written by a physician in the true scientific spirit, and illustrates the immense importance of a closer relation between physiological and medical study.

AFFECTIONS CHIRURGICALES DES REINS, DES URÉTÈRES, ET DES CAPSULES SURRÉNALES, by M. A. LE DENTU. Paris: G. Masson. 1889. Pp. 818. Thirty-four illustrations.

THIS is an excellent and well arranged work: like the majority of French books, elaborate in detail, essentially didactic, and painstakingly clear. The author is well acquainted with the writings of others, and throughout shows a praiseworthy desire to do justice to them. The first ninety pages are devoted to traumatic lesions of the kidney. M. LE DENTU thus sums up his remarks on the question of operative interference in cases of injury to the kidney (subcutaneous) which have resisted other treatment: (1) To avoid as much as possible immediate interference, unless some complication such as hæmorrhage is urgent. (2) Not to shrink from extirpation of the fragments of the kidney, however difficult this may be, if hæmorrhage persists to a dangerous extent. (3) To combine, if needful, perineal or suprapubic cystotomy with extraperitoneal nephrectomy, if the bladder is full of clots, or if an intense cystitis, not to be otherwise treated, is bringing the patient into a critical condition. (4) If nephrectomy seems useless, and if clots cannot be removed from the bladder by ordinary means, cystotomy—preferably suprapubic—should be practised to ensure drainage.

A chapter of 147 pages on lithiasis follows. This deals with laborious and characteristic minuteness with such points as the differences between *sable*, *gravelle*, *graviers*, *calculs*, *pierres*, reminding us of a controversy on these matters in this country not so long ago. The varieties of stone, the changes they set up in the kidney, the symptoms and treatment of lithiasis are most fully given, but little or nothing is said of those conditions which may so closely imitate renal calculus and which are liable to lead to bootless operations.

Chapters on pyelitis, perinephritis, and renal fistulæ complete the first half of the book. Characteristically full and

detailed as all this is, the second half, which deals with hydronephrosis, tuberculous kidney, malignant disease, movable kidney, and operations on the kidney is by far the most interesting. Chapter XI, on renal exploration, is a valuable one. M. Le Dentu lays stress on visual examination, the patient being in the knee-elbow position in a good light, and the surgeon standing near the head. This method has been found useful in cases where increase in size of the kidney is but slight, and percussion thus gives but little aid. Attention is also called to the value of renal *ballottement*, as practised by M. Guyon, a case being mentioned in which the commencing enlargement of a tuberculous kidney was detected by this means.

For exploratory incisions, the lumbar is strongly preferred to the abdominal incision. The author considers that many of the advantages claimed for the latter method are illusory, and that between an operation that allows us to seize the kidney between the finger and thumb and one which only admits of palpation of the anterior surface, there can be no hesitation in choosing. *Apropos* of Mr. Knowsley Thornton's case,[1] in which, though the symptoms pointed to the left kidney, the stones were found by the abdominal operation to be in the right kidney, M. Le Dentu pithily adds: "How many cases of the same kind can be quoted?"

We can only draw attention to two or three remaining points. The use of the cautery in opening a kidney abscess with a view of barring the cut tissues from sepsis will not be approved in this country. At pp. 399, 695, the author calls attention to *héminéphrectomie postérieure*. In cases where the adhesions by which the kidney is matted down are so dense as to endanger in a nephrectomy the peritoneum, colon, etc., M. Le Dentu advises the surgeon to rest content with removing the posterior half of the kidney with scissors and cautery. One case is quoted in which this method was used. It is not encouraging. The patient recovered, but with a fistula which was often very fœtid. The fact that the kidney was here fatty and sclerosed accounted for the hæmorrhage being very slight. An interesting section is given to the sequelæ, immediate and remote, of nephrectomy. These include disturbances of the nervous system, modifications of the urine, and compensatory hypertrophy.

It is impossible to do justice to this very valuable work in a short review. It will well repay careful study by anyone interested in renal surgery.

NOTES ON BOOKS.

The Technic of Ling's System of Manual Treatment as applicable to Surgery and Medicine. (Edinburgh and London: Young J. Pentland. 1890.)—Under this title Dr. Arvid Kellgren publishes a book which has at least the merit that it puts formally before those who have the curiosity to read it the pretensions of a system which has never found much favour in the eyes of medical men. The book abounds in statements which are certainly marvellous—statements of cures which it is impossible to ascribe to the preceding treatment, and of methods to which no rational basis can be assigned. A process bearing the formidable name of "pétrissage" is defined as "a kneading movement by which the skin, subcutaneous tissues, and more particularly muscles, are acted upon." It is conceivable that "pétrissage" so defined might be tolerated by an enduring and credulous patient, but science must modify its views considerably before it will see in such a proceeding a causal relation to the speedy cure of extensive and severe facial erysipelas. Of the operation of "shaking at the pit of the stomach," we are told that "as the solar plexus commands the circulation in the abdomen, we may readily understand that this manipulation must indeed have a great effect." Such shaking is also prescribed for enlarged spleen resulting from malaria. "Vibrations," which are "fine shaking movements," are of universal application with the Lingist,—to the eyes, throat, larynx, lungs, and even to ulcers and to abscesses, and he who can be persuaded will find in vibrations at least this merit, that they are most useful in conditions where a remedy to ordinary men is a desideratum. "Vibration" over the apex of the heart has the "effect of a stronger, better, and quicker beat," and should be resorted to in fainting and palpitation. With the philosophy of "nerve vibrations" most people are already only too familiar, and it is neither necessary nor desirable to expose the unfounded assumption on which it is based. Suffice it to say that in Dr. Kellgren's book it is endowed with a range and credited with an efficacy which imply no small share of enthusiasm. Indeed the evidence of this sentiment is such as to warrant us in exercising caution as to matters of fact, while the *rationale* of the system is, on the face of it, a monstrous *petitio principii*.

[1] *Med. Times and Gaz.*, 1885, vol. ii, p. 10.

Transactions of the American Gynecological Society. Volume 15 for the year 1890. (Philadelphia: William J. Dornan, 1890.)—The fifteen annual meeting of the American Gynecological Society was held in Buffalo in September, 1890, and the stout volume recently received is a striking evidence of the activity with which the society carries on its work. Some of the papers in the volume are well illustrated and there is a striking portrait of the late Dr. William Heath Byford, together with an appreciative memorial notice of that physician.

Transactions of the American Orthopedic Association. Vol. iii. (Philadelphia: Published by the Association. 1890.)—The volume contains a report of the proceedings of the fourth annual meeting of the American Orthopedic Association held at Philadelphia in September, 1890. The papers appear to be all of a practical nature and to contain many points of great interest to surgeons engaged in the practice of orthopedic surgery.

The Middlesex Hospital. Reports of the Medical, Surgical, and Pathological Registrars for the year 1889. (London: H. K. Lewis. 1891.)—The registrars of the Middlesex Hospital deserve every praise for the care and regularity with which they produce their reports. The medical report is signed by Dr. W. Essex Wynter, the surgical by Mr. W. Roger Williams, and the pathological, which is a complement to the other two, is signed by Mr. Leopold Hudson.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

FLEXIBLE CAPSULES.

We have received from Messrs. Duncan, Flockhart, and Co., Edinburgh, a number of samples of capsules containing various pharmaceutical preparations. They are very soft and flexible, and can be easily swallowed. The capsules, containing 1, 2, and 3 Blaud's pills respectively, are not much larger than ordinary pills. A chemical examination of their contents shows that the iron is in the ferrous condition, and therefore that these capsules retain the full efficacy of fresh Blaud's pills.

The cascara capsules, which contain the equivalent of half a teaspoonful of fluid extract of cascara sagrada, are not inconveniently large, and can be swallowed without difficulty.

The flexible capsules of Gregory's powder will be appreciated by those persons who are prevented from taking this remedy on account of its nauseous taste.

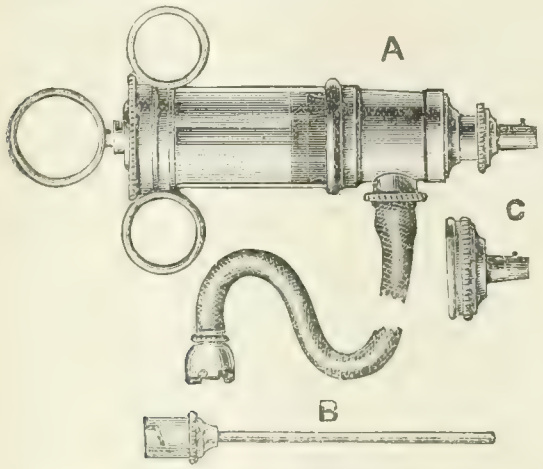
Compound iron capsules, containing various amounts of Easton's syrup, are very convenient for the administration of this well known preparation.

PURE WILLOW CHARCOAL TABLOIDS.

These tabloids form a very convenient and pleasant mode of administering charcoal. They immediately disintegrate and fall to a fine powder when placed in water. Their taste is not unpalatable, so that they can be taken as a lozenge. Each tabloid contains 5 grains of willow charcoal with a small quantity of sugar. The manufacturers are Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, London, E.C.

A SELF-SUPPLYING LACHRYMAL SYRINGE.

In the accompanying sketch is shown a lachrymal syringe, in which I have endeavoured to remedy three defects which are very prominent in the instruments generally in use. They are: (1) The inconvenience to the operator and discomfort to the patient entailed in disconnecting and reconnecting syringe and nozzle, while the latter is in the lachrymal canal, each time it is required to refill the syringe. (2) Owing to the small outlet for the fluid in front, and the pressure behind, there is a great liability for the nozzle to be forced from the syringe, causing the fluid to spurt over both operator and patient. This is especially objectionable in using Condy's fluid. (3) The ordinary nozzle is made of such a length that its thick upper end has to be in close contact with the inner canthus before the lower end reaches the nose: this necessitates the upper end being pushed down over the projection of the brow, and consequent deflection of the lower end from its proper course.



To remedy the first, I have added to the syringe a valve chamber (A), which, being fitted with inlet and outlet valves, and in connection with a bowl of lotion, obviates the necessity of disconnecting and reconnecting syringe and nozzle for the purpose of recharging, as the cylinder is refilled by the action of drawing back the piston after the contents have been expelled.

The second defect is remedied by the addition of a bayonet catch, so that when the syringe is inserted into the nozzle and turned slightly there is no chance of their parting unintentionally.

The third difficulty is met by lengthening the nozzle (B), so that the lower end reaches the nose before the upper end has passed over the brow.

With increased facilities it is found that the treatment naturally becomes more thorough, as it is now perfectly easy with the syringe in one hand to wash out a purulent sac for an indefinite time without disconnecting the syringe from the nozzle.

The instrument, which has been made in a very satisfactory manner for me by Messrs. Down Brothers, is quite simple in construction, and the valves are made so that they can easily be got at; or, in the event of anything occurring to the valve chamber which could not be remedied by the surgeon, it is only necessary to unscrew it and send it to the makers, while the syringe remains available for use—as one of the ordinary type—by screwing on a cap (C) which is supplied with it, and which takes the place of the valve chamber.

C. Armstrong Lumley.
Resident Surgeon, Eye Hospital, Birmingham.

TRIANGULAR BANDAGE.

With regard to the triangular bandage described in the British Medical Journal of March 14th, and as to which there seems to have been some misunderstanding, we are informed that all the figures depicted on the bandage were taken from photographs of men of the Volunteer Ambulance School of Instruction, and were made under Mr. Sleman's supervision, by whom, as already stated, the "key" was composed.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, APRIL 11th, 1891.

ORDER OUT OF CHAOS.

Dwellers in London may now be of good cheer, for Mr. Ritchie has at last made a serious attempt to remove some of their worst grievances, and to evolve order out of the chaos which now represents the sanitary administration of the metropolis. The removal of slush and snow will be in future superintended by the local authority; salt will no longer be allowed to form freezing mixtures on our streets in winter, nor dust-bins to scatter their noxious contents through the air in broad daylight. Nuisances, unsound meat, smoke, water supply, and disinfection are dealt with in summary and drastic fashion, and a very practical clause makes heavy penalties recoverable from anyone affected with or convalescent from infectious disease who milks cows, picks fruit, or handles any article of food in a way which is likely to communicate contagion.

These and the other provisions of the Bill are to be carried out by a largely-increased staff of inspectors, and, following the excellent precedent of the Scotch Local Government Act, medical officers of health are to be hereafter removable only by the authority of the Local Government Board. Mr. Ritchie's speech in introducing his two Bills for the amendment and consolidation of the public Acts of London was clear, conciliatory, and able, and we congratulate him sincerely on the favourable reception it met with from all parts of the House.

One or two warning notes of criticism were sounded during the discussion, as when the London members urged with much force that it is putting the cart before the horse to introduce such a Bill before the establishment of district councils; and when several speakers urged the propriety of relieving householders from the ill-performed duty of clearing away snow from their doorsteps and pavements. But, on the whole, a most friendly feeling prevailed, and it was agreed that detailed criticism had better be reserved for the Grand Committee on Law, to which the Bill has been referred: we are sanguine that when it comes back to the House, strengthened and improved by amendment and compression, it will soon take its place on the Statute Book as a measure which will contribute largely to the health, comfort, and convenience of the inhabitants of London.

We shall watch the Bill carefully as it passes through Committee, and report progress from time to time. We note with pleasure Mr. Ritchie's expressed desire to accept reason-

able suggestions for its "betterment," and the Parliamentary Bills Committee will immediately take steps with the view of helping him to complete with credit and success a task which he has so well begun.

TUBERCULOUS MEAT AND MILK.

It is extremely unfortunate that more care was not taken by Dr. Ollivier to make sure that his facts and premisses were correct before he undertook to draw such important deductions as those mentioned in the SUPPLEMENT, March 14th, No. 229, and March 21st, No. 250. He has had to make corrections and admissions that greatly weakened his case, but what remains in his report after all these corrections are made still affords ample evidence on which he may still base a very strong indictment. It is probable, however, that much greater stress will be laid on the corrections than on the corrected facts themselves, though it is well to bear in mind that the "corrected" case is only one of thirteen cases of tuberculosis that have occurred in the school within the last four years, so that twelve—an extraordinary large number for a public institution of this kind—still remain to be accounted for. A single well-authenticated experiment, with positive results, is worth a bushel of negative experiments. In this connection it cannot but be felt, for example, that Dr. Gallavardin's statement[1] that he and his family had used the unboiled milk of a cow twenty years old, which was afterwards found to be tuberculous, proves very little except apparently that it is a good thing to feed a phthisical patient on milk from a tuberculous cow, as the little girl to whom reference is made, according to the doctor, appears to have thriven on it.

In the first place, there is no record as to the condition of the udder in this animal, and from what may be gathered from the description of the other organs, it may be assumed that the udder was simply an atrophied organ, as the milk supply had been diminishing for some time, the very reverse of what usually takes place in tuberculosis of the udder; latterly, the milk had been so bad that it could not be used, this, again, not usually being the case in tuberculosis. This accidental, somewhat loose, experiment, therefore, proves nothing; whilst the case quoted by Professor Nocard,[2] in which a calf fed only on the milk from an apparently well-nourished mother succumbed to tuberculosis of the alimentary canal, which at once led Nocard to the conclusion that the animal, although it was in prime condition, was suffering from tuberculosis, which probably had extended to the udder is of quite a different order. The animal was killed, and the diagnosis was absolutely confirmed. Many other cases, though scarcely so circumstantial as this, have from time to time been recorded.

It must be borne in mind, however, in this case, that although infection of the fœtus *in utero* is a remarkably rare occurrence, there are cases in which such infection appears to have taken place; and M. Galtier's experiments[3] on rabbits and guinea-pigs go far to prove that, where the tubercle bacilli have made their way into the blood stream in considerable numbers during the period of pregnancy, the resulting offspring may be tuberculous. In some cases abortion takes place, in others the fœtuses are stillborn: whilst in others the animals live for a short time after birth. It must thus be considered quite possible that some of the cases that have been said to be due to alimentation with tuberculous material may really be due to intrauterine infection, although, fo far as can be learned, hereditary tuberculosis, in the ordinary sense in which that term is used, seldom if ever occurs, and intrauterine tuberculosis exceedingly rarely.

As regards the production of tuberculosis by the use of infected meat, most of the experiments seem to point to the fact that although tubercle bacilli are frequently present in the juice of the meat of infected animals they are present in such small numbers (except in very advanced cases) that as a rule it is found necessary to inject a very considerable quantity of the expressed juice or to introduce actual pieces of the muscle in order to reproduce the disease. For this reason also most of the feeding experiments, when carried out with muscle juice, have given negative results.

This is exactly what we should expect, for in tuberculosis, as in all other diseases of bacterial origin, the quantity of the virus or the number of the bacilli is always recognised as playing a most important part in determining the disease, even the comparatively weak tissues being able to deal most effectively with a small number of bacilli, whilst in the presence of a larger number they are absolutely powerless and the bacilli have everything their own way. These points were worked out by Pasteur, Chauveau, Koch, and others, in connection with anthrax, and they appear to have an equal bearing on the production of tuberculosis.

These facts, no doubt, will be taken up by the Commission on Tuberculosis, but in the meantime there are two pieces of advice which may be given and which should be readily acted upon by everyone until these questions are settled one way or another. The first of these is never use milk from any source until it has been thoroughly boiled. This caution is especially necessary where children, even though they are not weakly, are fed on cow's milk, whilst in those cases in which the children are out of health or ailing in any way, the precaution is doubly necessary. All flesh, especially beef and pork, should be cooked through and through, is the second piece of advice that should be taken and acted upon. The check that is kept, or should be kept, in most of our large towns by the inspectors of our cattle and on our meat supply, if thoroughly carried out, should, along with these precautions, be sufficient in the meantime to guard against the spread of tuberculosis through the ingestion of infected food materials. It is as well to avoid a panic, as the danger may at present be over-estimated, but it is equally necessary to take all reasonable precautions, as it is equally probable that the risk of infection may be understated.

[1] SUPPLEMENT, April 11th, No. 297.
[2] *Bull. de l'Acad. de Méd.*, February 24th, 1891.
[3] *Lyon Medical*, March 8th, 1891.

FACTORY LEGISLATION.

In previous articles Clause 19 and its consequences have been very fully discussed; its second subsection remains to be considered. It arranges for the continuation of the services of medical men to investigate and to report upon accidents coming under the cognisance of the factory laws. Mr. Matthews referred to this provision as indicative of his goodwill towards certifying surgeons, and as affording some compensation to them for the extinction of their office. Such a notion shows the limited acquaintance the Home Secretary has personally with factory questions. It is a small crumb of comfort and consolation to the gentlemen concerned. The proceeds

derivable from the duty will, in the case of a few certifying surgeons in large cities where much dangerous machinery is in operation, amount to a few pounds per annum, whilst to others they will be represented by a sovereign, or perhaps only half-a-sovereign, yearly; and it is to be noted that no security is afforded that those who have hitherto worked as factory officers will in future have the slender benefit in question; for any registered medical practitioner will hereafter be eligible to earn it. This extension doubtless would be right, but the folly is to put the plan forward as something for the certifying surgeons themselves to be grateful for.

The Home Secretary expressed a further desire not to be too hard upon the certifying surgeons, with that view retaining the clause of the Factory Act, 1878, which gives permission to inspectors at their discretion to call for the services of medical men in cases connected with health and sanitation; and, in the account of the proceedings of the deputation already referred to, we observe that the chief speaker went so far as to recognise that occasional visits to factories by medical men would be desirable. Permissive legislation such as the above mentioned clause of the Factory Bill is not worth the ink expended in printing it. Its application is to be in the hands of the inspectors. In questions of sanitary arrangements they are already empowered to act alone. In cases of health impaired by employment, are they suitable officers to single out the sufferers and to undertake preliminary questioning of them before resorting to the final appeal to the medical man? If this duty of medical examination is to be performed by them, then by all means let us have female factory inspectors, for to such alone could be relegated inquiries of the sort in reference to female workers, who are more commonly the sufferers. It may well be asked, can it be reasonably expected that factory inspectors, overwhelmed as they are with the manifold work of supervising the observance of the Factory Act in all its details, noting compliance with prescribed hours for labour and for meals, examining into the safety of machinery and adherence to the sanitary rules the law enacts, in watching the attendance of children at school, and the keeping of registers, we say—bearing all these duties in mind, not to mention many of a minor sort—can we look for attention on their part to the signs of disease existing in a few individuals among scores or hundreds of workers congregated in a factory? They are not professionally trained in the recognition of disease. The inevitable conclusion, therefore, is that the clause Mr. Matthews recommends as a very valuable one in the health interests of factory operatives is illusory and worthless.

Another scheme mentioned, and seemingly approved by some manufacturers, is to provide for occasional visits of medical men to factories. While it may be allowed to have some merit, it offers no equivalent for the benefits of the existing system of certifying surgeons. The latter has a different aim. Its object is to protect children against the imposition of labour for which they are physically disqualified.

The one arrangement could be grafted upon the other, and with benefit, but to do so will require a complete remodelling of the sanitary and medical organisation of the factory laws.

However, both Mr. Matthews's views concerning occasional visits to factories in the interests of those working in them, and the idea broached at the interview of manufacturers with that gentleman, amount to an acknowledgment that some necessity for the exercise of medical skill and observation exists in manufactories. Indeed, this fact was very noticeable at the deputation of manufacturers in February of last year, when it was urged as an argument against the office of certifying surgeons that their functions terminated on the entrance of workers beyond the door of the mills, whereas, to be serviceable, they ought to be continued and extended among all hands within the precincts of the factory. Therefore, putting together the arguments of their adversaries, the surgeons may congratulate themselves not only that they have clearly established their high utility as certifying officers, but that there is a distinct recognition that their duties, in the protection of health and in sanitary supervision, ought to be enlarged and extended to the interior of factories.

THE SUPPLIES OF LARGE ESTABLISHMENTS.

It is extremely unfortunate that those who control the supply of necessaries to large public and private establishments do not adopt systematic and reliable means of assuring themselves that the nature and quality of their contractors' goods are what they are represented to be. The almost universal want of attention to these matters is not generally known among the public; where it is known it can hardly be adequately appreciated. The immense quantities of food of all kinds which are supplied daily to our hospitals, workhouses, prisons, and other large public institutions are, as a general rule, taken in on faith. No check of any kind is placed upon the contractors, and the result of this want of care is what might naturally be expected. As we have pointed out when dealing with this subject on previous occasions, the proper examination of contractors' goods is exceedingly rare, and when any such examinations have been made it is still more rare for the facts to be published. Wholesale "manipulation," carried on practically without the fear of detection, is a proceeding which pays extremely well, and those who indulge in it no doubt "know their business." The supply of milk and of butter may be cited as examples. These supplies may be most ingeniously manipulated, and it is within our knowledge that they are so. By judicious admixture of "separated" milk with "whole" milk a product is obtained which contains the lowest possible amount of fat—that is, such an amount as is found only in the milk of single cows yielding the very poorest quality. Mixtures of butter and margarine are prepared containing comparatively small percentages of the latter, but still quite large enough to yield handsome profits to the dealers, and defying detection by all chemical tests excepting that of thorough and complete analysis.

Cocoa is another article of which very large amounts are supplied to public institutions, and it is highly probable that the major portion of these supplies consists of so-called "cocoa powder," grossly adulterated with starch and sugar. Instances might be multiplied; and it is to be noted that public institutions are by no means the only "happy hunting grounds" of the adulterating contractor and dealer. Large private establishments, such as clubs, hotels, and restaurants, are liable to the same frauds; but they are probably not so badly off as public establishments, where it is seldom anybody's business to examine the supplies, and where,

accordingly, no official or manager is likely to suffer personally through the passing of inferior goods.

The necessity of systematically examining the food supplies is not, however, the only point to which we desire that attention should be directed. Stores of all kinds delivered under contract are subjected to fraudulent practices of a similar character to those which are applied to food. We believe that all kinds of articles supplied under contract to some of the Government departments are now constantly examined by competent experts, with the result that a considerable number are condemned. It would surely be highly desirable that this system of control should be widely extended.

We have reason to believe that the drugs supplied to public establishments—especially to prisons and workhouses—are often of very inferior quality. This is a matter which is not less serious than the adulteration of the food supplies. The great difficulty is to bring home the importance of the whole matter to the various governors and bodies who are, or ought to be, responsible.

It is announced that the "Official Italian Pharmacopœia" will be published in June of the present year.

The spring meeting of the General Medical Council will commence on Tuesday, May 26th; a meeting of the Executive Committee will be held on the previous day.

At the recent annual meeting of the Birmingham General Hospital, Sir Walter Foster was appointed Consulting Physician, in consideration of the eminent services which he had rendered to the hospital.

At a recent meeting of the Chester Medical Society, under the presidency of Dr. Roberts, Dr. Dobie read a paper on the Chester Water Supply, stating his belief that the river Dee ought to be condemned. After considerable discussion a resolution was adopted requesting the Town Council to ask the Local Government Board to hold a public inquiry.

INCREASE OF DRINKING IN FRANCE.

Judging from the latest returns issued by the Minister of Finance, the use of alcohol by the French people is rapidly growing. In 1889 the amount expended was larger than it had ever been before, yet during last year nearly a million more was spent in this way. In every department save one, the Hautes Pyrénées, the expenditure has gone up. In the large towns the increased consumption of spirituous beverages has been remarkable, ranging from 10 per cent. at Caen to 31 per cent. at Nimes. The amount consumed over the whole country was, in 1890, 37,395,000 gallons. The average quantity consumed per head of the population was rather more than a gallon and a half in Paris, fully two gallons in the Somme and the Eure, and three gallons in the Seine Inférieure.

CONVOCATION AND THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

The Committee of Convocation of the University of London, which was appointed some years ago to confer with the Senate as to the reconstitution of the University will, it is understood, frame and circulate a report on the latest scheme before the meeting of Convocation on May 12th. It is to be hoped that graduates of the University will recognise the great importance of this meeting and that the attendance may be full. The opponents of the Senate's scheme have been, in a sense, first in the field by issuing a circular, which members of Convocation received some weeks ago, but the question is eminently one upon which judgment ought to be reserved until all the facts have been studied. The report of the Senate, the report of the Committee of Convocation upon that, and in all probability the draft charter will be forwarded to members of Convocation before May 12th, and it is therefore evident that no complaint can be made that full information has not been supplied.

HEALTH OF TROOPS IN BRITISH BECHUANALAND.

Sir Henry Loch, Governor and High Commissioner, in acknowledging the report of Sir Sidney Shippard, Administrator of British Bechuanaland, for the year ending September 30th, 1890, calls attention to the prevalence of sickness amongst the Border police. There were, he says, 194 cases of fever at Elebe and Madoustie camps during the year, in a force which never reached 200 men, and this proportion of fever cases, he justly observes, "I consider excessive." Sir Henry Loch has given orders that seeds of eucalyptus are to be supplied, to be planted in the neighbourhood of the several camps, and he has wisely recommended that every encouragement should be given to the men to take up gardening and other amusements likely to prevent the lassitude and depression which predispose to disease. The valley of the Limpopo, in which the Border police are serving, is regarded in South Africa as a deadly fever bed at certain seasons, and the most important point of all would therefore seem to be to exercise skill in the selection of sites for camps and townships and of water supplies. A medical officer of health abreast of modern sanitary science would render valuable services in Bechuanaland. It is understood that fever has been again prevalent amongst the troops since the date of the administrative report, and several deaths from dysentery have been reported.

TEIGNMOUTH.

At a meeting of the Teignmouth Local Board, held on Lady Day, the following resolution was, we understand, unanimously adopted: "That, while reappointing Dr. Pigott Medical Officer of Health, the Board regret that his annual report was so worded as to convey a wrong impression to the outside public as to the drainage of the town, which the Board assert is second to none in the kingdom, and trust that in future the report, whilst paying due regard to the facts, be so worded as at least not to prejudice the town." This extremely long and involved sentence has caused us to examine the report in question with peculiar care, and we must confess that on the whole we have risen from the perusal with the impression that the Local Board of Teignmouth is disposed to show more than usual alacrity in acting on the advice of an able and energetic medical officer of health. The resolution above quoted appears to prove, moreover, that the Board is exceedingly sensitive on the point of honour; but it would have been more wisely occupied in resolving to provide an efficient infectious hospital and to spread a knowledge of sanitary requirements among the householders and lodging-house keepers of the town than in passing a resolution which cannot but arouse suspicion, however ill-founded, in the minds of the "outside public."

POPULATION AND HUMIDITY.

The forty-fourth number of the *Census Bulletin*, just issued, is devoted to the results obtained in the last United States census on the above subject. Dr. Porter explains that the relative humidity of the atmosphere is to be understood as meaning the amount of moisture contained in it in proportion to the amount required to saturate it. The amount, of course, varies with the temperature; the higher the temperature the greater the amount of moisture which it is capable of holding in solution. The term is not, therefore, an expression of the absolute amount of moisture. The information is arranged in tabular form, and gives the figures for the censuses o

1870, 1880, and 1890 for purposes of comparison. The table shows that nearly all the population breathe an atmosphere containing 65 to 75 per cent. of its full capacity of moisture; that is, the atmosphere is from two-thirds to three-fourths saturated. In 1890, 57,036,000 out of 62,622,250 were found in this region; in 1880, 46,559,000 out of 50,155,783; and in 1870, 36,273,000 out of 38,558,371. The number of inhabitants living in a drier atmosphere was at each census comparatively trifling, numbering in 1870 less than half a million, and in 1890 less than two millions. In the moister atmosphere were found larger numbers scattered along the Gulf Coast and the shores of Washington and Oregon. The most rapid increase has been found at the top and bottom of the scale, and particularly in the more arid region, where the population has nearly doubled during each of the last two periods.

SLUM-MOTHERS AND LIFE INSURANCE.

In the *Nineteenth Century* for April, Dr. E. Berdoe has a spirited "vindication" of "slum-mothers." "There is no reason to think," he writes, "that the slum-mothers are worse mothers than their more favoured sisters," and he adds some true sentences on the touching devotion so frequently exhibited by the poorest mothers towards their sick children. He pours a fine scorn on those who believe that the system of child life insurance is fraught with danger to this high standard of maternal devotion which he so much and so rightly admires. But, like a good many more people who indulge in the luxury of scorn, he has not been at the pains to understand the position of his imagined opponents. "The bishops, clergymen, coroners, doctors, and other worthy persons" do not "believe that a child-insurer is a probable child-murderer." Such an opinion would carry its absurdity on the face. Insurance companies are not criminal conspiracies for the procuring of murder, but commercial companies trading for profit. Unscrupulous persons take advantage of the facilities for insuring children which the agents of these companies offer somewhat too freely, but this is a very different thing from saying that "a child-insurer is a probable child-murderer," or that every "mother is the holiest thing that lives." Sweeping generalisations of this kind are neither good philosophy nor good poetry. An impartial examination of the facts of human existence proves incontestably that a certain small proportion of parents are utterly careless of their children's welfare and even of their lives, and it is the duty of the State to see that these parents of the worser sort are not tempted to be still more careless. There is but a narrow partition between reckless indifference to childish suffering and actual crime.

INSANITARY "MODEL DWELLINGS."

The report of Mr. D. C. Nicholls and Dr. Edward Seaton on the public inquiry held by them "into the sanitary condition of certain premises in the parish of St. Leonard, Shoreditch," has been issued as a Parliamentary paper. The report recommends that the sanitary staff should be strengthened in order to allow of an extension of the work of subsoil and house drainage. It also recommends the adoption and enforcement of tenement regulations and the institution of systematic house-to-house inspection, and that proceedings should be more frequently taken before magistrates under the Nuisance Removal and other sanitary Acts. The attention of the vestry is further directed to the better drainage, paving, and scavenging of the roads and streets. The most important paragraph in the report, however, is one in which a serious indictment is brought against blocks of model dwellings built on the flat system. "To say that some of these model blocks," the report states, "are built without due regard to sanitary requirements would be a misuse of language. The fact is that they are built in gross violation of the very first principles of sanitation." Special reference is made to dwellings in Vinegar Ground, Shoreditch. They are over 40 feet high and less than 20 feet apart, and contain a large number of separate tenements approached by dark corridors. "The water closets for these dwellings abut on the corridors, and are without direct light or proper ventilation. The dwellings thus approached contain rooms, many of which can never be penetrated by the rays of the sun. These dark, gloomy habitations are, in our opinion, far more likely to become a source of danger to the public health than are even the worst of the dilapidated cottages to which public attention has been drawn by the Mansion House Council."

LEAD POISONING IN LEAD WORKS.

Some very striking evidence of the practical importance of the topic chosen by Dr. Oliver for his Goulstonian Lectures has been recently afforded in Newcastle by a series of deaths from lead poisoning which have been reported in the local press. The *Newcastle Daily Leader*, under the title "Another Death from Lead Poisoning," recently reported the evidence at an inquest held in the Newcastle Workhouse regarding the death of a young woman aged 22 who had been employed in the storehouse of a white lead factory. According to the evidence of the foreman, the deceased had probably only worked in the factory for sixteen days since the beginning of the year. It would seem that she had been ill for a month or so before her death. When admitted into the Workhouse Infirmary on March 17th she was suffering from the effects of chronic lead poisoning. The coroner, according to the report, took a most fatalistic view. "It was," he said, "most painful to inquire continually into the death of young persons brought about by lead poisoning. It only seemed to be a question of time, for sooner or later these women would succumb to lead poisoning." Would it not, however, be wiser to call upon the authorities to take steps to prevent, as far as possible, the occurrence of these cases? We are of course unacquainted with the special circumstances of the factory in which these young women work, but there can be no doubt that a great deal can be done by proper supervision and attention to ventilation and cleanliness to prevent the occurrence of these unfortunate cases.

INEFFICIENT VACCINATION.

The following remarks, taken from the last annual report of Mr. Creswell, the Medical Officer of Health for Saltley, refer to a reprehensible practice which is calculated to place a large number of children in a state of false security against small-pox, and to bring unmerited suspicion on vaccination, when, in after-life, these so-called "vaccinated" individuals contract small-pox. "It will be noticed that small-pox has been altogether absent, and it is to be sincerely hoped that it may continue so, since I have reason to believe that, in course of time, the community will be found to be less and less protected against it, in consequence of the very insufficient character of the vaccination performed by some medical men in the neighbourhood. One mark only, and that a small one, is made on the child's arm; and as the protective effect of such vaccination as this speedily wears out, and as there is, generally speaking, no such thing as voluntary revaccination among the lower and most numerous classes, it may be taken as certain that some day, in the course of a few years, the whole of this districts of the Midlands will experience such an epidemic as has not been observed for a very long time. I drew attention to this last year, and I am sorry to be obliged to say the evil complained of, instead of abating, is rather on the increase, since the ignorant are only too glad to avail themselves of the opportunities given them of evading, as far as possible, the requirements of the Vaccination Acts."

MEDIÆVAL ETON.

Some recent correspondence in the daily press has again drawn attention to the indifferent provision for dealing with cases of illness which obtains in the largest and most famous of England's public schools. Nothing short of adequate provision for the reception, treatment, and—whenever called for—the proper isolation, of infectious cases of illness

can be regarded as at all a satisfactory arrangement. But the general public may be pardoned something more forcible than mere astonishment on learning that, in the great majority of cases, "a sick boy has to do the best he can in his little room, measuring, perhaps, not more than 10 feet by 6 feet, by 7 feet 6 inches high." Such an apartment, it is naïvely admitted, may be quite large enough for a healthy lad, "who is out of it for the greater part of the day;" yet few people would have the courage to recommend it as a suitable room in which to nurse a case of serious and possibly of infectious illness, or would willingly plead guilty to the insanitary ignorance (the adjective might be slightly varied) involved in such a recommendation. Parochial authorities even are finding that it is bad policy to attempt to treat their sick paupers under conditions so unfavourable and so full of risk; for a room of this kind and size cannot possibly be properly ventilated without the certainty of draught, to begin with: and, amid the surroundings of a collection of such "boys' studies," the isolation of an infectious case is, and has been proved abundantly to be, quite unattainable. So that no one is surprised to learn that, under such conditions, the not infrequent result is that, in order to give a boy the chance of getting well, it is necessary to remove him from the school before he is free from infection, and at a risk of injury to his health. We do not for a moment suppose that such a state of things is consonant with either the desires or the usual practice of the medical men who attend the school: and we imagine that it only requires some concerted action amongst the large number of parents interested to prompt the authorities to take effectual measures to remedy this serious blot upon their educational system. Eton, perhaps, suffers somewhat from the divided medical control, which must always be to some extent disadvantageous to a school; but this constitutes no serious objection to the establishment of a properly-equipped hospital in which all serious cases of illness, and of another one in which all cases of infectious disease, could be separately treated in accordance with the recognised rules of modern medicine. Measles has been peculiarly prevalent of late, and especially so in every large school. The disease has also furnished a large number of cases in which serious complications have supervened. Eton has not escaped the incidence of the common epidemic; but the illness will not have been without its advantages if it result in the setting of such "houses" in something like real hygienic order.

EDUCATION IN THRIFT.

Several friendly society matters have recently been pressed on the attention of the Government by members of Parliament. Chief among these is the question of the adoption of some general system of superannuation or old age pensions. With reference to this, the Government—speaking by the Chancellor of the Exchequer seem "disposed to wait for the further development of public opinion." This is a position that can easily be understood on a question involving very large issues and possible legislative novelties—especially under a representative form of Government and with an extended franchise. There is another direction, however, in which a great deal of good might be done in a manner so quiet as to be almost imperceptible. This is by causing the children in the higher standards of the public elementary schools to be taught the plain principles which govern benefit and friendly society work, and, indeed, the whole system of insurance. Divested of technicalities and taught in a familiar fashion, a lad of ordinary intelligence would readily grasp enough to enable him to discriminate between a good or bad society. Unfortunately, it is only too certain that both kinds exist, even under the sanction of registration. Such knowledge would be of real practical service to young men beginning life. It would, in addition, lead to some improvement among the societies. At present the existence of the bad ones depends on a constant supply of uninformed new members; when better information dries up this source they must either reform or die out, and either event would be to the advantage of the nation. Sir W. Hart Dyke has stated on behalf of the Government that the Education Department cannot make this compulsory, but the liberty they possess as to optional subjects leaves school managers full power to include such teaching. Here, then, is an opportunity of locally giving a useful practical turn to education, and at the same time helping to cure some defects in a system which has, on the whole, been extremely beneficial to the population.

CEREBRO-SPINAL MENINGITIS IN THE EASTERN COUNTIES.

A report by Dr. R. Bruce Low on cerebro-spinal meningitis has just been issued by the Medical Department of the Local Government Board. A dozen attacks were heard of in July, 1890, in Oakley, a thinly populated parish on the boundaries of Suffolk and Norfolk. Other cases were heard of in the neighbouring parishes. In all, there was in and around Oakley a group of twenty cases, of which two were fatal. Dr. Low also gives particulars of a case which occurred in August at Essex, and of three cases in Lincolnshire, and refers to some fatal cases of illness which occurred in the Maldon rural district, and were certified as typhoid fever, but which were probably cases of cerebro-spinal fever. There appeared to be nothing to distinguish the sanitary surroundings of persons attacked from those of persons who escaped. They were neither worse fed, clothed, or housed than the others. The wages of the agricultural labourer in Suffolk are low, but in none of the cases was there evidence of insufficiency of food or of clothing, or any facts pointing to the condition known as "general misery," to which some writers have attributed the disease. In general, it may be said that no satisfactory decision has been come to regarding this outbreak, nor has it been found possible to account for the extension (if it occurred) of the disease from the first case to the others. Dr. Low remarks that the disease is known to have been appearing epidemically on the shores of the Mediterranean during 1887 and 1888, but whether the cases which occurred in the east of England last year are connected in any way with the foreign cases there is no evidence to show. He also adds that it is highly probable that cerebro-spinal meningitis is of more frequent occurrence than is generally held, fatal cases being certified probably under the name of "fever," of tuberculous meningitis, or of convulsions, while non-fatal cases may be diagnosed as sunstroke, as "violent cold," or some such ailment.

SURGEON PARKE ON THE ARROW POISON OF THE PIGMIES.

The arrow poison used by the Pigmy race in Central Africa is evidently of a very fatal character, since of all the members of the Stanley Expedition wounded by these arrows at the action of Ava-Sheba only Lieutenant Stairs survived, and his recovery was probably due to the fact that the poison was immediately sucked from the wound. The determination of the composition of the poison and of the nature of the antidote used by the Pigmies appeared, therefore, a matter of importance in the interests of humanity, and Surgeon Parke, after considerable trouble, persuaded a Pigmy woman following the caravan to show him the plants used, and the method of preparing the poison. The specimens obtained and presented to the museum of the Pharmaceutical Society by Surgeon Parke have been examined and partially identified by the curator, Mr. E. M. Holmes, and the whole subject incorporated in a joint paper read before an evening meeting of the above Society on Wednesday, April 8th. Surgeon Parke ascertained that the poison is prepared by pounding together into a paste about two square inches of the bark of a tree very common in the neighbourhood of Fort Bodo, two dozen long green leaves from a herbaceous plant found throughout the forest, three feet of the pinkish shoots of a

thorny creeper, about a dessertspoonful of the scrapings from the green stem of a common branching shrub, and eight small seeds resembling small horse beans in appearance. These quantities yield about a teacupful of a paste of greenish colour, which is stuck on the tops of the arrows and allowed to dry, forming a hard crust like clay, and is said by the Mombuttu to lose its strength after three or four days. From observation of the symptoms exhibited by men wounded by the poisoned arrows, and from experiments upon Lieutenant Stairs's dog, Surgeon Parke arrived at the conclusion that this poison undoubtedly causes tetanus, although he admits that different poisons may be used by different tribes. The bark was at once recognised by Mr. Holmes as that of *Erythrophlæum Guineense* (*Don.*), the so-called sassy bark, which is known to effect general muscular relaxation in animals, and other symptoms exhibited by Lieutenant Stairs's dog. The green leaves are no doubt those of a commelynaceous plant, probably of *Palisota Barteri* (*Benth.*), and plants of this order are not known to possess poisonous properties, although several are used as diuretics. The identification of the thorny creeper offered considerable difficulty, but from the habit of growth and microscopical examination of the stem structure by Dr. Radlkofer, of Munich, Mr. Holmes thinks it may be with certainty assigned to the genus *Combretum*, and that it is either *C. confertum*, *C. grandiflorum*, or a hitherto undescribed species. Comparatively little is known of the physiological action of plants of this natural order; but from a preliminary chemical examination of the specimen by Dr. F. Passmore, the creeper possesses neither alkaloidal nor tannin constituents, though it contains an appreciable quantity of a glucoside. The green stem furnishing the fourth constituent of the arrow poison has been identified as that of a species of *Strychnos*, probably *S. icaja* (*Baill.*), known to be used as an arrow poison in the Gamboon, and said by various authorities to contain strychnine, brucine, and two unidentified alkaloids, the one a convulsant and the other a narcotic, so that the tetanic symptoms observed may be attributed to this source. The seeds agree perfectly in character with those of *Tephrosia Vogelii*, frequently used in Africa as a fish poison, and said to possess narcotic properties. With regard to antidotes, besides a white powder proved to consist of wood ashes, the natives make use of the leaves of three plants and the young bark of one of the plants. The process of identification has not been so successful here as with the poison, only one of the leaves being referred to the *Unonaceæ*, an order whose members are chiefly remarkable for aromatic and stimulant properties. This is of less importance since, as it is obvious that as in this arrow poison the two chief active ingredients are erythrophloein and strychnine, poisons the action of which is known, therapeutics will be able to suggest a reliable antidote for travellers to use when passing through the great Central African forest.

CLINICAL ART.

Visitors to the Paris Salon are only too familiar with a certain phase of Impressionist art, which depicts medical men carrying on their every-day work, and even follows the hand of the surgeon into a variety of practical details ranging from vaccination to ovariotomy. Our own English school does not lend itself so readily to this unpleasant realism, but every now and then we find a peep taken into the hospital ward or the sick room, and some little idyll of domestic medicine worked out with a quiet pathos which is apt to call into sudden activity the functions of the lachrymal gland. Many of us remember John Faed's "From Dawn to Sunset," and "Tired Out"; and Fildes's stalwart navvy gazing with speechless misery at his dead child can hardly be forgotten by those who have seen the impressive work which now finds a somewhat inappropriate resting-place at the Holloway College. This year the brilliant painter of bright scenes returns to his early love, and gives us another touching little domestic drama on the stage of humble real life. A sick child lies on a hastily improvised bed in the middle of a poorly-furnished room, and the doctor, before he disturbs its half-comatose sleep for further examination, takes a long and keen diagnostic glance at the pale face and limp-lying arms. There are obviously difficulties in the case, and he is evidently puzzled, whilst the uncertainty of the situation is reflected by the father, who, standing in the background beside his despairing wife, eyes the arbiter of his child's destiny with an anxious look, and waits patiently for the verdict. The lamp-light throws a ruddy glow over the principal actor in the scene, and through the eastward window we see the chill light of the early morning just beginning to make itself felt. When visiting the studio our representative met several physicians who were speculating with keen professional interest as to the intentions of the artist. What is the matter with the patient? Is the prognosis hopeful or hopeless?—and on these points a wholesome difference of opinion existed. One pronounced for tuberculous meningitis, and a necessary fatal result. Another, relying on the absence of certain diagnostic symptoms, decided in favour of fever, and a favourable prognosis. Mr. Fildes, on being appealed to, wisely declined to give any opinion of his own. The picture is simply called "The Doctor," and he leaves those who look at it to puzzle out its meaning for themselves; and if one object of art is to stimulate thought and encourage mental speculation, then success has been perfectly attained, and the pathetic force of this masterly work will combine with the rich and harmonious colouring and the perfection of complete yet unobtrusive detail to render it one of the most attractive pictures of the coming Academy. It will be good news for the art-loving world to hear that it has been bought by Mr. Tate, and that we may therefore hope to find it included in the fine collection which he has so generously presented to the nation. By a curious coincidence Mr. Dicksee has this year worked on very much the same lines as Mr. Fildes. Under the name of "The Crisis," he represents a sick girl sleeping that slumber which may end in the more permanent sleep of death, or lead on to the joyful awakening into convalescence. Worn out by long watching the anxious father fixes his eyes on his daughter's face, and waits for Nature to say the word which will fill him with joy or sorrow. There is something very fine about the blended look of half-puzzled expectation mixed with a kind of hopeful resignation, which fills the eyes and shades the brow of the impressive father's head, which rests on and is partly hidden by the thin hand. And again we begin to try and look into the future. But it is very difficult to say how things are to go in this case. The patient is thin and worn and thoroughly exhausted, but sleep may do much for her, and "the crisis" may be past when she wakes. As the visitor turns away from the canvas he cannot help recalling a well-worn quotation from Hood:

> We thought her dying when she slept
> And sleeping when she died.

HYPNOTISM IN AMERICA.

At a meeting of the New York Medico-Legal Society on February 11th, an animated discussion took place on the report of a special committee appointed to study the question of hypnotism. The points submitted for consideration were the following: Is hypnosis a disease? Is hypnotism attended with danger to the subject? Should hypnotism be used on criminals in an inquisitorial way? Should the Penal Code be amended, and the rules of evidence be changed to admit hypnotism as an element in court proceedings? Dr. E. P. Thwing, who opened the debate, maintained that hypnosis was not as a rule dangerous to the subject. He had himself made about 150 experiments without any bad results. He had, however, heard of cases in which serious consequences had followed the abuse of hypnotism. He considered that the employment of hypnotism in courts of law in order to get accused persons to incriminate themselves would be both improper and illegal. A letter from Professor William James,

of Harvard, was read, in which the opinion was expressed that it would be undesirable to have legal rules laid down for the regulation of hypnotic experiments when conducted by scientific men of good professional standing. Dr. Charles H. Hughes, of St. Louis, thought public exhibitions of hypnotism should be prohibited by law. Hypnosis, according to him, was an abnormal function of the brain, and the practice of inducing it should not be encouraged when the subjects were persons who were very impressionable. Professor G. Trumball Ladd, of Chicago, was of opinion that for the time being hypnotism should be left in the control of science. The law should, however, prohibit public exhibitions of hypnotic subjects, and should prevent the practice of hypnotism by incompetent persons. Among those who took part in the discussion was Mr. Julian Hawthorne, well known as an author in his own right, and better still as the son of the author of *The Scarlet Letter*. He propounded the remarkable theory that on certain occasions individuals became "self-hypnotised," and the greatest achievements of orators, actors, and poets were sometimes performed in this condition. "Self-hypnotised" is good, and will probably become popular as an excuse for all sorts of backslidings, from petty larceny to murder. It is the *fin de siècle* equivalent of the defence which used to pass current in a less sceptical age—"The Devil tempted me." We freely admit the hypnotic power of many orators and poets; as regards the former, the palm must unhesitatingly be given to performers on the "drum ecclesiastic;" but as to the latter, opinions may be divided. The late Sir Henry Hollan l said he found the sonnet in any language act *cito, tute, et jucunde* beyond any other form of versification; we ourselves are rather inclined to give the preference to the epic.

THE CONSUMPTION OF CHLORODYNE AND OTHER NARCOTICS.

THE Home Secretary, in reply to a question recently put by Mr. S. Smith, advised that any representation as to the expediency of classing chlorodyne with other narcotics, and placing the same restrictions upon its sale, should be addressed to the Pharmaceutical Society, as the Council of that body is empowered by Section 2 of the Pharmacy Act, 1868, to make additions to the poisons in Schedule A of that Act, subject to the approval of the Privy Council. Mr. Smith does not appear to have acted upon this advice, nor could the difficulty be overcome so easily as suggested in Mr. Matthews's answer. In the first place "chlorodyne" is not an article of definite composition; the name is applied to preparations manufactured from different formulæ by different makers. Even if it were attempted to include a group of preparations in the poison schedule under this loose designation, the restriction would not apply to the sale of the same article or articles under a changed name. On the other hand, it may be remembered that, in an important prosecution under the Pharmacy Act last year, Mr. Gill, who appeared on behalf of the Public Prosecutor, expressed the readiness of the Treasury to take proceedings in any instance brought under its notice of a person selling a proprietary medicine containing poison, and not so labelled. The prosecution referred to—in which the defendant was charged with and convicted of having sold three bottles of cough mixture, containing in each bottle two grains of acetate of morphine, the bottle not being labelled with a poison label in compliance with the seventeenth section of the Pharmacy Act, 1868—was undertaken with the avowed object "to clear up the misapprehensions in the minds of the public and those who are owners of proprietary and patent medicines, that neither the face of the stamp upon the bottle, nor the fact of their having a patent, would protect them if they sell an article which contains a poison, unless they comply with the provisions of the seventeenth section." Probably there would not be much difficulty in demonstrating the presence of a scheduled poison in one of the preparations sold under the name "chlorodyne," and then the Treasury might be called upon to fulfil its promise. A simpler way would be to make it imperative upon the makers of nostrums to declare the presence of a scheduled poison when it enters into the composition of the nostrum. This would tend to confine the dealing in such articles to qualified hands, and the way would be thus cleared for throwing upon them a responsibility as to the quantity of narcotics that may be supplied without a medical order. It is reported that a chemist in North Kensington has recently assured a coroner's jury that one of his customers spends 10s. a week in laudanum to drink, and that another customer takes as much as two ounces of the drug at a sitting.

LIVING MICRO-ORGANISMS IN TUBERCULIN.

PROFESSOR NIKOLAUS WISSOZKY, President of the Committee appointed by the Medical Faculty of the University of Kasan to study Koch's method of treating tuberculosis, recently announced that in two bottles of tuberculin received from Berlin—one from Professor Guttmann, and the other from Dr. Libbertz—living micro-organisms were found. In view of this discovery the committee decided not to go on with the injections, but to test the fluid on animals. In a third bottle received more recently bacteriological examination also revealed the presence of living organisms, among which were staphylococcus pyogenes aureus and albus. Dr. Libbertz's explanation of the occurrence was given by our Berlin Correspondent in the BRITISH MEDICAL JOURNAL of March 21st.

LADY APOTHECARIES.

THE tyrant, man, is slowly but surely being driven behind the last breastworks of his professional monopolies, and woman is everywhere more or less triumphantly asserting her "rights." Not content with prescribing drugs she now insists on compounding them. A *projet de loi* has just passed the French Chamber of Deputies admitting properly qualified women to the practice of pharmacy. Frenchmen are nothing if not chivalrous, and it is therefore somewhat surprising to find them considerably behind other nations in this respect. In Norway women have for the last six years been allowed to study pharmacy and to manage and own drug shops. About ten women are at present employed in pharmaceutical establishments either as pupils or assistants, but not one of them has presented herself for the final examination. In Denmark only two women have, in the course of many years, taken up pharmacy, and neither of them has "qualified." In Finland there are seven female apothecaries, none of of whom, however, have passed the final examination; indeed, since 1884 no lady has applied for admission. In Russia ladies have, since the beginning of last year, been entitled to become pharmacists, and nine having completed the requisite preparatory studies at Zürich, have passed the Russian examination. Courses of instruction in pharmacy for women, have already, as we stated a week or two ago, been established in one of the St. Petersburg hospitals, from the dispensary of which the fair pillmakers have already succeeded in ousting the rival sex. The facts which we have mentioned seem to show that the strong-minded sisterhood have not the devouring enthusiasm for pharmacy which they display for medicine, though it is an occupation for which they are in some respects especially well fitted; this indifference may perhaps be due, at least in some measure, to the comparatively little opposition they have met with in the attack on that particular male citadel.

SCOTLAND.

THE Senatus Academicus of the University of Edinburgh have unanimously appointed Professor Butcher their representative in the University Court, in succession to Professor Campbell Fraser, who has resigned office.

SCOTTISH UNIVERSITIES COMMISSION.

The fifty-fifth meeting of the Scottish Universities Commission was held on April 1st, when evidence with regard to graduation in science was heard from Professors Young and Bower, of the University of Glasgow. The fifty-sixth meeting was held on April 2nd, when evidence was heard from Professor Armstrong with regard to the necessity for instituting a Faculty of Applied Science in the University of Edinburgh.

LORD DUFFERIN AT ST. ANDREWS.

The Marquis of Dufferin and Ava gave a brilliant address as Lord Rector of St. Andrews University on April 6th. He devoted the greater part of his time to the discussion of such subjects as the methods of learning ancient and modern languages, literary style, and the art of public speaking. Many of his observations showed great practical insight and will be not less valuable to members of the medical profession than to those of other learned professions, which are more often called upon to address public audiences. In the early part of his address he devoted some telling paragraphs to the necessity of attention to health from the earliest days of manhood. He especially condemned the practice of some conscientious students of denying themselves a reasonable amount of exercise in order to devote more time to the study of books. "Our mental functions, our memories, our attention, our power of continuous application," he truly said, "are even more dependent for vigour and vitality on the general condition of our health than is the play of our muscles."

ROWDYISM AT ABERDEEN UNIVERSITY.

A correspondent writes: Amongst more than the ordinary capping tumult and frivolity, the twenty-nine new graduates received the degrees of M.B. and C.M. in the sight of their less fortunate companions on April 3rd. It is a pity that on these public occasions the wit and humour of the learned youth should be as small as their reverence for their teachers and friends.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

The monthly meeting of the Society was held on April 2nd in the Society's Hall, the President, Dr. Garden, in the chair. Dr. McKenzie Davidson called attention to the value of fluorescin in ophthalmic practice in cases of corneal ulceration or abrasion. He also exhibited a piece of steel removed from the lens with the electro-magnet, and showed the patient. Dr. Williamson exhibited a cast from a case of deficient dentition. Dr. MacGregor read notes on an interesting case of pelvic hæmatocele. Dr. Gordon showed a case of head injury in which he had operated and elevated the depressed fragments of the skull some eight months ago. Dr. Rose showed microscopic specimens of a case of acute catarrhal pneumonia, and Dr. Edmond gave an exhibition of a capital cast of a case of primary cancer of the body of the stomach.

THE ORPHAN HOMES OF SCOTLAND.

The remarkable progress made in the West of Scotland by the rescue work among children has frequently been noticed in the British Medical Journal. Towards the end of last year, we stated that in twenty years £200,000 nearly had been voluntarily offered Mr. Quarrier to carry on his efforts for the rescue of destitute children, and that the organisation had now at Bridge of Weir a series of thirty-four buildings, embracing a large number of cottage homes, a church, a school, a training ship inland, workshops, etc., and that Mr. Quarrier was appealing for more funds to build additional cottages and accommodation of other kinds. It is pleasing to learn that his appeal has not been in vain. Within the last few weeks the money for two new cottage homes, amounting to £3,200, has been sent to him, besides £1,300 to enable him to send a party of 130 boys out to Canada. In twenty years, 3,000 rescued children have been sent out to Canada, and placed in suitable homes, and of all that number the failures have not amounted to 1 per cent. Mr. Quarrier's early ambition was to rescue one child daily; he has now reached the stage of rescuing two daily, and to secure that he needs accommodation for, and the means of maintaining, 1,400 annually.

SALARIES OF PUBLIC HEALTH OFFICERS.

The East Lothian County Council have appointed Dr. Caverhill, of Edinburgh, to be the medical officer for the county at a salary of £105. The appointment is made with absolute disregard of the recent circular of the Scottish Board of Supervision and the Secretary for Scotland, which set forth that the drift of the Local Government Act clearly indicated that the county medical officer ought to be paid an adequate salary and ought not to engage in the duties of general practice. This is the same marvellous county council which recently, as reported in the Journal, appointed the chief constable of the county to be the county sanitary inspector, at the handsome salary of £10. It is fair to add that a sensible minority of the council protested against this further appointment of a county medical officer on such terms and under such conditions. It will be interesting to note the attitude of the Board of Supervision towards this appointment.

TYPHUS FEVER AND INHUMANITY IN MULL.

Some cases of typhus fever have occurred during the past few weeks in the Ross of Mull. One case occurred at Kinlock, and as no one could be got there to attend the patient, a man named Mitchell, living at Bunessan with his wife and granddaughter, was persuaded by the sanitary inspector to go to Kinloch to perform this duty. On his return to Bunessan, Mitchell himself sickened and died. Immediately on his illness being declared a regular boycott was instituted. None could be got to render service to his household or hold any intercourse with them. When he died none could be persuaded to undertake to prepare him for burial, even the sanitary inspector sharing in the panic. In the end Mitchell's body was coffined by the doctor, assisted by a travelling pedlar. After the death the people still refused the slightest assistance to the widow and grandchild, including in their boycott a daughter who had, after the funeral, arrived from Glasgow. The three women found it therefore necessary to leave the place, but they were refused passage by steamer, and they were refused a conveyance for the road. They were consequently compelled to set out on foot for Craignure, a distance of 32 miles, *en route* for Oban. But on the road they were everywhere refused assistance and shelter, and on reaching Craignure admission to the inn was denied them, and they had to get what shelter was possible from an old boat turned upside down on the shore. From Tuesday, when they began their journey, till Friday they had no shelter whatever, and the old boat was the only shelter from Friday till Saturday morning, when an outhouse was put at their disposal. Any food obtained on the way was laid on the road for them, but they were not allowed to approach near a house for it. On Saturday evening friends arrived with a boat to ferry them over to Oban. The poor pedlar was similarly treated, and after some search was found dead from exposure in a gravel pit. The sanitary inspector, in spite of peremptory orders, refused to bury him, and an inspector had to be sent from Oban to do so. The full details of the behaviour of the people of Mull in these cases exhibit an amount of ignorance and inhumanity that one would not expect to find except among a barbarous or semi-barbarous people.

A PORTABLE DUST COUNTER.

At a recent meeting of the Philosophical Society of Glasgow an extremely ingenious little instrument for counting the particles of dust in any atmosphere, devised by Mr. John Aitken, was shown. It is constructed on the principle that moisture requires for its deposition some nucleus, and that such is afforded by the atmospheric dust. Some two years

ago Mr. Aitken devised an apparatus for counting dust particles, based on this fact, which was described in the British Medical Journal at the time. It consisted of a large globe of known capacity, inverted on a stand. Connected with it was a pump for exhausting the air, with arrangements for the admission of dust-free or dust-laden air in measured quantities. Pure water was contained in the globe, in small quantity, to maintain a moist atmosphere. Fixed in the globe, in a position enabling it to be viewed by a lens, was a plate of mica, divided into minute squares of equal size, whose proportion to the capacity of the globe was known. If the globe were dust-free and partially exhausted, and if then a measured quantity of dusty air were admitted, moisture was deposited, and the droplets falling on the squares could be counted. It was then only necessary to get an average of drops by counting those falling on several squares, and then by calculation from the size of the squares, the capacity of the globe, and the quantity of air admitted, the number of dust particles in the atmosphere could be estimated. The portable dust counter is a miniature of this larger apparatus, so small as to be easily carried in the pocket. It consists of a small brass-bound globe, uncovered above, where it is capped by a lens, and uncovered below to permit of being illuminated by a small reflector. The apparatus is held by a stem, which is hollow, and in which a small exhaust pump is fitted. Within the globe is a plate divided into squares, and minute stop-cocks give communication to the globe, and are arranged to admit a certain quantity of air. In a few minutes the number of dust particles in any atmosphere can be easily estimated by this apparatus.

IRELAND.

A fresh case of small-pox is reported in Belfast. The case, like so many of the preceding ones, originated in one of the police barracks.

APPOINTMENTS TO HOSPITALS IN DUBLIN.

Mr. J. Dallas Pratt, F.R.C.S.I., has been elected to the position of Surgeon in Jervis Street Hospital. The vacancy caused by the resignation of Mr. Thomas Myles will be filled this month, and amongst the candidates mentioned are Dr. Burgess and Dr. Louis Byrne. Mr. Robert L. Swan, F.R.C.S., surgeon to the National Orthopædic Hospital, has been appointed surgeon to Steevens's Hospital in room of Mr. William Colles.

INFECTIOUS DISEASES ACT IN DUBLIN.

At the Dublin Corporation, on Monday, the report of the Public Health Committee on the subject of the Infectious Diseases Act, was considered. The report pointed out the importance of the clause empowering the detention in hospital of an infected person who was without proper lodging or accommodation. The Corporation could in future provide, free of charge, temporary shelter or house accommodation, with any necessary attendants, for the members of any family in which any infectious disease appeared, compelled to leave their dwellings for the purposes of enabling disinfection to be carried out. After a brief discussion the Corporation decided to adopt the Act.

PROFESSOR GAIRDNER'S VISIT TO BELFAST.

Dr. Gairdner will arrive in Belfast on April 21st. On the following day (Wednesday) he will deliver an address to the Ulster Medical Society. The meeting will be held in the Museum, and it is expected that it will be attended not only by the members of the Society, but by a large number of the profession in Belfast and neighbouring counties. On the same evening Professor Gairdner will be entertained at dinner by the Ulster Medical Society. The dinner will be held in Thompson's Restaurant, Donegal Place, Belfast, at 7.30 p.m. The Mayor of Belfast and the President of the Queen's College are among the invited guests.

THE PROPOSED AMALGAMATION OF THE CORK HOSPITALS.

The Cork Corporation having requested the Law and Finance Committee to report on the prospect of the amalgamation of the city hospitals, with a view to a more economical management, deputations from the three institutions—the North and South Infirmaries and the Fever Hospital—had a meeting recently to discuss the subject. One of the trustees of the North Infirmary stated that it would be a great mistake to close the South Infirmary, as both it and the North Infirmary, situated as they were in the city, would be necessary. If there was to be a concentration of the hospitals, it should properly be in the centre of the city, which, however, was not practicable, as there was not a suitable site; and, secondly, they would not have the capital to support it. With regard to Lady Combermere's legacy of £25,000, the trustees of the North Infirmary proposed to expend a certain sum on buildings, and to apply to the Court to have the residue of that sum invested in the funds for the maintenance of the wards. Other speakers followed, and the matter having been fully discussed, the following resolution was adopted: "That having heard the views of the representatives of the various hospitals, this Committee are of opinion that it is neither desirable nor practicable to amalgamate the North and South Infirmaries in one general hospital."

ULSTER MEDICAL SOCIETY.

The usual monthly meeting of this Society was held on April 3rd, when there was a large attendance. Dr. O'Neill read the notes of eight cases of fractured patella treated by various methods. He spoke highly of Thomas's splint. Professor Sinclair made some remarks upon the paper. Dr. Byers then read a paper on puerperal fever. Evidence was given in support of the view that scarlatina, when it attacked a lying-in woman, bred true, causing the same disease, and not puerperal fever, the so-called puerperal scarlatina being probably septicæmia with a red rash. The ordinary form of cutaneous erysipelas had not any relation to puerperal fever, but the phlegmonous variety, being itself a form of septicæmia, might give rise to the disease. Puerperal fever, he thought, had no analogy with epidemics, and neither soil, season, nor situation had anything to do directly in its causation. Dr. Byers regarded it as a traumatic or wound fever, due to the entrance from without of micro-organisms, and in its manifestations it might take the form of a sapræmia, a septicæmia, or a pyæmia. The nature of the bacteria was discussed, and it was shown that modern research and experience were against the "autogenetic," or self-infective, theory, the poison coming from without. The brilliant results obtained by antiseptic precautions in lying-in hospitals were mentioned. The routine use of douches was not considered necessary in private practice, and the importance of abdominal palpation during labour, as rendering vaginal examinations less frequent, was pointed out. Several objections which might be made to the use of antiseptics in private practice were then stated, and it was shown how easily the method might be carried out with very little trouble or expense. Early local treatment was regarded as of the utmost importance. The value of disinfecting the genital tract, the use of iodoform crayons, the practice of curetting, and the question of abdominal section in puerperal peritonitis were discussed. Owing to the lateness of the hour, the discussion on Dr. Byers's paper was adjourned to the next meeting.

At the meeting of the Standing Committee on Trade, on April 9th, Clauses 7 and 8 of the Government Factory Bill were passed.

FACTORY LEGISLATION.

Trinity College, Dublin.

The following petition has been presented by Trinity College, Dublin:

"To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.

"The humble petition of the Provost, Fellows, and Scholars of the College of the Holy and Undivided Trinity of Queen Elizabeth, near Dublin, under their corporate seal,

"Humbly showeth—

"That there is a Bill before your honourable House entitled a 'Bill to amend the law relating to Factories and Workshops.'

"The 19th Section of said Bill provides that certificates of fitness for employment of children and young persons in factories and workshops shall not be required in pursuance of Section 27 of 'the Factory and Workshops Act, 1878,' in said Bill described as the principal Act.

"Your petitioners believe that the effect of the provisions of said Act, which requires medical certificates of the fitness for work of children and young persons under the age of 16 has been of incalculable service, inasmuch as your petitioners have been informed and believe that in Lancashire and Yorkshire it has been found that over 1,300 children per annum have been returned as unfit for work.

"Your petitioners respectfully submit to the consideration of your honourable House that to repeal the existing law, which requires medical certificates of fitness, would be a retrograde step in factory legislation and calculated ultimately to lead to disastrous results to the community at large.

"That the existing law has proved to be a protection to children against being worked beyond their strength in factories and driven to work by needy parents when entirely unfit physically for the employment they might be forced into.

"Your petitioners therefore humbly pray that your honourable House will not pass the 19th Section of said Bill into law."

Association of Certifying Surgeons.

A memorandum has been issued by the Association of Certifying Surgeons containing such statistics as it has been possible to obtain with regard to the number of refusals of children brought up to be certified as fit for employment in factories. Nineteen certifying surgeons in various manufacturing towns in England, Scotland and Ireland, who have kept private records of the number of cases refused, show that they alone have refused on the average 1,313 cases annually. It has, however, been an exception for certifying surgeons to keep any such records, it being no part of their duty to do so. There is no record kept in factories of refusals, so that statistics collected and submitted by employers and cotton spinning associations cannot be of any value. Further, many children are presented to the surgeon and refused, whose names are never entered on the register. The causes for which these rejections have taken place are extremely various. Apart from the ordinary infectious diseases and such contagious maladies as itch and ringworm, we find entries of paralysis, epilepsy, chorea and imbecility among nervous disorders, and of phthisis, heart disease, rheumatism, deformities, spinal injuries, spinal abscess, hip-joint disease, and of various eye disorders such as corneal ulcer, cataract and ophthalmia. The memorandum contains a list of cases rejected recently which it is unnecessary to reproduce here as they belong to one or other of the above mentioned classes, or are further examples of serious disorders mentioned in previous lists of rejected cases.

Dr. W. H. Barr, of Bury, forwards an interesting list of diseases noted by him in the register of certain factories during the year 1888, which was selected as a fair average year, uninfluenced by any stimulus of recent events. His list may be taken as fairly typical:—Ophthalmia, 6 cases; lupoid ulcers covering face, 1; ulcerated sore throat, 3; eczema, 8; feverishness (temperature over 100° F.), 4; chlorosis, 1; blindness right and defective left eye, 1; cataract, 2; disease of eyelids, 4; measles, 1; scarlatina, 1; whooping-cough, 2; diseased bone of spine, 2; general debility (excessive), 1; hip-joint disease, 2; cripple (allowed to work seated), 1; phthisis, 1; deaf mute, 1; sloughing ulcer of foot, 1; peripheral neuritis, 1. In a few instances where accurate note has been kept the proportion of refusals to presentations has varied from 5 to 15 per cent.

Dr. James Holmes has forwarded the following diary of cases refused at the dates mentioned:—

March 5th. Boy—working under age.

March 6th. Boy—tinea tarsi, with loss of many eyelashes. Passed, but to be again seen in two months; in the interval to attend Manchester Royal Eye Hospital. Girl—head one mass of eczema; hair matted together and swarming with lice. Refused.

March 9th. Girl—contagious disease of skin. Refused.

March 10th. Boy—heart disease. Passed for special work only.

March 11th. Girl—commencing tinea tarsi. To be treated and kept under observation.

March 16th. Boy—severe inflammation of eye; working in dye works. Refused.

March 17th. Girl (1)—heart disease. Passed for suitable work only. Girl (2)—slightly inflamed throat; being neglected. Passed, but to be presented again next visit; if not better, will be discharged until recovered.

Dr. Emrys-Jones, Fallowfield, Manchester, notes that on March 19th he came across the three following cases, which are examples of disorders of the eye among children brought up to be passed as fit for work:

1. Harry A., aged 16, right eye lost some time ago through injury, now in a highly irritable state. His left eye commencing sympathetic irritation. Sent at once to Eye Hospital for enucleation of right, with a view to saving the left if possible.

2. Eben. B., had a large chip on deep layers of cornea and iritis. Eye (right) in a very bad state. Totally unfit for work. Sent to hopital.

3. Lucy H., aged 14. Right eye, recent ulcers of cornea and opacities. Left eye, several opacities, vision very imperfect. Sent for treatment and refused.

Death-rate among Children Employed in Cotton Factories.

Our attention has been called to some tables contained in the annual report of the medical officer of health for Blackburn (Dr. Sidney Barwise), for 1889. The facts brought out are shown below, the total number of deaths above the age of 10 years in each class being taken at 100. The percentages in the various classes at the ages of 10 to 25 are as follows:

Salaried class	5.6
Shopkeepers	9.6
Journeymen	9.8
Labourers	6.8
Cotton operatives	20.97
Operatives, other than cotton	10.5

These figures show in a striking manner the special dangers to health involved in the cotton trade, and ought certainly to act as a warning to our legislators before withdrawing the protection which the present law affords to young persons beginning to follow this dangerous occupation.

Manchester Medico-Ethical Association.

The following instruction has been presented to the Right Honourable Chairman and Members of the Standing Committee on Trade:

Government Factory and Workshops Bill, 1891.

Gentlemen,—The undersigned, representing the Manchester Medico-Ethical Association, desire to present to your honourable Committee a copy of resolutions passed by the Parliamentary Subcommittee of that Association on March 17th, 1891, and ask for their consideration in discussing the clause therein referred to.

1. That in Clause 18 of the above Bill the words "without a medical certificate of fitness" be added after the word "child."

2. That strong opposition be offered to the abolition of the office of certifying surgeon, as proposed in Clause 19 of the above Bill.

3. That all examinations for certificates of fitness be at the works, so that the certifying surgeon shall be better able to judge of the probable effect of the work at which the child is to be employed.

(Signed) H. Ashby, M.D., President.
A. Wahltuch, M.D., Chairman.
F. Collins, M.D., } Honorary
F. M. Pierce, M.D., } Secretaries.

March 17th, 1891.

Half-timers.

The following letter has been forwarded to members of the Standing Committee on Trade:—

Leeds, April 7th, 1891. Dear Sir,—We have been asked by a member of the Standing Committee on Trade of the House of Commons to express our opinion as to the desirability of raising the lowest age limit of half-time workers in factories to 11, or even 12 years. Our opinion is that the physical welfare of half-time workers does not demand any alteration of existing arrangements. We firmly believe, however, that the present Board School system of education places a premium on intellectual as opposed to physical development. A child, 13 years old, who has passed the fourth standard, is permitted to work full time, whilst one who has not is allowed to work half-days only. As a natural consequence, we have frequently brought before us stunted specimens of humanity, of high intellectual but of low physical calibre. The dullards are indeed the stronger. It is precisely the precocious children of both sexes, from 13 years upwards, who require professional judgment, not to refuse them employment, but to moderate it in quantity and in kind, according to their needs. If this supervision ceases, flat feet, crooked limbs, and spinal curvature will be much more in evidence than they are at present. What can anyone without professional training know about the early stages of physical degeneration, or about the ills of puberty, and the grave, yet insidious, deviations from health which are apt to occur about that time?—a period, indeed, when external growth and internal development are so active, and when overstrain leads but too often to lifelong deformity, or to permanent health deterioration. We beg, therefore, to press upon your attention our decided conviction that "young persons" (so-called), 13 to 16 years old, demanding full time labour certificates need our professional consideration more even than half-time workers, whose labour is light and of short duration.—We are, dear Sir, yours truly,

Alfred Rickards,
William Hall,
John A. Nunneley,
Charles J. Wright,
} Certifying Surgeons for the Leeds District.

THE GENERAL PRACTITIONERS' UNION.

At a meeting of the Committee on Hospital Management, held on April 6th, it was resolved to send a circular to the general practitioners residing in the metropolitan district, inviting replies to the following questions:—

1. It is within your knowledge that hospitals and public dispensaries are abused? State particulars as to cases. No need to disclose names and addresses of patients.
2. Do you know of any cases where the spread of infectious or contagious diseases can be traced to the out-patient departments of hospitals or public dispensaries?
3. Is it not your opinion that the special departments of the general hospitals should be so extended and supported as to render special hospitals unnecessary?
4. Do you consider any kind of special hospital desirable? If so, which?
5. Do you approve of the paying or part-paying system in the general and special hospitals or public dispensaries? If you do, or if you do not, state your reasons.
6. Do you approve of a central board to supervise the existing charities and the licensing of new ones?
7. Is it not your opinion that public hospitals and dispensaries should have the power to recover all expenses incurred for treatment of patients who have obtained admission to hospitals under false pretences?
8. Do you think that the number of out-patients seen per day should be limited?
9. What further check would you impose upon the admission of out- and casualty patients?
10. Is it your opinion that the larger field which exists in the Poor-law infirmaries and dispensaries for the instruction of medical students should be utilised for their curriculum, more especially during the fifth year of study?

The Committee will feel obliged if any medical man, in a position to furnish information respecting the above, will communicate with the Honorary Secretary, 29, Threadneedle Street, E.C.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 15th day of April next, at 2 o'clock in the afternoon.

The following Committees will also meet:—

Tuesday, April 14th, 1891.—3.30 p.m. Branch Organisation.—4.30 p.m. Premises Committee. 5.0 p.m. Therapeutic Committee.—5.30 p.m. Trust Funds Committee.—*Wednesday, April 15th, 1891.*—11.30 a.m. Journal and Finance Committee.

April, 1891. Francis Fowke, *General Secretary.*

The President of the Council has returned from India, and he desires to express to the members who have addressed letters to him his regret that, through an inadvertence, a notice of his intended absence was not inserted in the British Medical Journal.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

Meetings of the Council will be held on April 15th, July 8th, and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, March 26th, June 18th, and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

South Wales and Monmouthshire Branch.—The next meeting will be held at Pontypridd on Wednesday, April 15th. Mr. Emil Behnke will give an address on the Nature and Treatment of Stammering and Stuttering. Members desiring to read papers, etc., are requested to send titles to Dr. Sheen, Cardiff, before March 30th.—A. Sheen, M.D., Cardiff; D. Arthur Davies M.B., Swansea, Honorary Secretaries.

Thames Valley Branch.—The next meeting will be held at the Talbot Hotel, Richmond, on Wednesday evening, April 15th. A paper will be read by R. Marcus Gunn, M.B., on Eye Symptoms in their Bearing on General Medicine. Members willing to read papers or contribute cases are requested to communicate with the Honorary Secretary, Charles C. Scott, St. Margaret's, Twickenham.

Oxford and District Branch.—The next meeting will be held on Friday, April 24th, in the Radcliffe Infirmary, Oxford, at 3.15 o'clock in the afternoon. Gentlemen are requested to give notice of papers, cases, etc., to W. Lewis Morgan, the Honorary Secretary, 42, Broad Street Oxford, on or before Friday, April 10th.

South-Eastern Branch: West Kent District.—The next meeting of this District will take place on Thursday, May 28th, at Gravesend, Mr. O. R. Richmond in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, Mr. A. W. Nankivell, St. Bartholomew's Hospital, Rochester not later than May 2nd, 1891. Further particulars will be duly announced

Midland Branch: Lincolnshire District.—A meeting will be held at Louth on Thursday, April 16th. Members desirous of reading papers, exhibiting cases, etc., are requested to communicate, before Monday April 6th, with W. A. Carline, M.D., Honorary Secretary.

Midland Branch: Leicestershire District.—A meeting of the above district will be held in the Board Room, Leicester Infirmary, on Friday, April 24th, at 3.30 p.m. The following papers, etc., are already promised: Mr. Marriott will show a Case of Innominate Aneurysm Cured by Simultaneous Ligature of the Subclavian and Carotid Arteries. Mr. Bond: On Some Points in the Operation for Ruptured Perinæum. Mr. Bond will also show a New Form of Tracheotomy Tube, with Patient. Dr. Pope: Pneumothorax from Rupture of an Air Cell in an Emphysematous Lung. Dr. Pope will also show Cases of Lupus under Treatment by Koch's Tuberculin. Several pathological exhibits, instruments, etc., will be shown. Members wishing to read papers or show specimens are desired to communicate with the Honorary Secretary, Dr. Frank M. Pope, Campbell House, Leicester. For further particulars see advertisement in Journal.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting will be held, by the kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, April 16th, at 8.30 p.m. Dr. Stephen Mackenzie will show patients illustrating various interesting forms of skin diseases. Visitors will be welcomed.—J. W. Hunt, 101, Queen's Road, N.E., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting will be held (by kind permission of the Treasurer) in the Court Room of St. Thomas's Hospital (entrance from Westminster Bridge Road), at 8.30 P.M., on Wednesday, April 15th. A discussion on the Koch method of treatment for tuberculosis will be opened by Dr. Bristowe, F.R.S., Senior Physician to St. Thomas's Hospital. Cases which have been treated in St. Thomas's Hospital will be reported on and exhibited by Dr. Hawkins and Dr. Robinson. All practitioners, whether members of the Association or not, will be heartily welcomed.—HECTOR W. G. MACKENZIE, M.D., Honorary Secretary, 77, Lambeth Palace Road, S.E.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.—A meeting will be held on Tuesday, April 14th, at the Lyric Hall, Ealing Broadway. The chair will be taken by Dr. T. B. Christie, C.I.E., Vice-President of the District, at 8.30 P.M. Business: 1. Minutes of preceding meeting. 2. A paper will be read by C. Y. Biss, Esq., M.D., F.R.C.P., on The Diagnosis and Treatment of certain forms of Visceral Neuralgia.—C. A. PATTEN, Honorary Secretary, Marpool House, Ealing.

NORTH OF IRELAND BRANCH.—A general meeting of the North of Ireland Branch will be held in the Royal Hospital, Belfast, on Thursday, April 23rd, at 4 P.M. Gentlemen who wish to read papers, show patients, specimens, etc., will kindly communicate, as early as convenient, with JOHN W. BYERS, M.D., Secretary, Lower Crescent, Belfast.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE fifth general meeting of this Branch was held in the Medical Institute, Birmingham, on February 12th, 1891. The chair was taken by the President, Mr. ALFRED FREER, and forty-five members were present.

New Members of Branch.—The following members of the Association were elected members of the Branch: W. J. L. Ffrench, L.R.C.P. & S.I.; Harold Mason, M.R.C.S., L.R.C.P.; J. F. G. Pietersen, M.R.C.S., L.R.C.P.; W. D. Urquhart, M.B., C.M.; W. Dudley, M.B.Lond.; A. Champneys Clarke, L.R.C.P.I.

Cases.—Mr. PRIESTLEY SMITH showed two cases of Metallic Foreign Bodies in the eye successfully relieved by the Electromagnet.—Mr. BARLING showed a man, aged 56, for whom twenty-one months previously he had successfully drained by anterior abdominal incision a Hæmo-hydro-nephrosis, the result of an injury two years before the operation. The cyst contained 100 ounces of cocoa-like fluid, containing 5 per cent. of urea.—Mr. MATTHEWS showed a Cancerous Liver, weighing 8 lbs. 11 ozs., removed *post mortem* from a woman, aged 74, which had given rise to symptoms only a few weeks before her death.

Paper.—Dr. SUCKLING read a paper on Headaches. In the discussion which followed, Dr. DOUGLAS, Mr. MATTHEWS, Mr. JORDAN LLOYD, Mr. MCCARTHY, Dr. SIMON, Mr. S. H. AGAR, JUN., and Mr. OAKES took part.—Dr. SUCKLING replied.

THE sixth general meeting was held at Birmingham on March 12th, 1891; Mr. ALFRED FREER, President, in the chair.

Nominations for Office-bearers.—The following nominations for office-bearers were received: *President-elect:* Dr. Joy. *Treasurer:* Dr. F. Underhill. *Honorary Secretaries:* Mr. Jordan Lloyd and Dr. Simon. *Representatives on Council:* Dr. Saundby, Mr. Lawson Tait, and Mr. Jordan Lloyd. *Representative on the Parliamentary Bills Committee:* Dr. Agar. *Council:* Country Members: Dr. Agar, Mr. L. Browne, Mr. V. Jackson, Mr. Manley, Dr. Douglas, Dr. Thursfield, Mr. F. H. Messiter, Dr. M. Moore, Mr. J. McCarthy, Dr. McVeagh, Dr. G. H. Phillips, Mr. H. M. Morgan. Town Members: Mr. Barling, Mr. Bartleet, Dr. Carter, Mr. Bennett May, Dr. Rickards, Dr. Saundby, Dr. Suckling, Mr. Lawson Tait, Mr. P. Smith, Dr. S. Wilson, Mr. Marsh, Dr. Foxwell, Mr. Bark, Mr. Eales, Mr. Haslam.

Amputation of Penis.—Mr. F. MARSH exhibited a man, aged 46, whose penis he had amputated for carcinoma, after Thiersch's method. The patient had suffered from multiple stricture of the urethra (gonorrhœal) for twenty years. Nineteen years ago he had syphilis, and eleven years ago suppurating inguinal glands. Until five years ago he was constantly under treatment for his strictures; since then he had neglected them, and two urinary fistulæ had formed, one in left side of the perineum, and one in the penis, just anterior to the scrotum. During that time he had been unable to retract his foreskin. On admission into the Queen's Hospital, Birmingham, on August 13th, 1890, the glans and the penis, almost down to the scrotum, were of stony hardness. On one side was an ulcer, the size of a shilling. All the urine was passed through the fistulæ, and the general health was broken down. It was impossible to pass the finest bougie down the urethra. As far as could be ascertained no lymphatic glands were implicated. On August 21st, the penis was completely removed in the following manner. The scrotum was split, the corpus spongiosum urethræ cut through and dissected down, the crura of the corpora cavernosa detached from the pubic rami, the penis removed, the orifice of the urethra sutured in the perineum, and the wound closed. As the patient was in such a feeble condition the testicles were left, that the time and shock of the operation might be minimised. He made a slow but good recovery, and left the hospital on October 8th. At the date of report the cicatrix was hardly visible, the urethra acted most efficiently, there was no irritation of the scrotum or perineum, and no sign of recurrence. The man had gained weight, and had been better since the operation than for the last eight or nine years.

Papers.—Mr. S. H. AGAR, JUN., read a paper on Incipient Insanity, and in the discussion which followed Mr. FREER, Mr. LAWSON TAIT, Mr. PIETERSEN, Mr. BARLING, and Dr. JOY took part.—Mr. BARLING read a paper On the Treatment of Ruptured Urethra by Immediate Suture. Mr. W. THOMAS, Mr. B. MAY, Mr. JORDAN LLOYD, Mr. V. JACKSON and Mr. MARSH took part in the discussion which followed.

BORDER COUNTIES BRANCH.

THE spring meeting was held at the County Hotel, Carlisle, on March 20th, 1891. The chair was occupied by Dr. ABLETT, of Whitehaven, and there were also present thirty-two members and two visitors.

Communications.—Dr. MASON (Windermere) read notes of a Case of Obturator Hernia, in which recovery had taken place.—Dr. PALM (Wigton) read notes of a Case of Purpura Hæmorrhagica, and detailed the *post-mortem* examination appearances.—Dr. THOMSON (Penrith) read a paper upon Symmetrical Gangrene, and showed photographs of a case.—Dr. TOMORY (New Abbey, Dumfries) read a paper upon the Treatment of whooping-cough by Ouabain.—Dr. NORMAN WALKER (formerly of Dalston) sent Five Sections taken from Tuberculous Lungs, and notes detailing the cases, which had been treated at Prague according to Koch's method. Some of the details of the cases were read by the SECRETARY, and the sections were examined under the microscope.—A discussion followed, and Dr. WALKER (Carlisle) gave an account of his experiences in Berlin, and answered numerous inquiries in regard to the treatment as he had seen it carried out.

Dinner.—The members subsequently dined together in the hotel.

Exhibits.—Specimens of recent and improved pharmaceutical preparations were exhibited on behalf of Messrs. Richardson and Co., of Leicester.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN ordinary general meeting of the Branch was held in 1, Crown Street (Milne's Library), Aberdeen, on Wednesday, March 18th, 1891, at 8 o'clock P.M., the President, Dr. GARDEN, in the chair.

Dr. P. el Howie, Strathdon, was admitted a member of the Branch.

Koch's Treatment.—Dr. FERGUSSON, Banff, read notes of nineteen cases of tuberculous disease, which he had treated in his hospital practice since December last. Of these cases, nine were cases of phthisis, three in the first stage, and the others with more or less breaking down of lung tissue; six were cases of lupus; one a case of scrofulous glands of the neck; two hip-joint cases, and one old-standing sinus of thigh. Of the three cases of phthisis in the first stage, two were pronounced "cured," the third decidedly improved, but had not been sufficiently long under treatment to have obtained the full benefit of the remedy. One of the more advanced cases was much improved, the sputum having decreased from 3 ounces to 3 drachms in the twenty-four hours, and the tubercle bacilli gone. Two other cases showed slight improvement. Two showed no difference, and one was worse, but not more than would have been the case under ordinary treatment. None of the lupus cases could be reported cured, although five showed more or less improvement; treatment had to be stopped on account of threatened syncope in the sixth patient, who was a stout flabby woman of 49. The

sinus of the thigh was cured after several scraping operations had failed. In one case of supposed tuberculous disease of hip-joint there was no reaction whatever, though in the other cases there was decided improvement, but it fell short of a cure. The gland case had only been a short time under treatment, but was considerably improved.

Fluorescin in Corneal Ulcer.—Dr. Bullock, Royal Infirmary (for Dr. Mackenzie Davidson), demonstrated the use of a 2 per cent. solution of fluorescin in the diagnosis of corneal ulcers. The ulcerated portion was strongly contrasted with the healthy parts of the cornea, even the minutest point of disease being brilliantly coloured a distinct green.

Renal Calculi.—Dr. MacGregor showed specimens of renal calculi composed chiefly of uric acid, and which, though rough, were passed by the urethra with much pain. Relief was given to some extent by cocaine solutions.

Traumatic Papillitis.—Dr. Ferdinands read notes of a case in which loss of vision was the first symptom complained of. Other points of interest were the curious intermittent pulsation in one of the retinal arteries and the anæmic condition of the macula lutea. In spite of the intense inflammation the patient completely recovered his full vision.

Foreign Body in Alimentary Canal.—Dr. Beveridge showed a piece of curved glass, sharp and about three-quarters of an inch long by one-fifth broad, which had passed through the alimentary canal of a child without producing any symptoms. It had been accidentally administered in a dose of castor oil.

SPECIAL CORRESPONDENCE.

BERLIN.

The German Surgical Congress.—The Langenbeck-Haus.—A New Poliklinik.

The Surgical Congress, which has just come to a close, owed a great part of its interest to the animated discussion on tuberculin. Professor Koch—newly returned from Egypt—was present, but took no part in the proceedings. Professor von Bergmann's opening address on the tuberculin treatment showed the great change which his views have undergone since the famous exhibition of cases in his clinic last November. Bergmann admits that tuberculin produces intense inflammation at a spot not contiguous to the point of application, and that it exercises a specific action on tuberculous tissue. It shares with other ferments—for instance, sepsin—the power of producing "general reactions." The "local reaction" ensues only where tuberculous tissue is concerned.[1] On the other hand, the injections have been followed by general reaction where no tuberculosis was present—in actinomycosis, for instance, and in certain malignant growths. Bergmann theoretically admits the possibility of a spreading of the tuberculous disease under the influence of tuberculin injections, though he considers actual step-for-step proof in each case extremely difficult. It is certain, however, that the tuberculin treatment forms no sort of protection against an outbreak of fresh tuberculous foci. As regards therapeutic action, Bergmann's experience is that temporary cure is followed regularly by relapse. One of the November lupus patients, first dismissed as "almost cured," and later on dismissed as "cured," returned a few weeks later with fresh tuberculous eruptions, and now presents the appearance of a fresh case of lupus. Bergmann's conclusion is that Koch's remedy has not hitherto justified the hopes first entertained. Nevertheless, he is of opinion that experiments with it should not be abandoned, because, though no cure has hitherto been effected, its influence on tuberculosis is undoubted. Schede (Hamburg) and König (Göttingen) agreed with Bergmann that the experiments should be continued. Von Eiselberg's experience (in Billroth's clinic) tallied with that of Bergmann as far as tuberculosis is concerned. He reported a case of actinomycosis cured by several weeks' tuberculin treatment. Sonnenburg and Hahn exhibited cases where lung cavities had been cut down upon while under tuberculin treatment. The results were encouraging; the general condition improved, and the number of bacilli temporarily diminished. Rubinstein (Berlin) gave an account of the results obtained by Professor Schüller in more than 100 cases of tuberculosis of the skin, of the glands, of the bones and joints by a combination of guaiacol taken internally, and injections of iodoform glycerine. In many of his cases the "cure" has lasted, without relapse, for many years. Senger gave an account of interesting experiments made by him in Trendelenburg's clinic at Bonn (in cases of glandular tuberculosis) with formic acid and formicate of ethyl-ether. Leser (Halle) had announced his intention of exhibiting a case of lupus "cured" by tuberculin. When about to bring forward his man, whom he had not seen for several days, he was horrified to find a fresh growth of lupus. Papers touching on questions of bacteriology were read by Braatz (Heidelberg), Jordan (Heidelberg), Brunner (Zurich), Fischer (Strassburg), and Reichel (Würzburg). There was a small exhibition of surgical and bacteriological instruments. Rohrbeck (Berlin) exhibited new steam disinfectors on the vacuum system; Haselauer (Berlin) showed the employment of the new "Mannesmann tubing" in hospital practice; the Allgemeine Elektrizitätswerke exhibited surgical instruments made of aluminium, the distinctive features of which are their light weight, and the ease with which they can be disinfected.

[1] This was questioned by Professor Küster, of Marburg.

On April 4th, the foundation stone of the projected Langenbeck-Haus was laid by Professor Thiersch (President of the Surgical Congress sitting at the time) in the presence of a distinguished assemblage, including the Chamberlain of the German Empress, Herrv. d. Reck; the Minister of Finance, Dr. Miquel; the Cultus Minister, Count Zedlitz-Trützschler; the commandant of Berlin; the General-Stabsarzt of the army, Dr. v. Coler, and many others. The Langenbeck-Haus is not destined for a surgical hospital (as the name would seem to imply), but is to be a sort of medical club, a meeting house for members of the profession, containing a lecture hall, library, reading rooms, refreshment rooms, etc. The idea originated with the late Empress Augusta, whose interest in medical matters is well known. It was her idea that the best monument to Langenbeck's memory would be a house bearing his name, in which members of the different branches of the profession would have an opportunity of meeting and exchanging their experiences. The last day of the Surgical Congress had been appropriately chosen for the ceremony of laying the foundation stone, and the congress was present *in corpore*.

A new private policlinical institute of some importance, and on a large scale, has just been opened in Berlin. It is to go by the name of the "Johanneum." The institute is to combine hospital practice with clinical instruction and theoretical research. It contains eighty beds, is furnished with laboratories, microscope rooms, etc., an electro-mechanical institute, and a lecture theatre, in which courses are to be given by Professor Eulenburg on diseases of the nervous system; by Professor Zülzer on diseases of the kidneys and bladder; and by Dr. Scheimann on diseases of the nose and throat.

BIRMINGHAM.

Vacancies at the General Hospital and at the Children's Hospital.—The Chair of Medicine at Queen's College.

The vacancy in the post of physician to the General Hospital, caused by the resignation of Sir Walter Foster, who has been appointed consulting physician, will shortly be filled up. The only candidate at present for the office is Dr. R. M. Simon, assistant physician to the hospital, whose clinical ability and success as a teacher, added to his long service in his present appointment, give him a very strong claim for the post.—There will shortly be a vacancy in the post of physician to out-patients at the Children's Hospital, caused by the resignation of Dr. Suckling. For this there will be a number of candidates. An honorarium of £60 is attached to the appointment.

For the Professorship of Medicine at Queen's College, resigned recently by Sir James Sawyer, there will be a contest. There are two joint professors of medicine, the custom being to select one from the General and one from the Queen's Hospitals, and this tradition will be observed in all probability on this occasion; otherwise the applicants for the post

would have been numerous. As it is there are two candidates —Dr. Carter, senior physician to the Queen's Hospital, and his colleague, Dr. Suckling.

CORRESPONDENCE.

THE PRESENT POSITION OF ANTISEPTIC SURGERY.

SIR,—The allusion that I made to Professor White's unnecessary readiness to take Sir Joseph Lister's place in an argument upon this subject will be found to bear an altogether different meaning from that forcedly put upon it by Professor White. My article was the criticism of Sir Joseph's address in Berlin, where my own arguments were not only not ignored, but were pointedly alluded to and by name. That, however, is a matter of no consequence. Professor White's unnecessary and inconsequent intervention was due to what he calls "an abiding faith"—a singular corroboration of the criticism I advanced against the whole antiseptic doctrine fifteen years ago. Its analogy can be found only in theological metaphysics. It is like the doctrine of "innate ideas"—it requires "an abiding faith," and, when that has been acquired, its recipient is wholly beyond the province of ordinary reason. I accept—I have often used as one of my strongest arguments—"the every-day facts of the surgical ward." It is precisely because I see the cut of the morning shave heal without suppuration in a healthy man, because I know that simple fractures heal without it, as do contusions without loss of continuity, and because of a hundred other daily facts of surgical experience which are ignored by the "peculiar people" of the "abiding faith," that I laugh at the whole thing.

The facts of the "beef and pickle argument," and those of the henwife and the housewife are quite familiar to everybody in this country, and, taken together with those of the every-day practice of surgery, they prove three things: (1) that the germs of putrefaction exist, with restrained potentiality, in all living tissue; (2) that the restraining influence is what we call, for want of a better name, vital force; (3) that when the restraining influence has its balance upset by what we call disease, lowered vitality, accident, etc., the germs are let loose to work their evil wills. This is the fundamental pathology which I was taught as a youth, and my mature experience confirms it every day in every particular.

One matter aside. Professor White complains of my attack on the deadly and dangerous character of the double cyanide dressing. I have had no experience of it, and my objection certainly was *a priori*. But with the awful experience we have had of the poisonous effects of carbolic, have we not reasonable grounds for fearing in a "double cyanide" something far worse? The part of the whole business of the antiseptic processes, where ridicule becomes the most potent, indeed the only argument, is that when we have seen every few months an infallible nostrum introduced, adopted by those of the "abiding faith," sworn to as the perfection of the system, and then, *incredibile dictu*, dropped into oblivion without a word of explanation or apology. Ordinary, plain-sailing, every-day folk, like myself, were charmed with the idea of the spray. It seemed so complete, so logical, that the confession on the part of Sir Joseph that he was ashamed of it put the final stone on the cairn of antisepticism.—I am, etc.,

Birmingham. LAWSON TAIT.

ABUSE OF MEDICAL CHARITIES AND CLUBS.

SIR,—I happen to be in a position to support the statements of Dr. Digby's letter in the BRITISH MEDICAL JOURNAL of April 4th. A county club has recently issued a circular specially inviting any person under 55, of either sex, to become members, insuring for sick pay up to 30s. per week, specially mentioning "tradesmen" as a class so invited: all, without distinction, to pay 4s. 4d. per annum as medical fee.

I sent a copy of this circular, with a request for the expression of opinion thereon, to each member of the profession in the county asking: (1) Whether the medical fee suggested was approved of? (2) Whether any practicable scheme would be supported to remedy these abuses in benefit clubs? (3) Whether a pledge would be given to support a suggestion to make the medical fee 4s. 4d per annum for each 10s., or part of 10s., insured for in sick pay, and to add *x*d. per annum for each year over 30 in the age on joining, (*a*) unconditionally, (*b*) if 100, or — per cent. of our profession in the county agreed?

Of the 130 medical men applied to, 52 sent answers within fourteen days. Of these, 37 expressly disapprove the suggested fees in the circular. 20 have no connection with clubs, and in 7 instances express disapproval of the club system *in toto*, 23 give a conditional pledge to support action to remedy the abuse, 2 only (1 by implication) approve the suggested fees, and positively decline to support any remedial action.

How widely spread is club membership, and how great is the proportion of club members among our patients may be inferred from the fact that I know of 800 such in a district whose population is given as 22,000; and there are more. How seriously our incomes are threatened is evident when we hear men, who have cheerfully paid £5 to £20 per annum for medical attendance, proposing to join this scheme, besides 5 to 10 per cent. of members already in these clubs well able to afford ordinary fees.

The extent of this abuse is, I am sure, not at all adequately realised by those just entering practice. I know of some instances of combination amongst medical men to secure a minimum fee from such members of clubs, and I hear from several correspondents of individual action in remedying these abuses. Clearly the remedy lies in our own hands.—I am, etc.,

Shaftesbury. C. S. EVANS, M.B.

P.S.—The following paragraphs from the circular of the club are those referred to:—

. . . These are effected upon strict principles of equity by the payment of 1d. a day per share from members not exceeding 30 years of age, and 6d. per year extra for each year beyond 30, thus placing old and young upon an equality. This extra 6d. per year may either be paid by the members or deducted from their interest accounts. Every member must also subscribe 1d. per week for doctor's attendance and medicine. . . .

Members may subscribe for as little as half a share (paying ½d. a day), insuring them 5s. a week sick pay, or as many as three shares (paying 3d. a day), insuring 30s. per week sick pay, with corresponding share of annual surplus; thus, tradesmen paying 3d. a day may secure 30s. a week during illness, and if they contribute for fifty years and leave their deposit accounts intact, accumulate £458. . . .

Any person of good character and of sound health, whose employment is not deemed by the surgeon as hazardous or tending to induce disease, whether male or female, and who is under 55 years of age, may be admitted as a member of the society, but the funds and accounts of each sex shall be kept separate, the dividend given in proportion to the surplus of each.

THE LATE MR. EDWARD BELLAMY.

SIR,—I was much pleased to see Mr. Ackland's letter in the BRITISH MEDICAL JOURNAL of April 4th. I am sure I am only echoing the sentiments of all old Charing Cross men when I suggest that steps be taken to perpetuate, either by means of an annual prize or scholarship, the memory of so good a teacher and so kind a friend as the late lamented Mr. Edward Bellamy.—I am, etc.,

Portishead. CHARLES A. WIGAN.

THE MIDWIVES BILL.

SIR,—If Dr. Aveling really maintains that the total average mortality of parturient women attended by trained midwives from metropolitan lying-in hospitals is only 1 in 729, I need only reply: *Credat Judaeus, non ego.* I have no doubt of Dr. Aveling's good faith, and, little as I value their reports, I do not wish to cast doubt on the veracity of the hospital secretaries, to whom Dr. Aveling is indebted for his startling statistics; but there is obviously a mistake in the interpretation of these. According to McClintock, rupture of the uterus occurs once in 737 confinements, and the frequency of this accident has been regarded as still greater by some other authors. Be this as it may, it is certainly a very moderate estimate to calculate that 1 in 729 labours terminates suddenly and unexpectedly in death, from one cause or another. It is obvious, therefore, that what is given as the total mortality in cases attended by trained midwives, is merely an expression of the fact that once in 729 confinements death occurs so rapidly and unexpectedly that the midwives fail to summon medical assistance in time to obtain the customary death certificate. I quite agree with Dr. Aveling that 1 in 116 is a very good average mortality for prominent obstetric physicians, but I would also add that it is equally so for general practitioners and trained midwives. I do not con-

sider that statistics obtained from a comparison of registered births and deaths are of much value, for many important reasons, and especially as registration of the enormous number of still-births is not required; but it is quite possible to show that, even if deaths from sepsis are excluded, the accidents of child-birth involve a mortality between 1 per cent. and 1 in 200, with skilled medical attendants. If Dr. Aveling's statistics prove anything they prove that mortality is highest in the practice of prominent obstetricians and in lying-in hospitals, next in ordinary private practice, and far away least of all in the practice of trained midwives. Consequently, it is no wonder that Dr. Aveling considers that "if women in ordinary labour were attended by trained midwives (I presume he means without a doctor) the valuable lives of hundreds of mothers would annually be saved."

If the use of the title "midwife" can be successfully restricted to persons who can manage parturition so that the death-rate during the lying-in period is as low as that of the general community, namely, 1 in 729 during three weeks, then the public will unquestionably benefit enormously if they employ midwives, and midwives alone.—I am, etc.,

Highgate. HUGH WOODS, M.D.

SIR,—Dr. Aveling seems quite unable to grasp the fact that the condition of practice in outdoor lying-in departments of hospitals are totally different to those of general practice. In the former the midwives are under direct control, in the latter it is quite impossible that they should be.

Again, is he prepared to deny that patients, who are likely to have trouble either during or after delivery, are removed to the wards, and thus from the outdoor department; or that the general puerperal mortality, compared with that of other countries, is anything else but satisfactory?

Next I will ask him whether, looking at the question broadly, it is advisable to substitute a trained class for a class which is trained and educated in one of the three subjects of our profession. Then how does he propose to compel women to employ the class which he proposes to create?

As it is an every-day occurrence to observe the evils resulting from the prescribing of medicine, and from the general treatment of adults and children by chemists and quacks, is he in favour of legislation for the re-establishment of the old apothecary class? It appears to me that logically he should be.—I am, etc.,

Hatfield. LOVELL DRAGE.

MEDICO-LEGAL AND MEDICO-ETHICAL.

UNQUALIFIED PRACTICE.

DR. S. S. HARWOOD writes from Hucknall Torkard with respect to two inquests recently held on deaths resulting from accident, where the deceased in each case had at first been treated by an unqualified practitioner. We can only express our astonishment that it should be possible for an unqualified practitioner to be recognised as the medical officer to a large colliery, and we very much question the legality of such an arrangement. The anxiety shown by the jury and coroner to prevent the feelings of this gentleman from being hurt by any insinuations as to the inadvisability of his practice would be ludicrous if it were not fraught with so much danger to the public. We would hope that the following, from the *Hucknall Morning Star and Advertiser*, is not a correct report of the proceedings at the inquest in question:—

"The coroner (Mr. D. Whittingham) suggested that some arrangement should be come to that Mr. Green [a man, it was stated, with no legal qualification whatever] should take the simple cases [that is, of accidents] and the doctors the more serious ones."

Surely it is the first duty of a coroner to condemn such an arrangement. It is often impossible for a skilled surgeon to tell at first what an apparently trifling accident is going to lead to. What, then, can be thought of the suggestion to leave the solution of such a problem to the skill and discretion of a man with no surgical qualification at all?

FEES FOR *POST-MORTEM* EXAMINATIONS.

HOUSE-SURGEON writes: I hold the post of resident surgeon in a public hospital. It has always been held that according to law no fee can be obtained for evidence given by a resident officer here at an inquest held by the coroner on any patient who may have died in the hospital. Such inquests are usually held in the hospital. On March 16th, 1891, the coroner ordered the dead body of a girl who died here to be transferred to the morgue, almost a mile away. The inquest was held there, and I had of course to attend. (1) Am I entitled to a fee in this case? The coroner said not, and declined to pay me. (2) What is a public institution as defined by law? This hospital is entirely supported by voluntary contributions, and does not receive a penny of State endowment. Are we bound by law to give evidence at inquests on patients who die under our care without a fee?

*** It is provided by the Coroners Act (Ireland), 9 and 10 Vict., cap. 37, that when any inquest shall be holden on the body of any person who has died in any public hospital.....whether the same be supported by endowments or by voluntary subscriptions, then and in such case nothing therein contained shall be construed to entitle the medical officer (whose duty it may have been to attend the deceased person as a medical officer of such institution) to the fees or remuneration therein provided.

The above will answer our correspondent's three questions. It will be observed that the place where the inquest is held is immaterial; the question is whether or not the person on whose body it is held died in the hospital the medical officer of which is summoned to give evidence.

EMPLOYERS AND SERVANTS.

B. writes: At my surgery on a Wednesday, after prescribing for a club patient residing some two miles and a half distant, the messenger asked me when next in the village where he resided to visit the patient at his home. I did so the following Friday. As I entered the cottage a medical man, W., was leaving, and my patient explained that W. had been sent by his employer without his knowledge, and, furthermore, he did not desire his attendance. Next morning I received a verbal message from his employer "that the patient was her servant, and she could have what doctor she chose to attend him, and W. was to attend." The patient shortly after sent a message regretting the occurrence, and explaining that he could not act contrary to his employer's wish. W. and his partner entirely ignored me, and took full charge of the case.

*** Our views in relation to the alleged unethical procedure of W. in the above case are fully expressed in the following rule extracted from the *Code of Medical Ethics*, 3rd edition, chapter ii, section 5, rule 15:—

"When, moreover (an oft-recurring incident) an employer or other person becomes anxious and apprehensive in regard to the illness of an *employé*, or in the case of an impending action for damages and the like, and for his personal satisfaction requests his own family or other doctor to visit the patient and report to him thereon, it is the duty of the deputed practitioner to point out to the employer or other interested party their respective ethical obligations in the matter; and, prior to making such visit, to solicit and obtain the sanction of the medical attendant in the case, otherwise he will commit a grave breach of professional etiquette, and justly subject himself to severe criticism and reproof."

ADVERTISEMENT BY PARAGRAPH.

L. W.—Professionally regrettable (and alike derogatory to the alleged implicated practitioner) as are modes of seeking notoriety by indirect public self-recommendation, we regret to observe, in response to our correspondent's query, "What is to be done?" that we are unable to suggest an effective remedy, inasmuch as we feel assured that neither the English nor the Scotch licensing bodies of which the assumed offending practitioner is a member will attempt to put in force their disciplinary laws without evidence of his more or less direct complicity in the preparation of the oft-repeated newspaper paragraphs. If, moreover, our correspondent be correct as to the views entertained on the subject by the residents and visitors of the health resort in question, he need not, we think, be apprehensive of the final outcome of Dr. P.'s alleged unprofessional tactics.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

SURGEONS A. G. P. GIPPS, JOHN HUNTER, M.B., ROBERT M'IVOR, M.D., and W. G. JACK, whose first appointment is dated March 31st, 1879, are appointed Staff Surgeons from March 31st. Surgeon Gipps was Surgeon of the *Inconstant* during the Egyptian war of 1882 (medal and Khedive's star), and Surgeon M'Ivor, during the same campaign, was Surgeon of the *Monarch*, and was at the bombardment of Alexandria, receiving the medal with clasp and the Khedive's bronze star; he also landed with the Naval Brigade for service in the Soudan, and accompanied the expedition for the relief of General Gordon at Khartoum in 1884-85 (clasp).

The following appointments have been made at the Admiralty: MAXWELL RODGERS, Deputy Inspector-General, to Malta Hospital, April 4th; DUNCAN HILSTON, M.D., Deputy Inspector-General, to Haslar Hospital, April 4th; EDWARD T. MORTIMER, Inspector-General, to Plymouth Hospital, May 7th; GEORGE ALLEN, M.B., Surgeon, to the *Lizard*, April 1st; JOHN E. WEBB, Surgeon, to Haslar Hospital, March 31st; WILLIAM H. PATTERSON, Staff Surgeon, to the *Aurora*, April 13th; ALEXANDER G. P. GIPPS, Staff Surgeon, to the *Boscawen*, April 13th; GEORGE L. BAKER, Surgeon, to the *Racer*, April 21st; EDWARD R. D. FASKER, Surgeon, to the *Lion*, April 21st; JAMES J. WALSH, to Chatham Hospital, April 7th; WILLIAM G. AXFORD, Surgeon, to Bermuda Hospital, April 7th.

MEDICAL STAFF.

THE QUEEN has been pleased to appoint Brigade-Surgeon VALESIUS SKIPTON GOULDSBURY, M.D., C.M.G., formerly Administrator of the Gambia, to be Administrator of the Island of St. Lucia and its dependencies; and further to administer the Government of the Windward Islands in the event of the absence, etc., of the Governor. Dr. Gouldsbury was placed on retired pay in 1885.

Surgeon F. H. Treherne, serving in Bengal, has leave of absence for seven months on private affairs.

Brigade-Surgeon W. Graves, who is serving in the Bombay command, has been appointed to the administrative medical charge of the Poona district, with the temporary rank of Deputy Surgeon-General, *vice* Deputy Surgeon-General G. L. Hinde, C.B., who is ordered home, his term of service having expired.

Brigade-Surgeon J. B. Hamilton, M.D., Honorary Surgeon to the Viceroy of India, and who is serving in the Bengal command, has been appointed to the administrative medical charge of the Allahabad district, with the temporary rank of Deputy Surgeon-General, *vice* Deputy Surgeon-General T. Rudd, M.D., who proceeds to Meerut and relieves Deputy Surgeon-General William Collis, ordered home on the expiration of his tour of service.

The following Surgeons-Major, who now rank as Majors, have become entitled to rank as Lieutenant-Colonels: L. A. Irving, J. A. M'Cracken, M.D., J. M. Beamish, M.D., J. A. Clery, M.B., J. Coats, M.B., J. G. Williamson, W. J. Fawcett, M.B., H. W. Joynt, W. E. Saunders, D. Leckie, M.B., W. J. Charleton, A. H. Anthonisz, M.B., O. F. Molloy, R. Exham, J. M'Namara, M.D., R. Harman, M.B., G. D. F. Leake, J. W. O'M. Martin, M.B., P. R. Gabbett, M. D. O'Connell, M.D., W. Finlay, and E. H. Joynt, M.D.

INDIAN MEDICAL SERVICE.

Surgeon J. G. Hojel, Bombay Establishment, on general duty in the Bombay district, is appointed to officiate in medical charge of the 5th Light Infantry, *vice* Surgeon G. E. Fooks, on furlough.

Surgeon-Major James M'Cloghry, Bombay Establishment, is appointed Civil Surgeon of Broach, but will continue to act as Civil Surgeon of Kurrachee till further orders.

Deputy Inspector-General James Sanderson, F.R.S.E., etc., Madras Establishment, retired, died at Edinburgh on March 28th, aged 79.

THE VOLUNTEERS.

Mr. Francis William Sinclair, M.B., is appointed Acting-Surgeon to the 3rd Durham Artillery (Western Division Royal Artillery), April 4th.

Acting-Surgeon F. P. F. Ransom, M.D., of the 3rd Volunteer Battalion Suffolk Regiment (late the 1st Cambridgeshire), is promoted to be Surgeon, April 4th.

Mr. Robert Rannie, M.B., is appointed Acting-Surgeon to the 5th Volunteer Battalion Gordon Highlanders (late the 1st Kincardine and Aberdeen), April 4th.

THE TITLES MUDDLE.

A correspondent sends us the wrapper of a trade circular addressed to him in typewriting as follows:—Brigade-Surgeon —— ——, Surgeon-Major H.M. Service. This is a fine example of the hopeless muddle of the civil mind towards medical officers' titles.

Nineteenth Century asks: What harm can granting military titles to medical officers do to combatants? Are not such titles freely accorded to paymasters and to officers of the militia and volunteers? Are combatants less beholden to medical officers than to these? Have they not rather to entrust their limbs and lives to the medical officers on the field and in unhealthy climates? One would reason that self-interest, if nothing else, would shame them out of their monstrous prejudices against medical officers. The granting of compound titles is an unsatisfactory compromise; full military titles will come in time, and it is a great pity Mr. Stanhope has not at once taken the credit to himself of granting them.

A Retired Lieutenant-Colonel writes: I have two sons—one a captain, another a surgeon Army Medical Staff. When at home the captain is always telling the medico he has no rank. Why not grant him honorary rank? That would meet the difficulty, and prevent constant disputes.

*** Our correspondent, as a father, has the true bearings of the rank question brought home to him in the persons of his sons. We can give him no reason why two men so nearly related should be treated so differently, except that one is supposed to belong to a self constituted "caste" which tries to "sit upon" the other.

TRAINING OF CANDIDATES.

I.V.R.C. makes three suggestions on this subject: 1. Candidates for commissions in the Medical Staff should be sent to Aldershot first, and to Netley afterwards; it would make them value the training at the former place more, and initiate them into the realities of army life. 2. Netley should be called, not a "school," but the "Medical Staff College." 3. No young officer should leave Aldershot until he had passed the examination for promotion to lieutenant.

CHANGES IN INDIA.

We learn from a trustworthy source that the Government of India has abandoned its new administrative medical scheme, which it will be remembered broadly consisted in the reduction of four deputy surgeons-general, and the employment of brigade-surgeons in their place in the so-called second class districts. The exposure of the injustice, as well as the unworkable nature of the proposed scheme, in these columns has probably led to its abandonment. The two vacancies in the rank of deputy surgeon-general, which were to have been absorbed, should now be promptly filled up, and the former Indian establishment at once restored. We trust there will be no hesitation or delay in doing this, which is but simple justice to the officers immediately affected.

LORD WOLSELEY.

"Truth" writes: His lordship declares that in the army no distinction is made between combatants and non-combatants. Will he explain therefore: (1) Why a combatant only can preside over a sanitary board, while a doctor (who probably knows something of the subject) cannot? (2) Why guards turn out to major-generals, but not to surgeon-generals? (3) Why combatants can be made G.C.B.'s, or even Peers, but doctors never? These are only a few examples against his lordship's accuracy of statement.

COURT PRIVILEGES.

A Senior Medical Officer writes: I offer, without fear of contradiction, a further example towards Sir Andrew Clark's representations to Mr. Stanhope on this subject: During the twenty-seven years the Royal Victoria Hospital at Netley has been in existence we have not had a single instance in which the surgeon-general and principal medical officer has been invited to Osborne while Her Majesty was sojourning in the Isle of Wight; while, on the other hand, the commandants of Netley Hospital, during that period, have very freely enjoyed that honour. This, too, in spite of the fact that the former officers were supposed to rank as major-generals, while the latter were colonels. Lord Wolseley has recently said the army knows no distinction between combatants and non-combatants. This is surely an instance against his post-prandial dictum.

VOLUNTEER AMBULANCE CLASSES.

T. P. W. asks what books would be best to read in order to lecture to a volunteer corps on ambulance.

*** The men will be examined by the *Medical Staff Corps Manual*, price 1s. 6d.; they should know pages 37 to 57 and 76 to 87; also the rules for carrying the stretchers, and the drill portion of the book up to and including the lifting and laying of wounded.

PROFICIENCY EXAMINATION FOR VOLUNTEER MEDICAL OFFICERS.

D. H. K.—The standard of the proficiency examination for volunteer medical officers varies, but a knowledge of the books which were recommended to an acting-surgeon of volunteers in a recent issue of the British Medical Journal would enable a candidate to pass easily in most of the districts. We would suggest our correspondent also reading Longmore's *Gunshot Wounds* and those parts of Lord Wolseley's *Soldier's Pocketbook* which refers to marches and camps.

THE SOLDIER AT HOME.

Lieutenant-Colonel writes to the *Morning Post* on the vexed question of the supply of recruits a letter as remarkable for its sound sense as for its brevity. In less than twenty lines he condemns the representations as to kit and rations as "false pretences," maintaining that no deduction should be made from the pay except for "wanton injury to Government property," or in the case of a man "rendering himself unfit for duty by intemperance or libertinism." He urges that every recruit should be "taught some handicraft," or employed in that to which he has been brought up, and that the army might make all clothing, etc., that it requires. If the morning were given to drill and the afternoon to industrial pursuits the soldier would be benefited physically and morally, and placed in a position to earn his livelihood after his discharge. The service would be more popular, and the nation gain pecuniarily. At present the "only relief from eternal drill" is the canteen, where habits of intemperance are acquired, and in other ways the soldier's health and character undermined.

THE MADRAS MEDICAL SERVICE.

The following is a brief statement of the grievances under which the medical officers of the Madras Service labour, and which they justly, as we believe, conceive to be a breach of faith, and not in accordance with the terms of service under which they entered: The extra pension of £100 a year referred to by "Justice" was granted in the notification of the Government of India, No. 228, dated June 4th, 1886, "As a compensation for the withdrawal from Sanitary Commissioners of the rank and privileges of a Deputy Surgeon-General," to which rank those officers were formerly promoted after so many years' service. The extra pensions are offered yearly in rotation to Surgeons-General, Deputy Surgeons-General, and to all Brigade Surgeons, but have been discontinued for all officers who enter the service after August, 1889.

In 1880 two administrative appointments of the Madras Service were abolished, and last year a further reduction was again made, without the slightest compensation being given to those officers whose chances of promotion have been thus reduced to one-half within the last ten years; unless, indeed, the provision made at the time of the 1880 reorganisation that the Surgeon-General, or, as he is now styled, the "Principal Medical Officer, Her Majesty's Forces" shall be alternately an Indian officer, can by any means be called "compensation," seeing that up to to the present time it has been carefully ignored.

The above does not exhaust the list of grievances from which the above-named Service is suffering, and steps are now being taken to have them duly represented.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

Proficiency Examination for Volunteer Medical Officers.—The following have recently passed the above examination: Surgeon Sir Morell Mackenzie, M.D., Queen's Westminster Rifle Volunteers; Acting-Surgeon D. Key, 1st City of London Artillery Volunteers; Acting-Surgeon Dundas Grant, M.D., F.R.C.S., 24th Middlesex Rifle Volunteers; Acting-Surgeon E. Younger, M.D., 3rd Volunteer Battalion Royal Fusiliers; Acting-Surgeon J. H. Griffin, London Irish Rifles; Acting Surgeon E. Steven, M.D., 21st Middlesex Rifle Volunteers; Acting-Surgeon T. Fennell, 3rd Volunteer Battalion Cheshire Regiment; Acting-Surgeon F. Ransom, M.D., 3rd Volunteer Battalion Suffolk Regiment. The above have been under instruction from Surgeon R. R. Sleman, M.A., and the staff of the School. The next class will be held in May. By order, H. F. Stokes, Surgeon London Rifle Brigade. Headquarters, 7, Bene't Place, Gracechurch Street, E.C.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

CAVENDISH COLLEGE.—An examination will commence on July 7th for one entrance scholarship of £50, one of £40, and at least two of £30, open to candidates who will be under 18 years of age on October 1st. Candidates may offer one or more of the following subjects: Classics, mathematics, natural science, modern languages. For particulars application should be made to the Master.

UNIVERSITY OF EDINBURGH.

THE following gentlemen have passed the First Professional Examination for the Degrees of M.B. and C.M.:

W. D. Adams, C. C. Aitken, H. de M. Alexander, J. Anderson, R. W. Beesley, W. Begg, W. Bethune, J. L. Bevans, J. E. Bowes (with distinction), F. W. Broadbent, R. T. Bruce, M. Burnet, A. P. Chapman, J. Cookson, B. R. C. Christie, E. Crerar, J. M. Dalziel, J. R. Dodds, H. O. Dougall, H. W. Dun, A. Edwards, H. P. Elliott, D. Evans, T. Finlay, J. Forbes, J. V. Forrest, J. S. Fraser, S. Fraser, W. H. Gaunt, T. Gibson (Australia), J. O. F. Gilchrist, T. E. H. Giuseppi, J. H. Glover, J. E. Good, D. J. Graham, J. H. K. Griffiths, W. Haig, H. Halton, C. Hardcastle, R. T. Herdman, A. Heys, F. Higinbotham, C. W. Holmes, A. Hosking, J. Hume, F. C. M. Hutchinson, T. H. Jameson, B. S. Jaraja, H. Jones, T. H. Jones, J. G. Kay, J. W. Keighley, B. C. Kelley, T. B. Kenney, J. W. Kippen, D. F. Laidlaw, J. Lawrie, T. G. Lewis, G. R. Livingstone, T. G. Lusk, W. C. W. M'Dowell, C. J. R. MacFadden, J. Maciver, W. H. Mackenzie, R. Mackinnon, J. G. Macmillan, D. Matheson, S. Messulam, J. Michael, C. H. D. Moore, R. S. Mowat, M. G. Naidu, F. B. Oliphant, D. Orr, J. E. Owen, E. L. Owen, G. W. S. Paterson, C. W. Peach, F. Porter, W. A. Potts, F. G. Proudfoot, J. C. Rait, A. M. Rattray, W. Riach, R. G. Robson, W. C. Rowlands, R. Samut, J. Scott, R. G. Selby, J. H. Seon, T. D. S. Shaw, S. S. Skinner, H. W. Sommerville, G. Smith, S. H. Smith, W. L. Stevenson, J. W. Sutcliffe, F. W. Taylor, A. G. P. Thomson, A. S. Trapaga, D. A. Tuckhud, G. D. de Waal, J. Watson, W. H. Watson, D. Watters, E. C. Watts, J. R. Whait, A. Whyte, P. W. Wilkinson, E. D. Williams, J. M. Wishart, J. B. Wood, J. G. H. Wood, Z. M. Zorat.

In the same examination the following have passed in Chemistry, Practical Chemistry, and Natural History:

T. Gibson, W. L. Pritchard, E. de C. Prout, J. T. Waite.

In Chemistry, Practical Chemistry, and Botany, the following gentleman has passed:

J. Wood.

The following gentlemen have passed in the Second Professional Examination:

G. W. Anerum, R. H. Armstrong, G. Butters, J. Cowie, F. W. Foxcroft, H. F. Green, W. R. Harvey, G. Hodges, G. H. Hogg, G. Home (with distinction), F. H. G. Hutchinson, S. P. Hyam, A. C. Stamberg, W. Evans, J. H. Ewart, R. Hutchison (with distinction), D. Campbell, W. S. Campbell, A. B. J. Cooper, S. G. Davidson, J. L. Dick, A. Douglas, G. Dickson, G. H. Dupont, D. C. Edington (with distinctions), J. J. Evans, A. Fells (with distinction), D. Fraser, J. A. Fullarton, A. Gardner, W. R. Gow, T. A. Granger, V. Green, R. L. Guthrie, T. B. Hearder, D. B. Hewat, A. Nobbs, H. J. Pechall, W. Robertson, J. J. Lewis, F. Lechman, I. McLew, F. R. Paterson, J. F. Robertson, A. T. Simpson, F. J. Walden, G. J. Williams.

The following have passed in the Anatomy and Physiology Section of the Second Professional:

W. A. J. Alexander, M.A., L. B. Beddie, M.A., A. B. Carvosso, J. Clark, A. M. Easterbrook, H. Fergusson, D. Findlay, J. D. Macmillan, A. Walker, M.A., R. A. Wilson, D. M. Fergusson, H. B. Gladstone, F. W. H. Wright.

UNIVERSITY OF ABERDEEN.

AT the Graduation in Medicine on April 3rd, 1891, the following candidates received Degrees in Medicine and Surgery:

Degree of M.D.—W. Alexander, M.A., M.B., C.M., Tarland; E. Bovill, M.B., C.M., Bengal; T. J. Compton, M.B., C.M., Norwich; J. Craigie, M.B., C.M., Chard; *G. S. P. Ferdinands, M.B., C.M., Aberdeen; *N. M. MacFarlane, M.B., C.M., Preston; T. W. A. Napier, M.B., C.M., Egremont, Cheshire; J. M. Rattray, M.A., M.B., C.M., Frome; J. Scott, M.A., M.B., C.M., Manchester; C. C. Shepherd, M.B., C.M., Kidderminster; J. Taylor, M.B., C.M., Bootle; T. H. Thomson, M.B., C.M., Campbeltown; R. M. Townsend, M.B., C.M., Cape of Good Hope.

* The thesis of G. S. P. Ferdinands was considered worthy of Highest Honours, and that of N. M. MacFarlane, of commendation.

Degrees of M.B. and C.M.—A. G. Allan, M.A., Portsoy; J. Bell, Cults, Aberdeen; A. H. Bennett, South Australia; S. H. Burnett, Manchester; W. H. Clark, Kintore; J. D. Crow, M.A., Aberdeen; P. W. Diack, M.A., Aberdeen; J. P. Farquharson, Aberdeen; W. Findlay, M.A., Aberdeen; J. W. de Hoedt, Ceylon; A. Hunter, Aberdeen; S. C. Ironside, Aberdour; J. H. Lumsden, Fortrose; G. Lyon, Whitehills, Banff; J. M'D. M'Kay, Sutherlandshire; G. Mackie, Insch; R. M. MacLennan, M.A., Ross-shire; J. Marnoch, M.A., Aberdeen; C. Milne, Newhills; T. Pimley, Preston; A. C. Ross, Craigellachie; D. Russell, Banchory; W. W. Sinclair, Banchory; C. E. G. Simons, Merthyr Tydfil; G. Snell, British Honduras; W. H. Stephen, Newhills; G. W. H. Tawse, Aberdeen; C. E. Wigan, Somerset; J. T. Wilson, Glasgow.

R. L. Brander, and W. J. Dewar, Arbroath, have passed the examinations for the degrees of M.B. and C.M., but will not graduate until they attain the necessary age.

Graduation Honours. The following candidates graduated with Honours:

Highest Academical Honours.—W. Findlay, J. Marnoch, G. W. H. Tawse.
Honourable Distinction.—W. J. Dewar, R. M. MacLennan, J. T. Wilson.

The Diploma in Public Health has been conferred on:

R. A. S. Eden, M.B., C.M., Aberdeen; W. B. Simpson, M.B., C.M., Bedale; W. Tonge-Smith, M.D.

The following candidates have passed the First Division of the First Professional Examination for the Degrees of M.B. and C.M.:

H. J. Baxter, R. Burgess, W. F. Cornwall, W. P. Crombie, J. B. Cruickshank, W. A. G. Farquhar, W. S. Fraser, J. L. G. Gillanders, P. Harper, L. Joseph, J. M'Culloch, D. M'Kenzie, G. O. Marke, R. D. Moncur, R. N. Petrie, G. A. Pirie, E. Proudlove, A. W. Reid, W. Thomson, R. M. Trotter, R. S. Trotter, T. D. Webster.

The following candidates have completed the First Professional Examination:

F. S. Ainley, A. Alexander, J. A. Allwood, F. Beaten, C. T. Bell, R. H. Boulton, **A. Brown, R. Burgess, A. Campbell, K. C. Chetwood-Aiken, A. L. P. Cruickshank, W. Cruickshank, A. B. Dalgetty, A. Duncan, W. C. Edmonston, A. F. A. Fairweather, D. G. Falconer, G. W. R. Fernando, H. Fraser, S. J. C. Fraser, *F. A. Gill, D. Grant, J. F. Hall, C. Haslewood, *W. Hector, A. Henderson, W. J. Heppard, P. Howie, J. Ingram, C. Kemp, *J. R. Kennedy, T. B. Law, W. Macdonald, C. G. M'Gregor, R. G. M'Gowan, **A. W. Mackintosh, *G. Marr, **J. Matheson, C. J. Milne, R. Mitchell, **A. A. Moore, C. K. Morgan, C. L. Morrison, H. Munro (Fort Augustus), *H. Munro, (Fortrose), P. M. Muttukumaru, A. Ogston, *W. W. Pearse, E. Philip, J. F. Philip, W. Pieris, A. Ponnambalam, C. W. Profeit, R. A. Slater, G. Sturrock, A. Thomson, J. Thomson, *W. Thomson, G. E. Watson, *G. J. A. Watson, G. A. Williamson, V. O. Wright.

The following candidates have passed the Second Professional Examination:

N. W. Anderson, W. M. Anderson, A. C. Barron, G. G. Bothwell, T. Brander, J. D. Burnett, W. J. Carmichael, J. S. Cooper, A. B. Dalgetty, W. Dunn, W. J. S. Ewan, A. Fraser, T. H. Galbraith, A. G. Gall, G. Geddes, G. K. Gifford, F. B. Graham, A. Grant, *J. W. Grant, H. T. Hinton, J. W. de Hoedt, A. Hogg, R. E. Kerr, A. Lamont, R. C. Macdonald, *D. D. Mackintosh, C. W. Marshall, C. Mitchell, W. J. Morton, J. G. Pardoe, A. W. Paterson, W. Paterson, *W. R. Pirie, W. Ross, *J. Rust, G. Savege, A. W. Scatliff, G. Skeen, *A. T. Smith, J. Sutherland, R. R. Sutter, J. Wallace, *J. T. West, R. Young.

* indicates that the candidate has passed "with credit."
** " " " "with much credit."

The University Gold Medals for the winter session, 1890-91, have been awarded as follows:

Fife Jamieson Memorial Gold Medal in Anatomy.—J. Gillespie, Aberdeen; J. T. West, Dinnet.
Keith Gold Medal for Systematic and Clinical Surgery.—A. Grant.
Shepherd Memorial Gold Medal for Systematic and Practical Surgery.—J. Rust, M.A.
Medals in Clinical Surgery, Descriptive Case Taking.—W. Trethowan, A. Grant (equal).

Chemistry:

First Year Students.—Silver Medallist: R. Cruden, M.A., Inverurie; Bronze Medallist: A. H. Lister, B.A., Leytonstone.
Second Year Students.—Bronze Medallist: A. Don, M.A., Strathdon.

Institutes of Medicine:

Senior Division.—Medallists: J. W. Grant, Watten, Caithness; D. D. Mackintosh, Aberdeen; R. E. Kerr, M.A., Bunchrew, Inverness; W. R. Pirie, M.A., Aberdeen.
Junior Division.—Medallists: A. W. Mackintosh, M.A., Deskford, Cullen; W. A. G. Russell, M.A., Longhope, Orkney; A. M. R. Sinclair, Inverness; R. R. Sutter, New Zealand.

Systematic Surgery:

Senior Division.—Prize Medal and First Class Certificate.—J. Rust, M.A. Medal and First Class Certificate: J. Leech, M.A.; A. T. Smith; J. Sutherland; A. Hogg, M.A., W. A. Pirie, M.A. (equal); W. Trethowan; W. Sinclair, M.A.
Junior Division. Medal and First Class Certificate: R. Mitchell, P. Howie.

Materia Medica:

Senior Division.—First Class Certificate and Bronze Medal: A. D. Forres.
Junior Division.—First Class Certificates and Bronze Medals: A. Grant, Dufftown; D. D. Mackintosh, Aberdeen; J. Leach, Ardersier.

Practice of Medicine (Session 1890-91):

Senior Division.—First Class Certificate: G. W. Tawse, Aberdeen (prize).
Junior Division.—First Class Certificates: J. Marnoch, M.A., Aberdeen (prize); A. Anderson, M.A., Edinkillie, Morayshire (prize); J. T. Wilson, Glasgow (prize).

Midwifery:

Prizemen and First Class Honours.—J. Marnoch, M.A., Aberdeen; W. Findlay, M.A., Aberdeen; H. Fraser, M.A., Fearn.

Systematic Pathological Anatomy, 1890-91:

Medallists.—E. C. Maguire; A. Anderson, M.A.; H. Fraser.

QUEEN'S COLLEGE, CORK.

THE annual report for the session 1889-90, which had been delayed in consequence of the president's death, has now been published. During the session 1889-90 the number of students on the books of the College was 238, and of these 96

were new entries. The new President, Mr. James Slattery, pays a tribute to the memory of President Sullivan, and speaks in the highest terms of his services to the College, and as a learned and scientific writer on various subjects.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in Physiology only at a meeting of the Examiners on April 4th:

A. H. Hardcastle, student of Yorkshire College, Leeds; H. S. Hughes, of Queen's College, Birmingham; J. A. Dawes, of Owens College, Manchester; S. L. Martin, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; H. M. Moore, H. R. Pring, H. Knight, G. L. Hanwell, L. M. Breton, M. White, and E. C. Peru, of St. Thomas's Hospital; H. Hearnden, J. J. Culmer, W. J. Burroughs, A. Alexander, and C. M. Greenway, of Guy's Hospital; N. M. Tarachand, of Bombay and Middlesex Hospital; A. E. Scott, of Middlesex Hospital; W. Allingham and J. H. F. Iles, of St. George's Hospital; R. D. Cox and S. C. C. Fenwick, of St. Mary's Hospital; J. Moses, of London Hospital; and H. Jenkins, of University College.

Passed in Anatomy and Physiology on April 6th:

R. G. Hann, of Yorkshire College, Leeds; A. E. Thompson, of Queen's College, Belfast; C. Porter, of Queen's College, Cork; F. W. Willway, C. L'O. Miall, A. B. Densham, and A. E. R. Rutherford, of Bristol Medical School; H. Ashton, of Anderson's College, Glasgow; J. Cryer, S. A. Archer, W. H. Budd, and D. D. Stewart, of University College, Liverpool; J. H. Marsh, J. R. Bishop, E. Knight, and A. Walker, of Owens College, Manchester; L. S. Tomkys, of Queen's College, Birmingham; W. F. Miller and E. H. Drake, of Guy's Hospital.

Passed in Anatomy only.

T. Astbury and A. H. Palmer, of Queen's College, Birmingham; J. Tilsley, W. A. P. A. Price, and T. D'A. M. Williams, of Bristol Medical School; A. E. Syme, of Melbourne University; F. Edmunds and P. Slack, of Sheffield Medical School; T. Talbot, of Boston University and London Hospital; F. W. Stokes, of University College.

Passed in Physiology only:

B. E. Edge, R. Goulden, P. Wilkinson, and T. L. Webster, of Owens College, Manchester; and J. E. Gordon, of Glasgow University.

Passed in Anatomy and Physiology on April 7th:

G. V. A. Robertson, R. L. B. Smith, D. Stephenson, and F. Walker, of Yorkshire College, Leeds; F. W. Crossman, A. Hudson, E. H. Marsh, and F. L. Titley, of Bristol Medical School; K. T. Williams, F. J. V. Hall, T. S. F. Hudson, W. dE. Emery, J. C. Poole, E. A. Dando, and G. W. Charsley, of Queen's College, Birmingham; E. Quayle, A. McDougall, S. C. Salter, A. Thorp, W. J. Hoyton, and J. Law, of Owens College, Manchester; L. S. Partridge and H. R. Welsh, of Oxford University; C. W. Branson, of Sheffield Medical School; D. Morrison, of University College; and M. S. Paterson, of St. Mary's Hospital.

Passed in Anatomy only:

C. H. Ackland and A. T. Morgan, of Bristol Medical School; W. H. Cooper, of Bristol Medical School and Mr. Cooke's School of Anatomy and Physiology; H. M. Harrison, of St. Thomas's Hospital; and W. B. Orme, of University College.

Passed in Physiology only:

A. D. Griffiths, of Bristol Medical School; and S. Langdon, of St. Mary's Hospital.

The following gentlemen passed the Second Examination of the Board in Anatomy and Physiology at a meeting of the Examiners on April 8th:

G. E. Barcht, G. H. Cowan, and F. W. Walton, students of London Hospital; E. W. Ormerod, W. H. Symons, B. Collyer, and A. D. Ducat, of St. Bartholomew's Hospital; D. E. Jones, of Trinity College, Toronto, and St. Bartholomew's Hospital; E. T. Jones and A. W. Clarke, of University College; G. H. Lock and W. H. Hargreaves, of Middlesex Hospital; A. W. Hooper, A. E. Thorp, and J. W. Laver, of St. Thomas's Hospital; R. A. Cowie, of Cambridge and St. Thomas's Hospital; A. Bousfield, of King's College; A. C. Hovenden, G. S. Hovenden, and H. W. Graham, of Guy's Hospital; A. G. Bennett, of St. Mary's Hospital and Mr. Cooke's School of Anatomy and Physiology; D. Mowrojee, of Madras Medical College; and T. S. Davies, of St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed in Anatomy only:

R. Serjeant, of Guy's Hospital; S. E. Price, of London Hospital; and A. P. Woolright, of St. Bartholomew's Hospital.

Passed in Physiology only:

E. Shepherd, of St. Mary's Hospital; L. J. A. de Gébert, of Middlesex Hospital; M. R. Taylor, of St. Bartholomew's Hospital; G. W. Gostling, of University College; and J. Challice, of London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having passed the necessary examinations, and having conformed to the by-laws and regulations, was at the quarterly meeting of the Council, on April 9th, admitted a Member of the College:

M. B. Dumaresq, L.S.A., 39, Streatfield Street, Burdett Road.

The following gentleman, having passed the necessary examinations, and having now attained the legal age (25 years), was at the same meeting admitted a Fellow of the College:

G. B. M. White, M.B.Lond., 42, Hazelville Road, N., Diploma of Member dated August 2nd, 1888.

SOCIETY OF APOTHECARIES OF LONDON.—Pass List, March, 1891.

Arts: There were 158 candidates, of whom 3 were placed in the first class and 14 in the second class, having passed in all the subjects required for registration as medical student.

First Class.

Woodstock, C. P.	Leney, E. M.	Henry, B. F.

Second Class.

Andrewes, G. S.	Crowe, G. A.	Kingdon, W. R.
Armson, C. J.	Fryer, H. E.	Malaher, A. E.
Blackstone, C. E.	Hilliard, H.	Rowlands, B.
Cardozo, F. B.	Ingram, J.	Wyllys, H. J. M.
Cator, P.	Izard, H. E.	

One hundred and eight passed in one or more of the subjects.

Surgery: The following candidates passed:

E. M. Dobinson, Guy's.	W. C. Lattey, St. George's Hospital.
W. B. Duck, M.A.Oxon., Oxford University and St. Mary's Hospital.	W. S. McGeagh, L.K.Q.C.P.I., St. Thomas's Hospital.
G. V. M. Gideon, St. Mary's Hospital.	L. E. Parkhurst, B.A.Oxon., Oxford University and St. Mary's Hospital.
C. D. Holmes, Liverpool University College.	A. Plumbe, London Hospital.
S. R. Lane, Glasgow, Middlesex, and London Hospitals.	F. Spurr, Sheffield and Middlesex Hospitals.

Medicine, Forensic Medicine, and Midwifery: The following passed:

E. A. R. Covey, St. Bartholomew's Hospital.	A. S. Phillips, St. Thomas's Hospital.
A. E. Mayner, M.D., C.M., Montreal University.	G. Jones, M.A.Oxon., Oxford University and London Hospital.
H. H. Crickitt, St. George's Hospital.	R. D. Waghorn, Westminster Hospital.
W. F. H. Newbery, M.D., C.M., Trinity Medical College, Toronto.	A. J. Lambert, Leeds Yorks College and Westminster Hospital.
G. V. M. Gideon, St. Mary's Hospital.	A. A. Wimberley, Birmingham, Queen's College.

Medicine and Midwifery:

T. C. Hughes, Westminster Hospital.	L. Roberts, Cambridge University and St. Mary's Hospital.

Midwifery:

R. W. Brimacombe, Birmingham, Queen's College, and St. Mary's Hospital.	J. S. Newington, Edinburgh University.

The following gentlemen were granted the Diploma of the Society qualifying for registration and entitling them to practise the three branches of the profession—Surgery, Medicine, and Midwifery:

Crickitt.	Lambert.	Parkhurst.
Gideon.	Mayner.	Waghorn.
Jones.	Newbery.	

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE HOUSING OF THE POOR IN SALFORD.

A LOCAL GOVERNMENT BOARD inquiry was recently held at Salford with reference to the application by the Corporation under the Housing of the Working Classes Act, 1890, for the issue of a provisional order confirming an improvement scheme agreed upon by the Corporation. The areas to which the scheme relates are five in number. According to the evidence of Mr. C. E. Paget, the medical officer of health, there are 378 houses in these areas, with a population of 1,123 persons; the average density of population is about 400 persons to an acre, and most of the houses are back-to-back, without through light or ventilation. The average death-rate from all causes is 64 per 1,000, the zymotic death-rate is over 7 per 1,000, and the death-rate from pulmonary diseases is in excess of 20 per 1,000. These rates are enormously in excess of the rates prevalent in Salford as a whole (about three times as high), and are even above the rates prevailing in the represented area of Bethnal Green in London.

Mr. Paget was of opinion that the insanitary condition of these areas could not be remedied except by the drastic remedy of pulling the whole down and rebuilding. To rehouse the people displaced, the Corporation proposed to begin at once to erect model dwellinghouses to accommodate

370 of the 1,123 persons, whilst within a quarter of a mile of the condemned areas there were empty houses which could accommodate 625 people. These empty houses only needed a little decoration and whitewash to make them habitable. The whole scheme would be carried out in two years, but the buildings would be demolished piecemeal, so that as the ground was cleared it could be let out at once for building upon.

The great difficulty in the execution of these schemes is the rehousing of the displaced population whilst the ground is being cleared; but at Salford, and probably in most other provincial towns, the difficulty is one which can be more easily met than in London, where a large number of empty houses in the immediate vicinity of the poor and crowded quarters is not to be looked for.

The Salford authorities are certainly to be congratulated upon their initiation of a scheme which will remove from their midst a number of plague spots of the worst description. It is such places as these condemned areas which foster disease, and allow it to spread to the more healthy population around, and which tax the energies of the sanitary officials without any permanent good resulting. An improvement scheme which levels the whole area, which provides for broad and open streets, and which compels the new dwellings to be constructed according to approved by-laws, is the only adequate remedy for these insanitary spots. Salford is worthy of imitation by other towns, whose insanitary areas only require to be found out when public opinion is already sufficiently awakened to call for their condemnation. The Act of 1890 provides the remedy for dealing with these nests of disease and death, which are menaces to the health of all our older cities, and which can now be dealt with effectually without any large expenditure and addition to the rates.

THE PUBLIC HEALTH (LONDON) BILLS.

The Bills for consolidating and amending the public health law of London were read a second time in the House of Commons on Tuesday, April 7th, and referred to the Standing Committee on Law, by whom they will be very critically examined and afterwards consolidated into a single measure. Although exception was taken by some members to certain of the proposed amendments of the existing law, the Bills have met with general approval, and Londoners are to be congratulated on the prospect that within a few months from the present time their sanitary law will be embodied in a single intelligible statute.

There are several points which will require further consideration before the Bill receives the Royal Assent. As we have on a former occasion pointed out, the present arrangements for holding Coroners' inquests are not satisfactory, and the provision of some proper accommodation for the purpose should be imposed on the local authorities. It will also have to be considered whether the maintenance of infectious cases in the hospitals of the local authorities and the Metropolitan Asylums Board should not be gratuitous. The claims, also, of the present medical officers of health to have extended to them the protection and security of tenure, which it is wisely proposed to give to all future officers, must receive attention. It is unfortunate that the District Councils Bill is still pigeonholed at Whitehall; but it will at all events be a long step in the right direction to have secured a satisfactory sanitary code for the metropolis.

ESTIMATES OF POPULATION.

Inquirer asks for the simplest method of correctly estimating the population of a country district to the middle of a given year, as required by the Table B in the medical officer of health's annual return, avoiding logarithms if possible.

*** It is impossible to estimate correctly populations except by the aid of logarithms, but it may be done arithmetically with some approach to accuracy. Assuming that the enumerated population of a district in 1871 was 20,000, and that in 1881 it was 25,000, the increase in the ten years was 5,000, or 500 per annum. This increase, under ordinary circumstances, may be assumed to have continued during the succeeding years. As the 1881 census was taken in April, it is necessary first to raise the population to the middle of that year by the addition of one-fourth of the annual increase, which in this case would be 125. This gives the population estimated to the middle of 1881 as 25,125, and the addition each year of 500 will give roughly the estimated population for succeeding years.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, April 4th, 6,231 births and 4,304 deaths were registered in twenty-eight of the largest English towns, including London. The annual rate of mortality in these towns, which had declined from 24.1 to 21.2 per 1,000 in the preceding five weeks, rose again to 22.4 during the week under notice. The rates in the several towns ranged from 14.1 in Derby, 14.5 in Brighton, 17.6 in Nottingham, and 18.1 in Birmingham to 30.2 in Halifax, 30.6 in Portsmouth, 31.6 in Plymouth, and 36.5 in Hull. In the twenty-seven provincial towns the mean death-rate was 23.7 per 1,000, and exceeded by 2.8 the rate recorded in London, which was 20.9 per 1,000. The 4,304 deaths registered during the week under notice in the twenty-eight towns included 468 which were referred to the principal zymotic diseases, against 449 and 414 in the preceding two weeks; of these, 184 resulted from measles, 149 from whooping-cough, 35 from scarlet fever, 34 from diarrhœa, 33 from diphtheria, 30 from "fever" (principally enteric), and 3 from small-pox. These 468 deaths were equal to an annual rate of 2.4 per 1,000; in London the zymotic rate was 1.9, while it averaged 2.9 per 1,000 in the twenty-seven provincial towns, and ranged from 0.5 in Norwich, 0.8 in Brighton, and 1.0 in Oldham to 5.2 in Huddersfield, 6.6 in Blackburn, and 10.5 in Portsmouth. Measles showed the highest proportional fatality in Sheffield, Leeds, Bristol, Huddersfield, Blackburn, and Portsmouth; scarlet fever in Bradford, Bolton, and Halifax; whooping-cough in Halifax, Newcastle-upon-Tyne, Plymouth, Salford, and Leicester; and "fever" in Wolverhampton. Of the 33 deaths from diphtheria in the twenty-eight towns during the week under notice, 24 occurred in London. Two fatal cases of small-pox were recorded during the week in London and one in Bristol; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals and 2 in the Highgate Small-pox Hospital on Saturday, April 4th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on the same date was 926, and showed a further decline from recent weekly numbers; 98 new cases were admitted during the week, against 91 and 81 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.7 per 1,000, and slightly exceeded the average.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 1,009 births and 684 deaths were registered during the week ending Saturday, April 4th. The annual rate of mortality in these towns, which had been 25.9 and 26.7 per 1,000 in the preceding two weeks, declined again to 26.2 during the week under notice, but exceeded by 3.8 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Aberdeen and Leith, and the highest in Glasgow and Paisley. The 684 deaths registered in these towns included 100 which were referred to the principal zymotic diseases, equal to an annual rate of 3.8 per 1,000, which exceeded by 1.4 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Glasgow and Paisley. The 308 deaths registered in Glasgow included 18 which were referred to measles, 8 to whooping-cough, 4 to scarlet fever, and 2 to diphtheria. Ten fatal cases of whooping-cough were recorded in Edinburgh, and as many as 20 of measles in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 6.4 per 1,000, against 5.7 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, April 4th, the deaths registered in sixteen of the principal town districts of Ireland were equal to an annual rate of 26.6 per 1,000. The lowest rates were recorded in Newry, Drogheda, and Kilkenny, and the highest in Sligo and Cork. The death-rate from the principal zymotic diseases averaged 1.2 per 1,000. The 197 deaths in Dublin were equal to an annual rate of 29.1 per 1,000, against 28.1 and 28.4 in the preceding two weeks, the rate for the same period being 19.3 in London and 25.7 in Edinburgh. The 197 deaths in Dublin included 8 which were referred to the principal zymotic diseases (equal to an annual rate of 1.2 per 1,000), of which 3 resulted from whooping-cough, 3 from enteric fever, and 2 from diarrhœa.

OBITUARY.

KARL BRAUN VON FERNWALD, M.D.,

Professor of Midwifery in the University of Vienna.

Professor Braun von Fernwald, of Vienna, whose name has long been familiar to gynæcologists throughout the world as that of one of the foremost among practitioners and teachers of the obstetrical art, passed away on March 28th, after a short illness, in the 70th year of his age. He was born at Vienna, and took his M.D. degree in the University of that city in 1847. He became *Privat-docent* in 1853, and not long after was appointed Professor in the School for Midwives at Trent. He was called to the Chair of Midwifery in the University of Vienna in 1857, and was elected Dean of the Medical Faculty in 1867 and again in 1871, and filled the office of Rector of the University in 1869.

Braun von Fernwald was not only a teacher of great authority, but a very successful practitioner. The speciality to which he devoted himself owes to him many valuable improvements in practice and some important additions to scientific knowledge. He was one of the pioneers of antisepsis in midwifery in Austria, and his name is associated with not a few new operations and instruments, both in the sphere of midwifery proper and in gynæcology. His writings

have already attained the rank of classics in Austria and Germany, and they are valued in other countries as the records of the life-work of a man with almost unrivalled opportunities of observation and possessing to a high degree the clinical insight and the resourcefulness in difficulties which constitute medical genius.

To Braun von Fernwald the famous Gynæcological Clinic of Vienna, which was established in 1858, owes its existence, and his teaching has for more than thirty years been one of the most powerful attractions to draw foreign students to the Imperial city. With them, as well as with his own countrymen, he was immensely popular. He was looked upon with respect and affection by his colleagues of the Vienna Professorial College, of which he was, at the time of his death, the senior member; and he was trusted and beloved by the crowds of patients who came to him from the most distant parts.

The deceased professor was the recipient of numerous Austrian and foreign orders and decorations. The rank and title of "Knight" was bestowed on him in 1872, and that of "Aulic Councillor" in 1877. In him the University of Vienna loses one of those who have done most in recent years to place the fame of its medical school on a secure basis. His funeral was attended by Dr. von Gautsch, the Austrian Minister of Public Instruction, by the deans and almost all the professors of the several Faculties of the Vienna University, by crowds of students, and by a large number of the general public. Funeral orations were delivered over the grave by Professors Chrobak and Rokitansky.

JAMES EDWARD KERSHAW, M.A., M.B.Oxon.

The Hospital for Consumption, Brompton, has lately lost its resident medical officer, J. B. Kershaw, M.B.Oxon., after a short and sudden illness.

Dr. Kershaw had filled the posts of house-physician and assistant resident medical officer, and had, within the last year, been promoted to be resident medical officer, the duties of which office he performed with much credit to himself and with great advantage to the institution. On March 16th he was attacked with pain in the head, coma, and right hemiplegia, from which he never rallied, but died early on March 21st. He was attended by several members of the staff of the Brompton Hospital, and was also seen by Dr. Gowers, who diagnosed arteritis and thrombosis of the basilar artery, which was confirmed by *post-mortem* examination.

The deceased, who was aged 34, was much beloved by all connected with the hospital, on account of his amiability, his tact, and his courtesy, and his services were highly valued by the medical staff and the Committee of Management, who now lament the loss to the hospital, and to the profession at large, of a medical man of so much promise.

FREDERIC WORTHINGTON, M.R.C.S.Eng.

Mr. Frederic Worthington, whose death, at the age of 81, we record with regret, retired from practice in 1879, and passed the remaining years of his life at his residence at Enfield. He was the son of the late Mr. Charles Worthington, a Liverpool surgeon, and commenced his medical studies at the infirmary in that town, several years before it had acquired the title "Royal," and before the medical school was formed. Lectures were, however, delivered at the institution on anatomy and other medical subjects, and after attending these for some time Mr. Worthington went to Paris and became a pupil of M. Ricord.

Having obtained his qualification he returned to Liverpool, and in 1832 was appointed, in conjunction with the late Mr. Simon, Honorary Surgeon to the newly-formed Lock Hospital, an office he retained until 1873.

For nearly 50 years he lived and carried on his practice in 40, Knight Street, the house his father had occupied before him. He had a considerable reputation as a specialist in venereal diseases, and also had an excellent general practice, many of the oldest and best known families in the neighbourhood of Liverpool being among his patients.

He was of a quiet and retiring disposition and took no active part in public or professional matters outside his immediate practice. He leaves a widow, three daughters, and a son, who is a distinguished member of the medical profession. It is worthy of remark that the present Dr. Sidney Worthington is the fifth in direct descent of a line of doctors.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS, Monday, April 6th.

Presumption of Life Limitation (Scotland) Bill.—The Lord Advocate, in moving the second reading of this Bill, said it was substantially the same as was introduced some years ago. The second reading was agreed to.

Charities Recovery Bill.—On the motion of Sir Walter Foster, this Bill was read a second time.

Tuesday, April 7th.

Baby Farming Advertisements.—Mr. Channing asked the Secretary of State for the Home Department whether he was aware that the National Society for the Prevention of Cruelty to Children had, in their investigation of baby farming and its attendant infanticide, obtained, and could supply to the Home Office if necessary, a practically complete list of the London and provincial newspapers which had inserted the advertisements of those who traded in unwanted children; and whether he would issue from the Home Office a circular letter to all such newspapers drawing the attention of the publishers and editors to the improper use of their columns by such advertisements and to the frequent cases of cruelty and death arising therefrom, and urging them to exclude, so far as possible, advertisements of this nature.—Mr. Matthews said the Society in question had not communicated to him a list, but, as he had already stated, he did not see his way to interfere with advertisements of the class described. He was doubtful whether such a circular would have any influence on the newspapers, even if he had the authority to issue it, these advertisements not being, as he had already stated, necessarily illegal.

(London) Law Amendment and Consolidation Bills.—Mr. Ritchie, in moving the second reading of these Bills dealing with the public health of London, expressed the hope that they would be referred to a Standing Committee and discussed in a businesslike manner. The state of the law in regard to public health in London was very unsatisfactory, being contained in twenty-nine separate statutes. The Consolidation Bill consolidated the whole of the Public Health Acts, and proposed certain amendments which were not, he thought, likely to create much criticism. The Bill proposed to extend to hospitals built by the sanitary authorities themselves the present provision by which sanitary authorities might contract with the Metropolitan Asylums Board for the provision of hospital accommodation, and the patients could, when thought able to do so, be made to pay. He had been able largely to adopt the proposals made by various authorities in London with regard to the consolidation. The definition of the word "nuisance" had been very considerably enlarged. The Bill provided for the immediate abatement of a nuisance, not only where it was actually proved to exist, but also where it was injurious or dangerous to the public health. At present only the person affected by the nuisance or the local authority could move in the matter; but under the present Bill any person might give information, and any person found guilty of allowing a nuisance to exist would be held responsible for abating it. The Bill imposed on the London County Council the duty of making by-laws to put a stop to the throwing of salt on the streets of the metropolis in snowy and frosty weather. The Bill also did away with the present distinction between slaughterhouses and knackers' yards. The removal of offensive matter by the local authorities had been put under the law of offensive trades. There was another branch of the matter generally known under the definition "destructors." The Bill provided that where a sanitary authority caused a nuisance, or did anything injurious or dangerous to health, it might be prosecuted, and all the provisions as to nuisances should apply. With regard to the smoke nuisance, the present dual authority was thought not to be a good thing, and it was proposed to entrust the carrying out of the law to the sanitary authority. It was not proposed to disturb the present arrangement making the householder liable to clear the snow from before his house. With regard to streets, the Bill required the sanitary authority to perform its duty of sweeping and cleansing the streets, and the sanitary authority was made liable to a fine if it did not perform its duty as far as reasonably practicable. With regard to the removal of house refuse the Bill now made it clear that the sanitary authority should provide for the proper removal of such refuse and in default be liable. No period for the removal was set out, but the sanitary authority would be bound to fix some proper and reasonable period for clearing away dust and house refuse, and they would be liable to a fine if, proper notice being given, they did not at once comply with the request of the owner. The proper regulation and construction of sanitary conveniences was provided for. The Bill also dealt with the question of unsound articles of food. It was proposed to extend the existing law, which only applied to those who exposed such articles for sale, and the Bill applied to every article used for food, and gave power both of search and destruction. It was now proposed to make the person from whom the food was bought, as well as the person selling it, punishable for the offence. As to water supply, a house without a water supply was held to be a nuisance, and the Bill absolutely prohibited a new house from being occupied until the sanitary authority should have certified that there was a proper supply. With regard to infectious diseases, the present law as to disinfection was entirely permissible. The Bill made it necessary for the sanitary authority to provide proper premises for disinfecting bedding, clothing, etc., and also vehicles for carrying the same, the sanitary authority to have power to do this in the case of poorer persons free of charge. The Bill imposed a penalty upon anyone milking, selling fruit, or otherwise engaging in an occupation connected with food who knew himself to be suffering from an infectious disease. It was proposed with regard to the notification of infectious diseases that the return required to be sent by the metropolitan asylums managers to the County Council should be sent by them to every sanitary authority in London and to the London School Board, and to the managers of every public elementary school in London. With regard to mortuaries, every sanitary

authority must make one, and, if required by the County Council, provide a building for *post-mortem* examinations. The Government also proposed to apply to underground and cellar rooms (the present law as to which was very defective) the complete Public Health Act of 1875 and amend the law where it was at present faulty. It was also necessary to strengthen the means by which the law was to be enforced, and the Bill provided that the Local Government Board might, if satisfied on representation of the London County Council that there was not a sufficient number of inspectors, order the sanitary authority to appoint as many as were deemed necessary, the appointment to be subject to regulations of the Local Government Board; and with regard to the medical officers of health and sanitary inspectors, it was provided that they should be removable by the sanitary authority only with the consent of the Local Government Board. This provision had been urged from many quarters, and there was much force in the argument that, unless these officers were to a certain extent independent of the local authority, they could not perform their duties with absolute freedom. There was a precedent for this in the Scotch Local Government Bill. He believed that the action or inaction of the sanitary authorities had been very largely caused by the complexity of the law with regard to the public health. The sanitary authority, just as an individual, was liable to a fine for non-performance of their duties. The Bill provided that the London County Council might prosecute the local authority, and also that the Local Government Board might, on complaint by the London County Council that the local authority was neglecting its duty, and, after satisfying itself that the complaint was just, make an order fixing a limit of time within which the duty must be performed; and, if it were not then performed, might transfer the duty from the local authority to the County Council. In many local matters the London County Council rightly had powers of a very extensive character; and it was right and proper in dealing with a great question of public health that the County Council, representing all parts of the metropolis, should be eligible for appointment with regard to the performance of duties which had been neglected by the local sanitary authorities. The House would see that the Government had prepared the Bill in a large and liberal spirit, and with a full desire to consider all representations made by local authorities, and to strengthen their hands by simplifying the law. If the House would assent to the Government's proposals, he believed that they would prove to be productive of enormous benefit to the health of London. It was proposed to refer both Bills to one of the Standing Committees, and he did not doubt that they would come back from that Committee even better measures than they were now. He begged to move the second reading.—Mr. STUART gave a general support to the Bill subject to the discussion of details in Committee.—Mr. J. R. KELLY viewed subsection 2 of Clause 5 with some alarm. As to the regulations with reference to underground rooms, he asked why should the ignorant, uneducated occupier be included with the owner as liable to punishment? He was so much opposed to some of the provisions of the Bill that if any member proposed its rejection he would support the motion.—Mr. PICKERSGILL advocated the substitution of the word "shall" for "may" in the clause dealing with coroners' court houses.—Sir A. ROLLIT thought the proposal that in future medical officers of health and sanitary inspectors should be irremovable, except with the sanction of the Local Government Board, would be resented by the local authorities as implying unnecessary distrust of their action, and that it would so far decrease the sense of responsibility on the part of those authorities that the best men in the different localities would be deterred from undertaking the work of local government.—Dr. FARQUHARSON thought the Bill would do a great deal to remove some of the minor miseries of life under which Londoners had been groaning for so many years. Hon. members had not yet had time to go thoroughly into this Bill, and it would, of course, have to be considered by a committee upstairs. The Bill would be a valuable one if it contained nothing more than the provision for the abolition of the detestable custom of putting down salt in the streets in order to dissolve the snow. Another matter which the Bill dealt with was the emptying of dustbins at all hours of the day. He agreed with those hon. members who thought it would be better to put the responsibility of removing snow and slush upon the local authorities. Some of the observations which had been made about this infection were extremely good. He was glad to hear that some means were to be provided by which a schoolmaster could ascertain whether an epidemic was raging in his district. He was glad his right hon. friend had followed the Scotch Bill in making the dismissal of local officers of health dependent upon the Local Government Board. This Bill appeared at first sight to be a very good one, and he believed that with a little licking into shape it would be of great service to the health of the metropolis.—Mr. CAUSTON asked Mr. Ritchie whether he could allay the anxiety of the medical officers and sanitary inspectors now in service as to their removability or irremovability from office. In Clause 35 the point was made clear as to future officers, but nothing was said as to the position of those now serving, and they were naturally very anxious to learn whether the omission was accidental or intentional.—Mr. ISAACSON expressed a hope that the President of the Local Government Board would permit the introduction of a provision preventing auctioneers and house agents from disposing of dwelling houses without being able to produce a certificate that they were in a proper sanitary condition.—Mr. RITCHIE said the position of medical officers and sanitary inspectors was this—that at the end of the term of their present appointment they would become officers under this Bill; until the present appointments ceased they would not.—Mr. CAUSTON stated that many officers were not subject to reappointment.—Mr. RITCHIE was not aware of cases in which they were not reappointed, but, in any event, existing appointments might be terminated by mutual consent and a new appointment made. But it would be impossible to impose an absolute duty on the local authority to keep on a man without an opportunity of considering whether he was a fit and proper person to be appointed permanently. He was afraid it would be impossible to carry out the suggestion made about certificates for sanitary houses. In order to certify every house to be in a perfectly sanitary condition it would be necessary virtually to pull the house to pieces, and he was afraid it might be found there were very few houses in London faultless in that respect.—The Bills were read a second time and referred to the Standing Committee on Law.

INDIA AND THE COLONIES.

BRITISH HONDURAS.

YELLOW FEVER AT BELIZE.—The insanitary state of Belize, built as it is on a swamp that, notwithstanding repeated resolutions, has never been more than partially reclaimed, is notorious, but the comparative immunity of the town from yellow fever, which has appeared only at long and uncertain intervals, is certainly remarkable; and on the theory of its spontaneous origin, or of its spread by epidemic waves, would be inexplicable. Though the outbreaks of 1874, 1886, and 1890 were popularly ascribed to the dredging operations in the in the harbour, Mr. Eyles, Colonial Surgeon, in a Report on the Occurrence of Yellow Fever in Belize, proves conclusively, from the dates and distribution of the cases in the two latter years, that these could have had no influence whatever, but that all the circumstances point to direct importation. In 1886 it was undoubtedly by the *Hedwig*, which took on board at Colon, where the disease was raging, four men and a quantity of ballast. Several of the crew were attacked, two dying, and the ballast was used for repairing the principal streets, in which the majority of the cases subsequently occurred. The outbreak of last year may have been a resuscitation of that of 1886, which is always liable to occur where frost is unknown. Mr. Eyles maintains that the essential cause of yellow fever is a specific contagion and that certain conditions of soil are necessary to its propagation or perpetuation in a place, climate playing but a contributory part. He insists on the urgent need for a thorough sanitary reclamation of the town on the one hand, and on the employment of a judicious system of quarantine on the other. His criticism of the inconsequence of certain authoritative and official pronouncements on this question are so excellent that we can only wish that his style were as good as his reasoning.

MEDICAL NEWS.

PROFESSOR LÉON LABBÉ and Professor Peter, of Paris, have been promoted to be Commanders of the Legion of Honour.

THE Mercers' Company have given 20 guineas to the funds of the Workhouse Infirmary Nursing Association.

The Worshipful Company of Merchant Taylors have contributed the sum of 200 guineas to the Building Completion Fund of the Royal Free Hospital, Gray's Inn Road.

THE Lord Chancellor has appointed Mr. Francis William Maclean, Q.C., M.P., a Master in Lunacy in the place of Sir Alexander Miller, resigned.

A SCHOLARSHIP of £50 in Natural Science at Clare College, Cambridge, has been gained by Mr. H. Boulton, of Epsom College.

DIPHTHERIA SPREAD BY A CORPSE.—The Rev. S. Bridenbaugh tells in the American *Sanitary Bulletin* how, when pastor of a small town in Pennsylvania, the corpse of a child that had died of diphtheria was "on view" for three days in a house opposite the public school, when over 100 of her schoolfellows as well as many other persons visited it. More than 150 persons contracted the disease, and 40 of them died.

WE have received the volume of the *Transactions of the Royal Academy of Medicine in Ireland* (Fannin and Co.) for the year 1890. As in previous years, the reports of the proceedings of the various sections of the Academy have been published in the BRITISH MEDICAL JOURNAL from time to time, and it is therefore unnecessary for us to enter into a detailed review of the volume.

INTERDICTION OF HYPNOTIC PERFORMANCES.—The Common Council of Cincinnati has, on the advice of the Health Commissioner of the city, Dr. J. W. Prendergast, interdicted public exhibitions of hypnotism, and adopted an ordinance making them a misdemeanour, on the ground that the indiscriminate application of hypnotism is, in a large proportion of cases, injurious to the mental health of the persons upon whom it is practised.

AN INTERNATIONAL HOSPITAL IN PARIS.—A Franco-Dutch hospital (Hôpital Franco-Néerlandais) has just been opened

in the Rue Championnet, Paris. The Consul-General of Holland has taken a leading part in the foundation of the new institution, which he hopes will soon change its name to Hôpital International, if, as he anticipates, the representatives of other foreign countries in Paris will associate themselves with him in the promotion of the good work.

The British Gynæcological Society will hold a provincial meeting on June 18th and 19th at Newcastle-on-Tyne. Dr. Robert Barnes, Honorary President of the Society, will take the chair at the meetings, which will be held in the College of Medicine. Dr. R. C. Benington has been appointed General Local Secretary, and all communications are to be addressed to him. Professor S. Pozzi, M.D., of Paris, Surgeon to the Lourcine-Pascal Hospital, has been elected an Honorary Fellow of the Society.

Koch's Treatment of Tuberculosis.—At Seville, Dr. Sota, of the Policlinic of the School of Medicine, has at present eight patients under treatment by Koch's method. In all the cases improvement has taken place, especially in two cases of lupus and one of leprosy. The largest dose hitherto used has been 5 milligrammes, and the treatment has not yet had to be discontinued in any case. The Munich police authorities have forbidden druggists to sell tuberculin until regulations on the subject have been enacted by the Bavarian Government.

Presentations.—Dr. Petter, of Darlington, has been presented by the members of his No. 1 (Way and Works) Ambulance Class with a handsomely-framed photograph of himself and a silver-mounted walking stick in appreciation of his services.—Dr. Younger, on recently resigning his appointment on the medical staff of the London County Asylum, Hanwell, after sixteen years' service, was presented by the inspectors and attendants with a richly-chased silver cup, and by the nurses with a handsome and highly ornate salver, each with a suitable inscription, as tokens of the high esteem in which he was held by the donors.—Mr. P. M. Scatliff, M.R.C.S., L.R.C.P.Lond., has been presented by the ladies of the Lordship Lane Branch of the St. John Ambulance Association with a handsome pedestal drawing-room lamp, as a mark of their appreciation of his services as honorary lecturer to the classes recently concluded.—On Monday last, Mr. Francis W. Clark, L.R.C.P.Lond., M.R.C.S., surgeon to Sir Charles Palmer's ironstone mines at Grinkle, in Cleveland, Yorkshire, was presented by the miners belonging to his ambulance class, all of whom have recently obtained the certificate of the Association, with a handsome silver-mounted ebony walking stick as a token of their esteem and appreciation of his services.—Dr. John Somerville Johnston, at a public meeting held on April 6th, was presented by the members of the Sharnbrook Branch of the St. John Ambulance Association with an elegant walking stick, as a token of esteem and thanks for his services successfully rendered to the classes of the branch.

MEDICAL VACANCIES.

The following Vacancies are announced:

ALRESFORD UNION, Hants.—Medical Officer of the 2nd District of the Union. Salary, £100 per annum and fees; and Medical Officer of Health for the District of the whole Union. Salary, £10 per annum. Applications to W. H. Moss, clerk, by April 17th.

BIRMINGHAM CITY ASYLUM, Rubery Hill, near Bromsgrove.—Clinical Assistant. Board, lodging, and washing provided. Applications to the Medical Superintendent.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon; double qualifications; not over 30 years of age. Salary, £80 per annum, with board, residence, and washing. Applications to C. V. Woodcock, Secretary, Albany Buildings, Market Street, Bradford, by April 11th.

CANCER (FREE) HOSPITAL, Fulham Road, S.W.—Assistant-Surgeon; must be F.R.C.S., and reside within the four mile radius. Applications to the Chairman of the House Committee by April 18th.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Honorarium £100 per annum. Applications to Stanley Boyd, Dean, by April 20th.

COUNTIES OF KIRKCUDBRIGHT AND WIGTOWN.—Medical Officer of Health. Salary, £350 per annum and personal and travelling expenses. Applications to R. M. and A. J. Gordon, County Clerks, Kirkcudbright, and J. and C. A. McLean, County Clerks, Wigtown, from whom further particulars can be obtained, by April 22nd.

DERBY COUNTY ASYLUM, Mickleover, near Derby.—Locum Tenens Assistant Medical Officer for 2⅔ months from May 1st. Terms, £2 2s., with board, lodging and washing. Applications to the Medical Superintendent.

DEVONSHIRE HOSPITAL, Buxton.—House-Surgeon. Salary £100 per annum, with board, furnished apartments and washing. Applications endorsed "House Surgeon," to the Secretary, by April 20th.

DEVONSHIRE HOSPITAL, Buxton.—Assistant House-Surgeon. Salary, £50 per annum, with board, furnished apartments and washing. Applications endorsed "Assistant House-Surgeon," to the Secretary, by April 20th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell E.—House-Physician. Board and lodging provided; no salary. Applications to Samuel Whitford, Secretary, by April 23rd.

GENERAL HOSPITAL, Birmingham.—Honorary Physician. Diplomas to be sent to the Medical Committee by April 13th. Applications to Dr. J. D. M. Coghill, House Governor. Election on April 15th.

GENERAL INFIRMARY, Leeds.—House-Physician. Board, lodging and washing provided. Applications to Mr. E. Ward, Secretary of the Faculty, Infirmary, Leeds, by April 22nd.

GENERAL INFIRMARY, Leeds.—Resident Officer at the Ida Hospital. Appointment for six months. Honorarium of £25, with board, lodging and washing. Applications to Mr. E. Ward, Secretary of the Faculty, Infirmary, Leeds, by April 22nd.

GENERAL INFIRMARY, Leeds.—Two House-Surgeons. Board, lodging and washing provided. Applications to Mr. E. Ward, Secretary of the Faculty, Infirmary, Leeds, by April 22nd.

GRANTHAM FRIENDLY AND TRADE SOCIETIES' MEDICAL INSTITUTION.—Resident Medical Officer. Salary, £150 per annum, and midwifery fees, with residence, coal, and gas. Not under 30 years of age. Applications to Mr. F. Hullott, Grantham, by April 13th.

GUEST HOSPITAL, Dudley.—Resident Medical Officer, double qualifications. Salary, £100 per annum, with board, residence, attendance and washing. Applications to E. Poole, Secretary, by April 23rd.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE.—Clinical Assistant. Board, lodging, and washing, and small honorarium. Applications to Dr. Rees Phillips, Virginia Water.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer, double qualifications, unmarried and not under 25 years of age. Salary, £200 per annum, with board and residence. Applications by April 22nd.

KING'S COLLEGE HOSPITAL.—Sambrooke Medical Registrar. Applications from King's College students, to J. W. Cunningham, Secretary, King's College, London.

KING'S COLLEGE, London.—Demonstrator of Public Health. Applications to J. W. Cunningham, Secretary.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, Bowdon, Cheshire.—Resident Medical Officer. Salary, £60 per annum with board, apartments, and washing. Applications to the Secretary by April 17th.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer. Applications to Alfred Craske, Secretary, by April 24th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant Resident Medical Officer. Applications to Alfred Craske, Secretary, by April 24th.

OXFORD EYE HOSPITAL.—House-Surgeon. Board, lodging, and honorarium of £50 at end of a year. Applications by April 20th.

PARISH OF CHELSEA.—Medical Officer of Health, Food and Drugs Analyst, and Gas Examiner. Salary, £450 per annum. Applications marked on outside of envelope: "Application for appointment as Medical Officer of Health, etc.," to Thomas Holland, Vestry Clerk, Town Hall, King's Road, Chelsea, by April 20th.

PARISH OF FULHAM.—Medical Officer of Health. Salary, £400 per annum. Appointed for three years. Age not to exceed 45. Applications to the Clerk of the Fulham Vestry.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King Street, Regent Street, W.—Third Honorary Physician. Applications to St. Leger Burnett, Secretary, by April 20th.

SHAPINSAY, Orkney.—Medical Officer. Salary, £30 from Parochial Board, £50 from Medical Association, with fees from practice. Application to R. Rannie, Shapinsay Manse, or Chairman of Parochial Board.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Surgeon, double qualifications; unmarried and under thirty years of age. Salary, £120 per annum, rising to £140, with board, residence and washing. Applications to Lieutenant-General E. F. Bourchier, Secretary, by April 20th.

SWANSEA HOSPITAL.—Resident Medical Officer; double qualifications. Salary, £100 per annum, with board, furnished apartments, coals, gas, laundress, and attendance. Applications to the Secretary by April 14th. Election April 23rd.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in the hospital. Applications to W. H. Laban, Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Assistant Surgeon. Application to R. J. Gilbert, Secretary, Superintendent, by April 20th.

WEST RIDING LUNATIC ASYSUM, Wakefield.—Pathologist and Assistant Medical Officer; double qualifications, unmarried, and not above 30 years of age. Salary, £100 per annum, rising £10 annually up to £150, with board, furnished apartments, and an additional £50 as Pathologist. Applications to W. Bevan Lewis, Medical Superintendent.

MEDICAL APPOINTMENTS.

ALTHORP, C. F. M., M.B., L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Surgeon to the Bradford Infirmary.

BAYNES, James, appointed Analyst for the City and Borough of Peterborough.

BETTS, W. A., M.B., C.M.Edin., appointed Junior House-Surgeon to the Liverpool Royal Southern Hospital.

BIDWELL, Leonard Arthur, F.R.C.S.Eng., L.S.A., appointed Assistant Surgeon to the West London Hospital, *vice* H. F. Weiss.

BLAIKIE, R. H., M.A., M.D., F.R.C.S.Edin., appointed Physician to the Edinburgh Free Church Training College for Teachers at Moray House.

BRONNER, Adolf, M.D.Heidelb., M.R.C.S.Eng., appointed Honorary Laryngologist to the Bradford Infirmary.

BRONNER, Herman, M.D.Strassburg., L.S.A., appointed Assistant Medical Officer to the Bradford Infirmary.

BRYCE, A., M.B., C.M.Glas., appointed Medical Officer for the Parish of Killin, Perthshire.

CAVERHILL, Thomas F. S., M.B., C.M., F.R.C.P.Edin., appointed Medical Officer for the County of Haddingtonshire.

COLLUM, Archie T., L.R.C.P., M.R.C.S., appointed House-Physician to Charing Cross Hospital.

DODSWORTH, F. C., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Chiswick Urban Sanitary District of the Brent.

FIRTH, John Lacy, M.D.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Bradford Infirmary, *vice* Mr. C. F. M. Althorp, resigned.

FISHER, John A., L.R.C.P.Edin., L.F.P.S.Glas., reappointed Medical Officer of Health for Garston, Lancashire.

FISHER, Theodore, M.D.Lond., M.R.C.S., appointed Assistant Medical Officer to the Infirmary of the St. Saviour's Union, *vice* Dr. Muspratt, resigned.

FOSTER, Sir B. Walter, F.R.C.P.Lond., M.D.Erlang., M.P., appointed Consulting Physician to the Birmingham General Hospital.

FRASER, H., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Windsor Royal Infirmary, *vice* E. Willmer Phillips.

GIBBS, Charles, L.R.C.P., M.R.C.S., appointed House-Surgeon to Charing Cross Hospital.

HANCOCK, William J., B.Sc., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the District Infirmary, Ashton-under-Lyne, *vice* John Edward Platt, M.D.

HODGSON, H., L.R.C.P., M.R.C.S.Eng., appointed Resident Obstetric Surgeon, Guy's Hospital.

HORROCKS, William H., M.B.Lond., F.R.C.S.Eng., L.S.A., appointed Assistant Surgeon to the Bradford Infirmary.

HUGHES, Edgar, F.R.C.S.Eng., appointed Surgeon to the St. George's and St. James's Dispensary, *vice* Ernest Solly.

JULER, Henry E., F.R.C.S., appointed Consulting Ophthalmic Surgeon to the London Lock Hospital and Asylum, Westbourne Green.

KAY, James M. M., M.B., C.M.Edin., appointed Medical Officer to the workmen of Messrs. Lucas and Aird, Railway Contractors, Crianlarich, Perthshire, *vice* Mr. Hodges, resigned.

LANE, James Ernest, F.R.C.S., appointed Surgeon to St. Mary's Hospital, Paddington.

MACGREGOR, Duncan Alistair, M.B., C.M.Edin., reappointed Medical Officer for the Clayton West District of the Penistone Union.

MACKINTOSH, Angus, M.D., L.F.P.S.Glas., reappointed Medical Officer of Health for the Clay Lane Urban District.

MADIN, William T., L.D.S., R.C.S., appointed Dental Tutor to Queen's College, Birmingham.

MARROW, John Smyth, M.D.Edin., M.R.C.S.Eng., appointed House-Physician to the Belfast Royal Hospital, *vice* Dr. W. A. Wheeler, resigned.

MILLIGAN, Hy. Norman Duncan, M.B., C.M.Edin., appointed Dispensary Surgeon to the Bradford Infirmary, *vice* W. B. Pettitt.

OWEN, Harold Edward, L.R.C.P.Lond., appointed Medical Officer for the 8th and 9th Districts of the Kingsbridge Union, S. Devon.

PARHAM, H. C. H., M.R.C.S., L.R.C.P., appointed Surgical Registrar to Charing Cross Hospital, *vice* F. X. Da Costa.

PERRY, Charles Edward, M.D.Brux., L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer of Health for Sandgate.

PETTITT, William Brakenridge, L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Physician to the Bradford Infirmary, *vice* Dr. Firth.

PHILLIPS, Edward E., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of Health to the Southend Local Board.

PIGGOTT, F. Cecil H., M.B.Cantab., reappointed Medical Officer of Health to the Teignmouth Local Board.

POPE, H. Sharland, B.A., M.B., B.C.Cantab., appointed House-Physician to the General Lying-in Hospital, York Road, S.E., *vice* H. B. Osburn, resigned.

PRATT, Joseph Dallas, M.D.Dub., F.R.C.S.I., appointed Surgeon to the Jervis Street Hospital, Dublin.

REMFRY, Leonard, M.A., M.D., B.C.Cantab., M.R.C.P., appointed Obstetric Physician to Out-patients at the Great Northern Central Hospital.

MITCHELL, John, M.D., L.F.P.S.Glas., reappointed Medical Officer of Health for the Barnard Castle Urban and Rural Districts of the Teesdale Union.

SHORE, H. G., M.R.C.S., appointed Medical Officer for the Cropedy District of the Banbury Union, *vice* Mr. M. Hodgson, resigned.

SIMPSON, Alexander, M.A., M.B., C.M.Aberd., appointed Junior Assistant Medical Officer to the Sussex County Asylum, Hayward's Heath.

SIMS, G. S., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the West District of the Derby Union.

SULLY, A. Max, L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Medical Officer to the Jaffray Suburban Branch of the General Hospital, Birmingham, *vice* Dr. Ballance.

SWALLOW, Francis McDonald, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for the Silkstone District of the Penistone Union.

SWAN, Robert L., F.R.C.S., appointed Surgeon to Steevens's Hospital, *vice* Mr. William Colles, resigned.

WAGGETT, E. B., M.B., B.C., B.A.Cantab., M.R.C.S., appointed Junior Resident Medical Officer to the Royal Free Hospital, Gray's Inn Road, *vice* Mr. E. C. Barker.

WHITAKER, George Herbert, M.R.C.S., appointed Medical Officer for the Bungay District, Suffolk, *vice* Mr. Johnson, resigned.

WILDING, Walter F. W., M.R.C.S.Eng., L.R.C.P.Lond., L.M.Coombe, appointed Medical Officer of Health to the Local Board, Hindley, Lancs., *vice* Jno. Aspinall, M.R.C.S.Eng., L.S.A., resigned.

WILLIAMS, Wm. Hy., jun., M.R.C.S., L.R.C.P.Lond, L.S.A., appointed Medical Officer of Health for the Rural Sanitary Authority of the Sherborne Union, Dorset.

WILMOT, Thomas, L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Medical Officer to the Bradford Infirmary.

WILLS, Ernest, M.B.Lond., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the County Asylum, Rainhill, near Liverpool.

WILSON, Arthur C. J., L.R.C.P., L.M.Edin., M.R.C.S.Eng., reappointed Medical Officer for the Penistone District of the Penistone Union.

YOUNGER, Edward George, M.D.Brux., M.R.C.P.Lond., appointed an Honorary Physician to the St. Pancras and Northern Dispensary.

YOUNG, James, M.D.Glas., appointed Assistant Surgeon to the South Dispensary, Liverpool.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. G. Buckston Browne: The Importance of the Post-prostatic (or Trigonal) Pouch in the Surgery of Vesical Calculus, illustrated by several cases.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Mr. J. H. Hutchinson: On Measles as a Cause of Endocarditis; being an account of four cases in which Organic Mitral Murmurs developed during the course of the disease (communicated by Dr. W. B. Cheadle). Mr. W. Arbuthnot Lane, M.S.: Chronic Traumatic Arthritis.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Mr. Edmund Roughton: On a case of Hepatic Abscess implicating the Lung, Pleura, Kidney, and Colon. Dr. Amand Routh: On the Treatment of the Vomiting of Pregnancy.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BRAND.—At Invery, Great Driffield, E. Yorks, on the 6th instant, the wife of Dr. Brand, of a son.

LOVELY.—On April 5th, at Woburn Lodge, Exmouth, the wife of Charles Newton Lovely, M.B., B.S., of a son.

ROTHERN.—On March 30th, at the Old Manor House, Beeston, Notts., the wife of Frank Rothern, M.D., M.R.C.S., of a son.

MARRIAGES.

ADAMS—WHYTE.—On March 12th, at St. Thomas's Cathedral, Bombay, by the Rev. F. C. Hill, Chaplain to the Bishop of Bombay, Charles Adams, M.B., LL.B.Dublin, F.R.C.S.I., son of the late Andrew Adams, Esq., Tinaquin, co. Tyrone, to Maude de Whyte, second daughter of the late Major John L. A. Whyte, J.P. co. Clare and Bray, Ireland.

CHAPMAN—WRIGHT.—On April 2nd, at the Parish Church, West Kirby, by the Rev. Canon Bienconwe, M.A., Harry Cecil Chapman, M.B.(London), Medical Superintendent, Mill Road Infirmary, Liverpool, to Mary Ada Wright, of Beachdale, West Kirby. No cards.

HARDYMAN—BEATH.—On the 3rd instant, at the Parish Church, West Wickham, by the Rev. F. E. Murphy, M.A., Bath, George Hardyman, M.B., C.M., of Bath, eldest son of the late John Hay Hardyman, Esq., of Heatherwick, W.S. (late of 3rd Battalion Royal Scots), to Constance Christian, second daughter of David Beath, Esq., Melbourne, Australia, and of Wood Lodge, West Wickham, Kent.

MACDONALD—USHER.—At 18, Lauder Road, Edinburgh, on April 2nd, by the Rev. Robert G. Balfour, Thomas Ranken Macdonald, M.B., Surgeon, Bengal Medical Staff, to Amy Balmer, youngest daughter of Mr. Thomas Usher, of Edinburgh.

SCOUGAL—GRIST.—On the 2nd instant, at St. Peter's, Huddersfield, by the Rev. Canon Bordsley, M.A., vicar, assisted by the Rev. Robert Willan, vicar of Golcar, Edward Fowler Scougal, M.A.(Abdn.), M.D., C.M. (Edin.), Huddersfield, to Edith, second daughter of John J. Grist, Oakleigh, Edgerton, Huddersfield. No cards.

DEATHS.

HOWELL.—On the 8th instant, at Cleeve House, West Hill, Wandsworth, Bessie, wife of T. Arthur Ives Howell, Esq., and daughter of the late John Tayler, Esq., of Gotherington, Gloucestershire, aged 31 years.

WADE.—On April 1st, at Cross, near Weston-super-Mare, Somerset Edward Wade, M.R.C.S.Eng., aged 81 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

MR. J. BENSON COOKE, Surgeon, H.M. Convict Service, Portland, writes: The guardians of an orphan lad, 15½ years old, are anxious to place him in the Mercantile Marine. They would be thankful to receive suggestions from any readers of the BRITISH MEDICAL JOURNAL, who have had experience of cadetships in this service. The guardians are prepared to pay a premium of £50 or £60. Information and advice on the subject would be gratefully acknowledged.

T. S. asks for the name of any books on the subject of casting in plaster-of-paris, etc., for taking models of the brain and other parts of the body.

INCONTINENCE OF URINE.

M.D. asks for suggestions on the following case. His patient is an intelligent boy of fourteen years of age, who has for nearly all his life suffered from nocturnal incontinence of urine. All the usual remedies have been tried without effect: belladonna, nux vomica, iron, arsenic, etc., with cold sponging, attention to diet, bowels, etc. At one time, after large doses of atropine, there was improvement for three weeks or a month, but this fortunate state of affairs was not maintained. The incontinence is sometimes present in the daytime as well as at night. Threadworms were noticed and treated some time ago, but not lately.

L.R.C.P.ED.

MEMBER asks to be informed of the best books to read in medicine, midwifery, materia medica, and medical jurisprudence for the final L.R.C.P.Ed.

*** Medicine: Either Bristowe's, or Bartholow's, or Roberts's manuals. Midwifery: Parvin or Playfair. Therapeutics: Bartholow, Garrod, or Mitchell Bruce. Public Health: Wilson. Medical Jurisprudence: Guy and Ferrier, Taylor's small manual, or Abercrombie's book.

ANSWERS.

A. H. (Glasgow): For description of Dr. Ward Cousins's antiseptic artificial membranes see BRITISH MEDICAL JOURNAL, September, 1889, and 1890. Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, London, E.C., are the manufacturers.

YELLOW FEVER.

DR. R. W. FELKIN (Edinburgh) writes: Referring to your reply to "Vox Clamantis" in the BRITISH MEDICAL JOURNAL of April 4th, the information he requires is to be found in the *Medical and Surgical Memoirs*, published by Joseph Jones, M.D., New Orleans. For the sake of other readers you may care to publish one analysis of blood and urine. "1,000 parts of blood contain: Water, 788.5; coloured blood corpuscles (dried), 140.5; fibrine, 1.47; albumen and extractive matters, 69.43; saline matters, 9.74. Amount of urine passed during twenty-four hours, 1,725 cubic centimetres; specific gravity, 1017, acid reaction; heavy deposit of yellow cells and granular casts, granular matter, urate of ammonia, colourless corpuscles, and cells of kidney; coloured matter and acids of bile present. 1,725 cubic centimetres of urine contained: Urea, 978.99 grains; uric acid, 34.5 grains; phosphoric acid, 22.0 grains; sulphuric acid, 78.2; albumen, 80.1 grains." (Vol. iii, Part I, p. 64.) For *post-mortem* appearances and microscopical preparations of blood and urine see Plates 7, 8, 9, and 10, Vol. ii.

AMMONIO-CITRO-ARSENIATE OF IRON.

M.D.—The chief advantages which the ammonio-citro-arseniate of iron, mentioned in the BRITISH MEDICAL JOURNAL of March 28th, 1891, page 706, appears to possess over a solution of citrate of iron and ammonia with liquor arsenicalis is that it is said to be better tolerated by "delicate stomachs or by those who are weakened by long illness." This statement is the published opinion of several eminent Italian medical authorities who have used both forms. A soluble combination of citrate of iron and ammonia with arsenic can be regarded as a reliable therapeutic combination, since the iron and arsenic are in a state which admits of their easy absorption. Peroxide of iron is an antidote to arsenic only under a certain condition. It must be given as recently precipitated moist ferric hydrate. In this state it combines with the soluble arsenic and forms an insoluble arseniate of iron.

INTRAUTERINE MEDICATION.

DR. FRANCIS W. CLARK (Staithes) writes: "Vox Clamantis" will find no difficulty in dilating the cervix uteri for supposed polypus by means of an ordinary laminaria tent introduced overnight; the endometrium can then be readily and safely explored the following morning by means of Thomas's dull wire curette, and the curetting followed by the application of iodised phenol (ac. carbol. pur., 1; lin. iodi. 1; glycerine, 2). As a rule, however, no previous dilatation is necessary, but, of course, considerable care must be exercised in using the curette, especially by one "who has not had much practical experience in the matter."

NOTES, LETTERS, Etc.

IT is stated that three deaths have recently occurred in the neighbourhood of Nimes from poisoning by *Amanita citrina*, which appears to be one of the deadliest fungi in the South of Europe.

THE HONORARY SECRETARY of the British Medical Benevolent Fund begs to acknowledge a parcel of clothing, and to thank "Anon" for forwarding it.

DR. J. MAXTONE THOM (Crieff) requests us to state that he has not accepted the appointment of Medical Officer and Bursar of Trinity College, Glenalmond, notified in the BRITISH MEDICAL JOURNAL of March 28th.

TOBACCO SMOKE.

MR. GEORGE M. STANSFELD (Clifton, Bristol) sends the following cutting from *Pearson's Weekly Paper*, No. 37: A gentleman whose lungs are not strong enough for him to enjoy the fumes of tobacco, took with him to a friend's house the other day a little lamp which he set on a table when the cigars were lighted. Over the flames of this little lamp was a ring of platinum which became red hot in a very few seconds, and which consumed the smoke of a dozen cigars as fast as it was made, so that the atmosphere of the room was as clear as it would have been had there been no smoking going on at all.

ASSOCIATION OF AMERICAN PHYSICIANS OF BERLIN.

ON February 19th, a meeting, at which some forty American doctors were present, was held at Berlin to take steps to establish a permanent organisation such as already exists in London, Edinburgh, Paris, and Vienna. Professor Miller, formerly of the University of Pennsylvania, and now Professor of Dentistry in the University of Berlin, pointed out the advantages of such an organisation, and urged that the *Transactions* of the Association should be published every year. The Association was then formally constituted, Dr. Judson Daland, of Philadelphia, being elected President, and Dr. F. R. Weber, of Milwaukee, Secretary. The objects of the Association are: (1) the arrangement of medical work and the formation of special private courses; (2) the giving of advice to new comers regarding instruction, lodgings, etc.; (3) the reading and discussion of papers, exhibition of patients, etc.; (4) the furthering of mutual ends by a more extended acquaintance among American medical men resident in the Prussian capital. Professor Miller has offered the use of the Dental Lecturing Room of the University, 40, Dorotheenstrasse, as a permanent meeting room of the Association. All communications should be addressed to Dr. Frederick R. Weber, Charité Hospital, Berlin.

MOSQUITO BITES.

A WRITER in a German contemporary says that for mosquito bites he has found in his own person nothing better than ordinary soap. He resides in Africa, and always carries a small piece of soap with him on his country expeditions. If he is bitten he makes a lather over the affected part and allows it to dry on. The burning is at once relieved, and all pain soon ceases. The application can be repeated as often as required.

CENTENARIANS IN JAPAN.

FROM the official report of the Japanese census, taken on December 1st, 1889, it appears that, out of a total population of 40,702,020, in Japan on that date there were 65 persons who had attained their hundredth year, 45 who had reached their hundred and first year, 13 their hundred and second year, 11 their hundred and third year, 1 his hundred and fourth year, 9 their hundred and fifth year, 3 their hundred and sixth year, 1 his hundred and seventh year, and 1 his hundred and ninth year. Decidedly all those who are anxious to beat the record in longevity should lose no time in taking up their residence in Japan.

A COUNTERBLAST TO ALCOHOL.

PROFESSOR FOREL has recently published an address delivered by him to the students of Christiania and Upsala on "Drinking Habits: their Hygienic and Social Importance, and their Relations to Academic Youth" (Enke, Stuttgart). His thesis may be stated in his own words as follows: "Alcohol, together with the worship of the Golden Calf, is the true Devil of the nineteenth century." Professor Forel vehemently denies all virtue to alcohol, whether as a stimulant or a food; he refuses to admit that it is a source of national wealth, a question on which finance ministers are apt to hold a different opinion. As showing the enormous quantity of alcoholic drink taken even by persons who might be supposed to be ethically as well as educationally superior to the common herd, Dr. Forel gives the following extraordinary statistics as to the amount of intoxicating liquor consumed at a public banquet during the International Medical Congress at Berlin last August

The number of guests was 4,000, and among them these thirsty souls—representing, be it remembered, the very head and front of the medical profession throughout the civilised world—drank 15,382 bottles of wine, 22 hectolitres of Bavarian beer, and 300 glasses of brandy. Can we wonder that scenes the reverse of edifying are said to have followed this Gargantuan symposium?

Treatment of Pneumonia.

Mr. D. Hughes, M.R.C.S. (Llangollen) writes: Allow me a small space of the British Medical Journal to call the attention of the medical profession to the following treatment of pneumonia, which I have successfully prescribed for the last fourteen or fifteen years. I may state that the treatment has been invariably successful in effecting a thorough and speedy cure in every case where there was no serious organic complications preceding the pneumonic attack. The treatment consists of liq. ferri. perchlor.: 12 minims every four hours.

From careful observation of the atmospheric influences on the respiratory organs, especially the east winds, I arrived at the conclusion that pneumonia was simply erysipelas of the lungs, and consequently adopted the above treatment with the satisfactorily results already mentioned. I am strongly of opinion that the treatment would have similar effects in pleuro-pneumonia amongst cattle, if scientifically applied; and some few months ago I ventured to make this suggestion to the President of the Board of Agriculture, which he promised to place in the hands of the veterinary surgeons belonging to the department for their consideration, which no doubt in due course will have their attention.

In the meantime I should be glad to know from some of your numerous correspondents whether they ever prescribed the above for pneumonia, and with what result.

The Midwives Bill.

Dr. J. A. Mansell Moullin (Wimpole Street, W.) writes: It is for Dr. Aveling to prove his case, and he has not done so. The accuracy of the figures is not the point in question, but the use Dr. Aveling makes of them. As he states the returns have been forwarded him, and it is evident he has not taken the slightest trouble to ascertain on what basis they have been compiled. Some interesting questions might be raised.

1. What becomes of all the cases which are deemed serious or likely to give rise to difficulty?
2. Do the in-patient returns of these institutions afford a similarly brilliant result?
3. At what length is the lying-in period computed?
4. What is the cause of the mortality acknowledged—malpraxis or insufficient training?

To follow Dr. Aveling's argument to its logical conclusion: if the midwives were sufficiently trained, obviously there should be no deaths at all.

A "Record" in Twin-bearing.

Dr. James Hurley (Queen Camel, Bath), writes: In reference to the American case of fecundity recorded in the British Medical Journal of March 28th, my experience leads me to believe that the old country can hold its own, in this respect at least. An Englishwoman, Mrs. M., had twins five times, triplets once, and single children four times. All of the twins were females. With the exception of one pair of twins no one of this numerous family was parent of more than a single child at a birth. Each of the excepted pair of twins had twins once and single children at other times.

The history of another family is of interest in this connection. Mrs. A., an Englishwoman, had twins, B, B., and single children, C, D, E, etc. (exact number unknown). The twins died unmarried. C, a daughter, had twins once and single children; D, a daughter, had twins once and single children; E, a daughter, had sixteen children (no twins). One of these, a daughter, had twins twice besides single children. None of the other fifteen was parent of more than a single child at a birth. E's husband's sister had twins three times. It is worthy of remark that of sixteen persons whose maternal grandmother, two maternal aunts, and one paternal aunt were mothers of twins, only one seems to have inherited the family peculiarity.

Breathlessness in Anæmia.

Dr. W. Langford Symes (Hackelstown, co. Carlow) writes: In his recent very valuable and instructive Lettsomian lectures Dr. Stephen Mackenzie, like many authors, rather hastily dismisses the subject of breathlessness in anæmia with the remark that it is partly cardiac and partly due to deficiency of red corpuscles. Now I have long considered it mainly due to the individual inability of each red cell to take up sufficient oxygen and the enormously diminished number of the cells, 30 to 40 per cent.; in fact, "oxygen starvation." For in addition to the low standard of oxygen already in the blood, by exercise more oxygen is used up, and if the supply by the red cells—one half their number and these diseased—is not equal to the demand, dyspnœa necessarily follows. Moreover, the cause of dyspnœa is "want of oxygen," and this is the real factor which stimulates the respiratory centre. It seems in fact to vary directly as the hæmoglobin, and will be found (when no cardiac or pulmonary cause co-exists) to accompany the several forms of anæmia in varying degrees of severity according to the richness of the blood in oxygen and the intensity of its combination with the hæmoglobin, for in some cases their combination seems very volatile and they are easily dissociated.

Since the respiratory function of the blood is in health dependent on —1, normal quantity of red corpuscles; 2, healthy character of red corpuscles; 3, normal quantity of hæmoglobin; 4, capability of hæmoglobin to combine with oxygen, and is thus proportional to its ability to become oxygenated, it follows that any disturbance of this equilibrium by disease will produce more or less dyspnœa; and Dr. Mackenzie has ably shown us how in all forms of anæmia these conditions are materially altered.

Adherent Membranes.

Dr. A. Cordes, M.R.C.P.Lond. (Geneva), writes: With regard to adherent membranes (British Medical Journal, p. 786) I can quote the following case: On July 12th, 1877, I attended Mrs. S. The after-birth came away without any undue fracture alone, the membranes being detached exactly at their junction with the placenta all round. I did not even try to bring them away, knowing they were adherent. Placenta slightly fatty. Ergot, usual doses. Slight *post-partum* hæmorrhage. On July 13th a large piece of membrane hanging out of the vulva I pulled gently on it. It tore away. All went well till the 17th, when Mrs. S.'s pulse went up to 104, and the lochia had some smell. I prescribed injections with camomile tea, and in the afternoon the remains of the membranes were expelled. The pulse at once went down to 88.

I shall not trespass on your valuable space in discussing whether I acted properly. I will only quote Fischer, who says the retention of the membranes is not dangerous. Portal (*La Pratique des Accouchements*, 1685, p. 12) says the same. Eberhardt (*Annales de Gynécologie*, 1890, I., p. 477) says the retention of the membranes is dangerous only for that portion which remains in the cervix or vagina, because there are no bacteria in the healthy uterus—they are only in the vagina and in the cervix.

Sol. Hydrarg. Perchlor. in Diphtheria.

Mr. E. Coward, M.B. (Almondbury), writes: In the British Medical Journal of March 28th Mr. A. H. Frere advocates the use of the biniodide of mercury in order to counteract the tendency towards mercurialism which one might almost expect to result from the continued large doses approved of by Mr. F. A. Coward, in his article of January 3rd, and which has given rise to the discussion about the merits of this drug in diphtheria. Mr. Coward and also Mr. H. Mainwaring Holt pointed out that the pot. iodid. does not alter the therapeutic effect of liq. hydrarg. perchlor. in this disease. Regarding the tendency to mercurialism, I can state from personal experience in many cases of diphtherial throats that not even symptoms of dyspepsia or diarrhœa have resulted from its use when given in ℥j doses every hour for 24 hours consecutively. This result may be due partially to the astringent effects of the iron used in combination as suggested, but I am of opinion that the explanation is to be sought in the action of the drug being expended in its destructive influence on organisms connected with pathological metabolism in diphtheria, and that the risk of mercurialism is lessened in proportion to the abundance of the bacilli present in this complaint. No doubt the efficiency of mercury in diphtheria is due to its germicide properties and to anyone who has tried its use as suggested the result is always pleasing as well as striking.

The Suppression of Juvenile Smoking.

M.D. writes: As one of the promoters of the conference recently held in the Manchester Town Hall to consider the above subject—as noticed in the British Medical Journal of April 4th—will you allow me to say that I thoroughly agree with your strictures on those who so very indiscreetly commented on ministers and others who smoke? The resolutions, unanimously adopted by smokers and non-smokers, were of a thoroughly practical character; they were to the effect: (1) That, since boys are led to smoke from ignorantly supposing that they will be benefited thereby, instruction on the subject of the use of tobacco and other narcotics should be given in schools in connection with the teaching of hygiene. (2) That, in order to support parental injunctions and the teaching in schools, in opposition to juvenile smoking, a law similar to those now in operation in certain parts of Switzerland, Germany, and the United States should be enacted by the Legislature of this country.

The quotation from the speech of the President of the Anti-Narcotic League was erroneously rendered by the reporter. What the speaker said was "10 lbs. of tobacco contains as much poison as would kill all the persons [130 to 150] in this room."

A Suggested Line of Research as to Tuberculosis.

Dr. James Braithwaite (Leeds) writes: In the research which is now so actively going on all over Europe as to the possibility of curing tuberculosis, one line, and that which seems to me the most promising, is being neglected. This line is to endeavour to destroy the tubercle bacilli by means of other bacilli, the products of which are directly destructive to the tubercle bacilli. Whether such bacilli exist remains to be seen, but the converse is probably true, namely, that tubercle bacilli destroy other bacilli, for it is the case, so a very intelligent gravedigger assured me, that if the body of a person who has died from consumption be accidentally seen two or three years after burial, it is quite fresh and undecomposed, and "like wax," whereas it is quite otherwise if the death has been from any other disease. I take it that the products of the tubercle bacilli have before the death of the patient destroyed the putrefactive bacilli always otherwise present. It was this remark of the gravedigger which originated this idea in my mind. Why should we not be able to turn the tables on the tubercle bacilli, and find a greater thief still to catch them?

The only inorganic substance which, so far as we have yet discovered, retards the growth or even destroys the tubercle bacillus is phosphorus, the most convenient form of which is the hypophosphites. But this remedy, although good, is not good enough, and possibly some rapidly growing bacillus exists which will kill the tubercle bacilli, and only produce a temporary illness in the patient. I would suggest the small-pox bacillus, which in the vaccinated would not produce very dire effects. Experiments might be conducted by infusing sterilised jelly with different bacilli, and then inoculating it with the tubercle bacilli, which would probably be found incapable of growth in a certain jelly which already contained its enemy.

Empyema of the Antrum.

Dr. Francis J. Allan (London) writes: During the last six months I have had the opportunity of examining and watching a large number of cases of this affection, under the care of Dr. Greville Macdonald, at the Throat Hospital, Golden Square, and I have been impressed with the fact that, as Dr. Robertson puts it in the British Medical Journal of April 4th, "the dental factor so widely supported by no means fulfils the promise we might hope for in aiding us to diagnosis."

All the cases I have seen exhibited evidence of well-marked nasal disease, and while few did not possess teeth that were more or less

carious, it was the exception rather than the rule that any tenderness or pain was complained of in connection with such teeth; and on extraction in order to open the antrum, it was often found that the fangs had not even perforated the floor of the antrum.

In some cases where the fangs actually protrude into the cavity pus will no doubt be found covering them; but this does not necessarily imply that such a tooth was itself diseased. The experience, however, of various careful observers is so strong in regarding the teeth as a cause of this affection that we are led to the conclusion that empyema of the antrum, like other complaints, may be produced by more than one cause.

The discrepancy which exists can best be explained, as Dr. Macdonald points out in his work on *Diseases of the Nose*, on the supposition that cases in which toothache is the chief symptom find their way to the dentist, while those that are free from this, but suffer from discharge from or obstruction in the nose, are more likely to come under the observation of the nose specialist.

Paracresotic Acid: A Correction.

Professor M. Charteris (Glasgow) writes: In the article on paracresotic acid, under "Chemical Experiments II," there is an error. "Melting point, 154°," should be 152°. The melting point is given correctly in the tabular statement.

Holiday Colonies in Germany.

The report of the German Association of Domestic Hygiene, which is under the patronage of Her Majesty the Empress Frederick, states that the total number of children sent into the country by the association for a longer or shorter period of time during 1890 was 2,318, being 309 more than in the previous year. A sum of 39,700 marks (£1,985) was collected by 142 local committees, and the annual contributions had also increased. One hundred and ten medical men gratuitously examined 4,000 children who presented themselves for admission to the "colonies."

Longevity.

In the country district of Ormskirk one of the medical practitioners discovered that the combined ages of the "first five" cases seen by him last Good Friday morning amounted to 402 years, the patients' respective ages being 71, 87, 71, 74, 99.

"Primary" and "Secondary" in Certificates of Death.

Mr. W. L'Heureux Blenkarne (Leicester) writes: The leading article in the British Medical Journal of March 21st on the above opens up a most interesting question. The words "primary" and "secondary" are certainly very misleading. Take, for instance, the case of a fatal attack of measles in which pneumonia has supervened. According to the ruling of the filling up of the death certificate, measles appears on the top line as the cause of death and by the friends, at any rate, it is understood so, the word "pneumonia" appearing in a "secondary" place, whereas the pneumonia is the real cause of death. Then, again, in a fatal case of pneumonia occurring from a chill, the word "pneumonia" appears on the top line of the death certificate; so here we have the anomaly of the same actual cause of death appearing in the one instance as primary, in the other as secondary.

I would suggest that the words "primary" and "secondary" be done away with altogether, and replaced by the words "immediate" and "contingent." No misunderstanding in filling up the certificate could possibly arise then, and, moreover, these distinctive terms are much more scientific and true, as for instance in the above hypothetical case of measles + pneumonia, where, although the measles is the "primary" (that is, original) cause of the illness, the pneumonia is the "primary" (that is, the chief) cause of the death.

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BOOKS, Etc., RECEIVED.

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REMARKS
ON
A NEW TEST FOR ALBUMIN AND OTHER PROTEIDS.

By JOHN A. MACWILLIAM, M.D.,
Professor of the Institutes of Medicine in the University of Aberdeen.

Salicyl-sulphonic acid[1] is a white crystalline substance, readily soluble in water and alcohol. On slow evaporation it crystallises from aqueous solutions in the form of long needles. It gives a deep red colour on boiling with Millon's reagent. As regards its constitution and formation, I quote the following (translated) from Beilstein's[2] *Handbuch d. org. Chemie* (2nd edition, vol. ii, p. 969)—Salicyl-sulphonic acid $C_6H_3(OH)(SO_3H)COOH$.

Formation.—By the action of sulphuric anhydride on salicylic acid,[3] or by heating salicylic acid with concentrated sulphuric acid.[4]

Salicyl-sulphonic acid is a remarkably powerful precipitant of proteid matter. It serves as an exceedingly delicate and precise test for the detection of proteids in solution. It acts upon all the classes of proteid bodies—(1) Native albumins (egg-albumin and serum-albumin); (2) derived albumins (acid-albumin and alkali-albumin); (3) globulins (for example, serum-globulin and myosin, also vegetable globulins); (4) fibrin (whether held in solution by dilute alkalies or by neutral salts); (5) proteoses (albumoses, etc.); (6) peptones.

In the case of all these substances salicyl-sulphonic acid at once forms a dense bulky white precipitate. When the proteid present is a native albumin, a derived albumin, a globulin, or fibrin, the precipitate is not redissolved on boiling; on the other hand, it becomes markedly flocculent. But when the proteid present in the solution tested with salicyl-sulphonic acid is an albumose or a peptone, the precipitate redissolves on heating, to reappear on the cooling of the fluid. Hence it is easy by the application of heat to distinguish between a precipitate due to the presence of albumoses and peptones and one formed by the other proteids. The proteid thrown down by salicyl-sulphonic acid is not at the same time coagulated, as is the case with the precipitate caused by nitric acid, etc. This is shown by the fact that the precipitate is readily soluble in a dilute alkali, provided a sufficiency of the alkaline solution be added. Coagulated proteid is, as is well known, insoluble in such a solution. On the other hand, the precipitate formed by salicyl-sulphonic acid is not soluble in weak acids, nor, indeed, in strong acids, unless a large amount of the strong acid (such as nitric) is added.

When fluids containing proteids (for example, blood serum, solutions of egg-albumin, solutions of albumoses and peptones) are freed from their proteid constituents by treatment with a large excess of absolute alcohol (after acidulation, when necessary) and filtration, they entirely fail to give the characteristic precipitate on the addition of salicyl-sulphonic acid. On the other hand, when the precipitate thrown down by the alcohol, after being well washed with alcohol, is redissolved in water and tested, it readily gives the usual proteid reaction with salicyl-sulphonic acid, a white precipitate being at once formed.

In the case of fluids containing proteids other than peptones (for example, blood serum) the proteid constituents can be completely removed by saturation with ammonium sulphate or sodio-magnesic sulphate, which precipitates the proteids. Here, again, the results are of the same character as those described above. The proteid-free filtrate gives no trace of the characteristic precipitate with salicyl-sulphonic acid. On the other hand, the proteid precipitate, when redissolved by the addition of water, gives a very evident and striking reaction on the addition of the reagent.

Such experiments I have performed with various fluids containing proteids—solutions of the proteids of white of egg (albumin and globulin), blood serum, albuminous urine, 10 per cent. sodic chloride extract of flour (containing vegetable globulin, etc.), saline solutions of fibrin, solutions of Witte's peptone (containing albumoses and peptones), and solutions of albumin which have been subjected to the process of peptic digestion (containing syntonin, albumoses, and peptone). The results have been uniformly similar in all cases. Fluids containing proteids among other constituents give a marked reaction with salicyl-sulphonic acid. The removal of the proteid is invariably accompanied by a complete absence of this reaction, the remaining constituents of the respective fluids being entirely unable—in the absence of proteids—to give the characteristic precipitate when tested with salicyl-sulphonic acid.

On the Delicacy of the Salicylic-Sulphonic Acid Test as a Means of Recognising the Presence of Minute Amounts of Proteids in Solution.

In the case of fluids containing minute amounts of proteid, the reaction which salicyl-sulphonic acid gives is an opalescence or cloudiness of the fluid, instead of the copious white precipitate obtained with such fluids as blood serum, etc.

When employed as a delicate reagent for the detection of traces of proteids it is well to proceed as follows: Take a small quantity of the solution (for example, 20 to 30 minims) preferably in a very narrow test-tube,[5] and add to it a drop or two of the saturated aqueous solution of salicyl-sulphonic acid; shake the tube so as to mix the reagent with the solution, and then hold it towards the light and look at it against a dark background. If necessary use two other tubes as control tubes; one containing some of the solution supposed to contain proteid, the other with water and a drop or two of of salicyl-sulphonic acid.

In the case of extremely weak solutions, where there is only a trace of proteid present the opalescence resulting from the addition of the reagent may not be pronounced until a little time (one minute) has elapsed.

When opalescence is declared the tube is then to be heated to the boiling point, so as to demonstrate whether the opalescence clears up on heating or not.

In the case of very strongly alkaline solutions supposed to contain a trace of proteid, it may be necessary to add more of the reagent than usual, as some of it is used up in neutralising the alkalinity of the fluid. And in case of doubt it is well to test the reaction of the fluid with litmus paper after the salicyl-sulphonic acid has been added, in order to make sure that the alkalinity has been completely overcome and the fluid rendered strongly acid, which it ought to be for the proper action of the proteid test.

It is to be specially noted that the cloudiness or opalescence caused by salicyl-sulphonic acid on shaking it up with a weak proteid solution is uniformly diffused over the fluid; it is entirely distinct from such an appearance as that of a few scattered crystals floating here and there in the fluid and soon subsiding. (Such crystals may appear if the liquid under examination contains a considerable amount of certain salts, for example, ammonium sulphate, etc.)

Extremely weak solutions of proteid (albumin and globulin) were obtained by mixing white of egg with a large amount of water or ¾ per cent. salt solution.

The dilution was gradually effected through various stages, and the action of a number of tests was compared at each stage. The results obtained at a few of these stages are stated here.

White of egg diluted 2,000 times:—

Boiling after faint acidulation with acetic acid = no change.

Xantho-proteic test (nitric acid, heat, and ammonia) = slight reaction.

Heller's test (cold nitric acid) = slight reaction.

Mercuro-potassic iodide = haziness of the fluid.

Salicyl-sulphonic acid = marked opalescence.

[1] For the first sample I examined I am indebted to my friend, Dr. McKenzie Davidson. It and the subsequent samples were procured from Messrs. Davidson and Kay, Union Street, Aberdeen.

[2] For this reference I have to thank Professor Japp, F.R.S.

[3] Mendius, *Ann. Chem. Pharm.*, 103, p. 45.

[4] Remsen, *ibid.*, 179, p. 197.

[5] I have frequently used small tubes of three-eighths of an inch diameter, and a length of three inches, and have found them very convenient.

White of egg diluted 8,000 times:
Boiling after acidulation = no reaction.
Xantho-proteic test = no reaction.
Heller's test = no reaction.
Mercuro-potassic iodide = no reaction.
Salicyl-sulphonic acid = distinct opalescence.

White of Egg diluted 12,500 times.—Salicyl-sulphonic acid still gives distinct cloudiness when the test tube is compared in a suitable light with control tubes containing (*a*) some of the dilute solution alone, and (*b*) water or salt solution with salicyl-sulphonic acid. Even with higher degrees of dilution an appreciable effect is obtained. But, without going to the extreme limits of the action of the test, let us take the solution obtained by diluting white of egg 12,500 times. The amount of proteid here must be exceedingly small, even when the dilution is performed with salt solution instead of water in order to keep the globulin of white of egg in solution. Taking the percentage of proteid (albumin and globulin) in white of egg as 12.2, we find that the dilute solution above referred to must have contained less than 1 part of proteid in 100,000 parts of the fluid tested.

A number of experiments were also performed with blood serum, in order to determine the relative delicacy of various tests in regard to the proteids of this fluid (serum-albumin and serum-globulin). The results obtained at a few of the stages of gradual dilution may be stated here. Normal salt solution ($\frac{3}{4}$ per cent.) was employed as the diluting fluid.

Serum diluted 1,000 times:—
Boiling after slight acidulation with acetic acid=no reaction.
Xantho-proteic test=no appreciable result.
Heller's test=no reaction at the time; distinct film five minutes afterwards.
Mercuro-potassic iodide=marked opalescence at once.
Roberts's test (saturated salt solution with hydrochloric acid)=marked opalescence on boiling.
Salicyl-sulphonic acid=marked opalescence at once.

Serum diluted 10,000 times:—
Boiling after being rendered faintly acid with acetic acid= no reaction.
Xantho-proteic test=no reaction.
Heller's test=no reaction at the time, nor five, ten, fifteen, or twenty minutes after.
Mercuro-potassic iodide=no reaction.
Roberts's test=no reaction.
Pietrowski's test (copper sulphate with caustic potash)=no reaction.
Salicyl-sulphonic acid=distinct cloudiness especially marked after about half a minute.

The amount of proteid in such a dilute solution is very small. Taking the total proteids of serum as being about 7.50 per cent.,[*] the amount in the serum diluted 1,000 times must be less than 1 in 13,000; and in the serum diluted 10,000 times, less than 1 in 130,000. Further, it can be shown that with even higher degrees of dilution an appreciable result is obtained when the solution is carefully tested with salicyl-sulphonic acid.

On the Use of Salicyl-Sulphonic Acid as a Test for Albumin and Other Proteids in Urine.

Normal urine gives no precipitate on the addition of salicyl-sulphonic acid.

Urine containing albumin or other proteids gives a white precipitate with this acid; and in the case of the proteids ordinarily present in albuminous urine (albumin and globulin) the precipitate does not clear up on heating: on the other hand it undergoes coagulation, becoming markedly flocculent. With albumoses and peptones, as has been already stated, the result is different; the precipitate which these bodies give clears up on heating, to reappear when the fluid cools. Hence the presence of albumoses or peptones in the urine (the so-called peptonuria) may readily be detected by this reagent; and they may be easily distinguished from the forms of proteid (albumin and globulin) present in ordinary albuminuria.

The fact that albuminous urine readily gives a marked precipitate with salicyl-sulphonic acid does not, of course, prove this reagent to be suitable as a test for the presence of albumin in urine.

There are certain questions to be considered:—

1. Is the precipitate really a proteid one, or is it due to some other substance present in albuminous urine?
2. If the precipitate is a proteid one, is it always obtained when proteid is present in the various abnormal conditions of urine which may have to be examined?
3. Is a similar precipitate given by any other possible non-proteid constituent of urine?
4. How does this test compare as regards delicacy and precision with those ordinarily employed?

I shall deal briefly with these questions *seriatim*:—

1. Is the precipitate really a proteid one, or is it due to some other substance present in albuminous urine?

The fact that salicyl-sulphonic acid gives no precipitate with normal urine tends to show that the ordinary constituents of urine are not the cause of precipitation in albuminous urine.

When albuminous urine is deprived of its proteid constituents, for example, by saturation with ammonium sulphate and filtration, the proteid-free filtrate gives no precipitate whatever when tested with salicyl-sulphonic acid (the filtrate may be freed from excess of ammonium sulphate by dialysis).

On the other hand, the proteid precipitate thrown down by ammonium sulphate when washed with saturated solution of the salt, and redissolved in water readily gives an abundant precipitate when tested with the acid in the usual way; and the presence of proteid is confirmed by other proteid reactions.

Again, the fact that the precipitate thrown down by salicyl-sulphonic acid in albuminous urine is of a proteid nature can be shown in this way: the reagent is added to some of the urine, with the result that a precipitate is at once formed. The urine is then filtered, and the precipitate, after being thoroughly washed with a dilute solution of the acid, is redissolved by the addition of a very dilute alkali (for example, 0.1 per cent. KHO solution). The solution so obtained—the redissolved precipitate—is then examined by various well-known proteid tests, and found to give characteristic results, demonstrating the presence of proteid.

Again, in the case of urine containing albumose, the precipitate caused by salicyl-sulphonic acid may be shown to be a proteid precipitate—precipitated albumose. We can remove the albumose by saturating the urine with ammonium sulphate and then filtering off the precipitate. The filtrate is found to be proteid-free: on the other hand, the precipitate when redissolved in water is found to give marked general proteid reactions, and also those peculiar to albumoses. In all the cases that I have as yet examined, the precipitate in urine (with salicyl-sulphonic acid), which cleared up on heating, to reappear on cooling, proved to be due to the presence of albumose.

Further, in the case of urine containing albumose, if the precipitate caused by salicyl-sulphonic acid be filtered off and redissolved in a dilute alkali, it is found to give the reactions of albumose.

Similar results are obtained with normal urine to which albumose or peptone has been added, with the difference, of course, that the peptone is not removed by saturation with ammonium sulphate, but remains in the filtrate, while the albumose is separated by filtration.

It is clear, from these experiments, that both in the case of urine containing the ordinary heat-coagulable proteids (albumin and globulin), and in the the case of urine containing proteids that are not coagulable by heat (albumoses and peptones), the precipitate thrown down by salicyl-sulphonic acid is of a proteid nature—it is a precipitate of the proteid present in the urine. The results obtained in albuminous urine are in complete agreement with those got with white of egg and blood serum. They make it plain that the proteid is what gives the precipitate, and that the ordinary constituents of urine are entirely unable to give such a result.

2. If the precipitate is a proteid one, is it always obtained when proteid is present in the various abnormal conditions of urine which may have to be examined?

I have examined a large number of samples of urine containing albumin in different conditions, for example, acid

[*] Hammarsten, "Ueber das Paraglobulin," *Pflüger's Archiv*, 1878. Ox serum was used.

and alkaline urine, urine rich in phosphates (deposit), in urates (deposit), mucin (deposit), sugar, bile, etc. In every case I was able without difficulty to recognise the presence of albumin by means of salicyl-sulphonic acid.

The most noteworthy point was that when the urine is very strongly alkaline, as in the case of urine which has undergone an extensive alkaline fermentation, it is necessary to use much more of the reagent proportionately to the amount of the urine tested than in ordinary cases. This is because—as in the case of acidulation by other acids (for example, nitric)—it requires a larger amount to render the urine acid, a portion of the reagent being used up in combining with the alkali present. (This is accompanied by marked effervescence when the urine has undergone ammoniacal decomposition.) And until more acid has been added than is required to combine with the alkali, the albumin is not precipitated. Of course one can economise the reagent in this case by using a smaller amount of urine, so that the relative proportion of acid is greater than the usual. And one can easily make sure that a sufficiency of acid has been used by testing the reaction of the fluid—which now ought to be markedly acid.

It is only, however, when the alkalinity of the urine is very strong that any special precaution is necessary, as with slighter degrees of alkalinity precipitation of the albumin occurs readily on the addition of a drop or two of salicyl-sulphonic acid, as described when dealing with solutions of egg-albumin.

3. Is a similar precipitate given by any other possible non-proteid constituent of urine?

I have examined a large number of varieties of proteid-free urine, and have as yet failed to find any other constituent which gives the characteristic proteid reaction with salicyl-sulphonic acid. The following results may be stated:

Urine which is turbid from precipitation of phosphates clears up on the addition of this reagent, just as with nitric or acetic acids.

Urine containing excess of urates gives no precipitate with salicyl-sulphonic acid.

Proteid-free bilious urine gives no precipitate. Bilious urine, containing albumin as well, gives no precipitate when the albumin has been removed by means of alcohol, etc.

Ox bile was also examined with reference to the possible influence of the reagent on bile salts, etc. The bile was treated with a large excess of absolute alcohol for a number of days, so as to precipitate the bile mucin, and then filtered. The filtrate was evaporated to dryness, and after being washed with alcohol the dry residue was redissolved in water. The solution so obtained was still of a bilious colour; it contained bile salts, as shown by its powerful precipitant action on solutions of acid albumin, etc. With this solution, containing bile salts and pigment, salicyl-sulphonic acid gave no precipitate.

As regards the possible influence of the presence of a large amount of mucin in the urine, I have seen no reason to believe that such would prove a source of error when the test is performed as described in the next section. Moreover, it is probably only in the case of alkaline urine, when there is at the same time a marked irritation of some part of the urinary passages, yielding a greatly increased mucous secretion, that the amount of mucin in the urine can be sufficient to come into question at all. But in such conditions of the urinary tract the detection of a trace of albumin is probably of no significance.

I have examined solutions of mucin in lime water (obtained from the vitreous humour, which is rich in mucin), and have seen very little change on strongly acidifying such a solution with salicyl-sulphonic acid—certainly nothing like the marked effect of acetic acid. Proteid-free urines of persons taking various drugs have not given any precipitate with salicyl-sulphonic acid (the urine was in each case proved to be proteid-free by other tests, sometimes applied after the urine had been concentrated, in order to augment the delicacy of the reactions) after large doses of alcohol, sulphonal, strophanthus, iodide of potassium, morphine, quinine, croton-chloral, after chloroform anæsthesia, etc.

These results are in marked contrast with those obtained with such reagents as a solution of mercuro-potassic iodide (Tanret's reagent); the latter gives copious precipitates in many of those samples of urine.

Solutions of various alkaloids and other substances, many of which give precipitates with some of the known tests for albumin (for example, mercuro-potassic iodide) were examined, and gave no reaction with salicyl-sulphonic acid. Solutions of aconitin, strophanthin, quinine, ergotin, caffein, theine, antipyrin, digitaline, gallic acid, morphine, nicotine, chloral, atropine, strychnine. Balsam of copaiba rubbed up in dilute caustic potash solution becomes markedly turbid on the addition of nitric acid, but shows no change with salicyl-sulphonic acid.

With normal urine, concentrated by evaporation to one-half its original bulk, salicyl-sulphonic acid gave no precipitate or cloudiness. The cold nitric-acid test, on the other hand, showed a considerable amount of precipitation at the junction of the acid and the urine, simulating the presence of albumin.

It need hardly be remarked that the question of the action of salicyl-sulphonic acid towards possible abnormal constituents, medicinal substances, etc., is one that can only be fully answered by extended observation.

4. How does this test compare as regards delicacy and precision with those commonly employed?

Probably the most common test for albumin in urine is the application of heat combined with acidulation. It is pretty generally recognised that the acidulation (when necessary) should be performed before, and not after, the heating; also that acidulation with acetic acid is greatly preferable to acidulation with nitric acid, since, in the latter case, there is a much greater chance of albumin present in the urine escaping detection by being converted into acid albumin, which is not coagulated by heat.

The difficulties connected with the test by acidulation with acetic acid followed by heat, putting aside the chance of a precipitate of mucin being caused by the acetic acid, are (1) that by inaccurate acidulation (insufficient or excessive) albumin may fail to be detected even when present in significant amount; (2) that in favourable circumstances (the most suitable degree of acidulation and rapid heating) this test may be extremely delicate—excessively delicate as many urge—giving a reaction with a proportion of albumin which is clinically insignificant and apt to mislead. In the case of urine which already is somewhat acid in reaction and consequently requires only slight acidulation, there is no doubt that the careful addition of a suitable amount of acetic acid, followed by a rapid heating of the upper stratum of the fluid is a test of very great delicacy.

On the other hand, the cold nitric acid test (Heller's) has often been found to be defective in precision, allowing albumin, even when present in significant amount, to escape notice. It has been felt by many observers that it is desirable to possess a test intermediate in position between the defective delicacy of Heller's test on the one hand and the extreme delicacy (in favourable circumstances) of acetic acid and heat on the other. Such an intermediate test is afforded by salicyl-sulphonic acid when used in the following way. Add a drop or two of the acid to a small amount of urine (for example, 20 or 30 minims) in a small test tube. Shake the tube quickly and examine immediately. The presence at once, or within a very few seconds, of a distinct cloudiness or opalescence in the fluid indicates the presence of an amount of proteid much smaller than is required to give a distinct reaction with Heller's test (allowing one minute for its development), but greater than is necessary to give a reaction by the acetic acid and heat method in favourable circumstances. This, then, is a test intermediate in delicacy between the cold nitric acid test on the one hand and the most favourable action of the acetic acid and heat test on the other. For example, a dilute sample of urine which gave a very slight film with cold nitric acid in course of a minute, gave an immediate opalescence on being shaken up with a drop of salicyl-sulphonic acid, even when diluted (with normal urine) two or two and a half times.

Again, it can be shown that when used in this way the salicyl-sulphonic acid test is markedly less delicate than acetic acid and heat.

A sample of albuminous urine was diluted with normal urine:

One part of albuminous urine in 200 parts: Acidulation with acetic acid and boiling = distinct opalescence of upper (boiled)

stratum of fluid; salicyl-sulphonic acid=no visible change at once or for a number of seconds; in half a minute there is an evident opalescence, and in one minute it is more marked than with acetic acid and heat.

One part albuminous urine in 400 parts: Acidulation with acetic acid and boiling=slight cloudiness; salicyl-sulphonic acid=no immediate effect nor for a number of seconds, in one minute an opalescence is present, more marked than with acetic acid and heat; this opalescence persists on boiling.

Hence it is evident that when *immediate* opalescence is made the test salicyl-sulphonic acid is intermediate between the cold nitric acid and the acetic acid and heat test. On the other hand, when the presence of distinct opalescence after one minute or more is made the determining point the salicyl-sulphonic acid test gives more delicate results than the heat test (after acidulation when necessary) or any other I have tried—picric acid, mercuro-potassic iodide, hydrochloric acid with saturated salt solution, etc.

The main points to be noticed in regard to the salicyl-sulphonic acid test as compared with the acetic acid and heat test, and the cold nitric acid tests, are:

Its use as an agent of a delicacy intermediate between the other two tests; or, if it should be wished, of greater delicacy than either. Its greater simplicity than the acetic acid and heat test; for with the latter, in the case of urines of various grades of alkalinity, care has to be exercised so as to get a correct degree of acidity, in order to obtain certain results; insufficient acidulation being attended with a danger of the albumin present not being coagulated on heating, and excessive acidulation leading to a similar fallacy by the formation of acid-albumin, especially if accompanied by slow heating, which gives more time for the formation of this substance. With salicyl-sulphonic acid there is no danger of adding excess, as, instead of a drop or two, very many drops may be added without harm. Indeed, the addition of an amount equal to the bulk of urine does not redissolve the precipitate formed. All that need be used, however, is an amount sufficient to render the fluid strongly acid—usually a drop or two.

Further, salicyl-sulphonic acid enables one to recognise the presence of albumoses and peptones, which acidulation and heat or the nitric acid test does not.

The drawbacks of the cold nitric acid test, in addition to its insufficient delicacy, are pretty well known—the possible precipitation of acid urates, resinous matters (copaiba, etc.), albumoses, etc. It is true that heat clears up such precipitates, but the application of heat—to the extent necessary to cause a precipitate of albumose to redissolve—is impracticable without involving a mixture of the strong nitric acid and the urine, and consequently a danger of albumin present being redissolved also.

In the case of mercuro-potassic iodide (a very delicate precipitant of albumin) there is the complication of its precipitating many alkaloids, bile-salts, urates in certain circumstances, etc., in addition to albumoses and peptones. And though subsequent heating may clear up the precipitate, it does not differentiate between the various substances. And unless the proportion of the reagent present is a suitable one, the precipitate in some cases fails to clear up, and so simulates albumin. With picric acid, in addition to a much lower degree of delicacy, similar difficulties are present.

To conclude: the method of testing for proteids by salicyl-sulphonic acid may be briefly stated. Take a small amount of urine (for example, 20 minims), preferably in a very small test-tube, and add a drop or two of a *saturated* watery solution[†] of the reagent. If the urine is strongly alkaline, an extra drop or two of the acid should be added, and if no opalescence or precipitate occurs it is well to test the reaction with litmus paper, and make sure that the urine has been rendered strongly acid. On adding the reagent, shake the tube quickly so as to mix its contents. Then examine at once. The occurrence of an opalescence or cloudiness *immediately or within a very few seconds* (for example, 2 to 3 seconds), is a test for proteids intermediate in delicacy between the cold nitric acid test on the one hand, and the acetic acid and heat test (in favourable circumstances) on the other. The development of an opalescence some time after (for example, ½ to 2 minutes), is a more delicate test than even acetic acid and heat, and shows the presence of minute traces of proteid, which are probably insignificant from a clinical point of view as a rule.

Next heat the tube to the boiling point. If the precipitate or opalescence is caused by the ordinary "albumin" (albumin and globulin) commonly present in albuminous urine, it does not disappear on heating, but, on the other hand, becomes markedly flocculent. But if the precipitate or opalescence is due to the presence of albumoses or peptones, it clears up on heating (before the boiling point is reached) and reappears when the tube cools.

[†] It is important to notice that the solution must be a saturated one in order to obtain the best results.

LECTURES
ON THE
PATHOLOGY OF TUBERCULOUS DISEASES OF BONES AND JOINTS.

Delivered at the Royal College of Surgeons of England.

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Lecture II.

[*Concluded from page 795.*]

Experiments with Tubercle Bacilli on Guinea-Pigs and Goats.—Previous Experimental Work.—Spontaneous Bone and Joint Disease in the Lower Animals.

B. Experiments on Guinea-Pigs.

Two similar experiments were performed on guinea-pigs, in both with positive results, but the processes did not show the same activity as in rabbits, a result like that obtained with tuberculous sputum.

C. Experiments on Goats.

The most important of all the experiments were some which were performed on goats. Müller was the first to employ goats for these investigations. In his experiments he injected the pus from chronic abscesses into the nutrient artery of the tibia, and he selected goats chiefly because the parts are larger. In goats, also, the process appears to remain local for a longer time than in rabbits, and thus the changes in the part can be better studied.

I have performed three sets of experiments on goats. In the first place an emulsion of tubercle bacilli was injected into the nutrient artery of the tibia. Müller had previously performed similar experiments with pus from chronic abscesses, and it seemed to me of importance to repeat them with pure cultivations of tubercle bacilli. The mode of performing the operation, as worked out by Müller, is to expose the upper part of the tibial artery in a goat, just below the origin of the nutrient artery. This is easily done by making an incision on the anterior part of the outer side of the leg, commencing about an inch below the knee-joint. A nerve will be at once seen running downwards superficially to the muscles, and dividing into two branches. Follow the anterior branch and it will lead to an intermuscular space; open up this space, and the vessels will be seen at the bottom of it. Having exposed the artery in this situation it is ligatured and opened above the ligature. The nozzle of the syringe is then introduced into and fastened in the vessel, the nozzle pointing upwards; the material is then injected against the blood stream, and the vessel ligatured as the nozzle is withdrawn. The result of this procedure is that the fluid is forced into the upper part of the tibial artery, and the vessel being blocked below the origin of the nutrient artery it passes along that vessel, and is distributed throughout the bone.

In a second set of experiments the material was injected directly into the joints, and in a third series the injections were made into the substance of the epiphysis. The fluid used was, as before, an emulsion of a pure cultivation of tubercle bacilli.

Experiment XXIII.—The right tibial artery was exposed

at its upper part in a young goat, and about 3 minims of an emulsion of tubercle bacilli were injected in the manner above described. The wound was then closed and dressed aseptically. The animal was somewhat lame for a few days after the operation, and then recovered, but after about three weeks the ankle-joint, and somewhat later the metatarso-phalangeal joint, began to swell, and the animal limped very much, hardly putting the foot to the ground. The goat died fifty-one days after the operation.

On examining the leg the soft tissues in the neighbourhood of the seat of operation were found to be very much thickened. The ankle-joint, and more especially the metatarso-phalangeal joint, was very much swollen and much larger than the corresponding joints on the other side, the thickening apparently affecting the bones as well as the soft tissues. No abscesses or cheesy patches were seen in the muscles or tissues of the leg. The inguinal glands on that side were much enlarged. The lungs were full of minute tubercles, for the most part transparent and not cheesy; a few were seen in the liver, but none in the other organs.



Fig. 5.

This photograph (Fig. 5) is from a drawing made from the fresh section of the bone, and we see that there is a large number of cheesy deposits in the bones, more especially at the lower end of the tibia and at the lower end of the metatarsal bone; they are also very numerous, but more diffuse throughout the medulla of these bones and in the various tarsal bones. The synovial membrane in both joints, more especially in the metatarso-phalangeal joint, was much swollen and gelatinous. The deposits were not limited to the diaphysis of the tibia, but also occurred in the epiphysis, though they were not so numerous there.

The following is the result of the microscopical examination:

In the lungs there were numerous tubercles which in many places had run together, and contained numerous tubercle bacilli.

In the lower end of the tibia we see numerous caseating deposits in the bone, not only in the cancellous tissue, but also in the dense bone, in what is apparently newly-formed bone and in the periosteum. As to the character of these deposits, they consist of roundish or irregular collections of large cells undergoing caseation at the centre, but with no well-formed giant cells. Many of the cancelli are filled with this tuberculous tissue, and the margins of the trabeculæ around are eroded and often completely destroyed, several cancelli filled with this material communicating with each other. There is in places new formation of bone from the periosteum.

In the epiphysis the deposits are not so numerous. The articular cartilage is almost entirely destroyed, and its place taken by tuberculous tissue with a few small giant cells. Here and there fragments of cartilage are found lying in this tissue. I think that the disease of the joint has been purely synovial in its origin, because in none of the specimens have I found any bone deposit breaking through the surface of the tibia, and the involvement of the epiphysis is comparatively slight.

The os calcis also contains large numbers of tuberculous deposits, especially beneath the epiphysial line; there are also more giant cells here than I have seen elsewhere. The articular cartilage is almost entirely intact except at one end, where a deposit is seen sprouting out of the bone, destroying the cartilage over it, and spreading over the surface of and eroding the cartilage on each side.

In the astragalus the deposits are fewer, but there are a good many in the cancelli just beneath the surface of the bone. The cartilage has been destroyed in parts, at some places apparently from the surface, at others by the tuberculous deposits beneath as seen in this photograph. The changes in connection with the destruction of the cartilage are precisely the same as those which occur in man.

The lower end of the metatarsal bone shows also a number of tuberculous deposits, very numerous indeed immediately above the epiphysial cartilage, and one or two very large ones in the epiphysis. The synovial membrane in this joint was also much thickened.

Here, then, we have as the result of the injection of tubercle bacilli into the nutrient artery of the bone and the deposition of these bacilli in various parts of the bone and



Fig. 6.

periosteum, the formation of caseating tuberculous deposits, destruction of the bone, new formation of bone both in the interior and from the periosteum, thickening of the synovial membrane, and destruction of the articular cartilages, both from the surface and from soft caseous deposits in the bone bursting into the joints; in fact, all the changes characteristic of tuberculous disease of bones and joints in man. And, as in man, in the specimens which I examined for bacilli, the organisms were few in number and imperfectly stained.

Experiment XXIV.—Small portions of a very dilute mixture of tubercle bacilli were injected into the nutrient artery of the right tibia in the usual manner, into the left knee-joint, and into the proximal end of the left metacarpal bone. As a result, the knee- and wrist-joints became swollen, but there was no apparent disease in the right hind limb. As the goat was weak and ill, and apparently suffering pain, it was killed forty-seven days after the injection.

On *post-mortem* examination, tubercles were seen in the lungs, spleen, and kidneys, all of small size. The right tibia showed nothing abnormal to the naked eye, and there was no swelling of the joints as in the previous case, but the muscles around the seat of operation were much thickened and infiltrated with tubercles.

There was great thickening of the synovial membrane of the left knee-joint (Fig. 6), more especially in the neighbourhood of the crucial ligaments, and the synovial membrane was covered with pendulous villous growths. These growths

were most numerous where the synovial membrane joined the bone, and also between the condyles of the femur. There was no pus in the joint, and nothing abnormal seen in the bones. (In Fig. 7 the patella has been turned outwards, and the villous synovial membrane is well seen.)

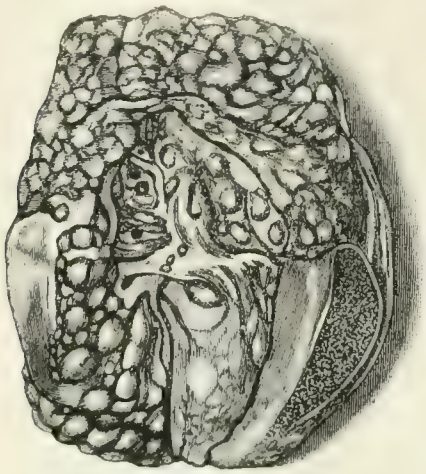


Fig. 7.

There was also great swelling of the left wrist-joint and marked thickening of the synovial membrane. In the proximal end of the metacarpal bone there was a large cavity containing soft material which communicated with the carpometacarpal joint. In this joint there were villous projections on the synovial membrane similar to those in the knee, and when the joint was laid open the appearance was exactly like that of a carious wrist-joint. The synovial membrane was thickened and highly vascular, and encroached on the articular cartilage and the bone; in fact, very little of the cartilage could be seen. The intercarpal articulation was also affected, but the radiocarpal joint was practically healthy.

Microscopical examination of the various parts gave the following result: In the lower end of the right tibia two tuberculous deposits were found presenting similar appearances to those in the former case. One of these was situated beneath the epiphysial cartilage, and the other somewhat higher up in the medulla. The articular cartilage was also destroyed at one part. Evidently very few bacilli had been arrested in the vessels in the bone.

The synovial membrane of the left knee-joint was greatly thickened, the new tissue being composed of young granulation tissue with tuberculous infiltration and a few small giant cells. There were no distinct tubercles, but there were here and there patches of caseating tissue exactly as in the wall of a chronic abscess. In some places the collections of epithelioid cells were more limited, and almost formed definite tubercles.

If a section of the lower end of the femur is examined, it is seen that towards the posterior part of the articular cartilage the point of attachment of one of the crucial ligaments is tuberculous and thickened at the surface. Passing backwards from the point of attachment of the ligament to the bone, we see that the tuberculous tissue has spread in between the cartilage and the bone, and has caused detachment of the former for a considerable distance, and there is sclerosis of the bone at this part. At the anterior and posterior points of reflection of the synovial membrane the tuberculous tissue is seen spreading over the surface of the cartilage. The cancelli immediately beneath the cartilage are filled with inflammatory tissue, but, except in the immediate vicinity of the crucial ligament, I can make out no tuberculous deposit in the bone. The peculiar flask-shaped projections of soft tissue into the cartilage from the superficial cancelli, as described in my last year's lectures, are well seen.

The sections of the synovial membrane of the wrist-joint show tuberculous deposits scattered throughout the fibrous tissue, some of them with commencing caseation.

This photograph is taken from a complete section of the wrist-joint (Fig. 8). Towards the posterior part of the metacarpal bone (at the upper part of the figure) there is a tuberculous deposit at the seat of injection. This deposit has destroyed the bone and the articular cartilage over it, and has thus spread into the joint; a number of the cancelli under the cartilage are also filled with the same material. On the anterior surface of the end of the metacarpal bone there is a considerable amount of new periosteal bone, and the bone around the deposit is much sclerosed. The synovial membrane in the articulation is much thickened and villous both in front and behind, and



Fig. 8.

shows the presence of caseating patches. The adjacent carpal bone shows destruction of the articular cartilage at the lower and posterior part, and penetration of the tuberculous tissue into the bone in this situation. There is much new periosteal bone in front, commencing destruction of the bone from the surface at the anterior and lower part, and great sclerosis in other places; in the soft textures behind there is a commencing abscess.

If, now, we examine the middle articulation, we find the same villous thickening of the synovial membrane and commencing destruction of the cartilage over the upper carpal bone, with sclerosis of the bone in the neighbourhood. The upper articulation is comparatively healthy, but even there the synovial membrane is beginning to spread over the cartilage at the posterior part of the surface of the radius, and slight thickening of the synovial membrane is taking place.

Compare this appearance with this section of the wrist-

joint from the human subject (Fig. 9), where the disease has also begun in the end of the metacarpal bone, and we find that the two appearances are essentially alike. Here also there is a deposit in the end of the metacarpal bone which has burst into the joint, and led to destruction of the carpo-metacarpal articulation. It has spread into the intercarpal joint, which is less involved, and is commencing to attack the radio-carpal articulation where the new tissue is beginning to spread over the cartilage of the radius.

In another experiment an extremely diluted cultivation of tubercle bacilli was injected into the nutrient artery of the right tibia of a goat and into the right wrist-joint. The tibia remained unaffected. The wrist-joint began to swell in the course of about three weeks, and this swelling steadily increased for about eight months. When the animal was killed nine months and a half after the injection this swelling was, however, distinctly less. On making a *post-mortem* examination there was no sign of internal tuberculosis; the wrist-joint was considerably swollen, the synovial membrane was thickened, and the bones, especially the metacarpal bone, en-



Fig. 9.

larged. My belief is that recovery was taking place, and that had the animal been allowed to live the part would have got completely well. This result would not have surprised me, for goats are probably not more susceptible to tuberculosis than man, while in this case such a very small dose of the virus was introduced in the first instance that I hardly expected any result; and, as I have found in the more acute diseases, the subsequent course and severity of the affection depend to a very great extent on the initial dose of the virus, especially where the susceptibility of the animal to the disease is not very great.

Thus, in the case of goats, we again see that all the characters of tuberculous diseases of bones and joints in man can be faithfully reproduced by the injection of tubercle bacilli into the nutrient arteries of bones, into the bones themselves, or into the joints. We see the same caseating deposits, the same new formation of bone and subsequent erosion by the tuberculous growth, the same modes of destruction of cartilage, the same villous thickening of the synovial membrane, etc. We also see that, as in man, the tubercle bacilli are difficult to find in the diseased tissues, although the disease has been produced by them alone. In the lower animals we seldom see well-formed tubercles as in man, but rather patches of tuberculous infiltration which are undergoing caseation.

These experiments seemed to me sufficient to establish the causal connection between the tubercle bacillus and tuberculous diseases of bones and joints, more especially when taken in connection with the work of previous investigators with coarse tuberculous materials, and I have not therefore thought it necessary to pursue the matter further at present. Nor have I thought it necessary to perform an extensive series of control experiments, for it has already been sufficiently demonstrated that this specific disease can only be set up by the tuberculous virus, and experiments in which bones and joints have been injured for other purposes—such as Kocher's experiments on osteomyelitis—are numerous, and have in no instance been followed by the development of these tuberculous lesions. Nor have these changes followed the injection of pigment granules, other bacteria of various kinds, etc., into the blood stream, although one of the chief seats of deposit of these foreign bodies is the medulla of bone, especially in the neighbourhood of the epiphysis.

These experiments are completed by a work just published by Professor Krause, in which he has repeated Schüller's experiments and injured the joints of animals previously inoculated with cultivations of tubercle bacilli. Like other observers, he has found that severe injuries, such as dislocations, are not nearly so readily followed by tuberculous joint diseases as lighter injuries, like sprains; and he has also found that fractures of bones in tuberculous animals heal without any trouble. Of joints which were dislocated or severely injured, a few became tuberculous, but of joints which were sprained the majority ultimately showed evidences of disease. In the great majority of cases the form of the disease was a tuberculous thickening of the synovial membrane resembling primary disease of the synovial membrane in man. In a few cases he found isolated tubercles in the epiphyses, but in three he found larger caseating tuberculous deposits. He also calls special attention to the difficulty of finding bacilli in these parts, although they were numerous in the tubercles in the internal organs.

Time fails me to go into the previous work which has been done on this subject, but the two most important researches, besides that just mentioned, are those by Tricomi and Müller. Müller's experiments were performed with pus from chronic abscesses, and Tricomi's with various tuberculous materials, chiefly sputum, pus from chronic abscesses, finely broken up tuberculous synovial membrane. Their results are practically identical with those which I have described, the only differences as regards Tricomi's work being the more rapid progress of the disease and death of the animals in his cases. This is, I think, chiefly accounted for by the fact that he employed materials such as sputum, which were not altogether pure, and that his results were probably in some cases the consequence of mixed infection. If this is the explanation it supports the conclusion to which I have come, that the presence of sepsis aids the extension of the tuberculous process. Müller's experiments were chiefly performed with the object of testing König's view that the osseous deposits, more especially the sequestra, are due to emboli of tuberculous material. The experiments were performed on rabbits and goats, and the material employed was pus from chronic abscesses. In one rabbit, which lived for about twelve months after injection of pus into the femoral artery, there was typical synovial disease of the ankle-joint, with pus in the joint, and in the middle of the articular surface of the tibia there was a sequestrum, quite loose, round, and of the size of half a pea. In a goat which lived for thirteen months after injection of pus into the nutrient artery of the tibia, there was no disease of the internal organs, but the knee-joint was much enlarged, and contained a quantity of sero-purulent fluid, and the synovial membrane was from six to ten times thicker than normal,

and had patches of caseation on its surface. In the external tuberosity of the tibia there was a sequestrum 1 centimetre in diameter, surrounded by brownish red granulations and the opposing surface of the femur showed several defects in the cartilage and bone filled with caseating tissue. On making a vertical section through the tibia the sequestrum was seen to be triangular in shape with the apex towards the shaft of the bone. In the internal tuberosity of the tibia there was a soft deposit containing brownish red and whitish material. Other deposits were found in the end of the femur.

Tuberculous Disease of Bones and Joints Occurring Spontaneously in the Lower Animals.

Very little appears to be known about these diseases in the lower animals, and after searching much literature and inquiring among veterinary surgeons both at home and abroad, I only succeeded in 1888 (when I looked into this matter) in finding one paragraph in which there is any description of the disease, and that was in a paper by Ostertag on "Oertliche und allgemeine Tuberkulose," in the *Archiv f. wissensch. u. prakt. Thierheilk.*, xiv, 4 and 5. I may quote Ostertag's statement. He says, speaking of general tuberculosis in animals, that tuberculosis of bones and joints "is found chiefly in the dorsal vertebræ, ribs, sternum, and the long bones, or the hip- and knee-joints. The tuberculosis of the bone usually starts from the medulla, or the spongy portions of the bone, more rarely from the periosteum, and leads to the formation of greyish red granulation deposits, which attain a considerable extent by lacunar absorption of the bone. The centre of the growth soon undergoes caseation, and ultimately a cavity is formed, which frequently only shows a narrow border of granulation tissue. As a rule, only isolated deposits are met with, but it sometimes happens that almost half the dorsal vertebræ are affected. The process may spread to the joints from the epiphysis, but an osseous deposit is not necessary for the formation of a tuberculous arthritis. In swine I have seen two forms of tuberculous inflammation of joints—(1) an empyema articulare tuberculosum, in which the synovial membrane is infiltrated with tubercles, moderately reddened and swollen, and distended with muco-purulent exudation; (2) an arthritis fungosa, where the synovial membrane is swollen, and converted for the most part into a granulation tissue with tubercles scattered through it, this tissue filling up the cavity of the joint without any great exudation into the joint."

From specimens which I have had the opportunity of examining, I believe that most of the so-called scrofulous joints of animals are not tuberculous but most probably rheumatic, but I have, through the kindness of Professor Schütz, of Berlin, obtained six specimens of true tuberculous disease of bones in the lower animals. [Photographs of five of these were shown.]

One section of the lower end of the humerus of the cow shows an extensive caseating patch in the medulla of the humerus, which reached as far as the articular surface, and had destroyed the cartilage over it. The soft deposit is surrounded by sclerosed bone, in which we see fresh tuberculous nodules, which apparently commence in the Haversian canals.

In another specimen from the sternum of the cow we see a considerable area of soft issue, and also roundish soft caseating masses. The small masses are composed chiefly of more or less perfect fibrous tissue, caseating in parts, and showing a few small giant cells, with marginal nuclei. The smaller patches are evidently in the Haversian canals, and consist of a central artery, with greatly thickened walls, surmounted by some fibrous and cellular tissue.

The appearances in the sacrum of the cow are essentially the same. At the anterior part there is new bone and sclerosed bone, with here and there circular caseating deposits in it; at the posterior part the osseous tissue has disappeared, and in its place is a patch of soft tissue, in which are similar round caseating deposits. In some parts the bone has become absolutely dense.

In a specimen of the vertebræ of a pig the chief seat of the disease is in the laminæ. To the naked eye the tuberculous mass seems to be composed of an aggregation of small nodules. There are also deposits in the bodies of the vertebræ. In one of the bodies there is a cavity of considerable size, filled with cheesy material and opening on the surface. In a photograph of a section is seen, chiefly in the situation of the laminæ, the tuberculous mass which consists of fibrous tissue replacing the bones, the tuberculous deposits being in roundish groups, and clearly commencing in connection with the blood-vessels. There are generally two or three deposits in each group, and some giant cells, but not much caseation.

In a photograph of a fowl's tibia peculiar caseating patches are seen in the medulla of the lower end of the tibia, and two similar patches in the cancelli of the epiphysis. These patches are surrounded, more or less completely, by a reddish ring, and we find here and there in the caseous material smaller red rings, which are apparently composed of fibrous tissue, and are probably formed around the blood spaces. The specimen had been badly preserved, and did not stain well.

The general character of the disease in cattle is the formation of large and small roundish, caseating nodules in the substance of the bone, accompanied in the first instance by sclerosis of the bone. These nodules commence in connection with the blood vessels in the Haversian canals, or in the medulla of the bone. In the Haversian canals the walls of the blood vessels are thickened, and in various parts we can trace all stages, from commencing thickening of the vascular wall to the complete development of a caseating tuberculous mass. The tuberculous growth evidently commences in and around the walls of the vessels, and soon becomes surrounded by a fibrous envelope. As it enlarges, the bone around becomes absorbed, and thus we come to have small and large round spaces in the bone, containing tuberculous tissue caseating in the centre; this caseous material falls out in preparing the sections. These deposits are not always round; in the process of absorption of the bone larger cancellous spaces are opened into, and thus we find elongated or irregular-shaped deposits. In these tubercles giant cells are not usually numerous nor large; and in the specimens which I have examined—which, however, were not well preserved—the bacilli were few in number. I have not met with sequestra in any of these specimens.

INTRALARYNGEAL INJECTIONS IN THE TREATMENT OF CERTAIN LARYNGEAL AND PULMONARY AFFECTIONS.

By J. WALKER DOWNIE, M.B., F.F.P. & S.Glasgow,

Surgeon, Throat Department, Western Infirmary; Lecturer on Diseases of the Ear, Throat and Nose, Western Medical School; Examiner in Aural Surgery for the Fellowship of the Faculty of Physicians and Surgeons, Glasgow, etc.

On November 8th, 1889, I read a paper before the Medical Section of the Medico-Chirurgical Society of Glasgow, bearing on this subject, and giving details of several of the cases which had been under my care during the six months previous to that date. The majority of the cases there detailed had been treated in the wards of the Western Infirmary, where, through the kindness of several of my colleagues, every opportunity was afforded me of testing this method of treatment. Among the conditions treated were cases of tuberculous laryngitis in an ulcerative condition without detectable pulmonary lesion, and others with varying degrees of pulmonary implication, cases of early phthisis pulmonalis, pulmonary cavity, bronchiectasis following long standing bronchitis, and some few cases of bronchial asthma. Every case to which I shall refer was examined by one or more medical gentlemen, independent of any examinations made by myself, and all particulars here given of the condition of the patients are founded on the opinions of those gentlemen.

Solutions Employed.—At first I employed solutions of menthol in rectified spirits varying in strength from 10 to 15 per cent., but on account of the glottic spasm produced by its introduction into the larynx in several cases, I substituted at an early date olive oil, used by Rosenberg and other experimenters, as the solvent and vehicle of the drug exhibited. Recently I have made use of vaseline oil as the solvent. When this is employed, the solution remains for a lengthened period perfectly clear, and it is readily borne by those who object to the smell of olive oil. Pure carbolic acid, creasote

eucalyptia, pinol, and oil of eucalyptus, separately and in varying combinations, and dissolved in olive oil, I also employed—the latter to a very limited extent only. Those to whom the oil of eucalyptus was administered complained of its smell and taste as communicated to the palate by the expired air, and on account of this and the loathing and sickness it produced in others, it was after a very limited trial laid aside. I then returned to the use of menthol dissolved in olive oil of the strength of from 12 to 15 per cent. Where fœtor of the breath existed I added pure creasote in proportions varying from 2 to 5 per cent. This I replaced by guaiacol after a time, and now the combination most largely employed, as it appears to be the most efficacious and the most pleasant, consists of from 12 to 20 per cent. menthol, and 2 to 4 per cent. guaiacol, in olive or vaseline oil. Guaiacol, which is contained in beechwood creasote to the extent of 60 to 90 per cent., has all the properties of creasote, is devoid of its—to some—disagreeable odour, is a much more powerful germicide, and is of definite composition.

The Syringe.—When first employing the injection I made use of the special syringe imported from the Continent. The point of the laryngeal tube of this syringe terminates in several openings, after the fashion of a spray. This, after an extended use, I considered objectionable, as the fluid injected was spread over the upper surface of the larynx, and spasm was the result. Chiefly on this account I discarded the use of this syringe, and in place of it I had laryngeal tubes made in vulcanite to fit on to the nozzle of a hypodermic syringe, or a larger syringe if desired, and by means of which the injection can be given thoroughly and satisfactorily. They are simple tubes of equal calibre throughout, and they are made in three sizes, the difference being in the size and form of the curve.

Method of Administration.—In the administration of the injection I have almost constantly employed the laryngeal mirror, by the aid of which the point of the laryngeal tube of the syringe can be accurately guided over the epiglottis and into the larynx without coming in contact with the tongue, the fauces, or the pharynx, thus obviating all risk of retching being induced. With a little practice, however, the tube in the majority of cases can be readily inserted, and the injection given without the aid of the mirror, by placing the patient before a good light, having his tongue held in the protruded position, and with the mouth widely open. The ease with which the tube can be introduced within the larynx greatly depends on the shape and the position of the epiglottis. Where the epiglottis is elongated and dependent, it will be found necessary to resort to the use of the frontal and laryngeal mirrors, and possibly the specially curved tube as well. The point of the laryngeal tube should be inserted within the larynx to the level of the vocal cords at least, and it should be in that position before the fluid is injected. If this is not attended to, if the fluid is spread over the cords the sensation produced is disagreeable, being similar to something having gone the wrong way, and the patient may be compelled to cough.

If, however, the nozzle of the syringe be placed below the level of the cords, the fluid is injected directly through the larynx into the trachea, and as much as two drachms in some cases can in this way be injected without the slightest inconvenience to the patient. An ordinary hypodermic syringe holds from 25 to 30 minims, and, in using it with the laryngeal tubes spoken of, I repeat the injection two or three times at each sitting, thus giving roughly from a drachm to a drachm and a half. Applying it in this gradual way, I never have patients coughing as they did when the same quantity was given at one injection by means of the large syringe.

Effects following the Injection.

Respiration and Cough.—Immediately on the administration of the injection containing menthol, the patient experiences a sensation of warmth in the larynx, which rapidly spreads downwards to the region of the sternum, and is soon followed by what the patient usually describes as a comfortable glow all over the chest. He breathes more freely, and where tightness or a feeling of constriction across the chest is complained of, this is rapidly relieved by the menthol injection. Following on its administration there is much less inclination to cough; this relief from the constant tickling cough is in many cases very marked, and more so after the first few days of treatment. On making the inquiry of patients under treatment, many say that they cough none for from four to eight hours, and in some cases even longer, after having the injection, and, if it be given at bedtime, many whose sleep was previously much interfered with by the frequently recurring cough, rest the whole night long without once coughing. This fact, which is corroborated by others who employ this form of treatment, and with whom I have conversed on the subject, is, on account of the rest it secures to the parts, of the very greatest importance in the treatment of laryngeal ulcerations.

Expectoration.—The expectoration in phthisical cases becomes greatly reduced in quantity, and much less offensive. In several cases the purulent element has entirely disappeared, and what little expectoration continued to be discharged resembled the frothy expectoration of simple bronchitis. The sputum in the tuberculous cases was not systematically examined for the presence of bacilli except in a comparatively small number of cases. Where it was thus carefully examined, the bacilli were markedly reduced in number in a given preparation, and as the amount of sputum in the twenty-four hours was but a fractional part of the quantity previously expectorated, the distinct reduction in the number of bacilli can be readily appreciated. Dr. Charles Workman, bacteriologist to the Glasgow Royal Infirmary, examined the sputum of one of the cases shown at the Medico-Chirurgical Society while she was under treatment, and he subsequently wrote that he had no difficulty in finding tubercle bacilli in the sputum, "but at the same time they were not in such large numbers as I often find in tuberculous sputum." Before treatment expectoration was large in quantity, tubercle bacilli were very numerous, and Dr. Workman's examination was made after three weeks' treatment only. In some few cases no bacilli could be discovered after some months' treatment, and as in many the cough had entirely disappeared, there was no expectoration for examination purposes.

Bodily Condition.—In most of the patients thus treated there was marked increase in weight, and in some the rapidity with which this was accomplished was noteworthy. The explanation of this, I think, is twofold—(*a*) by relief from cough following on the administration of the injection sleep was less broken and thus more satisfactory; and (*b*) the organs of digestion were in no way interfered with by the means used to attain this end.

Case I.—J. S., aged 31 years, whose family history contains the record of three deaths from consumption, namely, two brothers, aged 30 and 35 respectively, and a sister at 42, first came under my observation at the throat department. He was suffering from ulceration of the left vocal cord, a great part of which had been destroyed by the ulcerative process, accompanied by œdema of the aryteno-epiglottidean fold on that side. The laryngeal ulceration was considered to be tuberculous in nature, and as he was rapidly losing flesh, besides developing other signs of tuberculosis, he was referred to the wards. There he was placed under the care of Dr. Dun, who, on examination, detected consolidation at both apices. Intralaryngeal injections were given daily from August 22nd till September 20th, when, on account of irregular conduct, he was dismissed. His weight on admission was 8 st. 12 lbs.; on September 2nd, 9 st. 1 lb.; September 9th, 9 st. 3½ lbs.; and on September 16th, 9 st. 6 lbs., a gain of 8 lbs. in four weeks.

Case II.—S. V., who was also a patient in the Western Infirmary, increased from 6 st. 12 lbs. on admission on July 30th, 1889, to 7 st. 11½ lbs. on September 30th, an increase of 13½ lbs. in two months. This factory girl is now, at the end of twelve months, in regular attendance at her work, her hours being from 6 A.M. till 5 P.M., and she is in as good health as she ever was.

Case III.—P. McL., aged 33, was admitted to the Western Infirmary on November 29th last, complaining of hoarseness and difficulty in breathing. On laryngeal examination it was found that the ary-epiglottic folds and the epiglottis were deeply injected, the ventricular bands were thickened, and the inner edge of each in a state of erosion. The vocal cords were injected, and the edge of each was ulcerated throughout its entire length, and the cords were fixed on account of the inflammatory œdema of the ventricular bands. Three days after admission (December 2nd) he weighed 10 st. 12 lbs., and his weight steadily increased from that till February 14th, when, previous to his being dismissed, he registered 12 st. 4¾ lbs., a gain of 1 st. 6½ lbs. in eleven weeks. Previous to his admission to hospital he was losing flesh rapidly, he had profuse night sweats, and his sleep was much broken by the tickling cough, and by the dry and painful feeling in the larynx. After the first few days of the menthol injection this was altogether changed; he slept undisturbed the whole night long. The laryngeal ulceration entirely healed (it cicatrised), as was witnessed by several medical gentlemen, and his voice was restored to its normal degree of clearness. In the infirmary he was under the care of Dr. Coats, whom I asked for an expression of opinion on this case. On July 4th he replied that, "I regarded it as a distinct case of tuberculous ulceration of the larynx. He improved in general condition while in the ward, and the local lesion virtually healed."

CASE IV.—C. E., a jeweller, aged 20, was admitted to the Western Infirmary under the care of Dr. Christie on December 11th, 1889. He complained of loss of voice coming on gradually, accompanied by frequent cough, and, recently, marked loss of flesh. The laryngeal mucous membrane was hyperæmic, and the whole inner surface of the interarytenoid mucous membrane was in a state of ulceration. His weight on December 26th was 6 st. 11½ lbs., and on April 15th, previous to dismission, it was 7 st. 12¾ lbs., a gain of 15¼ lbs. in three months and a half. Here again the ulcer, which occupied a position frequently the site of a tuberculous ulcer, cicatrised, and is at present firmly healed.

It may be argued by some in opposition to these statements, that the increase in weight might be due to the rest in bed, the appropriate food, and the improved hygienic surroundings obtained by residence in hospital. This I was careful as far as possible to guard against, by having patients for a time under the usual ward treatment, noting the weights at stated intervals previous to administering the injection. In some there was slight increase, others remained at much the same weight, while in several the weight continued to diminish. In almost every case from the time at which the injection was begun distinct increase in weight was registered, examples of which I have given.

Temperature.—The last point to which I desire to draw attention is that of reduction in the temperature of the patient. To say that the fever of phthisis may thus be overcome seems a very bold statement, but that it does occur was admitted by those who carefully observed the various cases under treatment. And to my mind it is capable of rational explanation. Dr. Joseph Coats, in his presidential address, delivered at the opening of the Section of Pathology at the meeting of the British Medical Association, held at Leeds in 1889, among other subjects, spoke of the constitutional susceptibility to tuberculosis. "Tuberculosis," he said, "wherever its seat, usually produces constitutional manifestations, fever, emaciation, frequently amyloid disease. It does so not necessarily or usually by the bacillus passing into the blood, but rather by the evolved products doing so. I think it may be said that whatever their seat, the bacilli do not produce tuberculosis by their mere presence, but rather by the poisonous principles which they evolve. These are probably alkaloids, and are soluble in the juices of the body. They are diluted by the fluids, and in this form may be carried away from the local seat, and pass on into the blood. I believe that it is the presence of these products in the blood which is the main cause of the fever and other constitutional phenomena." If then by any means we can overcome the activity of the bacillus, and, if not destroy it, render it at least innocuous, we may hope to prevent the formation of those poisonous products, the absorption of which results in elevation of temperature and the other constitutional manifestations referred to.

The temperature in Case II, previously referred to, was 101.2° F. on the evening of the day of admission. Injections were begun about a fortnight after admission, during which time the temperature ranged from 99.2° F. and 100.2° F. From that time it gradually, though irregularly, descended to normal, at which it remained. M. C., who was under the care of Dr. Christie, I first saw on account of aphonia. On examination I found the faucial and pharyngeal mucosa markedly anæmic, and the laryngeal mucous lining generally, in a similar condition. The ventricular bands were slightly thickened, possibly œdematous in character, both vocal cords were eroded throughout the posterior half of each, that on the left side having passed into a condition of ulceration close up to the arytenoid cartilage, and the inter-arytenoid mucosa was the site of an ulcer. The condition of his lungs was such that Dr. Christie had no hesitation in giving it as his opinion that the lad was suffering from phthisis pulmonalis. On admission, May 7th, 1889, his temperature was 101.8° F., on the third evening it rose to 103.8° F., and for a week it ranged between those points. On the eighth day injections were begun, and three days thereafter the temperature was normal, and was only once above 99° F. (and that four points only) during the remainder of his stay in hospital. In reply to an inquiry, Dr. M'Corkindale, of Lugar, the district in which the patient resides, wrote, on May 11th, as follows: "I saw M. C. yesterday, and on examination found his general health good; he is working regularly and has to travel three miles to it, and does not complain of exhaustion after the day's work is done." He has gained 12 lbs. in weight since leaving the Western. The rapid reduction in temperature in other cases was more or less marked, and very much on the lines indicated in those quoted.

Other Treatment.—Those patients who were wholly under my care, had, in addition to the intralaryngeal injections, some chalybeate tonic, administered usually in the form of tinct. ferri perchlor., along with a plentiful supply of milk food. No complications arose during the treatment of those cases, which could in any way be traced to the use of the injections, even in advanced cases of phthisis, if we except the glottic spasm produced, which in some cases seemed alarming, while making use of rectified spirits as the solvent.

Conclusions.—Regarding the action of menthol specially, when thus employed, I think we may consider it to be of a triple character. It is, first, a local anæsthetic. On account of this property, we have relief from cough, and that in a way greatly to be preferred to the older fashion of administration of opiates by the stomach, with their consequent deleterious effects on alimentation. Secondly, administered internally, it is a powerful, though comparatively harmless stimulant. Thirdly, it is an antiseptic, and being of a highly volatile character, it is readily diffused throughout the whole lung. By its use in this fashion, we have an antiseptic brought as closely into contact with the affected surface as it is possible; certainly much more completely than is the case when inhalers are employed. The active ingredient used with an inhaler is to a very large extent absorbed on its way to the lungs, by the moisture on the surface of the tongue, cheeks, fauces, pharynx, etc. Here we place the antiseptic—menthol rendered more powerful by the addition of creasote or guaiacol—within the trachea, from which it readily enters the larger bronchi, and all air inspired, passing over this, becomes laden with the antiseptic, and is carried onwards to the finer ramifications of the bronchi. The active ingredients thus introduced slowly volatilise, and their odour, especially when creasote is present, may readily be detected in the breath, eight or ten hours after introduction. The oil, I suppose, is partially absorbed, but in greatest quantity is, by the cilia of the epithelium, driven upwards through the bronchi and trachea along with the mucous secretion towards the larynx, from which it readily enters the gullet. By this form of treatment the majority of the patients whom I have seen treated have had their sufferings alleviated, and a goodly proportion have not only been markedly relieved, but restored to apparent health.

REPORT OF A CASE OF PAGET'S DISEASE OF THE RIGHT NIPPLE,[1]

FOLLOWED SEVEN YEARS AFTER ITS FIRST APPEARANCE BY CARCINOMA OF THE BREAST; REMOVAL OF BREAST BY OPERATION; RECURRENCE OF CARCINOMA IN RIGHT ARM AND AXILLA AND LIVER SEVEN MONTHS AFTER THE OPERATION.

By HENRY O'NEILL, M.D., M.Ch.,
Visiting Surgeon, Belfast Royal Hospital.

MRS. L., aged 54 years, married, has had eight children; her youngest child was born twelve years ago. About fifteen years ago, when suckling her seventh child, her breasts became inflamed, and each nipple was fissured. Spirit lotion was applied to the affected parts, and the fissures healed in a few days. With this exception, she states she never had any disease of her breasts or nipples until 1882, when the skin around the right nipple became tender, inflamed, and abraded, exuding a watery discharge. The surface of the skin was smooth, red, and painful.

When first seen on November 25th, 1885, her general health was good. There was no history of cancer, rheumatism, or gout in her family. Her catamenia had ceased two years before. She was nervous, and complained of severe pain of the right nipple and the surface of the right breast, which was ulcerated for 2 inches around the nipple. The base of the ulcer was smooth and red, slightly lower than the surrounding skin, and exuded a copious discharge of thin, acrid, serous

[1] Read at a meeting of the North of Ireland Branch.

fluid, which stiffened linen like the discharge which escapes from an eczematous ulcer. The bowels were regulated, and lin. calcis and zinc oxide were applied to the nipple and breast.

December 2nd. The ulcer of the nipple was still painful, and not healing. Zinc oxide and morphine hydrochl. were ordered to be dusted on night and morning. A wire shield was worn over the breast to prevent any pressure from her dress.

August 8th, 1886. The ulcer was not healing, but the serous discharge was less. The morphine and zinc oxide was applied regularly every day, and the pain was less.

October 18th, 1888. The ulcer of the right breast extended for 3 inches round the nipple, was acutely painful, and was discharging serum freely. A hard mass was distinctly felt beneath the nipple, and was first observed by her in July, 1888. She was suffering from acute suppurative parotitis of the right side, from which she completely recovered in six weeks. She was strongly recommended to have her right breast amputated, but refused until January 1st, 1889, when the swelling and hardness of the right breast had increased. There were several enlarged glands felt in the right axilla. She was in fair health.

On February 5th, 1889, a photograph (Fig. 1) of the breast was taken.

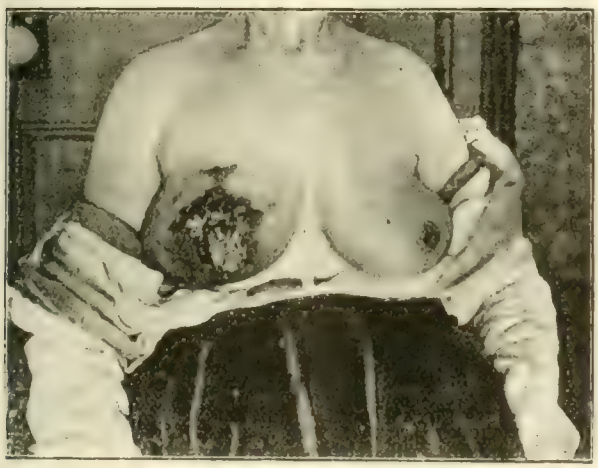


Fig. 1.—Paget's disease of the right nipple.

Assisted by Professor T. Sinclair, Dr. J. A. Browne, and Dr. W. A. Wheeler, chloroform was administered, and the right breast and several enlarged glands (as many as were recognised) in the right axilla were removed. No glands could be felt beneath or above the right clavicle or in front of the right elbow. There was slight hæmorrhage, easily arrested by torsion forceps. The edges of the wound were approximated by three silver sutures, permitting of free drainage for the discharge. The wound was dusted over with iodoform, and dressed with iodoform gauze and wood-wool wadding. The wound healed by granulation, and in twelve weeks the cicatrix was quite firm. The temperature never rose above 100° F., and that only once—on the day after the operation. The pulse ranged from 96 to 84.

On May 16th, 1889, three months and eleven days after operation, the cicatrix was firm and healthy. There was then no sign of any enlargement of the right axillary glands, or any secondary deposits in other parts of the body.

On September 15th, 1889, I found her in bed, sick and weak, suffering severe pain over the region of the liver and right kidney; small, hard nodules were felt in the skin of the right axilla, close below the lower edge of the cicatrix, and in the skin over the outer condyle of the right arm. The liver was enlarged and the surface felt rough and nodular below the tenth rib. She gradually grew weaker, the liver became more enlarged and painful; the glands above the right clavicle were enlarged. Her appetite decreased until she was quite exhausted, and she died on October 27th, 1889.

Remarks.—This case is interesting in the following points: 1. On account of its rarity. Bryant[2] records 3 cases of ulceration of the nipple preceding carcinoma, in 600 consecutive cases. Mr. Henry Morris records 2 in 305 cases. Gross and Oldekop report 5 cases in 370, making a total of 10 cases of ulceration of the nipple observed in 1,275 cases of carcinoma of the breast, or 0.86 per cent. Dr. E. D. Mapother records[3] having seen during seven years only 1 case of Paget's disease of the nipple in St. Vincent's Hospital, Dublin. 2. The slowness of its growth, 6½ years having elapsed from the first appearance of the ulceration of the nipple till the cancerous tumour in the breast was first seen. 3. The extensive and rapid recurrence of cancer as secondary deposits in the skin of the right axilla and arm, and in the right supraclavicular glands, and in the liver seven months after removal of the right breast and axillary glands. 4. The necessity for an early diagnosis of this form of malignant ulceration of the nipple. Bryant records 2 cases where he removed the breast and enlarged axillary glands early in this form of ulceration of the nipple with good results.

Microscopic Examination by Mr. Jonathan Hutchinson, jun.—Microscopic sections made through the diseased nipple and scirrhous tumour beneath showed the structure to consist of large cells embedded in a small amount of fibrous tissue, indicating a rapidly growing form of cancer. This soft scirrhous mass had extensively invaded the skin, and projected at parts through the epithelial covering. Surrounding this was an area of skin which had been the seat of chronic eczema, and outside the eczema was healthy skin. The lymphatic vessels were particularly well marked around the alveoli; towards the skin surface was a dense infiltration of small round cells, no doubt in part due to the eczematous condition, this being constant in cases of Paget's disease.

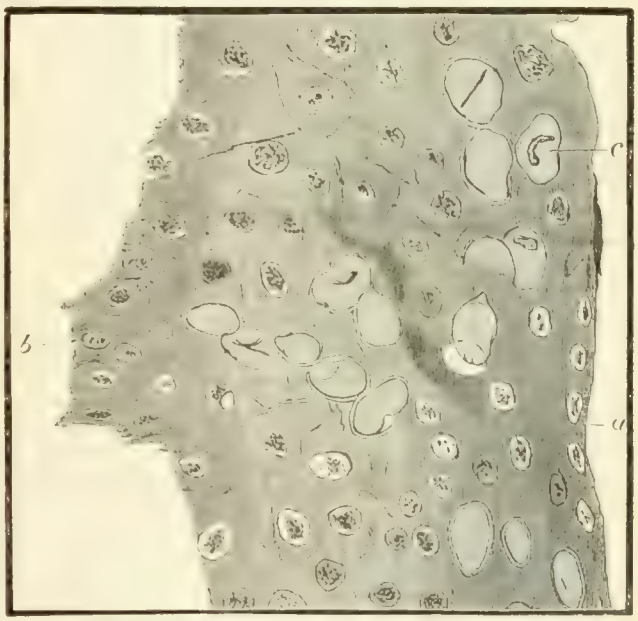


Fig. 2.—Vertical section of epithelium in Paget's disease of the nipple in this case × 800 diameters. *a*, Surface; *b*, level of corium; *c*, coccidia (?).

After making and preparing many sections of the epithelium, the scirrhous tumour and scrapings from the surface of the breast, and carefully examining them under the microscope, bodies like coccidia were observed in the epithelium and the scrapings from the surface of the breast, but none were found in the scirrhous tumour. They showed a distinct double contour, this feature being perhaps the best marked one of coccidia, a fairly regular oval shape, sometimes a crenated edge and a narrow end suggesting the "micropyle" of the parasite. It will be seen by examining Fig 2, that they are much larger and more distinct than the epithelial

[2] *Diseases of the Breast*, 1887.
[3] *Papers in Dermatology*, 1889.

nuclei amongst which they lie. The various methods used for staining the sections were Neelson's fluid, picrocarmine, safranine, and logwood. Sections stained with Neelson's fluid showed the coccidia perhaps the best. In the scrapings treated with liquor potassæ, quite a small number were found in comparison with the case reported by Mr. Jonathan Hutchinson, jun., F.R.C.S., in the *Pathological Society's Transactions* for 1890.

Psorospermosis.—In 1889 Darier demonstrated a monocellular parasite belonging to the class sporozoa—Order, psorospermia—as being always present in the skin and gland ducts in cases of Paget's disease of the nipple and *acné cornée*. Dr. Louis Wickham's monograph on this subject[4] is well known. The parasites were seen by these observers in various stages of their growth. At the first they consisted of amœboid masses like cellular protoplasm. The cell containing the parasite increased in size, and had a more irregular shape. At a certain time the parasite became encysted, and its capsule, at first clearly defined, became quite round, thickened, and bright. A distinct large nucleus was then seen in the cell, having a round body and double contour, and in the central protoplasmic contents were observed two or three nuclear bodies, which were pseudo-navicellæ. These distinct well marked bodies are the coccidia or psorospermiæ in their mature state. A ready means of examining coccidia under the microscope is to scrape the affected part with the blade of a knife, and add to the scrapings one drop of liquor potassæ. This is a valuable means of diagnosis in Paget's disease. The presence of these parasites among and within the epithelial cells and ducts determines the various degrees of inflammation and cell proliferation. This inflammation is kept up constantly by the parasite, and causes the increased growth of the epithelium. The cancer which frequently follows Paget's disease of the nipple develops in the breast from the lactic ducts, or in the skin from the gland follicles. The new growth is a pavement epithelium, which may be lobular, tubular, or alveolar. Paget's disease of the nipple should be treated in its early stages by antiparasitic remedies, as recommended by Darier, and so prevent the development of cancer.

VITILIGO AS A SEQUELA OF INFLUENZA AND ERYSIPELAS.[1]

By E. MANSEL SYMPSON, M.A., M.D.Cantab., M.R.C.S.,
Lincoln.

As vitiligo or leucopathia acquisita is not a very common disease in this country, and as every direct outcome of erysipelas and of the recent epidemic of influenza is interesting, the following case seemed worthy of being brought before your notice.

M. B., married, aged 41, had a severe attack of influenza with much pain and tingling in her hands and feet, and then, five or six days later, erysipelas of the face, for which she was attended by my partner, Dr. Collier, in January, 1890. Soon after her recovery, and ever since (these notes were taken in July), she has noticed tiny spots on her wrists, hands, arms, and legs. They were attended by no pain or irritation of any kind. They have gradually increased in size to their present condition, several remaining together to form the larger patches. They also occur on her body, both back and front, but I could not find the slightest trace of them on her face and neck, while her hair was of a uniform and very dark black. She has naturally a dark complexion, and her face, neck, hands, and forearms are also much browned by the sun.

The edges of the white patches are distinctly deepened in colour, and are not merely darkened by contrast. The colour of the patches varies from a dull white in the smaller ones to a pinkish hue in those of larger size. There is no loss of tissue in the patches, and the patient has perfect sensation in them. The smallest spot I could distinguish was about the size of a pin's head. As will be seen by the photographs, the spots occur on both flexor and extensor surfaces indifferently. They are very splashy in appearance, as though hastily daubed on with an overfull brush of white paint, but on examination under a small magnifying glass the edges even of the most irregular patches will be found to be parts of circles with the convexities directed towards the ordinary pigmented portions of the skin. There are no solitary black spots, nor indeed anything suggestive of Addison's disease. She has no history, and bears no marks of syphilis. She has been a fairly healthy woman, and now suffers no trouble with this complaint—which she ascribes to her commencing change of life—beyond her singularly piebald appearance.

She suffers somewhat from indigestion, flatulence, and occasional attacks of urticaria on her forearms and legs: this produces, after the wheals have subsided, tiny pimples: whether these are the starting points of the spots of vitiligo is uncertain.





Most of these cases of acquired vitiligo have followed some acute febrile disturbance; typhoid fever, scarlatina, and remittent fever have all been succeeded by this complaint so directly as to leave no doubt that the latter was dependent in some way on the former, and in my case the immediate antecedents were influenza and erysipelas.

When a disease produces no pain or inconvenience, but only a mild surprise and a hope that it is not "catching," treatment obviously is in abeyance. In the case of a gentleman who had some few patches on his wrists and hands, I have recommended that they should be tattooed to match the healthy skin. And, of course, when the white patches become so extensive as to leave narrow boundaries of unaltered skin between, then the pigment may be dispelled from these, and a uniformity of tint be once more gained.

[4] *Thèse de Paris*, 1890.

[1] Read at the meeting of the Midland Branch of the British Medical Association at Boston.

Chard Rural (Population, 23,000).—*Measles Epidemic and School Closure: Tuberculosis and Cancer: Influenza.*—Mr. Edward Stephens's report for 1889 is brief, as the year was uneventful and the returns very satisfactory. The deaths registered from zymotic diseases were considerably below the average, and the general death-rate of 13.0 per 1,000 was satisfactory. The only epidemic recorded was one of measles of a mild type, which necessitated the closing of several schools, but no case ended fatally. Mr. Stephens thinks more attention should be given to diseases of a tuberculous nature and to cancer, the deaths from this latter disease being unusually large. During 1890 this district suffered severely from an epidemic of influenza, but few of the cases terminated fatally. Scarlatina was also prevalent, spreading from Seavington into Dinnington, Loper, Stocklinch, and Ilminster. The death-rate for 1890 was 17 per 1,000.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TAPPING THE VENTRICLES.

In the year 1876 I was attending a child 2 years old suffering from hydrocephalus, and looking upon the case as a hopeless one, I decided to try tapping. With the aspirator I removed ten ounces of fluid, and the result was that the child improved steadily, the fontanelles closed, he became able to walk, and I looked upon him as cured. Unfortunately his mother was a careless woman, and, shortly after he was able to walk about she left him in the house by himself, and when she returned she found him burned to death.

Leeds. H. Tordoff.

ALTERNATION OF SCARLET FEVER AND DIPHTHERIA.

I have read with interest the article by Messrs. Bevan and Shadwell regarding the simultaneous existence of scarlet fever and chicken-pox in the same family, and the following notes point to a similar connection at times existing between scarlet fever and diphtheria. It is well known that the throat appearances are often very similar in both these diseases, and not infrequently one has been mistaken for the other; but the observations on the cases cited below were carefully directed towards the avoidance of such an error.

On October 4th, 1890, I received a notification of a case of diphtheria. The parents of the child, although the family was large and the house small, declined removal to the fever hospital, as the doctor in attendance considered the child too ill to be removed, and isolation was carried out as far as practicable at home.

On October 20th a case of scarlet fever was notified at the same house, and was removed to the hospital. No history of infection was traceable, school attendance had been stopped, the first patient was still isolated, and was carefully watched for signs of desquamation, but none occurred.

On November 7th, ten days after the first case had begun to mix with the rest of the family, a third notification was received, this time a case of diphtheria, which was also removed to the hospital, with the result of checking any further outbreak.

There was no doubt as to the distinct nature of the two diseases, and besides being interesting as showing the co-existence of the two poisons under one roof; the third case throws light on the incubative period of diphtheria, which is generally much shorter than the above.

Chatham. J. Holroyde, D.P.H., M.R.C.S.

SCARLATINA AND ENTERIC FEVER.

The interest shown of late in the British Medical Journal as to the co-existence of specific fevers in the same individual has induced me to record the two following cases. I would, however, venture to remind your readers that similar cases were recorded by Murchison, Rilliet and Barthez, and others. They have described the co-existence of measles and scarlatina, typhoid and scarlatina, and small-pox and scarlatina.

Two patients suffering from enteric fever complicated with scarlatina came under treatment at the North Western Fever Hospital last year. The salient features of the two diseases were well marked in both cases, and the course and symptoms of each did not appear to be in any way modified.

The first case, R. O., male, aged 18, was admitted to a general hospital on October 14th, 1890. He was then at the end of the first week of enteric fever. On the 17th he was removed here, as he had contracted scarlet fever. On admission he had a characteristic scarlet rash, and on the abdomen rose spots could be distinguished quite distinct from the punctate scarlet eruption. The throat was generally inflamed. The highest temperature was 103.2°. The bowels were constipated as a rule, and enemata were necessary. Several of the motions, however, were characteristic of typhoid. Retention of urine necessitated the use of the catheter for 12 days. The scarlet rash faded on October 20th, and desquamation began two days later. Crops of rose spots continued to come out until the 27th. The temperature was normal on the 29th, the morning remissions of the last five days being well marked. The convalescence was slow. Desquamation ceased in the first week in December, when the patient was discharged.

The second case was similar but more severe. The patient, E. E., female, aged 19, had been ailing for some days when she took to her bed on October 29th. There were rose spots on the abdomen, which was swollen and very tender on pressure. The evening temperature was as high as 104°. On November 3rd the patient vomited, and a bright characteristic scarlet rash appeared the next day. The tonsils and pharynx were acutely inflamed. The temperature that evening was 104.2°. Fresh rose spots were observed to develop during the existence of the scarlet rash, and they continued to come out until November 17th. The motions were loose and yellow in colour. Several of the joints became the seats of scarlatinal arthritis, and the patient was much prostrated. The temperature fell to normal on November 22nd. The urine from time to time contained traces of albumen. Desquamation all over the body was very free. The patient had a long convalescence and was discharged in the middle of January.

It is worthy of note that the superadded scarlatina in neither case sensibly affected the temperature.

James Harry Sequeira, M.B.Lond.
North Western Hospital, Haverstock Hill.

SUPRAPUBIC LITHOTOMY.

U. Hed Wahiagir, aged 21, an agricultural labourer, came to the Welsh Calvinistic Methodists' Mission Hospital, Jowai, Assam, on February 26th, 1891, complaining of great pain in passing water. From the age of 2 years more or less difficulty had been experienced in micturition, but latterly the pain had become so severe as to compel him to seek surgical advice. On passing a sound, a stone of large size was detected and an operation decided on. A brisk purgative was prescribed, and the next day the patient was put under chloroform. The bladder was well washed out with a boracic acid solution and distended in the usual manner. No mode of rectal distension was made use of. The pubes having been well shaved and washed, an incision 2½ inches long was made in the middle line and the bladder readily exposed. With the forefinger as a director, the knife was carefully inserted into the bladder and a pretty free longitudinal incision made. The calculus at once presented itself at the opening, and by dint of gentle leverage with the middle finger of the right hand in the rectum was got out. The bladder was then explored and thoroughly irrigated. No sutures were inserted in that viscus. The wound was carefully dried, a drainage tube inserted in its lower angle, and two catgut ligatures placed in its upper two-thirds. Styptic colloid was then painted over it and iodoform freely dusted all around. A dressing of sal alembroth wool and lint was kept in position by sal alembroth gauze bandages. A soft india-rubber catheter was tied in the bladder and an opium pill administered.

The calculus when weighed was 740 grains, and of a smooth, rounded, and heavy character. Its length was 2 inches and breadth slightly less. The patient made an uninterrupted recovery; his temperature never rose above 100.5° F. A soft catheter was kept tied in the bladder for the first forty-eight hours, and then used to draw off the water six times daily. The wound was dressed daily, and by the ninth day was firmly and completely closed and the patient declared convalescent.

Arthur D. Hughes, M.B., C.M.Glas.

POISONING BY NITRO-BENZOLE: RECOVERY.

A few weeks ago I received an urgent message to attend a man, aged 47, who was taken suddenly ill, but no clue was given as to the nature of the case. I went immediately, and found the patient sitting on a chair in front of the fire, having vomited just previously to my arrival. He looked very ill, and the air of the apartment was saturated with the smell of almonds. He seemed rather deaf, but was sensible and answered questions quite rationally, but in a drawling manner. He informed me that he had taken 2 drachms of nitro-benzole. It appeared that this was about three-quarters of an hour to an hour previously, and in the interim he had had

his dinner of steak pie, but did not drink with it alcohol in any form; then, although feeling very ill, he managed to walk home, a distance of about three-quarters of a mile. He was in a condition of extreme cyanosis, complexion pale and livid, lips and nails purple, skin clammy, pulse feeble, and the respirations shallow and irregular, with an occasional sigh, the breath smelling strongly of almonds. Having with me some sulphate of zinc, I tried to get him to swallow it, but finding difficulties I went immediately for my stomach pump. Mr. Lawrence K. Phillips, whom I found waiting at my house, kindly returned with me at once, and lent his assistance. The jaws were now apparently fixed, and we had much difficulty in introducing the gag, but we ultimately succeeded, and applied the stomach pump for about an hour and a half to two hours before we were able to satisfy ourselves that the washings were free from the peculiar odour. He was now extremely weak, and I administered an injection of ether subcutaneously, which partially revived him. The condition of the pupils during this time was variable, occasionally dilating widely, but for the most part contracted. Motions were passed involuntarily.

He was now removed to the dispensary, where he was detained for some days under the care of Mr. A. Hodson, who subsequently informed us that no further treatment was found necessary, and that the man made a good recovery.

The case is of special interest on account of the large amount of the poison taken. A fatal case is reported after 15 minims, and another nearly ended fatally after 23 minims, this latter having been taken in divided doses. It may fairly be claimed, I think, that the successful issue of the case was due entirely to our early and thorough use of the stomach pump, and that no doubt the absence of alcohol with the meal prevented the even more rapid absorption of the drug.

ARTHUR H. DODD, L.R.C.P.Lond., M.R.C.S.Eng.
West Brighton.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ADELAIDE HOSPITAL, DUBLIN.

A CASE OF MYELOGENOUS LEUCOCYTHÆMIA.[1]

(By WALLACE BEATTY, M.D., F.R.C.P.I., Senior Assistant Physician to the Hospital.)

DR. GOWERS, in his article on leucocythæmia, in *Quain's Dictionary of Medicine*, writes: "There is some reason to believe that as the spleen alone may be diseased, so in some rare cases the marrow of bones may alone be diseased, and may give rise to a primary 'myelogenic leucocythæmia,' but this is not yet proved." Again, Professor R. v. Jaksch, in his book on *Clinical Diagnosis*[2], makes the following statement: "It is usual to distinguish leukæmia as splenic, lymphatic, and myelogenic, according to the anatomical seat and clinical symptoms of the disease, although probably an instance of true myelogenic leukæmia has not yet been observed." The following case proves that a purely myelogenous leucocythæmia may occur.

M. H., aged 35, unmarried, a dressmaker by occupation, was admitted into the Adelaide Hospital, under my care, on September 9th, 1890. Her history before admission was as follows:—She had scarlatina when a child; she was subject, when a child, to frequent attacks of epistaxis. She stated that she enjoyed very good health until five years ago, when she caught cold, and was said to have had pleurisy and bronchitis, and some affection of the kidneys. She recovered from this, and remained well until last June, when she began to feel her stomach out of order; she lost strength; her bowels became confined. Seventeen days before admission to hospital her legs became swollen, and felt cold and numb; at first there was no pain nor redness of the skin, but after four days hard red burning and tender nodules developed on the legs. For about four or five days the nodules did not alter in appearance, but after this they gradually enlarged, and began to alter in colour and resemble bruises. She suffered from night sweats. She had become very thin. All along she had no headache nor cough. She stated that she had not suffered from palpitation nor breathlessness on exertion; the fact, however, that her occupation was a sedentary one may account for the absence of these two anæmic symptoms. She said she had occasionally "singing noise at the top of her head." She had not suffered from vomiting. A week before she came into hospital she had a copious hæmorrhage from the uterus. She had not menstruated for thirteen months. As regards family history, the only facts elicited were that her father died of heart disease, and her mother died of some brain affection.

On admission to hospital her condition was as follows: She was very anæmic in appearance, and looked very ill; the gums and conjunctivæ were very pale. The veins in her neck were distended, and there was a distinct venous murmur. She had typical nodes of erythema nodosum on her legs, and one node on the ulnar side of the right wrist. Her liver was found to be somewhat enlarged. The spleen could not be felt. The urine was loaded with lithates, and contained a trace of albumen. Her tongue was very pale and furred. There were a few mucous *râles* at the bases of the lungs. A well-marked systolic murmur was audible all over the heart; its point of maximum intensity was in the mid-sternum opposite the third intercostal space. The pulse was 108, of large volume, and somewhat abrupt: the temperature was 101° F.; the respirations were 32. A few days after admission it was found that the sternum was exquisitely tender on pressure; the ribs were only slightly tender. The cardiac murmur was very loud and very rough in character. The blood contained a great excess of white corpuscles. My colleague, Dr. Bewley, kindly examined her blood on two occasions—September 17th and September 19th. On September 17th he found that the proportion of white to red was 1 to 5; the red corpuscles were greatly diminished in number, being less than one million to the cubic millimetre. On September 19th he found the proportion of white to red to be 1 to 5½; and the red corpuscles numbered about one million to the cubic millimetre. The patient's strength rapidly failed; she was attacked with diarrhœa, became delirious, then comatose, and died on September 21st, thirteen days after admission to hospital.

Course of Temperature and Pulse-rate from day of Admission to Hospital until Death.

	Temperature.		Pulse.	
	Morning.	Evening.	Morning.	Evening.
September 9th ...	—	101.2°	—	104
,, 10th ...	99.6°	99.5°	84	104
,, 11th ...	98.0°	101.4°	92	96
,, 12th ...	99.6°	—	92	100
,, 13th ...	101.2°	101.2°	100	92
,, 14th ...	101.2°	101.7°	108	92
,, 15th ...	99.8°	99.8°	100	96
,, 16th ...	100.4°	101.6°	100	108
,, 17th ...	101.4°	101.8°	108	104
,, 18th ...	102.0°	102.4°	116	120
,, 19th ...	102.2°	102.0°	122	120
,, 20th ...	102.7°	99.3°	124	120
,, 21th ...	100.8°	—	128	—

Dr. Bewley made the *post-mortem* examination; the following is his account of it: Body pale everywhere, well nourished; no œdema. On opening peritoneum, no ascites: peritoneum, and especially omentum, had many little dark grey or blackish spots, irregular shaped, round or long, small in size, like particles of soot scattered in the peritoneum: probably these were old blood extravasations. Viscera were in normal position. Pleural cavities: No fluid; one slight adhesion at right apex, none at left. Lungs: Anterior parts very pale and free from blood, posterior parts darker, redder in colour, very little air, much œdema, sank in water (that is, hypostatic congestion and œdema). In lungs were a few small patches of catarrhal

[1] Read in the Medical Section of the Royal Academy of Medicine in Ireland.

[2] *Clinical Diagnosis*, by Professor R. v. Jaksch, translated by James Cagney, M.D., p. 20.

pneumonia. Pericardium: normal, except that there was a large white spot on the right ventricle, and a smaller one on the right auricle. Heart: Rather large; relative size of parts normal; valves and openings normal; myocardium here and there fatty. Right heart was full of pale pinkish clot, uniform in colour; left had darker clot below, lighter above. In arteries and veins the clots were pale pinkish in colour; all these clots were *post-mortem* clots. Aorta normal. Œsophagus normal. Stomach normal. Intestines: In upper jejunum the surface of the mucous membrane all over had a number of faint greyish spots. In ileum there were two small calcified nodules in the mucous membrane, in size about that of No. 6 shot, whitish. Peyer's patches were not thickened; there were blackish grey spots all over them. Colon normal; in sigmoid flexure and rectum there were four herniæ of the mucous membrane (small diverticula). Mesenteric glands normal except one, which was calcified. Kidneys: Weight, 6½ ozs. each; consistence rather firm; colour very pale, a uniformly translucent appearance; capsule came off readily; cortex of normal thickness. Suprarenal capsules normal. Spleen: Weight, 10 ozs.; pale, and pinker than normal, otherwise it seemed normal. Liver: Weight, 72 ounces; did not contain very much blood, yet looked nutmeggy; consistence normal. Gall bladder normal; half full of thick bile, which flowed easily into the duodenum. Retro-abdominal tissue normal. Pancreas normal, except for yellowish mucus in duct; uterus had a recent clot in it; ovaries were normal. Brain: In the left corpus striatum and elsewhere, but to a less degree, there were hæmorrhages into the perivascular spaces; corpus dentatum cerebelli seemed rather prominent on section, otherwise the brain was normal. Bones: Left femur very compact and hard; medullary canal normal in size, smooth inside; marrow red and fairly firm, not fatty; skull cap unusually heavy and dense; spongy bones (vertebræ, sternum) seemed normal.

A microscopic examination made by Dr. Bewley of the bone marrow, and of the liver, spleen, and kidneys, gave the following result:—

Marrow of femur in ½ per cent. chloride of sodium solution showed: (1) White blood corpuscles, some large, some small, each with one round nucleus. (2) Red blood corpuscles, some normal (most), some irregular in shape (pear-shaped), a few nucleated. (3) Spindle-shaped connective tissue cells. (4) A few oil drops. In the vertebræ there was nothing found but white blood corpuscles and a very few red blood corpuscles. Liver: The liver cells in places were atrophied, and their place was taken by a soft, loose kind of granulation tissue; the capillaries seemed rather dilated; everywhere between the liver cells there were unusual numbers of leucocytes; in the liver cells were some fat drops. No evidence of iron was found in the liver. Spleen: Sections stained with logwood showed nothing abnormal; sections stained with ferrocyanide of potassium and hydrochloric acid showed here and there cells stained blue—that is, containing iron albuminate derived from breaking down of hæmoglobin. Kidneys: Some cloudy swelling of the epithelium of the convoluted tubes was found.

Remarks.—There can be little doubt that the case I have described is one of myelogenous leucocythæmia, and for the following reasons: 1. The symptoms during life.—There was most exquisite tenderness on pressure over the sternum, and to a less degree on pressure over the ribs. There was an absence of any lymphatic gland enlargement, and the spleen was not palpably enlarged. 2. The *post-mortem* appearances.—The marrow in the centre of the femur was red, and a scraping of it showed red corpuscles and white corpuscles in great numbers. There were no enlarged lymphatic glands found. The spleen was only a little enlarged; it weighed 10 ounces; on examination it was found healthy except for evidence of increased hæmolysis (as showed by the iron test). The condition of the kidneys is accounted for by the anæmia and the fever. The urine during life was febrile urine (loaded with lithates and with a trace of albumen). It is interesting to note the occurrence of erythema nodosum in this case. Before the patient died the nodes had flattened down, and there was only staining left.

Medical Magistrate.—Mr. Frederick Wright, Stamford Bridge, York, has been appointed a Justice of the Peace for the East Riding of Yorkshire.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 14th, 1891.

Timothy Holmes, M.A. Cantab., President, in the Chair.

On Measles as a Cause of Endocarditis; being an account of Four Cases in which Organic Mitral Murmurs developed during the Course of the Disease.—This paper, by Mr. J. H. Hutchinson, was communicated by Dr. W. B. Cheadle. In it the author called attention to the rarity of the occurrence of endocarditis as a direct result of measles. He recorded four cases of endocarditis, all of which occurred in an epidemic of measles at a boys' school. Case I: Boy, aged 10, with a rheumatic family history, developed mitral murmurs on the second day of the prodromal stage. Case II: Boy, aged 9, suffered from measles complicated with catarrhal croup and slight broncho-pneumonia; a mitral systolic murmur was heard on the fifteenth day. Case III: Boy, aged 9, several of whose relatives had suffered from heart disease, probably rheumatic, developed broncho-pneumonia and pleurisy on the second day of the eruption of measles, and endocarditis on the fourth day. Case IV: Boy, aged 11, having had repeated attacks of follicular tonsillitis, but no articular rheumatism, whilst apparently convalescing from a rather severe attack of measles, developed a systolic mitral murmur on the fourteenth day. The author suggested that a rheumatic taint might have been a predisposing cause, since the first case had rheumatic history and had suffered from chorea, the third had family history of heart disease, and the fourth had follicular tonsillitis.—Dr. Cheadle said that very probably the poison of measles could act on the endocardium just as it did on the mucous membranes or on the meninges. It was possible that some of the cases of heart disease hitherto regarded as unexplainable might be due to this cause. He had not seen a case during life, but he had found reference to two in the *post-mortem* records of the Great Ormond Street Children's Hospital. He wondered if some of the cases might not be severe rötheln, which often had grave complications.—Dr. Sturges feared the author had drawn his conclusions from an insufficient number of cases. He doubted if endocarditis followed measles, and it was very difficult from the physical signs to say that endocarditis was present. Dr. Lee had never been able to satisfy himself that a single case of valvular cardiac disease was due to measles, though the older writers held that smallpox, measles, and scarlatina were all causes of endocarditis. Dr. Haig supported the writer in his contention that more cases of endocarditis would be found in the course of measles if they were looked for. He had elsewhere maintained that endocarditis was due to the action of uric acid on the fibrous tissues of the heart, and this was more likely to happen if, as in the second and third cases, the fever of measles was accompanied by an inflammation like that of broncho-pneumonia. He held that the murmur in the last case was probably due to cardiac dilatation.

Chronic Traumatic Arthritis.—Mr. W. Arbuthnot Lane read this paper. He wished, in the face of the recent more accurate differentiation of the clinical conditions originally comprised under the several terms rheumatoid arthritis, rheumatic gout, etc., to separate from the mass of clinical and pathological material which was said to be characteristic of that disease, or rather groups of diseases, a definite variety to which he would apply the term chronic traumatic arthritis to distinguish it from the two other chief varieties—rheumatoid arthritis and rheumatic arthritis. He suggested this title for the reason that its course was a long one and constantly progressive, and its causation was simply and solely mechanical. He referred to a paper in the *Transactions* of the Pathological Society for 1886 ("The Causation and Pathology of Rheumatoid Arthritis and of Senile Changes"), in which he dealt with many of these changes in detail, and showed that they were the result of force exerted on one or several occasions upon a joint. These he stated briefly, together with other similar conditions which he had observed, and which he had described in various papers.—Mr. Howard Marsh said that the group of cases described by the author had been differentiated long ago by Sir James Paget. He referred to a case he

had seen recently where an injury to the hip of a woman, aged 54, was followed by severe pain, wasting of the muscles, and shortening of the limb with eversion of the foot. The same kind of arthritis followed injuries to the shoulder, knee, toe, or thumb.—Mr. LANE, of Bath, maintained that many of these cases were associated with scrofula. The joint of rheumatoid arthritis was of spindle shape, whereas that of rheumatic arthritis was not enlarged and not distorted. Grating only occurred in rheumatoid arthritis, and the occurrence of neuroses in this class served to distinguish it. A few cases owed their origin to injury only.—Mr. WARRINGTON HAWARD did not agree that the cause was solely mechanical; the mechanical injury called forth a constitutional tendency that was already present in the patient.—Mr. GOLDING-BIRD failed to see why these damaged articulations could not repair themselves if they were otherwise healthy. He believed that the changes described could only be induced in people who had a tendency to the affection. In cases of arthritis following injury to the shoulder or hip there was pain, stiffness, and wasting of the muscles, but no deformity.—Dr. ARCHIBALD GARROD held that the injury was only the starting point of the lesion, and not its cause. In chronic arthritis from injury to a joint in young people their characters were not similar to those described. The changes did not occur if the joint was in a state of perfect nutrition.—Mr. PARKIN thought it well to reserve a distinctive name for the traumatic group of cases, which occurred mainly in males, affected the large joints, was associated with grating, but was without nervous symptoms.—Mr. W. A. LANE, in reply, said that he saw no difficulty in the idea of the change beginning in the cartilages. His cases were distinct from those in which rheumatoid arthritis commenced in a damaged joint. He was unaware that there existed any literature dealing with this special subject.

CLINICAL SOCIETY OF LONDON.

FRIDAY, APRIL 10TH, 1891.

Sir DYCE DUCKWORTH, M.D., LL.D., F.R.C.P., President, in the Chair.

Popliteal Aneurysm in a Youth, aged 17.—Mr. A. T. NORTON related this case. The patient was a parcel-post boy who had felt pain behind the left knee for five months, and in March, 1890, finding an enlargement in that region which prevented him from working, entered St. Mary's Hospital. The tumour occupied Hunter's canal, and extended down into the popliteal space, which it filled. The part in Hunter's canal could not be diminished by pressure to such an extent as an aneurysmal cavity should be; there remained an apparent enlargement of the femur, the part in the popliteal space was quite as compressible as an aneurysm. The tumour pulsated and dilated in all directions. During pulsation a loud systolic murmur was heard over the whole tumour. The measurement around the tumour was 14½ inches as compared with 13 inches in the corresponding position of the sound limb. Pulse 60. Temperature normal. Urine normal. Tongue clean; appetite good. Glands in both groins enlarged, also one under the chin. There was a difference of opinion as to the character of the tumour, Mr. Norton considering it unquestionably an aneurysm, others looking upon it as a pulsating sarcoma, chiefly on account of the fact that the femur could be felt enlarged in the position of Hunter's canal after steady compression of the tumour, and on account of the youthfulness of the patient. In consequence of the difference of opinion, Mr. Norton determined to watch the tumour for a week, at the same time treating the patient by Tufnell's method. On March 29th, finding the pain increasing, Mr. Norton tied the femoral artery in Scarpa's triangle. On May 5th the sutures were removed, the wound having healed by the first intention, and pulsation being fully re-established in the vessels below. On May 8th measurement over the tumour was reduced 1 inch. Left thigh, 13½; right, 12¾. On June 21st, seven weeks after the operation, after walking about, both limbs had increased in size, and both were nearly equal in size. Left thigh, 13½; right, 13½ inches. The position of the popliteal tumour was scarcely to be recognised, but in Hunter's canal could be felt a small sharp edge of bone or exostosis, which in all probability was the cause of the vessel giving way at that part, and hence the peculiarity of the aneurysm in a person 17 years of age.

Calculous Suppression of Urine with Double Pyonephrosis.—Nephrolithotomy on Both Sides at One Sitting.—Mr. G. R TURNER described this case. H. B., aged 45, was admitted into St. George's Hospital under the care of Dr. Whipham, July 21st, 1890. She had led a very intemperate life, and had suffered from symptoms of renal calculi for five years, occasionally passing stones by the urethra. None, however, had passed for the last year. Three days before her admission she had a severe attack of pain in the right loin and groin, and for twenty-four hours before she had passed hardly any urine at all. She was weak and drowsy on admission, and in each lumbar region was a tender, evidently renal, tumour. The right was the larger of the two. On July 23rd, after consultation with Dr. Whipham, Mr. Turner decided to cut down on both of these from the loin. The bladder was quite empty, and no urine being passed. The left kidney was first attacked, and a large calculus weighing just under an ounce was removed. A quantity of extremely offensive pus occupied the dilated renal pelvis. This was irrigated with warm water, and drained. The right loin was then dealt with in a similar manner. Pyonephrosis was present here also, but there was less pus on this side; two rounded calculi weighing some 5 drachms were removed. In all 2 ounces 2 drachms 10 grains of calculous matter were removed from both kidneys. She rallied well from the operation, a quantity of urine coming away from the drainage tubes, and about an ounce was drawn off from the bladder by catheterisation. On July 27th she passed 3,125 cc. by the urethra, slightly blood tinged. The wounds did well, and her general condition was satisfactory till August 1st, on which day she became rather suddenly prostrate, and passed no more urine by the urethra, though a quantity of it and increased discharge of pus came from the loin wounds. Two stones the size of hazel nuts were found and removed from the right side; none could be felt from the left loin. Temporary improvement followed, but the patient finally died of asthenia on August 3rd, eleven days after the nephrolithotomies. *Post-mortem* examinations showed both kidneys to be most extensively diseased, four more stones in cavities on the right side, and another calculus on the left side plugging the ureter about one inch from its commencement. These stones could not be felt from the loin incisions. Remarks were made as to the best treatment for calculous suppression of urine, and it was suggested that unless the patient's general condition forbade it, or one kidney was obviously hopelessly disorganised, unfit for any excretory work at all, both sides should be relieved by operative interference, not necessarily a nephrolithotomy on the second kidney, but, at any rate, a nephrotomy to relieve the mechanical obstruction.

Nephrolithotomy in a Boy aged 10.—Mr. BILTON POLLARD reported particulars of this case. During the past three years the boy had been subject to attacks of abdominal pain associated with hæmaturia. The attacks of pain were not characteristic of renal calculus. The hæmaturia was sometimes profuse. The urine contained no pus, and when free from blood it appeared to be healthy. The right kidney could be felt; it was not tender on pressure, and there was no renal tumour. The boy's general condition was good, although he was anæmic. On December 25th, the right kidney was explored through the lumbar incision at the North-Eastern Hospital for Children. The stone could be felt in the pelvis of the kidney by the finger, and was also struck by the exploring needle. It was easily extracted through the cortex of the kidney. The stone weighed 27 grains. The kidney bled rather freely, but the bleeding was stopped easily by plugging the wound in the kidney with gauze. The gauze was removed on the following day, and the tube on the second day after the operation. No blood appeared in the urine after the operation, and as the discharge of urine from the wound did not diminish materially, the renal pelvis was again explored on the fourteenth day after the operation, as it was thought possible that it might be plugged with blood clot. No clot was found. A fine tube was passed in the direction of the ureter and some lotion syringed through it, with the object of dislodging a clot if there was one impacted in the ureter. The quantity of urine which escaped from the wound now diminished quickly, and

ceased entirely after the fifth day, and the patient made a complete recovery. It was now sixteen weeks after the operation and the patient continued well. From inquiries which Mr. Pollard had made, he thought nephrolithotomy was a rare operation in childhood. Mr. R. W. Parker had twice operated for renal calculus in children at the East London Hospital, but no cases of the kind had occurred in three other London children's hospitals, nor yet at the Pendlebury Children's Hospital. Mr. Pollard reported the case with the view of ascertaining the experience of others in regard to renal calculus in childhood.

Eight Cases of Lumbar Nephrolithotomy.—Mr. W. H. A. JACOBSON gave details of the cases. The paper formed a sequel to a previous paper "Four Cases of Nephrolithotomy."[1] Case I: Symptoms of renal calculus for five years in a man, aged 53—lumbar nephrolithotomy—calculus (lime oxalate, 14½ gr.) removed from upper part of ureter—recovery. There was a history of five years' lumbar pain at intervals with hæmaturia and frequent micturition. Urine, specific gravity 1025. Abundant lime oxalate crystals. Light amount of albumen. Nephrolithotomy October 7th, 1889. A small circular hedgehog calculus of lime oxalate was found and removed. Recovery. Patient went out December 11th: had since remained well. Case II: History of calculus for eighteen years in a patient aged 30—large left renal swelling with stinking alkaline purulent urine—nephrolithotomy, August, 1889—nine stones removed; urates, oxalates, phosphates, 333 gr. First attack of hæmaturia when aged 12, occasionally since. Ten months ago rigors, and urine turbid. Large tender swelling in left loin. Urine alkaline, stinking, and loaded with pus. No tubercle bacilli. August 10th, 1889, nephrolithotomy. Kidney enlarged. Eighty-nine rough, foul stones removed, one jammed in ureter. Patient made a good recovery, but a fœtid sinus persisted from which a large quantity of watery urine came away, requiring a lumbar normal nephrectomy, August, 1890. One stone left behind in uppermost part of kidney. Recovery. Case III: Calculous pyelitis closely simulating tuberculous pyelitis in a patient, aged 29—exploration, November 16th, 1889—removal of eight calculi (mixed urates, 39 grs.) and much pus—complete recovery by February, 1890—since maintained. Patient was a woman, aged 29, with a much enlarged and tender right kidney. Much pus in urine, very scanty history of hæmaturia. Morning temperature, 99°, evening 100°. Family history of phthisis. Exploration, November 16th, 1889. Removal of eight stones and much pus. Kidney much expanded and damaged. Recovery. All soundly healed by February 18th, 1890. Patient had remained well. Case IV: Severe symptoms due to a very small calculus (lime oxalate, 25 grs.) in upper part of kidney. Nephrolithotomy—stone found with much difficulty in an upper cavity—recovery. E. S., aged 18, had had frequent hæmaturia, severe pain in left loin and testicle for a year. Nephrolithotomy, July, 1890. It was only when search was about to be abandoned that Mr. Jacobson detected a small lime oxalate calculus which was extracted with some difficulty. Wound in kidney firmly plugged with strips of sal alembroth gauze. Recovery. Patient went out five weeks later with a small sinus. Two weeks later some shreds of gauze presented themselves in this sinus, and three strips (1 inch by 4) were removed by Dr. Lever, of Harrogate. Sinus closed firmly, and the patient had remained entirely well since. Case V: Strong evidence of renal calculus for five years in a patient, aged 38—exploration August, 1890—no stones found—descent of two in October, one being removed from urethra, the other treated by lithotrity. M. C., a shipwright, had been subject to lumbar pain and hæmaturia for five years. In 1885 he passed a calculus. Exploration, August, 1890. Good recovery. He went out September 15th, and returned to full work in October. Shortly after, a stone was impacted in the urethra and removed by forceps. Since then micturition had been frequent, painful, and interrupted. A small stone was detected in the bladder and crushed November 28th. The crushings weighed 20 grs. The patient was heard of in March, 1891, in good health, and able to follow his occupation regularly. Case VI: Symptoms of a year's duration—suprapubic lithotomy in America—nephrolithotomy—kidney very high up—calculus—uric acid and oxalates, 54 grs., removed from pelvis—recovery. A. C., aged 33, had three attacks of left renal colic in the last year. Nine months ago, his symptoms being thought to point to vesical stone, suprapubic lithotomy was performed in the Pennsylvania Hospital without any result. Nephrolithotomy, October 10th. Kidney placed very high up. Stone easily felt in pelvis, and hooked out with finger. Recovery. He went out November 15th, and had since remained well. Case VII: Symptoms of ten years' duration in a patient aged 25—nephrolithotomy—wound of peritoneum—calculus (lime oxalate, 33 grs.) removed from pelvis—uninterrupted recovery. C. K. D., labourer. Kidney trouble began ten years before. Attacks of left side and lumbar pain, and hæmaturia frequent. Marked lumbar tenderness. Nephrolithotomy October 17th. Peritoneum accidentally wounded. The day after the operation, to ensure safe drainage, the kidney was sutured well up into the wound. Recovery uninterrupted. Patient went out November 23rd. Case VIII: Fifteen years' symptoms in a patient aged 40—diagnosis of cystic calculus from deposit in the urine—nephrolithotomy—grave condition of shock throughout the operation—four calculi removed, three of pure cystin—recovery; but a sinus present two months and a half after the operation. Miss B., aged 40, seen in December, 1890. For fifteen years increasing misery with right lumbar pain and tenderness. Occasional hæmaturia. Right kidney very movable. Nephrolithotomy January 25th. Four calculi removed from dilated pelvis. Operation most easy and brief, but patient's condition most grave from collapse throughout. Recovery, but a tiny sinus, allowing of a slight escape of urine, was present two months and a half after the operation. Mr. Jacobson suggested the following points to the meeting: 1. That in doubtful cases of tuberculous disease, especially of the genito-urinary tract, where, as in Cases II and III, the diagnosis between calculous and tuberculous pyelitis remained obscure, the aid of bacteriology, that is, inoculation of the suspected fluid either into the anterior chamber or beneath the skin of an animal, would readily clear up the case. He alluded to two cases, one of obscure cystitis, the other of a lateral lithotomy wound in a child, which with the inguinal glands became infected, in both of which the case was made plain by inoculation by Dr. Washbourn. 2. Information was sought for the best means of detecting small stones impacted high up in the kidney itself, Cases IV and V showing the extreme difficulty that might be met with here. 3. With regard to the cystin stones removed in Case VIII, Mr. Jacobson sought information as to the risk of recurrence, and whether there was anything in the pathology of cystinuria that accounted for the extreme weakness of the patient, and the very grave condition of shock which was present throughout the operation.—The PRESIDENT remarked on the treatment of these cases by other than surgical measures. It was the duty of the physician to prevent the cases going into the hands of the surgeons if possible. It was right to bear in mind that milder means of treatment—especially by the so-called "washing out" plan—were often effectual. Many such cases in an early stage were cured by "taking the waters" of certain baths, especially at Buxton and Contrexéville; or if not cured were greatly relieved. But there were other cases where that plan of treatment could not be procured, as where the patient was worn out by exhaustion and pain and had large calculi. Then was the time for the surgeon to interfere. And, indeed, surgeons were to be congratulated on their great success in relieving and recovering people from almost imminent death in these cases. As regarded cystin, he remarked that it was usually associated with severe forms of gastric dyspepsia; and nothing led him to suppose that it was due to tuberculous or scrofulous disease. Cases of cystinuria should be treated by careful attention to diet, etc.—Mr. R. W. PARKER said that his two cases at the Shadwell Hospital had been already quoted by Mr. Pollard. One was that of a little girl with indefinite symptoms for years before. She was relieved by operation. The comparative frequency with which stones formed in the kidneys of children and were undiscovered until after death was remarkable. Further, stones in the kidneys of adults had often probably been there for years, even, it might be, from childhood. He had seen a third case of renal calculus in a boy, aged 12, who was not suspected to have stone in the kidney until after falling on a form at school and thereby striking his right side. He died with

[1] *Clin. Soc. Trans.*, vol. xxii, p. 198.

suppression of urine, and it was then found that the right kidney was large and full of stones, one of which had recently blocked the ureter; whilst the left kidney had been greatly diminished in size, owing to the impaction of a calculus in its ureter long since. Surgeons should try to discover when the first symptoms of stone occurred in adult cases, as he was convinced they often dated back to childhood.—The PRESIDENT remarked that he had heard that the wound in the loin was likely to open again. It was satisfactory, however, that such was not reported to have occurred in any of the ten cases related that evening. He had known a case in which a sinus was open for years, and was very difficult to close.—Mr. TURNER briefly replied.—Mr. JACOBSON, in reply, said that in one of his cases, with foul stinking urine, there had been a sinus for a year, due to a small fragment left behind. Such a complication was rare. Multiple stones with pus were infrequently found; whilst large stones filling the pelvis were soon discovered and removed. His cases emphasised the necessity for care in order to avoid wounding the peritoneum. For example, in Case VI the kidney was high up and the stone easily found. In Case VII, cut the very next week, the spleen was first found, and the peritoneum thus wounded, whilst the kidney was low down, close to the brim of the pelvis.—Mr. A. T. NORTON mentioned that a stone might remain in the ureter about two inches or an inch and a half from the bladder. He had once cut down on a kidney for probably renal calculus, and a persistent fistula resulted. He then performed nephrectomy, and, at the subsequent *post-mortem* examination, a calculus was found in the urethra at the situation stated. In another case of nephrectomy there had sometimes been an escape of pus from the resulting fistula, which he thought must be due to a collection above such an impacted stone. He was proposing in that case to open the abdominal cavity and examine the ureter, as he could not do so from the dorsal wound.

MEDICAL SOCIETY OF LONDON.

MONDAY, APRIL 13TH, 1891.

R. DOUGLAS POWELL, M.D., President, in the Chair.

The Importance of the Post-Prostatic (or Trigonal) Pouch in the Surgery of Vesical Calculus, illustrated by Several Cases.—Mr. BUCKSTON BROWNE read a paper on the importance of the post-prostatic (or trigonal) pouch in the surgery of vesical calculus, and related several illustrative cases. He pointed out that the surgery of stone in the bladder was comprised under two heads: the finding and the removal. Mistakes were frequent with regard to the former, and these mistakes often attracted much attention; while with reference to the latter, there was even still much difference of opinion and frequent discussion as to which was the best way of removing a stone from the bladder. He believed that mistakes in diagnosis and differences of opinion as to method of removal were due to the fact that the bladder was not always, and especially in old age, a simple sac, but that frequently there were secondary chambers or sacculi. He said there were three kinds of sacculi: (1) the well-recognised sacculus which might be called the ordinary sacculus, consisting of a protrusion of mucous membrane between the muscular fibres of the bladder (such sacculi might be found in any part); (2) a pouch often formed behind the trigone, that was, behind a line drawn between the vesical orifices of the ureters; it was part of the general cavity of the bladder, but was sometimes deep enough to make difficult the discovery of a stone lying within what might be called the post-trigonal pouch; (3) there was a post-prostatic or trigonal pouch to which he particularly drew attention, because he believed it had hitherto received but little notice, and because he thought it was the chief cause of error in searching for stone, and of imperfection in its removal, whether by the lithotrite or by the knife. The post-prostatic pouch was often of extraordinary depth. If the patient were supposed to be lying down it might be said to consist of the trigone of the bladder, pushed down between the enlarged and projecting prostate in front, and a thickened and firm inter-ureteral ridge behind. Where there was much intravesical prostatic projection the pouch might literally be roofed over by this prostatic outgrowth. Calculi in this pouch caused much pain, since the trigone of the bladder had a larger nervous supply than any other portion. Lying, as the pouch did, in front of and below the orifices of the ureters, it was a perfectly contrived trap for the catching and retention of renal calculi upon their entrance into the bladder, and it would readily be seen how favourably the stones were there placed for growth, and that they did lie there and grow into extraordinary shapes was shown by several specimens which were exhibited. The object of the paper was to put forward the two following propositions for consideration, and to relate illustrative cases: 1. That owing to the post-prostatic pouch vesical calculus was often difficult to detect in cases of enlarged prostate, and that if the pouch were deep it might be absolutely impossible to find the stone by any instrument passed in through the urethra. 2. That owing to the occasional depth of the post-prostatic pouch lithotrity was sometimes an impracticable operation, it being mechanically impossible to evacuate the bladder of all *débris* by urethral instrumentation. Case I: This patient, aged 68, was under the author for three years. Owing to a very large intravesical growth lithotrity was performed with very great difficulty, and nearly three years after, when the patient returned with calculous symptoms, it was found impossible to do more than merely touch the stones, which lay in a deep post-prostatic pouch. Suprapubic lithotomy was performed, and nine stones, each bearing a remarkable spike were removed. The spikes were probably due to the friction of the stones as they lay tightly packed in the pouch. Four months after, the patient had a rigor after a long sea swim, and died. The bladder and prostate were obtained, and a drawing of the parts was exhibited, and the fact demonstrated that the post-prostatic pouch in this case was out of the reach of all instruments introduced by the urethra. Case II: Patient aged 68. This was an example of a post-prostatic pouch containing a stone, the pouch not being deep enough to make the detection of the stone very difficult, but sufficiently deep to make successful lithotrity impossible. Indeed, lithotrity had been performed elsewhere five times in less than two years, and little or no relief obtained. The stone was successfully removed by suprapubic lithotomy. Case III: Patient aged 94. Some years ago lithotrity had been performed, and more recently he had again undergone that operation. Since the last operation he had suffered considerably. He consulted the author, but, owing to his age, declined further treatment, and lived three months. After death, the remarkable stone exhibited was obtained. It was a complete cast of the post-prostatic pouch, presenting a small rough surface in the general cavity of the bladder, and anteriorly a cup-shaped hollow in which the intravesical prostatic projection played. The case was brought forward as an example of one in which lithotrity was an impracticable operation. Case IV: Patient aged 70. The stone was a complete cast of the post-prostatic pouch, in solid uric acid, successfully removed by the author by suprapubic lithotomy, exhibited as an example of the superiority of lithotomy over lithotrity in such cases, and of the advantages of the suprapubic operation. Case V: Aged 70. This patient was under the author's observation for a considerable time; owing to a large intravesical prostatic growth, several surgeons had sounded the bladder in vain for the stone, which lay in the post-prostatic pouch. Lithotrity was at first successful, but as stone after stone descended from the right kidney, there was at last one which lay so deeply in the post-prostatic pouch that it could not be got out by the lithotrite. Suprapubic lithotomy was successful. When the patient died the bladder was examined, and the parts, together with a drawing, were exhibited. The pouch was completely covered over by the intravesical prostatic growth. This case was brought forward as an illustration of the difficulties experienced in sounding the bladders of elderly men. Case VI: Patient aged 80. A stone weighing 13¾ drachms was successfully removed by the author by suprapubic lithotomy from a deep post-prostatic pouch. Lithotrity had been performed fifteen months before, and it might be assumed that the surgeon who operated did not come in contact with this stone. Case VII: Patient, aged 80. Uric acid calculus, weighing 50 grains, which evaded thorough search through the urethra by the author, and was only found in the deep post-prostatic pouch after suprapubic lithotomy had been performed. Prostatectomy was performed in addition to the cystotomy, and the patient sank. This case was an illustration of a small stone

lying so deeply in a post-prostatic pouch as to be beyond the reach of urethral instruments, and only reached by the finger suprapubically with difficulty. The practical outcome of the paper was:—1. The insistance, in all doubtful cases of vesical suffering, where the prostate was enlarged, upon careful search being made behind that organ. In sounding in such cases it was not enough merely to reverse the beak of the sound, but thorough examination must be made with the reversed beak for the slit-like opening between the intravesical prostatic growth and the inter-ureteral ridge, which might be the sole means of access to a large post-prostatic pouch, when such a pouch existed. For this investigation a sound designed by the author, with a beak like a flat-bladed lithotrite, would be found useful. The broad flat beak was easily reversed when in the bladder, and it slipped with greater facility than the beak of an ordinary round-ended sound under the projecting lobe of the prostate, allowing the space under it to be as fully explored as was possible by any instrument passed in by the natural passage. Help might sometimes be afforded in this exploration by introducing a rectal bag into the bowel before sounding, or by an assistant making upward pressure with his finger in the rectum. The endoscope in these cases was useless, neither was distension of the bladder with fluid (which in the case of a post-trigonal pouch was always of service) of any avail when the stone lay concealed in a post-prostatic pouch. 2. When there was reason to believe that there was a deep post-prostatic pouch, it would be well, save in very exceptional cases, not to attempt lithotrity, for it was when performed with such conditions present that lithotrity was likely to be discredited, because it might be impossible to clear the pouch of all stone by instruments passed in by the urethra. Case IV was a good example of this. Here lithotrity was abandoned in favour of suprapubic lithotomy. It was reasonable to believe that such a stone, situated as it was under a projecting prostatic mass, could not have been entirely removed by lithotrity; and the result had justified the decision, for the patient had had no return since the operation (two years and a half ago) of calculous troubles. 3. Finally, when calculous symptoms and vesical distress continued in spite of treatment, and no stone could be found by the usual methods of examination through the urethra, and also in cases where a stone was found, but lying deeply in a post-prostatic pouch, it was urged that the bladder should be opened by suprapubic incision in preference to all others, for, combined with firm upward rectal pressure, the surgeon thus obtained complete command over the post-prostatic pouch—such command, indeed, as could be obtained by no other cystotomy, while at the same time it was incomparably safer than any perineal operation, being almost bloodless, in cases which by their very nature (great prostatic enlargement) were certain to bleed freely if any incision was made from between the legs.—Mr. HOWARD MARSH mentioned the case of a gentleman, aged 79, with a long-standing history of vesical trouble, upon whom lithotrity had been performed some years before. On the symptoms recurring he sounded, and with much difficulty he made out a stone in a pouch behind the prostate. After a good deal of consideration it was decided to perform suprapubic lithotomy, and he found just such a condition as that described by Mr. Browne, there being four stones. The patient made a good recovery, and was now relatively quite well. He concurred generally in the author's views.—Mr. REGINALD HARRISON agreed that when recurrence took place this was often due to resorting to lithotrity in unsuitable cases, where the operation did not admit of being thoroughly carried out. He would not, however, concede that suprapubic lithotomy was the best operation in most cases, one or other of the perineal operations being often preferable. He urged that the median perineal operation had been too much neglected, though one of great value in a certain class of cases.—Mr. F. SWINFORD EDWARDS did not see how the class of cases described that evening could have been dealt with by a perineal operation. Such cases as the No. 2 did not lend themselves to lithotrity, and he had lost a patient under similar circumstances. With regard to Case VII, he thought that the suprapubic operation was perhaps somewhat severe treatment, and he suggested that by means of a finger in the rectum it might have been possible to push the stone out of the pouch. He had assisted at upwards of 200 lithotrities, including 40 of his own, and they had always succeeded in evacuating the bladder without recourse to suprapubic lithotomy. He asked whether the wounds in suprapubic lithotomy were usually long in healing.—Mr. A. PEARCE GOULD related a very instructive case under his own observation, the patient being a man of 70. He had at first performed lithotrity, and then, on recurrence of the symptoms, lateral lithotomy, but after all he had been obliged finally to resort to the suprapubic operation.—Surgeon-Major KEEGAN observed that the paper filled a gap in the literature of stone in the bladder. He, however, raised the question as to whether it was desirable to subject old people to any operation at all. He thought that one or two of the cases might have been dealt with by the median perineal operation.—Mr. C. WILLIAMS mentioned a case which tended to show that recovery was more prompt and less tedious after the suprapubic than after the perineal operation. He mentioned that Mr. Berkeley Hill had had only one death after the suprapubic operation. He thought, too, that the operation of crushing was followed by more shock in old people than the latter procedure.—Mr. MARMADUKE SHEILD asked if any explanation was forthcoming as to why oxalate calculi exhibited the peculiar tendency to the formation of projecting processes. He observed that the author had said nothing about rectal examination in these cases.—Mr. BROWNE, in reply, mentioned that Mr. Marsh's case had been under his care some years before. Even then he had experienced considerable difficulty in dealing with the stone, and doubtless the condition had become aggravated in the interval. He was unable to agree with Mr. Harrison as to the advantages claimed for the median perineal operation. He pointed out as justifying operative intervention in persons of such advanced years that they were all cases in which the suffering was extremely severe, and indeed unendurable. The wounds healed well enough if not treated with too much surgical zeal. He thought that the old rule not to cut into the bladder unless the stone had been felt with the staff would have to be modified, like several other time-honoured maxims.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, APRIL 9TH, 1891.

FANCOURT BARNES, M.D., in the Chair.

Specimen.—Mr. MAYO ROBSON showed a Fibrocystic Tumour of the Uterus weighing 20 lbs., removed from a patient aged 45, which had been growing for five years, having doubled in size during the last six months. A diagnosis was made of ovarian cystoma with a uterine fibroid, but, at the operation, it proved to be as stated above. Complete recovery resulted.—Drs. ROUTH and HEYWOOD SMITH made remarks.

Treatment of Chronic Disease of the Uterine Adnexa.—In resuming the adjourned discussion on Dr. Bell's paper, Mr. BOWREMAN JESSETT said he considered there were two distinct forms of neurosis. In one, if they removed the cause of the irritation, namely, the ovaries, the probability was that the patient would get well, while in the other class it would fail to afford any relief. He thought there was a great deal of sentimentality in the idea of unsexing women, and mentioned the case of two sisters, both unmarried and both suffering from distressing dysmenorrhœa and nervous symptoms. One recovered after oöphorectomy, but the other failed to get rid of her neurotic condition by the same means.—Dr. MANSELL MOULLIN thought that rest produced such an amelioration in some cases that a would-be operator found himself unable to recommend the operation, and, in the course of five or six weeks the case was dismissed as cured, and in some the relief was permanent. He urged that if Dr. Bell would allow his cases to rest awhile, even without treatment of any kind, he would obtain the same brilliant results as he claimed to have obtained by means of intrauterine medication.—Mr. LAWSON TAIT asked Dr. Bell to define the phrase "unsexing" a woman. It was on this phrase that most of the arguments against operation were based. Now the sexual relations of a woman were of three kinds: as a woman, a wife, and a mother. If the operation unsexed her in all these three, then, indeed, it would be a serious matter, and he would certainly have to reconsider most of the work he had undertaken; but there were at least two of these conditions in which the woman was unsexed be-

fore the surgeon touched her; her functions as a mother had disappeared, sexual intercourse was next to impossible, but the sexual appetite was not destroyed. Supposing it were, however, he urged that the man who would make this an argument in favour of refusing the operation to a woman who was suffering the agonies of ovarian disease was neither more nor less than a brute. The best accounts of diseased tubes was to be found in French literature between the years 1820 and 1840; it was no new thing. Another argument was that it was improper to remove an organ for inflammation. Had they never heard of an eyeball being removed to save its fellow? Did they never see a knee-joint excised or a limb amputated for inflammatory mischief? or a chronic suppurating fistulous orchitis? He only advised removal of healthy appendages in extreme cases, such as epilepsy, and then only after careful selection.—After some remarks from Dr. Hugh Fenton, Mr. Mayo Robson said practical results must outweigh any sentimental objections. He showed a specimen of appendages enlarged and matted together by adhesions, the result of gonorrhœa, in which nothing could have been done but by surgery; also a case of hæmatosalpinx, in which the patient had been ill two years previously; a third specimen was one of tubal gestation, as to the treatment of which none would hesitate. Cases comprised four classes: (1) those where pelvic tumour existed with a clear history of long-standing painful symptoms; in these he had no hesitation in proposing operation; (2) cases of uterine tumour; in these he was disappointed with the results he had obtained by electricity—removal of the appendages was safe and satisfactory; (3) chronic inflammatory disease; and (4) Battey's operation. In this last operation it was difficult to arrive at a conclusion, but all the symptoms must be carefully considered. He thought it would be nothing short of a positive calamity to have a death after operation in such a case.—The discussion was then further adjourned till April 23rd.

SOCIETY FOR THE STUDY OF INEBRIETY.

Tuesday, April 7th, 1891.

Norman Kerr, M.D., President, in the Chair.

Annual Meeting.

Presidential Address.—The President commented on several recent criminal trials in which intoxication had played a part. He referred to the Witnesham murder of a mother by her son as illustrative of alcoholism in both parents being transmitted into a transformed inheritance of mental instability and defective control. The guilty though temperate son was acquitted on the plea of insanity. (Reg. *v.* Dixon, Suff. Winter Ass., 1890). The sentence of nine months with hard labour (Reg. *v.* Batty, Old Bailey, October, 1890) on a drunken mother for causing her child's death by neglect was contrasted with the refusal of Lord Young, in a similar case, to even hear the prisoner's counsel plead, and to send the case to the jury. In this latter case the intemperate mother, who had been labouring under delirium tremens, was discharged on the ground that excessive drinking was not a crime and delirium tremens was a disease. (Reg. *v.* Short, Glasg. Circuit Court, 1889). Mr. de Rutzen's dictum (Westr. Police Court, January, 1891), when sentencing Samuel Davis to hard labour for one month for assaulting a constable when drunk, that the being maddened by a very little liquor was no excuse for getting drunk, was confronted with Baron Pollock's ruling (Reg. *v.* Mountain, Leeds, April, 1888) that the last person to know his own weakness (as to alcohol) was he who had a weak mind; he could not argue as doctors could do for him, and believed himself as strong in mind as those about him. The jury followed Baron Pollock's ruling. Alcoholic trance was illustrated by the case of John Hoare (Cent. Crim. Court, February, 1891) who, generally an affectionate father, cut his boy's throat, and had no knowledge or recollection of the act, and who received a light punishment on promising to be an abstainer. Several cases of homicidal inebriety were cited. Sentences of penal servitude for five years for a serious attack on a mother by a drunken son, and of fifteen years for manslaughter while drunk and apparently not conscious of the deed, were quoted. The more humane judicial procedure was proved by various cases, including imprisonment by Mr. Justice Charles (Reg. *v.* Putnam, Cent. Crim. Court, February, 1891) for one month, on a promise to abstain, of a drunken drover for cutting a woman's throat. Dr. Kerr highly commended the course pursued by Sir Peter Edlin (County of London Sessions, February, 1891) in binding over two alcoholic kleptomaniacs to appear when called upon on condition of their entering a home for inebriates for twelve months. Dr. Kerr contended that our present penal treatment of inebriate criminals was as mischievous as it was unfair. Police-court "repeaters" were simply refitted for fresh excesses by their brief detention on a non-alcoholic regimen, the starving wives and children, deprived of the breadwinner, being the persons really punished. Dr. Kerr concluded by submitting the two following proposals:

1. In all criminal trials in which the alleged criminal act has been committed by the accused when under the influence of liquor or has been committed by an inebriate, there should be an investigation into the previous medical history of the prisoner. There should also be an inquiry into the family history, so as to elucidate the heredity with special reference to inebriety, insanity, and other neurotic affections, syphilis, and gout. This twofold inquiry should be entrusted either to a medical expert, or to a mixed committee composed of a legal and medical expert acting conjointly. The object of this investigation is to ascertain how far the accused has been cognisant of his alleged criminal offence, as to whether he was competent to discern its consequences, and as to whether, if so cognisant and so competent, he was able to resist the criminal impulse. Such an expert inquiry should be provided for the accused, whatever their circumstances, as a judicial provision to ensure a fair and just trial. 2. The appointment of a mixed commission of judges, counsel, solicitors, and medical experts for the consideration of the question of dealing with inebriates who have been convicted of a criminal offence. This inquiry should have special reference to the best procedure to be pursued: whether (1) if penal, by cumulative punishment or otherwise; or (2) if curative, by medical treatment for a diseased condition, with due provisions for classification, occupation, hygienic measures, and elevating influences.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Friday, April 10th, 1891.

H. E. Armstrong, M.R.C.S., President, in the Chair.

Infectious Diseases Notification Act.—The evening was devoted to the discussion of questions connected with the working of the Infectious Diseases Notification Act. The discussion, in which several present or past officers of the Asylums Board took part, brought out clearly that no new powers were conferred by the Act, compulsory removal being effected only by a justice's order, under Section 124 of the Public Notification Act, 1875; that admission to such hospitals did not pauperise, even though the Board should forego payment; that no patient was admitted without a medical certificate, except in the case of children brought by their parents, when the medical officer of the hospital would give the certificate; that well-to-do patients were invited to pay; and that though occasionally patients were brought in in a moribund condition the medical attendant could certify that the patient was not in a fit state for removal and that the hospital nurses who accompanied the ambulance had strict orders to call in a medical man if it appeared that the removal might endanger the patient's life.—Messrs. Bernays, Whittaker, and Lovett opposed the expediency of including measles among the diseases to be notified on the grounds that many cases were not attended by medical men, the absence of hospital provision, and the prejudice which such a course would create against the Act. Other members urged that the grave sequelæ of measles among the poor justified the admission of severe cases to hospitals.—The President said that the absolute mortality from measles far exceeded that from any other infectious diseases. The dual system fully met the alleged difficulty arising from the general absence of medical attendance.—Drs. Thresh and Reid and Mr. Bernays, among others, thought that the notification of erysipelas was needless, the cases reported being few, and of these most were probably merely erythema.—Dr. Gibbon and Dr. Willoughby took an opposite view. The expediency of rendering the adoption of the Act compulsory on all sanitary authorities was affirmed unanimously.

University of Vienna.—The teaching staff of the Medical Faculty of the University includes at the present time 22 ordinary and 35 extraordinary professors, 60 *Docentes*, and 46 assistants. The number of medical students last winter was 3,242, the total number in all faculties having been 6,220.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Pathological and Clinical Section.

Friday, March 20th, 1891.

Priestley Smith, M.R.C.S., in the Chair.

Further Notes of a Case of Cancer of the Rectum.—Mr. F. Marsh exhibited a man, aged 31, with symptoms indicating secondary carcinomatous growth in the lungs, and occurring nearly two years after excision of the lower half of the rectum for adenoid carcinoma. The case was of interest, in that it was the first recorded [1] in which the method of operative treatment of cancer of the rectum, advocated by Mr. Marsh, was carried out. The method consisted in the performance of a preliminary iliac colotomy by complete division of the bowel and closure of the opening into the lower segment, followed after a short interval (seven to twenty-one days) according to the condition of the patient, by a proctectomy, the perineal wound being allowed to cicatrise. In this case the perineal wound had been absolutely closed for eighteen months, and during that time the man had continuously acted as the driver of a hansom cab. About November, 1890, twenty months after the proctectomy, he began occasionally to spit up a little jelly-like blood, and towards the end of December, when running, two or three mouthfuls came up. From that time until his admission into hospital, on January 14th, 1891, he had one or two attacks of hæmoptysis daily. Stooping down was often sufficient to bring one on. He had no pain, very little cough, and no sickness. Since admission the amount and character of the sputum had varied considerably: the first week or two some ounces of dark red-stained sputum, occasionally almost pure blood, were daily expectorated; then for a few weeks there was hardly a trace of blood; and again there had been, for the last few weeks, a return of the hæmoptysis, the quantity and colour varying from day to day. No bacilli had been discovered. The temperature had generally been normal. The patient felt fairly well, but rather weak, and the last few weeks had regained 3½ pounds of 7 pounds previous loss of weight. There was no sign of recurrence locally, nor in the adjacent lymphatic glands, nor in the liver. The only physical signs present were dulness and slight feebleness of breath sounds over the base of the right lung, reaching to 1 inch above the nipple line, and apparently extending, for on admission the area of dulness did not reach above the level of the nipple line. Dr. Foxwell, who had examined the chest on one or two occasions, was of opinion that although the physical signs were somewhat indefinite, yet, viewed with the history, they rendered the presence of a secondary malignant growth extremely probable. The patient would be kept under observation, and the progress and result of these symptoms communicated to a future meeting of the section.

Post-manubrial Tumour.—Dr. A. Foxwell exhibited a boy, aged 16, who had been sent to him at the Queen's Hospital as a case of goitre with pressure symptoms. On examination it was found that the apparent goitre was due to great hypertrophy of both sterno-mastoids, resulting from extreme difficulty of inspiration. This difficulty evidently arose from a post-manubrial tumour pressing on the bifurcation of the trachea. The boy had been in hospital three weeks, and had for ten days been taking small doses of iodide of potassium, when he developed a sharp attack of pleuro-pneumonia at the right base. On recovering from this, the tumour rapidly dwindled to less than half its largest size, the dyspnœa vanished, and at the present time the boy experienced no shortness of breath, except when he attempted to run. The tumour was probably a mass of enlarged glands.

Tuberculous Cranial Necrosis.—Mr. H. G. Barling showed a young man with tuberculous periostitis of the frontal bone, causing necrosis, and tuberculous periostitis of ribs. The latter condition had existed for several years, and the head mischief for about eighteen months. There was a circular patch of necrosis the size of a shilling, involving both tables of the frontal bone, and exposing the dura mater, which pulsated freely in the bottom of the opening, and from the margin of the opening small scales of bone occasionally separated. All round this the skin of the forehead was undermined over an area 3 inches in diameter, into which numerous sinuses opened. There was a suppurating gland over the right parotid region, and some others in the neck. The patient had sharp general and local reaction after injection of 1 milligramme of tuberculin, and the lesion improved with further injections. Antisyphilitic treatment had not caused improvement; indeed, the mischief had extended under its use. The patient had a scar on the penis, which might have been caused by a chancre, and of which he gave a very suspicious history.

Exhibits.—Dr. G. F. Crooke showed microscopical preparations of Lupus, also sections of Lung from patients who had been treated by Koch's lymph.—Dr. Robinson showed Segmented Rubber Plates and Raw Hide Plates for use in Intestinal Anastomosis.

Post-diastolic Murmur of Mitral Stenosis.—Dr. T. Stacey Wilson read a paper on the so-called "post-diastolic" murmur of mitral stenosis in which he drew attention to the special points by which it was distinguishable from the presystolic (that is, auricular systolic) murmur. He also brought forward arguments in favour of the "diastolic" mitral murmur being due to a *vis a fronte* as suggested by Dr. Lockhart Gibson, and not to a *vis a tergo* as was usually stated. He demonstrated the presence of this murmur in five patients, most of whom were in a satisfactory state as regards their general health, and were following their usual employment. In the case of one of these it was easy to demonstrate the interesting fact that an apparent reduplication of the second sound, audible only at the apex, was in reality a normal second sound followed by a short, somewhat musical diastolic mitral murmur, and that there was in all probability no real reduplication at all.

Koch's Treatment of Tuberculosis.—Dr. Crooke showed microscopical preparations from lupus nodules excised by Dr. Schimmelbusch, in Professor von Bergmann's surgical clinic in Berlin, at various periods of the treatment by Koch's tuberculin. The appearances have already been fully described by Dr. Schimmelbusch in the *Deutsch. med. Wochenschrift*, No. 6, 1891. In the nodules excised in the early stages of the treatment, during the height of the local reaction following the injection, the changes noted were simply those of an acute inflammatory process; but there were no evidences of a "coagulation necrosis," such as Koch had described in his experimental investigations. Sections of lung from two cases of advanced phthisis treated by injections of the lymph were also shown. In the one case death ensued two days after the third injection of 0.003 g. Around caseous foci there was an intense inflammatory zone of leucocytic infiltration, both into the alveoli and also in the walls. Dr. Crooke, however, remarked that he had observed similar appearances in cases of acute pneumonic phthisis long previous to Koch's discovery. In the second case death occurred five days after the fourth injection of 0.004 g. Here there were unmistakable evidences of coagulative necrotic changes in progress. Hyaline changes were seen in the walls of the air vesicles, and in the small branches of the pulmonary artery. The alveoli were filled with an exudation consisting of granular material, leucocytes, desquamated epithelial cells, and fibrin, the meshwork of which was remarkably coarse and prominent. The sections were swarming with tubercle bacilli, evidently in a condition of active vitality, for they showed none of the alterations described as indicating degenerative changes. Dr. Crooke also showed sections of lung from a case of acute miliary tuberculosis that occurred in a patient the subject of old standing mitral stenosis. The primary focus was found in caseating and calcareous bronchial glands, one of which had ulcerated into a branch of the pulmonary artery. The lesions, though disseminated in both lungs, were characterised by their extreme minuteness, so that on the *post-mortem* examination table they almost escaped recognition, and were only identified by a microscopic examination of fresh sections made at the time. Histologically the lesions were distinctly pneumonic in type, miliary catarrhal pneumonia undergoing rapid central necrosis, and no trace of a giant-celled reticular structure was anywhere visible in them. Tubercle bacilli were pretty numerous in all, and some were found in the caseous bronchial glands. The points of interest were: (1) the unusual coincidence of miliary tuberculosis with heart disease; (2) the acute and rapid course of the disease, to-

[1] British Medical Journal, 1889, vol. i, p. 893; *ibid*, 1889, vol. ii, p. 803.

gether with the naked eye and histological characters of the lesions, representing the earliest stages of their development; (3) lastly, the extreme latency of the tuberculous disease. This seemed to have an important bearing upon the new method of treatment in those cases that presented neither external nor internal signs of tuberculous disease, and yet exhibited a general reaction after injections of the lymph. It certainly suggested the utility and practical bearing of information to be obtained from a search through *post-mortem* records for similar cases of latent tuberculous disease. This patient was admitted in a moribund condition and died in two hours, so that no satisfactory physical diagnosis was possible. Had she come under notice a year previously with her mitral stenosis, who would have ever thought of a latent tuberculosis?

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, APRIL 1ST, 1891.

THOMAS JONES, M.B., B.S., F.R.C.S., President, in the Chair.

Cerebral Abscess.—Mr. SOUTHAM showed a case of trephining for abscess in the anterior lobe of the brain following a punctured fracture of the frontal bone. On the fifth day after the operation there was a copious discharge of cerebro-spinal fluid from the wound; this appeared to come from the lateral ventricle, owing to the formation of a communication between it and the abscess cavity. After continuing for a week, the discharge of fluid ceased and the wound afterwards healed, the patient making a complete recovery.

Acute Lymphosarcomatosis (*Acute Hodgkin's Disease*).—Dr. DRESCHFELD related the following case: A man, aged 23, was admitted into the Manchester Infirmary on February 19th, 1891, complaining of great weakness, cough, and dyspnœa. He had always enjoyed good health, being temperate and never having had syphilis. In the beginning of 1891 he began to be troubled with a cough, but went on with his work till January 23rd, when he had a rigor, followed by pain in the right side of the chest. He then took to his bed, but getting weaker, he sought admission into the infirmary. On admission, he was found intensely anæmic; the examination of the chest showed some dulness over the upper part of the sternum, extending to the second and third intercostal space on the right side; there was dulness of the left side of the thorax behind, extending to the angle of the scapula, with diminished breathing and diminution of fremitus; localised dulness in the interscapular region on the right side, with increased fremitus and crepitations; there was some mucopurulent expectoration. The pulse was 110, small, and very compressible; the liver was found slightly enlarged, likewise the spleen; the superficial glands in the neck, axilla, and groin showed no enlargement; both retinæ showed extensive hæmorrhages; otherwise the nervous system showed nothing abnormal. The temperature was 100° F.; the skin dry; the body fairly well nourished. The examination of the blood showed a marked increase of leucocytes—1 to about 30 red blood corpuscles; most of the leucocytes were very small, mononuclear, the nucleus finely granular, the granules not staining well with eosin. The red blood corpuscles showed numerous microcytes and poikilocytes. The urine had a specific gravity of 1020; it was very pale, contained a large sediment of urates, which, from the absence of blood-colouring matter, appeared only very slightly tinged; no urobilin. The clinical diagnosis was intrathoracic tumour of the nature of lymphosarcoma, effusion in the left pleura, pneumonia of right middle lobe, hyperplasia of spleen and liver with secondary deposits, acute leucocytosis. Arsenic was administered, but the patient became worse, the breathing becoming quick and laboured, and he died on February 23rd. The *post-mortem* examination showed a growth of firm consistency, but containing in its interior a few cysts, in the anterior mediastinum localised pneumonia of the right lung; the left pleura contained about a pint of clear serum. The liver was enlarged, the spleen weighed 16 ounces; to the naked eye the spleen and liver showed no deposits, but in the hilum of the liver several large soft glands were seen; the retroperitoneal and mesenteric glands were found considerably enlarged; both kidneys contained numerous white masses of varying size. Microscopic examination of the mediastinal tumour showed it to consist of small mononuclear round cells with adenoid tissue and firm fibrous tissue: the liver contained small deposits of round cells round the portal canals; the growths in the kidney consisted of similar round mononuclear cells. Numerous small thick bacilli were found in the kidney, filling capillaries and small vessels, and also in and around the capsules of the glomeruli. These bacilli stained readily with Gram's method, and differed therefore from those described by Kelsch and Vaillard in a case called by them acute leucothymalia.[1] The case was chiefly interesting on account of the acute course which the disease ran and the large increase of leucocytes in the blood, which had the same character and appearance as the cells in the lymphosarcomata as if there had been a sudden flooding of the blood with these cells. Micro-organisms had now been found by several observers in Hodgkin's disease, but their exact relation to the disease had yet to be made out.

Papilloma of Bladder.—Mr. W. WHITEHEAD showed three specimens of papilloma he had recently removed from three male patients. He had selected them from a considerable number on account of their illustrating in a marked degree some of the more important symptoms in bladder growths. Amongst other features they demonstrated the ordinary fact that the closer a growth was in proximity to the prostate, the greater the pain usually experienced—that the size of the tumour bore no relationship to the frequency or the amount of hæmorrhage, or to the length of time symptoms had been observed.

Paper.—Dr. DIXON MANN read a paper on the Elimination of Lead in Cases of Chronic Lead Poisoning.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, MARCH 18TH, 1891.

M. A. MESSITER, M.R.C.S., President, in the Chair.

Chorea with Arsenical Pigmentation.—Dr. SUCKLING showed a woman the subject of pigmentation caused by arsenic taken internally for chorea. The flexion of elbows, the axillæ, the front of the chest, the back, around the eyes, areolæ of breasts were all pigmented. The abdomen was much pigmented. There was no staining of the mucous membranes or conjunctivæ. She had pigmentation in a previous attack of chorea on taking arsenic. She was now taking liq. arsenicalis ♏iij, with iron.

Healed Fæcal Fistula after Operation for Perityphlitis.—Mr. W. J. CLARKE read this case. A girl, aged 13, had always had good health until three years ago, when she was confined to bed for a week with pain in the right iliac region. She remained well until a year ago when she had a similar attack, lasting 10 days; since that time she had suffered from occasional pain in the right iliac region. No history of constipation. On November 14th, 1890 (a week after the commencement of the attack) she came under the care of Dr. Ellis and Mr. Clarke. She then had considerable swelling in the right iliac and lumbar region, which was very tender and the skin over it was very red and hot. Temperature 103° F., pulse 140, respirations 36. Tongue coated, and urine normal. Slight cough, but no physical signs detected in the chest. Next morning Dr. Ellis made an incision extending from a point one inch to the inner side of the right anterior superior spine of the ilium downwards and inwards for three inches, the muscles were slit up, and then a distinctly fluctuating swelling could be felt; an incision was made into this, and about one ounce of non-odorous pus evacuated. The abscess cavity was irrigated out with warm carbolised water, a large drainage tube inserted, and the rest of the wound sutured. A dressing of Gamgee wool was applied. On the 16th the discharge from the wound had a fæcal odour, so the sutures were removed and the wound ordered to be irrigated twice a day; dressed with tow. There were now signs of double apex pneumonia, and the expectoration was almost pure blood. On the following day the condition was very critical. Small pellets of hard fæces were found on dressing. During the next five days fæces discharged constantly from the wound, but the general condition continued to improve, owing to subsidence of the pneumonia. Temperature fluctuated between 101° and 102°. By the end of the fourth week the escape of fæces had entirely ceased, and the discharge was perfectly inodorous. The wound was now rapidly granulating. There was no tenderness on pressure around

[1] See SUPPLEMENT to BRITISH MEDICAL JOURNAL, February 28th, p. 72.

the wound. From this time the patient continued to do well; the wound healed completely, and at the date of report there was not the slightest tenderness on pressure.

Unilateral Laryngectomy.—Mr. CHAVASSE showed a boy, aged 5, upon whom, two years before, he had performed unilateral (right) laryngectomy for stenosis, resulting from inflammation and repeated intubation, which rendered the patient completely dumb. The boy, who wore a modification of Gussenbauer's apparatus, could speak in a hoarse whisper, but, with a phonal reed, the voice was distinct and audible for some distance.

Case.—Mr. E. WOOD WHITE showed a case of Entropion, treated by transplantation of mucous membrane from the mouth. He considered it the most satisfactory way of dealing with these cases.

Specimens.—Dr. MALINS showed the following specimens: (1) Dermoid Tumour of Ovary. (2) Fibroid from a Case of Hysterectomy.

Papers.—Dr. EDGAR UNDERHILL read notes of a case of Brow Presentation in a Contracted Pelvis, where he had successfully performed Porro's operation.—Mr. TAYLOR read a paper on Uterine Displacements.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THURSDAY, MARCH 12TH, 1891.

W. DALE JAMES, M.R.C.S., President, in the Chair.

Cases.—Mr. SNELL showed a child, aged 2, with well marked Molluscum Contagiosum. Large nodules were situated on the left upper eyelid, and smaller ones on the forehead and cheek. The duration was twelve months. The mother was reported as having "spots" on her legs at the time of the birth of the child, but their character was uncertain. Mr. Snell remarked on the opinion as to the contagiousness of this affection, and mentioned Haab's successful experiment in inoculating his forearm with the freshly removed contents of a nodule. Mr. Snell also introduced a compositor, aged 21, who in October 1890 had been the subject of Nystagmus. The onset was somewhat sudden, and the oscillations were up and down, and of a jerky character. Mr. Snell was inclined to associate the nystagmus with the patient's employment. Mr. Snell introduced a man, aged 27, who had been subject to sick headaches since the age of 9. For about the last 7 years he had also paralysis of the motor oculi on the left side. The attacks now occurred every two or three weeks, and the ocular palsy passed off only slightly in the intervals. Mr. Snell referred to two other cases: one a girl, aged 18, under observation five years ago, who reappeared at the end of three years and a half with another attack. The migraine had gone on in the interval, but there appeared to have been freedom from the eye trouble. The other case, a little girl, in whom the palsy commenced at 18 months, he had recorded in the *Transactions of the Ophthalmological Society* (1885). Mr. Snell discussed these cases, and, referring to the literature of the subject, said he thought that Charcot's suggestion to name these cases "ophthalmoplegic migraine" was worthy of adoption. Mr. JAMES and Mr. C. ATKIN made remarks on the cases.—Mr. R. J. PYE-SMITH showed a boy in whom a large cavity, resulting from old standing Empyema, had closed after the resection of portions of the fifth, sixth and seventh ribs. Mr. Pye Smith also showed a young man, from whose right frontal sinus he had removed a number of Small Mucous Polypi. Fragments of the polypi removed were shown. Mr. SNELL and Dr. KEELING made some observations on the cases.—Dr. BURGESS showed a man, aged 35, with a scar-like patch, 3 by 1½ inches, of circumscribed Scleroderma (Addison's keloid) on the back of the neck. When first noticed, sixteen months before, it was a white spot about the size of a sixpence. Itching and burning had been complained of. The induration was then subsiding. Dr. Burgess also showed a case of Unilateral Nystagmus in a man who had recovered from an anomalous attack of hemiplegia. The oscillations, which were horizontal, and about 180 per minute, ceased when the eyeball was moved voluntarily. There was optic atrophy in the affected eye, and a dark body on the retina, which Mr. Snell recognised as a piece of metal, having seen the case five years before, soon after it had been driven into the eye. Mr. JAMES, Mr. SNELL, and Dr. SIDNEY ROBERTS made remarks on these cases.—Dr. GWYNNE showed a girl, aged 12, from whom he had removed half the lower jaw on the left side for a large Sarcomatous Growth, which had been noticed six months previously and was growing rapidly. On the fourth day after the operation the stitches were removed and the wound had practically healed. The tumour, after removal, measured 3½ inches in length and 7 inches in circumference. It had apparently grown from the medullary cavity and pressed out the bone on all sides. The microscope revealed a large number of round cells with some connective tissue, and here and there groups of large giant cells. The tumour was most probably a myeloid sarcoma. Dr. ARTHUR HALL and Mr. C. ATKIN made some observations.—Microscopic sections were shown.

Sarcoma.—Mr. C. ATKIN read notes of some cases of sarcoma, and pleaded for earlier exploratory incisions in doubtful swellings. Operation before the state of "fungus hæmatodes" had been arrived at was strongly advocated, as recurrence was all but certain under such conditions. In one case the growth seemed to spring from the cutaneo-phalangeal ligament of Cleland, which passed from the last phalanx of the finger to the skin. In another case an apparently innocent sebaceous tumour had taken on sarcomatous development. This was removed from the axilla ten months ago, and there had been no recurrence, though the infiltration was of the round celled character. In a third case a mixed sarcoma had grown from the front of the shin of a young married woman. It had originated in a nævoid mark. In all three cases there was a family history of "cancer," but, from all accounts, more of the "epithelioid" type, suggesting a connection, if not an evolution, amongst growths of a malignant nature. Microscopic sections of the growths were shown.—Dr. BURGESS and Mr. ARTHUR JACKSON made remarks.

Specimen.—Mr. H. T. WIGHTMAN showed (for Mr. G. H. SHAW) an Eye which had been removed in consequence of an injury received from a revolver bullet. The bullet entered under the left malar bone, and was found lying beneath the upper eyelid of the right eye, the left orbit having sustained no damage.

THURSDAY, MARCH 26TH, 1891.

W. DALE JAMES, M.R.C.S., President, in the Chair.

Optic Nerve Atrophy after Injury to the Head and Spine.—Mr. SNELL introduced a young man who, two weeks before Christmas, 1890, had been pressed down in the shaft of a coal pit by a descending cage. There were some symptoms pointing to fracture of the skull. Sight was lost immediately. There was now optic nerve atrophy. Mr. Snell remarked on Holder's observations on the involvement of the orbit and optic canal in fractures of the base.

Specimens.—Mr. W. F. FAVELL showed the Bladder, Kidneys, and Ureters from a man, aged 38, whom he had seen in consultation with Mr. Thorne. The patient had persistent hæmaturia, for which a specialist had ordered injections, which were followed by acute cystitis. He suffered great pain, and catheterisation was necessary on account of the obstruction caused by clots and mucus in the urethra. He died of exhaustion, and, on *post-mortem* examination, cancerous infiltration of the coats of the bladder was discovered, with a growth in the right kidney, and dilated ureters and pelves. No calculus was found, and no growth elsewhere. Mr. A. JACKSON and Mr. THORNE made remarks.—Dr. PORTER showed (for Mr. A. BOYNTON LEE) a Horseshoe Kidney, discovered in a subject in the dissecting room.—Dr. F. J. GREEN exhibited microscopic specimens of Sputa containing Tubercle Bacilli from a patient undergoing the Koch treatment. One specimen prepared before injection with tuberculin showed numerous bacilli, beaded in appearance. Two other preparations contained large colonies of apparently degenerated bacilli, some short and thick, some attenuated, others segmented. A few appeared as if teased out into their fibres, while in some places dense patches consisting of fragments of bacilli were to be seen. He stated that three weeks from the commencement of treatment the sputa were free from bacilli for two days. Blood was mixed with the sputa from which the specimens containing degenerate bacilli were prepared. The presence of blood and dying bacilli at the same time pointed, in his opinion, to the breaking down of the walls and evacuation of the caseous contents from old cavities.—Dr. H. RHODES showed some specimens from a woman, aged

34, who had been under Dr. Dyson's care at the infirmary for Carcinoma Uteri. The pelvic viscera were matted together and infiltrated with cancer, the rectum adherent to the uterus and considerably obstructed; the cervix uteri had entirely disappeared, and the uterine cavity was opened into posteriorly; both ovaries were greatly enlarged and cancerous; the liver weighed 48 ounces. In front of the right lobe was a large spherical nodule, nearly 3 inches in diameter; it was adherent below to the transverse colon. In the posterior part of the right lobe was a much larger nodule, adherent above to the diaphragm. The heart weighed only 4¾ ounces. In the anterior wall of the right ventricle was a cancerous nodule, about the size of a walnut, and coming to the surface inside the cavity of the ventricle. The valves were normal; the kidneys were small and pale, pelvis much dilated at the expense of the papillary layer, which was atrophied; ureters much dilated, and distended with urine; the left suprarenal capsule was enlarged but not cancerous. Mr. A. Jackson, Dr. Keeling, Dr. Dyson, and Mr. W. F. Favell joined in the discussion.

Surgical Experiences.—Mr. W. F. Favell read a paper on A Few Surgical Experiences and Warnings. While freely acknowledging the great results from improved surgical procedure in the last twenty or thirty years, he defended the principle of conservatism in surgery. In the case of the removal of malignant growths he had a great dislike of "incomplete operations," and he laid it down as a general rule that unless they could be wholly removed they were better left alone. At the same time there was the danger of going to the opposite extreme in some cases, and by the severity and magnitude of an operation risking life without the fair prospect of good ultimate results in so-called "successful cases." Mr. Mitchell Banks had recommended that in all cases of removal of malignant tumour from the breast, the axillary glands should be cleared out at the same time, whether diseased or not. This, which was a large operation, was not without immediate danger to life, and Mr. Favell doubted the alleged greatly diminished probability of the return of the disease after its performance. He had grave doubts as to the wisdom of meddling with an axilla in which there was no evidence of cancerous implication, and he thought that the irritation set up in the cellular tissue by the necessary manipulative measures where the knife was contra-indicated would be very likely to favour a local return of malignant growth. Mr. Favell then proceeded to speak of the danger of catheterisation in certain cases of chronic retention in elderly people with enlarged prostates, quoting Brodie's caution as to the necessity for care, and advising the partial removal of the contents of the bladder at first from time to time. Mr. Favell mentioned a case where he had seen adynamic symptoms followed by a fatal result in three or four weeks after the first introduction of a catheter; on the other hand, he had known old people live in comparative comfort for months and years with a condition of incontinence from overflow, where catheterisation had not been resorted to.—Mr. James, Dr. Hunt, Dr. Dyson, Mr. C. Atkin, Dr. S. Matthews, Mr. A. Jackson, and Dr. G. Thomson joined in the discussion.

Thursday, April 9th, 1891.

W. Dale James, M.R.C.S., President, in the Chair.

Tumour of Pons.—Dr. W. S. Porter showed a brain from a patient who had been under his care at the infirmary with cross paralysis. There was a small tumour in the left half of the pons, the nature of which had not then been investigated. The patient, a man, aged 40, was admitted with right hemiplegia, paralysis of the left side of the face, and internal strabismus of the left eye. There had been no anæsthesia, no contraction of the pupils, and no affection of the fifth nerve. The knee jerks were exaggerated on both sides, especially on the right, and ankle clonus was very marked in the right foot. The speech was slurred, and latterly the tongue inclined slightly to the right on protrusion. There was a family history of insanity, cancer, and tubercle. No syphilitic history was obtained. A lesion of the pons was diagnosed. The patient died comatose seven weeks after admission, and about four months from the commencement of symptoms.

Mammary Tumour.—Dr. J. W. Martin related a case of mammary tumour which he had recently removed. He first saw the case three years before, when there was retraction of the nipple and some puckering of the skin. The patient was aged 50, and delay was then advised by his colleagues. When she presented herself in February last, there was a well-marked tumour, and the breast was removed. It was apparently scirrhous, but there was no involvement of the glands or loss of flesh.

Fracture of the Malar Bone and Injury to Eyeball.—Mr. Snell introduced a man who had sustained a blow on the face some months before with a shovel. The malar margin of the orbit was driven in, and the anterior chamber of the eye was filled with blood. When the hæmorrhage had cleared away, it was seen that the lens was cataractous and dislocated into the vitreous, the greater part of the iris being also carried away. The orbital margin was irregular at its outer part in consequence of the fracture.

Double Papillitis with Palsy of External Rectus.—Mr. Snell also showed a young woman, aged 21, a file cutter, in whom symptoms of headache and sickness dated back some months, and in whom there was palsy of the external rectus of two weeks' duration. There was well-marked papillitis in both eyes, but vision was normal. Mr. Snell discussed the connection of plumbism with the condition found in the patient. In her trade she had been exposed to the deleterious influence of lead, and though there was an absence of some symptoms, a blue line on the gums was evident. Much in her case suggested migraine, and she came from a neurotic family. —Dr. White and Dr. Burgess made remarks on the case.

Gliomatous Growths in the Eye.—Mr. H. T. Wightman showed sections of three eyes mounted in glycerine jelly, each containing a glioma growing from the choroid. In one case, that of a child, aged 2, in which the tumour had been noticed only about a month or so before it was removed, a very long section of the optic nerve was made, the nerve being divided above half an inch from the globe. A microscopic section of the nerve showed a large number of scattered small round cells very like the cells found in the tumour.

Doubtful Skin Eruption.—Dr. Sidney Roberts showed a case of skin eruption in which the diagnosis lay between a tuberculous and a syphilitic origin. He intended trying the effect of an injection of tuberculin with a view to diagnosis.—Mr. A. Jackson, Mr. Snell, and Dr. White made remarks.

Circumcision.—Mr. Arthur Jackson read a short paper, entitled A Few Notes on Foreskins, calling attention to the ancient origin of the operation of circumcision, its sanitary object, and the evil results of its being given up. He attributed the frequency of hip-joint disease, of affections of the spinal cord, of hernia, and of epilepsy in young subjects to the neglect of the condition of the prepuce and adhesions of the labia minora in female children, and urged the more frequent attention to these parts in all long-continued diseases. —Mr. James, Dr. Keeling, Dr. White, Mr. C. Atkin, and Mr. B. Walker joined in the discussion which followed.

Obstetric Notes.—Dr. Martin read a paper, entitled Obstetric Notes and Queries, in which he discussed, in the first place, the question of early manipulative interference in cases of lingering abortion; next the question of the early application of the forceps in cases of labour in which there was full dilatation of the os, strong labour pains, and no progress for several hours; finally, the question as to the length of time the patient ought to be kept in the recumbent position after delivery. With regard to the first question, he was of opinion that there existed too great a tendency in the present day to interfere, and that such interference ought not to be undertaken too lightly. He believed that manipulative interference of any kind was attended by possibilities of no small danger to the patient, and that the risks should be thoroughly considered and explained to the patient's relatives before anything was done. The early application of the forceps in the second condition, and under the circumstances described, he regarded as a measure for conserving the patient's strength and securing a favourable convalescence. In reference to the third point raised, he believed that prolonged rest in the recumbent posture favoured complete involution, and he advocated a period of at least three weeks in that position, and considerable caution for a further period of ten days or two weeks. Mr. B. Walker, Dr. S. Matthews, Dr. White, Mr. R. Favell, and Dr. Keeling joined in the discussion.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, APRIL 3RD, 1891.

T. CHURTON, M.D., President, in the Chair.

Poisoning by Nicotine.—Mr. W. R. BATES was called to a man in a public house, comatose and much collapsed. He recovered after an injection of ether. He had very little alcohol, but had smoked in two hours two twopenny and six penny cigars.

Croup Treated by Nitrate of Silver.—Mr. BATES also related a case of croup. The child had a metallic cough, great dyspnœa, and a temperature of 103.3°. After giving ipecacuanha and antimony without relief he asked the assistance of Mr. G. H. Rickards, who lived near, who applied a solution of silver nitrate, 18 grains to the ounce, by means of a piece of lint wrapped round a wire, to the throat so far as it could be reached, with very speedy relief. He thought the case was one of catarrhal laryngitis, as there was no albumen in the urine, and he had seen no membrane.—Mr. RICKARDS had applied a solution of silver nitrate in seven cases of croup with very rapid relief. In one case the patient immediately coughed up a cast of the trachea of tough membranous character.—Dr. JACOB remarked on the rarity of membranous laryngitis in Leeds. He said silver nitrate had at one time been very largely used, but had fallen into disrepute; and until an exact diagnosis was made between simple catarrh of the larynx with spasm and true croupous inflammation, it was impossible to estimate the value of any remedy.—Dr. EDDISON related cases where unexpected recovery from croup took place. In one instance this occurred after a roasted mouse had been administered in obedience to an ancient tradition. He had seen nitrate of silver much used, but without effect, except as producing irritation and cough which occasionally dislodged membrane. It was very difficult to get the ordinary mop used on these occasions into a child's trachea.

Eustachian Catheterisation in Disease of Middle Ear.—Dr. ADOLF BRONNER read a paper on this subject. The catheter should be used more frequently, but only in well selected cases. The instrument should be of small size, of metal, and thoroughly aseptic. The treatment was most successful in cases of chronic non-suppurative catarrh. In dry catarrh (sclerosis) it often increased the deafness and produced tinnitus. The cocaine spray was first used before passing the catheter, and medication (for example, menthol, etc.) applied to the internal ear, by means of Lucae's modification of Politzer's bag. Too much reliance should not be placed on catheterism, but diseases of the throat and nose, if any existed, or any constitutional condition, for example, syphilis, should be treated.

Unusual Complications and Sequelæ of Enteric Fever.—Mr. E. H. PEARSON described four cases occurring in the Borough Fever Hospital. (1) The patient, after the usual symptoms, with rather severe hæmorrhage, and an intercurrent relapse, was seized, on the thirty-fourth day, with neuritis, affecting the outer and inner cords of the brachial plexus on one side. There was pain, hyperæsthesia followed by anæsthesia, weakness, and muscular atrophy. Murchison had described a case of paralysis of the arm, which he thought due to thrombosis. (2) After a protracted course and a severe relapse, with hæmorrhage, constipation, and a sausage-like tumour in the ilio-cæcal region were observed. The tumour, which developed fluctuation, was opened by Mr. Littlewood, with the discharge of some fæcal smelling pus. He was doubtful whether this was due to a perforation, caused by a typhoid ulcer, or by impacted fæcal accumulation. (3) This was admitted as typhus, owing to a petechial eruption. There was an extensive purpuric eruption, hæmorrhage from the bowels, and death. The necropsy revealed a very extensive ulceration of the bowel. (4) In this case there were extensive hæmorrhages from the nose, bowel, lung, and kidney, followed, on the forty-first day, by a purpuric eruption. Food had to be given by the rectum, but the patient improved on the fiftieth day, and was discharged well after eight weeks in hospital.—The PRESIDENT related a case of paralysis after enteric fever, due, not to neuritis, but to a clot in the Rolandic area of the brain. He had seen melancholia following enteric fever very satisfactorily treated by hypophosphites given with food.—Dr. CAMERON said the second case reminded him of one in which the symptoms were very indefinite, but, after three weeks, the patient, who seemed to have almost recovered, had a discharge of pus from the umbilicus. This became of marked yellow colour, and ultimately the patient died. She was found to have had a well-marked typhoid attack a year before, and this abscess seemed to be the result of an old unhealed ulcer.—Mr. LITTLEWOOD said the abscess he opened (in Case 2) contained pus of fæcal odour, but contained no fæcal matter. He thought an indirect osmotic communication had been set up by softening of the tissues between the bowel and the abscess cavity, without there being any definite opening. Perhaps there was an adhesive peritonitis, and thus softening and communicating with the abscess beneath the peritoneum, or, in case there was a mesocolon, a retrocæcal abscess burrowing through the layers of the abdominal wall.—Dr. GRIFFITH had noticed absence of patella jerk in the third week, remaining for some time without wasting of muscles. He thought the abscess more likely to have been caused by the perforation of an ulcer.—Dr. HELLIER, Mr. HICK, and Mr. BATES spoke on the difficulty of diagnosis of typhoid in an early stage.—Dr. TREVELYAN, under whose care the neuritis case now was, remarked on the rarity of the complication; the case was recovering well. Dr. Handford had recorded three cases in which the ulnar nerves were affected, but he thought this was due to long-continued flexion and pressure. The typhoid poison might act like alcohol or arsenic in producing neuritis.—Dr. BARRS had recorded a case of peripheral neuritis from septic poisoning. He thought it unlikely that the abscess was caused by perforation, owing to the great suddenness with which the latter generally took place.

Specimens.—The following specimens were shown:—Dr. KILNER CLARKE: Pyloric Tumour, removed fourteen months after gastro-enterostomy.—Mr. LITTLEWOOD: Rupture of Spleen and Stomach.—Dr. CHURTON: Vessels from a Case of Multiple Embolism.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, APRIL 3RD, 1891.

JOHN POLAND, F.R.C.S., President, in the Chair.

Case.—The PRESIDENT exhibited a lad with Deformity of the Leg and Foot, and Arrest of Growth of the Tibia following Separation of its Lower Epiphysis.

Graves's Disease.—Dr. HINGSTON FOX read a paper on Graves's disease, especially with reference to cardiac conditions. After speaking of the four cardinal symptoms—rapid heart, tremor, goitre, and exophthalmos, any one or two of which might be absent in an undeveloped case, he dwelt on the mental condition in severe cases. The emotional centres seemed to be in unstable equilibrium, disturbed by slight influences, a condition allied to hysteria, and to the effects of chronic alcoholism in women about the climacteric. Muscular weakness and impaired nutrition, with neuralgia and the well known eye symptoms, were noted. Severe gastric crises had attended one case, the patient nearly dying from the vomiting, diarrhœa, etc., which appeared to be the effects of "bowel hurry." Dr. Hunter Mackenzie's theory of the pathology of the disease was adopted, the symptoms being regarded as an expression of a permanent condition of the emotional nervous centres, set up in the first instance by terror. Darwin's graphic description of the effects of sudden fear upon animals was alluded to, the thyroid enlargement being the only important symptom of Graves's disease which was there unrepresented. The fright might have been sudden, or a repetition of small shocks. Instances were quoted in illustration of this. With regard to the heart, beyond a hæmic murmur and eventually dilatation, there was not usually any sign of disorder, except the rapid and irregular action. Some cases showed simply tachycardia, others mainly irregularity; in some the condition was continuous, in others paroxysmal. The graphic record of one severe case in a lady, aged 49, was shown extending over eight months. Here attacks of irregular and rapid heart action occurred at intervals of a few days or a week, and lasted twenty-four hours or so. For treatment Dr. Hingston Fox laid stress on (1) moral and hygienic care; (2) improvement of nutrition, much milk, cod-liver oil, iron; (3) belladonna in mild and early cases, iodides in later stages, pushed fearlessly to large doses, bromides in some cases; (4) locally, the weak continuous current.

following Dr. Sansom in persevering long with its use; it should be applied to the thyroid with a large plate; Leiter's cold coil also gave some promise; (5) for tracheal obstruction, tracheotomy, incision of capsule of tumour, or compression laterally in some cases, inhalation of chloroform; or, lastly, division of the isthmus offered the best hope of relief.—The paper was discussed by Dr. Moon, Dr. Cable, Dr. Horrocks, Dr. MacGavin, Dr. Fullerton, Mr. Jessett, and the President.

Cancer of Uterus.—Mr. F. B. Jessett read a paper on the surgical treatment of carcinoma uteri. After briefly describing the most usual site in which this disease was found, he described the treatment adopted by him in very advanced cases, by which he had been able considerably to alleviate the suffering of the patients, and relieve their symptoms. He next discussed the different forms of operation, condemning caustics as dangerous and unreliable. The actual cautery and galvanic *écraseur* were not devoid of danger. Supravaginal amputation of the cervix with scissors had, in his hands, proved the most reliable method of removing the disease when limited to the cervical canal, the mucous membrane of the vagina being unaffected. By this method he was able to cut away the interior of the uterus to its fundus. In those cases in which the disease commenced in the body of the uterus, he advocated vaginal hysterectomy, as long as the uterus was freely movable, and the vaginal mucous membrane unaffected.—Dr. MacGavin, Dr. Horrocks, and Dr. Moon took part in the discussion which followed.

COUNTY AND CITY OF CORK MEDICAL AND SURGICAL ASSOCIATION.

Wednesday, March 11th, 1891.

Jeremiah Cotter, M.D., President, in the Chair.

Tracheotomy in Diphtheria.—Dr. C. Y. Pearson read a paper on tracheotomy in laryngeal diphtheria, with a report of a case. The patient was a boy aged 4 years and 9 months. The result was in every respect successful. The diphtheritic nature of the case was proved by the subsequent occurrence of some paralysis, both of the laryngeal and palatal muscles, and also by diphtheria attacking a brother of the patient in the same house during the time of his illness. Dr. Pearson laid stress on the importance of performing the operation as soon as there were distinct symptoms of mechanical obstruction, namely, retraction of lower ribs, sternum, and trachea during inspiration, with marked diminution of respiratory murmur over the chest, and, previous to the onset of lividity and serous effusion into the air cells. He also referred to the relative merits of tracheotomy and intubation, and considered the latter should have a trial, first, in children under 3 years; secondly, where the hygienic surroundings were unsuitable for tracheotomy or where skilled attendants could not be obtained; thirdly, when the patients were unwilling to permit the cutting operation.—Dr. Ashley Cummins also read a paper on tracheotomy and intubation in croup. He discussed the relative merits of the two operations, indicating the conditions most suitable for one or other. He entered fully into statistics of recovery after both operations.—A discussion ensued in which several members took part.

REVIEWS AND NOTICES.

Hypnotism. By Dr. Albert Moll, of Berlin. Contemporary Science Series. London: Walter Scott. 1890.

It is, roughly speaking, true that it is only for a little more than a hundred years that mesmerism has been formally introduced to the world, and only during the last half century that, under the more impersonal name of hypnotism, it has been making good its claim to contain something that cannot be quite overlooked by the psychologist, the physiologist, or the physician. For though there are traces of hypnotism in some of the elder Oriental practices, and in the teachings of Paracelsus and Van Helmont, still it was only in 1779 that Dr. Antony Mesmer was beginning to establish an interest in the displays at his *baquet* in Paris; and in 1841 that Lafontaine, one of his followers, was showing to a very sensible Manchester surgeon, James Braid, some hypnotic phenomena which Braid was determined to prove true or false, and which he succeeded, in fact, in satisfying himself and others were accurate, and perhaps explicable on a theory of expectant attention. Dr. Esdaile startled the medical world of India a good deal by demonstrating to a medical committee in Calcutta in 1846, before the general use of chloroform or ether, that the hypnotic anæsthesia was something very different from the hysterical, and was deep enough in some cases to admit of major operations, such as lithotomy and amputation above the knee, being performed under it without the knowledge of the patient. Since then, after a somewhat chequered career, there has been much more respect paid to the matter in Europe, especially in France, where, after some brilliant essays by Broca in 1859, Azam in 1860, and Charles Richet in 1875, M. Charcot in 1878 undertook some experiments on a large scale among the hysterical patients at the Salpêtrière; and at Nancy in 1882, after the long experience of their townsman M. Liébeault since 1860, the professors of medicine, physiology, and law—MM. Bernheim, Beaunis, and Liégeois—took up the inquiries over a broader field of subjects than the hysterical alone. In Sweden and Italy, and to a less extent in the other Continental States, the practice spread in the sick room and hospital ward as well as in the physiological laboratory; and after the learned discourses of Heidenhain at Breslau, Münsterberg at Freiburg, and Preyer at Berlin, it has been established in various German centres.

From the pen of Dr. Moll, of Berlin, we got in 1889 what is perhaps the handiest textbook on the subject in most of its aspects—historical, physiological, legal, and medical—with the promise of a further book for the discussion of its more difficult psychological problems.

The second edition of this in 1890 has been well chosen by the Editor of the Contemporary Science series for translation. It has been well translated, and offers a careful and straightforward account of facts that are of growing interest and importance. It is founded on a broad basis of knowledge, with references to more than 600 authors, of whom at least 400 are contemporaries, who write from all parts of Europe and America. The French can give evidence of the largest amount of experience, both physiological and clinical, though the frequent successes in Sweden, Holland, and Italy show that very different types of character and temperament may be similarly affected. Dr. Moll is anxious, perhaps over-anxious, to deny that any hysteria or weakness of any kind in the physique of the subject leads up to his being more easily hypnotised. "Neither neurasthenia nor pallor, neither hysteria nor general feebleness of health, produces a disposition to hypnosis." At the same time, he hardly sufficiently recognises one point which a large survey of the results would seem to us to teach, namely, that given equal readiness of all men, learned and unlearned, cultivated and uncultivated, to submit themselves to hypnotic experiments, the less learned and less cultivated are on the whole the easier subjects, though this is a very rough generalisation with many exceptions. It seems, in fact, as if it were easier to take the guidance of the less complicated machines.

But it may well be that we are as yet too much on the fringe of a large and perplexed subject to venture on the broadest generalisations with profit. Dr. Moll keeps for the most part to very hard facts. He is too cautious to admit that commands in hypnotism may effect a visible organic change, though he does not attempt to explain in any other way some of the blisters claimed to have been produced by a vasomotor suggestion without drugs and without fraud; but he is very positive in insisting that it may bring about sleep and satisfactory rest in the pain and discomfort of serious organic disease, as the last nine years of clinical practice at Nancy have shown us abundantly, and the later years at Amsterdam and Stockholm as well, in acute and chronic cases, renal, cardiac, rheumatic, etc.; acting in them, at least in all the cases where it acts at all, as a sedative and refreshment without drawbacks. And that it has had this influence on 70 or 80 per cent. of the persons on whom he has tried it himself is also an important point in a large experience such as that of Dr. Moll in Berlin.

He agrees with Prizl, Auvard, Thomas and others that it may be used always without damage and sometimes with most satisfactory efficacy in avoiding the pains of childbirth. Dr.

Kingsbury, of Blackpool, has very recently[1] shown its complete success as an anæsthetic in the confinement of a girl of less than 15 years of age. Similar uses in the case of surgical operations have been known since the days of Récamier (1821) and Jules Cloquet (1829), and have been more frequent of late in small surgical operations (Baierlacher, Mesnet, Forel, Tillaux, etc.), and in dental surgery, as Elliotson showed in 1838, on the testimony of Sir C. Tomes, and many others since, including Dr. J. M. Bramwell last year at a large meeting of the profession at Leeds. But the use to which Dr. Moll attaches great importance, an importance, indeed, of which we naturally as yet do not know the limits for want of a sufficient experience, is the gaining, with the patient's consent, by post-hypnotic suggestion, of a control over some habits which the patient is himself anxious but no longer able to control—for example, drunkenness, morphinomania, etc. A few detailed accounts of such cases, for which Dr. Moll's textbook has no space, but which are to be found in the more recent works of Liébeault, Forel, Bernheim, von Schrenk-Notzing, and others are to be recommended to those who would pursue the subject further. Dr. Moll has said enough on this and the other possibilities of hypnotism to show good grounds of interest both for the critical physiologist and the practical physician clearly stated and temperately expressed. That the last word has not yet been said upon the matter he is very well aware.

Les Microbes de la Bouche. Par le Dr. Th. David, Directeur de l'École Dentaire, Chirurgien Dentiste des Hôpitaux de Paris. Précédé d'une Lettre-Préface de M. L. Pasteur. Avec 113 figures en noir et en couleurs dans le texte. Paris: Felix Alcan. 1890.

The practice of dental surgery, like every other branch of medicine and surgery, has been very considerably modified during the last few years by the facts brought to light by bacteriologists, but this is due rather to the influence exerted by the heads of the profession than to any very widely-diffused or accurate knowledge acquired by the rank and file. This can only be accounted for on the supposition that up to the present the literature on the subject of bacteria and antiseptics as applied to dentistry has been confined to isolated papers and discussions. More recently, however, several works have appeared from the pens of able workers in Germany and in France, and we have now before us a book on *Les Microbes de la Bouche*, by Dr. Th. David, Director of the Dental School in Paris, the study of which will place those who wish to understand the relation of micro-organisms to dental surgery in possession of most of the knowledge they require.

In the first chapter the author is occupied with the treatment of the general question, giving a sketch of the history, the classification, form, modes of reproduction, special functions and products, and the special methods of research. A list of the common non-pathogenic micro-organisms usually met with in the mouth is then given, and one is a little surprised to find that in this is included the bacterium termo, which we thought was by this time relegated to the "mixed cultivation" series. A description is then given of the pathogenic microbes that may be met with in the human saliva—specially the microbe associated with salivary septicæmia described by Pasteur; the pneumococcus or pneumobacillus of Friedländer; whilst the microbes associated with various suppurative processes are also described. A fourth chapter is devoted to the microbes associated with buccal and dental lesions in which micro-organisms are usually met with.

In this part of the book Dr. David has brought his work well up to date, including what has been done by Galippe and Vignal and Miller, and has given very full descriptions of certain organisms that are associated with alveolo-dental periostitis, and with dental caries. The relation of certain bacterial conditions to acute tonsillitis and to diphtheria are also pretty fully treated. The relation of all these points to dental practice can only be fully understood through a study of this or of some similar work. The use of antiseptic washes, the cleaning out, sterilisation, and filling of cavities, and the treatment of anginas, stomatitis, and gingivitis, are all mentioned, and in some instances moderately full indications are given for treatment; in others, however, the directions are too scanty. This latter feature is rather characteristic of the work. The descriptions are exquisitely clear and accurate so far as they go, but there appears to be a want of fulness and a lack of detail which is sometimes a little disappointing, as the reader feels that he would like to be carried equally pleasantly and as directly a little further than he is allowed to go in these pages. This, however, in itself is a compliment to the book, and we cannot but feel that Dr. David has supplied us with a work that will be read with great interest by those who have the care of the teeth of the community.

One point that he brings out, and which, of course, we should expect from a specialist, is, that thorough and periodic antiseptic washing of the mouth and naso-pharynx affords protection against many of the diseases that make this cavity a coign of vantage from which the alimentary and respiratory tracts may be attacked; the importance of antiseptic precautions being taken in all cases where the buccal mucous membrane is injured—intentionally or accidentally—is also very strongly insisted upon.

Another good feature of the book is that in it the author does not confine his attention to theoretical considerations, but deals very fully with all the practical steps to be taken in connection with the treatment of the diseases, the etiology of which he associates with the presence of micro-organisms. The book is well printed, and most of the illustrations, which are borrowed from the best sources—Miller, Vignal, Cornil and Babes, Biondi, and others—are admirably executed.

A Manual and Atlas of Medical Ophthalmoscopy. By W. R. Gowers, M.D., F.R.S. Third edition. Revised throughout with Numerous Additions, and Additional Illustrations. Edited with the assistance of Marcus Gunn, M.B., F.R.C.S. London: J. and A. Churchill. 1890.

We are glad Dr. Gowers has been induced to give the profession a new edition of his *Medical Ophthalmoscopy*. When the work first appeared it supplied a recognised want, and immediately became a medical classic. So thoroughly and so ably did it cover the ground, that no attempt has since been made to displace it, and it would have been a pity had it been allowed to become out of date. The work is so well known, not only in this country but throughout the medical world, that introductory remarks are almost out of place. We are, however, tempted to point out how medical ophthalmoscopy comes to occupy so important a position. The pre-ophthalmoscopic days are long passed away, and every cultivated physician uses the ophthalmoscope. An authoritative treatise on the subject, as a book of reference, becomes a necessity. Dr. Gowers's qualifications for the duty of preparing this were singularly complete. An accurate clinical observer and methodical note-taker, a sound pathologist and histologist, an accomplished artist, and one of the earliest medical workers at the subject, he had accumulated a storehouse of observations and original drawings from his own brush. Moreover, in power of lucid expression and just estimation of the work of others, Dr. Gowers has few equals. On the present occasion he has availed himself of the assistance of Mr. Marcus Gunn, whose position as ophthalmic surgeon to the National Hospital for the Paralysed and Epileptic renders him peculiarly fitted to act as Dr. Gowers's co-adjutor.

We are told, in the preface of the present edition, that the whole work has been subjected to a revision sufficiently thorough to involve additions and alterations in almost every page and in almost every paragraph. This we find to be the case, and the claim that it embodies whatever of value has been added to our knowledge since the appearance of the last edition is fully justified.

One or two alterations have been made in the arrangement of the book. The microscopic figures which in former editions were represented in photo-lithographic plates at the end of the work, have been reproduced as phototype blocks, and incorporated with the text. This is a convenience to the reader, and the engravings have not suffered materially by the transference. The new illustrations of the fundus in chorea and ulcerative endocarditis, also prepared by this pro-

[1] British Medical Journal, February 28th, 1891, p. 460.

cess, are very soft and effective. A second alteration is the omission of the fifty or more cases which appeared in the former edition. These, which Dr. Gowers considers have served their purpose, have been replaced by brief epitomes. This has the effect of reducing the size of the book, in spite of the numerous additions that have been made to it. Dr. Gowers has also added, in an appendix, some practical instructions for drawing the fundus in pencil and in colours. The directions given are simple but adequate, and will, we hope, encourage those commencing the study of diseases of the eye to make their own drawings. Nothing is so conducive to accuracy of observation, or so helpful to memory as depicting what is seen; the artist sees more than the ordinary observer. The Atlas remains unaltered, and shows what effective representation of ophthalmoscopic appearances may be accomplished in monochrome. The difficult subjects of optic neuritis and atrophy are treated in a most masterly manner, and are the best exposition of those matters with which we are acquainted, conveying an extraordinary amount of information. It will thus be apparent that the reputation which *Medical Ophthalmoscopy* has acquired in previous editions, is more than sustained in the present, and the work is a thoroughly trustworthy guide on the subject of which it treats.

Hunterian Lectures on Intra-cranial Inflammation Starting in the Temporal Bone. By Arthur E. J. Barker, F.R.C.S. London: H. K. Lewis. 1890.

To the uninitiated it would be startling to be told that, of all known aural lesions, 30 per cent. are accompanied by suppuration in the body of the temporal bone, with a mortality of $2\frac{1}{2}$ per cent., and that the chronic affections are the most fertile sources of the intracranial lesions, with which these lectures are concerned. The author's advocacy of a preventive treatment is well timed; for, although it may be of interest to the surgeon to adopt heroic treatment when the internal lesion has supervened, it is of the first importance to the patient that the trouble which gives rise to such serious disease should be nipped in the bud. This might be done were the diffusion of knowledge of aural disease commensurate with the clinical importance of the subject.

The author's large experience at University College Hospital enables him to speak with authority on the subject which he treats, and the lectures are replete with exact and valuable information which no surgeon can afford to neglect. The lectures enter into the consideration of subdural abscess, meningitis, thrombosis of the lateral sinus, pyæmia, cerebral and cerebellar abscess; and in the diagnosis and treatment of these several and other conditions Mr. Barker not only draws on his own experience, but illustrates his lectures by cases occurring in the practice of other surgeons.

We not only recommend the study of this work to every medical man, but we feel that no general practitioner under whose care such cases usually first come ought to be ignorant of the preventive treatment, and of the early signs which he may learn from these lectures and no surgeon who professes to treat such cases can afford to be without the exact information as to treatment here set forth.

Electricity in the Diseases of Women. By G. Betton Massey, M.D. Second Edition. Philadelphia and London: F. A. Davis. 1890.

This book will be read with interest and profit by the gynæcologist. It can hardly be said to answer the purpose which the author professes of making the uninstructed practitioner a sufficiently accomplished electrician. This is too much to expect from any book of the kind; but Dr. Massey is evidently familiar with his subject, and he conveys many practical hints which are the outcome of the best kind of experience. It is no doubt an advantage to the specialist to have collected in a convenient form the processes which have the sanction of use in his particular branch of practice, but he will do well to regard the author's warning, and to weigh in each case the advantages which he proposes to himself in departing from the more usual methods. It is a defect inherent in the subject that an American writer is apt to prefer and to recommend apparatus somewhat different from that most used in England; but a good reason is given for the choice in every instance, and the principle upon which it is made is easily applied to other instruments. The physical laws which are the basis of electro-therapeutics are illustrated by a series of simple and interesting experiments, which it is rightly stated the practitioner should not dispense with; and due regard is paid to important physiological conditions.

The practical part of the work deserves every praise. Apostoli's treatment receives a full share of notice, and is handled in a thoroughly independent spirit. One result of this is that many admirable suggestions are made as to matters of detail. Thus the addition of a little glycerine to the clay mass in making the abdominal electrode, and thoroughly soaping the surface of the same with glycerine soap is said to permit of the passage of heavy currents through the skin with a minimum of pain. If this be so, the importance of the fact is very great. The electrical treatment of uterine fibroids and of hæmorrhage is illustrated by the notes of many instructive cases; and on the subject of uterine displacements, which perhaps is not a very promising one, data are produced upon which tentative measures ought, he considers, to be based. The book is written in a forcible and attractive style, the illustrations are good, and the matter is in no respect redundant.

Researches on Micro-organisms. By A. B. Griffiths, Ph.D., F.R.S.E., F.C.S. Illustrated with fifty-two figures. London: Baillière, Tindall, and Cox. 1891.

The work before us is that of a chemical expert who has an exceedingly good knowledge of the literature of bacteriology, and who has made himself well acquainted with both biological and chemical bacteriological methods. He has collected an enormous number of facts, and has arranged them in a manner that renders them easy of access, although in so doing he has interfered somewhat with the continuity of his book.

The best part of the work is that which treats of the distribution of non-pathogenic microbes in the air, soil, and water, with the chemistry of the animal alkaloids, the special soluble ferments produced by micro-organisms, and the other substances produced by microbes—in fact, wherever the chemical side comes in, the work is well done. The description of the biology of certain microbes is somewhat sketchy, except in the case of the tubercle bacillus, in connection with which the author has given a considerable amount of space to a method of treating phthisis. We are afraid that anything new in Dr. Griffiths's method has not yet had a sufficiently extensive trial, and that the results hitherto obtained have not been sufficiently striking to enable anyone to affirm that much good has resulted.

The work as a whole, however, may be recommended to those who wish to have in a convenient form a very large number of facts and references relating to bacteria, the various substances to which they give rise, and the putrefactive and morbid processes that they induce. As the author says in his preface, "it does not profess to be a treatise on, or a manual of, bacteriology, but an *exposé* of recent researches in various branches of the subject, especially where such researches throw light on the pathology, therapeutics, etc., of infective diseases."

This work certainly affords evidence that the number of thorough workers on bacteriology in this country is greater than some people would have us believe, and it shows that the knowledge of both our own and foreign literature is kept up by those, even outside the medical profession, who are trying to advance the science in this country.

Traitement des Tumeurs Blanches: Emplâtres Mercuriels: Injections Modificatrices: Valeur Relative des Opérations et Surtout des Résections. Par le Docteur Lucas-Championnière, Chirurgien de l'Hôpital Saint-Louis. Paris: A. Coccoz, Libraire-Éditeur. 1890.

In this little book of thirty-one pages, M. Lucas-Championnière, who has for many years paid much attention to tuberculous diseases of bones and joints, describes the methods he has found most successful in his treatment of these affections. In opposition to those who take a despondent view of the prospects of surgical treatment in such cases, the author holds that both by operations and by bloodless and strictly

conservative measures, we may often succeed both in removing the local manifestations of articular tuberculosis, and also in guarding the patient against general infection and in restoring the general health. He believes it to be a well ascertained fact that attenuation and even disappearance of well-marked pulmonary symptoms may follow the resection of a diseased joint. In the non-operative treatment of articular tuberculosis, which in the practice at the Hôpital Saint-Louis has been attended with much success amongst young patients, M. Lucas-Championnière rejects certain details which are now almost always carried out, and, on the other hand, advocates certain methods which, since the introduction of arthrectomy and other partial operations, have fallen somewhat into disrepute. He is opposed to the practice of immobilisation in which the diseased joint is secured by a splint or stiffened bandage, and prefers, when this is practicable, simple extension of the affected limb. In the medicinal treatment he would reject iodide of iron as being not only useless but mischievous, and strongly recommends the long-continued administration of small doses of iodide of potassium. Much reliance is placed on the frequently repeated application of the actual cautery to the skin over the diseased joint, and the use of the local remedy so frequently practised in this country, and so well known by the name of Scott's dressing. This plan of dealing with articular disease has lately been strongly recommended to French surgeons by M. Suchard and M. de Saint-Germain. M. Lucas-Championnière describes his own method of applying Scott's dressing, which he makes use of in every case of tuberculous joint disease in which operative interference is unnecessary, or in other respects contraindicated. When the joint disease has advanced to the stage of open suppuration, and sinuses have formed, he would practise, before resorting to resection, frequent injections of an emulsion of iodoform.

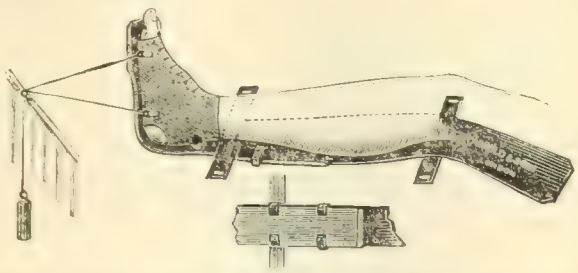
This very interesting and suggestive study of the treatment of common tuberculous lesions concludes with some remarks on the indications for operative treatment, and a brief review of eighty-one cases of resection of different joints for tuberculosis. M. Lucas-Championnière has done much not only to bring resection into favour with his own countrymen, but also to strengthen the position of this operation in the clinics of other countries. His success in this branch of surgical practice has been very remarkable. Of forty-five cases of resection of knee not one was fatal, and in forty of these healing was effected without any suppuration.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ON A METHOD OF APPLYING WEIGHT EXTENSION IN THE TREATMENT OF OBLIQUE FRACTURES OF THE TIBIA.

Oblique fractures of the tibia often present great difficulties in treatment. To prevent the upper fragment of the tibia riding over the lower, extension is necessary in some cases, and three forms have been used: (1) extension by means of a screw attached to a movable footpiece; (2) extension by means of elastic bands; (3) weight extension. Undoubtedly of these the equable steady traction of a weight has the advantage. The greatest difficulty in using weight extension has been the absence of a satisfactory method of applying it to the leg. Messrs. Arnold and Sons have made, at my request, a splint which, I think, meets all requirements, and I have used it in several difficult oblique fractures with excellent results—results which are as good as those obtained in ordinary transverse fractures.

The splint, as shown in the woodcut, is similar to a Neville's back splint, but has a sliding footpiece. The "purchase" for the extension is got from a padded leathern "spat," which is laced on to the foot. In applying the splint, the spat is placed behind the heel, and the foot and leg are fixed in the usual manner, care, however, being taken that the bandage does not interfere with the free play of the footpiece; the "spat" is then laced up, the splint swung from a cradle, and side splints applied.



Next a weight of from 4 to 8 lbs. is attached to the "spat" by means of a cord and pulley. In the woodcut the cord is seen to be attached to two pairs of rings, but in practice it will be found better to attach it only to the lower or posterior pair, as then the line of traction is directly in the line of the long axis of the limb, and so the heel is kept well down against the footpiece, and the fragments are made to drop into good position.

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MEAT EXTRACTS WITH ANTISEPTICS.

We have received some complaints that certain "meat extracts" or "liquid meat foods" sent to us for examination have not been noticed in this column. The preparations referred to contained substances added for the purpose of preservation; to this we take strong exception. For example, boric acid was found in considerable amount in some specimens; the fact being not only unacknowledged or suppressed, but specific statements that "no drugs or chemicals" whatever had been added, being made. Such facts would be sufficiently objectionable in regard to foods intended for ordinary use. These preparations, however, are sold specially for the use of invalids. We cannot approve of proceedings of this kind, and have in a previous article stated our reasons at greater length.

COD-LIVER OIL EMULSION WITH HYPOPHOSPHITES.

We have received from G. Mellin, 48, Piccadilly Circus, W., a specimen of an emulsion of cod-liver oil with the hypophosphites of sodium and calcium. A microscopic examination shows the oil to be uniformly and very finely divided. The emulsion is unusually permanent, mixes readily with water, milk, etc., and when thus diluted is by no means unpleasant to take. The emulsifying agent is not of an alkaline character, since the emulsion is perfectly neutral.

MALTED MILK.

We have received and examined some specimens of this substance. It is a dry preparation of malt extract and milk, and the statements made by the manufacturers as to its composition are practically correct. It may be described as a milk and malt food. We find high percentages of sugars and of dextrin, as was to be expected, and the fat amounts to as much as 6.78 per cent. The preparation, which is very palatable, is free from "chemical" preservatives and from other adulterants, and contains no unaltered starch. The idea is a good one, if not perhaps strictly new. The value of the substance as a food for children and invalids, and the extent to which, under ordinary conditions of use it would be found applicable, are matters which must be determined by experience. The preparation is manufactured by Horlick's Malted Milk Co., 39, Snow Hill, E.C.

Professors C. Lomboroso and A. Tamburini have been commissioned by the Italian Government to make an inspection of all the lunatic asylums in Italy. They have already begun their labours in the public asylum at Naples.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, APRIL 18th, 1891.

DISTRICT COUNCILS.

The introduction by Mr. Ritchie of a Bill to amend the Public Health Acts renders it almost imperative that he should introduce his District Councils (Metropolis) Bill, or at least lay it upon the table at once, if he does not proceed to legislation this session, so as to let the public know how the gaps in his Health Bill are to be filled by the administrative details of the District Councils Bill. The underlying principle of this Health Bill is to secure uniformity in the administration of the law throughout the metropolis, and for this purpose to confer upon the London County Council power, not only to prescribe the manner in which the law is to be administered, but in certain events to override the local authority. Medical officers of health and other sanitary officers appointed or reappointed after the commencement of the Act will be rendered largely independent of the local sanitary authorities, since the sanction of the Local Government Board will be required before they can be removed from office. This provision tends to make the sanitary officers servants of the Local Government Board as well as of the vestries. The clauses of the Bill to which exception is particularly taken are 9, 13, 20, 34, 35, 36, and 37, as introducing provisions involving unnecessary subordination; and 16 and 17 as depriving the vestries of their independence. There are two sides, of course, to these issues, one on which increased efficiency is enforced by the action of the Local Government Board, and the other on which vestries seek to resist this superior authority. The Bills for consolidating and amending the laws which concern public health in London, as well as those of last session dealing with the housing of the working classes, appear to show that the Government are of opinion that the existing laws must be classified, determined with precision, and amended before further steps are taken towards the completion of a scheme of local government in London. When these have been consolidated and amended it will be more practicable both to amend them further by the light of modern experience and to determine by what bodies they are to be administered.

The conference on Monday at the Memorial Hall, Farringdon Street, convened by the London Municipal Reform League, was a timely one. The Executive Committee of that body has for some time past been at work on the complicated and intricate question of completing the scheme of London Government, and it has prepared the heads of an admirable draft Bill to deal with the subject. What these district councils will do in helping to complete our form of London government is not always clearly understood, so that it will be as well first of all to set forth the existing bodies, other than the London County Council, which now exercise jurisdiction in London, and to state what is proposed to be done with them under the new *régime*. These existing bodies are: (*a*) *General Government, including Health:* 1, the City Corporation and the City Commissioners of Sewers; 2, District Boards and Vestries; 3, Metropolitan Asylums Board; 4, Port Sanitary Authority (Corporation of London). (*b*) *Poor Law:* 5, Local Government Board; 6 Boards of Guardians; 7, School District Committees; 8, Sick Asylum District Committees. (*c*) *Rating:* 9, Overseers and bodies exercising the powers of overseers; 10, Vestries and District Boards; 11, Assessment Committees; 12, Special Quarter Sessions. (*d*) *Education:* 13, School Board. (*e*) *Licensing Public-houses:* 14, Justices. (*f*) *Police:* 15, Her Majesty's Government and City Corporation within the City. (*g*) *Miscellaneous:* 16, Burgesses of Westminster; 17, Commissioners of Baths and Washhouses; 18, Commissioners of Paving; 19, Commissioners of Public Libraries; 20, Commissioners of Squares; 21, Thames Conservators; 22, Water Companies; 23, Gas Companies; 24, Tramway Companies; 25, Electric Lighting Companies. It is generally understood that the administrative bodies dealing with these subjects are to be replaced by district councils. The chief questions respecting these councils are what should be their several areas, their constitution, and their functions, including their relations to the County Council. As to areas, it is thought that the areas of jurisdiction should be larger than small vestry areas—say, as an example, to unite in Westminster the districts of St. James's, St. Anne's, the Strand district, and St. Martin's, but to leave areas like St. Pancras, Marylebone, St. George Hanover Square, Lambeth, and Chelsea as units of administration, with powers to the London County Council to divide or unite where necessity arises.

There is one point as to areas of administration being larger in the future than in the past, that a large mass of property known as vestry halls, etc., could be utilised and sold, and the proceeds devoted to the reduction of London's debt; so that the opinion that district councils must increase expense may turn out to be incorrect. As a matter of fact, the cost of vestry administration is at its maximum, as the expenditure of the last five-and-thirty years in roads and sewers and sanitary work has brought them to a fair state of efficiency, and all we want now is to maintain this. The expenditure will not be duplicated under the new bodies. As to the functions of the new district councils, and their relation to the County Council, there arise many difficult issues. It is easy to say that the duties of the present vestries and district boards—such as paving, watering, lighting, and scavenging streets; collecting and disposing of dust and house refuse; enforcing the Sanitary Acts and Nuisances Removal Acts; constructing and inspecting sewers and drains; enforcement of the Acts against adulteration of foods; notification of infectious diseases; disinfection, etc.; establishment and management of libraries, baths and washhouses, etc.—should be transferred to the new district councils. When, however, these duties are examined individually, it is found that they are contained in a long series of confused Acts of Parliament passed *pro re nata* as each subject pressed for solution; framed on no regular plan, and having no reference to the new constitution of the govern-

ment of London. In some cases the law differs in different parishes and districts, and upon scarcely any one of the numerous subjects of jurisdiction is there any clear, consistent, and intelligible set of rules.

The relation between the London County Council and the vestries and districts boards is confused and obscure. There seems to be hardly any function of either which does not intermingle with and infringe upon some function of the other. For instance, if a matter is to be dealt with as a nuisance, it falls within the cognisance of the vestries; if it is dealt with as a matter requiring a licence, it is within the cognisance of the County Council. Licensing of cow-houses and slaughter-houses is vested in the Council. The control of pigsties appears to be a matter for the vestries. The control of offensive businesses and storage of petroleum are now matters for the Council, but they seem to be no more important or general in their character than many sanitary duties now entrusted to vestries. The numerous recent Acts relating to nuisances, diseases, dairies, bakehouses, offensive businesses, and health generally, give powers almost promiscuously to the Council, to the vestries, and to the Local Government Board, with little attempt, if any, to distinguish between the proper functions of each authority. When these functions do come to be revised—which it is hoped will be at no distant date—either the principle of the centralisation and consolidation of powers in the London County Council must be followed, or the opposite one of decentralisation, of making the district councils as important as possible and vesting in them all such executive functions as are not essentially and incontestably the business of a central authority. The policy of the old municipal reformers was to make London one for all administrative purposes common to all London, and this in the main is carried out by the Act of 1888; but their theory as to minor administration was to leave sanitary works, rating, assessment, and part of the Poor-law administration to the district councils.

If the whole of the Poor-law administration is handed over to the district councils, there will be no objection: but if that is not to be, then it will be proposed that the whole of the Poor-law administration should be eliminated, and vaccination, the registration of births, deaths, and marriages, should be separated from the Poor Law, and added to the district councils. This we venture to think is the right course. Owing to the controlling hand of the Local Government Board, the action of the boards of guardians in London is not so widely varying as that of the vestries and district boards. If, however, the whole work of poor relief could be efficiently directed from an administrative centre, there would be a great saving of cost. For instance, the whole supplies for the thirty or forty workhouses could be purchased wholesale, and distributed on requisitions as it were retail, saving many intermediate profits, estimated at £150,000 per annum, as was done in the case of the Admiralty contracts with like results. If this cannot be effected, the transfer of the various duties now performed by boards of guardians to the district councils would be a decided advantage; the local committees appointed by the district councils would be of sufficient importance to make them objects of legitimate ambition to good men in each district, and especially to the better class of those who have hitherto been discharging the work of Poor-law guardians. The highest type of municipal government in London will be that which unites effective general and extended local control; and with the establishment of district councils we shall be approaching a step nearer this type. It is proposed that each district council shall consist of not fewer than forty-five nor more than sixty members; and that persons qualified to be district councillors or electors shall be all persons on the County Council register (together with all persons having the Parliamentary franchise) within the district, without distinction of sex. The great advantage of the establishment of district councils will be that they are part of a great municipal system, and that membership of such bodies will be a valuable training for and stepping stone to a higher municipal position in the Council itself.

The necessity for some change, and the direction which it ought to take, are obvious. London is held back in the grip of vested interests, and although in the conduct of her rulers she has never approached the dreadful experience of New York thirty years ago, she has not until 1888 given any illustration of that genius for local self-government which the Municipal Corporations Act of 1835 has done so much to evoke.

Mr. Acland's motion, on April 14th, to provide for the extension of municipal institutions to parishes and rural, urban, and village districts, raised an important debate. The amendment carried against it did not destroy, but extended the sphere of action. The growth of public opinion in this direction will in a few years astonish our legislators. The institution of these councils must lead to a great reform in municipal finance, and compel Chancellors of the Exchequer to settle upon a broad and satisfactory line the policy of finance common to the smallest as to the greatest municipality. The communal system of France may be studied with advantage.

We anticipate that with the Health Bill and Mr. Hobhouse's and Mr. Acland's proposals, a great stride will be made in the very near future in administrative reform throughout the country.

COMBINED HEALTH APPOINTMENTS.

Recent legislation has considerably increased the duties of medical officers of health, at any rate in those districts where the authorities have any genuine intention of carrying out the law, and the adequate payment of such officers, the conditions of their appointments, the amount and nature of the work that they can legitimately be required to perform, are questions which have once more come to the front. Several fresh appointments have, moreover, been created. In reference to these new offices and to the increased work of the older ones, the aim of local authorities should not be to endeavour to discover what is the lowest possible remuneration for the largest possible amount of heterogeneous work that can be cast upon a medical officer without causing a professional outcry, or preventing the application of the class of candidates from which it is necessary to choose, in order that the proper amount of reflected glory may be shed by the officer appointed upon the "authorities" who appoint. It is, of course, needful above all things that the acts and proceedings of the members of a public body should appear at least to be righteous in the eyes of the ratepayers. On the one hand it may be desired by certain members that a man of some re-

pute should be appointed, but on the other there is the tendency to false economy.

The system of forcing all sorts of extraneous duties upon a medical officer of health is, however, rapidly falling into disrepute. There are numerous cases where medical officers are called upon to perform duties which properly belong to inspectors of nuisances. Further, the analysis of water is most absurdly and improperly forced upon them in most instances without remuneration. It is plainly the duty of the authorities to pay for such special professional services. The system of combining in one appointment the duties which should be performed by several distinct officers is one which, in the public interest, should invariably be protested against. The salary paid for a combined officer is, as a rule, but little if at all higher than that which should be paid to the medical officer of health for work strictly within his department. It is true that the combination of the appointments of medical officer of health and public analyst is now comparatively rare, but nevertheless abuses of this description die hard. A striking instance is afforded by what appears to be the intended action of a London public authority—the vestry of Chelsea. This body has advertised for a medical officer of health, holding a public health diploma, who is also to undertake the duties of public analyst and of gas examiner. The vestry are no doubt anxious that the work of each of these offices should be thoroughly and efficiently carried out, and assuming this to be the case, the person appointed must be not only a medical man specially qualified in sanitary science—he must in addition be a trained chemist, with the long special practice and experience which should be required in public analysts, and he must also have the special photometric and chemical knowledge and experience of a trained gas examiner. The vestry are prepared to pay the munificent sum of £450 per annum to the "admirable Crichton" who, in their opinion, fulfils all these requirements, and is duly elected by them. We do not say that such men are not to be found. There may be a very few who unite in themselves these various qualifications. We say that it is directly detrimental to the public interests that such appointments should be combined. They have obviously nothing in common, and under such a system, however able and experienced the man may be who undertakes to carry it out, the efficient working of any one department must necessarily be achieved at the expense of the others. We say, further, that even if the contrary be assured, a payment of £450 per annum for the working of these three offices in a district of the size, character, and importance of the one referred to, would be absurdly inadequate, and is calculated to bring the offices in question into contempt.

The Chelsea Vestry is one of the last of the metropolitan public authorities which seem to adhere to the exploded notion that the multifarious duties of such essentially distinct and different offices ought to be undertaken by any single individual. The appointments have up to the present been united in this district, and it is a matter for sincere regret that the vestry have not taken the opportunity afforded by their being vacated to disunite them. It may be noted that the application of the Adulteration Acts in Chelsea does not compare favourably with the application in neighbouring districts. In the year 1889, according to the Local Government Board return, the Vestry Committee only considered it necessary to have 136 samples analysed, and this for a population of between 80,000 and 90,000. Of course there is no reflection in this upon the able and distinguished officer who held the appointment. It merely serves as an illustration of our previous contention.

Cases of a similar kind have occurred in the provinces, notably one during last year in the North of England, but, in this instance, we believe that the local authority—the Town Council of a large borough—brought themselves into unpleasant contact with the Local Government Board.

It may surely be hoped that the local Council will, as a general rule, refrain from adopting a policy at once so narrow and so injurious. It would be interesting to determine whether, among the bodies both in and out of London who still adhere to such systems, are included those who have recently made somewhat hysterical appeals for the preservation of their corporate existence. It might, perhaps, not be undesirable for public boards in which such ideas as those we have ventured to condemn are ingrained, to be incorporated with larger, more active, and better informed authorities.

FACTORY LEGISLATION:

Complete Vindication of the Certifying Surgeons.

Professor Charteris and his colleagues who had been in anxious attendance at the Grand Committee on Trade since the Factory Bill came up for consideration must have been considerably relieved when Mr. Macartney moved the rejection of Clause 19. For Mr. Mundella followed with a vigorous speech, in which he supplied ample statistical evidence of the excellent work done by the surgeons; and Dr. Farquharson, who came next, was able to show that Lancashire stands almost alone in its opposition to domestic hygiene. Mr. Matthews's arguments were little more than a *réchauffé* of those which have already done service in the House, and he laid great stress on the miserable case made out by the medical men when he received them in deputation some months ago.

In justice to them, we must reply that the sudden way in which the Bill was sprung on the House rendered the first presentment of their case somewhat scanty and imperfect in detail. But, at all events, none of it was manufactured out of perversion of fact; and, since it became necessary to take more active measures, members of Parliament have certainly had no cause to complain of the quantity or want of precision of the documentary evidence supplied to them in favour of the preliminary examination.

After Mr. J. A. Campbell had made a strong appeal, from a Scottish standpoint, in favour of the removal of the clause, Sir William Houldsworth, as representing the opposition, spoke with much tact and good feeling, and told the Committee—as he had already told the House—that the Education Act had made the surgeons obsolete and unnecessary, and that they must now be reformed out of existence, because there is no more work for them to do. "The argument that they often check infection may have something in it," he said; "but, admitting that, why is not the principle applied to schools, which form such admirably convenient foci for the spread of contagious diseases?"

The answer to this is obvious. If we are not to reform one inefficient institution because another standing at our elbow equally deserves repair, we must stop all progress, and preach the doctrine that everything is for the best in the

best of all possible worlds. Do one thing at a time, but do it thoroughly, so that it may serve as a precedent, and encourage others to follow your good example. And, above all, do not, in deference to influential prejudice and interested motives, destroy a system which has already done good service, and which this Bill, it may be hoped, will render yet more wide-reaching and effective. We may remind Sir William Houldsworth that the London School Board, appreciating the dangers which he described to the Committee, have already appointed a medical officer whose whole time is placed at their disposal, and that with many excellent authorities we have always argued in favour of a systematic medical inspection of schools throughout the country.

When the debate was resumed on Thursday, ample and convincing testimony was given by the representatives of every political party present in favour of the certifying surgeons, and after strong speeches from Lord Cranbourne, Mr. Chamberlain, Mr. Brunner, Mr. Shaw Lefevre, Mr. Barran, Mr. Abraham, and Mr. Maclean, the impression became general that Mr. Matthews would retire from the unfortunate position which he had taken up. But he elected to take the sense of the Committee on the subject, and the division resulted in the excision of Clause 19 by 39 to 9.

The certifying surgeons are to be sincerely congratulated on a victory which is largely due to the energy and skill with which their case was laid before the Committee; as on a former occasion, the organisation and resources of the Parliamentary Bills Committee enabled the task to be accomplished with speed and certainty. Not less are employers and employed to be congratulated on the retention of a sanitary provision which relieves the one from responsibility and ensures hygienic protection to the other.

The prizes in the Faculty of Medicine of University College, London, will be distributed on Thursday, May 14th, at 2 P.M., by Sir Richard Quain, Bart., M.D., F.R.S.

We understand that a meeting of the Special Committee of the Senate of the University of London was held on April 15th, and that the draft charter which has been prepared by the legal members will probably be submitted to the Senate at its next meeting on April 22nd.

The Jacksonian Prize of the Royal College of Surgeons has been awarded to Mr. William Thorburn, F.R.C.S., Assistant Surgeon to the Manchester Royal Infirmary. The subject of this prize for the year 1892 will be "The Diseases of the Ovaries and Uterine Appendages, their Pathology, Diagnosis, and Surgical Treatment."

The sittings of the Committee of the House of Lords on Child Life Insurance were resumed on April 14th, under the presidency of Dr. Magee, Archbishop of York. Important evidence was given by Dr. Grimshaw, Registrar-General for Ireland, to which we shall hope to have the advantage of referring on a future occasion.

It is announced that Professor Koch is about to publish a reply to all the criticisms which have been made on his method of treating tuberculosis. Professor Virchow's objections are to be dealt with in detail. Dr. Koch's son-in-law, Professor Pfuhl, is understood to be assisting him in the preparation of the work.

The meeting of Fellows and Members of the Royal College of Surgeons to consider the scheme for the reconstitution of the University of London will be held on May 11th at 3 P.M. A meeting of Convocation of the University of London, it may be remembered, will be held on the following day.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

The Royal College of Surgeons will give a reception to the International Congress of Hygiene and Demography during its session next August. A committee was appointed at the last meeting of the council to make the necessary arrangements. The council has also agreed to lend the Examination Hall on the Embankment for the purposes of the congress. Professor R. Emmerich, of Munich, and Dr. K. B. Lehmann, of Würzburg, have been appointed delegates of the Bavarian Government at the forthcoming Congress of Hygiene and Demography.

THE FIFTH YEAR.

A special meeting of the Council of the Royal College of Surgeons was held on April 10th to consider a report upon the allocation of the fifth year which the General Medical Council have recommended to be added to the curriculum. Various propositions were submitted, including one from the Secretary of the Physiological Society expressing the opinion that a large portion, if not the whole, of the additional year which is to be added to the medical curriculum should be devoted to elementary physics, to chemistry, and especially biology. The report, which we understand is in favour of devoting the fifth year to clinical work, will now be considered by the Royal College of Physicians.

PASTEUR'S TREATMENT IN NEW YORK.

Dr. Paul Gibier, director of the Pasteur Institute at New York, issued his first annual report on March 23rd. The period covered by the report extends from February 18th, 1890, to the corresponding date in the present year. The number of those who applied for treatment was 828, all of whom had been bitten by dogs or cats. In regard to 643 of these persons, it was proved that the animals which had inflicted the bites were not rabid. In 185 cases the existence of true hydrophobia was established clinically or by inoculation in the laboratory, and in many cases by the death of other persons or animals bitten by the same dog. No death from hydrophobia occurred among those treated.

THE ALBANY STREET BARRACKS.

Major-General Philip Smith, C.B., commanding the Home District, at a recent inspection of the 1st Life Guards, is reported to have said, that when he inspected the regiment last year there was not a single man in hospital, now there were several, owing no doubt to the insanitary state of the barracks. The barracks have long been condemned and are now to be demolished. The gallant regiment were no doubt very fortunate to have no men in hospital at the date of the former inspection, and it is probably incorrect to trace the few present cases of sickness entirely to local insanitary conditions; for the barracks so long bad could hardly have become so much worse in a single year. But be that as it may, we trust they will be evacuated forthwith, and speedily handed over to the vendors of old bricks. They are at once unfit for our troops and unworthy of London.

IMPRUDENT NURSES.

The medical profession will sympathise with the correspondent of a contemporary who some time ago pleaded that trained nurses should be taught to restrain their tongues when attending ladies in the country instead of dilating on the horrors they may have witnessed at their hospitals, or in attendance on their former patients. Nurses, whether of the Gamp order or of the more scientific class, are but women,

and are little given to the practice of golden silence. There is great temptation, no doubt, during the long hours of watching in the sick room to while away the time by conversing on what is to the nurse her most interesting topic—her former patients. Her stories are frequently eagerly listened to by her charges, and the painful details are dwelt upon and worried over in the sick person's mind long after the garrulous nurse has forgotten the conversation. To weak frames, sleepless brains, and shattered nervous systems the painful narratives of the sick room and hospital ward must necessarily have an effect which the physician would of all things dread, and do his utmost to avert. That the patient's devoted nurse should be her greatest hindrance to recovery—as she may readily be under the circumstances complained of—is an evil well worth pointing out. Those who are responsible for the training of nurses will do well to endeavour to safeguard sick folk from such a contingency as this.

THE ROYAL COMMISSION ON TUBERCULOSIS.

VERY few replies have as yet, we believe, been received by the Royal Commission on Tuberculosis to the series of questions bearing on the etiology of tuberculous disease. The inquiry is one of great national importance, affecting very closely the great industry of agriculture—which is still the greatest industry in the country—and many dependent trades. Of its great pathological interest it is not necessary to speak. It may, however, be well to remind medical officers of health, and other practitioners into whose hands the questions of the Commission may have fallen, of the value which would attach to well-observed instances of the several conditions as to which inquiry has been made. These are examples of communication of the disease from animals to man or from man to animals, or of immunity under prolonged ingestion of food products from tuberculous animals. The scientific investigations for the Royal Commission are being conducted in two sections, under the direction of Dr. Buchanan and of Dr. Burdon Sanderson and Professor Brown (of the Board of Agriculture) respectively.

VACCINATION IN AUSTRIA.

FROM the Report of the "Hay Vaccination Institute" at Vienna for 1890 it appears that the number of vaccinations at the institute itself was 512 (99 per cent. of which were successful), and of revaccinations 69, (85 per cent. of which were successful.) The number of "portions" distributed to public officials and private practitioners was 83,200. The supply was obtained from 91 calves, the average got from one animal being 3 grammes—a quantity which, rubbed into a paste with glycerine, sufficed for 1,000 vaccinations. No bad effects followed any of the vaccinations. During the year experiments were made for the first time as to the possibility of obtaining lymph from goats, these animals being but slightly susceptible to tuberculosis. The experiments have so far proved very successful. At a recent meeting of the Sanitary Council of Lower Austria a report on the same subject was presented by Professor Oser and Herr Umlauf, a veterinary surgeon. The Council passed a resolution that all animals used as sources of lymph supply should be slaughtered and the carcasses submitted to careful *post-mortem* examination before the lymph is employed on the human subject. The Minister of the Interior has ordered that the whole medical and nursing staff, and all attendants of whatever kind, in the Vienna public hospitals are to be forthwith vaccinated or revaccinated, as the case may be.

THE WATER SUPPLY OF CHESTER.

THE agitation respecting the water supply of Chester has been brought to the acute stage by a letter from Dr. Dobie published in the *Chester Courant*. The letter drew attention to the fear of pollution from sewage poured into the river from places above Chester. This letter was followed up, as reported last week, by the meeting of the Chester Medical Society held on April 3rd. The resolution of the Society asking for a special inquiry was read at a meeting of the Town Council on April 8th, and the whole question gave rise to a very animated discussion. As the Council had arranged with Sir J. Coode to visit Chester on April 10th to give his opinion respecting the flow of tidal water over the river and beyond the intake—the point that had given rise to Dr. Ballard's warning—it was decided to form a Special Committee to go into the whole question of water and sewage, to meet Sir J. Coode, and report to the Council. The supply is at present obtained from the river Dee, which, running out of Bala Lake down the Vale of Llangollen, receives the drainage of the valley, and presumably the sewage of Bala, Corwen, Llangollen, and Ruabon, as well as the villages lying between. After leaving the valley, the river runs through many miles of highly-cultivated plain, receiving the drainage of this plain, and the sewage of some large villages. In addition to the river water flowing from the Welsh hills, the bed of the river is believed to be very plentifully supplied with springs. The question requiring an answer is this: Is the water as supplied by the Water Company suitable for drinking purposes? In deciding the question, it must be borne in mind that above the intake the river receives sewage, that for a few days every month the tidal water passes beyond the intake and may deposit some sewage there, and that an immense volume of fresh water is coming down or springing in the bed, and flowing with great velocity.

RUFFIANLY FOOTBALL.

EVERY football season for many years past attention has been called to the ruffianly manner in which football is too often played. Gradually the public conscience has become awakened, and there seems to be now good reason to hope that football players will be shamed into taking steps which ought to have been taken long ago, or that the law will be seriously invoked to bring the young savages who now disgrace a manly game to their senses. At an inquest held at Middlesbrough on April 14th, it was proved, according to the reports in the daily press, that the death of one of the players was due to his having run with great force against the knee of the goal-keeper. Five witnesses swore that there was no necessity for the goal-keeper to put his knee up as he did. At the request of the jury, the coroner severely reprimanded the goal-keeper, telling him that he had narrowly escaped being sent to the assizes on the charge of manslaughter, and that if he had a conscience at all, he must feel his position acutely. The jury, the coroner said, had no desire to put an end to a manly game, but that game would have to be played properly; in any future case the offender would be dealt with very severely, for the jury thought that the game was played in too rough a manner in that district, and were of opinion that umpires and referees were guilty of highly reprehensible conduct in not seeing that the game of football was played strictly in accordance with the rules of the Football Association. The coroner added that he would lay the facts before the Football Association, and it is certainly high time that that body took decisive action. The list of serious injuries and deaths this year is longer than ever, and if the Football Association will not legislate, or is too weak to enforce its rules, the law will have to act.

MEDICAL PROVIDENCE.

A MEETING of the Executive and General Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at the offices of the British Medical Association on Wednesday, April 15th, under the presidency of Dr. G. E. Herman. Among those present were Messrs. Lawson Tait, J. Pickett, F. Wallace, Major Greenwood, jun., J. Brindley James, R. Lord, E. Bartlett, A. S. Gubb, W. Smith, and W. Thomas (Birmingham). The report presented for the first quarter of the current year was considered very satisfactory. From this it appeared there was a net increase in the membership of 24, bringing the total up to 1,133. The receipts for

the quarter amounted to £3,366, and the expenditure to £1,058, leaving an increase to be added to reserves of £2,308. The sickness fund of the Society had again been largely useful, £840 having been paid to 57 incapacitated members on account of a total of 254 weeks' illness, several of the cases being of a severe and protracted character, the duration of the claims ranging from one week to the whole of the period. Although the payments were large, the rate of sickness was considerably under that provided for by the tables, more than half the sickness premiums received being carried to reserves. The cost of management was again extremely low, being at the rate of only 3.8 per cent. of the premium income—a proportion without parallel in insurance work. Owing to this economy there is a present profit balance in the management fund alone of £3,513. The total funds of the Society now amount to £46,710. Of this amount, £42,437 is invested in the names of the trustees, Mr. Ernest Hart, Dr. W. M. Ord, Sir T. Spencer Wells, Bart., and Mr. J. R. Upton (solicitor). Sanction was given by the Committee to the investment of a further sum of £3,100 in first-class local board securities approved and sanctioned by the Local Government Board, at 3½ per cent. interest. Full particulars of the work of the Society, prospectuses, proposal forms, and all requisite information may be obtained (free of cost) on application to the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, London, S.W.

A DANGER TO THE LONDON WATER SUPPLY.

Dr. Blaxall, of the Medical Department of the Local Government Board, has recently reported on the sanitary condition and administration of the rural sanitary district of Staines, Middlesex, after an exhaustive inspection of the district. He finds "at every step of the inquiry unmistakable evidence of the want of efficient sanitary administration." The soil has been allowed to become sodden with filth, a matter which is of more than local concern. Besides the rain that falls on the district, large volumes of water course through the river gravel which forms the subsoil, and into this gravel are washed the contents of several thousand cesspools purposely dug in the gravel for convenience of discharge thereinto. The water thus befouled flows directly or indirectly into the Thames, entering the Thames at various parts of the ten miles where the district abuts on the river. The principal and most direct flow of the water through the gravel bed of this district would seem to be from west to east, and its discharge to be mainly in the lower portion of the boundary river, in the neighbourhood of Sunbury. At a short distance below this neighbourhood, on the southern bank of the river, are situated the pumping stations of certain great London water companies. "I shall not attempt," adds Dr. Blaxall, "to measure the amount of the actual impurity furnished by Staines Rural District to the Thames above these water intakes, nor shall I discuss the extent of depuration that may go on before the filth of the district reaches the river. But I may at least direct attention to the prevalence in the Staines Rural District of that particular disease that disseminates itself generally by means of water," namely, typhoid fever. The discharges from each case of fever in the district, if they find their way from the cesspools along the gravel stream into the Thames, may specifically contaminate vast quantities of the river water; so that, as the inspector points out, "nothing but the efficiency of the water company's filtration stands between the typhoid matter entering the river at Sunbury and the consumption of that typhoid matter by the water drinkers of half London." Is Staines the only district which thus contaminates the Thames?

THE INFLUENZA EPIDEMIC.

Telegraphic reports state that the epidemic of influenza in the United States has rapidly extended its area during the last fortnight. The mortality from all causes in New York rose on April 13th to 215, 32 deaths being attributed to influenza; this is a larger total number of deaths and of deaths from influenza than was observed in 1889-90, when the highest numbers for any one day were 206 and 25 respectively. A telegram in the *Daily Telegraph* states that the deaths from influenza in New York were, for the week ending March 28th, 4; week ending April 4th, 48; week ending April 11th, 108. The working of the police and fire departments is seriously hampered by the number of men invalided, owing to influenza. Reports from the life-saving stations on the Atlantic coast for hundreds of miles north and south show that this service also has been much crippled from the same cause. In Chicago and other Western cities there has been no decided abatement. It is reported that some cases have occurred at Nuremberg, the first patient being a man who had recently arrived from Chicago. In this country, as will be seen from the letter of our Sheffield correspondent, cases have occurred in that town and neighbourhood. Dr. A. T. Brand informs us, in reply to an inquiry, that influenza has been epidemic since the middle of March in Driffield and the surrounding villages and country. "The outbreak has been very widespread and seems now to be abating, there being little fresh material to work on, few having escaped. The disease has been especially severe among farm labourers, whose healthy state and surroundings have been no protection against it. As a consequence of the outbreak, public works have been almost at a standstill, school attendance has been reduced, and farming operations much delayed at a very inconvenient time. Though the disease has been very widespread, the death-rate has not been materially affected directly. The outbreak is characterised by a very sudden onset of symptoms of severe nervous disturbance, severe pain in the head, eyeballs, back, loins and limbs, accompanied by high temperature and rapid pulse, and a sensation of cold water poured down the back. In some cases nausea and vomiting have formed part of the onset. After 24 to 48 hours the fever rapidly subsides, and is followed by great debility, languor, depression, want of appetite, and a very irritating dry cough, suggestive of vagus irritation; delirium has occurred in many cases. Uncomplicated cases, especially among young people, are short, though very severe for the time, but cases complicated by the effects of chill, for example respiratory diseases, are of course more severe and protracted at the time and followed by a lengthened convalescence. Salines, bromides, antipyrin, quinine and salicylate are of great service in the first stage, and nerve tonics such as nux vomica, etc., together with stimulants are markedly beneficial in the second stage." The epidemic is also prevalent in Hull, where it appears to have assumed alarming proportions. It is reported that there is scarcely a business firm that has not a number of its hands away ill, and in some houses great difficulty is experienced in carrying on the business. The death-rate is larger than it has been for many years, the figures published yesterday showing a rate of 46 per 1,000, against an average of 15 to 18 per 1,000. As yet but few cases are known to have occurred in London.

THE NEW MEDICAL LAW IN FRANCE.

A new law regulating the practice of the healing art in all its branches has recently passed the French Chamber of Deputies. The first clause enacts that "no one shall be allowed to practise medicine in France unless he possesses a diploma of Doctor of Medicine granted by the French Government after examinations passed before a State institution of superior medical education." This provision abolishes the lower grade of practitioners known as *Officiers de Santé*, due regard being, however, paid to the rights of those who are already in practice, or who have entered as students with the intention of obtaining that qualification. Foreign medical men, whatever be their nationality, will be allowed to practise only after having obtained a diploma of Doctor of Medicine from the French Government. Exemption from some part of the examinations may under certain conditions be granted by the Minister of Public Instruction, but in no case shall such

exemption apply to more than three of the prescribed tests. Foreign students wishing to obtain the diploma of Doctor of Medicine are to be subject to the same regulations as regards curriculum and examinations as French students; the diplomas and certificates of attendance which they have obtained in their own country may, however, be recognised by the proper authorities as equivalent to those required for "inscription" in a French medical school. The degree of Doctor of Surgery is abolished. There is no body in France corresponding to our own General Medical Council, and the registration of practitioners is to be carried out directly by the State. Within a month of starting in practice in any particular locality, doctors are bound to register their titles at the prefecture or subprefecture of the department, and at the civil court of the district. Every year lists are to be prepared under the direction of the prefects and the judicial authorities containing the name, surname, address, date, and place of admission to degree of every medical practitioner in the department; these lists are to be publicly posted every year during the first fortnight in January in every commune of the department, and duly certified copies are to be forwarded to the Minister of the Interior, the Minister of Public Instruction, and the Minister of Justice. It is enacted that every practitioner, under penalty of a fine varying from 20 to 500 francs, shall, as soon as he has made his diagnosis, notify to the public authority any case of epidemic disease occurring in his practice, provided such notification does not involve a breach of professional confidence. A list of notifiable diseases is to be drawn up under the authority of the Minister of the Interior, with the assistance of the Academy of Medicine and the French Consultative Committee of Public Hygiene. "Covering" is expressly declared to be a form of illegal practice exposing the Doctor of Medicine guilty of it to severe penalties. Exception is made in favour of *internes* appointed by open competition and students who have gone through the full curriculum, who may practise during times of epidemic, or as substitutes for fully-qualified practitioners. Illegal practice, if accompanied by usurpation of a medical title, is punishable by a fine varying from 1,000 to 2,000 francs (£40 to £80); a second offence entails the penalty of a fine of 2,000 to 3,000 francs with imprisonment for from three months to one year. Anyone using the title of Doctor of Medicine without indicating its source shall be considered guilty of "usurpation of title" unless such title has been granted by the French Government. Practice without registration of diploma is punishable by a fine varying from 50 to 200 francs. The licence to practise may be suspended or withdrawn in the case of medical men convicted of various crimes and misdemeanours; this does not apply to "political" offences. The new law applies to Algeria and the French colonies as well as to France.

CULLEN'S LECTURES.

ACCORDING to an Irish contemporary two large volumes of the manuscript clinical lectures of William Cullen were discovered some time ago at Nottingham. Even if this statement prove to be true, the "find" probably possesses little value; while the constant habit of Scottish students, down to the present day, of writing out the lectures of their professors[1] in full, makes it probable that the statement is erroneous. At all events, a comparison of the handwriting of the manuscript with that of some genuine specimen of Dr. Cullen's will be necessary before we can accept it as authentic. Since, moreover, Cullen, in his lifetime, published his *Synopsis Nosologiæ Methodica* in 1769, his *First Lines of the Practice of Physic* (4 vols. 4to.) in 1784, and his *Treatise of the Materia Medica* in 1789—the year preceding his death—it is not probable that he left any unpublished material of importance. Nor is it likely that he possessed any written lectures on any subject for his own use, since we are told that he employed only a few brief notes, and spoke at all times extemporaneously, being a master of the art of oratory. If these lectures are genuine (a great "if" in the present case) their proper place is in the library of the Edinburgh University, as an interesting memorial of a man who profoundly influenced the course of medical thought for many years, and who was a distinguished professor of the University.

[1] An interesting evidence that the same practice obtained in the English schools during the first part of the present century is afforded by Sir Astley Cooper in his classical *Treatment on Dislocations and Fractures*, in the preface to which he adduces almost identical extracts from the notes on his lectures, made by ten old pupils of his, to prove that he had not copied a recent author (J. Bell) in his opinion as to the union of the fractured cervix femoris. Probably, however, the practice was never so common in England as in Scotland, where the custom of professors examining their own students induces the latter to make their notes a sole and sufficient textbook.

SCOTLAND.

EDINBURGH UNIVERSITY COURT.

THE Court met on April 13th. There were present—Lord Stormonth Darling, Dr. Heron Watson, Dr. Duncan, Mr. McKie, Professor Sir William Turner, Professor Crum Brown, Professor Butcher, the Rev. Professor Taylor, and Principal Sir William Muir, who presided. It was reported that the Chancellor of the University had appointed Mr. Æ. J. G. MacKay, Advocate, Sheriff of Fife and Kinross, as his assessor at the Court, and that Mr. MacKay had accepted. Dr. Patrick Heron Watson was appointed to be a curator of patronage of the University, in succession to the late Mr. T. Graham Murray.

POISONING BY ACCIDENTALLY ADULTERATED SUGAR.

IN response to our inquiries, Dr. J. Gairdner, of Crieff, has been good enough to send the following particulars of the cases of poisoning by sugar recently reported in the public press:—"About March 11th a quantity of the same sugar was consigned to three different merchants. All the poisoned were customers of one merchant, who received five bags. All the bags were innocuous except one, which he began to use about April 2nd. This bag had been in contact with a can of 'climax' weed killer which had been leaking during the transit by rail. I understand from a gardener that it is composed of carbolic acid and arsenic. One gallon is diluted with twenty gallons of water, and is then strong enough to kill weeds. The manipulator is advised to wear gloves, and the gardener has suffered from coryza during the mixing. The weed killer was consigned to the adjacent village of Comrie, and it is now said that the carrier complained of gastric symptoms. He dined on his way out on two pies, finding them hotter in the taste than usual. I saw the first case on Saturday, April 4th. The symptoms were little more or less than free emesis, and in none of my patients did I find tenesmus or bloody diarrhœa. Constipation was, as a rule, present. There was abdominal pain, sore throat, and the eyes were affected. I placed a quantity of the sugar which I suspected in the hands of my sanitary inspector on Sunday, but my local authority did nothing. The merchant, however, immediately stopped the sale of the sugar on Monday. On Tuesday a sample was sent to a chemist, who found arsenic. Two deaths have occurred, but none in my practice; and, from what I observed, no great anxiety was to be felt unless the patient was old or feeble. The strong and healthy suffered little. The deceased had partaken freely of the sugar not only in tea, but afterwards in whisky toddy. The child at its mother's breast suffered, and a cat had a litter of dead kittens before time."

IRELAND.

AN UNFOUNDED CHARGE.

A CASE recently heard before Mr. Justice Andrews and a special jury, at the last Derry Assizes, affords another instance of the serious and utterly unfounded charges against which any medical man may any day be called to defend

himself. A young married woman, wife of a shop assistant, charged Dr. D. J. Brown, of Derry, with having attempted to kiss her in his consulting room; £1,000 damages was claimed. The case occupied the greater part of two days. The woman told an entirely incredible story in the witness box, and the evidence appears to have shown, according to the most charitable interpretation, that she was labouring under an hysterical delusion. The jury, after a few minutes consultation, found a verdict for Dr. Brown, and the judge gave judgment with costs against the plaintiff.

THE COST OF A MISTAKE.

On Friday, at Dublin, before Master Osdruce and a jury, the case of Gray *v.* the Junior Army and Navy Stores, Limited, was decided. The complainant averred that the defendants had negligently compounded a prescription, and that he was seriously injured in consequence. It appeared that he had been ordered a mixture containing aromatic spirits of ammonia, but on taking a portion of it, as prepared by the defendants, his mouth was burnt, and he suffered intensely all through the night. The suggestion for the plaintiff was that a strong solution of ammonia had been used in mistake. Medical evidence was given to show the extent to which the plaintiff was injured, and in the result the jury assessed the damages at £200.

A FOCUS OF DISEASE.

At a recent meeting of the Cork Public Health Committee, Dr. Donovan, superintendent medical officer of health, stated that on April 4th a child was brought to his house suffering from scarlatina, and on inquiry he learned that the child's grandmother and mother were both laundresses, acting as such for one of the large hotels in the city, some clothes from the hotel being at the time in their possession, which were to be delivered that night. Moreover, the child's father was employed at a dairy in the town and was intimately connected with the distribution of milk; and the child's aunt, who lived in the same house, was acting as a school teacher a little outside the city. So that here were three fertile sources of spreading the disease as an epidemic. Dr. Donovan sent the grandmother and child to the fever hospital, and notice was given to the mother not to give or take clothes until all those in the house were disinfected and until she had received permission to do so. The father was given notice to discontinue his duties at the dairy and the aunt kept from attending the school, while the house and its contents were thoroughly disinfected. Dr. Donovan some time since recommended that a set of by-laws should be adopted for the registration of cowkeepers, dairymen, and purveyors of milk, and if this plan were carried out a good deal of trouble might be prevented in cases of this description.

AN IMPORTANT INSURANCE QUESTION.

A case which cannot fail to attract the attention of medical men was before a court of arbitrators in Dublin on April 11th. It arose out of the death of Dr. J. P. Nicholls, of Navan, who, it was alleged, died of blood poisoning, the result of an injury received while making a *post-mortem* examination. The defendants were the Accident Insurance Company, of St. Swithin's Lane, London, with whom the deceased was insured against accident for £1,000. The case for the executor was that the deceased made a *post-mortem* examination for the Crown on a woman who had died of blood-poisoning. A month before he had injured the nail of a finger on the left hand, and he was advised by Dr. Finegan, who assisted him, to protect that finger. It was accordingly protected with oiled silk. In twenty-four hours he had pain in the index finger of the right hand, rigors, and swelling of the limb. Dr. F. A. Nixon, of Dublin, went to see him. The arm was swollen. On the forefinger was a small pustule the size of the head of a pin. He made the necessary incisions, but Dr. Nicholls died. The case was one of blood poisoning, and Dr. Nixon had no doubt that it arose from a puncture on the right forefinger. There was nothing wrong with the left arm. Various medical witnesses were examined. It appeared that the certificate of death described the injury as a "cut on the left index finger;" but this was a mistake. The defendants, through their counsel, contended that the information supplied to them was of a very misleading character, and the company were not satisfied with the answers to their queries. There was no evidence to show how the injury was occasioned, or that it was received at the *post-mortem* examination. To succeed in the action the plaintiff must show that there was a personal injury within the meaning of the policy and that death was the direct effect of the injury. The defendants were not liable for death or disablement arising from disease, although such disease might have been brought on or contributed to, or its effects accelerated by, accident. Blood poisoning was a disease, and it was not the necessary consequence of an accident. Mr. Walker, Q.C. (one of the Court) said he should not be inclined to think that it was a specific disease within the meaning of the policy. If a man broke his leg and blood poisoning arose, was it contended that the defendants could not be liable? Counsel said they did not provide for such a case. It had been decided that where death resulted from pneumonia following on a railway accident the company was not responsible. The arbitrators gave their decision on April 14th. Mr. Walker, Q.C., said they found that blood poisoning was produced by the *post-mortem* examination; that it was the direct cause of death; that it was not a disease within the meaning of the policy; and therefore that the claim was sustainable. Having regard to the way in which the claim was put forward, they did not see that the company could have done anything else but contest it, and the arbitrators had arrived at the conclusion that the defendants should be at liberty to deduct their costs out of the amount payable.

FACTORY LEGISLATION.

Proceedings of the Grand Committee on Trade.

The House of Commons' Standing Committee on Trade, presided over by Mr. Osborne Morgan, resumed on April 13th the consideration of the Factories and Workshops Bill.

Clauses 9 to 18 having been approved with a few amendments, Mr. Macartney moved the omission of Clause 19, which abolished medical certificates for the employment of children and young persons in factories and worshops.

Mr. Mundella said that in 1878 the then Home Secretary was determined not to do anything to weaken the position of the certifying surgeon, and since the second reading of this Bill he himself had been overwhelmed with evidence against the abolition of the office. He produced the books of one of the Manchester certifying surgeons, which showed that in three years he had rejected 95 children out of 334 presented. The records of 19 certifying surgeons in Lancashire gave an average for three years of 1,330 refusals per annum out of a total of 4,870 cases presented. He was at a loss to understand the opposition of the Lancashire operatives to the office of certifying surgeon until he learned that the operatives had to pay the fee of the certifying surgeon, and he had heard of numbers of cases in which employers had charged parents 2s. 6d. for the fee, although only 6d. had to be paid to the surgeon in respect to each child.

Mr. Addison and Mr. Coddington said they had never heard of such a thing being done in Lancashire.

Mr. Mundella was surprised to hear that, and assured the hon. members that if they made inquiry they would find that what he said was correct.

Mr. Matthews stated that in 1889 and 1890 he received a deputation of great weight and importance representing the whole of the manufacturers and operatives of Lancashire, who were unanimous in declaring that the medical certificate had degenerated into a mere farce. Mr. Mawdsley, a working man of long experience in the Lancashire cotton mills, declared that never once had he come across a single case where a child had been objected to by a surgeon on account of disease or anything except want of age. [Cries of "Oh," and Mr. Mundella, "He ought to know better."] He (Mr.

Matthews) had also received a deputation of certifying surgeons, and he was bound to say they made out a very miserable case. Balancing the evidence as well as he could, he arrived at the conclusion that the certificate imposed a burden both on the employer and employed. It must be remembered that the parent might under the Act be charged half the fee, and if a child changed its employment four times in a month it required four fresh medical certificates.

Mr. J. M. MACLEAN did not think the feeling in favour of the abolition of certifying surgeons was as strong in Lancashire as it was a couple of years ago, but nevertheless he would support the clause.

Dr. FARQUHARSON said that Lancashire could not be taken as representing the entire United Kingdom. Mr. Matthews had referred to two deputations which he had received. He (Dr. Farquharson) carefully read over the proceedings of the second of these. Two gentlemen were put forward specially to state the case against the factory surgeons. One of these, Mr. Bond, stated that he was "not so well conversant with the subject as other speakers." The other spokesman, Mr. Buckley, of the United Cotton Spinners' Association, based his case on the oppressive nature of the charges laid on the employers by the medical fees, which amounted in all to £80,000 a year. Mr. Matthews, interrupting, told him he was quite wrong, that the total amounted to £35,000; whereupon Mr. Buckley calmly remarked: "I thought, at the time I was told it was £80,000, that it was excessive." It was on such evidence as this—most of which came from one particular part of England—that the case against the factory surgeons had been got up. He (Dr. Farquharson) held in his hand a large mass of evidence from a considerable number of industrial centres in the United Kingdom—Stockton, Blackburn, Belfast, Manchester, Bristol, Waterford, Radcliffe, Dublin, Preston, Derby, Bury, Accrington, Ashton, Barrow, and Chipping Norton—giving the opinions of various employers of labour strongly in favour of the retention of the factory surgeons. Mr. Matthews had stated that the examination had degenerated into a farce, but he (Dr. Farquharson) was also in possession of a large mass of statistical evidence showing that a very large number of children were annually rejected on account of physical infirmity; this did not take into account the deterrent influence which was exercised by the the knowledge that the medical examination would take place, as well as the well-known fact that a large number of cases were settled, as it were, "out of court," by the child being brought to the surgeon and his opinion taken in an informal way as to its capacity for work. Such opinions, he might add, were generally given gratuitously. The statistics were defective, as the surgeons had not been required to keep any return of their rejections. Some arrangement might be come to by which they could be expected or obliged to make such returns periodically to the Home Office. He thought it would be desirable that the certifying surgeons should be enabled to look at children from time to time to see whether the stress of work was not pressing too hardly upon their constitutions, or whether it might not be desirable for them to change from one variety of work to another. Not only had he shown that there was a great mass of public opinion among employers themselves in favour of the surgeon, but he had himself presented to the House of Commons petitions from a great number of professional bodies, and he was about to receive, and would present later on, a very influential petition in favour of this medical inspection of children from that well-known excellent body, the Society for the Prevention of Cruelty to Children. It was a somewhat harsh proceeding, by one stroke of the pen, to deprive something like 1,500 medical men, who had, on the whole, performed their duties satisfactorily, of considerable professional emoluments; in certain instances factory surgeons had given up private practice. If by any extraordinary chance the retention of this clause should be determined upon by the Committee it would of course be only equitable to consider the question of compensation. It was also quite evident that if the factory surgeon was abolished someone must do the work, however imperfectly, and for that purpose it would be necessary to increase very largely the staff of inspectors. The expense of this would fall upon the taxpayer, not perhaps altogether to his satisfaction. In conclusion, he appealed to Mr. Matthews to yield to what was a very strongly felt wish, from all parts of the House and in all parts of the kingdom, for the excision of this nineteenth clause.

Sir W. HOULDSWORTH said this was one of the few subjects on which employers and employed in Lancashire were entirely agreed. He had never seen a certifying surgeon who thought it part of his duty to examine a child medically in order to see whether it was fit for work or free from disease. The figures which had been mentioned included children who had been refused because they were under age.

Mr. FENWICK rose to speak, but the time for adjournment had arrived.

On Thursday the Committee resumed the consideration of Clause 19.

Lord CRANBOURNE said he supported the rejection of the clause, but only after very great hesitation, for although he knew that the great majority of the operatives and employers in Lancashire were against the continuance of the office of certifying surgeon still he thought the better course for the Government to adopt was to leave things as they were. He admitted that in the great majority of cases the certifying surgeon was unnecessary, but seeing that the expense was so small he thought that for the sake of the small minority of children whom it might benefit the inspection should not be done away with.

Mr. MACLEAN remarked that he had come to the conclusion that sufficient evidence had not been put before the Committee to show that it was desirable to do away with the certifying surgeons. They should remember that the examination was not a farce, but was of great use in preventing weakly and sickly children from being employed in the mill.

Mr. BRUNNER also supported the rejection of the clause, as did Mr. SHAW LEFEVRE, who said that in a conversation with the late Lord Shaftesbury a year or two before his death his lordship said that he regarded the certifying surgeon as one of the greatest safeguards in the carrying out of factory legislation.

Mr. J. CHAMBERLAIN said that the employers of Birmingham were perfectly satisfied with the present arrangement, which he was convinced was one that was conducive both to the advantage of the employers and employed.

Mr. BARRAN said that he came to the Committee with a perfectly open mind on the subject, but from the evidence which had been brought before them he felt bound to vote for the retention of the clause.

Mr. FENWICK said that it could hardly be denied that the medical examination in the past of the certifying surgeons had been of a most perfunctory character, and the working men of Lancashire were only agreeable to the retention of the office on the understanding that in the future the examination should be a real one.

Mr. W. ABRAHAM spoke in favour of the retention of the certifying surgeon, and in doing so he was, he said, echoing the opinion of the vast majority of employers throughout the country.

Upon a division, the clause was rejected by 39 votes to 9.

Mr. MATTHEWS said that upon that decision he would move the omission of subsections 1 and 2 of Clause 20 as follows: (1) Every occupier of a factory or workshop wherein any child or young person under the age of 16 years is employed shall, so long as the child or young person is employed therein and is under the age, keep a certificate of his birth, and shall, when required, produce the certificate to the inspector. (2) A certificate of birth shall either be a certified copy of the entry in the register of births kept in pursuance of the Acts relating to the registration of the birth of the child or young person (whether the copy is obtained in pursuance of the Elementary Education Act, 1876, or otherwise), or be a certificate of the local authority within the meaning of the Elementary Education Act, 1876, to the effect that it appears from the returns transmitted to the authority in pursuance of the said Act by the registrar of births and deaths that the child or young person was born at the date named in the certificate.

The omissions were agreed to.

MISS A. F. BROWNE, who will be remembered by Cambridge men as matron of Addenbrooke's Hospital from 1882 to 1887, when ill-health compelled her to retire, died last month at Mutley, near Plymouth.

THE HOSPITALS COMMITTEE.

Irish Graduates and English Hospitals.

The first meeting after the Easter recess of the Select Committee of the House of Lords appointed to inquire into the administration of the London hospitals and dispensaries was held on Thursday, under the presidency of Lord Sandhurst.

Dr. John William Moore, Fellow and Registrar of the Royal College of Physicians in Ireland, Physician to the Meath Hospital, Consulting Physician to the Cork Street Fever Hospital, was the first witness called.

The Chairman stated that the Committee would be very glad to hear Dr. Moore, but their instructions would not allow them to go into matters affecting Ireland generally in regard to medical institutions.

The Witness then said that, whilst there was not a universal rule in England which excluded other than Members of the Royal Colleges of Surgeons and Physicians from the staff appointments at the London hospitals, there was a very large number of hospitals at which the rule applied. He did not know of any London hospital where the rule did not apply. In the case of a provincial hospital, not long ago a graduate of the University of Dublin sent in an application, and he was found to be ineligible. He also found, during the last few weeks, a number of exclusive advertisements in the British Medical Journal with reference to appointments in London hospitals. The grievance was this: that a man who might perhaps have been in practice twenty or twenty-five years, and held the highest qualification in his own college, would be very reluctant to subject himself to the lower examination in a sister college in order to qualify. Although no representation as to the grievance had been made to the London Colleges, they had been made to various institutions. The exclusive rule secured to the men who had passed in the London Colleges the hospital appointments. Down to 1876 an exclusive rule existed in Ireland in the case of the county infirmaries, which required that every successful candidate for one of the infirmary appointments in Ireland should be a Licentiate of the Royal College of Surgeons of Ireland. But in that year the rule was abrogated by Act of Parliament. All the county infirmaries were now open to all registered practitioners. He simply asked for reciprocity. The exclusive rule as to hospitals certainly did not exist in Ireland.

The Witness, in answer to Lord Monkswell, further stated that there was no need for medical men in Ireland practising in London to put themselves under the jurisdiction of the London Colleges of Surgeons or Physicians, because their own colleges had power over them. In addition to that, the General Medical Council had full powers which they could exercise in connection with all the licensing bodies. The powers of the Council would prove quite sufficient.

In answer to Lord Cathcart, the Witness said that all his arguments as to Ireland would apply to Scotland.

Mr. Henry Gray Croly, F.R.C.S.I., President of the Royal College of Surgeons in Ireland, Senior Surgeon to the City of Dublin Hospital, ex-Examiner in Surgery and Operative Surgery to the Royal College of Surgeons in Ireland, was next called, and supported the evidence of the previous witness. Although not saying that the Dublin diplomas were superior to the English, he contended that their examinations were not inferior to, and were of quite as high a standing, both for the licence and the Fellowship, as the English examinations. The public were protected in every way by the Dublin examinations.

Major-General Mercer, Chairman of the Board of Management of the West End Hospital for Paralysis and Epilepsy, stated that it was founded about twenty years ago. It was not entirely free, although there was a free ward, and no one was refused admission. There had been no in-patients since he had been chairman, because the hospital had been entirely rebuilt from the very foundation. When finished there would be from forty-five to sixty beds. The hospital had received increasing grants from the Hospital Saturday Fund, but not from the Hospital Sunday Fund. The accounts were audited by a chartered accountant.

Dr. Tibbit said he was the founder of the hospital. Previously to its being a hospital it was a butcher's shop, and the funds to found it came from his friends. In 1878 there was no hospital for paralysis and epilepsy which admitted children, and besides he entertained the opinion that epileptics should be treated as out-patients, and not in the wards of a general hospital. It was now maintained by voluntary contributions, and there were several bazaars to raise funds, including the "Ice Carnival," which realised £1,400 net profit for the hospital. They had just had "The Coming Race" at the Albert Hall for the benefit of the hospital. That had been a most unfortunate loss, which fell upon his shoulders alone, and it had been his most earnest endeavour to know why the Council of the Hospital Saturday Fund had refused the grant; but he could not get a reason from the Treasurer of the Fund for the refusal. He had differences with Lord Robert Montagu, and there had been resignations of most of the members of the medical staff, and not one of them would give any reason for their resignation.

In reply to Lord Kimberley and other members of the Committee, the Witness said that the present board approved of the management. In 1884 there was an entirely new medical staff, and with one exception there had been no difficulty. One of them disapproved of the association of the school of massage with the hospital. There was intense jealousy against new special hospitals. His principle was that the nurses should always work under the supervision of of medical men. He altogether disapproved of the treatment of uterine disease by massage. The treatment of diseases of the uterus by massage was a monstrous thing, and ought not not to be. He always sets his face against it. The pupils paid fees for admission to the school. The massage establishment he was afraid was not paying its expenses. There were now he believed about a dozen students. Although not the owner of the school he was responsible for it, and if there were any profits from the school it would go to the proprietor, who was his wife. Whilst in the hospital the nurses did not go out as *masseuses* until they had received their certificates. Although the massage was carried on by uncertificated nurses, without the presence of a medical man, it was always done on the written instructions of the medical staff. There was never any profit from the hospital to the founder, in fact it had been a dead loss to him. There were other qualified medical men connected with it.

Mr. Alexander Dowell, Honorary Secretary and Treasurer of the Hospital, said he attended at the hospital twice a week, and more frequently on special occasions. The out-patient department was very crowded. The cost of appealing for funds was very great. All the professional medical work was done without payment. There were three physicians, an ophthalmic surgeon, and a general surgeon, and the throat and ear post was now vacant. The matron received £50, with board and lodging. Electricity was part of the curative system, but he could not say whether that was the cause of the medical hostility to it.

Dr. Armitage having given evidence in favour of special hospitals, the Committee adjourned until Monday.

The Duke of Connaught will preside at the dinner of the North-Eastern Hospital for Children to be held at the Holborn Restaurant on May 15th.

A Lock Home.—A small medical home, containing twelve beds, has been opened by the National Vigilance Association, to whom cases of venereal disease may be sent for treatment by a woman doctor. Preference will be given to cases sent from the rescue homes, and it will be the earnest desire of all connected with the medical home to aid in the moral reform of the patients. The primary object of treatment in this home is the reclamation of patients from a life of vice. With this view the committee desire especially to take in cases of young women arrested early in their downward career, for whom association with older and more hardened prostitutes in the lock wards of infirmaries and hospitals has been found to be damaging to such a degree that those experienced in rescue work hesitate to send them for the necessary treatment. The home will be entirely unsectarian in character, but every effort will be made to bring moral and spiritual influence to bear upon the girls as a means of lifting them from their degraded condition. No charge will be made for patients.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members, in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

Meetings of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 18th and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

Oxford and District Branch.—The next meeting will be held on Friday, April 24th, in the Radcliffe Infirmary, Oxford, at 3.15 o'clock in the afternoon. Gentlemen are requested to give notice of papers, cases, etc., to W. Lewis Morgan, the Honorary Secretary, 42, Broad Street Oxford, on or before Friday, April 10th.

South-Eastern Branch: West Kent District.—The next meeting of this District will take place on Thursday, May 28th, at Gravesend, Mr. O. R. Richmond in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, Mr. A. W. Nankivell, St. Bartholomew's Hospital, Rochester not later than May 2nd, 1891. Further particulars will be duly announced

Midland Branch: Leicestershire District.—A meeting of the above district will be held in the Board Room, Leicester Infirmary, on Friday, April 24th, at 3.30 P.M. The following papers, etc., are already promised: Mr. Marriott will show a Case of Innominate Aneurysm Cured by Simultaneous Ligature of the Subclavian and Carotid Arteries. Mr. Bond: On Some Points in the Operation for Ruptured Perineum. Mr. Bond will also show a New Form of Tracheotomy Tube, with Patient. Dr. Pope: Pneumothorax from Rupture of an Air Cell in an Emphysematous Lung. Dr. Pope will also show Cases of Lupus under Treatment by Koch's Tuberculin. Dr. H. Handford: Case of Pernicious Anæmia: Recovery. Dr F. W. Bennett: Nasal Obstruction and its Effects. Several pathological exhibits, instruments, etc., will be shown. Members wishing to read papers or show specimens are desired to communicate with the Honorary Secretary, Dr. Frank M. Pope, Campbell House, Leicester. N.B.—Afternoon tea will be provided after the meeting.

North of Ireland Branch.—A general meeting of the North of Ireland Branch will be held in the Royal Hospital, Belfast, on Thursday, April 23rd, at 4 P.M. Gentlemen who wish to read papers, show patients, specimens, etc., will kindly communicate, as early as convenient, with John W. Byers, M.D., Secretary, Lower Crescent, Belfast.

East Anglian Branch: Essex District.—A meeting will be held at Brentwood on Thursday, May 21st. Gentlemen having communications to bring before the meeting are requested to notify the Honorary Secretary of the District, Mr. C. E. Abbott, Braintree, as soon as possible. Further particulars will be duly announced.

Metropolitan Counties Branch: North London District.—The next meeting of this District will be held at the Tottenham Hospital, The Green, Tottenham, on Thursday, April 30th, at 8 P.M., Sir William Mac Cormac, President of the Metropolitan Counties Branch, in the chair. Dr. F. de Havilland Hall will read a paper on "Clinical Notes on Diseases of the Pharynx." Discussion to follow. Some interesting cases from the wards will also be exhibited. All registered medical men, whether members of the Association or not, are earnestly invited to attend these meetings.—George Henty, M.D., Honorary Secretary.

Metropolitan Counties Branch: Western District.—A meeting of this District will be held on Tuesday, April 29th, at the Lyric Hall, Ealing Broadway. The chair will be taken by Mr. F. C. Dodsworth, L.R.C.P., at 8.30 P.M. A paper will be read and a demonstration given by Mr. W. J. Walsham, F.R.C.S., Assistant-Surgeon St. Bartholomew's Hospital, on "Nasal Obstruction and its Treatment." The honorary secretary will be pleased to receive notice of papers or specimens of interest (microscopical, pathological, or clinical).—C. A. Patten, Honorary Secretary, Marpool House, Ealing.

North of England Branch.—The spring meeting will be held at Sunderland, on Thursday, April 30th, at 3.30 P.M. Notices of papers, etc., should be sent in at once.—G. E. Williamson, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-upon-Tyne.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.

A meeting of this District was held on Friday, April 3rd, at the Lyric Hall, Ealing Broadway, W. The chair was taken by Sir William Mac Cormac, Surgeon to St. Thomas's Hospital, and President of the Branch.

Demonstration of Orthopædic Cases.—The minutes of the preceding meeting having been read, Mr. Noble Smith gave a clinical demonstration of typical orthopædic cases and their treatment. By means of a lay figure and a variety of apparatus he showed how these cases might be dealt with by the surgeon without complicated instruments. The following principles were advocated: First, the simplification of mechanical appliances; secondly, the advantages of employing natural forces to act remedially as much as possible, both by (*a*) exercises and also (*b*) by directing the natural movements when applying instruments, and placing as little dependence as possible upon statical force—in other words, a joint which gives way in one or other direction should not be supported by fixture, but simply retarded from bending into an unnatural position. The apparatus shown were made of tempered steel, so that the surgeon himself could make the necessary alterations in their shape. An instrument for talipes was shown, which could be altered in the most simple manner from a fixed joint—necessary directly after operation—to a free joint or stop-joint which might be required for a subsequent period, thus obviating the usual expensive procedure of having a variety of instruments for different stages in the treatment. For support of the spine in caries it was advised that any apparatus which was used should be constructed on the principle of fixing the upper part of the spine by attachment to the shoulders, leaving the chest perfectly free from pressure, the projecting angle being supported by soft pads and the lower part of the apparatus being attached to the pelvis. By this means the spine was more thoroughly supported, while the functions of the thorax were assisted instead of being interfered with. A very simple tin splint was shown for use after operation for Dupuytren's contraction of the palmar fascia, instead of the elaborate apparatus with rack joints which was often used. A discussion followed in which the President, Dr. Cleveland, Mr. Patten, Mr. Henry Davis, and others took part.

A meeting of this District was held at Ealing on April 14th, Dr. J. B. Christie, C.I.E., in the chair.

Paper.—Dr. C. Y. Biss read a paper on Visceral Neuralgia and its Treatment, in which he laid considerable stress upon the necessity of ordering absolute rest in cases of neurotic gastralgia.

SOUTH-WESTERN BRANCH.

An intermediate meeting of the Branch was held on March 5th at Newton Abbot, and was attended by twenty-five members. Dr. Slade-King, President of the Branch, occupied the chair.

Typhoid Fever.—A discussion on "The Difficulties and Uncertainties in the Diagnosis of Typhoid Fever" was opened by Mr. C. H. Wade (Chudleigh). Mr. Wade based his conclusions on two obscure cases of continued fever, the symptoms of which presented many features of a typhoid character. It was contended that the essential feature of enteric fever lay in the presence of intestinal lesions, and that without them no assemblage of symptoms warranted the diagnosis of typhoid. The speaker urged that the term was far too frequently employed without proper justification, and quoted authorities in proof of the assertion. The possible injury

that might ensue from an improper use of the term "typhoid" was dwelt upon, and the prime importance of greater accuracy in diagnosis. A well-sustained discussion followed the reading of Mr. Wade's paper, the general conclusions arrived at being in harmony with those expressed therein.

Paper.—Mr. YOUNG EALES (Torquay) read a paper on a "Case of Ruptured Membranes (Accidental) fourteen days before Commencement of Labour."

LANCASHIRE AND CHESHIRE BRANCH.

Midwives Bill.—A special general meeting of the members of this Branch was held in the Owens College, Manchester, on Wednesday, April 8th, 1891. Present: Dr. LEECH (President) in the chair, and 45 members. The President having taken the chair, he called upon the honorary secretary to read the resolution calling the meeting. This having been done the honorary secretary read the report of the Committee appointed to consider the Midwives Registration Bill. The Committee reported that they had met six times. The desirability of any legislation on the subject was first discussed, and the affirmative carried by the casting vote of the Chairman. The report then discussed the clauses of the Bill seriatim suggesting various amendments. The minority report, presented by Dr. Rentoul and signed by 24 members of the Committee was read by the honorary secretary as follows: "The undersigned members of the Committee appointed by the Lancashire and Cheshire Branch of the British Medical Association to consider and report upon the Midwives Registration Bill, beg to report to the members of the Branch that we have considered the Bill clause by clause and are of opinion that the Bill should be opposed, its defects being so numerous as to render its emendation impracticable. We would call your serious attention to the fact that although various important amendments have been discussed no one can give you any guarantee whatever that such amendments will be accepted by the House of Commons or that the Bill will not be passed in a form objectionable to the bulk of the medical profession. We therefore suggest that the Lord President of the Privy Council, the Home Secretary, the President of the Local Government Board, the members of Parliament for Lancashire and Cheshire, and the Council of the British Medical Association be earnestly requested by the Council of the Lancashire and Cheshire Branch to use every effort to oppose this Bill." The report and the minority report being now before the meeting, Dr. LEECH proposed, seconded by Dr. BARRON, "That the report of the Committee be received and adopted." Dr. RENTOUL, seconded by Dr. ILLINGWORTH, thereupon proposed as an amendment. "That the so-called minority report be the report of the Lancashire and Cheshire Branch, and that as such it be received and adopted."—Drs. RENTOUL, WAHLTUCH, JOHNSON-MARTIN, CAMPBELL, DUNN, BROADBENT, and others having spoken, the amendment was put to the meeting and carried, 24 voting for and 4 against. On the motion of Dr. BARRON, the names of the dissentients were ordered to be taken down by the honorary secretary for entry on the minutes. The amendment having now become the substantive motion, it was put formally from the chair and carried.

WEST SOMERSET BRANCH.

THE spring meeting of this Branch was held at Taunton on April 9th. Twelve members attended. Mr. RIGDEN was voted to the chair until the PRESIDENT (Mr. Kemmis) arrived, which he did at 5.20 P.M.

Annual Meeting.—The minutes of the autumnal meeting having been read and confirmed, the time for holding the annual meeting at Milverton was considered. It was resolved that it be held on Thursday, June 25th.

Royal Commission on Tuberculosis.—Mr. STEPHENS read and distributed copies of a circular issued by the Royal Commission on Tuberculosis, inviting medical practitioners to communicate, for the information of the Commission, any observations that they may have made on the apparent communication of tubercle from animal to man or from man to animal.

Army Medical Staff.—Dr. KELLY read a circular issued by the acting Chairman of the Parliamentary Bills Committee (and distributed copies of the same to those who would take them) drawing attention to the correspondence between Sir Andrew Clark and Mr. Stanhope on the position of the Army Medical Staff, and urging that the utmost influence should be brought to bear on members of Parliament to support and plead the cause of army medical officers.

Disposal of the Dead.—After dinner, the question, as settled by the Council, namely, "What, in your opinion, is the best method of disposal of the dead in England?" was well discussed. Written answers were read by the HONORARY SECRETARY from Dr. Cordwent, Mr. Cornwall, and Mr. Alford, who were unable to be present. The general opinion, from a sanitary point of view, was decidedly in favour of cremation. Nevertheless, it was considered that the time had not arrived when it should be made compulsory. Incidental to the question, it was considered that, as long as interment in the earth continued to be practised sanitary precautions should be better enforced. Vaults and brick graves should be prohibited; coffins (if not altogether dispensed with, as one member suggested) should be of the most perishable material; the body, or coffin, should be laid in a shallow grave, and be covered with dry earth, or, in special cases, with a disinfecting material; and the drainage of cemeteries should be better attended to. A valuable suggestion in regard to the burial service was made, namely, that the whole office should be conducted in the church or chapel, and the present custom of standing, for the latter part of the service, bareheaded by the side of the grave be done away with. The cause of many serious and fatal illnesses would thus be avoided.

Communications.—Mr. HUNT read notes of a Case of Abnormal Temperature of Three or Four Months' Standing. After discussion, the case was thought to be probably one of endocardial mischief.—Mr. BARKER mentioned a Case in which alarming dysenteric results had followed the administration to a child of an enema of infusion of quassia, which he had ordered. On investigation, he found that the infusion, which had been dispensed by a druggist, contained a large quantity of crude spirit. He found that it was the practice of druggists to dispense concentrated infusions made with spirit (not always of the purest character).

CAPE OF GOOD HOPE BRANCH.

THE annual general meeting of this Branch was held on September 9th, 1890, in the rooms of the Young Men's Christian Association, Long Street, Cape Town, Dr. BAIRD, President, in the Chair. The following were present:—Drs. Murray, Anderson, Piers, Harman, Silke, Herman, Fismer, Whitty, Hewat.

General Business.—A letter from Mrs. J. Wright, widow of the late Dr. John Wright, was read, thanking the Branch on behalf of herself and family for their letter of condolence.—Dr. SILKE proposed, and Dr. BAIRD seconded, Dr. J. Hanau, of Carnarvon, as a new member.

Annual Reports.—The Hon. Secretary's report was then read. It stated that during the year (the second of the Branch's existence) eight meetings had been held, with an average attendance of eleven, as against six in the previous year, with an average attendance of ten. Among the subjects submitted to the Branch had been a proposal to reorganise the New Somerset Hospital, but the matter had been dropped for the time, partly owing to the change in the Colonial Ministry. Later in the session two Bills of special importance to the medical profession had been introduced by the late Government—the Registration of the Births and Deaths Bill and the Medical Bill. The former had speedily been withdrawn, but there was some prospect of an Amended Bill being introduced next session. The Medical Bill had also been withdrawn, but the Secretary, having interviewed the Attorney-General (Mr. Innes) on the subject, was informed that it had been sent back to the Select Committee, and would probably be divided into a Medical and a Pharmaceutical Bill, both of which, it was hoped, would be introduced during the next session of Parliament. Letters had been received from the President and Secretaries of the parent Association, inviting one or more delegates from the Branch to the annual meeting held in Birmingham at the end of July, 1890. Accordingly Surgeon-General Faught and Dr. A. Petersen were deputed as representatives. From the former letters had been received speaking highly of the welcome accorded to him and the hospitality he received. Dr. A. Petersen had also attended the International Medical Congress at Berlin on

behalf of the Branch, but no report had yet been received from him. A discussion was held with a view to establish some uniformity in the matter of the collection of consultation fees, but no definite conclusions were arrived at. The specimens shown at the meetings had included the following: Villous Growth from a Long Standing Case of Hæmaturia, Dr. J. H. M. Beck; Ovaries, etc., from a Case of Pyosalpinx, Dr. L. A. W. Beck; Fœtal Monstrosity, Dr. Stevenson; Cyst of Broad Ligament from which Six Gallons of Fluid had been Removed, Dr. Stevenson. The following papers had been read: Dr. Beck, On Cases of Chronic Endometritis Treated by Apostoli's Method; Dr. Murray, Notes of a Case of Snakebite and Lumbar Colotomy; Dr. Anderson, Notes of a Case of Trigeminal Neuralgia. The progress of the Branch for the past year had been very satisfactory, no fewer than fifteen new members having joined. The total number of members now on the books was nearly forty. During the year the Branch had had to lament the death of Dr. John Wright, for many years a practitioner in the suburbs, and one of the oldest members of the profession in the Colony. An expression of the general regret was recorded in the minutes, and a letter of condolence forwarded to the family of the deceased.—Dr. Anderson proposed the adoption of the report, and suggested that in future the annual report should emanate from the Council.—Dr. Murray seconded both Dr. Anderson's proposals, and moved that the latter be an instruction to the incoming Council. Both proposals were carried *nem. con.*—Dr. Herman proposed that the Secretary's report be printed, and circulated among the members of the Branch; and that a full report of the meeting be forwarded to the British Medical Journal.—Dr. Anderson, the Hon. Treasurer, read his report, showing a credit balance of over £30. The report was unanimously adopted, and it was announced that all moneys lying idle be deposited in the Post Office Savings Bank. Dr. Piers was appointed to audit the accounts.

Election of Office Bearers.—The meeting then proceeded to elect office bearers for the ensuing year.—Dr. Herman proposed, and Dr. Piers seconded, Dr. Baird as President.—Dr. Baird, having thanked the members for the honour done him, begged to be allowed to retire from the chair, and proposed Dr. Herman; Mr. Silke seconded.—Dr. Murray, while much regretting Dr. Baird's determination, considered Dr. Herman's claims to the office very great. Dr. Herman was then unanimously elected President for the ensuing year. *Vice-President:* Deputy Surgeon-General Colahan was proposed by Dr. Murray, and seconded by Dr. Piers. Elected *nem. con. Hon. Secretary:* Dr. Silke having declined re-election, Dr. Silke proposed, and Dr. Baird seconded, Dr. Piers for the office. Carried *nem. con. Council:* A ballot having been taken, resulted in the election of Drs. Baird, Murray, Stevenson, and Douglas.

President's Address.—The President (Dr. Baird) then delivered the annual address. After a retrospect of the past year, he gave an account of recent researches into the relation of tuberculosis in cattle to the same disease in mankind, drawing copious illustrations from the immunity of the Jews from phthisis, and pointing out the necessity for sanitary regulations in the slaughter and sale of meat.—Dr. Murray, in proposing a vote of thanks to the President, again urged the necessity for a Department of Public Health. He thought that medical men themselves did not take sufficient interest in the subject.—Dr. Herman seconded, and the vote was passed by acclamation. The President returned thanks.

MALTA AND MEDITERRANEAN BRANCH.

A quarterly meeting of the Branch was held on March 16th at the Station Hospital, Valetta, Brigade-Surgeon O'Dwyer, M.S., the senior member present, in the chair.

Minutes.—The minutes of the previous meeting were read and confirmed.

Lupus Treated by Koch's Injections.—Professor Bonnici showed two cases of severe lupus, at present under treatment in the Civil Hospital, and illustrated the same with charts indicating the variations in temperature after each injection. While they had been treated for years with very little if any benefit by other means they had shown marked improvement under Koch's treatment.

Specimens.—Surgeon Dennis, R.N., exhibited two specimens of Ulcerative Laryngitis, which had caused death. The first, of syphilitic origin, presented well marked ulceration of the inner surface of the cricoid cartilage. The second was of tuberculous origin. *Post-mortem* examination revealed caseation of the bronchial glands and ulceration commencing under the epiglottis and attacking the vocal cords and thyroid cartilages, the latter being ulcerated through and pus escaping into the cellular tissue.

Prevention of Venereal Diseases.—Dr. I. Psaila read a paper in which he showed the necessity of amending the law in Malta referring to the prevention of venereal diseases. As far back as 1861 an Act had been in force compelling all public prostitutes to be fortnightly visited by the police physician, and, at the request of the woman, also by two other medical men appointed by the magistrate, and if she were found suffering from venereal disease she was isolated in the Lock Hospital until cured. Doubtful cases occurred, however, and in such cases the woman was released. Dr. Psaila proposed that the doubt should go in favour of the public and not of the prostitute, and that she should be kept under observation and isolated until the medical experts could come to a definite decision on the case. Dr. Psaila also pointed out that it was necessary to alter the existing regulations of the Civil Hospital prohibiting the admission of men suffering from primary manifestations of venereal disease, but admitting them when complications or secondary symptoms of syphilis supervened. He showed that such an arrangement rendered more difficult the treatment of venereal diseases, favoured their spreading, both in their primary and secondary stages, and entailed greater expense on the public revenue, the disease taking a longer course when not properly treated from the beginning. Dr. Psaila lastly said that, in his hands, the best method of treating gonorrhœa was by alkalies, and of syphilis by the hypodermic injections of hydrargyri bichloridum.

Committee on the Prevention of Venereal Disease.—A Committee was appointed to investigate the subject with reference to the prevention of venereal diseases, and to report to the Branch as to the best manner in which to approach the Government, so that the law in Malta might be amended accordingly.

New Members.—The following gentlemen were elected members of the Branch: Staff-Surgeon Lambert, Surgeons Hewlett, Chambers, Townsend, and Dennis, R. N.; Surgeons Duncan and Corcoran, M.S.; and C. Ghio, M.D., district medical officer for Valletta.

BATH AND BRISTOL BRANCH.

The fifth ordinary meeting of the session was held on March 25th at the Museum and Library, Bristol, A. B. Brabazon, M.D., President, in the chair. There were present forty-seven members and two visitors.

New Member.—Surgeon-General Irving, M.D., of Clifton, was elected a member.

Communications.—Mr. C. F. Pickering related some Cases of Arthrectomy, upon which observations were made by Mr. Harsant and Mr. Greig Smith.—Dr. J. Michell Clarke read a paper on the Modern Diagnosis of Some Stomach Affections, which was discussed by Drs. Roxburgh and Shingleton Smith and Mr. Greig Smith.—Dr. Aust-Lawrence read a paper on Midwifery Forceps, their Use and Abuse. Dr. Swayne, Mr. Ewens, Dr. Brown, and Dr. Fairbanks joined in the discussion which followed.

ABSTRACT OF PROCEEDINGS OF COUNCIL.

At a numerously attended meeting of the Council, held in the Council Room at the offices of the Association, 429, Strand, W.C., on Wednesday, April 15th, 1891, Dr. W. Withers Moore, President of the Council, in the Chair, it was

Resolved: That the financial statement for the year ending December 31st, 1890, as certified by the auditors, be approved and published in the British Medical Journal in accordance with By-law 26.

The remainder of the Proceedings of the Council will appear in a future number of the British Medical Journal.

FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31st, 1890.

BALANCE SHEET.

Dr. LIABILITIES.	£ s. d.	£ s. d.
To Subscriptions paid in advance		650 5 10
,, Advertisements ditto		417 11 0
,, Publishing ditto		11 15 0
,, Library		49 16 4
,, Contributions		620 18 8
,, Committee for the Investigation of the Mental State and Fitness of School Children		75 0 0
,, International Congress of Hygiene		100 0 0
,, Reporting		22 18 6
,, Engraving		119 13 7
,, Printing Journal		320 6 4
,, Paper for Journal		765 13 0
,, Miscellaneous Printing		37 11 5
,, Reference Committee		63 0 0
,, Therapeutic Committee		200 0 0
,, Parliamentary Bills Committee		50 15 6
,, Stationery		45 14 9
,, Coal and Coke		3 17 0
,, Repairs		12 13 11
,, Legal Charges		38 1 8
,, Wood Fund		25 0 0
,, Rates, Taxes, and Gas		162 16 11
,, Plant and Type		481 3 9
,, Sundries		41 18 6
,, Office Furniture and Fixtures		13 19 0
TOTAL LIABILITIES		4,330 10 8
,, Depreciation—as at 31st Dec. 1889	2,320 1 5	
Lease, 18 years, one-eighteenth of 4,500 0 0 =	250 0 0	
Lease, 16 years, one-sixteenth of 3,200 0 0 =	200 0 0	
Alterations, one-eighteenth of 4,278 17 2 =	237 14 3	
Amount written off India Stock redeemable at par in 1931, one-thirty-ninth of 302 11 0 =	7 15 2	
Furniture, 15% on 1,941 15 6 =	291 5 3	
		3,306 16 1
,, Surplus Account, namely:—		
Balance on January 1st, 1890	38,956 7 7	
Profit for 1890 brought from Revenue Account	2,376 17 3	
,, BALANCE, being total of excess of assets over liabilities		41,333 4 10
		£48,970 11 7

Cr. ASSETS.	£ s. d.	£ s. d.
By Subscriptions—Amount due		1,282 16 10
,, Advertisements—Amount due		3,144 19 11
,, Sundry Sales—Amount due		143 10 2
,, Lease		4,500 0 0
,, ,, Agar Street Premises		3,200 0 0
,, Alterations of Premises		4,278 17 2
,, Furniture, and Fixtures at cost		1,941 15 6
,, Library as at 31st December 1889	510 4 0	
,, Additions, 1890	234 11 11	
		744 15 11
,, Plant and Type, Dec. 31st, 1889	1,898 0 7	
,, ,, Additions, 1890	650 11 5	
	£2,548 12 0	
,, Less Depreciation Fund	693 3 10	
		1,855 8 2
,, Interest due on Investments		326 6 5
,, INVESTMENTS		23,871 18 6
,, Cash, namely:—		
London and Westminster Bank on current account	1,606 11 5	
Ditto, on deposit	2,000 0 0	
Ditto, at Office	73 11 7	
		3,680 3 0
		£48,970 11 7

Revenue or Profit and Loss Account for Year ending December 31st, 1890.

	£ s. d.	£ s. d.
Editorial Expenses (Salaries, Contributions, Engraving, and Reporting)	5,281 1 3	
Expenses of Journal (Printing, Postage, and Paper)	14,675 12 10	
Office Expenses (Rent, Taxes, Office Postage, etc.)	2,420 1 3	
Office Salaries and Wages	2,242 3 0	
Association Expenses (Scientific Grants, Scholarships, Expenses of Committees, etc.)	3,114 12 5	
Plant Depreciation Fund	250 0 0	
Provision towards redemption of expenditure on Alteration of Premises, Lease of Premises, and Furniture and Fittings, and Premium on India Stock	986 14 8	
	28,970 5 5	
Subscription Losses from death, resignations, etc.	468 6 9	
	29,438 12 2	
Profit for Year carried to Balance Sheet	2,376 17 3	
	£31,815 9 5	
Subscriptions		14,441 11 10
do. former years		99 18 4
Advertisements (less discounts and allowances)		13,835 11 11
Sundry Sales of Journal ,, ,,		1,464 16 11
Collective Investigation Record Sales		2 6 2
Sundries—Reading and Binding Covers		101 1 5
Reprints		125 12 10
Interest on Investments		833 7 9
Unexpended Grants to Committees returned		195 15 2
Scientific Grants unused and returned		127 19 10
Sale of Waste, etc.		22 5 5
Discount on Printing, Paper, etc.		565 1 10
	£31,815 9 5	

STEWART FUND.

£579 invested in 4 per cent. Caledonian Railway Debenture Stock, in the name of the British Medical Association.

1890.		£ s. d.
Jan. 1.	To Balance brought down	63 5 7
Dec. 31.	,, Interest one year on £579	22 11 8
		£85 17 3
1890.		£ s. d.
Dec. 31.	By Balance carried down	85 17 3
		£85 17 3

HASTINGS FUND.

£477 invested in 4 per cent. London and North Western Railway Debenture Stock, in the name of the British Medical Association.

1890.		£ s. d.
Dec. 31.	To interest one year on £477	18 10 6
		£18 10 6
1890.		£ s. d.
Jan. 1.	By Balance	2 6 4
Dec. 31.	,, Amount refunded to the British Medical Association	8 15 0
,, 31.	,, Balance carried down	7 9 2
		£18 10 6

MIDDLEMORE FUND.

£500 invested in 4 per cent. North British Railway Debenture Stock, in the name of the British Medical Association.

1890.		£ s. d.
Jan. 1.	To Balance brought down	93 11 4
Dec. 31.	,, Interest one year on £500	19 10 0
		£113 1 4
1890.		£ s. d.
Aug. 1.	By Award (Dr. W. A Brailey)	50 0 0
,, 1.	,, ,, (Mr. Priestley Smith)	50 0 0
Nov. 4.	,, Payment for Engrossing Certificates	1 18 0
Dec. 31.	,, Balance carried down	11 3 4
		£113 1 4

We have examined the foregoing Accounts, with the Books and Vouchers of the Association, and find the same to be correct.

PRICE, WATERHOUSE, & CO.,
44, Gresham Street, E.C.

March 23rd, 1891.

SPECIAL CORRESPONDENCE.

SHEFFIELD.

Reappearance of Influenza.—Indecent Assaults and the "Cat."—Suicide after Failure of Koch's Treatment.

INFLUENZA has reappeared in the town and district, and medical men are finding their lists running up with the same class of cases they were accustomed to meet with rather more than twelve months ago. It would seem that whilst many cases are more of the nature of severe colds others partake of the character of true influenza. The weather has been cold, and easterly winds have for some time prevailed.

A more than usually brutal outrage is reported from Barnsley. A man, only liberated last September on leave for the remainder of an unexpired term of ten years' penal servitude for an assault on one of his daughters, has been caught in the act of committing an outrage on his little daughter, aged 10. The feeling of the public is evidenced by the remarks of the *Sheffield Daily Telegraph*: "that no confinement, no hard labour is punishment enough for the mere brute who perpetrates such crimes. The 'cat,' which stopped the garotter, might fitly be tried on their backs."

The hopes sometimes inspired by Koch's method of treating phthisis have had a most sad ending, in a case in this neighbourhood (Bakewell). The patient is reported to have suffered from a "peculiar affection of the throat" for a year or 18 months. Since Christmas he has been treated by Koch's method. For a time he appeared benefited, and he looked forward to recovery. But later these hopes were proved to be delusive, and he, a few days since, terminated his existence by shooting himself with a pistol.

CORRESPONDENCE.

PROPOSED RECONSTITUTION OF THE UNIVERSITY OF LONDON.

SIR,—There are some grave misconceptions about the scheme of the Senate of the University of London. One is that the modified University will necessarily contain Provincial Constituent Colleges, and that thus it will be contrary to the recommendation of the Royal Commission, and will not meet the wants of the London Colleges and Medical Schools. This is not so. The scheme goes no further than giving the Senate the option of including Provincial Colleges; and it also gives power to remove them. The chief Provincial Colleges are ineligible, as they are affiliated to the Victoria University. It is quite possible that none of the others will apply for admission; or, if they do, the Senate will not be satisfied with the grounds given for such admission. Moreover, if admitted, they will not interfere at all with the London colleges and schools, which are, in their own right, constituent colleges that cannot be removed by the Senate. The question of Provincial Colleges is, therefore, an unimportant matter.

Next, it is urged that the M.D. is unaltered. This is not correct, for it is rendered much more accessible, as a candidate can attain his M.B., and his M.R.C.S. and L.R.C.P. by passing one set of professional examinations, thus saving expense, time, and risk of failure. The University will determine the standard for the M.B., and the Colleges that for the M.R.C.S. and L.R.C.P. It is incorrect to conclude, as some have done, that the Colleges will have the power of granting degrees. It is stated that the scheme satisfies none of the bodies concerned. It is obvious that when there are so many bodies interested, and each wants all it can get, none can be completely satisfied.

It seems to me a very strong reason why every member of Convocation should support the scheme is that it has been adopted by the Senate, the Royal Colleges of Physicians and Surgeons, University and King's Colleges (with certain reservations with regard to Provincial Colleges) by all the London Medical Schools, and by the Incorporated Law Society; that is to say, by nearly all the bodies interested. A particular reason why medical graduates should uphold it is that it gives a just proportion of the representation and government of the University to the medical profession. Those who oppose it should remember that if this scheme is not adopted, one of two things must happen: either the Medical Faculty of London must be left in its present unsatisfactory state for many years to come; or a second University will be founded in London. This will lead to dangerous rivalry, and probably to a lowering of the standard for degrees by one or both of the Universities. Further, there will be great confusion between the two London degrees.—I am, etc.,

W. HALE WHITE, M.D.Lond.

Harley Street, W.

ON THE DIAGNOSTIC VALUE OF VENOUS HUMMING MURMUR IN THE NECK.

SIR,—In the BRITISH MEDICAL JOURNAL of April 11th Dr. Bewley has given the results of his interesting observations on the diagnostic value of the venous humming murmurs audible in the neck. I would point out that the late Dr. Herbert Davies made also an exhaustive series of observations of a similar nature, which are published in detail in his work entitled *Diseases of the Lungs and Heart*, 1851. He examined 50 of the finest, healthiest, and ruddiest men in the Coldstream Guards, whose ages ranged from 21 to 27, and found the murmur present in 88 per cent., and in 22 the murmurs were heard on both sides, and in 6 a sternal venous murmur was audible also. A similar examination of 100 healthy young men, varying between 17 and 23 years of age, and belonging to the Provisional Battery, Chatham, gave the result of 85 per cent., and in 44 the murmurs were loud on both sides, and in 10 traces were found on both sides, while a sternal venous murmur was present in 11. Again, in 53 healthy young females, varying from 16 to 28 years of age, the result was found to be 85 per cent., and in 17 the murmur was loud on both sides, and in 9 traces were audible on both sides. He found that the murmurs became less frequent after the prime of life, although sometimes audible in extreme old age. He also fully confirmed Dr. Liman's statement as to the frequency of these murmurs in children, having found them in 765 out of 802, or in 95 per cent. His conclusions are identical with the last two of Dr. Bewley's.—I am, etc.,

Finsbury Square, E.C. ARTHUR L. DAVIES, M.D.

GASTRO-ENTEROSTOMY.

SIR,—Under the above heading Mr. Kilner Clarke has published a most interesting case in the BRITISH MEDICAL JOURNAL of April 11th, page 798, upon which I should like to make one or two observations.

Mr. Clarke says: "The jejunum not being visible, I pushed aside the great omentum, and turning up the lower part of the stomach, saw it lying beneath the transverse mesocolon. Making a rent in the mesocolon, I brought up the intestine," etc. I do not quite understand how this proceeding was carried out, as to turn up the lower part of the stomach, unless the transverse colon and omentum were turned up as well, the gastro-colic omentum must have been torn through, when naturally the jejunum would have been found lying beneath the transverse mesocolon. Had the transverse colon been turned up, the jejunum should have been seen lying directly below the mesocolon.

I have often advocated the fixing of the jejunum to the posterior wall of the stomach. In the one case in which I have practised this method I turned the great omentum and transverse colon aside and made an opening through the transverse mesocolon, drew a portion of the posterior wall of the stomach through the rent, made an opening into the stomach and inserted the bone plate, passing the lateral threads through all the coats of the stomach, also through the mesocolon, from above downwards: the threads being held firmly, the portion of stomach was replaced to its normal side of the mesocolon; the plate in the jejunum was readily applied and fixed in position by the sutures. There were between the plates all the coats of the stomach on the one side, the intestines on the other, and the transverse mesocolon fixed between the two.

Mr. Kilner Clarke thinks his patient died of closure of the artificial opening. It is unfortunate this could not have been cleared up by a *post-mortem* examination, as I think there is very great doubt if such was the case, and I cannot but help thinking the cause of death might have been either kinking

of a loop of intestine or strangulation of the loop that was drawn through the mesocolon.

I quite agree with Mr. Clarke that it is well to stitch the serous and mucous coats of the incised viscera. I prefer catgut to silk, however, for this purpose. I have advocated this proceeding on many occasions when discussing this subject. In the five cases on which I have operated, three of which have made good recoveries, I have never found the opening to have any tendency to close, however.—I am, etc.,

Upper Wimpole Street, W. FRED. BOWREMAN JESSETT.

DEATH UNDER CHLOROFORM.

SIR,—I note in the BRITISH MEDICAL JOURNAL of April 11th a report of a "death under chloroform" contributed by Mr. H. T. Wightman. I notice in his report of the case one or two omissions of details which tend to detract from its usefulness as a record. No mention is made (1) of the method of administration of the chloroform; (2) as to whether the patient was unconscious at the time of the actual performance of the operation; (3) as to whether vomiting or retching had occurred; (4) as to the examination, *post mortem*, of the larynx and air passages.—I am, etc.,

City Road, E.C. CHARLES PATTERSON, M.B.EDIN.

NAVAL AND MILITARY MEDICAL SERVICES.

ADMINISTRATIVE CHANGES IN INDIA.

A CORRESPONDENT sends us a letter commenting on the scheme recently abandoned for the reduction of four deputy surgeon-generals in India. He asserts that the scheme was originally drawn up without reference to the Surgeon-General at headquarters, who, when it did come before him, had no difficulty in showing its injustice, absurdity, and unworkable character. A fresh or alternative scheme was then drawn up by the Commander-in-Chief in consultation with the Surgeon-General, which provided for brigade-surgeons being employed in administrative duties only in second class districts; but this scheme was not accepted at home as effecting too small a saving, and being likely to cause great irritation. Meanwhile, the original scheme had been acted upon, as far as the reduction of two deputies on the Indian establishment was concerned, with a precipitancy which, to say the least, was unbecoming. Now, of course, the vacancies will have to be filled up, and as a stopgap the two senior brigade-surgeons in India have been given local and temporary rank to carry on the deputy duties.

This kind of abortive tampering with the medical establishments is most destructive to the peace and efficiency of the department, but there seems to be little consideration for either one or the other when some injudicious saving is the object. It is not as if the establishment of administrative officers of the Medical Staff was on such a bloated scale that it could not be too hastily reduced; it has, indeed, been whittled down so persistently and freely during the past two decades, that in another twenty years hardly any of these appointments will be left for the executive officers to work and wait for.

The following table shows the number of deputies on the establishment since 1867:

Year.		No.	Year.		No.	Year.		No.
1867	=	35	1877	=	31	1888	=	27
1870	=	34	1880	=	30	1889	=	25
1872	=	33	1886	=	29	1890	=	23
1875	=	32	1887	=	28			

The reduction has thus gone on at an accelerated pace during the past few years, and at the same rate the grade would be altogether extinct before the century is out.

VOLUNTEER AMBULANCE COMPETITION.

A CHALLENGE shield of the value of £200 will be offered for competition by the Volunteer Medical Association in July next. The shield will be competed for annually, and each man of the winning team will receive a badge and a cup. The team must be composed of four certificated regimental stretcher-bearers, one of whom may be a sergeant. Preliminary competitions will be held in May, at which the best detachment of each brigade will be selected to proceed to Bisley, where the final competition will be held. Detachments of corps such as engineers or artillery, which are not brigaded, will be squadded under the direction of the Association.

The subjects of the competition will include stretcher and waggon drill, lifting and carrying wounded on stretchers and by improvised seats, first aid, and the application of the triangular bandage. Regiments intending to compete must send their entries and a fee of 5s. before April 30th to the Honorary Secretary of the Volunteer Medical Association, 101, Great Russell Street, W.C., from whom further information may be obtained.

THE ZHOB VALLEY EXPEDITION.

DESPATCHES have been published respecting the recent operations in the Zhob Valley. The Governor-General in Council, and the Adjutant-General speaking on behalf of the Commander-in-Chief in India, express their cordial approval of the manner in which the expedition had been carried through by officers and men. Among those singled out for special mention by the officer in command are Deputy Surgeon-General S. A. Lithgow, M.B., C.B., D.S.O., and Surgeon-Major G. J. H. Evatt, M.D.

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 5s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

WANTED, an exchange, by a Surgeon-Major stationed in Cyprus, to a Home Station.—Address: Surgeon-Major SHAW, M.S., Limassol, Cyprus.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:

	From	To
Deputy Surgeon-General A. Allan, M.D.	Dublin	Edinburgh.
Brigade-Surgeon S. K. Ray	Limerick	Woolwich.
,, T. O'Farrell, M.D.	Dublin	Egypt.
Surgeon-Major R. C. Eaton	...	Fermoy.
,, J. Macartney, M.D.	Newbridge	Gibraltar.
,, E. J. Fairland	Dover	Bermuda.
,, R. Anderson	Dundalk	Egypt.
,, F. G. Adye-Curran, M.D.	Bermuda	Dublin.
,, W. L. Gibbins, M.B.	Bengal	Colchester.
,, E. R. Power, M.B.	Templemore	Chatham.
Surgeon S. J. Flood	Enniskillen	Belfast.
,, G. F. A. Smythe	Dover	Eastbourne.
,, J. E. Nicholson	Jersey	Devonport.
,, R. L. Love, M.D.	Enniskillen	Bengal.
,, E. R. Cree	Chatham	Gravesend.
,, J. H. Nicholas	Dublin	Devonport.
,, G. Coutts, M.B.	Burnley	Salford.
,, S. Townsend, M.D.	Cork	Ennis.
,, R. P. Hetherington, M.B.	Netley	Madras.
,, J. W. Beatty, M.D.	Cape Coast Castle	Sierra Leone.
,, W. G. Clements	Chatham	,, ,,
,, S. J. Rennie	Netley	Dublin.
,, N. M. Reid	Devonport	Bengal.
,, W. Dick, M.B.	Chester	Bury.
,, W. W. Pike	Dublin	Ceylon.
,, G. Nelis	Edinburgh	Glasgow.
,, J. D. Moir, M.B.	Dublin	Dundalk.
,, J. F. Bateson, M.B.	Bengal	Home Dist.
,, W. T. Swan, M.B.	Dublin	Curragh.
,, R. G. Hanley, M.B.	,,	,,
,, H. G. Hathaway	Madras	Dublin.
,, C. G. Woods, M.D.	Bengal	Portsmouth.
,, H. T. Knaggs	Dublin	Sligo.
Quartermaster J. Thomson	N.W. District	Egypt.

The Surgeons appointed to the Army Medical Staff, January 31st, are stationed as follows:—T. B. Beach, Aldershot; E. E. Powell, Woolwich; C. W. R. Healey, Dublin; J. W. Jennings, Chester; E. M'K. Williams, Devonport; H. E. Dowse, Aldershot; J. C. Connor, M.B., York; J. E. Carter, M.B., Dublin; F. W. Hardy, Aldershot; J. T. Clapham, Chatham; W. Ap S. J. Graham, Edinburgh; D. D. Shanahan, Dublin; C. W. H. Whitestone, M.B., Dover; A. Pearse, Portsmouth; H. D. Mason, Devonport; C. Dalton, Dublin.

THE NAVY.

STAFF-SURGEON E. R. H. POLLARD is promoted to be Fleet-Surgeon, April 11th. He was appointed Surgeon March 30th, 1878, and Staff-Surgeon November 18th, 1882. As Surgeon of the *Boadicea*, he landed with the Naval Brigade during the Zulu war, in 1879 (medal with clasp), and during the war in Egypt, in 1882, he served with a battalion of Marines, being present at the battle of Tel-el-Kebir (medal with clasp and Egyptian bronze star).

The following appointments have been made at the Admiralty:—Mr. H. F. TEMPLE to be Surgeon and Agent at Budleigh Salterton; JAMES A. COLLET, Staff-Surgeon, and WALTER H. S. STALKARTT, Surgeon, to the

Superb, April 14th; EVELYN R. H. POLLARD, Fleet-Surgeon, to the *Orlando*, additional, undated; MARTIN H. ATOCK, Surgeon to the *Orlando*, undated; JOHN H. THOMAS, Surgeon to the *Orlando*, April 24th.

THE MEDICAL STAFF.

SURGEONS-MAJOR HENRY WILLIAM JOYNT and DAVID LECKIE, M.B., have quitted the service on retired pay from April 15th. Their commissions, all of which were simultaneous, are thus dated: Assistant-Surgeon, April 1st, 1871; Surgeon, March 1, 1873; and Surgeon-Major, April 1st, 1883.

Brigade-Surgeon J. WATSON has succeeded Surgeon-Major E. A. H. Roe as Medical Officer at the Tower of London. Brigade-Surgeon Watson entered the service as Assistant-Surgeon, February 1st, 1859, and was placed on retired pay, with the honorary rank of Brigade-Surgeon, December 8th, 1880.

Brigade-Surgeon J. HECTOR, M.B., has been appointed Medical Officer for the South London Recruiting District. He was placed on retired pay February 26th, 1887.

Surgeon-Major G. T. LANGRIDGE, who is serving in the Bengal command in medical charge of the Station Hospital at Novogong, is appointed temporarily to the medical charge of the Bundelcund Political Agency, in addition to his other duties.

Surgeon-Major THOMAS BABINGTON died in London on April 2nd. He joined the service as Assistant-Surgeon, March 31st, 1864; became Surgeon, March 1st, 1873; and Surgeon-Major, April 28th, 1886, accepting retired pay, April 17th, 1889. He served in the Boer war of 1881 as Senior Medical Officer with the Natal Field Force, and was present in the engagement at Lang's Nek, being mentioned in despatches for his services.

Surgeon-General R. K. PRENDERGAST died at Cahir on November 25th, 1890. His commissions were thus dated: Assistant-Surgeon, October 7th, 1836; Surgeon, April 14th, 1846; Surgeon-Major, October 1st, 1858; Deputy Surgeon-General, March 24th, 1863; and Surgeon-General, January 6th, 1875. He retired on half pay, April 28th, 1876. He had no war record.

An army order recently issued says that no candidate for admission to the Army Medical Staff will be allowed to compete on more than two occasions.

INDIAN MEDICAL SERVICE.

THE services of Surgeon-Major C. W. CALTHROP, M.D., and of Surgeon L. G. FISCHER, both of the Bengal Establishment, are replaced at the disposal of the Military Department.

Surgeon-Major F. F. MACCARTIE, Bombay Establishment, is appointed to officiate as Deputy Assay Master, Bombay, *vice* Mr. F. W. Peterson.

Brigade-Surgeon R. GRAY, M.B., Inspector-General of Prisons, Punjab, is permitted to retire from the service from April 3rd. He entered the service as Assistant-Surgeon July 27th, 1859, and attained the rank of Brigade-Surgeon June 3rd, 1887.

Deputy Surgeon-General C. E. MCVITTIE, Madras Establishment, is appointed to the administrative medical charge of Her Majesty's forces, southern district.

Surgeon-Major P. N. MOOKERJEE, of the Madras Establishment, is directed to accompany the Manipore Relief Column, under Brigadier-General T. Graham, C.B.

Surgeon-Major O. H. CHANNER, Bombay Establishment, Deputy Sanitary Commissioner southern registration district, is directed to act as civil surgeon of Belgaum during the absence of Surgeon-Major J. P. Greamy, M.D.

The undermentioned gentlemen have leave of absence as specified: Brigade-Surgeon S. O'B. BANKS, Bombay Establishment, privilege leave for three months; Surgeon-Major G. G. MACLAREN, M.D., Bengal Establishment, civil surgeon of Deyrah Dhoon, for two years on private affairs; Surgeon-Major J. B. GAFFNEY, Bengal Establishment, civil surgeon of Tanjor, for one year, on private affairs; Brigade-Surgeon L. C. NANNEY, Madras Establishment, civil surgeon and superintendent of the gaol at Kurnool, for one year, on private affairs.

THE VOLUNTEERS.

THE undermentioned gentlemen are appointed Acting-Surgeons to the corps specified: HENRY CECIL HARPER, 2nd Volunteer Battalion Suffolk Regiment (late the 6th Suffolk); EDMUND RUNDLE, 1st Volunteer Battalion Duke of Cornwall's Light Infantry (late the 1st Cornwall); WILLIAM KINNEAR, M.B., 3rd Volunteer Battalion Royal Highlanders (late the 3rd Forfarshire); GEORGE WILLIAM HENRY FRENCH, 3rd Middlesex; all to bear date April 11th.

The undermentioned Acting-Surgeons are promoted to be Surgeons in their respective regiments from April 11th: H. M. KEMMIS and T. L. LAXTON, 2nd Volunteer Battalion Somerset Light Infantry (late the 2nd Somerset); F. V. ADAMS, 1st Lanarkshire; A. C. KEEP, M.D., 2nd Volunteer Battalion Worcester Regiment (late the 2nd Worcestershire); and J. D. PRATT, M.D., the Tower Hamlets Rifle Volunteer Brigade.

Acting-Surgeon T. L. CROOKE, 2nd Volunteer Battalion King's Own Scottish Borderers (late the 1st Berwickshire), has resigned his appointment, which was dated July 13th, 1889.

ARMY MEDICAL RESERVE. See Army Order 56 of 1888 and paragraphs 5 and 6 of the Secretary of State's Instructions on this Order. Paragraph 6 reads as follows: "Officers of the Army Medical Reserve who are willing to offer their services will have a prior claim to employment in the district in which they reside to other medical officers of the auxiliary forces or to civilian medical practitioners."

PROMOTION OF ACTING-SURGEONS OF VOLUNTEERS.

ACTING-SURGEON (of Volunteers) who has passed the proficiency examination, complains that he cannot get promotion to surgeon; his adjutant says that as the battalion has two surgeons the establishment is complete. We would suggest that the attention of the adjutant should be called to Volunteer Regulations 1887, Part I, Section II, paragraph 82 b, and to Army Order No. 77, of February, 1889, also to this month's *Army List*, in which he will see the establishment of full surgeons allowed to the 1st Volunteer Battalion the Royal Scots Fusiliers, the 13th Middlesex (Queen's Westminster) R.V. and the 20th Middlesex (Artists) R.V. From this it will be seen that promotion is not a question of establishment, but of becoming proficient.

BRIGADE-SURGEONS AND BEARER COMPANIES OF VOLUNTEERS.

WE have received an interesting letter from S. G. (Retired), in which he calls attention to the fact that the newspapers in speaking of the staff of brigades employed at the Easter manœuvres made no mention of the brigade-surgeons who were presumably answerable for the field medical arrangements. Referring to our article on brigade bearer companies, this officer thinks it unwise to draw the *personnel* of such from the fighting line, and adds that the powers of brigade-surgeons should be strengthened in this matter. We quite agree with him, and are of opinion that they need great assistance in such matters as transport and medical and surgical equipment.

As long as regimental stretcher bearers get no extra capitation grant, and accordingly possess neither medical nor surgical equipment, to say nothing of the transport, so long will the organisation of these brigade bearer companies be deficient.

UNDRESS VOLUNTEER UNIFORM.

VOLUNTEER SURGEON desires to be informed if the undress uniform of a surgeon of artillery volunteers is exactly the same as the undress uniform of a surgeon Army Medical Staff, excepting that silver is substituted for gold lace, or if it is not, he would be glad to know what difference there is between them.

*** See Army Order 188 of 1888 and *Vol. Regs.* 1887, Part IV, Sec. III, para. 1844. "Medical officers of volunteer corps will wear the uniform of their respective corps, with the following exceptions: Sword belt, pouch belt, field pouch, as for Army Medical Staff, except that silver is substituted for gold," so that a surgeon of a volunteer artillery corps wears the uniform of his regiment with the belts mentioned above in silver.

MR. STANHOPE'S REPLY.

AD REM says: It is notable that Mr. Stanhope, in his reply, places "rank" last on the list, although it is the first and essential grievance. Will he show where the equal footing with combatant officers comes in, or is it merely hypothetical? Real rank carries with it respect and defined position officially and socially, and such we contend is deliberately withheld from us. Everyone in the army knows such to be the case, and so Mr. Stanhope's misleading assertion must be intended for civil consumption. We tell him we have neither rank nor title understood by the public, and that any youngster in the service, however humble his origin or faulty his manners or education, provided he can dub himself "combatant," affects to look upon the medical officer as of quite an inferior order. This is simply notorious, in spite of what Mr. Stanhope says about equality.

ARMY MEDICAL EXAMINATIONS.

WE have received letters objecting to Mr. Stanhope's recent decision that candidates for commissions in the Medical Staff who fail at a first competition are in future only to be allowed a second trial. We do not agree with the objectors; for, while we hold that any number of trials may be allowed in mere pass examinations, and at least a second for promotions, it is inexpedient to permit an indefinite number in a public competition, such as that for army commissions. It will hardly be contended that a man who repeatedly fails in an examination, even although he may at last succeed, is, *a priori*, as good as another having no record of failure. It is notorious that the system of allowing an unlimited number of chances in the competition for the Medical Staff has, to say the least, worked unsatisfactorily. We therefore think Mr. Stanhope has acted wisely. The new order will not exclude really competent men, although it will lessen the total number of competitors, which, in itself, is not a matter for regret.

PROMOTION OF MEDICAL OFFICERS TO RANK OF LIEUTENANT-COLONEL.

ONE OF THEM writes: General Harman stated (Q. 250) before Lord Camperdown's Committee that medical officers were always gazetted as corresponding with certain ranks, so supporting the statement of the military party that their army rank was clearly defined. On April 1st, 1891, twenty-four officers attained the so-called rank of lieutenant-colonel. No gazette publishes this to the army or to the public; these officers simply drift into the rank without it in any way being made public. In no other branch of the service does an officer obtain promotion without such promotion being notified in the *Gazette*. Presumably the rank of these officers is of so shadowy a description that the *London Gazette* can take no cognisance of it.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ARE MILITARY HOSPITALS PUBLIC INSTITUTIONS?

SURGEON.—The Section of the Act 50 and 51 Vict., cap. 71 (which re-enacts Section 5 of the Act 6 and 7 Wm. IV, cap. 89, to which the coroner refers), does not very clearly define the institutions to which it is intended to apply. It has, we believe, been held by a county court judge that the sick wards of a workhouse are within the Act; and we are inclined to the opinion that a military hospital would also come within it. We have not been able to ascertain that there has been any judicial decision on this point, and it may fairly be assumed to be doubtful; and inasmuch as the point may frequently occur, it may be desirable in our correspondent's interest to get the question settled in the county court.

THE OWNERSHIP OF A PRESCRIPTION.

DR. ROBERT REID RENTOUL (Liverpool) writes: I should like to tell "D. H." how I act in the matter of prescriptions. I have an arrangement with seven chemists, that they retain and return to me once a month, or oftener, every prescription of mine which they are requested to dispense. This plan has been in force for over two years, and works well. If any person complains to the chemist, he refers them to me. If they want a copy of any prescription I may perhaps give them one. I was driven to this plan by finding that a lady lent a prescription of mine to eight other ladies, and so practically robbed me of eight fees. The chemists naturally accept my plan, as it prevents the patients going to the cheap drug stores. It is to the patients' interests that they do not consume cheap and nasty medicines, and also much to my success with my cases.

I am now trying to introduce a rule that no chemist shall make up a prescription of mine on more than two occasions without my having seen the patient. I have found that often the question as to whether a prescription is to be dispensed a second time is frequently settled by a talk between the patient and chemist. This is chemists prescribing—a thing I object to.

I understand that in Italy a prescription cannot be dispensed a second time without the doctor having so ordered. If the local chemists had objected to my plan, I would have done one of two things—send all prescriptions to the chief local store, or dispense my own prescriptions. Had any patients objected to my plan, I should have had printed on the prescription paper "to be retained by chemist and returned to me." I have never yet heard of a lawyer returning his brief to the client, or a parson handing his MS. to his parishioners. I find that patients measure us doctors by the measure by which we ask them to measure. My prescriptions are mine, and I mean to stick to them. We only require to make the above "the custom."

DR. WM. MACVIE (Bootle, Liverpool) writes: My own opinion has always been, and still is, that the prescription does not legally belong to any of the parties concerned, but should be destroyed after it has fulfilled its mission. We pay for a railway ticket, and it is taken from us on completing the journey. The prescription is nothing more than a convenient missive between doctor and chemist, and probably would not be entrusted to the patient if we had any other more convenient way of communicating our order. We do not address the prescription to the patient; we advise the chemist how he has to compound a certain number of ingredients for the patient; this being done, the prescription should be destroyed or returned to the "author."

*** The opinion given on page 778 of the BRITISH MEDICAL JOURNAL as to the ownership of prescriptions is apparently in conflict with the preconceived ideas of some members of the profession, and is unacceptable to others. It is also said to be capable of being misunderstood. It may be well, therefore, to point out that the language used was in answer to a specific question, and must, of course, be read with reference to that question, and not distorted so as to apply to other matters. The law lays down no rule as to the formalities to be observed by a practitioner when prescribing for a patient, and he may, and often does, prescribe perfectly well by merely giving verbal directions to be observed by his patient. When, however, those directions include the use of any particular drugs, it is usual and convenient to put them into writing, so that the patient may not make any mistake in ordering the drugs which he is advised to use. The usage of giving a written prescription does not affect the property in the piece of paper given to the patient. It is his the moment he receives it, unless by custom or by special agreement it belongs to someone else. A custom to be good in law must be general; and there is no custom as that a prescription belongs to anyone except the patient, at present, known in England. The paper, therefore, belongs to the patient, unless he agrees with his medical attendant that it shall not do so. It is, of course, open to any practitioner to stipulate that his prescriptions shall belong to himself, or shall only be made up by a particular chemist, who shall destroy the paper as soon as he has used it; but it is equally open to each of his patients to decline to be bound by any such stipulation, and to do what he chooses with the paper when once he has got it. Any such stipulations should be clearly brought to the notice of the patients before they consult their medical adviser, so as to give them the option; if only mentioned after the prescription has been given, they would not be binding.

FEES FOR MEDICAL EVIDENCE.

G. W. S. writes: In the year 1890 I was subpœnaed at the Gloucester assizes, to give medical evidence in a case of felony. The judge disallowed the expenses of the prosecution, namely, the police, on whose side I was giving evidence; and I have been unable to recover my fees. Have I any legal remedy and, if so, whom shall I sue?

*** We are advised that there does not appear to be any legal remedy for recovery of the fees in question under the circumstances. Application might, however, be made to the County Treasurer on the subject, even though it may be without any favourable result. Formerly witnesses were unable to claim their expenses in any criminal case, it being considered by the law to be the public duty of every one to obey a call of this description. The Legislature has, however, enacted (from time to time) that in nearly all cases of felony and in many cases of misdemeanour, the Court shall be empowered, on the application of any person appearing on a recognisance or subpœna to prosecute or give evidence in the cases mentioned, to order payment of the expenses of such prosecutor and witnesses. The order for payment is made on the Treasurer for the County. The amount of the witnesses' fees has been fixed by an order of the Home Secretary in 1858.

PRINTED NOTICES ON PRESCRIPTIONS OR BOTTLES.

SURGEON AND PHYSETER MACROCEPHALUS.—Communications stating hours of attendance, whether for consultation or for dispensing if placed in the hands of patients only, or referring to the particular case in hand, do not appear to violate any rule of medical etiquette. At the same time the utmost discretion should be exercised in such a matter, in order to avoid the appearance of advertising. With regard to printed prescription papers, we are of opinion that the use of the form "A. and B., Surgeons," is open to some objections, on the ground that it is curt and tradesmanlike. If it is considered absolutely necessary to place the name of the firm upon such papers—which we very much doubt—it would be advisable to set out the names of the partners, or to use the form "Messrs. A. and B."

AN INCOMPLETE INQUIRY.

OUR attention has been drawn to an inquest recently held in Ramsgate, on the body of an infant, aged 1 year and 7 months, who died, as was stated, in a fit. A medical man who was called in did not see the child alive, and very properly refused to give a certificate without a *post-mortem* examination. Strangely enough the coroner advised the adjournment of the inquest, to permit of an examination being made, but the jury did not want to know the cause of death, they had made up their minds, and returned the usual verdict of "Natural Causes," whatever that may be supposed to mean. So far as we are able to judge from the very scanty evidence, as reported in the local papers, it would seem not improbable that death was due to a foreign body in the larynx.

DEATH CERTIFICATES AND THE CORONER.

TARAWERA writes: Under what circumstances may a medical man give a certificate of death in cases of sudden death? Lately, while I was talking to a patient and examining her chest (my only knowledge of the patient being confined to treatment of chronic ulcer a year ago), she fell back dead, doubtless due to fattily degenerated myocardium. I wrote to the coroner stating the facts, and he replies that if I am satisfied as to the cause of death, he presumes I shall give a certificate in the usual way. Now would you inform me:—

1. Whether I did right to communicate with the coroner.
2. Whether if I had not seen the patient, but from account of symptoms I could form an opinion as to cause of death, I then could give a certificate?
3. Whether a medical man is bound to communicate to the police or directly to the coroner?

*** The circumstances of the case mentioned are somewhat unusual, but a knowledge of the symptoms and the examinations already made would have given sufficient ground for signing the certificate.

1. As a matter of courtesy and prudence it was right to communicate with the coroner, who would certainly not be justified in holding an inquest if the medical attendant were willing to give a certificate of death.
2. A medical man who has never seen the deceased during life cannot give a certificate of death.
3. In such cases there is no necessity to communicate with the police; the medical man or the friends of the deceased should inform the coroner or his officer.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF GLASGOW.

THE Glasgow University Court has recently instituted a Lectureship on Pathology, and has appointed Dr. Joseph Coats as lecturer. This is the first step towards the institution of a properly endowed Chair of Pathology in the University.

Among those on whom the Senate has decided to confer the degree of Doctor of Laws, *honoris causâ*, at the graduation ceremony on April 24th, are William Alexander Mackinnon, C.B., Director-General of the Army Medical Department, and Sir Douglas Maclagan, M.D., Professor of Medical Jurisprudence in Edinburgh University.

The following gentlemen have passed the First Professional Examination for the Degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.) (out of 84 candidates 41 passed):

J. E. Adam, A. P. Aitken, J. Allan, J. G. Anderson, J. Bain, D. Blair, M.A., J. Boyle, W. Buchanan, E. N. Burnett, A. Campbell, T. R. A. A. G. Crawford, T. Crossan, J. Donaldson, D. Drummond, W. M. Duff, J. Findlay, W. D. Findlay, R. S. Frew, R. H. Gemmell, E. W. Graham, T. Holmes, W. H. Jamison, E. M. Jenkins, J. C. Lauder, J. H. Lawson, J. J. Lowell, J. W. van Millingen, A. Muir, W. E. Macharg, C. M'Kay, J. M'Kenna, J. C. M'Neillie, A. G. Newell, P. P. Petrie, M.A., W. Salmond, J. Scott, J. Selkirk, M.A., H. B. Smith, T. D. Smith, J. Thomson, M.A., R. N. White.

The following gentlemen have passed the Second Professional Examination (out of 93 candidates 50 passed):

W. I. Buchanan, A. P. Campbell, D. J. McG. Campbell, W. Campbell, J.

J. Carruthers, D. Charters, T. Colvin, W. Copland, W. J. Couper, R. R. Coyle, J. C. Davies, J. S. Davies, M.A., G. Edgar, J. D. Finlay, A. Forrest, M.A., H. N. Gardiner, A. A. C. Grant, D. F. Harris, B.Sc., W. M. Hunter, J. Jack, H. E. Jones, A. Kelso, D. M. King, W. A. Kirkwood, J. Lang, R. Langmuir, M.A., R. M'F. Marshall, T. B. Marshall, J. B. Millar, D. R. Miller, E. J. Morris, J. Morrison, W. M'N. Muat, W. Muir (Paisley), C. C. M'Call, A. H. M'Cracken, J. M. MacLauchlan, J. A. Naismith, G. Nicoll, J. Paxton, J. Pettigrew, E. L. Pollonais, A. Robertson, M.A., H. M. Robertson, F. Small, N. Stevenson, M.A., R. Tennent, J. Thomson, A. Webster, J. C. Young.

The following gentlemen have passed the Third Professional Examination, including, in the cases marked with asterisks, the subject of Pathology (out of 75 candidates 44 passed):

J. Aitken, W. L. Brown, A. G. Burrell, *A. Baillie-Craig, J. A. Creighton, J. D. Davies, D. S. Dewar, R. S. Dickson, T. Divine, *N. Downie, *A. Findlay, R. Forsyth, *D. Frame, M.A., *D. W. Girvan, *J. Green, J. A. Harrison, J. Hunter, H. Kerr, M.A., D. C. Laird, *P. A. Laird, J. Lamont, J. Lindsay, M.A., J. B. Littlejohn, S. T. M'C. Lowry, *R. M. Malcolm, *W. C. Murray, A. C. M'Arthur, D. D. Macdonald, *D. N. Macfarlane, *J. M'Gregor, *C. H. M'Ilwraith, M.A., A. J. M'Kechnie, J. Pearson, H. J. Rankin, *D. Smith, P. M. Smyth, *M. T. Stack, *W. Steel, *W. C. Steele, J. Stewart, D. R. T. Strong, *G. M. Sydenham, *J. A. Wilson, C. F. Wylie.

UNIVERSITY OF DURHAM.

Faculty of Medicine.—First examination for the Degree of Bachelor in Medicine. The following candidates have satisfied the examiners:—

Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany.—T. C. Barkas, College of Medicine, Newcastle-upon-Tyne; E. J. Brewis, College of Medicine, Newcastle-upon-Tyne; J. W. Gibson, College of Medicine, Newcastle-upon-Tyne; S. H. Hawley, Queen's College, Birmingham; C. J. Jeaffreson, College of Medicine, Newcastle-upon-Tyne; G. E. Pearcey, College of Medicine, Newcastle-upon-Tyne; G. W. Pickering, Queen's College, Birmingham; W. H. Richards, College of Medicine, Newcastle-upon-Tyne; W. Smith, College of Medicine, Newcastle-upon-Tyne; W. E. F. Tinley, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy and Physiology.—R. H. Bellwood, College of Medicine, Newcastle-upon-Tyne; H. Bond, College of Medicine, Newcastle-upon-Tyne; W. E. Gibbs, College of Medicine, Newcastle-upon-Tyne; H. H. Gourley, Edinburgh School of Medicine; C. Hanks, College of Medicine, Newcastle-upon-Tyne; A. P. Lloyd, College of Medicine, Newcastle-upon-Tyne; R. A. Morris, College of Medicine, Newcastle-upon-Tyne; E. Tonge, College of Medicine, Newcastle-upon-Tyne; C. R. Wood, B.A., College of Medicine, Newcastle-upon-Tyne.

Chemistry with Chemical Physics, and Botany with Medical Botany.—P. L. Armstrong, College of Medicine, Newcastle-upon-Tyne; P. R. Ash, Yorkshire College, Leeds; W. G. Cook, College of Medicine, Newcastle-upon Tyne; W. W. Deans, Yorkshire College, Leeds; W. G. Fell, College of Medicine, Newcastle-upon-Tyne; P. A. J. V. Forde, St. George's Hospital; E. R. Fothergill, Guy's Hospital; N. C. Gwynn, Bristol Medical School; H. Hartigan, Medical School, Catholic University, Dublin; T. Hartigan, Medical School, Catholic University, Dublin; E. A. Lermitte, College of Medicine, Newcastle-upon-Tyne; W. F. Miller, Guy's Hospital; W. H. Peake, Guy's Hospital; T. J. Selby, Edinburgh School of Medicine; E. E. Woodhouse, College of Medicine, Newcastle-upon-Tyne; E. P. Wrinch, St. Thomas's Hospital.

Chemistry with Chemical Physics.—P. Coleman, M.R.C.S., L.R.C.P.Lond., St. Thomas's Hospital; L. G. C. Vintras, M.R.C.S., L.R.C.P., B.Sc., Paris, St. Mary's Hospital.

Examining Board in England by the Royal Colleges of Physicians and Surgeons.—The following gentlemen passed the Second Examination of the Board in Anatomy and Physiology at a meeting of the Board on April 9th:

W. E. L. Horner, J. E. Waite, T. V. Crosby, and G. H. C. Way, students of University College; J. W. Haines, A. C. Gurney, J. B. Great-Rex, G. R. Fox, C. H. Drake, and J. L. Dalby, of St. Bartholomew's Hospital; E. Bromet, A. E. Russell, S. W. F. Richardson, and H. W. Harding, of St. Thomas's Hospital; C. J. E. Cock and W. T. White, of Charing Cross Hospital; C. K. James, of Middlesex Hospital; N. D. S. Towne and C. P. Harris, of London Hospital; W. C. Wood and M. A. Saltmarsh, of St. Mary's Hospital; F. K. Wilson, of Westminster Hospital; and C. R. Colley, of Guy's Hospital.

Passed in Anatomy only:

D. Davies, of London Hospital; L. J. Miskin, of St. Thomas's Hospital; C. H. Nicholson, of Middlesex Hospital; H. G. Larnder, of St. Mary's Hospital; and B. Saul, of Charing Cross Hospital.

Passed in Physiology only.

H. Williams, of Middlesex Hospital; A. W. Austen and W. H. Chute, of Westminster Hospital; and E. G. Annis, of Guy's Hospital.

Passed in Anatomy and Physiology on April 10th:

L. E. V. Every-Clayton, student of Guy's Hospital; A. W. Riley, W. H. Thomas, of London Hospital; F. C. Robinson, W. H. Pollard, E. L. Pawlett, H. B. Meakin, and T. Hampton, of St. Bartholomew's Hospital; W. W. Linington, A. A. Martin, R. Corfe, and C. D. Lindsey, of St. Mary's Hospital; J. Harper and A. Dobson, of St. Thomas's Hospital; F. N. Cookson, of Middlesex Hospital; C. E. Wallis and F. C. Spawson, of King's College; H. M. Dowler and C. D. Garrett, of Westminster Hospital; and H. R. B. Hickman, of St. George's Hospital.

Passed in Anatomy only:

H. J. W. Barlee, F. H. Bailey-King, of Middlesex Hospital; P. G. Williams, of London Hospital; and A. Stockton, of King's College.

Passed in Physiology only:

A. Barnes, of Charing Cross Hospital; A. M. Watts, of University College; F. A. Cooke, of St. Mary's Hospital; W. E. Lee, of St. Bartholomew's Hospital; and A. J. Campbell, of St. Thomas's Hospital.

Passed in Anatomy and Physiology on April 13th:

J. M. Stewart and T. B. Stedman, of University College; C. G. Cory and Sydney Cornish, of St. Bartholomew's Hospital; W. A. Propert, of St. George's Hospital; W. Fleming, of Westminster Hospital; D. E. Evans, H. G. Lawrence, E. J. Morgan, and G. B. Riddick, of St. Mary's Hospital; J. E. G. Rogers, of London Hospital; P. J. Probyn and T. E. Cundy, of Charing Cross Hospital; C. H. Watson and W. P. P. Seed, of Middlesex Hospital; R. H. Fagge and G. L. Eastes, of Guy's Hospital.

Passed in Anatomy only:

L. Harman, of St. Thomas's Hospital; A. C. Strand, of Middlesex Hospital; H. C. Wimble, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; and J. W. Summerhays, of St. Mary's Hospital.

Passed in Physiology only:

T. H. P. Morris, of Middlesex Hospital; W. R. Larbalestier and H. W. Whitley, of Charing Cross Hospital; H. N. Robson, of St. Thomas's Hospital; and C. H. Wilmer, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed in Anatomy and Physiology on April 14th:

W. Gardner and J. Garrett, of St. Mary's Hospital; H. M. Rigby, V. J. Batteson, and H. E. B. Porter, of the London Hospital; T. W. W. Burgess, P. C. Barford, E. G. B. Adams, P. E. Adams, F. W. Robertson, and P. E. Turner, of St. Bartholomew's Hospital; W. F. Henley, of Charing Cross Hospital; J. F. Sarjeant, W. Way, W. E. Hudleston, and J. Kekwick, of Middlesex Hospital; E. F. Harwood, A. P. Nuttall, J. P. Kitson, and T. R. Llewellyn, of University College; F. S. Penny, of King's College; G. A. Clarkson, of St. George's Hospital; and A. F. W. King, of St. Thomas's Hospital.

Passed in Anatomy only:

H. J. K. Bamfield, J. H. Campbell, and J. B. Yelf, of St. Mary's Hospital; H. A. Andrews, of St. Bartholomew's Hospital; E. J. Rowbotham and H. A. Madge, of Charing Cross Hospital; and W. L. Stuart, of Guy's Hospital.

Passed in Physiology only:

M. J. Reubens, of Grant Medical College, Bombay.

Passed in Anatomy and Physiology on April 15th:

R. W. Weekes, H. T. M. Whitling, C. M. Hewer, and R. H. Wilkin, of St. Bartholomew's Hospital; C. B. Hall, of St. Mary's Hospital; M. Breton, of St. George's Hospital; F. J. Godwin and E. B. Jones, of Charing Cross Hospital; W. D. Jones, A. Cowes, and J. L. Davies, of University College; C. H. Dickens and P. C. Fenwick, of St. Thomas's Hospital; H. W. Collier, G. E. Manning, and H. P. Barker, of Guy's Hospital; M. W. Loy, of London Hospital; M. Farrant, of Westminster Hospital; and E. Playfair, of King's College.

Passed in Anatomy only:

W. B. Murray and R. S. Olver, of King's College; A. J. Grant, of St. Thomas's Hospital; and W. Wyllys, of St. Bartholomew's Hospital.

Passed in Physiology only:

T. D. Bell, of University College; A. J. Mathison, of Guy's Hospital; and G. R. Harcourt, of St. Thomas's Hospital.

Royal College of Surgeons of England.—At the last meeting of the Council the following gentlemen were elected by ballot to the Fellowship of the College, under the Section of the Charter relating to Members of twenty years' standing: Mr. Thomas Turner, of Hereford, and Mr. Denis Francis Keegan, of the Bengal Army.

Royal College of Surgeons in Ireland.—Fellowship Examination:

Mr. A. G. Chance, having passed the necessary examination, has been admitted a Fellow of the College.

OBITUARY.

PETER HINCKES BIRD, M.D., F.R.C.S.Eng., D.P.H.Camb., L.S.A.

Dr. Peter Hinckes Bird, whose death was announced a short time ago, was the youngest son of the late Thomas Bird, of Hornsey, Middlesex. He was born at Muswell Hill, May 15th, 1827. His medical education was conducted at Queen's College, Birmingham, and at St. Thomas's Hospital, London. He subsequently studied in Paris, and was for some time engaged at the *Dreadnought* Hospital, while still conducted in the ship of that name moored in the Thames, off Greenwich. At Queen's College Hospital he obtained six medals, and several first class certificates and prizes. He was successively House Surgeon at the Queen's Hospital, Birmingham, and at St. Thomas's Hospital.

He gained the Jacksonian Prize in 1849 for his essay on "The Nature, Causes, Statistics, and Treatment of Erysipelas." Subsequently his attention was specially directed to practical sanitary work.

He became medical officer of health for the Fylde combined U. and R. District, which included Blackpool, Lytham, Kirkham, and Fleetwood (Lancashire), and gave much attention to sanitary matters. He was the inventor of a "costless system of ventilation," which was fully described in the *Builder*, March 1st, 1862. The system obtained for the inventor several medals and certificates. He was the author of a practical manual entitled *Hints on Drains, Traps, Closets, Sewer Gas, and Sewage Disposal*, and of several pamphlets on ventilation and sanitary appliances.

After leaving Blackpool he resided in London, and became assistant surgeon to the 18th Middlesex Rifle Volunteers. But before this he had taken an active interest in volunteering, and was chief medical officer of the large body of volunteers which went to Belgium in 1872. In 1882 he left England for Cyprus, but returned after two years' absence, and settled in Chelsea, where he practised until the autumn of last year, when he left England for "sunnier climes," with the intention of practising abroad.

He died from acute bronchitis, after a short illness, at San Remo, on January 28th, 1891, aged 63.

Dr. Hinckes Bird leaves two sons, one of whom is a student at St. Mary's Hospital.

W. ROYSTON PIKE, M.D.,

Senior Physician to the Royal Portsmouth Hospital.

DR. ROYSTON PIKE was the son of a well known Baptist minister, and was born at Wisbech on April 20th, 1848. He commenced his professional career with Mr. Michael Foster, of Huntingdon, in the year 1864, and received assistance from his son, the now eminent Professor of Physiology. After a distinguished course of study at St. Thomas's Hospital, he obtained the diploma of Membership of the Royal College of Surgeons, and started for Australia in 1872. He returned to England and commenced practice at Portsmouth, and soon won his way to a high professional position by his great energy and tact. Dr. Pike was a very careful and successful practitioner, and fully enjoyed the confidence of a large circle of influential friends. Still he considered it the highest honour to be called "the poor man's doctor." The writer of these few lines has often had the pleasure of assisting him in many important surgical operations, and has had many opportunities of watching his intense anxiety to secure by every means the safety of his patients.

In 1889 he graduated at the Durham University with distinction, and he has since been engaged in the practice of medicine only. During the past twenty years Dr. Royston Pike has been associated with the honorary medical staff of the Royal Portsmouth Hospital. He was a man of great natural ability, possessed a very remarkable memory, and exhibited much devotion to literary pursuits. Unfortunately he died at a comparatively early age, on April 3rd, after a long and very painful illness, throughout which his remarkable energy and force of character were clearly seen by all in contact with him.

The following resolution was unanimously adopted at a large meeting of the medical profession at Portsmouth and the surrounding neighbourhood: — "The members of the South-East Hants Medical Society deeply regret the death of their old friend and colleague, Dr. Royston Pike. For many years he was connected with the Royal Portsmouth Hospital, and only within the last few weeks he was unanimously elected by the Committee of Management to the honourable post of physician. They desire to express their appreciation of his great energy and ability, and of his long and honourable career in Portsmouth, and to record their deep sympathy with Mrs. Pike and all the members of his family."

GEORGE BERNARD HOFFMEISTER, B.Sc.Lond., M.A., M.D.Camb., M.R.C.S.Eng.

WE regret to have to record the death of Dr. George Bernard Hoffmeister at the comparatively early age of 32, thus closing a career of exceptional promise and ability. He was thrown from his horse on March 24th; concussion of the brain followed, and right hemiplegia ensued. Mr. Thomas Smith trephined the skull, and the patient's condition subsequently fluctuated much from day to day, but terminated fatally on the sixteenth day after the accident. He never properly regained consciousness.

He was educated at Epsom College, at Gonville and Caius College, Cambridge, and at St. Bartholomew's Hospital. He also studied at the Universities of Bonn and Vienna. He obtained the B.Sc.London (first honours in botany), 1879; B.A. (first class Nat. Sc. Trip. special distinction), 1880; M.A.Camb., 1884; M.B., 1884; M.D., 1890; M.R.C.S.Eng., 1884. He gained the gold medal in medical botany of the Apothecaries' Society in 1883; he was first prizeman in natural science, Caius College, Cambridge, in 1877-80; and natural science schol., 1877-84; Shuttleworth Schol. in the University of Cambridge, 1879-81; Gilchrist Schol. in the University of London, 1877-79; Epsom Scholar, St. Bartholomew's Hospital, 1877-84. He was surgeon to the Royal Yacht Squadron; he was house physician at St. Bartholomew's Hospital in 1885, and lecturer on biology at Epsom College, 1881-84. His contributions to medical literature were "On Bismuth and Bismuth Compounds" (*Journ. Chem. Soc.*, 1881); "The Influence of Race on the Course and Treatment of Disease" (*Practitioner*, 1890). A firm believer in the old maxim, "Mens sana in corpore sano," he distinguished himself in the athletic world, where he won many honours. In the inter-university sports he was the winner of the hundred yards and of the quarter mile race. He had ever the greatest love for the sea. He was a keen yachtsman, and had acquired considerable reputation in the yachting world by his clever handling of small racing yachts. He accompanied Lord and the late Lady Brassey on what proved the latter's last voyage in the yacht *Sunbeam*, and was with Lady Brassey at her sad death. He was appointed with his father, the late Sir William Hoffmeister, and his brother, Dr. William Hoffmeister, one of the surgeons to the Queen and Royal family in the Isle of Wight in 1888.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS, Thursday, April 9th.

Volunteer Surgeons.—Dr. CLARK asked the Secretary of State for War whether volunteer surgeons are now promoted to brigade rank; and, if so, whether it was the intention to promote to a similar rank the senior militia surgeons, as some of them had been serving before the volunteer force was instituted. Mr. E. STANHOPE said the reason why the volunteers had this advantage was because they were organised by brigades, and the rank of brigade-surgeon was conferred in recognition of the increased responsibility attached to the principal medical officer of a brigade.

Certifying Surgeons' Certificates.—Mr. JACOB BRIGHT asked the Home Secretary, seeing that he had stated that his opinion in regard to the certifying surgeon was based upon the best information, whether he had consulted the Chief Inspector of Factories upon the subject, and also the Superintending Inspector and the other inspectors in the districts chiefly interested namely, the cotton and woollen districts—as to the advisability of abolishing the certifying surgeons' certificate of fitness; and, if not, why not.—Mr. MATTHEWS said he had, in the ordinary course, consulted the Chief Inspector of Factories on the subject, and learnt through him the views of his department. It was hardly reasonable to suppose that in dealing with this question he should fail to take advantage of all the sources of information at his disposal.

Consumption of Opium in India in 1880.—Sir J. FERGUSSON, in reply to Mr. S. SMITH, said the consumption of opium in Madras and Bombay for 1880 could not be given; in 1889-90 it was 1,594 chests. Excluding Madras and Bombay, but including Lower Burmah, the total consumption in British India was for 1880-81, 5,606 chests, and for 1889-90, 4,800 chests. In Lower Burmah the consumption was for 1880-81, 812 chests; for 1889-90, 791 chests. The consumption in Upper Burmah was not known.

Friday, April 10th.

Tuberculosis in Cattle.—Mr. KNOWLES called attention to the hardship entailed upon butchers through the seizure (without compensation) of tuberculous animals, evidence of which it was practically impossible to obtain until the animals were slaughtered, and asked whether the Government would consider the advisability of extending the provisions of the Contagious Diseases (Animals) Act, 1878, and the amending Act of last session to tuberculosis as far as compensation was concerned.—Mr. CHAPLIN said he was unable to say when the Royal Commission appointed to investigate the subject would report. Cases of pleuro-pneumonia and tuberculosis differed so greatly, that the course suggested would not have the effect which was anticipated either by the hon. member or by those whom he represented.

Outbreak of Fever in Mull.—In reply to a question put by Dr. CAMERON as to the outbreak of fever in Mull (noticed in the BRITISH MEDICAL JOURNAL of April 11th, p. 818), the LORD ADVOCATE said that the Secretary for Scotland would call for a full report from the Board of Supervision, and

would also direct the attention of the County Council to the lamentable state of matters revealed by the case referred to.

Sale of Opium for Smoking.—Mr. KIMBER asked the Secretary of State for the Home Department whether opium, the manufacture of the Indian Government, imported into the United Kingdom for the use of Chinese or others for smoking or other purposes, would be allowed to be sold here, as in India, without being labelled "poison," as was required by law to be done as regards opium sold for use as medicine, and under penalties enforceable in the criminal courts.—Mr. MATTHEWS pointed out that, in accordance with the provisions of the 17th section of the Pharmacy Act of 1868, opium, and all preparations of opium or of poppies, cannot be sold in Great Britain unless labelled with the name of the article, the word "poison," and the name and address of the seller.

Indian Opium Traffic.—Sir J. PEASE, on the motion to go into Committee of Supply, called attention to the Indian opium traffic, and moved a resolution (which was seconded by Mr. M. STEWART) urging the Indian Government to cease granting licences for the cultivation of the poppy and the sale of the drug in India, except for medical purposes, and to take measures to arrest the transit of Malwa opium through British territory.—Dr. FARQUHARSON thought the injurious effects of the use of the drug were much exaggerated.—Sir J. FERGUSSON pointed out that there was nothing to prevent the Chinese putting on a prohibitive duty on the importation of the drug if they desired to do so. The demand for it, both in China and India, was so great that it was impossible to prevent its use.—Mr. W. H. SMITH said the policy of the Indian Government was gradually to diminish the cultivation and use of the drug, but the Government declined to assent to a resolution which would deprive India of a large part of its revenue without at the same time providing a means whereby the deficiency could be made up.—On a division, the motion was carried by 180 to 130.

Tuesday, April 14th.

Local Government in Rural Districts.—Mr. A. ACLAND called attention to what he regarded as the unsatisfactory position of local government in the rural districts, and moved a resolution affirming the principle that no measure of local government for the rural districts of England and Wales will be satisfactory which does not provide for the reform of the vestries and the establishment of parish councils, so as to secure to the inhabitants of country villages a reasonable share in the management of their own affairs.—Mr. J. MORLEY seconded the resolution.—Mr. HOBHOUSE contended that the establishment of parish councils would seriously damage the management of local affairs; and he moved an amendment (which was seconded by Mr. HASTINGS) advocating the grouping of rural parishes under popularly-elected district councils, and the effective control of local affairs by similar bodies in urban and populous places.—Mr. SEALE-HAYNE challenged the Government to produce their promised District Councils Bill, and, while in favour of the parish being made the unit of local government, he thought it would be necessary to begin by a readjustment of areas.—Mr. LLEWELLYN pointed out the difficulties which would result from the grouping of parishes for the purpose of local government, on account of local jealousies; and Sir E. GREY, who spoke in support of the resolution, contended that parish councils should be placed upon a more popular basis by restricting the plural vote.—After some remarks from Mr. AMBROSE, Sir W. FOSTER said that county councils were in many places too far removed from the ordinary villager, who looked forward to the time when some such scheme should be brought in as that which was foreshadowed by the Chancellor of the Exchequer, who had once said: "I propose that in every village there should be some responsible head man; I am extremely anxious that throughout the rural villages we may develop a mass of civic life." Under present conditions little or nothing could be done to make those villages what they ought to be in point of sanitation. The people who suffered from bad water supply and bad drainage in country districts had no part in the management of such matters. If parish councils were created they would be heard, and there would be improvement. The control in rural districts over sanitary affairs was placed at present in the hands of men who were elected primarily to administer the Poor Law, and sanitary administration was relegated by them to an inferior position. From twenty officers of health residing in different parts of the country he had received deplorable accounts of the way in which the people were housed. He believed that if they had these parish councils, the control of the houses of the poor would be in the hands of men who felt the evil of their squalid condition.—Colonel KENYON-SLANEY and Mr. F. STEVENSON having spoken, Mr. RITCHIE pointed out what the Government had already done in the way of local government reform, and expressed the view that the establishment of district councils, whereby the Sanitary Acts and other measures dealing with the health and comfort of the people might be carried out in rural localities, was far more urgently required than parish councils. He admitted, however, that no system of local government reform would be complete which did not eventually deal with parochial administration, and, while he thought it would be difficult to undertake any reform of this kind without at the same time dealing with the question of parish areas, he expressed the hope that ultimately there would be a link between the county councils and the district councils, and between the district councils and the parish councils.—Mr. STANSFELD argued that no further measure of local government reform would be acceptable which did not provide for parochial administration as well as for the formation of district councils; and on a division the resolution was negatived by 175 to 142; after which Mr. RITCHIE moved an amendment to Mr. HOBHOUSE'S amendment, with a view of including the reform of parish government, whereupon Mr. JOHN ELLIS moved the adjournment of the debate, which was agreed to.

DR. BAILLARGER, the eminent French alienist, whose death was recently announced in the BRITISH MEDICAL JOURNAL, has bequeathed to the French Academy of Medicine a capital sum sufficient to produce an annual revenue of 1,000 francs, which is to be applied to the foundation of a biennial prize of 2,000 francs (£80) for the best work appearing in the interval on mental diseases.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MEDICAL OFFICERS OF HEALTH AND OTHER PRACTITIONERS.

BRANDON.—The statement made in the report of the medical officer of health is certainly of a very grave character, and reflecting as it does upon the conduct of the cases of diphtheria by the medical attendant should certainly not have been made except upon the clearest evidence, and then only in the public interest as illustrating the mode of origin or spread of the epidemic. The medical officer of health being a public officer must occasionally sacrifice personal interests for the sake of the public good, but it can rarely be necessary to comment upon the conduct of a professional brother in the manner complained of by our correspondent. A medical officer of health who examines cases of infectious disease without the permission of the medical attendant is guilty of a breach of professional etiquette. If such permission is not granted and the medical officer of health still considers it his duty to examine the cases, he should inform the medical attendant of his intention and of the probable day and hour at which the examination will be made, so that the medical attendant may be present if he so desires.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, 6,615 births and 4,400 deaths were registered during the week ending Saturday, April 11th. The annual rate of mortality in these towns, which had been 21.2 and 22.4 per 1,000 in the preceding two weeks, further increased to 22.9 during the week under notice. The rates in the several towns ranged from 18.3 in Brighton, 19.4 in Birkenhead, 19.5 in Norwich, and 19.8 in Nottingham to 29.7 in Manchester, 34.1 in Newcastle-upon-Tyne, 34.2 in Manchester, and 42.5 in Hull. In the twenty-seven provincial towns the mean death-rate was 25.3 per 1,000, and exceeded by 5.3 the rate recorded in London, which was 20.0 per 1,000. The 4,400 deaths registered during the week under notice in the twenty-eight towns included 438 which were referred to the principal zymotic diseases, against 414 and 468 in the preceding two weeks: of these, 157 resulted from measles, 147 from whooping-cough, 40 from diphtheria, 36 from scarlet fever, 30 from "fever" (principally enteric), 28 from diarrhœa, and not one from small-pox. These 438 deaths were equal to an annual rate of 2.3 per 1,000; in London the zymotic rate was 1.8, while it averaged 2.6 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Brighton, 0.4 in Sunderland, 0.5 in Birkenhead, and 0.6 in Wolverhampton to 4.0 in Leicester, 5.0 in Blackburn, 6.2 in Huddersfield, and 8.7 in Portsmouth. Measles showed the highest proportional fatality in Bristol, Blackburn, Huddersfield, and Portsmouth; scarlet fever in Bradford; and whooping-cough in Newcastle-upon-Tyne, Leicester, Derby, and Halifax. The mortality from "fever" showed no marked excess in any of the large towns. Of the 40 deaths from diphtheria in the twenty-eight towns during the week under notice, 26 occurred in London, 4 in Salford, and 2 each in Manchester, Liverpool, and Sheffield. No fatal case of small-pox was recorded in any of the twenty-eight towns; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 1 in the Highgate Small-pox Hospital, on Saturday, April 11th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on the same date was 1,018, and showed a further decline from recent weekly numbers; 77 new cases were admitted during the week, against 81 and 98 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.4 per 1,000, and slightly exceeded the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, April 11th, 915 births and 653 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 26.7 and 26.2 per 1,000 in the preceding two weeks, further declined to 25.0 during the week under notice, but exceeded by 2.1 per 1,000 the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Greenock, and the highest in Glasgow and Paisley. The 653 deaths registered in these towns included 80 which were referred to the principal zymotic diseases, equal to an annual rate of 3.1 per 1,000, which exceeded by 0.8 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Leith, Glasgow and Paisley. The 311 deaths registered in Glasgow included 16 which were referred to whooping-cough, 12 to measles, and 2 to diphtheria. Nineteen fatal cases of measles were recorded in Paisley, against 11 and 20 in the preceding two weeks. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 6.3 per 1,000, against 5.4 in London.

HEALTH OF IRISH TOWNS.

IN sixteen of the principal town districts of Ireland the deaths registered during the week ending Saturday, April 4th, were equal to an annual rate of 25.9 per 1,000. The lowest rates were recorded in Newry and Sligo, and the highest rates in Drogheda and Waterford. The death-rate from the principal zymotic diseases averaged 1.6 per 1,000. The 162 deaths in Dublin were equal to an annual rate of 23.9 per 1,000 (against 28.4 and 29.1 in the preceding two weeks), the rate for the same period being 20.9 in London and 23.9 in Edinburgh. The 162 deaths in Dublin included 5 which were referred to the principal zymotic diseases (equal to an annual rate of 0.7 per 1,000), of which 3 resulted from whooping-cough, 1 from enteric fever, and 1 from diarrhœa.

A CLINIC for Mental Diseases is about to be established in the University of Innsbrück, of which Dr. G. Anton, a former assistant of Professor Meynert's, is to be the director.

HOSPITAL AND DISPENSARY MANAGEMENT.

MEATH HOSPITAL.

The annual meeting of the friends of the Meath Hospital was held on April 6th, Sir Percy Grace, Bart., in the chair. The report stated that the income was £4,630 14s. 4d., and the expenditure £4,967, while there was a total debit balance of £523 18s. 5d. Patients to the number of 1,310 were treated during the year, the average beds occupied being 95.40. The cost of each bed was £49 3s. 9½d.

MEDICAL NEWS.

Professor Corfield has been elected an honorary member of the Imperial Society of Medicine of Constantinople.

We are requested to state that the Æsculapian Society will meet at the Metropolitan Hospital, Kingsland Road, E., on and after April 17th. The hour of meeting is 9 P.M.

The creation of a medical faculty at the University of Lemberg was one of the new measures mentioned in the speech from the Throne before the Austrian Reichsrath on April 11th.

The Marquis of Lorne on April 14th laid the memorial stone of a new wing to the National Orthopædic Hospital. When completed it will accommodate some forty additional patients.

Dr. Herbert Page, of Redditch, has been appointed temporarily a Medical Inspector of the Local Government Board. Dr. Page, who has held the post of medical officer of health for Redditch, will bring considerable experience of sanitary administration to bear upon his new duties.

Prizes.—The Central Committee of the Hungarian Naturalists' Association offers prizes for the best essays on the following subjects: (1) Pathology and Treatment of Tuberculous Diseases of Bones and Joints; (2) Pathology and Treatment of Trachoma; and (3) The Spread of Cancer in Hungary.

German Congresses.—The Ophthalmological Congress will be held this year at Heidelberg from September 13th to 17th.—The Congress of the German Anthropological Society will meet at Danzig in August.—Professor Bardeleben, of Berlin, has been elected President of the German Surgical Congress for 1892.

Mr. George Henry Blackmore, a highly respected general practitioner of Shepherd's Bush, died in St. Mary's Hospital on April 7th from injuries received in attempting to alight from his carriage; the horses had bolted and the coachman had been thrown from his seat. The deceased gentleman, who was 42 years of age, leaves a widow and six children, for whom much sympathy is felt. Mr. Blackmore held several public appointments.

The Home Hospitals Association.—At the thirteenth annual meeting of this Association, presided over by Sir Richard Quain, the report presented showed that during the year there were 463 applicants for admission, and 324 admissions—an increase of 23 over the previous year. The Nurses' Home, opened in 1888, had proved very successful. The number of nurses on the staff would shortly be increased to 16. The income for the year was £893, and the expenditure £938.

Medical Congress at Salamanca.—It is proposed to hold a Medico-pharmaceutical Congress in the ancient university town of Salamanca in connection with the public celebration of the four-hundredth anniversary of the discovery of America by Columbus, which is being organised for 1892. Salamanca claims to have befriended the great Genoese explorer when principalities and powers looked askance at him and his projects.

The late Professor Botkin.—The pupils, friends, and admirers of the late Professor S. P. Botkin, of St. Petersburg, have subscribed a sum of 20,000 roubles towards the building of a municipal elementary school which is to bear the name of the deceased physician. The Town Council of the Russian capital has voted an additional sum of 10,000 roubles for the same purpose. A site in the Wassili-Ostrow quarter has been selected, and the building is to be at once proceeded with. Accommodation will be provided for 100 children.

Clearness v. Purity of Water.—Major Powell, of the United States Geological Survey, protesting against the supply to a public building at Washington of water from a "clear" spring which he believed to be contaminated by sewage, stated that when experimenting with various substances for the precipitation of suspended particles of clay in river waters, he found nothing so efficient for the purpose as "sewage." If this be true, its bearing on the notoriously clear and inviting appearance of many undoubtedly polluted waters is obvious and suggestive.

Infant Life Insurance.—At a meeting of the Burial Reform Association, held in the Zouche Chapel, York Minster, the following resolution, moved by Mr. J. Shields, of Durham, and seconded by Archdeacon Hamilton, was carried unanimously: "That attention should be called to the excessive insurance of infants' lives. Such sums as £10, £15, and £20, and even more, for which children's lives are sometimes insured, are beyond what is required. It ought, therefore, to be sufficient for parents to insure the moderate cost of a simple funeral, with its concomitant expenses." This was carried unanimously.

Literary Intelligence.—A new monthly periodical, entitled *Journal of Gynecology*, is about to appear at Toledo, Ohio, U.S.A., under the editorship of Dr. Charles N. Smith. A special feature will be a bibliographical index, in which it is proposed to note every article on gynæcology, obstetrics, and abdominal surgery which appears in American medical journals.—The Spanish Royal Academy of Medicine has recently published the first part of the eleventh volume of its *Anales*. Besides miscellaneous matter it contains reports and discussions on diphtheria, a disease which is almost endemic in the Spanish capital.—Professor Edoardo Maragliano, of Genoa, has just published a book bearing the title "On the Treatment of Pulmonary Phthisis with Koch's Lymph."

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Lafosse, Professor in, and afterwards Director of, the Veterinary School of Toulouse, and author of a textbook of pathology, which is considered a classic in France; Dr. Bourguet, of Aix, well known as one of the best surgeons in the south of France; Dr. Charles T. Parkes, Professor of Surgery in the Rush Medical College of Chicago, and one of the most prominent surgeons in the State of Illinois; Dr. Alvan Talcott, of Guildford, Connecticut, aged 87, a distinguished Greek scholar, who gave Yale College 25,000 dollars to endow a Chair of Greek; Dr. Richard Maly, Professor of Chemistry in the German University of Prague, aged 52; and Dr. August Schenck, Professor of Botany in the University of Leipzig from 1868 to 1887, aged 76.

Congress of American Physicians and Surgeons.—The second triennial meeting of the Congress of American Physicians and Surgeons will be held in Washington on September 22nd to 25th, 1891, under the presidency of Dr. Weir Mitchell. Among the subjects on the programme are the following:—Conditions underlying the Infection of Wounds, including a Discussion of Disinfection with reference to Treatment of Wounds, of the Relation of Bacteria to Suppuration, of the Resistance of Tissues to the Multiplication of Bacteria, and of the Effects of Antiseptic Agents on Wounds, to be opened by Dr. William H. Welch, Professor of Pathology in the Johns Hopkins University, Baltimore, and Dr. Roswell Park, Professor of Surgery in the Buffalo Medical College; the Late Manifestations of Syphilis, to be introduced by Dr. Phineas S. Conder, Professor of Surgery in the Medical College of Ohio, and Dr. Abner Post, Instructor in Venereal Diseases and Syphilis in the University of Harvard; and Fibroid Processes (Chronic Interstitial Inflammation, Scleroses), their Pathology and Etiology, with special reference to the Influence of Diathesis and Heredity, to be opened by Dr. Alfred L. Loomis, Professor of Pathology and the Practice of Medicine in the University of the City of New York, and Dr. William Osler, Professor of Medicine in the Johns Hopkins University. The presidential address will be delivered by Dr. Weir Mitchell on September 22nd.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—At the last quarterly court of directors of the Society, the President, Sir James Paget, in the chair, one new member was elected, and the deaths of two were reported. A fresh application for a grant was made by a widow, and an immediate grant of ten guineas was made pending inquiry. The death of one widow was announced, one had ceased to apply for assistance, and two had become ineligible through age for further grants. Applications for grants were read from sixty-two widows, twelve orphans, and three orphans on the Copeland Fund, and £1,383 10s. was recommended to be divided among them at the next court. The expenses of the quarter were £68 9s. The following gentlemen were nominated for election as directors at the annual general meeting:—Dr. Russell Reynolds in the place of Dr. Matthews Duncan, deceased; and Dr. Ogle, Dr. Church, Mr. Durham, Mr. Vasey, Dr. Hickman, and Mr. G. T. Keele in the place of the six senior directors who retire. The annual general meeting was fixed to be held on Thursday, May 28th, at 5 o'clock.

PRESENTATIONS.—On Easter Tuesday, Dr. Walter Grosett Collins received as a parting gift from patients and friends, on the occasion of his leaving Midhurst, a handsome silver tea and coffee service, together with silver kettle and stand, the latter bearing a commemorative inscription. The whole service is enclosed in a substantial case of polished zebra wood.—At a distribution of ambulance certificates at Middlewick, Dr. McJannet, by whom the classes have been conducted, was presented, on behalf of the ladies' class, with a gong, while from the male class he received a silver-mounted walking-stick.—On Wednesday, April 1st, Dr. E. F. Scougal, the Honorary Secretary of the Huddersfield Medical Society, was, on the occasion of his marriage, presented by the members with a handsome walnut cylinder writing-table and a library chair, the former bearing a suitable inscription. The presentation was made by Mr. T. Kilner Clarke in a few appropriate words. Drs. Macgregor and Walker (Golcar) referred in eulogistic terms to the zeal and energy which Dr. Scougal had displayed on behalf of the Society and the good work he had done in connection with it. Dr. Scougal acknowledged the gift in suitable terms.—On April 15th, Dr. Balfour Graham was presented at Leven, Fife, N.B., by the members of his ambulance class under the St. Andrew Ambulance Association, with a handsome microscope in appreciation of his services as their lecturer.

MEDICAL VACANCIES.

The following Vacancies are announced:

CANCER (FREE) HOSPITAL, Fulham Road, S.W.—Assistant-Surgeon; must be F.R.C.S., and reside within the four mile radius. Applications to the Chairman of the House Committee by April 18th.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Honorarium £100 per annum. Applications to Stanley Boyd, Dean, by April 20th.

COUNTIES OF KIRKCUDBRIGHT AND WIGTOWN.—Medical Officer of Health. Salary, £350 per annum and personal and travelling expenses. Applications to R. M. and A. J. Gordon, County Clerks, Kirkcudbright, and J. and C. A. McLean, County Clerks, Wigtown, from whom further particulars can be obtained, by April 22nd.

COUNTY BOROUGH OF BRADFORD FEVER HOSPITAL.—Resident Medical Superintendent; double qualifications. Applications, endorsed "Resident Medical Superintendentship," to the Chairman of the Sanitary Committee, Town Clerk's Office, Bradford, by April 27th.

DERBY COUNTY ASYLUM, Mickleover, near Derby.—Locum Tenens Assistant Medical Officer for 2½ months from May 1st. Terms, £2 2s., with board, lodging and washing. Applications to the Medical Superintendent.

DEVONSHIRE HOSPITAL, Buxton.—House-Surgeon. Salary £100 per annum, with board, furnished apartments and washing. Applications endorsed "House Surgeon," to the Secretary, by April 20th.

DEVONSHIRE HOSPITAL, Buxton.—Assistant House-Surgeon. Salary, £50 per annum, with board, furnished apartments and washing. Applications endorsed "Assistant House-Surgeon," to the Secretary, by April 20th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell E.—House-Physician. Board and lodging provided; no salary. Applications to Samuel Whitford, Secretary, by April 23rd.

GENERAL INFIRMARY, Leeds.—House-Physician. Board, lodging and washing provided. Applications to Mr. E. Ward, Secretary of the Faculty, Infirmary, Leeds, by April 22nd.

GENERAL INFIRMARY, Leeds.—Two House-Surgeons. Board, lodging and washing provided. Applications to Mr. E. Ward, Secretary of the Faculty, Infirmary, Leeds, by April 22nd.

GENERAL INFIRMARY, Leeds.—Resident Officer at the Ida Hospital. Appointment for six months. Honorarium of £25, with board, lodging and washing. Applications to Mr. E. Ward, Secretary of the Faculty, Infirmary, Leeds, by April 22nd.

GUEST HOSPITAL, Dudley.—Resident Medical Officer, double qualifications. Salary, £100 per annum, with board, residence, attendance and washing. Applications to E. Poole, Secretary, by April 23rd.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Medical Officer, double qualifications, unmarried and not under 25 years of age. Salary, £200 per annum, with board and residence. Applications by April 22nd.

HULME DISPENSARY, Manchester.—Honorary Surgeon. Applications to Dr. F. H. Collins, Honorary Secretary Medical Committee, by May 1st.

KING'S COLLEGE HOSPITAL.—Sambrooke Medical Registrar. Applications from King's College students, to J. W. Cunningham, Secretary, King's College, London.

KING'S COLLEGE, London.—Demonstrator of Public Health. Applications to J. W. Cunningham, Secretary.

LIDDELL PROVIDENT DISPENSARY, Jarrow-on-Tyne.—Medical Practitioner. Salary, £150 per annum, and all midwifery fees. Application to John Christie, Secretary, 28, Cobden Street, Jarrow, by April 20th.

LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Out-door Qualified Assistant. Salary, £120 per annum. Applications to the Secretary, W. Coulson, 12, North Parade, Lincoln, By April 20th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT, Bowdon, Cheshire.—Resident Medical Officer. Salary, £60 per annum, with board, apartments, and washing. Applications to C. W. Hunt, Secretary, by April 21st.

NEW HOSPITAL FOR WOMEN, 141, Euston Road, N.W.—Female Resident Medical Officer; qualified. Application to Margaret M. Bagster, Secretary, by April 27th.

NEWCASTLE-UPON-TYNE CITY LUNATIC ASYLUM.—Assistant Medical Officer; double qualifications; under 30 years of age; unmarried Applications to Medical Superintendent by April 18th.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man. Resident House-Surgeon; unmarried. Salary, £90 per annum, with apartments, gas, coals, and washing. Applications to T. Brown, Honorary Secretary, by April 26th.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer. Applications to Alfred Craske, Secretary, by April 24th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Assistant Resident Medical Officer. Applications to Alfred Craske, Secretary, by April 24th.

NOTTINGHAM BOROUGH ASYLUM, Mapperley Hill.—Resident Clinical Assistant; double qualifications; board and residence provided. Applications to the Medical Superintendent.

OXFORD EYE HOSPITAL.—House-Surgeon. Board, lodging, and honorarium of £50 at end of a year. Applications by April 20th.

PARISH OF BIRMINGHAM.—Medical Clinical Clerk at the Workhouse Infirmary. Honorarium, £15 15s. for six months, with rations, coals, gas, apartments, washing, and attendance. Applications (only on printed forms to be obtained at the parish offices) to Walter Bowen, Clerk to the Guardians, Parish Offices, Edmund Street, Birmingham, by April 18th.

PARISH OF CHELSEA.—Medical Officer of Health, Food and Drugs Analyst, and Gas Examiner. Salary, £450 per annum. Applications marked on outside of envelope: "Application for appointment as Medical Officer of Health, etc.," to Thomas Holland, Vestry Clerk, Town Hall, King's Road, Chelsea, by April 20th.

PARISH OF FULHAM.—Medical Officer of Health. Salary, £400 per annum. Appointed for three years. Age not to exceed 45. Applications to the Clerk of the Fulham Vestry.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL, St. George's Circus, S.E.—Clinical Assistant for three days a week. Salary to commence at £35 per annum. Applications to the Secretary.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King Street, Regent Street, W.—Third Honorary Physician. Applications to St. Leger Burnett, Secretary, by April 20th.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Surgeon, double qualifications; unmarried and under thirty years of age. Salary, £120 per annum, rising to £140, with board, residence and washing. Applications to Lieutenant-General E. F. Bourchier, Secretary, by April 29th.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Physician; double qualifications; unmarried, and under 30 years of age. Salary, £60, rising to £80, per annum, with board, residence, and washing. Applications to the Secretary by May 6th.

VICTORIA (Ebbw Vale, Mon.).—Surgeon; fully qualified; married; to take charge of Iron Works and Colliery District. Salary, £500 per annum; will be required to keep qualified assistant and provide drugs. Application to Wm. Dayson, Secretary, Ebbw Vale Works Doctor's Fund, Ebbw Vale, Mon.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in the hospital. Applications to W. H. Laban, Secretary.

WEST HERTS INFIRMARY, Hemel Hempstead.—House-Surgeon and Dispenser; double qualifications; unmarried. Salary, £100 per annum, with board, furnished rooms, fire, lights, attendance, and washing. Applications to the Secretary by May 6th.

WESTERN SKIN HOSPITAL, Great Portland Street, W.—Honorary Physician. Applications to the Chairman of Committee by April 28th.

WOLVERHAMPTON EYE HOSPITAL.—Resident Assistant; rooms, with board and washing, provided. Appointment for not less than six, nor more than twelve, months. Applications to the Secretary by April 30th.

WOLVERHAMPTON UNION.—Medical Officer and Public Vaccinator for the Township of Willenhall. Salary as Medical Officer, £140 per annum, with fees; must reside within the township. Applications to Edwin Pritchard, Clerk to the Guardians, St. Peter's Close, Wolverhampton, by April 21st.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £130 per annum, with furnished apartments, coals, and gas. Applications to S. W. North, Esq., 84, Micklegate, York, by May 1st.

MEDICAL APPOINTMENTS.

ASHWELL, Michael H., M.R.C.S.Eng., L.S.A., appointed Consulting Physician to the North Staffordshire Infirmary and Eye Hospital.

AULD, Archibald, M.B., C.M.Edin., reappointed Medical Officer for the Heck District of the Pontefract Union.

BLAIKIE, Arthur B., M.B.Camb., L.R.C.P.Lond, M.R.C.S., appointed Medical Officer for the No. 1 District of the Oswestry Union.

BOSWELL, John Irvine, M.D.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Port and Borough of Faversham.

BURWOOD, James Watson, L.F.P.S.Glas., reappointed Medical Officer of Health for Bourne, Lincolnshire.

CARTWRIGHT, John P., M.R.C.S.Eng., L.S.A., appointed Medical Officer of Oswestry and the Workhouse.

CLARKE, Ernest, M.D., B.S., appointed Surgeon to the Eye Department Miller Hospital.

COSENS, Charles H. C., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer for the Second District of the Wellington Union.

DAVIES, E. P., M.R.C.S., appointed Consulting Surgeon to the Carmarthen Infirmary.

DISTIN, Howard, M.R.C.S., L.R.C.P., appointed Resident Clinical Assistant at Bethlem Hospital.

ERSKINE, Robert, M.D.Q.U.Irel., reappointed Medical Officer for the Camborne District of the Redruth Union.

FIELD, Frederick Arthur, L.R.C.P.Lond., M.R.C.S., appointed House-Surgeon to the West Norfolk and Lynn Hospital, King's Lynn.

GOLDIE, Edward Milliken, M.B., M.Ch.Edin., appointed Assistant Medical Officer to the York Lunatic Asylum.

HAWKINS, H. P., M.B.Lond., M.R.C.S.Eng., appointed Assistant Physician to St. Thomas's Hospital.

HUGHES, Edgar, F.R.C.S., appointed Surgeon to the St. George's and St. James's Dispensary, and Surgeon to the London Rifle Volunteer Brigade.

MCLEAN, Charles J. Russell, M.D. and C.M.Edin., reappointed Medical Officer of Health to the Yeadon Urban Sanitary District.

MCVAIL, John C., M.D.St. And., D.P.H.Camb., appointed Medical Officer of Health for the Counties of Stirling and Dumbarton.

NICHOLLS, Hubert, M.R.C.S.Eng., M.B.Cantab., appointed Assistant Physician to the North Staffordshire Infirmary and Eye Hospital.

NORGATE, Robert H., M.R.C.S., L.R.C.P.Lond., appointed Third Assistant Medical Officer to the Worcester County and City Lunatic Asylum, *vice* Arthur W. Boning.

OSBURN, H. B., M.R.C.S., L.R.C.P., appointed Anæsthetist and Registrar to the Royal Hospital for Children and Women, Waterloo Road, *vice* Dr. S. W. Wheaton.

RADFORD, William J., L.R.C.P., M.R.C.S., appointed Resident Medical Officer to the St. Marylebone General Dispensary, *vice* E. A. Snape, L.R.C.P.

ROBINSON, G. Drummond, M.B., B.S.Lond., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Chelsea Hospital for Women, *vice* Dr. Mortlock.

ROLSTON, T. R., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Stoke and Tamar District of the Stoke Damerel Union.

SAYRES, A. W. F., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

SIMON, R. M., M.D.Cantab, appointed Physician to the Birmingham General Hospital, *vice* Sir Walter Foster, resigned.

STONEY, Percy Butler, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer Health for Millom, Cumberland.

STURGE, W. Howard, M.R.C.S., L.R.C.P., appointed House-Surgeon at the London Hospital.

THORNE, J. M., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Royal Hospital for Children and Women, Waterloo Road, *vice* Dr. E. Moss.

THURSO, W. J. Brock, M.D., B.Sc., appointed Medical Officer to the Counties of Midlothian, West Lothian, and Peebles.

TURNEY, Horace George, M.A., M.B., M.S.Oxon, M.R.C.P.Lond., F.R.C.S.Eng., appointed Resident Assistant Physician to St. Thomas's Hospital, *vice* Dr. H. P. Hawkins.

VALLANCE, Ernest, L.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Resident Medical Officer to the Workhouse of the West Ham Union.

WILLIAMS, E. R., M.R.C.S., appointed Honorary Medical Officer to the Carmarthen Infirmary, *vice* E. P. Davies, M.R.C.S., resigned; and Surgeon to the Great Western Provident Society, *vice* J. Hughes, F.R.C.S., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. G. A. Heron: The use of Koch's Remedy in Lupus Vulgaris and in Tuberculosis of the Lung. N.B. Patients on view at 8 P.M.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. J. C. Mackenzie: Melanotic Sarcomatosis. Mr. Sydney Jones: Perforation of Gall-bladder. Mr. H. H. Clutton: Osteitis Deformans of Tibia. Dr. W. B. Hadden: Ulceration and Great Contraction of Stomach. Mr. W. H. Battle; Acute Epiphysitis. Mr. E. Hurry Fenwick: Tuberculous Bladder after Koch's Treatment. Mr. Solly: Myeloid Tumour of Tibia with Secondary Growths. Mr. W. Anderson: Fæcal Fistula at Umbilicus. Mr. W. H. Battle: Sarcoma of Femur. Dr. West: Secondary Sarcoma of Lung. Card Specimens: Dr. Howship Dickinson: Aneurysm of the Abdominal Aorta Opening into the Duodenum. Aneurysm of the Thoracic Aorta Opening into the Left Bronchus. Mr. H. H. Clutton: Extensive Rodent Ulcer of the Scalp. Mr. J. H. Targett: Melanotic Sarcoma of Bladder.

WEDNESDAY.

HUNTERIAN SOCIETY, 8 P.M.—Dr. A. T. Davies will exhibit a Case of Graves's Disease. Mr. F. R. Humphreys: Two Cases of Pneumonia (migrating) with complications. Dr. E. G. Gilbert: Some Remarks on Colds. Dr. J. Langton Hewer: Extra-uterine Fœtation. Mr. A. H. Tubby: The Pathology and Treatment of Acute Necrosis of Bone.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Further Adjourned Discussion on Dr. Bell's Paper: Treatment of Chronic Disease of Uterine Adnexa.

FRIDAY.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND. Brislington House, Bristol, 3 P.M.—Dr. Hack Tuke: Prichard and Symonds in especial relation to Mental Science. Dr. Weatherly: The Use and Abuse of Hyoscine. Dr. Bonville Fox: Notes on a Few Unusual Cases of General Paralysis.

CLINICAL SOCIETY OF LONDON, 8 P.M.—Living Specimens. Mr. Bilton Pollard: Old (? Congenital) Dislocation of Patella reduced by Intra-articular Operation. Dr. J. Taylor (for Dr. Hughlings Jackson): Two Cases of Muscular Atrophy. Mr. F. B. Jessett: (1) A Case of Estländer's Operation; (2) A Case of Gastro-enterostomy for Pyloric Cancer. Dr. Ewart and Mr. W. H. Bennett: A Case of Gastro-jejunostomy for Pyloric Obstruction. Mr. W. H. Bennett: Symmetrical Enlargement of Parotid Glands. Mr. Bruce Clarke: Case Showing a New Method of Amputation just below the Knee-joint. Dr. F. Hawkins: Two Cases of Congenital Disease of the Heart. Mr. W. H. Battle: (1) A Case of Recurrent Dislocation of the Patellæ; (2) A Case Showing Recovery from Lupus Erythematosus after Internal Treatment only; (3) A Case Showing the Result of Plastic Operation for Extroversion of the Bladder.—9 P.M. Papers. Mr. W. H. Brown: A Case of Gastro-jejunostomy. Mr. Arbuthnot Lane: Two Cases of Resection of Intestine by Senn's Method. Mr. C. J. Symonds: Two Cases in which a Sequestrum was Removed from the Neck of the Femur without Injury to the Joint; recovery in both, and in one with a perfect joint.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTH.

PETTY.—On March 11th, at Belgram, Buenos Ayres, Argentine Republic, the wife of Dr. Michael John Petty, of a daughter.

MARRIAGES.

COX—ILES.—At Watford Parish Church, on the 14th inst., by the Rev. R. Lee James, Alfred Edward Cox, M.R.C.S., L.R.C.P., youngest son of the late William Henry Cox, Esq., of Duffield, Derbyshire, to Sybil Maud Iles, 3rd daughter of the late F. H. Wilson Iles, M.D., of Watford.

LYELL—MORETON.—On the 11th inst., at St. Andrew's Church, Tarvin, by the Rev. Canon Upperton, assisted by Rev. E. J. Richardson and Rev. W. H. Shuter, William Darling Lyell, Advocate Sheriff Substitute of Galloway and Kirkcudbright, to Helen (Nellie), daughter of J. E. Moreton, F.R.C.S.

MOLSON—LEESON.—On the 11th instant, at St. Andrew's, Wells Street, by the Rev. W. T. Houldsworth, Vicar, assisted by the Rev. Stanley Collier, John Elsdale Molson, M.B.Cantab., son of S. Elsdale Molson, of Montreal, to Mary, elder daughter of Dr. Arthur E. Leeson, of 22, Dorset Square.

NEWTON—DAVIDSON.—Morpeth, St. James's Church, 2nd inst., by the Rev. H. J. Bulkeley, M.A., Rector of Morpeth, assisted by the Rev. J. Lightfoot, Vicar of Ashington, cousin of the bride, George Newton, M.R.C.S.E., of Newcastle-on-Tyne, to Amy, youngest daughter of William Davidson, B.A., Morpeth Grammar School.

TRIPP—EYTON-JONES.—On the 9th of April, at Trinity Church, New York, by the Rev. G. Hill, William Harper Tripp (of Indianapolis), second son of the Rev. John Tripp, M.A., Samford Brett Rectory, near Taunton, to Mabel Winifred, elder daughter of T. Eyton-Jones, M.D., Wrexham.

DEATH.

HUGHES.—April 14th, at Glanaber, Barmouth, Florence Edith, wife of D. Arthur Hughes, M.R.C.S.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4. Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2, Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.45; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 1, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1, Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

M.D. asks for the addresses of any good places for obtaining second-hand surgical instruments in London.

FESTUS asks for particulars of the probable cost of opening and maintaining a small cottage hospital, say of eight beds, in a Scotch country town.

PRIVATE PATIENTS IN HOSPITALS.

HOUSE-SURGEON wishes to know what the rule is with regard to the above. Is he bound to attend them without extra remuneration? or must he be satisfied with a hurried "Good-bye"?

MANUFACTURED WINES AND BRANDY SUBSTITUTES.

J. S. asks: 1. Are manufactured brandies and wines equal medicinally to the genuine articles distilled from wine or fermented naturally?

2. Is the use of pure ethylic alcohol—as sp. vin. rectif.—equal as a stimulant to brandy or whisky?

*** 1. This question is very general, as "manufactured wines" include a very wide range of quality. Assuming that the commoner kinds are meant, it may be said that "manufactured brandies and wines" are not "equal medicinally to the genuine articles." They usually contain about the same amount of alcohol, but want the delicate flavour of the natural product, and are usually overloaded with sugar and other flavouring substances, which renders them more apt to disturb digestion and disagree. It is notorious that over-indulgence, or even moderate indulgence, in such manufactured liquors is followed by much more unpleasant results, as regards both the digestive and nervous systems, than if good sound wine or spirits have been taken. The quality and degree of harmfulness of manufactured liquors vary very greatly.

2. Pure ethylic alcohol (diluted) is without doubt a powerful stimulant to the circulatory system, and is not infrequently used as a substitute for brandy, whisky, etc., under the idea that the patient will not readily acquire a taste for it. Probably, however, owing to the absence of ethers, which exercise a powerful effect on the blood vessels, pure ethylic alcohol is not quite so good a stimulant as the spirituous liquors in common use. No exact observations on the subject are available.

TREATMENT OF "FERMENTATIVE DYSPEPSIA."

NIL DESPERANDUM asks for suggestions for the treatment of the following case. A gentleman, aged 57, has for years suffered from fermentative dyspepsia, distension and enormous flatulence coming on after every meal and lasting for some hours afterwards. Meals of late have been restricted to two in the day—8.30 A.M. and 5 P.M.—and of whatever they may be composed the result is the same; the bowels are continually relaxed, will only retain the fæces for a very short time, and the motions are semi-pultaceous, evidently irritating the bowels, and causing premature expulsion, whilst the flatulent distension is enormous. Symptoms cease if no food is taken, and return immediately food is put into the stomach. Almost every remedy thought of has been tried in vain, and the only thing that seems to exert any palliative influence is morphine in small doses preceding the meals; but the effect is only very transient. The patient is of most temperate habits, active, and otherwise well; family history good.

ANSWERS.

A MEMBER OF FORTY YEARS' STANDING.—Sir Henry Thompson has published two books on food and cooking, namely, *Food and Feeding* (F. Warne and Co., 6th edition), published three months ago, and *Diet in Relation to Age and Activity* (Kegan Paul and Co.), 1889. Our correspondent probably refers to the first named.

A SUBSCRIBER.—In the circumstances mentioned it would seem to be absurd to apply the term offensive to such a question as that about which you ask our opinion.

DISTRICT MEDICAL OFFICER OF HEALTH.—Full particulars as to diplomas in public health will be found in the Students' number of the BRITISH MEDICAL JOURNAL, September 6th, 1890; see also BRITISH MEDICAL JOURNAL, February 28th, 1891, p. 497; and March 14th, 1891, p. 618.

INCONTINENCE OF URINE.

DR. S. A. C. SWAN (Gilford, Co. Down) writes: If "M.D." will try the effect of counter-irritation with a fly blister on the nape of the neck, I think he will be gratified. Some five years ago I saw this treatment recommended in an article by Dr. Harkin, of Belfast, and have carried it out many times since in cases which have refused to yield to other remedies, and always with success.

TREATMENT OF NÆVUS.

DR. W. BARON COCKILL (Kendal) writes: In reply to "Member" (April 4th) on the treatment of nævus, I would recommend him to destroy the skin with strong nitric acid, and then apply chloride of zinc paste spread upon lint, cut to the size of the nævus, and kept in its place by a strip of adhesive plaster. One application will probably suffice.

NOTES, LETTERS, Etc.

ERRATUM.—In Mr. E. Coward's remarks on Sol. Hydrarg. Perchlor. in Diphtheria, in the BRITISH MEDICAL JOURNAL of April 11th, p. 835, line 13 of article, for ʒj read ʒj.

IT should have been stated that the full report of the proceedings of the recent Conference on the Housing of the Poor, to which reference was made in the BRITISH MEDICAL JOURNAL of April 4th, p. 765, was published in the *Sanitary Record* of March 15th.

PUBLIC DEBATE ON VEGETARIANISM.

THE ORGANISING SECRETARY OF THE LONDON VEGETARIAN SOCIETY (Memorial Hall, Farringdon Street, E.C.) asks us to state that the Society has arranged to hold a public debate at the Memorial Hall, on Thursday, April 23rd, when the advantages of pulses, grains, fruits, and nuts *versus* fish, flesh, and fowl will be maintained against all comers.

AN UNUSUAL COMPLICATION OF LABOUR.

MEDICAL men are called upon frequently to render services to their patients which certainly are not in the bond; but it is seldom, perhaps, that a physician has to vary the monotony of the time of waiting at the side of the parturient woman by removing his patient on his back from a burning house to a place of safety. Yet this is the duty which Dr. Bergeron, of Chicago, found it necessary to perform during the recent great fire in that city. Within a quarter of an hour of her delivery came from fire, the patient was delivered of a girl, who is to be given the not inappropriate name of Phœnixia, which is presumably assumed to be the feminine of phœnix. With such a name to carry with her through life, the child is not likely to be allowed to forget the circumstances of her birth.

HIGH TEMPERATURE IN BRONCHIAL PNEUMONIA.

DR. J. O'CONNOR (Manchester) writes: M. P., aged 10 months, was suffering from bronchial pneumonia. I took the temperature three hours before death, when the thermometer registered 108.8°. To be accurate I again took the temperature with another thermometer, when I got exactly the same result. This may be interesting to some of your readers, as personally I have never met with such a high temperature in bronchial pneumonia.

PREDISPOSITION OF WOMEN TO LEAD POISONING.

DR. RICHARD K. CORSER (Bath) writes: In the BRITISH MEDICAL JOURNAL for March 14th Dr. Oliver attributes to female idiosyncrasy women's greater predisposition to lead poisoning. Is it not more probable that the vegetable infusion, tea, of which they drink so freely, renders the lead in them soluble? and, if this be so, ought not those who suffer from the toxic properties of lead to be warned of the danger of indulgence in vegetable diet?

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY: BACTERIOLOGICAL LABORATORY AND MUSEUM.

THE following gentlemen have already consented to send objects of interest to the museum or to demonstrate in the laboratory:—Mr. Adami, Dr. Andrewes, Professor Arloing, Mr. Bokenham, Professor Bouchard, Dr. Boyce, Dr. Banfield, Dr. Brieger, Professor Celli, Dr. Charrin, Professor Chauveau, Mr. P. D. Coghill, M. Collin, Professor Crookshank, Dr. S. Delépine, Dr. Despignes, Dr. Edington, Professor Frankland, M. Gamaleia, Dr. Gordon, Professor Hamilton, Dr. Hime, Dr. W. Hunter, Professor Klein, Professor Laveran, Dr. Lodge, Dr. Malassez, Professor McFadyean, Dr. McWeeney, Dr. S. Martin, Mr. Everett Millais, Dr. Metschnikoff, Dr. Murray, M. Pasteur, Dr. Plowright, Mr. D'Arcy Power, Mr. S. Pringle, Dr. Roger, Sir Henry Roscoe, M.P., Dr. Rouse, Dr. Armand Ruffer, Dr. Russell, Mr. S. Shattock, Dr. Sherrington, Professor Straus, Dr. Vaillard, Dr. Vincent, Dr. Washbourn, Dr. J. C. Wood, Dr. G. S. Woodhead, Dr. Hürtz.

RASH AFTER ANTIPYRIN.

MR. ERNEST GEORGE ARCHER, M.R.C.S., L.S.A., writes: I have been giving antipyrin in a case of migraine of the supraorbital variety. The left side is almost always attacked. A dose of 6 grains gives rapid relief to the headache, but on every occasion the drug has been administered it has been followed in about six hours by these phenomena: first suddenly appears an intense itching of the skin round the anus, and at a distance of about an inch from it bullæ then rapidly appear about the size of a horse bean, and form a complete ring exactly corresponding with the itching surface. These bullæ gradually disappear, apparently by exuding serum, but a great deal of soreness and discomfort is experienced for some days. I should be glad to know if anyone has observed similar symptoms following antipyrin administration, and I should be thankful for any suggestion how to exhibit the drug so as to avoid this accompanying discomfort.

A CONSULTING-ROOM THIEF.

DR. CHARLES T. QUILLER (Clapham Common, S.W.) writes: I send a description of a man who gained access to my consulting room on April 13th by telling the servant that he wished to see me professionally, and would wait my return. In a few minutes he rang the bell to be shown out, saying he would call again; with him went my laryngoscope and hypodermic syringe. He was about 30 years of age, of gentlemanly appearance, fair, with long fair moustache, light trousers, blue overcoat, and brown bowler hat.

"CURES" FOR TUBERCULOSIS.

IT has been persistently stated in the German lay press, and echoes of the rumour have reached this country, that Professor Ewald had added yet another to the fast-growing number of more or less infallible specifics for tuberculosis. In the *Berliner klinische Wochenschrift* the Professor disowns the impeachment, which, he says, has no foundation beyond the fact that Dr. Tranjen, of Sistowo, in Bulgaria, has for some time past been testing the effect of a combination of remedies already known in the Augusta Hospital under his supervision. Dr. Tranjen will publish a report on the results of the treatment in due course.

HALVIVA.

DR. G. YEATES HUNTER, late Brigade-Surgeon, Bombay (Philbeach Gardens, W.) writes: In reply to the letter of Dr. Nias, in the BRITISH MEDICAL JOURNAL of March 21st, I beg to state that when I alluded to kreat I referred to Ophelia Chirata, though kreat is also the local name (so far as Bombay is concerned) for Andrographis Paniculata N.O. Acanthaceæ. There are various kinds of Chirata (kreat), for example, Sir George Birdwood, in his admirable work on *Bombay Products* (1st Division, Raw Produce, Vegetable), enumerates under the N.O. Gentianaceæ.—1st. Ophelia chirata (Griesbach) habitat, Nepaul, the Morungs. 2nd. Ophelia Multiflora (Dalzell) habitat, Mahableshwur. Ophelia Elegans is a native of the Pulney Hills and Northern Circars, and thus, as this eminent authority says, all India is provided with this valuable tonic.

Besides the already mentioned varieties there is Exacum Hyssopifolium, which is intensely bitter; also Exacum Bicolor, which enamels the sward of the Western Ghats with its beautiful blossoms of white and purple, with one or two other kinds which it is needless to enumerate.

Gentian, which is loosely spoken of as the analogue of kreat, has no real analogy, its analysis showing essential differences.

As to Dr. Nias's statement that similar indigenous remedies for ague are found all over the world, it is very significant that kreat alone amongst all these should have received names indicative of the beneficent properties it was believed to possess, not only by the older botanists who called it agathotes, and the more recent ones who rechristened it ophelia (a blessing), but also by such great authorities as Sir William Moore, Sir George Birdwood (Bombay), Balfour (Madras), to say nothing of Pereira, Neligan, and a host of others, both at home and in India.

After a lengthened experience in the East I am unable to agree with Dr. Nias in his poor estimate of native acumen. "Halviva" prepared from kreat, may be roughly described as meaning the "preserver of life."

SCARLET FEVER LATE IN LIFE.

DR. ALFRED BERRILL (Woodford) writes:—E. C., a spare, thin woman, aged 59, had been in poor health for several weeks previous to present note, owing chiefly to want of good food and clothing. She is much troubled with rheumatic arthritis, and lately has had an attack of iritis in both eyes. I saw patient on January 10th; said she "felt ill all over." She had a normal temperature, but her pulse varied between 80 and 100, and was very intermittent. Has never had scarlet fever. January 13th.—Patient had a copious and typical scarlet fever rash all over body; on buttocks and back it was petechial. She was constantly vomiting, and had severe headache; pharynx and fauces dusky red and swollen; temperature, 100.8° F.; pulse 110, but regular and strong; tongue coated, and quite dry; slight diarrhœa. January 15th.—Patient much better. Passed two to three pints of urine in twenty-four hours; contained slight cloud of albumen, and some granular casts were seen under the microscope. There was no œdema of legs. She passed through all the stages of the disease, and made an uninterrupted recovery. The albuminuria remained about same, even up to present date. She was treated in the ordinary way with salines, nitrous ether, and nitrate of potash; hot carbolic baths and inunction of carbolic oil during height of disease afterwards perchloride of iron was given.

TO CORRESPONDENTS.

OUR correspondents are reminded that prolixity is a great bar to publication, and with constant pressure upon every department of the BRITISH MEDICAL JOURNAL, brevity of style and conciseness of statement greatly facilitates early insertion. We are compelled to return or hold over a great number of communications chiefly by reason of their unnecessary length.

A Learned Doctor.

An American contemporary gives the following as the text of a letter recently received by a consulting physician in the States from a learned brother in some difficulty about the management of a case:—

"Dear Dock,—I have a pashunt whose physical sines showes that the windpipe has ulcarated off, and his lungs have drop into his stumick I have given hym everrything without effeckt his father is welthy honable and influenshal as he is a member of assembly and god nose I dont want to lose hym what shall I do ans by return male. Yours frat, ————————"

The diagnosis matches the spelling as perfectly as if by some Leibnitzian *harmonia praestabilita* they had been made for each other. If "style is the man," what an ornament to the profession must the author of this edifying document be!

Long Interval between Birth of Twins

Dr. D. A. W. Carmichael (Durness, Sutherlandshire) writes: Apropos of Dr. Hines's remarks in the British Medical Journal of March 14th on the long interval between the birth of twins, the following case, which has come under my own observation, may be of interest. While practising in Lochgilphead, I was summoned on a Tuesday to attend a case about six miles distant, and found on arrival a full grown stillborn child. After examination I found there was another, but as there were then no pains I left, requesting them to send for me if necessary. On the Monday following I was sent for again, and to my surprise found the woman in labour, which came on a few hours before my arrival. Finding that she made no progress, I applied the forceps. With some difficulty, I delivered her of a living child, six clear days after the birth of the first.

As a student of Leishman's, who recommends leaving to Nature, it occurred to me to communicate to you the foregoing case.

Antifebrin in Solution.

Dr. J. Christian Simpson writes: A more extensive use of antifebrin is probably to some extent debarred by its insolubility in ordinary media, and the consequent difficulty of its administration under certain circumstances. It is easier taken in milk than in water, and still better in butter milk, when that can be procured; but it is not generally known that a heated solution of tartaric acid is a ready solvent, and no precipitation takes place on cooling. Being anxious to know whether any change takes place in the composition of the antifebrin when in the tartaric acid solution, I put the question to the *Chemist and Druggist*, and have received the following reply in their issue of March 7th:

"Antifebrin is a very indifferent body, and is not easily decomposed by acids. It is not possible to say, without actual experiment, that decomposition results with tartaric acid, but the probability is that it does not. We can trace no observations regarding the relation of acetanilide to the organic acids. With hydrochloric acid it forms a hydrochloride, which, however, is decomposed by water, and acetanilide is not recovered from it. Taking this and other properties of acetanilide into account, it may be safely inferred that a tartaric acid solution is merely a superior solvent."

Whooping-cough in an Old Man of Eighty-four.

Mr. Wm. Boulting, L.R.C.P.Lond. (Hampstead) writes: Cases of whooping-cough in adults are not so very uncommon, and occasionally one meets with the disease in aged people. A leader of the profession had it at 65, and Wm. Heberden the elder[1] observed it in an old woman of 70 and an old man of 80. I recently attended an old man of 84 who had probably contracted it from a little lad lodging in his house. The boy was living on the upper floor. The old man, who is blind but otherwise hale, resides in the basement, and they did not come into personal contact. The attack lasted six weeks, and the whoop was most characteristic. There were no complications. My patient does not remember having had whooping-cough before.

[1] *Commentarii de Morborum Historiâ*, 1802.

LETTERS, COMMUNICATIONS, Etc., received from:

(**A**) A.D., L.R.C.S.I.; Professor John Attfield, London Mr. C. E. Abbott, Braintree. (**B**) Mr. C. S. Buck, West Ham; Dr. Berdoe, London; Dr. W. Blair, Jedburgh; Sir J. Crichton Browne, London; Mr. J. B. Bailey, London; Mr. G. Barling, Birmingham; Dr. A. Bronner, Bradford; Dr. H. Billinghurst, Midhurst; Mr. S. Boake, Stamford Bridge; Dr. D. Bruce, Netley; Mr. G. F. Blake, Dublin; Mr. W. P. Biden, Hyères; Dr. W. Boulting, Hampstead; Mr. J. Beal, London; Dr. H. Barnes, Carlisle; Dr. W. Brown, Fishponds; Mr. F. M. Beckett, Ely; Mr. C. H. Byers, London; Mr. R. Bradshaw, West Allendale; Mr. R. L. Bayley, Stourbridge; Dr. Fletcher Beach, Dartford; Mr. Blackett, London; Mr. C. S. Buck, West Ham. (**C**) Mr. R. Creasy, Winslow; Dr. Chervin, Paris; Mr. C. A. Corke, Wem; Dr. E. Clarke, London; Mr. Arthur Cooper, London; Dr. H. Candlish, Ayr; Mr. Watson Cheyne, London; Dr. James Cagney, London; Dr. W. A. Carline, Lincoln; Mr. T. A. Clifford, London; Professor Charteris, Glasgow; Mr. W. R. E. Coles, London; Dr. Cordes, Geneva; Mr. W. B. Cockill, Kendal; Dr. Chapman, Hampstead. (**D**) Dr. C. Digby, Hednesford; Dr. A. Duke, Dublin; Dr. A. T. Davies, London; Dr. V. Dickinson, London; Mr. A. H. Dodd, West Brighton; Sir Dyce Duckworth, London; Dr. P. M. Deas, Exeter; Dr. C. E. Douglas, Cupar; Mr. H. Distin, London; Mr. W. Dayson, Ebbw Vale. (**E**) Miss C. Ellaby, London; Mr. H. M. Earle, Wandsworth. (**F**) Dr. C. E. Fitzgerald, Folkestone; Messrs. Fraser and Co., London; Mr. Adams Frost, London; A. H. Frere, M.B., Bradford; A Fall Between Two Stools; Dr. D. J. Flynn, Cork; Dr. P. S. Fentem, Bakewell; Dr. H. Fox, London. (**G**) Miss J. O. Galloway, Glasgow; Mr. F. J. Gant, London; Dr. A. G. P. Gipps, Portland; Dr. S. A. Gill, Liverpol; Mr. E. F. Grün, Putney; Dr. Balfour Graham, Leven; Dr. C. C. Godding, Portsmouth; Dr. J. Gairdner, Crieff; Dr. J. H. Galton, Norwood. (**H**) Mr. C. J. Heal, Netley; Dr. G. E. Herman, London; Mr. D. H. S. Hozier, Nancy; Mr. E. Hughes, London; Dr. J. P. Henry, St. Mary Cray; Dr. A. D. Hughes, Jowai, Assam; Mr. G. C. Henderson, Pietermaritzburg; Dr. G. Henty, London; Dr. Halliburton, London; Mr. C. W. Hunt, Manchester; Mr. F. Hinde, Bloxham; Dr. William Hoffmeister, Cowes; Mr. H. T. Herring, London. (**I**) I.V.R.C.; Dr. C. R. Illingworth, Accrington. (**J**) Dr. E. H. Jacob, Leeds; Mr. F. B. Jessett, London. (**K**) Mr. J. T. Knight, Carlton; Dr. Norman Kerr, London; Dr. Kelly, Taunton; Dr. A. Kellgren, London. (**L**) Dr. W. J. Lawrie, Ayr; Dr. R. R. Leeper, Rathdrum: Rev. F. Lawrence, York; Mr. C. Legg, London. (**M**) F. McKee, M.B., Dromore; Mr. B. G. Morison, London; Mr. C. Monckton, London; Dr. Max Meyer, London; Dr. Charles J. Russell McLean, Yeadon; Professor McKendrick, Stonehaven; M.D.; Mr. N. S. Manning, Birmingham; M.S.; Dr. A. Macnaughton, Taynuilt; Dr. J. D. Malcolm, London; Medicus R.N.; Dr. Myrtle, Harrogate; Dr. J. W. Miller, Dundee; Mr. Ernest Milner, King's Langley; Dr. J. W. Moore, Dublin; Dr. W. J. Mickle, London; Dr. R. Maguire, London; Mr. W. Martindale, London. (**N**) Dr. H. A. A. Nicholls, Trinidad; Mr. W. G. Nash, Plymouth. (**O**) Dr. Isambard Owen, London; One of Them. (**P**) Mr. C. F. Pollock, London; Mr. J. Poland, London; C. Patterson, M.B., London; Mr. H. C. Pauli, Luton; Messrs. J. H. Parkington and Co., London. (**R**) Dr. F. Rothern, Beeston: Mr. T. Ritchie, Otley; Dr. R. J. Roberts, Lowestoft; Mr. E. M. Roberts, Llangefni; Mrs. E. M. Robertson, Brentwood. (**S**) Dr. M. Skerritt, Clifton; Mr. E. Somerset, Carmarthen; Secretary of the General Practitioners' Union, London; Mr. R. R. Sleman, London; Dr. R. Stockman, Edinburgh; Secretary of the West London Medico-Chirurgical Society; Dr. G. Steell, Manchester; Secretary of the Sheffield Medico-Chirurgical Society; Stretton Hill Mineral Waters Company, Church Stretton; Dr. S. A. L. Swan, Gilford; Dr. Andrew Smart, Edinburgh; Secretary of the University of Durham College of Medicine, Newcastle-on-Tyne: Dr. R. Saundby, Birmingham; Secretary of the Manchester Pathological Society; Mr. P. L. Sclater, London; Secretary of the University College Hospital, London; Dr. W. C. Steele, Ealing; St. Leonard's Member; Secretary of the Royal Society, London; Secretary of the Royal Statistical Society, London. (**T**) Mr. H. Tordoff, Leeds; Mr. E. W. Taylor, London; Mr. D. Tacey, Doncaster; Dr. J. Taylor, Chester. (**V**) Mr. C. M. Vernon, Kingston; Væ Victis. (**W**) Dr. A. Whitelegge, Wakefield; Dr. O. Wood, London; Mr. F. Wright, Stamford Bridge; Mr. F. H. Weiss, London; Dr. Willoughby, London; Dr. W. J. H. Wood, Boston; Mr. N. Walker, Prague; Dr. G. E. Williamson, Newcastle-on-Tyne; Mr. E. R. Williams, Carmarthen; Mr. F. Wood, Leicester; Dr. Hale White, London; J. Walter, M.B., Reigate. (**X**) X. (**Y**) Dr. N. E. Yorke-Davis, London; Dr. J. Young, Clifton; Dr. E. G. Younger, London; Miss M. Yates, London, etc.

BOOKS, Etc., RECEIVED.

The Proclivity of Women to Cancerous Diseases. By Herbert Snow, M.D. London: J. and A. Churchill. 1891.

Pulmonary Tuberculosis. By R. W. Philip, M.A., M.D. Edinburgh and London: Young J. Pentland. 1891.

Elementary Chemistry. By W. Jerome Harrison, F.G.S. London: Blackie and Son. 1890.

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AN ADDRESS
ON
THE KOCH METHOD OF TREATMENT FOR TUBERCULOSIS.

Delivered at a Meeting of the South London District of the Metropolitan Counties Branch of the British Medical Association.

By JOHN SYER BRISTOWE, M.D., F.R.C.P., LL.D., F.R.S.,
Senior Physician to St. Thomas's Hospital.

I HAVE never hitherto ventured to give public expression to my opinions on the subject of the Koch cure of tuberculosis which, since the autumn of last year, has excited so much interest, not only among the general public, but also in the medical profession. I have been an amused and sceptical spectator, but I have held my peace; in the first place, because I did not care to take any part in the grave experimental inquiry to which Dr. Koch invited the profession while withholding from them the facts and inferences which justified it to his own mind; and, in the second place, because, since he has begun to take us into his confidence by instalments, the enthusiasm with which his supposed discovery was greeted has subsided, and a general sense of distrust in it has arisen and prevails.

I should not have ventured to say anything on the subject even now had it not been for the kind invitation of your excellent Honorary Secretary (Dr. Mackenzie) that I would open the discussion which had been arranged for this evening; for my actual experience of the treatment has been limited to a few cases which have lately been under my care, and it has been arranged that our hospital experiences (including my own) shall be brought before you collectively by some of my younger colleagues; but the subject has really interested me, and I propose, therefore, to give you my thoughts concerning it.

Specific infective diseases (all of which most of us believe to be due to specific living organisms) may, it seems to me, be somewhat roughly divided into those which tend to last a limited time, and of which one attack confers more or less complete immunity against subsequent attacks, and into those which tend to last indefinitely, and which cannot, therefore, in any sense be regarded as self-protective. Of the former class, typical examples are afforded by small-pox, scarlet fever, and measles; of the latter class, typical examples are tuberculosis and leprosy. There are many infective diseases, no doubt, the behaviour of which in the above respects has not been fully determined. Thus, there are many persons, I should suppose, who, having regard to the invariable fatality of natural hydrophobia, would hesitate to admit it into the self-protective class, although there is much in the collective phenomena of the disease to suggest that it does really belong to this class, and for those who accept (as I do) the efficacy of Pasteur's treatment there can be no doubt on the point; and there is much reason to believe that epidemic cholera, typhoid fever, and diphtheria are self-protective in only a very slight degree. I may remark, however, in this connection, that the very fact of an infective disease having a natural tendency to get well is a proof that it has a tendency to be self-protective, for, if it were not so, the specific germs which cause it would tend to multiply indefinitely, and, sooner or later, to destroy their host. The question of the duration of the protective influence is another matter, and different self-protective diseases may, and doubtless do, vary within wide limits both as to duration and as to degree.

Now, upon what this self-protective influence depends we have, so far as I know, no knowledge whatever. But notwithstanding this, we have been enabled in certain striking and well-known cases so to avail ourselves of it, as by imparting a mild or attenuated form of disease by inoculation, to confer protection against subsequent and more severe attacks. In the last century, by inoculating and thus perpetuating a mild sort of small-pox, characterised by little febrile disturbance and scanty eruption, persons thus treated were systematically rendered proof against the severer form of the disease; and, since the time of Jenner, the inoculation of cow-pox (which is doubtless small-pox attenuated by passage through the cow) has conferred similar, though perhaps less powerful, protection against the same disease. More recently, as we all know, Pasteur, working on these lines, has discovered methods by which the contagia of anthrax and of hydrophobia may severally be so reduced in virulence as to impart on inoculation a manageable affection which is protective against the unmanageable and fatal attacks of the natural diseases. I need not go into particulars; it is sufficient for my purpose to remark that, in the case of the former disease, he devised a special mode of cultivating the bacillus anthracis, which reduces its virulence to such a degree that inoculation with the attenuated bacilli imparts an attenuated, though still protective, attack of the malady; that, in the case of hydrophobia, he discovered a process of treatment of those tissues of the rabid animal which are the selective sites of the virus, and are presumably therefore the special habitat of the hitherto undiscovered rabid organism, in virtue of which portions of these tissues may be inoculated on other animals so as to impart to them an attenuated and non-fatal, yet still protective, form of hydrophobia. It may be presumed that all the cases above cited fall under the same law, namely, that the attenuation of the disease is due to an attenuation of the specific virus or disease germs which cause it, both disease and germs remaining nevertheless potentially unchanged.

But nothing that I have hitherto said throws any light on the nature of the protective influence which certain of the infective diseases exert against recurrence of themselves; neither do I pretend that I can throw any light on the subject; yet there are some things which may, perhaps, have some relation to it, to which I may briefly advert. There is no doubt that disease germs cause mischief in the body, not by the mere fact of their presence therein, but in consequence of some poisonous matter which they manufacture or secrete, or some other deleterious influence which they exert over the fluids or tissues in or among which they lie. Dr. Burdon Sanderson and others demonstrated some years ago that while some septic organisms enter the system and multiply in it, causing symptoms of septicæmia, which tend to continue or increase and terminate in death, in other cases the septic organisms flourish only in unhealthy sores, and produce symptoms of septic poisoning not by their actual presence in the blood or tissues, but by means of a poison which they discharge, and is absorbed more or less abundantly, and distributed by the circulating fluids; that, in the former case, the symptoms are maintained in consequence of the continued presence and multiplication of the bacteria in the tissues; that, in the latter case, the symptoms, being only the consequence of the absorption of chemical poison from a restricted area, cease with the restoration of that area to health; and further that, in this latter case, the poison is soluble, and can be obtained in solution, entirely free from bacterial or other organisms, and from putrefactive taint or tendency; that it is of extreme virulence (the effects being proportionate to its dose), and has exactly the same effect on the system as the material containing bacteria from which it is derived. The symptoms to which it gives rise are, I may add, very much like those which are induced by the injection of Koch's fluid.

Dr. Sanderson also, in 1883, "reporting as to chemical agents capable of destroying the material of infection, dwelt upon the circumstance that many of the chemical products of bacterial life are endowed in a very remarkable degree with the power of putting an end to the life of bacteria themselves."[1]

More recently observations have been made by Wooldridge, Hankin, Sidney Martin, and other observers, which throw additional light on this interesting subject. It has been shown, for example, that the bacillus anthracis, acting on albuminous tissues, produces an albumose or toxalbumin (a proteid substance) possessing special and characteristic poisonous properties which seem to be identical with those belonging to the bacilli themselves, and, not only so, but that the injection of this albumose into the system has the same influence in preventing a subsequent attack of anthrax as has the injection of the attenuated but living anthrax bacilli. It

[1] Nineteenth Annual Report of the Local Government Board.

can hardly be held that this albumose is the actual poison which the bacilli discharge; but, at any rate, it is a substance infected with it, and possibly holding it in chemical or mechanical solution or suspension. It may be added that recently Sidney Martin has succeeded in producing an alkaloid from anthrax bacilli which, equally with the anthrax albumose, produces poisonous effects on mice, only much more rapidly. The points, however, to which I wish to direct attention are that these observations confirm the earlier observations of Sanderson, and accord with what *a priori* reasoning might have justified one in believing—namely, that disease germs produce disease through the poisons which they yield or manufacture; that specific symptoms of the same kind as those due to the organisms themselves may be induced by the injection of the chemical poison derived from them; and that the protective influence of infective diseases against their own subsequent attacks would seem to be mainly, if not solely, due to the influence of the specific poisons which they discharge, and not to their own direct and personal influence.

All the discoveries above alluded to in respect of the prevention of certain specific infective diseases have had reference to diseases which are themselves self-protective, and their recognised effects are not to cure these diseases in the sense in which the word cure is ordinarily used, but to render persons invulnerable to future attacks. They are in their application protective, and not curative. But, as I have already observed, tuberculosis and leprosy and other such diseases differ from the diseases against which protective inoculations have hitherto been found successful in the important facts that one attack of either of these affections is, as a rule, the beginning of a lifelong ingravescence of it; that they can in no sense be regarded as self-protective, for, on the contrary, every new focus of disease is, as in cancer, the starting point of further infection; and that, in respect of them, inoculations, if they act beneficially at all, must act curatively, and not by way of prevention. It seems clear, therefore, that such diseases must be attacked on different principles from those which have been found successful in the case of diseases of the other class; that is to say, that if we are to treat them successfully by inoculation, we must either discover something which, injected into the healthy body, will render it thenceforth invulnerable (and this something can scarcely be any modified or attenuated form of the specific virus), or must discover something which, injected into the body already diseased, destroys or neutralises, or otherwise gets rid of, the specific morbific organisms.

When Koch's alleged discovery was first announced—and, indeed, for some little time after it had become the rage in Berlin, and doctors and patients were flocking thither from all quarters—we were kept in ignorance not only of the nature and mode of preparation of the fluid employed for the purpose of inoculation, but also of the scientific explanation of the mode in which its manufacturer considered it to exert a beneficial or curative influence. It was announced, no doubt, and soon became sufficiently obvious, that the injection was a potent poison, which produced, or tended to produce, some febrile disturbance of limited duration, and at the same time produced, or tended to produce, aggravation of inflammation in tissues already the seat of tuberculous growths. And it was generally admitted that the injection was derived from tuberculous guinea-pigs; but as to its specific action we had no clue. For my own part, I was under the impression, and I believe that this was the impression of many others who gave thought to the subject, that Koch—working on lines already referred to—had discovered a method of separating a form of albumose instinct with the poison of tubercle bacilli, and that his aim in injecting it was to destroy the bacilli present in the patient's system.

But when, about the middle of November, Koch gave the world an instalment of his confidence, and stated with respect to the action of his fluid on tuberculous tissue: "In what way this process occurs cannot as yet be said with certainty, as the necessary histological investigations are not complete. But so much is certain, that there is no question of a destruction of the tubercle bacilli in the tissues, but only that the tissue enclosing the tubercle bacilli is affected by the remedy"; I must acknowledge that the scepticism which I had hitherto entertained with respect to the efficacy of his treatment became largely increased, partly because of the important admission herein contained that his remedy had no direct influence on the cause of the disease, partly because his account seemed to me to imply that he had hitherto been working in the dark and was still in search of a working hypothesis.

Two months later, namely, in January last, Koch unburdened himself a little more fully. He told us then that "the remedy with which the new therapeutic treatment of tuberculosis is carried out is a glycerine extract of pure cultivations of tubercle bacilli;" and further that, "the constitution of the active principle can as yet only be a matter of conjecture. It seems to me to be a derivative of albuminous bodies, and to be in close relation to them, but it does not belong to the group of so-called 'toxalbumins,' as it can withstand high temperatures, and in the dialysator passes easily and quickly through the membrane." He also explained more fully the mode in which he believed its curative influence was effected, and how he had been led to his discovery. Briefly his account is as follows. He found, in the course of some experimental inquiries, that the injection of either living tubercle bacilli or tubercle bacilli which had been destroyed, ground down and suspended in water, produced a different local effect according as it was injected beneath the skin of healthy guinea-pigs, or of guinea-pigs already inoculated and tuberculous: that, whereas in the former case it produced a nodule which after a time ulcerated and remained ulcerated down to the time of the animal's death, in the latter case it formed no nodule but led to a necrotic change extending for some distance around, and finally resulting in the separation of an eschar and the healing of the sore; that, further, the injection of even large quantities of the solution of defunct bacilli produced no effect in healthy guinea-pigs beyond local suppuration, while in guinea-pigs already tuberculous, small doses rapidly proved fatal, but if largely reduced below the amount required to kill and repeated at short intervals caused only little local ulceration, but gradual shrinking of already tuberculous lymphatic glands, and notable improvement in the general health. And he suggested, in explanation of the curative effects of his remedy, that the injection of the fluid led to inflammatory changes and a necrotic process in the outlying tissues in which the bacilli were embedded, analogous to, if not identical with, what we know as caseation: and that the bacilli becoming thus imbedded in, or overwhelmed by, the wide-spread ruin in which they were involved, became, though not killed, checkmated, and in deep seated or solid tissues imprisoned, at the surface of organs or in organs accessible to air thrown off and an eschar formed of the surrounding necrotic tissue.

I believe that the above is a fair summary of Koch's published views; and I proceed to make a few remarks upon them. In the first place I am disposed to believe (though this is a matter that requires confirmation) that the fluid, even though it be not an albumose, does really contain the specific poison which tubercle bacilli yield, and which, by its local influence, causes the inflammatory growth which we know clinically as tubercle. In the second place, I think we ought to have had furnished to us full details, and not a mere summary, of his experimental researches with respect to the effects of the injection of his fluid into healthy and into tuberculous guinea-pigs respectively. I am not, of course, in a position to deny the accuracy of his statements, but, on the other hand, I am not prepared to accept them on the evidence which has been placed before us. It is the less necessary, however, to go into this matter at length since we now have a great deal of evidence of more or less value with regard to the influence of so-called "tuberculin" on human beings. As I have already stated, so soon as I learnt that Koch himself allowed that his injections had no directly injurious influence whatever upon the bacilli themselves, the essential cause of tuberculosis, the scepticism I had from the first entertained became at once profound; for I could not bring myself to believe that a mere aggravation of the natural inflammation that attends the tuberculous process, even if succeeded by extension of necrotic changes, could in any true sense lead to the cure of tuberculosis. It is not the bacilli as simple living bodies which cause this disease. The progress of the affection involves, first, the multiplication and diffusion

of these bodies; next, the development of granulation tissue, and sooner or later, in a greater or less degree, more acute and widespread inflammatory changes, all arising directly or indirectly out of the irritation to which the bacilli give rise; and, lastly (unless they dry up and become effete), the disintegration and excavation of the diseased patches. And it is these superadded conditions which make tuberculosis the dangerous and lethal malady we know it to be; it is to them that are due the breaking down of the lung tissue into cavities, the ulceration of the bowels and larynx, and the graver phenomena in tuberculous meningitis and peritonitis, and even in lupus. Moreover, not only did it seem probable that the remedy might aggravate the tuberculous process in these respects, but (notwithstanding the theoretical suggestion as to the imprisonment of the bacilli and the consequent neutralisation of their destructive tendencies) it seemed on theoretical grounds at least as probable, if not more probable, that the softening and disintegration of the tissues in which they were embedded might really tend to liberate them and to allow of, or even to promote, their multiplication and diffusion. It is no doubt true that it has been shown by clinical experience that the inoculation of patients suffering from lupus tends first to produce aggravation of inflammation in the inflamed part, and then to exfoliation of the over-inflamed tissues, and to a certain amount of healthy reaction or apparent improvement; though, after all, such results amount to nothing more than the fits of amelioration which those who are in the habit of treating this disease not infrequently witness under other circumstances, and which unfortunately only very rarely result in real and permanent cure. But, on the other hand, no one could contemplate with equanimity such aggravation of inflammation in the cases of tubercle of the lungs, bowels, brain, kidneys, or serous membrane, even though the temporary aggravation, failing to cause death, should lead to temporary improvement. In such cases as these, the only justification for such treatment seems to me to be the assurance of a reasonable hope that the temporary aggravation of mischief should be followed by an actual cure, and not merely by a lull in the progress of the malady. All that seems to have been demonstrated by Koch's experiments, in fact, is that the fluid has a notable influence in temporarily aggravating the tuberculous process, followed in the case of superficial parts by exfoliation of the affected tissues and some apparent local improvement, and that it has a notable influence in causing aggravation of mischief in internal parts affected with tuberculosis. He has never shown that the tuberculous bacilli in tuberculous patients are actually bound in fetters, as he suggests they are, or that they do not, as a matter of fact, become more potent and virulent under the conditions in which he places them than they were before.

There is, of course, abundant evidence to show that Koch's fluid has certain striking therapeutic properties. It causes a temporary febrile attack of more or less intensity and of limited duration; it causes aggravation of inflammation in tuberculous tissues, and this inflammation does in some cases —and more especially in superficial parts—lead to some disintegration and removal of the affected tissues, and to this extent to some, at any rate temporary, amendment. But the general febrile disturbance is very uncertain in its occurrence. Often it fails when it might reasonably be expected to occur; and it occurs not only in tuberculous patients, but also in persons who are free from tubercle. The local reaction, again, is also very uncertain. Often, even in tuberculous cases, there is no local reaction whatever, even though the general febrile disturbance is considerable. In many cases of tubercle —as often, for example, in the case of scrofulous glands—it is impossible to get any local reaction. And, further, it has now been, I think, satisfactorily shown that local reaction occurs not only in the case of tuberculous diseases, but also in leprosy and some other affections. In reference to these matters, I should like to repeat what I have already said, that the general symptoms caused by the introduction of Koch's fluid have a close resemblance to those due to the influence of septic poison, and to suggest that it is highly probable that any poisonous influence evoking high fever would tend to cause aggravation of inflammation in parts already the seats of inflammatory mischief, and that hence such effects might be expected to follow the introduction of any poison of the class to which Koch's fluid belongs; and further, that had Koch's fluid been used as extensively in the treatment of the granulomata—such as syphilis and leprosy—as it has been in that of tubercle, one might have observed equivalent results. There seems, indeed, to be some real evidence accruing in support of the latter view; and it is interesting that Mr. Hutchinson observes that in two cases at least (of lupus thus treated), during the febrile reaction old chilblains became again inflamed.

But, after all, the real question to be decided is whether or not Koch's fluid cures tuberculosis. Now, in answer to this question much valuable evidence has accrued. In the early days many persons—not only among the general public but also in our own profession—seem fairly to have lost their heads. Scrofulous joints and lupus have been cured, not only in Berlin, but all over Europe, the only grounds for the allegations of these successful results being an unreasoning faith in Koch's infallibility, and the obvious fact that local increase of inflammation was followed sooner or later by some degree of temporary amendment. The successful treatment of phthisis and other internal tuberculous affections was less widely and noisily, but not less confidently, proclaimed—less widely and noisily, because happily there was a wholesome dread that, at any rate in advanced cases, the remedy might prove dangerous, and therefore few such cases were treated; not less confidently, because in certain early cases of phthisis in which it was employed some improvement of health followed—as improvement of health frequently does, for a time at least, attend almost any kind of treatment, and even no treatment at all; and on the principle of "*omne ignotum pro magnifico*," the apparent improvement in the general health was assumed to represent the total elimination of that unknown quantity, the local pulmonary lesion, and the curability of consumption was proclaimed as a fact. But amidst all this chorus of jubilant credulity, discordant voices were here and there heard, and as time has progressed these have become more and more abundant and obtrusive. Of great interest in this connection seem to me the recent lecture of Mr. Hutchinson on lupus, and especially the remarkable address by Virchow on the effect of Koch's remedy on the internal organs of tuberculous patients. Mr. Hutchinson was at considerable pains to ascertain how cases of lupus treated in this country, and supposed to be benefited, have gone on. He says: "If we are obliged to report that nothing that can be called a cure has yet been obtained in London practice, it may seem unnecessary to ask whether cures are lasting. On this point too, however, I am sorry to say that some evidence is already forthcoming. I fear it is the fact that relapses occur very quickly. The patient who was taken to Berlin by Mr. Malcolm Morris and Dr. Pringle, and was for a time supposed to be almost cured, is now, I am assured by both the gentlemen concerned, in a condition almost as bad as before the treatment." Virchow's address dealt with the pathological conditions observed in some 27 or 28 deaths in subjects of tuberculosis who had been actively treated by Koch's process, of which 16 were cases of pulmonary phthisis, and 1 a case of tuberculous meningitis. It would take too much time to recapitulate his observations. But the collective results go to show, that in the lungs, bronchi, membranes of the brain, and other internal parts (as in lupus and scrofulous joints) the use of Koch's fluid tends to cause more or less intense and widespread inflammation around the tuberculous deposits; that this inflammation in no degree tends (as Koch assumed to be the case in order to explain the supposed curative action of his remedy) to envelop and imprison the living bacilli in caseous cocoons, and so to prevent them from doing further mischief; but that, as happens in the case of lupus, the inflammation in some cases becomes from its very severity (witness his case of meningitis) a source of serious danger; that largely it induces the disintegration and destruction of tissue—in the lungs the formation and enlargement of vomicæ, in the bowels the extension of ulcers and tendency to perforation; and that associated with the above conditions there is a rapid and large development of miliary or submiliary tubercles, not only in the organs primarily affected, but also in other parts of the body, and even in such unusual situations as the pericardium. It is certain that Virchow's calm, philosophical, and business-like account not only gives no support to Koch's

theories and holds out no hope of the successful treatment of tuberculosis by Koch's method, but proves beyond question that all the fears of its most sceptical opponents are more than justified.

For reasons already stated I have purposely refrained from discussing my own cases which have been subjected to treatment by Koch's remedy. I have, therefore, nothing further to say save to apologise for my language if I have anywhere expressed myself unduly strongly, and to thank you for your kind attention.

LECTURES
ON THE
PATHOLOGY OF TUBERCULOUS DISEASES OF BONES AND JOINTS.

Delivered at the Royal College of Surgeons of England.

By W. WATSON CHEYNE, M.B., F.R.C.S.,

Hunterian Professor: Surgeon to King's College Hospital and to the Paddington Green Children's Hospital.

Lecture III.

Factors which aid in the production of Tuberculous Disease.—Points of Entrance of the Bacilli into the Body.—Heredity.—Influence of Injury.—Relative Frequency of Disease in Different Bones and Joints. Influence of Chronic Inflammation, Movement, and Pressure.—Influence of Sepsis.—Relation to Age, Sex, and General Hygienic Conditions.

Although there can no longer be any doubt that the tubercle bacillus is the ultimate cause of these affections, and although without it they could not occur, the converse does not necessarily hold good, namely, that given the tubercle bacillus in the body, tuberculous disease must result. This proves, not that tuberculosis is not a contagious disease, not that the tubercle bacillus is not the essential causal agent of tuberculous diseases, but only that the bacillus cannot act except under favourable conditions—that, in fact, other factors must come into play to enable the bacillus to obtain a foothold and grow in the animal body. One of the chief problems to which we must direct our attention in the future is the nature of these accessory factors, and there is no doubt that as our knowledge with regard to them increases, so our power of dealing with these affections will become greater.

In the lectures on Suppuration and Septic Disease which I had the honour of delivering here three years ago, I attempted to point out the various factors which come into play in the production of these affections, and to estimate their relative importance. Our knowledge with regard to the conditions under which the tubercle bacillus acts is, however, by no means so full as that with regard to the pyogenic organisms, and one reason for this deficiency is that it is difficult to carry on cultivations of these organisms outside the body, while their growth both outside and inside the animal body is very slow. It is quite clear, however, that conditions exist which favour or hinder the entrance of the parasite into the body, which enable it to obtain a foothold in certain parts, and which permit or encourage it to go on growing in these parts, and cause the morbid changes characteristic of tuberculous disease.

The points of entrance of the tubercle bacillus are very various. I have already referred to instances in which the bacilli entered through wounds in the skin, and, as we have seen, the characteristic lesions in such cases are the development of a sore at the point of entrance and tuberculous disease of the neighbouring lymphatic glands, and subsequently it may be other tissues and organs of the body; this mode of entrance is, however, comparatively rare. In order to inoculate the tuberculous virus on animals with certainty, it is necessary to form a pocket beneath the skin into which it is introduced, and in which it may lie at rest; moisture and the possibility of remaining in the part for some time are essential for the growth of the bacilli. If the tuberculous virus is simply rubbed into scratches in the skin, the blood containing the virus quickly dries, and in this way the growth of the bacillus is prevented—while even where there is enough moisture the organisms are usually rubbed off or carried away before they have had time to obtain a footing in the wound.

The most common point of entrance of these bacilli is, without doubt, the mucous surfaces of the body, more especially of the digestive and respiratory tracts. Thus in children one of the most frequent seats of disease is the lymphatic glands—chiefly the cervical, mesenteric, and bronchial glands. In the case of the cervical glands, infection usually occurs from the throat, from carious teeth, from ear disease, eczema of the scalp, etc. In the case of carious teeth or otitis media, we have suppurating cavities through which the bacilli may enter, but in many instances there is no definite evidence of a primary lesion at the point of entrance, the only sign of disease being the enlarged glands in the neck, and yet in all probability the infective material has in most cases entered from the throat. In the same way it is not uncommon to find the mesenteric glands in children much diseased, although there is no tuberculous ulceration of the intestine.

Klebs found that finely-divided particles of tuberculous material were absorbed without lodging and causing disease at their point of entrance in the intestinal mucous membrane, but they were usually caught in the mesenteric glands, though in some cases they even passed them and lodged in various internal organs. On the contrary—and this was also demonstrated by Chauveau—where the animals were fed with large and firm tuberculous masses, intestinal ulcerations occurred. Just as in the experimental so in the natural infection, the virus may escape the glands and produce the first symptoms of disease in parts distant from the point of entrance.

Another common seat of infection is the respiratory tract. Apart from the local effects on the nasal passages, as manifested by the production of ulcerations, etc., grouped under the term scrofulous ozæna, it is not uncommon for the virus to be inhaled into the lungs, and either set up disease in the pulmonary alveoli in the first instance, or, as in the case of the intestine, pass through the alveolar epithelium and be carried to the bronchial glands, and set up disease there without any previous affection of the lungs. Indeed, it seems very probable that in most cases the source of the joint infection is diseased bronchial glands. In order to reach the joint from these glands the virus must, of course, be carried by the blood, and it has been demonstrated that the tuberculous growth may destroy the wall of an artery or vein, project into the lumen of the vessel, and thus furnish the conditions necessary for the entrance of the organisms into the blood current; or the virus may reach the blood from the lymph stream, more especially when the disease has entered from the intestine, and has attacked the wall of the thoracic duct. When large quantities of the virus are poured into the blood in one or other of these ways general tuberculosis results, but it is perhaps most common for the bacilli to enter the blood in small numbers at a time, and then, unless they meet with conditions which favour their deposit in some suitable organ, they are quickly destroyed.

Lastly, it is held by many that the disease is often hereditary—that is to say, that infection has occurred before birth. Jani examined the generative organs of several individuals who had died of tuberculous disease, and found tubercle bacilli in the seminal tubules in 5 cases, in the prostate in 6 cases, and in the Fallopian tubes twice, and in none of these cases was there any local disease. From these facts it has been concluded that, apart altogether from tuberculous lesions of the genital organs, tubercle bacilli may be present in the genital passages of tuberculous individuals, and thus gain access to the ovum.

In connection with Jani's observations, which, however, are of doubtful accuracy, I may briefly allude to some very interesting experiments which have been performed by Maffucci. Tubercle bacilli were injected into new laid eggs, which were then hatched; 18 eggs were inoculated and at the same time a hen and a guinea-pig. The guinea-pig died after forty days with tuberculosis of various internal organs, and the hen died after two months and a half of internal tuberculosis, especially affecting the liver. Of the 18 eggs 9 proved sterile, and in one the embryo died before full time, but no tubercles or tubercle bacilli were found in it. The chickens

came out on the nineteenth day, and were all small and delicate, but very active. With the exception of one, which died in thirty-six hours, and in which no tubercles were found, the remaining 7 chickens lived for from twenty days to four months and a half; 6 of them died of tuberculosis, tubercles and tubercle bacilli being found in the internal organs. The tuberculous disease first appeared and was most advanced in the liver, and next in the lungs, and Maffucci came to the conclusion that infection occurred through the area vasculosa, and that, therefore, the virus was carried in the first instance to the liver.

With regard to Jani's statement as to the presence of tubercle bacilli in the seminal fluid of tuberculous men, I may mention that Landouzy and Martin have injected the semen of tuberculous rabbits into guinea-pigs, and have in this way produced tuberculosis; while, on the other hand, Rohlff has failed to cause tuberculosis in rabbits by the injection of the semen from tuberculous men into the anterior chamber of the eye.

While these facts show that the possibility of the conveyance of tubercle bacilli to the ovum by the semen cannot be absolutely denied, the probability of such an occurrence must be extremely slight. It is difficult to understand how the bacilli get into the ovum, seeing that they are motionless; one must almost suppose that they remain in the uterus and grow in the decidual membranes, and thus enter the blood; but here we should expect evidence of tuberculous disease of the decidua or placenta. It is hardly conceivable that this can be a common, or, as is held by some, the most common, mode of transmission of tuberculous diseases, especially when we bear in mind the greater frequency of tuberculosis in adult life; otherwise we must suppose that the bacilli are stored up in the body for years, till some condition comes into play which enables them to develop. This is most unlikely, for we know by experiment that the most resistant spores cannot live in the healthy animal body longer than a few months. It is quite a different matter where the bacilli are enclosed in a caseous mass, which becomes encapsuled, for there the spores are protected by the caseous material from the action of the living cells and juices of the body.

The infection of the fœtus from the side of the female must also be equally rare, but might conceivably occur under two conditions, namely, where there is tuberculosis of the Fallopian tubes, leading to infection of the ovum as it passes downwards; or where the placenta becomes the seat of tuberculous disease. Numerous experiments have been made to ascertain whether, after inoculation of a pregnant animal with an infective disease, the young become infected, and it has been found that as a rule the young do not become affected unless the disease has first established itself in the placenta, or unless there has been rupture of placental vessels, leading to the establishment of a communication between the maternal and the fœtal circulation; organisms circulating in the blood in healthy placental vessels are apparently, as a rule, unable to pass into the fœtal circulation. And this is also the case in tuberculosis; unless there is tuberculous disease of the placenta, the fœtus apparently very rarely becomes infected with the tubercle bacillus. Thus, Toledo[1] injected tubercle bacilli into the veins, pleural cavities, and subcutaneous tissues of pregnant guinea-pigs, but failed to find tubercles or tubercle bacilli in the young by any of the methods of investigation.

Only one or two cases have been published, either in animals or in man, where the young at the time of birth have shown evidences of tuberculous disease; and, as in the experiments on animals, where women have died of acute tuberculosis during pregnancy, no evidence of tuberculosis has been found in the fœtus. We must, therefore, conclude that, whether from the father or the mother, transmission of the tuberculous virus must be an extremely rare occurrence, though it is quite possible that some cases of tuberculosis in infants may have originated in this way.

The conditions which enable tubercle bacilli to obtain a foothold in the tissues, and which favour or hinder their growth, are very various, and are, as I have already said, but little understood. In my lectures on Suppuration I referred to one very important condition which held good in the case of all the organisms which I had investigated, namely, the number primarily introduced. I deduced certain very important laws from my experiments, one of them being that in animals not extremely susceptible to a disease it was necessary to introduce a number of organisms at first, in order to set it up, and another that the severity of the resulting disease varied directly with the number of organisms introduced in the first instance. I have not myself tested this matter in the case of tubercle, but from experiments which have been recently made by others it seems that the same laws hold good in this disease. Thus, Gerhardt experimented with the milk of tuberculous cows, and found that in cases where the original milk was virulent it produced no effect, whether injected subcutaneously or into the peritoneal cavity, when it was diluted forty times or more. In experiments on feeding animals with phthisical sputum, he found that infection did not occur when the sputum was diluted more than eight times, although the same sputum diluted 100,000 times caused infection when injected subcutaneously. He obtained the same results when pure cultivations of tubercle bacilli were used, and he notes that the disease ran a much slower course when the number of bacilli originally introduced was very small. Wyssokowitsch found that it was necessary to inject more than forty tubercle bacilli into the veins of rabbits in order to produce infection, and he makes the same observation as to the more severe character of the disease the greater the number of bacilli primarily introduced.

The conditions which favour the deposit of the bacilli in bones and joints are for the most part unknown; but experiments have shown that when large numbers of non-pathogenic organisms are injected into the blood they are rapidly deposited from the blood, and retained in various organs; and one of their favourite seats is the medulla of bone, especially in the neighbourhood of the epiphyses. It has further been shown that the endothelium of the blood vessels takes up organisms floating in the blood, and this fact is of great interest in connection with the development of tubercles from the vascular endothelium, to which I have formerly referred. It is clear, however, that these alone are not sufficient to explain the affection of the joints; for we have to account for the limitation of the disease—in the first instance, at any rate—to a single bone or joint. König supposes that many cases of joint disease are due to embolism, the embolus being a plug of material containing tubercle bacilli. This view, however, even if it were correct—and the evidence in favour of it is very slight—does not help us much; for it is difficult to see why the embolus should stop just where it usually does; and, besides, we can hardly suppose that only a single group of bacilli escaped into the blood vessels; and if there were more than one, why the disease should be only in one part. Besides, both from Jani's observations, if correct, and from experiments, it appears that a few bacilli may float about in the blood without causing local disease. Thus Steinheil produced tuberculosis in guinea-pigs by intraperitoneal injection of the expressed juice from the psoas muscles of patients who had died of phthisis; and Kastner has similarly caused tuberculosis in animals by the expressed muscle juice of cattle with advanced tuberculosis.

One very important local condition is a previous injury, and I have already referred to Krause's experiments, which clearly demonstrate this point. One very obvious way in which injury may act is by leading to extravasation of blood, and, if bacilli are floating in the blood, to their deposit in the part. Injury also favours the growth of the extravasated bacilli, in that the result of the trauma is the production of changes in the part similar to those noticed in the early stages of inflammation, these changes being necessary for repair, and at the same time implying, in the first instance, a weakening of the resisting power of the tissues. Even where there is no extravasation, a slight injury may favour the deposit of bacilli, on account of the disturbance of the circulation, more especially the slowing, which results. As a rule, the cases where injury comes into play are usually attributed to a slight injury, such as a slight sprain or blow; the injuries are seldom said to have been severe. It is noteworthy that after severe injuries, such as fractures or amputations in tuberculous subjects, tuberculous disease does not occur at the seat of injury. It is probable that after a violent injury there is so

[1] *Arch. de Méd. Expér.*, 1, No. 4.

much reparative material, and the repair is so vigorous, that the bacilli cannot obtain a foothold. I could mention several instances in which there can be no reasonable doubt that the injury was the starting point of the disease, and in which I have had the opportunity of examining the parts and demonstrating the presence of tuberculous changes, but I shall pass on to various statistical facts which prove that injury has a direct causal relation to joint disease. We also not uncommonly notice that after tuberculous joint disease has become quiescent and apparently got well, it may recur as the result of a slight injury. In these cases it is probable that the bacilli or their spores have remained dormant in the interior of hard tuberculous masses, and only wake up again when brought in contact with fluids and living tissues.

About two years and a half ago I put together statistics of all the cases of tuberculous bone and joint disease which had occurred for some years previously in Sir Joseph Lister's and my own in-patient hospital practice, amounting in all to 293 cases affecting one or other of the six larger joints, in which the ages of the patients at the commencement of the disease are definitely known. There were 8 other cases where the age was not noted. In 188 of these cases no definite cause was assigned, while in 105, or 35.8 per cent. of the whole the trouble was directly ascribed to an injury. In these cases the males were considerably in excess of the females; namely, 194 : 99 or 66 per cent. : 34 per cent. Now, of the 194 males, there was no history of injury in 113; and of the 99 females there was none in 75, or a percentage proportion of uninjured males and females of 60 : 40. This leaves 81 males and 24 females, with a history of injury, or a percentage proportion of 77 : 23.

The facts are more striking if we contrast the cases commencing before and after ten years of age in males and females respectively. Examine the following table:—

Percentage Proportion of	First Decade.	Later.
Uninjured and injured males	67.1 : 32.9	53.2 : 46.8
,, ,, ,, females	68.8 : 31.2	81.5 : 18.5
Total males to total females	60.8 : 39.2	69.6 : 30.4
Uninjured males and uninjured females	60.2 : 39.8	60.0 : 40.0
Injured males to injured females	62.1 : 37.9	85.3 : 14.7
Uninjured males during the two periods	41.6 : 58.4	
,, females ,, ,, ,,	40.3 : 59.7	
Injured males	28.4 : 71.6	
Injured females	58.4 : 41.6	

From this table we see:—(1) That where there is no history of injury the proportion of cases in males as compared with females, commencing before and after 10 years of age is practically the same in the two periods, namely, 60 : 40. (2) That the proportion of cases arising after injury in males as compared with females under 10 years of age is practically the same as where there is no history of injury, namely, 62 : 38; while after 10 years of age the proportion alters very much, namely, 85.3 : 14.7; and further the increased proportion of males over females after 10 years of age is almost entirely made up of cases which commenced after an injury. (3) That of the cases in males which commenced after injury, by far the largest proportion began after 10 years of age, namely, 28.4 : 71.6; while the reverse is the case in females, namely, 58.4 : 41.6, numbers which do not at all correspond with the facts in cases where there was no history of injury.

Now it is generally held that the liability of males to injury is greater in later life than that of females, while I think we may safely assume that before 10 years of age their liability is almost the same. In correspondence with this view the proportion of uninjured and injured females below 10 years of age is about the same as that of males, while in later life there is a marked increase in males, amounting to 14 per cent., and a decrease in females of the same amount. From the various facts which I have mentioned, whatever be their exact meaning, we must I think conclude that injury plays a part which is not merely accidental, but that it is an active exciting agent of disease. At the same time I suspect that the difference is not entirely due to increased exposure on the part of females below 10 years of age, but rather to a greater tendency on their part to develop the disease after injury during childhood. For, as I have already pointed out, the disease is not usually referred to severe injuries, to which males are undoubtedly most liable, but to slight injuries to which we can hardly suppose that adult females are so much less liable than males, as is shown by the above percentages. Again, we cannot suppose that the slight injuries that set up the disease are much more likely to occur in adult males than in males under 10, and yet we find a marked increase in the cases occurring after injury in males above 10 years of age, implying I presume not only greater exposure but also greater susceptibility to the effects of injury. Even if that is not so and if the greater number of males affected in after-life is due to greater exposure to injury, we would have in that fact a proof that injury is an active agent in the production of the disease.

A further point which these statistics seem to indicate is that there is a local as well as a general susceptibility to injury, for it is not always in the most exposed joints that one most often gets a history of injury, and also the frequency with which the different joints are affected varies somewhat in males and females respectively. Lastly, it seemed as if injury were not only an active agent in the production of these diseases, but also as if it determined a graver form. The cases in which injury was given as the cause were more serious on the average than those where no cause was assigned, as judged by the severity of the treatment required for cure, by the results as regards complete recovery, and by the occurrence of suppuration. In the cases which followed injury amputation and excision were much more frequently required, suppuration much more often occurred, and the recoveries were fewer than in those which apparently commenced spontaneously. An injury, such as a twist of the joint during the course of the disease, may render a trouble which was only progressing slowly a permanently active one. And it is also well known, with regard to the use of violence in overcoming deformities the result of disease, that this violence may again light up the process, and lead to recurrence. It is conceivable also that injury may produce a graver disease by determining its outbreak in a special tissue, more especially in the bone. In the statistics to which I have referred the facts as to the primary seat of the disease are very imperfect, because the treatment was not as a rule such as to elucidate this point, nor were special investigations always made in cases where a decision was possible. Nevertheless, it is striking that of the cases where there was little doubt that the bone was primarily affected a considerable excess occurred in those where there was also a history of injury. Thus, in 301 cases the bone was undoubtedly primarily affected in 94, or 31.2 per cent. Of 193 uninjured cases, the bone was the primary seat of disease in 53, or 27.4 per cent.; in 108 traumatic cases, the bone was primarily affected in 41, or 37.9 per cent.—an increase of 10 per cent. It seems to me that the injury would most probably tell more on bone than on soft parts, whether that injury be a blow or a sprain.

Apart from the question of injury, there is some local condition, which is not very clear, which influences the outbreak of the disease more frequently in one bone or joint than in another. Varying estimates have been given by different writers as to the relative frequency with which different bones and joints are affected, the variations being due partly to the age of the patients examined, and partly to whether they were in- or out-patients. The following table gives a fair estimate of the distribution of the disease when patients at all ages are grouped together. It has been obtained by adding together the figures given by Jaffé, Schmalfuss, Billroth and Menzel, and 602 cases of my own partly composed of the cases previously alluded to and partly of cases which have occurred as in- and out-patients in the practice of Mr. Stanley Boyd and myself at Paddington Green Children's Hospital. The table clearly shows the existence of some local predisposition which we cannot as yet define, but which renders one part more liable to be attacked than another.

	Per cent.		Per cent.
Spine	23.2	Sternum, clavicle, and ribs	5.2
Knee-joint	16.5	Pelvis	3.5
Hip-joint	14.6	Femur, tibia, and fibula	3.5
Tarsus and ankle	14.1	Shoulder	1.5
Elbow-joint	6.3	Scapula, ulna, and radius	1.0
Wrist and hand	6.0	Humerus	0.8
Skull and face	5.5	Patella	0.1

Another local factor which, in all probability, influences the occurrence of the disease, and which certainly favours its spread, is chronic inflammation. It is, of course, almost impossible to point to any individual case and say that that case illustrates the occurrence of tuberculous disease in a part which was previously the seat of some chronic inflammatory trouble, for the natural reply is, How do you know that the chronic inflammatory trouble was not tuberculous from the first? In the case of tuberculous cervical glands, however, we see that these often become enlarged, as the result of what I think we must admit to be simple irritation from the mouth, head, or neighbouring parts, and that the glands so enlarged ultimately become the seat of tuberculous disease. Further, when tuberculous disease has commenced in a part, chronic inflammation is set up in the vicinity, and the tuberculous growth spreads in the directions in which the chronic inflammation is most marked. The best explanation of the good results which follow aseptic incisions into tuberculous joints, where the synovial membrane is much thickened, and where none of the disease is removed, and also of the good results of partial arthrectomies, where only part of the disease is removed, is that the operative procedures have relieved or diminished the chronic inflammation around the tuberculous area, and have thus checked the progress of the disease. Among the cases which form the statistics on which I am basing my remarks, there were 19 cases of disease of the knee-joint without suppuration, in which simple incisions were made through the thickened synovial membrane into the joint, none of the tissue being removed, and yet 15 showed marked improvement as the result of this treatment. This method of treatment was commenced on the principle of relief of tension before the tuberculous nature of these diseases was understood, and it is difficult to find any other explanation of the results than by supposing that the relief of tension led to cessation of the chronic inflammatory condition, and thus interfered with the growth of the bacilli.

Other factors which aid the extension of tuberculous disease probably by keeping up a state of chronic inflammation in the part are movement and the pressure of the diseased surfaces against each other, whether from the weight of the body or from the tonic contraction of the muscles surrounding the joint.

The presence of pyogenic organisms along with the tubercle bacilli is a most potent factor in aiding the spread of tuberculous disease. The tubercle bacillus evidently finds in many individuals great difficulty in obtaining and maintaining a foothold, and anything which depresses the vitality of the tissues will, without doubt, aid its progress. We have seen how the disease assumes increased activity, or springs again into life after an injury, the effect of the injury being to depress the vitality of the part. It may also be often noticed that while the general health of the patient remains good, the local affection is chronic, and makes but little progress; while, if the health becomes lowered, the local disease assumes a more rapid course, and suppuration often occurs. Anything which interferes with the healthy state of the part, and diminishes its vitality, leads to more rapid extension of the tuberculous disease. Now one of the most powerful depressing agents, both local and general, is a septic state of a wound. The septic organisms, by virtue of the products of their growth, interfere seriously with the vitality of the tissues, and render them less able to resist the invasion of other parasites; while these products being absorbed still further favour the local and general spread of the disease by their effects on the system generally. Thus, apart from the suppuration, profuse discharge, hectic fever, etc., which are the results of sepsis, the local tuberculous disease makes more rapid progress when there is a septic condition of the diseased part than when the skin is unbroken and the tissues are not depressed from this cause.

The influence of sepsis in keeping up the tuberculous process is well seen when we compare the result of the aseptic drainage of abscesses connected with tuberculous disease of bones and joints with that obtained in septic cases. Taking the cases of spinal abscess in the foregoing statistics, we have a record of 58 cases treated by drainage, of which 49 remained aseptic from first to last, while 9 became septic. Of these 49 cases, at the last note when these statistics were compiled, 38, or 77.5 per cent. had healed; 5 were improving, but had not yet healed; 1 was still in hospital, and 5 had died of phthisis or tuberculous meningitis; while of the 9 septic cases none had healed and 3 had died. In the case of the hip-joint, we had 25 cases of suppuration treated to the end by aseptic incision and drainage, and of these 72 per cent. were cured, 24 per cent. were incomplete, some doing well, some not, and 4 per cent. had died of tuberculous meningitis. Contrast this last result with Mr. Howard Marsh's table of 260 septic hip-joint cases, of which only 32.8 per cent. were known to be cured, 23.7 per cent. were incomplete, some probably cured, some not, and 33.5 per cent. had died. Contrast also our results in aseptic spinal abscesses with the universal opinion of surgeons before the antiseptic era that these abscesses but rarely healed after they burst or were opened. The serious interference with healing caused by the presence of pyogenic organisms would also be still more evident if we contrasted the severity of the treatment required for cure in cases with aseptic as compared with septic sinuses. I need, however, only mention here that in 105 cases of disease of the larger joints with aseptic sinuses, excision or amputation was only performed in 37, or 35.2 per cent., while in a similar number of cases with septic sinuses, these operations were necessary in 69 or 65.7 per cent.

It has been pointed out by König and others that tuberculous meningitis is more frequent in septic than in aseptic cases; thus, of 16 cases of tuberculous meningitis which occurred in König's practice, 11 affected septic cases. In former times, too, phthisis seems to have been more frequent after these joint diseases than it is now, and this fact I am also inclined to refer to some extent to the septic condition of the wound. Thus Billroth gives the proportion of deaths from phthisis and general tuberculosis in cases of tuberculous joint disease as 27 per cent., while König, working more antiseptically, gives it as 16 per cent. In our own cases the mortality is very much less, but this may be to some extent due to the shorter length of time that the patients were under observation; of our 386 patients, only 17, or 4.4 per cent., are known to have died of tuberculous disease, while only 42, or 10.8 per cent., are known to have suffered from phthisis or general tuberculosis.

Passing now to factors which act in a general rather than a local manner, the first which we have to note is the question of age. The frequency with which the disease commences at various periods of life differs greatly in the case of different joints, but as a whole it is most frequent in childhood. This is well seen in the accompanying table, where we have, first, the percentage of the total cases commencing in each quinquennial period up to 50 years of age, and also the percentage of males and females respectively. Thus, of the total number of cases affecting the seven larger joints, 23.2 per cent. commenced during the first five years of life; and of these, 14.3 per cent. were males and 8.8 per cent. females, etc.

	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	Above 50
Total	23.2	16.0	14.6	15.0	8.5	8.8	4.0	3.0	2.0	2.0	2.0
Males ...	14.3	9.5	9.5	9.5	6.3	5.3	4.0	2.4	2.0	1.8	1.0
Females.	8.8	6.5	5.0	5.8	2.0	3.3	—	0.8	—	0.4	1.0

This table does not, however, represent accurately the risk of the occurrence of these diseases at different ages, for it may quite well be that a greater number of cases commenced during the first five years of life, because a greater number of persons are alive at that age than at any other; in fact it may be that the percentage proportion of individuals attacked during the first five years of life is actually less than that of those attacked, say, between 15 and 20 years of age, when considered in relation to the number of persons alive at these ages, and thus, although more cases commence in the first quinquennial period, the actual probability of the occurrence of tuberculous joint disease may be greater in later life. Investigations of this kind have been made with regard to phthisis, and have led to the surprising result that in Copenhagen, Sweden, and various German cities the danger of phthisis in any given individual constantly increases with advancing age, and that in advanced life a larger proportion

of the individuals alive at that age die of phthisis than at the period of life during which it has been supposed to be most frequent (15 to 30 years of age). Fassbender has applied a similar mode of investigation to cases of tuberculous diseases of bones and joints, and found that the results did not correspond to those obtained in phthisis, although the proportion of adults and old people affected was in reality greater than appeared to be the case.

Employing the German statistics of the proportion of persons per 1,000 alive at different ages, I have calculated the "real frequency" of the disease in my cases and in the following table, we have the ratio per 1,000 (expressed as a percentage) of my cases of disease of the seven larger joints beginning in each quinquennial period to the persons alive at that quinquennial period per 1,000.

In the second line we have the apparent frequency, and in the third the real frequency, as calculated by Fassbender.

	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-60	61-70	71-80
Real frequency ...	167	134	145	164	98	120	60	48	36	42	17	—	33
Apparent frequency ...	232	153	150	153	85	88	41	30	20	20	14	—	7
Fassbender's real frequency ...	108	145	113	157	77	109	76	106	66	85	—	—	—

From this table it will be seen that my results, in the main, confirm Fassbender's conclusion that the real frequency of these diseases is greater in advanced life than has been supposed, but that it is much less than in youth. In my list the disease commences most frequently between 1 and 5 years of age, then declines, and rises again between 15 and 20, then again steadily declines, with the exception of a slight rise between 25 and 30 and between 45 and 50; the accuracy of the latter numbers is, however, very doubtful, because I had only a few cases in my list which commenced at that age. My results agree with Fassbender's in the rise between 15 and 20 years of age, but disagree somewhat in the frequency between 1 and 5, and in later life.

Great differences exist as to the period of life in which the disease commences in different joints, as shown by the accompanying table, in which we have indicated the percentage proportion of cases of disease of each joint, commencing in each quinquennial period up to 50, and each decade afterwards. Thus, of the total number of cases of hip-joint disease, 39 per cent. commenced during the first quinquennial period, 19.4 per cent. during the second, etc.

	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-60
Hip	39.0	19.4	14.1	17.0	2.6	2.5	—	—	2.5	—	1.7
Knee	25.0	17.3	9.9	16.0	9.4	5.0	6.5	2.0	—	0.9	2.0
Ankle	9.5	28.5	19.0	14.3	14.2	—	4.7	—	9.4	—	—
Tarsus	11.9	15.0	19.0	7.9	7.9	19.0	3.8	—	8.0	3.1	—
Shoulder ...	—	—	33.3	—	16.6	50.0	—	—	—	—	—
Elbow	18.0	15.0	24.0	9.0	7.5	9.0	3.1	9.0	—	9.0	—
Wrist	3.4	—	10.4	24.0	17.8	27.0	6.9	6.7	—	3.4	—

Perhaps a better way of looking at the facts is to represent the distribution of the disease in each joint in each decade, as in the following table:

	Hip.	Knee.	Ankle.	Tarsus.	Shoulder.	Elbow.	Wrist.	Spine.
First decade	30.2	29.5	5.4	4.6	—	6.7	0.6	12.0
Second ,, ...	20.3	22.8	5.9	5.9	1.6	9.2	8.4	15.2
Third ,, ...	4.8	18.2	3.6	8.4	4.8	6.0	15.8	28.0
Fourth ,, ...	—	36.6	3.3	3.3	—	13.3	13.3	20.0
Fifth ,, ...	12.5	6.2	12.5	18.7	—	18.7	6.2	12.5

Thus of 149 cases of tuberculous bone disease (including ribs, fingers, etc., which are not shown in this table) which commenced during the first decade, 30.2 per cent. were cases of hip-joint disease, 29.5 of knee-joint disease, etc. Now from this last chart we see that, of the cases commencing in the first decade, the highest point is occupied by the hip; in the second decade by the knee; in the third decade by the spine; in the fourth by the knee; and in the fifth by the tarsus and elbow. As regards the individual joints, we saw from the former table that hip-joint disease commences by far most frequently during the first decade, and then falls rapidly; the knee-joint is also most frequently attacked during the first decade, but its fall is by no means so rapid, and the cases are fairly numerous even above 50 years of age; ankle-joint disease also commences slightly more frequently before 10 years of age, but also very frequently in the second, and to a less extent in the third, decade; disease of the tarsus is much more evenly distributed over the first three decades; there were no cases of disease of the shoulder-joint during the first decade, but they were most frequent in the third; the elbow-joint was rather more frequently affected in the second than in the first decade; disease of the wrist-joint was most common in the third decade, and very rarely commenced in the first; disease of the spine was most common in this list in the third decade.

From the above list we would arrange the various bones and joints in the following order of occurrence from youth up: hip, knee, ankle and elbow, tarsus and os calcis, fingers, spine, shoulder, wrist, ribs. In order of frequency during the first decade we have: hip, knee, spine, ankle, tarsus, os calcis, fingers, wrist. While this list gives a fairly accurate idea of the state of matters, there is one glaring discrepancy from what we know to be the case—namely, with regard to the spine. Spinal disease is in reality by far the most frequent tuberculous disease of bone during the first decade of life, and the discrepancy in our list is due to the fact that a very large proportion of cases of spinal disease are treated as out-patients, while our list has only to do with in-patients. In the out-patient list, of 190 children under 10 years of age with tuberculous bone and joint disease, 78 were cases of spinal disease, 44 hip, 24 knee, 13 elbow, 4 tarsus and ankle, 2 shoulder, 2 wrist, etc.

I may mention one other point with regard to age—namely, that several authors have held that tuberculous disease of the spine does not occur before the third year of life. In our list of in-patients, however, we have 1 case which began at three months, and 3 others during the first year of life. Of the out-patients, 4 were only a few months old when they came under observation, 3 were a year old, 9 in the second year, and 6 two years old. Of the hip-joint cases, also, among out-patients 6 were under 3 years of age. It is certainly the fact that tuberculous disease of any kind is rare during the first year of life, a fact which tells against the hereditary origin of the disease. Thus Frobelius, with a material of over 91,000 cases, in a foundling hospital found that the deaths from tuberculosis in children under 1 year of age were 0.4 per cent. of all the children, and 2.2 per cent. of all that died. He concludes that tuberculosis is a rare disease during the first year of life, that sex had no influence over the disease at this age, that overcrowding and bad ventilation predispose to it, that inhalation tuberculosis is the most frequent form, and that the disease, though sometimes localised to one organ, usually becomes rapidly general.

In my statistics I have also found that age not only affects the commencement of these affections, but also influences their severity, a fact long known and accepted. That this should be so is not a matter of surprise, for the activity of the vital processes and the resisting power of the body diminishes with age.

I need not go into all the points which show the increasing severity of these affections with advancing age, but I may refer to one, namely, the frequency of suppuration. Taking only the cases admitted to hospital, I find that during the first decade 66 per cent. ultimately suppurated, during the second decade 74.5 per cent., and during the third 86.2 per cent. No doubt this does not give an absolutely accurate idea of the relative frequency of suppuration, for of out-patients during the first decade really only a small number suppurated, and the above figures are no doubt in all cases

too high, but more especially during the first decade. Thus, of 60 cases of spinal disease under 10 years of age treated as out-patients only 9 suppurated while under my observation. This increasing severity of the disease in joint cases as age advances is no doubt to a large extent due to the increasing proportion of cases in which the disease commences primarily in the bone, and also the greater frequency of sequestra over soft caseating deposits.

Sex is another important factor. Thus, in our 386 patients under treatment in hospital, 251, or 65 per cent. were males, and 135, or 35 per cent., females. This is a fact which is noted by most authors, although the relative percentages of the two sexes may be somewhat differently given. In the case of the spine the statements are the most contradictory. The relation of the sexes varies at different ages, as is readily seen on referring to the former table. Thus, of the total number of cases admitted, 11.3 per cent. were males and 8.8 per cent. were females at or below 5 years of age, etc., females being thus distinctly less susceptible than males, but especially so above 10 years of age. The predisposition of the sexes to disease also varies according to the joint in question, as seen in this table, where (excepting the shoulder-joint, where the number of cases was too few) we see that the numbers most nearly approach each other in the case of the knee-joint, 57.6 per cent. being males and 42.4 per cent. females, and are farthest apart in the case of the tarsus, where 85.8 per cent. are males and 14.2 per cent. females.

	Hip.	Knee.	Ankle.	Tarsus.	Shoulder.	Elbow.	Wrist.
Males ...	59.7	57.6	81.9	85.8	50	74.3	75.9
Females ...	40.3	42.4	18.1	14.2	50	25.7	24.1

Further, it appears that the disease is more grave in males than in females, and that to some extent independently of age or injury, whether we test the matter by the severity of the measures required for cure, by the results of treatment, or by the frequency of suppuration. This is a point which is not referred to, so far as I have seen, by other writers, although some—such as Albrecht—give tables of the methods of treatment employed in the two sexes, and these tables show a larger proportion of cases treated by the expectant method, and a smaller proportion of cases treated by excision and amputation in females than in males. This fact would, however, correspond with the less susceptibility of females to the disease, diseases when they occur in individuals but little susceptible being, as a rule, milder than when they attack the highly susceptible.

Among other general predisposing conditions are those which have led to the belief in the heredity of tuberculous disease. I have previously said it must, in my opinion, be extremely rare that the disease itself is inherited; nevertheless, it is more apt to occur and is more severe in families where there is a tendency to the disease, as indicated by its occurrence among several members, this tendency not being altogether accounted for by increased opportunity for infection. It is, however, not the disease itself but the peculiar collection of conditions which render the parent liable to infection which is transmissible to the offspring. Where these conditions are present and fully developed the bacilli naturally get an easier and a firmer foothold, and grow more luxuriantly than in other individuals, and the disease is thus correspondingly graver. Scrofulous children are more predisposed to the occurrence of tuberculosis because the tissues, apart from their peculiar tendency, are less strong and active, seeing that the children are usually delicate, and are thus more confined to the house and to badly ventilated rooms, etc., than healthy children. These, or similar conditions of the tissues, may also be induced by poverty with its attendant evils. The bad hygienic conditions under which poor children live, their confinement to badly ventilated rooms or to the foul alleys of large towns, the deficient quantity and bad quality of their food, etc., are all factors which deprave the constitution, and render it less able to resist the attacks of any parasitic disease. There is also some reason to suppose that apart from the poor quality and deficient quantity of the food, its chemical constitution is of some importance, and notably that an excess of vegetable food is bad. As regards food, Bidder, in speaking of the treatment of these diseases, lays great stress on the avoidance of substances rich in potash, and also of starchy materials, and strongly advises the employment of albuminous foods rich in soda and fat. A probable confirmation of this view is the noteworthy fact that tuberculosis is, as a rule, very common, in herbivorous animals, and can usually be readily induced in them, while, on the other hand, it seldom occurs in the carnivora. Man, who employs a mixed diet, stands midway between these two groups in his susceptibility to this disease, tuberculosis being more often local and less virulent than in the herbivora, while it is much more frequent and destructive than in the carnivora. In this way also Bidder explains the much greater frequency of tuberculous diseases in the western part of Germany than in the eastern, although the density of the population is greater in the latter. It appears that the inhabitants of eastern Germany employ less vegetable diet than in the west, and eat large quantities of salt meat.

THE TREATMENT OF LARGE TUBERCULOUS ABSCESS ASSOCIATED WITH BONE DISEASE BY EVACUATION AND INJECTION WITH A SOLUTION OF IODOFORM IN ETHER.[1]

By A. W. MAYO ROBSON, F.R.C.S.,

Professor of Surgery in the Yorkshire College, Examiner in the Victoria University, and Honorary Surgeon Leeds General Infirmary.

The following series of cases is given to illustrate the method of treating cold abscesses due to bone disease by evacuation with an aspirator or trochar, and injection with an ethereal solution of iodoform. Those will best appreciate this simple method who have seen many cases treated in the ordinary ways, or by the method of opening and draining antiseptically. The latter treatment is practically impossible to carry out in most general hospitals, as very few infirmary boards will allow their beds to be occupied by patients who will not only possess them for one, two, or more years, but who require very careful dressings, which, although not individually expensive, amount in the long run to a serious item. I have now been following out this line of treatment for about six years, during which time I have had a considerable number of cases both in hospital and in private practice; and, where it has been carried out systematically, I have been very well satisfied with the results, both immediate and remote. For the notes of the cases I have to thank my successive house-surgeons, Mr. B. G. A. Moynihan, Mr. F. Hudson, and Mr. Sellers.

Case I.—T. K., aged 9. Admitted July 14th, 1885. Had been in hospital on several occasions on account of spinal caries with curvature. On admission, a large lumbar abscess had developed on the left side.

July 18th. Aspirated, 3 ounces of thick pus removed.

July 30th. Aspirated, 5 ounces of thick pus removed; cavity injected with iodoform and ether.

August 10th. Aspirated, 4½ ounces of pus smelling of iodoform removed; nearly 1 ounce of iodoform and ether solution injected.

September 15th. Made an out-patient, wearing a spinal support. Appeared to be quite well, and showed no sign of reformation of abscess. Patient not seen again.

Case II.—A. J. H., aged 21. Admitted March 26th, 1887. A year ago noticed a swelling 4 inches below the right scapula. Present condition: Large fluctuating swelling in lumbar region; curvature of spine in mid-dorsal region.

March 31st. Aspirated, 12 ounces of pus removed; cavity injected with ½ ounce of iodoform and ether solution.

April 6th. Nine ounces of pus removed, ½ ounce of iodoform and ether solution injected.

April 21st. Four ounces of pus removed, ½ ounce of iodoform and ether solution injected.

[1] Read before the Yorkshire Branch of the British Medical Association at Barnsley.

May 5th. Four ounces of pus removed, ½ ounce of iodoform and ether solution injected.

May 12th. Four ounces of coffee-coloured pus, smelling strongly of iodine, removed, and cavity injected again.

May 24th. Two ounces of coffee-coloured pus removed; cavity not injected.

June 7th. Returned home wearing a poroplastic jacket. Cavity seemed quite empty, and patient appeared well. He attended from time to time for a year, the pus never reformed, and, when last seen, he had given up his spinal support, and was quite well.

Case III.—S. E. G., aged 29. Admitted June 9th, 1887, for angular curvature of the spine and psoas abscess. First noticed between two and three months ago; much larger during last month. Had pain in hip since last confinement two years ago. Three months after confinement noticed a lump over the spine, and was obliged to walk with a stick; no history of injury. Present Condition: Large fluctuating swelling in the upper part of the right thigh, extending over outer and inner sides and front of the thigh, constricted in the middle over the femoral vessels. Angular curvature of the spine implicating the three lowest lumbar vertebræ. General health not good.

June 16th. Abscess aspirated. Creamy pus removed.

July 14th. Eleven ounces of thin creamy pus removed, no pain, general health improved.

August 5th. Slight collection of pus (?) Plaster jacket applied.

August 8th. Returned home.

October 25th. Readmitted. Cavity again filled up.

October 27th. Twenty-seven ounces thin, yellow, sweet pus removed. Cavity injected with half an ounce of iodoform and ether solution.

November 24th. Eight ounces of sanio-purulent fluid removed. Half an ounce of iodoform and ether solution injected.

January 5th. Abscess aspirated on outer side of thigh. One ounce of iodoform and ether solution injected.

January 24th. No re-collection of pus.

February 4th. Poroplastic jacket applied. Made an out-patient. Attended occasionally as an out-patient: the abscess did not form again, and the patient when last seen appeared to be well, although not strong.

Case IV.—S. D., aged 31. Has had pain in dorso-lumbar region for three years, increased by exercise, particularly stooping. Had noticed a swelling in the groin for six weeks. Diagnosis: Psoas abscess depending on spinal caries, with curvature in dorso-lumbar region. Treatment: Rest in bed for first month, and afterwards a spinal support.

April 19th, 1888. Aspirated, 24 ounces of thick curdy pus withdrawn.

April 26th. Aspirated, 19 ounces of thick curdy pus withdrawn.

May 3rd. Aspirated, 19 ounces of thick curdy pus withdrawn, and cavity injected with 1 ounce of iodoform and ether solution.

May 24th. Aspirated, 8 ounces of thin pus removed, and 2 drachms of iodoform and ether solution injected.

July 19th. Four ounces of clear yellowish fluid removed, and 4 drachms of iodoform and ether solution injected.

August 25th. No return of pus. Abscess completely healed. Made an out-patient. When seen a year afterwards he was quite well, and there had been no return of the abscess.

Case V.—T. S., aged 8. Noticed swelling for six weeks. No signs of spinal caries. No pain or tenderness over vertebræ. No pain or percussion on movement of head. No pain on pressing iliac bones together. Diagnosis: Iliac abscess, probably due to caries of ilium. The abscess presented internally to, and a little above, the right anterior superior spine.

April 26th, 1888. Aspirated, 8 ounces of thick flaky pus withdrawn.

July 13th. Aspirated, 8 ounces of thick flaky pus withdrawn.

July 19th. Aspirated, 6 ounces of thick flaky pus withdrawn, and cavity injected with 2 drachms of iodoform and ether solution.

July 26th. Aspirated, 3 ounces of thinner pus withdrawn, and 2 drachms of iodoform and ether injected.

August 5th. Three ounces of clear straw-coloured fluid withdrawn.

August 28th. No return of fluid. Sent to a convalescent home.

October 19th. No return of pus. Patient apparently well. When seen some months afterwards there had been no return of the abscess.

Case VI.—R. L., aged 6. Spinal caries in lower dorsal region for twelve months. Abscess on inner side of thigh and over great trochanter noticed a month ago. The abscess surrounded the hip-joint, limiting its movement and giving appearance of hip-joint disease. Diagnosis: Psoas abscess depending on caries of spine. An abscess of large size could be felt in the iliac region in the thigh, to the inner side of the vessels and over the great trochanter. Treatment: Rest for two months and spinal support.

June 28th. Aspirated, 6 ounces of thick curdy pus withdrawn.

July 19th. Aspirated, 4 ounces of thick curdy pus withdrawn, and 4 drachms of iodoform and ether solution injected.

August 18th. Four ounces of thin pus withdrawn, and 2 drachms of iodoform and ether solution injected.

August 29th. Three ounces of thin pus withdrawn, and 2 drachms of iodoform and ether solution injected.

September 6th. Three ounces of clear fluid withdrawn, and 2 drachms of iodoform and ether injected.

On September 20th the abscess had partially reformed, and was so near the surface, the skin being thinned, reddened, and inflamed, that a small incision was made, about 2 ounces of almost clear fluid being let out from a superficial cavity, and the wound dressed antiseptically. Antiseptic dressings were reapplied until October 16th, when the wound had perfectly healed, and there was no return of the pus. The patient remained well, and when seen some months afterwards there had been no return of the abscess.

Case VII.—G. A., aged 63. Admitted December 7th, 1888, with psoas abscess. Nearly two years ago he had pain in the small of the back. Five months ago he first noticed a swelling in the left femoral region.

December 13th. Aspirated, 7 ounces of thick pus removed. Injected with half an ounce of iodoform and ether solution.

January 6th, 1889. Fitted with a jacket made of steel covered with wash leather.

January 8th. Made an out-patient at his own request.

January 23rd. Readmitted. Slight reaccumulation of pus.

January 24th. Injected with 2 drachms of iodoform and ether solution.

He attended as an out-patient for a time, and, as there was no fresh collection and he had no pain, he considered himself, and appeared to be, well.

Case VIII.—E. S., aged 11. Admitted November 25th, 1889, with lumbar abscess. Has had pain in the back for two or three years. Last dorsal and first lumbar spines prominent. A fluctuating tumour the size of a cocoanut between the crest of the ilium and the sacral spines.

November 28th. Aspirated, 22 ounces of thin pus removed, half an ounce of iodoform and ether solution injected.

December 6th. Sixteen ounces of pus removed and half an ounce of iodoform and ether solution injected.

January 16th, 1890. Four drachms of pus removed, and two drachms of iodoform and ether solution injected.

February 16th. Made an out-patient, wearing a jacket.

When last seen was quite well, but still wore the jacket.

Case IX. F. R., aged 8. Admitted February 18th, 1890, for psoas abscess. One year ago became ill with pain in the back and in the left knee, causing lameness. Present condition: Lordosis and fixing of the hip, no tenderness or pain on pressing the hip or on rotation, but tenderness over lumbar spine without curvature.

February 20th. Aspirated, 12 ounces of pus removed and 3 drachms of iodoform and ether solution injected.

March 6th. Seven ounces of pus removed and iodoform and ether again injected.

March 20th. No sign of return of pus. Extension weight of 12 lbs. put on to straighten the limb.

April 26th. A steel support applied to the spine with a bar extending down the thigh to keep the limb extended.

May 3rd. Made an out-patient, apparently quite well.

September. Attended as an out-patient, expressed himself as quite well; no return of the abscess; still wearing the spinal support.

Case x.—C. W., aged 36. Admitted July 29th, 1890, for psoas abscess. Has had pain in the lumbar region for three years. A tender spot present at the level of the iliac crest. No prominent spinous processes. Has noticed a swelling in the thigh for the last fortnight. Present condition: Smooth and rounded swelling on the inner side of the femoral vessels.

August 7th. Aspirated, 6 ounces of pus removed, cavity injected with 1 ounce of iodoform solution.

August 21st. Aspirated, 10 ounces of pus removed, again injected with iodoform solution.

September 18th. Aspirated, 5½ ounces of thin watery pus of a light brown colour removed; the pus did not smell of iodoform; cavity again injected.

September 20th. Made an out-patient, wearing a spinal support, there being no further collection of fluid in the abscess cavity.

February, 1891. The patient returned to the infirmary after five months' absence in order to inquire if he was to continue wearing the spinal support. There was no sign of recurrence of the abscess or mark to show where the puncture had been.

Remarks.—In all cases strict antiseptic precautions are observed as to hands, instruments, and skin over the site of puncture. At first the carbolic spray was used, but of late I have ceased to employ it in any operation. If the pus be thick and incapable of evacuation by the aspirator a good sized trochar is employed. As a rule an anæsthetic is not administered, although when the ether expands some little pain is felt; this, however, rapidly passes away. It will be noted that whilst the emptying of the abscess and the injection of the cavity forms an important part of this method of treatment the disease causing the abscess is not forgotten. The patient is for some weeks kept recumbent, and is afterwards supplied with a correctly-fitting spinal support, which is worn for at least a year or until the spinal disease is well. My reason for bringing these cases forward is that I believe that this simple method of treatment is not generally known, or if known is certainly not usually followed out by the majority of surgeons; and that now from an extended experience I can fully and confidently recommend it.

A CASE OF POISONING BY "FAINTS."

By JAMES SWAIN, M.D., M.S.Lond., F.R.C.S.Eng.,
Senior Resident Officer Bristol Royal Infirmary.

T. H., male, aged 57, was brought into the Bristol Royal Infirmary dead on June 25th, 1890. At the *post-mortem* examination, fourteen hours after death, rigor mortis was beginning to pass off. The body was well nourished, and there were no signs of injury. Hypostasis was well marked. On opening the body, there was a strong smell resembling nitrite of amyl, but somewhat sweeter, which pervaded all the organs and fluids of the body. The lungs were congested and œdematous, but otherwise healthy. Kidneys rather dark; no diminution in size of cortex, and capsule peeled off easily. The liver was normal and weighed 60 ounces; spleen slightly adherent and rather soft. The mucous membrane of the stomach was soft and thick, and the contents consisted of about 3 ounces of reddish grumous material. The red colour was shown to be due to blood, both by the guaiacum and the microscopic tests. The ventricles of the brain contained about 1½ oz. of clear fluid, having the odour above mentioned. The heart was slightly fatty, the cavities in a state of contraction, and the aortic valves and aorta were somewhat atheromatous. The contents of the stomach, the fluid of the ventricles, a portion of brain matter, and about 3 ounces of urine found in the bladder were saved for examination.

At the inquest on the following day it was elicited that the deceased was a heavy drinker, and his widow stated that he was in the habit of drinking heavily of "faints," which could be obtained in large quantities from a distillery for nothing. Many of the jurymen said that they had frequently heard of "faints" being used externally for rheumatism, but never knew of its internal administration.

I requested the coroner's officer to obtain some "faints" for me, and I found that it answered to the same tests as the fluids saved for examination. As I am not aware of any record of death occurring from this substance before, and as only slight reference is made to it in the ordinary textbooks of toxicology, I may be permitted to mention some of its properties.

The "faints" is the latter portions of the distillate obtained on rectifying crude spirits of wine from fermented potatoes, etc. It is rich in alcohols which are less volatile than ordinary alcohol and ether, and for practical purposes may be said to consist chiefly of fusel oil (amylic alcohol) mixed with large quantities of the secondary and primary propyl alcohols and the higher homologues of the alcohols and ethers (Rabuteau).

"Faints" has an odour of bad spirits, and owing to the presence of large quantities of amylic alcohol, it yields an odour resembling jargonelle pears, when heated with an acetate and strong sulphuric acid, due to the formation of amyl acetate.

Dr. Fürst, of Berlin, and Dr. W. B. Richardson, by experimenting, the former on rabbits, and the latter on various animals, have shown fusel oil to cause nausea, giddiness, lessened sensibility to pain, and loss of muscular power. They supposed that it acted more powerfully when breathed as a vapour than when taken internally as a liquid. It has at first a powerful intoxicating effect, followed by a period of marked depression. Its superior intoxicating effect is said to be known amongst the consumers of corn brandy in some of the northern countries of Europe, who frequently demand to be served with a "glass of good fusel."

Clinically the above case is of great interest, for in spite of the man's having the habit of taking large quantities of fusel oil (which is considered the most poisonous part of bad spirits) for the greater part of his life, his organs nowhere exhibited any greater degeneration than might be expected in a hard working man of his age, and especially should it be noted that cirrhotic changes in the liver and kidneys were entirely absent.

Finally, I would point out that the habit of drinking "faints," though perhaps not common, is practically without restriction, inasmuch as the substance can be obtained for nothing at various distilleries. This latter fact appears to deserve the attention of the "Select Committee appointed by the Chancellor of the Exchequer to consider the propriety of taking means to prevent the introduction into public use of raw and immature spirits."

THE PATHOLOGY OF GANGLION.

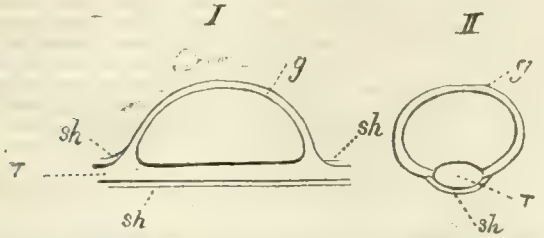
By WALTER G. SPENCER, M.S.,
Assistant Surgeon, Westminster Hospital.

Whilst there can only be few chances of examining *post-mortem* cases of ganglia, the opportunities which the surgical treatment by excision afford enable a conclusion to be formed of the pathology in the majority of cases, which is certainly more simple than that which has often been given by writers on surgery. I have had a good many patients under my care in whom ganglia have been caused by one of two conditions—first, a sprain or blow causing an immediate effusion of blood into the tendon sheath; the remains of the blood clot are to be found more or less organised as a solid mass within the ganglion; secondly, tenosynovitis, at first acute, later on becoming chronic; the tenosynovitis is generally caused by the overuse of some particular muscle in the work of the patient, especially when the work has only lately been taken up.

Thus, in the case of a boy, his work in the printing office obliged him constantly to twist and adduct his right hand, and to contract the flexor carpi ulnaris muscle. When first seen there was acute tenosynovitis in the tendon sheath of this muscle immediately above the wrist; later on the tenosynovitis became chronic, and a fluid swelling about 1½ inch long formed by distension of the sheath. Melon seed bodies could be felt in it. In a case recently operated upon the patient had been put to work a lift by pulling on a rope so as to use excessively the extensor communis digitorum. Teno-

synovitis was set up in the extensor sheath on the back of the wrist, and after a time a ganglion formed. Another patient, a domestic servant, put much strain on the right index finger in her occupation. An effusion occurred into the sheath of the flexor tendon on the palmar surface of the first phalanx. The effusion persisted for a year in a subacute and chronic condition. When the flexor tendons were exposed by an incision, they were found to be pushed forwards by two solid bodies about the size of peas, similar to those found in joints, lodged between the tendons and the palmar surface of the phalanx. A cure with free movement resulted from their removal. Similar ganglia have been found on the dorsal surface of the foot, the tenosynovitis being produced by the rubbing of the boot.

My observations, therefore, show that a ganglion is usually produced by a shutting off of a portion of the tendon sheath by inflammation, so that, as the diagrams indicate, the tendon forms part of the wall of the ganglion.



T. Tendon. *sh.* Sheath of tendon, not altered. *g.* Wall of ganglion, consisting of the dilated and thickened sheath. *I.* Diagram of vertical section through a ganglion. *II.* Diagram of transverse section through a ganglion.

The chief complaint of a patient suffering from a ganglion is that of diminished power in the muscle affected. This is clearly due to the firm adhesion of the tendon to the wall of the cyst, which prevents it moving freely in its sheath. In all the cases upon which I have operated the loss of power was sufficient to prevent the patient following his occupation. A common method of treatment is forcibly to rupture the cyst, and so allow the tendon to move freely in its sheath again. This can only result in cure when the amount of inflammation has been small and is still capable of absorption. The injection of iodine, etc., increases the amount of inflammatory tissue, and so fixes the tendon more firmly. If the sac wall be excised and passive movement begun early, the tendon regains free movement and the patient his former power. If the ganglion has become compound by extension from one of the flexor tendon sheaths above the wrist into the palm, an incision should be made at either end of the sac and the cavity washed out, after which the incision may be completely closed. The ganglion may not fill again; if it does so, a seton of several strands of silver wire may be passed through, and if careful antiseptic precautions be observed no suppuration will occur, but just sufficient inflammation will have been set up, when the wire is removed after a few days, to cause union to take place between the walls of the ganglion.

I have not had under my care a case of primary tuberculous disease of the tendon sheath. Several children have had tuberculous abscesses in tendon sheaths of the hand or foot, but in all the cases caries of the adjacent bone was found to be the primary lesion. Such cases heal without further suppuration after scraping and application of boracic acid powder as a dressing.

WATFORD (Population, 17,000). *Influenza.*—The general tone of Dr. Brett's rather brief report is favourable, though the death-rate of 1890 (14.5 per 1,000) showed a slight advance on that of the previous year. The proportion of deaths per 1,000 from zymotic diseases is 0.76, a remarkably low rate. Influenza was very prevalent, but not fatal, and there was no approach to any other kind of epidemic. Some sanitary wants, which the health officers appears to have previously pointed out to the local board, seem to be still undealt with by that body.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

NOTE ON THE DIRECT CEREBELLAR TRACT.

IN some lectures before the College of Physicians[1] I made the observation that in the cervical region in the monkey the posterior roots, on entering the cord, gave a large number of fibres to the direct cerebellar tract. This statement was based on the examination of three cords from monkeys, on which Mr. Horsley had cut the posterior roots of several cervical nerve pairs. In one of these, figured in the above lectures, the direct cerebellar tract was largely degenerated, the degeneration being traceable quite distinctly into the restiform body. In the other two, which, at the time of publishing the lectures, I had not had time to examine carefully, there was also degeneration of the direct cerebellar tract, but on more careful examination there was found in addition some slight descending lesions which could not possibly have been secondary to nerve root section. This circumstance aroused suspicions as to the cause of the degeneration in the first case, and led me to do two more posterior root sections. In one of these, again, there appeared to be a very few degenerated fibres in the direct cerebellar tract, but in no way so extensive as in the three preceding cases. In the other this tract was quite normal. In all these experiments the postero-lateral column and the fibres passing into the horn are strikingly degenerated and broken up. One is forced, then, to the conclusion that in the cases in which the direct cerebellar tract is affected there must have been some lesion of the tract itself. Such a lesion may be inflammatory, or, as Mr. Horsley suggested, a cutting off of the blood supply of the tract by thrombus, or possibly due to a local irritation after a too free use of carbolic acid. I am bound to say, however, in my sections no evidence of any of these influences can be discovered. In order to eliminate some of these sources of error, I lately made an experimental section of three of the combined anterior and posterior roots on the proximal side of the ganglion, without laying open the dura of the cord. In this case the cord shows characteristic secondary degeneration of the postero-lateral column and also of the fan-shaped fibres entering the horn, but the direct cerebellar tract remains intact. I am therefore inclined to think that my former statement that the posterior roots enter into the composition of the direct cerebellar tract is erroneous, being based on what I now consider to be an error of experiment.

Harley Street, W. H. H. TOOTH, M.D.

ROSEOLA BALSAMICA AND ROSEOLA SYPHILITICA.

J. R., aged 21, came under observation on December 16th, 1890, with a profuse, raised, mostly papular, and very irritable eruption on the trunk, forearms, especially about the back of the wrists and elbows, and front of both thighs. The rash was of a deep red colour, and there were a few abortive wheals on the back. The patient said he had been suffering from gonorrhœa for five or six weeks and had been treating himself with copaiba until the day before, when the rash appeared, the wrists being the parts first affected.

Thus all the usual characters of a rash due to copaiba were present. But it was also noticed that the glands in both groins were enlarged and multiple. On further inquiry the patient stated that a small sore had appeared on the internal surface of the prepuce about the same time as the discharge, and had readily healed under some local application. Neither sore nor scar could now be seen, either at the spot indicated or elsewhere. The history did not assist the diagnosis, as there had been repeated exposure to the risk of contagion for some time. A saline purgative was ordered.

Three days later the itching had disappeared and the rash also, except that on the abdomen it was still faintly marked. But among these darker red remains of the drug rash there were scattered a few lighter red blotches about the size of a sixpence, and these latter were not at all raised above the

[1] BRITISH MEDICAL JOURNAL, April, 1889.

surface of the skin. There was still nothing to be seen on the penis in the shape of sore or scar, but on careful palpation of the prepuce a small very slightly indurated spot could be felt. Syphilis was of course diagnosed and mercury prescribed. The induration subsequently increased till a clearly marked nodule could be seen on rolling back the prepuce, but there was no ulceration. The roseola also spread to the chest, back, and limbs, and was followed by a papular syphilide and lesions in the throat of the ordinary kind.

The chief point of interest in the case is that two rashes, which are occasionally liable to be mistaken one for the other, were present at the same time, though in this instance each had its own peculiar characters so well marked that there would have been no excuse for such a blunder. The case also affords a good illustration of how apparently insignificant an affair the primary lesion of syphilis may be, and thus suggests caution in making a positive diagnosis of even the most innocent-looking venereal sore until the incubation period of syphilis has gone by.

Old Burlington Street, W. ARTHUR COOPER.

CANCER OF THE BREAST TREATED BY INJECTION OF METHYL-VIOLET.

THE patient, whose case is described below, presented herself suffering from a well-marked circumscribed indurated tumour of the breast, about the size of a small egg. The case was considered a particularly suitable one for testing the efficacy of Dr. Mosetig's treatment by injection of methyl-violet.

The treatment having been explained to the patient, her consent was readily obtained, and a course of twenty injections was prescribed. This treatment was commenced with a dose of 10 minims of 1 part of methyl-violet in 300 parts sterilised water; administered February 7th, 1891. The injections were given daily. The first ten injections produced no pain and no inflammation of the breast, but, after the tenth injection, a slight redness of the skin became apparent, which increased after each injection. On the fifteenth day of treatment some suppuration of the breast tissue was present, masking, to a great extent, the tumour. The injections were still continued. After the twentieth injection, on careful examination, the tumour being still present, it was decided to remove the breast in the ordinary manner.

The operation was performed by Dr. Hugh Fenton, with strict aseptic precautions, after the manner of Dr. Edgar Kurz, of Florence, described in the *Deutsche medicinische Wochenschrift* of November 20th, 1890, and, although considerable suppuration was present in the breast, the wound healed by first intention at the end of seven days, the only application to the breast having been dry Gamgee tissue, carefully sterilised previous to the operation in the hot air steriliser, as were all the instruments used in the operation, no carbolic acid or iodoform being used at any time during or after the operation.

The breast, on examination after removal, was found to contain a typical tumour of the scirrhous cancer variety. The growth presented no alteration that could be attributed to the injection of the methyl-violet, even when examined, after hardening and staining, by very high microscopic power, such as the $\frac{1}{12}$th and $\frac{1}{18}$th oil immersion. No degeneration of the cancer structure could be observed around the growth. Considerable suppuration of the glandular tissue of the breast had taken place, which no doubt, under ordinary antiseptic dressing, would have considerably retarded primary union. The result of the treatment by methyl-violet must, in this case, be regarded as purely negative. The rapid healing of the wound speaks greatly in favour of the aseptic sterilised dressing now so largely adopted on the Continent with such good results, Dr. Kurz giving a mortality of 2 in 169 cases of operations, of amputations, resections, laparotomies for perforation in typhoid fever, and other major operations.

Putney. EDW. F. GRÜN, M.R.C.S., L.R.C.P.

A CASE OF EXTREME HYDRAMNIOS.

LATE one night I was called to see a Mrs. A., aged 41, who was expecting to be confined of her eighth child, the messenger saying she was in great pain and "did not know what was the matter with her." I found the woman in great distress and embarrassment of breathing, which had been increasing for the previous two days. Her legs and the lower part of the abdomen were very dropsical, her face also was puffy. The uterus was enormously enlarged. The os, about the size of a florin, was high up, and no presentation could be felt. By means of a straightened hairpin I punctured the membranes, and immediately the liquor amnii began to rush away, to the great relief of the woman. I caught most of the liquor in a washhand basin, and with it more than filled a 3 gallon pail, the overflow running through the floor into the room beneath. After four or five hours' rest, labour terminated quickly; the child, which was male, lived two days. The woman made a good recovery, all dropsy subsiding.

She accounts for her condition by trouble, being much reduced in circumstances. I did not see the placenta, it being destroyed before my second arrival. The woman suffers from chronic rheumatism and mitral regurgitation. The measured quantity of liquor amnii was 24 pints, besides what escaped on the bed and floor—probably 2 or 3 pints.

Luton, Beds. HY. C. PAULI.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GENERAL HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.

THE TREATMENT OF TUBERCULOUS ABSCESSES BY EVACUATION WITHOUT DRAINAGE.

(Under the care of G. A. WRIGHT, B.A., M.B.Oxon., F.R.C.S.)

[Reported by F. H. WESTMACOTT, M.R.C.S., L.R.C.P., Junior Resident Medical Officer.]

OF the first twelve cases treated by the following method during the last two years, ten were successful and two failed. The mode of procedure is as follows: An incision is made over the prominent part of the abscess, or if it arises under an old scar this is excised, the cavity is explored with the finger, and all parts of it well scraped with a sharp spoon. In some cases partial excision of the abscess has been accomplished. Hot perchloride of mercury solution (1 in 3,000) is next used to flush out the cavity, remove all *débris*, and arrest oozing. A series of sponges made of absorbent wool covered with carbolic gauze are next taken in a pair of forceps and screwed into all parts of the abscess cavity, which is thus well dried and wiped out. Iodoform emulsion is injected with a glass syringe, the wound orifice being closed by a sponge; the part is filled to distension, waxed silk sutures are put in the edges of the wound, excess of emulsion is squeezed out, and the sutures are then tied. Iodoform and boracic powder is then dusted on the part. A small piece of carbolic gauze dipped in perchloride (1 in 3,000) is laid on, and then plenty of wood-wool wadding is employed as dressing. A gauze bandage exerts some pressure on the part, which is augmented by an elastic webbing bandage. In a fortnight or so, the part is dressed, and the sutures are removed. If the discharge "comes through," the outside of the dressing is well soaked with perchloride solution (1 in 3,000) and packed with wood-wool wadding.

Although in the following cases a solution of mercury has been used to flush out the cavity, there have been only one or two instances in which there has been any shock or rise of temperature following the operation. One cannot, therefore, quite agree with Mr. Barker in saying that these symptoms are due to the use of germicide in the flushing; though in cases of spinal caries it is perhaps safer to use a solution of boracic acid.

For the use of notes of some cases, I am indebted to Mr. Bowman, Mr. Melland, and Mr. Williams.

CASE I.—A. W., aged 4. was admitted on January 16th, 1889, suffering from morbus coxæ. Her mother died of phthisis. Twelve months ago, lameness in walking was first noticed. Eight months ago she had a Thomas's hip splint put on, and has worn it ever since. Has had night cry six or seven weeks. Pelvis tilted up on right side; foot everted, shorten-

ing one inch. Fulness and fluctuation over the great trochanter. No local or general increase of temperature. Hip splint was put on, and the child kept at rest in bed. Swelling gradually increased, and on February 28th, the abscess was opened under chloroform. No communication was found with the joint, the abscess being superficial to it. The cavity was well scraped with Volkmann's spoon, flushed by means of a Higginson's syringe, with perchloride of mercury solution (1 in 3,000), well rubbed round with wool sponges in forceps, and so cleaned and dried. Iodoform emulsion syringed in to distension. Wound sutures put in; excess of emulsion squeezed out; then sutures tied. No drain tube put in. First dressing under the spray March 11th. Wound healed. Alternate sutures removed. Second dressing, March 25th; remainder of sutures removed. There was some thickening round the cicatrix, which, however, subsided, and the patient was discharged in a Thomas's hip splint on March 31st.

Case II.—M. C., aged 3 years, was admitted January 29th, 1889, with caries of the spine. No history of phthisis in the family. Slight curvature of spine first noticed twelve months ago. Played about until three months ago, when she became weak, and always wanted to lie down. Has had slight incontinence of urine and frequent desire to micturate for the past three months. Has had night cry for the same period. On admission there was backward projection of the second, third, and fourth lumbar spines. On the sides of this curvature were two swellings, the one on the left side larger than the one on the right. There was also a swelling on the outer side of the left buttock. February 21st. An incision was made under chloroform over the swelling in the buttock. A quantity of pus came away, and on introducing the forefinger the cavity could be felt going in different directions, one way being through the sciatic notch into the pelvis. Carious bone could be felt with the sharp spoon passed through the notch. After well scraping the interior of the cavity, it was flushed with hot perchloride (1 in 3,000), scrubbed and wiped with wool sponges, iodoform emulsion injected, the wound sutured with waxed silk, and dressed as in the last case. The same evening there was a rash like measles round the chin and right ear. Temperature at 4 A.M., 101.2°. Slight cough. Next day, February 22nd, at noon, the rash had spread all over the face and neck. Temperature 98.8°. At 4 P.M., 100.4°; at 8 P.M., 99.8°; and next morning at 8 A.M., the temperature was normal. The rash on February 23rd had spread over forehead. It was absent on the body with exception of the lower part of the neck. February 24th. Rash on left arm. After this it began to disappear. There was no running of eyes or nose. All went well till February 28th, when the temperature suddenly went up to 102.6° at 4 P.M. Dressing was done under the carbolic spray. The buttock was swollen and red. The wound, which had almost healed, was reopened. A quantity of watery pus spurted out at high pressure. Cavity syringed out with hot perchloride and redressed, the wound being left open. No drain tube put in. The wound was dressed every other day after this, a fair amount of discharge coming away daily. On March 29th, she was discharged, the wound being small and superficial.

Case III.—L. T., aged 14 months, was admitted May 24th, 1889, with tuberculous arthritis of right knee, and abscesses in other parts of the body. Father and mother died of phthisis; no history of injury. Two months ago knee began to swell, gradually at first, and, latterly, more rapidly. Not much pain unless the part is handled roughly or knocked about. The limb is in a semi-flexed position, skin tense, pain on moving the joint. Extension applied to limb. June 7th. $CHCl_3$. Spray. Incision, vertically above the knee-joint. Abscess cavity well scraped. Iodoform emulsion injected, after flushing with hot perchloride (1 in 3,000), and wiping with wool sponges. Dressings as before. Other abscesses in hand and body treated in the same way. June 14th. Dressing; knee looked well. June 24th. Dressing; sutures removed from knee and hand; both are quite healed. The knee in this case was afterwards erased on July 25th, and did well.

Case IV.—J. C., aged 10 years 4 months, was admitted on June 10th, 1889, with caries of spine and psoas abscess. No history of phthisis. In October, 1888, the boy could not bend his back when stooping. In January, 1889, he had a plaster jacket applied. Five weeks before admission a swelling was noticed at the back of the thigh; this had gradually increased. On admission, there was rigidity of dorso-lumbar spine, no curvature. Large fluctuating swelling over back of thigh, extending from gluteal fold to a point just above the popliteal space; thickening round lumbar spines. He can walk all right but cannot stoop. The skin over the abscess is tense and red. Right thigh two inches greater than left. July 25th. $CHCl_3$. Incision 1 inch in length, just below the gluteal fold. Half a pint of pus was discharged; cavity scraped with sharp spoon, and washed out. Iodoform emulsion injected. Wound sutured and dressed as before. August 9th. First dressing; spray used; wound healed; sutures removed. August 31st. Wound sound; no fresh collection. September 2nd. Fluctuation in thigh detected to-day. September 4th. Swelling has increased very rapidly; abscess nearly as large as before. $CHCl_3$; spray; incision; cavity scraped and flushed; drainage tube inserted; dressing as before. The wound closed; was dressed on September 6th and looked healthy; not much discharge on the 14th; the tube was left out, and on the 18th the wound was soundly healed. In this case the pus on reopening the abscess was quite as sweet and aseptic as at the first operation. The temperature never rose above normal during the whole course of the time in hospital, either before or after each operation.

Case V. A. J., aged 1 year, admitted August 5th, 1890, with abscess around the knee. Child fell on the knee three weeks before; it swelled the following day, and had increased up to date of admission. There was a fluctuant swelling above the patella, capsule of joint distended, thickening round lower end of femur, pain on movement of joint; temperature normal. On August 13th, the swelling was aspirated with a needle and syringe, but the pus was too thick to be drawn off. August 21st. $CHCl_3$. Abscess opened above patella on inner side of limb. There was pus in the upper part of synovial sac with granulations. The sac was well scraped, flushed and injected, sutured without drain, and dressed as before. August 29th. Wound healed; sutures removed. September 19th. Knee sound, nearly the same size as the other; no pain; sent home in Thomas's knee splint September 25th.

Case VI.—E. L., aged 8, was admitted February 13th, 1890, suffering from a residual abscess of hip (left). Had morbus coxæ and excision of the joint eighteen months ago; has worn a Thomas's hip splint since. A few weeks ago she had more pain in the hip than usual. A swelling formed over the front of the thigh. Shortening in left leg 2¼ inches; can walk with difficulty; leg slightly everted. There is an abscess on the front of the thigh below Poupart's ligament; excision wound quite sound; free mobility of hip. March 3rd. Under $CHCl_3$, abscess opened, well scraped out with a sharp spoon, well flushed with perchloride of mercury solution 1 to 3,000; pus recent; a little grit in the cavity. Some membrane came away; iodoform emulsion injected; excess squeezed out; edges of wound sutured with silk; no drainage tube used; wound dressed in the usual way. March 17th. Dressing; wound healed; sutures removed. March 22nd. Sent home with Thomas's hip splint on. May 22nd. Was seen at the hospital this morning; wound quite sound; no pain.

Case VII.—R. K., aged 1 year 9 months, was admitted on April 2nd, 1890, suffering from osteomyelitis of the radius. Phthisical history in father's family. No history of injury. Arm painful for six weeks; child has been restless and feverish. There was some thickening of the lower part of the left radius; no acute inflammation or redness of skin. Wrist-joint freely movable and painless. April 10th. $CHCl_3$. Elastic tourniquet to upper arm. Incision 2 inches long over dorsal surface of radius, extending to 1 inch from the wrist-joint. The bone was gouged away till the medulla was reached. Here pus was found, and some inflammatory products, which, however, were not extensive. These were removed with a gouge and sharp spoon. Iodoform emulsion poured in; wound closed with continuous suture. Usual dressing. Temperature never rose above the normal. Dressing April 25th. Wound quite healed; suture removed. Some little thickening round the bone remained. Discharged cured April 30th, 1890, and remained sound.

Case VIII.—C. H., aged 8, was admitted with morbus coxæ

(right) on April 30th, 1890. Phthisical history on mother's side. Had a fall four years and a half ago. Has been an out-patient for three years, and has worn a Thomas's hip splint till six months ago. Three months ago she had a fresh injury to the hip; since then a swelling has appeared gradually; has very little pain. No night cry. There is a large abscess pointing below and in front of the great trochanter. Temperature normal. There is ¾ inch shortening in the right leg; cannot walk now. Has pain on abducting the limb. May 1st. $CHCl_3$. Incision 2 inches long, vertical, and just below the great trochanter. No bare bone was found. No communication with the hip-joint. Cavity scraped well with a sharp spoon; washed out with hot perchloride solution (1 in 3,000). Iodoform emulsion poured in; wound sutured with silk, part squeezed dry. Dressing as in the last case; bandaged with gauze bandage, and then white elastic webbing. May 12th. Dressing. Wound quite healed; sutures removed; no pain. Thomas's hip splint put on. Sent home May 24th, well. Abscess had not recurred six months afterwards.

Case ix.—D. A. W., aged 6, admitted June 3rd, 1890, with pulpy knee (right). No history of injury. Two years and a half ago the knee swelled gradually, with pain and inability to walk. Has got worse lately. The knee is partially flexed. Cannot walk; pain on movement. There is general thickening round the joint, more especially round the lower end of the femur, with fluctuation at that part. June 5th. Abscess opened above and external, and below and internal to the knee; well scraped with a sharp spoon; flushed with hot perchloride solution; iodoform emulsion injected; cavity emptied; wound closed with silk sutures. No drainage tube; dressings as before. Firm pressure applied with elastic webbing. June 16th. Dressing; all healed; sutures removed. Sent home June 22nd, in Thomas's knee splint.

Case x.—E. W., aged 5, admitted June 19th, 1890, suffering from spinal caries. Phthisical history on father's side. Before she was 1 year old she had measles, and after that the back became painful. Has never been able to walk properly. Deformity in back first noticed soon after measles. Abscess first noticed six weeks ago. On admission a fluctuating swelling was found to the left of the dorso-lumbar vertebræ, which formed a prominent angle posteriorly. The child is very emaciated; lungs healthy; knee-jerks diminished; no paralysis. June 21st. $CHCl_3$ Spray; incision over swelling; cavity well scraped; no communication with bone could be found. Perchloride flushing; iodoform emulsion; wound sutured; dressing as before. June 24th. Temperature last night 99.6°. Dressing; wound healthy. July 2nd. Dressing; Sutures removed; wound quite healed; sent home.

Case xi. E. H., aged 4, admitted August 20th, 1890, with pulpy knee. No history of phthisis. Fell off a cart ten months ago, and hurt his left knee. He was admitted here two months after the injury with synovitis, and was discharged in a Thomas's knee splint. There is a good deal of thickening round the knee-joint, which is painful on movement. At the lower and anterior part of the thigh there is a fluctuant swelling. August 21st. Abscess opened under $CHCl_3$. No bare bone was found, but there was a small sinus communicating with the knee-joint. Cavity scraped, flushed, wiped, and injected, and wound sutured. Dressings as before. No pus could be squeezed out of the joint. Wound did not heal well, although there was no rise of temperature throughout. Sutures were removed in ten days, and knee was put in a Thomas's knee splint for a couple of months. On October 13th, under $CHCl_3$, the sinus was scraped; bare bone was found, and the mischief appeared to be extending towards the joint. The leg was put on a back splint. The discharge became less, and the Thomas's knee splint was applied again. When discharged there was a good deal of thickening below the patella.

Case xii.—J. H., aged 2, admitted August 26th, 1890, suffering from pulpy knee. History of phthisis on father's side of the family; father ill now with phthisis. The boy knocked his left knee on a chair six months ago; this became swollen and painful. He has never walked since. He has a troublesome cough. On admission the knee was much swollen and "boggy," especially at the upper and inner side of the patella. The limb was straight, and he had no pain when at rest or on gentle movement. The circumference was 1½ inch greater than the opposite knee. There was no acute inflammation in the part. After being in hospital a short time the knee became more swelled, and fluctuation was obtained. October 2nd, 1890. The abscess was aspirated, and thick curdy pus was obtained. October 13th. $CHCl_3$. Abscess opened over the most prominent point; the cavity was scraped and flushed out. No communication with the joint could be found. Iodoform emulsion was injected, and the wound sutured with silk. No drainage tube was used. Dressings as before. October 24th. First dressing; all healed. Sutures removed. Discharged November 1st in a Thomas's knee splint.

Remarks by Mr. Wright.—In the British Medical Journal of February 7th Mr. Barker advocates the complete evacuation of tuberculous abscesses, and their subsequent closure without drainage. The method has, no doubt, been widely employed for a considerable time past, but it appears from Mr. Barker's paper that it is worth while to record experience in this direction, and there are one or two points that require emphasising. We therefore relate some of our cases and describe our procedure. Complete aseptic removal of the abscess is the essence of the matter. Once this is done, by whatever means, primary union without drainage may be confidently looked for in the majority of instances. Success, assuming this to be true, cannot be looked for so long as the original disease—the starting point of the abscess—is left behind. For this reason I fear there will be many failures in applying the plan to spinal abscesses, for in most of them the disease is still active, and it is mechanically impossible to remove it completely. A fair number of even spinal cases will, however, probably succeed—those in which the active disease is over, and the abscess more or less fully answers to the description of a residual abscess. In residual abscesses about joints there is an excellent prospect of complete success, also in periarticular abscesses, and the plan will probably prove of great value in many of these as a preliminary to erasion or excision, which are more likely to yield a good result if surrounding tuberculous foci have been previously removed as in Case iii. Indeed, it is likely that in many instances it will be the better plan to deal in this way with each case—namely, first to remove the abscess, and, after healing has taken place, to deal with the joint itself instead of doing both at one sitting. A further extension still is that illustrated in Case vi, where, after complete removal of diseased bone and pus from the radius, primary union was obtained; and the same results are now being got by us in cases of tuberculous dactylitis and similar lesions by completely clearing the disease away and closing the wounds. We might have considerably extended our list in these directions. We have not found any special instrument necessary. Volkmann's spoon, with a Higginson's syringe, some artificial sponges, and an abundant supply of perchloride or boric acid lotion, as well as of iodoform emulsion, are all that is required beyond the ordinary knives and forceps. It is interesting to notice that in cases in which the abscess, for the reason above given, refills, it does so in some instances quite quietly, and the state of affairs appears to be exactly that existing before the operation, except for the scar over the abscess. It is certainly worth while, in such cases, to repeat the process. The complete removal of suppurating glands and glandular abscesses has, of course, been already firmly established as the procedure which gives the most thorough and speedy cure with the least scar.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, April 21st, 1891.

W. H. Dickinson, M.D., F.R.C.P., President, in the Chair.

Melanotic Sarcomatosis.—Dr. Woodhead read an account of this case for Dr. J. C. Mackenzie, of the Morpeth Asylum. The patient was 75 years of age. The primary growth occurred in the left iris, there was infiltration of the optic nerve, but the brain and spinal cord were free. The general symptoms observed during life did not bear on the pathology of the case. There was extensive infiltration with secondary nodules of the skin of the chest and abdomen. At the necropsy secondary deposits were found in the substance of the heart, the inner surface of the pericardium, the lungs, pleuræ, dia-

phragm, liver, gall bladder, pancreas, spleen, adrenals, kidneys, intestines, stomach, bladder, mesenteric glands, testes, thyroid body, portal vein, and left pulmonary veins. The rarity of secondary growths in several of these situations was commented on, and it was pointed out that the chief interest of the case lay in the very wide distribution of the malignant deposits.

Perforation of Gall Bladder.—Mr. SYDNEY JONES gave the clinical and pathological details of a case of perforation of the gall bladder. The patient was a lady, aged 53, who, a year before the onset of the fatal illness, had a slight attack of jaundice, from which she soon apparently recovered. On February 16th, 1891, symptoms of obstruction set in suddenly; on February 19th the symptoms were those of general peritonitis. On March 2nd there was an obscure fluctuation in the right hypochondrium. The patient was first seen by Mr. Sydney Jones on March 6th, when there was undoubted fluctuation in the right side of the abdomen, and three pints of yellow fluid, with bile-stained flakes of lymph, escaped on incision. There was also an abscess in the left parotid gland, from which purulent fluid was obtained. There was friction over the lower lobe of the left lung. The right parotid gland swelled later, but subsided without suppuration. The patient died thirty-one days after the commencement of the symptoms. At the *post-mortem* examination the gall bladder was found to contain fifty-three small stones, and there was a small ulceration, of pin-point size, through its wall. No stones had escaped into the peritoneal cavity, the peritonitis being due to the escape of bile, and being localised. The wall of the gall bladder was thickened, and the lining membrane was free from ulceration. He referred to a case of Dr. Norman Moore's, in which there had been ulceration of the lining membrane of the gall bladder, but there were no gall stones.—Dr. SHARKEY had seen cases of ulceration of the gall bladder followed by perforation, peritonitis, and death.

Chronic Osteitis of Tibia (? Osteitis Deformans).—Mr. H. H. CLUTTON showed a vertical section of an adult tibia, with enlargement from one end to the other with the exception of the articular extremities. The medullary canal was almost completely filled up with new bone, which was as dense as the wall of the shaft. A few pits and spaces were filled in the recent state with granulation tissue. The specimen was removed by amputation from a woman, aged 35, who had been an out-patient at St. Thomas's Hospital for ten years. No other bone was affected, and there was no history of syphilis. No old or recent syphilitic lesion could at any time be discovered. She suffered from a great deal of pain, but obtained no relief from anti-syphilitic remedies given over long periods and in full doses. Mr. Clutton was inclined to look upon it as an unusual case of osteitis deformans (1) from the absence of any evidence of syphilis either in the history or in the examination of the patient over a long period; (2) from the pathological appearances of the bone, which were as much in favour of osteitis deformans as of syphilis. Objections, he thought, might be raised (1) from the age of the patient; but in one of Sir James Paget's cases evidences of the disease were first noticed at the age of 28. (2) From the fact that only one bone was affected; but in *Path. Soc. Trans.*, 1883, Mr. Bowlby had recorded a similar case in an elderly subject, and Mr. Clutton had himself in 1888 recorded one in which the bones were unsymmetrically involved. (3) From the absence of any curvature of the bone. In answer to this objection, Mr. Clutton stated that the patient scarcely ever put her foot to the ground except to come to the hospital. She was a pensioner, and had an angular curvature of spine; and, only one bone being affected, she naturally stood on the sound one, and never eant heavily on the leg that was so painful.—Mr. SYDNEY ONES asked if any microscopical examination had been made of the bone.—Mr. BARKER asked what was the cause of the angular curvature of the spine.—Mr. CLUTTON said that no microscopical examination was made, and that the curvature of the spine was of the ordinary character, due to caries.

Ulceration and Great Contraction of Stomach.—Dr. W. B. HADDEN showed an extremely contracted stomach, which was taken from the body of a woman, aged 30, who had suffered for several months before death from vomiting. She had lived entirely on liquid food, which she took with marked slowness. The walls of the stomach were much thickened from a chronic œdematous condition of the submucous coat. There was some ulceration of the lower half of the œsophagus and of the first two inches of the stomach. There was some chronic broncho-pneumonic consolidation of the upper lobe of the left lung, with a cavity of rather recent date. The condition of the stomach was probably due to extensive ulceration with subsequent contraction. It was probable that the ulceration might have been due to the action of some corrosive poison, although the history, which was indefinite, did not furnish information on the point.—Dr. LONGHURST asked if there had been any hæmatemesis during life.—Mr. ROGER WILLIAMS referred to the fine series of specimens of stomachs in the St. Thomas's Hospital Museum.—Dr. HADDEN, in reply, stated that there had been no hæmatemesis, and that there was no similar specimen in St. Thomas's Hospital Museum.

Urinary Tuberculosis.—Mr. HURRY FENWICK showed the urinary tract of a man, aged 32. Symptoms, apparently of reno-vesical tuberculosis, had been observed for two years, and yet only very slight ulceration of the bladder was found after death. As the urine was pyelitic, and as it contained the tubercle bacillus, no instrumental interference was considered justifiable. One milligramme of Koch's fluid was injected, and the reaction was immediate and moderate. Profuse hæmaturia, vomiting, and fever, however, set in the next day, and the patient died in sixteen days of pyelo-nephritis. Careful microscopical examination of the diseased tissues failed to detect any bacillus, though tuberculous glands were found at the hilum of the right kidney. The bladder was ulcerated, and caseous tuberculous nodules were demonstrable at the neck of the viscus. The left ureter was congenitally impervious. Mr. Fenwick considered that the tuberculin injection had hastened the inevitable result of the disease.—The PRESIDENT asked if any tubercle had been observed elsewhere in the body.—Mr. FENWICK replied in the negative.—Dr. WOODHEAD asked if there was any histological evidence—other than the presence of bacilli—of tubercle, either in the walls of the abscesses or in the ulcerations of the bladder.—The PRESIDENT asked if the atrophied kidney had been destroyed by a stone.—Mr. TARGETT, who had made the histological examination of the specimens, said that the abscesses in the left kidney were not tuberculous but pyelo-nephritic. The ulceration at the mouth of the bladder was undoubtedly tuberculous, giant cells and the ordinary evidences of tubercle being present.

Myeloid Tumour of Tibia with Secondary Growths.—Mr. E. SOLLY showed a specimen of central myeloid sarcoma of the shaft of the tibia, situated a little above the centre of the shaft. The patient was a lad aged 17, who had only noticed the growth fourteen days before the limb was amputated; and at the operation the popliteal glands were found to be infected. Recovery appeared complete for about five months, but secondary growths appeared in the lungs and axillary glands, and death took place six months after the operation. Secondary growths very rarely followed central myeloid sarcomata of the bone, but the statistics of Gross and others showed that they were most frequent from the diaphysial part of the bone rather than from the epiphysial ends.

Fæcal Fistula at the Umbilicus, with Imperfect Development of the Large Intestine.—Mr. WILLIAM ANDERSON showed the specimen, and gave the following account: The patient, a seven months' child (male), was found on the day after birth to have a fæcal fistula at the umbilicus, with absence of development of the lower part of the large intestine. He died of asthenia a fortnight afterwards, the functions in the interval having been discharged normally, and the bowels evacuated without difficulty through the umbilical aperture. The *post-mortem* examination showed a hernia of the ileum at the umbilicus, at a point an inch and a half from the cæcum. The umbilical orifice was single, but the probe passed freely into the intestine in both proximal and distal directions. The large intestine was filled with fæces, and terminated in a blind conical extremity about 6 inches from the ileo-cæcal valve. There was little doubt that the umbilical protrusion consisted of a kind of Littré's hernia (the result of persistence of the condition which normally obtained during the early periods of fœtal life), a portion of which had been cut off when the umbilical cord was divided. The adjacency to the cæcum made it probable that the hernia was determined by a persistent Meckel's diverticulum, which drew the ileum close up to the umbilical aperture, and favoured its escape when the

ventless gut became filled with accumulated excretion.—The PRESIDENT mentioned a case of umbilical fistula in a young child, which ultimately did well without operation.—Mr. ROGER WILLIAMS referred to a case which terminated fatally after laparotomy.—Mr. BARKER had seen several cases of umbilical fæcal fistula, which gradually healed without surgical interference.—Dr. WOODHEAD asked if some of these cases might not have a different origin than fœtal maldevelopment.—Dr. D'ARCY POWER asked if there was anything unusual about the case when it was first seen?—Mr. ANDERSON said that a swelling was noticed at the proximal portion of the cord, but too late, as it was after the cord had been cut.

Card Specimens.—Dr. LEE DICKINSON: (1) Aneurysm of the Abdominal Aorta, opening into the duodenum; (2) Aneurysm of the Thoracic Aorta, opening into the left bronchus.—Mr. H. H. CLUTTON: Extensive Rodent Ulcer of the Scalp.—Mr. J. H. TARGETT: Melanotic Sarcoma of Bladder.

MEDICAL SOCIETY OF LONDON.

MONDAY, APRIL 20TH, 1891.

R. DOUGLAS POWELL, M.D., President, in the Chair.

Koch's Remedy in Lupus and in Pulmonary Tuberculosis.—Dr. HERON gave his experience with Koch's remedy, a number of the patients being present for inspection, and the general results being exemplified in tabular form. He opened the paper by expressing the wish that the discussion which was to follow would help to clear up the position which the remedy ought to hold in the treatment of tuberculosis. He himself proposed only to summarise the results obtained under his own observation. He pointed out that all the patients submitted to this treatment were placed under the same general conditions and were subjected to it only when they had expressed a wish after having witnessed the effects of the treatment in other patients. The tuberculin experimented with was obtained by Dr. Heron from Dr. Libbertz, of Berlin, so that its genuineness could be relied upon. It was usually injected under the skin between the shoulder blades, with the prescribed antiseptic precautions, the doses ranging from one to a thousand milligrammes, and the injections, in pulmonary cases, being repeated as far as possible daily. Before beginning the treatment the sputum of patients was examined with care for bacilli, none having been found in four of the cases treated. The same course was pursued in regard to the temperatures of patients before commencing treatment and after. He was guided in the choice of cases by Dr. Koch's own explicit definition that it was most likely to do good in cases in which a small portion of one lung only was found to be affected to a slight extent, and in which there was no evidence of excavation. He had soon found, however, that but very few cases answering to this description were comprised among the patients applying for treatment at the City of London Hospital, more particularly in regard to the male patients. The same observation had been made by his colleagues. It therefore became necessary to select cases which departed as little as might be from Koch's ideal description. Thirty-seven patients in all had been treated by means of tuberculin, and up to April 7th over 1,200 injections had been given. The smallest number of injections given was 8, and the largest number up to that date 66. The shortest residence in hospital under treatment was 21 days: 3 cases of lupus, admitted in November and December last, being still in the hospital. He had remarked that patients soon became indifferent to the pain of the injection, but in some cases the pain returned in from three to twelve hours, marking the beginning of the reaction. In such cases the pain might be considerable, lasting till the rise of temperature had disappeared. In none of the 37 cases was there ever any indication of the formation of an abscess. Repeated injections sometimes induced increased sensitiveness of the skin at the site of injury, but when another point was selected the puncture invariably became red and swollen within two or three hours, which he thought indicated that local tolerance had been established at the site of the earlier injections which did not obtain when another spot was injected. Among the more unusual phenomena of reaction he instanced low temperatures, but in many cases this proved to be due to circumstances incidental to their having been taken in the mouth. Dr. Adamson, however, had found in experiments on his own person that the temperature under the tongue the morning after the injection was under 95°, and so remained until after breakfast. Temperatures of 96° and 97° were not rare in patients after the reaction had passed away, usually occurring between 12 P.M. and 4 A.M., and not associated with any symptoms. He mentioned two cases of undoubted tuberculosis in which the effect of the injection was to produce a steady fall instead of a rise in the temperature. This illustrated the fact that all cases, even when the disease was well marked, did not react to tuberculin. High temperatures, he observed, were usually the result of large doses of the fluid, and were exceptional when the treatment was commenced with moderate doses. Consequently he had seen little of these severe reactions in his own practice. He mentioned one case, however, in which the reaction was unusually well marked, the temperature not returning to normal until about the sixth day. The patient, a young girl, was suffering from lupus, and was the first to be treated in this country by this method. The dose was 10 milligrammes. The temperature after the second injection reached 105.8°, and was preceded by three severe rigors, nausea, and delirium. Since then he had never commenced with a larger dose than 5 milligrammes. With proper attention to details he said that tuberculin could always be administered with safety. A peculiar feature in this case, also noticed in others, was a marked increase in the rate of respiration, with a striking softness of pulse, though the pulse rate was not necessarily quickened. It varied, indeed, in this case, from 72 to 96, while the respirations were at the rate of 60 to 90—no dyspnœa, merely rapidity of breathing, subject to voluntary control on the part of the patient. Passing on to consider the question of the physical signs during the treatment, he observed that in many of the cases there was noticed increase of the mucous *râles* after the use of the remedy. The moist sounds become coarser and more abundant, being noticed in parts of the lung where none were previously audible. In patients in whom only one lung was affected, these sounds were sometimes heard at the opposite apex after the injection, and continued for some hours or days. In most of the cases these new signs disappeared as the treatment progressed, and in no case were they present when the patient left the hospital. These new physical signs were sometimes, but not always, associated with increased dulness on percussion. He explained them by reference to what took place in lupus after the injections. He assumed them to be evidence of portions of lung being affected which had not given rise to physical signs beforehand. With reference to skin eruptions, the patient L. F. was the only one who exhibited the peculiar eruption described by Dr. Crocker, and she had it on two occasions. Another patient developed a purpuric eruption after the twenty-second injection, and this was associated with slight tenderness and swelling in the right wrist, and at the outer and back part of the right elbow and forearm. There was also pain in both knee-joints in the legs and left elbow. These symptoms began to disappear about the sixth day, but recurred on the seventh, and the rash had recurred several times subsequently. A trace of albumen was discovered on one occasion only in the urine. In only 8 of the 37 cases was albumen found in the urine of patients under treatment, and it was always temporary. Among other complications he mentioned the case of a girl who showed no reaction after the twenty-first day of treatment, but on the following day her temperature began to rise without any apparent reason therefor, and she developed pleurisy, which ran an ordinary course. In a fortnight the treatment was resumed, and was continued until thirty-six injections had been given, the last three having been of 100 milligrammes each. The patient did very well. In another case pneumothorax developed after the ninth injection, but she made a good recovery so far as this condition was concerned. The cases of laryngeal tuberculosis treated by this method were too few to justify a decided opinion, but, so far as they went, not one of them did well. He pointed out that hectic only occurred in patients previously subject thereto, and its recurrence did not seem to have been prevented by the treatment. He had examined the blood of one of these patients during an attack of hectic, but no bacilli had been found. In the table which he brought forward he divided

his cases into three categories: (1) Those which, according to Koch, offered the best prospect of benefit. Of these he was unable to affirm that any had been cured beyond danger of relapse. (2) Those in the second stage (consolidation); and (3) those which presented signs of cavities. In none of the cases previous to treatment was there any evidence of a tendency towards a cure, or even to be stationary; indeed, the contrary obtained in every instance. In a certain number of cases the patients had improved in health, some more, some less, under the use of tuberculin, this being manifested by a gradual disappearance of troublesomeness of cough and of night sweats, and by a material, and sometimes a very marked, increase in the sense of freedom of breathing power, points to which the patients themselves were the first to call attention. In addition to this, however, there were the physical signs in the lung which, broadly expressed, consisted in that the coarser *râles* gradually became finer, getting less and less marked to such an extent that it was sometimes difficult to distinguish between crepitation and a dry rub. This was the condition in the first class of cases, but it was applicable *mutatis mutandis* to the others. He opined that in order to ascertain the value of these different degrees of improvement, time and prolonged observation were necessary before it could be gauged with accuracy. He urged, however, that the striking effects of tuberculin upon tuberculous processes which could be seen and handled justified its use in early cases of pulmonary tuberculosis. In lupus vulgaris the results had been so marked that he felt sure it would soon be regarded as an essential part of the ordinary treatment. He, however, quoted two cases to show that, in spite of the excellent results which, up to a certain point, always followed the use of tuberculin in lupus vulgaris, the danger of the reappearance of the disease was so great that, as Koch himself had said, auxiliary methods should always be resorted to.—Dr. Theodore Williams commended the author for having taken such a very moderate view. He himself had tried the treatment in 14 cases of undoubted phthisis, with the general result that although none of them had been under treatment less than six, and some as long as ten weeks, the effects had not been at all satisfactory. Of the 14 cases, 5 belonged to the first stage, that is, cases in which there was consolidation at the top of one or both lungs, but no signs of excavation. The remainder comprised one case of softening, and the others with one or more cavities. Only 6 out of the 14 showed any signs of improvement, the rest going from bad to worse. Of the 5 early cases, in 4, cavities formed somewhat rapidly, and the bacilli became more abundant in the sputum. Out of the 14 cases, one or more cavities existed or were formed in 12. There was excavation with spread of the disease in 6, and tuberculous spread without excavation in 1. He pointed out, however, that in all the cases in which cavities had formed, a subsequent change for the better took place, and eventually the cavities contracted to some extent, and the patients left the hospital better, or at any rate no worse, than when they entered. Compared with the results of ordinary treatment, he considered the results of Koch's treatment to have been disastrous. He remarked that no matter how early the treatment was commenced, the injections were soon followed by the presence of lung tissue in the sputum. Even as a means of diagnosis, he did not think that the fluid was to be relied upon. Dr. Radcliffe Crocker compared the results of the treatment in lupus with other methods of dealing with this affection. In some cases he had obtained more reaction from local injections than when the fluid was injected in the back. He instanced cases in which every progress seemed to be made towards a cure, and then suddenly the process stopped short, and a fresh crop of granulations made their appearance. So far as the permanence of the results went, the injections did not compare at all favourably with scraping alone. Latterly he had been in the habit of clearing out the diseased tissue by scraping, applying one or other of the strong acids, and then employing tuberculin, but it was too early as yet to say anything definite about the permanence of the effects of the treatment. He showed several patients to illustrate the results of this combined treatment. On the whole, he thought that at the most it must be regarded as only a complementary treatment. He mentioned that though lupus erythematosus was not regarded as a tuberculous affection, he had tried it in a very marked case, and there had been a considerable reaction; but though some improvement followed, it had been nothing like so marked as had followed an attack of erysipelas on a previous occasion. Altogether he thought the results were disappointing.—Dr. Waterhouse mentioned two cases in which he had tried the treatment. One was an advanced case, and the patient died soon after, but not, he thought, on account of the treatment. The other patient was in the second stage, and was under treatment ten weeks. The result had been eminently satisfactory. She was not well, but her temperature was normal, there had been no return of the hæmoptysis, and the expectoration had considerably diminished. She had lost the troublesome cough, and had gained in weight. He had also tried it in several cases of tuberculous joint disease. In one case in which there had been sinuses for two years previously, which they could not induce to close up, the use of tuberculin had had for effect to cause them to heal, and the patient had made more progress in two months than he had previously made in two years.—Dr. Bagshaw admitted that tuberculin was a potent factor, but added that it was open to question whether it was for good or evil. In certain cases it certainly seemed to bring about rapid destruction of lung tissue, and he mentioned one case in which thirteen injections were given, with the result that in about a fortnight the middle lobe of the lung broke down and formed a large cavity. He would not undertake to say at present whether the treatment had done this patient good or injury, but he observed that the excavation took place about the middle of January, and was associated with a very suspicious ulcer under the tongue and a great deal of pain in the joints, anorexia, dyspnœa, and symptoms pointing to probable ulceration of the bowels, and hæmaturia; two months later all these symptoms had disappeared, and he was at present in a markedly better condition than he was at the commencement of the treatment. The cavity had practically healed up, and expectoration had been reduced almost to nothing.—Dr. Theodore Acland asked whether Dr. Heron considered it preferable to repeat the injections so as to set up a certain tolerance to the remedy, or whether it was desirable to space out the injections so as to allow of a reaction each time. In regard to the cases in which an improvement had manifested itself under treatment, he asked whether they had been subjected to the usual dietetic and other treatment before commencing Koch's treatment, in order to make sure that the improvement, such as it was, was not due merely to the improvement in diet and general surroundings. Lastly, he urged that it was a very remarkable circumstance that they should be discussing what could not be regarded in any other light than a secret remedy. He yielded to no one in his respect for Dr. Koch, but he could not help thinking that in adopting the course he had, he had done great harm to science. He mentioned that having written to Berlin for a further supply of lymph, he had been referred to a firm just as in the case of a proprietary article.—Dr. Heron, in reply, said he had seen nothing of the rapid formation of cavities alluded to by several of the speakers, either by the remedy or during its use. In only one case had any suspicion of the kind been aroused. He could not help thinking that Dr. Theodore Williams's experience must have been exceptional, and the results very much surprised him. He had remarked the presence of a considerable amount of lung tissue in some of his own cases while under treatment. He did not think that in the cases he had shown any evidence of the spread of the disease could be detected, nor had he been able on April 7th to detect anything of the kind himself. With regard to the local injections in lupus, he himself had found the injections in the back quite as effectual as locally. He pointed out that after a time a sort of local tolerance was established, so that, if one changed the site of the injections, an increased effect would be observed. He agreed, however, that local injections might sometimes be specially indicated. He too had treated a case of erythematous lupus by the fluid, and, though there was no local reaction, some improvement had resulted. He had never met with any symptoms which would tend to make him feel anxious. With reference to Dr. Acland's questions, he observed that he had had the best results in those cases in which the early reactions were well marked, and in which subsequent reactions were less well marked. In fact, he looked upon this early reaction and subsequent diminution as a favourable sign. Even when there

Table of Dr. Heron's Cases Treated by Tuberculin.

Patient's Initials.	Age.	Sex.	Condition of Disease.	Tuberculous Bacilli.	Sputum Decreased. From	Sputum Decreased. To	Number of Injections	Highest Dose in Milligrms.	No. of Marked Reactions.	Complications.	Weight Gained.	Weight Lost.	Duration of Treatment.	Results.
											lbs.	lbs.	days.	
F. S.	22	M.	First stage	very many	2drms.	scanty	15	20	—	—	2	—	16	great improvement.
C. H.	27	M.	,, ,,	—	½ to 1oz.	unaltered	20	30	10, all below 10 mllgr. dose	—	unaltered		35	improvement.
F. J. W.	29	M.	,, ,,	many	1oz.	scanty	36	100	6 below 10 mllgr. dose, 4 above	hectic and abdominal pain, sore over xiphoid	unaltered		70	unimproved.
Z.	—	M.	,, ,,	,,	1 to 3oz.	about 2oz.	44	350	6 below 10 mllgr. dose, 6 above	—	1½	—	66	improved materially.
J. K.	35	M.	,, ,,	—	½oz.	scanty	55	1,000	13	—	—	3	67	decided improvement.
J. H.	26	M.	,, ,,	few to many	1 to 4oz.	unaltered	18	20	5 below 10 mllgr. dose, 1 above	hectic, before, during and after treatment	—	7	32	became worse.
J. P.	24	M.	,, ,,	very many	1oz.	½oz.	40	400	3 below 10 mllgr. dose, 2 above	laryngeal tuberculosis	10	—	66	improved in lung; larynx trifling improvement.
*H. D.	14	F.	,, ,,	,, ,,	½ to 1oz.	scanty	36	100	3 all up to 10 mllgr. dose	pleurisy, old hip-joint disease	12	—	42	great improvement.
*H. B.	28	F.	,, ,,	many	1½oz.	—	32	100	4 up to 10 mllgr. dose	—	10	—	46	very great improvement.
M. deW.	28	F.	,, ,,	,,	½oz.	1drm.	31	50	10 up to 10 mllgr. dose, 2 above	tonsillitis, trivial attack	3½	—	42	improvement.
O. H.	21	F.	,, ,,	few	scanty	scanty	69	300	9 up to 10 mllgr. dose, 9 above.	—	6½	—	126	great improvement.
L. B.	23	F.	,, ,,	very many	½oz.	,,	38	100	4 up to 10 mllgr. dose, 9 above	hectic before treatment	6	—	56	improved materially.
E. S.	20	F.	,, ,,	,, ,,	2oz.	1½drm.	24	100	3 up to 10 mllgr. dose, 4 above	hectic before treatment	unaltered		52	improvement, still in hospital
J. D.	20	F.	,, ,,	—	—	—	10	4	7	—	,,	,,	30	unimproved, left hospital at her own request.
*G. M.	23	M.	Second stage	very many	1oz.	scanty	38	100	3 up to 10 mllgr. dose, 1 above	hectic after treatment	—	2½	41	improvement.
*B. W.	22	M.	,, ,,	,, ,,	unaltered 1oz. to 2oz.		27	100	2 up to 10 mllgr. dose, 2 above	laryngeal tuberculosis	2	—	30	,, ,,
E. G.	36	M.	,, ,,	,, ,,	2oz.	unaltered	47	500	8 up to 10 mllgr. dose, 3 above	syphilis	—	—	69	improved materially.
R. N.	36	M.	,, ,,	few, none after inject.	½oz.	unaltered, mucous, only purulent before	38	100	12 up to 10 mllgr. dose, 4 above	—	5	—	52	unaltered.
J. G.	29	M.	,, ,,	many	4oz.	1½oz.	33	100	16	—	2½	—	51	improved slightly.
L. S.	45	M.	,, ,,	,,	2½oz.	1oz.	34	100	4 up to 10 mllgr. dose, 1 above	—	3½	—	43	improved materially.
T. L.	49	M.	,, ,,	,,	2½oz.	1¼oz.	22	100	2 up to 10 mllgr. dose, 5 above	twisted arteries	10½	—	35	improved.
A. A.	16	F.	,, ,,	,,	½drm.	—	40	20	21 up to 10 mllgr. dose, 1 above	tuberculosis, glands of neck, sore left side	—	4	84	improved, sore healed.
*A. D.	40	M.	Cavity	,,	1oz.	scanty	44	100	3 up to 10 mllgr. dose, 2 above	hectic before treatment	8	—	52	great improvement, signs of cavity gone.
A. D.	27	M.	,,	very many	1oz increased	6oz.	33	70	1 up to 10 mllgr. dose, 1 above	laryngeal tuberculosis, hectic	unaltered		56	became worse.
A. W.	23	M.	,,	many	4oz.	1¼oz.	40	40	11 up to 10 mllgr. dose, 9 above	hectic from first	—	1	62	trivial improvement.
C. M.	23	M.	,,	very many	5oz.	¼drm.	8	3	1	hectic before treatment	unaltered		9	improved considerably.
S. M.	19	F.	,,	—	1drm. increased	4drm.	41	150	14 up to 10 mllgr. 3 above	hectic before treatment	7½	—	79	slight improvement.
S. M.	18	F.	,,	very many	2drm. increased	2oz.	9	6	4	pneumothorax, left lung	unaltered		14	became worse.
A. H.	28	F.	,,	,, ,,	1oz.	1drm.	22	8	12	purpura	—	5	35	,, ,,
						Anæmia.								
*A. B.	18	F.	Anæmia.	—	—	—	15	30	7 up to 10 mllgr. dose	—	8	—	28	very great improvement.

Lupus Vulgaris.

Patient's Initials.	Age.	Sex.	Condition of Disease.	Injections.	Highest Dose.	Reactions.	Weight.	Duration of treatment.	Results.
					Milligr.				
A. N.	16	F.	Face, elbow	50	1,000	18	Unaltered	104 days	Arm very greatly improved; face much improved.
*E. F.	57	,,	Face, hand	50	400	8	10 lbs. gained	124 ,,	Much improved; relapse.
*E. R.	27	,,	Face, patch under chin	59	1,000	9	10 lbs. ,,	128 ,,	,, ,,
*L. F.	21	,,	Face, nose, and lips	59	1,000	6	18½ lbs. ,,	135 ,,	Great improvement; relapse.
J. B.	27	,,	Right side of nose, right cheek	35	1,000	6	—	63 ,,	Very good.

* Cases reported in BRITISH MEDICAL JOURNAL, December 6th (p. 1322), and subsequent numbers.

was no general reaction the local reactions were well marked in lupus. As a rule, his cases came to him straight from the out-patient room to undergo the treatment. He did not think that Dr. Acland's argument was a fair one in any case. If he thought that the amelioration was due to the general treatment, he had only to bring forward a similar series of cases in which that plan alone had been tried. It was unfair to apply that argument to his cases, for never had so much attention been paid to cases of pulmonary tuberculosis as since the introduction of this plan of treatment. With reference to Dr. Acland's concluding remarks, he observed that when such a man as Koch expressed a desire to keep back part of a discovery which was entirely his own and was the result of years of assiduous and unaided labour, he was quite content to abide thereby, and he considered that Koch was well within his rights in so doing, the more so as his motive was certainly not a selfish one, but was prompted by a desire for the welfare of humanity.—The PRESIDENT thought it his duty as President of that Society to comment upon Dr. Acland's remarks. Whilst he regretted that a gentleman of Dr. Koch's eminence and integrity of purpose should, for reasons not altogether within his control, have kept the remedy secret so long, yet he would urge that it could not at the present moment be fairly regarded as a secret remedy. They had been informed of the general method of its preparation and they knew its composition, and it was only a few details which Koch had kept to himself, and this for reasons which he had distinctly stated, namely, that it was not to the public advantage that any chemist should be enabled to profess that he could prepare the remedy. He thought, therefore, that there was much to be said in excuse of Dr. Koch's decision. He said this because it might be construed as a reproach to the Society if they were really discussing or favouring a remedy which did not come within their province, and it would be obviously impossible to discuss the value of a remedy the composition of which was unknown to them.

HARVEIAN SOCIETY.

THURSDAY, MARCH 5TH, 1891.

H. CRIPPS LAWRENCE, L.R.C.P., M.R.C.S., President, in the Chair.

Offensive Lochia.—Dr. R. BOXALL, after referring to cases of sepsis after childbirth without fœtor, related a case in which the patient died of septic infection, although the lochia proceeded naturally without offensive smell. He related other cases in which fœtor was present without septic symptoms or illness of the patient. He had tabulated a series of 120 cases of offensive lochia which occurred among 640 patients in the General Lying-in Hospital, where they were all placed under similar conditions, the whole series being completed before the introduction of sublimate as an antiseptic. By the aid of these tables he showed the influence of the character of the incidence of fœtid discharges during the puerperium. He discussed the relation of fœtid discharges to elevation of temperature, and proved that fœtor was, as a rule, associated with fever; the rise of temperature almost invariably preceded the altered character of the lochia. He further discussed the relation which fœtor bore to sepsis, and demonstrated that, as an indication of septic infection (septicæmia), or even of septic intoxication (sapræmia), the presence or absence of fœtor in lochial discharges was not an infallible guide. In every case of offensive lochia (as fœtor invariably indicated a failure to maintain local asepsis), vigorous antiseptic measures should be at once instituted. He deprecated the use of more deodorants, and recommended that the vulva and vagina should be first washed and cleansed with a potent antiseptic such as sublimate, and that only after this had been done, and where real necessity arose, should the cleansing be extended to the interior of the uterus.—After some remarks from the PRESIDENT, Mr. HAZEL said that whenever an instrument had to be introduced into the uterus during labour, he afterwards used tincture of iodine as an antiseptic as recommended by the late Dr. Wiltshire.—Dr. GRIFFITH asked whether all cases in the same schedule were treated by the same antiseptic under the same conditions and precautions.—Dr. BOXALL replied that his statistics were reliable because the antiseptic conditions were the same.

Leucorrhœa.—Dr. W. S. A. GRIFFITH read a paper on this subject. Leucorrhœa occurred at all ages, and was usually a symptom rather than a disease, and was not necessarily the result of recognisable disease of the structures from which the discharge issued. It was commonly met with at any age, as a result of anæmia and debility, and was readily cured by attention to those conditions without local treatment. Leucorrhœa he defined as a discharge from the vulva of any abnormal fluid other than blood or urine, namely, mucus, serum, or pus. He defined a vulvar discharge of mucus to be leucorrhœa when the quantity exceeded that which could be removed by the usual daily bath. Any discharge causing cutaneous irritation, or which was offensive though not excessive, was also leucorrhœa. Leucorrhœa might arise in three ways: (1) by the formation of an excessive quantity of an otherwise normal secretion; (2) by alteration in composition as well as in quantity of the ordinary secretions; (3) by the addition of some extraneous secretion. The normal secretions were almost entirely formed by the mucous membrane and glands of the uterus: the vagina had no glands, and being lined with true skin, not mucous membrane, could have no proper secretion, though it was possible that even in health there might be some transudation of fluid from its vessels. Vaginal mucus was uterine mucus retained in the vagina, and its acidity was due to decomposition. The mucus found in the body of the uterus differed very slightly, if at all, from that found in the cervix; it was perhaps less viscid. At the vulva the mucus of Bartholin's glands was added; the other glands of the vulva were sebaceous. The conditions in which these parts gave rise to leucorrhœa were described, as well as inflammatory collections of fluid (pus or serum), which, opening into the genital tract, might give rise to leucorrhœa. In a large majority of cases leucorrhœa came from an intrauterine source. Such cases were divided into two classes: (1) those in which the mucous area of the uterus was enlarged; (2) those in which it was not enlarged. The second group was very common in girls and women of all ages. No examination was necessary in single women: the patient's appearance of ill health was sufficient for practical diagnosis. No local treatment was necessary: the patient would speedily get well under judicious general treatment. In the first group of cases attention should chiefly be directed to diminishing the size of the uterus, if practicable; vaginal irrigation, as a rule, only benefited by bringing away retained discharges, and, unless there was a vaginal cause, could produce little effect on the diseased part.—The PRESIDENT remarked on the inadvisability of vaginal examinations for ordinary leucorrhœa.—Mr. D'ARCY POWER asked whether leucorrhœa was prevalent in myxœdematous subjects: his *post-mortem* room experience pointed that way.—Dr. HILL, commenting on the statement that the vagina was not a true mucous membrane and without mucous glands, inquired whether the vagina was observed to be drier than usual after total extirpation of the uterus.—Dr. GRIFFITH, in reply, said that leucorrhœa had been present in one myxœdematous patient whom he had vaginally examined, but he did not know whether the conditions were generally associated. He would make a note of Dr. Hill's point for future observation.

CLINICAL EVENING.

THURSDAY, MARCH 19TH, 1891.

H. CRIPPS LAWRENCE, L.R.C.P., M.R.C.S., President, in the Chair.

Cases.—Mr. SILCOCK showed a man who had suffered from Distension of the Frontal Sinus, which not only caused bulging of the bone over the left eyebrow, but also great protrusion of the eyeball and external strabismus. Trephining over the sinus was performed, the mucoid material filling the sinus removed, and drainage by a tube passing into the infundibulum re-established, with marked amelioration of the symptoms and the disfigurement. In reply to questions by Dr. WILLIAM HILL, Mr. ROUGHTON, and Dr. MAGUIRE, Mr. SILCOCK said the infundibulum was blocked, and nothing short of trephining would have succeeded in removing the viscid fluid. Slight optic neuritis had been present. Recurrence did not take place after thorough drainage.—Dr. BATTEN showed (1) a child recovering from Dry Catarrh of the Trachea with Crusts visible by Laryngoscopy; (2) a woman, aged 25, with symptoms somewhat resembling Disseminated

Sclerosis. She suffered from epileptic fits, and had had slight right hemiplegia and aphasia. The right side of the face was smoother than the left. Tremors of the head and hand had come on after recent parturition. Testing for exaggerated reflexes had induced an epileptic attack. The patient's peculiar gait movements were demonstrated. Remarks were made by Dr. PHILLIPS, Mr. D'ARCY POWER, Dr. ALDERSON, Dr. MAGUIRE, and Dr. HANDFIELD-JONES.—Dr. EWART showed a woman, aged 42, who had been weakened by Dental Trouble and by Basic Pleurisy and Congestion, immediately after which her tremor and peculiar stoop began (three years ago). She also had influenza in December, 1889. Eleven weeks ago she had pain and slight swelling in her knuckles, followed by general pains, weakness, and ultimately inability to stand. When she was admitted, the slight arthritic affection, the stooping attitude, and the blank facial expression suggested early rheumatoid arthritis. The two latter signs, coupled with the tremor, were, on the other hand, greatly in favour of commencing paralysis agitans, but the progress of the case justified the diagnosis of hysteria induced by weakness, and causing, besides globus and right hypochondrial pain, a fine tremor of the right hand and spontaneous foot clonus of the same side, apt to arise in a sitting posture. Thanks to valerian and galvanism, the patient was now able to stand and to walk almost erect. The foot clonus and the tremor of the right hand (aggravated by attention) were still present. The tremor never affected the left hand unless the right hand were steadied by an observer.—Dr. EWART also showed a case of Friedreich's Disease in a girl, aged 19. The diagnosis was made on the following *positive* grounds: slight tremor of the hands on purposive movement, slight lateral nystagmus, marked ataxia of the lower limbs with very slight loss of sensibility, slight temporary affection of articulation (which had now become normal), integrity of the cerebral functions, without any trace of hysterical manifestations; and on the following *negative* grounds: absence of the pupillary and visceral symptoms of tabes, absence of the spastic features of ataxic paraplegia, and absence of sufficient tremors and nystagmus and cerebral affection to justify a diagnosis of disseminated sclerosis. The symptoms had begun at the age of 16, after which menstruation had become irregular and had finally ceased. Some general gain in strength and in weight, and some improvement in the power of standing and of walking, and in the steadiness of the hands, had resulted under rest, tonics, and massage. The affection of speech present a year ago had ceased, and under the treatment the right leg, which was previously the weaker, had improved at a quicker rate than the left, and was now the stronger. The exaggerated knee-jerk was the only feature not favouring the diagnosis, but this was a condition especially mentioned by Dr. Gowers and by Dr. Bastian as having been noted in exceptional cases. Remarks were made by Dr. CLEVELAND, Dr. HANDFIELD-JONES, and Mr. D'ARCY POWER, who, with reference to Dr. Ewart's second patient, mentioned that he had seen four members of a family afflicted with Friedreich's disease, whose parents were free from disorders of the nervous system and of speech.—Mr. KEETLEY showed a case of Intra-articular Exostosis of the Knee, which he had removed as a loose body by operation. Mr. POWER and Mr. ROUGHTON considered the structure removed more of the nature of an osteophytic growth from rheumatoid arthritis than a true exostosis.—Dr. MAGUIRE brought forward a youth suffering from Functional Nervous Disease, whom he had shown at the Society a year previously, and whose condition was then fully recorded. Time had not cleared up much that was obscure in the case. The PRESIDENT, Dr. EWART, and Dr. CLEVELAND made some remarks.—Dr. PHILLIPS showed a case of Congenital Atelectasis of the Lungs with Displaced Heart. The PRESIDENT and Dr. EWART made some remarks.

HUNTERIAN SOCIETY.

WEDNESDAY, APRIL 8TH, 1891.

STEPHEN MACKENZIE, M.D., President, in the Chair.

CLINICAL EVENING.

Ringed Eruption.—Dr. GEORGE CARPENTER showed a boy, aged 16 months, with an eruption on the buttocks and adjacent parts, composed of rings 1 to 2 inches in diameter, with raised striated edges, the colour of raw ham. The enclosed surfaces were quite healthy, the margins nearly ¼ inch broad. The child had snuffles and a rash on the buttocks at six weeks. The ringed rash was of about four months' duration, and had improved greatly under mercury. The trichophyton had been searched for in vain. There were no other signs of syphilis.—Dr. COLCOTT FOX agreed in believing the eruption syphilitic. The resemblance to ringworm was great, but the broad margin, with a fine retiform structure, was unlike. Ringed syphilides were, in rare cases, met with, both in congenital and acquired disease.—The PRESIDENT said failure to find the fungus was no proof of its absence. There were no confirmatory signs of syphilis, and he thought it probably a case of tinea circinata.

Craniotabes and Parrot's Nodes.—Dr. CARPENTER also showed two infants with congenital syphilis to illustrate cranial conditions. The first was a boy, aged 11 months, with snuffles since birth, and an eruption at fourteen weeks. When seen six months before, there were enlarged liver and spleen, and some thickening of the spermatic cords. Craniotabes affected not only the occipital, but the parietal and squamo-temporal bones. This condition was, however, no longer demonstrable. The boy's sister, aged 2 years, was also shown. She had snuffles since birth, and was decidedly rachitic, with enlarged liver and spleen, and craniotabes in the parietal bones. Parrot's nodes were well marked. Dr. Carpenter considered that both craniotabes and Parrot's nodes were usually syphilitic manifestations, although by some classed under rickets; 74 per cent. of cases of craniotabes were syphilitic.

Fibrous Growths on the Hands.—Dr. FRED. J. SMITH showed a case of unusual growths on the hands of a young woman exhibited several months before. The nodules were now more distinct and isolated, with less erythema around. He had excised one, and found it consisted of fibrous tissue.—Dr. COLCOTT FOX said a similar case was published by Dr. Bury, of Manchester. He thought it an indolent inflammatory eruption which had become fibrous in course of time.—The PRESIDENT still inclined to the diagnosis of rheumatic nodules.

Congenital Heart Disease.—Dr. SMITH also exhibited a boy, aged 12, with marked cyanosis of face and lips, the latter nearly black, and finger ends much clubbed. There was no *bruit*, and the particular defect of heart present, which was discussed by Drs. F. HAWKINS, G. CARPENTER, and DUNDAS GRANT, Mr. TATHAM, and the PRESIDENT, was uncertain.

Paralysis Agitans.—Dr. A. T. DAVIES showed a man, aged 49, exhibited before the Society three years before. The symptoms were then confined to the right arm and leg, and some doubt was raised as to the diagnosis. Within the last two years similar symptoms had developed on the left side, and the case now presented a typical appearance.

Multiple Lipomata.—Dr. A. H. ROBINSON brought forward a man, aged 33, with numerous small fatty growths of ten years' duration scattered over the trunk and limbs. His father had some similar tumours.

Cervical Tumour.—Dr. ROBINSON also showed a man, aged 71, with an old tumour close below the occiput, supposed to be a lipoma. There was an irritable condition of the upper fibres of the trapezius amounting almost to spasmodic torticollis.

METROPOLITAN COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION: SOUTH LONDON DISTRICT.

WEDNESDAY, APRIL 15TH, 1891.

J. W. J. OSWALD, M.D., Vice-President, in the Chair.

DISCUSSION ON THE TREATMENT OF TUBERCULOSIS BY KOCH'S METHOD.

DR. BRISTOWE gave the address which will be found at page 893.

Dr. H. P. HAWKINS showed a number of cases of lupus which had been treated by Koch's method in St. Thomas's Hospital, and furnished a report of nearly all the cases which had been treated on the medical side. Five cases of lupus of the face or neck had been treated, and of these four had shown slight improvement at first but soon became stationary, and subsequent treatment by scraping, etc., had been necessary in all, while the fifth had refused to continue the treatment after the

third injection. One case of lupus of the hand showed slight improvement, subsequent treatment by other methods having, however, been necessary. Five cases of phthisis had been treated. In two early cases the result had been doubtful, but the disease apparently had not increased. In one case, with well marked excavation, no apparent change had taken place. In two cases in which the larynx had also been affected, the pulmonary and laryngeal disease had made rapid progress; one case had proved fatal, but no *post-mortem* examination had been made. One case of scrofulous glands had been treated, without apparent result. In a case of tuberculous peritonitis, increased pain and tenderness with continued fever followed the injection of 0.001 cubic centimetres, and the treatment had not been continued.

Dr. Hector Mackenzie said the South London District might congratulate itself on having had such a calm judicial opinion as that of Dr. Bristowe on the Koch treatment. He thought that now when tuberculinum was advertised as on sale at the chemists' it was high time practitioners should learn what was thought of the remedy by those who had had opportunities of seeing its effects in hospitals. He contrasted Koch's statements at the International Medical Congress last August with those in his now famous communications of November, 1890, and January, 1891. Koch had said that hitherto physicians had failed to cure tuberculosis because they had gone about it in the wrong way and tried the effects of various remedies on man, instead of on the parasites themselves in their pure cultures and then on the lower animals. Koch, after mentioning that he had tried various substances which hindered the growth in media but were absolutely without effect in tuberculous animals, made the sensational announcement that he had at last hit upon a substance which had the power of preventing the growth of tubercle bacilli, not only in a test tube but in the body of an animal. The credulity with which statements as to the rapid curing of cases of lupus and phthisis were received about the time when Koch made his communication in November was altogether phenomenal, and within a few weeks they had the spectacle of Berlin crowded with medical men from all parts of the globe to learn the new treatment and with consumptives struggling to get injections at so many marks apiece. Koch talked of speedy cures of lupus and of early cases of glandular, bone, and joint tuberculosis, and regarded it as certain that phthisis in the beginning was curable by his remedy. Relapses, if they occurred, might, it was asserted, be cured as easily and quickly as the first attack. Koch had led people to suppose that he had himself fully tested this wonderful remedy of his, that he had found that it prevented the growth of the tubercle bacilli in the test tube, and they were surely not wrong in supposing that he had made numberless experiments with it in regard to tuberculosis in the lower animals. Two months were allowed to elapse before Koch admitted the profession to his confidence as to the nature of his remedy and the experiments on which he had satisfied himself of its power. During that time the remedy was employed probably in every hospital in Europe. The account of the fluid in Koch's further communication was bald in the extreme. He gave no indication of the length of time he had experimented with it, and the only experiments he told of were a few on guinea-pigs. Surely, if he had made the experiments on animals which people had been led to assume he had done, he would have told of them. The conclusion forced upon one was that he had suddenly left science for empiricism, and after a few observations on tuberculous guinea-pigs had proceeded at once to this gigantic experiment on tuberculous man. The official report on the results of the Koch treatment in Prussia was a striking commentary on it all 5 alleged cures of lupus out of 215 treated, 13 alleged cures of internal tuberculosis out of 1,061 treated, 884 out of 1,769 acknowledged as unimproved, and 55 out of the same number dead. Dr. Mackenzie had watched the effect of treatment on patients at the Brompton Hospital under the care of his colleagues. Some of these patients, before and after the treatment, had been under his own care, and he had therefore had the best opportunities of forming an opinion as to the effect of the treatment. He had seen no case of cure. Some were *in statu quo*, some were distinctly worse, some had proved most intolerant of the remedy. In some cases in which there was apparent improvement the signs of disease were more extensive, and pointed to more active disintegration going on in the lung. The results of the treatment with Koch's remedy compared most unfavourably with the results obtained on the ordinary lines with tonics, cod-liver oil, good food, and good hygienic surroundings. What had been the practical outcome of the whole matter? Honours and decorations to Professor Koch, a short harvest to the Berlin hotel keepers, loss of time and money to medical practitioners in all parts of the world, a few doubtful cures of lupus, hundreds of patients made to undergo a course of treatment which, at least temporarily, increased their sufferings, the hopes of thousands raised to the highest pitch only to be bitterly disappointed, and a number hastened to the grave.

Dr. Phineas Abraham expressed pleasure at listening to Dr. Bristowe's thoughtful and instructive address, which contained many statements with which they must all agree. He could not, however, go quite so far—especially as Dr. Mackenzie had done—in denouncing Dr. Koch and his remedy. There was little doubt that Koch's hand must have been forced some eight months ago, and he was hardly responsible for the exaggerated statements of cures and the extraordinary puffing by some of the Berlin doctors and newspaper reporters. Although Dr. Abraham had had four months' experience of the Koch treatment—having injected between 40 and 50 patients (21 being cases of lupus)—he could not yet speak very definitely on the subject, the inquiry being, in his opinion, still in the experimental stage. Most of the lupus cases had more or less improved, three in so marked a manner as to be regarded almost as practical cures. In a few there was no very obvious improvement at any time, one being a case of erythematous lupus of sebaceous type, in which considerable constitutional, but little local, reaction was produced. The injections here caused several crops of chilblains on the hands and feet. Besides the transiently alarming pyrexia, etc., he had not met with the appalling results recorded by the French surgeons; and he agreed with those who thought that the Hôpital St. Louis report was perhaps a little premature. In one case severe facial erysipelas set in after the sixth injection, but it was just after "Boxing Day," when a number of visitors had been in the ward, and the patient also complained of catching cold from a window near her being left open. The injections were commenced again, and then left off, and some ten days or so after the last another attack of erysipelas came on. The connection of the erysipelas with the treatment was therefore not clear. One patient, an old man of over 70, with supposed lupus, who received one injection of 1 milligramme—chiefly for diagnosis—subsequently died in about a fortnight. The reaction had subsided, but the injection was not repeated, because of his age and chronic bronchitis. About this time the very severe weather and terrible fogs set in, the man's condition became worse, and he succumbed, like many other old people at the same time in the infirmary. It was hardly fair to put down that death to the Koch fluid. In none of the lupus cases had Dr. Abraham pushed the remedy beyond 20 milligrammes, generally commencing with 2 milligrammes. A few of them showed skin rashes, the most severe being a scarlatiniform eruption in a boy, leading to copious desquamation over the greater part of the body; this case turned out to be one of his best results. According to his experience, those cases acted best in which the lupus was hyperæmic and ulcerative, and for such—especially where the disease was extensive and not easily reached by other means—he believed that they had in tuberculin a remedy of some real value for lupus. He was now combining with the method the application of other remedies salicylic and resorcin ointments, etc. He thought there was much in what Mr. Hutchinson said as to the failure of the treatment to act on the myxomatous or "apple jelly" tissue of lupus; but he had seen in a few cases desquamation and diminution to some extent of such tissue.

Mr. H. B. Robinson exhibited a case of lupus treated by Koch's method. The fluid had been used in increasing doses for three months and had been discontinued one month before the exhibition of the patient. Although the case had improved greatly it was feared that the disease was already recurring. Cases of injection in tuberculous bones and joints were referred to, but the success obtained had been limited, occurring with any certainty only in one case, where there

was an old discharging sinus. It was suggested that the injections might be found of benefit in such cases.

Dr. S. W. Wheaton said that he had had the opportunity of watching a large number of cases treated by Koch's fluid, and had made necropsies in two cases subsequently fatal. In no case had he seen a permanent improvement, but in nearly all cases a temporary improvement occurred. The remedy certainly had no effect upon the bacilli, and the changes which had been described in them after the treatment, such as beading of the rods and their disintegration into short fragments, could be shown to occur in cases not so treated. In several cases of phthisis he had found the bacilli more numerous after the treatment, and in tuberculous glands he had been surprised to find a great increase in the number of bacilli after the treatment. He agreed with Dr. Bristowe that the fluid acted as a septic poison. The symptoms produced, such as various rashes, tonsillitis, and sore throat, the marked disturbance of respiration (which in children might become Cheyne-Stokes in character), the enlargement of the spleen, congestion of the lungs, anæmia, and wasting following the injections, all pointed to septic poisoning. That septic poisoning would cause the breaking down of chronic inflammatory masses or caseous material in the body was well known, and frequently seen in patients suffering from acute fevers, such as scarlatina, typhoid, or erysipelas, where there was a special tendency to the formation of abscesses around any old caseous or inflammatory deposit. In answer to the question, Has the fluid any effect in tuberculosis? he would say that it would certainly cause the disintegration of caseous material. This was shown by the result of the *post-mortem* examination of a case of tuberculous peritonitis, in which large nodular masses of tuberculous deposit were felt running across the abdomen at the level of the umbilicus, and in the iliac fossæ. After several injections the abdomen became greatly distended, and acute peritonitis set in, the temperature rising to 105° F. This was followed by greater distension and subsequent rupture of the umbilicus, from which pus continued to be discharged up to the time of the patient's death, which occurred six weeks later from asthenia. At the necropsy no tuberculous deposit was found in the body, except a few suppurating glands in the iliac fossa, but there were three distinct collections of fœtid pus in the abdominal cavity, in the positions formerly occupied by the nodular masses. In another case of phthisis of the left apex and old sinuses persisting after excision of the hip, the patient died five weeks after the last injection from obstinate vomiting and diarrhœa, after scraping of the sinuses. *Post mortem* the left lung was found to be shrunken, the pleura adherent, and its upper lobe infiltrated with caseous miliary tubercles, which were evidently undergoing resolution, and had in part become converted into nodules of fibrous tissue; no other tuberculous disease existed except in the hip-joint. These cases differed from those reported from abroad in that no general tuberculosis had been set up by the injections. The treatment was not justifiable, except in cases where there was a ready exit for the products of the breaking down caseous material, and no risk from the danger of a collection of pent-up pus.

MANCHESTER PATHOLOGICAL SOCIETY.

Wednesday, April 8th, 1891.

G. A. Wright, M.B., F.R.C.S., President, in the Chair.

Brown Induration of the Lungs.—Dr. R. B. Wild described and showed the organs from a case of brown induration of the lungs, in which the whole of both lungs was indurated, enlarged, and infiltrated by a deposit of brown pigment, which on chemical analysis was found to consist of particles of oxide of iron; the apices were more affected than the bases. There was enormous dilatation and hypertrophy of the right ventricle and right auricle, but no disease of the mitral or aortic valves, and only very slight enlargement of the left side of the heart. The liver was of a well-marked nutmeg type, and the kidneys showed slight parenchymatous changes; spleen enlarged and other organs normal. During life the patient worked in a cotton mill, had suffered from anæmia and dyspnœa, with cyanosis, from the age of 16 to 21, when he became much worse, and the signs of dilated heart were first recognised. There were no physical signs over the lungs, but the left vocal cord was paralysed, owing to pressure upon the left recurrent laryngeal nerve by a group of enlarged and indurated glands which were found *post mortem*.—Dr. T. Harris said that in Dr. Wild's case there was no cause apparent at the *post-mortem* examination which could produce chronic pulmonary congestion, although a most careful search was made for any lesion which would obstruct the exit of blood from the lungs. From the macroscopic and microscopic appearances of the lungs, however, he had no doubt that the case was one of advanced brown induration. The possibility of a lesion of the vagus of one or both sides, producing a chronic vasomotor disturbance in the pulmonary circulation, appeared to be worth some consideration in a case where other more likely causes for venous stasis could not be recognised.—Dr. Wahltuch suggested the possibility of the iron in the lungs having been derived from iron inhaled in spray form as a therapeutic agent; he stated that he often ordered spray inhalations of solution of perchloride or sulphate of iron in hæmoptysis and pulmonary phthisis. The condition of the heart as described could not be a primary affection.—Mr. C. E. Richmond remarked that the patient's temperature, the involvement of the lung apices chiefly, and the condition of the cervical and thoracic glands pointed to a tuberculous history, and suggested the possibility of this in some way preparing the tissues for deposit of the iron pigment. He inquired also as to the possible source of the iron, whether from ingestion as medicine or degeneration of red corpuscles, or both, and into the condition of the mesenteric glands.

Sloughing Ulceration of the Larynx in a Child affected with Tuberculosis.—Dr. H. Ashby showed a specimen of ulceration of the pharynx and larynx from a child, aged 20 months, who had died of catarrhal pneumonia and miliary tuberculosis. The child had been admitted to the hospital with urgent symptoms of laryngeal stenosis, and was intubated, the tube being removed on the fourth day. The intubation relieved the dyspnœa, which did not return after the removal of the tube. There was some bronchitis, and some doubtful pneumonia of one base. The boy contracted measles four weeks after admission, the pneumonia got worse, and he died two weeks after contracting measles. The right lung was semi-solid with caseating broncho-pneumonia, breaking down into small cavities. There were miliary tubercles in the left lung and liver. There was extensive superficial ulceration of the pharynx on both sides, exposing the muscular layer. The vocal cords were also ulcerated, and there was a superficial ulcer in the trachea, which corresponded with the end of the tube. Microscopical examination showed the ulceration was not tuberculous, but inflammatory, resembling cancrum oris in its nature. The ulcerative process appeared to have been a sequel left by the measles. The flange of the tube might possibly have excoriated the mucous membrane and started an ulcerative process.

Endocarditis and Chorea.—Dr. Ashby also showed a specimen of endocarditis from a fatal case of chorea in a girl aged 10. She had never had rheumatism, and the fatal attack was the first. She commenced to be ill with tonsillitis, which was attributed to bad drain smells in the house. Several other members of the family also suffered. Two weeks after choreic movements began. The movements became very severe; sleep had to be obtained by sedatives, and the feeding was difficult. She died of exhaustion after five weeks' illness. There was moderate fever throughout the illness. There was endocarditis of the mitral valves, no pericarditis, the right parotid was much swollen, and there was extensive pneumonia of the right lung. There was a doubtful patch of meningitis on the convex surface of the brain. It would appear as if the chorea was symptomatic of some grave blood change.

Abscess of the Brain from Caries in the Orbit.—Dr. A. Hill Griffith related the case of a strumous boy, aged 16, who had suffered for some years from extensive caries and loss of substance of the right half of the parietal bone, with a discharging sinus just above the upper lid, complete ectropion, and partial atrophy of both optic discs. There was occasional headache and vomiting for twelve months before death, which took place rather suddenly. Examination revealed in the right parietal lobe a circumscribed abscess cavity the size of a hen's egg, containing green pus, and communicating by a minute opening through the carious orbital plate with the

external sinus. There was some localised recent purulent meningitis. Syphilis was negatived on careful inquiry.—The PRESIDENT called attention to the rarity with which tubercle attacked the flat bones of the vault of the skull.—Mr. E. ROBERTS mentioned two cases in which caries occurred simultaneously in both orbital plates of the frontal. He considered that he had seen caries of the orbital plate of the frontal due to struma, but in these cases the disease had been confined to one orbit.

Ossifying Sarcoma of the Tibia.—Mr. J. TURVILLE SMITH showed a growth of this nature which had been removed from a woman, aged 22, who had been admitted into the Warrington Infirmary in February, 1889. Nine years previously she had noticed a small painful swelling on the "shin bone" midway between the knee and the ankle, which grew slowly for five years. The growth was removed, but recurred twice, and finally amputation was performed through the thigh, at the junction of the upper with the middle third, the patient making a good recovery. Under the microscope the tumour was found to be a sarcoma of the mixed type, containing spindle cells, with numerous giant cells. There had been no return of the growth.—Mr. C. E. RICHMOND made remarks.—Mr. SMITH also showed an Aortic Aneurysm which had compressed and ruptured into the Œsophagus.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, APRIL 3RD, 1891.

T. GUNTON ALDERTON, M.R.C.S., L.R.C.P., President, in the Chair.

Chloroform Poisoning.—Dr. F. H. ALDERSON reported a case of attempted suicide by chloroform in a girl, aged 20, who drank two drachms after a quarrel with her lover. She became dazed and very pale, with clenched jaws and eroded lips. Dr. Alderson saw her almost immediately after the chloroform had been swallowed. The respiration was normal, pulse 100, no cyanosis or loss of consciousness. Sulphate of zinc and hot water produced vomiting of a dark grumous fluid, smelling strongly of chloroform, and the patient soon recovered without ill effects. Attention was drawn to the rarity of fatal cases after swallowing chloroform, and the necessity of promptly washing out the stomach to obviate the occurrence of serious after-symptoms was urged. A discussion followed, in which Messrs. POTTER, LLOYD and LYNCH took part.

Treatment of Vesical Calculus.—Mr. F. S. EDWARDS read a paper on Forty Consecutive Cases of Lithotrity or Lithola-paxy, which will be published shortly.—After some remarks by Dr. THUDICHUM, Mr. REGINALD HARRISON referred to the recurrence of stone after lithotrity, and mentioned a remarkable case of a patient who came under his care early in the year who had undergone five different operations for stones in the bladder, and on whom he performed perineal lithotrity followed by a prolonged course of bladder drainage.—Surgeon-Major KEEGAN urged the use of antiseptic precautions and stylets in the evacuating catheters. The discussion was continued by Messrs. BEETLEY, POTTER, BATTEN and ALDERSON; and Mr. EDWARDS replied.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.

SATURDAY, FEBRUARY 21ST, 1891.

T. D. SAVILL, M.D., in the Chair.

Cases.—Mr. J. R. LUNN exhibited: (1) A man, aged 50, suffering from Functional Tremors, chiefly of the right upper extremity, said to have come on after ceasing the use of large doses of chloral hydrate which he had been in the habit of taking. Firm pressure in the inguinal regions produced a choking sensation in the throat. (2) A boy, aged 8, who had frequent attacks of a wide-spread Bullous Eruption, preceded as a rule by a considerable rise of temperature. On some occasions he had slight attacks of hæmoptysis, doubtless due to the presence of the eruption in the air-passages. The eruption could be controlled by the administration of arsenic, but speedily recurred when it was withheld. In other members of the patient's family there was a history of snuffles, and the mother had had miscarriages. (3) Chronic Pyæmia (?) in an old man who had had one of his great toes amputated for injury some fifteen years before. This was followed by swelling of both shoulder-joints. At present both shoulders were more or less ankylosed, and there was considerable atrophy of the muscles about the joints, notably of the deltoids. During the progress of the case the ungual phalanx of the finger had undergone a remarkable atrophy, producing a condition somewhat resembling leprosy. There were, however, no nerve symptoms, neither was there any history of gonorrhœa. (4) Clonus of Lower Jaw in a young man who some years before contracted gonorrhœa, and, immediately afterwards, being much exposed to hardship and cold, had a severe attack of rheumatism. On admission, in addition to the rheumatism, he had marked general wasting of muscles. There was now a tract of anæsthesia reaching in a circuitous manner from the point of the shoulder, through the axilla to the angle of the scapula. The patient also presented marked clonus of both wrists, which came on as soon as the hands were raised. Ankle clonus was not generally to be obtained, but was elicited on one occasion when he was under the influence of ether. (5) Lupus of the Face in an old man; the disease had existed 52 years and was very extensive. Eight injections of tuberculin had been given, and there were marked signs of improvement. The man had been subject to pain in his knees for some years, and after each injection that pain, with some synovitis, had returned. (6) Epithelioma of Abdominal Wall in a woman past middle age. The growth, which was in the left hypochondrium, was several inches in diameter. Cases were also shown of Angiomatous Tumours in the Legs in a girl; perfect movement of joint after Excision of Hip in a child; Alcoholic Neuritis and Friedreich's Disease.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

FRIDAY, APRIL 3RD, 1891.

E. H. BENNETT, M.D., President, in the Chair.

Cirrhosis of Lung.—Dr. J. M. FINNY read a paper upon cirrhosis of the lung, which was discussed by the PRESIDENT and Drs. BEWLEY and BEATTY.

Histology of Tuberculous Tissues after Treatment with Koch's Tuberculin.—Dr. E. J. M'WEENEY read a paper in which he summarised the results obtained by Israel, Henoch, Kromeyer, Jürgens, Riehl, Hausemann, von Kahlden, and others. He had carefully examined two such cases himself at the Mater Misericordiæ Hospital. One was a case of tuberculous dactylitis, in which the patient, a girl, aged 20, had a fungous mass as large as a hazel nut projecting through an ulcerated aperture in the skin on the flexor aspect of the proximal interphalangeal articulation. She received ten injections of tuberculin ranging from 1 to 10 milligrammes, and showed marked local as well as general reaction (to 102°). The fungous mass contracted a good deal, but did not altogether disappear, and as the progress made was slow and unsatisfactory it was scraped away, upon which rapid healing ensued. The microscopical examination showed that the mass was composed of a small cell granulation tissue, remarkably rich in tubercles, which were close together, but distinctly demarcated from one another by a fibrous investment. No infiltration with leucocytes, or degeneration, or necrotic change was perceptible. The second case was one of fibroid phthisis, which had proved fatal. The injections had been discontinued for nearly a month before the patient died, and the microscopic examination revealed no regularly formed tubercles and no giant cells, but extensive small cell infiltration and destruction of the bronchial and peribronchial tissues, with extremely numerous and widely distributed tubercle bacilli.—The PRESIDENT and Mr. STORY made remarks; and Dr. M'WEENEY replied.

Syringomyelia.—Dr. J. F. O'CARROLL read a communication on a case of syringomyelia. A telegraph clerk, aged 32, had worked at his business for two years and a half, during which he had suffered from progressive spastic paralysis. He then came to Dublin for treatment, being able to walk a mile and a half to the local railway station. He lost his way, and was brought to the hospital by the police, and was found on admission to have a stammering speech, an imbecile manner, and to be almost completely paraplegic. His symptoms during the succeeding ten days included incontinence of urine and fæces, the rapid formation of bullæ and bedsores, and an immediately *ante-mortem* temperature of 108.2°. *Post*

mortem there were sero-sanguineous patches in the pia mater, the brain seemed normal, the central canal of the cord was dilated for about four inches in the lower dorsal and upper lumbar regions. The dilatation was in the central canal; sections showing the epithelial lining around the canal, with breaks in its continuity such as might be accounted for by rapid dilatation of the tube. The original disease could only be guessed at from the symptoms as detailed by the patient's sister; that from which he suffered in hospital seemed to be a myelitis, which turned out to be associated with effusion into the ventricle of the cord.—Remarks were made by Drs. FINNY, BEWLEY, and M'WEENEY.

Septic Phlebitis.—Mr. R. F. TOBIN gave particulars of a case of septic phlebitis treated by him in St. Vincent's Hospital. The disease was secondary to the removal of portions of varicose veins, and originated, not in the operation wounds, but in a small ulcer near the ankle. All the superficial veins on the inside of the leg and three inches of the long saphenous vein were engaged. Mr. Tobin reflected the skin from the affected parts, and removed every diseased vein, following each till an apparently sound point had been reached. The wound healed rapidly, but it was not till a month after the operation that the patient's temperature was normal, and his condition in every way satisfactory. Dr. M'WEENEY made remarks: and Mr. TOBIN replied.

Subconjunctival Lipoma.—Mr. J. B. STORY exhibited microscopic sections of a subconjunctival lipoma.

CORK MEDICAL AND SURGICAL ASSOCIATION.

WEDNESDAY, MARCH 25TH, 1891.

JEREMIAH COTTER, M.D., President, in the Chair.

Specimens.—Dr. WOODS exhibited the Heart of a Patient who died of Phthisis. On the surface of the right ventricle, beneath the pericardium, were a number of cysts filled with serum; the left ventricle was hypertrophied, and the right atrophied, and the walls very thin; the heart weighed only 6 ounces.—Dr. H. R. TOWNSEND exhibited a Tumour which, on microscopic examination, proved to be a fibro-neuroma. The tumour grew from the musculo-spiral nerve. After its removal, slight paralysis supervened, which disappeared under treatment.

Œsophagotomy for Foreign Bodies.—Dr. O. T. WOODS read this paper. The patient, aged 29, was a lunatic, who, on February 18th, 1891, was reported unable to swallow, and, on passing an œsophageal tube, an obstruction was found about 9 inches down. A long forceps was introduced, which just reached the foreign body, and two pieces of wood 1¼ inch long were removed. Another foreign body remained which it was impossible to remove. After consultation with Dr. H. R. Townsend, œsophagotomy was performed, and a stone was extracted which weighed 620 grains. The gullet wound was not stitched, and the external wound was closed by sutures. The patient did well until the fourth day, when some maniacal excitement set in. On the fifth day he had to be fed by the mouth through a tube, and, on the seventh day, he died from exhaustion. On *post-mortem* examination, the œsophagus was found inflamed, with little attempt at healing. Eight stones were found in the intestines, seven in the transverse and descending colon and one in rectum; twigs, grass, and leaves were also found in the ascending colon.—A discussion ensued in which several members took part.

REVIEWS AND NOTICES.

DU VERTIGE CARDIO-VASCULAIRE, OU VERTIGE DES ARTÉRIO-SCLÉREUX. Par le Professeur J. GRASSET. Leçons recueillies et publiées par le Dr. G. RAUZIER, Chef de Clinique Médicale. Montpellier: 1890.

THIS is the title of a pamphlet issued from the venerable school of Montpellier, and it records some of the teachings from the clinic of the Hospital of St. Eloi in that interesting old town. Time was when the *dicta* of the Montpellier school were listened to with greater deference by the medical world than now. *Tempora mutantur*; and Lyons and Paris are the centres of medicine to-day in the great French Republic. The glory of old Montpellier has, however, by no means departed, and the writer of this notice can bear testimony from a recent visit to a revival of a most promising kind in respect of its medical faculty.

The *Leçons* now before us tell something of this, and indicate that the standard of teaching in Montpellier to-day is well abreast of the best given anywhere.

M. GRASSET treats of the whole subject of vertigo, and especially describes three forms (1) simple vertigo; (2) vertigo, with epileptiform crises; and (3) vertigo, with permanently infrequent pulse, accompanied by syncopal and epileptiform crises, and connected with the condition of arterial sclerosis. He discusses the complex subject of vertigo as induced by the various causes commonly recognised. He declares his inability to give a comprehensive or concise definition of the condition itself. Always a symptom, it is difficult to trace it to its immediate cause in any given instance. Thus, it is known as a symptom in epilepsy, in cerebellar disease, as a result of oculo-motor palsy in gout, in gastric disorders, and in Ménière's disease.

M. Grasset makes a distinction between acute or accidental vertigo and chronic or habitual vertigo. In the former category he places the vertigo met with at the outset of acute diseases, enteric fever, influenza, in forms of dyspepsia, *embarras gastrique*, acute alcoholism, those resulting from the "first cigar," from swinging, or waltzing, and from sea-sickness. Toxic vertigo comes into this category, such as that induced by digitalis, quinine, or sodium salicylate.

In the chronic variety he places prolonged vertigo or *état vertigineux*, and recurring vertigo, and notes three particular types of this epileptic vertigo, sensorial vertigo, including Ménière's disease and gastric vertigo. He disagrees with Charcot, who regards the epileptic form as one apart from all others, and believes it to be only a severe variety rapidly passing into unconsciousness. He differs again from Hughlings Jackson in regarding vertigo as a sensory and not as a motor trouble.

Sensorial vertigo he divides into ocular and auricular, the former dependent on oculo-motor paralysis, and the latter constituting Ménière's disease. He lays special stress on the importance of not regarding all ear troubles and symptoms associated with vertigo as example of Ménière's disease, and this affords support to the views of Buzzard, with which M. Grasset is apparently unfamiliar, to the effect that the majority of cases of auditory vertigo are due, not to disease of the periphery, but to disorder of the centre of that nerve in the medulla oblongata. All forms of vertigo, he remarks, may give rise to aural troubles.

Gastric vertigo (*vertigo a stomacho læso*) again, he thinks, is a clinical type which has been much abused. This form supervenes at an advanced period of digestion, four to six hours after a meal, most commonly, and only rarely in the first stage of digestion. Here we are disposed to join issue with the author, and would convert the terms of his proposition. He insists that the sufferer in this form must be a dyspeptic. In the acute or accidental varieties, M. Grasset declares there is no treatment save for the causes on which they depend. For each form of chronic vertigo, on the contrary, there is a distinct line of treatment. It is to another type of cases that our author directs special attention in these lectures one having a separate history, and demanding peculiar treatment. This is cardio-vascular vertigo, or the vertigo of arterio-sclerosis.

Like most French writers, Professor Grasset is little familiar with the work done in other countries than his own, and he has not a word to say about recent observations made in England or Germany on the subject of cardio-vascular degeneration. No reference is made to the work of George Johnson, Gull, Sutton, or Broadbent on this matter. Nevertheless his knowledge is clinically exact, and fully in accord with the best teaching. It is therefore of great value, being confirmatory of others' observations without a trace of plagiarism. He describes very fully the clinical characters of arterio-sclerosis, and for its etiology recognises the part played by gout, syphilis, alcohol, and lead as destroyers of arteries. He also adds to the list marsh poison and tobacco, as to which many might fairly differ from him. We should be disposed to add the influence of cold and damp, and that of habitual overeating.

The succession of events in any case he believes to be—first arterio-capillary spasm accompanied by high vascular tension; next, arterio-capillary sclerosis proper; and, lastly, visceral scleroses. He lays great stress on an accentuated aortic second sound as the indication of high arterial tension.

The evidence of arterio-sclerosis occurring in any organ or viscus he declares to be a *claudication intermittente* (intermittent faltering or failure of function) of that organ. This temporary suspension of function is due to imperfect blood supply. Cases are quoted supporting this view, and symptoms due to arrested brain, heart, and kidney function are explained on this hypothesis. The arguments are convincing to our mind. It is thus that Professor Grasset seeks to establish the variety of vertigo which he describes in these lectures.

The symptoms of intermittent failure of cerebral functions are hemiparesis, amnesia, intellectual exhaustion, and aphasia. Of the latter, a very remarkable example is given at length, complete aphasia having occurred for several hours in a well-marked case of arterio-sclerosis, and being completely recovered from. It was believed to be due to a temporarily insufficient circulation in the territory of the third left frontal convolution, "*une claudication cérébrale en rapport avec le spasme des arterioles de la région.*" A similar explanation is propounded for the phenomena of "Cheyne-Stokes" respiration, the bulb being the seat of intermittent failure in this case. A well-marked example is described in detail, and the symptoms passed off in a few days. The patient had cardiac and renal disease, together with arterial sclerosis.

Vertigo dependent on this condition is declared to be one of the earliest symptoms recognisable before more serious involvement of any of the viscera. M. Grasset points out that such cases rarely come under hospital treatment, and are more commonly met with in private practice and in the higher classes of society. Later on, more important symptoms supervene, and the preliminary warning symptom of vertigo is forgotten amidst graver disorders. The ultimate issue is commonly an interstitial nephritis with cardio-vascular changes, as ordinarily recognised.

Whatever be the etiology, if arterio-sclerosis is set up, vertigo is likely to supervene from the occurrence of occasional arterial spasm; hence M. Grasset's explanation, for example, of gouty vertigo and angina pectoris. This theory is not, in our opinion, adequate for the vertigo which occurs in many gouty persons, for it is certainly met with in such subjects at a period long antecedent to the onset of degenerations, when it may fairly be attributed to an irritation of certain nuclei in the bulb by some peccant material, as uric acid, owning, in such instances, probably, a humoral and not a solidistic origin.

M. Grasset next directs attention to the occurrence of graver forms of vertigo dependent on arterio-sclerosis, such as are accompanied by epileptiform crises, loss of consciousness, and falling down, and he quotes cases in detail exemplifying this form. He also describes a third series of cases, the severest form of all, accompanied by remarkably infrequent pulse, 26 beats per minute being noted in one case, the patient being subject to syncopal attacks with loss of consciousness, preceded by vertigo and general convulsions. Fatty degeneration of the heart is commonly suspected in these cases, but M. Grasset attributes the disorder mainly to arterio-sclerosis which is always coexistent. He calls attention to Huchard's observations on this collection of symptoms named by him "Stokes-Adam's disease," and the anatomical basis for them he declares to be cardio-vascular degenerations, of which the special localisation lies in the vessels of the bulb.

Three forms, or grades, of vertigo are thus attributed to this condition of arterio-sclerosis: (*a*) Simple vertigo, (*b*) vertigo with epileptiform crises, and (*c*) vertigo with permanently infrequent pulse and epileptiform or syncopal attacks, each type being determined by the special localisation in respect of the nerve centres.

The therapeutical point of greatest importance is the early indication of commencing arterial degeneration afforded by this one symptom of vertigo. By early treatment M. Grasset aims at retarding this progressive decay in the vessels. The stage at which vascular spasm occurs is that most amenable to therapeutics.

The treatment of vertigo due to arterial degeneration demands a special line of treatment. M. Grasset treats ordinary epileptic vertigo by full doses of sodium bromide continued over long periods. For aural vertigo, or Ménière's disease, he prefers quinine; while gastric vertigo is amenable to remedies directed to the morbid state of the digestive process which is directly causative. But for vertigo of arterio-sclerosis, none of the above-mentioned lines of treatment are suitable. The essential point is to diminish vascular tension, and this is best done, according to Huchard, as quoted by M. Grasset, by sodium iodide and trinitrine. The sodium iodide is markedly preferable to the potassium salt, which he considers "forty times more toxic."

Fifteen grains a day is reckoned sufficient, but it must be continued for months and even years, and is best given before breakfast and dinner. Along with this, solution of trinitrine may be given, $\frac{1}{2}$ to 2 minims (according to the Appendix of the *British Pharmacopœia*, 1890), and M. Grasset prefers to begin the treatment at an early stage with both remedies simultaneously. Later on, he prescribes the iodide for the first twenty days in the month, and the trinitrine for the last ten days. The dietary is also to be regulated: alcohol, tobacco, strong meats and condiments, are forbidden; white meats, milk, and vegetables are enjoined. Exercise and outdoor life are important. When epileptiform crises accompany vertigo, bromide of sodium, in doses of 30 to 45 grains daily, is indicated, together with the iodide salt, and some arseniate of sodium may be advantageously conjoined if there are signs of defective nutrition generally.

In conclusion, Professor Grasset considers that he has fully demonstrated the existence of a form of vertigo dependent on arterio-sclerosis, a form clinically differentiated from others; that this variety may occur in varying grades of intensity, and that when these are recognised they demand a method of treatment directed to the removal of their proximate cause.

These lectures well repay perusal, and exemplify some of the best clinical researches now carried on in the famous old school of which M. Grasset is so distinguished an ornament. Nor must we omit to pay a tribute of appreciation to Dr. G. Ratzier, who has put these clinical lessons into shape for publication, and done his part with the characteristic minuteness and finish of a French *chef de clinique*.

NOTES ON BOOKS.

The Pocket Pharmacopœia: being an abridgment of the *British Pharmacopœia* of 1885, with the Appendix of 1890. By C. E. Armand Semple, B.A., M.B.Cantab., M.R.C.P., L.S.A. (London: Baillière, Tindall, and Cox.)—This volume is simply a condensed *British Pharmacopœia*, the only additions being a few very brief notes indicating the therapeutical applications of the preparations, and the natural orders to which official organic substances belong. In one or two instances a few chemical details are also given.

The Register of Trained Nurses for 1891. (The Royal British Nurses' Association, 8, Oxford Circus Avenue, Oxford Street, W.)—One of the main objects for which the Royal British Nurses' Association was founded was to institute a system of registration for nurses, so that the public should be protected from ignorant and untrustworthy women who might hold themselves out as trained nurses. Applicants for registration are required to produce proof that they have been engaged for three years in work in hospitals or infirmaries, of which not less than twelve months must have been spent in a recognised general hospital containing at least forty beds. Certificates as to character and knowledge must also be obtained. During the first six months of the Association's work, however, all women who had been for three years engaged in sick nursing, whether trained in hospital or not, were recognised to be eligible for registration. The present volume is the first *Register*, and contains the names registered up to March, 1891. Future editions will be issued in the autumn of each year. The registration board contains the names of many well-known physicians and surgeons, and those of the matrons of some of the principal hospitals in England, Ireland, and Scotland. The *Register* contains the name and ad-

dress of the nurses, the date of registration, and the qualifications as to training, etc. A cursory glance through its pages shows that comparatively few persons have been registered under the temporary rule as to the non-requirement of hospital training. The first edition of the *Register* is undoubtedly valuable, and future editions are likely to possess still greater authority.

Prescribers' Pharmacopœia. A Synopsis of the more recent remedies, official and unofficial, with a therapeutic index and a summary of the *B.P.* additions, 1890. By a Member of the Pharmaceutical Society of Great Britain. Second Edition. (Bombay and London: Kemp and Co., Limited. 1891.)—The second edition of this useful and compact little book has been brought up to date, and includes the drugs added to the *B.P.* in 1890, as well as a large number of new unofficial substances. Its primary purpose is implied in the name *Prescribers' Pharmacopœia*. It gives a short account of all the important old and new drugs, along with full information as to the newest and best forms of administering and prescribing them. In addition, there is a copious therapeutic index, besides short chapters on urine testing, hypodermic medication, and pills. Although primarily intended for medical men practising in India, it is calculated to be of service to practitioners in all parts of the world.

The Midwives Registration Bill, or the Proposed Repeal of the Medical Act. By Robert Reid Rentoul, M.D., etc. (Liverpool: F. and E. Gibbons.)—In this pamphlet Dr. Rentoul has brought together a number of arguments against the Midwives Bill. The readers of the British Medical Journal are already familiar with the facts and theories advanced.

Modern Abdominal Surgery (the Bradshaw Lecture delivered at the Royal College of Surgeons of England, December 18th, 1890), with an Appendix on the Castration of Women. By Sir T. Spencer Wells, Bart., F.R.C.S. (London: J. and A. Churchill. 1891.)—Sir Spencer Wells has republished as a pamphlet his Bradshaw Lecture, which was published in the British Medical Journal of December 20th and 27th, 1890, and has added to it, as an appendix, an article entitled "The Castration of Women," which he contributed to the *American Journal of the Medical Sciences* in 1886. He has been induced to reprint this article in consequence, he states, of the continued, and apparently extending, abuse of the unnecessary mutilation of young women. Many surgeons will be glad to have these two articles, by a master of his art, bound together in the same volume for reference.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SQUARE PRISMS AND A TRIAL FRAME ADAPTED FOR THEM.

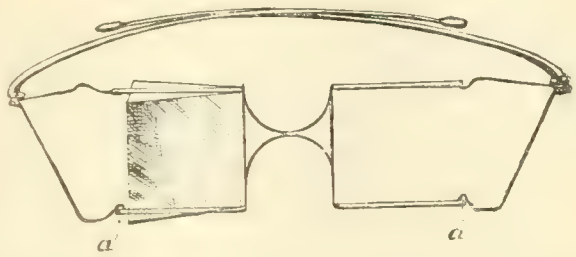
The prisms which are provided in the ophthalmic surgeon's trial cases are almost invariably circular. They have several disadvantages.

1. It will usually be found that the slight mark which is intended to indicate the apex of the prism is incorrectly placed. In many samples there is no marking at all.

2. Circular prisms when placed in the trial frame take some little time in adjusting to their right position. Rapidity is one of the essentials to success in testing patients who suffer from muscular insufficiency.

3. If circular prisms are lent on trial to patients they are almost certain to be displaced, as rotation is almost unavoidable.

Oblong rectangular prisms to obviate such defects have been devised by Mr. Wray and Dr. Maddox, who, indeed, pointed out these disadvantages a year or two ago. These are very convenient when prisms base in or out are required, but are useless, of course, for cases in which a prism base up is demanded. I have therefore had some square prisms and a special trial frame made for me by Messrs. Curry and Paxton. The trial frame is a modification of Dr. Maddox's pattern. The annexed diagram indicates its leading features.



The margins of the prisms are grooved longitudinally, while the upper and lower flanges of the trial frame present corresponding longitudinal ridges. The prisms can be quickly slipped into the frame, either edge or base up or in as may be required, and they are held in position by the little projections marked (*a*). The square shape of the prisms renders rotation into a faulty position impossible, so that they can be safely lent to patients for trial at their own homes.

The prisms are marked according to their refractive power, that is, according to the number of degrees of minimum deviation they produce.

Archibald Percival, M.A., M.B., B.C.Camb.
Newcastle-on-Tyne.

COCA WINE.

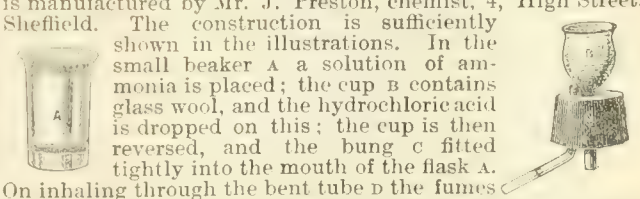
This is a well-prepared coca wine. We find that the statements made by the manufacturers as to its composition are substantially correct, so far as they are capable of accurate proof. It is claimed that "an ordinary sherry glass contains the properties of one dram of specially-selected coca leaves." The statement is somewhat loose. The amount mentioned, however, contains a fair average dose of the active ingredients. Manufactured by Waters and Son, 33, Eastcheap, E.C.

HOP TEA.

We have examined a sample of the hop tea forwarded to us by the Hop Tea Company. It is prepared by mixing with ordinary tea hops which have been treated by a similar process to that employed in the manufacture of tea. The results of analysis show that the tea used was genuine and of good quality. The characteristic compounds of the hop were extracted from the sample. The article ought, of course, always to be sold as hop tea, and it may be regarded with favour by many persons, but we are not aware that any claims to special hygienic or dietetic advantages can be made. It is manufactured by the Hop Tea Company, 28, George House, Eastcheap.

"ONE CELL" INHALER.

A simple and ingenious inhaler, designed especially for chloride of ammonium, but adaptable to other volatile drugs, is manufactured by Mr. J. Preston, chemist, 4, High Street, Sheffield. The construction is sufficiently shown in the illustrations. In the small beaker A a solution of ammonia is placed; the cup B contains glass wool, and the hydrochloric acid is dropped on this; the cup is then reversed, and the bung C fitted tightly into the mouth of the flask A.



On inhaling through the bent tube D the fumes are obtained, The only objection to the instrument appears to be that the fumes are not washed. For the inhalation of other volatile substances the medicament is dropped on the glass wool, and warm water is put in the vessel A.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, APRIL 25th, 1891.

ETHER OR CHLOROFORM?

It is well known that the controversy as to the relative merits of ether and chloroform is being carried on as vigorously on the Continent and in America as in this country. Nothing but good can come from a full and free discussion of the question, more especially when those who take part in the fray are men of large experience in the use of both anæsthetics.

Dr. Julliard, one of the leading surgeons of the Geneva school, has recently published an essay[1] which must be regarded as an important contribution to the discussion. Dr. Julliard narrates how he spent the earlier years of his professional life with a firm faith in chloroform as the best anæsthetic; how, in 1871, his confidence in its safety was shaken by a death in his own practice; how for several years he struggled on with his confidence shaken; how he was led in 1877 to study the anæsthetic properties of ether; and how, since then, he has used it in the great majority of cases, and has come to regard it as the safest of anæsthetics.

He first points out that both anæsthetics will destroy life if pushed beyond a certain dose, and he discriminates between their normal physiological result and the accidental effects they occasionally produce. Both anæsthetics may produce primary or secondary arrest of respiration with this difference, that that of chloroform is almost always sudden, while the arrest of ether as a rule comes on gradually. The stoppage from chloroform is also more permanent, and the respiratory mechanism can be less easily started again by artificial respiration.

As regards the influence of chloroform on the heart, Dr. Julliard distinguishes between the primary syncope occurring during the first inhalations and the secondary syncope which may happen during deep anæsthesia. The primary syncope is sudden, unlooked-for, dangerous, while the secondary is slower in its advent, and is often—perhaps always—preceded by stoppage of the respiration. He is convinced that primary syncope is much less frequent with ether. Death before complete anæsthesia occurs much oftener with chloroform than with ether. This is supported by statistics. In 243 cases of death by chloroform, 127—more than half—occurred before anæsthesia, while in 60 cases of death by ether only 4 happened before the operation began.

He next supports the statement that secondary syncope is less common with ether than with chloroform. Adopting the prevalent opinion that the danger from chloroform is stoppage of the heart, while that from ether is stoppage of respiration, Dr. Julliard states that the stoppage of breathing from ether is not sudden, and that it is always preceded by slowing and weakening of the respiratory movements, and he points out that it is much more easy to employ artificial respiration for this condition than to do anything for the heart when this organ stops in primary syncope from chloroform. This aspect of the question has often been insisted on by writers in this country, but we have seldom seen it put with such point and force as in Dr. Julliard's paper. As a practical surgeon Dr. Julliard naturally attaches more importance to the facts gathered in the operating room than to those collected by the experimental physiologist, and accordingly he gives a most valuable statistical summary, quoting his authorities, with the following result: In 524,507 cases of anæsthesia by chloroform there were 161 deaths, or one in 3,258; while in 314,738 cases in which ether was administered only 21 deaths occurred, or 1 in 14,987. The mortality from chloroform is, therefore, from four to five times greater than from ether. His own experience has been that, in fourteen years, he has given ether 3,654 times without a death, and he adds: "And not only have I not had any deaths, but I have had no alarming accident. I have not once had to do artificial respiration. Neither have I had to interrupt an operation in order to ward off any accident due to etherisation. I cannot say as much for my chloroform administrations."

Dr. Julliard, after narrating a case in which death occurred during etherisation, gives 20 cases of death by chloroform, 17 of those being published for the first time. Of the 20, no fewer than 15 occurred before the operation had commenced. He then sums up his argument by stating: (1) that anyone who is anæsthetised by chloroform or by ether risks his life; and (2) that the risk is five times less with ether than with chloroform. If, then, ether is less dangerous, why is it not preferred? This leads Dr. Julliard to discuss the objections to ether, and his fairness is indicated by his careful consideration of no fewer than eighteen objections: (1) Ether is disagreeable. This is a matter of taste, and is hardly worthy of consideration, in view of the risk. (2) Ether is difficult to administer, requiring complicated apparatus. Dr. Julliard gives it with a very simple mask containing gauze and flannel, and covered with macintosh cloth. (3) Ether is less active than chloroform, and the anæsthetic effect is more slowly produced. True; but the little delay is more than compensated by the additional safety. (4) Ether does not produce a sufficiently deep anæsthetic effect. Denied: objection not consistent with experience, if a sufficient dose be given. (5) Stronger preliminary excitement with ether. Excitement occurs in about the same number of cases with both anæsthetics. Dr. Julliard finds that a preliminary subcutaneous injection of morphine in most cases prevents excitement. (6) Vomiting is more common after ether. Statistics show that this occurs in 1 in 9 cases after ether, and that the proportion is about the same after chloroform. (7) Ether is inflammable. True; and therefore it should not be used where the thermo-cautery is to be employed in operations on the head. As a matter of prudence, chloroform is to be then preferred. (8) Ether causes coughing during the operation. True; but this may be diminished by breathing at first through the nose a vapour not too concentrated, and

[1] L'Éther: est il préférable au Chloroforme? Par M. le Dr. Julliard, Professeur de Clinique Chirurgicale a Genève. *Rev. Méd. de la Suisse Romande*, February, 1891.

by a subcutaneous injection of morphine. (9) Ether salivates. An exceptional phenomenon, occurring in 1 in 20 cases, and disappearing during deep anæsthesia. Where it is necessary to guard against it, a subcutaneous injection of morphine and atropine is efficacious. (10) Ether excites bronchial secretion. This occurs rarely, and the tendency is much diminished by the subcutaneous injection of morphine and by breathing a diluted vapour. It occurs chiefly at the beginning of the administration, and disappears in deep anæsthesia. (11) Ether causes cyanosis. This occurs in nervous and alcoholic subjects. When observed, stop the administration, and recommence when the cyanosis has passed off. Cyanosis only occurs in cases in which any anæsthetic is more than usually dangerous. (12) Ether asphyxiates. This accident may occur in one of two ways: (*a*) by an arrest of the respiratory mechanism; or (*b*) by tracheo-bronchial hypersecretion. It is not common. Stoppage of administration and artificial respiration are the proper procedures. (13) Vapour of ether disagreeable to other patients, nurses, etc. This is largely avoided by using a proper mask. (14) Ether causes severe muscular tremors. This occurs rarely, chiefly in alcoholics, usually in the lower limbs, ceases during deep anæsthesia, and it may pass off on strong flexion of the great toe. It is very rarely seen after subcutaneous injection of morphine. (15) Ether is eliminated more slowly. It is true that patients recover more quickly from ether than from chloroform, but occasionally cases occur in which the recovery is not complete for several hours. These cases are very rare, and have no disagreeable conclusion. The rule is rapid recovery. (16) Ether lowers the temperature more than chloroform. This is also true, but the difference is so small as to be of no account. (17) Ether causes nephritis, pulmonary congestion, bronchitis, even pneumonia. Not admitted.

Roux found 4 cases of albuminuria in 119 cases of ether administration, and there was strong evidence in all these cases that the albuminuria existed before the administration. On the other hand, Patein asserts that slight albuminuria occurs in 1 out of 3 cases of chloroform administration—a statement the accuracy of which is perhaps open to some suspicion. (18) Ether cannot be given to children. Various surgeons have found that ether is liable in children to produce a sudden stoppage of breathing, the heart continuing to beat. Dr. Julliard has etherised 500 to 600 children and he has observed this phenomenon, but stoppage of the inhalations and douching the face with cold water quickly restored breathing. He adopts the view of Dastre, that these arrests of respiration are more alarming than really dangerous, as in the absence of dangers referable to the heart they can be remedied by artificial respiration. Further Dr. Julliard does not believe in the supposed greater safety of chloroform for children. This appears to us to be the only unsupported statement in his thesis. Children undoubtedly bear chloroform remarkably well, so that in the surgery of childhood chloroform is very generally preferred.

Dr. Julliard, in all operations of long duration, gives a subcutaneous injection of one-sixth to one-third of a grain of morphine. He finds that this calms the patient, notably diminishes the quantity of ether necessary, and sometimes produces, after a few whiffs of ether, a remarkable condition of analgesia, or insensibility to pain without loss of consciousness. The latter condition is undoubtedly the ideal anæsthetic state. The injection is given to the patient in a quiet room, and he is encouraged to close his eyes and to sleep. In about 20 minutes he is carried to the operating table, where in quietness and without excitement he is etherised. Julliard narrates 7 cases of analgesia with ether and 1 case with chloroform. In all these cases the patient was conscious but felt no pain, and in several he was able to aid the surgeon by voluntarily making convenient movements.

Unfortunately, this analgesic state cannot always be obtained, but an investigation of the conditions in which it occurs is well worthy of the attention of physiologists and surgeons. Dr. Julliard advises, however, that the susceptibility of the patient to morphine should be tested by a minute dose some days before the operation, as there are individuals in whom a previous injection of morphine may increase the dangers both of chloroform and of ether.

In conclusion, Dr. Julliard denounces the method of giving a concentrated vapour of ether at the beginning of the inhalation, with the view of quickly producing anæsthesia, as being likely to cause any or several of the accidents of ether administration. He also views with disfavour Kocher's method of giving chloroform at the beginning, and of continuing the anæsthesia with ether, designating the method as a combination of the dangers of chloroform with the disadvantages of ether.

We have given this somewhat lengthened notice of the views of the Swiss surgeon, as they put the case for ether clearly and forcibly. If the mortality from chloroform be only 1 in 4,000, patients should not be subjected to even that risk if a safer anæsthetic can be employed. Dr. Julliard's paper is worthy of the calm attention of surgeons who may be somewhat bewildered by the conflicting voices in the air, and who may be aided more by the experience of a practical man like themselves than by the refined conclusions of the physiological laboratory.

WHAT IS THE PRACTICAL VALUE OF TUBERCULIN?

We are now beginning to hear the first attempts to answer this question, not yet quite ripe for solution. We publish at page 893 a thoughtful critical article by Dr. Bristowe, dealing mainly with the general theoretical considerations upon which Koch's method is based; and at page 913 will be found an outline of the results obtained at St. Thomas's Hospital—results which it must be confessed are far from satisfactory.

At the Medical Society's meeting on Monday, April 20th, there was a very full gathering to hear Dr. Heron open the discussion on the value of Koch's tuberculin in the treatment of tuberculosis in the human subject. Dr. Heron gave a general account of his experience with the drug—an experience probably larger than that of any other physician in this country. It included 37 cases of pulmonary phthisis, 5 of lupus, and 1 of anæmia. Speaking broadly, he expressed the opinion that the results were decidedly encouraging. All the cases of lupus had improved during treatment, though in 2 there had been subsequent relapses. Of the 37 cases of pulmonary disease, only 10 had failed to show decided benefit. Always provided that Koch's instructions as to selecting early cases for treatment were followed, Dr. Heron's general conclusions were that (1) there is practically no risk in the use of the remedy, provided that the dose is gradually

increased, and (2) that it is not of absolute diagnostic value, as one case of undoubted phthisis had never reacted, and a case of anæmia, in which no evidence whatever of tubercle could be found, had reacted readily.

On another page will be found a full report of Dr. Heron's paper, together with the tables of the results, both in the cases of phthisis and of lupus which he laid before the Society. Of the 9 cases which at the end of last year and at the beginning of this were reported in the BRITISH MEDICAL JOURNAL, 5 were exhibited at the meeting; the others were either absent at convalescent homes or had failed to respond to the request to attend. The present condition of the remaining cases was as follows: CASE II.—A. D., aged 40, phthisis, third stage (cavity); the sputum had diminished from 1 ounce daily to a very small quantity; 8 pounds in weight had been gained, and the physical signs of a cavity had disappeared. CASE VII.—H. B., aged 28, phthisis, first stage; the sputum had diminished from 1½ ounce to a trace; 10 pounds in weight had been gained, and there had been great general improvement.

With the cases of lupus, his experience had been most favourable up to a certain point; and in this Dr. Crocker fully concurred. But the treatment by itself was evidently not sufficient. This fact, it is only just to remember, Dr. Koch himself from the first pointed out. In several of the cases, although the general local condition very greatly improved, yet even during the treatment fresh foci of lupus tissue appeared; and, after its discontinuance, there was a tendency to a more or less severe relapse. The following are the cases of lupus, whose earlier condition was reported in the BRITISH MEDICAL JOURNAL, which were shown at the meeting: CASE IV.—L. F., aged 21, lupus of face, nose, and lips, showed very great local improvement, as the parts were much less hard and swollen, and the glands could no longer be felt; but there were two or three fresh foci of lupus tissue. CASE V.—E. R., aged 27, lupus of face and chin; much improved in every way. CASE IX.—E. F., lupus of face and elbow; both parts much improved, but not healed. The conclusion to be drawn from Dr. Heron's case seems to be that in suitable early cases of phthisis the remedy ought certainly to be tried; and that it is a most valuable adjunct to the usual surgical treatment of lupus. The general result of the discussion seemed to be that the remedy is one of undoubted value, but that its limits, as well as modes of use, have yet to be determined. Dr. Theodore Williams and Dr. Acland would not, however, be prepared to admit so much as this.

Mr. Watson Cheyne will bring the results of the treatment in his surgical cases before the meeting of the Royal Medical and Chirurgical Society on Tuesday next.

Mr. Gilbert Barling, in a report on the surgical cases treated in the Birmingham General Hospital, read before the Midland Medical Society, on April 15th, took, on the whole, a hopeful view of the value of the remedy. In 11 out of 13 cases of tuberculous joint disease there was distinct improvement, in some instances very remarkable improvement. In 5 cases of tuberculous bone disease there was improvement in 2, little or no improvement in 2, and in 1 the improvement noticed may have been due to operation. Of 3 cases of glandular disease 2 are reported cured, and the other as markedly improved. In the only case of tuberculosis of the urinary passages treated the patient has gained weight, though it is not yet possible to say whether the local condition has been benefited. As to 5 cases of laryngeal tuberculosis, Mr. Barling said: "In no case has there been cure, but in every one such improvement as I have never seen from any other treatment, and it is yet too early to say that cure will not follow in some of the cases." As to lupus also a favourable report is given: "Of the 14 cases, 2 may be described as slightly improved, 8 as considerably improved, and 4 as much improved." Mr. Barling expressed the same opinion as that to which Dr. Radcliffe Crocker gave utterance at the Medical Society of London, namely, that the injection of tuberculin and the operation of scraping, with, perhaps, subsequent use of antiseptic pastes, should both be employed in the treatment of lupus.

Mr. Hutchinson, in discussing the treatment of lupus by Koch's fluid, in the last number of his *Archives of Surgery*, writes: "Not a few of the cases appeared to be little if at all improved. In some I am bound to say the results were, after long perseverance, excellent. Yet even of the best I cannot assert that I have seen a single one in which the disease was cured. The best results seemed to be obtained in cases in which there had been extensive inflammation with ulceration, etc., and without much of the true lupus growth. In these the attacks of inflammation induced by the injection appear to have had a very similar effect to that which we not infrequently witness after attacks of erysipelas. In the cases which most nearly approached to cures there always remained little islands of the brown apple jelly deposit, ready on the slightest provocation to set up new disease. In cases of what may be called quiet lupus, in which there is only the brown apple jelly growth without inflammation, I much doubt whether this treatment is of any avail." This is not warm praise, still the statement in the second sentence is encouraging, if of a very different character from the glowing reports which appeared six months ago. Even if the injection of tuberculin turns out to be nothing better than a useful adjuvant to surgical methods of treating tuberculous disease of bones, joints, and skin, still we may say with Sir Thomas More, "Marry, this is somewhat."

PART PAYMENT.

THE question of part payment has come up so often of late, especially in connection with the reform of medical charities, and appears to be so little understood, that it may be worth while briefly to consider the advantages and injuries resulting from the system both to the public at large and to the profession. To exact part payment for medical relief seems to the benevolent an inviting short cut to the encouragement and practice of thrift. On the face of the matter it appears most reasonable that if a man cannot pay the full cost of the benefits which he receives from an institution, he should at least contribute that proportion of the expense which he is able to afford. This argument is used to establish a system of admission to hospitals, infirmaries, clubs, and societies at fees too small to cover the actual working expenses, the deficiency being made good by the subscriptions and legacies of charitable persons.

Between those who are willing to pay the full cost and those who are unable to pay it there is undoubtedly a class of persons who like to get as much as possible in return for as little as possible, and in whose hands it is certainly unsafe to place the assessment of their own medical fees. It is hard to imagine a system of litigation in which the per-

mission to sue *in formâ pauperis* at greatly reduced rates should be granted by the clients to themselves, or one by which costs should be taxed not by the taxing master, but by the parties who had to pay them.

The chief evil of unchecked part payment is that it obliterates the boundary between real payment and the receipt of charitable bounty, and removes the only safeguard remaining except discomfort; for immediately a man pays a sum, however small, for services rendered to him, it is generally impossible to convince him that he has not established a right to those services in future, and thus the establishment on an uncommercial basis of funds for the encouragement of thrift may in the end prove to result in organisations for the abolition of gratitude. Where the institutions themselves introduce part payment by the issue of a far larger number of "letters" than they could ever meet if all were to be presented, the question becomes so complex that it requires a far keener insight than belongs to most of the applicants to realise that clubs which purchase numbers of such letters and use every letter bought are still only the beneficiaries, and not the benefactors and masters, of the charity which they patronise. In fact, as regards the public, there is small difference in principle between part payment and free treatment. Many receive both who are well entitled to them, but both encourage unscrupulous and feeble folk who are hardened and demoralised by them, and by their aid are placed in a more prosperous position than that of their more sturdy and conscientious friends.

The same objections apply indeed not only to part payment and to no payment, but to all payments which are not directly seen to be a rendering in full of the expenses which have been incurred. If there is no other alternative than a hospital for persons under certain conditions, the full cost of treatment should most certainly be fixed by the authorities and paid by the patients in question, or by the persons responsible for them. It is true that a few conscientious masters, who have sent their servants to a hospital, may make elaborate calculations or inquiries as to the amount which they ought to contribute in return, but these will certainly be the exception; and the hospitals themselves are to blame if they do not give every information and facility for the discharge of such obvious duties to the community.

To the profession also part payment shares many of the aspects of free treatment. The hospitals, it is true, are not likely to be overcrowded with part-paying patients while there is so much unchecked gratuitous relief; but if future reform were merely to require a large number of those who are now free patients to pay a certain inadequate sum, the present burden would be only very slightly diminished, and the profession at large would be in no better plight. At present, indeed, it is probable that such part payment as exists presses on the body of private practitioners at least as hardly as free treatment; for the class of patients who are deluded or delude themselves by a small payment into the belief that they are not the recipients of charity are the very people who are able to pay the family doctor his just due. Thus the profession as well as the public are justified in claiming that part payment shall not be adopted as in any sense a panacea.

The German Congress of Internal Medicine will meet next year at Leipzig.

The names of Sir Walter Foster and Sir Guyer Hunter have been added to the Grand Committee on Law, for the consideration of the Public Health (London) Law Amendment Bill.

The German Congress of Internal Medicine, during its recent meeting at Wiesbaden, unanimously elected Professor Virchow an honorary member, on the occasion of his 70th birthday.

"A BIRD IN THE HAND."

It is hardly necessary for us to direct the anxious consideration of the Army Medical Department to Mr. Stanhope's answer to Mr. Bartley. Matters have now reached a very critical point, and much tact and judgment will be required to play the next move with effect. We understand that Sir Andrew Clark will shortly summon a representative meeting to take stock of the situation, and we will postpone all further comment until we are in a position to announce what decision has been arrived at.

THE LATE DR. POLLOCK AND MR. BELLAMY.

Steps are being taken to raise a fund to perpetuate the memory of the late senior physician (Dr. Julius Pollock), and the late senior surgeon (Mr. Edward Bellamy), of Charing Cross Hospital. Both gentlemen had been connected with the hospital for many years, and were held in affectionate regard by many generations of students at the Charing Cross Medical School. The form which the memorial shall take will be decided at a general meeting of the subscribers to be held early in May. Subscriptions may be sent to Mr. Stanley Boyd (Dean), 134, Harley Street, W; Mr. R. C. Ackland, 13, Savile Row, W; or Mr. G. T. Bishop, at the Hospital.

THE LATE MR. JOHN MARSHALL.

Former colleagues and many of the friends of the late Professor John Marshall wish to establish a memorial of him in connection with University College, London, where he was a student, and where, for many years, he held the chair of Surgery. It is proposed that a bust of Mr. Marshall should be presented to the College; and, in the event of the contributions to the fund warranting it, a prize to be called the Marshall Prize is to be founded in the Medical Faculty of the College. Doubtless, many of the friends of Mr. Marshall, who, in his various capacities as teacher, as a member of the Council of the College of Surgeons, and President of the General Medical Council, worked so ably and disinterestedly in the cause of the profession, will be glad to take this opportunity of testifying their regard for his memory. The treasurer of the fund is Mr. John Tweedy, 100, Harley Street, W.

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

At the meeting of the Senate of the University of London on Wednesday last, the draft charter was considered, amended, and ordered to be printed and circulated to members of Convocation. We understand that its adoption by Convocation will be moved at the meeting on May 12th by Lord Herschell. The Special Committee of Convocation appointed some years ago, of which Sir Philip Magnus has acted as chairman, has had under consideration the scheme of the Senate, and has expressed its approval thereof by a majority, it is stated, of 10 to 2. The opponents of the scheme are still active, and have recently circulated a fresh appeal for signatures to the "expression of dissent" issued some weeks ago. The list of signatures already obtained contains about 770 names. At a meeting of those members of the staff of Guy's Hospital Medical School who are members of Convocation of the University of London, it was resolved, in order to support the scheme of the Senate, to issue a special circular to all Guy's men who are members of Convocation, asking them

to attend a meeting of Convocation on May 12th, in order to support the scheme of the Senate by their votes. The circular points out: (1) That the scheme is the only one which has received strong support from the bodies chiefly concerned; (2) that if this scheme is not adopted, either the Medical Faculty of the London University must be left in its present unsatisfactory state or a second university will be founded in London; (3) that the scheme gives a large share in the representation of the government of the University to the medical profession: (4) that the scheme does not make any attempt to lower the present high standard of the degrees, but merely to render them more accessible.

THE METROPOLITAN HOSPITAL AND THE "PROVIDENT PRINCIPLE."

At the Festival Dinner of the Metropolitan Hospital at the Hôtel Métropole, on Tuesday last, the chairman (Sir Julian Goldsmid) and other speakers alluded to the Provident Department of the hospital, which, it was stated, had now been in operation for three and a-half years. The chairman remarked that the amount received by the hospital last year from the subscriptions of several thousand people in the Provident Department exceeded £600; he considered it an excellent plan, and a system of thrift productive of much good. Sir E. H. Currie said that if the hospital authorities had not been able to conciliate the medical men in the neighbourhood, they would not have been able to meet there that night. Now he was informed that the medical men living near the hospital had met together, and desired for the future to hold the meetings of their local society (the Æsculapian) at the hospital. It was also stated in the course of the evening that, although the hospital is built for 160 beds, the funds only allow 70 to be occupied. A sum exceeding £2,400 in subscriptions to the hospital was announced by the secretary in the course of the evening.

THE ROYAL BRITISH NURSES' ASSOCIATION.

The application of the Royal British Nurses' Association to be registered by the Board of Trade as a Company with the omission of the word "limited" has been met by considerable opposition, and a meeting was held on April 17th, under the presidency of Sir William Savory, to consider the position of the Association. Among those present were Princess Christian, Sir James Crichton Browne, Sir Joseph Fayrer, and Dr. Pavy. A resolution was moved by Sir James Crichton Browne, protesting against the opposition "of a few representatives of nurse-training schools." The resolution was unanimously adopted, as was another expressing the opinion that the *Register* of trained nurses—which is referred to in another column—would be most valuable to medical men and a protection to the public against ignorant and untrustworthy workers.

ACONITE POISONING.

The report of an inquest on the body of a girl, aged 13, who is believed to have been poisoned by homœopathic aconite pills, is published in the *Rochdale Observer*. The father, a painter, said that they used these pills as a sort of general remedy if they were unwell. The child had been liable to attacks of headache during the previous three months, and had been given the pills by her parents. On April 12th, having been ill on the previous evening, she was given two pills every two hours during the afternoon, taking ten pills altogether. About 10 P.M. she became much worse, and appeared to be sinking. Mr. A. B. Elliott, F.R.C.S., was summoned and saw her at 11.30 P.M. She was unable to answer questions, and could just protrude the tongue, which was furred and moist; she was pulseless at the wrist, the arms and face were cold and covered with clammy sweat, the feet were warm owing to a hot bottle and plenty of clothes; pupils dilated, equal, face pale, lips bloodless; heart very feeble, about 180 per minute, respiration hurried, gasping, painless; no action of alæ nasi. Slight convulsions preceded death at 12.45 P.M. by a few minutes. No signs or symptoms of inflammation of bowels, lungs, or heart could be found; the aconite was the only cause of the sudden collapse that Mr. Elliott couldsuggest. The temperature taken half an hour after death was 102°. The parents' statement seems to point to her having been slightly feverish all day. No *post-mortem* examination was held. The jury returned a verdict that death was due to aconite poisoning, aconite having been administered by misadventure.

SANITARY STATE OF ST. BARTHOLOMEW'S HOSPITAL.

The following letter has been addressed to the Governors of St. Bartholomew's Hospital:

"St. Bartholomew's Hospital, April 16th, 1891.

"In face of statements publicly made of the general insanitary condition of St. Bartholomew's Hospital, we, the physicians and surgeons of the hospital, each of us answering for the cases under his own care, consider it our duty to assure the governors that statements to that effect are not justified by any existing evidence. Each of us is almost daily in the wards, and if insanitary conditions existed, which acted prejudicially on the patients, we could not fail to observe them by their effects on those under treatment, and especially in the surgical wards on those submitted to operations; but such unfavourable results do not occur. With regard to the occurrence of diphtheria in some of the patients admitted for other diseases, and in certain members of the nursing staff, a searching investigation by a committee of the medical staff has failed to find any evidence or reason for supposing that such occurrence was due to defective sanitary arrangements. (Signed)

*J. Andrew.	Wm. S. Savory.
W. S. Church.	Thomas Smith.
Samuel Gee.	Alfred Willett.
Dyce Duckworth.	J. Langton.
Philip J. Hensley.	W. Morrant Baker.
T. Lauder Brunton.	Howard Marsh.
Norman Moore.	Henry T. Butlin.
Samuel West.	W. J. Walsham.
F. H. Champneys.	Harrison Cripps.
W. S. A. Griffith.	W. Bruce Clarke.
	Henry Power.
	Bowater J. Vernon.

* Signs this as correctly representing his experience until his illness kept him from the hospital."

MIDWIVES IN FRANCE.

Under the new *projet de loi* for the regulation of the practice of medicine in France, a summary of which was given in the British Medical Journal of April 18th, midwives appear to be distinctly recognised—in their own special sphere and within strictly defined limits—as practitioners of the healing art. All the provisions as to qualification, registration, etc., in the case of medical men, apply, *mutatis mutandis*, to midwives. Thus, no woman can practise as a midwife unless she possesses a diploma of the first or second class, duly granted by the French Government after examination undergone before a Medical Faculty or a Medical School recognised by the State. It is incidentally stated that midwives possess the right to practise as such under certain clauses of a law passed on the 19th Ventôse, Year 11 ("which being interpreted in the old slave style," as Carlyle says, means March 7th, 1804), confirmed by several subsequent Ministerial decrees. There is a special clause expressly forbidding midwives to use instruments; and, in cases of difficult labour, they are enjoined to call in a doctor of medicine. They are also forbidden to prescribe medicines, except under circumstances specified in existing regulations, or which may be hereafter determined on the recommendation of the Academy of Medicine. They are, however, permitted to perform vaccination and revaccination. Foreign midwives will not be allowed to practise in France unless under conditions similar to those applying to foreign doctors. They are allowed to bring actions for the recovery of fees in exactly the same way as medical practitioners may do. They are under the same obligation as to the notification of cases of infectious disease occurring in their practice. Usurpation

of the title of "midwife" with illegal practice of the obstetric art is punishable by a fine of 100 to 500 francs for a first offence, and 500 to 1,000 francs, with or without imprisonment for six to fifteen days, for a second. The right to practise may be forfeited by midwives under exactly the same circumstances as by medical men. It should be pointed out that though the Bill containing these provisions passed the Chamber of Deputies on March 29th, it has not received the sanction of the Senate.

NON-COMPETITIVE EXAMINATION.

The Hon. Auberon Herbert is not disposed to let the interest aroused by the articles on "The Sacrifice of Education to Examination" die out without making an attempt to bring the matter to a practical test. A kind of declaration of faith is now in course of signature in favour of a system of education in which the competitive element should be eliminated. Study for its own sake is to be the object aimed at, the pupil and teacher being left free to determine the direction and character of the work undertaken, the desire being to cultivate an interest of the student in his work entirely apart from and independent of any examination. Examiners would still exist, but only to receive reports on students from tutors and professors, and to consider papers submitted. Only in doubtful cases would an actual examination of the candidate for a degree take place. Mr. Herbert hopes to persuade the University of Oxford to permit the establishment of such a system, and, for the better advertisement of his scheme proposes to hold a public breakfast, on May 19th, in London or Oxford, and is prepared to receive, at The Old House, Ringwood, Hants, applications from would-be breakfasters.

DEATH OF MR. JOHN SPEAR.

Sanitary workers will learn with regret of the death, on April 20th, after a somewhat lingering illness, of Mr. John Spear, of the Medical Department of the Local Government Board. Mr. Spear, who had for several years held with distinction the post of medical officer of health for South Shields, Jarrow, and Hebburn, was appointed a medical inspector of the Local Government Board in March, 1880. Since that date he has been engaged in many important investigations into the cause and spread of disease, his most noteworthy inquiries being, probably, those relating to "Anthrax amongst Woolsorters," and the circumstances under which typhus fever has been prevalent in various localities. By his untimely death, whilst still a young man, the Local Government Board has lost one of its most conscientious and respected officers.

THE ABUSE OF HOSPITALS IN LONDON.

At a meeting of the Royal Statistical Society on April 21st, Dr. Steele, of Guy's, read a paper on the charitable aspects of medical relief with special reference to the metropolis. He pointed out that the Local Government Board was gradually supplementing or superseding charitable effort in nearly every department. The main difficulty was to discriminate between those who were eligible for charitable assistance, and such as were more suitable for Poor-law assistance. The large and increasing numbers of out-patients at the various hospitals, notwithstanding the establishment of free dispensaries, rendered it necessary that measures should be adopted for curtailing the same, provided this could be done without hardship to the deserving poor. The provident dispensary system offered numerous advantages, but it failed to meet with general acceptance among the working class, which was attributed by its promoters to the migratory character of the population, and the facilities given for treatment at the free and special hospitals. He thought that the principle of self-help had been fully recognised at special hospitals, and at convalescent homes and cottage hospitals throughout the country, but had made very little way in the general hospitals, where there was great room for its development. That it would not prove hostile to the general practitioner was proved by the experience of such hospitals as had partially adopted the system, where the bulk of the paying cases admitted had been recommended by outside practitioners.

FACTORY LEGISLATION.

At a meeting of the Grand Committee on Trade, it was decided by 23 to 9, on the motion of Dr. Farquharson, to insert the following clause: "Every certifying surgeon acting under this or the principal Act shall in each year make at the prescribed time a report to the Secretary of State as to the persons inspected during the year, and the results of said inspection." The clause proposing to provide for periodical inspection by certifying surgeons was rejected by 5 to 24.

LEPROSY IN NEW CALEDONIA.

Dr. M. A. Legrand has recently published[1] an account of the introduction of leprosy into the French convict settlement of New Caledonia, which is at once interesting and instructive. In 1846, when missionaries first landed in the island, the disease was entirely unknown there, nor did it exist in 1853, when the French formally annexed it. In October, 1880, M. Vauvray, chief of the Health Department, sent back five negroes from the New Hebrides on the ground that they had lost their fingers and toes from leprosy. He at the same time requested the authorities to prevent the introduction of lepers into the colony. In September, 1883, M. Brassac reported that there were several cases of leprosy in the north part of the island, and suggested the establishment of a lazaretto for their reception. No steps were, however, taken by the authorities, and in 1888 Dr. Forné, chief physician and president of the Committee of Hygiene, presented an elaborate report, in which he stated that the cases of leprosy could then be numbered by hundreds, especially in the north. The Committee, however, adopted the ostrich-like policy familiar to such bodies, and it was not till the following year that, yielding to the force of public opinion, the executive decided to establish two leper houses, one at Pic des Morts, near the bay of Canala, and the other in the Isle of Goats in the Noumea roads. Forty lepers were confined in the former and twenty in the latter. In May, 1890, the total number segregated was seventy, and there had already been fifteen deaths. A third lazaretto is about to be established not far from Houaïlou. Though the first cases of true leprosy among the aborigines of New Caledonia were observed only in 1883, more or less legendary accounts of earlier appearances of the disease are current among them. Thus a Chinaman, covered with hideous sores, is said to have arrived in 1866 or 1867, and to have lived for several years with a native tribe, several of whom afterwards developed disease of the same nature. Whatever may be the true history of the importation of leprosy, however, there can be little doubt that it was imported, and at the present time, according to M. Legrand, it exists everywhere in New Caledonia, and has acquired a foothold in the great majority of the native tribes. Europeans have also suffered. The course of the disease appears to be more rapid than elsewhere, a fact which M. Legrand attributes to the habit which the natives have of scarifying the macule and the tubercles, often to a considerable depth, with pieces of glass, and to their ruthless use of caustics. M. Legrand considers that these barbarous therapeutics together with tattooing and burning with moxas, which seems to be their fashion of expressing affliction at the loss of relatives, have much to do with the spread of the disease. He explains the ravages made by the disease in virgin soil like New Caledonia by the fact that the people not being aware of the danger take no precautions against it.

[1] *Archives de Médecine Navale*, February, 1891.

Under the will of the late Mr. C. A. Hubbock, the English Nurses' Fund and the Poor Invalids' Society at Davoz each receive £100.

SCOTLAND.

Dr. John Macintyre has been appointed Lecturer on Diseases of the Throat and Nose at Anderson's College Medical School.

CLINICAL INSTRUCTION AT BELVIDERE.

The clinical instruction offered by the Corporation of Glasgow at their fever hospital was last year taken advantage of by 146 students, the instruction being given by Dr. J. W. Allan. So far as Dr. Allan is aware, none of the students contracted any infectious disease.

THE ROYAL PHYSICAL SOCIETY.

The last meeting of the session was held in Edinburgh on Wednesday, April 15th, when Dr. Fortescue Fox read a paper on the Climate of Strathpeffer Spa. He showed that the range between the cold of winter and the heat of summer was less by 13° at Strathpeffer than at Greenwich; that the summer was cooler; and that the average difference between day and night temperature was less by 7.6° than at Greenwich.

INADEQUATE SALARIES IN THE PUBLIC HEALTH SERVICE.

Attention has on several occasions been called to the extremely inadequate salaries paid by many health authorities in Scotland to their medical officers. The increased vigour with which the sanitary law is being enforced, or will be enforced, in Scotland has undoubtedly thrown many additional duties upom medical officers, and has created an intolerable position, which, sooner or later, will have to be remedied. It appears to be most advisable that some united action should be taken, and in the first place an appeal should be made to the Colleges of Physicians and Surgeons in Edinburgh, and the district medical officers throughout Scotland would do well to lay their grievances as to salaries and increased duties before the Councils of these Colleges at an early date.

ABERDEEN COUNTY MEDICAL OFFICERSHIP.

A conference of members of the Public Health Committees of the Aberdeen County Council and Town Council was held last week to consider the proposed arrangement whereby the medical officer for the city (Dr. Matthew Hay) would undertake the work of the county medical officership as well. At the meeting of the Town Council, on Monday, the Health Committee reported adversely to the proposal. After a lengthy statement from the convener of the committee, the Town Council unanimously agreed that the medical officer of the town should not be permitted to accept the county medical officership.

OPENING OF SUMMER SESSION AT ABERDEEN.

The summer session began on Monday, but most of the classes were opened on Tuesday. The number of entrants is about the average, and the other classes are well attended. The practical classes of physiology, zoology, pharmacy and hygiene will be held in the commodious new laboratories which were finished a few days ago. Hitherto Aberdeen has been much hampered for want of laboratory accommodation, and now that this want is supplied, practical work should get a good fillip.

THE CRIEFF SUGAR POISONING CASE.

The Greenock refiners of the sugar, which was the medium of the recent poisoning at Crieff, have instituted a searching examination into the whole case. The order from the Crieff buyers was for about 11 tons, of which about 2 tons remained with the refiners, waiting the buyers' orders. Samples of this, and of two consignments to other towns, were submitted to the public analysts of Greenock, whose analysis was confirmed by Dr. R. R. Tatlock, of Glasgow. The following is the analysis: Crystallisable sugar, 99.30; uncrystallisable sugar, 0.19; other organic matters, 0.0; ash, 0.06; water, 0.45: total, 100.00. The above sugar free from all poisonous or deleterious matter. A sample of the sugar damaged in course of transit yielded the following on analysis: Crystallisable sugar, 99.0; uncrystallisable sugar, 0.18; other organic matters, 0.8; ash, 0.23; water, 0.51. The further test reveals in this sugar the presence of 0.1459 per cent. of arsenic, calculated as arsenious oxide, equal to 10.22 grains per avoirdupois pound. The weed killer, which was carried in the same waggon, showed, on testing, the presence of arsenic, which, as arsenious oxide, amounted to 22 per cent. The sugar was carried in bags, and the porter who checked the goods at Crieff has entered in the invoice: "One bag wet with sheep dip," but it has been shown that the leakage occurred from a case containing weed killer.

IRELAND.

Mr. William Thomson has resigned his seat on the council of the College of Surgeons in order to become a candidate for an examinership in surgery. Mr. Thomas Myles, of the Richmond Hospital, and Mr. F. A. Nixon, of Mercer's Hospital, are candidates for the vacancy.

It is stated that an extraordinary outbreak of hydrophobia has occurred in the counties of Wexford, Carlow, and Kilkenny. Dogs, cows, horses, pigs, and one boy have been bitten. The marked peculiarity is that mania rapidly develops. So far the accounts appear to be inaccurate and exaggerated.

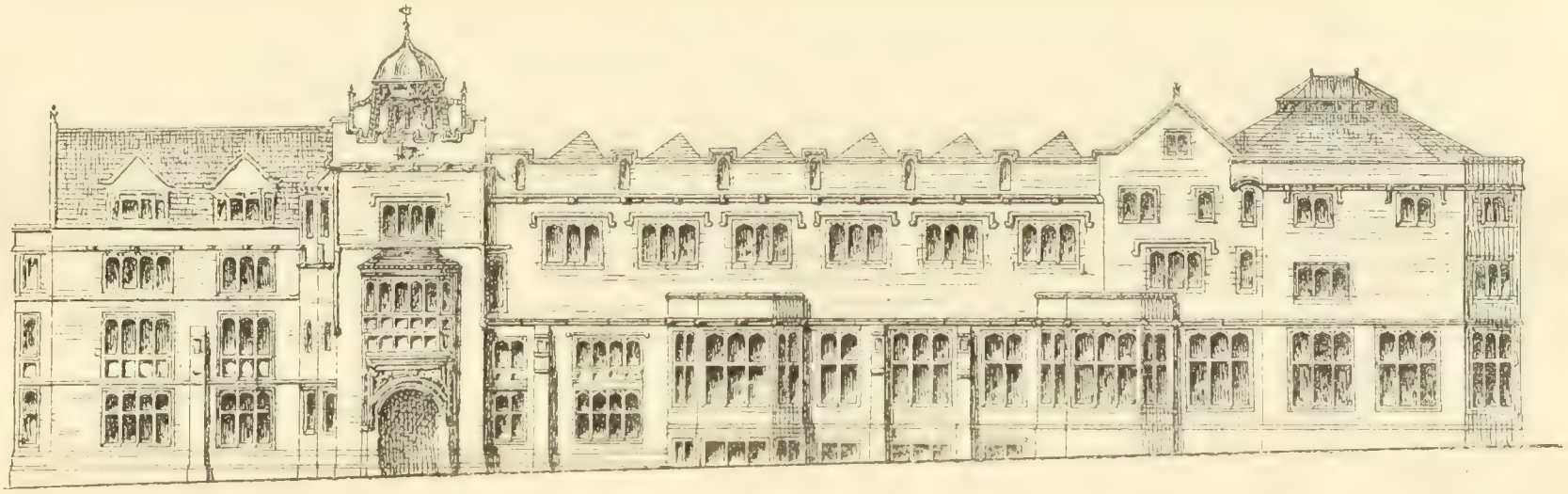
At the Meath Hospital on April 16th Mr. Lambert H. Ormsby was presented with an address and a claret jug by the Lady Superintendent and the Sisters and probationers of the Red Cross Society attached to the hospital, in recognition of his services in establishing and promoting the efficiency of the organisation. A number of medical practitioners were present. Mr. Ormsby suitably acknowledged the gift, and Sir George Porter moved a vote of thanks to Viscount Powerscourt, K.P., for presiding.

ROYAL ACADEMY OF MEDICINE.

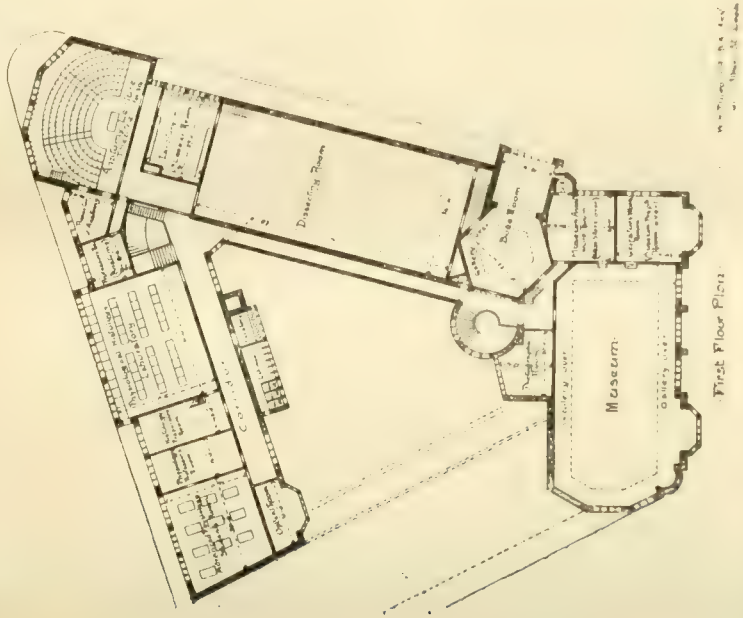
There was a very large gathering at the meeting of the Medical Section on Friday evening, April 17th, to hear a discussion on hypnotism. Papers were read by Dr. Cruise and Dr. Kingsbury (Blackpool). The general tenor of the communications was that the therapeutic effects of hypnotic suggestion were genuine; that they were specially marked in functional disturbances of the nervous system; that suitable cases should be selected, and that the system was worthy of investigation by the profession. A very long discussion followed, the general feeling being favourable to the claims advanced.

REGIUS PROFESSOR OF SURGERY, DUBLIN UNIVERSITY.

Mr. William Colles, Surgeon to the Queen in Ireland, has resigned his position as Regius Professor of Surgery in the University of Dublin, which he has held since 1877. His many friends will regret to learn that the cause is declining health. There are several candidates for the appointment, which lies in the hands of the Board of Senior Fellows, to whom a recommendation is made by the Council. Sir William Stokes, Dr. Edward Hamilton, Professor E. H. Bennett, Dr. C. B. Ball, and Mr. W. I. Wheeler, are mentioned as candidates. Should Dr. Bennett be selected he will hold the dual offices of professor of surgery and regius professor, but it is not known whether this arrangement will be sanctioned. The duties of the regius professor are almost nominal, and chiefly consist in presiding at examinations in surgery.



Elevation to Thoresby Place.



YORKSHIRE COLLEGE, LEEDS.

New Medical School Buildings.

The plans for the new school of medicine at Leeds, to be erected on a site having an area of about three-quarters of an acre, close to the General Infirmary, have now been completed. We are enabled to give a sketch of the elevation facing the infirmary, and a plan of the first floor, showing the general arrangement of the building, which appears to be extremely well adapted for the purposes of a medical school. The various departments of the school are grouped round a large open quadrangle, but the fourth side is not at present to be built upon. Each department has been made as far as possible self-contained and complete in itself, while all are retained in close proximity to each other. Thus it is proposed to place the physiology department at the Blundell Street side, where it will occupy the ground and first floors; the anatomy department will occupy the first floor of the Thoresby Place side; while it is proposed to place the department for pathology, students and professors' common rooms, and a general lecture theatre on the ground floor. The anatomy lecture theatre, which is shown in the plan, will accommodate 214 students, and the dissecting room occupies the entire width of the building at this side, access being provided from the rear to the museum in front. A special bone room is provided, as well as a dark room for photographic purposes. On the basement floor a dining room is provided for the use of students, while the roof will be asphalted and arranged as a flat. The elevation shown in our engraving is that which will face the Royal Infirmary; it is 200 feet in length. The south elevation is shorter, but of more ornate design, and is occupied by the library and museum.

INFANT LIFE INSURANCE.

THE following paragraphs contain the outline of the evidence given by Dr. T. W. Grimshaw, Registrar-General for Ireland, before the Committee of the House of Lords on April 14th.

Dr. Grimshaw said that, before taking office as Registrar-General, he had been engaged in practice as a physician in Dublin, and had acted as physician to Dr. Steevens's Hospital, Cork Street Fever Hospital, and other institutions during a period of eighteen years. During his tenure of these offices he had made it a voluntary practice to visit the homes from which many of the children brought to the hospital came, especially those admitted to the Cork Street Fever Hospital. His attention had long been directed to the high rate of mortality among children in large towns in Ireland, especially in Dublin, where the rate was one of the highest known. Special instructions had been issued to registrars of births and deaths and other officers of the Registrar-General's Department who had to issue certificates under the various Friendly Societies and other Acts for the purpose of the industrial insurance companies and friendly societies; recently special care had been taken to prevent any carelessness or irregularity in dealing with the certificates. He stated that in Belfast the practice of obtaining certificates of causes of death from medical men who only saw the body after death prevailed. The form of certificate for the cause of death issued by the Registrar-General's Department had been found to have been used by medical men for the purpose of certifying after death. Of the forms thus received within a limited period, eight at least referred to children, and included such "causes" as the following: "Measles," "congestion of the lungs," "natural causes," "premature birth eleven days before," "bronchitis," "debility from birth, died suddenly, cause unknown," "probable suffocation." The attention of the registrar in the Belfast district had been called to this irregularity.

In Ireland bodies could be buried without the registrar's certificate, but the clergyman officiating at the burial or the person responsible was bound to notify to the registrar, though such notification might be deemed to have taken place if the burial was returned under the Public Health Acts. This system did not work well in all cases, and Dr. Grimshaw gave an instance of a case in which an illegitimate child had been buried without the registrar's certificate, the address and the address of the undertaker being incorrectly given.

An arrangement had recently been made with the Commissioner of the Dublin Metropolitan Police by which a sergeant of the police took a note at the Registrar-General's Office of death certificates of all children under 12 years of age registered in the Dublin district, the registrars having been by special circular required to show in all such cases whether certified copies had been granted for insurance purposes. It was found that during the course of one month 64 cases came to be investigated, the ages ranging up to 12 years. In 3 cases there was no insurance, and in 4 the child was not in benefit. Two of these cases afforded examples of dying children insured; thus in one case the child, aged 22 hours, had been insured for 22 hours for £2, the cause of death being "debility from birth;" there was no medical attendant. In the other case the child had been insured three hours before death, and though not in benefit the case showed an attempt to trade in the life of a dying child. One child, who had died at the age of 7 months, had been insured for seven months for two sums of £2 10s. each. In some cases the assured appeared to have been in benefit societies of which all members of the family were usually made members, and each child was entered in the books of the society immediately after its birth. The death-rate among young children in Dublin was remarkably high, and the city therefore appeared to be a favourable locality for testing the causes of a high death-rate among children.

He had read a paper upon this subject before the Statistical Society of Ireland in July, 1889.[1] Taking the average of the five years 1883-88, the death-rate at all ages varied from 13.8 per 1,000 in the "professional and independent class" to 34.8, or about 2½ times as much in the "general service and inmates of workhouses class." Taking children under 5 years of age the difference was still more remarkable, the rate being 18.2 per 1,000 living at this age period for the "professional and independent class," and 116.9 per 1,000, or over six times as much, in the "general service and inmates of workhouses class." This latter figure was startling in a civilised community. It was a remarkable fact that though the death-rate of children was so high in Dublin, it was for the rest of Ireland below the average of other countries. The causes assigned for the high death-rate of children in Dublin were (1) the large proportion of very poor in Dublin, (2) the inferior housing accommodation of the artisan and labouring classes, (3) the extremely intemperate habits of the lower class in Dublin, and (4) carelessness with regard to children in general and of sick children in particular. During the first quarter of the present year there were 2,654 deaths registered in Dublin; 275, or 10.4 per cent., of these deaths were uncertified, the deceased persons not having had any medical attendant during their last illness. Of these 275 cases there were 152, or 55 per cent., of children under 5 years old. Of deaths of children under one month, 46.9 per cent., or nearly one half, were uncertified, of those under one year 30.2 per cent., or nearly one third.

He had had prepared for the first quarter of the present year statistics as to the age, social condition, and causes of death of children under 10 years of age in the Dublin registration district, showing the cases certified and uncertified. The population was in round numbers 350,000; the total number of deaths of children under 10 years of age was 768, and of these the causes were uncertified in 158. In 221 or 35.3 per cent. of the certified cases certificates for industrial or kindred insurance companies were issued, whereas such certificates were only issued in 21 or 13.3 of uncertified cases. Of the total cases of deaths among children under 10 years of age certificates for insurance purposes were issued in 242 cases or 31.5 per cent.

Classes.	Deaths.			Certificates for Insurance Purposes Issued.				
				Certified.		Uncertified.		
	Total.	Certified.	Uncertified.	Cases	Percentage.	Cases	Percentage.	Percentage Cert. and Uncert.
Professional and Independent	8	—	—	1	—	—	—	—
Middle	126	104	22	23	22.17	5	22.7	22.2
Artisan and Petty Shopkeeper	209	161	48	82	50.9	5	10.5	41.6
General Service	373	285	88	113	39.3	11	12.5	33.3
Workhouse Inmates ...	58	58	—	2	—	—	—	—

GENERAL PRACTITIONERS' UNION.

A MEETING of the Executive Committee was held on March 15th, GEORGE BROWN, M.R.C.S., in the chair. The following members were also present:—F. H. Alderson, M.D.; T. R. Atkinson, M.R.C.S.; J. B. Cook, L.R.C.P.Ed.; F. H. Corbyn, M.R.C.S.; James Dawson, M.D.; and Hugh Woods, M.D.

Forty-four general practitioners having been duly proposed and seconded, were elected members of the Union.

It having been suggested that it would greatly facilitate the work of the Union if the metropolis were divided into districts, with a secretary for each, it was decided to carry out the suggestion, and the following district secretaries were appointed:—East Central District—W. E. Dawson, L.R.C.P.I.; Hammersmith and Shepherd's Bush District—F. H. Alderson, M.D.; South Kensington District—T. R. Atkinson, M.R.C.S.; Kilburn District—H. C. C. Shaw, L.R.C.P.Lond.; St. John's Wood District—F. H. Corbyn, M.R.C.S.Eng.; Highgate and Upper Holloway District Hugh Woods, M.D.; Islington District—J. B. Cook, L.R.C.P.Ed.; Canonbury and Stoke Newington District—J. Dawson, M.D.; West Ham and Barking District—Percy Rose, L.R.C.P.Lond.; Camberwell and Peckham District—Campbell Boyd, L.R.C.P.I.

District secretaries will be appointed for other parts of London and for the provinces as soon as practicable.

[1] *Dublin Medical Journal.*

INCREASED PREVALENCE OF INFLUENZA.

THERE is unfortunately no longer any room to doubt that influenza has once more become fatally prevalent in London and in some provincial towns, notably Hull and Sheffield. In London the deaths directly referred to this disease last week, irrespective of those cases in which influenza was given only as a secondary cause of death in the medical certificate, numbered 9. During March only 9 deaths were attributed to influenza, while during the first three weeks of this month 19 deaths have been recorded. It is noteworthy that while the deaths from all causes in London last week were below the average, the 185 deaths referred to pneumonia showed a marked excess, and exceeded the average by more than 50 per cent.; this excess was not equally distributed over all the age-periods, but at precisely the same ages as during the epidemic at the beginning of last year.

A large number of suspicious cases have come under treatment this week in London, but it does not appear that the disease has particularly affected any special area of the metropolitan district, or that the disease is distinctly epidemic.—Thus Dr. J. W. HUNT (Honorary Secretary of the East London and South Essex District) writes: There are a considerable number of cases which, if they had occurred last year, would have been called mild cases of influenza. The great muscular pain and the intense prostration are completely absent, however, and I do not feel justified in saying that we have a return of last year's disease.—Dr. GEORGE HENTY (Honorary Secretary of the North London District) writes: Although there are many cases of simple catarrh, and some cases of acute congestion of lungs, and even pneumonia, arising from the prevalence of the cold weather, yet there is no epidemic influenza existing in this northern district of London.—Mr. GEORGE EASTES, referring to Paddington and adjoining parishes, writes: I cannot say that influenza is epidemic in this neighbourhood; I have seen one patient to-day (a medical man) who appears to me to have it, and who saw several people in two families, who were suffering from it on Sunday last at Kingsland. The other doctors near here have as yet had but few cases; but there is much illness about, especially cases with ordinary catarrhal symptoms.

The epidemic has caused a very high rate of mortality in Hull and Sheffield. In Hull the death-rate rose in one week from 23.0 to 36.5 per 1,000, and in the following week, ending April 11th, it further increased to 42.5, with one exception a higher rate than in any week on record. A large number of deaths have been directly referred to influenza in Hull durthe past three weeks.—Dr. H. W. PIGEON, of Hull, Secretary of the East York and North Lincoln Branch of the British Medical Association, writes, in answer to an inquiry: The epidemic in Hull and neighbourhood has been felt much more severely than it was last year. During the last month hardly a household has escaped; in many cases all the inmates have been laid up at the same time, and many have found it difficult to obtain attendance. The general type of influenza has been more severe than last year, the subsequent depression and anæmia being more marked. Numerous deaths have occurred from bronchitis and pneumonia. Several practitioners have been laid up. The number of cases is now decreasing.

Dr. W. STEPHENSON, of Beverley, writes, in reply to our inquiry, that: Beverley and its neighbourhood have suffered severely from the influenza epidemic, which, though not frequently fatal, has greatly interfered with all branches of business. The epidemic appears to be abating.

In Sheffield the rate of mortality has also shown a marked increase, and rose to 33.9 per 1,000 last week, against 21.7 and 24.8 in the preceding two weeks. In this town, also, a considerable number of deaths was attributed to influenza. Our Sheffield Correspondent writes: Influenza continues rife in Sheffield. It is much more widespread than the epidemic last year. It is diffused throughout the whole town, and the neighbouring districts have suffered in a similar manner. Fortunately, though so many have been attacked, the malady has, generally speaking, assumed a milder character than was the case last year, and the consequent uneasiness has been less. Pneumonia is, too, less rife. Hospital Saturday was on April 18th, and the first returns show a little falling off from those of last year. This, the newspapers say, is due to the disablement of the workpeople by the influenza; it is even asserted that as many as a third of the men engaged at the factories were off work from this cause last week. The death-rate from respiratory diseases is reported as having gone up last week—a fact not to be wondered at when the widespread prevalence of the influenza is considered, even though its character is milder than was the case last year. Several medical men have themselves suffered, but fortunately the issue has in every case been satisfactory. The epidemic last year, it will be remembered, bore very heavily on the medical profession, and several of its members were carried off by it.

Dr. J. MITCHELL WILSON (medical officer of health) informs us that "cases of epidemic influenza are very numerous among all classes throughout the town of Doncaster and surrounding parishes. The cases are reported as differing from those prevalent last year, as being now accompanied with more fever and prostration. Many cases are ushered in with sickness or diarrhœa, others with intense muscular pains and headache. In all there is left great debility. No death has yet been registered from it. Several medical practitioners are now laid aside through attacks of the prevailing complaint.

Our Leeds correspondent writes: During the last fortnight influenza of the kind which some time ago assumed epidemic proportions in Leeds, has been adding rather seriously to the work of the medical profession in the town. At one institution there are nearly a dozen well pronounced cases, and at another centre of benevolent work some of the nurses are quite helpless. The medical practitioners under whose supervision sufferers are being treated have no doubt whatever as to the nature of the malady. The symptoms are exactly the same as were identified with influenza when some hundreds of people were affected during the last outbreak. Pains in the back and limbs, extreme lassitude, and high temperature, are the most prominent evidences of the presence of the malady, as they were the last time it made its appearance in Leeds. In a few isolated cases these ailments have been succeeded by pneumonia.

Dr. A. DRURY (Hon. Assistant Secretary of the Yorkshire Branch at Halifax) states that there are undoubtedly many cases of influenza in Halifax. "In my own practice I have several typical cases, and each doctor I have spoken to during the day reports the same. Up to the present no fatal case is reported."

Dr. W. H. HALEY (Honorary Assistant Secretary of the Yorkshire Branch at Wakefield) writes that the epidemic is very bad there; "several medical men are laid up with it. In reply to your question as to extent, I can say that (in a large practice), to every single case in the last epidemic, there are at least ten cases in this. Of course, the name of influenza is a misnomer entirely, there being no nasal symptoms; the cases show more direct reference to the cerebro-spinal system. In many cases the throat symptoms have been very marked; but the one peculiar feature which I have observed has been the similarity to acute rheumatism; the high temperature, together with the pain in the extremities, being very likely to mislead."

Dr. ADOLF BRONNER (Honorary Assistant Secretary of the Yorkshire Branch, at Bradford), states that there are a large number of influenza cases in Bradford. They are, however, of a much milder nature than last year. They last only one to two days, and are followed by nervous prostration, but not to a great extent. No complications.

Dr. R. LAWFORD KNAGGS (Honorary Assistant Secretary Yorkshire Branch, at Huddersfield) writes that the medical officer of health informs him that inquiries have been made, which have resulted in the finding of one probable case, but that there is certainly nothing in the nature of an epidemic. There have lately been a number of colds and sore throats of an apparently infectious character in the town, but nothing like the influenza that was so prevalent last year.

Dr. ROBERT CUFF (Honorary Assistant Secretary Yorkshire Branch, at Scarborough), states that he is informed that the disease has been very prevalent in the villages to the south of Scarborough, between that town and Hull, that on the west it has travelled as far as Snainton, where a good many

cases have occurred, but that he has not yet heard of it as existing in the villages to the north.

At Harrogate, Dr. Gordon Black (Honorary Assistant Secretary Yorkshire Branch) informs us that there have been a few sporadic cases, but no epidemic.

The epidemic has distinctly spread into Lincolnshire; thus Dr. Palemon Best, of Louth, has been good enough to inform us that there has been a very extensive spread of influenza in that district. The annual hunt steeplechases were held a fortnight ago, and the epidemic appeared to have been brought to the town by strangers attending the races, as a few days afterwards a large number of those who attended the races became affected with the disease. Three of the medical men of this town who attended the races have been sufferers, and one large oil cake mill employing a considerable number of men has been partially closed on account of the number of *employés* affected. Two distinct types occur: (*a*) the bronchitic, (*b*) the catarrhal. Both are ushered in with high fever and pains in back, limbs, and bones of head and face. In the bronchitic type profuse purulent expectoration from lungs occurs in two or three days. In the catarrhal variety the discharge from the nose does not become purulent so soon, if at all, and the constitutional symptoms are less severe than in bronchitic type. Last year one of my patients became paralysed in muscles of head, trunk, and limbs on both sides; the paralysis was unequal on two sides, but has become permanent, so that she can with difficulty feed herself or walk; her age is 40, and her health was excellent until she suffered with influenza. Up to the present time I have not this year seen any such untoward result following an attack.

Dr. W. A. Carline (Honorary Secretary of the Midland Branch, at Lincoln) writes that, while influenza is very prevalent in the towns and villages in the northern part of the county, there have been several cases in Lincoln also during the past week. He fears that the influx of visitors caused by the great horse and cattle fair this week is likely to be followed by an increased spread of the disease.

In other parts of the midland counties the epidemic does not appear to prevail, at any rate, as yet; thus, Dr. Sharp (Secretary of the Midland Branch, at Derby) writes: I have heard of two or three cases, but it is certainly not epidemic at the present time in this town. Dr. Handford (Honorary Secretary at Nottingham) writes: Influenza has certainly not become epidemic again in this neighbourhood, and I have not heard at present of a single unquestionable case.

Dr. Frank Pope (Honorary Secretary at Leicester), on the other hand, writes: Influenza has never been entirely absent since its first arrival in December, 1889, occasional cases having been observed from time to time. During the last two months these have become more frequent, and in many cases more severe. Few, if any, of the local practitioners have not had several cases under their care. The epidemic has, however, up to the present not reached the proportions of the first one in the spring of 1890.

The epidemic in the United States appears to be on the decline, although the number of cases daily reported is still very large and the death-rate is high. Few cases, so far as we have been able to ascertain, appear to have occurred on the Continent, but it is reported that in Portugal cases of influenza have occurred in some parts of the interior; the disease, while not showing much tendency to spread, is of severe type, often simulating typhoid fever. The epidemic is especially severe in the province of Macau, which is also suffering from a visitation of small-pox. Influenza has been raging in North China since the beginning of the winter.

THE HOSPITALS COMMITTEE.

Special Hospitals.—General Practitioners and the Metropolitan Hospital. St. Peter's Hospital.—Hospital for Sick Children.

This Committee resumed their inquiry at the House of Lords on April 20th, Lord Sandhurst presiding.

Dr. Stretch Dowse was first called, and said that he was a private practitioner, a doctor of medicine of the Aberdeen University, a Fellow of the College of Physicians, Edinburgh, and of the College of Surgeons, London. He had previously been connected with the West End Hospital for Nervous Diseases, but had resigned in consequence of disputes which arose there, and the unbusiness-like way in which it was administered. There was great opposition to Dr. Tibbits's administration, but not to his method of treatment of the patients. He (Dr. Dowse) could not go so far as to say that special hospitals were undertaken in the first instance as commercial speculations. They were nearly all started in a very small way in order to meet the necessities for the treatment of the particular diseases rather than to benefit any particular men. He was strongly in favour of special hospitals, but he thought there should be some method of checking their growth, for it ought not to be in the power of any man, medical or otherwise, to start a special hospital and appeal to the public for charity unless it were made evident that such hospital was worthy of charity, and was conducted upon what might be considered business-like principles.

The Witness, in answer to Lord Kimberley, spoke of the great desirability, in his opinion, of the utilisation of twenty-four Poor-law infirmaries for clinical instruction. There was no doubt that those institutions were well officered and managed, but their organisation might be greatly improved. The Gathorne Hardy Act should be thoroughly carried out. He would have the infirmaries managed by the London County Council, and ladies should have a share in the management. There was a great advantage in these institutions as homes for the suffering and afflicted poor, who could only be kept for a limited time in the London hospitals. Steps should be taken to organise a staff of visiting surgeons to go to the infirmaries to give instruction to students. There was great need for more extensive clinical teaching than that which was afforded by the London hospitals. It was undoubtedly the case that students after passing their examination were lamentably deficient in practical knowledge. The infirmaries were really perfect hospitals, but he should strongly protest against selecting men holding appointments at the general hospitals as visiting surgeons. There was a rapidly growing and evil tendency on the part of the hospital staff to absorb everything unto themselves which came within their grasp. The new centres for teaching would afford opportunities for every hospital to come to the front, and for the younger men to show of what stuff they were made. That would produce rivalry and have a good effect upon the profession at large.

In answer to Lord Thring, Dr. Dowse said he considered that that which was for the benefit of the doctors was for the benefit of the patients. It was not his experience that patients were neglected or that science and the doctor's advantage were preferentially sought at the hospitals. He was not personally acquainted with the centralising system in Vienna, but he was of opinion that such a system had more advantages than disadvantages. Unless institutions were conducted in a business-like manner, such as would meet with the approval of the Hospital Sunday Fund, they ought not to be allowed to continue. If a hospital was not recognised by the Hospital Sunday Fund it was ostracised by the medical profession, and ought to be so by the public.

The Witness further stated that he had been medical superintendent of the Highgate Infirmary, in which there were more than 500 beds. He believed at that infirmary there was the best staff of nurses in the world. They were trained at St. Thomas's Hospital. He was decidedly in favour of free general hospitals. The extensive gratuitous treatment of patients injured private practitioners. The out-door hospital relief was no doubt abused, but the extent of the abuse was greatly exaggerated. The out-patient departments of hospitals were so badly organised and conducted that their great advantages were very much lost. His remedy for the abuses would be a better organisation of the hospitals.

Dr. Arthur Henry Sandiland said he practised in the Southgate Road, near the Metropolitan Hospital. That hospital was now conducted on the pay principle. He wished to say something as to the evidence given by Mr. Byers, the secretary, as to the feeling of the medical practitioners in the district. It was stated that they had withdrawn their opposition to the scheme; but he (the Witness) did not know that any one of them—unless he had become a salaried officer—had withdrawn his objection. The grounds on which they objected was that the hospital, as at present constituted, was of no use to the poor in the neighbourhood. The poor man could only get one attendance, and then, unless he joined the

provident fund, he was told to go to the workhouse. It was also a great injustice to the private practitioner in the neighbourhood; and, further, improper persons were relieved and provision was made for those who could and did pay for themselves. He gave several instances of persons who had previously paid private practitioners for medical attendance who had been relieved by the hospital. Whilst he did not deny that a hospital of that description might be started, he considered that the authorities of the Metropolitan Hospital had no right to obtain money from the charitable public. They had not complained to the hospital authorities, and until the present there had been no opportunity of coming before their lordships. According to the deeds of the hospital, it was founded and supported to afford "gratuitous relief to the sick poor." There had, since the alteration of the basis of the system at the hospital, been a meeting of the subscribers and the alteration had been agreed to. The poor were now turned away. The indigent poor had to seek relief at long distances from their homes or had to go to the workhouse. He was not unfavourable to the provident system if it were started in a *bonâ-fide* manner.

Dr. George Locke (Kingsland Road) also took exception to Mr. Byers's evidence as to the alleged withdrawal of the opposition of private practitioners to the adoption of the provident system at the Metropolitan Hospital. Fifty of the practitioners in the district had signed a "round robin" objecting to the system at the hospital. That was two years ago, and its object was to demonstrate the fact that their opposition had not ceased. His experience of several years at the Metropolitan Provident Medical Association was against the provident system. The system was spoiled by the officials, who looked after numbers rather than the selection of suitable cases. He then read letters from two members of the profession strongly protesting against the provident plan at the Metropolitan Hospital.

Mr. Walter Scott (Secretary of St. Peter's Hospital for Stone) said there were twenty-four beds and two private wards in the hospital, which was situated in Covent Garden. He took exception to the statement of Colonel Montefiore, of the Charity Organisation Society, as to the cost per bed at the hospital, and said that, instead of £285, the cost was £130. From the year 1883, application for a grant had not been made to the Hospital Sunday Fund. That was because of the excessively small and decreasing grant received year by year. The work of the hospital was increasing, but the Distribution Council of the Fund did not recognise the special work of the institution. The patients were admitted entirely by the surgeons through the out-patient department. There were no letters of recommendation. It was in no sense a proprietary hospital. It was worked at a deficit, and he had managed to fund £800 towards the expiration of the lease. To a large extent it was by means of the fees of the out-patients that the hospital was run. There was a matron, a child's nurse, two regular day and night nurses, and a ward maid. Last year £543 was spent on drugs, and a subcommittee allotted £500 to the out-patients and £43 to the in-patients. The Witness then spoke of the constitution and management of the hospital.

In answer to Lord Kimberley, Mr. Scott stated that the grants from the Hospital Sunday Fund had been £51 11s. 3d. in 1879, £56 6s. 8d. in 1880, £56 5s. in 1881, £56 5s. in 1882, £33 15s. in 1883, and £23 6s. 8d. in 1884. He believed the reason for the falling off was a strong objection to special hospitals, and also the amounts obtained from the out-patients. Mr. Scott further stated the reason might have been the fact that they could not make the two ends meet. He really did not know the circumstances of the patients who were relieved, but presumed that it would be left to the surgeon. The four medical men on the staff were honorary members of the Committee.

Mr. Hurry Fenwick, surgeon of the hospital, stated that he was also connected with the London Hospital. He sometimes sent in-patient cases from the London to St. Peter's Hospital for Stone, as it was his endeavour to bring about co-operation between the general and the special hospitals. He thought that that plan of co-operation was capable of further development. He did not find any opposition to the system on the part of his colleagues. There had been a great deal of teaching at St. Peter's Hospital during the last two years.

Upon the resumption of the inquiry on Thursday (Lord Sandhurst presiding).

Mr. Hurry Fenwick, recalled, stated that at St. Peter's Hospital for Stone, syphilitic cases were not admitted as in-patients. In regard to the co-operation of general and special hospitals, he said that such co-operation should be much more extended, as a good deal of the educational power of special hospitals could then be more utilised than at present. If the special hospitals were affiliated to the general hospitals, a good deal of the antagonism to the special hospitals would be done away with. Special hospitals withdrew from the consultant, who was generally attached to the hospital, a good deal of special material which he might use to get experience and clinical teaching from. No place should be allowed to use the word "hospital" unless a licence was obtained. Such a licensing authority might also be with advantage extended to general hospitals.

Mr. A. Lucas, Vice-Chairman of the Great Ormond Street Hospital for Sick Children, stated that that hospital, which was founded in 1852, was the first children's hospital in London; since then there had been fourteen such institutions started in England. Although it might be called a special hospital, he considered it was a general hospital, with a limitation as to age, for practically all diseases were treated there. There were 127 beds now, but when the new wing now being erected was completed there would be provision for another 90 beds. The hospital was practically free. The sources of income were subscriptions and donations, and in 1890 they received £2,997 in subscriptions; £3,501 in donations; £2,160 from legacies; Hospital Sunday Fund, £781; Saturday Fund, £154; dividends, £430; sundries, £1,281. There were endowments amounting to £16,232, which gave an income of £431 a year. More than £3,000 was required to meet the cost of building and furnishing the new wing. There was a lady superintendent, eight sisters, eleven staff nurses, eleven probationers, eight lady pupils, and seven sisters engaged in private nursing outside the hospital. The private nursing was a paying business.

The Chairman: What is your opinion as to licensing hospitals? All new hospitals should be licensed, but the licensing body should not be composed of doctors; they would be influenced by professional jealousies. He had very little doubt that there was an abuse of the outpatient department, but the extent of the abuse was very much exaggerated. A great deal of the abuse was due to ignorance. Since 1875 the hospital authorities had taken active measures to prevent abuse of the advantages of the charity. The Witness, in reply to further questions, stated that he would be in favour of some supervision of all hospitals—special and general. He would not like the authority to be a municipal body or connected with the Charity Commissioners. As Highgate was now a part of London, it was proposed to give up the convalescent branch there and to affiliate with other convalescent institutions. There was a Medical Committee which discussed the various matters of interest to the doctors. The question of having a paying ward had been sometimes considered, but receiving money from the public as a charity, it was thought that it would be detrimental if it were known that payment was received from the patients. There were a large number of endowed cots at the hospital. There were two classes of endowments one at the rate of £1,000, which was in perpetuity, and a second class, which, by payment of £300, was for life. There were ten of the first and seven of the second class. The donors of such cots had no right to keep them vacant. The cots were frequently named in memory of some deceased friend of the donor, and such names were always afterwards associated with the cots. The estimated cost per bed in 1890 was £70 18s. As to the out-patients, it was difficult to arrive at anything like a reliable estimate of the cost per patient, but for twelve years the average had been estimated at 1s. 8¼d.

Dr. W. B. Cheadle, F.R.C.P., senior physician to the hospital, said that he was in favour of a separate hospital for children. There were a certain number of students at the hospital, which was open to all who chose to pay. The fees went direct to the lecturers, who received proportions in accordance with the amount of work done. There were also some female clinical clerks, and lady students attended the hospital. Some of the staff were also connected with other hospitals, and that was of advantage, because it ensured men

of very high standing. Affiliation of the provident dispensaries with the hospitals, if it could be carried out satisfactorily, would be very desirable.

Mr. R. G. GILBERT (Secretary) said that the West London Hospital, Hammersmith, was a general hospital without a school. The letter system obtained at the hospital, and every patient was required to bring a letter. The out-patients, even if they had not a letter, were, however, treated once by the resident medical officers. There were 101 beds, including ten in special wards. The hospital was started as a dispensary; there were several special wards, and diphtheria and other cases were isolated. Such infectious cases as scarlet fever, small-pox, and typhus were not admitted. There were four resident medical officers; they were under the House Committee, which was practically the administrative body of the hospital. The average number of the working beds was 88.69 for the last three years, and last year it was 94.45. There was a large out-patient department. The average number of new cases for the last three years was 21,000, and of attendances 60,700. From some of the medical staff there had been complaints of the extraordinary number of cases they had to see. The population the hospital served was probably 500,000. The hospital was assessed at £310, and it stood in grounds of nearly four acres. He then proceeded to give details of the expenditure and income of the hospital.

The Committee then adjourned.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will take place on Thursday, May 28th, at Gravesend, Mr. O. R. Richmond in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, Mr. A. W. Nankivell, St. Bartholomew's Hospital, Rochester, not later than May 2nd, 1891. Further particulars will be duly announced.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The annual meeting of the above District will be held at Canterbury on Thursday, May 14th, Mr. Brian Rigden in the chair. A discussion will take place on Koch's Treatment of Tuberculosis.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—A meeting will be held at Brentwood on Thursday, May 21st. Gentlemen having communications to bring before the meeting are requested to notify the Honorary Secretary of the District, Mr. C. E. Abbott, Braintree, as soon as possible. Further particulars will be duly announced.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—The next meeting of this District will be held at the Tottenham Hospital, The Green, Tottenham, on Thursday, April 30th, at 8 P.M., Sir William Mac Cormac, President of the Metropolitan Counties Branch, in the chair. Dr. F. de Havilland Hall will read a paper on "Clinical Notes on Diseases of the Pharynx." Discussion to follow. Some interesting cases from the wards will also be exhibited. All registered medical men, whether members of the Association or not, are earnestly invited to attend these meetings.—GEORGE HENTY, M.D., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WESTERN DISTRICT.—A meeting of this District will be held on Tuesday, April 28th, at the Lyric Hall, Ealing Broadway. The chair will be taken by Mr. F. C. Dodsworth, L.R.C.P., at 8.30 P.M. A paper will be read and a demonstration given by Mr. W. J. Walsham, F.R.C.S., Assistant Surgeon St. Bartholomew's Hospital, on "Nasal Obstruction and its Treatment." The honorary secretary will be pleased to receive notice of papers or specimens of interest (microscopical, pathological, or clinical).—C. A. PATTEN, Honorary Secretary, Marpool House, Ealing.

NORTH OF ENGLAND BRANCH.—The spring meeting will be held at Sunderland, on Thursday, April 30th, at 3.30 P.M. Notices of papers, etc., should be sent in at once.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 22, Eldon Square, Newcastle-upon-Tyne.

SOUTHERN BRANCH: SOUTHAMPTON DISTRICT.—The next meeting of the District will be held at 1, Grosvenor Square, Southampton, on Tuesday, May 5th, 1891, at 8 P.M. After the election of officers and examination of accounts a paper will be read by Professor Henry Cayley, F.R.C.S., Army Medical School, on Some Functional Diseases of the Heart.—THEOPH. W. TREND, M.D., Local Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE spring meeting of this District was held at the Queen's Hotel, Upper Norwood, on March 12th, Mr. H. G. PLIMMER, of Sydenham, in the chair.

Next Meeting.—After the minutes of the previous meeting had been read and confirmed, it was resolved that the next meeting be held at Croydon, on Thursday, May 14th.

Communications.—Mr. J. SIDNEY TURNER read notes of a case of Malignant Disease of the Sigmoid Flexure in a patient aged 66, where acute obstruction came on suddenly after an aperient, and death occurred in twelve days without sickness or rise of temperature.—Dr. JOHN H. GALTON described a case of Traumatic Pemphigus.—Mr. CHARTERS J. SYMONDS described the Nature and Treatment of Goitre, showing patients on whom he had operated, as well as photographs and specimens of tumours removed. Unilateral goitre was usually cystic, and had a distinct capsule, which could be easily dissected out without fear of hæmorrhage. Bilateral goitre was mostly parenchymatous, and, as it was unwise to attempt removal of the entire organ, Mr. Symonds advised resection of the lateral lobes, leaving the portion over the trachea which covered the vessels and recurrent laryngeal nerves.—Mr. ECCLES and Dr. JOHN GALTON made remarks.—Dr. ARMAND RUFFER read notes on the Pathological Anatomy of Infectious Diseases, and showed a series of slides illustrating them in a magic lantern with oxy-hydrogen light. These included specimens showing the bacilli in the process of destruction by the leucocytes, and the changes that occur in such diseases as diphtheria, actinomycosis, splenic fever, etc.

Dinner. After the meeting nineteen of the members dined together.

A MEETING of this Branch was held on April 2nd at the Royal Surrey County Hospital, Guildford, Mr. C. J. SELLS, President of the Branch, in the chair.

Communications.—Dr. RUSSELL: A Case of Removal of the Kidney for Cystic Disease—successful: also a Case of Compound Depressed Fracture of the Skull; depressed portions removed; recovery. Dr. GABB: A similar case.—Dr. MORSHEAD: A Case of Necrosis of Whole of the Clavicle following Measles.

MIDLAND BRANCH: LINCOLNSHIRE DISTRICT.

A MEETING was held at the Town Hall, Louth, on April 16th, Mr. PILCHER, President of the Branch, in the chair.

Papers and Cases.—Dr. ELDER: The Treatment of Tuberculous Peritonitis by Abdominal Section. Dr. MANSEL SYMPSON: Congenital and Infantile Spastic Palsies, with Notes of One Case of Each Form. Dr. PALEMON BEST: Suppression of Urine. Mr. CANT: A Case of Destruction of the Lower Lid by Lupus, and its Complete Restoration by Transplantation, a large piece of skin being removed from the forearm for the purpose. Dr. CARLINE: A Case of Buphthalmos.

Luncheon.—Luncheon took place before the meeting, at the Masons Arms Hotel.

Influenza.—Several members were prevented attending the meeting, owing to the prevalence of influenza in the neighbourhood.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE spring meeting of this Branch was held on April 15th at Pontypridd, Dr. PRICE (Cardiff), President, in the chair. About thirty members were present.

Papers, etc.—Mr. EMIL BEHNKE read a paper on the Nature and Treatment of Stammering and Stuttering, etc.—Mr. R. T. E. DAVIES (Tredegar): A case of Extensive Epithelioma (?) of the Face, which Perforated the Cavity of the Mouth, treated successfully by the application of strong Nitric Acid. The patient was shown.—Dr. J. TATHAM THOMPSON (Cardiff) presented two communications (1) Removal of Steel from Retina by Electro-magnet; case shown. (2) Transplantation of Mucous Membrane to Eyelids for Entropion; cases shown.—Mr. H. N. DAVIES (Cymer) showed cases (1) Fracture of Skull with Depression, with Dislocation of Right Hip and Fracture of Left Femur. (2) Chopart's Operation, in which the Tendon of Tibialis Anticus was left attached to the Flap, giving a very useful foot.

Midwives Bill.—It was resolved that the Midwives Registration Bill be not discussed.

New Members.—The following gentlemen were elected members of the Association and Branch:—R. A. Forde, Merthyr; D. Naunton Morgan, Gilfach Goch; Elmes Y. Steel, Abergavenny; Arthur E. Poolman, Abergavenny; C. B. Gratte, Newport; L. D. Gamble, M.B., Abergavenny (Branch only); G. H. Browne, Brynmawr (Branch only); E. H. Jones, M.B., Dowlais.

Vote of Thanks.—A vote of thanks was passed to Mr. Behnke for his paper.

Dinner.—The members and friends subsequently dined together at the New Inn Hotel.

SPECIAL CORRESPONDENCE.

BERLIN.

Another New Cure for Consumption.—A Lost Essay by Goethe.

THE announcement of "a new cure for consumption" has ceased to arouse any excitement in Berlin, and thus Dr. Tranjen's publication in the *Berliner Klinische Wochenschrift* of April 20th, though interesting enough in itself, and though accompanied by encouraging remarks by Professor Ewald, is received with little more than—"we shall see" and "time will show." The time for enthusiastic hopes is over—in fact, medical men seem almost ashamed that there ever should have been such a time, and determined that their critical faculty shall not again be caught napping. Dr. Tranjen's remedy is a solution of hydrargyrum thymolo-aceticum, which he injects into the gluteal muscles once in seven or ten days. After the second or third injection, a dessertspoonful of a solution of potassic iodide (5 in 200 grammes) is given internally three times a day. Dr. Tranjen says: "(1) In cases in the initial stage of pulmonary consumption I have, in a very short space of time, effected so great an improvement that, should it continue, the cases may be considered as cured. (2) In cases where the disease was not too far advanced, I have been able to observe improvement—decided, though varying in degree. (3) Even in very serious cases I have observed no ill effects, with the exception of a slight rise of temperature."

Professor Bardeleben, of Jena, has found amongst Goethe's unpublished papers in Weimar an essay "On the Comparative Anatomy of the Skull of Mammalia," written throughout in Goethe's own hand. The essay is dated 1794. Professor Bardeleben will read a paper on the subject at the Anatomical Congress to be held at Munich next month, and probably the essay itself will be printed in one of the forthcoming "Goethe-Jahrbücher."

LIVERPOOL.

The Use of Cantharidinate of Potassium in Tuberculosis.—Localised Paralysis: a Cortical Injury.

AT a recent meeting of the Medical Institution Dr. W. Carter related his experience of the use of cantharidinate of potassium in a few cases of tuberculous disease. The results he had so far obtained were not encouraging. The injections gave rise to intense pain at the point of introduction, an inconvenience that was, however, speedily obviated by the preliminary injection of a little cocaine. Considerable gastric pain and albuminuria frequently resulted, and no improvement occurred in the condition of the patients beyond what might reasonably be expected from the general care they received in hospital.

An interesting case of limited paralysis from injury to the cerebral cortex lately came under treatment in the Northern Hospital. A youth, aged 15, received a kick from a horse on the left side of the head. When admitted he was in a semi-conscious state, and there was a compound depressed fracture of the cranium situated about three inches above the left ear, corresponding pretty nearly to the lower part of the arm centre. There was escape of brain matter. Mr. Mothersole, the house surgeon, trephined and removed the depressed bone. Consciousness returned, and it was then ascertained that there was paralysis of the right arm and slightly of the side of the face, but none of the leg, and speech was not affected. At the end of a week power began to return in the arm, but for some time the patient could write better with the left than with the right hand. There was no agraphia. Six weeks after the accident all trace of paralysis had disappeared.

CORRESPONDENCE.

FACTORY LEGISLATION AND CERTIFYING SURGEONS.

SIR,—The victory which has been won for the certifying surgeons by the rejection of Clause 19 of the Factory and Workshops Bill is a matter for congratulation not only in the interests of the profession, but in the interests of public health. It would have been a retrograde and disastrous step to have abolished an office which has been shown, during the discussion in Committee, to be most useful in the protection of weakly children and in the prevention of disease. The physical fitness of the worker must still be a matter of State concern, and future legislation will have to use the medical profession more and more for the enforcement of sanitary precautions and provisions. In the present instance a great danger has been overcome by the vigilance and activity of the Parliamentary Bills Committee of the British Medical Association, which has been able, by means of its permanent organisation, to assist the representatives of the certifying surgeons in placing their case to the best advantage before the Standing Committee on Trade. The greatest praise is due to Mr. Mundella for his influential aid throughout the struggle in Committee, where he was ably supported by Dr. Farquharson. I hope the success which organised action, although taken somewhat late, has won in this case, will teach us to rely more and more on wise combination to lessen the political powerlessness of the medical profession.—I am, etc.,

Birmingham. WALTER FOSTER.

PROPOSED RECONSTITUTION OF THE UNIVERSITY OF LONDON.

SIR,—Dr. Hale White, in a letter in the BRITISH MEDICAL JOURNAL of April 18th, states that there "are some grave misconceptions about the scheme of the Senate of the University of London." There are, but nowhere have I seen or heard of them in greater profusion than in Dr. White's letter. I have been comparing it with the last promulgated scheme which has been officially forwarded to us, and with your permission I will mention a few of the discrepancies between the two.

1. Dr. Hale White states that provincial colleges connected with other Universities will be ineligible to become constituent colleges. This is not the case, as the scheme only states that in considering the application of an institution for admission regard shall be had to its relation to any other college. There is nothing prohibitive in this regulation (23 e.).

2. He proceeds to tell us that the Senate has the power of refusing to admit provincial colleges. There is a half truth in this, but the other half, which has been omitted, is that any college refused admission has a right to appeal to the

Lord President of the Council, who may overrule the decision of the Senate (27).

3. London constituent colleges cannot, he tells us, be removed by the Senate. Clause 25 b., on the contrary, states that the Senate shall have power to remove any institution from being a constituent college, subject to an appeal to Her Majesty in Council.

4. As a conclusion from these mistaken premisses, he states that "the question of provincial colleges is an unimportant matter." To whom? Not to the provincial colleges, since the new scheme proposes to deal unjustly and inequitably with them to the advantage of the metropolitan institutions. And certainly not to the latter, since it will accomplish that which has all along been the object of the metropolitan teachers, or, at least, a portion of them—that is, it will give them an unfair and fictitious advantage over provincial institutions without requiring them to make any unpleasant personal or pecuniary sacrifices in order to enable them fairly to compete with the latter.

5. Dr. Hale White then proceeds to argue that the status of the M.D. will be lowered, or, what is the same thing, that it will be made more accessible. It is difficult to see how this follows from the facts. The examination for the M.D. is to remain unaltered; but it is notorious that a large proportion of those obtaining the degree of M.B. at present never proceed to the higher distinction. Is it in the least likely that any larger, or even so large a proportion of those who, in the future, obtain the modified M.B., will go on to the unmodified M.D.? It should not be forgotten, in this connection, that the student's cry is for a Doctor's, not a Bachelor's, degree.

6. Dr. White next urges the adoption of the scheme on the ground that nearly all the interested bodies are satisfied. Those in London may or may not be: one hears contradictory statements on this point. In any case the College of Surgeons has not yet expressed an opinion, and cannot do so until May 11th, when a meeting is to be held to consider the scheme. Whatever may be the opinion in London, there is no doubt of that in the provinces, and however convenient it may be for metropolitan schools to endeavour to ignore those outside that charmed limit, provincial institutions have shown in the past, and are prepared to show in the future, that they have to be reckoned with. Our schools are not and will not be satisfied with any such scheme as that at present contemplated, and are determined to oppose it stage by stage in every way in their power. Four representatives out of forty-two on the Senate, and one out of nineteen on the Standing Committee of the Senate for the Faculty of Medicine, is a disproportionate representation which the provincial colleges are not for a moment prepared to accept.

Moreover, the position adopted by so many metropolitan teachers—that if their claims, reasonable or unreasonable, be met, it is of no consequence what provincial teachers may feel; together with the calm assumption of the former that, at their mere desire, a great Imperial institution like the University of London is to be made a narrow parochial undertaking—is not one which we are willing to concede without a vigorous resistance, a resistance in which we hope to be seconded by all provincial graduates who are members of Convocation.

In the last paragraphs of his letter Dr. Hale White deserts the realms of fancy for those of prophecy, into which I shall not follow him. Those who wish to estimate the value of his forecasts can judge by that of his facts.—I am, etc.,

BERTRAM C. A. WINDLE, Dean of the Medical Faculty, Queen's College, Birmingham.

SIR,—Dr. Hale White's letter is, as I read it, an endeavour to show that the "medical grievance" would be remedied by the adoption of the Senate's scheme, and at the same time the high standard of the M.B. be maintained. The "medical grievance," as generally understood, is that an M.D. degree is relatively inaccessible to the London students, as compared with those in the other centres of medical education. Dr. White urges that the M.D. degree is "much more accessible" because a student "can attain his M.B. and his M.R.C.S. and L.R.C.P. by passing one set of professional examinations," although "the University will determine the standard for the M.B. and the Colleges that for the M.R.C.S. and L.R.C.P."

Taking this to be a correct interpretation of the scheme, I fail to see how, if existing standards of graduation are maintained, the M.D. degree can be "much more accessible." We can imagine that at the proposed conjoined examination a candidate may have reached the standard for the M.R.C.S. and L.R.C.P., and fail to attain that for the M.B. Is not this likely to give rise to great confusion? In fact, is it possible to maintain for long the two standards? One thing only can happen in the long run—the two standards must become equal. Those who have any knowledge of medical education in London well know that the standard for the M.B. (if the "medical grievance" is to be redressed) must sink till it is the equivalent of the M.R.C.S. and L.R.C.P.—in other words, the M.B. of London will become inferior to that of any other University in Great Britain. There is another reason why the Senate's scheme cannot solve the "medical grievance." The Preliminary Scientific Examination is to remain as it is, and, as I read it, only those who have previously passed it will be eligible for the M.B. degree. If this position is maintained, I contend that the degree cannot become more accessible. But does anyone seriously contend that this examination will be kept as at present, when, as would be the case if the scheme should pass, the management of the medical faculty is under the control of the Royal Colleges and the medical schools? Have the Royal Colleges given any sign in the past that they recognise the importance of elementary science in medical education? On the contrary, I understand, from the BRITISH MEDICAL JOURNAL of April 18th, that they have decided to give the whole of the additional year to clinical work, contrary to the recommendation of the Physiological Society and others that it should be largely devoted to elementary science. In no University in Great Britain is an M.B. degree given, except after an efficient education in which elementary science forms a part.

I maintain that the student who receives the "education" demanded by the Royal Colleges is not deserving of an M.B. degree. I maintain, also, that the Preliminary Scientific Examination is not too severe a test in elementary science to impose on a candidate for an M.B. degree.

What is required in London will not, in my opinion, be attained by passing the Senate's scheme. The metropolitan medical schools should so organise their scientific teaching by appointing suitable scientific lecturers and providing properly equipped laboratories, by which means the "unsatisfactory state" of the Medical Faculty of London may have some chance of improvement.

Because the Senate's scheme will not tend to this end, but have a dangerous influence on higher education in London, I appeal to all medical graduates in London to oppose it.—I am, etc., T. W. SHORE, B.Sc., M.D.Lond.,

Lecturer on Comparative Anatomy and Biology, and late Demonstrator of Physiology at St. Bartholomew's Hospital.

THE ABUSE OF CLUBS.

SIR,—As Dr. Evans says, we have it in our own power to remedy the evils complained of. We have too long been content with a passive acceptance of, or a useless grumble at, the "terms" offered us by various benefit societies. We need not quite imitate the methods of the trade-unions; but surely we may and should with advantage take a leaf from their book. Why can we not, like them, combine, as also do the societies that literally work us in a way that, were our positions reversed, would probably be called the sweating system. It may be that your readers are tired of complaining, and think further discussion useless, but I am not aware that any honest combined attempt to solve the difficulty has yet been made. I would suggest that, time being first given for the matter to be discussed in the BRITISH MEDICAL JOURNAL, as many members as can should meet together at some convenient place, to discuss the best manner of proceeding to get some combined action from the profession, and to suggest also what this action should be. For instance, the meeting might endeavour, in say every district where there is a Branch of the Association, to appoint a provisional secretary, who would do his best to get a meeting of all the general practitioners in his district, when the proposals that would be suggested by the first meeting would be discussed, and if necessary added to. Each district might then appoint one or more delegates for the further discussion of these proposals.

The suggestions of the first meeting might take something of the following form:—

1. What shall be the minimum annual payment of each member of a club?

2. Shall it be a fixed sum, or regulated by: (*a*) The sum insured for in case of illness; (*b*) the age at which the member joins; (*c*) the income or age of the member?

The section "*b*" either to be used by itself, or in conjunction with "*a*" or "*c*."

3. Shall or can any rule be made that will exclude from the benefits of medical attendance those members who are well able to afford the ordinary fees of a general practitioner?

These suggestions are very crude and might no doubt be added to, though it seems to me that the fewer and the more definite the points of discussion the better; I will not now attempt to discuss them, but hope others more able will take the matter up. One thing is certain that unless we get a very large majority to endeavour to work together we can do no practical good whatever.—I am, etc.,

Freshford. CHAS. E. S. FLEMMING.

SIR,—I enclose a slip[1] containing a brief annual report of the Medical Aid Association which exists in this town. As an addition to this report I will state two or three facts. One is that the population of the area from which this Society draws its members (3,058) does not much exceed 6,000, so, practically, cheap medical attendance is supplied by this Association to about half the population. Cheap medical attendance means at the rate of 4s. per annum for each adult, 2s. for each child, including all medicines, etc.; midwifery 10s. and vaccination 1s. each case. Another fact is that a large number of the members are well-to-do, and can easily pay reasonable fees for medical attendance. This number is made up of farmers, shopkeepers in the principal streets, nearly all the publicans in the town, small property owners, artisans earning £2 to £3 per week, domestic servants from the large houses, etc. Another fact to notice is that two medical officers, whose joint salary is about £300 per annum, are engaged by this Society, and are doing the work that formerly, without any hardship to the public, brought in to the general practitioner about £200 per annum.

Judging from the report and the facts I have given, you can can readily understand what a very serious injury is being done to general medical practitioners by such societies as this, and how impossible it will be (if these societies continue to spread as they are doing) for a large number of practitioners to get a living for themselves, much more provide for a family; and, further, how the scope for medical practice is being limited, and thus the question as to what is to become of the large number of men annually entering the medical profession is rendered one of very serious importance.

I have on former occasions pointed out that the only remedy, as far as I can see, is such a combination of the members of our profession as will have power enough to compel all such societies either to have a wage limit with regard to the membership, or a sliding scale of payments, and thus be able to employ more medical officers and give much larger remuneration for their services.—I am, etc.,

Stourpoint. W. MOORE, M.R.C.S.E., L.S.A.

"THE NEW L.S.A.'s."

SIR,—I wish to bring to the notice of the profession the great hardship which the new Licentiates of the Society of Apothecaries of London are labouring under.

In many provincial hospitals applicants for the post of surgeon must be Fellows, Members, or Licentiates of the Royal College of Surgeons of Great Britain, or hold a degree in surgery from some British university, thus shutting out the new L.S.A.'s, who are as equally well qualified as those holding the M.R.C.S. and L.R.C.P.: diplomas granted upon similar conditions should certainly be placed on an equality.

A friend of mine lately commenced practice in a town. Soon after his arrival he had occasion to fill up a death certificate in a surgical case. The friends of the deceased took the certificate to the local registrar, who officiously informed them that the newcomer had no surgical qualification, which was false, he holding the new L.S.A. The Society of Apothecaries is the only medical corporation which grants a single title to a triple qualification, and I propose the General Medical Council be petitioned by the new Licentiates to grant them a title sufficiently distinguishable from the old L.S.A., who had no surgical qualification. I would propose the title L.M.S. be prefixed to L.S.A., which could not possibly give offence to anyone, and would, I believe, satisfy the requirements of the new Licentiates.

The paragraph inserted in the *Medical Register* is quite inefficient, and I would advise all the new L.S.A.'s, in the coming election of direct representatives to the General Medical Council, to vote only for those candidates who are in favour of giving us some distinguishing title.—I am, etc.,

L.S.A. 1887 and 1891.

GRAVES'S DISEASE.

SIR,—In the report in the BRITISH MEDICAL JOURNAL of April 18th, of Dr. Hingston Fox's interesting paper on Graves's Disease, at the West Kent Medico-Chirurgical Society, it is stated that Dr. Hunter Mackenzie's theory of the pathology was adopted.

As the theory mentioned is mine might I ask you to correct the name accordingly.—I am, etc.,

HECTOR W. G. MACKENZIE.

Lambeth Palace Road, S.E.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PHYSICIANS AND LICENTIATES.

KING'S LYNN.—There can, we believe, be no doubt that a Licentiate of the Royal College of Physicians is entitled to call himself a "Physician," and to practise as such.

ADVERTISEMENT BY CIRCULAR.

A. L.—We quite concur with our correspondent that the issue of the advertisement circulars, of which he forwarded copies, is greatly to be deprecated; and we have repeatedly urged in these columns that such advertisements should be forwarded to the College or body from which the advertisers derived their diploma. Prompt measures would, we hope, be taken to stop the objectionable practice.

"A CARD."

C. L.—With a view to avoid the wearisome reiteration of advice on the same subject, we deem it best to refer our correspondent to the suggestions made in the BRITISH MEDICAL JOURNAL of March 14th, page 611, and April 14th, page 778, under the respective headings of "Advertising Cards," and "Advertisements in Newspapers." The "card" issued by Dr. R. should entail upon its author the rigid enforcement of the disciplinary laws of his College.

A BAD COMRADE.

X.—We would willingly advise our correspondent as to the specific ethical obligation devolving upon A. and C. in the matter of B., but in the absence of any definite charge (other than a general imputation) of unethical conduct against the latter, are not in a position to do so, and therefore can only urge upon them the special expediency of seeking by precept and example unobtrusively but persistently to impress upon B. the *golden rule* by which it behoves all practitioners, in their own true interests, to be governed. It is scarcely necessary to add that, however regrettable the line of conduct pursued by B. may be, nothing would justify A. and C. in deviating by way of retaliation from a professionally honourable course of action, which, sooner or later, can scarcely fail to meet with its due reward.

FEES FOR ATTENDANCE ON RELATIVES OF MEDICAL MEN.

ST. LEONARDS MEMBER.—The medical man in South Africa is quite justified in making a claim for his attendance on our correspondent's brother. As the deceased left no estate, and as there is no actual legal claim against the brother, the best solution would probably be a letter written, fully and candidly stating all the facts.

ALARMIST ARTICLES.

ARTICLES, such as that on "Nervous Exhaustion," contributed by a young practitioner to the *Rectory and Vicarage*, are injurious, inasmuch as they unquestionably tend to excite a feeling of painful anxiety, not only in persons of feeble health, but in nervous and elderly people otherwise healthy; and such, it has been stated, has been the effect of the article in question. Great, therefore, will be the responsibility of

[1] The annual report showed that the year closed with a total membership of 3,058, being an increase of 239 over the previous year. The income for the year was £184, £20 of which was for entrance fees. The expenditure exceeded the income by £5, the chief items being medical officers' salaries, £295; cost of drugs, £15; cab hire, £20; rents, rates, taxes, and gas, £63; salaries of officers, £25; and cost of alterations and fitting up of surgery at new premises in York Street, £26. The total worth of the Association was £106, being value of stock £60, and cash in hand £46. The report stated that an extraordinary expenditure of upwards of £50 had been incurred in consequence of the Society removing their business from Lichfield Street to York Street. The statistics for the year of the medical officers showed 9,530 attendances at the surgery, 11,415 bottles of medicine, 4,654 home visits, 62 vaccinations, 252 teeth extracted, 83 births, and 70 deaths.

the writer if he persist in overshadowing the family circle with needless dread and apprehension. Moreover, he will do well to bear in mind that such contributions to non-medical papers may subject him to the disciplinary laws of his College.

INTRODUCTIONS.

A. BUYS a practice from B., paying half purchase money on entering, the other half to be paid on tranfer of appointments. The agreement states that B. is to give an introduction either personally or by circular, but this is not done. B. leaving the district the day after A. arrives, without leaving any address. Is A. legally bound to pay the rest of the money?

*** We are advised that a thoroughly reliable opinion on this case cannot be formed without the contract. It is not stated whether the appointments referred to have been duly transferred to the purchaser. If they have been, the question arises as to whether or not they were tranferred at a period later than that within which the introduction should reasonably have been given, as, if so, this might be taken as an admission by the purchaser that he was satisfied with the vendor's performance of the contract on his part. Apart from this, and from any facts appearing on the contract or otherwise, we think the purchaser would be entitled to counterclaim (in an action for the unpaid instalments of the purchase money) for damages for breach of contract. It will be well to look carefully at the contract, in order to ascertain whether or not there is any express agreement on the part of the vendor not to practise in the neighbourhood. If there is not, the vendor might return and re-establish himself, and the non-payment of the balance of the purchase money might afford a good excuse for so doing; although, as we have before advised in these columns, no excuse would appear to be legally necessary in the absence of an express provision in restraint.

A QUESTION OF SENIORITY.

SUFFOLK writes: A. and B. are partners with equal shares (A. being the senior). A. sells his share to C., and B. and C. then become partners. Who is by right senior partner, B. or C.?

*** Perhaps, in the absence of any express agreement on the subject, there is no strict legal right on the part of B. to take the position of senior partner, but we have no doubt that, by courtesy and general custom, he is entitled to it. In this case, the privilege would seem to consist of having his name appear first in the title of the firm.

MEDICAL MEN AND CORONERS' JURIES.

JUSTITIA. Medical men in actual practice are exempt from serving on juries, whether coroners' or in civil or criminal matters. The exemption should be claimed at the time the jury lists are made up. If the name remains on the list its owner is liable to be summoned, and may then find some difficulty in proving his right to be exempt.

NAVAL AND MILITARY MEDICAL SERVICES.

CONTINUOUS FOREIGN SERVICE.

A CORRESPONDENT points out that the present onerous conditions of foreign service in the Medical Staff demand a remedy. As that service is chiefly in India, he therefore invites attention to the following special regulations which govern the service of Royal Engineer officers in that country: Every Royal Engineer officer after four years is entitled to place his name on a "continuous service India list," and, if approved, he is allowed to serve on a certain time, after which he goes home on furlough, not on duty. At the end of the furlough he returns to India, and continues this system until the period for retirement comes, when he obtains a special Indian, in addition to his regimental, pension. By such a system, while the autonomy and cohesion of the Royal Engineers as a corps are maintained, and regimental promotion and rewards not interfered with, there is obvious advantage both to the State and to individuals. It is argued that similar advantages would accrue if some system of the kind was adopted in the Medical Staff; for the present system of long spells of foreign service and short periods of home duty, without break, speedily wears men out.

We think the information here supplied and the suggestions thrown out are well worthy of attention. Everything, in fact, connected with the organisation of the Royal Engineers is worth study, for they enjoy a larger amount of self-government, and as a result judiciously contrive to take better care of themselves than any other body of public servants. It may not be affirmed that the system suited for them could be fully applied to the Medical Staff; but at least much can be said, both on theoretical and practical grounds, for a system of semi-voluntary service in such a country as India. To some men Indian service supplies both pleasure and profit; to others it brings only disease and death. A voluntary system, therefore, tempered by official watchfulness, would automatically work out a selection of the fittest. There is a great difference in a home furlough and in the home service of medical officers. The value of furlough has long been recognised, so that some of our wisest Indian administrators have advocated one every seventh year, instead of after ten years. It affords real rest and refreshing for both body and mind, whereas the home tour of the medical officer brings no relaxation to one or the other. The medical officer, after five or six years of exhausting work in the plains, does duty on the homeward voyage, and on arrival is immediately plunged into the worry of garrison hospital work. The short annual leave he may get—probably after no little bother and delay—is far too limited for the recovery of broken health, much less for the brushing up of professional knowledge. It is not so much the amount of work as its continuous uncertain grinding character which wears out medical men, both in civil and military life, while the public and governing bodies are all too apt to look upon the doctor in the aspect of the hired horse, which proverbially never does or ought to tire. We would, therefore, welcome any modification of conditions which would lessen the strain of foreign service on medical officers as a body. At present they have little leisure either for recreation or for study, and any system which would afford them more of that is worth discussion.

THE NAVY.

SURGEON RICHARD EDMUND BIDDULPH, B.A., M.B., is promoted to be Staff-Surgeon, March 31st. His first appointment is dated March 31st, 1879.

The following appointments have been made at the Admiralty:—JOHN K. CONWAY, Fleet-Surgeon to the *Asia*, for service in Portsmouth Dockyard, April 13th; PERCY W. BASSETT-SMITH, Surgeon to the *Penguin*, April 15th; JOHN L. BARRINGTON, Surgeon to the *Nankin*, April 15th; HENRY L. CROCKER, Staff-Surgeon, to the *Boscawen*, for Portland Sick Quarters, May 3rd.

THE MEDICAL STAFF.

BRIGADE-SURGEON JAMES YOUNG DONALDSON, M.D., is promoted to be Deputy Surgeon-General, ranking as Colonel from December 10th, 1890, *vice* J. Landale, M.D., retired. Dr. Donaldson's previous commissions are thus dated: Assistant-Surgeon, June 13th, 1859; Surgeon, March 1st, 1873; Surgeon-Major, January 6th, 1875; and Brigade-Surgeon, June 24th, 1885. He has no war record in the Army Lists.

The promotions of the undermentioned officers are antedated as follows: Deputy Surgeon-General (ranking as Colonel) EDWARD CORRIGAN MARKEY, C.B., to September 11th, 1890, *vice* S. B. Roe, M.B., C.B., retired; Deputy Surgeon-General (ranking as Colonel) GEORGE E. WILL, to November 13th, 1890, *vice* J. G. Faught, promoted; Brigade-Surgeon (ranking as Lieutenant-Colonel) JOHN MATURIN, F.R.C.S.I., to September 11th, 1890, *vice* E. C. MARKEY; Brigade-Surgeon (ranking as Lieutenant-Colonel) ROBERT COLLINS, M.B., to November 13th, 1890, *vice* G. E. Will; Brigade-Surgeon (ranking as Lieutenant-Colonel) THOMAS O'FARRELL, M.D., to December 10th, 1890, *vice* J. Y. Donaldson, M.D., promoted.

Surgeon-Major (ranking as Lieutenant-Colonel) GEORGE ANDREW, M.B., is promoted to be Brigade-Surgeon from February 14th, *vice* J. Wilson, M.D., F.F.P.S.Glas., retired. Brigade-Surgeon Andrew entered as Assistant-Surgeon, March 31st, 1865; became Surgeon, March 1st, 1873; and Surgeon-Major, March 31st, 1877. He served with the 6th Regiment in the Hazara campaign in 1868, including the subsequent operations on the Black Mountain (medal with clasp), and in the Afghan war of 1878-80, taking part with the expeditions into the Lughman Valley and against the Khugianis (medal).

Sergeant-Major MARTIN HEWITT, Medical Staff Corps, is appointed Quartermaster, with the honorary rank of Lieutenant, *vice* Honorary Lieutenant T. Warrington, deceased, April 22nd.

Brigade-Surgeon H. S. MUIR, M.D., and Surgeon C. S. SPARKES, who are serving in the Bengal command, have leave of absence for six months on private affairs.

Surgeon A. PETERKIN, M.B., serving in the Bombay command, in medical charge of the station hospital at Poorundhur, is transferred to general duty in the Poona district; and Surgeon H. J. BARNES, who is also serving in the Bombay command on general duty in the Poona district, is transferred to the medical charge of the station hospital at Poorundhur.

INDIAN MEDICAL SERVICE.

SURGEON W. J. BUCHANAN, Bengal Establishment, is appointed to the officiating medical charge of the 35th Sikhs, *vice* Surgeon F. C. Clarkson, in temporary medical charge of the 2nd Battalion 4th Goorkhas.

The appointment of Surgeon-Major H. HAMILTON, Bengal Establishment, to the temporary medical charge of the Guides Cavalry, is cancelled.

Surgeon A. L. DUKE, Bengal Establishment, is appointed to officiate as Residency Surgeon in Turkish Arabia during the absence on furlough of Brigade-Surgeon R. Bowman.

The services of Surgeon A. W. D. LEAHY, Bengal Establishment, Agency Surgeon in Urwur, are placed temporarily at the disposal of the Home Department.

Surgeon JOHN CRIMMIN, V.C., Bombay Establishment, is directed to act as Health Officer of the port of Bombay, *vice* Surgeon-Major F. F. MacCartie.

Surgeon-Major O. H. CHANNER, M.B., Bombay Establishment, Deputy Sanitary Commissioner, Southern Registration district, is appointed to act as civil surgeon of Belgaum, in addition to his own duties.

Brigade-Surgeon W. MOIR, M.B., Bengal Establishment, civil surgeon of Meerut, is permitted to retire from the service from April 1st. He entered the service as Assistant-Surgeon January 20th, 1860, and rose to be Brigade-Surgeon April 26th, 1888.

Surgeon E. L. C. SMITH, Bombay Establishment, has been appointed to the medical charge of the Baroda Residency, in addition to his own duties with the 1st Bombay Grenadiers.

Surgeon T. D. C. BARRY, Bombay Establishment, is appointed to the medical charge of the 6th Cavalry (Jacob's Horse), *vice* Surgeon-Major J. McCloghry, transferred to the civil department.

Deputy Inspector-General DONALD MACFARLANE, M.D., late of the Madras Establishment, died on April 12th, near Paris, on the journey home, aged 77.

THE VOLUNTEERS.

MR. PETER MURRAY KERR, M.B., is appointed Acting-Surgeon to the 3rd Volunteer Brigade King's Own Scottish Borderers (late the 1st Dumfries), and MR. WALTER KING LOVELESS is appointed Acting-Surgeon to the 1st Volunteer Battalion Hampshire Regiment (late the 1st Hampshire): both appointments being dated April 18th.

Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) J. TURNER, of the 1st Herefordshire, has resigned his commission, with permission to retain his rank and uniform. He dates as Surgeon from August 9th, 1881, and as Surgeon-Major from February 1st, 1889.

Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) T. D. BUCHANAN, M.D., 5th Volunteer Battalion Highland Light Infantry (late the 16th Lanarkshire), has also resigned his commission with a like permission. His commission as Surgeon is dated September 1st, 1869; that of Surgeon-Major February 1st, 1889.

ACTING-SURGEON (OF VOLUNTEERS) will find information concerning the subjects of the proficiency examination, and also the names of books which would be required to be read, in the BRITISH MEDICAL JOURNAL of April 11th, p. 826.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

GENERAL COUNCIL.

AT the recent statutory half-yearly meeting of the General Council of Edinburgh University a report of the Committee appointed for the consideration of communications to the Universities Commissioners was presented. This report urged the adoption of a summer session in the Faculty of Arts, at least, such as already exists in Medicine; it expressed a general approval of the proposals made by the University Court with reference to graduation in science. These proposals have already appeared in the BRITISH MEDICAL JOURNAL. The Committee further approve of the proposals that (1) the extramural teachers should be included in the list of examiners for their respective subjects, along with qualified persons who are neither professors nor extramural teachers; and (2) that the number of examiners should be sufficient to prevent the possibility of any candidate being examined wholly or chiefly by the professor or the extramural teacher in the subjects of his own lectures.

The Committee support the view that the oral examinations for degrees should be open to all members of the University, inasmuch as the practice would be beneficial to subsequent candidates, and would increase public confidence in the character of the examinations.

The Committee report themselves as favourable to the general principle that women should be admitted to the same facilities of university education and the same privileges of graduation as men. But they recognise the practical difficulties which surround this subject, and as one of these is the financial difficulty in a specially aggravated form, the Committee find in this circumstance an excuse for not at present entering into any further details on this subject.

The Committee hope that arrangements may be made whereby the facilities to graduates for carrying on researches in the University laboratories may be increased, and the cost, if possible, be diminished.

The Committee also suggest that the present regulation with regard to the University Library, by which an annual fee of 10s. 6d. is charged to the members of the General Council, is adverse to its use by them. They suggest that a single payment of £1 would be much more likely to meet the convenience of members of Council, and would not diminish much, if at all, the revenue of the University.

The last point of importance in the report was the status and remuneration of university assistants. The Committee stated that the subject of the position of university assistants was one of much interest to the members of Council. But it is so connected, the report stated, with financial considerations that the Committee are only able to announce some general conclusions, which may, they fear, give the report on this point less of a practical character than they would desire. The Committee, however, have no difficulty in expressing their opinion as regards the tenure of the office of assistant to a professor. While they think he should be appointed as at present by the Court, on the recommendation of the professor, they are of opinion that wherever any part of his emolument is derived from University funds he should be removable only by the Court. As regards the period of tenure, the Committee think that, while it is impossible to lay down an absolute rule, senior assistants should hold office for a longer period than one year. The requirements of different chairs, or even of the same chair at different times, vary so much that perhaps a flexible system which would allow the period to be fixed from time to time with reference to each chair would be most expedient. With regard to emoluments, the Committee are of opinion (1) that any fees derived from instruction given by assistants, and not by professors, should, after deduction of whatever might be deemed reasonable for university purposes and class expenses, be appropriated to the payment of the assistants who give such instruction. (2) That the aim should be to obtain for senior assistants, who give their whole time to university work, a salary at least equivalent to that attached to tutorships at the English universities, which may be estimated at from £200 to £300 a year, and for junior assistants payment in proportion to their time employed. The tutors of the English universities, it must be remembered, generally hold, in addition to their tutorships, fellowships with emoluments, including rooms, of the value of from £150 to £250 a year.

THE University of Edinburgh has conferred the honorary degree of LL.D. on Dr. John Beddoe, B.A., F.R.S., on account of his eminence as a physician, as a scientist, and especially as an anthropologist; and on Sir George Murray Humphry, F.R.S., of Cambridge.

VANS DUNLOP SCHOLARSHIPS.—The Vans Dunlop Scholarship in Chemistry and Chemical Pharmacy, of the annual value of £100, and tenable for three years, has been awarded to William Cossar MacKenzie, D.Sc. The Vans Dunlop Scholarship in Anatomy, Physiology, Materia Medica, and Pathology, has been awarded to Robert Hutchison.

SECOND PROFESSIONAL EXAMINATION.—In addition to those whose names have already appeared in the BRITISH MEDICAL JOURNAL, the following have passed the Second Professional Examination for the Degrees of M.B. and C.M.:

G. B. Anderson, W. C. Anderson, M.A., J. R. Armstrong, W. D. Barrow, A. Beecroft, H. F. D'A. Benson, C. H. Bond, M. R. Bow, D. H. Burn, A. Cameron, F. Cargill, J. F. Carruthers, J. G. Christie, M.A., P. G. Cilliers, G. P. Coldstream, H. D. Coles, J. W. Craig, R. W. Duncan, C. R. Edmondson, J. L. Ferris, W. Fitzgerald, W. T. Fox, T. G. Goldie-Scot, G. K. Grimmer (with distinction), J. B. Hawthorn, J. A. Hamilton, L. E. Hardy, F. J. Hare, B.Sc., J. H. Johnson, J. L. Jones, H. W. G. Lander, T. Lawson, H. C. Lloyd, G. O. M. Lunt, J. M'Donald, J. Maclean, M.A., A. H. M. Macmoran, G. W. F. Macnaughton (with distinction), P. O. Malabre (with distinction), J. C. Maxwell, M.A., R. Maxwell, D. Melville, J. E. Moorhouse, M.A., B.Sc., D. G. M. Munroe, J. H. Murray, P. W. Nichol, A. A. O'Hara, L. J. H. Oldmeadow, J. Owen, G. W. Park, C. Parker, W. H. Pimblett, C. F. Ponder, R. Proudfoot, M. M. Rattray, G. P. Richards, A. Robertson, H. A. Robertson, J. L. Russell, W. A. Rutherford, W. Scott, T. Sidebottom, J. P. Somerville, St. J. Stanwell, R. Stephens, A. G. Talbot (with distinction), M. W. Talbot, G. D. S. Thom, J. L. Thompson, J. B. Thomson, A. C. Turner, C. C. B. Tyrie, A. H. H. Vizard, A. Walker, M.A., J. Wallace, D. C. Watson, J. K. Watson, W. T. Wearing, E. Williams, R. Williams, J. C. Wilson, M. Young, W. Young.

UNIVERSITY OF ABERDEEN.

UNIVERSITY COURT.—A meeting of the Court was held last week. Mr. P. J. Anderson, LL.B., was appointed to serve on the Committees of which Mr. Garden was a member. Drafts of standing orders were considered, and after discussion were approved. The draft representation to the Commission in reference to the proposed alteration of the rule, making it imperative on the Senatus to hold its meetings at Old Aberdeen, was submitted, and—Principal Geddes dissenting—was finally approved. Accounts incurred in connection with the Rectorial Address were submitted on the part of the Students' Representative Council, and were referred to the Finance Committee. Estimates were accepted for the drainage and plumbing arrangements of Marischal College Buildings. Dr. Angus Fraser and Dr. Milligan cautioned the Court to keep a

more watchful eye on the expenditure of money. The Dean of the Medical Faculty was authorised to procure safes for the custody of the University records.

CINGALESE STUDENTS UNION.—The Cingalese students at Aberdeen University have formed a union, which was formally inaugurated at a supper held in the Imperial Hotel last week. The Lord Rector was among the guests.

UNIVERSITY OF ST. ANDREWS.

THE following gentlemen, having passed the required Examinations, had the degree of Doctor of Medicine conferred upon them on April 16th:

J. W. Anderson, L.F.P.S. and L.M.Glas., Glasgow; R. H. Barker, M.R.C.S.Eng., L.S.A.Lond., Hungerford; A. Graham, L.R.C.P.Ed., L.R.C.S.Ed., Currie; F. Hollinshead, M.R.C.S.Eng., L.S.A.Lond., Selly Oak; J. H. Honeyman, L.R.C.P.Ed., L.R.C.S.Ed., Auckland, New Zealand; J. F. Horne, L.S.A.Lond., L.F.P.S.Glas., F.R.C.S.Ed., Barnsley; L. S. Mackenzie, L.R.C.P.Ed., L.R.C.S.Ed., Bradford; J. Nairn, L.R.C.S.Ed., Glasgow; F. La C. Thorne, M.R.C.S.Eng., L.S.A.Lond., Leamington; A. Wheeler, L.S.A.Lond., M.R.C.S.Eng., L.R.C.P.Lond., London.

A THOUSAND pounds has been given to St. Andrews University towards the endowment of a botanical lectureship or future chair in the United College.

UNIVERSITY OF DURHAM.

FACULTY OF MEDICINE.—Examinations for Degrees in Medicine and Surgery. April, 1891. Second Examination for the Degree of Bachelor in Medicine. The following candidates have satisfied the Examiners:

Honours. First Class.—J. A. H. White, Queen's College, Birmingham.

Honours. Second Class.—G. C. B. Kempe, College of Medicine, Newcastle-upon-Tyne; C. H. Bryant, College of Medicine, Newcastle-upon-Tyne; A. W. Scott, Yorkshire College, Leeds; F. H. Browne, College of Medicine, Newcastle-upon-Tyne; H. E. Gamlen, College of Medicine, Newcastle-upon-Tyne; S. McCoull, College of Medicine, Newcastle-upon-Tyne; B. H. Morris, College of Medicine, Newcastle-upon-Tyne.

Pass List.—J. Braithwaite, College of Medicine, Newcastle-upon-Tyne; E. Bromley, Yorkshire College, Leeds; A. G. Cooley, Sheffield School of Medicine; W. H. D. P. D'Esterre, St. Mary's Hospital; F. W. Fullerton, St. Thomas's Hospital; J. S. Hall, College of Medicine, Newcastle-upon-Tyne; W. E. Harker, College of Medicine, Newcastle-upon-Tyne; T. Hartigan, Medical School, Catholic University, Dublin; A. S. Hedley, College of Medicine, Newcastle-upon-Tyne; H. D. Hey, St. Mary's Hospital; D. N. Jackson, College of Medicine, Newcastle-upon-Tyne; H. D. Johns, M.R.C.S., L.R.C.P., Charing Cross Hospital; R. V. Lloyd-Williams, College of Medicine, Newcastle-upon-Tyne; G. E. Middlemist, London Hospital; H. B. Morison, College of Medicine, Newcastle-upon-Tyne; M. Richards, London Hospital; A. Y. Richardson, College of Medicine, Newcastle-upon-Tyne; T. J. Selby, Edinburgh School of Medicine; H. Smurthwaite, College of Medicine, Newcastle-upon-Tyne; F. W. Stokes, University College, London; A. E. Thompson, College of Medicine, Newcastle-upon-Tyne; T. C. Visser, College of Medicine, Newcastle-upon-Tyne; O. Watson, College of Medicine, Newcastle-upon-Tyne.

Examination for the Licence in Sanitary Science. April, 1891. The following candidates have satisfied the Examiners:

W. H. Cheetham, M.D.; R. P. Shearer, M.B., C.M.Glasg; T. Smailes, M.R.C.S.Eng., L.R.C.P.Edin.; C. H. Tattersall, M.R.C.S.Eng., L.R.C.P.Lond.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in Anatomy and Physiology at a meeting of the Examiners on Thursday, April 16th:

E. F. H. Hardenberg, H. A. Duffett, and J. A. Howard, students of Guy's Hospital; A. Baldwin, of Middlesex Hospital; T. H. Woodfield, of St. Bartholomew's Hospital; R. L. Jones and T. Harrison, of University College; E. W. Joscelyne, of St. Mary's Hospital; A. F. Goldsmith, of St. George's Hospital; J. A. Edwards, G. M. Hetherington, J. S. Boden, and W. R. Bryett, of King's College; and G. M. Dawkin, of London Hospital.

Passed in Anatomy only:

A. M. Wilkinson, of Westminster Hospital; A. G. Ince and W. Escombe, of Charing Cross Hospital; C. C. Parsons, of St. Mary's Hospital; W. H. Horton, of St. Bartholomew's Hospital; and R. A. Fegan, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only:

O. O. Williams and J. G. Fowler, of London Hospital; J. Grech, of St. Mary's Hospital; H. Hewetson, of Guy's Hospital; and W. J. Robertson, of Charing Cross Hospital.

Passed in Anatomy only on April 17th:

H. W. Clarke and E. S. Chilcott, of St. Mary's Hospital; G. H. Steele, A. White, and E. S. Hoare, of Guy's Hospital; C. M. Spain, W. S. Mayne, and M. Dick, of University College; S. R. Wright, M. T. Archdally, E. Parsons, and P. C. Spark, of Charing Cross Hospital; R. W. Dillon, C. W. Grant-Wilson, H. W. Osborn, and F. W. J. Goodhue, of St. Thomas's Hospital; C. Corben, of St. Bartholomew's Hospital; and G. R. Hannon, of King's College.

320 candidates presented themselves in anatomy and physiology, of whom 184 passed in both subjects, 45 in anatomy only, and 35 in physiology only, and 56 were referred in both subjects. In anatomy only, 29 candidates presented themselves, 21 of whom passed. In physiology only, there were 28 candidates, of whom 24 passed.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The quarterly examinations took place in Edinburgh in April with the following results:

First Examination.—Of 31 candidates, the following 21 passed: A. A. Hill, Norwich; A. H. Field, Yorkshire; J. O'Connell, co. Kerry; E. A. Rowan, Kilkenny; S. W. Pitcher, Talbot, Australia; G. H. Williams-Parry, Carnarvon; J. K'Kerrow, Liverpool; G. Prentice, Carnwath; H. W. Vaughan, Torrington; T. P. Powell, Talgarth; C. H. van Straubenzee, Dover; Grace H. Giffen, Roxburghshire; Mary Janet Dodds, Corstorphine; P. Sullivan, co. Cork; W. J. Read, Dublin; J. A. Campbell, Victoria; P. J. Murphy, Cork; W. S. Harvison, New South Wales; Adele Jeanne Chrestien Akyab, India; M. G. Wilkins, Madras; and J. H. Fellows, Wednesbury.

Second Examination.—Of 50 candidates, the following 30 passed: A. W. Hall, Lincolnshire; E. J. Winston-Waters, New Zealand; J. J. Gray, Dublin; T. Messenger, Silloth; W. A. Lloyd-Davies, Abergele; C. A. Smith, Leeds; T. W. Bartlett, Southsea; R. H. F. Bostock, Leicestershire; G. H. Johnstone, Belper; A. Phillips, Coventry, R. J. Blackham, Belfast; R. Morris, co. Cork; F. J. Turnbull, Edinburgh; W. Wardman, Yorkshire; H. A. Jones, co. Cork; H. Campbell, co. Antrim; J. English, Armagh; A. P. Stinson, co. Armagh; P. F. Evans, Cork; Edith Grace Collett, Madras; O. S. Maunsell, co. Waterford; R. D. Jameson, Trinidad; W. R. Thrower, Tasmania; L. C. Murphy, Melbourne; W. L. Lovett, Tullamore, Ireland; J. T. M'Arthur, co. Tyrone; J. Ryan, co. Limerick; P. R. Cairns, Galashiels; A. A. Fermie, India; and A. J. Troughton, Norfolk.

Final Examination.—Of 76 candidates, the following 38 passed, and were admitted L.R.C.P. and S.E., and L.F.P. and S.G.: Beatrice M. Harrison, Brighton; W. D. Sweeny, co. Mayo; G. S. Crawford, co. Antrim; J. Orr, co. Antrim; S. Kirkpatrick, Sligo; P. Ukarji, Bombay; C. J. van Coller, Cape Colony; T. J. Davies, Llanrwst; W. Thyne, London; P. Stainsby, Saltaire; V. E. Barrow, Madras; A. A. Macleod, Greenock; J. Reid, Argyleshire; W. Buck, Boston, Lincs.; W. Melville, Bo'ness; J. B. Smith, Montrose; P. R. Crofton, co. Roscommon; D. L. Heggie, Brampton, Canada; L. D. L. Ellis, Manchester; A. B. Masani, Bombay; P. G. Mahoney, Maliopuram; P. J. Hatton, Birkenhead; W. B. Rotheroe, Queenstown; J. White, Easdale, Argyllshire; A. Dennison, Leeds; R. Johnson, York; W. J. Evans, co. Limerick; Margaret Ida Balfour, Edinburgh; C. R. Martin, Dublin; A. H. Barstow, Spofforth, Harrogate; T. B. Brooke, Cambridgeshire; J. A. Fink, Calcutta; M. B. Gorman, Castletownroche, Cork; J. W. Lewis, Cardiganshire; T. Hamilton, co. Tyrone; J. Barry, Ireland; W. R. W. James, Bangalore; and R. M. Almes, Rosshire.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS, Friday, April 17th.

The Factories and Workshops Bill.—Mr. SUMMERS called the attention of the Secretary of State for the Home Department to a passage in the last report of the Committee of Council on Education, in which regret was expressed that the attendance of so many children of 10 years of age and upwards was discontinued as soon as, by passing the prescribed standard, they were freed from the obligation to attend school, and became entitled to go to work; and whether he would take the facts cited in the report into consideration in connection with any proposals that might be made to amend the Factories and Workshops Bill.—Mr. MATTHEWS said the hon. member was doubtless aware that the effect of the Factories Act was that children between 10 and 13, if they were employed in a factory, were obliged to continue half-time attendance at school, whereas outside a factory a child of 10, as soon as he had passed the prescribed standard, was free from the obligation to attend school, and might enter upon full-time employment. The raising of the age at which a child could be employed in a factory from 10 to 12 would have the effect (in factory districts) of increasing the number of cases deplored by the Committee of Council, because every child between 10 and 12 who could pass the prescribed standards would betake himself to other employment, whereas if those children were employed in a factory between 10 and 12 they would probably continue that employment, and also their attendance at school, up to 13.

Monday, April 20th.

Rank of Army Medical Officers.—Mr. BARTLEY asked the Secretary of State for War whether he proposed to grant to army medical officers the composite titles suggested by Lord Camperdown's Committee?—Mr. E. STANHOPE said he was quite ready to recommend to her Majesty the grant of composite military and medical titles if such a concession meets the wishes of the officers of the Army Medical Staff, but he was met with the difficulty that this concession, although asked for in Sir Andrew Clark's letter of January 17th last, appeared to be repudiated in his later letter of March 7th. These officers, he should state, had not approached him or his Royal Highness the Commander-in-Chief through any recognised

official channel, but he assumed that Sir Andrew Clark was expressing their opinion on the subject.

English Practitioners in France.—In reply to Dr. TANNER, Sir J. FERGUSSON said that inquiries were being made as to the French Bill regulating the practice of medicine in France and as to its effect on English practitioners in that country.

Ether Drinking in Ireland.—Mr. S. SMITH asked the Chief Secretary for Ireland whether his attention had been drawn to an article in the *Christian Herald*, of March 26th, wherein it was stated that there were 46,000 ether drinkers in the North of Ireland, imbibing annually 18,000 gallons of that liquid; whether he was aware that ether was sold by chemists, publicans, grocers, and hawkers, or ragmen, who went through the country districts; and whether the Government could see their way to put down the sale of this drug by reimposing the tax upon it or otherwise.—Mr. A. J. BALFOUR said that from close inquiry and observation the local constabulary authorities were satisfied that the numbers given in the article in question were wholly exaggerated. The improper sale of ether as an intoxicant had been promoted through the agencies named, but the matter having come under the notice of the Government they took prompt steps in November last to suppress it. Ether was thereupon scheduled as a poison, and could now only be sold by authorised chemists, and by them only as a poison. Inquiries showed that since that time the sale had largely diminished.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

MEDICAL OFFICERS OF HEALTH AND OTHER PRACTITIONERS.

A MEETING of the East Anglian Division of the Medical Defence Union will be held at the Committee Rooms of the Sanitary Authority, Cambridge, on (this day) Friday, at 2.30, to consider an instance in which the report of a medical officer of health is alleged to have reflected injuriously on the professional character of a member of the Union.

DR. FREDERICK JOY (Brandon, Norfolk) writes: In respect of this, it is very evident the remarks in the BRITISH MEDICAL JOURNAL of April 18th, page 886, apply to myself. I venture to submit to you a copy of the report which I presented to the Thetford Rural Sanitary Authority, under whom I act, and also to the Local Government Board at their request, in June, 1890. It is evident that neither of these boards attached any significance to those paragraphs to which exception has been taken by the medical attendant.

No one has been more astonished than myself at the misconstruction which has been placed upon them, and I can only regret that your correspondent should have been so disingenuous as to charge me with sinister motives. I distinctly deny that any part of the report was intended as a reflection upon the conduct of the cases of diphtheria by the medical attendant, but contrariwise, it was rather an admonition to the public generally, and a reiteration of the tenets which I have repeatedly advocated in former reports, in order that early and timely medical advice should be obtained, and thus give the medical attendant a more reasonable prospect of conducting his case to a successful issue, and also to facilitate the work of the health officials.

In the paragraph of which complaint is made, I was led to infer this (*a*) from the personal statement of the medical attendant to me, and (*b*) his admission by letter, which I possess, "that it is a great question whether sepsis may not account for the bronchitis." Under this suggestion, then, had I not reasonable grounds for regarding its possible origin in the illness at Leeder's house?

With regard to the examination of the infectious cases, I certainly did see some of them—but at his request, as he was anxious about the serious phase the cases assumed.

IS A PROVIDENT DISPENSARY A "PUBLIC BODY?"

M.O.H.—We assume that subsection 2 of Section 4 (not Section 8) of the Infectious Diseases Notification Act is that to which our correspondent refers, and that the question has relation to the amount of the medical practitioner's fee for a certificate.

It is difficult to express an opinion as to whether or not a "provident dispensary" comes within the meaning of this subsection without being more fully acquainted with the nature of the institution, and even then it would be a matter of opinion only, there being no definition given in the Act of what a public body or institution is intended to include, and there being no judicial decision that we are aware of on the subject. Each particular case, therefore, must be considered on its merits, and we think there should not be any great difficulty, all the facts being known, in arriving at a correct solution.

The Section provides that the local authority shall pay to every medical practitioner for each certificate duly sent by him in accordance with the Act the fee of 2s. 6d. if the case occurs in his private practice, and of 1s. if the case occurs in his practice as medical officer of any public body or institution. The first question which should be considered in order to arrive at a solution of the difficulty would, we think, be whether or not the patient has been attended by the medical practitioner in his private practice. This we think should afford a reasonably safe guide, and might render it unnecessary to interpret strictly the words "public body or institution." There can, we think, be no doubt that the medical officer of any public body or institution attending patients in his private practice is entitled to the fee of 2s. 6d. as if he did not hold any such appointment.

SALARIES OF HEALTH APPOINTMENTS IN SCOTLAND.

M.B. (Scotland).—It is undoubtedly unreasonable to expect medical officers who are paid the wholly inadequate salaries granted by many Scotch authorities to make elaborate returns of all cases of infectious disease coming under their notice, though it would no doubt be their duty to make returns as to the number of intimations of cases of infectious disease sent in, in pursuance of the provisions of the Notification Act. We should strongly recommend our correspondent to lay the circumstances of his case before the Board of Supervision, addressing his letter to the Secretary, 125, George Street, Edinburgh.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, April 18th, 6,368 births and 4,321 deaths were registered in twenty-eight of the largest English towns, including London. The annual rate of mortality in these towns, which had increased from 21.2 to 22.9 per 1,000 in the preceding three weeks, declined again to 22.5 during the week under notice. The rates in the several towns ranged from 16.7 in Wolverhampton, 17.3 in Birmingham, 17.9 in Brighton, and 18.2 in Derby and in Bradford to 27.6 in Halifax, 27.9 in Hull, 31.6 in Newcastle-upon-Tyne, and 33.9 in Sheffield. In the twenty-seven provincial towns the mean death-rate was 24.1 per 1,000, and exceeded by 3.6 the rate recorded in London, which was 20.5 per 1,000. The 4,321 deaths registered during the week under notice in the twenty-eight towns included 420 which were referred to the principal zymotic diseases, against 468 and 438 in the preceding two weeks; of these, 150 resulted from measles, 141 from whooping-cough, 42 from diphtheria, 36 from diarrhœa, 27 from "fever" (principally enteric), 25 from scarlet fever, and not one from small-pox. These 420 deaths were equal to an annual rate of 2.2 per 1,000; in London the zymotic rate was 1.8, while it averaged 2.5 per 1,000 in the twenty-seven provincial towns, among which it ranged from 0.0 in Wolverhampton and in Birkenhead, 0.4 in Brighton, and 0.7 in Plymouth to 3.5 in Salford, 4.0 in Sheffield, 5.0 in Blackburn, and 6.5 in Portsmouth. Measles showed the highest proportional fatality in Preston, Bristol, Leeds, Huddersfield, Blackburn, and Portsmouth; and whooping-cough in Birmingham, Halifax, Liverpool, Newcastle-upon-Tyne, Nottingham, Derby, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. Of the 42 deaths from diphtheria in the twenty-eight towns, 26 occurred in London, 3 in Manchester, 3 in Preston, 2 in Liverpool, 2 in Nottingham, and 2 in Salford. No death from small-pox was registered during the week under notice either in London or in any of the provincial towns: 15 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, of whom 9 were admitted during the week under notice, and 1 in the Highgate Small-pox Hospital on Saturday, April 18th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on the same date was 949, and showed a further decline from recent weekly numbers; 84 new cases were admitted during the week, against 98 and 77 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.9 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

IN eight of the principal Scotch towns 826 births and 590 deaths were registered during the week ending Saturday, April 18th. The annual rate of mortality in these towns, which had declined from 26.7 to 25.0 per 1,000 in the preceding three weeks, further fell to 22.6 during the week under notice, and slightly exceeded the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Greenock, and the highest in Glasgow and Paisley. The 590 deaths registered in these towns included 81 which were referred to the principal zymotic diseases, equal to an annual rate of 3.1 per 1,000, which exceeded by 0.9 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Edinburgh, Glasgow and Paisley. The 265 deaths registered in Glasgow included 15 which were referred to measles, 10 to whooping-cough, and 6 to diphtheria. Twenty-two fatal cases of measles were recorded in Paisley, and 3 of diphtheria in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.4 per 1,000, against 5.9 in London.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 11th, the deaths registered in sixteen of the principal town districts of Ireland were equal to an annual rate of 27.0 per 1,000. The lowest rates were recorded in Drogheda and Lisburn, and the highest in Armagh and Sligo. The death-rate from the principal zymotic diseases averaged 1.6 per 1,000. The 207 deaths in Dublin were equal to an annual rate of 30.6 per 1,000, against 29.1 and 23.9 in the preceding two weeks, the rate for the same period being 20.0 in London and 19.3 in Edinburgh. The 207 deaths in Dublin included 8 which were referred to the principal zymotic diseases (equal to an annual rate of 1.2 per 1,000), of which 5 resulted from enteric fever, 2 from whooping-cough, and one from diphtheria.

KING'S NORTON RURAL (Population, 28,396).—Although not recording any material advance on the vital statistics of 1889, Mr. Hollinshead's latest annual report is of a very satisfactory nature, especially when the prevalence of zymotic disease is considered. Scarlet fever, measles, and whooping cough were seldom absent from the district, and a large number of cases came under notice. Every effort was made to cope with them; no fewer than 170 out of a total of 287 notified cases were isolated in hospital; schools were closed, and sanitary defects discovered in connection with diphtheria or typhoid fever were promptly rectified. The rates for 1890 are as follows: Birth-rate, 23.13 per 1,000: death-rate, 12.04 per 1,000; and zymotic rate, 0.73 per 1,000.

MEDICAL NEWS.

At the examination for inspectors of nuisances held by the Sanitary Institute on April 10th and 11th, 89 candidates presented themselves, and 60 passed.

Royal Institution.—Dr. E. Klein, F.R.S. (Lecturer on Physiology at St. Bartholomew's Hospital), will begin a course of three lectures on "Bacteria, their Nature and Functions" (the Tyndall Lectures), on April 28th.

North of England Obstetrical and Gynæcological Society.—The June meeting of this Society will be held in Hull, on June 19th. Dr. Lowson, 15, Albion Street, Hull, will act as local secretary.

Mussel Poisoning.—A tradesman at Willington, named Mockett, aged 51, has died suddenly after eating three mussels. The symptoms and *post-mortem* appearances were stated to be consistent with mussel poisoning.

Artificial Coloration of Wine.—The Italian Minister of the Interior has sent a circular to all the prefects of the kingdom reminding them that under the new sanitary law the artificial coloration of wine is absolutely prohibited.

Hospital Hygiene in St. Petersburg.—It is stated that the hospital authorities in St. Petersburg have decided to have the walls, ceilings, and floors enamelled in all wards where cleanliness and strict precautions against possibilities of infection are particularly required.

Prophylaxis of Diphtheria.—At a recent meeting of the Council of Public Hygiene and Salubrity of the Department of the Seine, Dr. L. Colin expressed the opinion that the clothes of children suffering from diphtheria should be burnt, as they are frequently the means of conveying the disease to other persons.

Lord Stanley of Alderley will, it is stated, on an early day, call the attention of the House of Lords to certain portions of the evidence taken before the Royal Commission on Vaccination, and ask whether the Government will provide debtor's treatment, instead of criminal treatment, for persons imprisoned under the Vaccination Acts.

Hypnotism at Lyons.—Dr. Gailletein, Mayor of Lyons, has directed that the following declaration be posted on the walls of city: "The *séances* of hypnotism and suggestion held in the *cafés-concerts* of Lyons are indecent and injurious. All proprietors of such establishments are forbidden to sanction such exhibitions, or any similar proceedings."

The Birmingham Water Supply.—The Birmingham City Council have approved of the scheme of the Water Committee for obtaining a supply of water for the City from the sources of the Elan and Claerwen, and authorised the taking of the necessary steps to promote a Bill in Parliament for the purpose.

New Fever Hospital for London.—At the last fortnightly meeting of the Metropolitan Asylums Board it was decided, subject to the approval of the Local Government Board, to purchase land at South Tottenham at a cost of £12,000, for the purpose of erecting a fever hospital. Twelve cases of small-pox, as compared with six in the two preceding weeks, were reported; four came from Rotherhithe.

Devon and Exeter Medico-Chirurgical Society.—A meeting of this Society was held at the Devon and Exeter Hospital on April 17th, Dr. Davy, President, in the chair. Two new members were elected. Dr. Woodman read notes of a case of perinephritic abscess simulating psoas abscess, and the case was shown. Dr. Mortimer read notes of Addison's disease, with special reference to the occupation of the sufferers. Mr. Harris referred to the radical cure of hernia in young children, and showed a case recently operated upon successfully. Mr. Domville showed a cheap form of artificial apparatus for a case of double amputation of the lower limbs.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Ransom Dexter, of Chicago, a surgeon of wide reputation in the United States; Dr. Rull, formerly Professor of Midwifery in the Medical Faculty of Barcelona; Dr. Heinrich Luczkiewicz, some time Professor of Pathology in the University of Warsaw, and for many years editor of the *Gazeta lekarska*, aged 65; and Dr. Kalning, of Dorpat, of glanders contracted during a bacteriological investigation conducted by him in the Veterinary School of that town.

The inquiry ordered by the Local Government Board into the alleged maladministration at the Eastern Fever Hospital, Homerton, conducted by Mr. Hedley and Dr. Bridges was concluded on April 20th, when it was stated that a report would be made to the Local Government Board, who would in due course communicate it to the Managers of the Metropolitan Asylums Board and to the Hackney Guardians.

New Hospital in Vienna.—A new hospital has within the last few days been opened in Vienna. It is called the "Wilhelminenspital" in honour of the Princess Wilhelmine Montleart von Sachsen-Kurland, to whose munificence it chiefly owes its existence. The hospital contains 120 beds, but in case of need it can accommodate 300 patients. Professor Maydl is medical director, and head of the surgical section of the new institution; and Dr. Toelg has charge of the medical section.

Public Health in Russia.—On April 14th the two laboratories established in St. Petersburg by the Town Council for the microscopic examination of pig's flesh were formally opened and began their work. As pork and ham are largely consumed in Russia during Eastertide, there was plenty of material for the experts to flesh their scientific swords upon. Stimulated by the excellent example set by the capital of the empire, the ancient city of Moscow has now decided to establish a "Central Analytical Station for the Examination of Food Stuffs." The cost of equipment is estimated at 9,000 roubles, and that of maintenance at 8,500 roubles a year.

MEDICAL VACANCIES.

The following Vacancies are announced:

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN, Steelhouse Lane, Birmingham.—Acting Physician. Salary, £60 per annum. Applications to the Medical Committee by May 6th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—House-Surgeon. Appointment for six months. Salary at rate of £60 per annum, with board and residence. Applications to the Secretary by May 9th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Assistant House-Surgeon and Registrar. Appointment for six months. Salary at rate of £50 per annum, with board and residence. Applications to the Secretary by May 9th.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Clinical Assistant for six months. Board, lodging, washing, and attendance provided. Apply to Dr. Ernest White, Medical Superintendent.

COUNTY BOROUGH OF BRADFORD FEVER HOSPITAL.—Resident Medical Superintendent; double qualifications. Applications, endorsed "Resident Medical Superintendentship," to the Chairman of the Sanitary Committee, Town Clerk's Office, Bradford, by April 27th.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY, Cardiff.—Assistant House-Surgeon. Board, lodging, and washing provided. Appointment for six months. Applications to G. T. Coleman, Secretary, by April 27th.

GREAT YARMOUTH HOSPITAL.—Resident House-Surgeon; unmarried. Salary, £90 per annum, with board and lodging. Applications to Ernest E. Leech, Honorary Secretary, by May 12th.

HULME DISPENSARY, Manchester.—Honorary Surgeon. Applications to Dr. F. H. Collins, Honorary Secretary Medical Committee, by May 1st.

JENNY LIND INFIRMARY FOR SICK CHILDREN, NORWICH.—Physician. Applications to Edmund Reeve, Honorary Secretary, 25, Surrey Street, Norwich, at least fourteen days before election on May 12th.

KING'S COLLEGE HOSPITAL.—Sambrooke Medical Registrar. Applications from King's College students, to J. W. Cunningham, Secretary, King's College, London.

KING'S COLLEGE, London.—Demonstrator of Public Health. Applications to J. W. Cunningham, Secretary.

NEW HOSPITAL FOR WOMEN, 141, Euston Road, N.W.—Female Resident Medical Officer; qualified. Application to Margaret M. Bagster, Secretary, by April 27th.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man. Resident House-Surgeon; unmarried. Salary £90 per annum, with apartments, gas, coals, and washing. Applications to T. Brown, Honorary Secretary, by April 26th.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Physician. Applications to Howard J. Collins, Secretary, at least fourteen days before the election, which takes place on April 25th.

NOTTINGHAM BOROUGH ASYLUM, Mapperley Hill.—Resident Clinical Assistant; double qualifications; board and residence provided. Applications to the Medical Superintendent.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Clinical Assistant. Applications to the Honorary Secretary of the Hospital by April 29th.

SICK CHILDREN'S HOSPITAL, Newcastle-on-Tyne.—Resident Medical Officer; double qualifications. Salary, £60 per annum, with board, lodging, and laundry. Applications to the Secretary, 10, Moseley Street, Newcastle-on-Tyne, by May 1st.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Surgeon, double qualifications; unmarried and under thirty years of age. Salary, £120 per annum, rising to £140, with board, residence and washing. Applications to Lieutenant-General E. F. Bourchier, Secretary, by April 29th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon; double qualifications; unmarried; and under 30 years of age. Board, residence, and washing provided. Applications to the Secretary by May 6th.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Physician; double qualifications; unmarried, and under 30 years of age. Salary, £80, rising to £80, per annum, with board, residence, and washing. Applications to the Secretary by May 6th.

VICTORIA (Ebbw Vale, Mon.).—Surgeon; fully qualified; married; to take charge of Iron Works and Colliery District. Salary, £500 per annum; will be required to keep qualified assistant and provide drugs. Application to Wm. Dayson, Secretary, Ebbw Vale Works Doctor's Fund, Ebbw Vale, Mon.

WALLASEY DISPENSARY.—House-Surgeon; unmarried. Salary, £110 per annum, with furnished apartments, coal, and gas. Applications to the Honorary Secretary, Mr. W. Heap, Elm Mount, Ponkett Road, Liscard, Cheshire, by April 27th.

WEST HERTS INFIRMARY, Hemel Hempstead.—House-Surgeon and Dispenser; double qualifications; unmarried. Salary, £100 per annum, with board, furnished rooms, fire, lights, attendance, and washing. Applications to the Secretary by May 6th.

WESTERN SKIN HOSPITAL, Great Portland Street, W.—Honorary Physician. Applications to the Chairman of Committee by April 28th.

WOLVERHAMPTON EYE HOSPITAL.—Resident Assistant; rooms, with board and washing, provided. Appointment for not less than six, nor more than twelve, months. Applications to the Secretary by April 30th.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £130 per annum, with furnished apartments, coals, and gas. Applications to S. W. North, Esq., 84, Micklegate, York, by May 1st.

MEDICAL APPOINTMENTS.

BALFOUR, T. Stevenson, M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

BARRITT, Gilbert Lacy, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Spalding Workhouse and the Eastern District of the Spalding Union.

BERRY, Edmund, L.R.C.S.I., L.F.P.S.Glas., reappointed Medical Officer of Health for Leyland.

BROCK, W. J., M.B., C.M.Edin., B.Sc., F.F.P.S.Glas., appointed Medical Officer of Health for the combined counties of Mid-Lothian, West Lothian, and Peebles.

BUTTERFIELD, Harris, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health for the West Kent Combined Sanitary District of the Sevenoaks Union.

BUTTERFIELD, Harris, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Maidstone Rural Sanitary Authority.

DAVIES, Edward, M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer for the Second Rural District of the Union.

EATON, James, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Grantham Rural Sanitary Authority.

EVANS, Wm. Arnold, M.D.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for Bradford, *vice* Dr. MacLintock.

FOX, Herbert, M.B., B.C.Camb., appointed House-Surgeon to the East Suffolk and Ipswich Hospital, *vice* H. G. Critchley, M.A., M.B.

GARRY, William Alfred, L.K.Q.C.P.I., L.R.C.S.I., appointed Assistant Medical Officer to the Salford Union Infirmary.

GILL, James McDonald, M.B.Lond., appointed Resident Clinical Assistant to the Bethlem Hospital.

GODFREY, Henry J. C., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Second District of the Bridlington Union.

HESLOP, Wm. John, L.R.C.P.I., F.R.C.S.Edin., reappointed Medical Officer of Health for the Stretford Union District.

HOLMES, Thomas D. H., M.B., C.M.Edin., appointed House-Surgeon to the Bridgwater Infirmary, *vice* Mr. T. E. Spencer, resigned.

KLOSTER, Olaf, M.R.C.S., L.R.C.P., appointed Resident House-Surgeon to the Deaconesses' Institution and Hospital, Tottenham, *vice* G. Ritchie Thomson, M.B., C.M.Edin.

LANGWELL, H. G., M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

LLOYD, Percival A., F.R.C.S.Eng., appointed Surgeon to the Pembrokeshire and Haverfordwest Infirmary.

MCALISTER, W. R. A., M.D., M.Ch.Irel., appointed Medical Officer of Sheils Institution, Carrickfergus.

MACINTYRE, John, M.B., C.M.Glas., appointed Lecturer on Diseases of the Throat and Nose, Anderson's College Medical School, Glasgow.

MADGSHON, Minnie, M.B.Lond., appointed Resident House-Surgeon to the Clapham Maternity Hospital.

MORROW, John Smyth, B.A., M.B., appointed House-Physician to the Belfast Royal Hospital, *vice* W. A. Wheeler, resigned.

NUTHALL, Robert L. S., M.R.C.S.Eng., L.R.C.P.Lond., appointed Fifth Assistant Medical Officer to Hanwell Asylum.

POTTS, W. J., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the New Bridge Street Wards, and Assistant Medical Officer to the Crumpsall Infirmary, Manchester Workhouse.

ROPER, Wm. Robert, M.D., appointed Medical Officer for the Madingley District of the Chesterton Union.

SAYRES, A. W. F., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the South Devon and East Cornwall Hospital, *vice* Charles Brooks.

SHEPPARD, Mr., appointed Medical Officer of Health to the New Forest Rural Sanitary Authority.

SIMPSON, J. B., M.A., M.B., C.M.Edin., appointed Medical Officer of Health for the District of Ballackulish and Glencoe.

SMITH, Mary, L.R.C.P.&S.Edin., L.F.P.S.G., appointed Assistant Physician to the Clapham Maternity Hospital.

THOMPSON, Joseph, L.R.C.P.Lond., M.R.C.S.Eng., appointed Surgeon to the General Hospital, Nottingham, *vice* T. Wright, resigned.

TILL, George Wm., L.R.C.P.Edin., L.F.P.S Glas., appointed Medical Officer of Health for the Rural Sanitary of the Worcester Union, *vice* Dr. Strange.

VANN, Alfred Mason, M.R.C.S.Eng., L.S.A., appointed *pro tem.* Assistant Medical Officer for the Brandon Union District, Durham.

WHITTINGDALE, John F. L., B.A., M.B.Camb., M.R.C.S.Eng., appointed Medical Officer of Health for Sherborne, Dorset.

WILLIAMS, D. J., M.R.C.S., L.R.C.P.Lond., appointed Junior Assistant Medical Officer to the County Asylum, Shrewsbury, *vice* Alfred Walter Campbell, M.B.Edin.

WILLIAMS, F. M., L.R.C.P.Edin., M.R.C.S.Eng., D.P.H.Camb., appointed Medical Officer of Health to Plymouth Town Council and the Port Sanitary Authority.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. T. Elliott (Tunbridge Wells): A Case of Ectopia Viscerum. Mr. W. Whitehead (Manchester): One Hundred Cases of Entire Excision of the Tongue.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 40, Leicester Square, W.C., 8 P.M.—Paper: Mr. D. N. Cauch, L.D.S.Irel.: On Exostosis, with microscopic slides and photographs. Casual communications. Mr. J. Bland Sutton: Odontome in a Horse. Mr. Morton Smale: A Case of Injury to Temporo-maxillary Articulation at 3½ Years, causing closure of the jaw. Mr. Stockton: Cases of Absorption of the Permanent Teeth. Mr. David Hepburn: A Case of Attrition in the first Dentition. Mr. C. V. Cotterell: Convertor for Electric Mallet.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Mr. Watson Cheyne: On the Value of Tuberculin in the Treatment of Surgical Tuberculous Diseases. Note.—A selection of patients will be shown in the North Room, at 8 o'clock.

WEDNESDAY.

THE HOSPITALS ASSOCIATION, Guy's Hospital, 8 P.M.—Dr. Steele: Hospital Ventilation, with an Account of the Victoria Infirmary at Glasgow. Mr. Saxon Snell: The Nursing Departments of Hospitals.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 8 P.M.—Dr. Symons Eccles: Chronic Rheumatic Arthritis. Mr. J. R. Lunn: Notes of Two Cases of Appendicitis. Mr. Towers-Smith: The Dietetic Treatment of Obesity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

GREATHEAD.—The wife of J. B. Greathead, M.B.Edin., M.R.C.S.Eng., of a son, on March 28th, at Grahamstown, South Africa.

MARRIAGES.

ADAMS—WHYTE.—On March 12th, at St. Thomas's Cathedral, Bombay, by the Rev. F. C. Hill, Chaplain to the Bishop of Bombay, Charles Adams, M.B., LL.B.Dublin, F.R.C.S.I., son of the late Andrew Adams, Esq., Tinaquin, co. Tyrone, to Maude de Wyte, second daughter of the late Major John L. A. Whyte, J.P., co. Clare and Bray, Ireland.

DRAKE-BROCKMAN—CHESNAYE.—On March 31st, at St. Mary Magdalene's Church, Mecan-Meer, Punjab, by the Rev. H. J. Spence-Gray, M.A., H. E. Drake-Brockman, F.R.C.S.E., Surgeon, Her Majesty's Bengal Medical Service, to May Kathleen, only daughter of Deputy Surgeon-General G. C. Chesnaye, F.R.C.S.I., Bengal Medical Service, P.M.O., Lahore District, and Honorary Surgeon to His Excellency the Viceroy of India.

FRANCIS—MARCON.—On April 14th, at St. Paul's Church, St. Leonard's-on-Sea, Alfred George Francis, B.A.Cantab., M.B., B.S.Lond., F.R.C.S. Eng., of Hull, son of the late Charles W. Francis, of Southchurch, Essex, to Frederica Jane, daughter of the late Rev. Walter Marcon, M.A.Oxon., Rector of Edgefield, Norfolk.

DEATH.

ALLINGHAM.—At Pisa, Italy, on April 13th, after a short illness, Christiana, wife of Wm. Allingham, F.R.C.S.Eng., of Grosvenor Street, W.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily, 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily. 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9, Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2, Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.15; females, Th., 8.45. *Operation Days.*—M. Tu., 2.30.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 1, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1, Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

EXAMINATION FOR F.R.C.S.ENG.

APOMORPHINE asks to be recommended works on anatomy or physiology to be read for the Fellowship of the College of Surgeons, England.

*** Gray's *Anatomy*, Holden and Langton's *Manual of Dissection*, Foster's *Physiology*, and Quain's *Anatomy* for Histology.

ANSWERS.

LONG SUFFERER is recommended to consult a physician.

STUDENT should study the article on hydrophobia in a textbook of medicine—for instance, Dr. Bristowe's; and also read the chapter on Hysteria.

TREATMENT OF FERMENTATIVE DYSPEPSIA.

DR. T. B. O'CONNOR (Piccadilly, W.) writes in reply to "Nil Desperandum":—I would recommend him to try creolin in capsules (Jeyes' Sanitary Compound Company), or Hamilton's preparation of pepsine, if he has not already tried these remedies.

MR. G. SHERMAN BIGG, F.R.C.S.E. (Victoria Street, S.W.), writes: The treatment of this affection depends entirely on the extent of the disease. In mild cases, 10 grains of bicarbonate of soda, with 5 grains of rhubarb powder and two drops of laudanum in water, given twice a day, is a useful remedy. For more severe cases chalk should be given before meals, and nitromuriatic acid, nux vomica, and gentian after meals. In obstinate cases a lead and opium pill should be given morning and evening, a dose of vegetable charcoal before each meal, and the acid mixture after meals. It is sometimes useful to give an alkali mixture before meals, and the acid mixture after meals. Attention to diet is most essential. Meat should be avoided, and fluids taken only in small quantities. Hot drinks and all wines and spirits aggravate the disease. Milk should be mixed with equal parts of lime water, but koumiss is better than milk, which often acts as an irritant. Should the disease not yield to one of these methods of treatment, the patient's food should be restricted to koumiss or milk and lime water, but it is seldom necessary to resort to this extreme measure.

MR. ERNEST A. MILNER, M.B.Ed. (Leavesden Asylum), writes: In reply to "Nil Desperandum," in the BRITISH MEDICAL JOURNAL of April 18th, I would recommend him to try washing out the stomach with warm water, coloured pink with Condy's fluid, the washing to be repeated once or twice a day at first, four or five hours after taking food, and continued at each sitting till the water returns pink from the stomach. The soft rubber siphon apparatus is much safer than the stomach pump, as the walls of the stomach are thinned and stretched, and have lost their muscular tone, for which reason also care must be taken not to overfill the stomach.

This treatment may with benefit be supplemented, for a time, by the use of pepsin or peptonised foods. The nausea and retching caused by the presence of the tube may often be relieved by letting the patient suck a small pad of cotton wool, soaked in a weak solution of cocaine, for five or ten minutes before commencing.

This treatment is largely used at the Edinburgh Royal Infirmary in cases of dilatation of the stomach, however caused. As the symptoms are all traceable to the presence in the stomach of a large quantity of half-digested and fermented food, giving off very foul gas and setting up great irritation, this seems the most rational form of treatment, imitating, as it does, Nature's attempts at relief—namely, vomiting—by removing the offending material, and so allowing the muscular coat to, to regain its tonicity, thus reducing the stomach to its normal size, and enabling the mucous membrane and glands to return to a healthy condition.

This complete result can, of course, only be looked for in tolerably recent cases. Cases due to malignant stricture of the pylorus and old-

standing simple cases where the walls of the stomach are permanently altered and degenerated can only be relieved, but the relief obtained is marvellous; and this relief can be easily maintained by repeating the washing at intervals of a week or more, as required, and patients soon learn to do the washing for themselves.

I recall a case of simple dilatation of the stomach, with fermentation, of many years' standing, where the patient, a coachman, washed out his own stomach regularly every Saturday night for two or three years, and was utterly miserable by the middle of the next week if, for any reason, he missed his weekly "washing."

DR. MAURICE G. EVANS (Brecon) writes: In reply to your correspondent, "Nil Desperandum," I would advise trying the following: Mag. carb. powd. gr. v, bismuth. subnit. gr. v, carbon. ligni gr. x, mixed in a wineglassful of water and taken three times a day, just before or immediately after a meal. Steadily persevered in, it has always proved of the greatest benefit, and has generally cured cases such as he describes. If accompanied by pain or diarrhœa, a little morphine may be added and chalk substituted for the magnesia.

DR. R. MANSELL-JONES (Brighton) writes: If "Nil Desperandum" will give his patient 15 or 20 grains of salicylate of soda in a tumblerful of hot water, three times a day, an hour before each meal, he will probably be gratified by the result. If this remedy fails, full doses of liq. hydrarg. perchlor. in combination with bismuth should be tried. Five-grain doses of β-napthol are often beneficial. A milk diet should be strictly enjoined. The symptoms are probably due to the intestinal canal being infected with bacteria.

MR. PHILIP MIALL (Bradford) writes: A case strongly resembling that recorded by "Nil Desperandum" was under my care some years ago. No permanent benefit was obtained till the patient was restricted to a purely vegetable diet. It was then easy to ascertain what vegetable foods agreed. After six months of this observation, great improvement following from the first, white fish, fowl, and game were occasionally added, singly, and in small quantities. Ultimately mutton or finely-minced beef was tolerated occasionally. Anything that made the urine turbid was forbidden; at least, for a time. The patient gained a complete knowledge of the diet that suited him, and latterly rarely suffered from flatulence or diarrhœa. He found it necessary, however, to be somewhat moderate as to quantity at each of his three daily meals. Should your correspondent desire, I shall be happy to give further particulars as to the case.

Rash after Antipyrin.

DR. RICHARD NEALE (Hampstead) writes: In reply to Mr. E. G. Archer, requesting information as to whether rashes similar to that described by himself at page 891 of the BRITISH MEDICAL JOURNAL have been observed by others, I would refer him to the BRITISH MEDICAL JOURNAL during 1887 and 1888, where he will find several cases recorded. The third edition of the *Medical Digest*, which will be issued next month, contains many references recorded in other periodicals.

Homes for Inebriates.

V.C., M.D. It is impossible to form a definite opinion upon the facts as stated. There is a special Act of Parliament governing the homes for inebriates, legal remedies for all offences under that Act are provided, and an officer exists to inspect regularly all patients under the Act. The complaint, it would seem, ought to have been addressed to this officer. The question of contract appears to be a purely legal point upon which a solicitor should be consulted.

NOTES, LETTERS, Etc.

Treatment of Hydatid Disease.

DR. CHAS. M. CHAPMAN (Hampstead, N.W.), writes:—I read with much interest Mr. C. J. Bond's paper on the above in last week's number of the BRITISH MEDICAL JOURNAL. With reference to the question of drainage, I would refer to a case reported in vol. ii, *Transactions of the West Lond. Med. Chi. Society*, in which I aspirated a large suppurating cyst, withdrawing three pints of stinking pus, containing numerous tapioca-like bodies; I washed out the cyst with warm 1 per cent. carbolic lotion until the latter returned quite clear and sweet, and finally allowed about 6 ounces of the lotion to remain behind. The patient made a rapid and uninterrupted recovery.

Adherent Membranes.

DR. T. WALTEN (Reigate) writes: In these cases the proper practice undoubtedly is to remove carefully the inner loose membranes, and then wash out the uterus with some "antiseptic." The outer adherent membrane (decidua, I presume) may then be safely left, as it affords no resting place for "germs," and does not become putrescent. I cannot remember now from whom I learnt this practice, but believe it may be safely followed.

MR. REGINALD Y. ROBERTS, B.A., M.B Cantab. (Lowestoft) writes: Reading Dr. Batchelor's notes in the BRITISH MEDICAL JOURNAL of April 4th, I thought the following might be of interest:

I lately confined Mrs. M. She had a natural labour, and I expressed the placenta twenty minutes after delivery. The placenta came away whole, but the membranes required a great deal of care, and were only removed whole with great difficulty. They had nearly torn completely away from the placenta. On examination, I found the remains of an old blood clot, which, becoming partially organised, had caused adhesion between the membranes and the wall of the uterus, and thus given rise to the difficulty in removing them.

DR. A. CORDES (Geneva) writes: Line 1, p. 835 of the BRITISH MEDICAL JOURNAL, April 11, "fracture" ought to be read "traction." I had another case of adherence of the membranes last week. They came away spontaneously, on the third day, after some uterine contractions. The temperature never went over 99.5°. The lochia had no smell. The uterus now (fourth day) is two finger's breadths above the pubes.

Girls' College.

MR. DALTON TACEY, L.R.C.P. and S.Edin. (Doncaster) writes: I wish to endorse Dr. Brierley's remarks as to the College for Daughters of Medical Men, Pelican House, Grove Park, Denmark Hill. My daughter received a portion of her education, extending over four years, at the above College. The education is thorough, and the moral and religious influences are all that could be desired.

Inefficient Vaccination.

A FALL BETWEEN TWO STOOLS writes: The evil complained of by Mr. Cresswell has more than one aspect. Anxious to obtain a grant for efficient vaccination, and unwilling to disregard direct injunction to the effect that every child must be vaccinated in four places, the public vaccinator is shunned by about seven-eighths of the mothers, and children are taken where one mark, or half of one, can be put on. Then, when the inspector pays his triennial visit, there is probably some flaw in the keeping of the books, or the method of recording the cases, or calf lymph has been bought and used instead of arm-to-arm vaccination, and the grant is forfeited on account of contravention of clause—in the instructions.

A Medical Alcalde.

DR. RODOLFO DEL CASTILLO, editor of *La Andalucia Medica* has been chosen Alcalde, or Mayor, of Cordova. We may venture to hope that his term of office may be marked by some betterment of the sanitary condition of Cordova, which, like most Spanish towns, especially in the South, "smell to Heaven" with a multiplicity and variety of stenches which even Coleridge's anathema on Cologne is inadequate to describe.

Sol. Hydrarg. Bichlor. in Diphtheria.

DR. A. HANBURY FREERE (Wickham Market) writes: In regard to Mr. E. Coward's interesting note in the BRITISH MEDICAL JOURNAL of April 18th, 1891, p. 835, I wish to say that I prefer the biniodide to the bichloride of mercury, because I believe there is not always a tolerance of the latter. The addition of pot. iod. to the sol. hyd. bichlor. may not alter its therapeutical effect in diphtheria. In other words, the action of the biniodide and the bichloride may be the same in this disease; but I hold that the former, being a stronger antiseptic, is far more certain, and, being quickly eliminated, is a far safer agent than the latter. It is well known that the biniodide, as a lotion for washing out the peritoneum, is far safer than the sol. hyd. bichlor., and I believe the same holds good when they are given internally. Having seen the dangers of the bichloride and the safety of the biniodide, I think it is only right to warn those who are so bold with the former, and to point out that they have a far safer and surer agent in the latter.

DR. C. R. ILLINGWORTH (Clayton-le-Moors) writes: Dr. Mainwaring-Holt, although supporting Mr. Coward in his advocacy of the bichloride, prescribes the biniodide. But the contention of those gentlemen in reference to the alteration by the addition of pot. iod. was objected to by me on January 24th.

Apart, however, altogether from the opinion of the supporters of the bichloride in diphtheria, it has been shown by Drs. Luff and Woodhead that "the biniodide is a more powerful and much safer antiseptic than the bichloride."[1]

The bichloride has been discarded altogether by several surgeons of repute, owing to the poisonous effect of its deposited albuminate; whilst the biniodide, besides forming no albuminate, is entirely eliminated by reason of the great solubility and high diffusion power of its sodic or potassic iodide solvent. There is, therefore, not the vestige of a reason for the further employment of the bichloride, either in medical, surgical, or obstetric practice.

Large Type for Old Folk.

MR. GEORGE ABBOTT (Tunbridge Wells) draws our attention to the periodical started this year, entitled *The Old Folks' Monthly Chit-Chat*, and published by Messrs. Simpkin, Marshall and Co., the most striking of which is that it is printed in very large type. There are many persons suffering from irremedial failure of vision to whom books with large type would be a luxury. At present their reading is practically limited to the Bible, prayer-book, and hymn-book. We regret to see that, although the type is of a height equivalent to about No. 2 of Snellen, the lines of which the letters are composed are much too thin. It would be much better to have a heavy type, such as that in which the word "Hymn" is printed on the first page, even if it was a little smaller. It is unnecessary for us to criticise the subject matter, which appears to be chiefly of a religious nature, but we trust the publishers will see their way to substituting "Folk's" for "Folks'" in the title.

A Consulting-room Thief.

DR. H. WINTLE (Forest Hill, S.E.) writes: A paragraph headed as above in the BRITISH MEDICAL JOURNAL of April 18th reminds me that on Thursday, April 2nd, a man exactly corresponding in description to that given by Dr. C. T. Quiller gained access to my consulting room, and, finding me absent, said he would await my return. In a short time he rang the bell to be shown out, saying that he would call again; he then left, and with him disappeared two newly-bound volumes of Erichsen's *Surgery*.

The Treatment of Pneumonia.

DR. C. R. ILLINGWORTH (Clayton-le-Moors) writes that in his opinion Mr. Hughes's pathology is bad. Erysipelas is a specific febrile disorder, pneumonia a catarrhal one, and no more due to micro-organisms than bronchitis or any other inflammatory affection. I have found iron of great service in pneumonia when there was much secretion and consequent deficient aëration of the blood, but to make a routine practice of it in all cases of pneumonia is to bow down to empiricism. I have had 22 cases of pneumonia at all ages this year, and I have had only one death—in a case of gangrene of the lung complicated with peritonitis.

My treatment consists in lowering the pulse rate and increasing the flowing power of the blood. I give digitalis, in 10-minim doses, every hour or two hours until the pulse comes down to 60 beats in the

[1] BRITISH MEDICAL JOURNAL, March 1st, 1890; and *Laboratory Reports Roy. Coll. Phys. Edin.*, vol. i, 1889.

minute, then less frequently, or in diminished doses, and liquor ammoniæ acetatis (concent.) in from 10 to 15-minim doses. I add iron if the secretion begins to become abundant or watery, and if cyanosis threatens I give iron only. I order a diet of milk every three or four hours, and toast-water between times. I especially carefully avoid all stimulants, for the reason that all inflammatory disorders require depressant not stimulant treatment. Finally, I never take a temperature.

THE EFFICACY OF VACCINATION.

DR. CECIL DIGBY (Hednesford) writes: Until reading the articles in the BRITISH MEDICAL JOURNAL on the Royal Commission on Vaccination, I was unaware that the want of belief in the efficacy of vaccination as a prevention of small-pox was still so widespread; the following facts go some way in proving its usefulness. In the town of Lagos, West Africa, numerous cases of small-pox occurred every year: towards the middle of 1884 and during the following years a very thorough system of vaccination was carried out by means of house-to-house vaccination throughout the whole town, and inspection and vaccination of all unvaccinated strangers at the different canal landing places. This resulted in the number of cases falling in 1884, to 80; in 1885, to 7; in 1886, to 3; in 1887, to 1; and in 1888 there were no cases; the disused small-pox hospital being used as an asylum for lepers. In 1887, 55 Houssas (native constabulary) formed part of an expedition sent inland; I had previously examined and where necessary vaccinated or revaccinated 54 of these men; the expedition was three months away and passed through several native villages in which small-pox was present, with the result that the one man not inspected before starting was attacked by small-pox, the others being unaffected.

TRAUMATIC HÆMATOCELE: CASTRATION: RECOVERY.

MR. MONTAGUE D. MAKUNA, M.R.C.S.Eng., L.R.C.P.Lond., Lic.Med.Bomb. Univ. (Treherbert), writes: A young man, aged 23, came under my observation with a scrotal tumour of four months' duration, caused by an accident. Having ascertained its nature, I injected cocaine hypodermically along the line of incision. The cut was painless; clots were removed, cavity washed with Sanitas lotion and plugged with lint. There was hydrocele of the cord, which was soon cleared away by the prick of a scalpel. Within a few days the cavity was refilled with clots, which were again removed, cocaine being freely used to render the operation painless, perchloride of iron applied to check oozing of blood, and the cavity plugged with lint. Unfortunately, it proved of no avail. On February 18th the patient was given chloroform, and with the assistance of Dr. A. Cook, of Cardiff, the incision was extended, and the testis found diseased and filled with clots. The cord, which was healthy, was tied with carbolised silk and cut. The sac was torn out from above downwards from the scrotal tissue without difficulty. This saved the hæmorrhage and the trouble of ligaturing the vessels, only one requiring torsion. The surface of the wound was freely dusted with iodoform with an insufflator, and the edges brought together by five silver sutures. The drainage tube and the cord ligature were brought out together at the lowest end. The scrotum was covered with iodoform wool and bandaged. The drainage tube was removed the fourth day, no discharge having been observed, and the first dressing and sutures removed the eighth day. The ligature came away on the twelfth day, and the wound healed up by the first intention, the lowest part only requiring three dressings. The patient was discharged, having made a complete recovery.

LETTERS, COMMUNICATIONS, ETC., received from:

(**A**) Mr. W. Allen, Hawkshead; Mr. C. E. Abbott, Braintree; F. S. Arnold, M.B., Bradford. (**B**) Mr. Stanley Boyd, London; Messrs. Burroughs, Wellcome and Co., London; Mr. A. H. Beal, London; Dr. A. T. Brand, Driffield; Dr. J. S. Bristowe, London; Mr. J. B. Browne, Palmerston; Dr. D. Bruce, Netley; Mr. G. S. Bigg, London; Mr. Gilbert Barling, Birmingham; Dr. A. G. Blomfield, Exeter; Dr. W. Boulting, Hampstead; Dr. A. G. Bateman, London; Dr. Byers, Belfast; Mr. B. Blewitt, London; Dr. P. Best, Louth; Mr. R. C. Benington, Newcastle-on-Tyne; Mr. N. D. Best, Birmingham. (**C**) Dr. J. Cagney, London; Surgeon-General Cornish, London; Mr. R. Creasy, Winslow; Dr. W. A. Carline, Lincoln; The Clerk of the City of London Lunatic Asylum, Stone; Mr. J. Cantley, Salford; Dr. R. Cuff, Scarborough. (**D**) Mr. Alban Doran, London; Dr. C. Digby, Hednesford; Dr. E. T. Davies, Liverpool; The Director-General of the Army Medical Department; Dr. W. H. Daly, Pittsburg, U.S.A.; Dr. A. Drury, Halifax. (**E**) Mr. G. E. Ellington, Edgbaston; Dr. C. T. Ewart, Colney Hatch; Mr. A. B. Elliott, Rochdale; Mr. W. G. Evans, Brecon. (**F**) Miss C. M. Frayling, London; Dr. J. Finlayson, Glasgow; Mr. Adams Frost, London; Dr. D. J. Flynn, Cork; Dr. Fentem, Bakewell; Mr. J. H. Fowler, Halifax, N.S.; Mr. C. E. S. Flemming, Freshford. (**G**) Mr. Henry Green, London; Messrs. H. Graves and Co., London; Dr. Grimshaw, Dublin; Mr. R. G. Gibson, Newcastle; Mr. E. Greville, Sheffield; Dr. J. G. Graham, Glasgow; Mr. W. A. Gillon, Hampstead; Dr. Gabb, Guildford. (**H**) Mr. D. A. Hughes, Barmouth; Mr. J. Haysman, London; Mr. J. M. Horsburg, London; Dr. Halliburton, London; Dr. C. H. S. Hozier, Berlin; Surgeon-Major G. F. A. Harris, Nagpur; The Homœopathic Medicine Company, London; Dr. H. Handford, Nottingham; W. E. Home, M.B., Bermuda; Dr. J. A. Harrison, Haslingden; Mr. W. H. Haley, Wakefield. (**I**) Mr. E. Insall, London; Dr. W. W. Ireland, Prestonpans; Dr. C. R. Illingworth, Accrington. (**J**) Mr. H. B. Jones, Bodfeirig; Mr. W. H. Jalland, York; Dr. F. Joy, Brandon. (**K**) Mr. J. Kelly, Helmsdale; Dr. D. B. Kendell, Wakefield; Dr. G. Kirker, Keyham; Dr. R. L. Knaggs, London. (**L**) Mr. W. W. Leigh, Treharris; Dr. H. D. Littlejohn, Edinburgh; Mr. P. A. Lloyd, Haverfordwest; Mr. R. R. Leeper, Rathdrum; Dr. C. A. Lumley, Birmingham; Mr. E. E. Leech, Great Yarmouth. (**M**) Surgeon-Major R. N. Macpherson, Portsmouth; Dr. William Marriott, London; The Medical Officer of the Local Government Board, London; Dr. F. W. Mann, Edinburgh; Dr. Maughan, London; Dr. H. W. G. Mackenzie, London; Mr. H. McKenzie, Paisley; Dr. A. McPhedran, Toronto; Dr. E. A. Milner, King's Langley; F. C. MacCarthy, M.B., Worcester; Mr. R. Mansell-Jones, Brighton; Dr. Mackenzie, Balham; Mr. F. Miall, Bradford; Mr. L. Mark, London; Dr. J. G. McKendrick, Glasgow; Mr. W. Moore, Stourport; Mr. W. A. Maggs, London. (**N**) Dr. W. G. Nash, Plymouth; Dr. R. Neale, London. (**O**) Mr. T. B. O'Connor, London; Dr. L. H. Ormsby, Dublin. (**P**) Dr. F. M. Pope, Leicester; Mr. W. J. Potts, Manchester; Persevere; Mr. T. G. Parrott, Aylesbury; Primrose; Mr. H. W. Pooler, Birmingham; Mr. H. C. Pauli, Luton; Dr. H. W. Pigeon, Hull. (**Q**) Dr. C. T. Quiller, Clapham. (**R**) Mr. J. Robertson, Edinburgh; Messrs. Rayner and Cassell, London; Dr. William Robertson, Newcastle-on-Tyne; Reform; Miss M. Ritchie, London; Surgeon-Major P. Ranking, Dilkusha; Mr. Mayo Robson, Leeds; Mr. R. P. Ryan, Bromsgrove. (**S**) Dr. Alfred Swann, Batley; Dr. R. M. Simon, Birmingham; Dr. Alfred Sheen, Cardiff; Miss M. Stewart, Dunrowan; The Secretary of the London Lock Hospital; London; Mr. R. R. Sleman, London; The Secretary of the University of Aberdeen; Dr. C. E. Sherrington, London; B. Sweeten, M.B., Cardiff; Mr. W. Johnson Smith, London; Student; Dr. Shore, Hornsey; The Secretary of the General Practitioners' Union, London; Dr. F. J. Smith, London; Messrs. Skeffington and Co., London; Mr. E. H. Snell, Birmingham; Dr. W. C. Steele, Ealing; Mr. Simeon Snell, Sheffield; Dr. W. J. Sinclair, Manchester; The Secretary of the Deaconesses' Institution and Hospital, Tottenham; Dr. W. Stephenson, Beverley; Mr. J. H. Salter, London. (**T**) Mr. W. Towers-Smith, London; Mr. M. E. Thomson, Northampton; Dr. J. W. Taylor, Scarborough; Dr. E. F. Trevelyan, Leeds; Mr. J. Thompson, London; Dr. H. H. Tooth, London; Dr. J. Tuke, Edinburgh; Mr. C. S. Tomes, London; Mr. J. T. Thomas, Camborne; Dr. T. W. Trend, Southampton. (**W**) Mr. H. R. Williams, London; H. Wintle, M.B., Forest Hill; Dr. Wallace, Cardiff; Mr. F. C. Wood, Nottingham; Dr. E. Willoughby, London; Mr. E. White Wallis, London; Mr. H. D. C. Woodcock, Leeds; Mr. T. J. Webster, Merthyr Tydvil; A Would-Be Member; Dr. J. M. Wilson, Doncaster; Professor B. C. Windle, Birmingham; Mr. J. Willing, jun., London. (**Y**) Miss M. Yates, London; etc.

BOOKS, ETC., RECEIVED.

Collected Contributions on Digestion and Diet. By Sir William Roberts M.D., F.R.S. London: Smith, Elder, and Co. 1891.

Die Blennorrhöe der Sexualorgane und ihre Complicationen, von Dr. Ernst Finger. Zweite wesentlich vermehrte und verbesserte Auflage. Leipzig und Wien: F. Deuticke. 1891.

Handbuch der allgemeinen und speciellen Arzneiverordnungslehre. Von Dr. C. A. Ewald. Berlin: A. Hirschwald. 1891.

The Modern Antipyretics. By Isaac Ott, M.D. Easton, Pa.: E. D. Vogel. 1891.

The Watering Places of the Vosges. By Henry W. Wolff. London: Longmans, Green and Co. 1891.

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AN ADDRESS
ON
REMEDIES NEW AND OLD;
ERRORS AND FALLACIES, WITH SUGGESTIONS FOR THE IMPROVEMENT OF THERAPEUTIC METHODS.

Delivered, by request, to the Ulster Medical Society, in Belfast.

By W. T. GAIRDNER, M.D., LL.D.,
Professor of Medicine in the University of Glasgow.

GENTLEMEN,—It would be unpardonable were I not to convey to you at the outset, in the most grateful language I can command, my sense at once of the great honour you have done me in inviting me to deliver this address, and of the still greater responsibility which the mere fact of its delivery under these circumstances imposes upon the speaker. I am here at your instance, not, it is true, in a foreign land, but still in a country that is not my own, and at the seat of a great medical school; and I am here to discuss matters of the gravest practical import; matters, no doubt more or less familiar to one who has been a medical teacher and a clinical teacher almost all his life; but still of a kind in regard to which he has not been accustomed to speak dogmatically, even within the circle of his own pupils; and which he has still more rarely had the opportunity of presenting, as now, to an audience in every way his compeers, and in many instances his superiors in respect of medical knowledge and experience. It will, however (if you will allow me to say so), somewhat lighten this oppressive sense of responsibility—oppressive not because of your exactions, but because of my own feeling of insecurity—if at the outset it comes to be understood that I conceive of myself as placed here not so much to originate new ideas, as to give further expression to some which have already been before you, and which, moreover, are so much in the air, so to speak, at present, that they may very well be supposed to be in the mind, and to have guided more or less the conduct, of every one here present. So viewed, my task will be divested, comparatively speaking, of an element of what might be called presumption; for it would be presumption to suppose that I can enunciate, *ex cathedrâ*, for the guidance of the Ulster Medical Society, final judgments on such difficult matters as those to which I refer. Opinions on therapeutical science can only have value at all, in so far as they proceed from those that have made a life-study, and a quite special study, of these extremely complex and difficult questions. Now, although I have ventured to select the subject of Remedies as the theme of this address, I am painfully conscious of having no manner of claim to appear in the character of a professed therapeutist. In regard to new remedies, in particular, my attitude throughout life has been one rather of caution and reserve than of extreme eagerness or forwardness in their use; and this not as a matter of temperament merely, as some might suppose, but as an attitude deliberately adopted and adhered to in general from a sense of duty—the duty which comes naturally home to a professor of medicine who, placed in a position to guide others, and necessarily to exercise influence over the young, would be sure to find his own hasty judgments, his own faults of undue partisanship or bias, reproduced in scores of careers where they would not be counterpoised by the more matured reflection and experience which are the natural correctives of the errors and fallacies, always tending to discredit, and often dangerous or disastrous, which so easily beset men of a too sanguine temperament. I have therefore supposed that at the present moment some good may be done if, without at all pretending to more knowledge or more experience than that of the average hospital physician, a brief glance all round could be made in this address, at some of the sources of the errors and fallacies here alluded to. And in applying this process of criticism to new remedies, it is by no means my intention to exclude from consideration the lessons that we may reasonably derive from the history of those much older remedial agencies which have the advantage of hundreds of years of prescription, and in regard to which I fear some of our minds are still by no means completely and finally settled even now.

THERAPEUTIC REVOLUTIONS.

One has only to recall such instances as blood-letting, mercury, quinine, arsenic, opium, alcohol—all of them, I believe, valuable, some of them even invaluable, remedies; but can we honestly affirm that we all, or even a practical majority of us, are quite agreed about the therapeutic uses of any one out of this list? To take only the first as an illustration—because it was resuscitated and very ably discussed at one of the London societies only the other day—can we shut our eyes to the fact that in the case of venesection, once reputed the greatest of all remedies, advocated and practised with almost entire unanimity by whole nations of men, under the advice of the most cultured physicians for several thousand years since the times of Hippocrates and Galen, we have not been saved by all our medical experience in innumerable different times and places from what may well now be called a species of idolatry, that is, from a state of mind not resting upon stable fact, but upon extremely insecure and unstable prepossessions—a state of mind, therefore, not accessible to reason and experience in many respects, but on this very account prone to revolutions and counter-revolutions; the last of which, tending in the direction of the entire dethronement of the idol, has occurred within the memory of some of us? Or take the last of my illustrations given above—the use of alcohol or of alcoholic stimulants in disease—can it be for a moment forgotten by any of us here that this, and the due limits of it, or even the existence of a therapeutic use of alcohol at all, has been the subject of controversies, even in our own day, which appear to exhaust all the possibilities of the extremest differences in opinion, from the enormous, and as I think deplorable and even ruinous, excesses advocated by the late Dr. Todd to the almost absolute disfavour with which the administration medically of even the smallest amounts of alcoholic remedies is regarded in some quarters? No doubt, the question of the therapeutic use is here complicated by other questions, moral and social, some of them of the first importance; but can it be a matter of indifference to us, in considering the whole question of remedies in general, that our professional convictions in regard to this particular one have been swayed this way and that, under the impulse of great names and plausible theories not during the Dark Ages, not when (as we are accustomed to think) men were led chiefly or wholly by authority, but in this nineteenth century of ours, and even beyond the middle of the century? I apprehend that no one can even approach the subject of new remedies without some amount of misgiving based on these considerations; and if I have any claim at all to address you on that subject, it is because you have reason to expect that whatever I may now enunciate to you will present some sort of continuity with another address[1] which I was invited to deliver in Dublin four years ago, and in which I endeavoured to vindicate for our art a position of greater stability nowadays than could be assigned to it a hundred years ago. But while in this and in other instances I shall not fail to point the moral which arises from our now dethroned and now reinstated idols in the past, I hope, by including in this address a general reference to the newer—indeed, in some cases the newest remedies, to escape in some degree the charge of merely repeating myself, and so wearying you. And yet it is but too plain to me that to speak in any detail, or in anything like an authoritative fashion, of new remedies in the presence of our friend Dr. Whitla, an ex-President of this Society, and now, as we shall all join in affirming, emphatically the right man in the right place in connection with the Belfast Medical School, is a perilous, even an audacious, venture. With all conviction I can declare that in everything which belongs to this region I ought to sit at his feet, and not he at mine. Nay, I will go further, and say that on no consideration could I be induced to place my own estimate of any one new remedy on a par with his. His admirable book, indeed, is ever at my elbow in the consulting room, and in

[1] Address in Medicine delivered before the British Medical Association, August 3rd, 1887.

his personal converse I have come more and more, within the last few years, to appreciate the highly trained and yet restrained instinct of just judgment which he applies habitually to one of the most difficult, if at the same time most attractive, of medical studies. I ask you, gentlemen, to consider these words as by no means those of empty compliment, but rather as the absolutely sincere expression of a feeling without some expression of which I dare not enter upon this address.

Fortunately for all of us, it is not much more than four years since Dr. Whitla, as President of this Society, was led to make known to you his views as then formed on the modern Domain of Therapeutics,[2] and since then he has been, as you all know, unceasingly active in pressing his suggestions, made in the first instance at the meeting of the British Medical Association in Dublin in 1887, upon the Therapeutic Committee of that great Association. It is of very good omen for therapeutical science when two such men as our friend here and Dr. Lauder Brunton, to say nothing of others, are endeavouring to combine their forces, and to urge upon us all the claims of the investigation of new remedies, in a spirit at once of hopefulness and of genuine scientific caution, with all the resources of the British Medical Association. You may be certain that if in this address I cannot do much to assist, I will certainly do nothing to hinder or disparage, an effort so clearly in harmony with the best traditions of our art.

Individual and Collective Investigations.

It is true that the very first President of the Therapeutical Section, at its origin here in 1884, devoted a considerable portion of his address to denouncing the statistical method, which may be held by implication to include the collective investigation of the effects of remedies; but although no one, perhaps, in this room has had more occasion than I have had to remark on the defects of that method, and although I fully appreciate the force of Dr. Maclagan's criticisms,[3] I hold at the same time that Dr. Whitla is amply justified in calling upon the younger and more active race of practitioners to aid in obtaining collective observations regulated by a distinct plan, and carefully adjusted so as to avoid, as far as may be, the fallacies inherent in all merely personal investigations on the one hand, and all indiscriminating statistics on the other. The only possible choice, indeed, as regards the majority of new remedies, is between such ordered and carefully collected observations, on a scale greater or smaller according to circumstances, and the haphazard results of individual observation at the bedside, with the fallacies of which in the past most of us are only too familiar. And here, let it be remarked, I am not to be understood as opposing, in all respects, Dr. Maclagan's thesis, which he himself briefly states as follows, namely: "That individual observation" (as opposed to statistics) is "that, on which we have to rely; that, by means of which the most important advances have been made in the past; that, too, by which all methods of treatment must be tested, and on the results of which their adoption or rejection must depend."[4] So far from disputing, I can fully accept, this statement as a part, possibly a large part, of the whole truth. And if all of us were thoroughly trained and disciplined observers like Dr. Maclagan, or like my other friends just referred to; if, moreover, we had each of us at disposal a field sufficiently large, and energies sufficiently gigantic adequately to work out the results, I should quite frankly concede that individual effort is greatly superior to collective effort in dealing with all questions of therapeutics. Perhaps, indeed, in the last resort, and for each one of us individually, personal observation alone will carry conviction as to whether a new remedy with plausible credentials is to be adopted or discarded. But then, consider for a moment the vast area over which such inquiries must extend, if they are ever to yield anything like properly verified results. How many of us are there—even those of us that have hospital wards or out-practice at disposal—who can possibly hope to obtain in one, or two, or even more years the means of testing thoroughly any one great therapeutic advance, not to say the comparative merits of the scores of new claimants along certain well-understood lines of progress—for example, new antipyretics, new hypnotics or analgesics, new digestive ferments or solvents, new cardiac tonics, new gastric, or biliary, or pancreatic stimulants? I declare to you, gentlemen, that to be compelled to undertake personally a comparative investigation on any one of these lines would much more than exhaust the resources I have at disposal as a teacher and hospital physician in any reasonably limited period. To undertake the whole of them, or even two or three of them, at once would be simply to court defeat, and at the same time to incur with too great reason the reproach of treating my patients as merely the raw materials for crude and rash experiments. How, then, can the science of new remedies—as opposed to mere haphazard observation—be advanced at all without some kind or measure of co-operative work?

Unscientific Co-operation.

Moreover, if we fail thus to co-operate upon a carefully-regulated and scientifically-planned basis for observation as regards new remedies, we shall be sooner or later compelled to adopt, quite uncritically, the mere attestations which are always forthcoming in any amount and to any number in favour of each novelty that a great firm thinks it worth while, or commercially profitable, to introduce. Co-operation for commercial purposes will thus in time entirely displace scientific co-operation for purposes of unbiassed and independent judgment. I am far from wishing to condemn unreservedly those who, possibly from no unworthy motive, are led into giving such testimonials as I read every day in advertisements, by no means always without a certain measure of justification. Few men were so shy of getting in an unauthorised way into the newspapers as my old teacher, Sir Robert Christison, yet he found himself for several years placarded in countless advertisements as the authoritative patron of a certain extract of meat, which he was thus supposed to defend against all rivals, in virtue of his having made some remarks in a lecture about it, which had got into print. And an old friend of mine in this country, though not in this city, has had his name recently appropriated, along with a crowd of distinguished and even royal personages, on behalf of a bit of sheer claptrap and quackery, widely advertised as patronised or employed by the said personages—the fact being that this gentleman's wife had the curiosity to send for one of the little machines in question, and did so unfortunately in her own name instead of through a tradesman, and without even consulting her husband. Nothing is easier, therefore, when money is in it, than to get up a perfectly delusive appearance of a consensus of professional opinion. The only fair and just antidote to this, as it appears to me, would be a professional combination of another kind—not to praise or advertise, but to judge and obtain evidence. And hence I am led to look upon Dr. Whitla's move in connection with the British Medical Association as the possibly embryonic form of what may become one of the greatest advances in therapeutic method in the future.

"The advance of pharmacology," says Dr. Whitla, in that Dublin address of his to which I have already referred,[5] "can only be accomplished by individual effort, whilst therapeutic advance demands combined and co-operative assistance." I have already explained to you in what sense I am disposed to concur with this proposition. But it is one which requires to be looked at all round, as it were, both with respect to its merits, and its difficulties and disadvantages, which latter are not small, and which Dr. Whitla himself is by no means, I am sure, disposed to overlook or to underestimate. The further consideration of this topic will bring us squarely abreast of the subject I have indicated as the theme of this address, and will, perhaps, show also some points of agreement with the remarks of Dr. Maclagan aforesaid, as to the unsatisfactory character of the statistical method as hitherto applied to therapeutics. And in discussing the errors and fallacies attaching to new remedies and their applications in disease, it will not appear to you surprising or incongruous if I attempt to point a moral in a few instances from the fate of some older ones.

Mercury.

Let us look, for instance, at the chequered history in the past of such a remedy as mercury, in connection with the

[2] *Dublin Journal of Medical Science*, January, 1887.
[3] British Medical Journal, 1884, vol. ii, p. 260, An Address, etc., on Methods of Therapeutic Research, by J. T. Maclagan, M.D.
[4] *Loc. cit.*, p. 262.
[5] British Medical Journal, 1887, vol. ii, p. 298.

important position attributed to it (I abstain even now from saying "finally secured for it") in the present day. It is surely an instructive, and even an ominous fact for us, that we can look back over more than five centuries during which "individual effort" has been diligently applied to this one subject, with the result that at the beginning of the present century an all but successful revolt took place, chiefly in military practice, against the use, under any circumstances whatever, of this remedy—a revolt not the result of fanaticism or theoretical bias, but rather led by well informed, watchful, and not undisciplined observers, who had thoroughly convinced themselves, and strove hard to convince others that mercury was not a remedy at all, but simply and absolutely a poison, and the source of almost all that was most virulent and disastrous in the diseases for the cure of which it was employed. Now, as I do not mean to linger long on this topic, and still less dogmatically to press my own views upon you in the course of this address, you will perhaps excuse my reminding you, very briefly and generally, of a few of the landmarks in that chequered history of which I have spoken. I believe it may be correctly affirmed that we owe the first introduction of mercury in medical practice to the Arabians, or at least to those ages called by us commonly the "Dark Ages," in which the Arabian physicians were almost the only lights that were not obscured to the point of extinction by scholasticism, necromancy, and false shows of science like alchemy and astrology.

The immense and probably much misapprehended group of formidable diseases which passed current as "leprosy," and drifted helplessly into the lazar houses or leper hospitals of Europe, appeared to have been in some instances successfully controlled by mercurial fumigations and inunctions, which accordingly had become, at the time of the great outbreak of syphilis in the end of the fifteenth century, the favourite resource of "surgeons and quacks," as testified by Sprengel[6] in his well-known history. Mercury thus came to be the great specific in many hands, and by a sort of "individual effort" by no means of the most creditable or scientific sort, in disorders which, having well-marked external manifestations to which the mineral could be directly applied, were at the same time reported to arise from a constitutional cause, or, as we should now say, from a virus in the blood. When the great (and as some think the first) outbreak of syphilis occurred, therefore, it was inevitable that mercury should be used, and, in fact, large fortunes are said to have been made out of its use, thereby, of course, very much increasing the difficulty of arriving at the truth. So it continued during the sixteenth century, notwithstanding calamitous results to which Ulrich v. Hütten (perhaps the most picturesque and chivalrous figure among the early reformers) bore emphatic literary testimony in his own case; notwithstanding also the persistent opposition of Fernel, the most instructed and learned physician in France in those days. From this time onwards mercury, like antimony as proclaimed by Basil Valentine, may be said to have enjoyed a "currus triumphalis" that carried all before it, until the much later date of the sceptical and negative movement of which I have already spoken. All of you know, as well as I do, the disasters that followed in the wake of this triumphal car of Juggernaut: the doctrine, or dogma, that mercury, carried to profuse and extreme salivation, was the one and only cure for syphilis, and perhaps also, according to some, for certain forms and stages of inflammation in general. In the hydrargyric *orgie* (for it was nothing less) which characterised the seventeenth and was continued in the eighteenth century, John Hunter stands out, to my mind, as a moderator in respect of doctrine and of practice, though no one has asserted the claims of mercury more strenuously, or has more distinctly intimated his own belief that, in the disorder referred to, it cannot be dispensed with. "Mercury," he said, "is the great specific, and hardly anything else is to be depended on." I have no time, however, now to adduce evidence in detail as to Hunter's doctrinal position on this subject; it was sufficiently strong and unflinching on behalf of mercury to have demanded, or provoked the sceptical movement aforesaid, by way of a protest, in this country; and yet sufficiently elastic as regards the theory of the remedial action, to have adapted itself successfully to modifications by his pupil Ricord, leading in time to the much more attenuated use of the remedy which now holds the field in France, and, with certain further modifications in the same direction, also in this country. All of us who are old enough, and especially all of us who were in any way connected with the Edinburgh school, will remember the traditions associated with the names of John Thomson and Syme, and their unqualified denunciations of this remedy as everywhere evil and only evil, the real source of all the woes it was intended, and believed, to obviate—denunciations which, in my own case, were so far effective as to have restrained me for years from almost ever employing this drug, either in the cases alluded to, or in the ordinary acute inflammations; whereby, it is true (and also from the practical disuse of blood-letting about the same period), I was led into a course of observation and reasoning with respect to the natural course and progress of many acute diseases, which has had an abiding, and, I think, a favourable, influence on the whole of my practice ever since. But most of us would be inclined now, probably, to admit that, under the careful guidance and matured judgment of such teachers as Mr. Jonathan Hutchinson and others, mercury has once more asserted itself, and has come to be justly considered, not only as an indispensable remedy, but in judicious hands one of the safest of remedies in the cases in question.

All this, you will observe, gentlemen, applies not to a new, but to a very old, remedy; and yet it contains some important lessons in relation to the more immediate subject of this address. Mercury, if any drug, has attained its position and its reputation, not through co-operation, nor by statistics, nor yet by any overwhelming weight of dogmatic prepossessions, but by "individual effort;" and when distrusted and discarded for a time, has been so distrusted and discarded mainly by individuals acting upon convictions acquired in the course of personal experience. There is no question, moreover, or almost no question here of pharmacology, as having furnished chemical or physiological science with a guiding principle, or even a clear and consistent theory. "Our knowledge of the action of mercurials," says Dr. Wood, of Philadelphia,[7] "is at present clinical rather than experimental, empirical rather than scientific, but it seems scarcely possible that it is not correct." I hope that Dr. Wood is not here too sanguine, but it must at least be admitted that in the endeavour by individuals to settle definitely the position of only one very largely employed and very active remedy, centuries have been consumed, not perhaps quite fruitlessly, but still very unsatisfactorily, in perpetrating frightful abuses, of which all of us are now with good reason ashamed, and which stand on record as among the worst opprobria of the healing art. In order to reach even a moderately safe, not to say efficient or stable, position in the therapeutic employment of this one powerful drug, we have been obliged to sacrifice on the altar of "individual effort" hecatombs of victims, and to stumble along painfully through centuries of delusion and mischievous blunders, not to say quackeries, in the search for only a few grains of solid truth.

Antimony.

I have elsewhere[8] told the story of antimony, and it is in its essence the same story, with the difference, perhaps, that even now there is not the same consensus of opinion as to the beneficial and not dangerous employment of the remedy. Proscribed and denounced utterly by the Faculty of Medicine in Paris in 1566 as a poison without any redeeming virtues; sternly interdicted "by the unanimous consent of all" in 1615, and legally prohibited, even as to its sale, under severe penalties, antimony nevertheless managed to assert itself in the hands of bold and possibly unscrupulous practitioners till, under the sunshine of Court favour and influence, it got itself formally admitted, by that same Faculty of Paris, into the list of regular and professional remedies in 1666, exactly

[6] Sprengel, *History of Medicine* (French translation), vol. 3, p. 72. The reference is to Fracastor de Morb. Contag., l. 2, c. 12. The following lines may be quoted: "Very early (1497) the external employment of mercury was begun in reference to the venereal disease; for, on account of its resemblance to leprosy, it was thought that this metal might be of some beneficial use; but the surgeons and the quacks only dared to use it thus, and were punished whenever the fact came to be known."

[7] *Treatise on Therapeutics*, 4th edition, p. 398.

[8] *The Physician as Naturalist*: addresses and memoirs bearing on the history and practice of medicine, chiefly during the last hundred years. Glasgow: James Maclehose and Sons, 1889. See pp. 97, 378.

a century after its first proscription, and so it has remained ever since. Almost every one here, again, must be more or less aware of the "contra-stimulant" doctrine of Rasori, and of the cumulative (and no doubt often utterly poisonous) doses of this potent drug prescribed in accordance with that theory, even during the first quarter of the nineteenth century. At present, if I may judge from what I hear about me in Scotland, antimony, like blood-letting, is in the position of a mostly dethroned idol, having been merged in the general wave of scepticism as to the more heroic antiphlogistics; or perhaps replaced by other and newer fashions, to be revived again when these are in their turn exploded or disgraced.

It would seem from these instances among the older remedies (and many others might be given did time admit) that to establish fairly the position of even any one drug having a powerful action on the human frame by the way of individual effort, or, as it is called, practical use and experiment, is by no means a very easy or a very safe process; that it may, or perhaps must, lead to violent extremes and alternations of opinion extending, in some cases, over many years, or even centuries; and may thus involve all but unavoidably, to judge from past experience, the most deplorable excesses and fanaticisms as a part of the necessary search after truth. And yet, according to Dr. Maclagan, statistics will not help us here, or, at least, have not helped us hitherto. "Individual observation is that on which we have to rely, by means of which the most important advances have been made in the past, etc."

New Remedies: Pharmacology.

I propose now to inquire whether, and to what extent, we may claim to be advancing in respect of our newer remedies on safer or better lines than these. It will, of course, occur to every one of you that up to this point I have made little account of pharmacology, or the scientific and exact investigation of the properties and physiological action of remedies which, as we all know, is a science comparatively of yesterday, and yet one having the closest possible relation to therapeutical inquiries. It is difficult to read such an address as that of Dr. Lauder Brunton in 1886[9] on the "Connection between the Chemical Constitution and Physiological Action of Remedies" without feeling that we have here entered into quite a new era. I am not one of those who would seek to limit the aspirations, or in any way restrict the progress, of pharmacology, but I cannot help noting that in respect of the increasing crowd of new remedies which it is bringing to light from the abounding wealth of new chemical combinations, it is in the meantime rather adding to than diminishing our difficulties. And in this I may claim once more the assistance and practical concurrence of our friend, Dr. Whitla, who says:[9] "The indication at present is not for more new remedies, but for better and more precise knowledge of those already in our hands. It seems as if one of our very greatest barriers to progress is to be found in the ever increasing number of new drugs which pours in upon us at a rate which prevents that thorough testing of their qualities and actions so necessary before the range of the new weapons can be accurately determined." This witness is true. I appeal to you, gentlemen, as men actively engaged in practice when I say that we cannot possibly overtake this flow of new remedies, or subject even a fractional proportion of them to what we should consider a fair therapeutic trial. Some consideration is due to our patients, and if we should ever attempt to make them the subjects of hasty and ill-advised experiments, we should condemn ourselves, and in the end, I believe, do far more harm than good. Some time ago, in using for the first time a brand-new antipyretic drug then just brought into notice by a most elaborate and thoroughgoing laboratory investigation, I was horrified and distressed at finding that the very first tangible effect brought about by it was hæmaturia, or rather hæmatinuria. The oversight was mine. The disintegrating effect upon the blood corpuscles was, indeed, mentioned in the memoir I refer to, but was so mentioned as to lead me to view it as a merely occasional and avoidable accident, quite of secondary importance as compared with the marvellous, and very real, power of controlling temperature of the drug in question. I need scarcely say to you that I did not give that drug a second trial, on the principle, which is ever present to my mind in the experimentation upon new remedies, that if anybody is to be killed by them, I had rather it should not be in any way on my advising.

On the other hand, if in the case of what we really believe to be an innocuous remedy we adopt the bold course of giving it all round, or the more scientific plan of giving it to one half of our patients (omitting the other half for the purposes of a control experiment), we shall be open to the kind of remark implied in a story which "went the round" in Edinburgh many years ago, but of which I can only say for myself in reporting it, *Se non e vero, e ben trovato*. It did not materially detract from the world-wide fame of the learned professor in question, nor did I ever hear that it had emptied, to any extent, his overflowing waiting room. The story was that a lady, finding in her prescription something unwonted and as she thought "uncanny" (being possibly an old bird in therapeutical experiments), turned back to get a further explanation from the professor, who was by this time fully occupied with someone else. But the man at the door was equal to the occasion. Taking the prescription into his hand he ran it over with a practised eye, even inured to Latin formulæ by long and faithful service in a medical man's house. He returned the paper to the lady and showed her to the door again, with the remark, "Ou aye, mem, it's a' richt; *they're a' gettin' that, the now.*" The professor had been experimenting all round, more or less, with some of the more unwonted metallic salts, salts of titanium, cadmium, tellurium, palladium, etc., most of which, I believe, turned out to be "tonics," with the exception of one, which had the awkward peculiarity of causing the patient to shed abroad such a peculiar and disagreeable perfume or stink (if you will pardon the word) that it had to be forthwith abandoned on this account.

Koch's Treatment of Phthisis.

But we have all had within the last six months a much more serious object-lesson in reference to the claims of pharmacological research as a guide to treatment than any of those just alluded to; and, although it is a sad and rather a depressing subject to speak about, it is not possible to escape some allusion to it in a discourse bearing at all upon new remedies at present. Whatever judgment may be ultimately arrived at in regard to Professor Koch's treatment of phthisis pulmonalis, few of us will be disposed to deny that we are now in the very trough of a wave of "reaction," or rather of discouragement, from the hopes and expectations entertained in November last. Now, gentlemen, there are not wanting among us—at least in Scotland—some very superior persons who, without knowing any more than their neighbours, find the present a suitable occasion for pluming themselves upon their consummate sagacity in consistently deriding Koch and all his works—past, present, and to come. Gentlemen, I am not one of those very superior persons; for on November 17th, 1890, I find I am reported as having used words like these to my own class, at the very next ordinary meeting after the celebrated article in the *Berliner klinische Wochenschrift*, translated in the British Medical Journal of November 15th: and I am by no means ashamed of these words now.

After a rapid glance at the social havoc wrought by tuberculous diseases in their ordinary and most fatal forms, the report proceeds: "It was not surprising that an announcement bearing on the treatment of so enormous an evil as tuberculous disease should excite the most intense and widespread interest, and *give rise to expectations which might easily be doomed to disappointment.* Looking to Dr. Robert Koch's previous record, and to his researches on this very subject in the discovery of the bacillus tuberculosis, Dr. Gairdner said that everything Koch had hitherto promulgated in connection with the pathology of tubercle had been characterised by a quite admirable patience, accuracy, and inventive genius. Dr. Koch's whole career had been that of a man resolved not only to penetrate Nature's secrets, but to speak the truth a regards them. No one, therefore, was better qualified to lea in the direction to which the new research pointed. But it was easy to misapprehend that direction and therefore to miscalculate, perhaps altogether to misconceive, the results foreshadowed in Dr. Koch's manifesto." Here followed an exposition in detail of the principal positive statements in Koch's communication of the above date, and an attempt to estimate the theory of them so far as then revealed; but it is

[9] British Medical Journal, 1886, vol. ii, p. 326.
[10] Address in Dublin, *loc. cit.*, p. 297.

needless in the present address to trouble you with this, as it has been superseded by later communications. The report then proceeds: "There was in all this at least a presumption of truth, inasmuch as these surprising results were in no sense crudely empirical or haphazard, but had been attained by a course of elaborate and conscientious research by a most competent and tried experimentalist. It was nothing less than a duty to go carefully and hopefully over this new ground, and arrangements had already been made for doing so in the Western Infirmary, where some at least of the results, whether entirely favourable or otherwise, would soon be within their ken, and perhaps the vision of all of them. But it would be well to select, in the first instance, cases which, on Koch's principles, afforded some reasonable hope of a strikingly good result, and not to make an indiscriminate rush upon the remedy as if it were a panacea."[11]

Such was the temper in which most of us, I believe, entered on this inquiry into a very new remedy only a few months ago; hopeful, if only for the sake of our common humanity turning its strained and anxious gaze to Berlin, as the children of Israel may be supposed to have looked to the brazen serpent in the wilderness, for a cure that was little short of miraculous; hopeful also in respect of the very sincere admiration and regard we entertained (and which I, for one, still entertain) for the quiet, modest, self-centered man of science, working out the pharmacology of tuberculin in the recesses of his laboratory by patient and continuous research; while at the same time we were quite fully alive to the risk of disappointment, and determined in any case to let no mere blind enthusiasm on the one hand, or ungracious disparagement on the other, interfere with the impartiality of our personal and strictly therapeutic estimate of results.

How do we stand now? Ever since the startling and ominous announcement by Virchow of the facts observed by him in fatal cases under Koch's treatment it has been, in the opinion of many of us, fairly open to question whether the risks are not so serious as to outweigh the expectation of benefit from that treatment in consumptive cases, or even in tuberculous diseases generally (excluding lupus). On the other hand, even the alleged benefits are, more or less, open to question also. Confining our attention to cases reported as pulmonary tubercle (and so reported from Berlin) we find that 932 of these are tabulated in the supplement to the *Klinisches Jahrbuch:* a supplement devoted specially to the official analysis of the statistical and other results of the Koch treatment in a great variety of hands. Of these 932 cases there are 48 in which the result is not stated, 10 reported as having ended in recovery, 147 in decided improvement, 158 in improvement, 533 in no improvement, and 36 in death.

There is no reason to doubt the entire good faith of these results, and they must be accepted in the meantime (subject to any further explanations or corrections) as probably the best that can be shown on a scale so considerable as to remove them in some degree from the unconscious bias of individual observers in selecting (and rightly selecting) only favourable cases for treatment. So viewing them, and admitting most fully that statistics cannot be allowed to have the last word in this question, it seems only too plain that there is but little encouragement to be drawn from these figures, which, as any one may see by turning to Dr. Walshe's book,[12] are less favourable than those obtained twenty years ago in the Consumption Hospital at Brompton. For in the Brompton cases, admitted "in all stages of the disease, and in every variety of general condition"—even including the cases moribund on admission—we are told that "the number improved or unadvanced (on leaving the hospital) was more than double that leaving it in a worse state, or dying within its walls (the exact ratio is 67.84 : 32.16);" while in the Berlin cases treated by Koch's method, 315 are claimed in all as on the side of improvement, and 569 (including the fatal cases) must be held to be at least probably tending to get worse; although it is equally probable that some of these might have been included at Brompton in the percentage of stationary cases. And in the matter of apparent recoveries, the comparison is still more unfavourable to Koch; inasmuch as Dr. Walshe claims in 4.26 per cent. of the Brompton cases "complete restoration to health, not only as regards apparent disturbance of the functions generally, but as regards local evidence of *active* pulmonary disease." The Berlin estimate of recoveries, as we have seen, is only 10 in the whole 932 cases, or not much in excess of 1 per cent. Possibly, however, the distinguished physicians who supplied the materials of this calculation may have imposed a more exacting test of "recovery" than is above indicated by Dr. Walshe; and, moreover, the lapse of time has been too brief as yet to permit of fully established recovery in a considerable proportion of cases.

My own personal experience is too small to be of any consequence, for, owing to difficulties in procuring the lymph, we were late in beginning the use of it at the Western Infirmary, and my trials of the remedy soon came to an end, owing to distrust inspired by Professor Virchow's statements. But, in the excellent and moderately-worded paper of Dr. Nixon, recently published in Dublin, we have an example of a sympathetic, if not an enthusiastic, follower of Koch, converted by sheer experience to an apparently antagonistic position; and, in the last number of the *Asclepiad*, Dr. B. W. Richardson declares himself uncompromisingly opposed to the entire theoretical basis of the new treatment. I need scarcely say that no word coming from Dr. Richardson can be set aside as unimportant, even if not confirmed by personal experience of the alleged remedy. On the whole it will be desirable to await Koch's further statements, now, it is said, about to be made public after a long silence, before saying anything more definite on this subject; but we seem to have already passed—whether as regards the public expectations or the attitude of the profession at large—through as great a range of extremes during these few months as was developed in relation to the mercurial treatment of syphilis in four or five hundred years. From the wild rush at Christmas and for some time thereafter, in search of immediate salvation at Berlin, to the contemplative, profoundly sceptical, and even pitiful state of discouragement in which we find ourselves in April is a long stride in the way of "reaction," and we can only hope that something of more or less permanent value may survive the discomfiture.[13]

The Duty of the Profession.

But the lesson which—whatever the ultimate fate of the Koch remedy—we have got to learn, and must needs learn, from this newest of new therapeutical agitations, is that pharmacology—or, let us say, the experimental investigation of new remedial agents in the laboratory—though indispensable, both as a stimulus and as a help to therapeutics proper, can never have the last word of control or be permitted in any way to supplant that purely *clinical* work, which it is the object of this address, as of Dr. Whitla's, to assist in organising, by the suggestion that, with a certain measure of co-operation, it can be, in many cases, more satisfactorily performed than by individual observers unattached. In the instance we have now been considering the co-operation has been, so to speak, instinctive and spontaneous, and has included the whole civilised world, with the results that we have just seen. Dr. Koch is, I believe, far too genuine and too noble a man to have wished it otherwise, although he may possibly regret now that his hand was forced by a Minister of State, and that what he set forth tentatively, and with an almost trembling solicitude for the truth, should have been at first surrounded with mystery and then converted into a sensational romance. But therapeutical investigations of the more commonplace kind are not, in the first instance at least, encompassed with such a halo of premature fame, and if, as too often happens, the apparent well-spring in the desert proves to be a mirage, the cause of the illusion is to be found rather in a morbid craving for notoriety on the part of the investigator than in a premature impulse on the part of the outside world to wring from him his secret. The principle of the nostrum is now, happily, so condemned and discredited in the medical profession (though still too much favoured by the public) that we may consider it as being definitely abandoned by all honourable men. But the evils of what may be called, in the most general and euphemistic expression, a morbid individuality do not end with the suppres-

[11] *Glasgow Medical Journal*, December, 1890.
[12] *Diseases of the Lungs*, 4th edit., 1871, p. 181.
[13] I notice that even Professor von Bergmann, speaking on April 1st, 1891, at the Surgical Congress (*Berliner klin. Wochenschrift*, No. 15), makes some rather damaging admissions, the full bearing of which, however, will not appear till after the delivery of this address.

sion of the nostrum. It is still possible to do a good deal that is objectionable in the way of self-advertisement without becoming the proprietor of a secret remedy.

Now it is against this tendency, deeply rooted in our frail human nature, and stirred into activity by trade enterprise and the enormous facilities that exist in the present day for converting into what they call in New York a "boom" (and this again at once into hard cash), what may be in the end discovered to be a worthless product, that we have ever to be on our guard in the case of new remedies. I am glad to declare and to know that in the more conspicuous instances of therapeutical research within the profession in our day, the conduct has usually been unblemished, and the motives, so far as they can be discovered, have been in accordance with the highest traditions. But in the adoption, so far as practicable or expedient, of the principle of scientific co-operation advocated by Dr. Whitla, there might be found, I think, not only a new source of strength, but a permanent barrier of defence against too much of individuality and too aggressive a self-consciousness in the matter of new remedies. Suppose that we had, not only a Therapeutic Committee sitting in London, but a multitude of therapeutic committees dispersed all over the country; one, at least, in every great medical centre and medical school; it might then (I abstain from saying that it would in all cases) become much more obviously than it is at present the duty of individual inquirers to throw the results of their early researches into a common stock so as to secure impartial and unbiassed investigation on a broader basis than individual experience of disease can supply. This, while acting as a wholesome curb on the impetuosity, or the *amor lucri*, of ignoble or unscrupulous enthusiasts, would not in reality impede any legitimate course of individual research; while the raising of questions and the organising of schemes for combined investigation and action would be an education in itself for the persons concerned in it, which could not fail sooner or later to leaven the entire profession with a new kind of fellow-feeling, and also with a sense of responsibility for the fate of new remedies which is at present greatly lacking with many of us.

You will observe, gentlemen, that I am improving, or at least enlarging, upon Dr. Whitla's programme in respect that I do not see how any one committee, sitting in London only, could possibly dispose of more than a mere fraction of the work to be done. But with twenty, thirty, forty, or more committees dispersed over the country, having a certain autonomy and independence, and yet affiliated to a central one in London, a good beginning might be made. And no body of professional men exists so well fitted as the British Medical Association, with its numerous branches, for originating and directing co-operative work of this kind.

Another incidental advantage of a multiplicity of committees thus acting independently, and yet with a mutual understanding, would be that grave issues affecting individual remedies might be thus removed from one committee to another, or even investigated by several independent juries, so to speak, at the same time. You know too well in Ireland, unhappily, the significance, and even the sheer necessity at times, of a change of venue. Cases would undoubtedly occur where a possibly biassed judgment in one place would require to be corrected in another, or where the personal questions in regard to the composition of one particular committee might quite obviously suggest its being left out, or, on the other hand, specially engaged in, a particular investigation; and it might be one of the special functions of the London, or central, committee to advise in such cases.

The New Polypharmacy.

I assume, of course, that the investigations of such committees would be almost confined to (perhaps absolutely and by rule confined to) the simplest forms of remedial agents obtainable; and this principle, if adopted, would tend to obviate an evil which is, I fear, a growing one, and which I will venture to designate as the new polypharmacy. I agree with Dr. Whitla in regarding this as "decidedly calculated to retard the progress of the healing art the practice of huge American and English drug houses who are flooding this country with ready-made remedies and cut-and-dry formulæ for every ache and symptom to which flesh is heir."[11] Here, again, I am content to echo my friend's wholesome words; but I do so from the point of view of one who has been preaching simplicity of prescription all his life, and who finds himself involved, unwillingly, in the toils of these very complex mixtures which, no, doubt, many of us almost daily prescribe as a mere matter of convenience, but from which it may be safely affirmed that, whether the patient is benefited or not, no inquiring mind can ever learn anything as to the real action of any remedy whatever. It would seem as if the days of the "mithridates" and the *theriaca* were likely to come back upon us, simply in order to provide a fruitful field for the commercial rivalry of these "huge American and English drug houses."

Much more might be said upon this subject, and the cause of combined action might no doubt be placed before you in a more interesting and amusing way, and with even stronger language, and more convincing arguments than I have cared to employ in this address. But I fear I have already detained you more than long enough, and must draw to a conclusion. When one surveys the immense and ever increasing list of new remedial agents, one is overwhelmed, not alone with the sense of a science advancing by leaps and bounds, but with an equally profound and overmastering sense of individual helplessness, in the midst of this *embarras de richesses*. For the average man, anxious only to do his duty by his individual patient, or by his dispensary, or hospital, the dilemma as regards many of these new remedies (of which he often knows, and can know nothing save by vague and possibly misleading reports) is a serious one. Shall he (as I must confess I too often do) shut his ears to the voice of the charmer (in the very human shape, occasionally, of the commercial agent) and leave the new remedy severely alone, till (perhaps) it blows over in a few months, or years, as the case may be? Or shall he, on the other hand, strive to extract the greatest possible amount of benefit, or of credit, or of guineas, out of every new remedy in its turn, by using it *pendant qu'il guérit*, as the shrewd old Montpelier doctor said; that is, as long as the fashion lasts, and as long as some personal credit can be got for, or from, the individual drug? Either way (or perhaps both by turns) is not uncommon among us; but we must confess that either way is somewhat ignoble, to say the least of it. Can we, somewhat upon the lines of this address, do anything towards initiating or devising a better way? That is the question which I desire to leave with you, gentlemen, and through you with the profession at large, in this country. It is a question which will have to be solved, one way or another, by the rising generation. Perhaps it will be considered enough, so far as I am concerned, to have associated myself with one of yourselves in thus suggesting it to you.

[11] *Dublin Journal, loc. cit.*

Aston Manor (Population, 71,124). — *Influenza: School-closing and Measles: Mortuary and Steam Disinfector Needed.*— Mr. Henry May regrets to have to report, with regard to the health of this district, that, after three consecutive years of a very favourable character, the year 1890 was distinctly unfavourable to health. The winter of 1889-90 will be long remembered on account of the prevalence of the severe epidemic of influenza, and Aston Manor suffered to a great extent from an increased sickness and mortality resulting from it. There was also a continued epidemic prevalence of scarlet fever; measles was present during a great part of the year; a much larger number of cases of diphtheria were reported; and there was as usual a high diarrhœal mortality amongst infants. The general death-rate for the year was 17 per 1,000. This was 1.9 higher than that of the previous year, and 1.3 above the average death-rate of the last nine years. School-closing in order to prevent the spread of disease is strongly advocated by Mr. May, especially in the case of measles. The sanitary state of the district is energetically attended to. The middens are being rapidly superseded by water closets, but still nearly 17,000 cartloads of night soil had to be removed from the old filth receptacles during last year. The supply of water is from the mains of Birmingham, but there seem to be a few doubtfully wholesome wells still in use. A destructor for the house refuse is being built, and public baths are about to be provided. The town, however, still needs a public mortuary and a steam disinfecting apparatus.

ABSTRACT OF

AN ADDRESS

ON

THE VALUE OF TUBERCULIN IN THE TREATMENT OF SURGICAL TUBERCULOSIS.

Delivered before the Royal Medical and Chirurgical Society on April 28th, 1891.

By W. WATSON CHEYNE, M.B., F.R.C.S.,

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Mr. WATSON CHEYNE, in this preliminary communication, referred, in the first place, to the method of administering the drug. In most of his cases the mode of administration was that recommended by Dr. Koch, in which the occurrence of reactions was the guide to the dose. The objections to this method were pointed out, and another plan, which the author had been using for some time, was described. It consisted in establishing tolerance, as regarded the general action of the drug, as quickly as possible, and then repeating the doses in rapid succession so as to keep up a constant local action. For example, if the initial dose of, say, 2 milligrammes, produced fever, the second dose of the same amount was given as soon as the fever had subsided, probably in two days; so with a third; and in most cases after four or five injections no further febrile reaction occurred with this dose. The same quantity was then injected twice daily, and, after two or three days, thrice daily. After three or four days the amount was increased, till ultimately doses of 1 to 2 or more decigrammes were given thrice daily: in this way a large amount of the fluid could be rapidly introduced without the patient suffering from fever after the first three or four doses, and with marked improvement as regarded the local condition. Another method of administering the fluid was that of giving considerable doses at long intervals, so as to avoid the establishment of tolerance. The method most commonly employed of giving small doses at considerable intervals was condemned as being one hardly likely to do any good, and not unlikely to increase the risk of dissemination of the disease. The various phenomena observed after injection were referred to very shortly, and the dangers were then discussed. It was pointed out that the danger of dissemination of the disease had been greatly exaggerated, and that the main danger was where the tuberculous disease was combined with sepsis and was due to extension, not of the tuberculous, but of the septic process. The question as to what the treatment could do was discussed on the basis of the microscopical appearance of tissues removed after treatment, of experiments on animals, and of clinical observations on man.

All the specimens, which were exhibited by the oxyhydrogen light, were stained first with Ehrlich's hæmatoxylin, and subsequently with a mixture of acid-rubin and orange. By this process the nuclei are stained blue, the fibrous tissue pink, and the protoplasm—especially of the epithelioid cells—orange yellow. The sections all showed isolated tubercles imbedded in vascular tissue. When the tubercle existed in masses changes were very much less marked, and in many cases were not at all evident. The specimens shown were as follows:

(1) Illustrated the earliest stage of the change in the tubercle itself after treatment by tuberculin; the specimen showed imperfect staining of the epithelioid cells, implying degeneration, and commencing infiltration of the tubercle with small cells (synovial membrane).

(2 and 3) Sections, under a low and high power respectively, of a small tubercle involving the wall of a vein in the synovial membrane, showing a slightly later stage of the process. Only a few epithelioid cells remained, most of them extremely degenerated, and everywhere surrounded and penetrated by small cells. The specimen showed that an impending communication of a tubercle with a vein had been arrested by the treatment; and that, therefore, in this instance at any rate, the generalisation of tuberculosis had been hindered, and not forwarded by the treatment.

(4) A section from synovial membrane, showing a still later stage. The tubercle was infiltrated by dense masses of small cells; the remains of a giant cell and a number of epithelioid cells were seen.

(5 and 6) Similar section, under a low and under high power respectively, showing the small cells infiltrating the tubercle, and large (? plasma) cells collecting at the periphery.

(7) Tubercle showing a later stage; remains of giant and epithelioid cells were visible, with commencing fibrous formation in various parts.

(8) Section of tubercle from a later stage than 7, showing very beautifully the presence of young fibrous tissue, almost completely taking the place of the tubercle. A few remnants of tuberculous tissue were seen towards one edge of the tubercle.

(9) A section from another case, showing a similar condition of early formation of fibrous tissue in two tubercles, the giant cells still remaining in the centre of each. At the margins the giant cells appeared to be undergoing a process of destruction by small cells.

(10) Section of lupus tissue after two months' treatment, showing the disappearance of the tubercles, but remains of giant cells among the fibrous tissue.

(11) Section under a low power, from Case III (K.C.H.), after nine weeks' treatment, showing very slight thickening of synovial membrane and remains of two tubercles.

He related the results of the treatment in several animals (guinea-pigs and a rabbit) artificially infected with tubercle. The ulcers at the seat of inoculation healed under treatment by tuberculin, and the neighbouring enlarged glands diminished in size. The condition of the internal organs found after killing the animals was very much less advanced than in animals inoculated with tubercle, and not treated with tuberculin. In one case the internal organs showed no disease. The fresh organs of a rabbit, killed just before the meeting, were shown; the inoculation in this case was in the anterior chamber on January 7th; twenty-three days after, when both eyes showed marked tuberculous iritis, much more advanced in the right than in the left, the treatment was begun. The animal had lived 111 days when killed, and had received 60 doses. During the treatment the disease in the right eye, into which a large piece of tuberculous tissue had been introduced, increased, while in the left eye, into which a small quantity was introduced, the tuberculous iritis made very slow progress. The animal did not lose flesh. The internal organs showed a number of tubercles in the lungs only, but did not present an advanced stage of tuberculosis. Mr. Cheyne read the notes of an animal infected in the same way but not treated with tuberculin, which at the end of 66 days showed advanced tuberculosis in all the organs, more especially the lungs.

The results of the clinical observations on man were contained in a series of tables from which we have selected those case out of 56 in which the commencement of treatment was recorded in the BRITISH MEDICAL JOURNAL on December 6th, 1890, p. 1322, and December 13th, 1890, p. 1382.

In aseptic cases, if the sinuses did not heal he would begin treatment with tuberculin about two or three weeks after operation. The following general conclusions were arrived at: In the first place, in the majority of cases the first effect of the treatment was to produce improvement as regarded the tuberculous disease, the degree of improvement varying according to the circumstances of the individual case and the mode in which the remedy was applied, but it was very rarely that this improvement went on to complete cure unless aided by other measures. In most cases, after improvement had gone on for some time, it came to a standstill, and if the treatment was given up at this stage or within three months and a half (the limit of the author's experience) relapse would almost certainly occur. In ten cases in which the treatment had been left off recurrence had certainly taken place in six cases, and had only certainly not taken place in one.

The great question was whether by continuing the treatment the disease could be kept at a standstill. The facts observed

Cases of Lupus.

Name, Age, Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections	Additional Treatment.	Condition when Last Seen.	Notes.
N. L., aged 20, female, K. C. H., admitted Nov. 24th, 1890, discharged Dec. 30th, 1890 *Diagnosis.*—Lupus of neck and arms; disease of metacarpal bone	One uncle died of phthisis. About 12 years ago had tuberculous glands in neck which suppurated. The wound did not heal, and lupus appeared around them, and spread along each side of neck. Since that time abscesses have formed on the inner side of both arms, and patches of lupus have also appeared. About 5 years ago the metacarpal bone of the little finger of her right hand began to swell, and portions of bone have been removed. She has undergone many operations and much treatment	Internal organs healthy; there is one large cicatrix around the under part of the jaw, and a number of smaller ones lower down. Numerous lupus nodules around the upper border of this scar, extending on to the cheek and occupying a breadth of about an inch, covered with crusts. Parts of the cicatrices are apparently healthy, but everywhere one sees lupus nodules here and there scattered over them. There are a number of patches covered with crusts along the inner side of both arms. The metacarpal bone of the right little finger is much thickened and very tender, and there is a small sinus in front, which she says has existed for 4 years	·001"; ·001 ; ·001"; (patient declined further treatment)	Commenced Nov. 26th, 1890; 3rd injection on Dec. 17th, 1890; discharged at her own request on Dec. 30th, 1890	None	When discharged on Dec. 30th the lupus patches had entirely disappeared, the sinus on the finger had healed and the swelling and tenderness of the bone had gone	The first reaction was a severe one but there were no dangerous symptoms: much local reaction. The temperature reached 104.4°, 16 hours after the injection fell a little, and again 31 hours after the injection was 104.8°. It then fell slowly, but was still about 100° when the second injection was given on Dec. 1st. There was an erythematous rash over the chest. The reaction after the second injection was much more severe, and for a few hours I was rather anxious about her. The temperature reached its highest point (105.2°) 9 hours after the injection, and during the next 24 hours she was retching a good deal, coughing, had a very weak and rapid pulse (168) and rapid respiration (60). She was also partially unconscious. Stimulants were administered and the symptoms gradually passed off, but the temperature did not reach normal till 7 days after the injection. There was violent local reaction and the lupus nodules for the most part sloughed out. There was a slight trace of albumen on Dec. 4th, but this disappeared next day. After the 3rd injection, though the temperature reached 104.4°, the general effects were comparatively slight.
Re-admitted Jan 26th, 1891 (JOURNAL, Dec. 6th, 1890, p. 1322, col. 1, second case mentioned, no number)		On re-admission a few fresh lupus nodules were found around the edge of the scar in various parts, and the finger, which was painless and not swollen when she was discharged, was as bad as it was originally; the sinus had opened up again, and a fresh one had formed. Portions of the scars on the arms were red, and here and there lupus nodules were seen	·001 : ·001 - ·001 - ·001 - (·001, ·001)-(·001, ·001)-·005-(·002, ·002)-(·002, ·002)-(·002, ·002)-(·002, ·002)-(·002, ·002)-(·002, ·002)-(·002, ·002)-(·002, ·004) (·004, ·004, ·004)-(·004, ·006)-(·006, ·006, ·006)-(·008, ·01)-(·01, ·01)-(·02, ·02)-(·03, ·03)-(·04, ·04)-(·05, ·05)-(·05, ·05)-(·06, ·06)-(·07, ·08)-(·09, ·1)-(·1, ·1)-·1 ; (·1, ·1)-·1-(·1, ·1, ·1); (·1, ·1). Became an out patient on March 5th, to go on with ·12 every day	Injections re-commenced on Jan. 28th. Total number of injections up to April 8th = 100. Total amount of fluid used = about 5·816 grms.	On March 15th Unna's strong salicylic and creasote plasters were applied over the remains of the lupus on the right side of the neck	Note on April 6th.—"Some spots of lupus can still be recognised on the neck, but the condition is steadily improving. The arms are very much better. The sinuses on the hand are still unhealed, but the swelling is less and free from pain or tenderness. On the right side of the neck are some sores due to the salicylic plasters" *Result.* Very considerable improvement, still progressing	The patient did not suffer during this course of treatment. The parts around the lupus patches were kept constantly red and scaling, and these patches have gradually become less visible. The hand also steadily improved, and the swelling and tenderness disappeared. On March 15th remains of the lupus nodules were still visible in places in the neck, and salicylic plasters were ordered for these places; the patches on the arm were very much improved, and the finger was painless, but the most recent sores had not yet quite healed. She complained a good deal of her hair falling out during the course of the treatment.
M. C., aged 23, female, admitted Dec. 1st, 1890, K. C. H. *Diagnosis.* Lupus of face and palate; enlarged glands in neck (JOURNAL, Dec. 6th, p. 1322, Case 1)	Mother died of phthisis. Disease began 15 years ago. The nose was first attacked, and from thence it spread on to both cheeks. Hard palate and upper gums became affected about 3 years ago, and the upper lip 2 years ago. Has undergone all sorts of treatment. Scraped last on Nov. 21st, 1890	Internal organs healthy. Very extensive lupus. A considerable part of the cartilaginous part of the nose has been eaten away, as well as the columna. It extends up over the root of the nose, and for a short distance on to the forehead. From the nose it extends on to both cheeks, on the right side covering the whole of the cheek down to the lower border of the inferior maxilla, and as far outwards as the level of the anterior border of the masseter. On the left side the disease does not extend so low, hardly reaching below the level of the angle of the mouth. The upper lip is much affected and swollen, and the disease spreads to the inner side of the lip, from thence to the front of the gums; there was also a small patch at the anterior part of the hard palate on the right side. Much of the surface is raw as the result of the recent operation. There was some discharge from the nose. There are some enlarged glands in the submaxillary region and at the angle of the jaw on the right side	·005"; ·006 ; ·006"; ·008", ·008 ; ·008 ; ·01"; ·01 ; ·013 ; ·02 ; ·03"; ·06 ; ·06", ·08"; ·1"; ·1 ; ·1"; ·12"; ·12 ; ·12 ; ·12"; ·12 ; ·15 ; ·12 ; ·12 ; ·12 ; ·12. ·12 ; ·1 ; ·1 ; ·1 ; ·1 ; ·1 ; ·1 ; ·1 ; ·1 ; ·09 ; ·1 ; ·1 ; ·1 ; ·1 ; ·1 ; ·1 ; (·1, ·1)-·1-(·1, ·1)-·1-·1-(·1, ·1)-(·1, ·1)-(·1, ·1)-(·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·1, ·1, ·1)-(·12, ·12, ·12)-(·12, ·12, ·12)-(·12, ·12, ·12

R. S., aged 25, female, admitted Nov. 29th, 1890, K. C. H.; discharged Feb. 2nd, 1891, to attend as out-patient *Diagnosis.*—Lupus of nose and cheek (JOURNAL, Dec. 6th, p. 1322, Case VI)	Father and mother consumptive. Began on upper lip, immediately below septum of nose, 5 years ago. Has steadily extended in spite of all sorts of treatment. Has had 24 operations, the last about 6 weeks before admission	Various organs healthy. About ⅓ of the cartilages at the tip of the nose have been destroyed, especially on the left side; the orifices of both nostrils are considerably contracted. The centre of the upper lip is drawn up. The greater part of the nose is covered with scar tissue, in which are numerous lupus nodules and small ulcers. On the left side there is a separate patch of lupus close to the inner canthus of the eye. There is also a patch about the middle of the right cheek, which is ulcerated, and below the symphysis of the jaw is a thickened scar about 1½ in. long, probably from a suppurating gland. There was evidently some disease inside the nose, but the orifice on the left side was so small that nothing could be seen	0008‴; 0·001‴; 0·001‴; 0·01‴; 0·01‴; 0·02‴; 0·01‴; 0·01‴; 0·012‴; 0·02‴; 0·03‴; 0·01‴; 0·06‴; 0·08‴; 0·1‴; 0·12‴; 0·12‴; 0·15‴; 0·2‴; 0·23‴; 0·1‴; 0·1‴; and once a week ·1.	Commenced Dec. 3rd, 1890. Total number of injections up to April 3rd, 1891, = 30. Total amount of fluid used up to April 3rd, 1891 2,331 grms.	None	Note on April 3rd.—"The parts remain healed, and there is no tendency to relapse. There are still several yellow spots in the scar, and the lupus patches below the eye and at the angle of the nose are not quite level." *Result.*—Great improvement. As yet no relapse	Before the temperature rose, after the first injection, patient had a rigor. She also complained of sore throat, nausea, and headache. There was a trace of albumen 2 days later, but this did not recur. The sore throat recurred after the first 9 injections; there was redness of the fauces, but no ulceration. No other noteworthy symptoms. The lupus improved rapidly and very markedly.
H. F., aged 15, male, admitted Dec. 1st, 1890, K. C. H.; discharged Jan. 28th, 1891 *Diagnosis.*—Lupus of thigh and axilla (JOURNAL, Dec. 6th, p. 1322, Case VI	No phthisical family history. Disease began 6 years ago	Internal organs healthy. At the back of the right thigh, rather below the middle, is a patch of lupus 3½ in. from above downwards and 3½ in. transversely. The patch is much thickened and covered with scales; there is no ulceration, and no signs of cicatrisation. Towards the outer part of the left axilla there is a similar patch, 3½ in. from above downwards, and 2½ in. from side to side	01‴; 0·03‴; 01; 0·013‴; 0·013‴; 0·015‴; 0·02‴; 0·022‴; 0·021‴; 0·03‴; 0·04‴; 0·05‴; 0·06‴; 0·08‴; 0·1‴; 0·12‴; 0·1‴; 0·12‴; 0·12‴; 0·1‴; 0·1‴. Subsequently attended twice a week and received ·1. Not been seen since the beginning of March	Commenced Dec. 3rd, 1890. Total number of injections about 30. Total amount of fluid used about 2,057 grms.	None	"When last seen, about the beginning of March, there were still remnants of lupus in both places, but most on the leg. The disease seemed to be quite stationary." Patient has not been seen since, and cannot be found *Result.*—Considerable improvement, and then stands still	After the first injection patient had a papular rash in patches over his back and sides, and slightly over the chest and thighs, in position and general appearance not unlike a herpes zoster. This faded away and disappeared about December 14th. On Dec. 22nd a small abscess was found, and opened at anterior fold of axilla, and rapidly healed. The local reaction was fairly severe, but the patient was not very ill. Tubercles were still present in tissue removed from the thigh in the middle of January, though evidently much atrophied and destroyed.

DISEASES OF BONES AND JOINTS (*Cases with Unbroken Skin*).

J. H., aged 6½, female, K. C. H.; admitted Nov. 26th, 1890 *Diagnosis.*—Hip joint disease (JOURNAL, Dec. 6th, p. 1322, Case VI)	No tuberculous family history. The first symptoms of hip joint disease were noticed last August, but they became much more marked after a fall four weeks ago	Internal organs healthy. Right limb slightly flexed and adducted. Limb can be flexed with ease to a right angle, but not beyond. Cannot be extended. No rotation or adduction, and attempts at these movements cause great pain. No shortening. Some thickening in front of the joint. Antero-posterior measurements by callipers over the head of femur give on right side 2¾ in., and on left 2½ in. Nothing noticed wrong with the eyes (Before the Koch period I would have employed the expectant treatment in this case)	0003‴; 0·003‴; 0·002‴; 0·002‴; 0·002‴; 0·002‴; 0·002‴; 0·003‴; 0·003‴; 0·001‴; 0·005-006‴; 0·005‴; 0·01‴; 0·01‴; 0·015‴; 0·02‴; 0·02‴; 0·05‴; 0·06‴; interval of 15 days; ·01; 0·02‴; 0·04‴; 0·06‴; 0·06‴; 2·07‴; 0·08‴; 0·08‴; ·1; ·1; ·1

DISEASES OF BONES AND JOINTS (*Cases with Unbroken Skin*) *continued.*

Name, Age, Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections.	Additional Treatment.	Condition when Last Seen.	Notes.
W. R., aged 32, male, K. C. H.; admitted Nov. 29th, 1890; discharged Feb. 18th, 1891 *Diagnosis.*—Disease of knee-joint and tibia (JOURNAL, Dec. 6th, p. 1322, Case III)	No phthisical family history. Disease began about 3 years ago after an injury to his knee (combination of twist and blow). The knee has improved from time to time when he lay up; on resuming work it always became painful again. Lately has been treated by rest and Scott's dressing	Internal organs healthy. Left knee somewhat swollen, more especially at the inner side. There is marked swelling over the inner side of the head of the tibia and tenderness on pressure at that part. The main synovial thickening is just above this. There is a slight amount of flexion without pain; attempts to bend it beyond half a right angle cause pain; the joint cannot be fully extended Before the Koch period I would have cut down on the inner side of the head of the tibia and removed as much of the affected tissues as possible)	·01″; ·01″; ·015″; ·015″; ·02″; ·02″; ·03″; ·04″; ·045″; ·04″; ·05–·06″; ·08″; ·1″; ·12″; ·15″; ·15″; ·2″; ·1″ operation, interval of 11 days); ·05″; ·04″; ·06″; ·07″; ·1″; ·1″; ·12″; ·1″; ·1″. Injections discontinued examination. The incision was continued downwards over the inner side of the head of the tibia, and some cheesy material was found under the periosteum, close to the upper part of the bone. A hole was also gouged in the bone because it was thought that there might be a tuberculous deposit in the bone, but only highly vascular inflamed bone was found. The wound was stitched up—no drain. Healing occurred by first intention. Back splint (no splint had been used previously). On microscopical examinations of the tissues removed, tubercles, many of them undergoing atrophy, were found. In the synovial membranes especially they were very much degenerated	Injections commenced Nov. 30th, 1890; discontinued Feb. 18th, 1891. Length of treatment = 80 days Total number = 28 Total amount of fluid used = 1.945 grms.	On Jan. 23rd an incision was made into the joint on the inner side, the synovial membrane was granular on the surface, but very slightly thickened; a portion was removed for microscopical	Patient seen on April 1st, and said that the knee was quite comfortable. The waterglass bandage was not removed, but he was given permission to walk with the bandage on *Result.*—Improvement in all respects for a time. Removal of portions of the affected tissue, healing of the wound (In such a case I would not now trouble to use Koch's method, but would operate in the manner previously indicated)	After the first injection there was a good deal of pain in the knee, some effusion into the joint, and enlargement of the part. This soon subsided, and as the treatment went on the enlargement decreased somewhat, the synovial thickening diminished, and the range of painless movement of the knee markedly increased; in fact, the patient could bend the knee to a right angle without pain. A trace of albumen was found in the urine the day after the first injection, but disappeared next day and did not recur. Patient was allowed to walk about on Jan. 12th, but this was followed by recurrence of swelling, slight pain, and fluid in the joint. These symptoms subsided on rest, but as the tibia now remained tender, the operation was performed. The patient was sent home on Feb. 18th, the whole limb being put up in waterglass. He returned on March 16th and the waterglass was removed. The line of incision remained soundly healed, and was somewhat drawn in at its centre. Knee still somewhat larger than the other, but quite free from pain or tenderness. There was an obscure sense of fluctuation at the inner side of the knee in the neighbourhood of the incision. Waterglass reapplied.
F. G., aged 3, female, K. C. H.; admitted Dec. 2nd, 1890 *Diagnosis.*—Disease of elbow-joint. (JOURNAL, Dec. 6th, p. 1,322, Case VII)	No tuberculous family history. Disease began 18 months ago after an injury. Has been treated at various hospitals, but elbow has lately got worse, in spite of rest	Internal organs healthy. Right elbow-joint 1½ inch larger than the other, measured over bend of elbow; the chief swelling is on outer side of arm, especially over the head of raidus. The movements of flexion and extension are limited, and pronation and supination are impossible. There is pain on movement Before the Koch period I would have persevered with expectant treatment for some time, but I believe that complete arthrectomy would ultimately have been necessary)	·002‴; 2·002‴; 3·002‴; ·002″; ·002″; ·002″; ·003″; ·004″; ·003″; ·004″; ·005″; ·007″; ·01″; ·012″; ·015″; ·02″; 2·015″; ·02″; ·02″ operation, interval of 11 days); ·02″; ·02″; 2·03″; ·03″; ·04″; 2·05″; ·06″; 2·07″; ·07″; ·08″; ·09″; 2·1″; ·1″; 2·1″; ·1″; ·1″; 1·1-1-1-1-1-1-1-1″; ·1″; 1-1-1-1-1-1-1-(·1, ·1)-(·1, ·1)-(·1, ·1)

of elbow-Joint; subcutaneous tuberculous nodule; enlarged glands in neck; corneal ulcer (JOURNAL, Dec. 13th, 1890, p. 1,382, Case III)	outer edge of patella noticed for 11 days. Corneal ulcer on right eye noticed for 7 days	Movement through angle of 15°. Small subcutaneous nodule over outer side of left patella, size of a bean; skin over it red and adherent. Periphereal ulcer on right eye (In such a case before the Koch period I would have performed complete arthrectomy at once, and have removed the nodule over the knee)	.02-.02-.02-.02-.02-.03; .03-.03-.04-.01; .05-.06-.07-.08; 1°-1°-1°-1°-1°-1°-2°-2°; 1°25; 1°25; 1°2-2. Treatment discontinued	discontinued on March 24th, 1891. The removal of the tuberculous tissue was not thoroughly carried out. Wounds stitched up. No drain. The nodule over the knee was also cut out, and was found to be a thin-walled cyst (tuberculous under microscope) containing a drop of pus *Partial arthrectomy after 18 injections* Numerous tubercles were found in the synovial membrane on microscopical examination. Two guinea pigs were inoculated on Jan. 22nd, and became tuberculous.	and softened synovial membrane was found and scraped out.	charge from both ears." *Result.* No improvement; scars broke down after the arthrectomy. (In a similar case I would at the present time perform complete arthrectomy at once, and leave the question of Koch's treatment till I saw whether the wounds healed or not. In this particular case a better result would in all probability have been obtained in that way) April 20th. Quite lately the temperature has become continuously high, and consolidation of the lungs is occurring (? tuberculous)	inner side of the elbow healed by first intention, and remains healed. That on the outer side healed by first intention, but began to break down on Feb. 16th. Ultimately the whole scar broke down, but began to heal when the higher doses were reached. On March 16th, about 30 seconds after the injection of .25 grms., the child began to scream, became very flushed all over the body, and immediately afterwards became very markedly cyanosed; the pulse became imperceptible. This passed off within 5 minutes, and the child seemed well. The temperature quickly rose, and was 104·4° two hours after the injection. Two hours subsequently it fell to 101°, but subsequently rose and reached 104° in the evening. It came down to normal next evening. On the evening of the injection there was a scarlatiniform rash all over the body and legs, which faded next day, and was not followed by desquamation. The treatment was discontinued on March 24th, because a small abscess formed in the back, and the temperature became irregular. On Dec. 18th there was a slight sero-purulent discharge from both ears, which still continues. A small abscess formed at one side of the rectum, burnt on Jan. 19th, and healed in ten days.
C. K., aged 3, male, K. C. H., admitted Dec. 1, 1890 discharged Mar. 18th, 1891 *Diagnosis.* Strumous dactylitis; enlarged cervical glands; sinus in buttock. (JOURNAL, Dec. 6th, p. 1,322, Case IX)	Tuberculous family history. A year ago patient had an abscess in the left buttock, and a sinus has remained ever since. Strumous dactylitis first noticed last August	Internal organs were healthy. At the lower part of the left buttock is a septic sinus, into which a probe passes for about 2 inches, but does not go to bone. There is a typical strumous dactylitis of the left ring finger, affecting the first phalanx. No sign of suppuration, but great tenderness on pressure. (Before the Koch period I would have cut out the sinus in the buttock; have put the finger at rest, and employed the usual remedies)	.002"; .002"; .002"; .003; .003; .003; .004; .005; .005; .006; .007; .007; .007; .008; 1°01; .02; .02; .02; .02; .03; .03; .04; .05; .05; .08; .09; 1°; 1°; 1°; 1°; 1°; 1°. Treatment stopped.	Commenced Dec. 3rd, 1890. Stopped March 1st. Continued for 88 days. Total number of injections = 35. Total amount of fluid used = 1·343 grms.	On Jan. 16th an abscess on the finger was opened, and a little cheesy stuff scraped out of bone. Wound left open. This did not heal. On March 3rd the sinus in the finger was laid open, and a quantity of cheesy material removed, and with it portions of bone, including the proximal end of the first phalanx. Wound left open. Two guinea pigs were inoculated with the material removed on Jan. 16th, and became tuberculous	Note on April 6th, 1891. "Condition of finger remains about the same; an opening still persists, and there is a good deal of swelling around it. The sinus in the buttock is again almost entirely healed, and the glands are decreasing in size. General condition good." *Result.* Temporary improvement as regards finger; subsequent abscess formation. Healing of sinus and diminution in the size of glands; temporary relapse as regards these 2 points after stopping the treatment. (At the present time I would treat such a case as I would have done before, and not employ Koch's treatment. The sinus could have been got more quickly, and certainly well, by dissecting it out, and the treatment was of no apparent advantage as regards the finger).	After the first 2 injections the temperature rose to 105°, but the child was not markedly ill. The sinus and buttock discharged freely, and the skin around became red and swollen. The finger also became enlarged and more painful. On Dec. 15th the sinus in the buttock was found healed, and had remained well since. For a time the finger improved; it became painless, and the swelling diminished somewhat, but at the beginning of Jan. signs of abscess formation appeared, and an incision was made on Jan. 16th. This did not heal, but presented the ordinary appearance of a tuberculous sinus, and was therefore again operated on on March 3rd, and the injections were discontinued. At that time the sinus in the buttock was healed, and the gland in the neck smaller. About the middle of March the sinus in the buttock broke down, and the glands on the right side of the neck and above the right elbow began to enlarge.
P. A. S., aged 5¼, male, P. G. C. H. admitted Dec. 9th, 1890; discharged March 5th, 1891. *Diagnosis* Strumous dactylitis; phthisis. (JOURNAL, Dec. 13th, 1890, p. 1382, Case ix)	Tuberculous family history. Disease began 3 years ago. Patient has been operated on twice, the interior of the bones being thoroughly scooped out on each occasion. These wounds have healed. Glands in axilla have also been removed.	Signs of consolidation, with crepitation at left apex. Other organs healthy. Proximal phalanges of middle and ring fingers of left hand much enlarged. Small unopened abscess on outer side of middle finger. Fingers tender on pressure.	.002"; .002"; .002"; 1°002; 1°002; 1°002; 1°001; 1°001; 1°001; 1°004; 2°005; 1°007; 1°01; 1°012; 2°015; 1°02; 1°025; 2°03; 1°035; 1°04; 1°05; 1°06; 1°06; 2°06"; 1°06"; 1°07"; 2°07"; 1°07; 1°07; 1°07 (Operation, interval of 5 days); 1°07; 2°08; 1°1; 1°1	Commenced Dec. 9th, 1890. Treatment stopped on March 9th, 1891. Total number of injections = 31. Total amount of fluid used = 1·283 grms.	On Feb. 16th the small abscess on middle finger scraped out, contained only a little cheesy material. Wound left open. Healed readily.	Note on April 6th. "Fingers in much the same condition as before the treatment, except that there is now no abscess. General health good. Lungs normal." *Result.* Fingers very much the same. Phthisis much improved.	Nothing special to note about the reactions; there was marked swelling of the fingers at first; but this soon subsided, and they became less swollen, and painless. The abscess, however, persisted, and was, therefore, scraped out on Feb. 16th. Since then the condition of the fingers has remained stationary.

Diseases of Bones and Joints—*continued.*

Case with Aseptic Sinus.

Name, Age Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections.	Additional Treatment.	Condition when Last Seen.	Notes.
C. N., aged 5, male, P. C. C. H.; admitted Dec. 8th, 1889 *Diagnosis.*—Hip-joint disease with sinus, resections partial arthrectomy (JOURNAL, Dec. 13th, p. 1382, Case VI)	Phthisical family history. Disease of right hip began Oct. 1889; no known cause. Was admitted first in Feb., 1890, and arthrectomy was performed on Feb. 20th. A sequestrum was removed from the neck of the femur. The head was partially dislocated, and was replaced. Acetabulum filled with soft material. Cheesy material in joint, and the synovial membrane had cheesy points in it. As much of the diseased tissues was removed as possible. The wound never healed completely, and part of the scar subsequently broke down. Very little progress had been made up to the date of admission, although he had been in a convalescent home for several months	Internal organs healthy. Hip stiff in good position. Sinus in scar leading to joint with flabby granulations. Very little discharge. Much thickening around joint. Before the Koch period I was several times on the point of excising the child's hip-joint, and I have no doubt I should ultimately have done so)	0·003″; 0·003″; 0·003″; 0·002″; 0·003″; 0·003″; 0·005″; 0·005″; 0·005″; 0·007″; 0·008″; 0·01″; 0·012″; 0·015″; 0·02″; 0·025″; 0·025″; 0·02″; 0·02″; 0·03″; 0·01″; 0·05″. Injections of 0·06 continued twice a week	Commenced Dec. 9th, 1890. Total number of injections up to April 8th, 1891, = 42. Total amount of fluid used up to the same date = 1·515 grms.	Sent to convalescent home on Feb. 27th, 1891	Note on April 7th, 1891.—"Sinus apparently soundly healed. No thickening. Child in good health." *Result.*—Great improvement. Rapid healing of the sinus, and disappearance of the thickening. (This is the sort of case in which I think that Koch's treatment will be of great value, and I would adopt it again under similar circumstances)	During the first reaction the temperature reached 101·4 10 hours after the injection, and next day about the same time it again reached 101°; there was a good deal of local reaction. The most severe reaction was after the third injection, but there were no dangerous symptoms. On the 13th of Jan. it is noted that the sinus is soundly healed, and all thickening has disappeared. Since that time the scar has steadily contracted. At the middle of March was allowed to get about in his Thomas's splint.

Cases with Septic Sinuses.

A. E. K., aged 2½, male, K. C. H., admitted Nov. 28th, 1890. Discharged, March 12th, 1891 *Diagnosis.*—Tuberculous disease of the right os calcis and the astragalo-calcanean joint with septic sinus. (JOURNAL, Dec. 6th, p. 1322, Case XII)	No tuberculous family history. When about 9 months old swelling first noticed on outer side of right ankle. Has been treated at various hospitals since. An abscess formed and broke some months ago	Internal organs healthy. Marked swelling about the right heel and and ankle, especially on the outer side. A septic sinus is present below and behind the external malleolus, and leads directly inwards to bare and soft bones, apparently the upper suface of the os calcis and the astragalo-calcanean articulation. No loose bone can be felt (Before the Koch period I would have cleared out the diseased bone)	0·0025″; 0·0023″; 0·003″; 0·003; 0·003″; 0·003″; 0·003″; 0·003″; 0·004″; 0·005″; 0·005″; 0·005″; 0·005″; 0·006″; 0·007″; 0·008″; 0·008″; 0·008″; 0·01″; 0·012″; 0·015″; 0·02″; 0·03″; 0·03″; 0·04″ (operation, interval of 13 days); 0·01″; 0·02″; 0·02″; 0·03″; 0·03″; 0·03″; 0·04″; 0·05″; 0·06″; 0·07″; 0·07″; 0·08″; 0·09″; 0·1″. Treatment stopped on March 20th, 1891	Commenced Dec. 3rd, 1890. Treatment stopped on March 20th, 1891, lasted for 107 days. Total number of injections = 41. Total amount of fluid used = 1·0146 grms.	On Feb. 3rd the opening was enlarged and a loose sequestrum was found and removed, the cavity from which it was taken being scraped and sponged with undiluted carbolic acid. Wound left open. On March 23rd it was again scraped out	Note on April 6th, 1891.—"Cavity in os calcis with free external opening. No bare bone; wound looks healthy. Less swelling." *Result.*—No apparent effect on the disease (I cannot see that the patient has obtained any advantage from the Koch treatment; in a similar case I should now follow the old lines and only use tuberculin if the wound failed to heal and if I had got it aseptic)	Not seriously ill after the injections, but especially after the 4th, 5th, and 6th much cough. After the 1st injection the heel on the outer side became red and much swollen, and there was greatly increased discharge. The thickening diminished considerably, but as bare bone was still felt the sinus was opened up on Feb. 3rd. The wound did not heal, and it was again thoroughly scraped out on March 23rd.
H. A., aged 21, male, K. C. H., admitted Dec. 1st, 1890. Discharged on Feb. 16th, 1891 *Diagnosis.*—Disease of elbow-joint with septic sinuses. (JOURNAL, Dec. 6th, p. 1322, Case VIII)	Tuberculous family history. The disease in his left elbow began 14 months ago without apparent cause. At first there was only a feeling of weakness in the elbow and some swelling. Then, eleven months ago, when opening a window, had pain, which rapidly increased with increase of swelling. Abscesses soon formed, and were opened from time to time, and the joint was thoroughly cleared out after division of the olecranon last August by Mr. Clutton. The sinuses did not heal.	Internal organs healthy. Right elbow-joint much swollen, the swelling being of a soft pulpy character, with numerous septic sinuses leading into the joint and to soft carious bone; the whole appearance of the part is that typical of a bad case of tuberculous disease with septic sinuses. No movement is possible. The elbow is held at a little beyond the right angle. The circumference of the joint at the level of the tip of the olecranon is 1½ in. larger than on the left side	0·01″; 0·01″; 0·01″; 0·015″; 0·015″; 0·015″; 0·02″; 0·025″; 0·025″; 0·03″; 0·03″; 0·04″; 0·06″; 0·08″; 0·06″; 0·08″; 0·08″; 1·08″; 1·08″; 1·1″; 1·1″; 1·12″; 1·1. Discharged, and twice a week had 1. Treatment stopped at the end of March	Injections commenced Dec. 3rd, 1890; stopped at end of March. Total number of injections = about 34. Total amount of fluid used = about 2·275 grms.	On Dec. 9th the sinuses were opened up and drainage tubes inserted; the joint was not scraped out. On Jan. 23rd the sinuses were again opened up and the joint thoroughly scraped out; the tuberculous material came away very readily	Note on April 6th, 1891.—"All the sinuses are still open, and there is no very marked improvement in the condition of the joint as compared with its state before treatment was commenced." *Result.*—No noticeable improvement. (In such a case I would not now use Koch's treatment.)	The first reaction was not very severe, but the elbow swelled up very much, and there was increased discharge from the sinuses. During the course of the treatment several small acute abscesses formed, and were opened from time to time. The tissues around the elbow became much firmer, and the measurements less. The patient was discharged on Feb. 16th to be treated as an out-patient; at that time the wounds were granulating well, and, with the exception of one in front of the elbow, were looking well and healing up rapidly. Bare bone could only be felt at one part.

Diseases of Bones and Joints *continued.*

Cases with Septic Sinuses continued.

Name, Age, Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections.	Additional Treatment.	Condition when Last Seen.	Notes.
E. P., aged 3, female, P. G. C. H., admitted Dec. 3, 1890. Discharged on March 10th, 1891 *Diagnosis.*—Disease of radius with septic sinus, enlarged cervical glands. (Journal, Dec. 13th, 1890, p. 1382, Case IV)	No phthisical family history. The disease of the radius began a year ago after injury. Has been in a general hospital and operated on without benefit	Enlarged glands in neck. Internal organs healthy. Septic sinus at back of lower end of right radius leading upwards to bare bone; no loose fragment felt. End of radius considerably thickened (The treatment in such a case before the Koch treatment would have been operation with the view of removing the affected portions of bone.)	0002‴; ·0002‴; ·0002‴; ·0002‴; ·0002‴; ·0002‴; ·0002‴; ·0002‴; ·0004‴; ·0004‴; ·0005‴; ·0005‴; ·0005‴; ·0005‴; ·0007‴; ·0008‴; ·001‴; ·001‴; ·002 (operation 12 days' interval); ·012‴; ·001‴; ·002‴; ·002‴; ·002‴; ·002‴; ·03‴; ·03‴; ·04‴; ·05‴; ·06‴; ·07‴; ·08‴; ·1‴; ·12‴; ·15‴; ·15‴. Treatment discontinued	Commenced Dec. 9th, 1890. Total number of injections 42. Total amount of fluid used = 1·349 grms.	On Feb. 5th the sinus was enlarged and a loose sequestrum was found and removed, undiluted carbolic acid applied, wound left open	On March 10th still a small short sinus at one part of the scar which does not go to bare bone. General health good. Glands smaller than at first *Result.* During the treatment the sequestrum became loose; the wound healed. Glands smaller. (In such a case I would now operate in the first instance, and if I got the wound aseptic, and if it would not heal, advantage might be obtained from this treatment. Possibly some advantage may have been got here from the previous use of the treatment, in that the separation of the sequestrum may have been favoured.)	The first two reactions were severe, the chief symptoms being coughing, swelling of glands in neck, pallor, and sickness. There was swelling and increased discharge from the wound. After the operation the wound gradually closed, but has not yet quite healed.

Diseases of Glands.

Name, Age, Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections.	Additional Treatment.	Condition when Last Seen.	Notes.
P. O. F., aged 30, male, K. C. H., admitted Nov. 20th, 1890. Discharged Jan. 29th, 1891 *Diagnosis.*—Tuberculous glands in neck and axilla with abscesses (Journal, Dec. 6th, 1890, p. 1322, Case X)	Sister died of phthisis. Glands in neck began to enlarge 6 years ago, and those in axilla 1 year ago. Have been increasing much during the last year. Medicinal treatment	Internal organs healthy. There is a large mass of enlarged glands matted together and situated in the right anterior triangle at the upper part and beneath the sterno mastoid; there were two small abscesses on the surface of this mass. A large number of hard but separate glands along border of sterno mastoid and in posterior triangle quite visible. On the left side of the neck there were also a number of large glands, especially at the upper part of the anterior triangle, but they were not so large as to cause deformity. In the right axilla there was a large mass of glands matted together and protecting at the anterior and inner border of the axilla. At the back of the left wrist there is a fluctuating swelling evidently connected with the sheaths of the tendons. (Before the Koch period I would have recommended excision of the glands.)	·001‴; ·0096‴; ·008‴; ·0096‴; ·0096‴; ·001‴; ·0097‴; ·008‴; ·008‴; ·008‴; ·008‴; ·008‴; ·008‴; ·008‴; ·01‴; ·015‴; ·02‴; ·03‴ (operation interval of 6 days); ·03‴; ·03‴; ·035‴; ·04‴. Discharged to go on with treatment at home. (He only had 4 injections at home.)	Commenced Dec. 3rd, 1890. Total number of injections = 25. Total amount of fluid used = about ·189 grms.	On Jan. 16th the abscesses in the neck were scraped out; they were quite superficial, and only contained a small quantity of cheesy material. The mass in the axilla was excised, and found to consist of a number of large, almost completely caseous glands. The wound healed by first intention. The glands were in the main cheesy, but portions were found containing tubercles. Two guinea-pigs were inoculated with portions of the glands on Jan. 16th, and became tuberculous	When discharged on Jan 29th the wounds were completely healed. The mass in the neck was about one-third of its original size, and the individual glands of which it was composed could be readily felt. The glands on the left side were also distinctly smaller. The swelling on the wrist remained the same. *Result.* Improvement in that the glands became somewhat smaller and much less matted together (In such a case I would still recommend excision, but it is quite a question whether it would not be advantageous to precede the operation by a few injections. Certainly the operation would be very much easier, safer, and more satisfactory if the periadenitis were in this way got rid of.	The first reaction was a severe one, the chief symptoms being headache, vomiting, and rigor. An erythematous rash appeared on his chest about 10 hours after the injection, and faded in a few hours. There was considerable local swelling, and one of the abscesses in the neck burst and discharged a little pus. During the next few reactions the rash and rigors generally recurred, and he had a good deal of nausea. The mass in the neck diminished gradually in size, and the individual glands could be made out a few days after the treatment was commenced. In a note dated April 7th, 1891, Dr. Garrod Thomas says: "I examined him to night, and find that the glands originally affected (right side) are smaller, but there are several fresh ones considerably involved just above the clavicle on the left side; the wrist and armpit are quite well."
L. B., aged 12, female, P. G. C. H., admitted Dec. 6th, 1890. Discharged, to attend as out-patient on Jan. 23rd, 1891 *Diagnosis.*—Tuberculous cervical glands (Journal, Dec. 13th, 1890, p. 1382, Case VIII)	Doubtful phthisical family history. Enlarged glands in neck for a year. No evident cause. Corneal nebula on right side	Internal organs healthy. Enlarged glands along posterior border of both sterno-mastoids. On right side, opposite middle of sterno-mastoid there is one gland hard and of the size of a Brazil nut; the others are about the size of beans; upper lip swollen and fissured (Before the Koch period I would have left these glands alone, giving a *placebo* such as cod liver oil, etc.)	·005; ·0094; ·0057; ·0057; ·005; ·005; ·0057; ·005; ·0067; ·0069; ·01; ·012; ·015; ·02; ·025; ·03; ·035; ·04; ·04; ·05; ·06; ·06; ·06; ·06; ·06; ·06; ·07. Treatment stopped.	Commenced Dec. 9th, 1890. Stopped Feb. 16th, 1890. Treatment continued for 69 days. No. of injections = 27. Total amount of fluid used = ·321 grms.	None	When the treatment was stopped the glands were distinctly smaller than they were originally. Note on April 6th. "Glands much smaller than at last note. The lip is well." *Result.* Distinct diminution in the size of the glands. Apparently no tendency to relapse. (I would not now trouble to use the Koch treatment in such a case.)	Nothing noteworthy about the reactions except that the upper lip swelled after the first injection. The patient did not suffer from the treatment at all, but after the 4th injection she was noticed to be slightly jaundiced; no other symptoms; this passed off in 2 or 3 days. As the glands were almost stationary and small, and there were no reactions, the treatment was stopped.

Diseases of Glands—*continued.*

Name, Age, Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections.	Additional Treatment.	Condition when Last Seen.	Notes.
G. G., aged 2, male. K. C. H., admitted June, 1890. Discharged Jan. 26th, 1891. *Diagnosis.*—Tuberculous disease of inguinal and cervical glands (JOURNAL, Dec. 6th, 1890, p. 1322, Case IV)	No phthisical family history nor history of syphilis. Last summer patient was operated on for hydrocele of the cord and afterwards for phimosis. The patient was sent home on the same day that circumcision was performed. When seen some days later the circumcision wound presented the appearance of a tuberculous ulcer. The scar from the hydrocele operation broke down shortly afterwards, and presented the same appearance. The testicle became tuberculous and was removed in autumn. Glands in both groins became tuberculous and broke down. The child rapidly wasted.	Large ulcers in both groins, with greyish sloughy surfaces. Enlarged gland on left side of neck. Child much emaciated; abdomen large and tense. No lung symptoms. Hectic temperature. As the parents were extremely anxious that this treatment should be tried, their wish was acceded to	·001″; ·002″; ·0023″; ·003″; ·004″; ·005-·006; ·007″; ·008″; ·01″; ·003″; ·008″; ·01″; ·01″; ·01″; ·005″; ·005	Commenced on Nov. 26th; last injection on Jan. 25th. Length of treatment 62 days. Number of injections = 17. Total amount of fluid used = ·1023 grms.	None	Died at home about the end of February. Parents did not inform us of the death till a fortnight later, and therefore there was no *post-mortem* examination. One of the glands in the neck had rather increased *Result.*—No noticeable effect as regards groin; increase in one cervical gland (I would not now employ the Koch treatment in such a case)	There were no general effects after the injections beyond the elevation of temperature. No distinct local reaction except in the cervical glands. After the first injections the temperature in the intervals became normal instead of hectic, and the child seemed much brighter and took food better. The injections were given up on Jan. 4th, but a fortnight later the hectic temperature returned and the child began to go downhill rapidly; hence the resumption of the injections. As, however, the parents wished to take the child home, they were allowed to do so. When discharged the local condition was very much the same as when the treatment was begun, but the child was thinner and weaker.
E. C., aged 5, female. P. G. C. H., admitted Dec. 8th, 1890. Discharged Jan. 26th, 1891. *Diagnosis.* Tuberculous glands; sinus leading to diseased bone (JOURNAL, Dec. 13th, 1890, p. 1382, Case VI)	Tuberculous family history. Six months ago was in infirmary with disease of left fibula. Some bone was removed by operation. An abscess formed in lumbar region lately and has burst	Internal organs healthy. Scar about 3 inches long, adherent to the lower end of the fibula. Bone enlarged at upper end of scar. There is a large mass of enlarged glands in the right iliac fossa, and a sinus joint above the right posterior superior iliac spine leading to bare bone at upper part of crest of ilium. No signs of vertebral or sacro-iliac disease.	·002″; ·003″; ·003″″; ·002″″; ·0025″; ·003″; ·004″; ·004″; ·004″; ·005; ·007; ·01; ·015; ·02″; ·025″; ·03″; ·035; ·04; ·04″; ·05; ·06; ·06″. Sent to convalescent home and ·06 given twice a week.	Commenced Dec. 9th, 1890. Total number of injections up to April 8th, 1891 = 42 Total amount of fluid used up to the same date = 1·6215 grms.	Sent to convalescent home on Jan 26th, 1891.	Note on April 7th.—"Condition the same as when sent to the convalescent home." *Result.*—Some diminution of the mass in the iliac fossa; sinus *in statu quo* (In such a case I would not now employ the Koch treatment)	No noteworthy general symptoms. At first there was increasd swelling in the iliac fossa, and increased discharge from the sinus. The swelling in the iliac fossa soon diminished, and when the child went to the convalescent home on Jan. 26th it was much smaller than it was originally. A small piece of dead bone had come away, but bare bone could still be felt. There was no local reaction in the fibula.
A. A., aged 7, female. P. G. C. H., admitted Sept. 22nd, 1890. *Diagnosis.*—Tuberculous glands with septic sinuses in groins; tuberculous glands in neck; slight phthisis (JOURNAL, Dec. 13th, 1890, p. 1382, Case VII)	Has attended the hospital for 2½ years with suppurating tuberculous glands in both groins, and has been admitted and operated on several times. Sinus opened and scraped on Sept. 25th, and caseous material removed from left iliac fossa. The remains of the glands on the right side were cut out.	Enlarged glands in neck. Small area of crepitation at angle of left scapula. Liver enlarged, occasional attacks of diarrhœa. Scars of old sinuses in both groins, and a sinus in each groin discharging pus. On both sides there is thickening in the iliac fossa, most marked on the left; eyes and ears normal. Hectic temperature.	·003″; ·003″; ·003″″; ·002″″; ·003″; ·003″; ·003″; ·004″; ·005; ·005′. Treatment abandoned	Commenced Dec. 9th, 1890. Left off on Dec. 30th, 1890. Continued for 21 days. Total number of injections = 10. Total amount of fluid used = ·031 grms.	Excision of hip after the treatment was stopped. See notes. The joint was much inflamed; there was evidently an acute septic arthritis	Note on April 6th, 1891.—"Wounds healed, except where drainage tubes are. A good deal of purulent discharge. Hectic temperature. Child anæmic and losing flesh. Condition of lungs unaltered" *Result.* Extension of septic process under treatment. No improvement as regards tubercle. (According to my present views, I would not now employ the treatment in such a case. There seems little reason to doubt that harm was done here by the treatment in that the extension of the septic process (not of the tubercle) was favoured)	After the first injection there was much local reaction in left groin. The discharge from the sinuses afterwards diminished, and for a time the condition of the patient was satisfactory. On December 31st symptoms of disease of the left hip-joint commenced, and the discharge from the sinuses was much more profuse. As the temperature remained high after the last injection, the treatment was abandoned. On Jan. 27th, the left hip-joint was excised, the sinuses were opened up, and a counter opening made in the left lumbar region. The hectic temperature has continued, though not very marked. Improving.

Tuberculous Peritonitis.

Name, Age, Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections.	Additional Treatment.	Condition when Last Seen.	Notes.
W. P., aged 11, male, P. G. C. H., admitted Dec. 8th, 1890, discharged to attend as out-patient on Feb. 14th, 1891 *Diagnosis.*—Tuberculous peritonitis (JOURNAL, Dec. 13th, 1890, p. 1382, Case I)	Tuberculous family history. Was admitted into hospital under Mr. Boyd in May, 1889, with signs of tuberculous peritonitis and a history of wasting of 3 months' duration. On May 31st Mr. Boyd opened the abdomen, and found a tuberculous mass in the subperitoneal tissue, matted intestines studded with miliary tubercles, and 2 pints of turbid fluid in peritoneal cavity. Wound stitched up and healed by first intention. Patient sent to convalescent home in July much improved. Readmitted in October, the scar having opened at the lower part. A quantity of caseous material was removed from the subperitoneal tissue. This wound healed, but broke down again about the end of November	A few crepitations at right apex in front. No other physical signs. Has occasional attacks of abdominal pain, headache and vomiting. Abdomen not distended, skin not inelastic and no asciites. Slight dulness over hypogastric and iliac regions. On deep pressure hard masses felt in neighbourhood of umbilicus and scar. In middle of scar is small sinus covered with a crab. Small ulcer on outer side of left buttock. Weight 3 st. 8½ lbs. Before the Koch period I would simply have continued the antiseptic dressings	·003"; ·003"; ·003"; ·003"; ·003"; ·003"; ·004; ·003; ·004; ·005; ·007; ·007; ·012; ·015; ·02; ·02; ·02; ·025; ·03; ·03; ·04; ·05; ·05; ·06; ·07; ·07; ·07; ·07; ·07; ·07; ·07; ·07; ·07 and 1 once a week after words	Commenced Dec. 8th, 1890. Total number of injections up to April 8th, 1891 = 41. Total amount of fluid used up to same date = 0·967 grms.	None	Note on April 6th, 1891. "Wound healed. Patient apparently in good health. No pain or swelling in the abdomen." *Result.*—Improved. Sinus healed; thickening in pelvis subsided. It is probable that this is one of the cases in which advantage will be gained by the Koch treatment	The first reactions were severe, the chief trouble being sickness. There was also a little temporary albuminuria. On Jan. 17th the reaction after ·02 was again severe, there being sickness and diarrhœa, the latter persisting for several days, accompanied with abdominal pain; several of the motions contained blood. There was no marked increase of discharge from the sinus, which had healed by Dec. 23rd. The weight went down to 3 st. 5¼ lbs. on Dec. 28th, and remained till Jan. 26th. On Feb. 5th it was 3 st. 7 lbs.

Phthisis.

Name, Age, Sex, etc.	History.	Condition before Injection.	Frequency and Amount of Injections.	Total Number, Amount, etc., of Injections.	Additional Treatment.	Condition when Last Seen.	Notes.
E. E., aged 9, female, P. G. C. H., admitted Dec. 4th, 1890, under the care of Dr Hermingham; discharged to attend as out patient on Jan. 24th, 1891 *Diagnosis.*—Phthisis; enlarged cervical glands (JOURNAL, Dec. 13th, 1890, p. 1382, Case XI)	Tuberculous family history. Wasting and cough for nearly 2 years. When first seen in Jan., 1890, she complained of cough and sweating at night, and there were signs of consolidation and breaking down at right apex. This condition continued much the same till admission, her weight being 2 lbs. less than when first seen	A few enlarged glands in submaxillary region. Slightly impaired resonance at both apices with some crepitation on the left side. No sputum could be obtained for examination. No night sweats or diarrhœa. Other organs normal. Weight 3 st	·002"; ·002; ·003"; ·001; ·004"; ·005; ·007"; ·009; ·01; ·015; ·02"; ·03; ·03"; ·04; ·05"; ·06; ·05"; ·06; ·06; ·06; ·06; ·06; ·07; ·07; ·07; ·07; ·07; ·07; ·07; ·07; ·07 (6 days interval ·06 and ·1 once a week (4 subsequently)	Commenced Dec. 9th, 1890. Number of injections up to April 8th, 1891 = 48. Total amount of fluid used up to that date = 1·344	None	On April 6th Dr. Hermingham notes: "The local condition is, I think, exactly the same as when the treatment was begun, the general health is rather improved." Condition of glands about the same *Result.*—Slight improvement	No noticeable increase in the lung symptoms occurred after the first injections. Improvement noticed at the end of December, and when sent home the improvement was very marked, the percussion note at left apex being normal, and no crepitations present. At right apex a few *rales* were occasionally heard on deep inspiration, and there also the percussion note was normal.
E. M., aged 8, female, P. G. C. H., admitted Dec. 8th, 1890, under Dr. Sidney Phillips; discharged Jan. 26th, 1891; readmitted March 11th *Diagnosis.*—Phthisis and enlarged glands in neck (JOURNAL, Dec. 13th, 1890, p. 1382, Case XII)	No phthisical family history. Subject to winter cough. Four months before admission, severe cough commenced with expectoration; loss of weight and night sweats	Enlarged glands in neck, various organs except lung healthy. Consolidation at base of right lung, reaching as high as angle of scapula posteriorly, and the 3rd rib anteriorly, with bronchial breathing and fine and coarse crepitations. No sputum could be got for examination. Night sweats not marked. Weight 2 st. 8 lbs. Temperature normal	·001; ·001; ·002; ·002; ·002; ·001; ·004"; ·005; ·005; ·009; ·008; ·01; ·015; ·02; ·025; ·03; ·035"; ·04; ·05"; ·06; ·06; ·07)-1" (·15; 1"-2"-25; 1"-3"; 1"-3"-3"-35; (·3, ·3)-3"-35; (·3, ·3)-3"-3"-3"; ·3, ·3	Commenced December 9th. Total number of injections up to April 8th = 54. Total amount of fluid used up to same date = 6·159 grms.	Sent to convalescent home on Jan. 26th	Note on April 6th. "Her present condition is the same as on Jan. 26th. No general symptoms, and patient is apparently in good health. Glands *in statu quo.*" *Result.*—Marked improvement	Nothing to note about the reactions. During the course of the treatment the crepitations diminished considerably, and the consolidation became much less marked with the exception of the base of the lung anteriorly. When sent to the convalescent home on Jan. 26th the condition was as above, there being left only a small area of dulness around and below the right nipple, with occasional crepitations. Very slight cough. No night sweats when in hospital. At the home the disease seemed to relapse somewhat, and she was therefore readmitted and the treatment pushed. Since that was done improvement has again taken place. The weights were on Feb. 8th, 2 st. 8 lbs.; Feb. 16th, 2 st. 11½ lbs.; Feb. 28th, 2 st. 11 lbs.; Jan. 9th, 2 st. 11½ lbs.; Jan. 17th, 2 st. 11½ lbs.; Jan. 26th, 2 st. 12½ lbs.; March 22nd, 2 st. 13 lbs.

by the author seemed to show that by continuing the treatment with this object in view, the condition of standstill could be maintained in a number of cases for a considerable time. As regarded the length of time, the author could only say four months and a half, the length of his experience, but it seemed not improbable that it could be maintained longer, and, of course, the longer it was maintained the greater the probability that the tubercle bacilli would die out, and the improvement become permanent. This question affected medicine more than surgery, for in surgery matters could generally be hastened in other ways. The diagnostic value of the remedy was then considered. He had found that in old people larger doses were required and the results of treatment were much less marked than in young adults. The best results were obtained in children and young adults, that is to say at ages between 5 and 25 years.

As regarded surgical practice, the conclusions provisionally come to were the following:—In cases of intractable lupus tuberculin was of great value when combined with other measures. In tuberculous glands it hardly repaid the trouble and inconvenience, except in so far as it might reduce the periadenitis and thus pave the way for operative measures. In diseases of joints the question as to its place could hardly as yet be definitively settled, but the author was inclined to think that it was best not to employ it in the early stages, that is to say in those cases in which it had been customary to resort to expectant treatment, but to reserve it as a means, after operation, of aiding the prompt healing of the wound. It might also be of value in enabling the surgeon to perform less severe and radical operations than he might otherwise do, that is to say one or two doses might be given a few days before operation in order that the limits of the tuberculous disease might be clearly evidenced. In cases of osseous disease it would probably only be useful after operation. In genito-urinary tuberculosis it could but seldom come into play on account of the great frequency with which these diseases were combined with sepsis, and for other reasons. In tuberculous laryngitis it appeared to be of use in certain cases. While admitting the small value which could be attached to his opinion as regarded phthisis, Mr. Cheyne could not but think that the dangers of tuberculin in that disease were being unduly magnified and its benefits unduly decried. Some of the imperfect results were no doubt due to timidity in the application of the remedy.

In a printed statement explanatory of the tables, Mr. Cheyne wrote as follows:—[1]

The amount administered at each injection is stated, and an attempt has been made to indicate the occurrence and intensity of the general reactions, and the frequency with which the injections were given. The strength of the reactions is indicated by dashes placed above the dose. Where there is no dash there was no reaction. Where there is one dash (for example, ·002′) there was only slight reaction, the temperature perhaps reaching 100° or a little higher, but without the patient suffering to any noticeable extent, and often not at all. Where there are two dashes (for example, ·002″) there was moderate reaction, the temperature being usually above 101°, between that and 104°, and the various symptoms being moderate in intensity. Where there are three dashes (for example, ·002‴) there was a severe reaction, that is to say, the temperature was usually at or above 101°, though sometimes it was only 103°, and the general symptoms were correspondingly severe. Where there are four dashes (for example, ·002⁗) the condition of the patient was such as to cause anxiety: only two reactions of this kind will be found in the list. No attempt has been made to indicate the local reaction.

This method, of course, only roughly indicates the state of matters. In some cases, even where the temperature was up to 102°, the patients did not suffer at all, but these were marked as moderate reactions. In other cases patients with a temperature of 102° or 103° (within my "moderate" area) have suffered more than those with a temperature of 104°. Where this has been the case they have been indicated as severe. Those with slight reaction, that is, with elevation of temperature above 99°, but seldom with any other symptoms, were probably correct. Those marked "severe" were, no doubt, all correct. But among those marked "moderate" were some where the symptoms were very slight, and which, were it not for the temperature, ought to have been so indicated, and others which were on the border-line as regards symptoms between moderate and severe, but where the temperature was not particularly high. The idea of indicating reaction and frequency in this way was taken from a paper by Leichtenstern, but his plan has been somewhat modified.

The frequency of the injections is also indicated in the following manner: Where more than one injection was administered on the same day the doses are bracketed together with a comma between them, thus: (·002, ·002). Where the injections were given on succeeding days there is a hyphen between each dose, thus: ·002-·002. Where there was one clear day's interval between the injections it is written thus: ·002; $_1$·002. Where there are two days' interval thus: ·002; $_2$·002, and so on.

As the ultimate result depends to a great degree on the way in which the material is used, it is absolutely essential in publishing the records of cases that the above facts should be clearly indicated, otherwise it is impossible to judge of the value of the results.

An attempt has been made to add to the value of the record by stating, in the first place, what would have been done in the case in question before the Koch period, and, in the second place, what would now be done in a similar case.

K. C. H. = King's College Hospital.

P. G. C. H. = Paddington Green Children's Hospital.

There were ten cases of lupus under treatment, of which two have only been going on for too short a time to be of value; both are steadily improving. I may say that in all the remaining eight cases improvement occurred at first, and in some it was very considerable; in one, indeed, there is now hardly any disease to be detected. In four of the eight cases the improvement is maintained or increasing. In one, when the patient was last seen the improvement had come to a standstill, although there was still a good deal of lupus tissue present. In three, after the improvement had gone on to a considerable extent, it came to a standstill, and now the disease shows a distinct tendency to relapse, but in none is it nearly so bad as before the treatment was commenced. The greatest improvement was obtained in a case treated by the "continuous" plan. The case of N. L. (the first case in the subjoined tables) is very interesting, as showing the very remarkable improvement after two severe reactions, but recurrence after leaving off the treatment, this improvement affecting not only the lupus, but also the disease of the metacarpal bone.

We had twelve cases of disease of the larger joints with unbroken skin which were treated by Koch's method in the first instance, and of these two have apparently completely recovered: how far this recovery will be permanent time alone will show. The remaining ten required operation; of these seven would have been operated on, at or soon after admission, before the Koch period, leaving three in which the conditions which determined operation appeared during treatment. In one of these three cases the determining cause of the operation was the occurrence of dislocation, but I cannot say that operation was absolutely essential in this instance: in another the determining cause was cessation of improvement, and here also the operation at that time was probably not essential, though I have no doubt that it would have ultimately been required (I operated in these cases under the impression conveyed by Koch's paper that the tuberculous material would be found broken down and easily removable, and that in this way operation would expedite the cure); in the third case operation was rendered necessary by the occurrence of suppuration.

Of the operations performed, excision was done in one case; the scar has here partially broken down. Complete arthrectomy was done in two instances, and it is as yet too early to say whether or not there will be recurrence. Partial arthrectomy (that is, partial removal of the affected tissue) was performed in seven cases, and of these three remain healed, and recurrence has taken place in four; of these four cases, two are now improving again as regards the local condition, and the other two have broken down quite recently;

[1] Some of the cases referred to in this statement do not appear in the tables as no case given, treatment having been commenced after the date of the early report in the JOURNAL.

in two cases the rapid recurrence was no doubt to some extent my fault, because I did not take pains to remove all the loose tuberculous material from the joint, being then under the influence of the view that the tuberculin caused caseation of the tuberculous tissue, and that, therefore, it would be readily removed by scraping and irrigation. It is worthy of note that in the case in which the partial arthrectomy has given the most promising result the operation was performed after six injections had been given, that is to say, the Koch treatment followed rather than preceded the operative interference.

In one case of acute spinal disease all symptoms disappeared in a few weeks, but here absolute rest was also employed.

In the two cases of dactylitis I cannot say that any advantage was derived from the treatment as regards the fingers. In one case, however, a sinus which had remained open for a year healed almost at once, and the enlarged glands in the neck diminished in size; and it is very interesting to note that soon after the treatment was stopped recurrence took place in these parts (this recurrence being, however, apparently only temporary), as if the use of the fluid had been keeping the disease in check.

We had six cases where there were *aseptic* sinuses in connection with disease of bones and joints. Of these, one has only been under treatment for a very short time. Of the remaining five, two have completely and, apparently, soundly healed, and have, so far, derived the greatest advantage from the treatment; while one is almost absolutely healed, and I think will be found quite healed when the dressing is next changed. In one case healing is not yet complete, but the condition is steadily improving, and the bare bone, which was present in the first instance, can no longer be felt. In one case, so far as the bone is concerned, no marked benefit has been derived, though the bare bone felt at first has now disappeared. In this instance the delay in healing is, I think, due to the conditions of the sinus itself rather than to the presence of tuberculous disease. In this patient a tuberculous sore on the hand healed under treatment, but has relapsed to some extent since the treatment was discontinued. (Note on April 20th. Of these six cases only two now remain unhealed.)

There were six cases of diseases of bones and joints with *septic* sinuses. Of these four cannot be said to have derived any benefit; one undoubtedly has; one is healing after operation, and possibly the separation of the sequestrum has been expedited by the treatment. In one case it is interesting to note that the tuberculous deposit where the skin was unbroken improved under treatment, but that those with septic sinuses did not: indeed, one, the elbow, became worse. Add here also the case of N. L. (the first case in the subjoined tables), where there were septic sinuses in connection with a metacarpal bone, and where the condition improved markedly under treatment, having healed in the first instance.

To these we must add thirteen others where enlarged glands were present, but which are mentioned under other headings. In seven of these no perceptible difference can be made out in the size of the glands; in four it is noticed that they were somewhat smaller; in one the glands were looser but not smaller; and in one they became smaller under treatment, but one or two of them enlarged after the treatment was stopped. In five cases the enlargement of the glands was the principal or only apparent affection, and in three of these there was no external communication. In all three the glands diminished somewhat in size, and in one where they were at first much matted together the periadenitis disappeared in a very striking manner. Of two cases where there were sinuses in connection with the glands, in one no noticeable effect was produced, while in the other, whatever may have happened to the glands themselves, the septic suppuration spread in the neighbouring tissues to a very serious extent.

There were nine cases of phthisis, of which two were hopeless from the first, and in which no change was noted in the lungs during the short injection period. Of the remaining seven cases all improved in general condition, some of them very markedly so; as regards local condition in one, it is said to be the same as at first, while in the others there has been improvement, varying from "slight" to "very remarkable." To these must be added one case improved and one case *in statu quo*.

A HUNDRED CASES OF ENTIRE EXCISION OF THE TONGUE.

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During the last twenty years my operations upon the tongue for cancer amount to 139 cases. I find that, out of these 139 cases of which I have a record, there have been 119 recoveries and 20 deaths, which gives a mortality of 14.3 per cent. As the main object of my communication, however, is to place before the profession an accurate and reliable record of my personal experience in excision of the entire tongue with scissors, I shall discard, in the first place, ten of the successful cases, as they were operated upon with the galvanic *écraseur*. I shall also exclude 25 successful partial excisions, for although the excisions were performed with scissors, I am anxious to adopt a definite standard by which the merits of the operation may be duly estimated, and more easily contrasted with the results of other methods of operating for the same object. Hitherto it has been the custom to place the results of total and partial excision in parallel columns, ignoring the palpable fact that the risks and difficulties in the two instances are certainly not identical. Where the disease has advanced beyond the tissues of the tongue the operation is also much more severe, and attended with much greater danger. By this arrangement I reduce the number of my total excisions to 104, with a mortality of 20, or a percentage of 19.21, against 14.3 in the gross number of my cases. In estimating these results it has been thought desirable to draw a clear distinction between cases in which the tongue alone was excised, those in which the tongue was removed together with the glands, and those in which division or removal of portions of the jaw was an additional part of the operation. Unquestionably the risks and dangers of these different operations are not the same, and it is misleading and unjust to classify them together. Taking my own cases as an example: in excision of the tongue alone the death-rate is only 4.5 per cent., compared with 77 and 57 per cent. respectively when glands and jaw have been involved.

I cannot better illustrate the misleading influence of grouping together all these different and distinct operations than by referring to the statistics published by Mr. Butlin in his work on *Diseases of the Tongue*. Mr. Butlin stated, which is perfectly true, that I supplied him with my statistics of tongue excisions in 1884, and they represent 48 cases with 9 deaths, but although the entire tongue was excised in every case, there was nothing to show or explain how much more than the tongue was removed. On referring to these cases I find that in only two was the operation confined to excision of the tongue alone; in every other case it was complicated with either the removal of glands, portions of the jaw, or some other addition to simple excision. To show more clearly how valueless statistics compiled on this basis must be, Mr. Butlin contrasted the results of my excisions with those of Mr. Barker, who classifies amongst his returns cases in which a portion only of the tongue had been removed.

It may be roughly estimated that the mortality from simple excision of the tongue amounts to only a point over 4 per cent., for they clearly show that 66 patients may lose their tongues, with a possible loss of three. Now, I consider that I am entitled to draw marked attention to the particulars of these three patients who died. In the first place the youngest was 56 and the oldest 70, and the average age of the three, 64. One was a man with advanced phthisis, who died on the second day from the rupture of a pulmonary abscess. Another died on the twelfth day from syncope, after the floor of the mouth had completely healed; and the third was a woman, aged 70, who died on the fourteenth day from inanition. When we take into consideration the ages and causes of death in these cases, I think that the statistics show what a slight risk there is in excising the tongue, when the opera-

tion is not complicated by the removal of contiguous structures.[1]

I think that I ought to state, in justice to myself, that throughout my practice I have operated upon cases indiscriminately, and that I have never allowed the extent of the disease, or the emaciated condition of the patient, to deter me from operating when I have seen any reasonable prospect of prolonging life or giving even the slightest prospect of temporary relief to suffering. Had I selected my cases, and operated only in the more simple and hopeful, to the exclusion of others, I venture to believe that the mortality might have easily been reduced to a very much smaller percentage.

I do not know that I have much to amend in the description I gave in 1881 of the operation for excising the tongue with scissors; but I will briefly recapitulate the essential features of the operation, and later I will enter a little more fully into some of the important details. (1) The patient should be completely under the influence of the anæsthetic during the first stage of the operation, but afterwards only partial insensibility should be maintained. (2) The mouth should be securely gagged and kept fully open throughout the operation. (3) The head should be supported in such a position that, whilst the best light is secured, the blood tends to gravitate out of the mouth rather than backwards into the pharynx. (4) A firm ligature should be passed through the tip of the tongue for the purpose of traction. (5) The first step in the operation consists in dividing the reflection of mucous membrane between the tongue and jaw and the anterior pillars of the fauces. (6) Rapid separation of the anterior portion of the tongue from the floor of the mouth. (7) Securing, if possible, the lingual arteries with Spencer Wells's forceps prior to division. (8) Passing a ligature through the glosso-epiglottidean fold, before finally separating the tongue. (9) The application of a mercurial solution to the floor of the mouth, followed by painting the surface with an iodoform styptic varnish.

When once it has been decided to remove a patient's tongue, the sooner it can be done the better; at the same time, it may be occasionally judicious, especially with those who are in a state of feeble health, to sacrifice a few days for the purpose of generous feeding, and more especially to obtain a cleanly condition of the mouth. With such patients digestion is often deranged, the bowels loaded, the skin inactive, the teeth foul and coated—all influences which have a tendency to lessen the chances of recovery.

For an anæsthetic I recommend the use of chloroform, although I know of no objection to ether, which I think has an advantage in feeble subjects. The important point is to obtain deep anæsthesia before commencing the operation.

The effectual gagging of the mouth is a point of great importance, for on the one hand it is necessary to keep the mouth wide open, whereas on the other we must avoid so pressing back the jaw as to embarrass the respiration. In fact, the aim in gagging the mouth should be to place the jaw, as it were, in the position it occupies in semi-luxation forwards.

As much depends upon the position of the patient during the operation, I hope I may be excused if I dwell rather fully upon a detail which I have found by experience to afford the greatest convenience to the operator. In the first place, the patient's head must be neither too high nor too low: the mouth ought to be, roughly speaking, on a level with the surgeon's axilla. The head should be firmly held erect with a slight inclination forwards, in such a position that the light will fall well into the mouth. It is, of course, always desirable to take advantage of the best obtainable light.

Great inconvenience is generally caused by the persistent tendency of the patient to slip down on the operating table, and the best means to prevent this is for the patient to recline on an almost perpendicular back-rest, with the thighs bent at a right angle over the elevated central portion of an ordinary operating table. In private practice any joiner, will readily improvise a substitute for this arrangement. A sand-bag makes a very convenient support for the head.

The ligature passed through the anterior portion of the tongue is a great aid throughout the operation, and much depends upon the dexterity of the assistant in anticipating the intentions of the operator, and in always making traction in exactly the right direction, his aim being to make tense those tissues which are immediately to be divided.

The first step in the actual operation consists in the separation of the tongue from its attachment to the floor of the mouth and the anterior pillars of the fauces, and I would lay stress upon the way in which this is done, because the ease with which the operation is continued depends largely upon the freedom with which this separation is carried out. The two structures principally responsible for the retention of the tongue within the mouth are the frænum and the anterior pillars of the fauces; and, if these are completely divided in the first instance, the tongue may be so freely drawn from the mouth that the operation is practically converted into an extra-oral excision. Extended practice has made me conduct this part of the operation with less deliberation and more rapidity than was my habit in my earlier cases. Instead of the cautious snipping I originally advocated, I now boldly cut until I get close to the vicinity of the main arteries, disregarding all bleeding, unless an artery distinctly spurts, when I twist it and proceed. The more profuse the general oozing the more rapidly I proceed, my object being to get as quickly as possible to the main arteries, as I have confidence that all subsidiary bleeding will cease immediately after their division. There is, in reality, no difficulty in determining the actual position of the lingual arteries, as they are practically invariably found in the same situation, and it requires very little experience to seize them with a pair of forceps before dividing them; if this be done there need not be the slightest hæmorrhage from this source. When once the vessels are effectually twisted, the rest of the tongue may be removed without any further anxiety about hæmorrhage; but it is desirable, before finally severing the last attachments, to pass a loop of silk through the glosso-epiglottidean fold, as a provisional measure of security, in case it may become necessary to make traction on the posterior floor of the mouth either to assist respiration, or to arrest any possible consecutive hæmorrhage. Traction on this ligature of itself arrests hæmorrhage, and makes it an easy matter to secure any bleeding vessel. As the retention of this ligature is a source of some annoyance to the patient, I always remove it at the end of twenty-four hours. At a matter of fact I cannot recollect its having been required in more than two cases, and but for the certain sense of confidence it gives to those who are left in charge of the patient I should dispense with the precaution altogether, were I influenced solely by the amount of benefit I have derived from its use.

The treatment of the floor of the mouth after the tongue has been removed is a matter of considerable moment. The first object is to make the cut tissues as far as possible aseptic, and for this purpose I am still in the habit of swabbing the parts with a mercurial solution, and, after drying, finally painting the surface with the iodoform styptic varnish which I introduced in 1881. This preparation, in addition to its antiseptic properties, has the advantage of lessening the discomfort which follows when the surface is left unprotected, and it also enables the patient to take food in the ordinary manner almost immediately after the operation.

The mercurial solution I prefer is that of the biniodide, and the strength I am in the habit of using is $\frac{1}{1000}$. I have recently made, and I think with advantage, a slight addition to the iodoform varnish. My original custom was simply to substitute for the spirit ordinarily used in the preparation of friar's balsam, a saturated ethereal solution of iodoform, but now I prefer to mix with the ether one volume in ten of turpentine. This addition has a very marked influence in promptly checking the capillary oozing which occasionally prevents a dry surface being quickly secured.

I was at one time in favour of suspending all alimentation by the mouth for the first four days, and feeding the patient entirely by nutritive enemata; but for some years I have

[1] I wish to acknowledge the debt of gratitude I owe to my colleague, Mr. Alexander Wilson, for collecting and arranging my statistics. In order to present my cases in as accurate and trustworthy a form as possible, I handed to Mr. Wilson all my notes and memoranda. He communicated with every patient whose address could be traced, and with the representatives, when it was possible to find them, of those patients who had not survived.

entirely abandoned this practice, and I now feed the patient with liquids, by the mouth, as freely and as early as possible, only using enemata when it is necessary to supplement the amount of food the patient is otherwise able to take; and I find that if a coat of the varnish is applied daily, patients rarely have any difficulty in taking an adequate amount of sustenance. It fortunately happens that the patients appreciate rather than object to the application of the varnish, and they will often ask for its use more frequently than once a day.

Instead of keeping the patients in bed and recumbent, my aim is to make them sit up from the first, and in fine weather I encourage them to walk out, if there be sunshine, the day after the operation, and I have never seen any ill consequences, but great advantage follows the adoption of this plan. There is certainly no worse practice than keeping the patients lying on their backs in bed, and I am sure that I have seen the evil consequences of doing so in several of my earlier cases. Under the above treatment, the average time of convalescence is about seven days, and in uncomplicated cases no patient need be detained in hospital after this time.

It is only reasonable that I should state the grounds upon which I prefer excision of the tongue with scissors to its removal by the galvanic or any other form of *écraseur*. In the first place I consider that it is more in conformity with the elementary principles of surgery to make use of a sharp-cutting instrument, it being desirable to leave a clean surface, a surface which, it must be acknowledged, is in the best condition for healing. To employ an instrument whose purpose is effected by bruising leaves a surface in the very condition we are most anxious to avoid in the ordinary practice of aseptic surgery. The wound, in fact, left after the use of the *écraseur* embodies every condition calculated to engender those putrefactive changes which it should be our primary aim to avoid. I fail to see any special danger in the operation of excising the tongue which can justify such a departure from surgical practice, and I cannot recognise any good reason why we should employ an instrument for excising the tongue which no surgeon would at the present day ever think of making use of in any other region of the body—an instrument which almost every surgeon of eminence in the past has made a point of condemning. With scissors absolute precision can be obtained, whereas the erratic course of the *écraseur* wire is absolutely beyond the control of the operator.

I am fully alive to the dangers which may result from blood gaining access to the lungs, even in small quantities, in patients with bankrupt constitutions; and, although I am aware that some surgeons advocate a preliminary laryngotomy or tracheotomy, I believe that it is possible to guard against this danger by measures attended with much less risk than those incidental to either laryngotomy or tracheotomy. At any rate, my own cases conclusively show that better results can be obtained without, than with, these preliminary measures. It unfortunately happens that it is precisely in those cases in which the danger from blood getting into the air passages is the greatest that the risks incurred in opening the trachea are also at a maximum. In one of my own cases, in which I performed laryngotomy on the day previous to that fixed for excision of the tongue, the patient died during the night in consequence of the first operation. If the head of the patient is properly arranged during the operation, and if the tongue has been thoroughly detached as recommended, when the arteries are divided the blood, unless the precaution has been taken to secure the vessels beforehand, will spurt directly out of the mouth, without any disposition to flow backwards. We must also bear in mind that the entrance of blood into the air passages is only one, and not the most important, determining factor in the causation of septic lung mischief. Patients suffering from cancer of the tongue with putrid discharges not infrequently die from septic pneumonia, apart from any operation, or the entrance of any blood into the air cells; and further, under an anæsthetic, a large quantity of blood frequently finds its way into the trachea during the extraction of teeth; but how rarely do we meet with instances of septic pneumonia resulting from such a cause.

The skill with which the administration of the anæsthetic is conducted is also largely responsible for the amount of blood which may enter the trachea. For instance, as I have just stated, whilst it is desirable to have the patient thoroughly under the anæsthetic at the commencement of the operation, it is a mistake to give more than will just suffice to restrain his movements during the later stage. If this practice is adhered to the patient's reflex power of guarding his own air passages is never altogether in abeyance, and no dangerous amount of blood will remain in the lungs at the termination of the operation, as it is practically completely expelled by the act of coughing.

Take my 66 cases of simple excision of the tongue; in not a single instance were ill effects observed which could be attributed to the entrance of blood into the lungs—a record which tends conclusively to show that the tongue can be safely excised without a preliminary laryngotomy.

Total Cases of Excision of Entire Tongue with Scissors.

104.

Recoveries. 84.		Deaths. 20.							
Excision through mouth.				Excisions preceded by laryngotomy or tracheotomy.		Excisions below the jaw.		Excisions with division of the jaw and those where portions of jaw were removed.	
Simple uncomplicated excisions.		Excision with removal of floor of mouth, tonsils and glands.							
66.		13.		5.		9.		7.	
Recovered.	Died.	Recovered.	Died.	Recovered.	Died.	Recovered.	Died.	Recovered.	Died.
66.	3.	9.	4.	3.	2.	2.	7.	3.	4.

When we come to consider what we can fairly and reasonably claim to be gained by excising the tongue, we have two questions to answer: Does excision prolong life, or, failing this, does it render the remainder of his life more endurable to the patient? From my own experience, I can bear the strongest and most emphatic testimony that, in the majority of cases, excision gives very great relief, and in support of this I could produce numerous letters I have received from patients and preserved for the purpose of answering this question. Twenty-six patients out of the 84 successful cases were traced and found to have lived a year and upwards after excision, and I think that we are reasonably entitled to add to this number a certain percentage of the 41 of whose fate nothing could be ascertained, and not to take it for granted that in every instance the patients had succumbed.

Although cases unsuited for operation and those where the disease has recurred after removal are not exactly within the scope of my communication, I cannot avoid taking advantage of this opportunity to make a few remarks upon this much neglected subject. If attempts are never made to follow the disease to its utmost limits, the possibilities of surgery can never be ascertained. I have on several occasions, in desperate cases, and in response to the wishes of patients, cleared out the anterior triangle of the neck, and in two instances excised a portion of the common carotid artery, with, however, fatal results in both cases. This experience is naturally disappointing, nevertheless I have not altogether abandoned the idea that I may yet meet with more favourable results. In fact, I have recently operated upon a gentleman, brought to me by Dr. Vaudrey, of Derby, and the case has stimulated my hopes. The patient had his tongue excised in May last under most unfavourable circumstances, there being at the time extensive gland infiltration. The operation temporarily fulfilled the purpose for which it was performed, and relieved him from a foul mass of sloughing tissue within the mouth. He received so much benefit that he afterwards consented to have the glands removed, and this was partially carried out by another surgeon. The wound rapidly healed; but his sufferings were not entirely relieved by what had been done. At the request of Dr. Vaudrey I again saw the patient, and proposed as a means of relief that I should attempt to remove the tension which was apparently the origin of the

pain. With this object I removed the sterno-mastoid muscle from its origin to its insertion, and cleared out large quantities of diseased glands, and it appeared possible to remove every visible particle had it not been found that the œsophagus was too extensively implicated to justify any further proceedings. During the course of the operation the external and internal jugular veins had to be sacrificed, and the full extent of the carotid sheath exposed. The patient recovered from the operation, and lived absolutely free from pain for several months. It is an interesting fact, and worth mentioning, that the loss of his sterno-mastoid did not appear to occasion him the slightest inconvenience or in any degree interfere with the movements of his neck.

There is another subject in connection with cancer of the tongue which is constantly and painfully being brought under notice. It is a constant experience to find that a patient suffering incessant and intolerable agony is ordered the paltry dose of a grain of opium at bedtime. In one of my own cases, a gentleman suffering from cancer arrived at the stage when he began to suffer pain, and he commenced with a quarter of a grain of morphine, which at first gave relief; by degrees this dose had to be gradually increased until he eventually took as much as *thirty* grains three times daily. This kept him entirely free from pain, without at any time interfering with his intellectual interest in his daily surroundings. The total amount of morphine this patient consumed during the twelve months preceding his death amounted to 3,512 grains. He also inhaled during the last four days of his life five pounds' weight of chloroform, and my firm belief is that this patient would have died much soooner had not this sedative treatment been adopted from the first.

The statistics afford some interesting information on the probable predisposing and exciting causes of cancer in this situation. They show that out of 104 cases a history of cancer in the family was only obtained in six cases. A definite history of syphilis was obtained in seven, and a doubtful account in seven other cases. In sixteen patients the origin of the cancer was attributed to an injury. Sixty-one out of the 104 were ascertained to be smokers, and in the majority of these the cancer commenced on that side of the tongue on which the pipe was usually smoked. In thirty-three cases the irritation of teeth is recorded as being the exciting cause of the disease. In marked contrast to these cases one man had never smoked in his life and had not possessed a tooth for twenty years.

The difficulties of ascertaining the duration of life after operation are very great. Mr. Wilson has succeeded in obtaining positive evidence in 61 cases; 15 patients survived the operation one year; 4, two years; 2, three years; 4, five years; and 1, six years; and I may incidentally mention that the patient whose case I published in 1880 lived fourteen years, notwithstanding the fact that she was 62 years of age at the time of operation.

If we believe that cancer of the tongue can be permanently cured by early excision, and that there are no other effectual means of eradicating the disease, we cannot too persistently urge these convictions upon those who have the earliest opportunity of detecting it, with the object of inducing them to adopt prompt measures and give the patients the only possible opportunity of having their lives saved.

It cannot be too frequently reiterated that the loss of time in the interval between the discovery of the disease and its removal by operation bears a direct ratio to the death-rate, and conversely, that the earliest excisions give the most favourable results.

PROBABLE PREDISPOSING AND EXCITING CAUSES.

A probable family history of cancer was obtained in *six* cases out of the 104:

1.—(Case 25.) The patient's brother died from cancer of the tongue. The patient himself smoked cigars to excess, and there were indications of the tongue having been irritated by a tooth.

2.—(Case 100.) Patient's father died of cancer of the œsophagus. The patient himself was a smoker, and had carious teeth.

3.—(Case 79.) Patient's mother died from cancer. Patient was a moderate smoker.

4.—(Case 37.) Patient's uncle died from cancer of the lip. In this case there was no apparent exciting irritation—the patient did not smoke—the teeth had disappeared before the onset of the disease.

5.—(Case 51.) Patient's mother's uncle had cancer of the lip. Patient smoked a clay pipe.

6.—(Case 75.) A cousin of patient's mother died from cancer. Patient had irritating teeth.

SYPHILIS.

Out of the 104 cases of cancer a definite history of syphilis was obtained in *seven* cases, and a doubtful history in *seven*.

In five cases actual syphilitic disease preceded the epithelioma. In one of these cases the ulcer was first brought on by irritation of decayed teeth, and subsided under treatment with pot. iod.; three years later an epithelioma developed in the scar.

EXCITING CAUSES.

Out of the 104 cases, in *sixteen* instances the patients distinctly traced the origin of the disease to some injury.

1.—In five cases the tongue had been bitten.

2.—In three instances the disease originated in dyspeptic ulcers—one of these patients was a glass-blower.

3.—The repeated irritation of a simple ulcer with caustic gave rise to the disease in one case; and, in another, the scar left after the application of creasote was the site of the growth.

4.—In five cases a definite history of repeated laceration of the tongue by carious teeth was obtained. This was well marked in the case of the youngest patient, a woman aged 25 years.

6.—In one case the irritation of a plate of false teeth was the assigned cause.

SMOKING.

In the 104 cases a note as to smoking or non-smoking is made in 79. Of these 61 were smokers, of whom 41 habitually smoked clay pipes, and 13 are described as "very heavy smokers."

In some cases it was reported that the disease began on the side on which the pipe was usually held.

In 33 cases the existence of carious teeth is mentioned as well as the habit of smoking, and in the 15 cases in women, two occurred in smokers.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE TREATMENT OF THE MORE SEVERE FORMS OF CLUB FOOT BY OSTEOCLASIS.[1]

THE treatment of the more severe forms of club foot is attended with the greatest difficulty: 1. Owing to the cause of the deformity. 2. Owing to its tendency when corrected to revert to the old position.

In many cases I have treated the tendons and fascia by stretching or wrenching, or a moderate tenotomy, using some apparatus to retain the foot in its new position. In patients over two years of age I find the bone deformity must usually be dealt with by excision of, or osteotomy of, portions of the tarsus. In addition to operations on the tarsus, Ogston, of Aberdeen, has performed osteotomy of the tibia and fibula just above the ankle-joint to enable him to rotate the foot outwards.

Believing as I do in the teaching of Escherich, that club foot is caused by an arrest of the fœtal unwinding of the foot, leg, knee, and even thigh, it occurred to me that I might be able, by means of my osteoclast, to improve by fracture and unwinding, some desperate cases, from whom the astragali had been removed, with the result of only partial improvement of the extremity. After the removal of the astragali the feet could, it is true, be placed flat on the ground, but the inversion of the feet remained.

Accordingly, I fractured the tibia and fibula with the osteoclast, close to the ankle-joint, and again between the lower and middle thirds of the leg. Having completed the fractures, I found it possible to improve the position of the foot, by getting it more flat, and also to unwind the extremities by rotating the foot and leg outwards. An iron back splint secured the foot, leg and thigh in their new position. In about ten days the extremities were examined, and the leg rotated until the foot and the patella were on a line, the iron splint was reapplied until firm union had taken place. All five operations were performed on identical lines, and in about six weeks the fractures had united.

I have also at present under my care a child aged 6, both of whose feet turn in about 2½ inches out of a line perpendicular to the patella, but she walks with her feet flat on the ground. I have operated on her right extremity—she is in hospital doing well. The after-treatment of these cases is of the utmost importance, in order to insure that the feet do not revert to the old position. I do not permit my patients to wear shoes, but insist that they run about with bare feet or with stockings only. I have found shoes always distort my cases. Should the foot at any time show any tendency to

[1] Read at a meeting of the Cork Medical and Surgical Association.

revert to its old position, an elastic cord is made fast on the outside of the foot by means of adhesive plaster; the other end is attached by a bandage below the knee.

This has in all cases proved sufficient to keep the sole of the foot flat on the ground, but this after-treatment, instructing them to walk and to retain the sole of the foot flat on the ground, was a matter of months and required the closest supervision and watchfulness.

Finally, it may be laid down as a rule that all cases will again revert to their former state should they be allowed to slip from supervision, before the cure is complete.

NICHOLAS GRATTAN, F.R.C.S.Ed.,
Senior Surgeon, Cork Hospital for Diseases of Women and Children.

EUSTACHIAN SYNECHIÆ.

THE condition to which the above designation applies is an anchoring of the margins of the ostium tubæ by adhesions resulting from the (previous) existence of enlarged pharynx tonsil. It is also just possible that the hypertrophied lateral band of granular pharyngitis reaching up to the neighbourhood of the ostium forms adhesions to the inferior lip of the ostium—adhesions which can readily be discovered by the finger. From such sources result adhesions which immobilise and stretch the ostium in various ways, for example, I have detected adhesions resulting from the former source, with the mirror, stretching the ostium to a slit-like aperture. Also opportunity is often afforded of observing the first stage of the process, namely, a mere white patch of sclerosis of the opposing surfaces (of growth and ostium). The later stage of more constant bands can often be seen and felt.

How early these adhesions take place would be difficult to determine; in adult life and even in old age they are frequent complications of otitis media chronica in its various forms, and also of otitis media purulenta.

The surest method of diagnosing this condition is by the use of the finger in the neighbourhood of the ostium. Nor should this step be omitted in any case of the above conditions of deafness, seeing that these adhesions occur so frequently.

These synechiæ can arise under various conditions, for example, where in early youth the presence of enlarged pharynx tonsil is entirely overlooked. Again, faulty removal of same, as must really happen if one trust entirely to the favourite instruments now in vogue.

Hartmann's curette, Gottstein's curette, and all the different forms of forceps—each and all are excellent for the removal of central parts of the growth, but the finger alone can be safely used to free the ostia when these are crowded upon or have adherent tags of growth attached to them. Hence a *sine quâ non* is a sweep of the finger round each ostium after the instrumental removal of the tonsil to see that the gravest part of the condition has really been removed, namely, the Eustachian synechia.

Newcastle-on-Tyne. WILLIAM ROBERTSON.

TUBERCULOUS MENINGITIS SUPERVENING UPON LOCAL TUBERCULOUS MISCHIEF.

ON February 3rd, I was called to see a child, aged 15 months, who was suffering from strumous dactylitis affecting the proximal phalanx of the right little finger, and the terminal phalanx of the left middle finger; he also had an indurated nodule about the size of a marble in the right cheek.

Family History.—Paternal grandfather and aunt died of phthisis, and another aunt is now suffering from phthisis; a maternal aunt also died from phthisis; father apparently healthy; mother delicate; a younger brother, aged 3 months, suffering from marasmus; no other children. I treated the fingers by inunction of unguentum hydrargyri, and gave liq. ferri phosph. co. and cod liver oil internally, and by the end of the month the fingers were very much smaller, the nodule in the cheek had almost disappeared, and the child seemed in better health than he had been for months; but on March 2nd he became fretful and irritable, and would not take his food; he also had a slight cough and a little diarrhœa. Day by day he got worse, and lost flesh rapidly, and on the 6th he began to show head symptoms; he put his hands up to his head and cried out—a typical hydrocephalic cry; there was also slight retraction of the head. On the 7th the child lay for hours in a semi-unconscious state, between which he would occasionally cry out, and was very fretful. It was with difficulty that any nourishment could be given, and on the 8th he became unconscious. He had ptosis of the right eyelid with an external squint, but no other paralysis. The child remained in about the same condition until the 11th, when he died. No *post-mortem* examination was obtained.

Is it possible that the irritation to the fingers was the exciting cause of the meningitis due to migration of the tubercle bacilli? It came on shortly after, and I have heard of similar cases in which the result has been the same. In such cases what should be the local treatment? Should the fingers be left alone or amputated?

GEORGE J. DUDLEY, M.R.C.S.Eng. L.R.C.P.Lond.
Dudley.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

BIRMINGHAM CITY HOSPITAL.

TREATMENT OF ULCERATED SCARLET FEVER AND DIPHTHERITIC THROATS BY IRRIGATION.

(By N. S. MANNING, F.R.C.S.I., Medical Superintendent.)

I HAVE used the following method of treatment in the ulcerated throats of scarlet fever and diphtheria in the Birmingham City Hospital for about two years and a half. The appliances necessary are a small india-rubber bag syringe, 4 or 6 ounces, according to the size of the patient, two small basins, and a towel. The medicament used is boric acid dissolved in hot water (about 105° F.). In order to facilitate the solution of the boric acid I have a saturated solution in glycerine prepared by Messrs. Philip Harris and Co., Edmund Street, Birmingham, of which the following are the proportions: Pulv. acid. boric., 4 parts; glycerine (sp. gr. 1260), 3 parts. The glycerine should be heated by steam, and the boric acid—best quality carefully powdered—stirred in till the solution is perfect. Of this solution a large tablespoonful is dissolved in about a pint of hot water.

The method of procedure is as follows: Place the patient sitting up, or, if too weak to sit up, place him on his side with his face over the end of the pillow; apply the towel round his neck to keep him dry if any water accidentally gets spilled. Withdraw the nozzle from the syringe before filling it and fill with the solution; replace the nozzle and direct the patient to open his mouth; then put it into the mouth well over the back of the tongue, and forcibly empty the syringe, at the same time receiving the water which rushes out of the mouth and nose into the empty basin. In this way the mouth, fauces, pharynx, and in some cases the posterior and anterior nares, are irrigated; the operation is repeated till the parts are quite clean. In cases of purulent discharge from the nose or nasal diphtheria the same procedure is applied to the nostrils: the irrigation may be performed every two or four hours as circumstances require.

In this hospital during two years over 1,500 cases of ulcerated scarlet fever and diphtheritic throats have been treated by this method. From this experience I can recommend it as superior to any other I have ever tried. I believe its efficacy is due to the fact that it is founded on the rational principle of washing away all septic discharges with a non-irritating, non-poisonous, fluid. It is not in any way disagreeable to patients, on the contrary, when the mouth is dry or foul it is most comforting. The solution is rendered sweet by the glycerine, so that only a small percentage of even very young children offer any objection to it. Occasionally children swallow some, but without any subsequent ill effects. It should be borne in mind that in order to prevent any septic matters being sucked into the syringe the nozzle should always be withdrawn when filling.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, APRIL 24TH, 1891.

Sir DYCE DUCKWORTH, M.D., LL.D., F.R.C.P., President, in the Chair.

Living Specimens.—Mr. BILTON POLLARD showed a patient with Old (Congenital?) Dislocation of Patella reduced by Intra-articular Operation. The patient met with an injury in 1885, and subsequently the limb was operated upon for genu valgum, but without improving the position of the patella. Mr. Pollard then divided the vastus externus, and opened the knee-joint along the inner border of the patella, removing the outer border of the trochlear surface with a chisel. The functions of the joint had been restored.—Dr. J. TAYLOR showed Two Cases of Muscular Atrophy, one in a boy, aged 13, a patient of Dr. Hughlings Jackson's, in whom the lower part of the trapezius did not react to galvanism. The position of the scapula was very peculiar, and was probably due to paralysis of the lower half of the trapezius, together with paresis of the levator anguli scapulæ. The other case was a girl, aged 14, a patient of Dr. Bastian's, who presented pseudo-hypertrophy of the first dorsal interosseous muscle and enlargement of the hypothenar eminence, and of the tongue. The other usual symptoms were present.—Mr. F. B. JESSETT showed a girl, aged 17, on whom he performed Estlander's operation in 1888 for pleurisy contracted in 1886, and followed by empyema. After a few months the sinus closed, and she was now quite well. There had persisted some flattening of the chest, and a slight curvature of the spine. Mr. Jessett also showed a woman, aged 56, upon whom he had performed Gastro-enterostomy for Pyloric Cancer in April, 1890, by means of an incision in the linea semilunaris, using Senn's plates. The patient was now in fair health, had gained in weight, and could take solid food, which was impossible before the operation.—Mr. W. H. BENNETT (with Dr. EWART) showed a case of Gastro-Jejunostomy Two Months after Operation. The patient, a drayman, aged 52, was admitted into St. George's Hospital under the care of Dr. Ewart on Feb. 14th, 1891, with symptoms of pyloric obstruction. There were great emaciation, frequent vomiting, and a constant feeling of discomfort and distension over the whole abdomen. The stomach was much dilated, the vomited matters very acid, and to the right of the umbilicus a hard movable mass, about three inches in its longest diameter, could be felt. On Feb. 27th, Mr. Bennett performed abdominal section through the middle line above the umbilicus, and found the pylorus involved in a movable tumour free from adhesions, the nature of which was not quite clear, although it was probably malignant. Gastro-jejunostomy was then performed, Senn's decalcified bone plates being used. The patient quickly rallied from the immediate effects of the operation, and made a rapid and uninterrupted recovery. Food was given by the mouth within twelve hours after the operation, and was retained with comfort. No dyspeptic symptoms of any kind had since occurred, although the patient's appetite was very large. The size of the stomach was only about half of that prior to the operation. The motions, formerly very pale, were now natural in colour, and up to the present date there had been an increase in weight of $2\frac{1}{2}$ stones. In spite of careful examinations of the motions, nothing had been seen of the bone plates or the sutures used in approximating them. Dr. F. HAWKINS showed two patients suffering from Congenital Heart Disease. The first was a lad, aged 12, with pulmonary stenosis and regurgitation. The apex beat was on the right side of the sternum. The other patient was a girl, aged 19, with systolic thrill in the episternal notch and probable pulmonary stenosis. Both patients exhibited a similar very curious deformity of the thorax and the same tendency to cyanosis, etc. Mr. BATTLE showed a girl suffering from Recurrent Dislocation of the Patellæ, which was treated by means of a modified Fisher's splint. He also showed a woman, aged 27, who had recovered from Lupus Erythematosus under purely medical treatment, viz., arsenic and iodide of iron internally. Mr. Battle also showed a very interesting case of Plastic Operation for Extroversion of the Bladder, in a boy, aged 10. A flap was turned down from above, the scrotum being brought up from below, the penis being carried down below the scrotum, the method being that practised by Mr. A. Boyce Barrow. Dr. S. WEST showed a case of Symmetrical Fracture of Both Calcanea in a case of Tabes in a woman, which occurred on rising from bed after a long illness. There had been fibrous union.

Gastro-jejunostomy.—Mr. W. H. BROWN (Leeds) read notes of this case. The patient, a woman, aged 56, had suffered from dyspeptic trouble for twelve months. Vomiting had commenced and excruciating pain followed on the introduction of the smallest quantity of liquid into the stomach. There was a well-defined sausage-shaped swelling to the right of the umbilicus, and the outline of the distended stomach could be readily seen. The abdomen was opened in the middle line, the growth made out to be involving the pylorus and first part of the duodenum; a piece of jejunum was seized and opened. A second opening was made in the anterior wall of the stomach and Senn's plates introduced. The patient bore the operation well, and the pain entirely disappeared. She was able to take liquid food well. She lived four months after the operation in comfort, the pain only returning a few days before death, which was due apparently to the extension of the disease.—Mr. B. JESSETT asked whether the author had traced down the small intestine from the pylorus, or whether he had taken up a loop of intestine at haphazard for the purpose of the operation. If the latter plan had been adopted it was wrong, since he had convinced himself by experimental observation on the cadaver that the lower end of the ileum might in such case be attached to the stomach, and the patient would then in a short time die of marasmus. It had been recommended that the omentum should be turned to the left in searching for the jejunum; he, however, was sure it was better to turn it over to the right, when any part of the duodenum or jejunum could be at once found. He had done the operation five times, and three of his patients were now living. As to the kind of suture to be used in dealing with the bony plates, he had united them with silk in his first case, and after death had found the plates nearly digested but still hanging in the stomach and intestine respectively by the silk threads, which did not become absorbed but were liable to ulcerate through, and cause grave trouble in so doing. He now, therefore, used chromicised catgut. He thought, too, the wound in the stomach should be made sufficiently large to admit the bone plates easily. As regarded nourishment, he thought the patient might be fed the next day to prevent exhaustion, as there was not likely to be any leakage whatever after that interval. Often the plates looked insecure after the operation, and he had placed five or six extra Lembert sutures, but small ones, along the front edge of the plates; to put sutures behind was not an easy operation.—Mr. W. H. BENNETT being asked whether this operation was justifiable, answered emphatically "yes." It was actually desirable in proper cases. One of his patients, the man previously exhibited that evening, was almost on the point of death from starvation. The operation was done in the afternoon, and at 10 P.M. of the same day he took his first meal, and began to rally at once, and in ten days had a meal of chicken. He was, therefore, an advocate for early feeding by the mouth. It was true the disease was left behind in this operation, but so it was in many other quite justifiable operations. Moreover, pylorectomy was so often fatal, and Loreta's operation of opening the stomach and stretching the pylorus with the fingers so often unsatisfactory, that he considered gastro-enterostomy preferable. If, further, the bowel was opened high up, there was no sign of wasting. Just before the operation in his case the motions had been clay-coloured, but soon became more nearly natural, and in ten days were quite natural. As to the omentum, he would also say, Turn it to the right and not to the left, as Mr. Jessett had directed. As to the tilting of the end of the plates, he had found the placing of sutures over them give an additional sense of security as the intestine was being returned into the abdomen. He believed the side sutures should be of catgut and the end sutures of silk. He asked Mr. Brown to explain the desirability of making the vertical incision in the stomach.—Mr. STEPHEN PAGET noticed that the patient had an acute attack of parotitis a few days after the operation; this he had noticed before, and he considered it for several reasons not to be a septic inflammation,

but of an innocent character.—Mr. C. J. Symonds, in performing the operation a few days previously had pushed the omentum to the left and had had difficulty in finding the duodenum; he was convinced now it would have been better to push it to the right. He had used only moderately-sized plates, but that in the small intestine seemed large for the gut, and made it look almost flat instead of cylindrical after the operation, and he was at first doubtful if that plate would not cause obstruction. The patient had, in fact, since vomited, and he had sat him up for a short time. He usually placed a few Lembert sutures in the stomach.—Mr. A. Lane also thought surgeons generally should use extra sutures, and remarked that Senn himself now recommended the practice. As to the posterior sutures, he found no difficulty in their insertion, if they were put in before the plates were tightened up, and were themselves also afterwards tightened up.—The President remarked that he had heard a paper on the subject read by Mr. Paul at Liverpool on the previous evening, in which the author advocated the use of cylinders of decalcified bone instead of plates of the same material. In a dog so treated, and then killed, the intestine was dissected out, and perfect continuity found.—Mr. Brown, in reply, said that, in finding the intestine, he had turned up the omentum in the way described by Mr. Jessett, and had then found the duodenum at once. He used silk sutures for the plates; and was pleased to learn that Senn had now advised the extra sutures outside the margins of the plates, which otherwise were wont to look very insecure. As to the vertical incision in the stomach, he thought that it had produced less kinking in his *post-mortem* experiments. He had seen parotitis come on four times after abdominal section. In the case of the patient exhibited that evening by Mr. Bennett he was glad to find that food was given within a few hours of the operation; he thought that was quite desirable in most cases.

MEDICAL SOCIETY OF LONDON.

Monday, April 27th, 1891.

R. Douglas Powell, M.D., President, in the Chair.

Ectopia Viscerum.—Dr. T. Elliott (Tunbridge Wells) showed a specimen of ectopia viscerum, in which the stomach, small and large intestine, together with the testes, were protruding through an opening in the abdominal wall about four inches in circumference at and below the umbilicus. The film which usually covered these protrusions was absent, having presumably been torn through during parturition. The child was otherwise well developed.—Mr. Edmund Owen said he had seen several examples of the abnormality. He agreed that nothing could be done surgically.

Double Genu Recurvatum.—Mr. Edmund Owen showed a child of nearly four years with double genu recurvatum. The knees were hinged backwards, like a stork's. They were so rigidly fixed by the shortened quadriceps extensor that even under chloroform the legs could not be brought down into the line of the thighs. He attributed the deformity to faulty "packing" of the fœtus, the presentation being described by the mother as "head first with the feet on the shoulders." The child could not stand. She constantly sat with the backs of the feet resting on the collar-bones, the front of the knees being marked by a wide retiring angle. The backs of the condyles of the femora and the inter-condylar notches could be clearly made out beneath the skin of the popliteal space. Palliative treatment being impracticable, Mr. Owen, on February 11th, divided each quadriceps just above the patella, freely opening the knee-joint. He was then able to flex the knees. The wounds were closed by continuous suture and dressed with wood wool; the limbs were fixed straight in a box-splint. The incisions promptly healed, after which massage and manipulations were employed. The child was now able to stand, and was gradually gaining strength in the legs. Flexion could be made to a right angle.—Mr. William Adams observed that the case was successful so far as the operation was concerned, but he thought that even more might have been done by the subcutaneous method.

A Hundred Cases of Entire Excision of the Tongue.—Mr. W. Whitehead (Manchester) read the paper, which is published at page 961.—After some remarks from the President and Dr. Purcell, Mr. Bryant said that early in his career he had employed the galvanic *ecraseur* with apparent success, but of late years he had discarded the method entirely in favour of Mr. Whitehead's procedure.—Mr. Butlin defended his statistics, observing that in classifying cases it was of less importance to divide them according as part of, or the whole of, the tongue was removed than to distinguish between the cases in which the tongue alone was removed, and those in which the glands of part of the jaw had to be removed. He expressed surprise at the large number of cases in which Mr. Whitehead had removed the whole of the tongue. At Bartholomew's part of the organ only was removed in many cases, and the practice was justified by the fact that recurrence seldom occurred at the same place. He never objected to operate if there was a hope of preventing recurrence in the mouth. In only one instance had he undertaken the more serious operation, and he had regretted having done so. He said that Mr. Whitehead's method had been largely adopted in the London hospitals, and he asked whether he had ever tried the practice of joining the edges of the wound. He pointed out that statistics as to the post-operative duration of life must of necessity be untrustworthy unless the cases were very carefully distinguished. It was not only necessary to distinguish between cases in which the tongue alone was removed and those in which other structures were involved, but they should specify whether the lesion was in the fore part or behind, and so on. Mr. Whitehead said that, as soon as the effects of the chloroform passed off, the patients were able to swallow in the usual way without any trouble. Recurrence was almost invariably in the glands, the internal organs being free. He had tried the plan of joining the mucous membrane in one instance, but he found that it prevented the closure of the epiglottis, thus giving rise to very great inconvenience. Mr. Sheild said he had understood Mr. Whitehead to say that all the nerves and vessels in the neck could be removed without danger to life, and he asked whether Mr. Whitehead included the vagus and the phrenic nerves, and if so, whether he would advise that course.—Mr. Whitehead said that these nerves had been removed without causing death, and, if absolutely necessary to relieve pain, he would not hesitate to deal with them.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Friday, April 17th, 1891.

T. Churton, M.D., President, in the Chair.

Pathological Meeting.

Suppurative Meningitis.—Dr. Trevelyan read a paper on some points in the morbid anatomy of this disease. Suppurative meningitis affected the convexity as well as the base of the brain. The pus was chiefly situated in the subarachnoid tissue, the pia mater, however, being also infiltrated. (In one of the cases referred to there was exudation on the outer surface of the dura mater, the tissue of which was also infiltrated with cells.) In the spinal cord the pus was more abundant in the lumbar and dorsal regions, and at the posterior part of the cord, especially between the posterior nerve roots, there apparently where the subarachnoid tissue was most abundant. The disease was really a meningo-encephalitis and myelitis, the underlying nervous tissue being involved. Death was probably due to the extension of the inflammation to the centres presiding over the necessary organic functions, and not to mechanical pressure of fluid in the ventricles. Hence tapping the ventricles offered little hope of relief. Recovery was not impossible, even when pus had formed, if the symptoms in fatal cases and those that recovered (in the epidemic disease, for instance) were compared. A few words were said about the pathogeny of suppurative meningitis, with special reference to infection with the pyogenic organisms and infection with the pneumococcus or bacillus of enteric fever. Microscopical specimens were shown illustrating the anatomy of the membranes and subarachnoid tissue; as also glycerine gelatine preparations and sections from two recent cases of suppurative cerebro-spinal meningitis secondary to ear disease.

Specimens.—The President showed (1) Iliac and Femoral Arteries obstructed by Emboli, from a case of mitral valvulitis, with a large thrombus in the left auricle. Gangrene of

both lower extremities had resulted from the obstructions. (2) The Spinal Cord of a girl, aged 8, who had superficial caries of the floor of the spinal canal, with suppuration outside the dura in the dorsal region; also suppuration within the dura as far as the medulla and pons. There were very many miliary tubercles but no pus in the Sylvian fissure; there was matting of the pia mater in this region.—Dr. ALLAN showed (1) the Heart and Aorta of a man aged 70. Death occurred suddenly through the rupture of the dilated aorta into the pericardium while the patient was resting in bed. The aorta presented a peculiar granular and reddened appearance. Dr. JACOB said the appearance of the aorta was more suggestive of an acute softening from inflammation than the usual chronic atheromatous disease.—Dr. ALLAN also exhibited (2) portions of Cranium showing syphilitic caries, from a man aged 28, with a syphilitic history of three years' standing. (3) Atrophied Liver from the same subject, showing the usual fibrous bands, pits, and contractions. (4) Heart with mitral stenosis in a man aged 70.—Dr. BRONNER showed diseased Incus and Malleus from a case of chronic otorrhœa, with offensive discharge. There was perforation of Shrapnell's membrane and the membrana tympani, and the malleus could be seen projecting like a piece of wire. After using cocaine, the tensor tympani was cut and the malleus removed by forceps. The viscus was hooked out with a piece of wire. Such cases, with very little discharge, were apt to end fatally if left alone. The discharge should always be stopped if possible, and carious bone scraped away, the mastoid antrum being opened if necessary.—Mr. MAYO showed a Brain with an aneurysm of the anterior inferior cerebellar artery. The patient, a woman aged 53, was in good health till three-quarters of an hour before death, when she complained of feeling faint. The mind was clear to the last. There was some paralysis of the left external rectus oculi.—Mr. MAYO ROBSON showed (1) a large Fibro-cystic Tumour of the Uterus removed by abdominal hysterectomy. (2) Sarcoma of Kidney removed by abdominal nephrectomy.—Mr. LITTLEWOOD showed (1) Growth from the posterior end of inferior turbinated bone causing nasal obstruction. (2) Fibro-cystic Tumour of the Uterus of nine months' standing, from a patient aged 39, removed by abdominal hysterectomy. (3) Cultivations of special Microbes from Professor Koch's laboratory. Microscopic sections of the uterine and nasal tumours were shown, and specimens from a cultivation of the typhoid bacillus.—Dr. GRIFFITH showed (1) a case of Bilateral Undescended Testicle (dissection). (2) Dissection of Amputated Phalanges of Thumb, showing new attachment of tendons. (3) Case of Tuberculous Ulceration of Intestine, with waxy viscera. (4) Waxy Spleen, and Liver from the same case, not waxy.—Mr. LAWFORD KNAGGS showed an Eye with Tuberculous Iritis. Dr. JACOB showed (1) a series of Microphotographs with the optical lantern, illustrative principally of tuberculous and cancerous growths; views of the apparatus generally used for microphotography were also shown, and recent improvements in methods described. (2) Microscopic sections of the principal lesions of lymphatic glands, including simple and tuberculous inflammation, lymphoma, lymphadenoma, and lymphosarcoma.

MIDLAND MEDICAL SOCIETY.

WEDNESDAY, APRIL 1ST, 1891.

M. A. MESSITER, M.R.C.S., President, in the Chair.

Aphemia of Nine Months' Duration Treated by Hypnotism.—Dr. STACEY showed this patient again. When before the Society some weeks ago, he was quite unable to speak; now he was able to do so without difficulty.

Specimens. The PRESIDENT showed: (1) A typical Oxalate of Calculus successfully removed; (2) a specimen of Compound Fracture and Dislocation of Vertebra. The injury had been cut down upon and several of the processes of the vertebra removed, but the fragments were firmly locked, and could not be reduced. The patient lived for over a week after the operation. Mr. CHRISTOPHER MARTIN showed a Sarcoma of the Ovary.—Mr. J. ROUND showed an Ovum about two months old, with a Hydatidiform Mole attached. The patient was a primipara who had been under treatment for anæmia, which had existed during nearly the whole of her married life. After the mole was removed, the patient had no bad symptom except a most fœtid discharge, which yielded readily to injections of a solution of Condy's fluid.

Double Abductor Paralysis of the Larynx.—Mr. BARLING showed a case of double abductor paralysis of the larynx in a girl, aged 20, apparently a hysterical condition grafted on to a slight catarrhal laryngitis. The respirations had been as rapid as 50, and nearly a year ago tracheotomy was performed for very severe dyspnœa occurring at night. With faradism and tonics there was subsequent recovery of the abductor function, but at the present time the patient was nearly as bad as ever. The present treatment was by tonics, faradism to the neck, and occasional intubation, slow improvement resulting.

Paper.—Dr. SHORT read a paper on the action of urethan, sulphonal, and paraldehyde, with clinical illustrations.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, APRIL 1ST, 1891.

JOSEPH WHITE, F.R.C.S.ED., Vice-President, in the Chair.

Paper.—Dr. W. B. RANSOM read a paper on the "Origin of Epithelial Tumours."

Cerebral Tumour Following Injury.—Dr. HANDFORD showed this specimen, which was a sarcoma situated in the right paracentral lobule and the upper end of the right ascending frontal convolution. It was taken from the body of a collier, aged 38, who was quite well until he was crushed by a fall of coal. Loss of power in the left leg ensued at once, possibly due to cerebral hæmorrhage. After four or five weeks paralysis of the left arm and side of the face followed. There were no convulsions. The patient becoming more and more comatose, death took place eighteen weeks after the accident, and a tumour was found in the right motor area corresponding with the paralysis. Intense optic neuritis developed a fortnight before death. The sensory disturbances showed a distinction in the appreciation of heat and of cold: sensibility to cold was acute, while to heat it was nearly lost.

WEDNESDAY, APRIL 15TH, 1891.

C. HAYDON-WHITE, M.R.C.S., President, in the Chair.

The Treatment of Cancer from the General Practitioner's Point of View.—Dr. G. M. LOWE read a paper on this subject. General practitioners dealt with cancer in its earliest, as well as in its latest, stages; whereas hospital surgeons only met with cases when more or less fully developed. He urged the importance of more fully and precisely recording the details of each case in the certificate of death for the information of the Registrar-General, and insisted on the duty of the general practitioner to obtain early treatment, accentuating, at the same time, the desirability of avoiding over-zealous surgical or medical treatment. The paper concluded with some observations on the treatment of cancer by caustics, electric cautery, and methyl violet.—Dr. BROOKHOUSE expressed a distrust of specialists in the treatment of such diseases as cancer, and a disbelief in the bacterial origin of the disease.—Mr. WOOD gave an unfavourable opinion of operative treatment, based upon twenty years' experience.—Dr. RANSOM stated that coccidia described as peculiar to cancer were discoverable in almost all epithelial growths.—Mr. ANDERSON made remarks upon the surgical treatment of cancerous growths in general.—Dr. BOOBBYER discussed the cancer statistics published by the Registrar-General in his Report for 1889, which, he said, with all possible allowance for error, went to show an undoubted increase during recent years in the prevalence of malignant growths.

Specimens.—Dr. BROOKHOUSE showed the Heart, Spleen, Kidneys, and Bladder removed from a man aged about 50, admitted, under his care, into the General Hospital for retention of urine. Three weeks previously he had a "stroke," suddenly falling back, and becoming unconscious. When admitted he was aphasic, and there was some loss of power on the right side; frequent desire but inability to micturate; pain in back; urine foul, alkaline, specific gravity 1010, with deposit of pus and phosphates. He died exhausted, about twenty-four days after admission. At the necropsy there was found wasting of the brain cortex in the Rolandic area; the brain vessels soft, and somewhat atheromatous. Heart: wall of left ventricle thin, vegetations upon mitral valve. Large infarct in spleen. Pyonephrosis of right kidney, cortex

wasted. There was a black, irregular-shaped stone, with rough surface, the size of a nutmeg, in the pelvis, which was much hypertrophied, as was also the ureter. The left kidney had dots of pus studded all over the cortex, and the capsule rather adherent. The bladder wall was enormously thickened, the cavity small, the mucous membrane congested and blood-stained: prostate uniformly enlarged.—Dr. MUTCH showed a Hydrocephalic Fœtus, with head measuring some twenty inches in maximum circumference, born, *per vaginam*, under extreme difficulties, at full time.—Dr. RANSOM showed, for Mr. WRIGHT, a large Multilocular Ovarian Cystoma, weighing 7lbs.; and a Dermoid Cyst, the size of a turkey's egg, successfully removed by the latter from a married woman, aged 30, at the General Hospital.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

FRIDAY, APRIL 10TH, 1891.

H. G. CROLY, President of the Royal College of Surgeons in Ireland, President, in the Chair.

Cases.—The PRESIDENT showed: (1) Patient whose right lingual artery was ligatured as a preliminary to removal of tongue; (2) Radical cure of direct inguinal hernia.—Sir WM. STOKES showed a case of inguinal hernia treated by peritoneal and intercolumnar suture.

Card Specimens were shown by Mr. HAMILTON, Mr. THOMAS MYLES, Mr. P. C. BAXTER, Mr. TOBIN, Mr. SWAN, and Dr. AUSTIN MELDON.

Ligature of the Lingual Artery as a Preliminary to Partial or Complete Excision of the Tongue.—The PRESIDENT read a paper, in which he strongly advocated preliminary ligature of the lingual artery in one-sided cancer of the tongue and deligation of both linguals in cases where the disease involved both sides of the tongue. He had tied fifteen lingual arteries, namely, six double and three single. The incision in each case commenced beneath and external to the symphysis menti, extending downwards to the great cornu of the os hyoides and upwards to a point near the angle of the jaw, avoiding the facial vein. The platysma and deep fascia were divided on a director, and, when raised, the submaxillary gland was exposed, the digastric muscle, with hypoglossal nerve, forming the boundaries of a triangle in which the artery lay. The fibres of the hyoglossus thus exposed were next divided horizontally on a director and the artery secured in its second stage. This dissection enabled the operator to explore the digastric space, and glands which could not otherwise be felt, owing to the dense cervical fascia, could be removed, thus making the operation a comparatively bloodless procedure, and giving the patient a much better chance than if the glands were not removed. The President related cases in which he removed the tongue as far back as the epiglottis, and where the root of the tongue being severed there was no bleeding. He expressed the opinion that exploring thoroughly the submaxillary region was just as important in tongue cases as exploring the axilla in breast cases. Lingual arteries varied—about one in six arteries lay on the hyoglossus instead of beneath the muscle. In ligature of both linguals one side often was easier; the artery occasionally pierced the muscle; the artery was sometimes large, occasionally very small. The President condemned the Paquelin cautery as a means of excising the tongue, having seen some secondary hæmorrhage following its use.—Mr. HAMILTON said that if ligature of the lingual artery was done for the purpose of examining and clearing the submaxillary space, as was done with the axilla for cancer of the breast, it must be regarded with considerable favour.—Sir WILLIAM STOKES could endorse all that had been said by the President as regarded the practical bloodlessness of the operation. He felt, however, compelled to question the necessity of ligaturing the lingual artery as a preliminary step in the operation of ablation of the tongue. He never had experienced trouble from secondary hæmorrhage. The exploration of the submaxillary space could and, in his opinion, should be made in all cases, whether the lingual artery were tied or not, as such glandular enlargements might undoubtedly exist in cases of cancer of the tongue without the possibility of their detection by any palpation of the submental tissues.—Mr. THORNLEY STOKER said that he did not find hæmorrhage give much trouble in operations for removal of the tongue.—Mr. WHEELER's experience led him to believe that it was quite unnecessary to ligature the lingual arteries prior to excision of the tongue.—Mr. WILLIAM THOMSON said he did not regard ligature of the lingual arteries as at all necessary for the prevention of hæmorrhage in removal of the tongue. The real value of the paper lay in the suggestion of the exploration of the submaxillary space and the removal of all diseased glands.—Mr. TOBIN remarked that when removal of the tongue, ligature of the lingual arteries, and clearing out of the sublingual space were decided on, the operation introduced by Kocher, of Berne, accomplished these objects better than any other, and, by removing the disease more completely, gave better results. His experience agreed with that of the President as regards the discovery of glands at the time of operation, which had previously escaped notice.—Mr. LENTAIGNE could not see why, when the submaxillary space was opened up, the artery should not be ligatured; it would certainly make the removal of the tongue much easier and more thorough, as the fear of hæmorrhage would no longer exist.—The PRESIDENT replied.

Osteoplastic Resection of the Foot.—Mr. LENTAIGNE read a paper on the Mikulicz-Vladimiroff osteoplastic resection of foot, which was followed by a discussion, in which Mr. THORNLEY STOKER, Mr. KENDAL FRANKS, Mr. TOBIN, Sir WILLIAM STOKES, Mr. SWAN, and Mr. WHEELER took part.

CORK MEDICAL AND SURGICAL ASSOCIATION.

WEDNESDAY, APRIL 8TH, 1891.

JEREMIAH COTTER, M.D., President, in the Chair.

Osteoclasis in Club Foot.—Mr. NICHOLAS GRATTAN read a paper on this subject, which is published in full at p. 964.

Specimen.—Dr. ASHLEY CUMMINS exhibited a Submucous Fibroid Tumour of the Uterus. The tumour projected into the vagina, and was removed by wire *écraseur*. The pedicle, which was long and rather tough, sprang from above the internal os. The patient had no hæmorrhage since the removal of the growth.

Trephining for Cerebral Abscess.—The PRESIDENT read this paper. A boy, aged 14, fell off a wall 26 feet high, his head coming in violent contact with hard ground, a large number of loose stones falling over him. He soon regained consciousness, and was able to walk to the hospital, but insisted on returning to his home, and during the night was restless and delirious. Next morning he was admitted to the hospital, when the following conditions were noted:—Contused wound one inch in length over occipital bone, situated one inch to the right and half an inch above the external occipital eminence. This wound extended to the bone, from which the periosteum had been torn, exposing a depressed fracture of both tables, running transversely above and parallel to the course of the lateral sinus. Another contused wound, produced by one of the falling stones, was situated over the left malar bone, which was denuded of periosteum. The patient was quite conscious. Temperature 99°, pulse 76, pupils normal. No symptoms of compression. He progressed favourably till the morning of February 16th, thirteen days after the injuries, when his temperature rose to 103°, and he complained of severe frontal headache, vomited once, became drowsy, but did not lose consciousness. Trephining was performed on February 19th. Two circles of bone were removed, and the depressed portion of the occipital elevated. About a wineglassful of pus oozed through a small wound in the dura mater produced by a spicule of depressed bone. There was no collection between the bone and the dura mater. The aperture was enlarged with scissors, and the probe entered a cavity in the occipital lobe of the brain. The cavity was washed out with a weak watery solution of iodine, a rubber drainage tube inserted, and the wound dressed with iodoform gauze and sublimated wool. The patient was quite conscious after the operation, and said the headache had completely disappeared. From this date he made an excellent recovery, the wound healed rapidly, and the patient was now quite well. The points of interest in the case were: (1) The occurrence of intracranial suppuration without any definite symptoms pointing to its presence; (2) the absence of symptoms of compression, though there was a considerable amount of depression, involving both tables, with wound of membranes and evident

pressure to such an extent as to produce suppurative meningo-encephalitis.—The papers and cases were discussed by several members.

REVIEWS AND NOTICES.

Clinical Diagnosis; the Bacteriological, Chemical, and Microscopical Evidence of Disease. By Professor von Jaksch, of Prague. Translated from the second German edition by James Cagney, M.A., M.D., with an appendix by Professor Stirling. London: C. Griffin and Co. 1890.

This work by Professor von Jaksch supplies a real want, and the fact that its author is a clinician as well as a scientific expert makes it of double value, for the precise needs of clinical investigation are too often lost sight of in the physiological laboratory, amid its wealth of appliances and its strivings after scientific completeness. The adaptation of physiological teaching and methods to the purposes of clinical investigation, so happily illustrated in this book before us, we shall endeavour to emphasise, and this will be best done by giving a brief outline of the scope of the work.

The first chapter deals with the blood. The description of the changes in the formed elements, especially as applied to leukæmia and pernicious anæmia, is exceptionally good. The methods of demonstrating organisms in the blood are concisely given, and the relation of these organisms to the causation of disease in as yet more doubtful cases is temperately stated. An account of the chemical changes in the blood occupies the remainder of the chapter. The effects of certain poisons on the colouring matter of the blood, and the presence of urea, uric acid, and the bile constituents in the blood are well described. We should like, however, to have seen even a fuller account of uræmia and acetonæmia.

The second and third chapters are concerned with the buccal and nasal secretions. The somewhat too meagre account of the coating of the tongue is supplemented by Dr. Cagney.

In the fourth chapter the sputum is considered. Under the microscopical examination, an interesting description of spirals and the alveolar arrangement of elastic fibres occurs. The pathogenic fungi with methods of demonstration are well described. The account of the sputum in diseases of the bronchi and lungs deserves special attention. The sputum in acute bronchitis is not stated to be ever aërated, and that of hæmorrhagic infarction is described as being made up of single coin-shaped masses of blood, bright red in colour, and intimately mixed with froth. The author says that the pneumonia microbe needs further investigation, and that perhaps several organisms may set up the disease. Professor von Jaksch recognises a non-bacillary form of phthisis, apparently not the same disease as cirrhosis of the lung.

The gastric juice and vomit form the subject matter of the next chapter. The chemistry of the gastric juice is fully given, and a useful summary of the chief points in its examination is to be found on page 106. The acidity of the gastric juice, especially in relation to free hydrochloric acid, receives an attention in keeping with the importance lately attributed to it in diagnosis. The remainder of the chapter deals with the examination of the vomit, especially in cases of diseases of the stomach and in poisoning, the ptomaines being carefully described.

The greater part of the sixth chapter on the fæces is taken up with the description of parasites, both vegetable and animal. Among the pathogenic organisms, Koch's bacillus of cholera is distinguished from the micro-organism of cholera nostras, and the bacillus of enteric fever is shown to be capable of identification by the method of pure cultivation alone. The chapter concludes with a good account of the character of the stools in intestinal affections.

The seventh chapter treats of the urine. The naked-eye and microscopical characters are first dealt with. The question of epithelium in the deposit from the point of view of diagnosis is well discussed. Casts are fully described, and interesting observations made on bacteriuria. Under the chemical examination albuminuria in its various forms is fully treated, peptonuria being specially considered. Glycosuria is divided into physiological and pathological. The phenylhydrazin test for sugar is recommended, as there are undoubtedly fallacies in Trommer's test. The methods of estimating sugar, urea, uric acid, and kreatinin are clearly described. This admirable chapter closes with an account of the urine in cases of disease and poisoning.

The eighth chapter deals with exudations (inflammatory), transudations (non-inflammatory), and cystic fluids. Special reference is made to micro-organisms. The author says that tubercle bacilli are not present in pleural (serous) effusions unless tuberculous matter has been discharged into the pleural cavity.

The ninth chapter is occupied with the secretions from the genital organs, and there is an excellent outline account of the methods of bacteriological research in the tenth chapter. Some useful additions by Professor Stirling are found in the appendix. This is followed by a full bibliography, and a good and sufficient index.

We shall be surprised if this work does not acquire in this country the same reputation it has already obtained abroad. In it will be found much of the author's own original work. It is rich in information, accurate in detail, and lucid in style. The work of translation has been well done, and Dr. Cagney has certainly added to the value of the book by introducing here and there descriptions of methods in common use in this country.

The illustrations, which number more than one hundred and thirty, and some of which are coloured, are admirably executed.

Antiseptics in Obstetric Nursing. By John Shaw, M.D.Lond., M.R.C.P.Lond., etc. London: H. K. Lewis. 1890. Pp. 126.

It might be expected that a work with the above title would either be limited to explaining, illustrating, and urging the broad principles upon which the system of practice initiated by Sir J. Lister is based, omitting mention of the less essential details which are being continually changed; or if going into details would describe fully the different antiseptics, and different methods of using them. This book does neither the one nor the other. The principles are set forth, and the details of practice as favoured by the author. Hence, along with much that will meet general approval, we find some things insisted on to which many teachers would object. Thus, as a preliminary to abdominal section, the nurse is instructed to stuff the vagina the night before with antiseptic pads; a precaution which, to say the least, is omitted by some of the most successful operators. It will be seen, from this illustration, that under "obstetric nursing" the author includes not merely monthly nursing, but the nursing of cases in which gynæcological operations have been performed. The author is not so robust in his antiseptic faith as most of the modern obstetricians. He still thinks that "inflammatory fever" may come from chill, and that scarlatina and erysipelas may produce "puerperal fever." He quotes authors on these doctrines, but does not seem acquainted with the writings of Gusserow on the former subject, or with those of Boxall and Meyer on the latter. He is not always correct in his terms. In the glossary we read, "sepsis, the condition of putrefaction." This is not the case; septic infection may take place without putrefaction, and mere putrefactive change does not cause septicæmia. It must be added that the book appears to have grown out of a course of lectures delivered to midwives and monthly nurses; and that it is written in a clear and interesting style, well adapted to such an audience. Both orthography and accidence, however, are outraged by such a word as "scyballæ." The book might be amended, yet its influence, upon the whole, must be good. In matters so important as those of which it treats, too much diligence is better than neglect.

Preventable Deaths in Childhood. By Wynn Westcott, M.B. London. 1891.

"Speaking in general terms, it may be said that almost all the deaths of children which come under the notice of the coroner are deaths which might have been delayed, if not entirely prevented." This is a grave charge to make against the community in general, and it comes with additional weight

from one who has had considerable experience as a coroner. In the pamphlet before us Dr. Westcott deals with his subject under several heads. The first is that of children found dead: of this, the commonest cause is overlying, and this in turn is mostly the consequence of intoxication; neglect also will account for a certain proportion of the deaths in this group. The next class, that of deaths caused or hastened by injury, includes burns and scalds, blows and falls, accidental poisoning and accidental drowning; and here again, with a little more care, all, or nearly all, the deaths in this group could have been avoided. The next section deals with the case of children who die without medical assistance, having been treated either by an unqualified practitioner or a prescribing chemist, or by one of that singularly ignorant, but notoriously blatant, class of persons who variously dub themselves as "herbalists," "botanists," or "eclectics," and do untold mischief both by omission and commission. The succeeding section deals with cases where a medical man, having seen the deceased child during life, yet declines to give a certificate of the cause of death. The pamphlet closes with a strong plea for legislation in the matter of infant insurance.

NOTES ON BOOKS.

Effecte der Nervenreizung durch intermittirende Kettenströme (Effects of Stimulating Nerves by the Interrupted Current). By Dr. Br. Werigo. (Berlin: A. Hirschwald. 1891.) This contribution to the theory of electrotonus and nervous excitation will be read with interest by those physiologists whose work lies in this erudite branch of physico-vital experimentation. The work is of an exceedingly painstaking and elaborate kind. The tracings which are reproduced are numerous, and we are inclined to think that it would have been better if more of these had been incorporated in the text instead of being relegated to large plates at the end of the book. Dr. Werigo's general conclusion that a stimulus is only effective when it throws the nerve into a state of katheleetrotonus will probably meet with very general acceptance, but that electrical processes lie at the root of all nervous activity requires further proof before the statement can be accepted in its entirety.

Notes on the Examination of the Sputum, Vomit, Fæces, and Urine. By Sydney Coupland, M.D., F.R.C.P. (London: H. K. Lewis. 1891.)—This is an excellent little compendium of the methods in ordinary use in clinical work. The naked-eye appearances are first given, and then the details of the examination, chemical and microscopical. The headings are printed in bold type, making reference easy. The value of these "notes" is certainly increased by the addition of clinical remarks. The student possessing it has a safe and serviceable guide, and, though primarily designed for the student, it may also be of use to practitioners.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

COMPRESSED MOSS.

Those who require a very absorbent material, and who prefer moss to jute, oakum, and marine lint, will find the compressed sheets of dried moss, specimens of which we have received from Mr. W. Martindale, of New Cavendish Street, a very acceptable and useful kind of dressing. This special form of moss dressing, which is known as Beckstroem's, has been adopted by the German Government for hospital use. The compressed sheets are light and dry, and can be very readily broken down into a loose moss, which is not only in itself a cleanly and antiputrescent application, but also, from its great capacity of absorption, is likely to be found a valuable dressing for the reception of profuse and ill-smelling discharge. It will, there seems to be good reason to believe, prove particularly useful in cases of continuous flow of urine or dropsical fluid.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MAY 2nd, 1891.

THE SCHOOLS, THE COLLEGES, AND THE LONDON UNIVERSITY.

The draft Charter for the reconstruction of the University of London, which we print at page 981, will shortly be issued to members of Convocation of the University of London, but it possesses also considerable interest for Members and Licentiates of the London Colleges. For the first time the scheme for the reconstitution of the University will come up for public discussion with open doors on May 11th, at the special meeting of the Corporation of the College of Surgeons, and on May 12th, at the annual meeting of Convocation of the University of London. In neither assembly will the scheme be allowed to pass without challenge. In Convocation the dissentients are numerous, and will certainly make their voices heard. At recent meetings of the Councils of the Association of Fellows and of the Association of Members of the Royal College of Surgeons, it was decided that the following resolutions should be moved on May 11th:

(1) That this meeting regrets that the Council of the College has not seen fit to place before the Fellows and Members the scheme for the reconstitution of the University of London before formally accepting this scheme in the name of the College. (2) That no increase of the power and influence of the Council of the College over medical education and examination is desirable until the constitution of the College has been so amended as to make the Council adequately representative of the body corporate.

Inquiries addressed during the past week to the various Colleges and medical schools affected show that considerable diversity of opinion exists. The three constituent colleges of Victoria University have taken no steps either to accept or oppose the present scheme for the reconstruction of the University of London, evidently feeling that, in the words used by the Dean of the Medical Faculty of University College, Liverpool, in replying to our inquiry, the requirements of their students being fully satisfied by the Victoria University, they were not called upon to take any action in the matter.

At Birmingham, however, a very different attitude has been assumed, for the Birmingham Colleges do not at present form a constituent part of any university. Mason and Queen's Colleges, acting conjointly, have taken most active steps to oppose the scheme, and a circular letter is now being issued to all past students of these colleges who are members of Convocation of the University of London or Fellows or Members of the Royal College of Surgeons, asking them to attend the coming meeting and to oppose the scheme. Firth College, Sheffield, has expressed its dissent from the scheme,

contending that the representation of the Provincial Colleges on the Boards of Studies is inadequate, and that all colleges sharing in the Government grant should be named as constituent colleges in the Charter.[1] The faculty further objected that the representation on the Standing Committee of the Senate for the Faculty of Medicine was inadequate. The faculty of the Medical School of University College, Bristol, on the other hand, are of a contrary opinion, thinking that under the present scheme the provincial institutions are well treated; they therefore accept the scheme, though they do not propose to take any active steps in the matter.

In London there would appear to be only two dissentient voices. University and King's Colleges entertain strong objections to the scheme. Statements of the grounds of their objections have been both separately and jointly agreed to by the Councils of the Colleges, and will be forwarded to the Lord President of Council this week. It is not worth while to conjecture the nature of the strong objections entertained by these two Colleges, since the text of the documents will be made public immediately after transmission to the Lord President. All the London schools appear to be in favour of the scheme, and a letter to the Senate in favour of the present scheme was signed by the delegates of each school. The College of Physicians and the Council of the College of Surgeons have approved the scheme.

At the first blush, it is impossible not to experience a feeling of disappointment that after so much labour, so many discussions, and so large an expenditure of printer's ink, we should still find ourselves in face of divergences of opinion so wide as those above enumerated. But a little consideration will show that we have advanced very far beyond the position in which we were when the agitation first commenced about five years ago. The main point—the fundamental principle for which we have all along contended is now accepted. Nobody any longer denies that a medical degree ought to be placed within the reach of every London medical student of average diligence and intelligence. That, at any rate, is a distinct gain. Further, the scheme of the Senate as presented in the draft Charter embodies important principles. It recognises the position of the Royal Colleges, but it recognises also the right of the teaching Colleges to have a share in the framing of regulations and the conduct of examinations a right never specifically recognised by these Colleges; in addition, the draft Charter recognises the rights of the future graduates of the University, whose professional interests will be intimately bound up with it, to take a share in the life of the University and in the conduct of its business a right always recognised at Oxford and at Cambridge, but always hitherto denied by the London Colleges to their diplomates.

These principles the right of London students to a degree on reasonable terms, and the right of the teachers in association with the graduates to settle these terms—are principles of such fundamental importance that all other considerations become matters of secondary consequence. This is the more true since the very large powers given to the Senate and to the Boards of Studies, which will be elected bodies, appear to render possible the adjustment in the future of difficulties with regard to matriculation and examination in the preliminary sciences, which, if this fact be left out of account, undoubtedly appear to be insurmountable.

[1] The following is the text of the resolutions adopted: "(1) That the representation of provincial colleges in the Senate is inadequate as failing to take the number of the colleges, the strength of their faculties, or their size into account, and that such inadequate representation would inevitably weaken the influence of the Provincial Board of Studies, whose recommendation could have no real weight apart from the provincial voting power on the Senate." "(2) That, under Clause 26, the provincial university colleges receiving grants from Parliament should be included in the first list of constituent colleges."

REMEDIES NEW AND OLD.

Professor Gairdner, in his address on "Remedies New and Old," delivered at Belfast, before the Ulster Medical Society, which is published at page 945, dealt in an eloquent and learned manner with questions which are of interest to all practising members of the medical profession. By a study of the history of therapeutics, as Dr. Gairdner showed, by a knowledge of the vicissitudes of fashion in the use of therapeutical agents, a lesson might be learnt teaching caution in the acceptance of new and much vaunted remedies, which might of themselves be of value, but come to be viewed with suspicion by the more cautious and sagacious members of the profession. Dr. Gairdner rightly deprecated the "booming" of new remedies, but, naturally, did not propose the rejection of a remedy because it was new. The most important matter contained in the address will probably be found to be the discussion of the methods by which it is possible most accurately to discover the real value of a therapeutical remedy, whether new or old. Such methods, as the lecturer pointed out, may be applied in two ways. The investigation may be undertaken by individual effort, or may be accomplished by the co-operation of several—perhaps numerous individuals. There can be but little doubt that the best work is done, the most difficult tasks accomplished, by individuals, who, either by force of mind, or by this combined with fortuitous circumstances, are enabled to accomplish a result not attainable by a corporation of individuals or a committee.

Still, although many questions must be left to individuals, there are some investigations which are with advantage undertaken by a society or committee, such, for example, as some in therapeutics. In his remarks Dr. Gairdner referred to the work which is being done by the Therapeutic Committee of the Association. Before noticing these remarks, the object and aim of this Committee, which is quite young, must be clearly understood. The formation of the Committee was the result of suggestions made by Professor Whitla in his address as President of the Therapeutical Section at the Dublin meeting of the Association (1887). Under the chairmanship of Dr. Lauder Brunton, the Committee has been working on certain lines, which may be briefly stated. Certain subjects for investigation—the action of drugs in particular diseases or in relieving certain symptoms, for example—are chosen by the Committee, and the questions which it is wished to determine are clearly defined. This is the starting point. Seeing the desirability of evading "irresponsible" investigation, the Committee decided that each of its members should individually take charge of the research chosen, pressing into the work those well known to them as competent to record observations accurately. In this way it was anticipated that in time a knot of competent workers would be enlisted into the work of the Committee, and that—composed, as the Committee is, of therapeutic experts in England, Scotland, and Ireland—all home centres of the Association would in time contribute to the advance of ac-

curate therapeutical knowledge, of which there is so much need. This, in short, is the aim of the Therapeutic Committee, and whether it will accomplish its end or not will depend on the amount of active co-operation it receives from its members and their colleagues.

It is a pleasure to record that Professor Gairdner says in his address that he will "do nothing to hinder or disparage an effort so clearly in harmony with the best traditions of our art." He would wish, however, to alter somewhat (although not materially) the mode of investigation at present adopted by the Committee. He says: "Suppose that we had, not only a Therapeutic Committee sitting in London, but a multitude of Therapeutic Committees disposed all over the country; one, at least, in every great medical centre and medical school."

Again, to quote Dr. Gairdner: "I do not see how any one Committee, sitting in London only, could possibly dispose of more than a mere fraction of the work to be done. But with twenty, thirty, forty, or more Committees dispersed over the country, having a certain autonomy and independence, and yet affiliated to a central one in London, a good beginning might be made."

This is what the Therapeutic Committee of the Association desire to accomplish. Such a consummation must, however, be of slow growth. It requires time to develop the investigating faculties, which are often hidden from lack of exercise. If Professor Gairdner would give his help in furthering the objects of the Therapeutic Committee, which are solely those of advancing therapeutical knowledge (not belief), it is certain that the Committee would have a successful career in front of it.

WHAT IS THE PRACTICAL VALUE OF TUBERCULIN?

II.

The paper which Mr. Watson Cheyne read at the Royal Medical and Chirurgical Society's meeting on Tuesday evening last was one of great interest. It was full of original ideas as to how and when Koch's tuberculin should be used—points which have, up to the present time, been amongst the most difficult questions in relation to it. From Mr. Cheyne's careful digest of all the cases that he has treated we have extracted all that refers to the cases reported in the British Medical Journal when the treatment was first commenced last December. With reference to the methods of using the drug, the desideratum, Mr. Cheyne contends, is to obtain a constitutional toleration without, at the same time, getting a local indifference of the tuberculous foci to the drug; this result is best obtained by his method of continuous administration. In cases of lupus, particularly, he found that it was most desirable to obtain so complete a toleration that a rapid rise up to two or three decigrammes of the drug daily could be borne. On the other hand, and especially in tuberculous joint disease, an establishment of indifference of the diseased parts to its action was unfortunate, as then no further good seemed to result. Mr. Cheyne, however, pointed out that his series of cases were far too few either to dogmatise upon, or to draw trustworthy statistics from. He confessed that he was still only in the tentative stage, and that the only conclusions to which he had as yet come to were: (1) That, by means of a short preliminary course, in lupus, tuberculin was of use in bringing into sight all the foci before more radical measures were undertaken. (2) That, in tuberculous bone and joint disease, he had but little hope of its being of any value as a preliminary treatment; but that, after ordinary surgical methods had been adopted, its subsequent use might be potent enough to demolish any small outlying foci which had been missed by the surgical procedures. And he went a step further in this direction, and thought that the extent of an operation might possibly be restricted, with the assurance that any small foci left behind could be afterwards destroyed by the drug.

This is but faint praise, yet it is a very different position from the attitude of violent reaction which many with far less experience than Mr. Cheyne have allowed themselves to adopt. It is also unfortunate for the credit of tuberculin that Mr. Cheyne, a surgeon, should consider that it would most likely turn out to be of more use to the physician than to the surgeon; though the ground on which he bases his opinion is reasonable enough—namely, that the drug has the power of checking the local extension of the disease. There is no doubt that if we have the power of arresting the spread of the disease locally, a great step towards cure has been made, for the healthy tissues will in time be able to absorb or encapsule any *débris*, and the bacilli will be likely to die out. The length of time that the treatment of phthisis ought to be persevered in should be, Mr. Cheyne thinks, at least two years; and it is unreasonable to expect that a disease of which the only cases, so far as we know, that are capable of being cured are those which run a subacute or chronic course, would not need a considerable time for the re-establishment of health.

As to the dangers attending the use of the drug, and especially its alleged tendency to produce general tuberculosis, Mr. Cheyne believes they have been greatly exaggerated. The sole basis on which the fear of the latter contingency rests is the assertion that injections of tuberculin may cause numbers of tubercle bacilli to be thrown into the circulation. Mr. Cheyne, however, affirms that this statement is incorrect, as a careful examination of the slides brought forward in evidence showed that the blood had been contaminated with sputum. Such evidence as Mr. Cheyne himself has obtained went, according to him, to show that it prevents, rather than facilitates, the entrance of bacilli into the blood stream.

As a model of how a scientific investigation into the use of a drug should be conducted, and of how the results should be made public, Mr. Cheyne's paper fully deserved the enthusiasm with which it was received by the audience to which it was addressed. Carefully accurate in facts, cautious in inference, and eminently judicial in tone—the unbiassed report of a man anxious only to discover the truth and to utter it without fear or favour—it is the most important contribution that has yet been made, in this country at least, towards the solution of the momentous question with which it deals.

Dr. Louis Parkes has been elected Medical Officer of Health for the parish of Chelsea, *vice* Dr. Seaton, resigned.

We regret to have to announce the death of Mr. T. H. Bartleet, Surgeon to the Queen's Hospital, Birmingham, and late President of the Birmingham and Midland Counties Branch of the British Medical Association. We hope to publish an obituary notice in an early number.

The annual *conversazione* of the Medical Society of London will be given in the rooms of the Society, on Monday, May 4th. Sir Joseph Lister, Bart., F.R.S., will deliver the annual oration at 8.30 P.M.

The Select Committee of the House of Commons appointed to deal with the London Water Bills met for the first time on Tuesday. After hearing counsel, the Committee rejected the City Bill, being of opinion that no Bill could be satisfactory which merely constituted a public authority to promote Bills in Parliament.

WITHDRAWAL OF THE MIDWIVES BILL.

We are authorised to state that, a consideration of the late period of the session, in view of the virtual pledge given by the Lord President of Council to grant a Select Committee for the consideration of the whole subject next session, decided the promoters of the Bill to withdraw it.

MR. STANHOPE'S OFFER.

We understand that a conference has been arranged to take place on Tuesday next, May 5th, between the Minister for War, who will be accompanied by the Director-General of the Army Medical Staff, and the President of the Royal College of Physicians and Mr. Macnamara (Parliamentary Bills Committee of the British Medical Association, as representing the Army Medical officers.

FACTORY LEGISLATION IN FRANCE.

At a meeting of the Paris Obstetrical and Gynæcological Society, on April 9th, Professor Pajot, at the request of a Committee appointed by the Chamber of Deputies to examine the *projet de loi* relative to workshops and factories now before that body, asked for an expression of opinion from the Society on the two following clauses: "1. Women who have been confined will be allowed to resume work only after a period of four weeks from the date of confinement. 2. During that time a compensatory indemnity in proportion to their needs, varying in amount from 50 centimes to two francs a day, will be granted to them." On the first of these points the following resolution was passed: "The Obstetrical Society unanimously declares that it is dangerous for a woman to resume work until after a minimum period of four weeks after confinement." On the second clause the Society declined to give any opinion, on the ground that the matter was not within its province.

THE RUSH TO ALCOHOL.

Whatever the cause, it is a significant fact that the Budget presented last week by the Chancellor of the Exchequer discloses a substantial increase in the amount of alcohol consumed in the United Kingdom. The growth of revenue from alcoholic intoxicants during the past twelve months has been no less than £900,000. A peculiar feature of this growth has been an increase of revenue under each class of liquors. There has been no great epidemic of influenza to which to credit this solid increase, and there seems little doubt that the greater prosperity of the people has been the main cause of this remarkable additional expenditure. It is to be regretted that the surplus of wealth has taken this questionable form. There surely must have been some defect in temperance teaching to account for so decided an addition to our former far too heavy expenditure on beverages so perilous to many in the community.

THE LONDON POST-GRADUATE COURSE.

The fifth, or summer term (1891), will commence on Monday, May 4th, and will terminate on June 27th. There will be nine separate courses of lectures and demonstrations delivered at the several associated institutions. The Hospital for Consumption, Brompton; the Hospital for Sick Children, Great Ormond Street; the National Hospital, Queen Square; the Royal London Ophthalmic Hospital, Moorfields; the Hospital for Diseases of the Skin, Blackfriars; Bethlem Royal Hospital; the London Throat Hospital; the Bacteriological Laboratory, King's College; and the Pathological Department, Great Northern Hospital, will each share in the work of the term. The arrangements now made with the hospitals will greatly facilitate the admission of members of the course to the hospital practice of the above-named institutions. During the winter term there were fifty-three entries for the various courses, and seven naval surgeons were enabled, under the new regulations, to attend the complete course. Lady graduates are admitted to all the lectures, except at one hospital, where there is a separate class instituted for their benefit. Whilst there is a satisfactory number of Americans attending the lectures, it is worthy of remark that the great bulk of the students are British and Colonial practitioners and military and naval surgeons.

THE QUEEN'S VISIT TO GRASSE.

At the conclusion of the Queen's visit to Grasse, the correspondent of the *Times* was requested to give an authoritative contradiction to certain statements which had been published (in a medical contemporary) as to the health of Grasse, and as to the sanitary state of the hotel. Careful inquiries were made by experts before the Queen's visit was determined on. The Queen has benefited considerably in health from her stay in Grasse, and whatever disappointment may have been caused by the absence of the genial weather generally experienced there at and after Easter, Her Majesty may be congratulated on having escaped one of the most inclement seasons of biting east wind which the present generation has had to endure—and it has endured much.

"DEPOSITED" BUT NOT "HUNG UP."

It is a favourite remark with judges that medical evidence in any case in which it is required is often exceedingly contradictory, but we are afraid that the interpretations given by lawyers as to the sale of bad meat in a very recent case, one of many instances, are at least equally confusing and contradictory. One court often reverses what another has decided, so that the setting aside of the decision of a magistrate by two judges of the Queen's Bench is not to be looked upon as unusual. Here we have evidently much law, but little equity, as the judges themselves, although unanimous against a conviction, on the ground that the meat had been deposited and not exposed by hanging up, regretted that they had to arrive at such a conclusion, and we are led to imagine that technically there was no exposure for sale, but that morally there was little doubt the confiscated meat was being kept for such a purpose. Medicine is sometimes accused of being empirical: law can repel any such charge with perfect propriety; but whether "precedent," especially if bad, is not sometimes worse than common sense empiricism (which is allowed even to physicians), leaves some room for doubt. There is this to be said, the doctor is, as a rule, chary of doing anything which would injure his patient, who has no higher court of appeal.

ACCIDENTAL WHOLESALE POISONING BY ARSENIC.

In connection with the lamentable poisoning at Crieff the other day, it may be of interest to recall the much more formidable outbreak of poisoning by arsenic which occurred at an industrial school near London in 1857. Three hundred and fifty children were suddenly seized with symptoms of poisoning soon after breakfast. They had been supplied with milk diluted from a boiler, into which a quantity of an alkaline solution of arsenic had been placed under the notion that the alkaline arsenite would effectually cleanse it of fur. Two gallons of this cleansing liquid, containing about nine pounds of arsenic perfectly dissolved by the aid of a large quantity of soda, had been well mixed with the water in the

steam boiler of the establishment without any information being given of its dangerous properties. Fortunately, only four gallons of the poisoned water were drawn out of the boiler. This quantity was mixed with about thirty gallons of milk and divided among the children, about a gallon of the mixture being assigned to every ten children. Upon an average each child took a grain of arsenic more or less. The nature of the poison was soon discovered, and proper remedies suggested and employed. It is remarkable that in this wholesale poisoning the symptoms varied but little among the children. There was shivering, with pain in the stomach and bowels, and, in most of the cases, vomiting of a clear ropy mucous fluid of a green colour (the cleansing liquid having this colour). These symptoms were developed within one hour. In about three hours after the meal pain in the forehead more or less intense was a prominent symptom, and there was a copious discharge of a watery fluid from the nose. Seven had cough of a croupy character, three vomited blood, and one passed blood by stool. All the children recovered.

EPIDEMIOLOGY OF INFLUENZA.

In spite of considerable increase in our knowledge of the behaviour of epidemic influenza gathered during the past year, much still remains very mysterious. It is, however, certain that one attack does not protect from a second, as already many persons who suffered during the last epidemic have suffered again now. A curious point, however, is that the disease, it appears, tends to recur at long intervals, each recurrence consisting of two, or sometimes three, epidemics. We find, on referring to Dr. Symes Thompson's historical survey in his edition of his father's work on *Influenza*, that an epidemic occurred in 1510, and again in 1557 and 1580. A long interval then elapsed without reliable records until 1658, 1675, and 1710. A series then occurred—1732-3-7-8-43—during which the disease was scarcely absent for more than three or or four consecutive years. After an interval of fifteen years came the epidemics of 1758-62-67-75-82. Twenty years then passed till the 1803 epidemic; then, after an interval of twenty-eight years, that of 1831. As in the preceding century, the "thirties" proved fertile, for 1831-33, and 1837 were all years of marked epidemic prevalence. Ten years later came the 1847 epidemic, which Dr. Peacock described so accurately: then, after an interval of forty-two years, that of 1889-90, to be followed this year by further epidemic prevalence.

THE EPIDEMIC OF INFLUENZA.

The epidemic of influenza continues to prevail very severely in Yorkshire and Lincolnshire. In the agricultural parts of the East Riding we learn that few villages have escaped, and in some cases whole households have been incapacitated at one time. In the city of York the epidemic has been very severe, and Dr. Turner informs us that there is probably no industry in or near the city which has not been severely crippled by it, while the attendance at the elementary schools has been reduced by from 50 to 70 per cent. In Leeds the number of cases continues to increase, while in Sheffield, which seems to be at present the centre of the epidemic, the last week was the worst yet experienced. Last week, our Sheffield Correspondent writes, the number of deaths attributed to bronchitis was 71, to pneumonia 47, and to influenza 55. The epidemic last year was earlier by some weeks, but the corresponding week in the epidemic would show that the deaths from bronchitis were then 36, to 71 now: from pneumonia 47, to 47 now; whilst from influenza 14, to 55 now. The increase under this last head (influenza) is very great, as during the last epidemic the highest number in a week was 14. The number of deaths from pneumonia was, however, in two weeks last year in excess of the number of last week. The death-rate last week will work out to about 57.5 per 1,000. Last year it did not approach this. Many of the large works, and the small factories also, have suffered in carrying on their business, in consequence of the number of absentees from illness. It may safely be asserted that, were the general run of cases so severe as met with last year, considering the very much larger number who suffered, the high death-rate would have been still higher. The epidemic has also made its appearance in the North Riding at Ripon, where Dr. Green informs us that there are a great many cases in the town and surrounding villages. As was the case last year, the North Riding has been visited after the districts to the east and south. Since our note of last week, we learn from Dr. Handford that the influenza has appeared in Nottingham, the first cases having been distinctly imported from Hull. The epidemic has also appeared at Ashton-under-Lyne, and in the neighbourhood of Morley and Churwell. In London a large number of cases have occurred this week. They have apparently been most numerous in Bermondsey, Shadwell, Mile End, and other parts of the East-end. Dr. Brodie Sewell informs us that he has seen no typical cases in the City, but that catarrhal cases are numerous, and that in some instances they have been complicated by a severe swelling of the cervical glands, sometimes simulating mumps, but not, apparently, of infective origin. The epidemic has also appeared to the south of the Thames, at Canterbury and other parts of Kent. Influenza has broken out in Norway, and is particularly rife in Christiania, where 891 cases were reported in one week. Whole families are laid up, and in several of the schools 70 per cent. of the pupils are ill. The disease has also appeared in Sweden, notably at Gothenburg.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

The following are the members of the Committee formed "to ensure the participation of France" in the forthcoming International Congress of Hygiene and Demography: President, Dr. Brouardel; Vice-Presidents, MM. H. Monod, Bergeron, Proust, and Chauveau; Secretaries, MM. Napais, A. J. Martin, and de Valbreuze; Additional Secretary (in London), M. Louis Vintras; Members, MM. Arnould, G. Ballet, Bechmann, Bérenger-Féraud, Bertillon, Bouffet, Bourneville, Chautemps, Chevallereau, Chevandier, Léon Colin, Cornil, Drouineau, Gibret, Girard, Grancher, Henrot, Ch. Herscher, Laborde, Lacassagne, Laye, Lereboullet, Levraud, du Mesnil, Netter, Nocard, Pamard, Peter, Peyron, Poincarré, Gabriel Pouchet, de Ranse, Rochard, Siegfried, Strauss, Thoinot, Trélat, Vaillard, Vallin. Professor Klebs, of Zürich, and Professor Gruber, of Vienna, have promised to attend the Congress to take part in the work of the Section of Bacteriology.

COMPETITION AND IMITATION.

Competition among hospitals for public support may perhaps be a good thing. It is easy, at any rate, to see that it possesses certain advantages and that in particular it keeps everybody up to the mark. It has also certain obvious disadvantages, but so long as it exists it ought to be carried on in a fair and straightforward manner. Everybody has heard of the National Hospital for the Paralysed and the Epileptic (Albany Memorial), Queen Square, and some people have wondered at its cumbrous title, which is as long and complex as the name of a Bourbon Princess. Everybody, however, has not heard of the National Hospital for Diseases of the Heart and Paralysis, Soho Square. The friends of the well-known hospital are persuaded that the resemblance in the names is not altogether accidental, and see in a paragraph which recently appeared in several daily papers confirmation of this. The paragraph was to the effect that in order to commemorate the connection of the late Duke of Albany with "the National Hospital for Diseases of the Heart and Paralysis, Soho Square," an anonymous donor has resolved to place in the institution a portrait of His Royal Highness copied by permission of the Queen from a picture at Windsor. Here indeed is a comedy of errors; how shall the bewildered testator or subscriber know which is the real Dromio? We do not recall that the National Hospital for Diseases of the

Heart and Paralysis (surely a curious conjunction) has as yet sent any representative to give evidence before the House of Lords Committee on Metropolitan Hospitals. But if it does—and the Committee will fail in one of its chief functions if it does not succeed in obtaining evidence from all these little special hospitals—then some explanation may perhaps be given of the strange imitative tendency which leads the little hospital in Soho Square to mimic the big hospital in Queen Square in being "National" and "for paralysis," and in some way connected with the commemoration of the memory of the late Duke of Albany.

THE PHYSIOLOGY OF GHOSTS.

The French Society of Physiological Psychology has appointed a committee to investigate the possibility of hearing the voices and seeing the counterfeit presentments of persons known to be far away at the time, a question with which our Psychical Society has occupied itself for several years with a zeal worthy of better results, if not of a better cause. The Committee consists of M. Sully Prudhomme, of the French Academy, President; Dr. G. Ballet, Professor *agrégé* in the Paris Faculty of Medicine; Dr. Beaunis, Professor of Physiology at Nancy; M. L. Marillier; Dr. Ch. Richet, Professor of Physiology in the Paris Faculty of Medicine; and Colonel A. de Rochas, Manager of the Ecole Polytechnique. Persons who have had experiences of the kind referred to are requested to communicate with the Secretary, M. L. Marillier, 7, Rue Michelet, Paris. Coleridge said he had seen too many ghosts to believe in them, and medical men are familiar with hallucinations of sight, hearing, and other special senses which might form the basis of perfectly authenticated ghost stories, and no doubt have often done so. It is satisfactory, therefore, that representatives of medicine and physiology of such unquestioned competence and authority as MM. Ballet, Beaunis, and Richet have consented to take part in such an investigation, which, in the absence of the scientific element, is too apt to degenerate into an uncritical collection of old wives' tales.

EARLY BURIAL.

It was stated at the Clerkenwell Vestry last week that there was no enactment in existence compelling people to bury their dead within a certain time. This observation was made when the vestry were told "more than they were previously aware" of the exposure of a body for ten days in a room in which a roaring fire was kept, and which was occupied by a woman and several children. The chairman of the board, after obtaining the additional knowledge, was of the opinion that some one should be punished. This case has found its way to the papers, but there can be little doubt that similar cases are of very frequent occurrence. They are in great measure the outcome of the desire on the part of poor people to have a little extra display on such an important occasion as a funeral, and until they are discouraged in this by the example of those who know better, the influence of "waking" and grand burials will give to lifeless clay a social importance it should not be able to assume in a civilised country. Unburied bodies (where death has resulted from certain infectious diseases) are most fertile sources or centres of infection, more especially in those crowded districts in which neglect of this kind is usually met with. In the meantime, who is to bear the blame, as the "doctor" cannot be sent out into the wilderness as a scapegoat?

SURRA AND MALARIA.

Surgeon-Major Ranking, in a preliminary note on the nature and pathology of the disease known as "surra," indicates that the researches hitherto carried on in this disease are not to be relied on, as in four cases he has examined he has not been able to find the spirillum which has hitherto been considered the effective cause of "surra." Examining the blood of "surra" animals in normal salt solution, he finds that the corpuscles undergo a condition which he terms *echinosis* from the fact that they "resemble nothing so much as a echinus." He then describes a plasmodic stage, the interior of the corpuscle being occupied by a foreign substance presenting amœboid movements, circular, stellate, pileate, straight or spiral bacillary in form. He compares these bodies with the *plasmodium malariæ*. He then describes a spore formation similar to that met with in plasmodia. Surgeon-Major Ranking has been able to cultivate an organism from "surra" blood on agar-agar peptone, but in place of being a plasmodium his growth is a bacillus very like the hay bacillus. Cultivations on other media gave similar results. Spores of this bacillus found in well water were exceedingly resistant to the action of heat. The relation of this organism to the red blood corpuscles and to the profound anæmia that occurs in this disease are mentioned, and the subject of phagocytosis is touched on. He claims that this organism is found in the blood, that it can be isolated and cultivated, that a pure culture of the organism reproduces the disease, and that the organism is again found in the blood, so that the whole of the postulates laid down by Koch are conformed to. Surgeon-Major Ranking evidently anticipates, what every one must feel on reading this paper, that the cultivation of this organism on the ordinary culture media and its development into a bacillus may be looked upon as weak points in the chain of argument.

MEDICINE IN HONG KONG.

Our Hong Kong Correspondent writes: Whilst passing through Hong Kong on his way to Japan, Mr. Ernest Hart was heartily welcomed and entertained by the medical fraternity. Owing to the extremely short stay he made the local Branch of the British Medical Association could not be got together, but instead, the Dean of the College of Medicine for Chinese stepped into the breach, and invited the Court and Senate of the College to meet Mr. Hart. Twenty-five sat down to dinner. Mr. Hart congratulated the medical fraternity of Hong Kong upon their activity and energy in forming a Branch of the Association, and made a complimentary remark upon the state of efficiency of the hospitals in the colony. Among the toasts, "The College of Medicine for Chinese" was of course prominent. The Dean, Mr. Cantlie, who occupied the chair, made a few apt remarks as to the constitution thereof. He pointed out that Hong Kong was the only place in China where a medical school was possible, owing to all the collateral branches of science being represented. It was the only place in China where collectively a professional chemist, botanist, hygienist, and dentist could be called in to assist the medical men in the more technically professional work, and that a medical school for China ought to be established at Hong Kong, with support from both the Governments of Hong Kong and China.

PHOTOGRAPHS OF DEAD BODIES.

It appears that a somewhat morbid custom exists among the Viennese of having the dead bodies of children and other persons dear to them photographed, and for this purpose the corpse used to be taken to the photographer's studio. The attention of the sanitary authorities having been drawn to the danger of the dissemination of infectious disease by this practice, a decree has been issued by the Austrian Minister of the Interior absolutely forbidding the photographing of corpses in studios open to the public, and the photographing of bodies of persons who have died of any infectious disease by professional photographers even in private houses. Exception is made of cases in which such photographs may be required for police or medico-legal purposes. In the case of persons who have died of non-infectious disease, the corpses may be photographed at the private residence of the deceased, subject to the approval and on the responsibility of the medical official whose duty it is to verify deaths. This ordinance came into force on April 1st.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

A special meeting of the Royal Medical and Chirurgical Society will be held on Thursday evening, May 7th, at 8.30 P.M. for the discussion of Mr. Watson Cheyne's paper on the Value of Tuberculin in the Treatment of Surgical Tuberculous Diseases.

MEDICAL OFFICERS OF HEALTH AND PRIVATE PRACTICE.

Mr. Gainsford Bruce has given notice that on Clause 35 of the Public Health (London) Law Amendment Bill he will move an amendment requiring that medical officers of health in London shall not engage in private practice. We need not stop to consider whether the mover of this amendment is prepared to define what he means by the term "private practice," but we will assume that his intention is that medical officers of health in the metropolis should give the whole of their time to their official work. There is much to be said in favour of this proposal at the present day. The duties of a medical officer of health have been greatly increased of late, notably by the enactments relating to the "housing of the working classes" and the "notification" and "prevention of infectious diseases." The metropolitan sanitary districts or parishes vary widely as regards both the size and character of their populations; but in one of medium size and average composition nearly, if not quite, the whole time of a capable and energetic officer is required for the efficient discharge of the important and responsible duties of medical officer of health. There would probably be little difference of opinion amongst those who are best acquainted with metropolitan sanitary administration on the question whether it is desirable that medical officers of health in London should give the whole of their time to public work (as they are required to do in the large provincial towns), provided the salaries paid to them were commensurate with the importance of the duties they are called upon to discharge; but, unfortunately, the settlement of the terms on which medical officers of health in the metropolis are engaged rests chiefly with the vestries. These authorities have as yet (with one notable exception[1]) shown themselves quite unable or unwilling to appreciate public health services. Thus we hear of a West-End district, which should be in the van of sanitary progress, having a population of 100,000 persons, with more than the average proportion of houses requiring periodic inspection by the staff of the local authority, advertising for a medical officer of health at a salary of £350 a year. It is hardly necessary to point out that, having regard to the nature and importance of the services required, and to the cost of living in the metropolis, such a rate of pay is absurdly insufficient, and that double the amount would not be more than adequate remuneration: but in this instance, as in most others that have come to our knowledge in the last few years, London local authorities fail to recognise the necessity for paying more for the services of medical officers of health than they did when the Metropolis Local Management Act was passed in 1855. Sanitary science was then in its infancy, and a system of public health administration could hardly be said to have existed.

INSUFFICIENCY OF THE OCULAR MUSCLES.

The term "insufficiency" is better known in this country, though perhaps less accurate than the term "heterophoria," which has been coined in America to express a tendency of the eyes to deviate from binocular fixation. This is a subject which has had too much importance attached to it. There has of late years been a great tendency among certain American specialists to attribute nearly every kind of affection of the nervous system, including epilepsy, to this condition, and it has been claimed that such conditions can be cured by operative treatment of the ocular muscles. As existence of the heterophoria can only be determined by special tests, and as the operative proceedings—which consist for the most part of "partial tenotomies"—have to be repeated many times, while the symptoms to be relieved are chronic, liable to intermission, and partially or wholly remediable by other methods of treatment, which in many cases have been adopted at the same time, it is evident that the claim on behalf of these operations requires closer scrutiny. A Commission of Inquiry, which was appointed in America to test the alleged cure of epilepsy by their means, reported most unfavourably, and a paper which was read by Dr. Berry, before the Ophthalmological Society of the United Kingdom (reported on page 287 of the British Medical Journal) would seem to indicate that these conditions of the ocular muscles to which such important consequences have been attributed are exceedingly common in those who have never had any symptoms at all. Dr. Berry's paper is almost too technical to be fully discussed in these pages, but he has made out a strong case for a full investigation of the whole subject of the action of the ocular muscles, an inquiry which will have been much facilitated by the introduction of the glass-rod test by Mr. Maddox. There is a not unnatural tendency in a highly specialised branch of medicine to attribute undue importance to slight abnormalities, and to adopt unnecessarily heroic measures for their removal; hitherto ophthalmic surgery has steered tolerably clear of this danger, and it would be a great calamity if these repeated partial tenotomies for the relief of a condition which is often only evident to the surgeon himself should be permitted to bring discredit upon legitimate surgery, while the importance of a most searching and minute investigation into all the symptoms of a case must not be underrated. A protest ought to be made against the assumption that an attempt should be made to remove every abnormal or unusual condition by surgical interference.

ARSENICAL PAINT.

Dr. William X. Swift reports in the *Boston Medical and Surgical Journal* a case of chronic arsenic poisoning in a boy aged 6. After the age of 2 he began to have periods of ill health, general debility, accompanied by stomatitis, salivation, and constipation. Finally he became very anæmic, the buccal mucous membrane was soft and spongy, he had cramps in the muscles when walking, and incontinence of urine. Suspicion arose that the house in which the child lived might have something to do with his illness. The sanitary arrangements were found to be good, but his urine was found to contain arsenic. At first some difficulty was encountered in finding the source of the arsenic, the wall paper, carpets, curtains, etc., being found to be free from it. Finally it was proved that the paint used to colour parts of the walls peacock-blue was loaded with arsenic. The painter who had painted the room six years before remembered that he had obtained the peacock-blue by mixing prussian blue and green: the green had no doubt contained arsenic. The paint was mixed with lead and oil, and had a smooth glazed surface.

SCOTLAND.

At a meeting of the Aberdeen University Court on April 28th plans of improvements and alterations in the Senatus Room at King's and the Faculty Room at Marischal College were approved.

The Chemical Society have awarded the Longstaff Prize to Professor Japp, M.A., Aberdeen University. The prize, which consists of a medal and a sum of money, is given every three years by the Society for distinguished original research.

[1] St. Giles's and St. George's, Bloomsbury. The medical officer of health is required to give his whole time, and is paid £600 and all expenses.

A UNIVERSITY HALL IN EDINBURGH.

A UNIVERSITY HALL has been founded in connection with Edinburgh University. The object of the scheme is to inaugurate among Edinburgh undergraduates a system of social residence, such as obtains in the English universities. Two buildings have been taken over for this purpose, one at Mound Place, another at Riddle's Court, and already there are nearly thirty residents.

ADULTERATED AERATED WATER IN ABERDEEN.

FOLLOWING the recent aërated water prosecutions, two other cases came before Sheriff Brown on April 28th. Mr. John Salmond was charged with having sold and delivered to the complainer (the sanitary inspector) to his prejudice an article of food, *videlicet*, a quantity of lemonade which was not of the nature, substance, and quality demanded by the purchaser, in respect that it contained 0.2 grain, or one-fifth of a grain per gallon of lead. He pleaded guilty, and a fine of £3 with the option of fourteen days' imprisonment was imposed. Mr. John Wallace was charged with a similar offence, the quantity of lead found in his lemonade being 0.3 grain, or three-tenths of a grain per gallon. A similar penalty was imposed. Of the thirteen samples analysed, it may be remembered, only three were found free from traces of lead. All the worst cases have now been prosecuted at the instance of Mr. Kenneth Cameron, the sanitary inspector, and convictions have been obtained.

MILK POISONING IN GLASGOW.

A FORTNIGHT ago the assistance of Dr. Russell, Medical Officer of Health of Glasgow, was asked in a rather exceptional case of milk poisoning. In one tenement in the city no fewer than twenty-five persons were found suffering from symptoms of irritant poisoning. All obtained milk from the same dairy, and the child of the dairy keeper was also suffering. A particular supply of milk was suspected, was immediately stopped, and the farm was promptly visited by Dr. Russell, accompanied by a milk inspector and a veterinary surgeon. It was found that the suspected milk had been drawn from a cow which had recently calved, and which was suffering from fever. A sample of the milk was submitted to the city analyst, who, however, found it normal on chemical examination, but showing the presence of colostrum when submitted to microscopical examination. The medical officer has been instructed to write to the Dairymen's Association, urging the advisability of its members introducing into their contracts a clause that the milk from newly-calved cows be not sent them for sale. All well-conducted companies, according to Dr. Russell, have such a clause in their contracts with farmers. The Annandale Dairy Company, Dundee, orders that no milk shall be sent for four clear days from date of calving, and the Milk Supply Association in Copenhagen prescribes an interval of twelve days. This is a subject of very great public importance, for the milk of newly-calved cows doubtless very often finds its way to the public use, but so largely mixed with other milk that no very marked symptoms are evident, while injurious effects are yet produced. In the Glasgow case the milk had not been freely mixed with that from other cows, and the results were consequently very obvious and alarming.

IRELAND.

THE name of Sir George Porter, Bart., is to be added to the list of candidates for the Regius Professorship of Surgery in the University of Dublin.

MR. THOMAS MYLES, Surgeon to the Richmond Hospital, has been elected to the Council of the College of Surgeons. There were two other candidates—Mr. F. A. Nixon and Dr. Lentaigne.

AN outbreak of fever has occurred at Midleton, county Cork.

VACCINATION IN IRELAND.

DURING the December quarter, 21,485 persons were vaccinated successfully; in 3,201 cases the operation was postponed, and 31 children were reported as insusceptible of vaccination. The deaths of 1,432 unvaccinated children under three months old were registered during the quarter, making a total of 26,149 children with regard to whom particulars as to vaccination were ascertained.

THE ALLEGED EPIDEMIC OF HYDROPHOBIA.

WITH regard to the alleged extraordinary prevalence of hydrophobia in Wexford and its neighbourhood, we have communicated with Dr. John Crean, consulting medical officer for Wexford, who writes that a boy called at his house on April 10th for advice as to a slight wound on his hand, caused by a bite inflicted by his own dog on the day before. The boy believed that the dog had shown symptoms of hydrophobia, and he had induced a policeman to shoot the animal. Dr. Crean saw the boy again on April 22nd, when the wound had completely healed, and he appeared to be in his usual good health. This simple occurrence seems to be the only foundation for the extraordinary stories which have been circulated.

PROFESSOR GAIRDNER'S VISIT TO BELFAST.

PROFESSOR GAIRDNER visited Belfast last week as the guest of the Ulster Medical Society. Dr. Gairdner arrived in Belfast on the morning of April 21st, and met the members of the Society the same evening at a *conversazione* given in the Museum by Professor and Mrs. Whitla. In addition to a very large attendance of the profession from Belfast and neighbourhood, there were present the Mayor of Belfast, the President of the Belfast Chamber of Commerce, the President of Queen's College, and many of the professors. On the following day, at 4.30 P.M., Professor Gairdner gave his address to the Society (see p. 945), when the attendance was again very large and representative. A cordial vote of thanks was passed to the speaker, on the motion of Professor Cuming, seconded by Dr. Lindsay, both of whom dwelt on Dr. Gairdner's philosophic breadth of view and practical instinct. On the same evening Professor Gairdner was entertained at dinner by the Society. Sixty-five gentlemen sat down to dinner, amongst the guests being the Mayor of Belfast and the President of the Queen's College. The toast of the evening, "Our Guest," was proposed by the President of the Society (Dr. Dempsey) in felicitous terms, and responded to with great warmth by Dr. Gairdner, who said he would never forget the remarkably cordial welcome which had been given to him in Belfast. At a later stage of the proceedings Dr. Gairdner, in proposing the toast of "The Queen's College and Belfast Medical School," paid a high tribute to the excellent work accomplished by that institution, and especially to the thoroughness and practical efficiency of its medical department. President Hamilton, D.D., and Professor Cuming responded. Amongst the other speakers in connection with the various toasts were the Mayor of Belfast (Mr. C. C. Connor, M.A.), Professor Dill, Professor Whitla, Mr. Fagan, Dr. Walton Browne, and Dr. Whitaker. A selection of songs, admirably rendered by Dr. Mackenzie, Dr. McCaw, Dr. McKisack, Dr. Leslie, and Dr. Lewers, added much to the enjoyment of the evening. On April 23rd Professor Gairdner was present at the quarterly meeting of the North of Ireland Branch of the British Medical Association, and took part in the proceedings. The same evening he was entertained at dinner by the President of the Ulster Medical Society (Dr. Dempsey). Much of the success of Professor Gairdner's visit must be attributed to the untiring efforts of Dr. McCaw, Honorary Secretary of the Ulster Medical Society.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held at the offices of the Association, on April 28th, when the following members were present: Mr. S. Sibley, in the chair; Dr. Agar, Henley-in-Arden; Dr. J. W. Brown; Mr. Butlin, Treasurer; Dr. Crocker, London; Dr. Walter Dickson, London; Dr. Langdon Down, London; Dr. Esler, Belfast; Dr. Farquharson, M.P., London; Sir Walter Foster, M.P., Birmingham; Mr. Galton, London; Mr. Hemming, Kimbolton; Dr. R. Jones, Redhill; Mr. Ker, Halesowen; Dr. Lamprey, Sierra Leone; Dr. Mickle, London; Dr. Withers Moore (President of Council), Burgess Hill; Mr. Wallace, London. Dr. Dawson Williams and Mr. Costelloe were also present. Letters of apology for non-attendance were announced from the President-elect, Dr. R. Thomson, Bournemouth; Dr. Barnes, Carlisle; Mr. Joseph White, Nottingham; Dr. Strachan, Dollar; Dr. A. Carpenter, Croydon; Dr. Bridgwater, Harrow-on-the-Hill; Mr. Spanton, Hanley; Dr. Harrison, Clifton; Dr. Maury Deas, Exeter; Dr. Phillips, Reading.

RANK OF ARMY MEDICAL OFFICERS.

Dr. FARQUHARSON, M.P., at the request of the CHAIRMAN made a statement on this subject. He said that in reply to a question put the other day in the House of Commons by Mr. Bartley, the Secretary of State for War had stated that he had had no communication from any responsible authority on the subject of the grievances of army medical officers, but he was quite prepared to grant compound titles and one or two other things for which they had asked, if he got an assurance that the medical officers were prepared to accept these concessions. A meeting had been held on April 27th, at the house of Sir Andrew Clark, when the general feeling was expressed that these titles and other concessions offered should be accepted, in the hope that they might be found to work well, and to remove the grievances complained of. He (Dr. Farquharson) advised their acceptance, as at least an experiment, on the distinct understanding that it was definitely explained and laid down by Royal Warrant that the titles should be held to convey absolutely the military rank which they were supposed to convey. It would be wise policy, he considered, on the part of army medical officers to accept what was now offered; if the arrangement was found not to work well it would then be time to ask that it might be reconsidered.

Sir WALTER FOSTER, M.P., said he quite agreed with what Dr. Farquharson had said. He did not think that the present was a satisfactory settlement of the whole matter, but it was a concession up to a certain point, and in all questions of concession by a department like the War Office it was their duty to get as much as they could and to ask for as much as they wanted. He thought they should accept this much for the present. It would be a gain, he hoped, in public as well as in military consideration. It was something to have achieved, and the Association would doubtless be glad to support the medical officers again should further action become necessary.

The following resolution, moved by Dr. WITHERS MOORE, President of the Council, and seconded by Mr. HUGH KER, was carried unanimously:—"This Committee recommends the army medical officers to accept the offer made by the Secretary of State for War of composite titles on the condition that they carry with them all the privileges attached to the corresponding military rank, but with command limited to the department."

MIDWIVES BILL.

The CHAIRMAN reported as follows:—In accordance with a resolution passed at the last meeting of the Committee, copies of the Bill as amended by the Subcommittee had been circulated among the Branches. A deputation, introduced by Dr. Farquharson, M.P., consisting of representatives of the Parliamentary Bills Committee, the Obstetrical Society, and the British Gynæcological Society, waited upon the Lord President of the Privy Council on February 25th. Mr. Sibley (acting Chairman of the Committee in the absence of Mr. Ernest Hart), Mr. Pease, M.P., Dr. Grigg, Dr. Aveling, Dr. Robert Barnes, and Dr. Playfair urged upon the Lord President the advisability of some legislation for the regulation and control of midwives, and for the appointment of a Select Committee with power to take evidence. Lord Cranbrook, in reply, said he thought it might be taken for granted that there was an almost unanimous opinion that something should be done to improve the position of midwives if it were possible by legislation to do so. The Government had already given practical proof of its interest in the subject by introducing a Bill some twelve years ago, but it had to be withdrawn owing to the opposition it encountered. He criticised the provisions of Mr. Pease's Bill, especially the proposal that the Privy Council should lay down rules and regulations, and keep a register. The Government had found itself unable to support the present Bill, but the question would have their most careful consideration. The Lancashire and Cheshire Branch and the Bath and Bristol Branch had, since the last meeting of the Committee, passed resolutions disapproving of the Bill in its present amended form. He added that Lord Cranbrook seemed very favourable to the appointing of a Select Committee.

Dr. FARQUHARSON pointed out that Lord Cranbrook referred in his remarks to the difficulties that existed during the present year in dealing with such an important question, which could only be properly handled by a very strong committee.

On the motion of Dr. WITHERS MOORE, seconded by Mr. HEMMING, a vote of thanks was passed to Dr. Farquharson, who had introduced the deputation, and to those members who attended and spoke on the subject.

MORTMAIN BILL.

The CHAIRMAN reported that, in company with Mr. Costelloe, he had had an interview, on the previous day, with Lord Herschell on the subject of the Mortmain Bill, as to which Mr. Costelloe would make a statement.

Mr. COSTELLOE said that he had been instructed by the Committee some time ago to draft a short Bill to amend the law relating to charitable uses. That draft was laid before Lord Herschell and others of the legal members of the House of Lords. Lord Herschell took a great interest in the Bill, and, during the interview, he had made it clear to them that he was entirely in accord with the principle, but he desired to have the draft altered in accordance with certain suggestions which he made. Without interfering with the main provisions of the present Act as regards the holding of property by corporations, he proposed to remove practically all the restrictions in the way of gifts of real estate to charities, on condition that the persons receiving the gifts should sell the realty and convert it into money within a year, or within such enlarged time as the Court might allow. If they fail to do so, the estate to vest in the official charity trustee upon trust to sell the same with all reasonable speed, and, after deducting expenses, to pay over the proceeds. Such a Bill would go a great deal further than the draft which he (Mr. Costelloe) submitted in the first instance, and would practically cure all the existing mischief in the readiest and simplest way. Lord Herschell expressed his willingness to introduce the Bill into the House of Lords, and thought it was quite possible that it might pass both Houses this session. An alternative Bill had been prepared by the Hospitals Association, which proposed an arrangement of a more complicated character.

It was proposed by Sir WALTER FOSTER, and seconded by Dr. LANGDON DOWN, that the revised draft should be placed in Lord Herschell's hands with a view to the early introduction of a Bill.

The suggestion was adopted.

It was further decided that the Chairman be empowered to consult Sir John Simon, and in conference with him to take any necessary steps on behalf of the Committee.

Replying to a question put by Mr. HEMMING as to the possibility of costly litigation, Mr. COSTELLOE said in the Bill he had drafted he provided that if any necessary application had to be made to the Court, it would be a very inexpensive and formal matter.

PUBLIC HEALTH LAW (LONDON) AMENDMENT BILL.

Mr. COSTELLOE stated that he had received from the Committee suggestions for amendment in the first few clauses of the Bill, and he had drafted a couple of amendments for the purpose. He had subsequently received instructions to draft amendments to other clauses in the Bill, but had not yet pre-

pared them. Dr. Dawson Williams reported that he had sent the draft amendments to Clauses 4 and 6 to Sir Guyer Hunter, who succeeded in obtaining their passage through the Standing Committee. The following were the amendments: Clause 5, page 3, line 27, omit the word "permanent," and add after the end of the line the words "which cannot be compensated by damages." Clause 6, page 3, line 38-39, omit the words "after 1885," and substitute the words "at any hours of the day or night which the justice may in his order specify."

Mr. Wallace offered to lay before the Committee the various amendments to the Bill agreed upon by the Metropolitan Asylums Board, of which he was a member. Mr. Wallace was thanked, and his offer accepted.

It was resolved to appoint a Committee consisting of the following gentlemen to deal with the Bill: The Chairman, Sir Walter Foster, M.P., Dr. Farquharson, M.P., Dr. Carpenter, Mr. Wallace, Dr. Withers Moore (President of Council), Mr. Butlin (Treasurer), and Dr. Cameron (Huddersfield). Letters from Dr. Seaton and Dr. Louis Parkes were referred to this Committee.

A discussion took place on the question of the desirability of medical officers of health in London and large towns being allowed to engage in private practice.

The following resolution, moved by Dr. Withers Moore, and seconded by Mr. Rivington, was carried: "In the opinion of this Committee, provision might be inserted advantageously in the Public Health Law (London) Amendment Bill to order that, where possible, the medical officer of health should not engage in private practice."

Factory Surgeons.

Mr. Costelloe read the following memorandum (prepared by Dr. Dawson Williams) giving the history of the action taken by the Parliamentary Bills Committee on behalf of the large body of factory surgeons:—

On February 10th the Home Secretary introduced the Factory and Workshops Bill. The Bill dealt with several matters of importance in regard to the sanitation of factories. Clause 19 proposed to do away with the whole system of certifying the physical fitness of children for employment in factories and workshops. This proposal involved a very important principle, inasmuch as it removed the chief safeguard of children in factories, and the substitutes proposed, which practically only amounted to ascertaining that the children and young persons to be employed in factories had attained a certain age and school standard, were obviously insufficient. The proposal also most seriously affected the medical profession, since the certifying surgeons under the Acts number at least 1500.

The Government clearly intended to push the Bill on with all speed, and the Hon. Secretary of the Certifying Factory Surgeons Association came up to London to ask, in this emergency, for the assistance of the Parliamentary Bills Committee. In the absence of Mr. Hart, Dr. Williams, acting upon the resolution of the Parliamentary Bills Committee at its last meeting, communicated with Mr. Sibley and Dr. Arlidge; Dr. Farquharson and Sir Walter Foster undertook to watch the matter in the House of Commons. A series of articles dealing with the objections to the Home Secretary's proposals was published in the British Medical Journal, and a memorandum was prepared by Dr. Arlidge for the use of the Parliamentary Bills Committee and the information of members of Parliament interested in the subject. All the Bills dealing with factory legislation having been referred to the Grand Committee on Trade, Dr. Farquharson was added to this Committee, and amendments drafted for the Parliamentary Bills Committee by Mr. Costelloe from the memorandum above mentioned, were placed in his hands. Meanwhile, owing to the circulation of the memorandum and to interviews with members of Parliament of both political parties, considerable interest had been aroused. A brief memorandum, prepared by Professor Charteris for the Parliamentary Bills Committee, was placed in the hands of every member of the Grand Committee on Trade on the day on which the clause abolishing factory surgeons was to be considered. The rejection of the clause was moved by Mr. Mundella, and supported in a speech containing much detailed evidence by Dr. Farquharson. The discussion was adjourned, but at the next meeting of the Committee the clause was rejected on a division by 39 to 9.

The following are copies of the two amendments which Dr. Farquharson endeavoured to get passed through Committee. The first, which many members of the Committee opposed on the ground of expense, was lost by a large majority; the second was carried:—

Page 6, after Clause 18, insert the following Clause:—

After the passing of this Act certificates of fitness for employment of children and young persons shall be subject to revocation by the certifying surgeon, if upon inspection he shall certify in the prescribed form that the continued employment of the child or young person named therein is dangerous to the health of such person, and the certifying surgeon shall be bound to make a periodical inspection of all children and young persons holding certificates at prescribed intervals, and shall be entitled to the prescribed fees.

Page 6, after Clause 19, insert the following Clause:—

Every certifying surgeon acting under this or the principal Act shall in each year make at the prescribed time a report to the Secretary of State as to the persons inspected during the year, and the results of said inspection, and also as to the number of children and young persons employed in factories and workshops inspected by him at the time of his last inspection, with such other particulars as may be prescribed from time to time, and such reports shall be presented to Parliament annually.

The Chairman expressed the thanks of the Committee to Dr. Farquharson, Sir Walter Foster, and others who had assisted in the matter, and to whom they were under considerable obligations.

Medical Practice in Sierra Leone.

The Secretary (Mr. Fowke) referred to the letter on this subject which was brought before the Committee at its last meeting, and said Dr. Lamprey, who had served for some years in Sierra Leone, was now in London, and had been asked to attend the meeting.

Dr. Lamprey said the local practitioners, who had increased in numbers during the last five years, were asking for some sort of protection from the unqualified chemists and druggists who had no training and passed no examinations. What was required was a Pharmacy Act on the same lines as the Pharmacy Act passed in 1868 for this country, compelling dispensers and chemists and druggists to pass an examination.

Mr. Butlin proposed the following resolution, which was seconded by Mr. Rivington, and approved: "That the Chairman be requested to communicate with the Secretary for the Colonies, pointing out the advisability of passing a Pharmacy Act in Sierra Leone and of introducing a system of medical registration of deaths."

Lunacy Acts Amendment Act.

The Chairman reported, in reference to the Lunacy Acts Amendment Act, that the suggestions which were brought up before the Committee at the last meeting were duly sent out in accordance with the resolution, and a letter was written to the Lord Chancellor, which was duly acknowledged.

Dr. Dawson Williams submitted a letter addressed by Dr. Leeper, of Rathdrum, to the Editor, asking for the assistance of the Parliamentary Bills Committee for the remedy of a grievance. Dr. Leeper stated that the medical officer of a union was prevented by Act of Parliament from signing a medical certificate for the committal of his own patients to an asylum. The Act 30 and 31 Vict., cap. 118, enacted that the justices were to call to their assistance the dispensary medical officer of the district in which the lunatic was found, and in his absence the nearest dispensary medical officer, thus preventing the workhouse infirmary medical officer signing the certificate unless he were also a dispensary medical officer, which was a rare conjunction. It was resolved to refer the matter to Dr. Mickle and Dr. Needham, with a request that they would look into the law and report to the Committee at a future meeting.

German Universities.—During the past winter semester the total number of medical students in the twenty universities of Germany was 8,498. They were distributed as follows:—Berlin, 1,397; Munich, 1,057; Leipzig, 913; Würzburg, 907; Erlangen, 389; Greifswald, 371; Strassburg, 329; Freiburg, 311; Breslau, 303; Heidelberg, 299; Bonn, 281; Halle, 269; Marburg, 242; Kiel, 237; Tübingen, 236; Königsberg, 235; Jena and Göttingen, 214 each; Giessen, 158; and Rostock, 136.

UNIVERSITY OF LONDON.

DRAFT OF SUPPLEMENTAL CHARTER.

MARCH, 1890.

VICTORIA by the Grace of GOD

Of the United Kingdom of Great Britain and Ireland, QUEEN, Defender of the Faith, TO ALL WHOM these presents shall come, GREETING.

1. WHEREAS by our Letters Patent, under the Great Seal of our said United Kingdom, bearing date at Westminster the fifth day of December, in the first year of our reign, We did grant, declare, and constitute certain persons therein mentioned, and all the persons who might thereafter be appointed to be Chancellor or Fellows as thereinafter mentioned, one body politic and corporate by the name of THE UNIVERSITY OF LONDON: And We did by our said Charter further will and ordain that the said Chancellor, Vice-Chancellor, and Fellows shall have power after examination to confer the several Degrees of Bachelor of Arts, Master of Arts, Bachelor of Laws, Doctor of Laws, Bachelor of Medicine, Doctor of Medicine: AND WHEREAS by our Letters Patent, under the Great Seal of our United Kingdom, bearing date at Westminster the seventh day of July, in the thirteenth year of our reign, We did enlarge the powers of the said Chancellor, Vice-Chancellor, and Fellows: AND WHEREAS by our Letters Patent under the Great Seal of our said United Kingdom, bearing date at Westminster the ninth day of April, in the twenty-first year of our reign, We did revoke and determine the said Letters Patent hereinbefore recited: And We did will, grant, declare, and constitute certain persons therein mentioned, and all the persons who might thereafter be appointed to be Chancellor or Fellows as thereinafter mentioned, and all the persons on whom respectively the University created by our said Letters Patent of the fifth day of December, in the first year of our reign, had conferred any of the Degrees of Doctor of Laws, Doctor of Medicine, Master of Arts, Bachelor of Laws, Bachelor of Medicine, or Bachelor of Arts, and all the persons on whom respectively the University created by that our Royal Charter might thereafter confer any of the said Degrees, one body politic and corporate by the name of THE UNIVERSITY OF LONDON: And We did further will and ordain that the said Chancellor, Vice-Chancellor, and Fellows, shall have power after examination to confer the several Degrees of Bachelor, Master, and Doctor in Arts, Laws, Science, Medicine, Music, and also in such other departments of knowledge, except Theology, as the said Chancellor, Vice-Chancellor, and Fellows, by regulations in th at behalf, should from time to time determine:

2. AND WHEREAS by our Letters Patent under the Great Seal of our said United Kingdom bearing date at Westminster the sixth day of January, in the twenty-sixth year of our reign, We did revoke and determine the said Letters Patent of the ninth day of April, in the twenty-first year of our reign: And We did will, grant, and declare and constitute certain persons therein mentioned, and all the persons who might thereafter be appointed to be Chancellor or Fellows, as therein mentioned, and all the persons on whom respectively the University created by our said Letters Patent of the fifth day of December, in the first year of our reign, had conferred any of the Degrees of Doctor of Laws, Doctor of Medicine, Master of Arts, Bachelor of Laws, Bachelor of Medicine, or Bachelor of Arts, and all the persons on whom respectively the University created by our said Letters Patent of the ninth day of April, in the twenty-first year of our reign, had conferred any of the said Degrees or the Degree of Doctor of Science or Bachelor of Science, and all the persons on whom respectively the University created by that our Royal Charter might thereafter confer any of the said Degrees, or any other Degree, one body politic and corporate, by the name of THE UNIVERSITY OF LONDON: AND WHEREAS by our Letters Patent under the Great Seal of the United Kingdom, bearing date at Westminster the fourth day of May, in the forty-first year of our reign, We did will, grant, and ordain, that the powers and provisions relating to the granting of Degrees and Certificates of Proficiency contained in our said last-recited Letters Patent should be read and construed as applying to Women as well as to Men:

3. AND WHEREAS We did by our said Letters Patent of the sixth day of January, in the twenty-sixth year of our reign, will and ordain divers regulations touching the said University, and the purposes, constitution, and powers thereof: AND WHEREAS it is expedient that the regulations now in force in relation to the said University should be altered in manner hereinafter appearing, and that for that purpose certain clauses and parts of clauses of our said Letters Patent, or some of them, and the regulations contained in, and the powers conferred by, the said clauses and parts of clauses should be revoked:

4. Now know ye, that We do by virtue of our prerogative royal, and of our special grace, certain knowledge, and mere motion, by these presents, for Us, our Heirs and Successors, will, grant, ordain, and declare as follows:

5. And first with respect to the purposes of the said University, We do will and ordain as follows:—

(1) The purposes of the University shall, in addition to the purposes as defined in the third clause of our Letters Patent of the sixth day of January in the twenty-sixth year of our reign, include the promotion of regular and liberal education throughout our dominions, and especially in the metropolis and the neighbourhood thereof.

(2) For the purpose of carrying into effect the purposes of the University, the Senate shall have power to establish or concur with any other body or bodies in establishing in or near London Professorships or Lectureships in connection with the University, and to provide or concur in providing in or near London means for the furtherance of regular and liberal education and original research, and to apply to the purposes aforesaid, a competent part of the revenue of such property as the said body politic of the University of London is or may be empowered to take, purchase, and hold, and upon the establishment of any such Professorship or Lectureship the Senate may assign to such Professor or Lecturer a place upon the Faculty as hereinafter described to which the subject of such Professorship or Lectureship belongs.

6. And with respect to the Constitution of the Senate of the said University, We do by these presents (but not so as to alter or in any way affect the right of the existing Fellows of the University to be such Fellows, or to exercise any of the powers by our said Letters Patent of the sixth day of January of the twenty-sixth year of our reign, or by any other Letters Patent conferred on or to be exercised by Fellows of the University, so far as such powers are not otherwise revoked) revoke and determine so much of the fifth clause of our said Letters Patent as ordained that there should be thirty-six Fellows, exclusive of the Chancellor and Vice-Chancellor for the time being, and so much of the said clause as relates to the appointment of Fellows, and also the whole of the eleventh, twelfth, thirteenth, and fourteenth clauses of our said Letters Patent. And We do hereby will and ordain as follows:—

(1) When the number of the now existing Fellows appointed by Us, other than the Chancellor, and other than the Fellows appointed by Us on the nomination of Convocation, shall by retirement or otherwise have been reduced below nine, and when at any time thereafter the number of Fellows appointed by Us, other than the Chancellor, and other than the Fellows appointed by Us on the nomination of Convocation, shall be less than nine, We, our Heirs or Successors, will appoint a new Fellow or new Fellows, so that the number of Fellows so appointed, other than the Chancellor, shall always be made up to nine: Provided that when there shall be nine Fellows other than the Chancellor who shall have been appointed by Us after the date of this our Charter, then upon the expiration of one year from the date of appointment of the Fellow last so appointed and of every subsequent year one of such Fellows, being the one who shall have been longest in office, or such one of those (if more than one) who have been longest in office as shall be determined by lot by the Vice-Chancellor, shall retire.

(2) The Chairman of Convocation for the time being shall be a Fellow *ex officio*.

(3) When the number of now existing Fellows appointed by Us on the nomination of Convocation shall by retirement or otherwise have been reduced below nine, and whenever at any time thereafter a vacancy shall occur among the Fellows appointed by Us on the nomination of Convocation, Convocation shall have power to elect a Fellow until the number of Fellows appointed by the election of Convocation shall by such election be made up to nine, and such election by Convocation shall be as follows: Upon the occurrence of the first, the fifth, and the ninth vacancies in the number of the now existing Fellows so appointed by Us as last aforesaid in respect of which a Fellow may be elected by Convocation the members of Convocation who are Graduates in Arts shall elect a Fellow; upon the second and the sixth of such vacancies the Members of Convocation who are Graduates in Laws shall elect a Fellow; upon the third and the seventh of such vacancies the Members of Convocation who are Graduates in Medicine shall elect a Fellow; and upon the fourth and the eighth of such vacancies the Members of Convocation who are Graduates in Science shall elect a Fellow. Whenever a vacancy shall occur in the number of Fellows elected by any one of the said classes of Graduates the vacancy shall be filled by election by the same class of Graduates; save that where by a vacancy occurring among the Fellows elected by the Graduates in Arts the number of Fellows appointed by their election shall be reduced from three to two, such vacancy shall be filled by election by the Graduates in Medicine, and that when by a vacancy occurring among the Fellows elected by the Graduates in Medicine the number of Fellows appointed by their election shall be reduced from three to two, the vacancy shall be filled by election by the Graduates in Arts: Provided that when there shall be nine Fellows appointed by the election of Convocation, then upon the expiration of one year from the date of appointment of the Fellow last so appointed and of every subsequent year one of such Fellows, being the one who has been longest in office, or such one of those (if more than one) who have been longest in office as shall be determined by lot by the Vice-Chancellor, shall retire. The holder of any Degree not included in the departments of Medicine, Science, or Laws shall be deemed to be a Graduate in Arts, and the holder of more than one Degree shall be entitled to vote in each class in which he holds a degree.

(4) The President for the time being of University College London and the Principal for the time being of King's College London shall respectively be Fellows ex officio, and the Council of each of the said Colleges shall be at liberty to elect two other Fellows, and from time to time to fill up vacancies in the number of Fellows appointed by them respectively. At the expiration of one year from the date of this our Charter and of every subsequent year one of the two Fellows appointed by each of the said Councils, being the one of the two who shall have been longest in office, or in default of seniority such one of them as shall be determined by lot by the Vice-Chancellor, shall retire.

(5) The President for the time being of the Royal College of Physicians of London and the President for the time being of the Royal College of Surgeons of England shall respectively be Fellows *ex officio*, and each of the said Colleges shall be at liberty to appoint one other Fellow, and from time to time to fill up any vacancy occurring in the office of the Fellow appointed by them respectively, and every Fellow so appointed shall hold office for three years.

(6) The Chairman for the time being of the Council of Legal Education established by the four Inns of Court, if and when it be arranged between the four Inns of Court and the Senate, and the President for the time being of the Incorporated Law Society of the United Kingdom shall respectively be Fellows *ex officio*.

(7) The London Faculties as hereinafter defined shall be at liberty to elect twelve Fellows, as follows: The Faculty of Arts shall elect three Fellows, the Faculty of Science shall elect three Fellows, the Faculty of Medicine shall elect five Fellows, and the Faculty of Laws shall elect one Fellow, and every vacancy occurring in the number of such Fellows shall from time to time be filled by election by the Faculty which elected the outgoing Fellow. Every Fellow so elected shall hold office for three years, save that in each group of the Fellows first elected by the Faculties of Arts and Science respectively one Fellow to be chosen by lot by the Vice-Chancellor shall retire at the end of one year from the date of this our Charter, and one Fellow to be chosen in like manner shall retire at the end of

two years from the like date, and that of the Fellows first elected by the Faculty of Medicine one to be chosen in like manner shall retire at the end of one year from the like date, and two to be chosen in like manner shall retire at the end of two years from the like date.

(8) The Principals of Provincial Constituent Colleges as hereinafter defined shall be at liberty jointly to elect such number of Fellows, not exceeding four, as may be determined in manner hereinafter expressed, and the Provincial Faculties as hereinafter defined shall be at liberty to elect a number of Fellows equal to the number for the time being elected by the Principals of the said Colleges. Every member so elected by the Principals of the Provincial Colleges or by the Provincial Faculties shall hold office for three years subject to such regulations as to the Fellows first elected as may be made by the Senate for the purpose of securing a rotation in the election of such Fellows, and every vacancy occurring in the number of such Fellows shall be filled by the election of the body which elected the outgoing Fellow.

(9) If any vacancy shall occur in the number of Fellows otherwise than in the ordinary course of retirement the Fellow appointed or elected to fill the vacancy shall be deemed to occupy the same position as to seniority as the outgoing Fellow, and shall hold office for the same time only as such outgoing Fellow would have continued to hold the same.

(10) Any Fellow, other than the existing Fellows and Fellows *ex officio*, who shall not have attended any meeting of the Senate or of any Committee thereof during an entire period of two years, shall be deemed to have retired at the expiration of such period.

(11) Any outgoing Fellow may be reappointed or re-elected.

(12) It shall be lawful for the Senate to exercise all the powers conferred upon them by this our Charter, although they may not for the time being be fully constituted in accordance with the provisions thereof.

7. And with respect to the election of Fellows by Convocation, We do further will and ordain that in lieu of the power given by the twenty-first clause of our Letters Patent of the sixth day of January in the twenty-sixth year of our Reign of nominating three persons for every Fellow to be appointed in manner therein mentioned, Convocation shall hereafter have such power of electing Fellows as is by the foregoing sixth clause of our present Charter provided in that behalf, and all powers by the said Letters Patent given to Convocation in respect of the nominations therein provided for shall be read and construed as applying to the election of Fellows under this our Charter; and further, that the twenty-sixth clause of our said Letters Patent shall hereafter be read as follows: Notice of the meetings of Convocation shall be given by advertisement, or in such other manner as the Senate shall from time to time determine. Whenever a vacancy shall occur in the number of the Fellows appointed by Us on the nomination of Convocation in respect of which a Fellow may be elected by Convocation, or in the number of Fellows to be hereafter elected by Convocation as provided by these presents, the Senate shall notify the same to the Chairman of Convocation, who shall as soon thereafter as conveniently may be convene a meeting of the Members of Convocation who are entitled to vote in respect of such vacancy, or take such other steps for the purpose of enabling an election to be held to fill such vacancy as may be prescribed by any Standing Order for the time being in force regulating the proceedings of Convocation in that behalf.

8. And with respect to the conduct by the Senate of the business of the University We do will and ordain as follows:—

(1) There shall be a Standing Committee of the Senate for the Departments of Arts and Science in connection with the London Constituent Colleges in those Departments. This Committee shall consist of the President of University College and the Principle of King's College, of the Fellows elected by these Colleges, of the six Fellows elected by the London Faculties of Arts and Science, and of ten other Fellows to be elected by the Senate annually. The business of the Committee shall be to promote the organisation, improvement, and extension of University teaching in Arts and Science in and for London, including the establishment of professorships and teacherships in London, and to discharge such functions in relation to the said Constituent Colleges, and the examination of students therefrom in Arts and Science, as the Senate may from time to time delegate to them.

(2) There shall be a Standing Committee of the Senate for the Departments of Arts and Science in connection with the Provincial Constituent Colleges, which shall discharge such functions in relation to the said Constituent Colleges and the examination of students therefrom in Arts and Science, as the Senate may from time to time delegate to them.

(3) There shall be a Standing Committee of the Senate in relation to the Examinations in Arts and Science other than Examinations conducted under arrangements with the Constituent Colleges.

(4) There shall be a Standing Committee of the Senate for the Department of Medicine. This Committee shall consist of the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England, the two Fellows elected by the said Colleges, the five Fellows elected by the London Faculty of Medicine, and (in the event of any institution becoming a Provincial Constituent College in the Department of Medicine) one Fellow holding a chair in a Provincial Constituent College of Medicine to be chosen by the Fellows elected by the Principals or Chief Officers of the Provincial Constituent Colleges, and the Fellows elected by the Provincial Faculties acting conjointly, and nine members to be elected by the Senate.

The business of the Committee shall be to discharge such functions in relation to the Medical Constituent Colleges and the examination of students in Medicine as the Senate may from time to time delegate to them.

(5) There shall be a Standing Committee of the Senate for the Department of Laws. This Committee shall consist of the Chairman of the Council of Legal Education, when a Fellow, and the President of the Incorporated Law Society, of the Fellow elected by the London Faculty of Laws, and of four other members to be elected by the Senate annually.

(6) The Chancellor and Vice-Chancellor shall be *ex officio* members of all Standing Committees.

(7) The Standing Committees shall in all respects be subject to the control and direction of the Senate.

9. And with respect to Constituent Colleges We do will and ordain as follows:—

(1) There shall be Constituent Colleges in connection with the University, which Colleges shall be deemed to be Constituent Colleges in respect of all or of some one or more of the Departments of Arts, Science, Medicine, and Laws; and all departments of knowledge, in which examinations may be held by the University, and which are not included in any other department, shall be deemed to be included in the Department of Arts.

(2) Constituent Colleges situated in or near London shall be deemed to be London Constituent Colleges, and the following institutions shall, in the first instance, be such Colleges, that is to say, in the Departments of Arts, Science, Medicine, and Laws, University College, London, and King's College, London; in the Department of Medicine, the Medical Schools of Charing Cross Hospital, Guy's Hospital, London Hospital, Middlesex Hospital, St. Bartholomew's Hospital, St. George's Hospital, St. Mary's Hospital, St. Thomas's Hospital, Westminster Hospital, and the London School of Medicine for Women.

(3) There shall be in each of the said Departments a Faculty which shall consist of Teachers in the London Constituent Colleges, and may (in the event of its being so agreed between the Senate and the bodies concerned respectively) include also in the Department of Laws Teachers appointed by the Council of Legal Education and by the Incorporated Law Society respectively, and such Faculties are hereinafter described as the London Faculties.

(4) There shall be determined by agreement between the Senate and each Constituent College, and in the Department of Laws by agreement also between the Senate and the Council of Legal Education and the Council of the Incorporated Law Society respectively, or failing agreement in either case, by the decision of the Lord President of our Council, the number and qualifications of the Teachers of the College, or of the Teachers appointed by the Council of Legal Education and the Incorporated Law Society, who shall belong to such Faculty or Faculties.

(5) The Senate shall have power from time to time to admit as London Constituent Colleges such other Colleges, in or near London as (1) give academical instruction upon a complete system and an adequate scale in all the Departments, and prepare, or are intended to prepare, students for Degrees in the University, or (2) give instruction upon an adequate scale in one or more, even though not in all, the Departments, and prepare, or are intended to prepare, students for Degrees in the University; but shall previously invite an expression of opinion from the Board or Boards of Studies interested. The Senate shall consider in respect of every Institution seeking admission the following points:—

(*a*) The character of the teaching and of the educational appliances.

(*b*) The character of the foundation.

(*c*) The average age of the students.

(*d*) The number of students proceeding from the College to the University.

(*e*) The relation of the College to any other University.

(6) On the admission of a London Constituent College the following matters shall be determined by the Senate, that is to say:—

(*a*) The Department or Departments in respect of which the College is admitted.

(*b*) The number and qualifications of the Teachers of the College who are to belong to the Faculty or Faculties of such Department or Departments.

(7) The Senate shall have power, after consultation with the London Board or Boards of Studies interested,—

(*a*) To increase or diminish the number of the Teachers in any London Constituent College who shall belong to any Faculty or Faculties.

(*b*) To remove any institution from being a London Constituent College, but such removal shall be subject to an appeal by the College to the Lord President of our Council.

(8) The Provincial Constituent Colleges shall in the first instance be such institutions situate in England or Wales, but not in or near London, as shall within six months from the date of this our Charter apply to the Senate for admission as Constituent Colleges in the University, and whose claim to admission shall be allowed by the Senate, or shall be allowed on such appeal as is hereinafter provided, and the Senate shall, in determining upon such claim, have regard to the conditions and matters contained in the foregoing fifth sub-clause, and shall, in the case of admission, determine the matters contained in the sixth sub-clause, and the Teachers so determined of such Constituent Colleges shall form the Provincial Faculties.

(9) In the case of any institution whose claim to admission as a Provincial Constituent College is not allowed by the Senate, the determination of the Senate shall, within one month of notice of disallowance being given by the Senate to the institution, be subject to an appeal on the part of such institution to the Lord President of our Council.

(10) The list of such first Provincial Constituent Colleges shall be finally settled by the Senate within one year from the date of this our Charter; but in the event of any such appeal as aforesaid to the Lord President, the list shall be deemed to be finally settled only when the determination of any such appeal or appeals is notified by the Lord President to the Senate.

(11) Upon the final settlement as hereinbefore provided of the list of institutions which shall in the first instance be admitted as Provincial Constituent Colleges, the Senate shall, having regard to the number of the Colleges so admitted, and to all the other circumstances of the case, determine and shall notify to the said Provincial

Constituent Colleges what number of Fellows, not exceeding four, the Principals of the said Colleges shall be at liberty to elect. Such last-mentioned determination shall, within one month of the notification thereof by the Senate to the said Colleges, be subject to an appeal to the Lord President of our Council on the joint application of the Colleges so admitted, and upon such appeal the said Lord President shall determine and shall notify to the Senate the number of the Fellows, not exceeding four, whom the said Principals shall be at liberty to elect. The number of Fellows to be so elected shall be deemed to be finally settled when the determination of the Senate in that behalf is notified to the said Colleges, or in the event of such an appeal to the Lord President as last aforesaid, when the determination of the said Lord President thereupon is notified by the Senate to the said Colleges.

(12) The Senate shall have power at any time after the final settlement of such list of first Provincial Colleges to admit as Provincial Constituent Colleges other institutions situated in England or Wales, but not in or near London, and also to remove any institution from the number of Provincial Constituent Colleges; and in exercising such powers the Senate shall have regard to the like conditions and determine the like matters, and their determination shall be subject to the like appeal, as hereinbefore provided in the case of the London Constituent Colleges.

(13) Save as aforesaid, We do hereby revoke the thirty-fourth and thirty-fifth clauses of our Letters Patent of the sixth day of January of the twenty-sixth year of our reign, and all rights and privileges therein or thereby created or conferred.

10. And with respect to the meetings of the Faculties and to Boards of Studies, We do hereby will and ordain as follows:—

(1) The Senate shall make such regulations as they see fit for the first meetings of the respective Faculties, and shall name some person to be Chairman of each of such first meetings. At the first meeting of each Faculty, the Faculty shall appoint a Committee with power to frame regulations, subject to the approval of the Senate, for the subsequent meetings thereof, and for the conduct of elections of Fellows and of members of the Board of Studies for the Faculty; and thereafter the Faculty shall have power from time to time, subject to the like approval, to alter and amend such regulations; provided that, when a Board of Studies for any Faculty shall have been constituted, the Chairman of the Board of Studies for the time being shall be Chairman of the meetings of that Faculty.

(2) There shall be a Board of Studies for each of the London Faculties. Each Board of Studies shall consist of—

(*a*) Such a number of Members elected by the Faculty, being four, eight, twelve, or sixteen, as the Faculty shall from time to time determine.

(*b*) Two Members of Convocation elected in such mode as Convocation may from time to time provide by the Members of Convocation who are Graduates in the Department to which the Faculty belongs.

(*c*) An Examiner in each subject in the Department to which the Faculty belong in which examinations are for the time being held in the University.

(*d*) If the Board of Studies shall so think fit, such persons, whether Members of the University or not, eminent in the subject of the Faculty, not exceeding two in number, as may be from time to time elected by the Board.

(3) One fourth of the Members of the Board elected by the Faculty, to be determined if necessary by lot, shall retire each year.

(4) Any vacancy occurring otherwise than as aforesaid among the Members elected by the Faculty shall be filled by the election of the remaining Members so elected; but any person so appointed shall retain his office so long only as the outgoing Member would have retained the same if no such vacancy had occurred.

(5) The Members of the Board elected by Convocation and the Members elected by the Board shall hold office for four years.

(6) Any vacancy occurring otherwise than by effluxion of time among the Members elected by any class of the Members of Convocation shall be filled by election by the same class.

(7) The period of office of the first Members of any Board of Studies shall be deemed to commence at the first meeting of the Board.

(8) Outgoing Members of the Board shall be re-eligible.

(9) The Examiners in each subject may, if more than one, agree upon one of themselves to be the Member of the Board of Studies. In case they fail to agree, the Examiner shall be nominated by the Vice-Chancellor in writing.

(10) The Senate shall make such regulations as they see fit for the first meeting of each Board of Studies, and shall name some person to be Chairman of such first meeting; and thereafter each Board of Studies shall be at liberty from time to time to frame such regulations as they see fit for the conduct of their business.

(11) Each Board of Studies shall have the following powers and duties:—

(*a*) To elect a Chairman every year.

(*b*) To consider and report to the Senate upon any matter referred to it by the Senate.

(*c*) To represent to the Senate its opinion on any matter connected with the Degrees and Examinations and teaching of the subjects of its Faculty.

(*d*) To deliberate, if so requested, in conjunction with the Senate or any Committee thereof.

(12) There shall also be Boards of Studies for the Provincial Faculties so far as constituted, and the provisions of the foregoing clauses shall apply to such Boards of Studies. But it shall be in the power of the Senate to constitute a separate Board or separate Boards of Studies for any group of the Provincial Constituent Colleges which may apply to them for that purpose, and to make such regulations for the constitution and business of such separate Boards as they may see fit.

(13) Boards of Studies shall, if so from time to time requested by the Senate, and may, if they shall from time to time think it desirable, meet and act concurrently on particular subjects. This provision shall apply to Meetings of the London and Provincial Boards of Studies as well as to the Meetings between the Boards of Studies of different Faculties.

11. And with respect to the Examinations for Matriculation and for the Degrees of Bachelor of Arts and Bachelor of Science, exclusive of the Examinations for Honours, We do will and ordain as follows:

The Senate shall have power to enter into arrangements with the London Constituent Colleges in Arts and Science jointly or any of them separately, and in like manner with all or any one or more of the Provincial Constituent Colleges in Arts or Science upon the following basis:—

(1) The approval by the Senate of syllabuses of courses of instruction proposed to be given in the Colleges to Candidates for Matriculation and for the Examinations for the Degrees of Bachelor of Arts and Bachelor of Science.

(2) The production of evidence satisfactory to the Senate of diligent attendance at such College lectures, and for such times as may from time to time be prescribed by the Senate.

(3) The examination of students, being Candidates for Matriculation or for the Examinations for the Degrees of Bachelor of Arts or Bachelor of Science, by a College professor or teacher in the subject, or other person appointed by the College or Colleges, and an Examiner to be appointed by the Senate, with power to the Senate to make Regulations or By-Laws from time to time for dealing with any cases in which the Examiners may be unable to agree upon their Report.

(4) The conferring of the Degree on the foregoing conditions.

12. And with respect to the Examination for the Degree of Bachelor of Medicine exclusive of the Examinations for Honours, We do will and ordain as follows:—

The Senate shall have power to enter into arrangements with the Royal College of Physicians of London and the Royal College of Surgeons of England for conducting the Examinations in Anatomy, Physiology, Medicine, Surgery, and Midwifery, for the Degree of Bachelor of Medicine by a Board of Examiners, consisting of the Examiners appointed by the University and Examiners to be appointed by the said Colleges, who shall join in the reports to the Senate on such Examinations. The Examiners appointed by the University may be called upon, if the Senate so think fit, to make in addition separate reports. These Examinations may, if so agreed on, be conducted in combination with Examinations for the said Colleges. The arrangements for giving effect to this clause shall be carried out under the direction of a Committee to be appointed in equal numbers by the Standing Committee for the Department of Medicine and a Committee to be appointed by the two said Colleges, and shall be subject to the approval of the Senate and of the two said Colleges. This arrangement for joint Examination shall not lessen or interfere with the duty of the Senate to be satisfied as to the adequacy of the Examinations in all respects.

13. And with respect to Candidates for Degrees, We do will and ordain as follows:—

(1) Candidates for Degrees in the Department of Medicine shall produce evidence satisfactory to the Senate that they have fulfilled the conditions required by the thirty-seventh clause of our Letters Patent of the sixth day of January in the twenty-sixth year of our Reign. But it shall be lawful for the Senate from time to time, after consultation with the Board of Studies for the Faculty of Medicine, to revise or to add to the list of Medical Institutions and Schools from which either singly or jointly with other Medical Institutions and Schools in this Country or in Foreign Parts Candidates for Medical Degrees shall be admitted, and to determine in respect of what branch or branches of Medical Education Candidates for Medical Degrees shall be admitted from any such Institution or School.

(2) With the exception of Examinations for Degrees in the Department of Medicine and of Examinations to be held under arrangements with Colleges under the powers hereinbefore contained, Candidates shall be admitted to all Examinations without regard to their place of education.

14. And We do further will and ordain that the fortieth clause of our Letters Patent of the sixth day of January in the twenty-sixth year of our Reign shall be read and construed as if the words or Honorary Degrees were inserted after the words *ad eundem* degrees.

15. And save as aforesaid We do hereby will and ordain that all such clauses or parts of clauses of our said Letters Patent of the sixth day of January in the twenty-sixth year of our Reign as are inconsistent with the provisions of this our Charter shall be and the same are hereby revoked, and save as aforesaid We do hereby confirm our said Letters Patent and also our Letters Patent of the fourth day of May in the forty-first year of our Reign, and We do will and ordain that such last-mentioned Letters Patent shall be read and construed as applying to the powers and provisions contained in this our Charter.

16. AND LASTLY, We do hereby, for Us, our Heirs and Successors, grant and declare that these our Letters Patent, or the enrolment or exemplification thereof, shall be in and by all things valid and effectual in law according to the true intent and meaning of the same, and shall be construed and adjudged in the most favourable and beneficial sense for the best advantage of the said University, as well in all our Courts as elsewhere, notwithstanding any non-recital, misrecital, uncertainty, or imperfection in these our Letters Patent. IN WITNESS whereof WE have caused these our Letters to be made Patent.

WITNESS Ourself at our Palace of Westminster this
day of in the year of our Reign.

MR. F. W. BURTON, M.B.Cantab., late house-physician to Addenbrooke's Hospital, on his appointment to the honorary physicianship of the Norfolk and Norwich Hospital, has assumed the name of F. Burton-Fanning.

AT a meeting of the Grand Committee on Trade on April 30th, the amendment proposing to extend the age within which children cannot be employed in factories to twelve, was rejected by 27 to 22.

THE SIGNIFICANCE OF THE COMMA-BACILLUS.

In a paper entitled "On Some Species of Choleraic Comma-Bacilli Occurring in Calcutta," published in the *Scientific Memoirs by the Medical Officers of the Army in India* (Part VI., 1891), Surgeon-Major D. D. Cunningham, F.R.S., describes some recent researches of his on the subject, which have an important bearing on the question as to whether Koch's comma-bacillus is or is not the specific micro-organism of cholera. The following abstract of the communication has been published by Mr. A. A. Kanthack, F.R.C.S., a member of the Leprosy Commission now in India.

The fact that cases of undoubted cholera often occur in Calcutta, without any trace of the presence of comma-bacilli in the intestinal contents, led to this inquiry. Dr. Cunningham succeeded in isolating ten different species of comma-bacilli from sixteen cases of cholera admitted into the three leading hospitals of Calcutta. At the beginning of 1890 he was in the possession of three distinct commas; Species I being obtained from the General Hospital, Species II from the Medical College Hospital, and Species III from the Sealdah Pauper Hospital. Thus after a lull in the disease, a patient developed cholera in the General Hospital. From this a fourth kind (Species IV) was obtained the only comma present in the discharges. After a second pause two further cases occurred at the same hospital, of which one presented the original comma, found at this hospital at the beginning of the year (namely, Species I), while the other case showed a new (5th) species. The next case came from the Medical College Hospital and contained no fewer than three easily distinguishable species (VI, VII, and VIII). This was followed by a case from the General Hospital, in which Species I was found once more. The last two cases came from the Medical College Hospital and furnished each a new and distinct species (IX and X).

Dr. Cunningham gives a detailed distinctive description of the various species. Two plates are appended to illustrate the morphological appearances of some of the species and their mode of growth on potatoes.

Species I. The growth on potatoes is limited and ordinarily a mere brownish film, but occasionally occurs in the form of a dense, thick, wrinkled mass of greyish-white colour.

Species II grows more readily on potatoes, forming a thick yellow film.

Species III forms brown expansions with irregular margins and lineated surface, resembling a crustaceous lichen-thallus.

Species IV is the most interesting, as it does not liquefy gelatine, presents an absence of evolution of cholera-purple in broth cultivations when treated with nitric and sulphuric acids, and on potatoes grows more rapidly than any other species, forming a thick ochreous-red, or burnt sienna, smooth polished stratum.

Species V, though not growing readily on potatoes, if it do so, forms a thick pink expansion, while Species VI develops a yellowish-pink growth, less in thickness and consistence than Species V, and Species VII appears as a thin, limited, colourless or whitish, pale-pinkish ochre expansion.

Species VIII does not grow readily on potatoes, and appears as a thin, moist, dirty, ochreous-pink film.

Species IX occurs as moist expansions of Indian yellow colour.

Species X develops badly on potatoes, appearing as thin colourless expansions.

The various species divide themselves naturally into two classes:—(1) Species not liquefying gelatine: Species IV, which, besides, is remarkable for its rapid growth on potatoes and absence of interstitial growth on agar-agar media, and incapacity to cause those decompositions in broth which are essential to the development of a purple colour on the addition of acids. (2) Species liquefying gelatine, namely, all the others, some (I, II, III, VIII, and X) doing so more rapidly than others (V, VI, VII, and IX).

The thesis naturally is *that Koch's theory that cholera is primarily due to the access of a specific comma-bacillus to the interior of the intestinal tract must be finally abandoned.* Koch's bacillus is not the only one found, and does not occur even frequently. "Koch was ignorant of the frequency with which vibrionic schizomycetes occur, and his discovery was merely an arbitrary selection of one of these as the cause of cholera, elected because it happened to be present in a limited number of cases which specially came under his observation."

Now it might be assumed that still, as a member of a group of organisms capable of producing various materials of a definite nature, Koch's bacillus might be causally connected with and related to the disease. But even this cannot hold; for (1) in many cases a careful investigator like Dr. Cunningham has not found any commas; (2) three species of commas occurred in one single case, "a fact suggestive of a suspicion that the presence of the comma-bacilli is not the cause of the morbid condition, but that the existence of the morbid condition is the cause of the presence of the comma-bacilli;" (3) in one case no cholera purple could be produced, so that the probability of this species (yet the only one found in an undoubted case of cholera) possessing identical toxic properties with the other species is reduced to a minimum; (4) none of the commas have ever been shown to originate the disease. It would be most natural to assume that the comma-bacilli are simply normal inhabitants of the intestines (and they are often found under normal conditions), and in cholera favourable conditions for their growth arise, and, according to the nature of such conditions, one or other species will preponderate or several species develop.

The deductions as to quarantine are of serious importance. Dr. Cunningham says: "It has been hastily assumed that cholera in India is invariably associated with a single species of comma, and that it is this which is invariably associated with the disease when it occurs in spreading epidemics beyond the limits of India."...."Now as cholera is associated in India—probably in Europe also—with many different species, quarantine is obviously futile until it has been shown that none of these various species be native to Europe."... "The very existence of a multiplicity of species, even if we regard the group as essentially causally related to the disease, is necessarily calculated to give rise to doubts as to whether general epidemic diffusion be not rather due to the diffusion of conditions favouring the group than to mere artificial diffusion of one or other species."

THE HOSPITALS COMMITTEE.

The Women's Hospital, Soho Square.—The Gordon Hospital for Fistula.—General Practitioners and the Metropolitan Hospital. Queen Charlotte's Lying-In Hospital.—The London Fever Hospital.

The Committee resumed their inquiry on Monday, April 27th.

Mr. David Cannon, the Secretary of the Hospital for Women, Soho Square, said he had been secretary for fifteen years. The hospital was both free and paying. There were forty free and fifteen paying beds—the total number of beds was sixty-six. A new wing for paying patients was opened in 1869. The patients who paid 25s. a week were admitted by letter on the recommendation of the medical officers; but letters were not required for urgent cases. It claimed to be the first special hospital of the kind. It was founded in 1842 in Red Lion Square, and removed to Soho Square in 1851, and a Royal charter and incorporation was obtained in 1887. All the premises were freehold, but there was a large mortgage debt. There was practically an unlimited out-patient department, which was entirely free. The expenses might be considered heavy as compared with other hospitals, because the wards were very small, and small wards were much more expensive to work than large wards. The grand total expenditure last year was £8,368, but the average ordinary expenditure was £6,800. They had managed to reduce the debt from £18,300 to £10,800. They were constantly paying off the debt as they received legacies. The annual subscriptions reached an average of £1,500, and the legacies last year were £2,852. The senior medical officer was the only medical man on the committee. The medical staff had a committee of their own.

In reply to Lord Spencer and other members of the Committee, the Witness stated that a very large proportion of the patients came from the East End of London, and would be unable to pay. Some medical students came to the hospital for educational purposes. They applied to the Dean, who gave them a ticket to attend on certain days, and they were instructed by the medical staff. They were not instructed in the wards, but only in connection with the out-patient de-

partment. A number of American medical men also came to the hospital for instruction. Paying patients, recommended by their medical men, came from Eastbourne, Brighton, and other places. The 25s. a week did not meet the whole cost of the in-patients, it was estimated at £2 2s. 6d. Some patients paid £2 2s. a week. No inquiry was made as to the circumstances of the patients. The number of students was limited to three a day. The patients admitted to the hospital were always asked if they could pay. He was perfectly cognisant of the position of the drains, but he had no plan of them.

Miss SQUIER, the matron of the hospital, said she had been fourteen months in that position, having been trained at St. Thomas's. Besides herself, there were four sisters, two staff nurses, ten ordinary probationers, two and sometimes three paying probationers, one special nurse, and one other. There was a sister, or a head nurse, a staff nurse, and three probationers for each floor. The nurses were not sent out to private persons except on the requisition of the medical staff of the hospital. After two years' training a certificate was given to the nurses. The Witness then gave details of the hours of work, food, rest, wages, and holidays of the nursing staff.

Dr. R. T. SMITH (Physician to the Hospital for Women) said that special hospitals to some extent co-operated with general hospitals. He was strongly of opinion that special hospitals for women were much required because there was a difficulty in providing accommodation for the students in the general hospitals, and women objected to being examined by a good many doctors. It must be admitted that, with regard to serious operations, they were much better carried out in special than in general hospitals. He should not object to see some of the work of special hospitals carried out in general hospitals if the accommodation were so increased as to enable them to provide for such work.

Replying to Lord SPENCER and others, the WITNESS spoke in favour of special hospitals as being most desirable for cancer and consumption cases. The students who came to the hospital did so to get actual practical knowledge by taking part in the work. It was difficult to get clinical instruction in the diseases of women.

Lord MONKSWELL: Would it not facilitate such clinical instruction if special hospitals were done away with, and women were treated at general hospitals?—If it could be done; but there would have to be such enormous extensions—the general hospitals would have to be almost doubled in size.

Captain HINCKS, Secretary of the Gordon Hospital for Fistula, Vauxhall Bridge Road, stated that patients were admitted free and by payment. The hospital was started in 1884 to meet the requirements of persons with limited means who did not wish to go into general hospitals. Well-to-do patients were not taken. The out-patient department was entirely free, without any governor's letters. There were 11 beds, and the average number occupied was 9.3. The expenditure for each bed was £105 6s. 8d. in 1890, and for each in-patient £6 5s. There was a scale of payments, but the patients were left, almost entirely, to pay what they chose. The committee had had to send away patients because of the numerous applications. There were 513 new out-patients last year. The expenditure last year was £1,018, and the income was £1,387, and, taking into consideration the loans paid off, there was a small deficiency. For several previous years they had paid their way. The hospital had been a private house and was made to accommodate patients. Since the hospital was opened the public had subscribed £3,535 and the patients had paid £2,798. The hospital received grants from the Hospital Sunday and Saturday Funds. There was no co-operation between the hospital and general hospitals, but he did not see any difficulties in the way, except that there was a feeling of jealousy on the part of the staff of general hospitals. The patients were not at all unwilling to pay. The hospital was open to medical men for instruction. The hospital was started by a medical man, but there was no profit derivable to the promoter. The hospital was named the "Gordon" after the death of the celebrated general, and with the consent of his family. The Hospital Sunday Fund reduced its grant because the management expenses were considered too great.

The CHAIRMAN: Do you think as a general principle it is useful to have a hospital with an average of only nine working beds, which entails the services of a paid secretary and a matron and staff, when the work might be done as well by one of the neighbouring general hospitals?—I should very much like to see it larger, but the hospital is doing a useful work, and meets the wants of patients who would not go to general hospitals.

Dr. W. T. WHITMORE, one of the founders of the hospital, said his object in starting the hospital was to meet a great want. There was not another hospital on the same principle in London. As a proof that such cases could not be as well treated in general hospitals, the Witness stated that he was continually receiving letters from patients successfully treated at the Gordon Hospital who had been several times unsuccessfully treated elsewhere. The expenses of the paid officials taken as compared with other hospitals, were quite nominal. His object in starting the hospital was more philanthropic than anything else. He was strongly in favour of special hospitals for the good of the public and of everybody. Students were encouraged to come to the hospital. He looked upon the hospital as *in embryo*, and that it would be much larger in future, and then the expenses would be proportionally less. He thought there should be special hospitals for all diseases: and if established, they would not detract from the opportunity of medical education to students, because they would go to the special hospitals, where they could study their subjects much better than at general hospitals. He was opposed to the colossal hospitals which were running to seed, as he considered that medical education could be better conducted at the head centres of specialism than at general hospitals.

At the meeting on April 30th, Mr. FREDERICK WALLACE, L.R.C.P., M.R.C.S., was called, and said he was a general practitioner in the North-East of London, in Hackney and Shoreditch. The nearest hospital was the London. There was also the Metropolitan Hospital. The free charitable institutions very much interfered with the practice of general practitioners, and some years ago he and his brother experienced a great falling off owing to the establishment of a children's hospital. He considered that owing to indiscriminate admission, the out-patient department was slightly abused; not so much as a few years ago. It was not grossly abused if there were no free out-patient departments, the patients would have to go to the general practitioners or the Poor-law infirmaries. By organisation he thought the large number of out-patients could be checked. That in fact had been done in connection with the London Hospital, where a system of inquiry was carried out. There had been an improvement at the hospitals of late years. As to the Metropolitan Hospital in Kingsland Road, he disputed the contention that it was in a poor neighbourhood. There was a great opposition by the general medical practitioners to its establishment on what were called provident principles. It had produced serious effects, and nearly all the medical men in the neighbourhood had signed a "round robin" protesting against the provident scheme. It was considered very unfair to the general practitioners, who lost a number of patients owing to the establishment of the hospital. With the exception of those who had joined the staff the medical men in the vicinity were opposed to the hospital. It was not actually required where it was established. With regard to special hospitals he considered them necessary to a certain extent, but he should prefer special departments attached to general hospitals. He thought special hospitals were requisite for diseases of the eye, bladder, and larynx, but not for cancer and consumption. There were sufficient hospitals for women. He would certainly not like to see physicians and surgeons receive pay at the hospitals; the honorary system was the best. As to dispensaries, he did not approve of the cheap advertising dispensaries. In many cases the offence of "covering" was committed. There were sometimes no qualified men attached to those dispensaries. He exhibited and read a number of handbills referring to cheap dispensaries. All the advertisements were issued by qualified men, but the places were left to unqualified men to attend to. Dr. Bourke had a number of dispensaries, but so far as he (the Witness) knew they were all conducted by qualified men. By their reduced fees the dispensaries sweated the profession. Those who attended to the cases would not be absolutely incompetent but they ought

not to be employed. They would be senior students, perhaps in their fourth year, and chemists' assistants.

The Witness further stated he objected to the provident scheme at the Metropolitan Hospital, because the fees were too low and the poor had to pay when well as when ill. He should like to see a large provident scheme for each district. The General Medical Council did prosecute in some cases; but it was difficult for general practitioners to get evidence and initiate proceedings.

Mr. G. O. RYAN, Secretary of the Queen Charlotte Lying-In Hospital, Marylebone Road, said he had had previous hospital experience. His salary was £250 a year. The hospital was founded in 1752, and was rebuilt in 1856. The letter system prevailed at the hospital. There was an out-patient department, in which last year 1,070 were relieved. Each patient would be attended seven times by the midwives. Single women who were considered deserving cases were attended for their first child. There were fifty-eight beds—fifty lying-in and eight labour-ward beds. There had not been any outbreak of fever in the hospital for many years—in fact it had not been closed since 1879. Last year among the in-patients the mortality was 4·48 per 1,000. There was not one death among the out-patients. There were no female doctors, clinical assistants, or clerks. Medical students were admitted. The Witness then spoke of the constitution or administrative body of the hospital. There were lady visitors, but no ladies on the committee. With regard to the finances of the hospital, he said that there was stock which could be sold to the amount of £9,869. The expenditure for the year was £3,421, and the receipts £3,056. The funds of the training school went to make up the deficiency of £365. There had been an increase in the life subscriptions. There were three day and one night nurse, who was assisted by two advanced pupils.

Dr. WILLIAM HOPE, Senior Physician of the hospital, said there had been a great improvement in lying-in hospitals of late years. That was due to the increased knowledge of sanitary matters, and also of antiseptics. He was satisfied with the state of things at Queen Charlotte's Lying-in Hospital. As to the age of the patients there had been some cases as young as 12; there were several at the ages of 14 and 15 up to 20. The prospects of recovery were as favourable at the hospitals as in private practice.

Lord BALFOUR of BURLEIGH (President of the London Fever Hospital), said that ward and private patients were taken as well as the servants and *employés* of governors and firms. The ward patients paid three guineas for the whole case, and the private patients paid three guineas a week. He gave a short history of the hospital from its foundation in 1802, and said that it worked for the class of persons between those who had their own homes and could isolate the cases, and the poor who were treated by the Metropolitan Asylums Board. Last year 682 persons were treated. All cases except smallpox were taken in. The most usual cases were scarlet fever, measles, German measles, typhus, typhoid, and diphtheria. As to the constitution of the hospital, the Witness said that besides the resident physician there were three consulting physicians. There were also two physicians and two assistant physicians. Their nurses were trained in the hospital. Within the last three years they had received as patients 334 medical officers and nurses from other hospitals. The circumstances of the patients were never considered, but if the committee thought that anyone was taking unfair advantage of the hospital, they would endeavour to put pressure upon them to pay.

Major W. CHRISTIE (the Secretary) followed, and gave corroborative evidence.

Dr. HOPWOOD, Resident Medical Officer of the hospital, said the honorary medical staff were members of the house committee. The nurses were nearly all trained at the hospital. None of their nurses had died from infectious diseases. He then gave particulars as to the hours and work of the nurses, and said that very few of them were sent out for private nursing. The demand was very irregular. The nurses were not hard worked, and their health was good. The mortality from scarlet fever, enteric fever, diphtheria, and measles was very low; and, in regard to enteric fever, it was about 50 per cent. less than that of the Metropolitan Asylums Board. At the hospital it was 9 per cent. in 1890, and in 1889 5·2 per cent. The Committee then adjourned.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary comitia of the College was held on Thursday, April 30th, at 5 P.M. The minutes having been read and approved,

The PRESIDENT stated with reference to the representation he had made on behalf of the College, that the objectionable clause in the Bill now before the House, relating to the Factory Act, had been rejected. He further stated that in reference to the grievances of the Army Medical Department, every one of the the things asked for had been granted except one, namely, the formation of an Army Medical Corps, and as there was yet another meeting to be held, he hoped that even this might be granted.

The PRESIDENT then nominated the following Fellows to form a committee to arrange for the reception of the members of the International Congress of Hygiene and Demography by the College, in August next, namely, the Treasurer, the Registrar, Dr. Langdon Down, Dr. Theodore Williams, Dr. Harris, Dr. Fowler, and Dr. Acland.

The following gentlemen were admitted as Members: W. Gordon, M.B.Camb.; G. R. Murray, M.B.Camb.; B. Pierce, M.D.Lond.; S. O. L. Potter, M.D.Jefferson Coll.; J. T. Robb, M.D.Aberd.; G. I. Schorstein, M.B.Oxf.; W. K. Sibley, M.B.Camb.; E. H. Starling, M.D.Lond.; D. F. D. Turner, M.D.Edin.

Licenses were granted to 97 gentlemen, of whom only 11 did not present themselves under the regulation of the Conjoint Board.

A communication was received from the Manchester and Salford Sanitary Association respecting the question of placing legislative restriction upon hypnotism. The communication was ordered to lie upon the table.

The following Members nominated by the Council were elected Fellows: W. A. Sturge, M.D.Lond.; A. H. Carter, M.D.Lond.; R. G. Hebb, M.D.Camb.; S. P. Phillips, M.D.Lond.; J. J. Pringle, M.B.Edin.; W. Pasteur, M.D.Lond., S. H. C. Martin, M.D.Lond.; A. E. Garrod, M.D.Oxon.; S. H. Habershon, M.D.Camb.

The TREASURER asked permission for the President to be allowed to entertain certain of the representatives attending the Congress of Hygiene and Demography at dinner in the College Buildings. This was seconded by Dr. THEODORE WILLIAMS, and at once agreed to.

The REGISTRAR moved: "That the course of medical study required for the licence of the College be extended to a period of five years from registration." He referred to the occasion on which this subject had been before the College, and pointed out that no decision had ever been arrived at on this question. This was seconded by Dr. ALLCHIN.

Dr. JOHN HARLEY deprecated hasty legislation. By the scheme of the General Medical Council a student would be committed to a course of five years' academic study. He thought it would entail a great hardship on many men by preventing them from having the opportunity of grounding themselves in the details of private practice.

Sir R. QUAIN moved that the question be now put; this was seconded by Dr. RUSSELL REYNOLDS, and carried.

The resolution was then put and carried by an overwhelming majority.

Dr. NORMAN MOORE moved, and Sir RICHARD QUAIN seconded, the postponement of the discussion of the proposals for a five years' curriculum till the next meeting, which was carried.

Dr. PRIESTLEY proposed that the report on the Midwives Registration Bill be sent to the Lord President of the Council and the General Medical Council. This was seconded by Dr. CHAMPNEYS.

The following is the report of the Committee appointed to consider and report to the College on the Midwives Registration Bill then before Parliament. The members of the Committee were Dr. Priestley, Dr. Sturges, Dr. Playfair, Dr. Powell, Dr. Farquharson, Dr. Champneys:—

1. It appears that there are from 10,000 to 15,000 midwives practising in England and Wales, many of them entirely uneducated and incompetent. This must be taken as an existing fact which cannot be ignored.

2. Midwives are under careful State regulation in all the

other principal countries of Europe, and, in the opinion of your Committee, the education, examination, and registration of midwives in Great Britain are urgently required in the interests of the women they attend.

3. The General Medical Council would be a suitable body to frame regulations for the future education and registration of midwives, if it would undertake that duty.

4. The Bill before Parliament may furnish a basis for legislation, but it requires important modifications. Thus:

(*a*) In order to ensure efficiency of examination, it would not be desirable to establish many centres, as proposed in Clause 3 of the Bill.

(*b*) Clause 5, as at present worded, is impracticable, since it goes beyond the provisions of the Medical Acts. It requires the addition of the word "registered" before midwife.

(*c*) It would not be desirable to admit midwives from a foreign country to the Register, as proposed in Clause 8, without examination.

(*d*) Clause 9 requires amendment, inasmuch as it apparently renders too easy the admission of existing midwives to a register. Satisfactory evidence of their competency should be required before admitting them to a register.

5. Your Committee do not believe that the examination and registration of midwives would seriously affect the practice of medical men in this any more than in other countries, if carefully guarded by proper regulations. In any case they feel confident that the majority of medical men in this country are not likely to raise objections to any measure which may conduce to the welfare and comfort of the poor.

6. As much misapprehension exists concerning the probable effect of educating and registering midwives, and as the Bill before Parliament has met with serious opposition, your Committee believe that it would be best to refer the question to a Select Committee of the House of Commons, so that all the facts may be elicited.

The report was dated March 3rd, 1891.

Dr. SANSOM thought it was a serious question whether the College should interfere in this matter, as the registration of nurses might next be before the College—a subject fraught with difficulty.

Dr. NORMAN MOORE thought that the College should adopt only the last clause, recommending that the subject should be referred to a Select Committee of the House of Commons.

Dr. PLAYFAIR strongly opposed the suggestion of Dr. Moore.

The resolution was then put and carried.

A report was read from the Council respecting the nomination of Fellows as examiners, pointing out that the Council was guided by no other consideration than the suitability of the gentlemen in question. This was received and adopted.

Dr. Warner was nominated as Milroy Lecturer.

The quarterly report of the Finance Committee was received and adopted, the financial position of the College being satisfactory.

A report of the Committee of Management, recommending that permission be granted for the use of the Examination Hall for the purposes of the Congress of Hygiene and Demography, and further recommending that the Royal Southern Hospital, Liverpool, be recognised as a "hospital in connection with a recognised medical school," was received and adopted.

The quarterly report was received and adopted from the Laboratories Committee, stating the work that had been done in the laboratories.

Votes of thanks were given to the donors of books.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—A meeting will be held at Brentwood on Thursday, May 21st. Gentlemen having communications to bring before the meeting are requested to notify the Honorary Secretary of the District, Mr. C. E. Abbott, Braintree, as soon as possible. Further particulars will be duly announced.

SOUTHERN BRANCH: SOUTHAMPTON DISTRICT.—The next meeting of the District will be held at 1, Grosvenor Square, Southampton, on Tuesday, May 5th, 1891, at 8 P.M. After the election of officers and examination of accounts a paper will be read by Professor Henry Cayley, F.R.C.S., Army Medical School, on Some Functional Diseases of the Heart.—THEOPH. W. TREND, M.D., Local Secretary.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will take place on Thursday, May 28th, at Gravesend, Mr. O. R. Richmond in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to inform the Honorary Secretary of the District, Mr. A. W. Nankivell, St. Bartholomew's Hospital, Rochester, not later than May 2nd, 1891. Further particulars will be duly announced.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The annual meeting of the above District will take place at the Kent and Canterbury Hospital, Canterbury, on Thursday, May 14th, at 2.45 P.M., Mr. Brian Rigden in the chair. The Chairman will be pleased to see members and friends to tea at his house, 64, Burgate Street, at 5 P.M. Agenda: The usual business of the annual meeting, including the appointment of an Honorary District Secretary in place of Dr. Tyson, who is retiring. The question of dinner or tea will be brought forward. Dr. FitzGerald will open a discussion on Koch's Treatment of Tuberculosis. Dr. Bowles: Treatment by Tuberculin: Experiences at Berlin and at Folkestone. Mr. Preston will show cases of (1) Congenital Dislocation of the Crystalline Lens in Three Members of a Family; (2) Coloboma of the Choroid and Iris.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this District will be held at the Greyhound Hotel, Croydon, on Thursday, May 14th, at 4 P.M., Dr. Shadforth Morton, of Croydon, in the chair. Dinner at 6 P.M.: charge 7s. (exclusive of wine). The following papers are promised:—Dr. Greville MacDonald: On Laryngeal Therapeutics. Mr. Charters Symonds: On Seven Cases of Chronic Intestinal Obstruction, in five of which the sigmoid was opened, in two the ileum. Mr. Charles Wray: On Some of the Commoner Forms of Conjunctivitis and their Treatment. Mr. A. Maude: On a Case resembling Acromegaly, with remarks. Members please communicate with the Honorary Secretary, P. T. DUNCAN, M.D., Croydon.

NORTH OF IRELAND BRANCH.

THE spring meeting of this Branch was held in the Belfast Royal Hospital on Thursday, April 23rd, Dr. W. A. McKEOWN, President, in the chair. There was a large attendance of members, and, amongst others, Professor Gairdner, of Glasgow, was present.

Cases.—Professor SINCLAIR showed a lad, aged 21, upon whom laparotomy for acute intestinal obstruction had been successfully performed. A cord-like band, extending from the brim of the true pelvis to the sacro-iliac synchondrosis, crushed two coils of the ileum against the brim, and these coils were matted together and bent upon themselves at an acute angle. The obstruction was complete. The band was divided and the adhesions broken down. Intestinal evacuation by incising the gut for a quarter of an inch was necessary, much gas and chyme being expressed by manipulation. Even after this the parietal wound could not be quite closed. The healing, however, proceeded, and the lad had returned to his work. The bowels acted from the day after the operation.—Dr. MACKENZIE showed two patients upon whom he performed excision for disease of the knee-joint nine months ago.—Dr. HOWARD SINCLAIR showed two cases of Phthisis exhibiting marked improvement under Koch's treatment, and gave a short account of sixteen cases of bacillary phthisis treated by tuberculin.—Dr. JOHN SIMPSON showed a case of Phthisis of the lungs treated by tuberculin.—The PRESIDENT showed a series of Eye Cases, one of them a boy from whose vitreous he had removed a piece of metal by the electromagnet.

Specimens.—Dr. A. B. MITCHELL showed Gangrenous Gut from a case in which intestinal obstruction had been followed by gangrene and perforation. He also read notes of a case of extensive Suicidal Wounds of the Throat (Tracheotomy), and showed the Larynx.—Dr. ST. CLAIR BOYD showed the Uterine Appendages removed by abdominal section in a case of Myoma, and read notes of a case of Parturition without further Rupture of the Perineum in a patient in whom, sixteen months previously, he had successfully performed perineorrhaphy by Tait's method for a rupture which extended through the sphincter.—Dr. BYERS showed the specimens from two successful Abdominal Sections; one was an ordinary Cystoma of the Ovary; in the other, in addition to an Abdominal Tumour, there was a second Cyst in the Pelvis, which during removal ruptured, discharging a quantity of tarry blood clot into the cavity of the peritoneum, which was got rid of by flushing out with warm water, followed by

drainage with a glass tube for forty-eight hours. The case was of interest in two respects: (1) It showed the difficulty of accurate diagnosis in such cases, as the tumour, which occupied the lower part of the abdomen, obscured the presence of the cyst in the pelvis; (2) it illustrated the value of cleansing the peritoneal cavity with warm water; of drainage and of the saline purge, when there was a suspicion of commencing peritonitis.

New Members.—The following were elected members of the North of Ireland Branch and of the Association: Dr. D. Jamison, Belfast; Dr. Bingham, Belfast; Dr. Adrain, Larne; Dr. Magill, Lisburn; and Dr. J. B. Moore, Belfast.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council, held in the Council Room of the Association, 429, Strand, London, W.C., on Wednesday, April 15th, 1891:—

Present:

Dr. W. Withers Moore, President of the Council, in the chair.
Dr. J. R. Thomson, Bournemouth, President-Elect.
Mr. H. T. Butlin, Treasurer.

Dr. B. Anningson, Cambridge.
Dr. Henry Barnes, Carlisle.
Dr. G. B. Barron, Southport.
Dr. T. Bridgwater, LL.D., Harrow-on-the-Hill.
Dr. J. S. Bristowe, F.R.S., London.
Dr. J. S. Cameron, Leeds.
Dr. A. Carpenter, Croydon.
Dr. W. Carter, Liverpool.
Dr. J. Ward Cousins, Portsmouth.
Dr. H. Radcliffe Crocker, London.
Mr. T. W. Crosse, Norwich.
Dr. G. W. Crowe, Worcester.
Dr. P. M. Deas, Exeter.
Dr. A. Dempsey, Belfast.
Dr. J. L. H. Down, London.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Sir B. Walter Foster, Birmingham.
Mr. R. S. Fowler, Bath.
Dr. J. H. Galton, Upper Norwood.
Dr. C. E. Glascott, Manchester.
Dr. Bruce Goff, Bothwell.
Dr. T. W. Grimshaw, Carrickmines.
Dr. H. Handford, Nottingham.
Mr. J. H. Hemming, Kimbolton.
Mr. G. F. Hodgson, Brighton.
Dr. C. Holman, Reigate.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. Jordan Lloyd, Birmingham.
Mr. C. Macnamara, London.
Mr. W. Jones-Morris, Portmadoc.
Mr. C. H. W. Parkinson, Wimborne Minster.
Dr. C. Parsons, Dover.
Dr. W. Russell, Edinburgh.
Dr. R. Saundby, Birmingham.
Mr. S. W. Sibley, London.
Dr. E. Markham Skerritt, Clifton, Bristol.
Mr. Noble Smith, London.
Dr. J. Strachan, Dollar, N.B.
Mr. T. Sympson, Lincoln.
Mr. Lawson Tait, Birmingham.
Dr. T. W. Trend, Southampton.
Mr. C. G. Wheelhouse, Filey.

The minutes of the last meeting having been printed and circulated amongst the members, and no objection having been taken, were signed as correct.

Read letters of apology for non-attendance from the President of the Association, Dr. Wade, Dr. Gairdner, Surgeon-General Cornish, Mr. Bateman, Mr. Hardie (Manchester), and Dr. Kelly.

Resolved: That the letters from Mrs. Waters and Dr. Arthur Strange be received and entered upon the minutes.

Resolved: That the family of the late Dr. Strange be asked if they have a portrait of him, and, if so, whether they would be kind enough to present it to the Association for the purpose of having it hung in the Council Room.

Resolved: That 263 of the 266 members whose names appear on the circular convening the meeting be elected members of the Association.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain report upon accounts for the quarter ending March 31st last, amounting to £6,795 6s. 10d., financial statement for the year ending December 31st, 1890, and report of auditors for the quarter ending March 31st last.

Resolved: That the financial statement for the year ending December 31st, 1890, as certified by the auditors as correct, be approved and published in the British Medical Journal in accordance with By-law 26 (see British Medical Journal of April 18th, page 879).

Resolved; That the minutes of the Branch Organisation Committee of April 14th be approved, and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Premises and Library Committee of April 14th be approved, and the recommendations contained therein carried into effect.

In reference to minutes 1,312 and 1,313 postponed from the last meeting, respecting the candidature of foreigners for election as members,

Resolved: That while recognising it as both a duty and a pleasure to accord a hearty welcome to foreign medical practitioners attending the annual general meeting of the Association, the Council is of opinion and is advised that it cannot extend to such practitioners the privilege of actual membership, having regard to the origin and constitution of the Association, and to the fact that in the opinion of the Council the word "qualified" in By-law No. 1 means British subjects who are registered or entitled to be registered in the *Medical Register* of Great Britain or Ireland, or British subjects residing in any part of the British dominions who are legally entitled to practise in such dominions, and that such definitions cannot be further extended.

Schedule of Medical Practitioners who are Eligible for Election as Members of the British Medical Association.

1. Medical practitioners, either English, Scotch, or Irish, residing in the British Isles, who are duly qualified to practise, and are registered by the General Medical Council.

2. Foreigners residing and naturalised in this country, who possess English degrees or diplomas, and have such degrees registered at the General Medical Council.

3. Englishmen resident in foreign countries who possess English degrees registered at the General Medical Council.

4. Englishmen resident in the colonies who possess English diplomas, and are registered at the General Medical Council.

5. British subjects residing in our colonies who are duly qualified medical practitioners in accordance with the colonial law.

In reference to minute 1,292, passed at the meeting of the Council October 15th last, a copy of which is as follows, namely:—

Resolved: That the elected members of the General Medical Council be respectfully requested to move that Council to represent to the Privy Council the desirability of exercising the powers conferred by Section 1c, Clause 10, of the Medical Act, 1886, and to increase the number of elected representatives.

Resolved: That the report of the Direct Representatives on the General Medical Council be received and entered upon the minutes. (See Journal, vol. ii, 1890, p. 1250.)

Resolved: That the Council of the British Medical Association regret much that the representation made to the General Medical Council by Sir Walter Foster as coming from the British Medical Association did not receive the serious consideration that it deserved, and that a Committee be appointed to consider the best means of furthering the object of securing an increased direct representation of the profession on the General Medical Council.

Resolved: That the Committee consist of the President of the Council, the Treasurer, Sir Walter Foster, Mr. Wheelhouse, Mr. Sibley, Mr. Lawson Tait, Dr. Ward Cousins, Dr. Saundby, and Dr. Alfred Carpenter, to take what action they may deem necessary.

The General Secretary reported that the dates of the next Council meetings had been altered from the third Wednesday in the month to July 8th and October 21st in order to meet the convenience of the Scotch representatives, and also in consequence of the early date of the annual meeting.

The Treasurer then placed before the Council the power of attorney for the receipt of dividends on £3,000 Local Loans Stock, which was sealed in the presence of the Council, and the seal relocked and the keys returned to the holders, namely, the President of the Council, the Treasurer, and the General Secretary.

Mr. Sibley, Acting Chairman, placed before the Council the

minutes of the last three meetings of the Parliamentary Bills Committee of January 13th, February 9th, and February 18th.

Resolved: That the minutes of the Parliamentary Bills Committee be received and approved.

Resolved: That the minutes of the Inebriates Committee, of November 24th last, be received and approved.

Resolved: That the Committee appointed by the Council on July 30th last in connection with a Medical University in London should consider and report to the Lord President in Council, or take such other steps as they think proper to bring their decision to his notice regarding the advisability of adopting or otherwise one or other of the schemes lately put forward for the formation of a Teaching University in the metropolis, provided such scheme is in accordance with the recommendations of the Royal Commission on this subject.

BRITISH MEDICAL ASSOCIATION.

FIFTY-NINTH ANNUAL MEETING.

THE fifty-ninth Annual Meeting of the British Medical Association will be held at Bournemouth on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1891.

President: WILLOUGHBY FRANCIS WADE, B.A., M.B., F.R.C.P., J.P., Senior Physician, Birmingham General Hospital, 27 Temple Row, Birmingham.

President-elect: JOHN ROBERTS THOMSON, M.D., F.R.C.P., Consulting Physician, Royal Victoria Hospital, Bournemouth, Monkchester, Bournemouth.

President of the Council: WITHERS MOORE, M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Burgess Hill, Sussex.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital.

An Address in Medicine will be delivered by THOS. LAUDER BRUNTON, M.D., F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, London.

An Address in Surgery will be delivered by JOHN CHIENE, M.D., F.R.C.S.Ed., Professor of Surgery at the University of Edinburgh.

An Address in Public Medicine will be delivered by EDWARD COX SEATON, M.D., Lecturer on Public Health at St. Thomas's Hospital, London.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

A. MEDICINE.—*President:* P. H. PYE-SMITH, M.D., F.R.S. *Vice-Presidents:* WILLIAM GEORGE VAWDREY LUSH, M.D.; THOMAS BARLOW, M.D. *Honorary Secretaries:* WM. FRAZER, M.D., "Elmhurst," Madeira Road, Bournemouth; H. MONTAGUE MURRAY, M.D., 27, Savile Row, W.

B. SURGERY.—*President:* JOHN WARD COUSINS, F.R.C.S. *Vice-Presidents:* J. D. G. DOUGLAS, M.D.; WM. WATSON CHEYNE, F.R.C.S. *Honorary Secretaries:* A. GUNTON TURNER, M.R.C.S., "Holmwood," Bournemouth; A. A. BOWLBY, F.R.C.S, 43, Queen Anne Street, W.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President:* W. J. SMYLY, M.D. *Vice-Presidents:* ALLAN MCLEAN, M.D.; A. H. G. DORAN, F.R.C.S. *Honorary Secretaries:* H. A. LAWTON, M.R.C.S., 74, High Street, Poole, Dorset; MONTAGU HANDFIELD-JONES, M.D., 24, Montagu Square, Hyde Park, W.

D. PUBLIC MEDICINE.—*President:* J. BURN RUSSELL, M.D. *Vice-Presidents:* H. F. PARSONS, M.D.; JOHN COMYNS LEACH, M.D. *Honorary Secretaries:* C. H. W. PARKINSON, M.R.C.S., Wimborne Minster; P. W. G. NUNN, L.R.C.P., "Maplestead," Christchurch Road, Bournemouth.

E. PSYCHOLOGY.—*President:* P. MAURY DEAS, M.B. *Vice-Presidents:* HENRY JOHN MANNING, M.R.C.S.; D. NICOLSON, M.D. *Honorary Secretaries:* P. W. MACDONALD, M.D., Dorset County Asylum, Dorchester; WILLIAM HABGOOD, M.D., Belmont, Sutton, Surrey.

F. PATHOLOGY.—*President:* W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* KINGSTON FOWLER, M.D.; W. RUSSELL, M.D. *Honorary Secretaries:* W. G. SPENCER, M.B., 35, Brook Street, Grosvenor Square, W.; E. HYLA GREVES, M.D., Rodney House, Poole Road, Bournemouth.

G. OPHTHALMOLOGY.—*President:* N. C. MACNAMARA, F.R.C.S. *Vice-Presidents:* ROWLAND W. CARTER, M.D.; MALCOLM M. MCHARDY, F.R.C.S.Ed. *Honorary Secretaries:* J. B. LAWFORD, M.D., 55, Queen Anne Street, W.; BERNARD SCOTT, M.R.C.S., "Hartington," Poole Road, Bournemouth.

H. DISEASES OF CHILDREN.—*President:* J. F. GOODHART, M.D. *Vice-Presidents:* T. W. TREND, M.D.; T. B. SCOTT, M.R.C.S. *Honorary Secretaries:* SIDNEY PHILLIPS, M.D., 62, Upper Berkeley Street, W.; DENNIS C. EMBLETON, L.R.C.P., "St. Wilfred's," Michael's Road, Bournemouth.

I. THERAPEUTICS.—*President:* WM. VICARY SNOW, M.D. *Vice-Presidents:* SIDNEY COUPLAND, M.D.; A. G. BARRS, M.D. *Honorary Secretaries:* CHRISTOPHER CHILDS, M.D., 2, Royal Terrace, Weymouth; JOHN ROSE BRADFORD, M.D., 52, Upper Berkeley Street, W.

Honorary Local Secretary: JAMES DAVISON, M.D., "Walderslow," Bournemouth.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 28TH, 1891.

9.30 A.M.—Meeting of 1890-91 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees: and other business.
4 P.M.—Sermon by the Right Rev. the Lord Bishop of Winchester.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address.

WEDNESDAY, JULY 29TH, 1891.

9.30 A.M.—Meeting of 1891-92 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Dr. T. LAUDER BRUNTON, F.R.S.

THURSDAY, JULY 30TH, 1891.

9.30 A.M.—Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery by Professor J. CHIENE.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 31ST, 1891.

10.30 A.M. to 1.30 P.M. Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Public Medicine by Dr. EDWARD C. SEATON.

SATURDAY, AUGUST 1ST, 1891.

Excursions.

THE ANNUAL MUSEUM.

THE Museum in connection with the fifty-ninth annual meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Foods and Drugs, including Prepared Foods, Pharmaceutical and Chemical Preparations, Antiseptic Dressings, etc. (Honorary Secretary, Mr. MacGillicuddy, Pendennis, Bournemouth.)

SECTION B.—Pathology, comprising Casts, Models, Apparatus, Microscopical and Macroscopical Specimens, etc. (Honorary Secretary, Dr. Bright, Roccabruna, Bournemouth.)

SECTION C.—Anatomy and Physiology, comprising Specimens and Apparatus as above. (Honorary Secretary, Dr. G. Schofield, Durham House, Bournemouth.)

SECTION D.—Surgical Appliances and Books, comprising New Books, Atlases, Diagrams, Tables; Medical and Surgical Instruments and Appliances, Ambulances, etc. (Honorary Secretary, Dr. Grabham Lys, Royal Victoria Hospital, Bournemouth.)

SECTION E. Sanitary Appliances, comprising Apparatus and Appliances connected with Sanitation, Equipment of Houses, Public Institutions, Hospitals, etc.; Improvements in Drainage, Water Supply, Ventilation, Illumination, and Clothing. (Honorary Secretary, Mr. W. H. L. Marriner, Westbourne Tower, Bournemouth.)

The Secretary of the Museum will be glad to hear from members of the profession who are willing to send objects for exhibition in the Sections of Anatomy and Physiology and Pathology. There is no hospital museum in the neighbourhood. (Address, Mr. George Mahomed, Astolat, Bournemouth.)

To Non-Professional Exhibitors.

Inventors and manufacturers wishing to exhibit in the annual Museum are invited to apply for space early to the Honorary Secretary of the Museum, Mr. George Mahomed, Astolat, Bournemouth.

The charge to exhibitors (other than members of the

medical profession) will be 2s. per square foot of table space in Sections A, B, C, D, and 6d. per square foot of floor space in Section E, and in Section D for ambulance appliances.

In considering applications for space the Committee will give preference to *bonâ fide* inventions and improvements not previously exhibited.

A Catalogue will be printed, prepaid advertisements will be inserted in the Catalogue.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretary of each Section in which they propose to exhibit.

2. Communications on general matters connected with the Museum should be addressed to Mr. G. Mahomed, Astolat, Bournemouth.

3. Intimation of proposed exhibits must be made to the Honorary Secretary before June 20th.

3*a*. A brief description of each exhibit must be forwarded to the Secretary of the Section concerned not later than June 30th.

4. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Bournemouth," with the name of the Section for which they are intended. Packages should not be addressed to a firm's representative at the Museum.

5. Exhibits must be delivered between July 15th and 21st.

6. Every packet most bear a card showing the name and address of the exhibitor.

7. The Committee will exercise every care regarding the objects entrusted to them, but all risks and expenses must be borne by the exhibitor.

8. The arrangement of signs, placards, etc., will in every case be subject to the approval of the Committee.

9. No exhibits will be received except on the understanding that the above regulations will be complied with.

A. G. S. Mahomed, M.R.C.S.,
Honorary Secretary Museum Committee.
Astolat, Bournemouth.

SPECIAL CORRESPONDENCE.

PARIS.

Medical Education in France.—Drinking Water and the Death-rate.—The French Medical Association.—General News.

The Marseilles Municipal Council has decided to establish a Municipal Medical Faculty in the Chateau du Pharo. M. Delibes has collected 70,000 francs (£2,800) for the special improvement of the science laboratories. Toulouse has also its faculty; some of the professors are recruited from Paris doctors and hospital *chefs de clinique*. The Paris Municipal Council still entertain the idea of creating a Municipal Medical Faculty. The existing Medical School is making efforts to improve its teaching organisation, and the Dean proposes to appoint forty clinical professors among the *agrégés* and faculty professors. A new regulation has been passed obliging all medical students to attend, during two months, the lying-in hospitals attached to the faculty. This new regulation is much discussed, inasmuch as there being only two lying-in hospitals attached to the Medical Faculty. These will be overcrowded by pupils during these compulsory attendances. At present students can obtain gynæcological knowledge at any hospital where there is a lying-in ward.

At a recent meeting of the Comité Consultatif d'Hygiène Publique, M. Henri Monod read a report on the effects of providing different communes with uncontaminated drinking water. The mortality returns were examined in twenty-five communes. In four, the mortality remained the same, but in twenty-one the decrease per cent. was as follows: 0.30, 0.42, 0.50, 0.53, 1.37, 1.41, 1.65, 1.87, 2.28, 2.57, 2.69, 2.93, 3.59, 3.69, 3.97, 4.25, 5.58, 5.72, 6.99, 10.39; and at Bessiges, 13.45. Before good drinking water was provided, the typhoid mortality in the last-named commune was 32.44 per cent. from 1881 to 1884; from 1886 to 1890, it was 28.40, good drinking water being then provided. With regard to seventeen communes, it was impossible to collect any statistics, as it is not compulsory in France to declare the cause of death. In the twenty-five communes, where the statistics have been drawn up with great care, mortality from typhoid fever has been reduced almost to *nil*.

The Association des Médecins Français held its annual meeting recently. Dr. Brun, who for thirty years has acted as Treasurer of the Association, stated that it numbers 8,000 members, and has distributed in yearly pensions and grants more than 1,500,000 francs (£60,000). At the last meeting, nineteen pensions of £24 a year were voted.

Dr. de Lannessau, Professor *agrégé* of the Paris Medical Faculty and deputy of the Seine, has been appointed Governor-General of the French Indo-China. Dr. Gadaud, deputy for Dordogne, has been elected Senator for the same department.

MANCHESTER.

Owens College: Summer Session: New Medical Buildings: Post Graduate Course.—The Royal Infirmary and its Scheme for Pensions to Nurses.

The Summer Session of the Owens College Medical School begins this day (Friday, May 1st). The plans of the extension of the Medical School, prepared by Mr. Waterhouse, R.A., have been approved by the Council of the College, and it is stated that the contract for the erection of the new buildings has been given to a large firm of builders in Manchester. Operations for the erection of the much needed new laboratories will therefore be commenced forthwith. As already announced in the advertising columns of the British Medical Journal, the medical faculty of the College have decided to continue the course of Post-Graduate Lectures and Demonstrations in the College that were so eminently successful last year. The courses will commence in June.

The Board of the Manchester Royal Infirmary have approved certain pension regulations framed by the House Committee for nurses. It is provided "that any nurse who shall produce evidence of having attained the age of 50 years, and who shall have been not less than 25 years continuously in the service of the Manchester Royal Infirmary, and who shall be in the opinion of the board of management unfit for further public work, and who is also of satisfactory character, shall be entitled to receive a pension of £25 per annum." It is further provided that if any nurse of not less than ten years' service shall from no fault of her own break down in health to such an extent as to render her unfit for further work, the Board of Management may award to such nurse such pension, gratuity, or allowance (temporary or otherwise) as they shall think proper.

LIVERPOOL.

Sir Dyce Duckworth on Chronic Rheumatic Arthritis.—Proposed Infectious Hospital for Birkenhead.—Public Exhibitions of Hypnotism.

In response to an invitation by the Medical Institution, Sir Dyce Duckworth read an interesting address before the society on the Nosological Position and Relations of Chronic Rheumatic Arthritis. He remarked that while the whole pathology of rheumatism was still a *quæstio vexata*, we were now fairly satisfied with our latest acquired knowledge of its therapeutics, the therapeutic art being in this, as in many other cases, far ahead of our knowledge of the nature and causation of the diseases we had to treat. There were three principal theories of rheumatism, (*a*) the chemical, or more strictly neuro-humoral theory, that regarded it as due to the presence of some peccant material, whether lactic or uric acid, or both, (*b*) the nervous, and (*c*) the infective theory. There was no complete evidence in favour of any one of them. Sir Dyce Duckworth recognised a neuro-humoral pathology for gout, and by analogy would suppose something similar in rheumatism, a dominant nervous element being present in both. In common with Charcot he accepted the idea of a basic arthritic diathesis, from which might issue the gouty and the rheumatic branches, and considered the existence of this diathesis as well established as the strumous or tuberculous habit. The difficulty was to assign to chronic rheumatic arthritis its true position. It bore no constant relation to acute rheumatism or gout. Its dependence on a diathetic

tendency was shown by the immunity of many persons who were exposed to the causes that gave rise to it in others. Direct heredity was not strongly marked, but there was commonly traceable an ancestral history of some rheumatic or gouty ailment. This diathetic tendency would entail a degree of vulnerability in articular structures. There could be little doubt of the influence of the nervous system in the case. He had gradually been led to adopt many of the views of Friedländer, who believes that the articular lesions are peripheral manifestations of a degenerative change in a joint centre, situated high up in the medulla oblongata. While Friedländer believes this degeneration is due to the presence of an infective micro-organism, Sir Dyce Duckworth regarded it as the outcome of a specific diathetic proclivity.

The vexed problem as to the provision of suitable hospital accommodation for infectious cases in Birkenhead seems to be approaching a satisfactory solution. The Health Committee have decided to recommend the construction of a hospital as suggested by the Local Government Board inspector. It is proposed that the building shall consist of three blocks, each containing twenty-four beds, making seventy-two beds in all, and a special block for the nurses and administrative staff. The scheme will involve the expenditure of about £12,200, and provides for the entire abolition of the present fever hospital.

It is much to be regretted that a series of public exhibitions of hypnotism have lately been taking place in Liverpool, and have been pretty fully reported in the press. The experiments appear to have been of a very ordinary kind, and must have tended to bring the whole subject into contempt.

CORRESPONDENCE.

THE PROPOSED RECONSTITUTION OF THE UNIVERSITY OF LONDON.

SIR,—Dr. Windle has misrepresented some of the facts of my letter, and seems himself to like to wander through "the realms of fancy" rather than to attempt to follow me when I try to estimate what will be the effect of the passing or the rejection of the present scheme. He sneers at prophecy, but occasionally indulges in it. Surely we all of us support or oppose the scheme according as to whether we prophesy that its effect will be good or bad.

He says "The College of Surgeons has not yet expressed an opinion." He does not, I am afraid, read the BRITISH MEDICAL JOURNAL carefully, for on p. 539 of the present volume it is stated that "The Royal Colleges of Physicians and Surgeons have, we understand, informed the Senate of the London University that they are prepared to accept the last revised scheme." Again on p. 769, "The Royal Colleges of Physicians and Surgeons have absolutely assented." To take another misstatement. Dr. Windle writes "Dr. White urges that . . . nearly all the bodies interested are satisfied." What I said was, "none can be completely satisfied," but I went on to point out that the scheme had been adopted by nearly all the bodies interested. This is a fact which cannot be shaken by anything Dr. Windle "hears," or thinks "may or may not be."

Dr. Windle objects to my statement that "the question of the provincial colleges is an unimportant matter." I still think it is, for the reasons I gave, and I think I can give others. What are the provincial colleges? They are colleges existing at Oxford, Cambridge, Manchester, Liverpool, Leeds, Durham, Newcastle, Birmingham, Bristol, Sheffield and Nottingham in England, Aberystwith, Bangor, Cardiff and Lampeter in Wales. Now of these those at the first seven places are already affiliated to existing Universities; St. David's College, Lampeter, is affiliated to Oxford and Cambridge, and the remaining three Welsh colleges are trying hard to get a university of their own. That leaves for consideration four out of fifteen, and these four places having provincial colleges are Birmingham, Bristol, Sheffield, and Nottingham. Now I think any impartial observer will admit that in comparison with the Senate, the Royal Colleges of Physicians and Surgeons, University College, London, King's College, London, all the London medical schools, the Incorporated Law Society and Lincoln's Inn—all of which have adopted the scheme—the colleges at Birmingham, Bristol, Sheffield and Nottingham are unimportant. Let us, however, test this point by the faculty of medicine. On pp. 917 and 968, BRITISH MEDICAL JOURNAL, vol. ii., 1890, is a list of the entries at the medical schools for the session 1890-91. The number for Birmingham and Bristol was 99, none are returned for Sheffield or Nottingham, the last in fact does not occur among the list of medical schools given in the *Medical Directory*. The number for the London schools was 1,008. Sheffield is such a small school that it cannot much alter these figures, from which it appears that the proportion of medical entries in London compared with those at the provincial colleges interested is rather more than 10 to 1.

Dr. Windle objects to my forecast that provincial colleges attached to other universities will be ineligible for connection with the reformed London University. I think he will find that, if the scheme is passed, time will show that I am right. He apparently has not read the memorandum, attached to the scheme issued by the Senate, for on p. 13 it is stated that the Senate have only taken into account those colleges which are not too intimately connected with any other university system to admit of being connected with the reformed University. This will I venture to think be found to exclude all the English provincial colleges except those of Birmingham, Bristol, Sheffield, and Nottingham; anyhow these were the only English colleges which took part in the deputation to the Senate on October 29th, 1890.

Dr. Windle's remark about the right of appeal does not in any way interfere with the accuracy of my statement that the scheme gives the Senate the right to refuse to admit provincial colleges as constituent colleges, but that certain London colleges are constituent colleges in their own right. I quite agree with him, however, that the Senate can remove either. By a slip in my letter in the BRITISH MEDICAL JOURNAL, "refused" was written as "removed."

Perhaps the most extraordinary paragraph in Dr. Windle's letter is No. 5, in which he says "Dr. Hale White then proceeds to argue that the status of the M.D. will be lowered, or what is the same thing, it will be made more accessible." I did not say lowered, I said accessible. I can hardly imagine even a foreigner thinking that the words lowered and accessible mean the same thing.

We learn from the papers that Birmingham is agitating for a university for itself. If this is true, it is very like the dog in the manger for that town to try to spoil the attempt being made to reform the University of London.

But after all, the important question is not to measure the degree of Dr. Windle's inaccuracy, but to determine whether it is advisable to support the scheme, and I still think, for the reasons set forth by Sir Philip Magnus in the *Times*, and for those given in my previous letters, Convocation will do wisely to accept it.—I am, etc.,

Harley Street, W. W. HALE WHITE, M.D.Lond.

SIR,—As the scheme for the reconstitution of London University is shortly to be considered by Convocation and by the Fellows and Members of the Royal College of Surgeons, we venture to appeal to you for permission to state briefly the views of the provincial schools on the subject.

The first scheme promulgated was objected to by us on the following grounds:—1. That provincial colleges and schools of medicine were excluded from representation on the governing body of the University, and incapacitated from becoming constituent colleges. 2. That Boards of Studies were to be in the hands of London institutions, thus depriving us of any voice in the arrangement of curricula in which we are deeply interested. 3. That examiners would be chosen solely from London and not, as now, impartially from London and the provinces. We argued this from the similarity of the composition of the Board to that of the Colleges of Physicians and Surgeons, which have persistently followed a policy such as that just indicated. The letter to the Lord President of the Council in which these views were embodied concluded with the following passage, which may be quoted as expressing our view of the matter. "It is in no spirit of opposition to the creation of a Teaching University for London that objection is made to the schemes of the Royal Commission and of the Senate. Objection is raised against the transformation of a national institution like the present University of

London, whose domicile is naturally in the metropolis, into a local university, with merely the additional power to grant degrees to outsiders." The letter from which this quotation is made was signed by the representatives of most of the provincial university colleges and schools of medicine.

Further negotiations led to a meeting between a deputation representing these colleges and the Special Committee of the Senate of London University. On this occasion the views above expressed were laid before the Committee, with various arguments in favour of the position taken up by the provincial representatives. It may perhaps be well to give the instruction which we, acting as members of the deputation, received from our Committee in Birmingham, as it shows what we have been contending for from the commencement.

"That it be an instruction to the deputation which is to represent these Colleges (that is, Queen's and Mason) before the Senate of the University of London, that the Councils of the Colleges, whilst expressing their strong opinion that the present constitution of the University of London should remain untouched, desire, should such an alteration as that entailed by the present scheme for reconstitution be inevitable, to respectfully but urgently maintain their claim to be admitted into the first list of constituent colleges on equal terms with metropolitan schools." Subsequently to this interview the last revised scheme was promulgated, by which provincial institutions are admitted to some share, but as we maintain, a totally inadequate share in the management of the University.

Our objections have been promulgated in the following resolutions which have been forwarded to the Senate:—

"1. The Joint Committee representing the Councils of the Queen's and Mason Colleges, respectfully beg to state that they consider that not less than twelve members out of the fifty-two of whom it is proposed the Senate shall consist, should be appointed as representatives of the Provincial Colleges.

"2. The Joint Committee beg respectfully to state that the provision contained in Clause 16 would be in their opinion absolutely fatal to the successful working of the University, and that if maintained with the disproportionate representation at present afforded, it will at once close the door to any further consideration of the scheme on their part. They desire respectfully to state that the minimum representation which would satisfy their legitimate claims would be five provincial members out of a standing committee of nineteen or a similar proportion in any increased committee.

"3. That in the opinion of the Joint Committee the meaning of Clause 49 would be more satisfactorily defined by the following addition, namely:—'With the exception of examinations for degrees in the Faculty of Medicine, and of examinations to be held under arrangements with colleges under the powers hereinbefore contained, candidates shall be admitted to all examinations without regard to their place of education, and no such arrangements as aforesaid shall render necessary the attendance for the purpose of instruction of any candidate at any London Constituent College or Medical School.'"

In conclusion we would reiterate our statement that we do not raise any objection to the scheme for a teaching university in London, which, indeed, we should regard as a valuable step in the progress of education. What we do object to is the capture for this purpose of an imperial institution, such as London University, and the exclusion therefrom of those colleges and schools outside London, which have so long had an equal share in it, or their reception therein on unfair and unequal terms.—We are, etc.,

R. S. Heath, Principal of Mason College.
Bertram A. C. Windle, Dean of the Medical Faculty, Queen's College, Birmingham.

Sir,—I have signed the "expression of dissent from the proposed reconstitution of the University of London": (1) because, under the new scheme, the standard of the M.B. degree will be too much lowered, the scope of the examination in anatomy and physiology being much wider at the University of London than at the Royal Colleges; (2) because the M.D. degree will not be made more accessible to the general practitioner, who cannot leave his practice to attend classes of preparation for the M.D. examination.

If the M.D. degree were given to all existing M.B.'s, the present M.D.'s would have no cause of complaint, provided they were given the right to put "M.D. (Honours)" after their names, as there is no honours examination for the M.D. at the present time. Or the M.D. degree should be granted to M.B.'s on terms similar to those in force at Edinburgh. For my own part, I wish that the University of London may remain a pure examining University for the whole of the British Empire, and that a new teaching university may be established in and for London.—I am, etc.,

Stourbridge. G. Birt, M.B.Lond. (Honours).

Sir,—From the students' point of view the revised scheme is disappointing. Whether the constituent and provincial colleges are allotted a few representatives more or less is a matter of small importance in comparison with the question whether a student after a curriculum no less expensive, and after examinations no less severe, is still to be handicapped in practice by M.B.'s and M.D.'s of northern Universities. A very large proportion of students in Edinburgh, Glasgow and Aberdeen are English, coming from London and provincial towns with medical schools. It cannot be urged that they go these long distances because the teaching is superior to that in London; then why should the Royal Colleges drive these students from their own doors, and enrich other corporate bodies at their own expense, and at the same time deprive London and provincial hospitals of student support? Again, why do Members of the Royal Colleges often spend a few days in the vicinity of the field of Waterloo? Certainly not to study military history, but to acquire that distinction which is conveyed to the popular mind by the letters M.D., and under the circumstances who can blame them?

The revised scheme gives an advantage to the London University student, inasmuch as by one examination he obtains in addition to his M.B. the L.R.C.P. and M.R.C.S.; but the London University does not return the compliment and confer its M.B. on the candidate who gains the M.R.C.S., L.R.C.P. If the Royal Colleges insist on each candidate passing the matriculation and preliminary scientific examinations, all well and good, then he will be eligible for the M.B., but if not it is a matter of indifference to future diplomates whether the University is revised or not.

I agree with Dr. Shore that a preliminary examination in elementary science is educational and advisable, and should I think be made compulsory, but need it be of the standard of the Preliminary Scientific or B.Sc.? I must, however, at once join issue with him on the statement that an M.B. the equivalent of the M.R.C.S. and L.R.C.P. "would be inferior to that of any other University in Great Britain." Since leaving Edinburgh I personally know nine M.B., C.M. graduates who have presented themselves before the Royal Colleges, and of that nine, five have been rejected. This result does not support the above statement.

The practical result of the whole scheme will be *nil*, for unless a student as heretofore passes the matriculation and Preliminary Scientific, he is just as far from a degree at the end of his curriculum as he was under the old constitution of the London University, and the Members and Licentiates may justly wonder what advantages accrue to the Royal Colleges by co-operation with a University which offers them no compensation for the loss of their own individuality. If the one examination resulted in each successful candidate obtaining an M.B., all would be well, and the examination might be in two classes, a pass and an honours degree. I am, etc.

Cambridge. E. Tenison Collins, M.R.C.S.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

Sir, Will you allow us to call the attention of your readers to the forthcoming International Congress of Hygiene and Demography which will be held in London in August next, under the presidency of H.R.H. the Prince of Wales.

The last meeting of the Congress took place in Vienna in 1887, where members from all countries were most hospitably received and entertained. Experience of former Congress meetings shows that the necessary expenses of the arrangements for the reception of from three to four thousand mem-

bers, the printing of transactions, correspondence, and postage cannot be kept lower than £6,000 or £7,000. We venture to appeal, therefore, to all those who are interested in the progress of hygiene, the improvement of public health, and the amelioration of the conditions under which the inhabitants of towns and other groups of population exist, to aid the committee in their endeavours to make the London meeting of the International Congress not only a success, but worthy of the country which has always been distinguished not only for its hospitality, but as a power in the work of practical sanitation. All donations from members of the medical profession will be acknowledged in the BRITISH MEDICAL JOURNAL.—We are etc.,

(Signed) DOUGLAS GALTON { Chairman of the Organising Committee,
W. ROBT. CORNISH { Chairman of the Finance Committee,
G. V. POORE, Honorary General Secretary.

20, Hanover Square, W.

P.S.—Full particulars and list of donations will be found on page 64 of the advertisements.

ORGANISATION OF NURSING.

SIR,—At a meeting of the Royal British Nurses' Association, held on April 16th, the proceedings of which have been reported in several of the daily papers, more than one of the principal speakers, including the Chairman and Honorary Secretary, spoke in strong terms of the persecution which as they alleged—this Association suffered at the hands of the nurse training schools and their representatives, and complained that this opposition aimed, amongst other things, at rendering the Presidency of Her Royal Highness the Princess Christian impossible, and at preventing Lady Bloomfield's Pension Fund for Nurses being handed over to it.

It would be making too great a demand on your space to ask the use of your columns and at the present moment this seems hardly necessary to discuss at length the grounds of the opposition of the nurse training schools and large hospitals to that which is the main object of the Royal British Nurses' Association, namely, the formation and control of a general Register of nurses having an authoritative character, or to dwell upon the evils, both to the public and to nursing, which they foresee as the consequence, inasmuch as in all probability the matters in dispute will have to be fought out before the President of the Board of Trade.

But meanwhile we, the representatives of the leading nurse training schools, feel it our duty to protest against the charge of using "secret means," and the term "persecution" being applied to the action of the bodies we represent. It is to the nurse training schools that the great advance which has taken place during the past thirty years in the quality of nurses and nursing and in the position of nurses is wholly due, and it is to these that we must look in the future for the maintenance of the high standard of excellence which has been thus attained.

Can it be seriously, then, charged against the authorities of these schools, all of whom have worked in the interest of nurses and nursing—and many have devoted themselves to the subject for years, and are themselves trained nurses—that they are the persecutors of nurses, or that they are perversely opposing schemes which are "obviously for the advantage of the nursing profession?"

They do not oppose, and never have opposed, the formation of any institution established for the purpose of thrift, mutual benefit, or of social intercourse; but, believing as they do, for reasons which they have elsewhere fully explained, that the establishment of such a register and the granting by such a body as the Royal British Nurses' Association of certificates of competency to nurses will be detrimental to the interests of nurses and misleading to the public and medical profession, they certainly have opposed, and will continue to oppose, the attempt of the Association to obtain from the Board of Trade the privilege which it seeks and by which a "legal status" would be accorded to it.

With regard to the Lady Bloomfield Fund, not one single word has been said by the nurse training schools or hospitals on the subject. The Lady Bloomfield Fund has a most distinct and valuable object in view, and with her ladyship at its head, and under the guidance of His Grace the Duke of Westminster, will without doubt be most successfully and carefully managed; whether its transference to any other association would be wise or not can only have been brought into the discussion for the purpose of diverting attention from the real question at issue.

While recognising in full the great interest taken by Her Royal Highness the Princess Christian in the welfare of nurses, and its value to nurses, they cannot but regard the manner in which Her Royal Highness's name has been introduced into the discussion as wholly uncalled for and unworthy of the spirit of fair discussion.

WESTMINSTER, President of Metropolitan and National Association and Westminster Hospital and Training School.
RUTHERFORD ALCOCK, Vice-President Westminster Hospital and Training School.
HARRY VERNEY, Chairman of the Council of the Nightingale Fund.
J. G. WAINWRIGHT, Treasurer of St. Thomas's Hospital.
ED. H. LUSHINGTON, Treasurer of Guy's Hospital.
E. MURRAY IND, Chairman of the London Hospital.
HENRY WACE, Chairman of Committee of Management King's College Hospital.
W. RATHBONE, President of the Liverpool Training School and Home for Nurses.

SIR,—We, the undersigned, regret to find it necessary to call the attention of the public to the following facts:—At the present moment any woman, even if she is destitute of knowledge or of character, or of both, can term herself a trained nurse, and can obtain employment in that capacity. There is, moreover, no means of preventing any certificated nurse, who has proved herself unworthy of trust, from continuing her occupation. It is unnecessary to point out the danger to the sick involved in this state of affairs. Three years ago the Royal British Nurses' Association was founded "in order to unite nurses for their mutual help and protection, and for the advancement in every way of their professional work." It has been already joined by many influential medical men, by the matrons of 150 important English and Colonial Hospitals, and by nearly 3,000 nurses. Its primary object has been to compile and issue a Register of Trained Nurses, the first annual volume of which has just been published, and can be obtained, through any bookseller, from the offices of the Association. It contains the names of 1,700 nurses, their addresses, and the place and length of the hospital training which each has received. These women have voluntarily applied for enrolment, and their certificates of technical knowledge and personal character have been carefully scrutinised by the influential Board appointed by the Association for the purpose. If any one of these nurses hereafter proves to be unworthy of confidence, her name can at once be removed from the Register.

The Association only deals with nurses who have completed their training. It does not therefore in any way interfere with the Nurse Training Schools.

We greatly regret that some hospital authorities and a few private individuals, misapprehending the objects of the Association, have exhibited their opposition to the system of registration by most unusual methods. Many nurses have been prevented from joining the Association, or have been compelled to resign their membership. Its members have been persistently assailed in print. A simple proposal to incorporate the Association under the Companies Acts, in order that it may take over and administer trust funds, has now been seized upon to send broadcast over the country documents marked "private and confidential," requesting the committees of provincial hospitals to oppose the Association. Failing any other opportunity of meeting such attacks, we are compelled to call public attention to the matter, and to express our very decided conviction:

1. That the sick should be protected from ignorant and untrustworthy nurses.

2. That nurses have a perfect right to demand that their calling should be cleared, as far as possible, from those who now discredit it, and them.

3. That the registration of nurses as carried out by the Association would accomplish these ends, exactly as the registration of members of other callings has proved to be of similar advantages to them.

4. That the Royal British Nurses' Association, therefore, deserves the most earnest support of the public and the medical profession.

5. That the nurse training schools, which have no control over those who are not in their service, have no legal or moral right to prevent nurses from enrolling their names upon a register, if they choose to do so. Nor have they any possible right to prevent the sick being protected in any measure, however small, from the acknowledged dangers to which they are at present subjected.—We are, etc.,

WM. S. SAVORY.	ANDREW CLARK, F.R.C.S.	WM. O. PRIESTLEY.
T. SPENCER WELLS.	OCTAVIUS STURGES.	F. J. GANT.
RICHARD QUAIN.	F. W. PAVY.	HARRINGTON SAINSBURY.
JAS. CRICHTON BROWNE.	N. DAVIES-COLLEY.	CHAS. GAGE-BROWN.
J. FAYRER.	ROBERT BARNES.	WYNN WESTCOTT.
DYCE DUCKWORTH.	T. PICKERING PICK.	W. BEZLY THORNE.
EDWARD H. SIEVEKING.	R. BRUDENELL CARTER.	SEPTIMUS W. SIBLEY.
ALFRED GARROD.	W. B. CHEADLE.	ALFRED T. SCHOFIELD.
EDWIN SAUNDERS.	G. ANDERSON CRITCHETT.	LOVELL DRAGE.
R. DOUGLAS POWELL.	HERBERT W. PAGE.	EDWD. W. FARDON.
WM. CAYLEY.	THOMAS BUZZARD.	EDGAR WILLETT.
A. PEARCE GOULD.	ARTHUR E. BARKER.	BEDFORD FENWICK.
SYDNEY COUPLAND.		

THE METROPOLITAN HOSPITAL AND THE LOCAL MEDICAL PRACTITIONERS.

SIR,—My attention having just been called to a paragraph in last week's BRITISH MEDICAL JOURNAL, p. 924, entitled "The Metropolitan Hospital and the Provident Principle," I desire to draw attention to an erroneous statement made by Sir Edmund H. Currie, which conveys the false impression that the Æsculapian Society represents the opinion of the medical men in the neighbourhood, who he states, have been "conciliated" by the hospital authorities, and that that Society has given its adherence to the provident system in operation at that hospital.

The facts are these: (1) The Æsculapian Society consists, to a large extent, of medical men who reside at a considerable distance from the hospital, and includes among its members but a few of those who live in its immediate neighbourhood. (2) The Æsculapian Society has given expression to no opinion whatever regarding the merits of the provident system. (3) The recent alteration in the meeting place of the Society was the result of an offer made in writing by the hospital authorities, who kindly invited the Society to make use of their board room for their meetings, and not, as your paragraph implies, due to any initiative taken by the Society.

Trusting you will give this correction the same prominence which you have given to the statement of Sir E. H. Currie,—I am, etc.,

ARCHD. K. CHRISTIE,
President of the Æsculapian Society.

Colebrooke Row, N.

SALICYL-SULPHONIC ACID AS A TEST FOR ALBUMIN.

SIR, It may perhaps be worth noting with regard to Dr. Macwilliam's very interesting paper under the above heading in the BRITISH MEDICAL JOURNAL of April 18th, that the test is scarcely so new as might be imagined. Salicyl-sulphonic acid was recommended as a certain, delicate, and convenient test for albumin by G. Roch, in a paper which was published in the *Pharm. Centralhalle* of September 19th, 1889, p. 549. A summary of his conclusions was published in the *Pharmaceutical Journal* of November 30th, 1889, and was copied into various other English and foreign journals. Roch recommended that a few crystals of the acid should be shaken with the urine, or that 5 cubic centimetres of a 20 per cent. solution of the acid should be added to 10 cubic centimetres of the urine to be tested. He claimed for this reaction that it was not affected by the presence of urea, uric acid, peptones, or glucose, and that the test was so delicate that it produced visible turbidity with as little as 0.0005 gramme of albumin in 10 cubic centimetres of urine. No mention of these researches is to be found in Dr. Macwilliam's paper, but the priority of indicating the value of salicyl-sulphonic acid as a "new test for albumin" undoubtedly rests with Roch.—I am, etc.,

Weymouth Street, W. NESTOR TIRARD, M.D.Lond.

ERRATUM.—In Mr. W. Moore's letter on the Abuse of Clubs in the BRITISH MEDICAL JOURNAL of April 25th, p. 935, line 20 of letter, for £200 read £1,200.

THE Association of German Naturalists and Physicians will meet at Halle on September 21st.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

THE Regius Professor of Medicine gives notice that the Final Examination for the Degree of Bachelor of Medicine will commence on Monday, June 1st, at 9.30 A.M., in the examination schools.

The Examination for the Degree of Master in Surgery will take place on Thursday, June 11th.

The First Examination for the Degree of Bachelor of Medicine will commence on Monday, June 22nd, at 9.30 A.M.

The Secretary of the Boards of Faculties gives notice that he will be in attendance at his office in the Clarendon Building on Saturday, May 16th, from 9.30 to 10.30 A.M., and from 2 to 3 P.M., for the purpose of receiving names of candidates for the Second Examination for the Degree of M.B.: on Wednesday, May 27th, from 2 to 3 P.M., for the purpose of receiving names of candidates for the Examination for the Degree of M.Ch.; and on Saturday, May 30th, from 9.30 to 10.30 A.M., and from 2 to 3 P.M., for the purpose of receiving names of candidates for the First Examination for the Degree of M.B.

UNIVERSITY OF CAMBRIDGE.

PROFESSORSHIP OF CHINESE.—Mr. F. V. Dickins, M.B., Assistant-Registrar of the University of London, has been appointed an Elector to the Professorship of Chinese.

PLANT HOUSES.—The Botanic Garden Syndicate propose to spend £2,700 on the erection of new plant houses in the Botanic Garden, which has became increasingly important with the growth of the medical and science schools.

PHARMACEUTICAL CHEMISTRY.—The Special Board for Medicine have approved a revised and enlarged schedule defining the range of the Second M.B. Examination in Pharmaceutical Chemistry. Copies may be obtained from the registrary.

STATE MEDICINE.—Dr. W. H. Corfield, Dr. T. Stevenson, Dr. J. F. W. Tatham, and Dr. E. Seaton have been appointed Examiners in State Medicine for the Diploma in Public Health.

EXAMINATIONS FOR MEDICAL AND SURGICAL DEGREES. EASTER TERM, 1891.—The following are the arrangements (subject to alteration in details, of which due notice will be given):—

First Examination.—Part I (Chemistry and Physics): June 9th, 11th, 12th and 13th. Part II (Elementary Biology): June 11th and 15th.

Second Examination.—Part I (Pharmaceutical Chemistry): June 15th, 16th and 17th. Part II (Human Anatomy and Physiology): June 9th, 11th, 12th, 13th, 15th and 16th.

Third Examination.—Part I: May 12th, 13th, 15th, 16th, and 18th. Part II: May 12th, 13th, 14th, 15th, 19th, 20th and 21st.

For Degree of Bachelor of Surgery.—Candidates who passed the Third Examination, Part I, before June, 1887, are examined in surgical operations and application of surgical apparatus, and also in clinical surgery, unless they have already passed in that subject.

For Degree of Master of Surgery.—May 15th, 16th and 18th.

The names of candidates for the Third Examination and for the Examinations in Surgery must be sent to the Registrary (through the Prælectors of their respective colleges) on or before Wednesday, April 29th; those for the First or Second Examinations, on or before Monday, May 25th. Forms on which it is requested that the names may be written will be sent to the Prælectors. The certificates of candidates, accompanied by their postal addresses, must be sent to the Registrary on or before the fifth day before the beginning of the examination for which they are entered. The fees for each examination must be paid to the Registrary when the certificates are sent in. The fee is £1 11s. 6d., for each part of the First and Second Examinations. The fee for admission or re-admission to each part of the Third Examination is £1 1s. Any candidate whose name and certificates have not been sent in and fee paid at the proper time is liable to pay an additional fee of £1 if he be nevertheless admitted to the Examination.

UNIVERSITY OF LONDON.

THE LATE CHANCELLOR.—At the last meeting of the Senate the following resolutions were unanimously adopted:

The Senate desire to place on record their sense of the great loss which they, together with the whole University, have suffered in the death of their Chancellor, Earl Granville.

Always accessible, always courteous, always ready to devote his time and great influence to the welfare of the University, Lord Granville presided for thirty-five years over all the more important deliberations of the Senate, and it is not easy to over-estimate the advantage which was derived from his counsels, and from his presence at all public celebrations.

The years of Lord Granville's Chancellorship were marked by the continuous progress of the University within the limits of its Charter, and the Senate profoundly regret that they have been deprived of so wise an adviser at a moment when schemes, in which he was himself much inte-

rested, are under consideration for the reconstitution of the University with new and extended powers.

The Senate request the Vice-Chancellor to forward a copy of these resolutions to Lady Granville, in the name of the University, and on their behalf to express the sincerest sympathy with her in her bereavement.

UNIVERSITY OF GLASGOW.

THE statutory meeting of the General Council was held on April 22nd. The attendance was exceedingly small, and the business had chiefly relation to the various ordinances of the Commissioners regarding the elections of Chancellor and Assessors. The Winter Session was closed on the 24th ult., with the usual graduation ceremony, among the honorary graduands being the Director-General of the Army Medical Department. The Summer Session began on the 29th ult., and continues till nearly the middle of July.

UNIVERSITY OF DURHAM.

FACULTY OF MEDICINE.—At the Convocation held on April 28th the following were granted the degree of Doctor in Medicine for practitioners of fifteen years' standing:

N. B. Elliot, F.R.C.S.Eng.; J. Hamilton, F.R.C.S., L.R.C.P.Edin., L.F.P.S.Glas.; F. K. March, L.R.C.P.Edin., L.F.P.S.Glas.; W. Furner, F.R.C.S.Eng.

And the following the degree of M.D.:

G. Berwick, M.B., B.S.Durh.; H. L. Ewens, M.B., B.S.Durh., M.R.C.S.Eng., L.R.C.P.Lond.; A. J. Gregory, M.B., B.S.Durh., M.R.C.S., L.S.A.; F. H. Mead, M.B., B.S.Durh., M.R.C.S.Eng.; G. Newstead, M.B., B.S.Durh.; C. P. O'Connor, M.B.Durh., M.R.C.S.Eng.; N. Raw, M.B., B.S., L.S.Sc.Durh.; L. Robinson, M.B.Durh., M.R.C.S., L.S.A.; J. S. Tew, M.B., B.S.Durh., M.R.C.S.Eng., L.S.A., D.P.H.Camb.

And the following the degree of Bachelor in Medicine (M.B.):

Honours. Second Class.—E. C. Willcox, College of Medicine, Newcastle-upon-Tyne.

Pass List.—W. R. Brunton, London Hospital; J. Clay, College of Medicine, Newcastle-upon-Tyne; H. W. J. Cook, Charing Cross Hospital; A. Cox, College of Medicine, Newcastle-upon-Tyne; A. J. Dale, College of Medicine, Newcastle-upon-Tyne; R. L. Daly, Yorkshire College, Leeds; C. Forsyth, Yorkshire College, Leeds; A. J. Gardner, M.R.C.S., L.R.C.P., Yorkshire College, Leeds; T. Hartley, College of Medicine, Newcastle-upon-Tyne; W. C. Haswell, College of Medicine, Newcastle-upon-Tyne; R. D. Hotchkis, M.A., St. Bartholomew's Hospital; W. A. Rudd, London Hospital; J. D. Wardale, College of Medicine, Newcastle-upon-Tyne; A. E. L. Wear, College of Medicine, Newcastle-upon-Tyne; R. A. Welsh, College of Medicine, Newcastle-upon-Tyne; J. Wood, Owens College, Manchester.

And the following the degree of Bachelor in Surgery (B.S.):

P. R. Adkins, M.B.Durh., St. Thomas's Hospital; F. C. Brodie, M.B. Durh., M.R.C.S., L.R.C.P., L.S.A., Middlesex Hospital; J. Clay, College of Medicine, Newcastle-upon-Tyne; H. W. J. Cook, Charing Cross Hospital; A. Cox, College of Medicine, Newcastle-upon-Tyne; A. J. Dale, College of Medicine, Newcastle-upon-Tyne; R. L. Daly, Yorkshire College, Leeds; C. Forsyth, Yorkshire College, Leeds; H. Fowler, M.B.Durh., Owens College, Manchester; W. C. Haswell, College of Medicine, Newcastle-upon-Tyne; R. D. Hotchkis, St. Bartholomew's Hospital; G. G. Howitt, M.B.Durh., College of Medicine, Newcastle-upon-Tyne; J. D. Wardale, College of Medicine, Newcastle-upon-Tyne; A. E. L. Wear, College of Medicine, Newcastle-upon-Tyne; R. A. Welsh, College of Medicine, Newcastle-upon-Tyne; E. C. Willcox, College of Medicine, Newcastle-upon-Tyne; J. Wood, Owens College, Manchester.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

PRACTICAL INSTRUCTION IN SANITARY WORK OF CANDIDATES FOR DIPLOMAS IN PUBLIC HEALTH.

THE Faculty of Physicians and Surgeons of Glasgow have brought under the notice of the Town Council of Glasgow the resolution of the General Medical Council referring to the study of outdoor sanitary work under a medical officer of health required from candidates for a Public Health diploma, and have directed their attention to the absence of any arrangements in Glasgow for such study. The Town Council referred the matter to Dr. J. B. Russell, who has pointed out that the only method by which the object aimed at can be attained is one by which the candidates shall be placed in a position to observe the whole round of duty, both indoor and outdoor, both in the daily administrative, deliberative, and advisory work carried on in the sanitary office, and in the method and conduct of the routine outdoor work of the staff, and the special inspections, etc., which devolve upon the medical officer himself. This cannot be done by means of a class carried on by the medical officer, since the work must be studied in its natural progress. Dr. Russell, therefore, thinks the relation of the candidates to the medical officer must be that of pupil or apprentice, and that only one, or, at the most, two, should be attached to the department at one time. He has, therefore, suggested that the medical officer be requested to take not more than two pupils under the following conditions:

1. They shall be called "pupil assistants."

2. They shall be appointed by the medical officer for not less than six, and not more than twelve, months, and their names reported from time to time to the Commissioners.

3. They shall pay no fee, and receive no salary, but shall assist in the work of the department in so far as may seem expedient, subject to the medical officer, and in return shall have every opportunity of studying the duties both of indoor and outdoor sanitary work.

The Town Council have approved and sanctioned these proposals of Dr. Russell, and if the various urban and county authorities adopt similar arrangements, candidates for diplomas in public health will have abundance of opportunities of studying the practical side of their work.

ST. MUNGO'S COLLEGE, GLASGOW.—The annual meeting of the governors of this college was held on April 27th, Principal Blackie presiding. It was reported that the total number of students attending the medical classes had fully equalled the expectations of the Academical Committee. It was also reported that some progress had been made in the direction of raising an endowment fund, that £20,000 was the sum aimed at, and that already £7,000 was promised.

QUEEN MARGARET COLLEGE FOR WOMEN, GLASGOW.—The endowment fund has now reached £17,000, the sum aimed at being £20,000. During the past session the total number of matriculated students was 194, and 181 students had enrolled in the correspondence classes. The present aim of the college authorities is to offer women a complete curriculum in arts and medicine, qualifying for the arts and medical degrees of the universities, and it is hoped that before another year has passed this will have been accomplished, and affiliation with Glasgow University will have been secured.

SOCIETY OF APOTHECARIES OF LONDON.—Pass List, April, 1891.

The following passed the First Examination in Chemistry, Materia Medica, Botany, and Pharmacy:

R. Hall, University of Durham.

The following passed in the subjects indicated:—

Materia Medica, Botany, and Pharmacy:

H. K. C. Delamotte, Edinburgh.
J. Edwards, London Hospital.
T. Hopps, Owens College, Manchester.
G. H. Nowell, B.A., Cambridge and Westminster Hospital.

Materia Medica and Botany:

F. R. Rouse, University College.

The following passed the Second Examination in Anatomy and Physiology:

D. Berne, Sydney University.
P. H. Best, B.A., Cambridge and University College.
B. H. Carpenter, St. Bartholomew's Hospital.
C. D. Garrett, Westminster Hospital.
J. Garrett, St. Mary's Hospital.
E. L. Greene, Royal Free Hospital.
H. Herbert, London Hospital.
E. P. Hewitt, St. Mary's Hospital.
F. Kennedy, Edinburgh University.
C. A. Marrett, Charing Cross Hospital.
H. J. Neatby, Yorkshire College, Leeds.
G. H. Nowell, B.A., Cambridge and Westminster Hospital.
L. C. L. Raymond, Charing Cross Hospital.
W. J. Woods, St. Bartholomew's Hospital.
R. M. Wright, Sheffield.

Anatomy:

G. C. Schultz, St. Mary's Hospital.
J. F. W. Waters, Middlesex Hospital.
H. C. Venis, Calcutta and St. Mary's Hospital.

Physiology:

G. E. Douglas, St. Mary's Hospital.
W. R. Fisher, London Hospital.
J. M. Gleeson, Dublin and London Hospital.
J. Joule, London Hospital.
S. Langton, St. Mary's Hospital.
G. Lowsley, St. Bartholomew's Hospital.
T. W. O'Reilly, St. Thomas's Hospital.
C. C. Pratt, St. George's Hospital.

The following candidates passed in Surgery:

W. Anderson, M.D., University, San Francisco, California.
F. J. A. Baldwin, London Hospital.
J. F. Brown, B.A., M.D., C.M., Toronto.
R. J. Colmer, London Hospital.
H. B. Falconar, King's College.
A. F. Gervis, St. Thomas's Hospital.
M. J. Houghton, Queen's College, Birmingham.
W. H. Kershaw, London Hospital.
G. F. Knipe, University College, Liverpool.
L. J. Minter, King's College.
W. H. Savery, Sheffield.
H. N. A. Taylor, B.A., Cambridge University and Norfolk Hospital.
C. F. Warren, St. Mary's Hospital.
E. C. Wimberley, Queen's College, Birmingham.

The following passed in Medicine, Forensic Medicine, and Midwifery:

C. D. Holmes, University College, Liverpool.
H. Knevitt, London Hospital.
A. W. Read, St. George's Hospital.
A. Richardson, Edinburgh University.
E. M. Rooke, Guy's Hospital.
P. Sharp, King's College.
H. de V. Stackpoole, St. Mary's Hospital.
G. R. Stilwell, St. Thomas's Hospital.
H. N. A Taylor, B.A., Cambridge University and Norfolk Hospital.
W. A. Williams, L.M.S., Calcutta and Middlesex Hospital.
F. C. Wood, L.S.A., London Hospital.

The following passed in the subjects indicated:—

Medicine and Forensic Medicine:

R. S. Freeland, L.R.C.P., M.R.C.S., Guy's Hospital.
G. F. Knipe, University College Liverpool.

Medicine and Midwifery:

R. Jackson, London Hospital.
C. P. Morgan, Guy's Hospital.
B. F. Parish, St. Mary's Hospital.
H. J. Thomas, Medical School, Bristol, and Guy's Hospital.

Forensic Medicine:

E. A. Humphreys, Owens College, Manchester.

Midwifery:

S. H. R. DeGroot, King's College.
A. G. Keeling, St. Thomas's Hospital.

The following gentlemen were granted the Diploma of the Society qualifying for registration and entitling them to practise Surgery, Medicine, and Midwifery:

Colmer	Holmes	Houghton	Knevitt
Minter	Sharp	Stackpoole	Stilwell
Taylor	Wimberley	Wood.	

MEDICO-LEGAL AND MEDICO-ETHICAL.

COPPIN v. RENTOUL.

ON April 11th, at Wandsworth County Court, an action was tried before his Honor, Judge Lushington, in which the plaintiff, a "collector," claimed £5 from Dr. R. R. Rentoul, of Liverpool, for services alleged to have been rendered in procuring signatures to a petition against the Midwives Registration Bill. It appeared that Dr. Rentoul had taken a leading part in promoting and organising opposition to the Bill, and had sent to about 800 medical practitioners throughout the country a circular letter in which he urged them to get petitions signed against the Bill, and mentioned that he himself found that the best way to do so was to pay a man 5s. a day to canvass for signatures. Mr. J. T. McMahon, a local practitioner, had adopted that course except as regards the payment of the man, which latter obligation he had endeavoured to impose upon Dr. Rentoul. Hence this action, which was brought by the canvasser on the ground that Dr. Rentoul had authorised Mr. McMahon to employ him on Dr. Rentoul's behalf. Mr. McMahon gave evidence that he had received a letter from Dr. Rentoul promising to pay 5s. per day, and that Dr. Rentoul had also verbally promised that he would bear the expense of employing a man to get signatures. Mr. McMahon, however, admitted that the letter to which he referred was the above-mentioned circular, which (as the judge held) contained no such promise. Dr. Rentoul absolutely denied on oath that he had ever authorised the employment of plaintiff on his behalf, or promised to pay any expense that Mr. McMahon might incur. It was mentioned that although the circular had been sent to about 800 practitioners, Mr. McMahon was the only one who had made any claim of the kind upon Dr. Rentoul. His Honour gave judgment for the defendant, with costs. In cross-examination of Dr. Rentoul, a desire was evinced to ascertain by whom the expenses of his agitation against the Midwives Registration Bill were borne. The plaintiff was represented by counsel, and Dr. Rentoul was defended by Mr. W. T. B. Woods, solicitor.

NO LABEL.

M. E. The mistake might render our correspondent liable to an action for damages, but in that case the patient would have to prove the damage. If the claim for compensation is persisted in, our correspondent should consult a reputable solicitor. Such a mistake as sending out medicines of any kind without labels is a very unpardonable one, and extremely likely to land the perpetrator in very great difficulties, and, in cases where death has resulted from such mistakes, the ruin of the unfortunate practitioner has been the not infrequent consequence.

ARE MILITARY HOSPITALS PUBLIC INSTITUTIONS?

A CORRESPONDENT writes: With reference to the question asked on p. 882 of the BRITISH MEDICAL JOURNAL of April 18th: "Are Military Hospital Public Institutions?" I would refer you to Brigade-Surgeon Riordan's *Manual for Army Medical Services*, page 63 (last paragraph). Writing of sudden death, he says: A medical officer should carefully avoid any *post-mortem* interference in the matter until the examination is duly authorised. A medical officer who performs a *post-mortem* examination on the body of a soldier does not do so in his military capacity, provided the examination is done by order of the coroner, in which case the medical officer is entitled to his fee." In connection with this subject it is worthy of note that a military hospital is not a public institution.

*** With reference to the above, we can only draw attention to the fact that no authority is quoted in support of the statement that a military hospital is not a public institution, nor does such statement refer in express terms to the provisions of the Coroners' Act, 50 and 51 Vict., cap. 71.

We must, therefore, repeat that in our opinion the point is not free from doubt. The words of the section are: "Where an inquest is held on the body of a person who has died in a county or other lunatic asylum, or in a public hospital, infirmary, or other medical institution, or in a building or place belonging thereto, or used for the reception of the patients thereof, whether the same be supported by endowments or by voluntary subscriptions, the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution, as aforesaid, shall not be entitled to such fee or remuneration."

CAVEAT EMPTOR.

F.S.A.—Assuming that there was no fraudulent misrepresentation on B.'s part towards A., and that the transaction between the two was *bonâ fide*, we cannot see that any responsibility, moral or legal, rests on B. to refund to A.

If one medical man buys a practice of another, and at the same time takes the furniture of the former at a price agreed between the two; if he afterwards be dissatisfied with the practice, and desires to retire from it, we do not see on what equitable grounds he can claim to receive back a portion of the price of the furniture, because the practice has not come up to his expectations. The "fair value of furniture as between ingoing and outgoing tenant" may vary very considerably, according to their respective requirements, and it may not infrequently be well worth the while of the ingoing tenant to pay more than the normal market value for suitable furniture that he finds ready at hand, and it must in all cases be assumed, in the absence of fraud, that when he does pay more than the nominal market value, he knows his own business best.

A "SIXPENNY DOCTOR."

SALFORD.—Assuming (for we fail to note the name in the *Medical Register*) that the popularly-styled "Sixpenny Doctor" be, as represented, M.B. and C.M.Edin., and surgeon dentist, so flagrant a deviation from the honourable traditions of the profession, as evidenced by the large poster bills exhibited in the shop window, should entail upon him a stringent enforcement of the disciplinary laws of his university; with which view, we would suggest, in the interest of the profession at large, that our correspondent should, if practicable, obtain a copy of the poster and transmit it, or a certified transcript, to the authorities of the university, with a short memorial signed by himself and other local practitioners.

PRIVATE ASYLUMS.

M.D. (MEMBER) asks as to the present state of the law as to the granting of licences for private asylums or houses for the reception of more than one insane patient?

*** Every applicant for a licence for a house shall, at least fourteen clear days before a quarterly or other meeting of the Commissioners in in Lunacy, or before a quarter or special sessions of the licensing justices, give notice of the application. (*a*) If the house is within the immediate jurisdiction of the Commissioners, to the Commissioners: (*b*) if elsewhere, to the clerk of the peace for the county or borough in which it is situate.

MEDICAL WITNESSES' FEES IN CRIMINAL CASES.

DR. WALLACE.—The amount to be allowed for each attendance to give professional evidence is in the discretion of the Court, the maximum being 10s. 6d. for each such attendance before a magistrate, and £1 1s. in Courts of Assize, General Sessions of the Peace, etc., where the witness resides in the borough or town in which the examination is taken, or within a distance not exceeding two miles therefrom.

We believe the custom is to allow the maximum in all cases where the costs are not disallowed altogether. A witness cannot refuse to give evidence (as in a civil action) till he has had his fee guaranteed.

MEDICAL WITNESSES' FEES.

Z. asks what are the proper fees—apart from travelling expenses—which can be claimed by him for two days' attendance to give medical evidence at the Court of Queen's Bench in a civil action. He lives at a distance of over five miles from the Law Courts.

*** No arrangement having apparently been made as to the payment of our correspondent's fees for giving evidence in the case referred to, we think that all he will now be able to claim will be £1 1s. for each day on which he was required to attend the court.

NAVAL AND MILITARY MEDICAL SERVICES.

INELIGIBILITY OF REJECTED CANDIDATES.

SEVERAL letters have been received inquiring whether the new rule which renders candidates who have failed twice at the examination for the Army Medical Staff is retrospective. We have communicated with Sir Ralph Thompson (Permanent Under-Secretary, War Office), who states in reply, that the ineligibility of candidates for the Army Medical Service does apply to those candidates who have already competed twice.

THE NAVY.

Deputy Inspector-General William James Eames has been placed on the retired List at his own request, with permission to assume the rank of Inspector-General. His commissions are thus dated:—Surgeon, February 14th, 1856; Staff-Surgeon, June 30th, 1863; Fleet-Surgeon, November 2nd, 1877; and Deputy Inspector-General, March 20th, 1886. As Surgeon of the *Bloodhound* he was engaged in the expeditions up the Niger during the years 1860 to 1862, and in 1861 had to combat a severe epidemic of yellow fever; he was also engaged in the attack on Porto Novo, on the West Coast of Africa, in which the *Bloodhound* and boats of the squadron took part.

The following appointments have been made at the Admiralty:—Matthew F. Ryan, Fleet-Surgeon to the *Swiftsure*, May 1st; William G. Stott, M.A., M.B., Surgeon to Malta Hospital, April 23rd; Graham E. Kennedy, Surgeon to the *Benbow*, April 23rd.

INDIAN MEDICAL SERVICE.

Brigade-Surgeon G. Massy, Bengal Establishment, has retired from the Service, which he entered as Assistant-Surgeon October 2nd, 1865, attaining to the rank of Brigade-Surgeon March 29th, 1890.

Surgeon A. R. W. Sedgefield, Bengal Establishment, Superintendent of the Chenewan Central Jail, is posted to Murree as Civil Surgeon, *vice* Brigade-Surgeon C. F. Churchill, M.B.

Surgeon J. Sykes, Bengal Establishment, second class civil surgeon, is transferred from Fyzabad to Saharimpore.

Surgeon-Major J. Armstrong, Bengal Establishment, second class civil surgeon, is transferred from Saharimpore to Cawnpore.

Surgeon-Major D. D. Cunningham, M.B., Medical College, Calcutta, and Surgeon-Major A. Crombie, M.D., Surgeon Superintendent of the Presidency General Hospital at Calcutta, both of whom are of the Bengal Establishment, have leave of absence on private affairs, the former for six months, the latter for seven months.

THE MEDICAL STAFF.

Surgeon-Major Henry Archibald Fogerty, M.D., is placed on temporary half-pay, April 15th. His commission as Surgeon dates from September 30th, 1874, and therefore as Surgeon-Major from September 30th, 1886.

THE VOLUNTEERS.

Mr. Eliot William Welchman is appointed Surgeon to the Staffordshire Yeomanry (Queen's Own Royal Regiment), April 25th.

Mr. George Herbert Hopkins is appointed Acting-Surgeon to the 1st Glamorganshire Artillery, and Mr. Richard Arthur Newton is appointed Acting-Surgeon to the 1st Volunteer Battalion Royal Warwickshire Regiment (formerly the 1st Warwickshire); both to date April 25th.

Surgeon W. E. S. Burnett, 4th Volunteer Battalion Cheshire Regiment (late the 4th Cheshire), is granted the rank of Surgeon-Major (ranking as Major).

Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) J. Loudon, M.D., 2nd Volunteer Battalion Scottish Rifles (late the 2nd Lanarkshire), has resigned his commission, with permission to retain his rank and uniform. He dated as Surgeon from April 11th, 1862; as Surgeon-Major from February 1st, 1889.

Mr. James Cowan Woodburn, M.D., is appointed Surgeon to the Lanarkshire (Queen's Own Royal Glasgow and Lower Ward of Lanarkshire) Yeomanry, April 29th.

Mr. Robert Macdonald Robertson, M.B., is appointed Acting-Surgeon to the 1st Edinburgh (City) Artillery, April 29th.

Acting-Surgeon A. A. H. Knight, M.D., 1st Volunteer Battalion Border Regiment (late the 1st Cumberland), has resigned his appointment, which was dated August 19th, 1874.

Mr. William Tiplady is appointed Acting-Surgeon to the 5th Volunteer Battalion Royal Highlanders (late the 2nd Perthshire), April 29th.

Surgeon O. Grant, M.B., 1st Volunteer Battalion Queen's Own Cameron Highlanders (late the 1st Inverness-shire), is appointed Brigade-Surgeon, ranking as Lieutenant-Colonel, to the Highland Brigade Infantry Volunteers, April 29th.

OBITUARY.

STEPHEN WINTER FISHER, M.D.Aberd., M.R.C.S.Eng., L.S.A.

Dr. Fisher, a respected and much lamented member of the profession in Brighton, recently died at the comparatively early age of 52. He was a native of Bristol and came of a good old Bristol family. He was educated at the Bristol Medical School and studied medicine and surgery in the wards of the Bristol Royal Infirmary. A colleague and warm personal friend, to whom we are indebted for this short sketch of Dr. Fisher's career, speaks of him as being at this period "an ardent young student and dresser under the tutelage of the late Dr. Thomas Green, of Berkeley Square, the Nestor of the staff of the Bristol Infirmary—a man of high culture, beloved and honoured by his own pupils, and admired and respected by those of others. No wonder that young Fisher should have caught the inspiration of such a man and subsequently imbibed somewhat of the spirit and enthusiasm of so kind and eminent an instructor." Shortly after qualifying Dr. Fisher was appointed medical officer to the General Dispensary in Castle Green. Dr. Fisher gave himself heart and soul to his work, and rendered much valuable service during the short time he was in office, leaving behind him many pleasing remembrances both of his skill and of his kindness and gentleness of manner. He was early appointed one of the staff of the Hospital for Sick Children and Women. This opened up a new phase of practical medicine to his view and afforded much fresh material for work. Here, too, Dr. Fisher's skill and care were highly appreciated. The illness of a member of his family led him to leave Bristol, and he settled at Brighton; he there found a new field for the exercise of his kindly and benevolent nature as well as his professional skill. He was at the time of his death acting honorary physician to the Brighton and Hove Dispensary as well as to St. John's Convalescent Home. Dr. Fisher took an active part in connection with the meeting of the British Medical Association at Brighton, and by his hospitality and in other ways did all he could to assist in making that meeting a success. At his funeral were present a large number of friends and former patients as well as an impressive contingent of his Masonic brethren desirous of expressing their kind sympathy with the family and of recording their last tribute of respect to the memory of one who had held an honourable position amongst the "Brotherhood."

JOHN WILLIAM EDMONDS, L.S.A.

Mr. John William Edmonds, who died recently at the age of 74, was one of the old class of practitioners. He was born in Tower Street, London. While residing with his grandfather, Mr. Maryan, a medical practitioner in Great Orchard Row, Camberwell, he entered at St. Thomas's Hospital, and in due course obtained the licence of the Apothecaries' Society. He subsequently became assistant to Mr. Battcock, of Brighton. Forty years ago, however, he returned to London, and settled in practice in Camberwell. He was medical officer to the Aged Pilgrims' Asylum, Camberwell, for thirty-one years. He was highly esteemed as a sincere and honourable man, ready at all times to give assistance, whether in time or money. His reading was extensive, and he took a considerable interest in science. He leaves one daughter and a son, who is a member of the medical profession.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, April 27th.

Sanitary Interments.—The Earl of Meath asked Her Majesty's Government whether they approved of the interment of bodies in burial grounds and cemeteries situated in populous centres; and, if not, whether they would take steps by Orders in Council to close for purposes of interment the Tower Hamlets City of London Cemetery, in the east, and the Brompton Cemetery in the west of the metropolis.—Lord De Ramsey said that the payment from the Brompton Cemetery to the Government was £6,000 a year and not £7,000. The Government did not approve of, and it was their policy to prevent, the interment of bodies in populous centres where it could be shown that such interment might be prejudicial to the public health. The Secretary of State had power to close by Order in Council any burial grounds which might be overcrowded. With regard to the two cemeteries mentioned in the question, the Secretary of State had asked an inspector to report. The inspector had from time to time paid surprise visits to the Brompton Cemetery, and in his opinion it was not a source of danger to the public health; further, the inspector was satisfied that the regulations were duly observed at the Tower Hamlets Cemetery.

HOUSE OF COMMONS, Monday, April 27th.

Mortality in Lunatic Asylums.—Dr. Farquharson asked the Home Secretary whether it would be practicable for the Commissioners in Lunacy to append to future issues of their reports a table showing the causes of death of all lunatics dying in all lunatic asylums, public and private, in registered lunatic hospitals, and in workhouses in England and Wales.—Mr. Matthews said he was informed by the Lunacy Commissioners that no returns were made to them as to deaths of lunatics in workhouses, and they had no power to call for them. They had considered, and would again consider, whether they could and how soon, insert tables showing the causes of death in lunatic asylums, registered hospitals, and licensed houses, but this would involve much additional clerical work, and the existing staff was already hard pressed owing to the great increase of work cast upon it by the operation of the Lunacy Act, 1890.

Methylated Spirits as a Beverage.—In reply to Mr. O'Neill, the Chancellor of the Exchequer said the Board of Inland Revenue intended to render methylated spirit sold by retail more nauseous in character. They also intended, when there was reason to believe that methylated spirit was being purchased from any retailer for potable purposes, to cause such retailer to keep a stock account, giving the date of sale and quantity sold on each occasion, together with the name and address of the purchaser, and, if any such purchaser were known to be using the methylated spirit as a beverage, the vendor would be warned that proceedings would be taken against him for recovery of the fine of £100 under Section 120 of the

Spirits Act, 1880, if he continued to sell methylated spirit to the said purchaser. Every possible precaution would be taken to put a stop to the practice.

Sanitary Condition of Restaurant Kitchens.—The LORD ADVOCATE, in reply to Mr. J. WILSON (Lanark) said that restaurant kitchens were not workshops under the Factory and Workshops Act, but any complaint as to their sanitary condition might at present be dealt with under the Public Health Acts. He did not, therefore, see any necessity for introducing legislation on the subject.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE TRUE DEATH-RATES OF LONDON DISTRICTS DURING THE FIRST QUARTER OF 1891.

In the accompanying table will be found summarised the vital and mortal statistics of the forty-one sanitary districts of the metropolis, based upon the Registrar-General's returns for the first or winter quarter of 1891. The mortality figures in the table relate to the deaths of persons actually belonging to the respective sanitary districts, and are the result of a complete system of distribution of deaths occurring in the institutions of London, among the various sanitary districts in which the patients had previously resided.

The 35,727 births registered in London during the three months ending March last were equal to an annual rate of 31.9 per 1,000 of the estimated population of the metropolis; this birth-rate showed a slight increase upon that recorded in the corresponding quarter of last year, which was the lowest on record. The birth-rates in the various sanitary districts showed, as usual, wide variations, owing principally to the differences in the age and sex distribution of the population. In Kensington, St. George Hanover Square, St. James Westminster, St. Martin-in-the-Fields, Strand, and London City, the birth-rates were considerably below the average; while in Fulham, Holborn, St. Luke, St. George Southwark, Bermondsey, and in nearly all the districts of East London, the birth-rate showed a marked excess.

The 24,870 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 22.2 per 1,000, which was slightly below the mean rate in the corresponding periods of the ten years 1881-90. The lowest death-rates among the various sanitary districts during the first quarter of this year were 15.0 in Hampstead, 17.1 in Battersea, 17.3 in Lewisham (excluding Penge), 17.4 in Hackney, and 17.6 in St. James Westminster and in Camberwell. In the other districts the death-rates ranged upwards to 29.1 in St. George Southwark, 29.6 in St. George-in-the-East, 30.1 in Woolwich, 31.4 in St. Giles, 31.9 in St. Saviour Southwark, 33.2 in Westminster, 33.4 in London City, 33.7 in Whitechapel, and 43.0 in Holborn. During the quarter under notice 1,930 deaths were referred to the principal zymotic diseases in London; of these, 699 resulted from whooping-cough, 450 from measles, 341 from diphtheria, 173 from diarrhœa, 160 from

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Complete Distribution of Deaths occurring in Public Institutions, during the First Quarter of 1891.

SANITARY AREAS.	Estimated Population middle of 1891.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Deaths of Children under 1 year of age to 1,000 births.
LONDON	4,492,707	35,727	24,870	31.9	22.2	1.7	1,930	3	450	160	341	699	1	97	6	173	137
West Districts.																	
Paddington	113,640	789	601	27.8	21.2	1.3	36	—	1	1	9	16	—	7	—	2	122
Kensington	198,422	1,011	930	20.4	18.8	0.9	44	—	4	7	7	19	—	4	1	2	159
Hammersmith	113,673	791	558	27.9	19.7	2.0	56	—	9	6	27	8	—	2	—	4	161
Fulham	84,290	903	516	43.0	24.6	2.7	56	—	4	5	8	31	—	1	—	7	157
Chelsea	109,065	760	587	27.9	21.6	1.2	32	—	2	—	4	17	—	4	—	5	137
St. George, Hanover Square	87,777	450	427	20.6	19.5	1.1	24	—	6	1	3	8	—	1	—	5	122
Westminster	53,828	420	445	31.3	33.2	1.0	13	—	—	2	2	4	—	2	—	3	126
St. James, Westminster	26,052	129	117	19.4	17.6	1.1	7	—	—	1	2	1	—	1	—	2	132
North Districts.																	
Marylebone	148,814	1,231	994	32.2	26.8	1.4	53	—	5	11	6	21	—	3	—	7	131
Hampstead	60,609	396	227	26.2	15.0	1.5	22	—	—	2	5	11	—	1	1	2	101
St. Pancras	245,479	1,915	1,371	31.2	22.3	1.2	72	—	8	8	15	31	—	5	—	5	119
Islington	348,920	2,627	1,698	30.2	19.5	1.8	158	—	29	16	29	67	1	5	—	11	129
Hackney	258,291	1,790	1,115	28.0	17.4	1.4	89	—	14	7	19	31	—	2	—	16	132
Central Districts.																	
St. Giles	38,063	309	298	32.6	31.4	1.4	13	—	1	—	5	5	—	1	—	1	149
St. Martin-in-the-Fields	14,274	63	89	17.7	25.0	1.1	4	—	—	1	1	2	—	—	—	—	79
Strand	28,088	156	187	22.3	26.7	0.4	3	—	—	—	1	1	—	1	—	—	179
Holborn	28,862	263	309	36.6	43.0	6.3	45	—	15	1	6	17	—	4	—	2	186
Clerkenwell	71,935	597	458	33.3	25.5	2.5	44	—	18	5	4	10	—	3	—	4	129
St. Luke's	52,000	344	371	42.0	28.6	0.9	12	—	3	1	—	3	—	1	1	3	145
London City	34,273	198	285	23.2	33.4	1.6	14	—	2	2	5	2	—	2	—	1	136
East Districts.																	
Shoreditch	125,228	1,276	808	40.9	25.9	2.7	83	—	32	6	19	14		4		8	140
Bethnal Green	133,555	1,368	923	41.1	27.7	2.9	96	—	36	5	24	19	—	6	—	6	139
Whitechapel	65,980	807	555	49.1	33.7	3.2	52	—	11	3	19	9	—	1		6	134
St. George-in-the-East	45,968	530	339	46.2	29.6	2.4	27	—	7	2	5	5	—	2	—	6	157
Stepney	59,062	527	382	35.8	25.9	2.1	31	—	8	2	7	9	—	1		4	156
Mile End Old Town	118,835	1,071	649	36.2	21.9	1.2	36		11	3	8	3	—	5	1	5	126
Poplar	199,459	1,667	1,003	33.5	20.2	2.0	101	—	36	10	10	31	—	4	—	10	132
South Districts.																	
St. Saviour, Southwark	26,793	216	213	32.3	31.9	2.2	15		3	—	2	10	—	—	—	—	199
St. George, Southwark	60,676	583	441	38.5	29.1	3.1	47		6	2	2	36	—	—	—	1	156
Newington	127,657	1,129	785	35.5	24.7	1.9	61	—	9	3	5	35	—	3	—	6	186
St. Olave, Southwark	14,500	104	90	28.8	24.9	0.6	2	—	—	1	1	—	—	—	—	—	183
Bermondsey	91,196	836	565	36.7	24.8	1.7	39		5	3	6	23	—	—	—	2	153
Rotherhithe	45,828	373	232	32.6	20.3	1.7	19	1	4		2	11	—	—	—	1	172
Lambeth	298,114	2,428	1,623	32.7	21.8	2.0	146		32	7	20	69	—	7	1	10	135
Battersea	180,100	1,425	770	31.7	17.1	1.4	61	—	3	10	16	21	—	2	—	9	140
Wandsworth	138,618	1,119	717	32.4	20.7	2.1	71		22	6	5	27	—	2	1	8	131
Camberwell	285,250	1,944	1,253	27.3	17.6	1.3	96	—	47	10	9	21	—	3	—	6	126
Greenwich	165,080	1,432	953	34.8	23.2	2.0	81	2	19	6	18	32	—	4	—	—	135
Lewisham (excluding Penge)	72,859	478	315	26.3	17.3	1.2	21	—	6	2	1	9	—	1	—	2	144
Woolwich	37,441	342	281	35.6	30.1	2.4	22	—	12	1	—	7	—	1	—	1	157
Plumstead	84,253	740	390	35.2	18.6	1.2	26	—	17	1	4	3	—	1	—	—	123

scarlet fever, 104 from different forms of "fever" (including one from typhus, 97 from enteric or typhoid fever, and 6 from simple and ill-defined forms of fever), and 3 from small-pox. These 1,930 deaths were equal to an annual rate of 1.7 per 1,000, which was below that in the corresponding period of any year on record. The lowest zymotic death-rates during the three months under notice in the various sanitary districts were 0.4 in Strand, 0.6 in St. Olave Southwark, 0.9 in Kensington and in St. Luke, and 1.0 in Westminster. In the other districts the zymotic death-rates ranged upwards to 2.7 in Fulham and in Shoreditch, 2.9 in Bethnal Green, 3.1 in St. George Southwark, 3.2 in Whitechapel, and 6.3 in Holborn. Compared with the preceding quarter the mortality from small-pox and whooping-cough showed an increase, while that from each of the other zymotic diseases showed a marked decline.

Three deaths from small-pox were recorded in London during the three months ending March last; of these, 2 belonged to Greenwich, and one to Rotherhithe sanitary areas. Twelve small-pox patients were admitted into the Metropolitan Asylum Hospitals during last quarter, and 7 patients remained under treatment at the end of March last. Measles showed the highest proportional fatality in Holborn, Clerkenwell, Shoreditch, Bethnal Green, Whitechapel, Wandsworth, Woolwich, and Plumstead; diphtheria in Hammersmith, St. Giles, Holborn, London City, Shoreditch, Bethnal Green, and Whitechapel; and whooping-cough in Islington, Holborn, St. Saviour Southwark, St. George Southwark, Newington, Bermondsey, and Lambeth. The mortality from scarlet fever and from "fever" showed no marked excess last quarter in any of the sanitary districts.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to registered births, was equal to 137 per 1,000, and was slightly below the mean rate in the corresponding periods in the preceding ten years, 1881-90. Among the various sanitary districts the rates of infant mortality were lowest in Paddington, St. George Hanover Square, Hampstead, St. Pancras, St. Martin-in-the-Fields, and Plumstead; while they showed the largest excess in Kensington, Hammersmith, Strand, Holborn, St. Saviour Southwark, St. Olave Southwark, and Rotherhithe.

MEDICAL OFFICERS OF HEALTH AND OTHER PRACTITIONERS.

A MEETING of the East Anglian and Midland Division of the Medical Defence Union was held at the Committee Rooms of the urban sanitary authority, Cambridge, on April 23rd. The chair was taken by Dr. Balding, J.P., president for Herts, and among those present were Dr. Jones, President for Northampton, Dr. Groves for Huntingdon, Dr. Latham, Dr. Fegan, Dr. Anningson, and Dr. Mead (Honorary Secretary).

Dr. Fegan made a short and temperate statement of his case, complaining of paragraphs in the report of the medical officer of health for the Thetford Union which, he considered, reflected upon his character as a medical man.

The Chairman, Drs. Grove, Mead, Latham and others put questions to Dr. Fegan. A discussion ensued, during which several similar instances were quoted in which medical practitioners had suffered inconvenience owing to comments published in the reports of medical officers of health, which were produced.

Much sympathy was expressed with Dr. Fegan, and it was unanimously resolved that the Chairman be requested to write to the medical officer of health asking him kindly to furnish the committee with the evidence on which he had been induced to impugn the correctness of the certificates of death given in four cases by Dr. Fegan.

Several members expressed their opinion that the practice of medical officers of health impugning in their reports the certificates of duly qualified medical men was fraught with great danger to the public, and likely to lead to serious obstruction and complications in carrying out sanitary legislation. With this opinion the meeting unanimously coincided.

PUZZLED writes: In the BRITISH MEDICAL JOURNAL of April 18th it is asserted that "a medical officer of health who examines cases of infectious disease without the permission of the medical attendant is guilty of a breach of professional etiquette." In view of this dictum, I shall be glad if you will be good enough to inform me what course I ought to have pursued under the following circumstances: Whilst visiting in my district, my attention was called to a house in which scarlet fever was reported to exist. On entering the sitting room, I found a child sitting with its mother, who was making up a lot of material into clothes for a wholesale clothier. It was obviously my duty to satisfy myself at once whether the child had had scarlet fever or not, in order that I might protect the public, if necessary, from the danger of having the infection scattered broadcast by means of these clothes. The child had been attended by a medical practitioner, who lived some way off. According to the dictum above quoted, I should have refrained from examining this child until I had obtained the consent of the medical attendant, which would have involved a delay of at least two days and the possibility of the clothes having disappeared meanwhile. I judged it my duty to examine the child at once, and thereby to satisfy myself whether it was convalescing from scarlet fever; whereupon, being satisfied, I impounded the clothes. Was I guilty of a breach of professional etiquette? If so, I venture to think that the sooner the code of professional etiquette is brought into harmony with common sense the better.

*** Under the circumstances, our correspondent was no doubt justified in the course he pursued. Professional etiquette must in such a case give way to the requirements of public safety. There is no rule without exceptions, and undoubtedly the exceptional circumstances which justify a breach of the rule are those where the delay necessary to obtain the permission of the medical attendant is fraught with danger to the public. The medical officer of health is the best judge of what constitutes a serious menace to the public safety, and we can only urge that he should in all cases exercise his discretion, and avoid as far as possible examining the cases of other medical practitioners without their consent unless the necessity to do so is obvious and urgent.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, 6,079 births and 4,661 deaths were registered during the week ending Saturday, April 25th. The annual rate of mortality in these towns, which had been 22.9 and 22.5 per 1,000 in the preceding two weeks, rose again to 24.3 during the week under notice. The rates in the several towns ranged from 11.6 in Brighton, 16.2 in Derby, 17.7 in Salford, and 18.0 in Bristol to 29.8 in Manchester, 33.0 in Preston, 33.9 in Halifax, 36.5 in Hull, and 57.8 in Sheffield. The very high rates in the two last mentioned towns were due to the fatal prevalence of influenza. In the twenty-seven provincial towns the mean death-rate was 27.0 per 1,000, and exceeded by 6.0 the rate recorded in London, which was only 21.0 per 1,000. The 4,661 deaths registered during the week under notice in the twenty-eight towns included 428 which were referred to the principal zymotic diseases, against numbers declining from 468 to 420 in the preceding three weeks; of these, 151 resulted from whooping-cough, 122 from measles, 51 from diarrhœa, 36 from scarlet fever, 35 from "fever" (principally enteric), 33 from diphtheria, and not one from small-pox. These 428 deaths were equal to an annual rate of 2.2 per 1,000; in London the zymotic rate was 1.9, while it averaged 2.5 per 1,000 in the twenty-seven provincial towns, and ranged from 0.4 in Brighton and in Sunderland, 0.5 in Norwich and in Derby, and 0.6 in Wolverhampton to 3.7 in Nottingham, 4.6 in Plymouth, 4.7 in Bradford, and 8.3 in Portsmouth. Measles showed the highest proportional fatality in Salford, Blackburn, Plymouth, Oldham, and Portsmouth; scarlet fever in Halifax and Bradford; and whooping-cough in Nottingham, Newcastle-upon-Tyne, Plymouth, Bradford and Leicester. The mortality from "fever" showed no marked excess in any of the large towns. Of the 33 deaths from diphtheria in the twenty-eight towns, 23 occurred in London, 3 in Cardiff, and 2 in Liverpool. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns; 19 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 1 in the Highgate Small-pox Hospital on Saturday, April 25th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on the same date was 940, and showed a further decline from recent weekly numbers; 85 new cases were admitted during the week, against 77 and 84 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.5 per 1,000, and exceeded the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, April 25th, 928 births and 586 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 26.7 to 22.6 per 1,000 in the preceding three weeks, further fell to 22.1 during the week under notice, and was 2.2 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Leith, and the highest in Glasgow and Paisley. The 586 deaths registered in these towns included 90 which were referred to the principal zymotic diseases, equal to an annual rate of 3.4 per 1,000, which exceeded by 1.2 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Greenock, Glasgow and Paisley. The 279 deaths registered in Glasgow included 20 which were referred to whooping-cough, 13 to measles, and 2 to diphtheria. Twenty-four fatal cases of measles were recorded in Paisley, and 6 in Edinburgh. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.4 per 1,000, against 5.5 in London.

HEALTH OF IRISH TOWNS.

IN sixteen of the principal town districts of Ireland the deaths registered during the week ending Saturday, April 18th, were equal to an annual rate of 27.6 per 1,000. The lowest rates were recorded in Dundalk and Lisburn, and the highest in Waterford and Galway. The death-rate from the principal zymotic diseases averaged 1.6 per 1,000. The 186 deaths in Dublin were equal to an annual rate of 27.5 per 1,000 (against 23.9 and 30.6 in the preceding two weeks), the rate for the same period being 22.6 in London and 21.8 in Edinburgh. The 186 deaths in Dublin included 7 which were referred to the principal zymotic diseases (equal to an annual rate of 1.0 per 1,000), all of which resulted from whooping-cough.

MEDICAL NEWS.

THE Chicago Medical College is about to erect a new building, at an estimated cost of 100,000 dollars.

THE Paris Anatomical Society has elected Professor Baumgarten, of Tübingen, an honorary member.

THE prohibition of the sale of tuberculin in Munich has now been made absolute. Druggists are forbidden to sell it even to medical men.

AN International Exhibition of Military Hygiene and Food Supply is to be held at Leipzig in 1892, under the patronage of Queen Caroline of Saxony.

THE Prince of Wales presided at a dinner, held at the Hôtel Métropole on April 24th, in aid of the funds of the Eastern Counties Asylum for Idiots.

THE seventeenth meeting of the German Association of Public Hygiene will take place at Leipzig from September 17th to 20th.

MR. ALEXANDER EDINGTON, who has been appointed bacteriologist to Cape Colony, will proceed to Cape Town on May 15th, after having made a special study of the phylloxera in the French wine districts.

THE freedom of the Plumbers' Company has been conferred on Dr. R. Farquharson, M.P., in recognition of the services rendered by him for many years past to the cause of sanitation.

DR. GATSCHENBERGER, of Kissingen, who died not long ago, has bequeathed 80,000 marks (£4,000) to the University of Würzburg for the creation of a Chair of Balneology, and the establishment of a Balneological Institute.

WE regret to have to announce the death of Dr. Charles Stewart, of Larkhall, who died on April 28th from blood poisoning, contracted a week earlier at a *post-mortem* examination.

MEDICAL MAGISTRATES.—Dr. Charles Lovegrove, Hythe, has been appointed a Justice of the Peace for the county of Kent, and Dr. Arthur Mussen, of Glenavy, Lisburn, has been placed on the Commission of the Peace for the county Antrim.

PRESENTATION.—Mr. J. H. Blayney, L.F.P.S.Glasg., has been presented by the members of the Rhodes Branch of the St. John Ambulance Society with a silver cigar case and match-box, to show their appreciation of his services as their instructor. All the members of the class, thirty in number, succeeded in obtaining certificates.

ABERDEEN INFIRMARY CORPORATION.—At the last meeting of the Board of Directors it was agreed to make the necessary arrangements for the introduction of the electric light into the new surgical block, which is expected to be ready early in the autumn. The following gentlemen, who have just finished their medical course, were elected resident surgeons and physicians: Dr. G. W. H. Tawse; Dr. John Marnoch, M.A.; Dr. J. K. Levack; Dr. R. M. Maclennan, M.A. The treasurer intimated that a donation of £1,000 had been received from Mrs. Saint for the maintenance of a bed, to be named after her late husband, in the new block.

THE POLICE AND STREET ACCIDENTS.—The censure which was administered to the police by Mr. Wyatt and his jury in an inquest at St. Thomas's Hospital last week, was certainly well deserved. A more gross case has not often come under our notice. A man fell off a van on to his head in the roadway, and was picked up unconscious; he was seen by a neighbouring medical man and then removed to the police station. There he was kept for four hours and then sent home, without the advice of the police surgeon being obtained. On the following evening he was admitted into St. Thomas's Hospital where he shortly afterwards died from fracture of the skull. When we reflect that prompt treatment in these cases may sometimes save life, the neglect of the police authorities seems little short of culpable, and if coroner's juries would only take this view of it instead of passing mild and perfectly ineffective votes of censure, we might fairly hope for more satisfactory results.

SUNDERLAND AND NORTH DURHAM MEDICAL SOCIETY.—The usual monthly meeting was held on Thursday, April 16th, Dr. J. Adamson, President, in the chair. At the invitation of the Society, Dr. Byrom Bramwell, of Edinburgh, delivered an address on The Value of Perimeter Measurements in the Diagnosis of Brain Diseases. He gave a summary of the most recent knowledge of the deep origin and connections of the optic nerve, discussing chiefly that form of hemiopia which is a symptom and physical sign of cortical lesion of the occipital lobe. He showed the perimeter charts and read the notes of cases in which the above diagnosis was made and verified *post mortem*. Other forms of amblyopia were briefly alluded to. A vote of thanks to the lecturer, moved by Mr. Morgan and seconded by Dr. Brady, brought the proceedings to a close.

THE BRITISH GYNÆCOLOGICAL SOCIETY.—The meeting of this Society, as already announced, will be held at Newcastle-on-Tyne on June 18th and 19th, under the presidency of Dr. Robert Barnes. The meetings, which will be held in the College of Medicine, will be open to all registered medical practitioners. A public dinner will be held on the evening of the first day. On June 18th Mr. Rutherford Morison, F.R.C.S., will open a discussion on "Surgical Treatment of Diseased Uterine Appendages," at 4.30. Dr. Auvard will read a paper on "Some Points in the Treatment of Endometritis," and the subject of "Puerperal Septicæmia" will be discussed by Messrs. J. H. Thompson, Reeves, Mayo Robson, and Professor Oliver. Dr. Hern, Darlington, will read a paper on "A few Notes of Cases Illustrating Symptoms removed by Correcting Uterine Misplacements (chiefly Anteflexion) which will be discussed by Drs. Horatio Bigelow, of Boston, U.S.A., Murphy, of Sunderland, and Page, of Newcastle. All communications should be addressed to the General Local Secretary, R. C. Benington, M.B., 59, Osborne Road, Newcastle-on-Tyne.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died, are Dr. L. Papaioannu, Professor of Anatomy in the University of Athens; Dr. Nicasio Landa, Medical Director of the Hospital of Pamplona, a practitioner well known in Spain as a learned physician and a distinguished journalist; Dr. Maurice de Mièville, of Nyon in Switzerland, author of works on climatology, etc.; Dr. E. Goltdammer, head of the Medical Section of the Bethanien Hospital, Berlin, aged 49; Dr. Alois Urbantschitsch, Knight of the Austrian Order of Francis Joseph, and physician to the St. Elisabethinerspital at Vienna, father of Professor Victor Urbantschitsch, the well-known aurist, aged 74; Dr. Joseph Hempel, first assistant to the Chair of Pathological Anatomy in the University of Cracow; Professor Vicenzo Dattilo, for many years teacher of operative surgery in the University of Naples; Dr. Thomas Baird Reed, Surgeon to the Presbyterian Hospital, Philadelphia, aged 56; Dr. Joshua Otis Stanton, a well-known physician of Washington, aged 53; Dr. Pircher, a well-known practitioner of Meran, of which he was for some time Burgomaster; and Professor Giovanni Bizio, a distinguished Italian chemist.

MEDICAL VACANCIES.

The following Vacancies are announced:

BIRMINGHAM CITY ASYLUM.—Resident Clinical Assistant. Board, lodging, etc., provided. Applications to the Medical Superintendent.

BIRMINGHAM CITY ASYLUM.—Assistant Medical Officer. Salary, £120 per annum, with board, etc. Applications to the Medical Superintendent.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN, Steelhouse Lane, Birmingham.—Acting Physician. Salary, £60 per annum. Applications to the Medical Committee by May 6th.

BOYLE UNION (Gurteen Dispensary).—Medical Officer. Salary, £110 per annum and fees. Applications to Mr. John Kilroy, Honorary Secretary, Clomanure, Gurteen, Ballymote. Election on May 20th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—House-Surgeon. Appointment for six months. Salary at rate of £60 per annum, with board and residence. Applications to the Secretary by May 9th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Assistant House-Surgeon and Registrar. Appointment for six months. Salary at rate of £50 per annum, with board and residence. Applications to the Secretary by May 9th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Surgeon; must be F.R.C.S.Eng., and reside within four mile radius. Applications to the Chairman of the House Committee by May 26th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Honorary Pathologist. Applications to the Chairman of the House Committee by May 26th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Pathologist. Applications on forms to be had at the Hospital, to A. C. Davis, Secretary, by May 6th.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Clinical Assistant for six months. Board, lodging, washing, and attendance provided. Apply to Dr. Ernest White, Medical Superintendent.

COUNTY MAYO INFIRMARY.—Resident Apothecary. Salary, £50 per annum, with apartments and rations. Applications to Mr. Joseph Sheridan, Secretary. Election on May 2nd.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn, E.C.—Honorary Physician. Applications to J. Lewis, Secretary, by May 8th.

GREAT YARMOUTH HOSPITAL.—Resident House-Surgeon: unmarried. Salary, £90 per annum, with board and lodging. Applications to Ernest E. Leech, Honorary Secretary, by May 12th.

HOLSWORTHY UNION, Devon.—Medical Officer and Public Vaccinator for No. 3 District. Salary, £25 8s. per annum, with midwifery and vaccination fees. Applications, endorsed "Application Medical Officer," to Cecil Bray, Clerk, by May 12th.

HOLSWORTHY UNION, Devon.—Medical Officer for the Workhouse. Salary, £22 per annum. Applications, endorsed "Application Medical Officer," to Cecil Bray, Clerk, by May 12th.

LIMERICK UNION (No. 1 District).—Medical Officer. Salary, £130 per annum and fees. Applications to Mr. Jno. H. Lee, Honorary Secretary. Election on May 11th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Two Clinical Assistants for Out-patient Department. Applications to Margaret M. Bagster, Secretary, by May 2nd.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Female Assistant Physician. Appointment for two years. Applications to Margaret M. Bagster, Secretary, by May 2nd.

NORWICH CITY ASYLUM, Hellesdon, near Norwich.—Assistant Medical Officer for one year, unmarried, and under 30 years of age. Salary, £100 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

PARISH OF KENNOWAY, Fifeshire. Medical Officer. Applications to the Inspector of the Poor by May 7th.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

SALISBURY INFIRMARY.—Dispenser. Salary, £105 per annum. Applications to the Secretary by May 15th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon; double qualifications; unmarried; and under 30 years of age. Board, residence, and washing provided. Applications to the Secretary by May 6th.

SUSSEX COUNTY HOSPITAL, Brighton.—House-Physician: double qualifications; unmarried, and under 30 years of age. Salary, £50, rising to £80, per annum, with board, residence, and washing. Applications to the Secretary by May 6th.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser: double qualifications; unmarried. Salary, £80 per annum, with board, lodging, and attendence. Applications to Capt. Phillpotts, R.N., Honorary Secretary, by May 16th.

WEST HAM UNION.—Medical Officer for No. 1 Stratford District: double qualifications. Salary, £100 per annum, with fees. Applications with three recent testimonials to F. E. Hilleary, Clerk, Guardians' Office, Union Road, Leytonstone, E., by May 13th.

WEST HERTS INFIRMARY, Hemel Hempstead.—House-Surgeon and Dispenser: double qualifications: unmarried. Salary, £100 per annum, with board, furnished rooms, fire, lights, attendance, and washing. Applications to the Secretary by May 6th.

MEDICAL APPOINTMENTS.

ALLDEN, John Horatio, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Shirley and Freemantle Local Board.

BARNES, Leopold J. J., M.D., L.R.C.S.Irel., appointed Medical Officer to the Erith Cottage Hospital.

BARON, Horatio Nelson, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of the Sixth District of the Lutterworth Union, *vice* Dr. Dickinson.

BEALE, Reyton T. B., F.R.C.S.Eng., appointed Demonstrator in Physiology in King's College, London.

BENNET, Charles John, M.R.C.S.Eng., reappointed Medical Officer of Health for the Chapel-en-le-Firth Union.

BURTON-FANNING (formerly BURTON), F. W., M.B.Cantab., appointed Physician to the Norfolk and Norwich Hospital, *vice* Dr. Sheppard Taylor, resigned.

CRAIG, Frederick A., M.B., appointed Junior Assistant Medical Officer to the Kent County Asylum, Chartham, near Canterbury, *vice* William Everett, M.B.

DALY, R. L., M.B., B.S.Durham, appointed House-Surgeon to the General Infirmary, Leeds.

DE WATTEVILLE, Walter F. R., M.B., L.R.C.P., L.R.C.S.Edin., appointed Assistant Medical Officer to the Kingussie District, Inverness-shire.

EALES, G. Young, M.R.C.S.Eng., L.R.C.P.Edin., appointed Honorary Physician to the Western Hospital for Consumption, Torquay, *vice* Dr. Wills, resigned.

ELAM, W. H., F.R.C.S.Eng., formerly Assistant Surgeon, appointed Surgeon to the Cancer Hospital (Free), Brompton.

EVERETT, Wm., M.B., appointed Senior Assistant Medical Officer to the Kent County Asylum, Chartham, near Canterbury.

FLOYER, Wm. Wadham, M.B.Lond., M.R.C.S.Eng., appointed Medical Officer for the Egham and Thorpe Districts of the Windsor Union.

FOSTER, Michael S., M.A., M.B.Cantab., appointed Physician to the Kur saal Maloja (Upper Engadine).

FOX, George M., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for Willenhall, *vice* Joseph Tonks, M.R.C.S., deceased.

GRANT, J., M.B., C.M.Aberd., appointed Assistant Medical Officer for the Abernethy and Duthil Districts, Inverness-shire.

GUTHRIE, L. G., M.A.Oxon., M.R.C.P.Lond., appointed Assistant Physician to the Paddington Green Children's Hospital.

HANDSON, C. P., M.B.Camb., appointed Assistant House-Surgeon to the Metropolitan Hospital, Kingsland Road, *vice* R. F. Standage, M.R.C.S.

HARDING, G. D., L.R.C.P., L.M.Edin., M.R.C.S.Eng., appointed Resident Medical Officer to the Grantham Friendly and Trade Societies' Medical Institution, *vice* Joseph Priestley.

HOWDEN, Robert, M.B., C.M.Edin., appointed Medical Officer for the Parishes of Aberlady, Bolton, and Haddington.

MARSH, Ryding, M.D.Lond., M.R.C.S.Eng., appointed Medical Officer to the Brighton, Hove, and Preston Dispensary.

MARSHALL, C. F., M.D., B.S., M.R.C.S., L.S.A., appointed House-Physician to the Metropolitan Hospital, Kingsland Road, *vice* Dr. H. Stanley.

MURRAY, Robert Milne, M.B., C.M., F.R.C.P.Edin., F.R.S.E., appointed Assistant Physician to the Edinburgh Royal Maternity and Simpson Memorial Hospital, *vice* Dr. Barbour.

PARKES, Louis C., M.D.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for the Parish of Chelsea, *vice* Edward Seaton, M.D., resigned.

PEARSON, H. A., L.R.C.P.Lond., appointed Outdoor Qualified Assistant to the Lincoln Oddfellows' Medical Institute.

PEIRCE, James E., M.R.C.S.Eng., L.S.A., etc., J.P., appointed Medical Officer to the Post Office, Redditch.

PRIESTLEY, Jos., M.D.Edin., D.P.H., M.R.C.S., appointed Chief Sanitary Inspector for Camberwell.

REMFRY, Leonard, M.A., M.B., B.C.Cantab., M.R.C.P., M.R.C.S., appointed Obstetric Physician to the Great Northern Central Hospital, Holloway Road, *vice* W. R. Dakin, M.D.

SMYTH, Wm., M.B., C.M.Edin., appointed Medical Officer for the North Togston Colliery, Northumberland.

STANDAGE, R. F., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Metropolitan Hospital, Kingsland Road, *vice* G. D. Parker.

UNDERHILL, Charles Edward, B.A.Cantab., M.B., F.R.C.P.Edin., M.R.C.S. Eng., appointed Physician to the Edinburgh Royal Maternity and Simpson Hospital, *vice* Dr. Hart.

WARD, Arthur H., F.R.C.S., appointed Registrar to the London Lock Hospital.

WEST, L. F., M.R.C.S., L.R.C.P., appointed House-Surgeon to the General Infirmary, Leeds.

WILSON, C. W., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Third District of the Bridport Union.

WINDLE, J. D., L.R.C.P.I., L.M., L.R.C.S.Ed., appointed Medical Officer of Health for the Southall-Norwood (Middlesex), Local Government District.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: External Examination of the Eye. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. W. B. Cheadle: Errors of Feeding and Food Diseases of Childhood.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 40, Leicester Square, W.C., 8 P.M.—Paper: Mr. D. N. Caush, L.D.S.Irel.: On Exostosis, with microscopic slides and photographs. Casual communications: Mr. J. Bland Sutton: Odontome in a Horse. Mr. Morton Smale: A Case of Injury to Temporo-maxillary Articulation at 3½ Years, causing closure of the jaw. Mr. Stocken: Cases of Absorption of the Permanent Teeth. Mr. David Hepburn: A Case of Attrition in the first Dentition. Mr. C. V. Cotterell: Convertor for Electric Mallet.

MEDICAL SOCIETY OF LONDON.—Annual *conversazione*. Oration at 8.30 P.M. by Sir Joseph Lister, Bart., F.R.S.: The Coagulation of the Blood in its Practical Aspects.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: Hypochondriasis and Melancholia. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: Raynaud's Disease and Allied Affections.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Dr. S. Delépine: Melanomycosis of Skin. Dr. J. S. Bristowe: Black Tongue. Dr. Albert Wilson: The Micro-organism of Diphtheria, with Experimental Results in Animals. Dr. S. Sharkey: Ulcerative Colitis. Mr. W. H. Battle: Acute Epiphysitis. Dr. N. Pitt: Gummatous Meningitis; Gumma of Heart. Dr. A. F. Voelcker: Tuberculosis of Mediastinal Glands Invading Lung. Mr. E. W. Roughton: Lipoma of Spermatic Cord with Hernial Sac. Mr. H. B. Robinson: Columnar-celled Carcinoma of Jaw. Dr. H. D. Rolleston: Myocarditis limited to Right Side. Dr. F. Payne: Syphilitic Caries of Calvaria in an Infant. Card Specimens.—Mr. Alban Doran: Hydronephrosis; Nephrectomy. Mr. J. H. Targett: Symmetrical Hemiatrophy of Gastrocnemius. Dr. H. D. Rolleston: Necrosis of Skull Cap; Fracture of First Rib. Mr. S. G. Shattock: Billharzia—Bladder.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. F. T. Roberts: Clinical Cases in Relation to Physical Conditions and Symptoms. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: Glaucoma.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Dr. Lewers, Dr. Godson, and others. Dr. Dakin: Tetany in Pregnancy. Dr. John Phillips: On a Case of Death following Vaginal Injection of Acid Nitrate of Mercury. Mr. Alban Doran: Sequel to the Case of Anterior Serous Perimetritis simulating Ovarian Sarcoma.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Tooth: The Diagnosis between Functional and Organic Diseases of the Nervous System. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. W. B. Cheadle: Common Errors and Fallacies of Medical Treatment in Children's Diseases. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. W. R. H. Stewart: The Examination of Ear Cases.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M.—Patients and Card Specimens at 8 P.M.—Mr. R. Williams: Arterio-venous Aneurysms of the Orbit. Mr. George Wherry: Parageusis with Ophthalmoplegia. Mr. T. Thompson: Emphysema of Conjunctiva. Mr. Lawford (for Mr. Johnston, of Vancouver): Penetration of Eyelash into Anterior Chamber. Mr. Ernest Clarke: Intrusion of Eyelash into Anterior Chamber. Dr. H. P. Mules: On Anterior Central and Pyramidal Capsular Cataracts. Mr. Kenneth Scott: On Perchloride of Mercury in Conjunctival Disease. Card Communications.—Mr. Lawford: Thrombotic Retinitis. Mr. R. Williams: Dermoid of Cornea. Mr. Ernest Clarke: Total Absence of Iris.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—T. W. Malcolm, M.B., F.R.C.S. Eng.: Some Complicated Cases of Abdominal Section.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Adjourned discussion on Mr. Watson Cheyne's paper on the Value of Tuberculin in the Treatment of Surgical Tuberculous Diseases.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Professor Crookshank: Lecture: The Microscope for Bacteriological Work. Practical Work: Cover-glass Preparations. Hospital for Consumption, Brompton, 4 P.M.—Dr. F. T. Roberts: Clinical Cases in Relation to Physical Conditions and Symptoms. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Heart—Valvular Lesions with their Consequences.

CLINICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Arbuthnot Lane: Two Cases of Resection of Intestine by Senn's Method. Mr. C. J. Symonds: Two Cases in which a Sequestrum was Removed from the Neck of the Femur without Injury to the Joint: Recovery in both, and in one with a perfect joint. Dr. T. J. Maclagan: Cases of Neuritis and Spurious Arthritis. Mr. Stephen Paget: A Case of Cerebral Abcess Twice Trephined: Hernia Cerebri: Recovery. Dr. Sidney Phillips: A Case of Typhoid Fever with Occlusion of the Femoral Artery during convalescence, and with Acute Maniacal Attacks.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BURNELL.—On April 25th, the wife of A. C. Burnell, M.B. and C.M.Edin., Newcastle-on-Tyne, of a daughter.

LAMBERT.—On April 25th, at Balgowan, Newland, Lincoln, the wife of Frederick Samuel Lambert, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter (prematurely).

MARRIAGES.

BALLANCE—WRIGHT.—On April 23rd, at Edgbaston Parish Church, by the Rev. Cresswell Strange, Vicar, assisted by the Rev. G. H. Cameron, Vicar of St. Stephen's, Birmingham, John Descarrières, second son of the late Charles Ballance, of Clapton, Middlesex, to Isabel Sophia, younger daughter of John Wright, of Edgbaston, Birmingham.

PARKINSON—PILLMAN.—At Christ Church, Morningside, Edinburgh, on April 27th, by the Rev. C. M. Black, B.D., T.C.D., Thomas Wright Parkinson, M.B., C.M., third son of the late T. H. Parkinson, of Kaituna, Canterbury, New Zealand, to Euphemia Jessie, eldest surviving daughter of Mervyn Pillman, Tossberry, Nile Grove. Australian and New Zealand papers please copy.

PILKINGTON—LLOYD.—On the 18th March, at St. Clement's Church, Mossmann's Bay, Sydney, by the Rev. Ernest Claude Beck, Francis Sergent Pilkington, L.R.C.P.Lond., M.R.C.S.Eng., youngest son of the late F. S. Pilkington, of Leyland, Lancashire, to Marie, third and only surviving daughter of the late W. Griffiths Lloyd, of Cerrig-y-Druidion, North Wales.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily. 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2, Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.* Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.15; females, Th., 8.15. *Operation Day.*—Tu., 2.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 1, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.15, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

G. P. asks for information as to the results of the treatment of phthisis by iodide of gold.

HALVIVA.

EASTERN SEAS asks where halviva can be purchased?

CONJOINT BOARD IN ENGLAND.

CANDIDATE asks to be recommended textbooks to read for the final examination of the London Colleges—that is, in medicine, surgery, obstetrics, and gynæcology; pathology, surgical and general; and medical jurisprudence.

*** Frederick Taylor's *Practice of Medicine*: Erichsen's *Surgery*; Galabin's *Diseases of Women*; Green's *Pathology*; Swayne Taylor's or Abercrombie's *Medical Jurisprudence*.

HERNIA IN INFANTS.

HIPPOCRAS asks: What is the most efficient treatment of a case of double hernia in a male child of 3 months? I am trying a double spica bandage with lint pads beneath, but this is not altogether satisfactory.

*** Mr. R. W. Parker informs us that he finds a well-fitting double leathern truss is the simplest and most manageable treatment for such cases. The flannel binder and the clothes about the abdomen should be quite loose; if at all tight they tend to force down a hernia. Careful feeding is required to prevent any flatulence, also an active agent in forcing down a hernia.

EMBALMING.

G. writes: Practitioners in tropical climates are frequently requested to embalm bodies so that they may be kept for a few days without decomposition. Interment of course being delayed to enable friends and relatives at a distance to attend the funeral. I shall therefore feel much obliged for details of a simple process of embalming, by which bodies can be kept at least a week without putrefaction in the great heat of the tropics, or for the name of any work, not out of print, from which I may glean the required information.

DISINFECTING APPARATUS.

MR. HAROLD H. B. MACLEOD (House Surgeon, Salop Infirmary, Shrewsbury) writes: Our directors being desirous of erecting a disinfecting apparatus at the infirmary, I should be glad if any of your readers can advise as to the best appliance to be used for that purpose. The cost of a steam-pressure apparatus being so much greater than that of hot air, I should be much obliged if anyone who has had experience of the satisfactory working of the latter would give me particulars of the form of apparatus used.

ANSWERS.

C. V.—We do not know any English practitioner who has used chloride of zinc pencils in the treatment of muco-purulent endometritis.

D.P.H.ENG.

GENERAL PRACTITIONER.—The date should be January 1st, 1890. The report, published on page 1446 of the BRITISH MEDICAL JOURNAL of December 20th 1890, as issued by the Royal Colleges, should have contained that date. The substitution of "1891" for "1890" was due to a printer's error.

PATENTING OF SURGICAL APPARATUS.

INQUIRER.—It is difficult to draw a distinction between a patent surgical appliance and a patent medicine. The patenting of any method or process of cure is interdicted by some of the licensing bodies, and would, we imagine, be repudiated by every medical man who has any regard for the dignity and welfare of his profession.

TREATMENT OF FERMENTATIVE DYSPEPSIA.

DR. J. D. WINDLE (Southall, Middlesex) writes: In answer to "Nil Desperandum," I should strongly advise him to prescribe a mixture consisting of sulphurous acid 5j, tinct. card. co. 5j, water 5j, after each meal. I should advise milk and malt liquors to be avoided, and saccharin to be used instead of sugar. Whisky and water with meals will be found the most suitable drink.

DR. C. R. ILLINGWORTH (Clayton-le-Moors) writes: I would advise the administration of full doses of hydrochloric acid, chlorate of potash, and nux vomica, with 5-minim doses of chlorodyne and some carminative. The symptoms point to extreme debility of the mucous membrane, which is common after middle age. The tongue in such cases is either perfectly clean and red, or covered with frothy saliva.

NUISANCE FROM GAS WORKS.

SURGEON, R.N.—Section 114 of the Public Health Act, 1875, applies to such a case as that described by our correspondent, where offensive gases (sulphuretted and carburetted hydrogen) are discharged from the works into the atmosphere around. If complaint is made to the urban sanitary authority, on the certificate of the medical officer of health, or of two medical practitioners, or of ten inhabitants of the district, that the works cause effluvia to be given off which are a nuisance or injurious to the health of the inhabitants around the works, it becomes the duty of the sanitary authority to lay a complaint before a justice, who may summon the person by whom the trade complained of is carried on, and after inquiry, if satisfied as to the existence of a nuisance, for the prevention of which the best practicable means have not been taken, may inflict a penalty not exceeding £5, or less than 40s. The sanitary authority may, if it so prefers, take proceedings in a superior court of law or equity in respect of the matters alleged in the certificate.

NOTES, LETTERS, Etc.

ERRATA.—In the BRITISH MEDICAL JOURNAL of April 25th, p. 942, col. 2, line 46 from bottom, for "pepsine" read "papain," and on p. 943, col 1, line 24 from bottom, for Dr. T. Walten, Reigate, read Dr. J. Walters, Reigate.

REPETITION OF PRESCRIPTIONS.

THE Marion County (Ohio) Medical Society has, it is stated, decided to ask the Legislature to pass an enactment prohibiting druggists from "refilling" any prescription except on the order of the physician who wrote it.

A SCIENTIFIC ICHABOD.

THE Sanatorium established at Charlottenburg some months ago by Dr. Cornet exclusively for the treatment of tuberculous patients by Koch's method has, it is stated, had to close its doors for lack of patients. It will be remembered that this establishment was opened with a great flourish of trumpets, Herr Bleichröder, the wealthy Berlin banker, coming forward as the founder of twenty free beds. *Sic transit gloria*—of a scientific theory!

MORTALITY OF CHILDBIRTH AND THE MIDWIVES BILL.

DR. HENRY CANDLISH (Ayr) writes: Apart altogether from any legislative interference with or enactment upon this question, its essential importance is so great that it ought to be faced to ascertain how far the death-rate associated with parturition is too high. If it can be established that the defective training of midwives has much to answer for in this respect, then it is not only desirable but necessary that they should be required to possess such instruction as to enable them to discharge the duties connected with the management of at least ordinary labours safely and properly. If it is clearly ascertained that in other countries, where legal provision is made for the education, examination, and registration of women with a view to their being authorised to practise obstetrics, there is a smaller death rate of mothers and infants than in Great Britain and Ireland, where such law does not exist (but where, for some time, amongst many members of the profession, a strong belief prevails that it ought), then by all means statutory measures should be adopted and enforced with the most commendable object of preventing avoidable mortality. It would be interesting to ascertain the number of deaths per 1,000 of the mothers and children in childbirth, or connected with it, by a return from practitioners engaged in that most important branch of their profession. I say per 1,000 because, although over thirty years in practice in the North of England, and attending confinements during the time, I am happy to say that I could not record a percentage of deaths. I assisted the local midwives in any difficult cases, and advised them or replaced them as I found it necessary. Although they were not qualified by any college course, I am glad to say they had the curriculum of experience, and did not delay too long in soliciting my attendance and services. This, added to the fact that, as a rule, they were extremely temperate, conduced greatly to successful results. I lay great stress upon the last characteristic, because I believe that impatience and meddlesomeness are not seldom promoted when the "steam's up," to the detriment, if not to the death, of the patients.

I do not wonder much at Dr. Aveling's highly favourable statistics. Parturition is a vital process, and trained nurses and trained minds and gentle manipulation and patience will do much to secure the best results. Making fair allowances for superior and inferior surroundings as to the social position of patients, and their possible needs, and provision therefore as considerations *pro* and *con* results, yet I do think that if the labours of the poorer classes were more conducted on sound temperance principles better results would sometimes ensue.

Assistants "*sine* diploma" I have a very kindly feeling for, all the more if they are of abstemious habits and sober life. I think it is fair that, not having a diploma as a guarantee of fitness to practise, they should at least be free from the reproach of incompetence through drink. I have no doubt, in the event of an Act passing in regard to midwives, the above class would be included unless such as had a certificate of fitness to practise midwifery from a body having a legal authority to confer the same. *Fiat justitia.*

ST. BARTHOLOMEW'S AMATEUR DRAMATIC CLUB.

MR. FREDERICK J. GANT (Consulting Surgeon to the Royal Free Hospital) writes: As no notice may have been sent you of the entertainment given by the Amateur Dramatic Club of St. Bartholomew's Hospital, on behalf of the rebuilding fund of the Royal Free Hospital, may I be permitted to at least personally express the warm thanks which are due to the club for the extreme kindness which prompted a large and rich hospital thus to aid a smaller and less independent neighbour? That the entertainment at St. George's Hall, April 9th, was a great success, before a crowded audience, is known to all, the comedy, *Our Guard*, being represented and placed upon the stage without a flaw. The many points of humour and pathos in the comedy were fully appreciated. The lady orchestra equally well acquitted themselves in the selections of music.

"SHAKING AT THE PIT OF THE STOMACH."

DR. ARVID KELLGREN (London) calls our attention to a printer's error in the notice of the "Technic of Ling's System of Manual Treatment," published in the BRITISH MEDICAL JOURNAL of April 11th. In the quotation "Vibration over the apex of the heart has the effect of a stronger, better, and quicker beat," "quicker" should read "quieter."

He adds: You give as a quotation from my book in regard to the manipulation of shaking at the pit of the stomach, that, "as the solar plexus commands the circulation in the abdomen, we may readily understand that this manipulation must indeed have a great effect;" whereas the entire sentence, of which this is only the tail end, reads as follows: "As the stomach and its continuation, the duodenum, have involuntary muscles in their walls which are more sensitive to stimulation by reason of their tendency to automatic contraction, and as the solar plexus commands the circulation in the abdomen, we may readily understand that this manipulation must indeed have a great effect" (page 39), and anyone who has the least medical knowledge will easily see the material difference between my statement and your qualification.

HALVIVA.

MR. M. A. GILLOW, M.R.C.S. (Hampstead, N.W.) writes: I have read with much interest the remarks of Dr. G. Yeates Hunter on this most valuable remedy, and can endorse fully his views. During forty years' practice I have searched in vain for a medicine equal to quinine for good and without its risks for evil. Though now retired from active work, I have tried kreat halviva during the last six months in many and varied cases, and with most satisfactory results. It pulls up the system quickly after severe colds and influenza. It fortifies the nerves against epidemics; it checks neuralgic pains, stimulating the liver and bowels at the same time—the reverse of quinine—and it supplies the place of alcohol to those who have the habit of excess. In these latter most painful cases I can honestly recommend halviva as a boon of rare value; it not only allays the morbid craving, but it builds up the shattered frame. For this end it should be given in full doses of 30 drops in a little hot water three or four times daily!

LETTERS, COMMUNICATIONS, ETC., received from:

(**A**) Mr. H. Acheson, Gorey; Messrs. Allen and Hanburys, London; Mr. J. H. Ashworth, Halstead; Dr. R. J. Anderson, Galway. (**B**) Dr. A. Bronner, Bradford; Dr. F. F. Burghard, London; Mr. N. D. Best, Birmingham; Mr. J. Blayney, Middleton; Mr. J. D. Ballance, Birmingham; Dr. Leslie Bates, St. Albans; Mr. G. Barling, Birmingham; G. Birt, M.B., Stourbridge; Dr. H. Barnes, Carlisle; Bouillon Fleet Company, London; Mr. A. H. Benson, Dublin; Dr. J. W. Byers, Belfast; Dr. P. Boobbyer, Nottingham; A. C. Burnell, M.B., Jesmond; Mr. R. C. Benington, Newcastle-on-Tyne; Mr. P. T. B. Beale, London; Dr. Berdoe, London; Dr. D. Bruce, Netley. (**C**) Dr. S. Coupland, London; Surgeon-Major H. Charlesworth, Dover; Dr. Crean, Wexford; Mr. J. Cantlie, Hong Kong; Clerk of the City of London Lunatic Asylum, Stone; Mr. T. Christy, London; Dr. A. R. Coldstream, Florence; Surgeon J. A. Cunningham, Woolton; Mr. E. T. Collins, Cambridge; Mr. E. Coward, Huddersfield; Mr. G. Coombe, Southminster; A. K. Christie, M.B., London (**D**) Mr. G. J. Dudley, Dudley; Mr. M. P. Duke, Dublin; Dr. Duka, London; Dr. J. Donelan, London; Dr. D. Drummond, Newcastle-on-Tyne; Mr. Alban Doran, London; Dr. G. H. Darwin, Didsbury; Dr. V. Dickinson, London; Mr. H. Davis-Jones, Llangollen. (**E**) Dr. R. Eager, Stourbridge; Mr. H. F. C. Eagle, London; Mr. G. Y. Eales, Torquay; Dr. R. Esler, Peckham. (**F**) Mr. C. M. Frayling, London; Dr. Michael Foster, Winchester; Dr. D. J. Flynn, Cork; Mrs. F. S. Fosse, Scarborough; Dr. T. C. Fox, London; Dr. H. Feulard, Paris; Dr. C. E. S. Flemming, Freshford; Mr. H. Fox, Newcastle-on-Tyne; Mr. G. Foy, Dublin. (**G**) Dr. Major Greenwood, London; Professor Gairdner, Glasgow; Dr. G. R. Green, Ripon; Dr. N. Grattan, Cork; Sir Richard Garth, London; Messrs. Grindley, Groom and Co., Bombay; Mr. G. M. Giles, Sanawar, Punjab; G. P.; G.; Dr. J. Gettings, Walsall; Dr. J. A. Gormley, Bangalore; Messrs. Charles Griffin and Co., London; Mr. W. Gardiner, London. (**H**) Dr. J. W. Hunt, London; Mr. S. Hooker, Hastings; Dr. A. Hodgkinson, Manchester; Dr. G. Henty, London; Mr. E. H. Houchin, Stepney; Mr. W. H. Hughes, London; Dr. G. E. Herman, London; Miss W. T. Haslam, London; Mr. W. B. Hemsley, Kew; Dr. H. Handford, Nottingham; Mr. J. H. Harris, Modbury; Mr. G. L. Hill, Dursley; Mr. F. E. Horsfield, Darlington. (**I**) Dr. C. R. Illingworth, Accrington; Dr. L. G. Irvine, Edinburgh. (**J**) Mr. G. W. Jackson, Jarrow-on-Tyne; Jaborandi. (**K**) Dr. Norman Kerr, London; Dr. R. Kirk, Glasgow; Mr. H. Knight, London; Messrs. King, Mendham and Co., Bristol; Mr. C. S. Kilner, Bury St. Edmunds. (**L**) C. J. R. Lawday, Strete; Mr. A. D. H. Leadman, Boroughbridge; Mr. R. Lamb, Edinburgh; Dr. Fletcher Little, London; Dr. C. Lovegrove, Hythe. (**M**) Mr. P. Michelli, London; Dr. MacCarthy, Worcester; Mr. E. H. G. Morris, London; Dr. W. J. Mickle, London; Dr. G. B. Mead, Newmarket; Dr. J. Mitchell, Stonehouse; Dr. J. A. Macdougall, Cannes; Mr. R. Maples, Kingsclere; A Member; Mr. W. A. Maggs, London; Mr. H. H. B. MacLeod, Shrewsbury; Dr. Maxwell, Woolwich; Dr. S. Martin, London; Mr. W. Moore, Stourport; Dr. R. Marsh, Brighton; Mr. T. Murtagh, Eastbourne; Dr. H. Mackenzie, London; Dr. L. McWhannell, Birkenhead. (**N**) Mr. H. A. A. Nicholls, Tobago; Mr. G. Norrish, London; Mr. E. N. Nason, Nuneaton. (**O**) Mr. T. B. O'Connor, London; Mr. W. Odell, Torquay; Observer. (**P**) Puzzled; Dr. F. M. Pope, Leicester; Dr. Parkes, London; Mr. W. H. Pearce, London; Dr. H. H. Phillips, Reading; President of the Pharmaceutical Society of Great Britain, London; Mr. J. Pocock, Bangor; Mr. F. W. Pilkington, Oxford; Mr. W. E. P. Phillips, London. (**Q**) Dr. R. F. Quinton, London. (**R**) Dr. R. R. Rentoul, Liverpool; Mr. G. H. D. Robinson, London; Dr. L. Raley, Caterham; Mr. H. Rix, London; Mr. A. W. Mayo Robson, Leeds; Dr. H. Rutherford, Glasgow; Mr. K. Roberts, London; Retired Medical Officer. (**S**) Dr. J. A. Sharp, Derby; Surgeon-Major; Mr. R. R. Sleman, London; Dr. C. B. Sewell, London; Messrs. Savory and Moore, London; Dr. H. Snow, London; Mr. W. Johnson Smith, London; Dr. E. M. Sympson, Lincoln; Mr. F. A. Southam, Manchester; Secretary of the Apothecaries' Society, London; Mr. P. L. Sclater, London; Dr. R. Wade Savage, London. (**T**) Mr. B. D. Taplin, Dorrington; A. Todd, M.B., Market Drayton; Sir Ralph Thompson, London; Dr. R. Turner, York; Dr. N. Tirard, London; Dr. Trevelyan, Leeds; Dr. W. H. Torbock, Fowey; Mr. J. J. Tisdall, Liverpool. (**U**) Dr. P. G. Unna, Hamburg. (**W**) Mr. W. H. Walmesley, New Charlton; Mr. W. J. Ward, Haverhill; Mrs. Webster, Lee; Mr. R. W. Watkins, Towcester; Dr. W. Hale White, London; Dr. E. W. White, Birmingham; Dr. T. Walters, Reigate; Dr. T. Webster, Bristol; Dr. O. Wood, London; Dr. Q. M. Wallace, Claughton; Mr. J. D. Windle, Southall; Mr. A. M. Williams, Erdington; Mr. J. B. Ward, Oxford; Professor B. C. A. Windle, Birmingham; Dr. Theodore Williams, London; Mr. J. G. Wainwright, London. (**Y**) Dr. Young, Melton, etc.

BOOKS, ETC., RECEIVED.

An Introduction to the Study of Mammals Living and Extinct. By W. H. Flower, C.B., F.R.S., and Richard Lydekker, B.A., F.G.S. London: Adam and Charles Black. 1891.

Yearbook of the Scientific and Learned Societies of Great Britain and Ireland. Eighth annual issue. London: Charles Griffin and Co. 1891.

Our Canine Companions in Health and Disease. By J. Woodroffe Hill. London: Swan Sonneschein and Co. 1891.

Transactions of the Obstetrical Society of London. Vol. xxxii, for the year 1890. Published by the Society. 1891.

Beiträge zur Pathologie und Therapie der Gallensteinkrankheit. Von Dr. J. Kraus. Berlin: A. Hirschwald. 1891.

Étude Historique sur les Organes Génitaux de la Femme. Par Gabriel Peillon. Paris: O. Berthier. 1891.

A Short Dictionary of Medical Terms. London: J. and A. Churchill. 1891.

Fever: its Pathology and Treatment by Antipyretics. By Hobart Amory Hare, M.D., B.Sc. Philadelphia and London: F. A. Davis. 1891.

Primer Congreso Medico Regional de la Isla de Cuba. Habana: A. Alvarez y Compañia. 1890.

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CLINICAL REMARKS
ON
THE PRESENT POSITION AND SCOPE OF LITHOLAPAXY.

ILLUSTRATED BY A RECENT SERIES OF 165 CASES OF THE OPERATION FROM THE WRITER'S PRACTICE.

By P. J. FREYER, M.A., M.D., M.Ch.,
Surgeon-Major H. M. Bengal Army, and Civil Surgeon, Moradabad.

My paper entitled "Recent Experiences in Surgery of Stone in the Bladder: 100 Litholapaxies and 32 Lithotomies,"[1] brought down the record of my operations for stone in the bladder—553 in number by all methods—to the middle of April, 1889. During the period that has elapsed since that time down to the end of February, 1891, out of 168 cases of stone in the bladder which have come under my treatment, in patients of all ages from 2 years to 90, no fewer than 165 have been dealt with by litholapaxy.

Sex and Age: Duration of Treatment.—There were amongst these 165 litholapaxy cases 99 adults—namely, 96 males and 3 females—and 66 male children, or lads up to the age of 15 years. The average age of the adult males was 51¾ years, varying from 18 to 90; that of the male children 7¼ years, varying from 2 to 15; and that of the three females 52⅔ years. The average number of days spent in hospital or under treatment (in case of patients in private practice) was, in the case of adult males, 6, varying from 2 to 28 days; in the case of male children, 5½ nearly, varying from 2 to 21 days; and in the case of females, 4 days. It should be mentioned, however, that in most instances the patients were kept in hospital one, two, or three days more than was absolutely necessary, merely as a precautionary measure and for purposes of observation. In no one case was the patient allowed to leave hospital till he had completely recovered.

Weight of Calculi.—The average weight of the *débris* of calculus removed was in adult males 242 grains, varying from 3 grains to 3 ounces and one drachm; in children 108 grains, varying from 2⅔ grains to 3 ounces and 2¼ drachms; and in women 435 grains. The weights here given are those of the *débris* when thoroughly dry.

Recurrent Stone.—These 165 litholapaxies occurred in 164 different individuals, operations Nos. 388 and 449 having been performed on the same person. On May 7, 1890, I removed from him a small phosphatic calculus, weighing 4 grains; he remained perfectly well for three months, when symptoms of stone again set in, and on December 8th, 1890, I removed a second stone of the same composition, weighing 95 grains. Amongst these 165 cases of litholapaxy there were, in addition to the case above described, six other instances of recurrent stone—two after lithotomy and four after litholapaxy. Case 314 had undergone lateral lithotomy in his childhood, and Case 361 lateral lithotomy twice, four and ten years previously respectively. Cases 336, 404, and 426 had been operated on by me two and a-half, seven, and two and a-half years previously; and in Case 412 litholapaxy had been performed by another surgeon one year and a-half before. All these patients had remained well and free from urinary symptoms for long periods after the first operation, so that the second calculus in each instance had no direct connection with the first.

Second Sittings.—In my previous writings I have laid great stress on the necessity of removing the whole of the stone at one sitting: 161 out of the 165 operations now under consideration were completed at a single sitting. It will, however, be found occasionally that a last fragment will sometimes evade detection. This is, undoubtedly, a weak point in the operation; but it is a weak point which sinks into insignificance when compared with the advantages with which the operation is attended. Of the four instances in which a second sitting was necessary, in three a fragment was undesignedly left behind. In all three cases the fragment revealed itself next day by the pain, stoppage of water, and other symptoms attendant on its presence in the bladder. In Cases 309 and and 337 the fragment was removed, and in each instance the patient made an uninterrupted recovery. In Case 451 the fragment was also easily removed, but the patient died. In the fourth case the operation was designedly divided into two parts; and, as the case is a remarkable one from many points of view, I will give it in detail.

Vesical Calculus; Second Calculus probably in Ureter.—A Mahomedan lad, Case 350, aged 15 years, was admitted to the Moradabad Civil Hospital, December 24th, 1890, with symptoms of stone of four years' duration. He was so miserably weak that he was unable to walk or even stand up. He was in constant agonising pain, the urine passing in drops continuously day and night. The foreskin was ulcerated, the result of the patient pulling at it to relieve the pain. His spleen was enormously hypertrophied, measuring, roughly, 1 foot long by 10 inches broad, and literally filling the abdomen. He had constantly suffered from fever for several months, was anæmic, and his face was pinched and anxious. The lad was a living skeleton, and altogether presented a miserable spectacle—the result of long suffering. A large stone of irregular shape was felt by the sound. The suprapubic operation suggested itself, but a cutting operation of any kind was contraindicated by the wretched health of the boy, and particularly by the enormously enlarged spleen. He was placed under preparatory treatment.

On December 26th, helped by my assistant-surgeon (my brother, Surgeon S. F. Freyer, Medical Staff, being present), I performed litholapaxy. I found that after slitting the floor of the meatus the largest lithotrite that would pass was a No. 9, and the largest cannula a No. 12. The stone was easily caught, but was too large for the lithotrite to lock on it. By the process of chipping off portions and scraping the sides of the calculus, I eventually reduced it to such dimensions that the lithotrite locked on it. It was fortunate that the stone was irregular in shape and fairly soft, which much facilitated the crushing. Both the lithotrite and cannula were several times introduced; and, after working for one hour, I imagined that I had completely emptied the bladder of stone, having removed a mass of *débris* which I roughly estimated to weigh nearly 2 ounces. On careful examination, however, I found that there was a tumour, elongated in shape, in the right groin. This I found was a second stone, situated in the direction of the right ureter, in which, at its entrance to the bladder, I came to the conclusion it was lying. The outline of the stone could be seen through the abdomen, and it could be felt in position between a finger introduced into the rectum and a hand placed on the abdomen. On introducing the lithotrite I could touch the lower end of the stone, which, however, could neither be grasped nor displaced from its position. The patient was much exhausted from chloroform; so he was put to bed, my intention being to remove the second stone by suprapubic cystotomy should the boy recover from the operation which he had undergone.

During the first three days after the operation the boy contо pass urine fairly freely but with considerable dribbling. He also had slight fever every evening, but, on the whole, was growing stronger daily.

On December 30th I found the patient in intense pain, with stoppage of urine. On passing a sound I found that the stone had shifted its position and was now lying in the bladder right up against its neck. The tumour in the groin had disappeared. The dislodging of the stone from the ureter was due, no doubt, to the other stone, on which it rested, having been removed, and the accumulation of urine behind pushing it on into the bladder.

The patient was at once anæsthetised, and litholapaxy again performed (Dr. S. F. Freyer present). The same instruments were used as before, and a stone of nearly the same size removed. The operation lasted 1½ hour, and the patient was much exhausted.

The *débris* removed at the first sitting weighed, when dry, 767 grains, and that at the second 681 grains; total, 1448 grains, or more than 3¼ ounces. For the first three or four days the lad was very low, and dribbling of urine continued, but on January 11th I had the pleasure of showing him to Surgeon-General W. R. Rice. He was then sitting up in bed quite happy; dribbling of urine had ceased, and his general health

[1] British Medical Journal, October 12th, 1889.

had much improved. All urinary symptoms had disappeared by January 20th, and on January 22nd he was discharged in fairly good health, the spleen being much reduced in size. On January 28th I met the lad walking about in the streets.

It is in such cases as this that Bigelow's operation stands forth in brilliant contrast with all other forms of operation for stone.

Complications.—Amongst the 165 cases of litholapaxy there were several instances in which stone in the bladder was complicated by the coexistence of enlargement of the prostate or of urethral stricture. Cystitis was also a not uncommon complication, and in some instances the urine was fœtid. Yet special treatment for this latter condition was rarely necessary, the removal of the calculus—the cause of the complication—being, as a rule, followed by a spontaneous cure of the cystitis. There were many other complications, such as disease of the kidneys, dysentery, piles, prolapse of the bowel, etc.; and some of the cases were, like No. 350, already given in detail, almost moribund when they came under treatment. Yet no case was rejected, the 168 cases of operation which form the subject of this paper being the only instances of vesical calculus that came under my treatment during the period under review. There were besides several cases of impacted urethral calculus, in five of which urethrotomy had to be performed.

It will be observed that there were several very large calculi amongst this series. Cases of this kind are always attended with interest, so I will venture to give details of one.

Large Calculus. — R. B., Case 379, a Mahomedan male, aged 75, admitted to the Moradabad Civil Hospital, April 14th, 1890, with symptoms of stone, which had existed six years. Large stone felt by the sound. Patient extremely weak and in great pain; passing urine every quarter of an hour, frequently mixed with blood. Prostate much enlarged. On April 15th I performed litholapaxy. I introduced my largest lithotrite, No. 17, and at once caught the stone, but found I could make no impression on it. Eventually, one end of the stone, which was oval in shape, was caught, and with a great effort a portion was broken off. This was reduced to fine *débris*, and removed. I again attacked the stone, and broke off a second piece, which was treated similarly to the previous portion. This process was repeated again and again, till the whole of the stone was disposed of. There was some bleeding during the operation, partly from the incised meatus and partly from the enlarged prostate, but the patient bore the operation well. The *débris* was that of an oxalate of lime calculus, and weighed 3⅛ ounces.

In the evening I found the patient wonderfully well, passing urine freely, slightly coloured with blood. There was no fever and only slight pain in the perineum, which was relieved by hot fomentations. Next day he was passing clear urine. On April 20th he was walking about, free from all urinary symptoms, and was discharged on April 24th, in excellent health.

Prostatic Enlargement.—In cases in which the presence of stone is complicated by enlargement of the prostate I frequently find that there is considerable bleeding, the result of the passage of the instruments. Great care is necessary in such cases to see that all the fragments are removed, for they frequently get entangled in clots of blood in the bladder, which are sometimes with difficulty removed by the aspirator. Several washings are advisable after all fragments seem to have been removed.

Anæsthetics.—As a rule the patient is, of course, anæsthetised during the performance of litholapaxy. Latterly however I have, in suitable, cases, performed the operation without the use of any anæsthetic.

Female Cases.—There were, as already mentioned, three females in this series. One of them was seven months gone in pregnancy at the time of operation. This case shows that litholapaxy may be successfully undertaken in the last months of pregnancy without fear of causing miscarriage. The chief, in fact I may say the only, difficulty I have ever experienced in performing litholapaxy in the female, arises from the difficulty of retaining water in the bladder both during the crushing of the stone and the aspiration of the fragments. This difficulty I have now quite surmounted by getting an assistant to place the fore and middle fingers in the vagina and press the lower lip of the urethra against the lithotrite or cannula, as the case may be—a manœuvre which prevents the water flowing out beside the instrument.

Deaths.—There were, as I have already stated, three deaths amongst this series of 168 operations for stone in the bladder.

Peritonitis. — A., Case 307, a Mahomedan male, aged 25, admitted April 21st, 1889, with stone in the bladder, of ten or twelve years' standing. He was extremely emaciated, scarcely able to stand up, suffering from constant pain in the bladder, and had to pass his urine in drops every ten or fifteen minutes. Fæces were passed involuntarily, and he had prolapsus ani. On April 24th, I performed litholapaxy. There was considerable difficulty experienced in passing a No. 14 lithotrite through the membranous portion of the urethra. The stone was easily grasped and crushed, and the main portion of it removed through a No. 16 cannula. Great difficulty was experienced, however, in catching the last fragments, owing to the sacculated condition of the bladder. The lithotrite and cannula had to be introduced several times before they were all disposed of. The calculus was composed of oxalate of lime covered by phosphates, and the *débris* weighed 355 grains. The operation lasted 45 minutes. For the first two days the patient did fairly well, passing urine freely, but suffering from slight fever in the evening. On April 27th, however, symptoms of peritonitis set in, and on April 28th these were fully developed, there being general swelling and tenderness of the abdomen, rapid breathing, temperature 103° F., pulse 110. Still he continued to pass clear urine, but in smaller quantities. In spite of treatment the peritonitis became more and more pronounced, and the patient died May 9th. No necropsy was allowed.

Old Age; Exhaustion. — H., a Hindu male, Case 318, aged 90 years, admitted May 30th, 1889, with the usual symptoms of stone, which had existed four years. He was little more than skin and bone, was in great agony, and had to pass urine "hundreds of time in the day and night." He was suffering from fever, and so weak that he could not leave his bed. I placed him under preparatory treatment, but he was so clamorous to have something done to relieve his agonies, that on June 3rd I performed litholapaxy. The urethra was capacious, admitting a No. 15 lithotrite and a No. 16 cannula easily. The stone (uric acid) was large and hard, the *débris* weighing 2 ounces and 40 grains. The instruments were four times introduced, and the operation lasted 45 minutes. There was no bleeding. The patient was much exhausted after the operation, but rallied towards the evening, passing water freely, and without pain. On the morning of the 4th he was very weak, the pulse being scarcely perceptible at the wrist, and he died from exhaustion at 2 P.M. that day.

Senility; two Sittings; Pneumonia.—B., a Hindu male, Case 451, aged 65, admitted December 12th, 1890, with symptoms of stone of one year and a half standing, a withered old creature, scarcely able to stand up, and in great agony. His urine was largely mixed with blood and pus, and had a fœtid stench. On passing a full-sized sound, its advance was obstructed by a tumour, which, on examination by the rectum, turned out to be an enlarged prostate. By gentle manipulation the sound was passed over the enlarged middle lobe of the prostate, and a stone felt lying behind it in the bladder. I performed the litholapaxy at once (Surgeon J. F. Tuohy being present). The stone (uric acid) was hard, the *débris* weighing more than 1½ ounce. Lithotrite No. 15 and cannula No. 16 were easily introduced several times during the operation; but the bladder was sacculated and ridged, so that much difficulty was experienced in catching some of the fragments. The operation lasted forty minutes. In the evening the patient passed urine freely and without pain; but next morning urine was passed with pain and difficulty. Suspecting that there might be a fragment left behind, I passed a sound, and detected one behind the prostate. Chloroform was at once given, the lithotrite introduced, and the fragment crushed, and removed by the aspirator.

After this the patient passed urine freely during December 13th, but on the evening of that day high fever set in with rigors. Next morning he was found to have pneumonia of the right lung, and he was extremely weak. On December 15th he had great dyspnœa, with almost complete suppression of urine, and, continuing to lose ground, he died on the morn-

Table showing particulars of 165 Litholapaxy Operations.

The cases which ended fatally are printed in *italics* (Nos. 307, 318, 451).

Serial Number.	Date of Operation.	Age.	Number of Days in Hospital.	Number of Sittings.	No. of times Lithotrite introduced.	Size of Cannula.	Weight of Calculus.			Variety of Calculus.	Minutes occupied by Operation.	Duration of Disease.
							Ozs.	Drs.	Grs.			
	1889.	Yrs.										
306	April 24	4	4	1	1	7 0	0	4		uric	5	4 months
307	,, *24*	*25*	*7*	*1*	*6*	*16 0*	*5*	*55*		,,	*15*	*10 years*
308	May 1	6	5	1	2	8 0	0	20		,,	15	4 months
309	,, 2	6	5	1	3	7 0	0	42		,,	25	6 ,,
310	,, 3	45	4	1	3	16 0	7	5		uric and phosphate	15	2 years
311	,, 8	80	8	1	1	14 0	1	30		uric	6	3 months
312	,, 9	60	5	1	1	16 0	0	24		,,	8	2 ,,
313	,, 18	12	7	1	2	10 0	2	0		phosphate	12	4 years
314	,, 18	30	28	1	6	14 0	3	10		,,	60	2 ,,
315	,, 26	6	6	2	2	8 0	2	40		uric	35	2 ,,
316	,, 28	2½	4	1	3	6 0	1	20		,,	55	1 year
317	June 3	5½	5	1	1	8 0	0	20		,,	10	1 ,,
318	,, *7*	*90*	*2*	*1*	*1*	*16 2*	*0*	*40*		,,	*17*	*7 years*
319	,, 4	85	5	1	1	6 0	0	38		,,	4	1 year
320	,, 7	28	4	1	2	16 1	0	2		uric and phosphate	20	2 years
321	,, 10	3½	4	1	1	7 0	1	10		phosphate	10	6 months
322	,, 11	30	4	1	1	14 0	0	30		uric	4	3 ,,
323	,, 11	5½	3	1	1	8 0	0	35		uric and phosphate	10	1 year
324	,, 13	45	4	1	1	16 0	0	40		uric	5	3 months
325	,, 15	2½	4	1	1	6 0	0	30		,,	30	1 year
326	,, 28	35	5	1	1	14 0	0	34		,,	6	6 months
327	,, 30	8	5	1	2	10 0	0	38		,,	10	2½ years
328	,, 30	55	7	1	1	14 0	1	15		uric and phosphate	6	1 year
329	,, 30	85	5	1	4	18 1	0	47		uric	30	2 years
330	July 1	4	4	1	2	7 0	0	18		,,	5	1½ year
331	,, 1	50	8	1	1	14 0	0	22		,,	5	6 months
332	Aug. 20	70	4	1	1	14 0	2	45		uric and phosphate	10	2 years
333	,, 20	55	4	1	1	16 0	0	20		,, ,,	4	2 months
334	Nov. 9	65	4	1	1	16 0	0	25		uric	30	6 ,,
335	,, 9	4½	6	1	3	7 0	0	42		,,	15	6 ,,
336	,, 13	67	4	1	1	16 0	4	2		uric and phosphate	10	4 ,,
337	,, 15	45	4	2	2	16 0	4	40		uric	14	1 year
338	,, 19	40	2	1	2	18 0	0	42		,,	8	1 ,,
339	,, 20	65	2	1	1	18 0	0	10		,,	4	1 month
340	,, 21	75	7	1	3	18 1	1	28		,,	25	3 years
341	,, 22	12	7	1	2	12 0	3	20		uric and phosphate	15	6 months
342	,, 23	65	5	1	1	16 0	0	42		uric	4	6 ,,
343	,, 27	9	6	1	2	10 0	3	41		uric and phosphate	20	1 year
344	Dec. 3	7	3	1	4	8 0	1	3		uric	30	1½ ,,
345	,, 4	12	3	1	1	8 0	0	28		,,	8	1 ,,
346	,, 5	8	5	1	1	7 0	1	2		,,	12	1 ,,
347	,, 18	5	7	1	2	6 0	0	39		uric and phosphate	20	6 months
348	,, 15	5	4	1	1	6 0	0	9		uric	10	3 ,,
349	,, 20	3	5	1	1	6 0	0	6		,,	5	6 ,,
350	,, 26	15	31	2	15	12 3	2	17		uric and phosphate	150	4 years
351	,, 29	34	2	1	4	16 0	1	5		uric	15	1 year
	1890.											
352	Jan. 1	55	7	1	0	16 0	0	5		,,	2	1 month
353	,, 3	60	5	1	1	16 0	4	7		,,	10	2 months
354	,, 11	14	5	1	5	10 1	2	1		,,	50	4 years
355	,, 13	3½	9	1	4	6 0	2	16		,,	90	1 year
356	,, 13	15	16	1	8	10 0	6	20		,,	50	4 years
357	,, 18	55	10	1	2	16 1	0	20		oxalate and uric	15	2 ,,
358	,, 26	70	7	1	2	18 0	4	40		uric and phosphate	15	4 ,,
359	,, 28	2½	5	1	2	8 0	0	22		uric	15	6 months
360	Feb. 1	55	4	1	1	14 0	0	21		,,	8	3 ,,
361	,, 2	15	6	1	2	10 0	1	1		phosphate	12	2 years
362	,, 3	45	6	1	1	16 0	0	22		uric	5	2 months
363	,, 21	18	5	1	1	16 0	5	12		phosphate	8	2 years
364	,, 22	3½	3	1	1	6 0	0	21		uric	10	1 year
365	March 4	35	3	1	1	16 0	1	20		,,	8	6 months
366	,, 5	10	8	1	1	9 0	0	17		,,	10	6 ,,
367	,, 8	14	5	1	1	10 0	1	20		oxalate	15	2 years
368	,, 10	35	4	1	1	16 0	0	26		uric	8	3 months
369	,, 11	34	8	1	2	16 0	1	50		,,	9	1 year
370	,, 11	65	8	1	1	16 0	2	50		phosphate	10	1 ,,
371	,, 11	55	16	1	6	18 2	6	11		uric	45	4 years
372	,, 16	7	3	1	1	8 0	0	34		,,	7	6 months
373	,, 19	60	4	1	2	18 1	3	0		,,	20	1 year
374	,, 21	80	9	1	6	18 2	4	38		,,	55	4 years
375	,, 26	2½	4	1	1	6 0	0	4		,,	10	3 months
376	,, 28	70	4	1	1	16 0	1	12		,,	5	6 ,,
377	,, 30	62	8	1	2	16 0	4	42		,,	12	2 years
378	April 9	40	5	1	1	16 0	0	22		,,	8	4 months
379	,, 15	75	9	1	7	18 3	1	0		,,	75	6 years
380	,, 19	9	5	1	2	8 0	0	52		uric and phosphate	12	2 ,,
381	,, 25	12	4	1	2	10 0	3	53		,, ,,	25	6 months
382	,, 26	2½	5	1	1	6 0	0	40		uric	20	6 ,,
383	,, 27	75	12	1	2	16 0	1	32		uric and phosphate	15	2 years
384	,, 29	60	6	1	3	16 1	1	20		uric	17	3 ,,
385	,, 29	72	3	1	4	18 1	4	10		,,	30	3 ,,
386	May 2	8	6	1	2	10 0	2	40		oxalate	17	6 months
387	,, 2	2½	7	1	2	6 0	0	22		uric	15	2 ,,

Serial Number.	Date of Operation.	Age.	Number of Days in Hospital.	Number of Sittings.	No. of times Lithotrite introduced.	Size of Cannula.	Weight of Calculus.			Variety of Calculus.	Minutes occupied by Operation.	Duration of Disease.
							Ozs.	Drs.	Grs.			
	1890.	Yrs.										
388	May 7	4	4	1	1	7 0	0	4		phosphate	7	9 months
389	,, 7	43	10	1	1	16 0	0	30		uric and phosphate	10	3 ,,
*390	,, 12	25	5	1	3	18 1	0	40		carbonate of lime	17	1 year
391	,, 13	30	4	1	1	16 0	0	14		uric and phosphate	4	3 months
392	,, 18	65	6	1	1	18 0	2	36		phosphate	11	1 year
393	,, 19	48	5	1	1	16 0	0	25		uric	10	6 months
394	,, 23	27	3	1	1	14 0	0	6		,,	5	1 month
395	,, 26	11	4	1	1	10 0	2	25		,,	10	1 year
396	,, 28	6	3	1	2	10 0	1	42		,,	12	2 ,,
397	,, 30	6	5	1	1	10 0	1	48		,,	10	1 ,,
398	June 4	7	5	1	1	8 0	0	22		,,	5	1 ,,
399	,, 4	11	5	1	1	10 0	0	3		,,	6	1 month
400	,, 7	80	4	1	3	18 0	6	13		,,	18	9 months
401	,, 7	55	9	1	1	16 0	0	51		phosphate	12	6 ,,
402	,, 8	4	4	1	1	7 0	0	18		uric	8	8 ,,
403	,, 9	32	3	1	2	16 0	5	6		uric and phosphate	13	1 year
404	,, 18	3	2	1	1	14 0	0	11		oxalate	5	4 months
405	,, 21	6	3	1	1	8 0	0	4		uric	5	1 month
406	,, 25	13	8	1	3	10 0	5	31		,,	25	6 years
407	,, 30	60	9	1	2	16 0	2	11		,,	16	3 ,,
408	,, 30	6	6	1	2	10 0	0	23		,,	10	2 ,,
409	July 2	4	7	1	3	7 0	1	5		,,	30	1 year
410	,, 4	40	6	1	2	14 0	0	26		,,	10	3 months
411	,, 4	60	6	1	1	16 0	1	55		uric and phosphate	6	1 year
412	,, 6	55	7	1	3	16 0	3	24		phosphate	30	1 ,,
413	,, 23	12	4	1	3	10 0	4	21		uric	30	2 years
414	,, 30	35	7	1	3	18 2	4	20		,,	36	7 ,,
415	Aug. 19	9	4	1	4	10 0	1	15		,,	11	5 ,,
416	,, 21	60	22	1	1	14 0	0	15		,,	10	3 ,,
417	Sept. 2	55	5	1	1	16 0	0	11		,,	5	4 months
418	,, 2	25	5	1	1	16 0	0	25		,,	5	12 years
419	,, 2	5	5	1	1	8 0	1	18		,,	15	7 months
420	,, 3	30	2	1	1	16 0	0	4		,,	3	15 ,,
421	,, 6	80	9	1	1	18 2	4	19		,,	35	8 years
422	,, 9	35	3	1	1	18 0	0	8		,,	5	6 months
423	,, 15	33	11	1	5	18 1	4	19		,,	35	4 years
424	,, 16	80	3	1	1	18 0	1	55		,,	4	3 ,,
425	,, 21	2	2	1	1	6 0	0	2½		,,	4	1 month
426	,, 26	63	3	1	1	14 0	0	11		phosphate	5	1 ,,
427	,, 26	55	4	1	3	18 0	4	55		,,	23	1½ year
428	,, 30	61	4	1	1	18 0	0	6		uric	5	15 days
429	,, 30	35	3	1	1	18 0	0	3		,,	5	4 months
430	Oct. 3	60	4	1	1	18 1	4	48		phosphate	15	2 years
431	,, 20	32	7	1	1	18 0	2	15		,,	8	1 year
432	,, 20	65	8	1	2	18 0	2	55		uric	10	10 years
433	,, 20	70	7	1	4	16 2	0	40		,,	35	2 ,,
434	,, 21	14	6	1	3	10 0	2	2		uric and phosphate	12	3 ,,
435	,, 24	15	8	1	4	12 0	3	58		uric	30	6 ,,
436	,, 28	41	4	1	1	16 0	0	25		,,	5	6 months
437	,, 28	60	3	1	2	16 0	6	30		,,	11	1 year
438	,, 30	5	5	1	1	8 0	0	21		,,	8	1 ,,
439	,, 31	70	2	1	1	18 0	0	9		,,	5	1 week
440	Nov. 1	11	3	1	3	10 0	4	8		oxalate and uric	28	4 years
441	,, 16	55	5	1	3	16 0	6	25		,, ,,	15	4 ,,
442	,, 20	5½	7	1	3	10 0	2	30		uric	17	2 ,,
443	,, 20	50	6	1	1	14 0	0	20		,,	13	1 month
444	,, 20	50	11	1	1	16 0	0	13		,,	17	6 months
445	,, 24	12	12	1	3	9 0	0	23		,,	23	6 ,,
446	,, 27	5	4	1	3	9 0	3	44		phosphate and uric	38	2 years
447	Dec. 2	32	4	1	1	16 0	0	24		uric	5	8 months
448	,, 4	60	4	1	1	18 1	0	4		,,	15	2 years
449	,, 8	4½	4	1	2	7 0	1	35		phosphate	16	4 months
450	,, 10	4½	5	1	1	10 0	0	47		uric	15	1 year
451	,, *12*	*65*	*2*	*2*	*8*	*16 1*	*2*	*40*		,,	*40*	*1½* ,,
452	,, 16	65	8	1	2	16 0	1	54		,,	10	1 ,,
453	,, 19	40	4	1	1	16 0	0	30		,,	10	4 years
454	,, 19	35	5	1	1	16 0	0	10		,,	6	1 year
455	,, 26	65	5	1	1	16 0	2	9		,,	10	6 years
456	,, 31	40	6	1	1	18 0	0	35		,,	6	4 months
457	,, 31	30	6	1	1	12 0	0	25		uric and phosphate	10	4 years
	1891.											
458	Jan. 2	20	4	1	4	16 3	0	0		,, ,,	35	15 ,,
459	,, 2	21	3	1	1	16 0	1	16		uric	5	1 year
460	,, 3	65	5	1	2	16 0	6	40		phosphate	8	6 months
461	,, 12	30	5	1	2	16 0	0	4		uric	10	4 ,,
462	,, 15	40	4	1	1	14 0	0	10		,,	5	5 ,,
463	,, 24	35	5	1	3	18 0	5	35		phosphate	25	2½ years
*464	,, 27	60	4	1	2	18 0	2	20		uric	8	3 ,,
465	Feb. 4	4½	7	1	1	8 0	0	6		,,	8	1 year
466	,, 10	45	3	1	1	16 0	0	7		uric	6	1 month
467	,, 10	10	3	1	1	10 0	1	18		,,	15	1 ,,
468	,, 11	5	5	1	1	7 0	0	24		,,	10	2½ years
469	,, 21	23	5	1	2	16 0	5	23		,,	13	1 year
470	,, 25	10	3	1	1	8 0	0	2½		uric, charcoal nucleus	5	15 days

* These three patients (385, 390, 464) are the only females in the list.

ing of December 16th. His friends would not allow a *post-mortem* examination.

Litholapaxy in Male Children.—When, in 1885, Keegan first showed that Bigelow's operation was capable of successful extension to the case of male children, I lost no time in procuring the necessary instruments, and, applying the operation to such cases. In two papers [2] I placed before the profession full details of 49 cases of litholapaxy undertaken by me in male children, or boys below the age of puberty. Since then 67 males of 15 years and under, suffering from stone, have come under treatment, and in 66 of these I have performed litholapaxy—in all, with complete success. In only one instance was it necessary to have recourse to lithotomy (suprapubic). The greater my experience of litholapaxy amongst male children becomes, the more I am fascinated by this operation. Though the average number of days such cases were kept in hospital was $5\frac{1}{2}$ as a rule, these little patients may be seen playing about the day after the operation, perfectly happy, and untroubled by urinary symptoms of any kind. Did space permit, I could illustrate the force of this statement by details of numerous cases from my practice.

It will be observed that amongst this series there were two little patients of $2\frac{1}{2}$, four of $2\frac{1}{4}$, and one of 2 years respectively, from whom calculi, varying in weight from $2\frac{1}{2}$ to 80 grains were removed by litholapaxy, and I have previously recorded [3] a case of a male child, aged $1\frac{1}{2}$ year, from whom I removed a calculus weighing 3 grains by this operation. It is astonishing the facility with which a No. 6 cannula will pass through the urethra of a child of this age. In this connection it will not be amiss to mention that on June 7th, 1889, a child, aged 9 months, was brought to me with symptoms of stone, but in whom no stone could be found. In this case I passed a No. 6 cannula easily, and washed out the bladder by the aspirator for diagnostic purposes. Had there been a stone I could have removed it by litholapaxy readily. Thus it will be seen that with the suitable instruments now available, litholapaxy can be successfully employed in patients of the most tender age.

Cases in which Cystotomy or Lithotomy was Performed.—Amongst this series of 168 calculous cases there were only 3 instances in which I was unable to perform litholapaxy; and, strange to say, they were all three of the same nature—calculi of medium size, lying partly in the bladder and partly impacted or sacculated in the prostatic urethra, from which position they could not be by any means displaced.

In the first of these cases, a lad of 10 years, suffering from stone for five years, I performed suprapubic cystotomy, under the impression that the stone was a large one—an impression in which examination by the rectum falsely confirmed me. The operation was performed on July 25th, 1889, the calculus weighing 3 drachms. The patient then passed into the hands of Surgeon-Major I. Boulger on August 3rd, and was discharged cured on August 14th.

In the second case, that of a man aged 45 years, suffering for four years, median lithotomy was performed on December 17th, 1889, and the patient discharged cured on January 13th, 1890.

The third case, aged 19, was a patient on whom I had previously performed suprapubic cystotomy on June 23rd, 1887.[4] He remained free from urinary troubles for two years, when symptoms of stone again set in, and he applied for relief on January 24th, 1891. On passing a sound, I detected a stone at the neck of the bladder, and endeavoured to dislodge it backwards, but without effect; so I performed median lithotomy, Surgeon-Major P. de H. Haig and Surgeon S. F. Freyer being present. I found the stone, which weighed 136 grains, lying in a *cul-de-sac* at the neck of the bladder, formed in the largest part by the distended and distorted prostatic urethra, and communicating with the bladder by an opening, through which, after removal of the stone, I could pass my forefinger. The patient was discharged cured on February 15th, 1891. This man had had left lateral lithotomy performed on him when a child.

Such, then, are my most recent experiences in the surgery of stone in the bladder. There are two very important lessons to be learnt therefrom:—

(1) That litholapaxy is almost universally applicable to all cases of vesical calculus, as is clearly shown by the fact that I have been enabled to perform this operation in 165 out of my latest 168 cases of stone, occurring in both sexes and in all ages and conditions. During 1890, 106 patients suffering from stone came under my treatment, and litholapaxy was performed in one and all of these, with one death.

(2) That the dangers which we anticipated from the extension of litholapaxy to the case of male children were purely imaginary and had no foundation in fact, as is fully proved by my having now performed this operation in 115 males below the age of puberty without a death, and in all with complete success.

General Statistics.—In my work on Litholapaxy,[5] published in 1886, I gave the results of 321 operations for stone in the bladder—128 litholapaxies and 193 lithotomies—performed by me down to the beginning of that year, with 14 deaths, and showed that the introduction of litholapaxy into my practice had had the effect of reducing the mortality from operations for stone in the adult from 18 to $5\frac{3}{4}$ per cent. Since that time I have in three papers published in the BRITISH MEDICAL JOURNAL, including the present paper, given full details of a further series of 400 cases of stone in the bladder. There were amongst these 342 litholapaxies—in 221 adult males, 5 adult females, 115 male children, and 1 female child—with 4 deaths; 54 perineal lithotomies—amongst 3 adult males and 51 male children—with 1 death; and 4 suprapubic lithotomies—in 2 adult males and 2 male children—with 1 death. That is to say, 400 operations with 6 deaths, or a mortality of $1\frac{1}{2}$ per cent.—a result which we can scarcely expect to improve on whilst we extend the operation to almost hopeless and moribund patients. It is a result unequalled in any other large and important operation in surgery, and entirely due to the introduction of Bigelow's method. The grave has now closed over that great surgeon, whose name is imperishably connected with the modern operation for stone and the word "litholapaxy" which he introduced to denote and distinguish it.

REMARKS ON SUPRAPUBIC AND LATERAL LITHOTOMY AND ON LITHOLAPAXY.

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SUPRAPUBIC lithotomy, or "Petersen's operation," is a very admirable proceeding in suitable cases, and a great advance on the old method, in which the peritoneum was frequently wounded; but for moderately-sized stones—up to, say, $4\frac{1}{2}$ ounces—that might be safely removed by lateral lithotomy, it is not to be compared to the latter operation, either as to facility or simplicity of performance, safety, comfort in after-treatment, or in the completeness of the cure—or, in other words, absence of bad effects from the operation itself. To compare it at all to litholapaxy in cases suitable for the latter is absurd.

Litholapaxy is infinitely safer than any variety of lithotomy for suitable cases about 90 per cent. of all cases—and the patient is laid up for about four days, instead of three weeks, after the operation.

Suprapubic lithotomy is the proper operation for removing a stone that cannot be crushed with a lithotrite, and which is too large to be safely removed through a perineal wound. I think the safe limit of size to exclude from litholapaxy would be over $6\frac{1}{2}$ ounces, although I have successfully crushed a stone at one sitting over 8 ounces, and there are published cases of larger stones having been successfully crushed. The percentage of stones met with in civilised countries over 6 ounces will always be very small. Almost all the cases of suprapubic lithotomy recently published could have been successfully dealt with by either litholapaxy or lateral lithotomy.

Suprapubic lithotomy requires more complicated arrangements as water or air bag to dilate the rectum; it involves a a deep and sometimes, in a fat patient, a difficult dissection

[2] BRITISH MEDICAL JOURNAL, December 24th, 1887, and October 12th, 1889.
[3] BRITISH MEDICAL JOURNAL, October 12th, 1889, p. 812.
[4] BRITISH MEDICAL JOURNAL, December 24th, 1887, p. 1375.
[5] *The Modern Treatment of Stone by Litholapaxy.* London: J. & A. Churchill

to reach the bladder; it involves a wound and consequent cicatrix in the circular muscular and elastic fibres of the bladder, which must to some extent interfere for ever afterwards with the proper contraction and dilatation of that portion of the organ; and, in cases in which the bladder becomes united to the abdominal wall in a common cicatrix, the formation of another fixed point would very effectually prevent the bladder from properly performing its functions. After suprapubic lithotomy, the urine, when a small quantity accumulates in the bladder, wells out through the wound and trickles over the abdomen and thighs, irritating the skin and soaking the bedding, to the great discomfort of the patient and nurse alike. Again, the bladder is never perfectly drained after suprapubic lithotomy as it is after lateral lithotomy, and this is an important consideration where cystitis has existed.

None of the above disadvantages apply to lateral lithotomy, so far as I am aware, and I had a considerable experience of the operation before litholapaxy became established. I may mention that of my first 23 cases of lithotomy I did not lose one, and the patients were of all ages, and some of the stones of considerable size.

It would be very difficult to compare the mortality of the two varieties of lithotomy, but I feel convinced that if it were possible to do so lateral lithotomy would have the best of it. Both operations are doomed, however, to give way to litholapaxy, except in special cases, which will never be frequent. Exceptionally large stones will be subjected to suprapubic lithotomy, and those complicated by extensive bladder or urethral or prostatic disease to lateral lithotomy.

The most potent argument against litholapaxy is the chance of a particle of stone being left behind in the bladder, which is likely to form the nucleus of a new stone. This complication, I am convinced, occurs but very seldom; if any particles left behind are small, they are voided with the urine, and particles of any considerable size would be left only by a very inexperienced operator.

I have noticed that patients in whom a recurrence takes place after litholapaxy resort again for relief very early after symptoms set in; the operation has little or no dread for them, and for a very small stone is so simple that the patient might almost be allowed to walk home the same day.

There is very little to say that has not been said before about the operation of litholapaxy. This series of cases, all successful, which comprised subjects of all ages from 2½ to 80 years, some of them with stones of large size and of long duration, and many in a very debilitated state of health at the time of operation, speaks well for the operation of litholapaxy and the state of perfection to which it has been brought.

The lithotrite that I prefer is Freyer's—as depicted in Weiss's new illustrated catalogue No. 1,942, which consists of a combination of Thompson's fenestrated blades and Bigelow's handle. The moderately curved aspirating cannula I consider the best, but it is also well to have a few straight ones, and for prostatic cases a few long tubes with a large curve. The best aspirator is undoubtedly Bigelow's, in which the glass receiver is immediately underneath the india-rubber bottle. Thompson's aspirators, of which I have used two—Weiss's No. 1,963 and 1,964—were found very inconvenient, as particles of stone kept circulating backwards and forwards in the current of water, and sometimes entering the bladder. In Bigelow's instrument once the particles subside by gravity they are never disturbed by the current of water.

Litholapaxy—when the stone is not very large, the bladder in a fairly healthy state, that is, free from tumours, not dilated or sacculated, or in the reverse condition, irritable, contracted, and with hypertrophied walls, and where the urethra will admit moderately large instruments, say, No. 16 tube—is a simple and safe operation in experienced hands, but under any of the above unfavourable circumstances, and always in children, the operation is a most delicate one, requiring great tactile sensibility and knowledge.

The anæsthetic that I use is pure chloroform till anæsthesia is established, and then the A C E mixture during the remainder of the operation; cocaine oil (2 per cent.) is used as a lubricant for instruments, and at the conclusion of the operation lead lotion is injected into the bladder. A dose of 5 grains of quinine with 1 grain of opium is invariably given after operation, and almost all my cases recover without a rise of temperature. The average time for all these operations is about 19 minutes, and the average stay in hospital about six days. Of the 66, 31 were 40 years old or over, and 15, 9 years or under. On three occasions during the year I found Weiss's smallest lithotrite, No. 6, too large to pass in children with stone, and I have ordered one of the scale size 4½.

One of these three children, Jamal, a Mahomedan, male, aged 4 years, I operated on at one of my district dispensaries, Mailsi, on September 21st, 1890. I passed No. 6 lithotrite with difficulty first time, and partially crushed the stone. On making a second attempt, I could not pass the lithotrite, and resorted to lateral lithotomy, removing the partially crushed fragments. The child was discharged cured on October 2nd.

Another child, Pursotum, aged 3, was admitted to Civil Hospital, Mooltán, on December 5th, 1890, with stone in the bladder. No. 6 lithotrite was passed with difficulty, and the stone partially crushed. After evacuating the crushed fragments, the lithotrite was again passed with still greater difficulty, and all the fragments that could be caught crushed; when these were washed away through No. 6 tube, a small piece still remained, and the lithotrite could not be got in again to crush it. The child was left in this condition till the new lithotrite comes, when the remaining piece will be crushed and removed. He was discharged from hospital, the original symptoms alleviated, on December 10th.

The third child was not operated on at all, and is awaiting the small lithotrite.

An interesting case was met with at Lodhrán Dispensary on June 4th, 1890. Mohamad yár, a Mahomedan male, aged 14 years, was found to have a large stone in the bladder, and I began litholapaxy. There was a stricture about the bulbous portion of the urethra, which prevented a lithotrite larger than a No. 12 passing. With No. 12 I was enabled after great difficulty to crush 7 drachms of fragments, which were removed with a good deal of blood. I now despaired of being able to complete the crushing operation, and resorted to lateral lithotomy and removed pieces weighing 2 ounces and 3 drachms. I now detected a tumour in the wall of the bladder at the fundus, which in its centre was soft and apparently partly broken down. This was the cause of the difficulty experienced in crushing the stone. He was discharged from the Lodhrán Dispensary two months later by the native doctor in charge, with a perineal fistula through which urine passed, and was subsequently admitted to the Civil Hospital, Mooltán. I found the urethra completely occluded at the site of the original stricture for about one-sixth of an inch, and all the urine passing through the fistulous opening in the perineum, the finest instrument could not be passed. External urethrotomy was performed, but the patient left the hospital without permission before his cure was complete, and has not been seen since.

Another patient, named Sultán, a Mahomedan male, 30 years of age, was admitted to Civil Hospital, Mooltán, on November 27th, with a large stone in the bladder. Litholapaxy was attempted, and after persevering for 47 minutes fragments weighing 920 grains were crushed and removed; the quantity removed, however, only represented the corners or small end of the stone, the large mass of which still remained uncrushed, and could not be fairly gripped in the blades of the largest lithotrite. As he was considered too weak to undergo further operative interference that day, he was put to bed, and suprapubic lithotomy resolved on as soon as he could bear it. He remained in hospital till December 2nd, and was doing well when his friends, disappointed at the delay, took him away without permission, and he has not been since heard of.

Khoda Bun, a Mahomedan male, aged 25, was admitted the same day as the above, November 27th, with a large stone, which could not be gripped at all by the largest lithotrite. Suprapubic lithotomy was resorted to, and a stone weighing 2 ounces 6 drachms was extracted. A large sessile tumour was now detected in the lower part of the posterior wall of the bladder, between the enlarged prostate and which the stone had been tightly wedged. On December 15th, his temperature having been normal for four days, he was passing his urine partly through the urethra. On the 17th he left without permission, the wound not being entirely healed.

The following is a table containing a series of 102 cases of stone in the bladder removed by litholapaxy since January, 1890, without a death, in the Amritsar and Mooltán civil hospitals and the dispensaries in the Mooltán district:—

Number.	Age.	Weight of Fragment in Grains.	Time in Minutes.	Date of Operation.	Date of Discharge.	Remarks.
1	9	—	—	Jan. 31	Feb. 7	3 introductions No. 6 lithotrite.
2	4	18	—	Feb. 14	,, 18	1 introduction No. 6 lithotrite.
3	5	4	11	,, 15	,, 17	2 introductions No. 5 lithotrite.
4	17	450	33	,, 20	,, 23	
5	2½	9	9	March 1	March 2	1 introduction No. 6 lithotrite; passed easily without slitting meatus.
6	3	13	8	,, 10	,, 12	1 introduction No. 6 lithotrite.
7	4	105	17	,, 26	,, 28	2 introductions No. 12 lithotrite and No. 16 tube.
8	14	890	57	April 9	April	
9	30	430	20	May 15	May 21	
10	40	2040	36	,, 23	,, 27	
11	45	140	10	,, 26	June 2	Mixed urates and phosphates.
12	40	33	7	,, 26	May 29	
13	3	166	36	,, 26	June 2	
14	50	126	8	,, 31	,, 6	1 introduction of lithotrite.
15	55	210	15	June 5	,, 11	
16	60	1150	40	,, 7	,, 12	
17	20	200	23	,, 7	,, 10	He ceased breathing under chloroform; artificial respiration had to be kept up for a considerable time. Composition, oxalates.
18	14	15	10	Sept. 15	Sept. 19	
19	35	200	15	,, 19	,, 24	2 introductions.
20	30	840	32	,, 20	Oct. 1	4 ,,
21	60	235	10	,, 20	Sept. 26	2 ,,
22	33	500	23	,, 21	,, 30	4 ,,
23	30	160	7	,, 21	,, 30	1 ,,
24	60	120	10	,, 21	,, 30	1 ,,
25	35	420	10	,, 21	,, 30	2 ,,
26	35	300	9	,, 22	,, 29	1 ,,
27	9	A few	—	,, 22	,, 30	
28	40	420	18	,, 23	,, 28	2 ,,
29	40	600	16	,, 24	,, 29	3 ,,
30	3	120	33	,, 28	Oct. 8	4 ,,
31	58	720	25	,, 28	,, 1	2 introductions. A tough stricture had to be dilated before the lithotrite could be passed.
32	60	240	19	,, 30	,, 4	3 introductions.
33	3	90	20	Oct. 3	,, 8	3 ,,
34	35	200	4	,, 4	,, 8	1 ,,
35	55	500	17	,, 4	,, 8	2 ,,
36	70	600	17	,, 4	,, 8	2 ,,
37	5	5	—	,, 4	,, 11	1 ,,
38	35	450	6	,, 4	,, 8	1 ,,
39	10	1400	30	,, 4	,, 8	3 ,,
40	20	160	4	,, 6	,, 8	1 introduction. This man was twice previously operated on by litholapaxy.
41	66	440	22	,, 10	,, 11	3 introductions.
42	80	630	35	,, 11	,, 14	This old man had ague daily from his admission to hospital on October 4th, which could not be stopped by antiperiodic treatment. His temperature was 99° when operated upon. The fever left him after operation. He had a large prostate. He insisted on leaving hospital without permission. He was doing well.
43	50	645	16	,, 11	,, 14	2 introductions.
44	70	1080	42	,, 13	,, 19	5 introductions. He had an irritable contracted bladder.
45	70	270	14	,, 14	,, 31	2 introductions. A miserably weak old man; artificial respiration had to be performed in the middle of the operation.
46	60	390	17	,, 17	,, 22	2 introductions.
47	3	6	a few	,, 19	,, 22	2 ,,
48	60	100	10	,, 20	,, 30	1 ,,
49	70	900	23	,, 28	Nov. 3	3 introductions. A good deal of bleeding from an enlarged middle lobe of the prostate which projected into the bladder.
50	10	360	21	,, 30	,, 3	3 introductions.
51	20	840	29	,, 30	,, 4	3 ,,
52	12	110	24	Nov. 3	,, 12	3 ,,
53	15	1680	36	,, 6	,, 15	5 ,,
54	4	150	44	,, 8	,, 15	4 ,,
55	60	1320	28	,, 11	,, 22	5 ,,
56	3	57	13	,, 11	,, 21	2 ,,
57	32	960	16	,, 21	,, 23	3 ,,
58	30	193	7	,, 22	Dec. 1	1 ,,
59	53	1320	35	,, 25	,, 12	4 introductions. This man was cut for stone ten years ago, and litholapaxy was previously performed by me in May, 1888.
60	50	70	6	Dec. 1	,, 7	1 introduction.
61	35	660	16	,, 1	,, 8	1 ,,
62	5	70	15	Dec. 10	Dec. 15	3 introductions.
63	50	500	13	,, 19	,, 23	2 ,,
64	40	900	35	,, 23	,, 28	5 ,,
65	35	40	60	,, 23	,, 31	1 ,,
66	30	210	5	,, 23	,, 29	1 ,,
67	35	570	23	Jan. 1891.	Jan. 9	Uric stone; breathing suddenly ceased during the operation and artificial respiration had to be performed.
68	60	780	39	,, 6	,, 17	Phosphatic stone.
69	60	600	20	,, 19	,, 23	Urates.
70	40	30	9	,, 27	Feb. 5	Oxalic stone.
71	4	150	31	,, 27	,, 3	Urates.
72	50	270	7	,, 31	,, 5	1 introduction of instruments; comp. lithates.
73	40	46	7	Feb. 6	,, 9	Urates.
74	50	630	27	,, 13	,, 19	,,
75	56	14	5	,, 13	,, 19	This old man had a stone removed at Mooltán a year before by litholapaxy, symptoms recurred and the hospital assistant sounded him and failed to detect a stone. I then examined him with Thompson's hollow sound and failed to detect a stone. The patient was most confident that the stone had re-formed, so I gave him chloroform and passed the lithotrite when I at once caught the small piece that was the cause of his trouble; composition urates.
76	60	255	35	,, 13	,, 19	Urates; had an irritable bladder and took chloroform badly.
77	60	200	21	,, 16	,, 27	Urates.
78	5	210	33	,, 16	,, 21	Hard oxalic stone.
79	60	1400	63	,, 27	March 7	Comp. lithates; had a very large prostate which made the operation difficult.
80	25	840	14	March 1	,, 9	Mixed urates and phosphates.
81	50	465	17	,, 1	,, 9	Mixed oxalates.
82	55	251	18	,, 1	,, 9	A multitude of small pea-like stones with polished surfaces, 17 came away entire with the crushed fragments; composition urates; had a large prostate.
83	40	150	15	,, 1	,, 8	Urates.
84	6	190	28	,, 3	,, 10	,,
85	7	150	30	,, 3	,, 10	,,
86	65	560	16	,, 3	,, 13	,,
87	55	520	13	,, 3	,, 14	,,
88	30	300	8	,, 3	,, 10	Mixed oxalates.
89	60	156	9	,, 3	,, 13	Mixed urates and phosphates.
90	32	80	8	,, 3	,, 15	Phosphatic stone; a stone was removed from this man's bladder by litholapaxy in June 6th, 1890, at the Civil Hospital, Mooltán, by Surgeon Clarke.
91	60	80	7	,, 4	,, 13	Comp. phosphates; a phosphatic stone was removed by lateral lithotomy on Sept. 10th, 1889, at the Civil Hospital, Mooltán, by the assistant-surgeon, who failed to pass the lithotrite; the man had a large prostate.
92	50	480	22	,, 5	,, 13	Urates.
93	55	120	13	,, 5	,, 10	Mixed oxalates and urates.
94	60	10	10	,, 7	,, 14	Oxalates.
95	3½	86	20	,, 7	,, 9	Urates and phosphates.
96	60	760	29	,, 8	,, 15	Urates; cystitis with ammoniacal urine in a very weak old man with a large prostate.
97	2½	85	29	,, 8	,, 13	Phosphates; a phosphatic stone was removed by lateral lithotomy in June, 1890, by the assistant-surgeon, respiration ceased under chloroform and artificial respiration had to be kept up for some time.
98	60	840	26	,, 10	,, 19	Urates; had a large prostate.
99	30	30	10	,, 17	,, 20	Mixed oxalates and urates.
100	22	692	11½	,, 27	—	Urates.
101	40	560	12	,, 27	—	,,
102	35	335	16	,, 28	April 5	Phosphates; he had a large discharging abscess in the left hypochondriac region, and one-third albumen in his urine, his temperature was only 97°; he is still under treatment for the abscess but is rapidly recovering.

In the cases of the adults given in the above list, where the size of lithotrite is not mentioned, Weiss's B fenestrated instrument was principally used, and A sometimes where the urethra was capacious and the stone large.

The last case is one of Kamal Din, published in the BRITISH MEDICAL JOURNAL, July 15th, 1890, page 17.

These six cases, operated on otherwise than by litholapaxy, complete a series of 72 cases, being all the cases of stone in the bladder met with and operated on by me throughout the year 1890 without a death.

The series of 36 litholapaxies in 1891, taken with the 66 cases in 1890, completes a continuous series of 102 stones removed from the bladder since January 1890, without a single death.

The principal noteworthy feature in this series is that in four cases, three of them with phosphatic stones, an operation had been performed within a short period for removal of a similar stone. If all these had been previously operated on by the crushing process it would have made a strong case for those who hold that formation is very likely to recur after crushing, fortunately, however, two of them had been operated on by lateral lithotomy.

I am convinced that most of the cases in the district dispensaries were kept needlessly long in hospital by the native medical men in charge after the operation.

Case No. 75 illustrates how in an old man with a dilated bladder and a large prostate a small stone may escape detection by the most careful sounding in the usual manner; fortunately this man's previous experience made him positive in his assertion that a stone existed in his bladder. In cases like this the best means of detecting a small particle is to pass an evacuating cannula and apply the aspirating apparatus, when the stone will be heard to click against the eye if too large to pass out through it.

No selection of cases was made, every patient who presented himself was operated on.

FORTY SUCCESSFUL CASES OF LITHOLAPAXY IN BOYS.

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THE advantages of litholapaxy in male children have already been fully demonstrated by Surgeon-Major Keegan, from whom it was my good fortune to receive my first lessons in the operation. The following series of consecutive cases, however, seems to me worthy of record, their uniform success affording another proof of the superiority of litholapaxy over other methods of treating stone in the bladder, even in the youngest children.

The condition of the small patients referred to in the ac-

Table of Dr. Gimlette's Cases.

Number.	Date.	Age.	Time occupied by the Operation.	Number of Times the Lithotrite was Used.	Composition of the Stone.	Weight of the Stone.	Number of Days in Hospital.	Result and Remarks.
	1889.							
1	March 27	3½	—	—	Urates and phosphates.	36 grains	7	Uninterrupted recovery.
2	April 1	7	—	—	Uric acid, oxalate of lime, and phosphates	67 ,,	7	,, ,,
3	,, 20	4½	—	—	,, ,, and oxalate of lime	60 ,,	5	,, ,,
4	,, 26	5	—	—	,, ,, urates, and phosphates	13 ,,	2	,, ,,
5	May 7	2	—	3	,, ,, and phosphates	28 ,,	4	,, ,,
6	June 4	12	—	—	,, ,, oxalate of lime, and phosphates	44 ,,	12	Intermittent fever for a few days. Good recovery.
7	,, 15	3	—	—	Urates	53 ,,	5	Good recovery.
8	July 2	5	—	6	Uric acid and oxalate of lime	90 ,,	7	Uninterrupted recovery.
9	,, 19	3	—	1	,, ,,	10 ,,	4	,, ,,
10	,, 26	9	1½ hour	5	,, ,, ,, urates, and phosphates	395 ,,	8	Intermittent fever the first two days. Good recovery.
11	Aug. 14	4½	1¼ ,,	3	,, ,, ,, and urates	65 ,,	9	A very small penis. Lithotrite passed with difficulty. Good recovery.
12	Oct. 1	6	1½ ,,	3	,, ,, ,, and phosphates	260 ,,	11	Good recovery.
13	,, 27	8	27 minutes	2	,, ,, ,, and oxalate of lime	30 ,,	5	,, ,,
14	,, 27	12	1 hour	2	Mainly phosphates; a small oxalate of lime nucleus	250 ,,	7	,, ,,
15	,, 27	3	¼ ,,	1	Oxalate of lime	6 ,,	10	A very small penis. Lithotrite passed with difficulty. Good recovery.
16	Dec. 2	7	20 minutes	1	Uric acid	62 ,,	4	Uninterrupted recovery.
17	,, 23	8	1 hour	5	,, ,, ,, and oxalate of lime	105 ,,	7	Good recovery.
18	,, 23	8	½ ,,	4	,, ,,	229 ,,	9	,, ,,
19	,, 24	10	1¾ ,,	5	,, ,,	65 ,,	8	Urethra of very small calibre. Operation difficult throughout. Good recovery.
	1890.							
20	Feb. 3	5	½ ,,	2	,, ,, ,, and oxalate of lime	30 ,,	6	Good recovery.
21	,, 9	16	1 hour	3	,, ,, ,, urates, oxalate of lime, and phosphates	245 ,,	12	Intermittent fever for some days. Good recovery.
22	,, 9	9	20 minutes	1	Urates and oxalates	50 ,,	7	Uninterrupted recovery.
23	,, 10	7	15 ,,	1	,, ,, ,,	16 ,,	5	,, ,,
24	,, 10	4	18 ,,	2	,, ,, oxalate of lime, and phosphates	19 ,,	7	,, ,,
25	,, 15	6	50 ,,	2	Uric acid, urates, and oxalates	120 ,,	6	This patient took chloroform badly, and hence the operation was delayed. Good recovery.
26	,, 15	4	66 ,,	6	,, ,, ,, urates, oxalate of lime, and phosphates	66 ,,	10	Much difficulty was experienced in evacuating the last fragments of this stone. Good recovery.
27	,, 15	5	45 ,,	2	Urates and phosphates	103 ,,	6	This patient also took chloroform badly. Good recovery.
28	,, 22	10	25 ,,	2	Uric acid and oxalate of lime	40 ,,	6	Uninterrupted recovery.
29	March 11	9	26 ,,	2	,, ,, ,, ,,	50 ,,	4	,, ,,
30	,, 13	5	22 ,,	3	,, ,, ,, ,,	20 ,,	4	,, ,,
31	April 30	4	25 ,,	1	Urates and oxalate of lime	24 ,,	7	Good recovery.
32	May 15	5	20 ,,	1	,, ,, ,, ,,	24 ,,	4	Uninterrupted recovery.
33	July 21	10	1 hour	4	Uric acid and oxalate of lime	140 ,,	8	Good recovery.
34	,, 28	10	1 ,,	3	,, ,, ,, ,,	105 ,,	15	,, ,,
35	Sept. 2	4	½ ,,	2	,, ,, ,, ,,	17 ,,	9	Slight fever for two days. Good recovery.
36	,, 22	3	¾ ,,	4	,, ,, ,, ,,	19 ,,	15	A very weakly child. Last fragments removed with difficulty. Slight fever for two days. Good recovery.
37	Oct. 13	8	65 minutes	4	,, ,, ,, ,,	206 ,,	12	Good recovery.
38	Nov. 7	3	40 ,,	3	,, ,, ,, and phosphates	43 ,,	7	,, ,,
39	,, 21	8	36 ,,	3	,, ,, ,, and urates	93 ,,	14	,, ,,
40	Dec. 12	8	50 ,,	4	Oxalate of lime and urates	26 ,,	5	,, ,,

companying table varied very much on admission. Some were the plump offspring of well-to-do parents, but the greater number were underfed and emaciated children of poor villagers from remote and malarious districts. Some of the children were suffering from fever on arrival, and, in such cases, operation had of course to be deferred. Nine times out of ten, however, it was of necessity performed on the morning following the arrival of the patient.

The variation in the calibre of the urethral passages was remarkable. The fact of this variation has already been pointed out by Surgeon-Major Keegan. Thus, the urethra of the boy aged 5, Case 20, admitted a No. 7 lithotrite, while in Case 19, that of a boy aged 10, only a No. 6 could with difficulty be passed.

In the very great majority of the cases the operation was followed by immediate relief, without anything more than a trifling rise of temperature. The boy, if allowed, would be up and playing about in two or three days. In a few some fever ensued—always of an intermittent type, never high, and yielding readily to quinine.

I append notes of the few cases occurring during the same period in which I found litholopaxy impracticable.

Case I.—A boy, aged 3. The smallest lithotrite at hand (No. 6) could not be passed in this case; lateral lithotomy was therefore performed, and two stones, weighing together 153 grains, were extracted. The patient did well.

Case II.—A boy, aged 3½. In this case also the smallest lithotrite could not be passed. Suprapubic lithotomy was performed, and two stones, weighing together 256 grains, were extracted. The patient did well. Urine commenced to pass *per urethram* on the sixth day, but the fistula was not entirely closed until the thirty-eighth day.

Case III.—A boy, aged 4½. Nothing larger than a No. 3 catheter could be passed into this child's bladder; suprapubic lithotomy was therefore performed. Failing a proper india-rubber bag a sheep's bladder was used to distend the rectum. He was a fat child, and the dissection down to the bladder took some little time. While it was going on some of the water leaked from the sheep's bladder, which was suddenly expelled from the rectum by the child's straining. As the bladder had been reached when this happened, it was thought better to proceed with the operation without delaying to reintroduce the bag. Shortly afterwards the peritoneum appeared in the upper angle of the wound; it was kept out of the way by a forefinger, and the operation completed, a stone weighing 109 grains being extracted. The patient did well, and was discharged on the twenty-third day after the operation. The case afforded a striking illustration of the value of distension of the rectum in suprapubic lithotomy.

Case IV.—This patient, a boy, aged 12, had suffered from stone for many years, and when brought to the hospital was in a worn-out and emaciated condition. For four or five days previously he had been in great agony; the urine, voided in drops with much difficulty, was stinking, the respirations were hurried, and the pulse feeble and quick. The stone was found to be a very large one. His condition precluded a long operation lasting two or three hours, and consequently the choice lay between suprapubic and lateral lithotomy. Bearing in mind the accident that happened in the preceding case, and being still without a proper bag, I unfortunately decided on the latter. The stone proved too large to be extracted by the perineum, and attempts to break it failed; it was therefore removed through an incision above the pubes as rapidly as possible. The patient never rallied, and died the same night. The stone was an enormous one considering the age of the child; it measured 3 inches by 2 by 1½, and weighed 2,010 grains; its composition was pure ammonio-magnesian phosphate, and it was of extreme hardness.

Case V.—A boy, aged 9. The bladder in this case was sacculated, a diverticulum existing at the upper part, and extending to the right of the middle line; its outline could be plainly seen when the bladder was distended. The stone was tightly impacted in this sac. An attempt was first made to crush it, but one end only could be reached by the lithotrite, and it was decided to proceed to suprapubic lithotomy. The patient, a very weakly and malaria-stricken child, is so far doing well.

Case VI.—A somewhat similar case to the above was a wretched-looking emaciated boy already worn out by suffering. On examination the stone was found embedded in a sac, and could not be grasped by the lithotrite. Further interference was postponed, and the child died a few days afterwards unoperated on.

OBSERVATIONS ON LITHOTRITY, WITH A SERIES OF FORTY CONSECUTIVE CASES.

By F. SWINFORD EDWARDS, F.R.C.S.,
Surgeon West London Hospital and St. Peter's Hospital for Stone.

Litholapaxy and Lithotrity.

I bring forward here a series of forty cases of lithotrity at a single sitting, or, as Bigelow its originator calls it, litholapaxy, though I agree with Mr. Buckston Browne in preferring to limit the use of this term to the removal of stone from the bladder without first crushing, using only an evacuating tube with aspirator, which methods may often be employed with success in cases of small stones, such as weigh from 1 to 5 grains. By lithotrity I mean the complete evacuation of the bladder at one operation.

In the accompanying table I have included several cases in which the *débris* of the stone only weigh a few grains, and therefore should not, according to Sir Henry Thompson's views, be called cases of stone in the bladder at all, but rather instances of gravel or concretion. It seems to me a matter of small importance what we call them so long only as the weight is correctly stated, together with the methods adopted for their removal. Many cases of small calculi weighing considerably less than 20 grains entirely resist all natural efforts to expel them, and may cause as much and even more suffering than large stones. Should they be capable of being dealt with by litholapaxy, it follows that the patient runs less risk than he does after the instrumentation necessary to, and attendant upon, lithotrity. These small stones or gravel, if allowed to remain, will assuredly grow, and so necessitate a more prolonged and serious operation. Not that there is much difference in the risk between lithotrity for a stone of 10 to 20 grains, or for one of a drachm or less. The risk to the patient does not depend upon the size of the stone—speaking of comparatively small calculi—so much as upon the condition of the soft parts in which it lies. Again, it is all to the credit of the surgeon to find these small calculi—by no means always an easy thing. I would recommend sounding an empty bladder, and, if nothing is discovered, though the symptoms point to stone, that a small Bigelow's evacuating cannula and bottle should be used. If manipulated with gentleness, this will cause no great inconvenience to the patient. If a small stone is present and loose in the bladder, the water rushing into the tube will bring the stone up to its eye with a click easily felt or heard, and if small enough it may pass through, thereby verifying the diagnosis and ridding the patient of his trouble.

Cases.

I pass now to a short consideration of my four fatal cases, and will also say a few words about two of the more interesting of the remaining cases, commencing with the latter.

Case 11.—Mr. H., an old and feeble man, was sent to me by Mr. Treves, of Margate. He was suffering from severe hæmaturia and frequent micturition, and had passed several calculi at times. Under ether, given by Mr. Lloyd, and assisted by Dr. Fairweather, of Wood Green, I crushed a small stone of 11 grains, and washed away at the same time many villus-like processes, which led me to suspect that the bleeding was chiefly due to a villous tumour of the bladder. After the operation I injected a solution of iodoform, and prescribed hazeline by the mouth, with bromidia at night; the bladder to be washed out daily with Condy's fluid. The following day he was in no pain and his pulse good. There was only a slight rise of temperature. I saw him again rather more than a fortnight afterwards on account of urinary fever, produced probably by the catheterism he was undergoing. He was passing no blood at this time. I have not seen nor heard of him since.

Case 25.—Mr. M., seen in consultation with Mr. Chittenden, of Wheathampstead, on December 21st, 1889. He was 72 years of age, and had suffered from enlarged prostate and other urinary troubles for some time. On sounding him I found a calculus, evidently a large one. On December 28th, Mr. Lloyd having administered chloroform, I endeavoured to perform lithotrity with an ordinary fenestrated lithotrite, but with this I was unable to grasp the stone, so having one of Bigelow's large instruments with me I tried to pass it, after having incised the meatus, but was unable to get it through the prostatic urethra. Two courses were now open to me, as I excluded lateral lithotomy, namely, suprapubic lithotomy and median cystotomy combined with crushing. I selected the latter, believing it to be the safer operation of the two, looking to the patient's advanced age. Cystotomy having been performed, I found a large stone lodged above the pubes, and this I promptly attacked with Bigelow's largest lithotrite, though even with this powerful instrument I found it very laborious work, nor did I succeed in crushing the whole of it, but had in the end to remove a large fragment, amounting almost to one-third of the whole, with forceps, the rest of the *débris* being removed with either scoop or

forceps. There was a good deal of bleeding from the prostate, for which I inserted a large glass tube and plugged with styptic wool. The operation lasted one hour, and the weight of the stone was 3½ ounces. Two months after I heard that he was doing uninterruptedly well, and that there was only a small fistula left. Ten months later I saw him again with Mr. Chittenden, for chronic cystitis. This was a very satisfactory case. Possibly he might have done just as well had I removed his calculus entire by the suprapubic route. But I had only recently performed this operation in an old man at St. Peter's for a very large phosphatic stone with a fatal result. He lived over a fortnight, but the wound showed no signs of healing, and he gradually sank, and died of exhaustion. I might mention that there was no extravasation nor peritonitis.

Case 40.—On February 12th I was sent for by Mr. Milner Burgess, of Harlesden, to remove a stone or concretion from the bladder of Mrs. B. It appeared that she had for twenty years suffered with cystitis, which came on after a confinement. She was suffering much pain, and micturition was very frequent. Under chloroform I sounded, and found a stone, which I crushed. In order to introduce an evacuating tube I had to dilate the urethra. On using the evacuator I found it did not act, and I saw some of the water escaping by the side of the cannula. Accordingly, I fully dilated the urethra, and introduced my finger, when a saccule was found on the right side filled with calculous *débris*, whilst phosphatic deposits adhered to most of the bladder wall. Almost all of this I removed, either with the finger or with a scoop. Once during the crushing I was cognisant of the fact of having nipped the bladder wall in the blades of the lithotrite. But as this had happened to me more than once before without any apparent ill effect, I did not think much of it, and left the house having given a favourable prognosis. The operation lasted rather under an hour. I should think that the *débris* removed would have about filled a teaspoon. On the second day after the operation, in the evening, I received a letter telling me of the patient's death, presumably from peritonitis. We could not get leave to perform a *post-mortem* examination. It is not long since one of my colleagues had a very similar case at St. Peter's, with death from peritonitis on the second day. Mr. Butlin, at a meeting of the Clinical Society on January 24th, mentioned the case of a patient with stone in the bladder, always to be felt with a sound, but never except once caught with a lithotrite. At the *post-mortem* examination a saccule in the wall of the bladder, with very thin walls, was found. The lithotrite had at last caught the stone in the saccule, causing the thin wall to rupture, death resulting in twenty-four hours. This I have no doubt now was what occurred in my case. Looking to these three fatal cases, I would recommend a suprapubic cystotomy in all cases where the stone is encysted.

Case 15.—J. D., an old and feeble man, was admitted with paralysis agitans and bronchitis. As a small stone gave rise to much pain, I decided to crush it by using a 5 per cent. solution of cocaine instead of general anæsthesia. The operation only lasted sixteen minutes, and he suffered no pain. The bladder was washed out with borax (℥j to ℥j) afterwards. Although I used all possible gentleness in the operation, as shown by the washings being almost free from discoloration by blood, his temperature went up slightly, and he died of exhaustion on the third day. No *post-mortem* examination was allowed. In looking back on this case I do not see what else I could have done to relieve the bladder symptoms.

Case 22.—E. R., aged 20, died on the tenth day from suppurative nephritis. The urine before the operation was normal (specific gravity 1010, acid, no albumen). I regret that the notes of this case do not throw much light upon its fatal termination. It is, of course, possible that things might have been better had his bladder and urethra been washed out with some antiseptic after the operation, but this was not our habit at St. Peter's Hospital.

Case 36.—J. P., an old man of 71. His urine was acid, specific gravity 1010, and contained traces of blood and albumen. He had a rigor within two hours of the operation, the temperature rising to 103°. There was suppression of urine for forty hours, after which he passed urine at frequent intervals, having in the mean time been given digitalis and a hot-air bath. He died on the second day. The *post-mortem* examination showed fatty kidneys. The bladder was thickened, but contained a thin-walled sacculus posteriorly, from which at the time of the operation one of two stones had to be dislodged. No rupture of the bladder nor of the cyst had occurred. Here death was no doubt caused by instrumentation of the urinary passage, and possibly might have been prevented by a careful employment of antiseptics.

Antiseptics.

I believe that 2 of the 4 fatal cases I have recorded might possibly have ended differently had I been more careful as to antiseptics. In performing an internal urethrotomy we are, or ought to be, most particular in seeing that our catheters and urethrotome have been thoroughly cleaned and soaked in carbolic for some hours previous to the operation, and after the operation we take care to wash out the bladder and urethra with a weak sublimate solution; then why not take the same care with regard to lithotrity? In two lithotrities which I have recently performed at St. Peter's—not included in the present series—I washed the bladder out subsequent to the removal of the stone with boracic solution and the urethra with sublimate.

Selection of Instruments.

It is desirable to have a variety of sizes of lithotrites, as also more than one evacuating tube. I have found a No. 16 tube most generally useful in adult cases. The lithotrites should be fenestrated and made after Bigelow's model. Sometimes towards the end of a long lithotrity a difficulty may be experienced in passing so large a lithotrite or tube as the one used on commencing, hence the advantage of having others at hand. Amongst the instruments ready to hand should be a blunt-pointed straight bistoury for division of the meatus, which is no guide to the size of the urethra, and often has to be cut to allow the passage of lithotrite and evacuating tube. A urethrotome should also be at hand in case a stricture—a complication which often exists—be present.

Practical Hints.

Of course gentleness and delicacy of manipulation are points on which I cannot lay too much stress, and they should be particularly employed when squeezing the bottle or aspirator. I doubt if it is necessary to inject at each squeeze more than a tablespoonful of fluid, and these light or gentle compressions should follow each other pretty rapidly. The bladder can be emptied of the fragments more quickly in this way than when more force is used. Now and then it is difficult to pass a given evacuating tube through the deep urethra. Instead of changing it for a smaller it is well to fix on the already filled bottle and compress it: this will have the effect of distending the passage and of allowing the tube to pass.

In some cases in which it is difficult to catch the stone, particularly if it is a small one, success may be attained by raising the thighs and pelvis, thereby allowing the stone to drop back on to the posterior wall, or rather the junction of this with the floor. In cases of enlarged prostate with a deep prostatic pouch in which the stone may lie, the finger of an assistant in the rectum, making pressure upwards, is of much service, as I have no doubt would be a Petersen's rectal bag, as recommended by my friend and colleague, Mr. Harrison. I think Surgeon-Major Keegan's advice with regard to having stylets fitted to each evacuating tube—especially when used in boys—very good, as by this we may prevent laceration of the urethra taking place when withdrawing a tube in the eye of which a large fragment may be lodged.

All manipulations, whether of crushing or evacuating, should be stayed when the patient from any cause is straining, or damage to the bladder might ensue.

Selection of Method.

In Boys.—If the stone is not too large or too hard to be crushed by a No. 6 or No. 8 lithotrite and if a No. 8 evacuating cannula will pass, I think lithotrity much to be preferred to lithotomy; but, where crushing is out of the question, I am of opinion that suprapubic is preferable to lateral lithotomy. Surgeon-Major Keegan, in a paper read before the Medical Society on March 15th of this year, stated that he had performed lithotrity in 125 boys below 15 years, the

youngest being 1 year 9 months, with a mortality of only 3.2 per cent., and there was only 1 case of recurrence out of the number. The average weight of calculi removed was just under 90 grains. The four deaths were all due to organic disease of the kidneys.

In Girls lithotrity should be the rule, but, if impracticable, then suprapubic lithotomy.

In Adult Females.—For small stones, lithotrity or litholapaxy, or dilatation and removal; for large stones, suprapubic lithotomy.

In Male Adults.—Lithotrity for all small stones, and even for large ones, which can be seized and crushed with Thompson's largest improved Bigelow lithotrite; otherwise the suprapubic operation. Lithotrity is not applicable to cases of encysted stone, nor to some cases in which the bladder is much contracted. Stricture should not militate against lithotrity, as internal urethrotomy should be performed as a preliminary.

In Old Men (for example, those over 65) lithotrity should also be the rule, failing which, if there be no considerable enlargement of the prostate, median cystotomy, combined with crushing; if much prostatic hypertrophy exist, the high operation for stone (although much risk is involved in all over 70) is yet, I venture to think, more likely to be successful than lateral lithotomy.

Table showing particulars of Forty Consecutive Cases of Lithotrity or Litholapaxy. All the Patients were Males except Nos. 1 and 40. R = recovery, D = death.

No.	Date.	Age.	Duration of Operation.	Variety of Stone.	Weight in Grains.	Recurrence.	Results.	Remarks.
			M.					
1	1881	3	30	Phosphatic	73	—	R	
2	1882	60	30	Uric acid	100	—	,,	A rectal stricture incised and dilated at same time.
3	,,	36	65	Phosphatic	192	—	,,	
4	,,	18	17	Oxalates	36	—	,,	
5	1884	69	88	U. and phosph.	515	—	,,	Slight rigor on third day.
6	1885	46	25	Phosphates	60	—	,,	
7	1886	71	30	U. and phosph.	67	R	,,	
8	,,	22	25	U. and oxalates	70	—	,,	
9	,,	15	25	U. and phosph.	56	—	,,	
10	,,	35	15	Phosphates	2	—	,,	
11	,,	75	—	Urates	11	—	,,	In crushing many villous processes were brought away.
12	1887	70	25	Uric acid	92	—	,,	
13	,,	70	30	Phosphates	178	—	,,	
14	,,	35	5	Oxalates	6	—	,,	
15	,,	65	16	U. and phosph.	30	—	D	A paralytic. Bronchitis and septicæmia. Died on third day.
16	1888	50	20	Oxalates	14	—	R	Stone impacted in urethra; pushed back.
17	,,	71	20	Uric acid	42	R	,,	
18	,,	39	60	Phosphates	66	—	,,	
19	,,	17	—	,,	—	R	,,	
20	,,	69	—	,,	50	—	,,	
21	1889	11	25	,,	74	—	,,	
22	,,	20	35	,,	180	—	D	On tenth day; suppurative nephritis.
23	,,	49	35	,,	150	—	R	
24	,,	54	20	Oxalates	4	—	,,	Litholapaxy.
25	,,	72	60	Urates	1680	—	,,	Perineal lithotrity.
26	,,	74	35	U. and phosph.	44	—	,,	
27	,,	74	20	,, ,,	62	R	,,	
28	,,	72	25	Urates	80	R	,,	Fifth time of recurrence.
29	,,	72	35	Phosphates	80	R	,,	Second time of recurrence.
30	1890	45	26	,,	30	—	,,	Internal urethrotomy at same time for stricture.
31	,,	65	45	Uric acid	437	—	,,	Epididymitis.
32	,,	45	15	Phosphates	10	—	,,	
33	,,	76	30	,,	65	—	,,	
34	,,	58	25	,,	36	—	,,	Meatotomy.
35	,,	42	25	,,	32	—	,,	
36	,,	71	70	Mixed calculus	75	—	D	In forty-eight hours suppression, sacculated bladder.
37	,,	—	15	Phosphates	26	—	R	
38	,,	64	35	Uric acid	106	—	,,	Bronchitis, prostatic abscess.
39	1891	66	10	U. and phosph.	34	R		
40	,,	50	50	Phosphates	—	—	D	Cystitis, sacculated bladder; peritonitis.

FATAL FOOTBALL.—Thomas G. Meadowcroft, aged 21, has met his death from injuries incurred in a football match played at Newbey.

CASE OF ELEPHANTIASIS ARABUM.[1]

BY C. E. ABBOTT, L.R.C.P.I., M.R.C.S.

THE case is a well marked example of an affection rare in this country. Dr. Duhring, Philadelphia, in his work on *Diseases of the Skin*, 3rd edition, 1882, writes as follows:

"Elephantiasis Arabum is a chronic hypertrophic disease of the skin and subcutaneous connective tissue, characterised by enlargement and deformity of the part affected, accompanied by lymphangitis, swelling, œdema, thickening, induration, pigmentation, and papillary growth. Elephantiasis



Græcorum, or true leprosy, is an endemic, chronic, malignant, constitutional disease, characterised by alterations in the cutaneous, nerve, and bone structures, resulting in anæsthesia, ulceration, necrosis, general atrophy, and deformity." The dark races are more liable to elephantiasis than the fair. In India it is particularly liable to attack the scrotum; in the West Indies the leg is its favourite seat, hence the term "Barbadoes leg."



The patient is a widow, aged 62. She has a florid complexion, and is not a "drinker." She complains chiefly of difficulty in walking, caused by the disease which affects her left leg. She is very fat, weight 16 stone, height 4ft. 11in. The patient was thin up to the age of 43, when, after the

[1] Read before the Essex District, East Anglian Branch. Case exhibited.

birth of her last child, she began to grow stout. She has been under my observation for the last twelve years, during which time the disease in the leg has developed, and steadily increased. When first seen in 1879 the left leg was slightly larger than the right, but there existed at that time no indication of the elephantiasis. The patient states she had white swelling of the leg affected after her tenth confinement twenty-three years ago; she was confined to the house for three months from this cause. What relation there was between this illness and the present condition I am not prepared to state; the interval between the confinement referred to and the onset of the present condition, about twelve years, does not favour the connection. The present condition began with slight constitutional disturbance; enlargement of the foot and leg became general; some patches of eczema were troublesome for several years, the leg gradually taking on the appearance it now presents. This is well shown in the accompanying illustration.

The following are the dimensions of the legs in circumference:

4 inches below knee,	sound leg, 16 inches;	left leg, 27 inches	
Middle of calf ...	,, 16½ ,,	,, 23½	,,
Ankle	,, 10½ ,,	,, 19	,,
Instep	,, 9 ,,	,, 10½	,,

On the front of the leg and over the lower two-thirds the skin presents a tuberculated, horny, and pigmented appearance. Just below the popliteal space a deep sulcus extends about two-thirds round the leg; several other depressions are to be seen lower down, more particularly on the inner side. The ankle is well worthy of attention, the hypertrophied leg overhanging the foot, and appearing even larger than it is from the depression in front of the ankles; the dorsum of the foot is also much hypertrophied, and on this surface are several areas of congested skin from varicose veins. The outer side of the leg is much infiltrated.

Digestive system normal. Nervous system: has headache and neuralgia at times. Patellar reflex absent. Respiratory system normal except shortness of breath on exertion: this is no doubt due to obesity. Circulatory system: heart sounds clear; there is probably some fatty degeneration of the heart, and no doubt the arteries of the affected limb are enlarged. Urine, clear acid, specific gravity 1016; no albumen.

Treatment.—The patient refuses operative measures. An elastic bandage is at times worn.

HYDATID OF LIVER: ABDOMINAL SECTION, INCISION, AND DRAINAGE.

By THOMAS EASTES, M.D.Lond., F.R.C.S.,
Folkestone.

E. P., aged 56, widow, was first seen by me in June, 1889, for an abdominal tumour about the size of two closed fists. It was almost median, chiefly below the umbilicus, only slightly movable from side to side, felt globular, and seemed to extend deeply towards the spine. It could not be connected clearly with any of the viscera, and seemed to be surrounded by a zone of resonance, but was itself dull. It continually increased until September 24th, 1889, when an exploratory incision was made, and, after pressing aside liver, bowel, and omentum, a small piece of hydatid cyst wall was uncovered, the cyst was aspirated, and a pint and a quarter of clear hydatid fluid was drawn off. The cyst wall was then incised, sewn to the edges of the peritoneum, and a glass drain introduced. A few small vesicles came out with the fluid. Sixteen days after the operation about two square feet of hydatid membrane were washed out by syringing. Drainage was stopped about six weeks after the operation, and the patient made a perfect recovery. The treatment of living hydatid cysts is as yet far from perfect. Some are cured by being aspirated, only a small portion of the contents needing removal, but some refill, and some suppurate after aspiration.

Incision and emptying the cyst seem the most satisfactory treatment, but I can only find one case recorded where the cyst was closed again at the operation instead of being drained, and that was a case of Mr. Knowsley Thornton's,[1] where the cavity was sponged out with tincture of iodine, and closed with the same sutures as the abdominal incision. Dr. Verco, of North Adelaide, has recommended removing the whole of the membranes at the same operation; another writer deprecates that, and apparently with good reason, as being liable to cause uncontrollable hæmorrhage, referring to a case of Dr. Bright's, in which the cyst ruptured through the abdominal wall spontaneously, and some of the membranes were removed on the second day after rupture; but next day some more presenting at the aperture resisted removal, and hæmorrhage into the cyst from a hepatic vein commenced, and was fatal within thirty-six hours.[2]

It is certain, from the one case already mentioned, that if the cyst be in the abdominal cavity, and the wall fairly thin, and not too rigid so that the general abdominal tension will close it, the cavity may be cleansed by an antiseptic and then closed; but I would suggest that it should simply be sponged out very gently, or, if in a suitable position, be first washed out with clean warm water as the peritoneal cavity is treated, and then gently sponged dry and closed without being drained, taking the precaution to keep the opening of the cyst and that of the abdominal cavity in close apposition by closing both with the same sutures in case of possible suppuration, until further experience has shown that to be unnecessary. Even if suppuration supervened, a drainage tube could then be easily inserted; and, if it did not, several weeks of drainage would be saved, three weeks being apparently the shortest time required hitherto, and as many months not being sufficient in protracted cases.

[1] British Medical Journal, 1886, vol. ii, p. 901.

A CASE OF TRAUMATIC CEREBRAL ABSCESS: TREPHINING: FREE DISCHARGE OF CEREBRO-SPINAL FLUID: RECOVERY.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

On June 8th, 1890, Dr. Watson, of Ardwick, asked me to see in consultation a boy, aged 13, who, six days previously, while at play, had struck his forehead against the end of a sharp bolt projecting from a door, a slight wound being produced about two inches above the orbit on the left side. He walked home after the accident, which was not considered serious, as it was not followed by any symptoms for several days, except that it was noticed that he was unusually dull and heavy. On the morning of the sixth day, when he was first seen by Dr. Watson, his temperature was 101.5°; he was somewhat drowsy, and there was a slight discharge of pus from the wound. The same evening when I examined him, the temperature had fallen to 100°, the pulse was 60, intermitting every four or five beats; he was quite conscious, speech was perfect, and there were no brain symptoms. On exploring the wound with a probe, it passed through a small opening in the frontal bone into the cavity of the cranium; on withdrawing the probe, a few drops of pus oozed from the wound, evidently coming from the interior of the skull. As it was clear that there had been a punctured fracture of the frontal bone, followed by intracranial suppuration, it was resolved to trephine at the seat of injury.

The operation was performed early the following morning. After raising a semicircular skin flap and removing a circle of bone at the site of fracture, along with numerous fragments of the inner table, which was extensively splintered, there was a free discharge of pus through a laceration in the dura mater. On introducing the finger through the trephine opening, it passed into a large irregular cavity in the frontal lobe. This was syringed out with boric acid lotion, a quantity of broken down brain substance coming away. A drainage tube was left in the wound, its end reaching well into the abscess cavity. For the first four days after the operation there was a profuse discharge of pus from the wound, which was syringed out daily with boric lotion. On the morning of the fifth day, it was found that during the night the dressings and pillow on which the boy lay had become saturated with a clear watery fluid. This continued to discharge very freely

[2] Bright. "Abdominal Tumours." *New Sydenham Society*, p. 51.

for four days, soaking through pads of wood wool and towels placed beneath the patient's head. It then gradually diminished in quantity and after the twelfth day entirely ceased. The purulent discharge then recurred, necessitating the retention of the drainage tube for several weeks, for Dr. Watson found that if any accumulation of pus took place, the pulse, which after the operation rose to about 100, at once became slow and very intermittent. After the removal of the tube, the wound quickly healed without any tendency to the formation of a hernia cerebri. At the present time, ten months after the operation, the boy is in the enjoyment of perfect health; there is no impairment whatever of the mental faculties, and the seat of the operation is marked by a cicatrix and a gap in the bone, through which the pulsation of the brain can be plainly felt.

The most interesting feature in the case is the discharge of cerebro-spinal fluid, which appeared on the fifth day after the operation, and after continuing for a week, then entirely ceased. It probably came, not from the subarachnoid space, but from the lateral ventricle with which the abscess cavity must have communicated, for when the wound was exposed, the fluid could be seen to well up through the drainage tube, evidently coming from the interior of the brain at a depth from the surface. As healing took place and the abscess contracted, the communication became closed and the escape of fluid then ceased.

A discharge of cerebro-spinal fluid from the vault of the skull after compound fracture or after trephining for any cause is of rare occurrence, and of twenty-four cases in which I have trephined the skull (in eighteen for compound fracture), this is the only instance in which I have observed it.

In the article on Injuries of the Head, in Holmes's *System of Surgery*, Sir Prescott Hewett quotes ten cases where it was met with, and in three of these the fluid was believed to escape from the lateral ventricle: in one of the latter which proved fatal this opinion was verified, for after death a minute communication with the ventricle was found to be present.

In the same article attention is directed to the fact that in cases of traumatic intracranial inflammation large quantities of serous fluid are sometimes effused into the ventricles. The case above recorded would support this view, for the amount of fluid which escaped from the wound must have been greatly in excess of that normally secreted by the lining membrane of the ventricles. The lateral ventricle becoming distended with fluid, its wall probably gave way, and a communication was thus formed between it and the abscess cavity in the frontal lobe.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

NOTE ON THE NERVE SUPPLY OF THE BLADDER AND ANUS.

DR. GOWERS, in his *Diseases of the Nervous System*, writes concerning the rectum and bladder and the connections of them with the spinal cord, "The centres for these are in the lumbar enlargement, but we do not know their exact position." In view of this condition of our knowledge in the case of man, some interest may attach to a determination of those spinal roots which contain efferent fibres for the bladder and anus in the monkey—an animal differing less from man in its anatomy than do the types more usually employed in the laboratory.

In rhœsus and bonnet monkeys the stimulation (the animal being of course deeply anæsthetised), by weak induction shocks, of the peripheral ends of the roots of the first, second, third, and fourth, and of the seventh, eighth, ninth, and tenth post-thoracic spinal nerves, produces contraction of the bladder, most marked in the case of the second, third, eighth, and ninth roots. On one occasion only in my experiments has an unmistakable contraction been registered on stimulating the sixth, and on no occasion on stimulating the fifth post-thoracic root.

As to the anus, in the rhœsus and bonnet, smart contraction of that orifice is brought about by stimulating the distal ends of the roots of the seventh, eighth, and ninth post-thoracic spinal nerves, and not by stimulation, so far as I have seen, of any other roots.

In the female the round ligament replies by extremely sharp and striking contraction to stimulation of the distal ends of the twelfth thoracic, and the first, second, and third post-thoracic, nerve roots; the contractions produced by the second and third post-thoracic roots respectively are greater than those produced through the two higher roots. In the male the vas deferens contracts much in the same way as the round ligament in reply to stimulation of the same above-mentioned roots.

C. S. SHERRINGTON, M.A. M.B., etc.

CASE OF LIVER HYDATIDS, WITH JAUNDICE; INCISION; RECOVERY.

T. D., aged 32, a shunter, was admitted into the Cancer Hospital in November, 1889. He had been a hard drinker; had received a blow on the side nine months previously; a tumour, however, had existed for five years. A huge seemingly solid mass, evidently connected with the liver, descended on the right side almost to the iliac fossa; in the middle line, to the level of the umbilicus, where the circumference was 31½ inches; 4 inches above this the girth was 34 inches. Jaundice of a greenish hue had been present four weeks. There was no pain, and no tenderness on pressure. No fluctuation could be detected. The prominence above the umbilicus gradually became more marked, and concurrently the jaundice disappeared. After six weeks distinct fluctuation was felt. On January 25th, 1890, the aspirator was employed, and 42 ounces of clear fluid, containing abundant scolices and hooklets, drawn off. The cyst promptly refilled, and on February 15th a median incision, 4 inches long, was made above the umbilicus. Around the opening the hepatic peritoneum was stitched to the parietal; there were already firm adhesions to the left of the middle line. The wound was plugged with strips of lint soaked in glycerine. Eight days later the cyst was incised, and a glass drainage tube inserted. Convalescence was subsequently retarded by an attack of pneumonia at the right base. The cyst, however, eventually cicatrised from the bottom, and the man was discharged well in May, 1890.

Gloucester Place, W. HERBERT SNOW.

CASE OF DIPHTHERIA OF THE VULVA.

DIPHTHERIA of the vulva, occurring as a primary affection, appears to be sufficiently rare to justify a record of the case.

On December 15th last I was called to see a young lady, aged 12, whom I found to be suffering from headache and general *malaise*. The forenoon temperature was 102°, and the pulse 136. The second morning the temperature was 103°, and it rose the same afternoon to 105°. There was no sore throat, nor apparently any other local affection to account for this high fever, nor did the history seem to point to any of the eruptive fevers as imminent. On questioning the patient's sister I was told that the only complaint the patient had made was of a soreness about the external genitals, and, on examination, I found both labia majora swollen and painful, and a slight mucous discharge from the vulva. I was naturally in doubt as to the cause and character of vulvitis in such a young person, accompanied, as it was, by high fever and prostration.

On the morning of the third day the temperature was 103.6°; on separating the labia three distinct ash-coloured membranous patches were seen on the mucous surface of the labia, two on one side and one on the other. I concluded that the case was a genuine primary diphtheria of the vulva, and began a local antiseptic treatment of frequent irrigation of warm creoline solution, and dusting with boracic acid powder. On removal with forceps of the largest patch on the fourth day, the base bled profusely. The other patches separated naturally about the sixth day. There was no re-formation of membrane, and the ulcers healed slowly.

The fever declined gradually, and on the twelfth day both morning and evening temperatures were normal, but a slight over-exertion during the third week sent the temperature up

to 102.4°, and a tendency to a slight afternoon rise persisted till the beginning of the fourth week.

No paralysis was apparent, but the cardiac action was feeble for long, and the muscular tone very slow of returning. The appetite was good throughout. I carefully examined the throat each day, but no formation occurred. There was no albuminuria. The social and sanitary surroundings of the patient were excellent, and I was quite unable to trace the sources of the infection.

Florence. ALEX. R. COLDSTREAM, M.D.Edin.

DEATH UNDER ETHER.

ON Tuesday, April 14th, I administered ether to a man for a medical man in private practice. The operation was for the relief of an overdistended bladder, with extravasation of urine into the scrotum and surrounding region.

The patient, A. L., aged 46, had been in a feeble state of health for a considerable time. He was all his life a hard drinker. Since August he had been confined to his room suffering from a tight stricture of the urethra. This he had neglected, refusing any treatment for its relief, as I am told, up to the time of the operation. His heart was hypertrophied. On auscultation double aortic and mitral murmurs could be heard; the pulse was feeble and irregular; the chest was barrel-shaped from emphysema, but at the time of the operation there was little or no cough. From an enormously dilated bladder, which extended upwards to his umbilicus, alkaline urine was continuously dribbling away. The penis and scrotum were greatly swollen, and were almost gangrenous from extravasation. It was for the relief of this condition and with the patient's full consent that an operation was decided upon. Prior to the operation a consultation was held, and it was decided to administer ether in preference to chloroform. Clover's inhaler was used, and the anæsthetic cautiously administered. There was little or no struggling; the breathing was slow but not laboured. After about five minutes' inhalation, and before the operation was commenced, I noticed his pulse suddenly becoming very feeble, hardly perceptible at the wrist; the lips were pale, and the breathing gasping; his pupils at this time were normal and the conjunctiva sensitive.

The ether was at once discontinued, his tongue drawn forward, the cardiac area and chest were stimulated, and artificial respiration was resorted to. The dusky pallor, however, increased in spite of all our attempts, and, although artificial respiration was continued for three-quarters of an hour, we failed to bring him round.

The patient positively refused to have anything done without an anæsthetic, although asked to do so. No *post-mortem* examination was allowed. L. MCWHANNELL.

House-Surgeon, Borough Hospital, Birkenhead.

DEATH UNDER CHLOROFORM.

THE following is an account of the recent death under chloroform at St. Thomas's Hospital.

W. F. D., a stout plethoric-looking man, aged 49, a sufferer from chronic bronchitis, but otherwise apparently healthy, came up to the hospital recently on account of œdema and stiffness of the left hand and wrist resulting from a Colles's fracture sustained in January. He was treated as an outpatient, and on a subsequent occasion chloroform was administered and some passive movements used. Patient became unpleasantly cyanosed during administration, and informed me subsequently that he had "felt very faint" after leaving the hospital. I now find that he fainted twice.

Further movements were required, and the patient was admitted into the hospital on April 16th. On April 20th chloroform was administered by Mr. Lovell, one of the house-physicians, as movements of the fingers, etc., were too painful to be performed without an anæsthetic. The heart was previously examined; the sounds were healthy but somewhat faint, which seemed sufficiently accounted for by the thick adipose covering of the chest, and the probable existence of emphysema. The pulse, however, was somewhat weak though regular, and the possibility of fatty degeneration of the heart, with the question of ether *v.* chloroform, was discussed. The latter was selected on account of the manifest presence of bronchitis. In about three minutes and a half the patient's limbs became relaxed, the stage of insensibility being preceded by a tendency to opisthotonos. Up to this moment I had kept a finger constantly on the pulse, and noticed only that it became a shade weaker in the stage of insensibility. The index finger was now flexed, and at the same moment the patient's face was noticed to be somewhat dusky. Feeling the pulse again it was found to be absent. Chloroform inhalation was at once discontinued, and after four or five deep gasps the respiration stopped. Artificial respiration was at once commenced and kept up for half an hour, and ether injections (the first within a minute) administered over the heart, but the patient showed no further sign of life. The amount of chloroform used must have been small, probably not more than 1 or 1½ drachm.

The *post-mortem* examination showed about ¾ inch of fat over the chest. Lungs adherent to chest wall all over except at apices and anterior borders (emphysematous); some mucopus in the bronchi. Heart loaded with fat on surface, no fatty degeneration; right side dilated, and tricuspid valves markedly incompetent; both sides of the heart practically empty of blood. Liver fatty; other organs healthy.

WM. G. G. STOKES, House-Surgeon.

A CASE OF RUPTURE OF THE VAGINA, WITH FATAL HÆMORRHAGE AND PERITONITIS.

THE following case is interesting in connection with the great outcry that has recently been raised by the so-called orthodox Hindu party in India (almost mainly, it is curious to note, in Lower Bengal, which claims to be the most enlightened and advanced province in India) that the Indian Government, by the introduction of what is commonly spoken of as the "Age of Consent" Bill, has aimed a blow at the Hindu religion, and affords, I venture to think, a proof that some legislative action on the part of the Government had become necessary for the better protection of young and immature girls.

A few days ago I was asked to make a *post-mortem* examination on the body of a little girl, of the Mali (or gardener) caste, said to be 12 years of age, and whose death was reported as follows: "It is reported that deceased's mother-in-law, Mussamut Bakki, with the assistance of Mussamut Raminka, introduced some substance into her private parts for the purpose of bringing her to maturity." Death had taken place on February 1st, and the *post-mortem* examination was held on February 2nd. The remains of rigor mortis were present; the body was emaciated and thin; the labia majora presented very distinct marks of recent superficial bruises on both sides, and there were also bruises on the labia minora, clitoris, vestibule, and the margins of the urethra. A clot of blood was hanging out of the vagina, and the margins of the vaginal orifice presented a swollen and contused appearance, and there were scarcely any traces of the hymen; posteriorly the tissues about the mouth of the vagina were in a sloughy condition. On dissection of the pelvis there was seen an irregularly circular rent at the upper vaginal *cul-de-sac* of the left side, at its junction with the neck of the uterus, and extending into the peritoneal cavity. The iliac fossæ were occupied by a large amount of blood clot, more especially on the left side. The mucous membrane of the bladder was stained of a reddish-grey colour; the intestinal coils nearest the pelvis were glued together, and the peritoneal cavity contained yellowish turbid fluid with flakes of lymph, and the peritoneal surface of the intestines had lost some of its shiny appearance. The uterus was of the infantile type, undeveloped and unimpregnated. The cause of death, in my opinion, was profuse hæmorrhage from the ruptured vagina, with secondary acute peritonitis. It was not considered necessary to examine any of the other organs. The cause of the rupture of the vagina I have no doubt was forcible dilatation with some hard substance, but as nothing was produced for my examination the precise nature of this substance is a matter of conjecture. It is, I think, quite possible that some of these injuries could have been produced by forcible intercourse. The girl was a weakly, emaciated, immature child of about 10 to 12 years of age, and the husband, who was present when the body was brought for examination, was a fairly well-grown youth of about 16 to 18 years. As I had no order I could not examine him.

In the pages of Dr. Chevers's work on *Medical Jurisprudence*

in India, pages 688 *et seq.*, will be found, under the heading "Fatal Injuries inflicted in the First Act of Connection," a full account of many such cases. I think it not unlikely, judging from the superficial bruises on the external parts, that an attempt at forcible intercourse had taken place at some time or other, probably very recently, and that the vaginal orifice and channel not having been sufficiently dilated thereby, an attempt had been made (too successfully, it must be admitted) forcibly to dilate once for all the sexually immature parts with a sharp-pointed piece of wood or metal, causing vaginal rupture, profuse hæmorrhage, and fatal peritonitis.

G. F. A. Harris, Surgeon-Major I.M.S., Officiating Civil Surgeon, Nagpur, C.P.

POST-PARTUM SHOCK.

In volume xiv of the *Transactions of the Edinburgh Obstetrical Society* Dr. J. Haig Ferguson relates three cases of *post-partum* shock, due to inadvertent pressure of an ovary or Fallopian tube in the process of expressing the placenta by the Credé method. In all his cases the patients were nervous subjects, and became suddenly unconscious directly after, or simultaneously with, the expulsion of the placenta. They remained so for several hours, their condition exciting the gravest apprehension on the part of the medical attendant and friends. There was no possibility of accounting for the condition by *post-partum* hæmorrhage, eclampsia, or heart disease, and the patients all made a good recovery. The following case affords an additional illustration of this accident, which, in its graver results, may be rare, but rather less rare than has been supposed, the condition being attributed to something else.

Mrs. G., aged 28 years, was attended by me in her fifth confinement, on March 30th. She is of nervous temperament, and of Irish nationality. The labour was easy and natural, and the child, a healthy male, was duly born. The uterus contracted firmly on the placenta, but as thirty minutes elapsed without its expulsion, I proceeded to employ the Credé method of expulsion. During this process, which did not occupy many minutes, she complained greatly of pain, and I felt something round and hard slip from beneath my thumb. The patient cried out, and then became quiet. Immediately afterwards the placenta was expelled, and, turning round to look at my patient, I found her perfectly unconscious, with shallow and occasionally sighing respirations, and radial pulse imperceptible. She resembled one well under the influence of chloroform. The limbs were flaccid, and neither slapping, pinching, nor shouting could rouse her. There were no twitching or convulsive movements. The uterus was well contracted, and there was no internal or external hæmorrhage, no heart disease, or eclampsia. The conjunctival reflexes were present, and the pupils dilated. In fifteen minutes the radial pulse was fairly good, but about three-quarters of an hour elapsed before I could rouse her sufficiently to swallow a little stimulant; but she soon lapsed back into unconsciousness. The pulse was now 80 per minute, soft and regular, and the breathing regular. I again managed to rouse her, so as to swallow about a tablespoonful of whisky, but she again became unconscious. In this state she remained for three hours, and then recovered perfectly. She passed through her puerperal period without a bad symptom.

The sudden onset of complete unconsciousness, the complaint of intense pain during expulsion of the placenta, coupled with the fact that I had inadvertently included in my grasp of the uterus a hard body—too hard for intestine, the absence of any possible cause of unconsciousness, such as *post-partum* hæmorrhage, eclampsia, or cardiac disease, led me to the conclusion that I had to deal with a case of *post-partum* shock, which had resulted from my squeezing an ovary against the hard and resistant uterine wall.

J. Gibson Graham, M.A., M.B., C.M.Ed.

Partick Hill, Glasgow.

Successful Vaccination.—Mr. Alfred E. Muncaster, L.R.C.P., public vaccinator for the Barton District of the Luton Union, has received for the third time the Government grant for efficient vaccination.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

DEOLALI CAMP HOSPITAL.

TYPHUS FEVER: APPARENT SPONTANEOUS ORIGIN.

(Under the care of R. H. Quill, M.D., Surgeon-Major M.S.)

Gunner S., Royal Artillery, with five years' Indian service and three months' service in his present station (Deolali), was admitted to hospital on September 30th, 1890, for obscure feverish symptoms. He was dull, listless, and drowsy; eyes injected, face of a dusky colour. Temperature, 101° F.; pulse, 100. No rash beyond a duskiness of the skin; no diarrhœa or abdominal tenderness. Being doubtful of the nature of the case, I had the man isolated and carefully watched. On the morning of October 3rd, when approaching the patient, I became sensible of a very peculiar odour, once (in my student days) so very familiar to me, that I at once threw back the bedclothes, and found, as I expected, a profuse mulberry eruption on the man's chest, abdomen, and back combined with the usual subcuticular mottling. The tongue was as dry as a cinder, rough and brown, the pulse feeble, and the heart's action uncertain.

During the second week the first cardiac sound became entirely lost, and the patient lay in a state of almost complete stupor, with black tongue, contracted pupils, and deafness. On the thirteenth day of the disease a profuse diaphoresis occurred, and by the following morning the temperature had fallen to normal, but it continued to rise on each evening for a week or so. The rash commenced to fade by October 17th, and by October 27th it had disappeared, only a duskiness of the skin remaining. The case progressed in all respects satisfactorily. The cardiac sounds were quite normal by the first week in November, and on November 27th the man was discharged as convalescent pending his embarkation for England.

The treatment of this case consisted in the freest possible perflation of the patient. He was placed in the centre of a large tent, the ends of which were looped up, so that night and day he lay in a current of fresh air. A very nourishing liquid diet of milk, eggs, essence of beef, etc., was given with a very free administration of brandy as soon as cardiac failure was observed. Subsequently, during convalescence, quinine and the mineral acids were given with benefit.

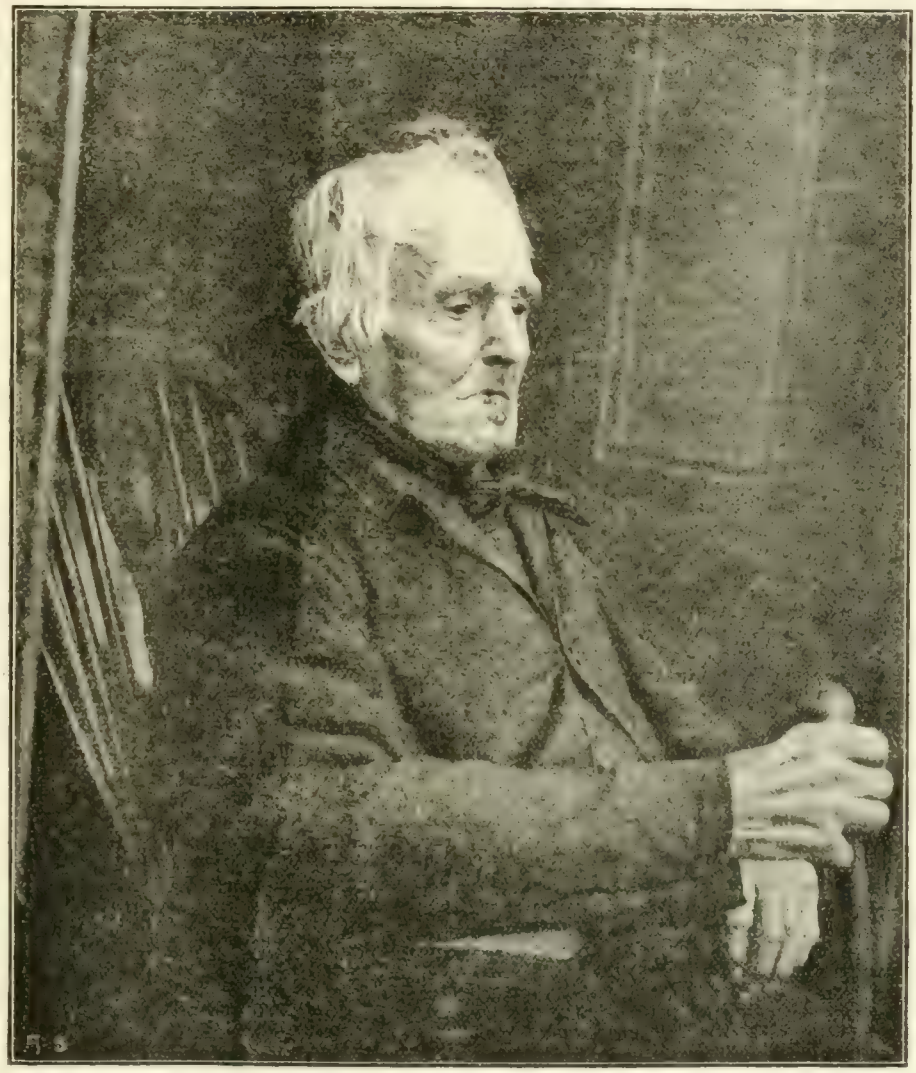
Remarks.—The main point of interest in this case is that relating to its origin. How did this characteristic case of typhus arise? The man was a steady, well-conducted soldier, who had been three months in this station, during which time his general health had been excellent. He occupied a large, well-ventilated barrack room, capable of accommodating twenty-two men, but only thirteen were in occupation. During his three months' residence in this station (which is a large isolated camp), he had been but twice in the adjoining native bazaar, and on neither of those occasions had he entered any house, or remained in the bazaar for more than a few minutes. The sanitary condition of the camp itself was excellent, and the same statement could be made regarding the bazaar. In neither camp nor bazaar had there been any contagious or epidemic disease for a year or more, certainly nothing in any degree resembling typhus fever. Indeed, the unsuspected existence of a disease so contagious as typhus in the small native bazaar here, vigilantly supervised as it is by an energetic sanitary committee, is impossible. Typhus fever is associated with overcrowding and destitution, and these factors, in the absence of contagion from a previous case, may, as Murchison believed, produce it. But in the present instance we had no overcrowding, no destitution, no insanitary environment of any kind, and certainly no contagion. I am no believer in the spontaneous origin of disease, yet here is an example of a specific fever which defied the best efforts of myself and others to refute its spontaneous origin.

YORK COUNTY HOSPITAL.

EPITHELIOMA ON THE LOWER LIP IN A MAN AGED 102 YEARS: REMOVAL: RECOVERY.

(By W. H. JALLAND, F.R.C.S., Surgeon to the York County Hospital.)

CENTENARIANS are rare, and when they are the subjects of successful surgical operations I think the fact worthy of record. The following case I saw with my friend, Mr. Trotter, of Pocklington. The day on which I first saw the patient he had walked a mile to Mr. Trotter's house to see me, and as he was most anxious to have the cancer removed, I consented to take him into the York County Hospital for that purpose. Unfortunately, there is no entry in any register that can be procured which proves the accuracy of the man's statement, but the following extract from a local paper, the *Pocklington Weekly News* (the facts in which were supplied by the man's relatives) is fairly conclusive that the statement may be relied upon. Langrick's daughter tells me that the brother mentioned in the paragraph died on February 2nd, 1875.



In these columns some time ago we spoke of a resident in this neighbourhood who was supposed to have reached an extraordinary age. John Langrick, who has for some time lived at Pocklington, is said to be in his 103rd year. Unfortunately, his age cannot be verified by an official register, but he had a brother died fifteen years ago aged 85, and John was two years his senior. He only just escaped fighting in the battle of Waterloo by an injury to his leg, a brother of his taking part in that memorable engagement. He has grandchildren over 50 years of age, so that, although his age cannot be actually verified by the parish register, he must be from other evidence a centenarian. We are sorry to learn that our aged friend is now an inmate of the York County Hospital, where he has had to undergo an operation for cancer on the under lip.

J. L., aged 102,[1] was admitted on October 18th, 1890, with a small growth springing from the centre of the lower lip, apparently from the junction of the skin and mucous membrane: it was raised and ulcerated, the edges were coated and hard, and the surrounding skin infiltrated; there had been no pain except for a week before admission. He said that it had existed for eight weeks, but could assign no cause for it, except possibly a cut whilst shaving. A gland below the jaw on the left side was slightly enlarged. He had previously been very healthy all his life, not having had three weeks in bed during the whole of it, until last year, when he had "two or three strokes;" he lost his speech in one of these (in April, 1890) for some days. He had never smoked or taken spirits, in fact he says he has never taken any alcohol.

All his senses were clear, except that he was rather deaf, but not extremely so. His memory was good, speech perfect, sight fair. His weight was 8 stone without his clothes; his height 5 feet 2 inches when erect, but he usually stooped so much as to take off nearly nine inches of this; there was no indication of any atheromatous change either in the radial or temporal arteries.

On October 21st I removed the growth by a V-shaped incision, and united the edges of the wound by two hair-lip pins. No anæsthetic was used, the patient being given half an ounce of brandy before the operation; he hardly winced during it and did not make any signs of pain. There was hardly any blood lost and no vessel tied. On the third day after the operation the pins were removed. The wound healed well; it ulcerated for some four or five days longer opposite the incision, but finally healed completely. The patient was never in bed during his stay in the hospital, except at night. The day following the removal he remarked that it felt more comfortable than before operation.

The notes and photograph of the case during the time he was in the hospital were taken by Mr. R. J. Hutchinson.

[1] The daily papers of April 15th stated that two centenarians were returned on the census papers in East Yorkshire: Mrs. Dinah Leak of Driffield, and Mr. John Langrick of Pocklington, both aged 102.

FRENCH CONGRESS OF SURGERY.—The French Congress of Surgery has already drawn up the programme for its next meeting in 1892. The following subjects have been selected for discussion: Pathogeny and Treatment of Surgical Gangrenes, to be introduced by M. Verneuil; Operations on the Bile Channels, their consequences, immediate and remote, to be introduced by MM. Terrier and Lucas-Championnière; and Pathogeny of Infective Accidents in Sufferers from Urinary Disorders, to be introduced by Professor Guiyon.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MAY 5TH, 1891.

W.H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Melanomycosis of Skin.—Dr. S. DELÉPINE read a paper on melanomycosis of the skin, with microscopical and macroscopical preparations, showing the fungus in tissues and a number of cultivations showing the influence of temperature on the growth of aspergillus niger. The case from which the original fungus was obtained was a man with a fractured thigh who went to St. George's Hospital, where the limb was fixed in the usual way with strapping. When the strapping was removed the skin beneath it was found in two places to be covered with brownish-black dust. In the centre of each of these patches there was an ulcer around which the skin was moist, and the cuticle peeled off easily. This black dust was found to consist of spore-like bodies somewhat smaller than, but otherwise closely resembling, the red blood-corpuscles. Some of this was sown on glycerine and on agar-agar, with the result of typical aspergillus niger growths. After giving the history of pathogenic moulds, he detailed the result of inoculation with the spores obtained in the present case. The experiments were performed by Dr. Woodhead, who inoculated the anterior chamber of the eye and the peritoneal cavity of a rabbit, with the result that in less than forty-eight hours after inoculation there was distinct inflammation of the eye, and there were tubercles of various sizes along the course of the lymphatics in the peritoneal cavity. These tubercles contained nests of spores, some germinating, others simply crenated. He also mentioned that he had grown an aspergillus, the spores of which had been removed from the ear of a woman by Mr. Bull. He had chosen for experiment aspergillus niger, because of its slight pathogenic power, to study the changes, fermentations, etc., which occurred in the nutrient media in which it was grown. He suggested that amylolytic fermentative power and hydrolytic action were inherent properties of all living protoplasm. During his researches he discovered that when the filaments of mycelium came to the surface they had the power of altering the media in which soluble lime salts were dissolved into fluids from which oxalate of lime was precipitated.

The Micro-organism of Diphtheria with Experimental Results on Animals. Dr. ALBERT WILSON read a paper on the micro-organism of diphtheria with experimental results on animals. He referred first to the loose way in which the term "diphtheritic" had been used. It had been employed to cover cases of sore throat not of true diphtheritic character. He then reviewed some of the recent researches into the nature of the disease, dealing especially with the investigations of Dr. Klein, which he criticised adversely, as in the inoculation into animals, Dr. Klein had failed to reproduce lesions in the pharynx or paralysis. He next dealt with the experiments he had himself performed. He showed that in ordinary cases of diphtheria a thin grey exudation preceded the membrane formation, and this exudation he believed contained the causative micro-organism. He inoculated tubes, and there first appeared a funnel-shaped depression in the gelatine, followed by liquefaction and the formation of an orange-coloured deposit. The germ present proved on examination to be a pure cultivation of a small micrococcus. Pigeons were inoculated from this, and in them a true diphtheria was produced, with membrane exudation and paralysis. As to the influence of chemicals, the organisms grew best in a neutral or faintly alkaline medium, and acids were injurious to their growth. Growth was prevented by a 2 per cent. solution of boracic acid and a 5 per cent. solution of salicylate of soda, a 2 per cent. solution of peroxide of hydrogen, a 5 per cent. solution of hydrochloric acid, a 2 per cent. solution of liq. ferri perchlor., and 1 per cent. solution of lactic acid, a solution of corrosive sublimate of 1 in 500, and a solution of iodine of the same strength. On the other hand, it was found that a 10 per cent. solution of chlorate of potash, a 20 per cent. solution of permanganate of potash, and a similar strength of sulpho-carbolate of sodium were useless in preventing growth. A solution of sulphurous acid was also useless, probably because of its volatility. He added in conclusion that diphtheria was a constitutional disease, hence the importance of internal remedies combined with local treatment; for the latter, chlorate and permanganate of potash should be banished in favour of lactic, hydrochloric, and boracic acids, salicylates, and hydrogen peroxide. The administration of pilocarpin, in doses of gr. $\frac{1}{15}$, he had found very useful.—Dr. WILLIAM HUNTER asked in what part of their bodies the pigeons were inoculated. These observations entirely disagreed with the latest researches on the Continent. Roux and Yersin in France, and still more recently Brieger, Fraenkel and Behring in Germany, had brought forward evidence that the true cause of diphtheria was the products due to the growth of Loeffler's bacillus in the body. The German observers had isolated this bacillus, grown it in nutrient media, which, after filtering the bacilli, they had injected into animals with the production of typical diphtherial paralysis.—Dr. WILSON said that the seat of inoculation was under the skin over the pectoral muscles. The Loeffler bacillus had not been shown to produce the lesion in the pharynx, which was, he contended, an essential quality of true diphtheria, and other observers, especially Dr. Woodhead, had shown the existence of micrococci in sections of tissues with diphtherial deposit.

Epiphysitis in Infants.—Mr. W. H. BATTLE showed several specimens of long bones obtained from infants under one year of age, with disease at one or both articular ends. The accompanying suppuration took place either in the contiguous joint, or in the immediately adjacent soft tissues. The disease had, in every instance, started at the end of the diaphysis, and the epiphysis was only secondarily affected, and was in no case completely separated from the diaphysis. The superficial opening of the ulceration did not correspond in size with the cavity of the ulcer, the interior of which was filled with pus, and there were granulations on the wall. In one specimen there was also considerable destruction of the cartilage covering the epiphysis; but in this case it was impossible to say definitely if there had been any primary disease of the epiphysis. In only one of the patients was there any evidence of congenital syphilis, and there was no clear history of injury in any of the cases. The author had examined a series of similar specimens in the museum of the Hospital for Sick Children, Great Ormond Street. He thought that the specimens helped to support the following conclusions with regard to the disease: (1) That it was essentially an osteomyelitis of the very vascular growing end of the diaphysis of the long bones of the extremities, the characters of which were simply modified by the conditions of the tissues in very young children; (2) the disease, though usually commencing in the growing end of the diaphysis, might affect the epiphysis primarily, but usually extended towards it from the common starting point in the diaphysis, and caused secondary changes, ending in the partial or complete destruction of the epiphyses; as in later life, the whole of the diaphyses might be destroyed, but this was rare; (3) the disease was not a pyæmic condition properly speaking, for although the lesions might be multiple they were confined to the bones in the first instance, and the suppuration in the joint was dependent on the limitation of the local abscesses to the joint, and was not the result of the pyæmic condition. The patients usually died from exhaustion, and if there was any coexisting internal inflammation, such as a pneumonia, it did not present the characters of inflammation due to pyæmic infarcts. The percentage of recoveries was much higher under appropriate treatment than was usual in pyæmia. The bones most frequently affected were the femur and humerus, in the former both articular ends, and in the latter the upper one. The disease might give rise to pyæmia, as osteomyelitis in later life might do. The acute arthritis of infants was a condition of joint which might result from several causes, of which the form of osteomyelitis under consideration and pyæmia were the most common causes. Localised osteomyelitis ought not to be excluded as a possible cause for an acute arthritis until section of the articular ends of the bones forming the joint had been made, and its absence thus proved, for the opening by means of which pus escaped into the joint was sometimes very minute, and might escape observation.—Mr. MACNAMARA said that Mr. Tom Smith had long ago pointed out that the epiphysis was most commonly affected in early infant life, and the diaphysis in

later infancy and in childhood.—Mr. BRODIE mentioned a child of 7 weeks of age with the whole of the upper end of one femur destroyed, the cartilage only being left on the top of the shaft.—Mr. J. HUTCHINSON, jun., mentioned a case in which the tibia at the lower epiphysial line was affected, and this case recovered.—Mr. STEPHEN PAGET asked where the lesion in the epiphysitis of congenital syphilis was exactly situated.—Dr. J. J. CLARKE compared acute osteomyelitis and pyæmia with a local tuberculosis and subsequent general tuberculosis.—Mr. BATTLE thought the starting point of the disease, both in his cases and in congenital syphilis, was at the growing end of the diaphysis.

Extensive Chronic Gummatous Meningitis of Five Years' Duration.—Dr. NEWTON PITT (for Dr. CUFF, of Scarborough) read the history of a case in which the patient had had frequent attacks of pain over the left temporal bone, which terminated in general convulsions without unconsciousness. The frequency of the attacks varied. He was first seen by Dr. Cuff in 1887, when he was very emaciated, and when he attempted to walk he reeled about. No paresis of the limbs could be detected. There were old iritic adhesions in the left eye, with commencing optic neuritis. He greatly improved on large doses of iodide of potassium, and six months later he had an average of two fits daily. There was still intense temporal pain, and the optic neuritis was double. The vision was $\frac{6}{9}$. After some time he had left-sided epileptiform convulsions, which lasted for a minute or so, followed by a hysterical condition, with only very transient loss of consciousness. The patient came under Dr. Pitt's care in Guy's Hospital for seven weeks in 1889, during which time he had attacks of left-sided twitching, followed by a highly hysterical condition. At the necropsy a year later the dura mater was adherent over the whole of the right side, there was a fibro-caseous gummatous thickening over the angular, supramarginal, and the central portions of the ascending parietal and frontal convolutions. The cortex of the two former were severely infiltrated, and there were a few spots in the lower part of the ascending convolutions. The long duration of the disease and its wide distribution were the features of interest, also the fact that in 1889, with the exception of occasional attacks, there were no physical signs except partial optic atrophy and a unilateral hemiopia.

Gumma of Heart.—Dr. NEWTON PITT also read the following case. The patient, a man, aged 28, fell down at work and died almost immediately. At the *post-mortem* examination a diffuse gummatous infiltration was found to involve the posterior parts of the septum and the musculi papillares of the mitral valve, which were much enlarged. A gummatous mass at the apex of the left ventricle had yielded and formed an aneurysm, which had ruptured into the pericardium. There was another gumma on the surface of the right ventricle. The aorta was atheromatous, and the testicles fibroid. The case was similar to one described by Dr. Goodhart, in the *Transactions* for 1887, but the condition was a very rare one. The patient till the time of his death had been able to work hard without inconvenience.—Mr. EVE mentioned a similar specimen from a woman.

Tuberculosis of Mediastinal Glands invading Lung.—Dr. ARTHUR VOELCKER read notes of three cases, and showed the specimens, illustrating the involvement of the lung by caseous bronchial glands. The cases had all occurred at the Hospital for Sick Children, Great Ormond Street. The first case, an infant, aged 10 months, had a strong tuberculous history. At the necropsy a large mass of caseous glands was found above the left bronchus, and a cavity the size of a walnut was found in the left upper lobe in direct continuity with the caseous gland. In a second case, from a child, aged 19 months, there was a cavity in the right lower lobe of the lung in relation to a caseous chain of glands which extended from the root of the right lung. In a third child, aged 23 months, the middle lobe of the right lung was converted into a caseous mass as the result of the ulceration of a caseous gland into the bronchus leading to it. Dr. Voelcker distinguished his cases from those in which the glands normally present merely became caseous by the occurrence of lung destruction as a result of the invasion of the caseous glands. He remarked on the frequency of caseous glands in children, having found them present in 110 cases out of the last 300 necropsies he had made at the Children's Hospital, and expressed a doubt as to their occurrence apart from some tuberculous affection. He also urged that the relation of the glands to the lung lesion, its peculiar distribution, and the fact that the glands might become caseous without any caseation being present in the lung, made him regard the destruction of lung tissue as secondary to the gland changes. It was also striking that all three cases were under two years of age.—Dr. PAYNE suggested that it would be very interesting to look for traces of tubercle in stillborn children and in infants who died during the first months after birth. Fœtal calves had been shown to be occasionally the seat of tubercles, and this must have been derived from one or other parent.—Dr. W. CARR, from his experience at the Victoria Hospital for Children, thought that in early infancy the bronchial glands were primarily affected with tubercle and the lungs subsequently.—Dr. VOELCKER mentioned an infant, aged 3 months, which died from asphyxia due to the pressure of a large caseous bronchial gland on the air passages. In answer to Dr. Carr, he said that cavities and caseous masses in the lungs apart from the bronchial glands were not, according to his experience, very rare.

Card Specimens.—Mr. ALBAN DORAN: Hydronephrosis; Nephrectomy.—Mr. J. H. TARGETT: Symmetrical Hemiatrophy of Gastrocnemius.—Dr. H. D. ROLLESTON: Necrosis of Skull Cap; Fracture of First Rib.—Mr. S. G. SHATTOCK: Bilharzia—Bladder.—Mr. L. A. DUNN: Ossifying Epulis of the Lower Jaw; Defective Development of the Lower Jaw.—Mr. RAYMOND JOHNSON: (1) Vesical Calculi with Threads from Catheter as Nuclei; (2) Nasal Calculus; (3) Cystic Horseshoe Kidney in a Case of Spina Bifida.—Mr. S. G. SHATTOCK: Heart with Bifid Apex.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, APRIL 23RD, 1891.

W. CHAPMAN GRIGG, M.D., President, in the Chair.

Sir Spencer Wells and Mr. Lawson Tait.—THE PRESIDENT read a communication from the Obstetrical Society declining to accede to the proposal to form a joint subcommittee of the two societies in reference to the matters in dispute between Sir Spencer Wells and Mr. Lawson Tait; and it was ultimately decided that the investigation should be continued by the subcommittee already appointed.

Sessile Uterine Fibroid.—Dr. FANCOURT BARNES showed a small sessile uterine fibroid removed from a patient, aged 30, for metrorrhagia. Treatment had extended for a period of over two years without any relief to the bleeding, which at times rendered her pulseless, and, as pelvic examination failed to detect anything else abnormal, the tubes and ovaries, which were adherent, were removed, with the result that the hæmorrhage was checked for some months. As, however, it returned, and the uterus was now felt for the first time to be enlarged, the cavity was dilated, and the fibroid—which was sessile and about the size of a walnut—was cut off with scissors. The question arose as to whether the fibroid existed before the ovaries were removed, or whether it grew subsequently, and the author thought in similar cases the cavity of the uterus should be explored before proceeding to any other surgical treatment. Mr. LAWSON TAIT believed the tumour had been there from the first, and did not think its removal at that time would have effected a cure.—Remarks were also made by Drs. ROUTH, BANTOCK, the PRESIDENT, Drs. MACNAUGHTON JONES, LEITH NAPIER, HEYWOOD SMITH, R. T. SMITH, and ROBERT BARNES.

The Treatment of Chronic Disease of the Uterine Adnexa.—The adjourned discussion on Dr. Bell's paper on this subject was resumed by Dr. HEYWOOD SMITH, Dr. INGLIS PARSONS, Dr. BANTOCK, and Dr. MACNAUGHTON JONES; and Dr. BELL replied.

HUNTERIAN SOCIETY.

WEDNESDAY, APRIL 22ND, 1891.

STEPHEN MACKENZIE, M.D., President, in the Chair.

Graves's Disease.—Dr. A. T. DAVIES showed a patient, aged 26, who had been under his observation for three years and a half. She was originally frightened by burglars. Cough, palpitation, and prominent eyes came on gradually, with

earthy anæmia and some fulness of the thyroid. Von Graefe's sign was present. Pulse 140. General marked pigmentation of the skin then appeared, such as to suggest Addison's disease; and, in illustration of this, a portrait from St. Bartholomew's Hospital Museum was shown, labelled "Exophthalmic Goitre with Addison's Disease." In course of time the pigmentation had to a great extent faded, the eyes had become less prominent, the pulse rate was now only 80, and there was very slight fulness of the thyroid. The disease had thus become quiescent.—Mr. Denton Cardew had found there was abnormal increase of pigment in 70 per cent. of Graves's disease, occurring both in the axillæ, etc., and in parts liable to pressure, as by a garter. He had found vitiligo and alopecia areata also common. Until a lesion of the suprarenal bodies was proved *post mortem*, he would doubt the coexistence of Addison's disease in such cases.

Fixation of Thorax and Head.—Dr. Appleford exhibited a man, aged 37, in whom stiffening of the chest, head, neck, and right arm had been coming on for two years. He had often suffered from rheumatism, not rheumatic fever. A brother died of phthisis, and he himself had had much cough, and had wasted. The thorax was rigid, respiration being diaphragmatic; the head could only be turned slightly to either side; the right arm could not be raised to a right angle with the trunk. Increased knee-jerks and clonus were present, but no spinal tenderness.—Mr. Poland attributed the fixation to osteo-arthritic disease, and pointed out that there was marked creaking in various joints.—Dr. F. J. Smith hesitated between rheumatoid arthritis and a local pachymeningitis of the cord.

Acute Necrosis.—Mr. A. H. Tubby read a paper on the pathology and treatment of acute necrosis of growing bone. After some remarks on the structure of the epiphysial line and the neighbouring parts, he said that, in view of the mode of onset, of the concurrence of periostitis and endostitis, and of the early separation of the shaft, with necrosis of its whole thickness, some region other than the periosteum or the medulla must be the site of the earliest inflammation. This region he believed to be the vascular layer of young growing bone, the juxta-epiphysial junction. Inflammation commencing there spread upwards and downwards to the medulla and outwards to the periosteum, being assisted by the peculiar disposition of the periosteum at the epiphysial line. The following three points were advanced: (1) The disease variously known by many synonyms, but for convenience here called acute necrosis, was due to the irritation and suppuration occasioned in growing bone by the entrance and development of micro-organisms, the staphylococcus and the streptococcus pyogenes aureus. (2) In cases of total death of the diaphysis, the destructive process was most marked at the extremities; and, further, there was a loss of tissue there, so that the dead shaft no longer fitted accurately into the periosteal and epiphysial cup. This point was supported by records of cases, notably those of Mr. Macnamara. (3) If the origin of the disease as a juxta-epiphysitis were conceded, then mere incision of the periosteum was not sufficient, but tunnelling the bone near the end of the shaft was necessary to give exit to the products of the inflamed medulla, and to relieve the tension in the juxta-epiphysial region. With particular reference to the relative liability of the periosteum, medulla, and growing bone to inflammation, Mr. Tubby gave an account of some experiments in which pure cultures of the micro-organisms placed in contact with these structures gave rise to inflammatory and suppurative changes, first of all near the growing line, before the periosteum became at all affected. In the discussion which followed, Mr. J. Poland and Dr. F. C. Turner referred to a different class of cases, in which necrosis followed specific fevers. There the process was much less acute, was localised, and was probably due to thrombi in the veins.

Migratory Pneumonia.—Mr. F. R. Humphreys read notes of two cases of pneumonia, with complications, in which the congestive process affected one lobe after another in both lungs. The first case died on the fifteenth day with lung softening and heart failure; the second recovered after a long course, including some cerebral mischief.

Dr. N. Senn has been appointed Professor of Surgery and Clinical Surgery in the Rush Medical College, Chicago, in succession to the late Dr. Charles T. Parkes.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Monday, April 20th, 1891.

David Newman, M.D., President, in the Chair.

Chronic Intestinal Obstruction.—Dr. J. Lindsay Steven showed the parts from a case which had been under the care of Dr. Samson Gemmell and Mr. H. E. Clarke. Female subject, obstruction never complete, motions ribbon-like as if from constriction low down. Exploratory operation a month before death showed matting of bowel in pelvis, and a right lumbar colotomy was performed. *Post-mortem* examination showed the obstruction to be due to matting of coils of ileum in pelvis.—Remarks were made by Drs. Kelly and Finlayson.

Addison's Disease.—Dr. Alexander Napier described a case in which only one suprarenal was concerned.—Dr. Alexander Robertson was of opinion that in the typical cases which had been recorded both capsules were diseased. There did not seem to have been in this case the usual specially deep pigmentation of the face and of the backs of the hands. In the cases he had examined the changes in the suprarenal capsules differed from those in the present case; these were in the early stages a greyish degeneration, with later yellowish points, and later still the capsules entirely yellowish, and finally wasting of the capsules, so that they were with difficulty discoverable. He had seen a fibrous transformation and matting of the capsules, involving the semilunar ganglia, which was in accordance with the commonly received pathology of the condition. Here the lesion of the capsules was unusual, both in character and extent, the pigmentation nearly approached to the typical, but it should be remembered that staining of the skin occurred in various conditions apart from the morbus Addisonii, and further inquiry was necessary.—Mr. Maylard said that the naked eye appearance of the affected capsule suggested hæmorrhage into it, and asked if such a condition was known in Addison's disease.—Dr. Finlayson said the emaciation in Dr. Napier's case was extreme. The emaciation in Addison's disease was slight as compared with what was found in, say, malignant disease.—Dr. R. M. Buchanan, in connection with injections of Koch's fluid in Addison's disease, referred to two cases which had been recorded in which there was rise of temperature and pain in the region of the suprarenal bodies. No good had resulted from the treatment.—Dr. Napier replied.

Recurrent Appendicitis: Removal of the Appendix.—Dr. Alexander Napier and Mr. Maylard read this paper. The patient, an unusually well-developed and healthy-looking young man of 21, had four attacks of what was regarded as appendicitis within ten months. Two of these were so severe as apparently to threaten life; two were much milder. The treatment consisted in rest, poultices, and opium. Mr. Maylard found the appendix distended and deeply attached. Numerous adhesions had to be severed. The patient was allowed to get about after a month's confinement. It was now a year since the operation, and the patient had been in perfect health ever since. He thought it was coming to be recognised that these cases should, from an early stage, be under observation by a surgeon.—After some remarks by Dr. Robertson and Dr. Finlayson, Dr. Macewen referred to the variety in type of the affection. Here operation was undertaken in very favourable conditions. In other cases twelve hours sufficed for the development of extensive and serious peritonitis following this small original disease. In view of this, if a patient had had attacks, and if one could still feel something, or if the patient still experienced pain or tenderness on handling, he would operate. He described a case in which, after some threatening symptoms, there came, after some jerking movement, an outburst of more serious illness. Within twelve hours there was general peritonitis. An operation was performed, and the appendix was found swollen and nearly ulcerated through. Death apparently from shock. He also mentioned a case of colitis, apparently beginning in appendicitis, in which 2 feet of the bowel had to be removed. The patient recovered. Operating early in such cases was a good thing. He thought there were cases in which there must be a specific germ, the inflammation was so intense and death so rapid. In from twenty-four to forty-eight hours, without operation, gangrenous patches were found.

Thyrotomy for Epithelioma of Larynx.—The President

showed a successful case of thyrotomy for epithelioma of the larynx. The patient had been suffering during the previous ten months from hoarseness, which came on suddenly. There was no dyspnœa, dysphagia, pain, or enlargement of glands. The mucous membrane of the larynx was deeply congested, and what was supposed to be an epithelioma was seen occupying the anterior third of the left vocal cord, and an eighth of an inch of the right cord. Tracheotomy was performed on November 9th. During November and December there was marked improvement in the appearance of the larynx, so much so that doubts were felt as to the accuracy of the diagnosis. During January the symptoms became worse after an attack of catarrh, but there was still no dyspnœa. Unsuccessful attempts were made to remove portions of the tumour for diagnostic purposes. Thyrotomy was then performed, and the tumour, which proved to be a flat-celled epithelioma, was removed. The disease was found to be more extensive than was suspected, so that not only the left vocal cord and the anterior half of the right, but also a considerable portion of the mucous membrane below the cords had to be excised. The cut surface was freely cauterised with the electric cautery, and the larynx was plugged with iodoform gauze. The patient made a most satisfactory recovery, and on April 20th could speak clearly, the false cords having taken up the function of the true cords. The patient was free from discomfort, and, as far as could be ascertained, cured of his disease. Dr. Newman had had several similar cases in which the same operation had been performed more than two years without recurrence up to the present date.

Gastrostomy and Tracheotomy for Epithelioma of the Œsophagus.—The PRESIDENT also showed a case of epithelioma of the upper portion of the œsophagus, which caused marked dysphagia and dyspnœa, successfully treated by gastrostomy and tracheotomy. The patient first consulted him on December 11th, 1890, when she complained of difficulty in swallowing and pain in the right ear. She had enjoyed perfect health till the beginning of November, when she began to experience difficulty in swallowing. When admitted to the Royal Infirmary she was much emaciated and very anæmic, and on examination a hard firm swelling was discovered immediately behind the cricoid cartilage, and extending in the œsophagus from the level of the vocal cords downwards for a distance of an inch and a half. It was impossible to pass a bougie, but the lumen of the larynx was not interfered with. The voice was perfect and the movements of the cords complete, but several enlarged lymphatic glands were felt in the neck. On January 29th, 1891, the stomach was exposed by an incision an inch below and parallel to the left costal cartilages. About a couple of square inches of stomach wall was dragged through the incision in the parietes. A circle of sutures, each including about a quarter of an inch of stomach wall, were passed through the serous and muscular coats. The radius of this circle was about one-third of an inch. Each suture overlapped its neighbours by about one-eighth of an inch, so that when they were all inserted they resembled the tyre of a wheel. After all the sutures had been inserted in the stomach wall, the free ends were introduced through the subcutaneous tissue and skin and tied externally, so that when the operation was completed an area of stomach wall about the size of a shilling was exposed to view. Through the centre of this area two silver sutures were passed parallel to one another and about a quarter of an inch apart. This method of stitching, by which the peritoneum and muscular tissue were left free and in full contact with the wall of the stomach, gave a broad base for adhesions, and ensured the formation of a complete sphincter. On February 5th, a small galvano-cautery point was introduced into the stomach, and through the opening thus made a No. 2 gum-elastic catheter was passed. During the next four weeks the patient made satisfactory progress. The opening in the stomach wall was gradually dilated, and on February 25th admitted a No. 18 bougie, through which the patient was regularly fed. When discharged on March 21st, the lumen of the larynx was encroached upon, but still there was sufficient air space to allow the patient free breathing; the voice was good, but the right vocal cord was fixed in complete adduction. The patient was readmitted on March 28th when tracheotomy was performed, and she was finally dismissed on April 18th, breathing well through the tracheotomy tube, and being fed through the gastric fistula, the sphincter action of which was perfect.

Cylinder-celled Epithelioma of the Umbilicus.—Mr. MAYLARD showed the tumour and sections. Patient aged 65. No visceral disease discoverable. It was suggested that the growth had origin in some remains of the vitelline duct.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

FRIDAY, APRIL 17TH, 1891.

J. MAGEE FINNY, M.D., President, in the Chair.

Hypnotism.—Dr. CRUISE read a papar on hypnotism. He related, at some length, what he had seen at Nancy, under Drs. Liébault and Bernheim, and his experiences of the clinical instruction on hypnotism by M. Luys at the Charité Hospital in Paris, and of M. Auguste Voisin and M. Guinon, at the Salpêtrière. He discussed the utility of hypnotism, pointing out the cases best suited for it, recounting his own experiences, and replying to the objections, physical and moral, which had been urged against it. He concluded by urging all to study the subject practically before committing themselves to an adverse opinion.—Dr. G. C. KINGSBURY pointed out that when Charcot spoke of hypnotism he referred to certain manifestations of disease met with rarely amongst hystero-epileptics, whereas what was meant by hypnotism at Nancy was not a disease but a method of treatment. That this method of treatment was based on common sense was shown by reference to the every-day experience of physicians of the effect of the mind or imagination on the body, and quotations in support of this were given from Stokes, Graves, Paget, and Trousseau. Hypnotism sought by exalting this power to heighten its effect. It was shown that the principle underlying all the methods was the continued stimulation of one or more of the senses, with the constant suggestion of sleep. The further process of treatment was then detailed, and it was shown how the verbal suggestion of relief, of which it mainly consisted, could be greatly emphasised, according to the nature of the case; for example, by friction in rheumatism or neuralgia, by inducing the patient to inspire deeply in pleuritic affections, by ordering the patient to walk in functional paralysis, etc. The process of dehypnotisation, or waking, was also explained. The opinion that the subjects of hypnosis were greatly fatigued after the process was erroneous. Any medical man who would take the trouble to study the subject could hypnotise, but here, as elsewhere, individual qualities would tell, some men always being more successful than others. "Who can be hypnotised?" was then considered, and it was shown that as distinctly the majority of people were susceptible, it was more important to know who could not be hypnotised; but Dr. Kingsbury believed he was within the mark in saying that 70 per cent. were hypnotisable, though only 15 per cent. would be found to be somnambulists. Children between 7 and 14 years of age were found to be the best subjects, 50 per cent. being somnambulists. Hysterical people were very difficult subjects. Lunatics were about the worst subjects, while imbeciles were practically impossible. Phthisical patients were particularly susceptible. Sex did not exert any marked influence. Nationality did not seem to be an important factor either, though the Oriental races were held to be the most easily influenced. Ill-health was by no means an essential, some of the best subjects being athletes. Dr. Kingsbury held it to be justifiable to try hypnotism in all cases where a distinctly nervous element could be detected. All functional disorders might also be treated by means of hypnotic suggestion. Hypnotism might be used in conjunction with drugs, whilst in some cases it might be tried alone. In midwifery, hypnotism seemed justifiable wherever any anæsthetic was thought necessary. It might be employed in many cases of ovarian pain and menstrual derangement. The alienist was justified in trying hypnotism, Voisin having succeeded with 10 per cent. of his patients, and Forel, of Zürich, having hypnotised 14 out of the first 33 patients tried. Moral ailments seemed to offer a wide field for the trial of hypnotism, and included cases of inebriety, morphinomania, cocainomania, kleptomania, masturbation, etc. In surgical cases Dr. Kingsbury declared that if he knew that a patient could be hypnotised deeply, so as to be completely anæsthe-

tised, he would prefer to employ hypnotism rather than chloroform for operative purposes. The dangers of hypnotism were grossly exaggerated. He had failed to find any case where insanity could be shown to have been produced by hypnotism employed by a medical man. It was time that the practice of hypnotism should be confined to the medical profession by right, but he maintained that scientists should be allowed to conduct hypnotic experiments for the elucidation of physiological and psychical problems. All that he asked for was a careful and scientific testing of hypnotism.—Dr. Foot wished to hear a differential diagnosis between mesmerism and hypnotism, because many great men had made shipwreck of their reputations on the rock of mesmerism. He thought that non-organic functional disease was the feeding ground for every form of quackery. He was anxious to hear how long the cures of dipsomania had lasted.—Dr. Joseph Redmond mentioned the case of a girl, aged 19, who had suffered severe pain in the side for five years. All sorts of treatment had been tried in vain. Dr. Cruise hypnotised her five or six times, and completely cured her of the pain.—Dr. M'Cullagh mentioned two cases in which he had performed circumcision painlessly under hypnotism.—Dr. J. J. Murphy related cases of dipsomania, masturbation, etc., in which hypnotism had done good.—Mr. Edward Hamilton, when a young practitioner, remembered a case of fever in which all narcotics failed. He sat by the patient's bedside, and, fixing his eyes on him, wished intensely, almost prayed, that he might sleep. After a few minutes the patient's eyes drooped, and he slept for some hours, which caused him the greatest benefit.—Dr. Conolly Norman said the evils of hypnotism had undoubtedly been absurdly exaggerated, nevertheless there were dangers. In a case of his own he believed general paralysis had originated in the constant practice of hypnotism. There could be no doubt of the service which hypnotism could render, at least for a time, in dipsomania: and in true insanity good might occasionally be done, and many patients were quite susceptible.—Dr. Fitzgerald mentioned two cases in which he obtained great benefit from hypnotism.— Dr. Richard Hayes related two typical cases in which hypnotic suggestion had succeeded in relieving symptoms. Mr. Wheeler asked what difference there was between hypnotism and electro-biology.— Dr. Cox and Dr. O'Carroll also spoke.—In answer to Dr. Foot, Dr. Kingsbury explained that practically there was no difference between mesmerism and hypnotism. Those who were familiar with hypnotism did not limit its employment to the field of "non-organic functional disorders," but found it useful alone or in conjunction with other remedies in surgery, in midwifery, and in the treatment of many ailments outside the pale indicated by Dr. Foot, such as rheumatism, neuralgia, pneumonia, tinnitus. Dr. Foot had scoffed at the idea of inebriety being cured by hypnotic suggestion, and thought these cures were only the temporary repentances of drunkards recovering from a debauch, such as they all frequently witnessed. If Dr. Foot would read what had been written, he would find well-authenticated cases of inebriates keeping sober for ten or twenty years, which periods certainly exceeded the length of alcoholic remorse. Dr. Norman thought Dr. Voisin deserved in a measure the reception he got at Leeds, on account of his wild extravagance. Perhaps Dr. Voisin did pourtray the rosy side of hypnotism, but one of the statements made by him, which was at the time considered most incredible, was that the menstrual functions or the action of the bowels could in any way be controlled by means of suggestion. Both these statements had been amply corroborated since. Mr. Wheeler wished to know what relation hypnotism had to electro-biology. It was one and the same thing.

SOUTH-EAST HANTS DISTRICT OF THE SOUTHERN BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Thursday, April 9th, 1891.

A. M. Garrington, M.D., President, in the Chair.

Cases.—Dr. Ward Cousins exhibited (1) Four patients who had undergone Conservative Operations on the Knee-joint. Three were cases of excision. The patients were women from 20 to 30 years of age. They could walk well with scarcely a limp. The fourth was a girl on whom arthrectomy had been performed. The movements of the joint were perfect. The operation had been done six months before, and some days after the rupture of a chronic tuberculous abscess into the joint. The accident had been caused by a fall. (2) Patients after Excision of the Elbow for Tuberculous Disease. (3) A patient who, about five years before, had received a deep wound 2 inches above the wrist. The laceration healed slowly, and the arm continued swollen and painful for many months. She came under treatment in the Royal Portsmouth Hospital for severe pain and loss of power. The fingers were then fixed and flexed, and the fore and middle fingers appeared quite insensible as far as the centre of the palm. Dr. Ward Cousins exposed the nerve and found it severed, and the ends separated by a firm and adherent fibrous nodule. The growth was excised, and the nerve trimmed and sutured with fine catgut. The movement of the fingers was now perfect. She had lost all pain, and could work well with her needle, but the tactile sensibility of the tips of the fore and middle fingers was only partially restored.—Mr. James Green exhibited a Case of Sclerodema. The joints were quite immovable, and the skin over them appeared thickened, inelastic, and adherent. The sensibility of the affected parts was unimpaired. Similar, but less marked, changes were visible over the neck and chest.

Lymphangioma Cavernosum.—Mr. William Marshall read notes of a case in which a lymphangioma cavernosum had been removed from the axilla of a lad, aged 18, by Dr. Ward Cousins. It had been growing some years, but had caused very little inconvenience until the last few months. The growth was about the size of a small orange, and it was situated under the edge of the anterior fold of the axilla. The external surface appeared dark coloured and lobulated. It contained a large number of cysts of various sizes. Their walls were generally firm, and their contents variable in character. Many of the larger cysts freely communicated with each other through imperfect septa, and they were filled with a thick fluid which presented the colour of venous blood.

Our Power of Assisting Labour apart from the Use of Instruments.—A discussion on this subject was opened by Dr. T. F. Pearse. He divided labour into two stages: (1) Up to the time of the head entering the true pelvis: (2) the passage of the head through the pelvic cavity. After the first indications of commencing labour the use of aperients was considered, and it was advised that rectal enemata should not be administered too early, otherwise the descent of the child's head was liable to load the rectum again. The use of castor oil in the later weeks of pregnancy was condemned, its use being recommended only when labour had commenced. For the distressing "pains" sometimes occurring at this stage chloral was chiefly advocated, the use of opium at this or any other stage being strongly objected to. In the second stage chloral was advised whenever the pains were exceptionally severe, and more especially if the os uteri was rigid and slow to dilate. The use of chloroform was advocated. Until the os was dilated and the head descended at least half way through the pelvis, it was recommended not to employ means to intensify the uterine contractions. The use of ergot was only advocated when there was complete absence of obstruction from rigidity of the os uteri or perineum, and the only difficulty in the labour was the feebleness of the uterine pains. Rupture of the membranes was advised only when the os uteri had become dilated, otherwise their rupture should be deferred to the last possible moment. The powerful means of assisting labour by employing compression on the abdomen was next alluded to, and its use by the hands, in preference to other ways, was advised. Digital dilatation of the os uteri and stretching the perineum were mentioned as excitants of uterine contractions. The management of the perineum during the passage of the child's head was lastly considered, and the rival schools of support and distension were compared. A combination of stretching the perineum just before the head passed, with support during the final stage, was strongly advocated.—The President, Dr. Lloyd Owen, Dr. Brook, Dr. Leachman, Dr. Axford, Mr. F. Way, Dr. Blackman, and Dr. Driver took part in the debate.

New Nasal Clamp Forceps.—Dr. Ward Cousins exhibited the instrument, and demonstrated its value in seven cases of nasal polypi, and in obstruction of the meatus from chronic thickening and osseous changes.

MANCHESTER CLINICAL SOCIETY.

TUESDAY, APRIL 21ST, 1891.

C. H. BRADDON, M.D., President, in the Chair.

Cases.—Mr. STANMORE BISHOP showed a boy of 14 upon whom Mikulicz's operation had been performed for Caries of the Os Calcis and Astragalus; the patient was able to walk well and had legs of almost equal length. Mr. Bishop also mentioned a case of Excision of a large Bronchocele in a man aged 57, and showed a drawing of the tumour. He drew a distinction between cases occurring in elderly men and in young females with reference to the probability of sequent myxœdema.—Dr. WAHLTUCH mentioned a case of Intestinal Obstruction due to the presence of a parovarian cyst. The patient, aged 57, was operated upon by Mr. Wright, the cyst being tapped and drained. An excellent result followed.

Specimens.—Dr. LLOYD ROBERTS showed an Ovarian Cyst which he had removed from a married woman aged 28 years. The tumour, which had manifested itself after her first confinement, eight months before, was adherent to the parietal peritoneum, omentum, and pelvic peritoneum. A glass drainage tube was used and recovery was uninterrupted. The cyst was apparently unilocular, but some thickened parts of its wall presented very minute cavities. Dr. Lloyd Roberts further showed a Parovarian Cyst removed from a married woman, aged 26, which had contained about 2 gallons of bright colourless fluid. Before puncturing the tumour the trocar and cannula entered a cavity between the cyst wall and its enveloping peritoneum, and liberated about a pint of clear fluid. A pedicle was made of the lowest part of the cyst wall. Both ovaries were healthy. A drainage tube was inserted for four days, and the patient made a good recovery.

Acute Pharyngitis.—Dr. F. H. COLLINS described a case of acute pharyngitis, due to exposure to a cold wind, in a previously healthy married woman, aged 30, which was followed by laryngitis and œdema glottidis. At the end of the third day the inflammation spread to the base of the left lung, while it subsided in the upper bronchial tract. Death occurred on the sixth day, when the right lung had become hepatised also. The heart began to fail a few hours after the onset of the disease; the pulse varied from 90 to 140 per minute; the temperature never rose above 99.1° F. There was general œdema of the front of the throat, but no glandular enlargement, and most careful examination failed to discover any diphtheritic patch or membrane. Three members of the household suffered at the same time from a similar condition of the pharynx, but the disease was amenable to treatment. The physical signs in the whole course of the case indicated a septic poison. The disease might be described as erysipelas of the pharynx, extending down the bronchial tract.

REVIEWS AND NOTICES.

A TEXTBOOK OF THE DISEASES OF THE EAR. By Dr. JOSEF GRUBER, Professor of Otology in the Imperial Royal University of Vienna. Translated from the second German edition, by special permission of the Author, and edited by EDWARD LAW, M.D., C.M.Edin., M.R.C.S.Eng., and COLEMAN JEWELL, M.B.Lond., M.R.C.S.Eng. London: H. K. Lewis. 1890.

THIS is a translation of the second edition of GRUBER'S standard work on diseases of the ear, the first edition of which appeared some seventeen years ago. The translators have done their work well; while following the German text with perfect fidelity, they have not disdained to study the comfort of their readers by rendering their author into readable English—a feature sufficiently rare in translations from the German as to deserve special acknowledgment. The book, however, is something more than a mere translation; it is rather a new edition of Professor Gruber's work specially adapted to the needs of English practitioners. Some portions of the original have been omitted; the anatomical introduction has been partly rewritten by Dr. Howden, Lecturer on Anatomy in the University of Durham, and several notes, mostly of a practical character, have been added by the translators. The book has thus been made at once less unwieldy and more practically useful than the original, while Professor Gruber's teaching on all important points is fully and accurately presented.

Professor Gruber's work is too well known to need any detailed analysis here. It has already attained the rank of a classic in German-speaking schools, and it is matter for wonder that it has not found an English translator before now. The first 117 pages are devoted to a careful anatomical description of the temporal bone and of the organ of hearing. Next comes an account of the various methods of examination, and then the general pathology and therapeutics of the ear are discussed. The remainder of the book is devoted chiefly to the diseases of the external, middle, and internal ear, considered *seriatim*. The work is preceded by two lithographic plates containing together seventy representations of the drumhead (forming a good atlas of the diseases of these parts), and the text itself contains 150 well executed illustrations. The author's immense experience and the practical way in which he handles all questions lend a great charm to the book. We may say in passing that perhaps justice has scarcely been done in it to the work of British otologists, a defect which the translators might legitimately have done something to remedy.

Among the additions made by the translators are some hints on catheterisation of the Eustachian tube (p. 174), and on the use of the galvano-cautery in the treatment of hypertrophied tonsils, especially as a preliminary to the removal of postnasal growths under anæsthesia, when the tonsillotome is inapplicable (p. 363); a description of Gruber's "amygdalæ aurium"—called by them "aural ovoids"—medicated gelatine preparations of conical form, containing liquid extract of opium, morphine, sulphate of zinc, and other substances for introduction into the auditory canal (p. 242); a description of a handy pocket case for aural instruments (p. 279), etc. The stickler for etymological propriety will doubtless be grateful to them for the suggestion of "otophone" as a substitute for "otoscope" as the designation of the tube employed in auscultation of the middle ear (p. 169).

For a work of such length and one bristling, as it does, with references to foreign authors and quotations from German and French sources, the book is reasonably free from printer's errors. It is well printed on excellent paper, and altogether it presents a handsome appearance in its English dress. We congratulate Professor Gruber on having found translators of such unquestionable competence. A word of praise is also due to the publisher.

The book is one that should be in the hands of every aurist, and to English specialists and general practitioners who do not read German the present translation will prove a very great boon, for by it Drs. EDWARD LAW and COLEMAN JEWELL have placed within their reach one of the best of existing books on aural surgery.

DES RÉSULTATS IMMÉDIATS ET ÉLOIGNÉS DU TRAITEMENT ÉLECTRIQUE DES FIBROMES UTERINS PAR LA MÉTHODE DU DOCTEUR APOSTOLI. Par Mdlle. FÉLICIA JAKUBOWSKA, Docteur en Médecine de la Faculté de Paris. Paris: Octave Doin.

THE profession is now very familiar with treatises on Apostoli's work. Such publications are not all received with universal confidence, for it requires certain special qualities to make a good electrician, and certain other qualities of a very different nature to make a good gynæcologist, so that the critic may doubt whether the author is really a fair authority both on electricity and on diseases of women. Again, it is very easy for an advocate of any new system to feel too confident as to apparent cures, and this is particularly the case in respect to electricity in the treatment of fibroids, for a myoma of the uterus may suddenly diminish in size from no appreciable cause, and many kinds of local stimulation produce a similar effect for a time.

Dr. JAKUBOWSKA'S treatise is of more than usual interest for its class. The authoress has at least served a medical education. She seems to have attained a fair acquaintance

of the science of electricity. It happens, however, that that the precise subject of her work, as indicated by the title, demands a knowledge of medicine on the part of the authoress, whilst deep experience in the science of electricity is less imperative, for the treatise discusses the results of the treatment as applied by others. Indeed, a person absolutely ignorant of the use of electric apparatus might be a particularly impartial judge of results, provided that he or she understood diseases of women. Dr. Jakubowska is an advocate of Apostoli's system, but not a bigot. Her treatise is mainly intended to confute the opinion that the effects of electricity are transitory. She has followed up thirteen cases, and watched them for several years, from 1882, 1883, or 1884, until the date of publication of this work a few months since. Her conclusions are that the most constant result of Apostoli's treatment of uterine fibroids is a rapid restoration of the general health. The arrest of hæmorrhage supervenes rapidly in the great majority of cases. In some rare instances it comes on but slowly. Floodings may continue unchecked in cases where the tumour is partly cystic, or where lesions of the uterine appendages also exist. The pains are usually suppressed, but not so frequently as the bleeding. The tumours usually diminish in volume: sometimes they entirely disappear, and are in other cases rendered movable by destruction of adhesions or by development of a pedicle. It is quite exceptional to find no checking of their growth after the use of electricity. The results are very persistent. Ten out of thirteen of the cases carefully followed up by the authoress have permanently enjoyed the benefits of the treatment for from four to seven years. The remaining three have been in better health than before treatment, the evils from which they still suffer being relatively insignificant.

The Action of Water on Lead. By J. H. Garrett, M.D. London: H. K. Lewis. 1891.

At the present time, when the subject of lead poisoning from drinking water has come somewhat prominently to the fore, and when an investigation of the matter has been set on foot by the Local Government Board, any contribution which tends to elucidate the difficulties relating to our knowledge of the action of water on lead is to be welcomed. This is the more so because it is not until the chemistry of the subject is thoroughly understood that we can hope to arrive at the best methods of preventing a contamination of the water supply which in some parts of the country constitutes a source of real danger to the population. The book before us is made up in large part of a somewhat extensive series of experiments which are set down in full, so that, as stated by the author in his preface, the results may be checked by anyone who may care to go through the practical part of the work for himself. It must, however, be borne in mind that the conditions under which the experiments were carried out are by no means similar to those which ordinarily obtain in the case of a public water supply.

For instance, the general method of experimentation, as described in the first few pages, is to use pieces of new one-inch lead service pipe cut into lengths of $1\frac{1}{2}$ inch, in order that the lead may be easily cleaned. Two such pieces of lead together with five ounces of water were generally used, which were placed in a 12-ounce glass jar, and, except in one or two instances, air was freely admitted to the surface of the water. Under these conditions, when distilled water was used, the reaction of which was usually slightly acid, a crystalline precipitate of hydrated oxide of lead appeared in the course of about twenty-four hours. When the reaction was alkaline to begin with, the precipitate appeared in less quantity and after a longer interval. If melted hard paraffin was poured over the surface so as to exclude the air, the action which might be energetic at first speedily came to an end.

It is obvious from the results of these experiments that the intensity of the action was in great measure due to the amount of oxygen absorbed by the water, a factor which can only come into play to a limited extent in the case of a public water supply. A much more satisfactory method of investigation, therefore, is that which we believe was first carried out by Dr. Sinclair White, in the case of the Sheffield water. This observer filled coils of lead piping with the water to be tested, and then after closing one extremity of the tube, connected the end to a service pipe in connection with the mains, thus imitating as much as possible the ordinary conditions, such as pressure, etc., under which the water is stored. His results appeared to show that the intensity of action on lead depended on the acidity of the water, which, when neutralised, ceased to possess any plumbo-solvent property. For this purpose calcium carbonate was most efficient. Dr. Garrett also comes to the conclusion that in presence of free acid, of nitrates, and of organic matter, lead is dissolved in greater quantity, the action being in each case, according to him, an oxidising one, while, if a carbonate be intentionally added (particularly calcium carbonate), or if CO_2 be derived from the splitting up of organic matter present in the water, as by boiling, the solvent action on lead is usually diminished or ceases altogether, from the piping becoming coated with carbonate of lead. As far as they go, therefore, his experiments tend to confirm the results obtained by former observers, a practical outcome of which was seen in the recommendation of the Sheffield Committee of Inquiry, that the water should be treated with chalk prior to its distribution.

Dr. Garrett, after detailing results of experiments with the water supplied to Mirfield, Okehampton, and London (New River Company), ends with an account of a simple method of detecting minute traces of lead in drinking water.

The book may, perhaps, be read with advantage by those interested in the subject, but, on the whole, we must confess to a feeling of disappointment after its perusal.

Die Peptone, in ihrer wissenschaftlichen und praktischen Bedeutung (Peptones, in their Scientific and Practical Bearings). By Dr. v. Gerlach. Hamburg and Leipzig: Leopold Voss. 1891.

This little pamphlet treats of a subject which is of great practical importance in present day therapeutics. When so many so-called "peptones" are in the field, it is necessary that we should know accurately their composition and their metabolic value. Kemmerich's peptone appears to be the one which Dr. Gerlach has chiefly used in his experiments, but the composition of other varieties is also given. The metabolic value of the products of proteolysis was investigated some years ago by Politzer; he separated the various albumoses from one another, and fed dogs on these for periods of two days, and found that the nitrogenous balance was kept up as well as when the animals were fed on an equivalent quantity of meat; this contrasted with the loss of weight which occurred when the dogs were fed on gelatine. In the present experiments, made both on dogs and human individuals, the various albumoses were not separated, but mixed in the form of commercial "peptone;" they lasted for more prolonged periods than Politzer's, but the results fully coincide with his. The body may thus receive all its proteid nutriment in the form of "peptone," and not only maintain its weight, but may even put on flesh, 22 grammes of these mixed albumoses being equivalent to 100 grammes of good meat.

The results with gelatine-peptones are analogous to those obtained long ago by Voit in his celebrated metabolism experiments with gelatine. Gelatine-peptone, like gelatine, is not by itself of nutritive value, but, mixed with proteid or proteid-peptone, acts as a proteid sparer.

The book will be useful from the practical standpoint, and moreover, the physiologist will find an excellenta ccount of our present knowledge of digestion, particularly of proteids and gelatine, together with a historical sketch of the subject from Hippocrates to Kühne.

NOTES ON BOOKS.

Official Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Eighth annual issue. (London: Charles Griffin and Co. 1891.)—The eighth annual issue of this convenient handbook has been carefully revised, and has been improved in one or two particulars. It is remarkably complete, and, so far as we have been able to ascertain, extremely accurate. The societies dealt with are classified under fourteen heads.

The Scientific Aspect of Dr. Koch's Remedy. By WILLIAM ODELL, F.R.C.S.Eng. A paper read, by request, before the members of the Torquay Natural History Society, at their monthly meeting in April, 1891. (London and Edinburgh: Young J. Pentland; and Torquay, *Directory* Office. 1891.)—In this little pamphlet Mr. Odell gives the result of the treatment of four of his cases of phthisis and one case of tuberculous affection of the knee-joint. All these have done well, although he says: "One of my patients caught cold, and got an attack of pneumonia; even she is progressing favourably, and none of the cases were in any way 'picked;' in fact, some were treated 'under protest.'" He agrees, however, with Koch on a point that is very frequently ignored—that tuberculin cannot be looked upon as giving its best results unless the patient is well nursed, well fed, and placed under the best possible hygienic and climatic conditions.

Elementary Chemistry for Beginners. By W. JEROME HARRISON, F.C.S. (Blackie and Son, 49 and 50, Old Bailey, E.C. 1890.)—The value of this little book is much diminished by the use of the English measures of weight and volume, and by the exclusive adoption of the Fahrenheit thermometer in recording temperatures. The method of teaching adopted is, however, eminently practical, and is clearly the outcome of experience in teaching the young, for whom the book is intended. Very rarely do we find a hard word unexplained; and the exercises are composed of well selected questions. Occasionally the statements made are too dogmatic, for example, on page 93, the unqualified remark that "1,000,000 pints of air contain only about five pints of gaseous ammonia" is likely to produce the erroneous impression that the proportion of ammonia in air is nearly constant. On the whole, the book is accurate and lucid in its teaching.

Chirurgie du Pancréas, des Kystes Pancréatiques. By Dr. JULES BOECKEL. (Paris: Félix Alcan. 1891.)—While there is no doubt plenty of room for further information on diseases of the pancreas, it is hardly possible to resist the feeling that it is somewhat unusual, or if becoming usual, still undesirable, that such a practical subject as the one filling the pages of the work before us, should be treated of by an author whose only experience of it is that he operated on an ovarian cyst in mistake for a cyst of the pancreas. Nevertheless, the work is full of interest; it is a summary of the views of those who have had experience, since it is based on a collection of the cases of others. The author has not collected all the information which he might have obtained from the English journals, since in them from time to time have appeared some extremely interesting communications, which have given, in a much shorter space, nearly all that the author attempts to set before us in this volume of 167 pages. The first chapter contains a historical review, after which follow chapters on the etiology, anatomy, symptoms, and course of the disease. A chapter is very properly given to the diagnosis, and another to the treatment, the author inclining to the view which has been clearly settled by all recorded cases, that the proper treatment is to empty the cyst, stitch its margins to the surface, and drain. For those who wish to study the subject from published cases, we can recommend Dr. BOECKEL's work.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

UNG. EMOLLIENS.

MESSRS. ELTON and Co., 28, Endsleigh Gardens, Euston Road, N.W., have introduced an ointment basis under the name of "ung. emolliens." It is of suitable consistence, and water, oil, etc., can be easily mixed with it; it is neutral. It appears to be suitable as a basis for the application of various medicaments.

AN IMPROVED MOUTH PROP OR GAG.

A MOUTH prop or gag must possess strong qualifications to justify its introduction, for among so many figured in catalogues there are really few which are of practical value. The ordinary mouth prop is often a danger to the patient and an annoyance to the operator, for it generally falls out with the first struggle, or else acts as an obstruction to the surgeon, necessitating the use of an accessory lever gag by an assistant.



This instrument, which Messrs. Mayer and Meltzer have made to my design, represents the "survival of the fittest" in my experience at the Central London Throat and Ear Hospital, where it has been in use several months and has given great satisfaction in operations upon the throat and naso-pharynx. Its chief qualifications (which will, I think, justify its existence) are as follows:—

1. It is "automatic," that is, having been once placed in position, the arms follow the opening movement of the mouth by reason of the expanding spiral spring, and being opened, it cannot be closed by the jaws, since the arms slide on a rod which is elliptical in section and curved in its length. It is therefore "locked."

2. The "tooth sockets" being mounted on swivels, free access is gained to the mouth by pushing the rod to one side or the other, out of the operator's way. This movement also enables the face piece of the inhaler to be closely applied.

3. It is extremely simple in construction, easily cleaned and cannot get out of order.

4. It is adaptable to any size of mouth.

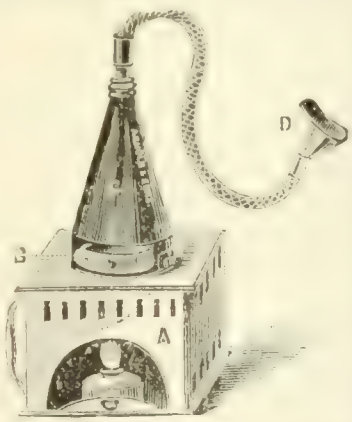
5. It can be quickly applied and removed, there being no complication of straps, bands or screws.

6. When properly expanded, the lateral movement of the jaw is prevented, therefore it cannot be "wriggled" out by the patient.

V. H. WYATT WINGRAVE,
Registrar and Anæsthetist, Central London Throat and Ear Hospital.

SULPHUR FUMES APPARATUS.

FROM time to time reference is made in the medical press to this old treatment of diphtheria. The plan usually adopted is to heat an iron shovel, put sulphur on it, and get the patient to inhale the fumes. The disadvantages of this plan are that the nurse gets most of the fumes, and the child, if obstinate and unmanageable, has but a small share of them. Another drawback is that a struggling child might easily be burnt by the hot shovel. In order to obviate all this I have devised a simple apparatus which will be found useful for this treatment. It consists of a stand A, with a spirit lamp, which heats the sulphur in the drawer B. The fumes pass up the chimney C, and by means of the tubing, to which a mouthpiece D is attached, they are conducted to the patient. A teaspoonful of sublimated sulphur is placed in the drawer, and when the fumes begin to appear at the mouthpiece it is held near and a little below the mouth, not over it, because some air space is necessary, as the fumes are acrid and irritating, and should not be inhaled undiluted. The fumes should be inhaled for two or three minutes, the patient inhaling through the mouth and exhaling through the nose; this to be done every two hours at first, and less frequently later. The eyes should be covered with a handkerchief to prevent the conjunctiva being irritated.



Eastbourne. JAMES ADAMS, M.D., F.R.C.S.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MAY 9TH, 1891.

TO BE OR NOT TO BE?

The meeting of the Convocation of the University of London, on Tuesday next, will be one of the most important which that body has ever held, and it is very much to be hoped that this fact will be appreciated by the graduates of the Medical Faculty. It will be in the highest degree unfortunate if the draft charter[1] prepared by the Senate after so many conferences should be rejected, except upon its merits, and after a full study of its purport. That the charter has many defects will be generally admitted, but that these defects are of so radical a nature as to render its rejection essential is a conclusion at which we find great difficulty in arriving.

The memorials from University College and from King's College to the Lord President of Council, to which reference was made in the article published last week, have now been presented, and we have received copies of these documents. They are, unfortunately, very voluminous, but we may briefly indicate the main points raised.

The first important objection is to the admission of colleges not in or near London as constituent colleges. It is contended that this provision involves a reversal of the principle laid down by the Royal Commissioners, which was that the University should be made "an efficient teaching University for the metropolis as well as an examining and degree-giving university for the whole kingdom." It is urged that this new system "has not been demanded and does not appear to be required." In opposition to this, however, it may be urged by those who support the Senate's scheme that such a modification has been demanded by a vote of Convocation, and apparently required by the remonstrances of the provincial institutions.

The objection that a Senate of 69 (reducible gradually by vacancies among existing members to 52) is too large for efficient administration appears to be well founded, but the further contention that the position within the University now offered to University and King's Colleges is inadequate to their merits is open to question. The number of representatives to be appointed by them has been reduced from the 36 per cent. at one time proposed to 25 per cent.; it must be remembered, however, that the representation of these two Colleges upon the Senate is even so considerably greater under the draft charter than under the scheme proposed by the Royal Commission, and that they may also count upon a fair share of the representatives of the arts and science faculties, of Convocation, of Crown members, and of medical or legal faculty members. Further, it is urged that the proposed additions to the Senate will place the Standing Committee for the London Constituent Colleges, which under the former scheme had a clear working majority of the Senate, in a minority, and that this will seriously affect the position of the new London work of the University.

It is also contended that the new scheme gives to the Senate a too extensive authority over the internal work of the colleges as their syllabuses of instruction and even the regulations for the attendance of students at their lectures are made subject to the approval of the Senate. As to the validity of this objection there is, of course, room for two opinions. The Senate may well urge that the new scheme does not affect the internal organisation of these two Colleges, for no voice is claimed in the appointment of professors, nor any concern with the management of their funds, or the use of their buildings or apparatus. The charter proposes only that the Senate should have a joint voice with the teachers in the regulation of the examinations, on the strength of which the degrees are to be conferred. It may further be urged that the control proposed to be exercised by the Senate over these Colleges in excess of the recommendation of the Royal Commission is the direct result of the concession of their demand to have a share in conducting the examination of their own students.

Considerable stress is laid upon the duplication of regulations as to preliminary science, owing to the severance between the arts and science faculties and the medical faculty. It is assumed that the Preliminary Scientific examination in the London Medical Faculty and the early examinations in the science faculty, being under the direction of different boards, would be treated on different and independent lines. If this were so, it must follow either that the cost of teaching would be greatly increased or that the teaching of elementary science come have to be entirely governed by medical regulations. Upon this it may be doubted whether the case of the two Colleges is as strong as they appear to suppose. The two Royal Colleges and all the other medical schools not unnaturally refused to sanction an arrangement which would give to University and King's Colleges a right as to the examination of medical students in science not possessed by the other medical schools. University and King's Colleges maintain that this very natural objection should be met, not in the manner proposed —namely, a university examination but by the admission of the "other medical schools to the London teaching system of graduation, and in the restoration to that system of a medical faculty."

The Standing Committee of the Senate for the medical faculty would, under the new charter, have very important functions, for it would regulate the syllabuses in medicine and in sciences connected with medicine, and would control the examinations and the appointment of examiners. University and King's Colleges object that they are not represented on this powerful Committee. The fact, however, appears to be that these Colleges have the same representation —neither more nor less— than other schools of medicine in London.

The draft charter does not contain any provision for concerted action between the Standing Committee of the London Constituent Colleges and the medical faculty, but this objec-

[1] The full text was printed in the BRITISH MEDICAL JOURNAL, May 2nd, p. 981.

tion, although it stands good, is an objection, not to a principle, but to a matter of detail, which it ought not to be difficult to remedy.

The draft charter does not propose to make any alteration in the degree of M.D.; and the memorialists, after dwelling upon this, criticise the arrangements for the M.B. degree to be conferred, to quote the words of the University College memorial, upon examinations not conducted by the University, but by a "Hybrid" Committee, appointed as to one-half its members by the Standing Committee for Medicine, and the other half by the Royal Colleges, outside the University. Upon this Hybrid Committee the half appointed by the Royal Colleges will be converted into a strong majority by the strength of their influence on the Standing Committee. The degree will thus be virtually, if not nominally, what the Royal Commissioners describe (paragraph 4) as "either conferring the power of giving medical degrees upon Colleges which have no academical character, or creating a new examining and degree-giving University in a single faculty, neither of which innovations appears to us in itself desirable."

It is urged that confusion is thus introduced, that waste of labour will result, and that the scheme does not provide that the system of examination should follow the teaching. Upon this point there is a direct conflict of opinion, for the Senate of the University has undoubtedly taken the course it has after full deliberation, its opinion being not that examination should follow teaching, but that it should test teaching. As it is, there are at the present at least two standards in London—namely, that of the Conjoint Board and that of the University. Under the draft charter, as we understand it, students, if they pass a satisfactory examination before the Conjoint Board, will be excused examination in the same subjects at the University. This does not involve a duplication of examinations so far as the medical faculty is concerned, and, as to the science faculty, the present triplication of examinations is reduced to a duplication.

In summing up the objections, the first—to quote again the words of the University College memorial—is that the draft charter "does not establish a teaching University for London in the proper sense of the word." This is the true kernel of the matter. But we venture to think that the word "proper" is a question-begging epithet. We may see this the more clearly if we consider the alternative which is suggested by University and King's Colleges. Crudely put, it would seem to be that these two Colleges should be erected into a University, granting degrees in Medicine as well as in other faculties. That the rights of the other medical schools in London would be in some way safeguarded under such a proposal may no doubt be contended; but, so far as the written statements of these two Colleges go, only the most shadowy safeguards would be proposed by them.

If the draft charter is rejected next Tuesday it is difficult to see what will be the immediate consequences. In all probability the matter will be shelved so far as the University of London is concerned, and we shall go back to the point at which we were four years ago. We have a shrewd suspicion that those graduates who are now loudest in opposing the scheme of the Senate will find still more serious objections to the course which is likely to be urged upon the Privy Council by the representatives of the two Colleges, and urged, it must be remembered, with all the force which the recommendations of a Royal Commission gives.

THE ABUSE OF THE "PROVIDENT" PRINCIPLE.

THE subject of the abuse of medical provident institutions and medical clubs is more and more attracting the attention of the profession, as is shown by the letters we receive from time to time from all parts of the country. There can be no doubt that this is a matter of grave and growing importance. It may well be asked how the yearly increasing numbers of our profession are to gain a living if this multiplication of provident departments of hospitals, provident dispensaries, medical aid societies and clubs, with their miserable rate of remuneration, is to continue. Two of our correspondents have lately informed us that in their respective districts one-half and one-third of the population respectively belong to such associations, and if these statements be correct—and we see no reason to question them—it will scarcely be argued that there can be in any part of this country, with its Poor-law and charitable institutions, a necessity for this wholesale lowering of medical fees. In all trades and industries the general rule now is to employ two where but one was employed formerly, and for the same work to pay a considerably larger price. In the profession of medicine, however, the tendency seems to be to make one do the work of two, and under the specious name of providence to reduce the remuneration of the medical practitioner almost to the vanishing point. What can be thought of 2s. per annum for attendance on a child, with supply of all necessary medicines? In this depreciation of the profession the public is not chiefly to blame, for it not unnaturally concludes that medical men are the best judges of the pecuniary value of their own services, and that if they are satisfied to work for such fees there is no reason why the public should pay more.

There can be little doubt that the future welfare of the profession depends not a little on the correct solution of some such questions as the following: 1. What is to be the limit of this constant lowering of medical fees? 2. What is the remedy for this? 3. If medical men are to combine, what shape is their combination to take, and how is such a combination to control the whole body of the profession?

"Union is strength," but there is no profession where there is so little union or agreement among the members to enforce rules necessary for its welfare. Without the deliberate underselling of one practitioner by another the present low rates of clubs and other similar associations could not have been reached, and if so suicidal a policy continues to be adopted by a large proportion of the practitioners of this country, we can only see, in the near future, further degradation. The motto "each for himself and God for us all" may be very well as a political axiom, but when carried to its logical conclusion in trade it has been called "sweating," and a Royal Commission has been recently investigating its pernicious effects on the community at large. Look where we will throughout the length and breadth of the profession, where do we see any attempts at union for the common good? If the staff of a hospital threaten to resign in order to enforce an important reform the threat loses half of its force on account of the facility with which—it is notorious—their places can be filled up. A medical man, who recently gave evidence before the Royal Commission on Hospitals, when demurring to the evidence of Mr. Byers, the Secretary of the Metropolitan Hospital, that all the medical men in the vicinity of that institution, who had taken exception to its pro-

vident department, had now withdrawn their objections, denied there had been any such withdrawal in the case of any "unless he had become a salaried officer." Here was a case in which the great majority of the medical men of the district had signified their opposition to certain provident innovations, on the ground that they were prejudicial to the common interest, and yet no difficulty, it is stated, was experienced by this hospital in obtaining salaried officers from the same district.

When shall we begin to learn how shortsighted is such a policy as this, and how terribly defenceless it renders us—individually and collectively—against that portion of the public which, under the guise of charity, constantly endeavours to lower the dignity of the profession by offering so paltry a consideration for valuable services?

THE PROGRESS OF FACTORY AND WORKSHOPS LEGISLATION.

THE Factory and Workshops Bill has now reached another stage in its progress towards the statute book, and has passed in an amended form through the Grand Committee on Trade. We have already devoted so much space to a detailed consideration of this somewhat pretentious measure and its shadowy claim to mark a definite advance in sanitary progress, that we shall content ourselves, for the present, with a few notes by the way. Weeks, perhaps months, may elapse before it awakes from its state of suspended animation and appears once more before the House, and when the report stage is reached, we may expect a brisk renewal of hostilities over one or two disputed points. In particular, we understand that Sir William Houldsworth and Mr. Sydney Buxton mean to fight hard over the age clause, and the comparatively small majority by which both the original motion and the compromise were beaten naturally leads them to hope that England, like Berlin, may stand firm in the interest of education and hygiene at the next occasion.

Although we must not be lulled into inaction by a feeling of false security, everything points to the factory surgeons being "let severely alone." The feeling of the Committee was so decidedly in their favour, and there is such an assured majority in all parts of the House opposed to their disestablishment and disendowment, that Mr. Matthews can hardly venture to face another crushing and decisive defeat.

But we must play a waiting and watchful game, for the Home Secretary is evidently annoyed at the loss of his clause, and has dropped words on one or two occasions which show a strain of animus which found no place in his original remarks. Most plainly was this shown in the scorn with which he rejected the very reasonable amendment providing for that continuous inspection of children and young people, the absence of which formed the major part of his argument against the retention of the factory surgeons. We are getting used to political gymnastics on the part of public men, but surely mental agility has not recently provided us with a more remarkable *volteface* than that performed by the Home Secretary on this occasion. On the following day, encouraged by success, he again turned his back on himself, and rejected, with a bare word of refusal, Mr. Randall's amendment, that the hygienic jurisdiction of the surgeon should apply to workshops as well as factories, a proposal which, as Mr. Buxton showed, he had himself made at an earlier stage, alternative to the adoption of Clause 19. As Mr. Randall was only beaten by one vote (12 to 11), we hope and believe that he will raise the point again on report.

Finally, now that the surgeons have been retained to continue their useful work, Mr. Matthews must be asked who is to carry out the hygienic clauses of the early part of the Bill. The best kind of sanitary machinery is now ready to his hand, and it remains to be seen how he will fit into harmonious working the old order of things and the new.

THE EARL OF DERBY, K.G., has been appointed by the Queen Chancellor of the University of London, in succession to the late Earl Granville.

MR. STANHOPE AND THE MEDICAL OFFICERS OF THE ARMY.

A CONFERENCE was held at the House of Commons on Tuesday, May 5th, between the President of the Royal College of Physicians, Mr. Macnamara, and Dr. Farquharson and the Secretary of State for War. The proceedings were of a most cordial and friendly character, and Mr. Stanhope promised to consider the points laid before him by Sir Andrew Clark and Mr. Macnamara and to furnish an early reply.

SIR WALTER FOSTER.

THE past and present students of the Birmingham Medical School and the medical friends of Sir Walter Foster propose to entertain him at dinner on Wednesday, May 13th, at the Midland Hotel, Birmingham, on the occasion of his retirement from the post of Physician to the Birmingham General Hospital. An address signed by some three hundred practitioners will be presented the same evening. The Chairman of the Committee of Arrangements is Mr. Jordan Lloyd. Mr. H. R. Leech (Monument Road, Birmingham) is receiving the signatures and applications for dinner tickets (price 5s., exclusive of wine).

LONDON COUNTY COUNCIL.

A VACANCY having occurred in the representation of the Northern Division of Hackney by the death of Mr. Joseph Beck, Dr. Baxter Forman, who formerly practised in the neighbourhood for more than twenty-five years, is a candidate for the vacant chair. In his address to the electors, Dr. Forman declares himself an ardent reformer in municipal matters, and notices also how large a number of the questions that engage the attention of the Council are of a medical nature.

THE ROYAL SOCIETY'S CONVERSAZIONE.

THE first *conversazione* of the Royal Society for the present year was held on May 6th. The scientific objects exhibited were nearly all electrical. That which attracted, perhaps, most attention was a selenium apparatus exhibited by Mr. Shelford Bidwell. The electrical conductivity of a selenium cell is greater in the light than in the dark, and this curious fact has been taken advantage of to construct an automatic lamplighter and alarm. A small electric current passing through a selenium cell is varied by the action of the light sufficiently to enable it to work a delicate relay, by means of which a bell may be rung or an incandescent lamp turned on. The alarm might be arranged to call attention to the accidental extinction of a ship's light, or a railway signal lamp, while the lamplighter could provide for the automatic lighting of an incandescent electric lamp when darkness came on. The only biological exhibits which we noticed were a series of ptomaines, including cadaverine, putrescine, and choline ex-

hibited by Dr. William Hunter; some exceedingly effective photographs of coral reefs by Mr. Savile Kent; and a series of remains of anomodont reptiles from the trias, Karoo, Cape Colony, by Professor Seeley. Coloured photographs of the spectrum by M. G. Lippman were of great interest, but showed that this new application of photography is still in its infancy.

THE ROYAL ACADEMY.

The picture in this year's Academy which is likely to attract the largest share of public interest is that painting by Mr. Fildes to which we made reference a few weeks ago. Many have already been the speculations as to the disease which the artist intended to depict and the exact significance of the doctor's attitude. But few portraits of members of the medical profession appear on the walls of the Academy this year. The best is unquestionably that of Professor Huxley, by his son-in-law, the Hon. John Collier. The well-known face of Sir G. M. Humphry, whose presentation portrait by Ouless appeared some three or four years ago, is again to be seen; but the picture, which is painted by his niece, is so badly hung that it is difficult to judge of its merits. One other portrait may be mentioned, namely, that of Sir S. H. Waterlow, the treasurer of St. Bartholomew's Hospital, which, we understand, is to be presented to the hospital. We believe there are no pictures by medical men in this year's Academy.

SUPPLY OF MILK BY RAIL.

To raise the rates of carriage by railway of such an important article as milk would be a retrograde step. In other countries, where the importance of the question has been estimated aright, the milk freight has been so reduced, in consequence of the action of the sanitary authorities and of others, that the practice of keeping cattle for milk supply within the boundaries of large cities has been very much diminished, with the result that a much better milk supply is obtained, and from healthier cattle. Whenever cattle are kept in the town where they cannot obtain sufficient fresh air and exercise tuberculosis is far more prevalent than when they are turned out to graze during the summer months; and Dr. Fox, the medical officer of health for Mid-Cheshire, has good cause for arguing that, if the railway rates for the carriage of milk are increased, the dairymen, to ensure their own profits—or, as they may say, in self-protection—will transfer their dairy farms to the towns. The matter is really one of national importance, and the decision ought to be guided not by merely commercial considerations, but with a full recognition of the crucial hygienic questions involved.

THE LEPROSY COMMISSION IN INDIA.

The members of the Commission left Calcutta on February 2nd. There they had inspected the large asylum, and gone through the ordinary examination of cases. Besides, Mr. Kanthack had performed some inoculation experiments on animals in Dr. D. D. Cunningham's laboratory. Monkeys, cats, and rabbits were used, and particles of leprous tissue implanted in the anterior chamber of the eye or dropped into the peritoneal cavity. On leaving Calcutta the Commission split up again to save time. Surgeon-Major Barclay and Mr. Kanthack started for Purulia, where they examined a large number of lepers at the Mission Asylum. The children of lepers are kept separate from their parents in a special asylum. But, unfortunately, the latter institution is of too recent a date to enable the Commissioners to draw any deduction as to the influence of heredity. Lucknow and Agra were visited next, and after a short tour into the Kangra Valley, calling at Jullundar, Kangra, and Dharmsala, Messrs. Barclay and Kanthack hurried up to Simla to take the erection of their laboratory in hand, visiting the large and well-known asylum at Tarn Taran on their way up. The other members of the Commission, consisting of Dr. Rake, Surgeon-Major Thomson, and Dr. Buckmaster, during this time visited the chief asylums in the Punjab and the North-West Provinces, calling at Burdwan, Fyzabad, Dehra Dun, Benares, and going up as far as Rawal Pindi and Peshawar. They made a prolonged stay at Almora, in the Kumaun district. There is a large asylum there, which is of special interest, as Drs. Lewis and Cunningham visited the place in 1876, and wrote an excellent report upon it. Besides, in it the children of leprous parents have been kept separate for almost twenty years. Thus here a good opportunity offered itself to study the influence of heredity on the propagation of the disease. The members of the Commission have also conducted some histological and bacteriological investigations at Almora. They are now on their way to Simla, and expected to join Messrs. Barclay and Kanthack on April 17th. The latter have been busy in Simla with histological and bacteriological examinations, and paid a prolonged visit to the Sabathu Asylum, where they stayed for some time, and collected valuable material, and continued their experiments on the cultivation of the leprosy bacillus, their previous attempts having been futile. All this work is conducted under great difficulties, as the laboratory is not yet finished. Nevertheless, they hope to open the laboratory shortly, and then propose to continue, in conjunction with the other members, their cultivation experiments. They also propose to prosecute their animal experiments which Mr. Kanthack began at Calcutta.

NAVAL AND MILITARY HYGIENE.

The programme of the Section of Naval and Military Hygiene of the International Congress of Hygiene and Demography has now been issued. Lord Wantage is the President, and the Honorary Secretaries are Dr. Collingridge, Mr. John Furley, Inspector-General Macdonald, F.R.S., R.N., and Brigade-Surgeon J. Hector (25, Anerley Park, Anerley, S.E.). The work of the Section will be carried on in two divisions, dealing with (I) Naval and Mercantile Marine, and (II) the Army, Auxiliary Forces, and Ambulance respectively. August 11th and 12th will be devoted to the first division and August 13th and 14th to the second division. The subjects for discussion in Division I will be: Quarantine and Medical Inspection; Port Infectious Hospitals; Disinfection, Construction, Ventilation, and Warming of Ships, with special reference to Crews' Quarters; Diet Scales; Scurvy; Causes and Prevention of Disease among Seamen; Transport of Sick and Wounded Afloat, and from Ships to Hospitals. In the second division the subjects are: Health of Troops in Garrison and on Field Service, and the Measures to be Adopted on the Outbreak of Epidemic Disease; Practical Hygiene in Modern War; Races, Ages, and Temperaments most Suitable for Military Service; Construction of Huts, Barracks, and Hospitals, and the Formation of Camps; Diet in Relation to Climate and Nature of Service; Transport of Wounded; Practical Regulations for Troops in Garrison, at the Base, in the Field, and Afloat during War. Abstracts, which must not exceed 500 words, must be forwarded to one of the honorary secretaries not later than June 15th, and the full text of the paper by July 15th.

"TAKING THE WATERS" IN THE SEVENTEENTH CENTURY.

In reading of the horrors which our sick forefathers had to endure at the hands, not merely of the pre-anæsthetic surgeon, but of the comparatively harmless physician, one ceases to wonder at the favour with which the milder dispensation of homœopathy was received by a generation surfeited with orthodox physic. In our own day patients start off to Carlsbad, Aix-les-Bains, or Mont Dore with a light heart as to a haven of rest after the fatigues of the season. In the good old times this would have been as inappropriate as the *cœur léger* with which M. Emile Ollivier rushed into the great war of 1870. "Taking the waters" was then a serious and even a formidable business, to which making one's will would have been a not unfitting preliminary. Before the treatment was

begun there was an initiatory ritual to be gone through, by which the system was cleansed of all peccant humours that might hinder the action of the healing waters. It is needless to say that this purification was effected by a remorseless application of the *seignare, ensuita purgare* formula, which must often have gone far towards curing the patient of the "fever called living" as well as his other ailments. If he survived this preparatory sweeping and garnishing of the house of life, there was still the terrible ordeal of the "waters" to be undergone; and if that failed to kill him, he might fairly congratulate himself on the possession of a constitution against which the worst assaults of medicine could not prevail. What extraordinary things were done in the name of medical science towards the end of the seventeenth century is shown by some letters written by Boileau, who, though his fame has now fallen on evil days, was in his time as indisputably the *Roi Soleil* of literature as Louis XIV was in the political sphere. Boileau, who had almost lost his voice owing to catarrhal laryngitis, was ordered by Fagon, the Grand Monarque's almost greater physician, to try the waters of Bourbon l'Archambault. In a letter to Racine, dated July 21st, 1687, Boileau thus recounts his experiences: "I have been purged and bled; none of the formalities alleged to be necessary before taking the waters has been omitted. The physic which I have taken to-day has done me, so they say, all the good in the world, as it has made me faint four or five times, and has reduced me to such a condition that I can scarcely stand. To-morrow I have to begin the great work, that is to say, I commence taking the waters." How the "great work" was carried out is shown by the following extract from a subsequent letter: "I take every morning twelve glasses of water—more difficult to return than even to swallow—which have, so to speak, cleared everything out of my body except the disease for which I take them." At last the much-enduring poet returned to Paris as voiceless as he left it, and completely worn out by the treatment. In time he recovered his voice, and it is interesting to note that he had the tact to attribute his cure to an infusion of hedge-mustard prescribed for him by a great lady of the Court.

THE UNIVERSITIES, THE COLLEGES, AND THE APOTHECARIES' HALL.

We are informed that Mr. Lawson Tait has submitted the following resolution to the authorities of the College of Surgeons, and it has been accepted as pertinent to the business, and will be submitted to the meeting of the Corporation of the College on May 11th: "That in the opinion of this meeting no scheme for amalgamation with the University of London for the granting of a medical qualification, and no scheme for a conjoint examination with the College of Physicians for such or a similar purpose, can be satisfactory so long as the Society of Apothecaries is not included in such scheme."

ADULTERATED CHOCOLATE.

The Woolwich police magistrate has inflicted a fine of ten shillings upon a local grocer who was summoned for selling adulterated chocolate. It appears that the substance was sold from a bowl labelled "Chocolate Powder, very nutritious, 6d. per pound," to an inspector, and that the public analyst, to whom it was submitted, certified that it contained 35 per cent. of sago-starch, and that its quality was "injuriously affected thereby." It was contended on behalf of the defendant that the proceedings must fail, because chocolate was not a "natural production," but a compounded substance, made in different ways, but having as its general ingredients cocoa, sago-starch, and sugar. It having been also urged that anyone could make chocolate of anything he pleased, the magistrate desired to know whether coal dust might, for instance, be used. The defendant's representative was good enough to answer in the negative, "as it would be prejudicial;" but stated that "oatmeal," or any other substance which in the view of the manufacturers would not be "prejudicial," might properly be used; and, further, made the strange remark that chocolate was no more capable of being adulterated, in the eye of the law, than "blacking" or "biscuits." A representative of the manufacturers, who was called as a witness, stated that all chocolates were mixtures containing starches, some of the qualities "most highly praised" (by whom did not appear), consisting of "over 50 per cent. of starch or sago." They were nevertheless "perfectly wholesome," and, if they were not so mixed, would not be "soluble" or "grateful." This witness—who did not explain who was to feel grateful—then ingenuously remarked that "there was no such thing as pure chocolate." In fining the defendant, the magistrate seemed to think that there ought to be. The real definition of pure high-class chocolate—a mixture of pure cocoa-paste and sugar—does not appear to have been mentioned in the course of this case; for, in giving notice of appeal, the defendant's solicitor disparagingly inquired what chocolate was, and only received for answer that "chocolate was chocolate," and not a mixture containing 35 per cent. of sago.

THE NURSING OF THE INSANE.

The Council of the Medico-Psychological Association are pressing forward their scheme for organising a system of practical instruction for nurses and attendants in asylums, to be followed by examination and the granting of special certificates to those who are successful in passing the requisite standard. Already a goodly number of candidates have entered, and encouraging reports are being received of the satisfactory progress the work is making in all parts of the kingdom. In this connection it is worthy of note that the London County Council have granted permission to Dr. Ewart, of the Colney Hatch Asylum, to deliver a course of lectures, under the rules of the St. John Ambulance Association, at this asylum, and we trust that Dr. Ewart, who is himself a member of the Medico-Psychological Association, will supplement this useful work by endeavouring to encourage the nurses and attendants to proceed to the acquirement of the certificate of the Association, which will enable them to become qualified as specially trained in the nursing and care of the insane. This has already been done with much success at the City of London and one or two other asylums, and we are glad to think that there is an increased activity in this direction throughout the asylums of the country generally.

SPURIOUS PAREGORIC.

In a report addressed to the County Council of the West Riding of Yorkshire, the public analyst for that district, Mr. Allen, calls attention to the fact that in country places it has been the custom for certain shopkeepers, who are not registered druggists and who have no licence to deal in poisons, to sell a substance called "paregoric," which is specially prepared for them and which is destitute of opium. The consequence has been that two preparations have been sold under the name of "paregoric," or "paregoric elixir;" one being the genuine preparation of the *British Pharmacopœia*, compounded of opium, benzoic acid, camphor, oil of anise, and proof spirit, as officially laid down; and the other a preparation manufactured expressly for sale by grocers and other persons who have no business and no legal right to deal in compounds containing opium. Of thirty-five samples of paregoric, only fifteen were genuine, six were of inferior quality, being more or less deficient in opium or benzoic acid, and fourteen samples were wholly or almost entirely destitute of opium. Several of these were also deficient in alcohol, and in one sample the amount of alcohol was only one-half of what it should have been. As regards benzoic acid, several samples contained less than the proper amount; in three cases only one-half of the quantity directed by the *British Pharmacopœia*

was present. One sample, which was wholly devoid of opium and benzoic acid, consisted chiefly of treacle, tincture of rhubarb, and oil of anise. The exceedingly serious character of this form of adulteration is obvious. On the authority of the report from which we have quoted, it would appear that one consequence of the practice has been for persons accustomed to take the spurious "paregoric" afterwards to purchase the genuine preparation from a druggist, with the result that severe cases of opium poisoning have occurred. There is, it seems, good reason to believe that fatal effects have not infrequently ensued from this cause in the case of infants and young children. It is to be noted that dangerous forms of adulteration occur mainly in those districts where the Sale of Food and Drugs Acts are inadequately applied through the ignorance or inertia of the public authorities whose duty it is to apply them.

THE SANITARY SCHOOLMASTER ABROAD.

The Staffordshire County Council have arranged with the Sanitary Institute to give a course of lectures to sanitary inspectors and other persons desirous of obtaining a practical knowledge of sanitary requirements and regulations. The lectures will be given weekly in Stafford on and after May 13th, the course concluding on July 29th. Inspectors and surveyors holding office, and candidates for the examination of the Institute, will be admitted for half the full fee, which is 15s. The wisdom of the County Council in making arrangements for such a course is very much to be commended, and commendation is changed to admiration when we learn that "the County Council will pay the travelling expenses of all inspectors holding office in the administrative county of Stafford who enter for the examination to be held in Stafford by the Sanitary Institute at the end of the course." The introductory lecture will be given by Sir Douglas Galton, and the list of subsequent lecturers includes the names of Dr. Bostock Hill, of Birmingham; Mr. P. Gordon Smith, architect to the Local Government Board; Dr. G. Reid, Medical Officer of Health, Staffordshire; Mr. Rooper, A.M.I.C.E., Stafford; Dr. J. C. Thresh; Mr. J. E. Willcox, A.M.I.C.E., Birmingham; Dr. B. A. Whitelegge; Dr. Henry Tomkins, and Professor Wynter Blyth.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

On May 1st a quarterly meeting of this Association was held at Brislington House Asylum, near Bristol. The meeting was numerously attended, and among those present were many of the leading practitioners of the district, who availed themselves of the invitation of the Drs. Fox, the proprietors of the institution, to be present at the gathering and to partake of the hospitality so liberally provided. Dr. Hack Tuke read a paper on Dr. Prichard, the eminent ethnologist, and Dr. Symonds, who for nearly forty years was a leading practitioner in Bristol, and the gist of the paper was the especial relation their work bore to mental science. Papers were also contributed by Dr. Weatherly on the use and abuse of hyoscine, and Dr. Bonville Fox on unusual cases of general paralysis of the insane. In connection with the visit of the Association a dinner was held in the evening at the Royal Hotel, Bristol, Dr. Yellowlees, the President of the Association, presiding.

THE WORKMAN'S BEER AND THE WORKMAN'S CHILD.

It is, perhaps, the most encouraging thing in the whole Budget that the emancipation of the country from the publican seems at last fairly to have set in. When the Chancellor of the Exchequer in a Conservative Government leaves the publican out of his list of favourites and his soul spares him not for his crying, then, indeed, is there hope of better times. The increased consumption of tea—notwithstanding all the hard things we have been told, and perhaps uttered, about the influence of the leaf on digestion and the nervous system—cannot be considered as otherwise than a subject for congratulation. The increase on this head is at the rate of 6½ per cent., and is still greater if we take into consideration the fact emphasised by the Chancellor that the tea from our own possessions was superior to that from China, in the proportion of 7½ to 5 gallons of liquid of ordinary strength. There has been a large increase in the quantity of tobacco consumed by the wage-earning class during the past year. Whether this be altogether a matter for congratulation is, perhaps, doubtful; but it shows that the working man has more to spend on luxury than before. These are piping times for the working classes. With an eight hour day in view, with a weekly wage ever and again accentuated by a strike, with improved conditions of life, and numerous public enactments on his behalf, the artisan who can live as he pleases, and spend his income pretty much as he likes, is on the high road to being State coddled. Free education is said to be the legitimate result of compulsory education; the next step will probably be free meals for the scholars, as the legitimate result of both combined. It is unsatisfactory to those who hoped for and expected the more rapid progress of the principles of temperance to find that this year again the consumption of alcohol has largely increased. In England, the increased consumption of home-made spirits was nearly 9 per cent. over the high figures of the previous year. In Scotland it was 7½ per cent., and the same in Ireland. It is exceedingly probable that the remitted school fees will in a large measure find their way to the tills of the publican. As there can be no great good without some corresponding evil, apparently, we must resign ourselves to this in view of the boon of an educated population. The children, after all, have the most right to consideration. Child life will be materially brightened in England if the Budget proposals are passed.

THE PRESCRIPTION OF ACONITINE.

A medical practitioner of Montécouver, in France, was recently tried on a charge of "homicide by imprudence." The evidence showed that on December 21st, 1890, he had prescribed 1 milligramme of aconitine for a young woman suffering from toothache. The patient was seized with colicky pains immediately after swallowing the dose, and died a few days later. The result of a *post-mortem* examination by a medico-legal expert led to the suspicion of aconitine poisoning, and it was at first supposed that the chemist who dispensed the drug had made a mistake; but after further investigation, the doctor was placed on his trial. Professor Brouardel gave evidence to the effect that the dosage of aconitine was not yet definitively settled, but that, in prescribing, medical men should follow the injunction given in the French Codex, and order only crystallised aconitine. The omission of this precaution led, according to Dr. Brouardel, to most dangerous confusion, to which he promised once more to call the attention of the Academy of Medicine. The defendant was fined 100 francs.

IGNAZ PHILLIP SEMMELWEISS.

On April 17th the remains of Ignaz Phillip Semmelweiss were, in compliance with the request of the College of Professors of the University of Buda Pesth, removed from their resting place in Vienna to Buda Pesth, where they were reinterred with much ceremony. The name of Semmelweiss is one that should be held in honour to the last syllable of recorded time for the great work he did in tracing the septic processes of childbed to their true source, and thus preserving vast numbers of women from a particularly pitiful death. For this he must rank with Edward Jenner, Louis Pasteur, and Joseph Lister, as one of those who have deserved well of the human race. Unlike these great men, however, Semmelweiss did not live to enter the promised land to which he himself had led the way. He died while he was

still in the prime of life, if age is measured by years, but with body worn out and mind darkened by the clouds of suffering and disappointment. To men of the present day he is little more than the shadow of a name; a few words as to his life may therefore be interesting to some readers. He was born in 1818, at Buda Pesth, in Hungary, where his father kept a grocer's shop, began his studies in that town, and entered the University of Vienna in his 19th year. He was in due time appointed assistant in the Obstetrical Clinic, then under the direction of Professor Klein. It was in 1847 that he made the discovery which revolutionised the practice of midwifery as completely as the antiseptic system afterwards revolutionised surgery. He qualified as *Privat docent* in 1850, and was called to the Chair of Midwifery at Buda Pesth in 1855. In 1865 he died in the Lunatic Asylum at Döbling, near Vienna, before he had completed his 47th year. The proverbial blindness of fortune was surely never more impressively exemplified than in the fate which made a man, who saved countless hearths from desolation, obscure in life and forgotten after death. If Semmelweiss had been an erotic poet who had corrupted the minds of thousands, his name would have been a household word among "cultured" people; as he was "only a doctor," many even of his own profession have probably never heard of him. May the earth of his native land in which he has now at last been laid lie lightly on him, for he was one of those whose actions, as James Shirley says, "smell sweet and blossom in the dust."

SCHOOL HYGIENE IN FRANCE.

Some recent official deliverances anent the prophylaxis of infectious diseases in French schools are not without interest to British sanitarians. About nine months ago M. Layet published in the *Revue Sanitaire de Province* a summary of the existing medical opinion as to the periods of incubation and of invasion of the infectious exanthemata, of the quarantine periods appropriate in the case of persons who had been exposed to the infection of the several diseases; and the *Revue d'Hygiène* more lately published a critical examination of this paper by M. Vallin. The quarantine period advocated in each case is arrived at by adding to the period of incubation from two to eight days (*période d'invasion*), *plus* a further allowance (*prévention supplémentaire*) of from two to four days. The totals thus reached are close approximations to those which have for some time past been recognised as requisite by the leading authorities in this country, all of whom, however, would not be prepared to admit that the "true incubation period" of scarlatina, for example, is invariably seven days; M. Layet also publishes a table in which the isolation periods to be enforced on patients who have actually suffered from an infectious malady, as formulated by the Académie de Médecine, and published in the circular issued by the Minister of Public Instruction (1889-90), is contrasted with the similar rules laid down by the Medical Officers of Schools Association in their Code of 1886. A notable difference between these two sets of recommendations is due to the fact that the French authorities advise as sufficient a limited period calculated from the date of invasion in all cases, with the single exception of whooping-cough, for which the limit of safety is set at "twenty days after the absolute disappearance of the five characteristic symptoms." These conclusions appear to be based on the investigations of Girard, of Marseilles, who about twenty years ago claimed to have proved that the prodromal and invasion periods were really the most dangerous times (as regards infectiousness) in the case of the eruptive fevers. We are accustomed to recognise the truth of this assertion in the case of measles, but surely few English physicians would pretend from practical experience that "it is equally true of scarlatina and of most of the febrile exanthems," or that this view is "now universally adopted." We should think him a bold, not to say a rash, man who should (even after adopting measures for the rigid disinfection of persons and of clothing, which our neighbours rightly insist on) turn all his scarlet fever patients loose upon society as soon as they had completed "the fortieth day after the date of invasion," without any regard to the condition of the epidermis, or of the pharyngeal mucous membrane, etc., or who would in all cases of diphtheria be satisfied with a merely numerical submission to a similar period of isolation. It is notorious that cases vary in their character and in their intensity; and, on the whole, our insular caution may claim that its results justify its recognition of the personal equation in our patients, even if we can assure ourselves of absolute uniformity to type in disease.

SCOTLAND.

The Summer Session at the Edinburgh University and Extramural School of Medicine began on May 4th.

THE ROYAL SOCIETY OF EDINBURGH.

An ordinary meeting of the Royal Society was held in Edinburgh on May 4th. The President, Sir Douglas MacLagan, was in the chair; and Dr. J. M. MacFarlane read a paper, in which he compared the life-history and structure (histological and general) of hybrid plants with that of their parents, and went on to discuss the bearing of the points raised on general biological problems.

ONE OF THE RISKS OF MEDICAL PRACTICE.

For the last two months or so typhoid fever has been raging in Buckie and the neighbouring villages. Vigorous efforts are being taken to stamp it out, but there are still several cases which are causing much uneasiness. Unfortunately there have been several deaths. Among the first to succumb was Dr. Alex. Geddes, who contracted the disease in the exercise of his professional duties. Dr. Geddes began practice in Buckie immediately after graduating at Aberdeen University last July. At the University he obtained distinction in several of the classes and acted as junior demonstrator of anatomy to Professor Struthers for two years. He was aged 26, and is survived by a widowed mother and a brother. His untimely death at the beginning of a promising career is directly due to the devotion displayed by him during the present outbreak of typhoid fever.

IRELAND.

Dr. J. J. Cranny, surgeon to Jervis Street Hospital, has announced his intention of seeking election as Vice-President of the College of Surgeons at the annual election in June.

Two fresh cases of small-pox have been recently reported in Belfast. Both cases are severe, neither patient having ever been vaccinated.

BELFAST ROYAL HOSPITAL.

In recognition of the kindly feeling shown by the people of Belfast towards the young Earl of Shaftesbury on his coming of age, his mother, the Countess of Shaftesbury, has presented to the corporation of the Belfast Royal Hospital the title deeds of the extensive grounds on which the hospital buildings stand. The gift is for 10,000 years at the nominal rent of 2s. 6d., and the corporation is empowered to dispose of the property if it should be decided to remove the hospital to another site. The value of the property in the market would represent several thousands of pounds. Messrs. Howard and Garrett Campbell have presented the sum of £1,000 to the hospital, being the amount received by them as trustees under the will of the late Henry Campbell, they having resigned their trusteeship.

THE INFLUENZA EPIDEMIC.

THERE was a very large increase in the fatal prevalence of influenza last week, both in London and in some of the largest provincial towns. The deaths directly referred to this disease in London, which had been 3, 9, and 10 during the first three weeks of April, rose to 37 during the week ending Saturday last, May 2nd. Of these 37 fatal cases only 4 were under 20 years of age, 5 were of persons between 20 and 40, 14 of persons between 40 and 60, and 12 of persons aged upwards of 60 years. The disease appears to be more or less prevalent in all parts of the metropolis, and to be especially fatal in Hackney and Bethnal Green. As was the case during the epidemic of last year, there has been a rapid increase in the mortality from diseases of the respiratory organs, especially of pneumonia. The deaths from these diseases in London last week were 588, and were 219, or 60 per cent., above the average. The fatal cases of pneumonia were 241, and were more than double the average number. This great excess in the mortality from pneumonia was most marked among persons aged upwards of 20 years, for of these 241 deaths from pneumonia no fewer than 169, or 70 per cent., were of persons upwards of 20 years, while the average proportion would be less than 50 per cent. The proportion of deaths from this disease among persons aged under 20 years was actually little more than half the average, thus clearly showing that a large number of deaths, the causes of which were primarily referred to pneumonia, were more or less directly due to influenza.

OUR Edinburgh Correspondent writes: Influenza has reappeared in Edinburgh—not, indeed, to anything like the extent numerically of the epidemic in the early part of last year, nor are the cases as a rule of so severe a type. The majority seem to be of a more kindly form if such terms can be properly used when speaking of influenza.

OUR Sheffield Correspondent writes: The last week has shown a very serious increase in the number of deaths from influenza, bronchitis, and pneumonia. The death-rate in the previous week was estimated at 57.8 per 1,000 per annum. For the week ending May 2nd it has increased to the unprecedented rate of 70.3. The deaths from all causes in Sheffield numbered 458 last week, against 375 in the previous week. Of this number, 285 are attributed to the three causes, influenza, pneumonia, and bronchitis; influenza being credited with 112, pneumonia 76, and bronchitis 97. In the worst week of the epidemic last year the deaths under the three heads were, 14, 47, and 36. The death-rate for the last 3 weeks has been 33.9, 57.8, and 70.3. It is asserted in the newspapers that the worst is now over. It would be a pleasant relief if this were so. The epidemic has already lasted longer than did the one last year, but the indications of abatement are not sufficiently evident as yet to make it certain that the scourge is on the wane.

Dr. H. HANDFORD (Nottingham) writes: In many instances, at any rate, no protection has been afforded by the attacks of last year, as the same individuals are again suffering. The chief peculiarities of the present epidemic are the severe pharyngitis; the limitation of the affection in other cases almost entirely to the abdomen, simulating peritonitis or acute intestinal obstruction; and occasionally (it is said) the presence of a rash. In the following case intestinal obstruction was suspected, and the patient was in imminent danger.

Mrs. W., aged 74, subject to asthma, but otherwise in fair health, was taken suddenly ill at 8 P.M. with pain in the abdomen and vomiting. There was no headache, and no rise of temperature was noticed. The pain and vomiting continued all night, and next day her condition was so grave that I was asked to see her in consultation late in the afternoon. The pulse was 120, very feeble and irregular, and the temperature 99.2°. Pain came on in the abdomen about every five minutes, and was generally followed by vomiting. The stomach rejected everything taken by the mouth, even plain water. I was shown a quantity of vomit, which was brown, foul smelling, and evidently the contents of the small intestine. No flatus had been passed *per anum;* and an aperient a glycerine enema, and a water enema had failed to move the bowels. Everything by the mouth was stopped except liq. atropiæ ℥j in a drachm of water, and the patient was allowed to suck ice. A further copious enema was followed by a free movement of the bowels, and the patient was soon convalescent.

It is only the occurrence of many other cases of the same kind, but not quite so severe, which enables me to form the opinion, with little hesitation, that the above was essentially influenza.

My second case occurred in February, 1890, and closely simulated both meningitis and delirium tremens. The patient was a well-to-do-man, over 40, who had lived freely, but had recently only taken claret, with some extra champagne during Christmas festivities. His illness began three weeks before I saw him, with headache and muscular pains, which were supposed to be rheumatic, but were almost certainly influenza, and were followed by some broncho-pneumonia. The temperature was very variable, usually between 100° and 102°, but sometimes normal. About ten days later delirium came on and persisted, and this was the cause of me being asked to see him. The patient thought he was not at home, and used to ask his wife to get a cab and drive him home. He had hallucinations of sight, seeing persons in the fire and in the room. At night he used to become more excited, getting out of bed, and walking about the room. The headache from which he suffered at first disappeared when the delirium began. In the daytime he was often depressed, and cried. When I saw him the pupils were equal and reacted normally, the knee-jerks were normal. There was no vomiting, no tremor, no sweating. The tongue was coated with a white fur, but was fairly steady. There was no definite paralysis, but he often used to drop things. He said he was afraid of losing his memory, which was essential to the successful conduct of his business; and, in fact, he used to forget what he had told me a few minutes before. With the exception of this, and of some mental depression, he was quite rational whenever I saw him on three occasions. Although he presented some of the symptoms of delirium tremens, the differences were marked. Salicylate of soda gave little relief, though it lowered the temperature. Quinine produced more benefit. He was very sleepless. The temperature continued raised for five days after I saw him, averaging 101°, and then finally and suddenly fell; but the delirium continued for eight days longer, when he seemed to wake up, and said he remembered nothing that had happened during the previous three weeks. At this time he developed gout in the big toe. Total duration of illness about six weeks.

Mr. E. CAUDWELL, M.R.C.S., L.R.C.P. (No. 7 Section Manchester Ship Canal Works), writes: For the past six weeks we have had a recurrence of the same epidemic which raged here at the beginning of last year. The epidemic was this time preceded by a large number of cases of pneumonia, which, in many cases, proved rapidly fatal in from three to five days; in those who did recover at once, the stage of resolution has been most unsatisfactory, going on to destruction of lung tissue and formation of vomicæ. The influenza, as it is called, has attacked in this section of the canal principally those who have been, owing to the nature of their work, very much exposed, and it is only within the last few days that any women or children have fallen victims to the disease.

We have some 60 cases of a severe type now under observation, 18 of whom have developed pneumonia, which has, in its clinical aspects, been so far precisely of the same nature as that which preceded the outbreak; of these 18, 8 speedily succumbed to the disease, the pneumonia creeping from its first focus, and attacking the whole lung. The patients fell into a typhoid condition, and died in from three to five days. It has been specially fatal among those of the men who have drank hard.

In two formidable cases the pneumonia was complicated by pericarditis, with abundant effusion; and a third case, who has old mitral mischief, and who was attacked yesterday with influenza, has to-day marked pericarditis, with no other chest symptoms. To-day I have seen a girl, aged 22, who was taken ill yesterday, and in whom I detected for the first time

a well-marked systolic *bruit* at the apex. She has all the symptoms of influenza, and there is no history whatever of rheumatism in the family.

I do not remember seeing one case in which any coryza was present. Nearly all commence with marked shivering, an intense feeling of *malaise*, severe frontal headache, pain all over the body especially in the lumbar regions, the pain being so intense that one has seen able-bodied navvies almost crying with it. The temperature is usually 103°, and the pulse about 120. In some, severe abdominal pains, colicky in character, are complained of, accompanied by severe vomiting, the vomited matter being watery in character and bile-stained.

In children the prominent symptoms seem to be the suddenness of the onset and the very severe frontal headache. In four cases I was able to detect at the commencement of the attack physical signs of commencing pneumonia. The severity of the symptoms commence to abate from twenty-four to forty-eight hours, and the patients are able to resume work within the fortnight.

SIR,—A perusal of the very interesting notes on the present epidemic of influenza which have been appearing week after week in the columns of the BRITISH MEDICAL JOURNAL cannot fail to attract the reader's attention to what is at first sight a very puzzling circumstance connected with the spread—or shall I say the transference?—of the disease from point to point on the earth's surface.

Influenza has been raging in North China since the beginning of the winter just past. It appeared in several towns in the United States of America early in March, and spread eastwards from Chicago, Pittsburg, Cleveland, and several other places in Ohio and in Iowa, finally invading New York and other cities near the eastern seaboard. The deaths from influenza in New York were: for the week ending March 28th, 4; that ending April 4th, 48; and that ending April 11th, 108. About this last date an outbreak occurred in Norway, 891 cases being reported in one week in Christiania, and also in Sweden, notably in Göteborg. Almost simultaneously a severe outbreak took place in Yorkshire and Lincolnshire, extending thence southwards and westwards to the Midlands and the south-eastern counties of England. Nothing is more interesting than to compare the death-rates of the twenty-eight great English towns in the first table in the Registrar-General's return for the week ending April 25th. Outside the epidemic area we find such low rates as 11.6 per 1,000 per annum at Brighton, 16.2 at Derby, 18.0 at Bristol, and 17.7 at Salford; inside that area we have 33.9 at Halifax, 36.5 at Hull, and the appalling rate of 57.8[1] at Sheffield. A lower temperature during April on the north-east coast of England, and keen, dry, easterly winds no doubt contributed to this high death-rate, but it was chiefly caused by influenza and its complications.

My chief object, however, in writing this letter is to draw attention to a possible—perhaps a probable—explanation of the almost certain connection between the several epidemics of the past winter and the present spring in China, North America, and North-Western Europe.

The explanation to which I refer assumes the micro-parasitic origin of influenza, and is based on meteorological considerations.

And, first, how did the influenza microbe find its way from China to the centre and eastern seaboard of North America? In winter—as your readers are aware—a vast area of atmospherical depression lies over the North Pacific Ocean, while cold, and therefore dense, air is gradually piled up into a great anticyclone, or area of high barometrical pressure, over the North American Continent. Round the former system there is a great cyclonic sweep of air from N.W. in China to W. over the Pacific, and to S.W. and S. over Vancouver's Island, British Columbia, and the north-west coast of North America. In these latter regions the air will be ascending to spread out eastwards in the higher strata of the atmosphere, and finally to share in the formation—over the North American Continent—of the anticyclone above referred to. Such air currents as are here described can easily be imagined to be the carriers of micro-organisms from China to the higher strata of the atmosphere over North America. But the air descends in the eastern and southern quadrants of an anticyclone in the Northern Hemisphere, and so we have a vicious cycle completed in the scattering broadcast over large districts of the United States of the pernicious air-borne microbe of influenza.

But, between America and Europe, we have, in winter, a state of things which is very analogous to that which holds over the Pacific. The "North Atlantic storm area" is really a vast winter cyclonic system, or area of low barometer, while over Eastern Europe and Asia a gigantic anticyclone forms in winter—the barometer, as is well known, rising above 31 inches in Siberia near the centre of the high pressure area.

For distribution by these atmospherical systems in a way analogous to what probably occurred in America, the influenza microbe arrived too late. It was, however, in time to be distributed by the spring systems of atmospherical pressure, which are—a commencing summer low pressure area over North America, and a spring anticyclone over Scandinavia and that part of the North Atlantic to which the name of the "Norwegian Sea" has been given.

Reference to the weather charts published in the "Daily Weather Report" of the Meteorological Office, London, will show that almost uninterruptedly from April 1st to 25th, 1891, an anticyclone hung over either Scandinavia or the Norwegian Sea, or over both these districts. Under such circumstances, easterly and north-easterly winds—descending from the higher strata of the air, and hence so keen and dry as these winds are known to be—played upon the very districts in Sweden and Norway, and England, which were simultaneously affected with epidemic influenza.

The foregoing considerations as to the transference of the virus or contagium of influenza by means of the great aerial currents of the atmosphere are based on the view that influenza is an acute infective disease of the miasmatic, rather than the miasmatic-contagious class; and that its virus, unlike that of typhus fever, is not rendered inert by oxidation from contact with atmospherical air, but rather the contrary. Several writers, however, have advanced the view that it is both a pandemic, or miasmatic, and an epidemic, or miasmatic-contagious disease. Thus Dr. P. Duflocq, Chef de Clinique in the Faculty of Medicine in Paris, concludes an elaborate article on the clinical varieties of influenza observed in that city in December, 1889, and January, 1890, with these words: "La grippe semble donc être une maladie à la fois épidémique et contagieuse et la période d'incubation serait de deux jours."[2] Even if we adopt this theory, it in no way militates against the view which I have put forward in this letter as to the air-borne origin of influenza epidemics.—I am, etc.,

JOHN WILLIAM MOORE, M.D.Univ. Dubl.,
F.R.C.P.I., Physician to the Meath Hospital and
Dublin. County Dublin Infirmary.

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[1] 70.3 per 1,000 in the week ending Saturday, May 2nd.

DR. MORTIMER GRANVILLE writes: Will you allow me to ask the consideration of those of my fellow practitioners who base their treatment of disease on a recognition of the fact that every morbid state, whether functional or organic, is simply a variation from the normal type, for the actuality and causation of the high temperature in influenza?

I saw a great deal of this malady last year, and I have seen many cases this year, and nothing has impressed me so strongly as the disastrous policy of regarding the high temperature as anything else than a bogus fever heat, which should be overcome by tonics, and never treated by depressants such as antipyrin or even quinine.

The mean temperature of the blood is 38° C., and anything which acts strongly as an inhibitant on the vasomotor centre or centres, must almost necessarily cause a speedy rise of the general temperature of the body to 102° F. When this rise occurs early in the course of a pyretic state, it is easy to see that nothing in the least degree wonderful happens if the temperature, as registered by the clinical thermometer in the axilla or under the tongue, reaches 103° or 104° F. To treat this already depressed condition with an antipyretic agent is obviously to make bad worse; and this, I maintain, is precisely what is done when the aim and results of treatment are "febrifuge." Those who remember anything of the epidemic of 1847-48 (which, from special associations, I saw treated) will recall the fact that diffusible stimulants such as camphor and ammonia succeeded when "antiphlogistics" failed, or did harm. I used these remedies, particularly the former, last year, and I have used them this year; and though I have seen many cases, simple and complicated, with extraordinarily high temperatures, I have not yet seen one that gave me any serious anxiety, or which has not yielded to the method described.

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[2] *Revue de Médecine*, tome x, p. 85, Février, 1890.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members, in commodious apartments, at the Offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 18th and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

One of the two scientific scholarships of the value of £150 per annum, tenable for one year subject to annual renewal by the Council, will shortly fall vacant. The Scientific Grants Committee are prepared to receive applications addressed to the General Secretary stating the particulars of the intended research qualifications and work done.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

BRANCH MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—A meeting will be held at Brentwood on Thursday, May 21st. Gentlemen having communications to bring before the meeting are requested to notify the Honorary Secretary of the District, Mr. C. E. Abbott, Braintree, as soon as possible. Further particulars will be duly announced.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The annual meeting of this District will be held at Limmer's Hotel, George Street, Hanover Square, on Thursday, May 14th, at 7 P.M. The following business will be transacted: Election of Officers for the ensuing year. At 7.30 P.M. precisely the members will dine together, Sir William MacCormac, President, in the chair. Tickets, 7s. 6d. (exclusive of wine).—HECTOR W. G. MACKENZIE, M.D., Honorary Secretary, 77, Lambeth Palace Road, S.E.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The annual meeting of the above District will take place at the Kent and Canterbury Hospital, Canterbury, on Thursday, May 14th, at 2.45 P.M., Mr. Brian Rigden in the chair. The Chairman will be pleased to see members and friends to tea at his house, 64, Burgate Street, at 5 P.M. Agenda: The usual business of the annual meeting, including the appointment of an Honorary District Secretary in place of Dr. Tyson, who is retiring. The question of dinner or tea will be brought forward. Dr. FitzGerald will open a discussion on Koch's Treatment of Tuberculosis. Dr. Bowles: Treatment by Tuberculin; Experiences at Berlin and at Folkestone. Mr. Preston will show cases of (1) Congenital Dislocation of the Crystalline Lens in Three Members of a Family; (2) Coloboma of the Choroid and Iris.—W. J. TYSON, Honorary Secretary, 10, Langhorne Gardens, Folkestone.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this District will be held at the Greyhound Hotel, Croydon, on Thursday, May 14th, at 4 P.M., Dr. Shadforth Morton, of Croydon, in the chair. Dinner at 6 P.M.; charge 7s. (exclusive of wine). The following papers are promised:—Dr. Greville MacDonald: On Laryngeal Therapeutics. Mr. Charters Symonds: On Seven Cases of Chronic Intestinal Obstruction, in five of which the sigmoid was opened, in two the ileum. Mr. Charles Wray: On Some of the Commoner Forms of Conjunctivitis and their Treatment. Mr. A. Maude: On a Case resembling Acromegaly, with remarks. Members please communicate with the Honorary Secretary, P. T. DUNCAN, M.D., Croydon.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at Hastings on May 28th. Notice of papers, etc., should be sent to the Honorary Secretary, T. JENNER VERRALL, 97, Montpellier Road, Brighton.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will be held at the Hospital, Gravesend, on Thursday, May 28th, at 4 P.M., Mr. O. R. Richmond, in the chair. The dinner will take place at the Old Falcon Hotel, at 6.15 P.M.; charge, 6s. 6d. (exclusive of wine). To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, Mr. O. R. Richmond, The Grange, Gravesend, not later than Tuesday, May 25th. All members of the South-Eastern Branch are entitled to attend this meeting and to introduce professional friends. Communications:—Mr. G. Hartridge: Injuries of the Eye and their Treatment. Mr. R. Bryden: A Case of Acute Glossitis. Mr. A. Boyce Barrow: Some Diseases of the Rectum. Dr. Firth: A Case of Hæmoptysis.—A. W. NANKIVELL, Honorary Secretary of the District, St. Bartholomew's Hospital, Rochester.

STAFFORDSHIRE BRANCH.—The third general meeting of the present session will be held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, May 28th, at 3 P.M.—GEORGE RICH, Honorary Secretary, St. Mary's Road, Stafford.

OXFORD AND DISTRICT BRANCH.

A MEETING of this Branch was held at the Radcliffe Infirmary, Oxford, on April 24th, Mr. MALLAM, the President, in the chair. Twenty-five members were present.

New Members. The minutes having been read and confirmed, Dr. Hendricks, Dr. Turrell, Mr. Prall, and Mr. Hill were elected members of the Branch. Mr. THOMSON proposed, and the HONORARY SECRETARY seconded, Mr. John McOscar, M.R.C.S., L.R.C.P., of Chinnor, as a member.

Communications.—Dr. HAYMAN read notes of a Case of Strangulated Hernia in which he removed a V-shaped piece of the bowel. The patient recovered.—Dr. HAYMAN showed a Vesical Calculus, removed by suprapubic lithotomy, which weighed 8¾ ounces.—Dr. COLLIER read a paper on the Contagium of Scarlet Fever.—Dr. BROOKS and Dr. COLLIER showed Cases Treated by Tuberculin.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE third meeting of this District was held at the Tottenham Hospital on April 30th, 1891, Sir WILLIAM MACCORMAC in the chair. Seventeen members were present.

Communications.—After the minutes of the former meeting had been read and confirmed, Dr. F. DE HAVILLAND HALL read Clinical Notes on Diseases of the Pharynx; a discussion ensued. Some cases were shown from the wards.

Votes of Thanks.—After votes of thanks had been given to the President, Dr. F. de Havilland Hall, and the authorities of the hospital for their kind reception, the meeting adjourned.

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session was held at the Grand Pump Room Hotel, Bath, on April 29th. The PRESIDENT (Dr. A. B. Brabazon) occupied the chair. Forty-six members were present.

New Members.—Messrs. C. F. Morton, F.R.C.S., J. J. Powell, M.D., and A. A. Sproule, M.A., M.B.T.C.D., all of Bristol, were elected members of the Branch.

Communications.—C. H. WALKER, M.B., read a paper on Central Amblyopia, and Drs. F. R. CROSS, J. MICHELL CLARKE, PAGAN LOWE, and the PRESIDENT took part in the discussion which followed.—H. WALDO, M.D., read a paper on Arterio-Capillary Fibrosis. Mr. RICHARDSON CROSS, Dr. GOODRIDGE, Dr. SHINGLETON SMITH, and Dr. WATSON WILLIAMS also took part in the discussion.—Mr. H. W. FREEMAN exhibited a Case of Hermaphroditism, which excited much interest.

NORTH OF ENGLAND BRANCH.

THE spring meeting of this Branch was held at the Infirmary, Sunderland, on April 30th; Dr. MIDDLEMISS, President, in the chair.

The British Gynæcological Society.—After a statement by Dr BENINGTON, it was proposed by Dr. PHILIPSON, seconded by Dr. GOWANS, and unanimously carried, "That the members of this Branch have heard with pleasure of the proposed meeting of the British Gynæcological Society at Newcastle-upon-Tyne, and they beg to offer to the Fellows of that Society their hearty welcome."

Cases.—Dr. MALING showed a remarkable Case of Molluscum Fibrosum in an old man. There were the ordinary nodules in the skin all over the body, and in addition the left lower limb was covered with huge pendulous masses, which at a distance gave the effect of elephantiasis.—Dr. SQUANCE and Dr. ROBERTSON showed Cases of Lupus under Koch's Treatment.—Dr. MURPHY showed a patient with Imperforate Urethra, in whom he had tunnelled through the penis.—Dr. DRUMMOND showed a Case of Friedreich's Disease in a boy.

Specimens.—Dr. MURPHY exhibited a practically complete Series of Specimens of Lesions of the Uterine Appendages, including tubal pregnancy, pyosalpinx, cysts of the ovary, parovarium, and broad ligament, with tumours of the ovary, etc. One tumour (round-celled sarcoma) weighing over 14 lbs., had been removed two years before from a girl of 16, who was still perfectly well and able to work.—Dr. DRUMMOND showed some Gall Stones, discharged through the abdominal wall. He also showed an Aneurysm of the Arch of the Aorta, with the temperature chart, showing marked pyrexia.—Dr. DESTER exhibited specimens of Rupture of a Thoracic Aneurysm into the Œsophagus, from a man aged 61, and Tuberculous Mesenteric Glands from a child.—Dr. BRADLEY showed an Aneurysm which had Ruptured into the Œsophagus.—Dr. SQUANCE showed a Lantern Microscope, in which the definition and the brilliancy of illumination were remarkably good.—Dr. ROBERTSON showed an Electric Lamp.

Vote of Thanks.—A vote of thanks was passed to the Committee of the Sunderland Infirmary.

Dinner.—Fifty members attended the meeting, and twenty-three were at the dinner held afterwards.

MELBOURNE AND VICTORIA BRANCH.

THE annual meeting of this Branch was held on January 21st, 1891, the Hon. G. LE FEVRE, M.D., President, in the chair.

General Business.—The minutes of the previous meeting (December 17th, 1890) were read and confirmed. A communication was read from the Queensland Medico-Ethical Association, requesting the influence of the Branch in the prevention of southern medical men tendering for lodges in Brisbane. The letter was referred back to the Council. Drs. T. L. MacMillan and R. H. Fetherston were appointed scrutineers of the ballot for members of Council.—The HONORARY SECRETARY announced that Drs. Balls-Headley, Fitz-Gerald, Hooper, Hewlett, and MacColl had withdrawn their names from nomination as members of the Council.

Report of Council.—The HONORARY SECRETARY read the annual report of the Council of the Branch for the year ending January 21st, 1891. It stated that the year had been one of marked advance and progress of the most satisfactory character, both as regards the increase in the number of members and the excellence of the papers read at the meetings, as also the discussions elicited by these papers. Since February, one honorary member and twenty-six ordinary members had been elected; one member died, and two resigned; the number of members at present was 164. There were ten ordinary meetings and one special general meeting. The latter was called to consider a proposal for the amalgamation of this Branch with the Medical Society of Victoria.[1] A subcommittee, consisting of the President, Dr. A. Shields, and Dr. J. W. Springthorpe, had been appointed to meet a similar subcommittee of the Medical Society, to assist Dr. Gresswell, Medical Inspector to the Board of Public Health, in conducting an investigation into the epidemic of influenza which prevailed last year. Circulars were drawn up and sent to practitioners, asking for statistics and the line of treatment adopted. Numerous replies had been received, but the Council was not yet in a position to give results. Two meetings of the conjoined Committee charged with the conduct of the Amending Medical Bill had been held, but despite vigorous efforts to induce the present Government to take up the Bill at the stage in which it was left by the last Government, the Bill was abandoned for last session. In response to a request from the Royal Commission on Charitable Institutions, Mr. T. N. Fitz-Gerald, Mr. J. T. Rudall, Dr. T. Rowan, and Dr. W. Snowball had been nominated to give evidence as representatives of the Branch.

Balance Sheet.—The HONORARY TREASURER then read the balance sheet, which showed that the Branch was richer by £11 than last year. The balance in the bank amounted to £46 11s. 7d. The report and the balance sheet were adopted.

Election of Office-Bearers.—The following were elected office-bearers for 1891: President, Dr. Andrew Shields; Vice-President, Dr. John William Springthorpe; Honorary Secretary, Dr. Augustus Leo Kenny; Honorary Treasurer, Dr. Felix Meyer; Members of Council, Dr. Kenny, Dr. Le Fevre, Dr. Neild, Dr. Meyer, Mr. Rudall, Dr. Springthorpe, Mr. Syme, Dr. Shields, Dr. Gresswell, and Dr. Fishbourne.

Retiring President's Address.—Dr. LE FEVRE, having vacated the chair in favour of the new President, Dr. Shields, delivered the retiring presidential address. After expressing his thanks for the honour done him, and alluding to the proposed union of the Branch with the Medical Society of Victoria, he proceeded to refer to the work done by the Branch during the year, and to the evidence given before the Charities Commission by four of its members. It was clear that a very large number of hospital patients obtained the benefits they received on false pretences, and that a system of shameless imposition was practised. It was easy to say that the high rate of remuneration insisted on by medical men compelled people even of considerable means to have recourse to charities for treatment. To any dispassionate person, however, the scale of fees, some years ago adopted by the Medical Society, could not seem objectionable. They had again been unsuccessful in obtaining an Amended Medical Act. The Amended Bill, which lapsed on account of a change of Government, contemplated very little more than to supply a ready means of differentiation as between the qualified and the unqualified practitioner. Some day, perhaps, there would arise special reasons for possessing such facility of differentiation, but until these did arise, these would, apparently, have to be content, if not satisfied, with the poor apology for an Act which they possessed, which conferred upon them no privileges, and supplied no protection to the uninformed public. Passing next to the subject of public health, Dr. Le Fevre called attention to the insanitary condition of Melbourne and the whole colony, and said it was their duty as members of the medical profession never to relax their efforts to bring about a better state of things. The Commission which sat the year before last to consider the whole question of the public health, although it accomplished very little in the way of substantial results, had at least the merit of being well intended. The Board of Public Health was doing its work well and faithfully, and in its medical officer, Dr. Gresswell, the Government had been fortunate in obtaining the services of an accomplished, capable, and untiring agent. A matter requiring immediate consideration, and one to which he (the speaker) had frequently called attention in Parliament, was that of providing for the prevention of the pollution of the rivers. The present condition of their streams was simply disgraceful. During the period that must elapse before the sewerage system was completed, some method of filtration, by means of revolving screens or by catch-pits, should be adopted. Typhoid fever had been extending year by year, and would continue to extend until some measures of sanitary reform were adopted which would bring about better results than any yet achieved. After referring at some length to the progress of therapeutics in recent years, and in particular to Koch's treatment of tuberculosis, Dr. Le Fevre mentioned that it was proposed to establish a Chair of Bacteriology in the University. He commented on the readiness with which the Council accepted the recommendations of the Faculty of Medicine on that point, as compared with their attitude regarding the teaching of insanity. The

[1] See letter from our Melbourne Correspondent, BRITISH MEDICAL JOURNAL, March 14th, 1891, p. 605.

Faculty of Medicine had unanimously decided that some more complete arrangements should be made for affording the students of the fifth year an opportunity of studying insanity practically, a term of attendance at a lunatic asylum being made compulsory. The Council, however, declined to authorise the regulation, on the ground that such study was not a necessary part of the academic course. The alarming increase of insanity in the colony pointed, he thought, strongly to the desirability of the Council reviewing their decision. With regard to the general question of the housing and treatment of the insane in Victoria, the accommodation afforded was greatly within the limit of what was required. Some time ago there had been a great outcry against what what was described as the "barrack system" of their asylums, and it was insisted that nothing but the cottage method was in accordance with the modern treatment of the insane. That the cottage system was a good one under certain conditions no one familiar with the principles of psychological medicine would deny, but to prescribe it as an absolutely necessary system under all circumstances was neither scientific in the abstract nor warranted by the records of experience. In like manner much had been urged in favour of the principle of boarding out lunatics. The practice had been tried, and the result was not such as to encourage its continuance. It was greatly to be regretted that the establishment of private lunatic asylums had been so completely discouraged. Under proper regulations private lunatic asylums were most useful institutions. Dr. Le Fevre concluded his address with some allusions to the Medical School of the University, and with some gracefully expressed compliments to the editor of the *Australian Medical Journal*.

Vote of Thanks.—A vote of thanks to Dr. Le Fevre for his address was proposed by Dr. SHIELDS, seconded by Dr. L. HENRY, and carried by acclamation.—Dr. LE FEVRE briefly replied.

JAMAICA BRANCH.

A GENERAL meeting of this Branch was held on October 1st, 1890, at the Public Library, Kingston, Dr. G. C. HENDERSON, President, in the chair. The following members were present: Drs. F. H. Saunders, Bronstroph, Plaxton, W. D. Neish, Robinson, L. M. Clarke, Castle, Maunsell, Tatham, and Da Costa. The minutes of the last meeting (July 30th) were read and confirmed and signed by the President.

Eczema of Face.—Surgeon TATHAM showed a soldier of the West Indian Regiment, a full-blooded negro from Demerara, suffering from an intractable form of eczema of the face and scalp. In an experience of three years, during which nearly 2,000 native soldiers had passed through his hands, he had not previously met with a case amongst them, though the disease was frequent enough among the coloured soldiers and the white men.—The PRESIDENT said that in his experience eczema was not rare in the black, though it was rare to find it on the face. Eczema of the scrotum was not rare, and behind the ears was common in infants, and on the flexor surfaces of the arm and on the wrists of washerwomen from the irritation of soda, etc. Aggravated prickly heat ran into it; sometimes it took the form of a relapsing erythema. It was more common amongst the light-coloured than the black.—Mr. F. H. SAUNDERS also made remarks.

Nævoid Growth.—Mr. W. H. STRACHAN showed a case of nævoid growth in the left temporal region and the eyelids. Opinion was asked as to the advisability of attempting some relief by operation. Electrolysis was suggested as justifiable, but benefit was thought problematical.

Telangioma Tuberosum Multiplex.—Mr. W. H. STRACHAN showed this case. The patient was a negro boy, aged 14. Scattered over his head, trunk, and extremities were minute nodules, varying in size from that of a millet seed to that of a pea, many arranged in lines like strings of beads. In places the nodules and lymph vessels were massed into groups about the size of a walnut. In some places the lymph vessels could be felt like cords. The boy's general health was good. At the time of his admission into the Public Hospital his liver and spleen were enlarged. The disease had lasted for some years. He had been treated with iodine chiefly since his admission; there had been a diminution in the size of the tubercles, and slightly of the two large masses.

Spontaneous Fracture of Both Clavicles.—Dr. C. W. M. CASTLE related this case. A negro, aged 30, whilst in the act of raising a small bundle of grass, felt his left collar-bone snap. The fracture was united by an abundant callus. Some time afterwards, whilst putting out his hand to lean against a post, he felt a crack in the shoulder, and almost fell down. The right clavicle was fractured almost at the centre of the bone. There was not much pain, and the man could use his arm. Malaria in the first instance, followed by prolonged anæmia and debility, in the absence of syphilis, heredity, etc., was probably responsible for the fragile condition of the bones.

Rheumatic Fever with Hyperpyrexia.—This paper was read by Brigade-Surgeon MAUNSELL on behalf of Surgeon-Major GALLWAY.

CEYLON BRANCH.

THE annual general meeting of this Branch was held at the Colonial Medical Library on February 21st, 1891; Dr. W. R. KYNSEY, the President for 1890, was in the chair. Among those present were Dr. James Loos (President for 1891), Dr. J. L. Vanderstraaten (President-elect), and Drs. Rockwood, Vandersmagt, Solomon Fernando, C. A. de Silva, W. Passe, and H. Marcus Fernando (Honorary Secretary). Dr. Lisboa Pinto was introduced as a visitor.

Annual Report.—The report for the year 1890 was read by Dr. H. MARCUS FERNANDO, after which the Honorary Treasurer, Dr. SOLOMON FERNANDO, read his report.

Office-Bearers.—The CHAIRMAN then submitted the names of the office-bearers for the year 1891, as previously determined upon by a Council meeting of the Branch held on January 9th, 1891; this was seconded by Dr. ROCKWOOD, and carried unanimously.

Retiring President's Address.—Dr. KYNSEY delivered an address on the relationship existing between variola and vaccinia. The latter part of the address dealt with practical considerations in connection with the modes of propagation of epidemics of small-pox and cholera in Ceylon, and the best means by which such epidemics could be checked.

Installation of New President.—At the close of the address, which was loudly applauded, Dr. KYNSEY introduced his successor, Dr. Loos, to the chair. Dr. Loos, on taking the chair, thanked the members for having elected him president, and confidently hoped, though he had the disadvantage of not residing in Colombo, that he would be able to do something for the advancement of the Branch during the year. Referring to Dr. Kynsey's address, Dr. Loos gave some interesting experiences of his own in connection with epidemics of small-pox in Colombo during the "50's," and of the manner in which arm-to-arm vaccination was done in those days.

Vote of Thanks to Retiring President.—Dr. ROCKWOOD proposed a vote of thanks to Dr. Kynsey for his address, and also for the interest he had shown in the meetings and the services he had rendered to the Branch during his year of office. This was seconded by Dr. VANDERSMAGT, and carried unanimously.—Dr. KYNSEY briefly returned thanks.

SPECIAL CORRESPONDENCE.

BERLIN.

The Phaneroscope and the "Transparent Finger."

AT last week's meeting of the Berliner Medizinische Gesellschaft, Professor Liebreich gave a further account of his cantharidin treatment, and exhibited two new instruments, which he had found to be most valuable in lupus cases, not for purposes of diagnosis only, but also as a test whether apparent improvement is real.

The first of these instruments, which Liebreich has named "phaneroscope," serves to render a small patch of skin quite translucent. It consists of a lens placed at one end of a cylindrical tube, the other end of which is funnel-shaped, and terminates in a small aperture. If a light be properly placed behind the lens, and the phaneroscope applied to the skin so that the small aperture almost touches it, the skin is rendered brightly luminous and translucent. Where healthy skin is present, an inner yellowish circle of light is seen sur-

rounded by an outer circle of a bright red colour. By means of the phaneroscope any portion of skin can be rendered luminous. The greater the number of capillaries is the brighter is the red of the illuminated spot. Where anæmic skin is present the illuminated circle is pale.

The second instrument is a small round plate of glass set in a metal frame, which Liebreich uses instead of digital pressure in lupus examinations. The advantages of this simple arrangement (which may be called a "transparent finger") are obvious. The skin can be observed during pressure and not only after pressure. By its help portions of lupus which might otherwise escape detection can be observed, the redness not disappearing under the pressure. If instead of the plain glass a lens be used, the skin is illuminated during pressure, and the examination is thus much assisted. The lens can be pushed from place to place, and will show lupus below the surface when it is not visible to the unassisted eye.

MANCHESTER.

Arsenic in Coloured Cotton Goods.—Annual Report of the Manchester and Salford Sanitary Association.—Royal Infirmary.—Summer Session at Owens College.

About four months ago a letter from Her Majesty's Consul at Christiania was forwarded to the Manchester Chamber of Commerce by the Foreign Office calling attention to the bad reputation which British cotton prints had acquired in Norway because of their containing arsenical matter in excess. The samples were analysed by the Chemical Committee, and in many of the samples of cotton cloth, both printed and dyed, arsenic was found present in such proportions as to be dangerous to the health of the wearer. The Committee state that the employment of arsenic, or arsenical compounds, in printing and dyeing is not absolutely necessary, and could be dispensed with by dyers and printers, probably with a little inconvenience and a slight increase in the cost of the production of the colour effect. A similar complaint was brought before the Chamber in September, 1888, and a special circular was then sent to the calico printers and dyers of Manchester and district on the subject. The Chamber have decided to communicate with the Government respecting further action to put an end to it.

The annual report of the Manchester and Salford Sanitary Association for 1890 states that the association has been instrumental in securing, especially for artisans' dwellings, an improved code of building regulations. The Association has also issued a caution to the public, and especially to women, against the dangers of hypnotism. The Association has from time to time issued a series of "tracts" giving an account of the earlier symptoms of the commoner infectious diseases of childhood and other kindred subjects, which have proved most useful in assisting parents and teachers to recognise the beginnings of such infectious disease.

The Board of Management of the Royal Infirmary have issued a circular to the trustees of the institution with regard to the question of providing increased accommodation for in-patients, and setting forth the reasons why they were unable to concur in the proposals submitted by Owens College relative to the establishment of a part of the hospital on the Stanley Grove Estate, which the College offered as a site for that purpose. The question of the enlargement of the infirmary on its present site seems to be one which is likely soon to engage the attention of the Manchester public, if one may judge from the correspondence that is taking place in the daily newspapers.

The Owens College Medical School was opened for the summer session on May 1st, and so far the number of entries is ahead of the corresponding period of last year.

SHEFFIELD.

The Late Mr. Wake.—Hospital Saturday and Sunday Funds.

Sheffield has lost a prominent citizen, and the medical charities a generous friend, in the late Mr. Bernard Wake, whose death occurred last week from pneumonia. He was Treasurer to the Public Hospital and Dispensary, and his munificent determination to bear the cost of the new out-patient building himself has been referred to in previous letters. He also supported a convalescent home at Sandygate, which was much valued. In many other ways also he testified his interest in the medical institutions of the town.

The first return for Hospital Saturday (April 18th) gives the amount collected as £920 18s. 11d. This is a falling off of £72 4s. from the amount first announced last year. The prevailing sickness has no doubt interfered with the workmen's contributions. The Barnsley Hospital Saturday and Sunday Committee recently had their annual meeting. The report submitted was of a most satisfactory character. The receipts for 1890 were £1,186 13s. 7d., against £847 16s. 8d. in 1889; an increase of £338 16s. 11d., and after deducting expenses the hospital will receive £328 10s. 7d. more than in the previous year.

CORRESPONDENCE.

RECONSTITUTION OF THE UNIVERSITY OF LONDON.

Sir,—Dr. Hale White, in his letter published in the British Medical Journal of May 2nd, states that University and King's Colleges have "adopted the scheme"—evidently meaning the scheme on which the Draft Charter is based, which is to be laid before Convocation on Tuesday next. The proceedings of the Senate, which are regularly sent to Dr. Hale White as a member of the Annual Committee of Convocation, showed that on March 3rd and 5th, 1891, letters practically identical were sent to the University of London from the Councils of University and King's Colleges, pointing out that on "some important points" the scheme differed from that to which the Councils of those Colleges had assented in July, and that they reserved full liberty to express their objections to the Lord President. These letters were read to the Senate on March 18th, and are published in the proceedings.

I cannot understand how Dr. Hale White can have translated these letters into an "adoption of the scheme;" but as his translation may mislead some of your readers, allow me to say that the objections have been sent to the Lord President, and that the teaching Colleges have determined to oppose the scheme before the Privy Council, should it be passed by Convocation. I had thought that the opposition of the London teaching Colleges was too well known to have permitted such a misrepresentation of their position being possible.—I am, etc.,

John Curnow, M.D.Lond.,
King's College. Dean of the Medical Faculty.

Sir,—I must ask you to afford me a small space to reply to Dr. White's last letter. In attempting to escape from his own mistakes and fix the burden of error upon my shoulders, Dr. White has only succeeded in plunging deeper into the morass of misconception into which he has fallen.

1. Dr. White contradicts my statement that the Royal College of Surgeons has not yet expressed its opinion on the scheme. Your leading article has by this time shown him that my letter was correct and his mistaken. The special meeting of the Corporation of the College of Surgeons takes place on May 11th, and until that meeting has been held it cannot be said that the body in question has approved of the scheme.

2. Dr. White is again unfortunate in learning, too late to save his reputation for accuracy, that King's and University Colleges have not approved of the scheme. Again, I refer him to your leading article. The fact that these bodies were opposing was known here some time ago. Dr. White, however, seems to have been in happy ignorance of it.

3. Dr. White climbs down, I am glad to see, as regards the ineligibility of colleges attached to other universities. On April 18th he wrote: "The chief Provincial Colleges are ineligible." He only "thinks" that time will show that he was right. Dr. White has scarcely grasped the meaning of the word ineligible. My contention was, and is, that the charter does not debar the Colleges in question from being made constituent colleges, and I am satisfied that this view is correct. Dr. White maintains that they will not be so constituted, and here I am happy to be able to agree with him, but this is a very different statement from his first.

4. Dr. White's point as to the M.D. degree is scarcely worth noticing. Again, his grasp of the meaning of words

seems to have failed. The value of the M.D. is in direct proportion to the difficulty of obtaining it. Reduce that difficulty and you lower the value. This, I should have thought, was obvious. If 150 new Fellows of the Royal Society were elected annually instead of 15, surely the F.R.S. would not be as great a distinction as it now is.

I regret to have been obliged to expose so many of Dr. White's mistakes, but the occasion is too important to allow them to go uncorrected.—I am, etc.,

Queen's College, Birmingham. BERTRAM C. A. WINDLE.

SIR,—The Senate has for years been blamed for making and keeping the standard of the examinations for the medical degrees too high, and also for certain regulations whereby it is rendered yet more difficult for London medical students to graduate.

The matriculation examination is constantly cited as forming a serious impediment to the entrance of medical students into the University. In 1873 Greek was made an "optional" subject; and in 1887 revised regulations were issued "to secure to each student a fuller and fairer opportunity of manifesting such knowledge as he really possesses." And there has during the last ten years been a large increase in the number of London medical students who passed the matriculation examination prior to registration, as the following figures, compiled from the Medical Students' Registers of the various years show:

	1880.	1885.	1890.
Total number of students registered in London ...	491	478	469
Of which number there had passed:—			
The University of London, matriculation, etc. ...	101	115	153
The Royal College of Surgeons, preliminary examination. (Abolished in 1882.)	228	3	1
The Apothecaries' Society, examination in arts ...	93	44	71
The College of Preceptors, examination for a certificate	4	236	131
The examinations of all other universities and other examining bodies	65	80	113

In other words, the undergraduates of the University of London, amongst the students first registered:

In 1880 formed 20.5 per cent. of the whole number.
" 1885 " 24.0 " " "
" 1890 " 32.6 " " "

Consequently, in 1880 one student in every 5 was an undergraduate of the University; but in 1890 nearly 1 in every 3 was an undergraduate. By so much had the popularity of the University increased amongst London students in eleven years. These are remarkable figures, and I am sure they will come upon many of your readers with a glad surprise.

The severity of the Preliminary Scientific Examination has always been much criticised; but its severity has now been virtually, though not actually, diminished by the Senate dividing the examination into two parts for any candidate desiring so to pass it, and by holding it twice yearly, in January and July. Formerly, also, it was not easy to obtain the tuition needed for the acquirement of the knowledge necessary for a pass, but this difficulty no longer exists. Now several good schools—St. Paul's School, King Edward's School (Birmingham), Epsom and Dulwich Colleges, the Normal School of Science, the Birkbeck Institute, Yorkshire, Owens, and Mason Colleges, for example—prepare for this examination, whilst the chief London medical schools have preliminary classes for the same object, the fees for attendance upon which are conveniently low. It is not surprising, therefore, that the numbers passing the examination yearly have grown from 98.4, the average of the five years 1876-80, to 122 in 1881-85, and to 164.1 in 1886-90.

As to the higher degrees, it is morally certain that a reconstituted Senate—that is, one leavened much more with the teachers of the medical schools than is the present Senate—will proceed much further than has the present body in the removal of the unnecessary difficulties which now, at all stages, still beset the attainment of the degrees of the University.

Those graduates may be expected to support the new scheme, by their votes on Tuesday next, who desire advance upon the lines hitherto followed, and which have resulted in the steady growth of the University itself and in the promotion of the cause of liberal education throughout the country.—I am, etc.,

Gloucester Place, W. GEORGE EASTES, M.B.

SIR,—Stated briefly, the "medical grievance" is that the degrees of M.D. and M.B. are, to the medical student in London, relatively less accessible than to the students in other centres of medical education, and that, in consequence, students who would otherwise come to the London schools go elsewhere. The remedy advocated for this state of things is the establishment in London of a degree of lower standard than the present M.B.Lond., on the argument that the examinations for the degree of the existing University are too severe for the average student. Particularly it is argued that the so-called Preliminary Scientific Examination is too difficult. From seven to eight years' experience of teaching biology to students for this examination, I claim to be able to speak authoritatively on this point, and I say emphatically that this examination is not too difficult for the average student if he is properly taught. If an academical year is given to the study of elementary science under proper teachers, 80 to 90 per cent. of the students will pass, and this has been the average percentage of passes amongst my students during the past seven years.

If, then, as I contend, the scientific parts of the curriculum for the M.B.Lond. are not too severe, what is the cause of the relative inaccessibility of the degree? It is, in my opinion, to be found in the fact that, speaking generally and without reference to any school in particular, the education in the more scientific portions of the curriculum is at fault, and the remedy is to be found, not in any attempt to lower the existing degree, but in making proper provision for educating the students up to its requirements. If London, as a centre of medical education, were as efficient in the way of appliances for the more scientific education—that is, were provided with suitable scientific teachers and properly-equipped laboratories, as is the case in Cambridge, Edinburgh, Manchester, Durham, and the other provincial centres—the "medical grievance" would gradually vanish. Speaking generally, the provincial universities, colleges, and schools are much better equipped for the scientific parts of medical education than London, and, on the contrary, London has facilities for clinical work which none of the provincial or Scotch centres can possibly possess.

The correct policy, then, is clear—the London schools should remedy their defective appliances for the more scientific parts of the curriculum.

The scheme for reorganising the existing University provides in no way for improving the teaching machinery, and cannot, in my opinion, be a final solution of the university question for London.—I am, etc.,

T. W. SHORE, M.D., B.Sc.Lond.,
Lecturer on Comparative Anatomy and Biology at St. Bartholomew's Hospital.

[WE are requested to publish the following correspondence.]

SIR,—At the suggestion of the Lord President of the Council, who states that he has no official knowledge of the scheme referred to in the letter addressed to him by the Master of the Society, of which I enclose a copy, I am instructed to send you such copy, and to ask you to be so good as to lay same before the Senate of the University of London, or other the body delegated by the University of London to deal with the scheme for a Teaching University for London. I am further instructed to state that the views of the Society on the subject are so fully embodied in that letter, that it seemed the simplest and most convenient course to furnish you with a copy of it rather than to restate the whole matter (practically in the same words) to the University of London.—I am, etc., "JAMES R. UPTON,

Society of Apothecaries, London. Clerk to the Society."

"MY LORD,—The attention of the Society of Apothecaries of London has been drawn to the scheme for a Teaching University for London, prepared by the University of London. Such scheme, so far as it excludes the Society from representation on the Senate, and also apparently from taking any part in the teaching or examining functions of the proposed University, appears to be defective for the reasons which I am desired to lay before your lordship.

"If you will refer to page 22 of the appendix to the report of the Royal Commission, made in 1889, you will find a very

accurate summary of the petition presented by the Society against the grant of the Charter sought for by the Royal Colleges of Physicians and Surgeons.

"The facts therein stated are the main grounds on which, without again repeating them, the Society contends that a very strong case is made in its favour for representation both in the Senate and the other departments of the Teaching University.

"The Society is aware that the report of the Commissioners does not specially assign a representative to the Society on the Senate of the proposed University, but it is urged that such report did not profess to lay down any hard or fast lines on which the Senate should be framed, and further, that the University of London has itself departed from the suggestions of the Commissioners by increasing the number of proposed members of that body.

"The very fact that the University of London feels itself at liberty to alter the scheme of the Commissioners in this respect, gives the Society the opportunity of pressing its claim that the scheme should be still further amended by giving representation to the Society.

"The Society feels that it has been placed somewhat at a disadvantage by what occurred before the Royal Commission. The origin of that Commission was mainly the consideration of the petition for a charter for a Medical University presented by the two Royal Colleges of Physicians and Surgeons.

"The whole weight of the Society's petition and evidence was directed against such charter being granted, and in that respect it entirely succeeded. But it was not specially invited to give its views, and never, in fact, did give its views in any way on the constitution or function of a general Teaching University for London. Had it done so it would, doubtless, have been able to show effectually that a very close analogy exists between the position held by the Incorporated Law Society (to whom the Report of the Commissioners has assigned representation) as regards the Law, and that of the Society as regards Medicine. The solicitor may be termed the 'general practitioner' of the Law, and if the body which represents him is to be entitled to representation, and to all the advantages arising therefrom, there would seem to be the strongest reason for placing the Society of Apothecaries of London in an equally good position.

"Lastly, if the Senate, or committees formed out of the Senate, as suggested by the Report of the Commissioners, are to elect the examining boards for the various faculties, the exclusion of the Society from the Senate of the proposed University seems still more difficult to understand. The Society urges with confidence that a Teaching or Examining Board in the Medical Faculty, from which any influence of the Society is to be absolutely and altogether excluded, would be imperfect, unpractical, and wanting in that liberal and broad basis which is essential to its efficiency.—I have the honour to be your lordship's very obedient servant,

"EDWIN CHABOT, Master."

"SIR,—I beg to acknowledge the receipt of your letter of May 9th with copy of a letter addressed by your Society to the Lord President of the Council, and I will submit these communications to the Senate in due course.—I am, etc.,

Burlington Gardens, W. "ARTHUR MILMAN."

INTERCHANGEABLE EXAMINATIONS.

SIR,—Reading Mr. Edward Tenison Collins's letter on the above has induced me to write a few lines. As a student of University College, London, I went through the same curriculum as the London University men; I had passed the Oxford Senior Local with honours, but this did not exempt me from the Matriculation. Therefore I was obliged to be content with the M.R.C.S.Eng., L.S.A.Lond. Then I went up to the University of Cambridge; here neither the Mathematics, French, nor English of the Senior Oxford was of any use, so I had to do the "Little Go" in Classics and Mathematics at 25, that is, do schoolboys' work again. Why are not the subjects at one examination, if passed, exemptions for the exactly identical subjects in another examination? This curse of modern education—the multiplication of examinations in name, number, and standard has spoiled the chances of many a good man for his M.D. degree; by the time he has satisfied the examiners on the same subjects twenty times his health and pocket are wrecked. If the exemptions were allowed many a man would be happy, before launching on private practice, to devote at any university two or three years to original research for his M.D. or M.S. degree, provided that the three years were clear of this vexatious repetition of examinations.—I am, etc.,

Bexhill-on-Sea. EDWARD H. RYAN-TENISON.

MEDICAL OFFICERS OF HEALTH AND PRIVATE PRACTICE.

SIR,—In an annotation under this heading in the BRITISH MEDICAL JOURNAL of May 2nd, approval is expressed of the principle that medical officers of health in the metropolis should give the whole of their time to their official work. Allusion also is made to a West End district which has recently appointed a medical officer of health at a salary of of £350 a year, but has not asked him to devote his whole time to his duties.

Now, I think the position of the vestry of this district is perfectly intelligible. Their late medical officer of health did not devote his whole time to his duties, yet his work was productive of such excellent results as the steady diminution of the death-rate and the elevation of the parish to quite a front rank amongst metropolitan sanitary districts for its good sanitary condition and sound methods of administration. The vestry, therefore, was perfectly satisfied with the conditions under which such work had been done, and determined to appoint his successor on the same lines. It was recognised, also, that to obtain a successor of the calibre of their late medical officer it would be necessary either to offer a large salary for his whole time, or to appoint at a smaller salary giving him leave to retain such private work and emoluments—not being general medical practice—as would make it worth the while of such specially qualified men to offer themselves for the post. Is it wonderful if the vestry, believing that by the latter method they could get as good, a man who would do as much good work, should prefer it as being far the most economical?

On the general question I have always been of opinion that medical officers of health of large or populous districts should not be in ordinary medical practice. Public health work and medical practice are incompatible. One or the other is sure to suffer, more especially the former than the latter. But medical men who look for their future to sanitary work are now receiving a very prolonged and expensive training in this branch of science; they are obtaining posts as professors, lecturers, and examiners to the medical schools, colleges, and universities, and in some cases obtain lucrative practice as sanitary experts in the investigation of infectious disease outbreaks, and in reporting upon the sanitary conditions of hospitals, schools, institutions, etc. Is it not desirable that medical officers of health should be recruited from the ranks of those who by training, by their position as teachers and examiners, and by their special experience, are taking a leading part in their own department? And yet they will not be attracted to the public sanitary service if they are required to resign their appointments and are debarred from all private work, for the vestries are not in the least likely to offer salaries sufficiently large to compensate for the loss such men must actually sustain.

It also must not be forgotten that a medical man who engages to devote all his time to the duties of a medical officer of health becomes at once a vestry official pure and simple, and loses in the eyes of his board much of his independent position as a man of science first, an adviser of the board after that. There is also this to be said, that a medical officer thus tied down loses those opportunities of acquiring a wide and varied experience and a mature judgment in sanitary matters generally, which consulting sanitary work outside his parish and contact with the outer world give him, and a tendency would in time be produced towards a narrowing of views and a condition of unprogressiveness from the limitation of his experience to a certain prescribed area on the map of London. Such a result, in its way, would be deplorable and antipathetic to real sanitary advancement in his own parish.

I venture to think that the subject is not yet by any means

fully ventilated, and that any attempt to apply a hard and fast rule to all London parishes would defeat the aims of those who have improved metropolitan sanitary administration most at heart.

Louis C. Parkes, M.D., D.P.H.Lond.,
Medical Officer of Health for Chelsea.

Sir,—We can hardly expect that the adoption of the whole service system will lead to beneficial results, since it is not likely that the salaries offered will attract the right sort of men. Whilst therefore approving of the principle advocated by Mr. Gainsford Bruce in the abstract, I think that its application in London at the present time would be unsuitable, unless, indeed, some provision could be made for taking the appointment of medical officers of health entirely out of the hands of the vestries, and giving it to a central authority which might be trusted not to sacrifice important public health interests to false ideas of economy.

One point which will need to be clearly defined is whether by "private practice" is to be understood practice as a general practitioner or physician, or whether the right of medical officers of health to act as sanitary experts is also included.—Yours, etc.,

M. O. H.

THE MIDWIVES BILL.

Sir,—Although the opponents of this Bill—like myself—cannot be anything but pleased with the terms of the report which the College of Physicians has adopted, upon the recommendation of their Committee, yet it is impossible to withhold an expression of regret that a College occupying such a prominent position and possessing such valuable monopolies for its Fellows and Members should have issued it. I will briefly state the grounds for these sentiments. In the first place, the report proves the correctness of the position which I have taken up on this question.

The Committee—no fewer than three of whom are closely connected with the Council of the Obstetrical Society and one with the Parliamentary Bills Committee of the British Medical Association, and therefore can scarcely be called an impartial one—bases its action upon two statements: (*a*) That there are from 10,000 to 15,000 midwives practising in England; (*b*) that midwives are under careful State control in all the other principal countries of Europe.

Now, considering that the Council of the Obstetrical Society has been at work at this subject since 1870, and that doubtless at least three of the Committee have the results of twenty years' work on the subject before them, the statements upon which the report is based are meagre, to say the least of it, and must be considered a totally insufficient foundation upon which to base a plea of necessity for legislation. The College apparently thinks that it is advisable to substitute an uneducated class for those whom it licenses to practise in midwifery; and, presumably on the same grounds which one of its members brought forward in his presidential address, namely, that practitioners of the present day possessed too much science, and used artificial means of delivery too freely, with consequent injury to the patient. It might have been supposed that the College, when in possession of this statement, would have desired to do everything in its power to increase the knowledge of the groundwork of the subject amongst those whom it licenses, and to diminish, as far as possible, the practice of any but those who are fully qualified. At all events, it appears impossible for them to have decided to take action in this matter solely upon the terms of the report.

With regard to the second statement, it is a pity that the Committee did not see fit to give the puerperal statistics of those countries which it holds up to admiration, and to compare them with those of our own, because the value of it would then have been apparent.

The fourth clause of the report proves that the introducers of this legislation are utterly at sea as to what they really want. Clause 5 in the Bill is the one designed to prevent the practice of unqualified midwives, and, as everyone is aware who knows anything of the practical rule of the question, is inadequate. This clause the Committee thinks impracticable, but the members think that it can be made practicable by the insertion of the word "registered" before midwife!

The fifth clause of the report begs the question. Doctors are not at all likely to raise objections to any measure which may conduce to the welfare and comfort of the poor, but those who practise amongst the poor know that the proposed measure will advantage them in no degree—and when I say the poor, I exclude the thriving artisan and well-to-do tradesman. The Committee has not thought it worth while to point out the reason why, out of the large number of trained midwives at present sent out by lying-in institutions, so few are found in actual practice amongst the poor and destitute. Again, the question is not so much the practice of medical men as the proper provision for the poor. If trained midwives before registration do not undertake this class of practice, why should they after registration?

The Committee make no attempt to show that, at the present time, the poor are improperly attended, or that there are not sufficient doctors who will attend them in their confinements; nor do they attempt to show that, if a Bill to introduce midwives (registered) were passed, those who run the risks of delivery with only a relation or neighbour at hand, will alter their ways. The plain fact of the matter is that it is perfectly well known that unless a midwife can get the better classes amongst those who are termed "the poor" as patients, it would not be worth her while to start in practice, and this she would only be likely to accomplish with a legal position. The poor—who are poor—especially in outlying and sparsely inhabited country districts, would certainly be left in much the same position as they are now. Many men find the practice of midwifery irksome; others think it beneath their dignity to accept even guinea fees. The question as to whether it is advisable to encourage these and to discourage those who are working in an honourable manner in the subject is one which might well have claimed the attention of the Committee. From the point of view of the science, it appears to me advisable in every way to encourage a high standard of practice, and it is difficult to see how the introduction of an uneducated class with a legal position can do anything but tend to put the position of the science back instead of forward.

Clause 6 of the report is inadequate, for Lord Cranbrook distinctly stated that the House of Commons objected to appoint Select Committees unless a *primâ facie* case for the necessity of inquiry was shown. What case does the report show?

I regret then, in the second place, that a body, which worthily occupies such a high position in the profession, should go to Parliament on grounds which are manifestly insufficient.—I am, etc.,

Hatfield. Lovell Drage.

THE VALUE OF TUBERCULIN IN SURGERY.

Sir,—In your abstract of my paper at the Royal Medical and Chirurgical Society, one sentence hardly expresses my meaning. On page 960 you say: "It (the treatment) might also be of value in enabling the surgeon to perform less severe and radical operations than he might otherwise do; that is to say, one or two doses might be given a few days before operation, in order that the limits of the tuberculous disease might be clearly evidenced." This sentence really contained two independent statements. The first is that the treatment might enable the surgeon to perform less radical operations, trusting to the tuberculin to complete the removal of the tubercle, and the second that in some cases it might be useful to give one or two doses before operation, in order to define the limits of the disease.—I am, etc.,

Welbeck Street, W. W. Watson Cheyne.

THE "SALIPHONIC" TEST FOR PROTEIDS.

Sir,—It has been suggested to me by Sir William Roberts that it might be desirable to have a shorter name for this test. The full name is indeed a long one for common use, though it has a certain advantage in indicating the constitution of the substance employed. I would now suggest that the phrase "saliphonic test" might be used as a short name for this proteid reaction.

Salicyl-sulphonic acid and its having a solidifying action on white of egg were first mentioned to me by Dr. McKenzie Davidson with a view to its possible use as a hardening agent. Since the publication of my paper in the British Medical Journal, I have learned that Dr. Davidson

had already, prior to our conversation, tried the reagent with albuminous urine, such use of the substance being suggested by reading an abstract of a paper by Roch in the *Pharm. Centralb.* (September 19th, 1889, p. 549), in which salicyl-sulphonic acid is proposed as a test for albumin in urine. I have not yet been able to see a copy of this paper. I was entirely unaware of the existence of any such paper or abstract when I wrote my article, and my application of salicyl-sulphonic acid as a test for albumin and other proteids was an entirely independent idea of my own.—I am, etc.,

Aberdeen, April 29th. JOHN A. MACWILLIAM, M.D.

MEDICO-LEGAL AND MEDICO-ETHICAL.

SIXPENNY DOCTORS.

SENEX writes: Permit me to supplement your remarks on a "sixpenny doctor" in the BRITISH MEDICAL JOURNAL of May 2nd, and ask if it is not possible to influence the universities to prevent their graduates practising as apothecaries, and, as some are doing, keeping open shops, and, in other instances that have been known to me, retailing bottles of physic at 4d. each, the advice gratis, valued at 0—probably what it was worth? The present craze for M.D. would be justifiable if the title was an emblem of respectability and ability, while the Members and Fellows of Colleges of Physicians are precluded from making a trade of the profession. The gentlemen (?) M.D. who assume a superiority should be prevented from degrading it by retailing lollipops, soaps, and tooth-brushes, and charging the extravagant sum of sixpence for advice and medicine.

M.D. (HONOURS) D.SC.EDIN. writes: I sincerely trust that the statement in regard to the "sixpenny doctor" being a graduate of Edinburgh University will turn out to be only an assumption, for it is the first time I have heard of an Edinburgh graduate descending to such depths. I was once acquainted with a so-called "dispensary doctor" who charged a shilling, and he confessed that it was not possible to attempt anything like a diagnosis of his patient's trouble as there was so little time. He, for example, prescribed for 130 persons in two hours. Of course he had no private practice whatever, and depended altogether upon casuals, whom I need hardly say he rarely saw again. Unfortunately, a university in granting a degree cannot interfere with the man's mode of practice subsequently so long as he does not transgress the law, and render himself subject to the censure of the General Medical Council. However, I have generally found in such cases that there was, or had been, something very far wrong in the individual's previous general conduct, his ability not being questioned, which caused him to descend to such work—indeed, it ought not to be dignified by the name.

MIDWIFERY FEES.

M.R.C.S., L.M., writes: In the case of another practitioner being called in by the patient and attending to a case of confinement, owing to the medical man engaged at a certain fee to attend not being at home when sent for, is it not usual to divide the fee, and not call upon the patient to pay another fee to such practitioner suddenly called in?

*** The following rule, extracted from the *Code of Medical Ethics*, Chap. ii, Sec. 5, rule 12, is that by which the above case should be governed: When a practitioner is called in, or otherwise requested to attend at an *accouchement* for another, and completes the delivery, or is detained for a considerable time, he is entitled by custom (except in the case of illness, etc., provided for by Rule 3) to one-half of the fee; but on the completion of the delivery, or on the arrival of the pre-engaged *accoucheur*, he should resign the further management of the case. In a case, however, which gives rise to unusual fatigue, anxiety, and responsibility, it is right that the *accoucheur* in attendance should receive the entire fee.

Note.—In either event, when the officiating *accoucheur* is a stranger, or a non-acquaintance of the family doctor, the full fee should be tendered to him.

"A CARD."

WITH reference to a note under this head which appeared in the BRITISH MEDICAL JOURNAL of April 25th, page 935, we are asked to state that "Dr. R." referred to issued the card in question under special circumstances, which appeared to him and to certain friends whom he consulted to justify him in the course which he took. Finding that the issue of the card had given offence, he immediately directed it to be withdrawn.

NAVAL AND MILITARY MEDICAL SERVICES.

FORNIX asks what steps are necessary to be taken in order to become Surgeon or Acting-Surgeon to Volunteers, and if there is any limit to age?

CRICKET COLOURS.

PRIMROSE.—The subject does not appear suitable for discussion in the columns of a medical paper.

DEPUTY SURGEON-GENERAL J. WARREN.

THE officers, Army Medical Staff, Woolwich District, gave a farewell dinner to Deputy Surgeon-General J. Warren on April 20th, at the Savoy Hotel, this officer being about to proceed to India. Brigade-Surgeon Ray, in proposing the health of the guest of the evening, expressed the regret of all present on the loss of so popular a Principal Medical Officer, and wished him prosperity and a speedy return. The following officers were present: Brigade-Surgeon Ray, Honorary Deputy Surgeon-General Norris (r. p.), Surgeons-Major Bradford, Gasteen (r. p.), Moore-Keys, and Hunt, Surgeons Wodehouse, Peard, Lewis, Jerome, Simpson, Wodd, Tate, MacCormack, Blackwell, and Blenkinsop.

THE NAVY.

FLEET-SURGEON WALTER REID, M.D., has been promoted to be Deputy Inspector-General of Hospitals and Fleets, May 1st. His previous commissions are dated: Surgeon, September 7th, 1863; Staff-Surgeon, July 12th, 1871; and Fleet-Surgeon, April 28th, 1882. He was attached to the Transport Service as Health Officer during the Ashanti war in 1874, being mentioned in despatches and receiving the medal. He was specially promoted to be Fleet-Surgeon on account of conspicuous professional merit, in accordance with the provisions of Her Majesty's Order in Council dated April 1st, 1881.

The following appointments have been made at the Admiralty:—PERCY W. BASSETT-SMITH, Surgeon, to the *Penguin*, April 17th; JAMES T. W. S. KELLARD, Staff-Surgeon to the *Invincible*, May 5th; GEORGE A. DREAPER, Surgeon to the *Defiance*, May 28th; GEORGE D. TREVOR ROPER, Surgeon to Haslar Hospital, May 7th; JOHN S. FOGERTY, M.D., Surgeon to Plymouth Hospital, June 6th; EDGAR R. DIMSEY, Surgeon to the *Vivid*, June 6th.

Fleet-Surgeon WILLIAM BROWN has been placed on the retired list of his rank at his own request. His commissions are thus dated: Surgeon, March 2nd, 1871; Staff-Surgeon, July 11th, 1882; and Fleet-Surgeon, July 8th, 1890. He was Staff-Surgeon of the *Monarch* at the bombardment of Alexandria in July, 1882 (promoted), and during the Egyptian war (medal with clasp, and Khedive's bronze star).

THE MEDICAL STAFF.

INSPECTOR-GENERAL ROBERT LAWSON, M.D., is appointed Honorary Surgeon to the Queen, *vice* Surgeon-General T. G. BALFOUR, M.D., F.R.S., deceased, May 6th. Dr. Lawson entered the service as Assistant Surgeon, May 15th, 1835, and after passing through the intermediate grades, became Inspector-General, March 9th, 1867, and retired on half-pay, June 19th, 1872. *Hart's Army List* informs us that he was present at the storm and destruction of the fortified native Mandingo town of Sabajee, on the Gambia, on June 1st, 1853, and that he served in the Crimea from November 8th, 1854, to January 15th, 1855, receiving the medal with clasp for Sebastopol, the 4th Class of the Order of the Medjidie, and the Turkish medal.

Deputy Surgeon-General THOMAS RUDD, serving in Bengal, is transferred from the Allahabad District to the administrative medical charge of the Meerut District, *vice* Deputy Surgeon-General W. Collis, tranferred to the Home Establishment.

The undermentioned surgeons, recently arrived in England, are placed on general duty as follows, all being in the Bombay command: F. A. HARRIS, Poona District; W. E. BERRYMAN, Mhow District; A. L. H. DIXON, Poona District.

Surgeon W. J. CROFTON, who is serving in the Bombay command, has leave to England for six months on medical certificate.

Surgeon PAUL CONNOLLY, late of the Army Medical Staff, has been called to the Bar at the Inner Temple.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR T. J. AUBIN, M.D., 3rd Royal Jersey Militia, is appointed Surgeon-Major ranking as Major, May 6th.

Surgeon F. V. ADAMS, 1st Lanarkshire Rifle Volunteers, is appointed Surgeon, ranking as Captain, May 6th.

Acting-Surgeon D. T. KEY, 1st London Artillery Volunteers, is appointed Surgeon ranking as Captain, May 6th.

INDIAN MEDICAL SERVICE.

SURGEONS F. F. PERRY, P. W. DALZELL, M.B., S. LITTLE, M.D., G. H. D. GIMLETTE, M.D., C. B. HUNTER, and J. C. C. SMITH, M.B., all of the Bengal Establishment, having served twelve years, are promoted to be Surgeons-Major from March 31.

Surgeon-Major H. D. MASANI, Bombay Establishment, Medical Officer 30th Native Infantry, has leave to South Africa for six months on private affairs.

Surgeon-Major A. F. SARGENT, Bombay Establishment, is directed to act as Civil Surgeon of Sattara, in addition to his own duties, during the absence of Surgeon-Major D. C. Davidson on privilege leave.

THE VOLUNTEERS.

MR. HARRY WATT ROBINSON, M.B., is appointed Acting-Surgeon to the 1st Lanarkshire Engineers, and Mr. CHARLES LENOX CUNNINGHAM, late Surgeon Royal Navy, is appointed Acting-Surgeon to the 1st Sussex Engineers, both to date May 6th.

Acting-Surgeon W. SQUARE, 2nd Volunteer Battalion, Devonshire Regiment (late the 2nd Devonshire), has resigned his appointment, which was dated February 28th, 1891.

Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) B. ANNINGSON, 4th Volunteer Battalion Suffolk Regiment (late the 2nd Cambridgeshire), has resigned his commission, with permission to retain his rank and uniform; his appointment as Surgeon dates from November 21st, 1865; that of Surgeon-Major from February 1st, 1889.

MEDICAL MAGISTRATE.—Dr. A. Mussen has been appointed a justice of the peace for County Antrim.

MEDICO-PARLIAMENTARY.

PUBLIC HEALTH (LONDON) LAW AMENDMENT BILL.

THE Standing Committee on Law which, with added expert members, has been proceeding with the consideration of the Bill for amendment of the laws relating to Public Health in London, has found it necessary to reprint the various sections of the Bill as amended, in order that the effect of a complicated series of verbal changes may be intelligible. There will be no controversy, we imagine, among those who are interested in the public health that the labours of the Committee on the clauses from 12 to 23, which have just been reprinted, have resulted in a great improvement of the law. There are very careful provisions in Clause 13 that a sanitary authority shall not, in the removal of house and street refuse, themselves create a nuisance; and that, if they do, they shall be amenable to the jurisdiction of the County Council summarily. Clause 15 having been defeated, the provisions of Clause 16 and 17 have been so recast as to constitute a simple and effective declaration of the duties of a vestry as to street cleaning and scavenging, with the subsidiary enactment that any dustman who demands a gratuity shall be fined twenty shillings. Clause 18 provides a simple machinery by which "obnoxious matter" other than ordinary refuse may be promptly removed. A following clause effects a necessary reform as to the provision of water-closets and privies, and enables the County Council to make by-laws with respect to all such matters. Clause 22 clears up and extends the existing law as to the powers of the sanitary authority to provide public sanitary conveniences, including lavatories and ashpits; and it declares what was before doubtful—namely, that the subsoil of any street or road is for such purposes deemed to be their property, without compensation to any neighbouring proprietor who might claim a title to it as a part of his land. After these follow the clauses concerning unsound food.

A great part of the meeting on Monday was taken up with the consideration of Clause 23, which amends and makes more stringent the existing law affecting the sale of unsound food, by providing that the maximum fine should be £50, and the maximum term of imprisonment six months.

On the motion of Mr. RITCHIE, words were added enabling the fine and imprisonment to be imposed on the person to whom the unsound article or animal belonged at the time of deposit for the purpose of sale or for preparation for sale.

It was further agreed, at the suggestion of Mr. WHITMORE, that the imprisonment should be with or without hard labour.

Some discussion took place as to the advisability of requiring a notice of the facts of a second conviction to be posted on the premises occupied by the person convicted. In the end the suggested addition was adopted, with a proviso that the notice should only be affixed in cases where the Court was satisfied that the second offence had been knowingly and wilfully committed.

Clause 26, which deals with the disinfection of bedding and other articles, was amended by the introduction of a provision that the cost of such disinfection should in every case be borne by the sanitary authority.

Clause 29, imposing a penalty on any person who, knowing himself to be suffering from an infectious disease to which the Infectious Disease (Prevention) Act, 1890, applied, engaged in milking, fruit picking, or any occupation connected with food, was adopted; and the subsequent words of the clause were amended so as to prohibit such a person from carrying on any business in a manner likely to spread the disease.

On the motion of Sir GUYER HUNTER, the following addition to Subsection 3 of Clause 29, which had been suggested by the Parliamentary Bills Committee, was adopted: "and it shall be unlawful for him knowingly to convey, and for any other person knowingly to place, in any public conveyance any person so suffering, and if he so does he shall be liable to a fine not exceeding ten pounds."

FACTORIES AND WORKSHOPS BILL.

At the meeting of the Standing Committee on Trade on May 4th, Sir William Houldsworth's proposal to prohibit the employment of children under the age of 11 years in factories or workshops was negatived by 27 to 22. Mr. Buxton failed to carry his proposal to prevent the employment of children over 14, except as half-timers, unless they had passed Standard V of the Education Code. Mr. David Randell moved that "all sections in the principal Act referring to certifying surgeons and certificates of fitness shall apply equally to workshops as to factories." The proposal was rejected by 12 to 11. The Bill, as amended by the Standing Committee, will be printed, and has been put down for discussion in the House on Monday, May 25th. Mr. Buxton has given notice of his intention to move a new clause prohibiting the employment of children under 12, and the employment for full time of a child over 14 not having obtained an educational certificate for Standard V.

HOUSE OF COMMONS, Thursday, April 30th.

Tuberculosis in Cattle.—Mr. RITCHIE, in answer to Sir T. SUTHERLAND, said the Commission on tuberculosis had been sitting since July last. The Commissioners were now engaged in carrying out an exhaustive series of experiments, the results of which could not be determined for some months.

Experiments on Rabbits.—In reply to a question put by Mr. S. SMITH as to whether the attention of the Secretary of State for the Home Department had been drawn to the experiments with phthisical sputum reported by Mr. Watson Cheyne in the BRITISH MEDICAL JOURNAL of April 11th, Mr. MATTHEWS said he had seen the report of these experiments in the journal referred to. They were made in the years 1887 and 1888, and a summary of them appeared in the annual report of the inspector presented to Parliament for those years under Table 3. From that table it appeared that they were under certificate A, which authorised experiments without anæsthetics, and which was granted on the supposition that the experiments were simple inoculations. He was informed by the inspector that the great majority of these experiments were simple inoculations, but that in the cases where the inoculation was performed on bone, as detailed in the journal quoted, the animal was fully under the influence of chloroform. With regard to subsequent pain, the licence always carried a condition that, if severe pain had been induced in an animal after the experiment, and if the main result of the experiment had been attained, the animal should be immediately killed under anæsthetics.

OBITUARY.

THOMAS HIRON BARTLEET, F.R.C.S.,

Birmingham.

MR. T. H. BARTLETT, whose death we announced last week, was a Birmingham man born and bred. The son of a highly esteemed medical practitioner, he was educated at the local foundation of King Edward the Sixth, and having completed with credit this stage of his education, entered the medical profession as a student at the Queen's College and the General Hospital. At a later date he migrated to King's College, London, and became M.B.Lond. in 1860, graduating with the high distinction of the gold medal in surgery. In 1871 he obtained the Fellowship of the Royal College of Surgeons by examination. Returning to Birmingham, after a course of operative surgery in Paris, he joined his father's partner, Mr. M. H. Clayton, Mr. Bartleet, senior, retiring from practice. Inspired with a love for surgery, he was highly gratified by obtaining the post of Surgeon to the Children's Hospital. In 1867 he was elected Surgeon to the General Hospital, but not without a severe struggle, for in those days every governor was a voter, and a hospital election was little less arduous than a parliamentary one; and his antagonist, moreover, was in every way a worthy one. His experience at the Children's Hospital and his gold medal in surgery stood him in good stead in this contest, and so no doubt did the regard in which his father was held, and the strenuous vigour of Mr. Clayton.

Upon the sudden death of Mr. Clayton in 1873, finding himself with a larger private practice than he could well manage, he was joined by Dr. E. Malins in a partnership, which a few years ago expired by effluxion of time.

To enumerate the local medical societies in which he took an interest would be to give a list of all existing ones. But his chief work was in connection with the Birmingham Branch of the Association, which benefited both as to its work and its number of members by his tenure for ten years of the Secretaryship. He was subsequently elected President.

When the Association met in Birmingham in 1873, his services as one of the local secretaries were most valuable. At the meeting last year he was asked to become President of the Surgical Section, a request which gave him intense satisfaction.

With the Birmingham Medical Benevolent Association his connection was hereditary. His father-in-law, Mr. Samuel Berry (whose only child he married in 1867) and Mr. Clayton were for many years on the Board of Management. Hence it can be readily understood that with his tender and sympathetic heart he was led to spend many an hour in hard work both in collecting funds and in assisting in their thoughtful distribution.

In his early years there were two medical schools in Birmingham, the Queen's College and the Sydenham College. An opinion came to be entertained that the cause of medical education would be assisted by an amalgamation of these two bodies. In procuring this result Mr. Bartleet took an energetic part in conjunction with the late Dr. Russell. To both of them it was a matter of deep regret that this, as it appeared to them, necessary reconstruction, could not be effected without doing violence to the feelings of very esteemed colleagues, who were warmly opposed to it. The amalgamation of the General and Queen's Hospitals for clinical instruction was an outcome of this change.

Mr. Bartleet was for some years Professor of Physiology in Queen's College, a chair in which he took not only pride but pleasure. After the foundation of Mason Science College, the advantage of certain chairs being filled by professors who could, unshackled by the claims of practice, devote to their duties their entire time, became apparent; of these, one was the Professorship of Physiology, and Mr. Bartleet, without hesitation, volunteered to efface himself. A partial amalgamation, lately rendered complete, between the two bodies thereby became possible. Of this complete fusion he was an ardent supporter. He had for some years been lecturer on operative and practical surgery at Queen's College. For this duty he was specially qualified, not only by his general knowledge of and experience in surgery, but by a notable deftness of manipulative skill and a delicacy of touch which did not degenerate into irresolution.

Mr. Bartleet had for some years been on the city bench of magistrates and a visitor of the city gaol. We may here quote the words of the stipendiary spoken in court on the morrow of his death: "All present feel the deepest sorrow. As a magistrate, our late colleague attended the court with a determination to take his share of the work and a firm resolve to do his duty in such a manner as would be both just and right." Mr. Colmore further added that as a friend he had found him a true one, and that his appreciation of his value made at his loss all the greater.

In politics a Conservative both by descent and conviction, Mr. Bartleet took a somewhat active part in local politics, and was a staunch supporter of that combination which is known as Unionism.

So much for that side of the man which is shown to the public. In it there was much worthy of respect. If we turn to that side which is shown only to more intimate observers, we shall find not less but rather more to admire. It is a common remark that beyond the business relations which exist between a medical attendant and his patients there are those of the friend and the confidential adviser in most intimate affairs. In a practice where to a great extent the doctor has inherited his patients and the patients have inherited their doctor these relations are emphasised. Such was the case here, although it is only justice to say that Mr. Bartleet had by his personal talents acquired a large number of new clients. Many patients new and old are lamenting the wise adviser, the man who would spare no time, no trouble, to assist them in their hour of difficulty whether as a doctor or as a friend; some, indeed, will miss the more material assistance ever unostentatiously and liberally at their service when material assistance was wanted. We here avail ourselves of the testimony, eloquent in its simplicity and heartfulness, of one who knew him well and loved him.

Preaching at St. George's, Edgbaston, last Sunday morning, the Rev. C. M. Owen (vicar) said he ventured to say that very rarely had the men and women of that neighbourhood been so shocked on taking up the morning newspapers as they were on Thursday morning last, when for the first time they received an intimation that Mr. Bartleet had not only been unwell, but that he had passed away from this life. That day fortnight, at the morning service, he was in his place at that church. As lately as last Monday he was going his rounds, visiting his patients whom he loved so well. The medical profession had lost one of its most prominent and active members, and one whom his colleagues would miss. The medical profession was not the only circle where the blank would be felt. There were many in the church that morning, there were many more in the neighbourhood of Birmingham, who knew what Mr. Bartleet was in a sick room. There was a singular gentleness about his character, there was a cheery expression upon his face, which always brought comfort and strength to his large number of patients. To that church and parish he had been a true friend. He was one of the first liberal donors towards the erection of that church, in which he always took the keenest, deepest, and most enthusiastic interest. During the last two years he had most admirably performed the duties of vicar's warden. As a private friend, he could not then speak of him. Lips could not always state what the heart felt. Many of those present had lost a dear friend, and he who was speaking had lost one likewise. Mr. Bartleet was incapable of doing an unjust act, or saying an untrue thing. His very outspokenness, his very open manner, proved his true sincerity. He (Mr. Owen) could never forget Mr. Bartleet's attention, devotion, and anxiety for him when, two years ago, he was upon a bed of sickness.

It may be mentioned that Mr. Bartleet had been aware, for two or three years past, that he was the subject of diabetes. The shortness of his last illness is but another sad example of the uncertain tenure of life in such cases. Mr. Bartleet was laid, on Tuesday, by the side of his parents at Chipping Campden. The first part of the burial service, chorally rendered, was performed (at St. George's, Edgbaston) in a church crowded by a number of colleagues, lay and medical, friends and patients, male and female, Jews as well as Christians, desirous of showing that regard and respect in death which they had so deeply felt for the living man.

JOHN McDOUGALL STEWART, M.R.C.S., L.S.A.,

Surgeon Army Medical Staff.

John McDougall Stewart, whose death, at the early age of 34, we record with regret, received his medical education at the Middlesex Hospital. He subsequently entered the Army Medical Service, and served with distinction in Egypt; for this he received a medal and clasp. After being stationed for a time at Jersey, he was ordered to India. After a short residence his health gave way, and he returned to Jersey, where, after a long and painful illness, he died, Sunday, April 26th. He was buried with full military honours. Dr. Stewart's early death will be deeply regretted by a large circle of friends. He married the second daughter of Mr. Charles Godfray, of the Old Bank and Beau Séjour, Jersey. He leaves his widow and two children.

A. J. MANSON, M.D., M.R.C.S.,

Banff.

Dr. Manson died at his residence in Banff on April 30th, aged 80. Deceased was born in England, where his father was a military officer. He studied both Arts and Medicine at the University of Aberdeen, and after spending some time in the London hospitals and in medical service abroad he began practice in Forgue in Aberdeenshire in 1835. For a quarter of a century he pursued his profession successfully there until he went to Banff as the partner of the late Dr. Milne. Both at Forgue and in Banff he was distinguished by a keen and lively interest in his profession. He had retired from active work for about four years, and wholly ceased to practise a year ago. He had a thorough love of his profession, and although located at a distance from the centres of light and leading he succeeded in keeping himself abreast of the latest discoveries in the science. It is stated that he was among the first, if not the very first, in this country to make use of cod-liver oil as a medicine. In appreciation of his professional services and unselfish devotion, Dr. Manson was, in 1883, presented, in the Council Chamber of Banff by Sheriff Scott-Moncrieff, in the name of 300 subscribers, with a tray,

together with the sum of 500 guineas and a handsome piece of plate, as a testimonial from his many friends. The Chairman, on the occasion, remarked that the gifts were an expression of the gratitude of many hearts which had been lightened in times of anxiety by his words of hope and cheered in the day of sorrow by his kindly sympathy. In 1884 Dr. Manson was, along with Dr. Davidson, Wartle, entertained to dinner by the profession in Aberdeenshire and Banffshire in celebration of their professional jubilee. He was presented with a beautifully-illuminated congratulatory address bearing the signatures of the gentlemen who took part in the jubilee celebration. Dr. Manson was married to Mary, daughter of the late Dr. Mitchell, R.N., Ellon, who pre-deceased him last year, leaving no family.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

THE following have been appointed examiners for the M.B. degree: W. D. Halliburton, M.D.Lond., Examiner in Physiology; A. L. Galabin, M.D.Camb., Examiner in Midwifery.

AN important statute has been passed by Convocation authorising the holding of the examination in Anatomy and Physiology for the first M.B. twice in each year, namely, in Michaelmas and Trinity terms. Now that the number of students in the medical school is increasing steadily, this will be a great boon to those unfortunate enough to fail in the examination, as it will allow them to come up for re-examination after an interval of six months instead of a year.

THE Hebdomadal Council have elected Mr. Tyrrell Brooks, M.A., M.B., Christ Church, and A. Winkfield, F.R.C.S., as Lichfield Lecturers in Clinical Medicine and Surgery.

THE Medical Board have issued a new syllabus for the Materia Medica part of the M.B. examination.

UNIVERSITY OF CAMBRIDGE.

PHARMACEUTICAL CHEMISTRY.—The Special Board for Medicine, in accordance with Regulation 10 for the degree of Bachelor of Medicine, publish the following schedule defining the range of the examination in pharmaceutical chemistry, and give notice that the schedule will come into force at the beginning of the next academical year (October 1st, 1891).

The examination will be practical, and will have reference to the chemical principles involved in—the preparation of Fowler's solution (*liquor arsenicalis*) and the hydrochloric solution of arsenic (*liquor arsenici hydrochloricus*), and the reactions of these solutions with ferric salts; the preparation from ferrous sulphate of phosphate of iron (*ferri phosphas*) and the solution of ferric sulphate (*liquor ferri persulphatis*); the preparation from ferric oxide of reduced iron (*ferrum redactum*); the preparation of iodide of potassium (*potassii iodidum*), and the action of dilute acids, ferric salts, and other oxidising agents, upon it; the reactions of sulphide of calcium (*calx sulphurata*) with acids and with salts of copper and lead; the detection of oxide of mercury with chalk (*hydrargyrum cum creta*); the preparation by sublimation of corrosive sublimate (*hydrargyri perchloridum*) and calomel (*hydrargyri subchloridum*), and the detection by means of ether of the former salt in impure calomel; the action of alkaline solutions on corrosive sublimate and calomel respectively; the action of solution of ammonia (*liquor ammoniæ*) on corrosive sublimate to form ammoniated mercury (*hydrargyrum ammoniatum*), and the chief reactions of this compound; the reaction of chloride of antimony (*liquor antimonii chloridi*) with water, the preparation from oxide of antimony (*antimonii oxidum*) of tartar emetic (*antimonium tartaratum*), and its principal reactions; the reaction of bismuth nitrate with water to form subnitrate of bismuth (*bismuthi subnitras*), and the reactions of the salt with water and with ammonia in the presence of citric acid: the action of alkalies on hydrate of chloral (*chloral hydras*); the preparation of iodoform (*iodoformum*); the preparation from ferrocyanide of potassium of diluted hydrocyanic acid (*acidum hydrocyanicum dilutum*), its formation from bitter almonds, and the production from it of Prussian blue; the reactions of the tannins of galls (*gallæ*), of rhatany (*kramcriæ radix*), and of catechu, with gelatine, lead acetate, ferric salts, and tartar emetic; the chief reactions and the detection of salicin, salicylic acid, and carbolic acid; the detection of any one of the following alkaloids in a mixture of it with other organic substances, by means of its characteristic reactions—morphine, quinine, conine, brucine, and strychnine; the estimation, by volumetric methods, of arsenic in Fowler's solution and the hydrochloric solution of arsenic, of iron in *ferrum redactum*, and of hydrocyanic acid in *acidum hydrocyanicum dilutum*—standardised solutions being provided.

A detailed knowledge of the special methods of preparation given in the *British Pharmacopœia* is not necessary; but a knowledge of the characters of, and the qualitative tests for, the foregoing substances will be required.

DEGREES.—At the Congregation on Thursday, April 30th, the following degrees were conferred:—

M.D.—J. Kerr, M.A., M.B., B.C., St. John's (thesis, The Sequelæ of Acute Croupous Pneumonia); B. B. Connolly, M.A., Caius (thesis, Asiatic Cholera); H. T. Bulstrode, M.A., M.B., Emmanuel (thesis, Complications of Scarlatina); P. Hicks, B.A., M.B., B.C., Cavendish (thesis, Mitral Regurgitation).

M.B.—C. P. White, M.A., Clare; E. A. R. Newman, B.A., Caius; G. E. Hale, B.A., King's; E. S. Peck, B.A., Christ's; F. Belben, B.A., Christ's

B.C.—Messrs. Hale, White, Connolly, Newman, and Peck.

UNIVERSITY OF LONDON.

ELECTION OF EXAMINERS.—The following Examiners for 1891-92 were elected on April 29th:—*Chemistry:* Professor H. E. Armstrong, Ph.D., F.R.S., and Professor W. A. Tilden, D.Sc., F.R.S. *Botany and Vegetable Physiology:* Professor Daniel Oliver, F.R.S., and Professor H. M. Ward, M.A., F.R.S. *Comparative Anatomy and Zoology:* Sydney J. Hickson, D.Sc., M.A., and Adam Sedgwick, M.A., F.R.S. *Practice of Medicine:* J. F. Payne, M.D., B.Sc., and Professor F. T. Roberts, M.D., B.Sc. *Surgery:* Professor Marcus Beck, M.S., M.B., and H. G. Howse, M.S., M.B. *Anatomy:* R. Clement Lucas, M.B., B.S., and Professor Alexander Macalister, M.D., M.A., F.R.S. *Physiology:* Professor W. D. Halliburton, M.D., B.Sc., and J. N. Langley, M.A., F.R.S. *Obstetric Medicine:* C. J. Cullingworth, M.D., and Alfred L. Galabin, M.D., M.A. *Materia Medica and Pharmaceutical Chemistry:* Frederick Taylor, M.D., and Professor N. C. I. Tirard, M.D. *Forensic Medicine:* J. D. Mann, M.D., and Professor G. V. Poore, M.D., B.S.

UNIVERSITY OF EDINBURGH.

THE clinical portion of the Final Professional Examination for the degrees of M.B. and C.M. (that is, Clinical Medicine and Clinical Surgery) began on Friday, May 1st, and will be carried on during the whole of this month, and the early part of next, in the University wards of the Royal Infirmary.

Although the University authorities do not publish definitely the number of candidates who appear for the various medical examinations, it is quite well known that the "mortality" at the recent First and Second Professional Examination was pretty high. In a not inconsiderable number of cases, candidates were refused a *viva voce* examination on the ground that their written papers did not come up to the required standard. This seems a somewhat questionable practice. The London method, by which every candidate has an oral examination quite independent of his written paper, is far more just to the candidates.

UNIVERSITY OF ABERDEEN.

THE EXTENSIONS OF THE MEDICAL SCHOOL.—As briefly intimated last week, these extensions have been completed, and the various departments have entered into occupation of their rooms. The need of increased accommodation has forced itself on the serious attention of the University authorities ever since 1880. In 1884 a movement was set on foot for the extension of Marischal College in keeping with the increase in the attendance at the school and the requirements of modern teaching in medical science. Repeated applications were made to the Government for aid in carrying out the proposed scheme of extension, and the movement was so far successful that a sum of about £6,000 was granted by the Treasury for this purpose; since then additional grants of nearly £1,000 were obtained. The whole was applied to the extensions and alterations of the South Wing of the College, the additions being made along the Longacre side of the wing, and the departments affected are physiology, materia medica, medical jurisprudence, public health, natural history, and midwifery. The great feature of the extensions is that, instead of the class rooms and laboratories being huddled together in almost chaotic form, they are now arranged with as much method and convenience as the sum at the disposal of the authorities could possibly allow. The rooms are airy, well lighted and ventilated and heated, and adequately equipped. The furnishings are not by any means extravagant, but they are substantial, well selected and arranged, and likely to be of the utmost service in efficient carrying on of the work. The ground floor is given up to physiology and materia medica, and the first floor is devoted to natural history and medical jurisprudence and public health. The midwifery department, which was formerly located in the old portion of this wing, is now to be in rooms formerly occupied by the physiological department in the main building, which have been accordingly adapted. A very convenient range of extra rooms has been provided in the lower part of the buildings. In the basement there are the natural history cellars, heating chamber, and workshops; the hygienic museum, a combustion room, a gas analysis room, chemical laboratory, sterilisation room, and a bacteriological laboratory; these are all floored in concrete, are well lighted and

furnished with the necessary apparatus. In the sub-basement are the physiological cellars and two animal observation rooms connected with the same department. It may be noted that though much has been done by these extensions to afford additional accommodation, much still remains to be done to provide sufficient room for the other departments at present in the College, to say nothing of those likely to be called into existence in the near future. While the town authorities are taking steps to open out the front of the College, the University authorities are beginning to take steps for the extension of the North Wing, and the building of a Students' Union.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen, having conformed to the by-laws and regulations, and passed the required examinations, were, at the meeting of the College on April 30th, admitted Licentiates.

Abram, G. S., Cambridge and University College
Allan, A. W., Charing Cross
Allott, J. E. C., Guy's
Ashworth, W. R., Westminster
Atkey, P. J., St. Thomas's
Barber, G. W., Middlesex
Bartlett, F. W., University College
Baskett, B. G. M., Bristol
*Bates, J. C., Guy's
Boake, B., Dublin
Box, C. R., St. Thomas's
*Brett, W. G., Guy's
Brown, R., St. Bartholomew's
Busfield, J., Charing Cross
Carling, A., Charing Cross
Clegg, R., Manchester
Collings, E. B., Leeds
Collins, R. H., Charing Cross
Colyer, A. R., Charing Cross
Constant, T. E., Charing Cross
Corner, A., St. Bartholomew's
Cornish, E., Guy's
Cory, E. R. H., London
Dale, C. B., St. Bartholomew's
Dalzell, A., St. Thomas's
Davies, D. L., Manchester
Dawson, C. L., St. Bartholomew's
De Renzi, H. C. C., Westminster
De Silva, A. H. C., Newcastle-on-Tyne
Dudgeon, R. H. B., Liverpool
Ellis, J. C., St. George's
Featherstone, G. W. B., Guy's
Finch, E. J., St. Mary's
Ford, F. C., St. Bartholomew's
Fox, A. C., London
Francis, J., Middlesex
Francis, L. A., St. Mary's
Freeman, J., Bristol
*Gardener, W. F., St. Thomas's
Gornall, J. G., St. Thomas's
Halsted, D. G., London
*Harden, E. H. T., University College
Hawke, E. D. H., Charing Cross
Hawley, A., Birmingham
Hebblethwaite, A. G., Leeds
Hey, C. E. M., St. Mary's
Hoffmann, A. W. W., Charing Cross
Holton, G. W., Manchester
Home, J. A., St. Bartholomew's
Hott, A. T., Charing Cross
*James, H. D., King's College
James, L. E., Westminster
Jeffreys, A., St. Thomas's
Johnson, F., St. Bartholomew's
Jones, H. T., St. Thomas's
Jordan, J. F., Birmingham
Kirton, C. S., London
Knevitt, H., London
Lansdown, C. E., St. Mary's
Lawson, A., Middlesex
*Leake, G. D. N., St. George's and Manchester
Marshall, F. E., King's College
*Masser, E. C., Birmingham
Milton, W. F. E., St. Thomas's
*Olivey, W. J., St. Thomas's
Patterson, C. S., University of Edinburgh and Middlesex
Powell, C. M., St. Bartholomew's
*Powell, R., King's College
Price, A. E., St. Thomas's
Rake, A. T., Guy's
Rannie, J., Aberdeen
Rawes, C. K., Manchester
Richardson, H., Guy's
Rider, A. G., University College
Rodd, M. L. B., Middlesex
Rogers, W. G., Guy's
Rowland, F. M., Cambridge and Birmingham
Rudd, A., Westminster
Scudamore, L. G., St. Thomas's
Segundo, C. S. de, St. Bartholomew's
Seton, B. G., St. Bartholomew's
Smith, E. N., University College
Spensley, J. R., London
Spurrell, W. D., Guy's
Stilwell, G. R. F., St. Thomas's
*Sumpter, W. J. E., University College
Swinton, F. E., St. Bartholomew's
Syrett, E. F., St. Bartholomew's
Tebbs, W. H. A., Westminster
Thomas, A., Guy's
*Thorpe, R., St. George's
Thurston, H. S., St. Bartholomew's
Watts, T., Manchester and Durham
Wellington, R. H., St. Bartholomew's
West, L. F., Leeds
Wilks, H. L. E., Guy's
Williams, H. B., St. Thomas's

* Candidates who have not presented themselves under the regulations of the Examining Board.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW. The following is the pass list of the April examinations held in Glasgow:

First Examination.—Of 41 candidates, the following 22 passed:—Kate K. Paton, Glasgow; R. P. Snodgrass, Montreal; S. H. Oulton, Liverpool; Janet R. Wells, Glasgow; Catherine Howe, Glasgow; W. E. Blakely, Auchnacloy; J. M'Lean, Glasgow; M. Stewart, Kilwinning; H. Marmion, County Down; W. Bond, Lancashire; T. B. Whitelaw, Kirkintolloch; H. P. Weston, Manchester; Gertrude N. O'Flaherty, Galway; A. J. Boulger, Colchester; J. M. Grant, Banff; J. Fenwick, Accrington; J. D. Ballantyne, Dundee; T. J. Evans, New Quay, Wales; T. Heaps, Preston; T. French, County Cork; R. C. Wilson, Birkenhead; M. P. Corkery, Bombay; W. Corkey, County Armagh; L. T. Myers, Yorkshire; C. Rutherford, Northumberland; J. H. Robinson, Southport; S. T. Brooks, Farnworth; S. B. Siddall, Stanley, Liverpool; G. Hill, Glasgow.

Second Examination.—Of 50 candidates the following 30 passed:—J. P. T. Burke, Ireland; H. De C. O'Neale, Barbadoes; A. M'Afee, B.A., Ballymoney; H. J. Cosgrove, Dumfries; W. M. Fox, Cork; R. Martin, County Down; A. M. Stewart, Alloa; A. J. M'Mickle, County Tyrone; J. M. Macmillan, Argyleshire; G. M. Wilcockson, Derbyshire; T. W. Waddell, Demerara; Janette F. A. Wallace, Inverness-shire; T. Dawson, Mid-Lothian; G. C. Giles, York; S. W. Pitcher, Talbot, Australia; J. Laymont, Argyleshire; R. H. Wright, Cheshire; H. L. M'Culloch, Melbourne; W. L. Crewdson, Edinburgh; R. T. Jones, Glamorganshire; J. C. Edwards, Derbyshire; R. T. Clark, Harrington; W. Walker, Aberdeenshire; Jeanie G. R. Duggan, Edinburgh; J. Featherstone, Northumberland; A. M'Kellar, Glasgow; M. Luby, Limerick; T. C. Hunter, Glamorganshire; A. J. Neill, Melbourne; C. D. L. Williams, Breconshire.

Final Examination.—Of 36 candidates the following 15 passed:—D. Doherty, Buncrana, Londonderry; T. Marshall, South Shields; Edith Mary Brown, Croydon; J. Lane, Fermoy; G. Billing, Blackpool; H. Collier, Carbrook; J. Dodgson, Burnley; E. Hartley, Blackpool; J. N. Banerjee, Bengal, C. N. Macquarie, Kilmuir; C. B. Lucas, Carmyle; H. D'A. Blumberg, Edinburgh; J. E. J. Pegg, Birmingham; P. A. Shore, Walsall; S. Wartyn, Bombay.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following gentleman was admitted a Diplomate of Public Health at the April examination:

A. P. Luff, M.D.Lond., Weymouth Street, London.

ROYAL UNIVERSITY OF IRELAND.—Third Examination in Medicine, April, 1891.—The Examiners have recommended that the undermentioned be adjudged to have passed the examination:—

Upper Pass Division.—M. Boyle, Queen's College, Cork; A. Jamieson, M.A., Queen's College, Belfast; G. J. Johnson, B.A., School of Physic, Trinity College, Dublin; R. R. L. Leatham, B.A., Queen's College, Belfast; J. H. McGee, Cath. Univ. School of Medicine, Dublin; J. C. Rowan, Queen's College, Belfast.

The above candidates may present themselves for the further examination for honours.

Pass Division.—J. Anglein, Cath. Univ. School of Medicine; R. Buile, Queen's College, Galway; J. F. Barrett, Ledwich, and Cath. Univ. School of Medicine; R. M. Beatty, B.A., Queen's College, Belfast; Eliza G. Bell, Queen's College, Belfast; F. H. Clements, Queen's College, Galway; M. J. B. Costello, Queen's College, Galway; R. P. Crosbie, M.A., Queen's College, Cork; T. H. Delany, Cath. Univ. School of Medicine; H. J. Dickey, Queen's College, Belfast; V. G. L. Fielden, Queen's College, Belfast; H. Fisher, Queen's College, Belfast; J. Graham, Queen's College, Belfast; R. Heard, School of Physic, Trinity College, Dublin; W. H. Heard, School of Physic, Trinity College, Dublin; B. B. Hosford, Queen's College, Cork; T. Howard, Queen's College, Cork; J. Lane, Queen's College, Cork; W. Lyle, Queen's College, Belfast; W. T. Meagher, Queen's College, Cork; J. O'Donnell, Cath. Univ. School of Medicine, Dublin; T. B. Pedlow, B.A., Queen's College, Belfast; F. L. Rowan, B.A., Cath. Univ. School of Medicine, Dublin; J. Stevenson, Queen's College, Belfast; E. S. Topping, Queen's College, Belfast; E. T. Vint, Queen's College, Belfast; J. J. Yorke, B.A., Cath. Univ. School of Medicine, Dublin.

Second Examination in Medicine, April, 1891.—The Examiners have recommended that the undermentioned be adjudged to have passed the examination:—

Upper Pass Division.—*R. Allen, Queen's College, Galway; P. Brady, Catholic University School of Medicine; *J. A. Corbitt, Queen's College, Belfast; *Emily Winifred Dickson, Royal College of Surgeons, Dublin; W. Hanna, B.A., Queen's College, Belfast; *W. McMath, Queen's College, Cork; J. Shine, Catholic University School of Medicine.

* Those marked with an asterisk may present themselves for the further examination for honours.

Pass Division.—M. H. Aicken, Queen's College, Belfast; W. J. J. Arnold, B.A., Queen's College, Belfast; C. L. Birmingham, Catholic University School of Medicine; C. Blue, Queen's College, Belfast; J. M. Browne, Queen's College, Cork, and Catholic University School of Medicine; A. J. Caldwell, Queen's College, Belfast; J. A. Clements, Queen's College, Galway; J. G. Clokey, Queen's College, Belfast; J. Colville, B.A., Queen's College, Belfast; Mina L. Dobbie, London School of Medicine for Women; A. E. Downey, Catholic University School of Medicine; J. W. Furey, Queen's College, Belfast; J. B. Johnson, Queen's College, Belfast; T. S. Kirk, B.A., Belfast; T. T. McKendry, Queen's Colleges, Cork and Belfast; J. McMullin, Queen's College, Belfast; J. Mathewson, Queen's College, Belfast; M. O'Dea, Queen's College, Galway; P. J. O'Keeffe, Queen's College, Cork, and Catholic University School of Medicine; H. L. Ormerod, Bristol Royal Infirmary and Medical School; A. A. Peel, Queen's College, Belfast; M. J. Ryan, Queen's College, Belfast; P. J. Scannell, Queen's College, Cork; J. H. Thompson, Queen's College, Belfast; J. J. Wallace, Queen's College, Belfast.

PROPOSED PAN-AMERICAN MEDICAL CONGRESS.—Dr. Charles A. L. Reed, of Cincinnati, will, it is stated, propose at the meeting of the American Medical Association in Washington that an invitation be sent to the medical profession of the republics and colonies of the Western Continent to assemble in the United States in an International Medical Congress. Dr. Reed says that communications received by him from leaders of the profession in Central and South America show that they are disposed to entertain the idea of a Pan-American Medical Congress favourably.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER OF 1891.

THE vital and mortal statistics of the twenty-eight great English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending March last, 79,875 births were registered in these twenty-eight towns, equal to an annual rate of 32.0 per 1,000 of their aggregate population, estimated at rather more than ten millions of persons. In the corresponding periods of the preceding three years, the birth-rate in these towns was 32.5, 32.4, and 32.1 per 1,000 respectively. In London the birth-rate last quarter was equal to 31.9 per 1,000, while it averaged 32.1 in the twenty-seven provincial towns, and ranged from 23.2 in Huddersfield, 25.9 in Bradford, and 26.3 in Brighton to 39.2 in Sunderland, 39.8 in Cardiff, and 41.7 in Newcastle-upon-Tyne.

During the quarter under notice, 57,472 deaths were registered in the twenty-eight towns, equal to an annual rate of 23.0 per 1,000, against an average rate of 22.9 in the corresponding periods of the preceding nine years, 1882-90. In London the rate of mortality was 22.6 per 1,000, while it averaged 23.4 in the twenty-seven provincial towns. The rates in these provincial towns ranged from 16.2 in Derby, 18.1 in Nottingham, 19.2 in Hull, and 19.5 in Bradford to 28.4 in Manchester, 28.6 in Blackburn, 29.7 in Halifax, and 30.8 in Preston.

The 57,472 deaths in the twenty-eight towns last quarter included 5,381 which were referred to the principal zymotic diseases, equal to an annual rate of 2.2 per 1,000; in the first quarter of the preceding nine years, 1882-90, the zymotic death-rate in these towns averaged 2.5 per 1,000. The lowest zymotic death-rates in the twenty-eight large towns last quarter were 0.8 in Derby, 0.9 in Wolverhampton and in Hull, and 1.1 in Cardiff to 3.7 in Preston, 4.0 in Salford, 4.5 in Huddersfield, 4.6 in Halifax, and 5.1 in Blackburn. The 5,381 deaths referred to the principal zymotic diseases included 1,790 which resulted from measles, 1,616 from whooping-cough, 568 from diphtheria, 539 from scarlet fever, 478 from diarrhœa, 387 from "fever" (principally enteric), and 3 from small-pox. The 1,790 fatal cases of measles recorded in the twenty-eight towns during the first quarter of this year were equal to an annual rate of 0.72 per 1,000, which, although it showed a decline from the high rate recorded in the preceding quarter, exceeded the mean rate in the corresponding periods of the previous nine years, 1882-90. The rate of mortality from measles in London did not exceed 0.40 per 1,000, while it averaged 0.97 in the twenty-seven provincial towns, among which this disease showed the highest proportional fatality in Preston, Oldham, Portsmouth, Bristol, Huddersfield, and Blackburn. The 1,616 deaths referred to whooping-cough were equal to an annual rate of 0.65 per 1,000, which was considerably below the average rate in the first quarters of the preceding nine years. In London the rate of mortality from this disease was 0.62 per 1,000, while it averaged 0.67 in the twenty-seven provincial towns, and was highest in Leicester, Birmingham, Huddersfield, Salford, and Halifax. The 568 fatal cases of diphtheria were equal to an annual rate of 0.22 per 1,000, against rates increasing from 0.20 to 0.31 in the preceding three quarters; this rate exceeded the average in the corresponding periods of the previous nine years, although it was below the rate in the first quarter of either of the preceding two years. In London the rate of mortality from diphtheria was as high as 0.32 per 1,000, while it averaged only 0.15 in the twenty-seven provincial towns, among which this disease showed the highest proportional fatality in Manchester, Newcastle-upon-Tyne, Norwich, and Salford. The 539 deaths referred to scarlet fever were equal to an annual rate of 0.22 per 1,000, which showed a marked decline from the rate in the preceding quarter, and was considerably below the average rate in the corresponding periods of the previous nine years. In London the scarlet fever death-rate was only 0.15 per 1,000, while it averaged 0.27 in the twenty-seven provincial towns, and was highest in Sunderland, Plymouth, Sheffield, Halifax, and Bradford. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 2,059 and 1,549 at the end of the preceding two quarters, had further declined to 982 at the end of March

Public Health Statistics relating to Twenty-eight Large English Towns, for the First Quarter of 1891.

TOWNS.	Estimated Population middle of 1891.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Rate per cent. of Uncertified Deaths.	Deaths of Children under one year of age to 1,000 Births.
28 Towns	10,010,426	79,875	57,472	32.0	23.0	2.2	5,381	3	1,790	539	568	1,616	387	478	2.1	149
27 Provincial Towns	5,517,719	44,148	32,205	32.1	23.4	2.5	3,424	—	1,338	371	213	916	281	305	2.9	159
London	4,492,707	35,727	25,267	31.9	22.6	1.7	1,957	3	452	168	355	700	106	173	1.1	137
Brighton	125,539	824	613	26.3	19.6	1.3	40	—	27	—	3	5	1	4	3.9	132
Portsmouth	144,671	1,265	873	35.1	24.2	3.0	107	—	77	3	7	6	5	9	1.3	127
Norwich	96,202	841	585	35.1	22.3	1.3	30	—	4	1	10	10	4	1	0.7	162
Plymouth	79,339	639	495	32.3	25.0	1.6	32	—	8	9	2	7	3	3	0.6	136
Bristol	235,171	1,754	1,425	29.9	24.3	3.5	207	—	156	16	2	15	7	11	2.9	156
Wolverhampton	84,277	732	440	34.8	21.0	0.9	19	—	5	2	1	—	6	5	1.1	139
Birmingham	469,003	3,833	2,616	32.8	22.4	2.1	246	—	8	17	17	139	18	47	2.6	168
Leicester	158,266	1,200	829	30.4	21.0	3.1	121	—	53	5	3	45	8	7	2.8	183
Nottingham	252,217	1,676	1,140	26.7	18.1	1.7	104	—	31	6	4	31	16	16	1.8	153
Derby	103,269	740	417	28.7	16.2	0.8	20	—	2	4	5	6	1	2	1.2	112
Birkenhead	107,619	814	624	30.3	23.3	2.2	60	—	15	2	5	21	10	7	0.6	143
Liverpool	620,443	4,622	3,535	29.9	22.9	1.8	271	—	35	50	19	121	17	29	6.1	166
Bolton	117,034	999	677	34.2	23.2	2.7	79	—	37	10	6	6	8	12	1.9	142
Manchester	506,325	4,351	3,582	34.5	28.4	3.1	390	—	99	50	41	108	48	44	2.0	164
Salford	251,024	1,857	1,514	29.7	24.2	4.0	252	—	82	15	27	94	19	15	3.8	194
Oldham	151,158	1,030	939	27.3	24.9	3.0	112	—	75	5	3	15	7	7	2.1	210
Blackburn	125,874	1,018	897	32.4	28.6	5.1	160	—	128	6	—	4	9	13	3.6	192
Preston	106,141	998	815	37.7	30.8	3.7	98	—	52	11	3	18	3	11	3.3	196
Huddersfield	101,080	584	670	23.2	26.6	4.5	113	—	73	4	4	30	2	—	4.8	217
Halifax	82,998	590	614	28.5	29.7	4.6	96	—	36	14	2	34	8	2	5.0	222
Bradford	246,101	1,587	1,198	25.9	19.5	2.2	137	—	40	48	5	23	11	10	1.7	158
Leeds	370,261	3,147	2,232	34.1	24.2	2.9	265	—	172	18	6	32	24	13	1.6	156
Sheffield	338,543	2,980	1,872	35.3	22.2	3.0	249	—	85	45	16	73	19	11	4.8	142
Hull	219,812	1,788	1,051	32.6	19.2	0.9	51	—	20	4	1	1	11	14	4.1	139
Sunderland	138,859	1,357	782	39.2	22.6	1.6	54	—	5	15	5	20	4	5	0.8	119
Newcastle-on-Tyne	165,016	1,716	1,072	41.7	26.1	1.9	78	—	6	10	13	38	7	4	2.1	148
Cardiff	121,477	1,206	748	39.8	24.7	1.1	33	—	7	1	3	14	5	3	2.1	135

last; the admissions, which had increased from 1,001 to 2,278 in the previous four quarters, declined to 1,147 during the first three months of this year. The 478 fatal cases of diarrhœa were equal to an annual rate of 0.19 per 1,000, which corresponded with the mean rate in the first quarters of the preceding nine years. The 387 deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever) were equal to an annual rate of 0.16 per 1,000, which with two exceptions was the lowest rate in the corresponding period of any year on record. In London the rate of mortality from "fever" during the quarter under notice was only 0.09 per 1,000, while it averaged 0.20 in the twenty-seven provincial towns, among which this disease showed the highest proportional fatality in Salford, Manchester, Birkenhead, and Halifax. Three fatal cases of small-pox were registered in London during the three months ending March last, but not one in any of the twenty-seven provincial towns; 12 small-pox patients were admitted during the quarter into the Metropolitan Asylums Hospitals, and 7 remained under treatment at the end of March last.

The rate of infant mortality in the twenty-eight towns, measured by the proportion of deaths under one year of age to registered births, was equal to 149 per 1,000, and almost corresponded with the mean rate in the first quarters of the preceding ten years. In London the rate of infant mortality was 137 per 1,000, while it was as high as 159 in the twenty-seven provincial towns, among which it ranged from 112 in Derby, 119 in Sunderland, 127 in Portsmouth, and 130 in Wolverhampton to 196 in Preston, 210 in Oldham, 217 in Huddersfield, and 222 in Halifax.

The causes of 1,209, or 2.1 per cent., of the deaths registered in the twenty-eight towns during the first quarter of this year were not certified, either by registered medical practitioners or by coroners. The proportion of uncertified deaths in London was 1.1 per cent., while it averaged 2.9 in the twenty-seven provincial towns, among which it ranged from 0.6 in Plymouth and in Birkenhead, 0.7 in Norwich, and 0.8 in Sunderland to 4.8 in Sheffield and in Huddersfield, 5.0 in Halifax, and 6.1 in Liverpool.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his quarterly return relating to the births and deaths registered in England and Wales during the first or winter quarter of this year, and to the marriages in the three months ending December last. The marriage-rate exceeded that recorded in the corresponding period of any year since 1883, and was slightly above the mean rate in the fourth quarters of the preceding ten years. The mean temperature of the air last quarter at the Royal Observatory, Greenwich, was 37.6°, being 1.2° below the average; there was a deficiency during each month of the quarter, especially during January. The rainfall amounted to 3.8 inches, and was 1.2 inch below the average.

The births registered in England and Wales during the three months ending March last were 229,953, equal to an annual rate of 31.3 per 1,000 of the population, estimated by the Registrar-General to be nearly thirty millions of persons. This birth-rate slightly exceeded that recorded in the March quarters of 1889 and 1890, but was 1.7 per 1,000 below the mean rate in the corresponding periods of the preceding ten years. The birth-rate in the several counties during the period under notice ranged from 23.1 in Rutlandshire, 25.0 in Sussex, and 25.4 in Shropshire to 36.1 in Northumberland, 37.1 in Essex, and 43.0 in Monmouthshire. In the twenty-eight large English towns for which the Registrar-General publishes weekly returns the birth-rate last quarter averaged 32.0 per 1,000, and was slightly above the general English rate. In London the birth-rate was 31.9 per 1,000, while it averaged 32.1 in the twenty-seven provincial towns, and ranged from 23.2 in Huddersfield, and 25.9 in Bradford to 39.8 in Cardiff, and 41.7 in Newcastle-upon-Tyne.

The births registered in England and Wales during the quarter under notice exceeded the deaths by 71,854; this represents the natural increase of the population during that period. From returns issued by the Board of Trade, it appears that 50,290 emigrants (including 17,708 foreigners) embarked from the various ports of the United Kingdom at which emigration officers are stationed; of these, 22,690 were English, 3,459 were Scotch, and 6,338 Irish. The proportion of British emigrants to a million of the respective populations of the three divisions of the United Kingdom were 761 from England, 831 from Scotland, and 1,365 from Ireland. Each of these proportions showed a considerable decline from the mean proportion in the preceding three years.

During the first quarter of this year the deaths of 158,099 persons were registered in England and Wales, equal to an annual rate of 21.5 per 1,000 of the estimated population. This rate was 1.4 per 1,000 below that recorded in the first quarter of 1890, but slightly exceeded the average rate in the corresponding periods of the preceding ten years. Among the urban population of the country, estimated at nearly nineteen and a half millions of persons, the rate of mortality during the quarter under notice was equal to 21.9 per 1,000; in the remaining and chiefly rural population of nearly ten and a half millions the rate was 20.9 per 1,000. The urban rate was 0.1 below, while the rural rate exceeded by 0.7 per 1,000 the mean rate in the first quarters of the preceding ten years. Among the twenty-eight large English towns the mean death-rate was 23.0 per 1,000; in London the rate was 22.6, while in the twenty-seven provincial towns it averaged 23.4 per 1,000, and ranged from 16.2 in Derby, 18.1 in Nottingham, and 19.2 in Hull to 28.6 in Blackburn, 29.7 in Halifax, and 30.8 in Preston.

The 158,099 deaths registered in England and Wales during the three months ending March last included 3,684 which resulted from measles, 3,448 from whooping-cough, 1,410 from scarlet fever, 1,385 from diarrhœa, 1,323 from diphtheria, 1,267 from "fever" (including typhus, typhoid, and simple continued fever), and 5 from small-pox; in all, 12,522 deaths were referred to these principal zymotic diseases, equal to an annual rate of 1.70 per 1,000, against an average rate of 1.96 in the preceding ten corresponding quarters. The mortality from measles and from diphtheria showed an excess, while that from each of the other zymotic diseases was below the average. Of the 5 deaths from small-pox 2 occurred in Harwich, 1 in Colchester, and 2 in the Metropolitan Asylums Hospitals, to which 12 small-pox patients were admitted during the quarter.

The rate of infant mortality, or the proportion of deaths under 1 year of age to registered births, was equal to 146 per 1,000, and slightly exceeded the mean proportion in the corresponding quarters of the preceding ten years. In London the rate of infant mortality was 137 per 1,000, while it averaged 159 in the twenty-seven provincial towns, among which it ranged from 112 in Derby, 119 in Sunderland, and 127 in Portsmouth, to 196 in Preston, 210 in Oldham, 217 in Huddersfield, and 222 in Halifax.

THE HEATH OF ADULTS IN 1890.

ALTHOUGH the record of the Registrar-General in the recently published summary of the deaths in London last year is very unfavourable, showing the mortality rate (20.3 per 1,000) to have been higher than in any of the five preceding years, there is reason to believe that the victims have been chiefly found among those who readily succumb to disease by reason of their extreme youth, old age, or constitutional debility, and that the year 1890 has not been unduly fatal to the adult male working and wage-earning sections of the community. Facts are not wanting that point to this conclusion. For instance, Dr. Walter Dickson informs us that in the Customs establishment of the Port of London, where elaborate statistics of the sanitary condition of the inferior outdoor officers have been kept for more than thirty years the amount of disease in the past year has been unprecedentedly small, and the exemption from mortality has been remarkable. Of the 600 men composing the force, the average daily number incapacitated by illness was less than 3 per cent.; not one death occurred in the period, and of the five cases of invaliding from physical infirmity only one was caused by a necessarily fatal disease (cancer). This singular immunity from all mortal illness is the more noteworthy, inasmuch as in the beginning of the year these officers underwent an acute visitation of influenza. Sixty-five cases of the epidemic occurred between December 15th, 1889, and March 1st, 1890, its maximum intensity being attained in the second week of January, when forty-five cases were simultaneously under treatment. Eleven per cent.

of the force were affected, but all recovered satisfactorily, though, in a few cases, owing to pulmonary complications, convalescence was protracted, and the mean duration of each case was fourteen days. Customs officers, as a rule, are exempt from zymotic diseases, which rarely exhibit a ratio of more than 5 per cent. on the whole amount of sickness. In 1890, however, in consequence of this epidemic, the annual ratio increased to 20 per cent. No other zymotic disease of importance appeared except one case of diphtheria in November, which an officer contracted from his sick child. He recovered, but the case is worthy of note as the only one of that formidable malady which has come under the notice of the medical inspector during his tenure of office and observation of probably 25,000 cases of disease, a proof of its rarity among the adult male population of the metropolis.

A large proportion of these Customs officers are men well advanced in life, and their work is often of a laborious character, involving much exposure to the weather, and to great vicissitudes of temperature in examining the lower parts of steamships, etc. Diseases of the respiratory organs, rheumatism, and gout, sooner or later involving the heart and lungs, are the most prevalent forms of illness, and in ordinary years account for one-half of the total amount of sickness and mortality of Customs officers.

In the past year the Registrar-General ascribes the heavy mortality among the general population of the metropolis to the exceptional frequency and fatality of bronchitis, and more especially of pneumonia, which caused 50 per cent. more deaths than in the preceding year, chiefly coincident with the epidemic of influenza in January and February, when the ratio of death from pneumonia was actually doubled.

To that zymotic influence rather than to climatic causes he rightly considers the high death-rate to be due; for the mean temperature of January was 7° above the average, and the increase of mortality was more marked in persons between 20 and 60 than in those of greater age and less resistant to cold.

More singular, therefore, is the immunity which the Customs officers enjoyed from serious pulmonary disease, notwithstanding their having had a fair share of influenza while it lasted. The proportion of all respiratory diseases throughout the year was considerably below the average, and the mortality from these, and indeed all other diseases, was absolutely *nil*. Even phthisis, which normally inflicts three or four deaths per 1,000, was in abeyance. This was doubtless an exceptional year, the usual death-rate ranging from five to twelve per 1,000, and the invaliding or premature superannuation rate being about half as many.

Dr. Dickson considers the meteorology of 1890, though trying to persons having a weak point in their armour, to have been on the whole propitious to health. A mild January, a dry February, followed by warmth in March and May, a cold wet summer till September, which was the finest and warmest month of the year, succeeded by a dry autumn with intense cold in the last six weeks of the year, form a type of weather which in former years has been observed to prove salutary to men of sound constitution, inured to labour, and spending much of their lives in the open air, and who can procure all the necessaries and many of the comforts, but none of the luxuries, of life. In several such years there has been a high standard of health maintained, but in none so high as in 1890, which has been characterised by the Registrar-General, from his study of the mortality tables, as the most disastrous of recent years to the population of London.

Within the last three weeks twelve cases of influenza have been received at the Custom House, of the same character as last year, but in some instances accompanied by sore throat, which was then seldom met with. Now, as then, there is no precise evidence as to its causation or mode of diffusion.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

At a meeting of the Council held on April 30th, it was unanimously resolved that if Section 35, subsection 1 of the Public Health Law Amendment Bill is intended to prevent in the future union medical officers being appointed medical officers of health, great injustice to the former will thereby be caused. The subsection referred to in the above resolution reads as follows: "The power to appoint the medical officer of a union to be a medical officer of health is hereby repealed."

THE OFFICE OF MEDICAL OFFICER OF HEALTH AND THE COMMISSION OF THE PEACE.

SANITAS.—The appointment of medical officer of health does not disqualify a gentleman otherwise qualified from being appointed or acting as a magistrate. He would, however, have to leave the Bench when cases in which he was concerned as medical officer of health came under consideration.

MODIFIED SMALL-POX.

W. B.—Judging from the description given, which tallies with that characteristic of a common form of the disease modified by vaccination, it is highly probable that the case was one of small-pox. The medical officer of health of the neighbouring town was, of course, entitled to alter his opinion, but he would have shown a wiser discretion if he had refrained from contradicting a diagnosis which was already matter of public discussion. Considering his very courteous and apologetic letter, we are of opinion that our correspondent would be well advised to let the matter drop, and to forget as speedily as may be any annoyance which he may have experienced.

HEALTH OF ENGLISH TOWNS.

DURING the week ending Saturday, May 2nd, 5,849 births and 5,153 deaths were registered in twenty-eight of the largest English towns, including London. The annual rate of mortality in these towns, which had been 22.5 and 24.3 per 1,000 in the preceding two weeks, further rose to 26.8 during the week under notice. The rates in the several towns ranged from 15.0 in Birkenhead, 16.8 in Norwich, 17.3 in Bristol, and 19.5 in Brighton to 36.1 in Leeds, 38.5 in Blackburn, 42.1 in Halifax, and 70.5 in Leeds. The high rates in the last-mentioned towns were due to the fatal prevalence of influenza. In the twenty-seven provincial towns the mean death-rate was 29.7 per 1,000, and exceeded by 6.4 the rate recorded in London, which was 23.3 per 1,000. The 5,153 deaths registered during the week under notice in the twenty-eight towns included 462 which were referred to the principal zymotic diseases, against 420 and 428 in the preceding two weeks: of these, 188 resulted from whooping-cough, 127 from measles, 53 from diarrhœa, 37 from diphtheria, 31 from "fever" (principally enteric), 26 from scarlet fever, and not one from small-pox. These 462 deaths were equal to an annual rate of 2.4 per 1,000; in London the zymotic rate was 1.9, while it averaged 2.8 per 1,000 in the twenty-seven provincial towns, and ranged from 0.5 in Derby and in Birkenhead, and 1.4 in Norwich, in Bristol, and in Sunderland to 4.9 in Leicester, 5.0 in Blackburn, 5.3 in Manchester, and 6.8 in Portsmouth. Measles showed the highest proportional fatality in Plymouth, Preston, Huddersfield, Blackburn, Bolton, and Portsmouth; scarlet fever in Halifax; and whooping-cough in Halifax, Newcastle-upon-Tyne, Plymouth, Manchester, and Leicester. The mortality from "fever" showed no marked excess in any of the large towns. Of the 37 deaths from diphtheria in the twenty-eight towns, 24 occurred in London, 5 in Manchester, and 3 in Newcastle-upon-Tyne. No death from small-pox was registered during the week under notice, either in London or in any of the twenty-seven provincial towns; 21 small-pox patients were under treatment in the Metropolitan Asylums Hospitals, and 1 in the Highgate Small-pox Hospital, on Saturday, May 2nd. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on the same date was 927, and showed a further decline from recent weekly numbers; 100 new cases were admitted during the week, against 77, 84, and 85 in the preceding three weeks. The death-rate from diseases of the respiratory organs in London was equal to 6.8 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

IN eight of the principal Scotch towns 893 births and 603 deaths were registered during the week ending Saturday, May 2nd. The annual rate of mortality in these towns, which had declined from 26.7 to 22.1 per 1,000 in the preceding four weeks, rose again to 23.1 during the week under notice, but was 3.7 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Greenock and Leith, and the highest in Glasgow and Paisley. The 603 deaths registered in these towns included 80 which were referred to the principal zymotic diseases, equal to an annual rate of 3.1 per 1,000, which exceeded by 0.7 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Leith, Glasgow and Paisley. The 284 deaths registered in Glasgow included 13 which were referred to measles, 12 to whooping-cough, 5 to scarlet fever, and 2 to diphtheria. Sixteen fatal cases of measles were recorded in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.6 per 1,000, against 6.8 in London.

HEALTH OF IRISH TOWNS.

DURING the week ending Saturday, April 25th, the deaths registered in sixteen of the principal town districts of Ireland were equal to an annual rate of 22.5 per 1,000. The lowest rates were recorded in Wexford and Armagh, and the highest in Waterford and Drogheda. The death-rate from the principal zymotic diseases averaged 1.4 per 1,000. The 156 deaths registered in Dublin were equal to an annual rate of 23.0 per 1,000, against 30.6 and 27.5 in the preceding two weeks, the rate for the same period being 21.0 in London and 18.0 in Edinburgh. The 155 deaths in Dublin included 6 which were referred to the principal zymotic diseases (equal to an annual rate of 0.9 per 1,000), of which 4 resulted from whooping-cough, 1 from enteric fever, and 1 from diarrhœa.

SMALL-POX AT NAPLES.—In view of the continued prevalence of small-pox in some parts of the province of Naples, the Prefect has taken steps to enforce the decree issued by the Italian Minister of the Interior on October 23rd, 1890, whereby it was enacted that all persons resident in houses in which cases of small-pox occur shall be at once vaccinated.

MEDICAL NEWS.

CAIRO is suffering from an epidemic of dengue.

A GERMAN College of Medicine and Obstetrics is about to be established in Chicago. The college is to have ten professors, four of whom will teach in English. Five years of study will be required before a diploma is granted.

A FESTIVAL dinner in aid of the funds of the University College Hospital was held at the Hôtel Métropole on April 28th, under the presidency of Lord Reay. The treasurer announced donations to the amount of £1,980.

A "UNIVERSAL and Historical International Exhibition" of Microscopy will be held at Antwerp in August and September of the present year, in celebration of the tercentenary of the discovery of the microscope.

THE Metropolitan Public Gardens Association has again rendered a public service by securing as an open space Barnsbury Square, Islington. It is about 1¼ acre in extent, and lies in a populous district.

UNIVERSITY OF HALLE.—A new clinic for mental and nervous diseases was opened in the University of Halle on April 29th in the presence of the Cultus Minister. Count von Zedlitz-Trützschler. Professor Hitzig delivered an address on the occasion.

APPLICATIONS for the medical research scholarships of the Grocers' Company will be received by the Clerk of the Company up to May 9th, but, as will be seen by a notice in our advertisement columns, the present scholars are eligible for reappointment.

HER Royal Highness the Duchess of Teck will distribute the medals and gratuities to the nurses of the Workhouse Infirmary Nursing Association, at their eleventh annual gathering, to be held at 9, Conduit Street, Regent Street, on May 14th, at 8 P.M.

A MEDICAL student, named W. T. Roche, described as late of Arundel, according to reports in the newspapers, has, in a prosecution undertaken at the instance of the Registrar-General, been fined £5 and £2 3s. 6d. costs for unlawfully representing himself in a medical certificate to be a registered medical man and a L.R.C.S.Edin. The defendant pleaded guilty.

PRESENTATION.—Dr. Morris, on his retirement from the medical staff of the Spalding Infirmary and Dispensary, after the completion of half a century's gratuitous medical service, has been presented by the governors with a testimonial in the form of a handsome silver salver suitably inscribed.

DR. MCGRATH, Coroner for the South and East Divisions of the county Tyrone, died very suddenly early this week. An inquest was held, and after hearing evidence the jury returned the following verdict:—"That deceased Dr. Thomas J. McGrath, died on Tuesday, 28th April, in the townland of Gortgonis, and that his death was caused by an overdose of a narcotic."

METROPOLITAN AND NATIONAL NURSING ASSOCIATION.—At the fifteenth annual meeting of this association, held on May 1st, at Grosvenor House, it was reported that the agreement with the Queen Victoria Jubilee Institute, whereby the association was appointed as the central training school for the Queen's nurses in England remained in force during the past year. The number of cases nursed was 686, and the number of visits paid 20,000.

ASSOCIATION OF MEDICAL OFFICERS OF SCHOOLS.—At the recent annual meeting of the Society, Dr. W. H. Dickinson was elected president in place of Dr. James Andrew, who had been compelled to resign owing to his recent illness. The accounts showed the Society to be in a flourishing state financially. On the motion of Dr. Alder Smith, it was resolved to proceed at once with the revision of the Code, and issue a third edition of it. A discussion on School Punishments, opened by Dr. G. H. Armstrong, of Wellington College, then took place. The annual dinner, owing to unavoidable circumstances, was postponed, and will be held in future at some fixed date in June.

CONGRESS FOR THE STUDY OF TUBERCULOSIS.—The second meeting of the Congress for the Study of Tuberculosis will be held at Paris, from July 27th to August 2nd of the present year, under the presidency of M. Villemin. The following questions will be discussed: (1) The identity of human tuberculosis with tuberculosis of the bovine species, poultry, and other animals; (2) the bacterial and morbid relations of tuberculosis; (3) hospitals for tuberculous patients; (4) the prophylaxis of human and animal tuberculosis; and (5) the agents capable of destroying Koch's bacillus, but not injurious to the organism, from the point of view of the prophylaxis and treatment of human and animal tuberculosis.

GERMAN PUBLIC HEALTH SOCIETY.—Among the subjects proposed for discussion at the seventeenth meeting of the German Public Health Society, which, as already announced, will take place at Leipzig on September 17th—20th, are the following: Report of the Committee on Systematic Researches as to the Self-Purification of Rivers; Sanitary Administration in Relation to Dwellings; Sanatoria for Sufferers from Pulmonary Complaints (to be introduced by Professor von Ziemssen, of Munich); Milk in its Hygienic Relations (to be introduced by Professor Soxhlet, of Munich); Cool Chambers for Meat and other Articles of Food (to be introduced by Professor Franz Hofmann, of Leipzig). "Gymnastic Inspector" Hermann, of Brunswick, will deliver an address on the School Games of German Youth.

TEMPERANCE IN THE MEDICAL PROFESSION. — The Council of the British Medical Temperance Association have recently held a series of local gatherings in the metropolis. To each conference all the medical men residing in the locality were invited, and, after refreshments of an unintoxicating character, a free and friendly discussion has been held. These meetings, especially in the western and northern districts were, we are informed, highly successful, and gave evidence that among the non-abstaining members of the profession there is warm sympathy with temperance effort. There are now some 450 abstaining medical practitioners enrolled in the Association, including professors at various universities. Nothing but good can follow the presentation of the case for abstinence before a profession which is pre-eminently the guardian of personal and national health.

MEDICAL VACANCIES.

The following Vacancies are announced:

BIRMINGHAM CITY ASYLUM.—Resident Clinical Assistant. Board, lodging, etc., provided. Applications to the Medical Superintendent.

BIRMINGHAM CITY ASYLUM.—Assistant Medical Officer. Salary, £120 per annum, with board, etc. Applications to the Medical Superintendent.

BOROUGH OF PLYMOUTH.—Medical Officer for the Borough Lunatic Asylum, Blockadon, near Plymouth. Salary, £400 per annum, with furnished house, gas, coals, and vegetables. Applications, endorsed "Medical Officer, Lunatic Asylum," to J. H. Ellis, Town Clerk, Guildhall, Plymouth, by May 16th.

BOYLE UNION (Gurteen Dispensary).—Medical Officer. Salary, £110 per annum and fees. Applications to Mr. John Kilroy, Honorary Secretary, Clomanure, Gurteen, Ballymote. Election on May 20th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—House-Surgeon. Appointment for six months. Salary at rate of £60 per annum, with board and residence. Applications to the Secretary by May 9th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Assistant House-Surgeon and Registrar. Appointment for six months. Salary at rate of £50 per annum, with board and residence. Applications to the Secretary by May 9th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Surgeon; must be F.R.C.S.Eng., and reside within four mile radius. Applications to the Chairman of the House Committee by May 26th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Honorary Pathologist. Applications to the Chairman of the House Committee by May 26th.

COUNTY OF CAITHNESS.—Medical Officer of Health. Salary, £300 per annum, with £50 travelling and other expenses; must not engage in private practice, and reside in Wick. Applications to James Burns, County Clerk, Thurso, by May 25th.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications to the Secretary by May 15th.

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION. Assistant Surgeon; not under 30 years of age. Salary, £160 per annum, rising £10 after six months, and £10 per annum afterwards up to £250, with midwifery fees. Applications to the Secretary, Mr. H. Bullivant, 73, Abbey Street, Derby, by May 23rd.

ECCLES AND DISTRICT MEDICAL ASSOCIATION. Assistant Medical Officer. Applications to Mr. J. Ramsdale, 15, Byron Street, Patricroft.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn, E.C.—Honorary Physician. Applications to J. Lewis, Secretary, by May 9th.

GREAT YARMOUTH HOSPITAL.—Resident House-Surgeon; unmarried. Salary, £90 per annum, with board and lodging. Applications to Ernest E. Leech, Honorary Secretary, by May 12th.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; double qualifications; unmarried, and not more than 27 years of age. Salary, £100 per annum, rising to £125 after twelve months, with furnished apartments, board, washing, and attendance. Applications, endorsed "Application for Appointment of Medical Officer," to Committee of Visitors, Knowle, Fareham, by May 20th.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE.—Fourth Assistant Medical Officer. Applications to Dr. Phillips, Virginia Water.

HOLSWORTHY UNION, Devon.—Medical Officer and Public Vaccinator for No. 3 District. Salary, £25 8s. per annum, with midwifery and vaccination fees. Applications, endorsed "Application Medical Officer," to Cecil Bray, Clerk, by May 12th.

HOLSWORTHY UNION, Devon.—Medical Officer for the Workhouse. Salary, £22 per annum. Applications, endorsed "Application Medical Officer," to Cecil Bray, Clerk, by May 12th.

LIMERICK UNION (No. 1 District).—Medical Officer. Salary, £130 per annum and fees. Applications to Mr. Jno. H. Lee, Honorary Secretary. Election on May 11th.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

ROYAL BERKS HOSPITAL, Reading.—Physician. Applications to the Secretary, John T. Hugo, at least ten days before the election on June 2nd.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Five Examiners in Anatomy; Four Examiners in Physiology; Examiners for Parts 1 and 2 of the Examination in Public Health; Five Examiners in Elementary Anatomy; Two Examiners in Elementary Physiology (First Professional Examination); and four Examiners in Midwifery (for the Third or Final Examination). Applications to Edward Trimmer, Secretary, by May 28th.

SALISBURY INFIRMARY.—Dispenser. Salary, £105 per annum. Applications to the Secretary by May 15th.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser; double qualifications: unmarried. Salary, £80 per annum, with board, lodging, and attendence. Applications to Capt. Phillpotts, R.N., Honorary Secretary, by May 16th.

WEST HAM UNION.—Medical Officer for No. 1 Stratford District; double qualifications. Salary, £100 per annum, with fees. Applications with three recent testimonials to F. E. Hilleary, Clerk, Guardians' Office, Union Road, Leytonstone, E., by May 13th.

MEDICAL APPOINTMENTS.

BRETTINGHAM, C. E. Seppings, L.F.P.S.Glas., appointed Medical Officer of Health for the Eastern Division of the Williton Union.

CARDWELL, Thomas, L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Ropsley District of the Grantham Union, *vice* R. J. A. Moore, M.B.

CLIBBORN, William, M.D., L.R.C.S.Irel., appointed Surgeon to the Police Force, Bridport, *vice* Dr. Evans, deceased.

DOWLING, John E., M.D.Irel., appointed Medical Officer for the Tuam Workhouse.

DUMERGUE, H. W., M.A.Cantab., M.D.Lond., M.R.C.S., appointed Third Honorary Physician to the St. George's and St. James's Dispensary.

FOWLER, C. H., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the North-West London Hospital, *vice* H. Dunn.

FOX, George Martin, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., appointed Medical Officer and Public Vaccinator for the Willenhall District of the Wolverhampton Union.

FRIPP, A. D., M.B., B.S., appointed Anæsthetist to Guy's Hospital Dental School.

GAMGEE, Leonard Parker, M.R.C.S., L.R.C.P., appointed House-Surgeon to the Queen's Hospital, Birmingham.

GIBSON, E. Valentine, M.B., C.M., appointed House-Surgeon to the Devonshire Hospital, Buxton, *vice* William Ring, L.R.C.P., L.R.C.S., resigned.

GREY, Thomas Campbell, M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Medical Officer to the General and Eye Hospital, Swansea, *vice* G. Herbert Hopkins, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

GUNN, Alfred Lloyd, L.R.C.P.Edin., L.F.P.S.Glas., reappointed Medical Officer for Swinefleet, Whitgift, and Ousefleet Sanitary Districts.

GUNN, A. M., M.B., C.M., appointed Medical Officer for Shapinsay, Orkney, *vice* Dr. George Hall.

HEBBLETHWAITE, A. G., M.R.C.S., L.R.C.P., appointed House-Physician to the General Infirmary, Leeds, *vice* E. Howell.

HORROCKS, Peter, M.D., F.R.C.P., M.R.C.S., appointed Physician for the Eastern Division of London of the Royal Maternity Charity.

HYDE, G. E., L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer of Health for the Martley Rural District.

JOLLYE, F. W., M.R.C.S., L.R.C.P.Lond., D.P.H.Lond., appointed Medical Officer and Public Vaccinator to the No. 2 District of the Alresford Union, and Medical Officer of Health to the Alresford Union.

LANCASTER, H. F., M.D.Brux., M.R.C.S., L.R.C.P., appointed Anæsthetist to Guy's Hospital Dental School.

LUCAS, R. Clement, B.S., M.B.Lond., F.R.C.S., appointed Examiner in Anatomy to the University of London.

MAY, F. H., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Aston Manor District of the Aston Union.

PETERS, Leonard G., L.R.C.P., L.R.C.S., L.F.P.S., L.M., appointed Medical Practitioner to the Liddell Provident Dispensary, Jarrow-on-Tyne, *vice* George W. Weir, M.D.

ROBINSON, A. H., M.R.C.S., appointed Medical Officer for the Wyke and part of the North Brierley Union.

ROWBOTHAM, A. J., M.R.C.S., reappointed Medical Officer for the Durham District of the East Retford Union.

STONEHOUSE, John, L.F.P.S.Glas., appointed Medical Officer for the Second District of the Whitby Union.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: Lachrymal Diseases. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Mr. Edmund Owen: Early Stages of Disease of the Spine.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Theo. Hyslop: Delirium Mania. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: Syphilis in relation to Vaccination.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Mr. Anthony A. Bowlby: Thirteen Cases of Paget's Disease of the Nipple, with special reference to the Causation of the Malady by Psorosperms. Mr. J. Hutchinson, jun.: On Paget's Disease of the Breast. (The papers will be illustrated by projections on the screen and by a microscope exhibit.)

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Percy Kidd: Indurative Affections of the Lung; their Pathology, Diagnosis, and Treatment, with Clinical Demonstration. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. B. Lawford: Colour Blindness (Congenital and Acquired).

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Gowers: Symptomatic Signals, and how to use them. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Mr. E. Owen: Late Stages of Disease of the Spine. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Law: The Examination of the Throat and Nose.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Specimens: Dr. Heywood Smith and Dr. Godson. Dr. Holland: Remarks on a Series of Abdominal Sections.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Professor Crookshank: Lecture: Anthrax and Malignant Œdema. Practical Work: Sections of Anthrax by Gram's Method. Hospital for Consumption, Brompton, 4 P.M.—Dr. Percy Kidd: Indurative Affections of the Lung; their Pathology, Diagnosis, and Treatment, with Clinical Demonstration. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Lungs—Inflammatory, Tuberculous, and other Lesions.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Theo. Hyslop: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

THOMSON.—On April 29th, at Wattlesboro', Half-way-House, near Shrewsbury, the wife of T. P. Thomson, M.B., C.M.Aberd., of a daughter.

MARRIAGES.

CRAWFORD—CASTLER.—At 5, West Princes Street, Glasgow, on April 29th, by the Rev. James Murray, Arbroath, brother-in law of the bride, assisted by the Rev. David Woodside, B.D., and the Rev. Andrew Laidlaw, Robert Crawford, M.D., to Lizzie Yates, fourth daughter of the late James Castler, Kilmarnock.

NESBITT—GORDON.—On April 2nd, at Elmwood Church, Belfast, by the Rev. A. C. Murphy, A.M., D.Lit., Charles Van Homrigh Nesbitt, M.D., Magherafelt, younger son of the late Professor Nesbitt, A.M., D.Lit., Queen's College, Belfast, to Ethel Sarah Cecilia, third daughter of John Gordon, A.M., Inspector of National Schools, College Park, Belfast.

DEATHS.

BARTLEET.—On April 29th, suddenly, of acute pneumonia, Thomas Hiron Bartleet, M.B., F.R.C.S., of Hatfield, Hagley Road, Birmingham.

JOSEPH.—At Little Bay Mine, Newfoundland, on April 24th, Alice, wife of Louis Joseph, M.B., C.M. (By cablegram.)

MACDOUGALL STEWART.—At Beau Séjour, Jersey, on April 26th, John MacDougall Stewart, M.R.C.S., Surgeon Medical Staff, only son of Colin MacDougall Stewart, Esq., and grandson of the late John MacDougall, of Lungar, in his 34th year.

TIZARD.—On April 7th, very suddenly, at Bayeliffe, Weymouth, Henry Tizard, M.D., aged 67. Beloved and deeply regretted.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily. 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9; Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.45; females, Th., 8.45. *Operation Day.*—Tu., 2.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.* Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

C. P. writes: I have a lady patient who is troubled with a uniform downy growth of hair over her face, with a tendency to moustache on her upper lip, which, as she is quite young, she is naturally very anxious to get rid of. I should be very much obliged if any of your readers could give me any hints as to how I can effect this for her.

AN OLD MEMBER wishes to hear of a hospital for children, in a healthy locality out of London, where a young lady could obtain a few weeks' training as sick nurse.

BISULPHITE OF LIME.

DERMATOS asks what is the composition and strength of sol. calcii bisulphurosi employed in Germany.

*** Mr. Martindale, to whom we have referred this query, writes: Sol. calcii bisulphurosi, as used in Germany, is also largely employed in England by brewers to cleanse their barrels and arrest fermentation. It is a solution of sulphite of calcium in free sulphurous acid, prepared by passing sulphurous acid gas into thin milk of lime. Its specific gravity is about 1060, and its strength of SO_2 is about 5 per cent. It is known in England as solution of bisulphite of lime.

TREATMENT OF NASAL DEFORMITY.

PERPLEXED asks: Can anything be done by mechanical means to prevent the falling in of the nasal bones after loss of the septum from ozæna and ulceration in a young girl, aged 13? The nose is just commencing to lose its shape.

ANSWERS.

A WOULD-BE FELLOW.—We are informed that there is no regulation forbidding a Fellow of the Royal College of Surgeons to dispense his own medicines. It is understood that he does not sell or supply drugs or medicines otherwise than in the due exercise or practice of his profession as an apothecary.

EXAMINATION FOR F.R.C.S.ED.

PRACTICE of Medicine: Bartholow's, Bristowe's, or Roberts's *Manuals.* Surgical Anatomy: Treves's Manual of *Surgical Applied Anatomy*; or *Applied Anatomy: Surgical, Medical, and Operative,* by John McLachlan, F.R.C.S., published by Livingstone, of Edinburgh.

DISINFECTION AFTER DIPHTHERIA.

APPETITUS RATIONI PAREAT.—A room which has been recently occupied by a person suffering from diphtheria should most certainly be thoroughly disinfected and cleansed before it is reoccupied.

VARIOLA OR SMALL-POX.

BETHNAL GREEN.—There must surely be some mistake. No medical officer of health would refuse to receive a certificate because the term variola was used instead of small-pox.

NOTES, LETTERS, Etc.

DR. WILHELM VON BOCK has been appointed Chief Magistrate of the City of Dorpat.

THE twentieth part of the *Cabinet Portrait Gallery* of photographs, by Messrs. W. and D. Downey (Cassell and Co.), contains an excellent portrait of Sir Henry Roscoe.

A CORRECTION.—In the review of Dr. John Shaw's book in the BRITISH MEDICAL JOURNAL of May 2nd, a confusion has occurred in lines 24 and 25. It is Gusserow who has written on *Erysipelas,* Boxall and Meyer on *Scarlatina.*

Imprudent Nurses.

Dr. Gorton Coombe (Southminster) writes: The note on "Imprudent Nurses" and their yarns, reminds me of this story: Scene, as usual, the sick room; patient fortunately asleep; present, two nurses and a lady visitor. One of the former, enlarging upon her experience in washing out the uterus in a previous case: "Ah," said the lady visitor, "my poor father always said if he had been done so he would not have suffered half as much as he did." Meaning, of course, his bladder not his uterus.

Dermatological Prize.

Dr. Unna, of Hamburg, offers an annual prize of 300 marks (£15) for the best essay on a dermatological subject to be announced every year at Easter. Essays must be sent in by December 1st. The subject for the present year is "The Topography of the Connective Tissue within the Skin in Adults." Professors Hoyer, of Warsaw, and Klebs, of Zürich, have consented to act as judges. The successful essay will be published in the *Dermatologische Studien*, edited by Dr. Unna.

Prize Essay.

The Spanish Medico-Chirurgical Society offers a prize of 250 pesetas (£10) together with the title of Corresponding Member, to the author of the best essay on the Diagnostic Significance of Jaundice in Diseases of the Liver. Essays, which may be written in Spanish, Portuguese, French, English, Italian, or German, must be sent before September 15th, 1891, to the Secretary of the Society, Dr. José Francos Rodriguez, Montera 22, Madrid.

Mr. Fildes's Picture.

M.D. writes: As to Mr. Fildes's picture, I venture to differ in one particular from the opinion expressed in the paragraph in the British Medical Journal after Show Sunday. I don't think the doctor is just taking a preliminary look: I think he has already examined the child and given an unfavourable prognosis, otherwise I cannot understand the attitude of the parents, who ought to be keenly watching his face to see if it would betray his first impressions. I hold that he is now taking a last look, and perhaps wondering whether after all there may not be more room for hope than he has allowed. I certainly do not agree with those who would diagnose tuberculous meningitis, and would rather think of some febrile condition, and would give a good prognosis.

Ether or Chloroform?

We have received several communications which we regret are too lengthy for insertion in full, with reference to an article on Ether or Chloroform, published in the British Medical Journal of April 25th.

Mr. George Foy, Dublin, assumes that we intended to adopt Dr. Julliard's views as to chloroform. The object of the article, however, was to give a full analysis of Dr. Julliard's pamphlet, which appeared to be valuable because it presented the case for ether in a striking and effective way. Dr. Julliard's case of death from chloroform was not the cause of his abandonment of chloroform in favour of ether, but it led him to examine the whole question, with the result that he was led to adopt ether in the great majority of his operations.

Mr. Foy points out that in London, where if anywhere, he thinks, the distrust of chloroform should be most prevalent, chloroform alone was used at St. Bartholomew's Hospital during 1890 1,601 times, and ether alone 686 times. Mr. Foy considers that Dr. Julliard's statistics are useless in their present form. "To form anything approaching a correct estimate," he writes, "as to the relative value of the drugs, we we must have full details of the patient's physical condition, and of the operation and the administration of the anæsthetic."

Dr. Dudley W. Buxton writes that the phrase "the refined conclusions of the physiological laboratory" reads rather like a sneer at those who prefer to follow the Baconian method of a direct appeal to experiment rather than trust to conclusions based upon statistics of observations made without rigid system or continuous watchfulness. We need hardly say that it was far from our intention to depreciate, still less to sneer at, the value of physiological investigation in the discussion of the relative merits of the two anæsthetics, but there are several complex physiological effects following the inhalation of ether and of chloroform as to the interpretation of which even physiologists are by no means agreed. Hence the doubt that still hovers over the question, notwithstanding the able investigations that have been made. The opinion of a practical surgeon of wide experience like Dr. Julliard is, therefore, of great value, more especially to those who may be unable to follow the details of technical physiological research.

On the Use of Pocket Handkerchiefs by the Phthisical.

Dr. Arthur Hill Hassall (San Remo) writes: In a notification of a meeting of the Committee of a well-known hospital for consumption, the following appears amongst the agenda: "Recommendation to order ten gross of handkerchiefs for the patients."

Knowing what we now do of the communicability of phthisis through the medium of the sputa, the above recommendation came on me as a surprise. Had it been, "To consider the best means of abolishing the use of handkerchiefs in public institutions for the reception of consumptives," it would have been more in consonance with modern views of the disease.

Pocket-handkerchiefs are at the best but necessary evils; and unless, as in the case of an ordinary cold, they are constantly changed, they become a source of annoyance, and possibly even in some cases of danger. They are saturated with moisture, mucus, and pus, and in this state they soil the hands and foul the clothes and pockets into which they are put; further, with the warmth of the body the organic matter they contain undergoes speedy decomposition, whereby it is rendered offensive.

If such be the results attending the use of pocket-handkerchiefs in the case of ordinary colds and fluxes, how much worse is it when they are employed as the receptacles for the sputa of the phthisical. The sputa in many cases dry up, become pulverised, the powder is easily diffused, and the dire disease consumption is propagated in those cases where the powder falls on a favourable nidus or soil. It is not stated in the recommendation of what materials the handkerchiefs are to consist; if of the ordinary kinds, the cost of washing the vast number that would be required would constitute a formidable item in hospital expenditure, and such a large number would be required that even the somewhat liberal allowance of "ten gross" would go but a short way to supply the wants of a hospital, say, of 100 beds. With all the disadvantages attached to the use of handkerchiefs, it would not be an easy matter to abolish their employment entirely, although a very great deal might and ought to be done to limit their use as far as possible.

The recommendation, as I have said, does not specify of what material it is proposed that the handkerchiefs should consist. In a letter published some time since in the British Medical Journal, on the disposal of the sputa in phthisis, I proposed paper as a substitute for the ordinary materials, not merely in the form of handkerchiefs, but more particularly in small pieces of regular size, these being at once got rid of after being used, chiefly by throwing them into the spittoons. There are now very thin, flexible, and suitable papers made, which admit of being folded and even crumpled up without being broken, as freely as cotton or silk handkerchiefs. A large number of such papers might be readily enclosed in a small case or envelope, when they would occupy but little space, and always be at hand for use. But these papers should not supersede diligent use of the spittoon, or a simple, uncomplicated flask.

The Late Professor John Marshall, F.R.S.

As we have already announced, the friends of the late Professor John Marshall wish to establish a memorial of him in connection with his Alma Mater, University College, London. It is proposed that primarily the memorial should take the form of a bust, to be placed within the college. In the event of the contributions to the fund which is being raised for this purpose being more than enough, the surplus will be set aside for the foundation of a prize in the Medical Faculty of the college, to be called the Marshall Prize. Those who wish to co-operate in this attempt to perpetuate the memory of Mr. Marshall's labours are requested to send their contributions to the treasurer of the fund, Mr. John Tweedy, 100, Harley Street, W.

Marshall Memorial Fund (First List).

	£	s.	d.		£	s.	d.
Mr. W. Anderson	2	2	0	Mr. Victor Horsley	2	2	0
Mr. A. E. Barker	2	2	0	Mr. S. J. Hutchinson ...	2	2	0
Dr. Barlow	2	2	0	Sir W. Jenner	2	2	0
Mr. Samuel Barnett	1	1	0	Dr. T. W. P. Lawrence ...	1	1	0
Mr. H. G. Barron	1	1	0	The Proprietors of the			
Dr. Bastian	2	2	0	*Lancet*	21	0	0
Mr. Marcus Beck	2	2	0	Dr. Louis Parkes	1	1	0
Dr. J. W. Bond	2	2	0	Mr. Awdry Peck	1	1	0
Mr. Stanley Boyd	1	1	0	Mr. Bilton Pollard	1	1	0
Mr. C. Bradley	2	2	0	Dr. G. V. Poore	2	2	0
Dr. C. Bucknill	1	1	0	Dr. Frederick Roberts ...	2	2	0
Mr. G. E. Claxton	0	10	0	Sir William Roberts	2	2	0
Messrs Collins and Collins	2	2	0	Dr. A. H. Robinson	1	1	0
Dr. C. d'A. Collings	1	1	0	Mr. Bernard Roth	2	2	0
Mr. T. W. Dix	0	5	0	Sir W. Savory	2	2	0
Dr. A. Downes	1	1	0	Mr. J. B. Scriven	1	1	0
Dr. W. T. Edwards	1	1	0	Dr. Ed. Seaton	2	2	0
Mr. J. E. Erichsen	2	2	0	Mr. Buxton Shillitoe ...	2	2	0
Dr. Fearnside	1	0	0	Mr. S. Sibley	2	2	0
Dr. J. P. A. Gabb	0	10	6	Mr. Balmanno Squire ...	1	1	0
Dr. J. G. Glover	1	1	0	Professor Thane	2	2	0
Mr. R. J. Godlee	2	2	0	Mr. T. W. Thompson ...	2	2	0
Mr. A. P. Gould	1	1	0	Dr. Thorowgood	0	10	6
Professor Halliburton ...	1	1	0	Mr. Jas. Turle	1	1	0
Dr. C. J. Hare	3	3	0	Mr. J. J. Tweed	1	1	0
Dr. Geo. Harley	1	1	0	Mr. John Tweedy	5	5	0
Mr. H. Harlock	1	1	0	Dr. J. Waggett	1	1	0
Rev. S. Haughton, M.D. ...	1	1	0	Dr. Walshe	2	2	0
Mr. Christopher Heath ...	2	2	0	Mr. Edwin Williams	2	2	0
Dr. Grailly Hewitt	1	1	0	Dr. John Williams	2	2	0
Mr. Berkeley Hill	2	2	0	Dr. W. Wood	5	5	0
Mr. F. Hinds	1	1	0	Dr. A. F. Voelcker	1	1	0

Treatment of Pneumonia.

Dr. H. Davies-Jones (Llangollen) writes: In reference to Dr. Hughes's treatment of pneumonia by liquor ferri perchloridi, I found it of very great service in two severe cases complicated with asthma and heart disease. There were abundant rusty sputa in one, and hardly any in the other. The effect of the drug was equally quick and efficacious in both. Dr. Hughes believes the disease to be due to micro-organisms, and acts accordingly.

Reconstitution of the University of London.

Mr. Julius Hamel, M.B.Lond. (Sheffield) writes: I have carefully read the proposed scheme for the reconstitution of the University of London and your article in the British Medical Journal of May 2nd. If the present standard of the M.B. degree is to be maintained, I fail to see in what way the M.D. degree will be made more accessible to the average London student; if, however, the standard is to be lowered, the vast majority of the present graduates will, I am sure, strenuously oppose the scheme.

Dr. F. W. Bennett (Leicester) writes: There seems to me one easy way by which the question of medical degrees could be arranged, not only to the satisfaction of the student, but also of those who desire to keep up the high standing of the present London qualification. The M.B. should be granted to those who pass the examination of the Colleges. The M.D. should rank as the equivalent of the present M.B.Lond., and a new qualification—for example, M.M., Master of Medicine—should be given to those who wish to attain to the highest ranks. Most men are at present prevented from gaining the London M.D., and yet rightly demand the title of Doctor of Medicine. The M.M. will still retain all the attractions of the present M.D., and will be a much more gratifying title than that of M.D.Honours—a title which I venture to think not one in a hundred would care to adopt.

British Pasteur Institute.

An Indian Officer writes: I am delighted to see that a sort of British Pasteur Institute is to be started at Cambridge, and that the British Medical Association has given £300 towards it. I have sent home a guinea, to be as a thankoffering for the British Medical Association setting so good an example of self-help. Science is always slighted in England, so the Association shows the State that the profession will found a Pasteur Institute without State aid. If every member will give his guinea, each member will feel the loss very slightly, while the aggregate subscription will be a handsome amount, that ought to make Parliament ashamed of its mean parsimony.

A Learned Assistant.

A Member writes: I notice an amusing letter in the British Medical Journal of April 18th headed "A Learned Doctor." It reminds me of quite as bright an example of the learning (?) of some of the profession in England. A man died here a few days ago, and the cause of his death was certified as "cyrosis of liver." An assistant was attending him, and, during the patient's illness, he (the assistant) informed several people that his patient was spitting up his liver, and, when the patient died, the learned M.R.C.S. stated that the poor patient had to go, as he had spat up all his liver.

Mortality of Childbirth and the Midwives Bill.

Mr. Herbert de C. Woodcock, M.R.C.S. (Moorville, Leeds), writes: Supposing I am asked to attend a woman after her confinement who has been delivered by a midwife. If the patient dies I sign the death certificate. Seven or eight such cases have occurred to me in the last eighteen months. During that period I have not lost a single patient in confinement whom I have had sole control of, and I have attended four hundred cases, yet the statistician will credit me with seven or eight deaths. It is obvious why a prominent obstetrician has a high mortality in his practice; he is called in to the worst cases.

Case of Abdominal Biliary Fistula.

Dr. Samuel Boake, L.R.C.S., L.R.C.P.Irel. (Stamford Bridge, York) writes: The rare occurrence of such a case as the above renders it, I think, of sufficient interest to merit publication. It occurred in the practice of Mr. Wright, of Stamford Bridge, York, and the following is a brief outline of it:

M. Y., married woman, aged 54 years, experienced, five years ago, a severe attack of obstructive jaundice. Since then she has not regained her former health, being frequently troubled with pain about the region of the liver and the right hypochondriac region generally. In November, 1890, a larger swelling gradually appeared a little above and to the right of the umbilicus, which became inflamed and indurated. Round the summit appeared several minute apertures, which, on probing, seemed to lead into one channel. Sixty gall stones have come away through these apertures, varying in size from a pea to a marble, and bearing facets. The swelling has entirely disappeared, leaving an indurated opening which extends upwards and to the right in a slanting direction for about four or five inches. Gall stones come away occasionally through this opening, and there is a constant discharge of a yellow, watery fluid. The patient has greatly improved in health of late.

LETTERS, COMMUNICATIONS, Etc., received from:

(**A**) Dr. J. Adams, Eastbourne; R. Arthur, M.B., London; Dr. J. Anderson, Ulverston; Professor Attfield, London; Mr. C. Adam, Elgin. (**B**) Mr. J. Batteson, Forest Gate; Mr. W. A. Berridge, Redhill; Mr. R. Browne, King's Lynn; Dr. C. Beale, London; Mrs. Barling, Birmingham; R. C. Benington, M.B., Tynemouth; Mr. G. S. Bigg, London; Fleet-Surgeon W. Brown, Woolston; Dr. F. W. Bennett, Leicester; Dr. G. A. Ballingall, St. Leonard's-on-Sea; Dr. Balding, Royston; Mr. H. N. Baron, Pailton; Mr. H. Bullivant, Derby. (**C**) A. Clarkson, M.B., Leeds; J. F. Craig, M.B., Birmingham; T. E. Carter, M.B., Stamford; Mr. J. Cornwall, Kew; Mr. O. J. Currie, Colombo; Mr. J. Cantlie, Hong Kong; Candidate; Mr. Watson Cheyne, London; Mr. F. H. Cheesewright, London; Mr. A. M. Craythorne, Liverpool. (**D**) Mrs. A. Duncan, London; Dr. P. T. Duncan, Croydon; Dr. A. E. Davis, Liverpool; Mr. A. Doran, London; Mr. D. Dickinson, Chester; Dr. W. Dickson, Upper Norwood; Dr. L. Drage, Hatfield; Dr. V. Dickinson, London; J. Drew, M.B., Cheltenham; Messrs. W. and W. Davies, Brighton. (**E**) R. H. Elliott, M.B., Bedford; Mr. J. E. Erichsen, London. (**F**) Mr. G. M. Fox, Bilston; Dr. B. Fenwick, London; Dr. H. Fox, London; Mr. W. Fleming, London; Surgeon-General J. G. Faught, Aldershot; Mr. G. Foy, Dublin; Dr. Foss, Stockton; Dr. R. S. Fowler, Bath; Dr. A. F. Ferguson, Aden; Frame Food Company, London. (**G**) Mr. L. Gamgee, Manchester; Mr. A. Graham, St. Leonard's-on-Sea; Professor Gairdner, Glasgow; J. H. Glenn, M.B., Bray; Messrs. C. Griffin and Co., London; Mr. T. C. Grey, Swansea; Mr. F. George, East Finchley; Dr. A. Grant, Fairfield; Dr. J. Mortimer Granville, London. (**H**) Mr. G. L. Hill, Dursley; E. B. Hulbert, M.B., Windsor; Dr. P. J. Hensley, London; Dr. G. E. Herman, London; Mr. J. F. Harrison, Stockport; Dr. A. H. Hassall, San Remo; Dr. H. Handford, Nottingham; Mr. Jonathan Hutchinson, jun., London; T. D. H. Holmes, M.B., Bridgwater; Messrs. Hertz and Collingwood, London; J. Hamel, M.B., Sheffield; Brigade-Surgeon J. Hector, London; Mr. F. R. Humphreys, London; Mr. J. H. Harris, Modbury; Dr. G. Henty, London. Dr. M. Handfield-Jones, London; (**J**) Mr. V. Jones, London; Mr. G. S. Johnson, London. (**K**) Dr. Norman Kerr, London; Dr. R. Kirk, Glasgow. (**L**) Mr. G. H. Lund, Manchester; Mr. Clement Lucas, London; Dr. R. Lee, London; Mr. W. H. P. Lewis, Woolwich; Mr. H. R. Leech, Edgbaston; Mr. J. E. Lane, London. (**M**) Mr. A. E. Muncaster, Ampthill; M.R.C.S., L.M.; Dr. F. H. Moore, Ely; Dr. J. W. Moore, Dublin; Mr. R. G. Macdonald, Dunedin; Professor McKendrick, Glasgow; The Malted Milk Company, London; Dr. J. A. MacWilliam, Aberdeen; Mr. E. Merch, Darmstadt; W. H. Murray, M.B., Pollokshields; Mr. J. Metcalfe, Barkly East, Cape Colony; Dr. H. G. W. Mackenzie, London; Mr. W. Martindale, London; Dr. W. McMurray, London; Mr. F. P. Maynard, Black Mountain; Mr. G. Meadows, Hastings; Dr. E. Magennis, Lurgan; Mr. K. B. Murray, London; Dr. Martin, Blackburn. (**N**) Mr. J. T. Neech, Tyldesley; Mr. A. W. Nankivell, Rochester. (**P**) Mr. D. Pennington, Hyde; Perplexed; Mr. C. Pounds, Odiham; Dr. L. Parkes, London; Dr. H. Page, Redditch; Sir George Paget, Cambridge; Messrs. Paine and Co., St. Neots; Dr. Leslie Phillips, Birmingham. (**R**) Mr. H. Rainsford, London; Mr. C. T. Russell, London; Messrs. Richardson Brothers and Co., Liverpool; Dr. J. Reynolds, Brixton; Mr. E. H. Ryan-Tenison, Bexhill; Professor C. Ruata, Perugia; Mr. Mayo Robson, Leeds; Registrar of the Royal College of Physicians and Surgeons, Edinburgh; Mr. J. Ramsdale, Patricroft; Dr. G. Reid, Stafford; Mr. W. W. Rooke, London. (**S**) Dr. E. Seaton, London; Messrs. Seabury and Johnson, London; Mr. J. B. Sutton, London; Secretary of the University of London; Dr. C. E. Shelly, Hertford; Mr. H. H. Sturge, New Eltham; Mr. R. R. Sleman, London; Mr. E. R. Sims, London; Dr. Sykes, Mexborough; Dr. J. K. Spender, Bath; Dr. F. J. Sandford, Market Drayton; Messrs. Street and Co., London; Dr. Siordet, Cannes; Sanitas; Senex; Secretary of the London School of Medicine for Women; Miss Sands, London; Dr. Shore, Hornsey; Dr. R. Stockman, Edinburgh; Dr. J. Shaw, London. (**T**) Mr. F. H. Treherne, Windsor; Sir H. Thompson, Falmouth; Mr. J. Tay, Bristol; Dr. Trevelyan, Leeds; Dr. F. Taylor, London; Mr. J. H. Targett, London; Mr. Lawson Tait, Birmingham; Mr. T. Turner, Norwich; Mr. John Tweedy, London. (**V**) Mr. T. J. Verrall, Brighton. (**W**) Messrs. W. Wood and Co., New York; Mr. W. Wilson, Florence; Mr. V. H. W. Wingrave, London; Mr. W. Whitehead, Manchester; Dr. A. Whitelegge, Wakefield; Mr. G. E. Williamson, Newcastle-on-Tyne; Professor B. C. A. Windle, Birmingham; Dr. Hale White, London; Mr. Mr. J. R. Whitley, London; Dr. O. Wood, London; Dr. A. Wilson, Leytonstone; etc.

BOOKS, Etc., RECEIVED.

Practical Treatise on Electricity in Gynæcology. By Egbert H. Grandin, M.D., and J. H. Gunning, M.D. New York: William Wood and Co. 1891.

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ON THE COAGULATION OF THE BLOOD IN ITS PRACTICAL ASPECTS.

The Annual Oration to the Medical Society of London delivered May 4th, 1891.

By Sir JOSEPH LISTER, Bart., F.R.S.,
Professor of Clinical Surgery in King's College, London.

Mr. President and Gentlemen,—Thirty years ago Dr. Alexander Schmidt, of Dorpat, enunciated a totally new view of the coagulation of the blood. Having rediscovered the fact observed many years before by Dr. Andrew Buchanan, of Glasgow,[1] that hydrocele fluid—uncoagulable in itself—is made to coagulate by the addition to it of the serum of blood already coagulated, and pursuing extended researches in the line thus indicated, he came to the conclusion that fibrin does not exist as such in solution in the plasma, but is composed of two albuminoid substances, one present in the liquor sanguinis, to which he gave the name of fibrinogen, and the other a constituent of the blood corpuscles, and this he termed the fibrinoplastic substance.[2]

It might be objected to Professor Schmidt that the hydrocele fluid and the various dropsical effusions with which he had worked were not fairly comparable to liquor sanguinis; that they were transudations through the walls of vessels, and that the liquor sanguinis might have become in one way or another altered in the process of transudation. This objection was, as I believe, removed by an observation made by myself about the same period.[3] It had fallen to my lot to observe that in mammalia, whereas the blood usually coagulates soon after death in the heart and the main vascular trunks, in the secondary vessels it remains fluid for an indefinite period, and that not only in those of small calibre, but, if the animal be large, in large vessels also. This being understood, I proceeded as follows: Having removed a portion of the jugular vein of a horse with the blood contained in it, between two ligatures, I suspended this segment of the vein in a vertical position. In the blood of the horse, the red corpuscles behave in a totally different manner as regards their aggregation from those of a healthy man or of the ox. In the horse, instead of the red corpuscles assuming the condition of a delicate network of rouleaux, they become aggregated into dense spherical masses, often visible to the naked eye, like coarse grains of sand; and these densely aggregated corpuscles, falling more quickly than the rouleaux in the liquor sanguinis, as hailstones fall more rapidly than snow flakes, soon leave the upper part of the fluid comparatively free from corpuscles; so that within about half an hour the upper third, or it may be half, of the blood is a transparent liquid.[4] When I had ascertained through the translucent walls of the vein that this state of things had occurred, I punctured the upper part of the vessel, so as to let out some of the clear fluid, and found that it was very slow in coagulating. In about three-quarters of an hour it had only begun to coagulate, whereas a little of this same clear fluid, to which a small portion of coagulated blood was added, clotted in a very short period. That the clear fluid did coagulate at all was sufficiently explained by microscopical examination, which showed that there were present in it some red corpuscles and numerous white corpuscles. It was obvious that if we could have separated the corpuscles absolutely from the liquor sanguinis, there would have been no coagulation at all: and as the separation of the corpuscles from the plasma had occurred, not by transudation through vascular walls but simply as the result of gravity, it could be no longer doubted that Schmidt's conclusions were essentially right.

During the time that has since elapsed various endeavours have been made to ascertain the precise nature and mutual relations of the constituents of the liquor sanguinis and the corpuscles thus concerned in the formation of the fibrin. This inquiry cannot be said to be yet terminated, and it is, at the present time, uncertain whether Schmidt's simple original view may not be correct, that there are two albuminoid substances, one in the plasma and one in the corpuscles, which combine to constitute fibrin.

These investigations, most valuable as they are, have, as it seems to me, somewhat overshadowed the question, which is after all the most interesting to us as practitioners, namely, What are the circumstances that determine the mutual reaction of these two constituents? What are the conditions under which the corpuscles are induced to give up their element of the fibrin, to combine with the element in the liquor sanguinis? This subject engaged a large share of my attention many years ago; and, though I am afraid I have not much of novelty to communicate regarding it, yet in consequence of its very great importance, I have thought that it might perhaps be not unworthy of the circumstances in which the kindness of your Council has placed me this evening.

Shortly before my investigations began, Professor Brücke, of Vienna, had conducted an inquiry into the conditions which determine coagulation, and had arrived at conclusions which to a certain extent resembled those to which I was led.[5] He found, as I also did, that there is a world-wide difference, in their relations towards the blood, between the walls of the living vessels and ordinary solid matter; and Brücke concluded, as Sir Astley Cooper and others had done before him, that this difference consisted in an active state of the living vessels; that the blood vessels, by an action which they exerted upon the blood, prevented it from coagulating. My investigations, on the other hand, led me to conclude that healthy blood has no spontaneous tendency to coagulate; and that the walls of the blood vessels are not active, as Brücke supposed, but passive in their relation to coagulation; that ordinary solids induce coagulation by an attractive influence—comparable, perhaps, to that which a thread exerts in causing the deposition of sugar-candy from a solution of sugar—while the healthy living tissues differ from ordinary solids in being destitute of this attractive influence.

Out of many experiments tending to this inference, published long ago,[6] I may be permitted again to describe one which not only appears to me conclusive on the point at issue, but is also of interest otherwise. A portion of the jugular vein of an ox with the blood in it being held vertically, I cut off the upper end, taking scrupulous care that the wounded part of the vessel did not come in contact with the blood, and then passed down into the vein a tube composed of very thin glass of a calibre rather less than that of the jugular vein, its upper end being stopped by a perforated cork in which was inserted a narrow glass tube, which again was continued with a short piece of vulcanised india-rubber tubing. The tube was pressed with the utmost steadiness down into the vein, so as to disturb the blood as little as possible. In the course of time, the vein being a little squeezed, blood made its appearance in the narrow glass tube, and then at the end of the india-rubber tube. When this was the case, the india-rubber tube was secured by a clamp, and the whole apparatus was rapidly inverted, and the piece of vein withdrawn. Waterproof tissue was then tied over the open end of the large tube to prevent evaporation and exclude dust, and the tube was securely fixed and left undisturbed. Thus we had blood present in a vessel consisting entirely of ordinary solid matter, but having been subjected in a minimum degree to the influence of the ordinary solid: and the result was that when I came to examine the blood after the lapse of ten hours, I found it still fluid, with the exception of a crust of clot lining the wall of the glass vessel. This, gentlemen, seemed to me of itself to afford sufficient evidence that healthy blood has no spon-

[1] *Proceedings of the Glasgow Philosophical Society*, February 19th, 1845.
[2] *Archiv für Anat. Phys.*, etc., 1861 and 1862.
[3] The Croonian Lecture, by the author, on the Coagulation of the Blood, *Proceedings of the Royal Society*, June 11th, 1863, p. 606.
[4] The same thing is seen in the mixture of serum and corpuscles obtained by stirring the blood during coagulation. In that from the horse the red corpuscles subside from about the upper third of the liquid within half an hour; whereas that from the ox shows only a thin layer of serum after the lapse of twenty-four hours. I am surprised to see that in some textbooks the buffy coat is attributed to slowness of coagulation, with which it has nothing whatever to do.
[5] *British and Foreign Medical Review*, 1857.
[6] The Croonian Lecture, *Proceedings of the Royal Society*, *loc. cit.*

taneous tendency to coagulate, requiring to be kept in check by an action on the part of the walls of the living vessels. This blood had been entirely withdrawn from the vein, and yet it remained fluid except where in contact with the ordinary solid.

This conclusion has been comparatively lately strikingly confirmed by the experiments of more than one observer. I would especially allude to one performed by Professor Berry Haycraft.[7] He has found that if a drop of blood is introduced, under suitable precautions, into a deep narrow jar of castor oil, and before the drop, which falls slowly through this oil, has reached the bottom of the vessel, the jar is inverted and the drop made to retrace its steps without having touched the glass, this process being repeated again and again, the drop of blood, having never come in contact with an ordinary solid, remains fluid for an indefinite period. This experiment may perhaps appear to some of you even more conclusive than mine, inasmuch as no coagulation whatsoever occurs in the drop of blood under these circumstances. Certainly it seems to me that it confirms in an absolutely unmistakable manner the view to which I had been previously led.

But there is also this interesting circumstance in Professor Haycraft's observation. It had been shown amply by myself that the gases of the atmosphere are incapable of inducing coagulation of the blood; but experiments like those of Professor Haycraft show that the same is the case with neutral or chemically indifferent liquids. This seems to me to be an exceedingly interesting fact, namely, that the active living tissue, such as lines the wall of a healthy vessel, in its relation to the coagulation of the blood, resembles the mobile particles of a liquid.[8] I say the *active* living tissue, for when the living tissue becomes impaired in vital energy it behaves towards the blood like an ordinary solid. That is the case not only when a vessel is wounded, but also when it is subjected to some influence, which, without actually wounding it, is calculated to suspend or impair its vital activity. A good illustration of this is afforded by a fact which I have never before referred to, but which I have often noticed. A very valuable field for simple and instructive observations regarding the conditions that determine the coagulation of the blood was afforded by the feet of sheep, removed after the animals had been killed, the blood being retained in the vessels by a bandage applied below the part where the foot is removed by the butcher. The blood remains fluid for days in the veins of such feet, while, at the same time, the persistent vitality of the vessels is shown by the fact that they contract when exposed by reflexion of the skin.[9] Now it happened that the butcher, in order to keep the sheep from struggling, always tied the feet together with a firm cord applied below the part where my bandage for retaining the blood was passed round; and I invariably found the blood coagulated in the superficial veins at the part where they had been pinched between the cord and the bone. There is no reason to suppose that the temporary application of the cord had deprived the veins of their vitality at the part subjected to its pressure. If the sheep had been released, I have no doubt whatever that the veins would have remained alive. But though the vessels had not been wounded, but only squeezed, only had their vital energies temporarily impaired, nevertheless the blood had coagulated in them at the part so treated. Just as by pinching a portion of the web of a frog's foot with the padded ends of a pair of dressing forceps you can induce, if you press hard enough, a degree of intense inflammatory congestion by which the pigment cells for the time being have their vital functions of diffusion and concentration of the pigment perfectly suspended, and yet are in a condition which is recoverable,[10] so had these veins been subjected to an agency—the pinching by the cord—which did not actually wound them, but merely impaired or suspended for the time being their vital power. Thus it appears that the living tissues, which, while in a healthy active state, differ from ordinary solids in not occasioning the coagulation of the blood, when lowered in their vital power, themselves act like ordinary solids, and induce coagulation.

Another point to which my investigations were at that time directed was the behaviour of the blood-clot in relation to coagulation. I came to the conclusion that an undisturbed coagulum resembles living tissue in its behaviour with regard to coagulation; that an undisturbed clot does not induce coagulation in its vicinity—a most important truth if it be such. This is well illustrated by the fact with regard to the sheep's foot, to which I have already referred. We have seen that, on the one hand, where the tight cord had pressed the veins, coagulation occurred in those veins, but on the other hand that the blood remained permanently fluid in other parts of the same vessels. In other words, the clot induced by the action of the cord upon the veins had not been able to spread, although the blood in the veins was perfectly at rest; the clot could not propagate itself. The same thing is seen in any amputated limb in which the blood vessels are sound. If such a limb is examined, say twenty-four hours after amputation, you will find that there exist clots in the vessels where they were wounded by the knife in the operation, but that elsewhere the blood remains fluid and coagulable. I came therefore to the conclusion that an undisturbed blood-clot is unable to induce coagulation in its vicinity; and I think that the instances I have given demonstrate that such is really the case.

Yet in the experiment which I have described, where a glass tube was slipped down into the jugular vein, the coagulum did propagate itself. I found, on examining such a tube ten hours after it had been charged with blood, that the crust of clot which lined the tube was only a thin one; but in another experiment, nearly two days having been allowed to pass before examination, the clot was thick, and there remained only a small channel in the middle of it, with the blood still fluid and coagulable. How is this difference of behaviour between the clot within the vessels and the clot outside them to be explained? At the time when I performed the experiment I was disposed to think that it must be due to some imperfection in the mode of performing it; that in spite of all the care that I had taken in very steadily pressing down the very thin glass tube, nevertheless the blood must have been influenced by the glass for some considerable distance.

I am now inclined to believe that another explanation must be given. It was ascertained by Schmidt that (to adopt provisionally his original nomenclature) the fibrinoplastic substance emitted by the corpuscles is greatly in excess of what is required in order to combine with the fibrinogen of the liquor sanguinis. This, in fact, is obvious from the fundamental truth that serum expressed from a shrinking clot, when added to hydrocele fluid, induces coagulation. The blood is coagulated already; the fibrin is already formed in it; and yet the serum contains fibrinoplastic substance in solution free to combine with the fibrinogen of the hydrocele fluid. Such being the case, we can readily understand that, in the experiment with the glass tube, the clot first formed, shrinking, squeezes out a little of its serum containing fibrinoplastic substance, and this, combining with the fibrinogen of the adjacent liquor sanguinis, fresh fibrin is formed, and the clot goes on perpetuating itself indefinitely, however slowly.

But how are we to explain the non-extension of the clot within the vessels in the cases referred to? how are we to explain the fact that it did not spread from the vicinity of the tight cord in the sheep's foot, and does not extend beyond the vicinity of the wound in the amputated limb? Again, why is it that the coagulum never propagates itself from the wound in the vein after phlebotomy? That wound—intentionally made somewhat gaping is certainly, in the first instance, occupied by blood-clot. The equable flow of the venous blood does not disturb it. It is an undisturbed coagulum. But it must often happen that the clot projects more or less into the calibre of the vessel, in which case the blood, at its lee side, will lie at rest in contact with it. Yet the indefinite extension of the coagulum, which the analogy of the blood in the glass tube would lead us to

[7] *Journal of Anatomy and Physiology*, vol. xxii, p. 582.

[8] Dr. Freund, of Vienna, almost simultaneously and independently observed this relation of inert liquids to coagulation, *Jahresberichte für Anatomie und Physiologie*, 1886.

[9] The blood in the amputated limb becomes gradually impaired in its coagulating property. A few hours after amputation it is found to clot more slowly than at first when exposed to the influence of ordinary solids, and after some days fails to coagulate at all.

[10] See a paper by the author on the Early Stages of Inflammation, *Phil. Trans.* for 1858, Part II, p. 682.

anticipate, never occurs; and we reckon with confidence on the wound in the vein simply healing without interference with its calibre.

These remarkable differences between the behaviour of a coagulum in a glass tube and within the living vessels may, perhaps, have light thrown upon them by a fact which I have on a previous occasion brought before the attention of this Society.[11] I first observed it, eighteen years ago, in an attempt that I made to obtain pure blood-serum from a horse; letting blood, with antiseptic precautions, from the carotid artery into a flask that had been purified by heating it to a very high temperature. To my great astonishment I found that, although the blood of the horse coagulated as usual in the flask, the clot did not shrink in the least. Though I kept it for many days, yet there was not a drop of serum to be seen upon its surface, and the sides of the clot remained in contact with the wall of the flask. This was made particularly striking by the circumstance that masses of aggregated red corpuscles, resembling grains of sand, as before described, were to be seen touching the glass in the lower part of the buffy coat. This, I need hardly say, astonished me immensely; and I imagine it was the first time that a blood-clot was ever seen not to shrink and press out serum.

It seemed scarcely credible that this result could be due to the destruction of micro-organisms in the flask, although the heat had been applied for that purpose. It was suggested to me that perhaps it might arise from some physical change in the glass due to the very high temperature to which I had subjected it. It had been observed by Liebig that, whereas a supersaturated solution of sulphate of soda is, under ordinary circumstances, made to start into a crystalline mass by contact with a glass stirring rod, no such effect is produced by the rod if it is heated in the flame of a spirit lamp and allowed to cool; a result attributed by Liebig to some temporary physical change produced in the glass by the heat. Might it be, then, that the fibrin of the clot failed to shrink in consequence of a different molecular arrangement assumed under the influence of the glass altered by heat? That view, however, has been exploded; because it has been proved, as illustrated by some striking experiments shown at a *conversazione* of the Royal Society some years ago by my colleague, Professor Thomson, that the cause of the crystallisation of the supersaturated solution of sulphate of soda is not the contact with the glass as such, but the accidental presence on the glass of minute quantities of sulphates isomorphous with the sulphate of soda; and that the effect of the heat is to drive off the water of crystallisation of those salts, and make them no longer isomorphous with it, and, therefore, no longer able to induce the crystallisation. And so a mystery in physics was cleared away, and made a very simple matter. Thus the suggested explanation fell to the ground.

The same absence of shrinking of the clot had been brought about by different means in the example which I exhibited to this Society five years ago. A glass jar, not especially clean, had been purified by means of a solution of corrosive sublimate in 500 parts of water. Blood had been let into this jar from the jugular vein of a horse, under antiseptic precautions, forty-one days before; and the members of the Society had the opportunity of seeing that, just as in the case of the flask subjected to a high temperature, the clot had not shrunk; the serum had not been squeezed out of it. And although it seems unlikely that in the short time that elapses between the shedding of the blood and the commencement of shrinking of the clot under ordinary circumstances, the micro-organisms present could have had such an influence on the blood, yet when we see that two agencies so different in their nature as a high temperature and a solution of corrosive sublimate, but both powerfully germicidal, led to the same result, one is almost inclined to think that surely it must be so. No other explanation has been offered, although I know that physiologists have been much interested in the subject.

If we admit that micro-organisms are the cause of the shrinking of the clot, it follows that a coagulum formed within the body under healthy conditions otherwise, being free from micro-organisms, will not shrink; and, therefore, that the clot, not squeezing out the serum, will not induce coagulation in its vicinity. Fibrinoplastic substance exists, no doubt, in the serum in the substance of the clot. But the experiments of the late Mr. Graham showed that diffusion of liquids is an exceedingly slow process, even between a strong saline solution and water; and it must be a very slow process indeed between two liquids so nearly allied as liquor sanguinis and serum. I do not say that this is really the true explanation; but it seems to harmonise with the facts.

[11] British Medical Journal, October 25th, 1884.

While an undisturbed clot resembles healthy and active living tissue with respect to coagulation, an injured clot acts in this relation like wounded tissue. And as a coagulum is an exceedingly lacerable and very easily injured substance, we often see coagulation induced by a blood-clot that has been disturbed. This is perhaps most strikingly seen in aneurysm. Let us take, for instance, a traumatic aneurysm. The blood escapes from the wounded artery into the surrounding tissues; and these having been injured, the blood coagulates in contact with them. Every successive portion of blood driven in by the force of the ventricle stretches and lacerates the clot so formed. It is an injured clot, and induces coagulation in its vicinity: and the result comes to be that while, on the one hand, the force of the heart tends perpetually to distend the sac, inferior as it is in elasticity to the wall of the artery, there is on the other hand a constant tendency to deposition of fibrin upon the interior of the sac as if the blood were "whipped," and thus the wall of the sac is perpetually strengthened, exhibiting a counteracting agency tending to recovery.

A beautiful converse of this state of things is presented, as it seems to me, by some cases of varicose aneurysm, such as used to be a not uncommon result of careless venesection. Here the communication with the vein was sometimes so free that the blood driven in by the heart distended the sac comparatively little, so that the aneurysm had no tendency to increase, but was merely a source of annoyance from the purring sensation caused by the arterial blood driven into the vein. And if an operation was performed on such a case, the remarkable fact was disclosed that instead of the aneurysmal sac being lined with layers of fibrin, it resembled in its interior an artery or a vein.[12] The force of the blood not being able to tell upon the clot and injure it, the clot ceased to induce further coagulation, and became organised and invested with endothelium.

We see the same thing illustrated in the different behaviour of the blood clot above and below a ligature applied upon an artery in its continuity. When such a ligature was applied in the old-fashioned way, in the shape of a silk thread, used without any antiseptic precautions, with the ends left long, it had to come away by suppuration, and there was serious danger of secondary hæmorrhage. But if this did occur, it was commonly not, as might have been expected, from the cardiac side, where the seat of ligature was subjected to the full force of the ventricular contractions, but from the distal side, where the pressure was comparatively feeble. The ligature having been applied sufficiently tightly to rupture the internal and middle coats, there necessarily occurred as an immediate result a certain limited amount of coagulation upon the injured tissues. On the cardiac side, where the force of the blood driven by the heart against the obstruction told powerfully at every stroke, the clot was perpetually disturbed, and infallibly coagulation occurred up to the first considerable branch, that carried the stream away and made further coagulation impossible. But at the distal side, if the circumstances of the anastomosing circulation were such that there was no pulsation, there might be no extension whatever of the undisturbed primary coagulum, so that a mere trace of clot was found on pathological examination.

I have hitherto referred to the view first advanced by myself and now, I believe, generally accepted—that the fluidity of the blood is not due to active operation of the living vessels. But I am far from holding the opinion that there is no part of the vascular system that actively opposes coagulation. If transfusion is practised in the ordinary manner—say by filling a syringe with blood and injecting it into the vessels of the patient—the blood is subjected to the influence of an ordinary solid, which would inevitably induce coagulation within the vessels, unless there were some counteracting influence at work. It is astonishing how very short a period

[12] Syme's *Principles of Surgery*, 5th edition, p. 140.

of contact with an ordinary solid determines the mutual reaction of the corpuscles and the liquor sanguinis. Yet no coagulation occurs as the result of such an operation. It is, I presume, in the capillary system that the correcting influence is exerted.

Again when intense inflammatory congestion is produced by the application of some irritant substance to the web of a frog's foot, we see that the corpuscles, both red and white, adhere to one another and to the walls of the vessels, and block the capillaries. Mechanical violence is one of the many irritating agencies which produce such congestion; and from what we know of the effects of the pressure of the cord upon the vessels of the sheep's foot, we cannot doubt that the blood must be coagulated in the congested vessels: that between the corpuscles there must be cementing fibrin. The distinguishing characteristic of acute inflammatory exudation is of itself pretty clear evidence to this effect. The exudations in intense inflammation differ from those of dropsy by being coagulable; hence the brawniness of tissues that are intensely inflamed, or the lymph in acute pericarditis. How can this coagulable character of the effused liquor sanguinis be explained except by supposing that the walls of the capillaries have acted for the time being like ordinary solid matter, and that, as a consequence of this behaviour of the capillaries, the corpuscles have given up to the liquor sanguinis (to use Schmidt's language) the necessary fibrinoplastic substance? And if the exuded liquor sanguinis coagulates, we cannot doubt that the plasma which remains in the capillaries is also coagulated. Nevertheless, if the irritant has not been pushed so far as to cause the death of the part on which it has acted, the tissues in due time recover, and we see the corpuscles gradually detaching themselves from each other, to pass on into the circulation. And we may surely say that, not only do the corpuscles recover their original non-adhesive character, but the fibrin which binds them together is redissolved.

I believe, therefore, that although in the larger vessels the vascular walls are negative as regards the coagulation of the blood, in the capillary system there must be potent agencies counteracting any tendency to clotting induced by abnormal conditions, and capable even of redissolving fibrin.

A CONTRIBUTION TO THE STUDY OF CHLORALAMIDE.

By JOHN GORDON, M.D.,

Physician Aberdeen General Dispensary; Assistant to the Professor of Materia Medica, University of Aberdeen, etc.

Chloralamide was introduced by Professor von Mering, of Strassburg. The advantages claimed for it over some of the other hypnotics are that it does not depress the cardiac, respiratory, or cerebral centres, the blood pressure is not markedly lowered, and it does not interfere with the normal course of digestion. Over sulphonal, the advantages claimed are that its action is more speedy, its use is not marked by depression, giddiness, motor inco-ordination, or deferred action. Chloralamide is further free from the somewhat deterrent taste and smell of paraldehyde, and is more active than urethane.

Physical Properties and Chemical Constitution.

Chloralamide occurs in white crystals which have a slightly cool bitter taste. It is soluble in water to the extent of about 1 in 10, in alcohol it dissolves in about 1 in $1\frac{1}{2}$. If dissolved in water of temperature above 120° F., it decomposes. It is also decomposed by a caustic alkali, by carbonates or bicarbonates of an alkali, but its solubility is increased and its decomposition is prevented by the presence of a weak free acid such as hydrochloric. Chloralamide is the result of the chemical combination of chloralanhydrate CCl_3CHO, and formamid $CHO\,NH_2$, or the formula may be thus expressed:

$$CCl_3\,CH\!<\!\begin{matrix}OH\\ NH\,CHO\end{matrix}$$

Reflex Functions of the Spinal Cord.

Numerous experiments were performed on frogs to elucidate its action on the reflex function of the spinal cord. The method employed was in all essential points similar to that described in my former studies. The result of these observations was to show that chloralamide diminished the reflex functions of the spinal cord. This was shown by the long delay of the period at which the limbs were moved or withdrawn from the stimulant after the injection of the drug. Chloralamide did not diminish, at any rate in any marked degree, peripheral sensation, for it was found that the non-ligatured limb continued to be more active in response to the stimulant than the ligatured limb. In this point the drug contrasts with paraldehyde, urethane, and sulphonal, all of which had distinct influence in diminishing peripheral sensation.

Experiment I.—To give an example, the following is a type. Frog, 34 grammes in weight, decerebrated, right iliac artery and vein ligatured; stimulation in H_2SO_4 (1 in 800), 5 minims 6 per cent. Chloralamide solution injected into dorsal lymph sac.

Before Administration of Chloralamide.

Ligatured Limb.	Unligatured Limb.
8 seconds limb withdrawn	7 seconds limb withdrawn
6 ,, ,,	5 ,, ,,
6 ,, ,,	6 ,, ,,

At 2.50 P.M., 5 minims, 6 per cent. solution chloralamide injected into dorsal lymph sac.

Ligatured Limb.	Unligatured Limb.
15 seconds limb withdrawn	18 seconds limb withdrawn
3.30 P.M.	
19 ,, ,,	2 ,, moved
	10 ,, withdrawn
3.55 P.M.	
30 ,, ,,	8 ,, moved
	28 ,, withdrawn
4.45 P.M.	
No movement	20 seconds, withdrawn with difficulty
5 P.M.	
,,	20 seconds moved feebly
11 A.M. next day; H_2SO_4 (1 in 400).	
No response	30 seconds feeble movement.

Experiments were also performed to test its action on frogs, and these confirm the observations of Kny, published in the *Therapeutische Monatshefte*, Heft 8, 1889. It had a distinct hypnotic effect, and diminished all the reflexes, but the frog ultimately recovered.

Experiment II.—A frog of normal activity, 32 grammes in weight, was taken at 9.35 A.M.; 15 minims of 4 per cent. solution of chloralamide was injected into dorsal lymph sac. At 9.55 its leap was heavy, fore and hind limbs were weakened, reflex of eye diminished; if placed on its back it occasionally struggled to right itself. At 10.8 reflex gone, but immediately after testing a strong co-ordinate spring was made; tendency of movement to be laboured. At 10.12 high spring made, and has since lain on its back. At 10.14 it turned suddenly to its right side, and executed violent movements of flexion and extension, and regained a sitting position. At 10.17 conjunctival reflex abolished; leg remained in same position when extended; when turned on its back made efforts to rise, but failed, and remained motionless on its back, with the legs drawn up. At 10.55 no reflex of eye or hind limbs; respirations very feeble; no cardiac pulsation visible. At 2.50 P.M. no reflex present except that of eye, but it is distinct. At 3 reflexes present in fore and hind limb and eyes, but all feeble. At 5 all reflexes present, and stronger than when last noticed. At 6.10 reflexes present, still feeble; feeble jerking efforts to move head and fore limbs. At 8.30 all reflexes present stronger than last; efforts to move more marked. By the close of the succeeding day the frog gradually recovered its normal activity.

Blood Pressure and Respiration.

Kymographic experiments on blood pressure and respiration were performed. The following observations were made, showing its action on the smaller carnivora. The drug was injected into the peritoneal cavity, afterwards into the left femoral vein, and finally into the peritoneal cavity. It will be seen from the chart that there is a slight lowering of the blood pressure after the injection, but it was only when a a considerable quantity was injected, so as to reach the heart almost directly, that its influence in lowering was at all marked. Its action on the pulse was, practically speaking, slight, for at the beginning of the experiment the pulse rate was 144 per minute, and after the various injections it became accelerated to from 156 to 168 per minute, while at the end of the experiment it slowed to the initial rate of 144 per minute. Its action with the smaller doses was to increase the respirations, but with larger doses there was marked slowing and weakening, and finally complete cessation. Thus before injection the respirations were from 48 to 54 per minute; after the first injection the rate was increased to from 60 to 66 per minute. After the larger injections the rate diminished to 44, 48, 34, 40, and 36 per minute, at which periods, in addition to the

slowing, the respirations became extremely feeble and shallow, and the animal died from paralysis of the centre.

EXPERIMENT IV.—*Cat under Ether.*

Time.	Dose of Chloralamide.	Respirations.	Pulse.	Blood Pressure.	Remarks.
0 mins.	—	60	144	126 m.m.	
12 ,,	0.25 grm.	48	156	136 ,,	Chloralamide, dissolved in salt solution, was injected into peritoneal cavity.
18 ,,	—	48	144	120 ,,	
24 ,,	—	54	156	120 ,,	
34 ,,	0.25 grm.	48	168	110 ,,	Chloralamide, dissolved in salt solution, was injected into left femoral vein.
40 ,,	—	54	162	112 ,,	
50 ,,	—	60	156	110 ,,	
60 ,,	—	54	168	100 ,,	
65 ,,	0.4 grm.	60	156	100 ,,	Chloralamide, dissolved in salt solution, was injected into left femoral vein; respiration feeble.
75 ,,	—	44	150	86 ,,	
81 ,,	—	40	132	80 ,,	Respirations more feeble.
87 ,,	—	36	144	66 ,,	
91 ,,	0.6 grm.	36	144	66 ,,	Chloralamide, dissolved in salt solution, was injected into peritoneal cavity.
97 ,,	—	24	144	34 ,,	Respirations very shallow and feeble; pulse regular.
100 ,,	—	abolished	144	33 ,,	Pulse still regular.

ACTION ON MOTOR NERVES.

The result of many experiments on motor nerves—the sciatic of the frog being used—was to show that the drug had a marked influence in diminishing and ultimately destroying the conductivity of the nerve trunk. Subsequent washing of the nerve in a salt solution did not restore its conductivity. In these experiments the apparatus employed was that planned by Professor Cash, F.R.S., and described in the BRITISH MEDICAL JOURNAL of December 2nd, 1889, in my paper on Urethane.

ACTION ON MUSCLE SUBSTANCE.

A series of experiments were performed on the gastrocnemii of the frog; and here again Dr. Cash's muscle chamber was employed. The experiments were of two kinds. In one the immersion of the muscle in 4 per cent. solution chloralamide dissolved in 0.75 per cent. salt solution, and single stimulations were used to test the irritability of the muscle substance; in the other, the immersion of the muscle in 4 per cent. solution chloralamide dissolved in 0.75 per cent. salt solution, and the application of the Faradiac current to test the irritability of the muscle.

(1) *Result of Single Stimulation.*—(*a*) That the drug slowly diminished the irritability of the muscle substance; (*b*) that subsequent washings of the muscle in salt solution did not restore the irritability.

(2) *Result of Faradiac Current.*—(*a*) A gradual lowering of the normal tetanic curve; subsequent washings in salt solution did not restore muscular irritability.

Chloralamide is thus, in its action on muscle substance, much akin to paraldehyde, urethane, and sulphonal. But its action in diminishing muscular irritability is more active, and there is less tendency for the muscle to recover its irritability. No initial period of irritability was observed to follow the action of the drug. In this it differs from paraldehyde, but resembles urethane and sulphonal.

CLINICAL OBSERVATIONS.

A number of experiments were undertaken to observe the action of chloralamide on the kidneys, including the increase or decrease of urea and phosphates, as well as the fluid constituents and the reaction of the urine. I have to thank several friends who willingly allowed themselves to be placed on a regulated and restricted diet for these observations. The results from all the cases pointed to the same conclusions. One case has been selected as a type of the others, and in all its essential features it agrees with the observations recorded in the other cases. The object of these experiments being not so much to record the hypnotic effect of the drug as to ascertain its action on the excretion of the kidneys, the subjects were not confined to bed, and were allowed a moderate but regulated amount of exercise. The diet was carefully regulated, both in fluids and solids, and was kept constant during the whole period of the observations. The experiment was continued until the subject expressed a desire that the observations should cease. The details of the method employed here also were similar to those previously described.

EXPERIMENT V.—The diet in the following case is given in detail:

Diet of A. H.

		Fluids. Cubic Centimetres.	Solids. Grammes.
Breakfast	Porridge	—	115
	Bread	—	65
	Milk	340	—
Dinner	Soup	170	—
	Bread	—	60
	Pudding, rice	—	170
	Beef	—	85
	Potatoes	—	112
Supper	Egg	—	60
	Bread and butter	—	85
	Milk	340	—
	Water	175	—
		1025	782

Daily Journal of A. H.[1]

Date.	Chloralamide Dosage.	Urine passed in 24 hours.	Specific Gravity.	Urea.	Phosphates.	Pulse. 9 A.M.	Pulse. 10:30 A.M.	Pulse. 12 P.M.	Respirations. 9 A.M.	Respirations. 10:30 A.M.	Respirations. 12 P.M.
1890.		c.c.									
March 6	None	1,300	1011	18.9	3.1						
,, 7	,,	1,250	1015	18.8	3.0						
,, 8	,,	1,330	1012	18.9	2.7						
,, 9	5 grains	1,250	1014	21.2	2.5	76	76	80	20	22	22
,, 10	5 ,,	1,170	1014	23.4	2.5	76	78	78	22	22	22
,, 11	5 ,,	1,020	1015	19.3	2.0	84	84	86	24	24	24
,, 12	None	1,170	1014	21.0	2.8						
,, 13	,,	1,010	1015	22.2	2.4						
,, 14	,,	1,300	1012	26.0	3.1						
,, 15	10 grains	1,320	1012	27.7	3.2	68	68	72	20	20	20
,, 16	10 ,,	1,000	1018	20.0	2.4	80	78	80	20	20	20
,, 17	10 ,,	1,480	1010	28.3	3.0	84	92	92	20	20	20
,, 18	None	1,200	1014	21.6	2.8						
,, 19	,,	1,220	1015	26.8	2.4						
,, 20	,,	1,020	1018	23.4	2.4						
,, 21	15 grains	1,260	1019	25.2	2.5	68	72	72	18	20	20
,, 22	15 ,,	1,360	1016	24.2	2.7	76	80	80	20	20	20
,, 23	15 ,,	980	1020	21.5	2.0	88	88	88	20	24	20
,, 24	None	1,230	1016	24.6	2.4						
,, 25	,,	1,830	1011	28.9	3.5						
,, 26	,,	1,440	1014	27.3	2.9						
,, 27	20 grains	980	1020	19.6	2.3	76	84	84	20	20	24
,, 28	20 ,,	1,380	1016	27.2	2.7	84	84	76	24	24	24
,, 29	20 ,,	1,200	1018	22.8	2.1	76	76	76	20	20	16*
,, 30	None	1,020	1012	22.4	2.4						
,, 31	,,	1,420	1010	28.4	2.8						
April 1	,,	1,000	1016	18.0	2.0						
,, 2	25 grains	1,000	1018	18.6	2.0	80	96	108	20	24	20
,, 3	25 ,,	970	1020	19.4	1.9	76	88	80	20	20	16*
,, 4	25 ,,	1,130	1016	24.8	2.2	78	80	68	20	16*	16*
,, 5	None	1,570	1014	25.1	2.5						
,, 6	,,	1,240	1016	23.5	2.5						
,, 7	,,	1,130	1018	21.4	2.1						

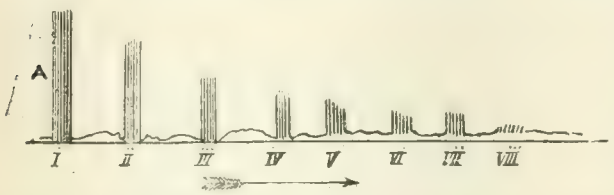
* Sleeping.

[1] The reaction was acid throughout the experiment.

The method followed for the estimation of urea was that employed by Russell and West. The phosphates were estimated by a volumetric solution of uranium acetate.

Urea.—The result of these observations showed that with the smaller doses (5 grains) of chloralamide there was an increase, but with the larger doses (25 grains) there was a decrease. During the three days at the beginning, when no chloralamide was given, the total quantity of urea excreted was 49.3 grammes. The total quantity excreted during the three following days with doses of 5 grains daily was 54.3 grammes, or an increase with chloralamide of 5 grammes, or a daily increase of 1.8 grammes.

In another experiment the total quantity of urea excreted without the drug was 55.5 grammes, but in three days with 5-grain doses the total excretion was 63.9 grammes, or an increase of 8.4 grammes with the drug, or a daily increase of 2.8 grammes. Here also, with 10-grain doses, an increase was observed; for on the three days when no drug was given the total excretion was 69.2, while with the drug the total excretion was 76 grammes, an increase of 6.8 grammes, or a daily increase of 2.28 grammes; but when large doses, such as 25 grains, were given the decrease in the excretion of the urea was evident. Thus, in one experiment, no drug having been given for three days, the total excretion was 55.6 grammes. When daily doses of 25 grains were given the total excretion was 52.9 grammes, or a decrease with chloralamide of 2.9 grammes, a daily decrease of 0.9 gramme. Again, in another experiment, the total excretion of urea for three



A.—Stimulation Series: 1 per cent. chloralamide in normal salt solution; coil 7.5 c.m. I, normal stimuli; II, 10′ later in chloralamide; III, 10′ later in chloralamide; IV, 10′ later in chloralamide; V, 10′ later, coil 3.5 c.m.; VI, 5′ later, coil 3.5 c.m.; VII, 5′ later, coil 0.0 c.m.; VIII, 5′ later, coil 0.0 c.m. Subsequent washing in salt solution did not restore the muscle irritability.

days prior to the administration of the drug was 68.8 grammes, and the total excretion of urea for three days when 25-grain doses were given was 62.2 grammes, a decrease of 6.6 grammes, or a daily decrease of 2.2 grammes. It is therefore evident that the smaller doses of the drug—doses that have no appreciable hypnotic action—tend to increase the elimination of urea, but as soon as doses large enough to produce hypnotic action are given there is diminution in the excretion of urea. In this the action of chloralamide closely resembles the action of paraldehyde, urethane, and sulphonal.

Phosphates.—The experiments also showed that there was a tendency for the drug to diminish the excretion of the phosphates and that this diminution was present during the whole time the subject was under the influence of the drug with both the smaller and the larger doses. In fact the largest diminution of the excretion of the phosphates in three days took place at the beginning of the experiment, when the small doses of the drug were exhibited.

In one experiment the total phosphates excreted in three days, prior to the administration of the drug, was 6 grammes, and, with 5-grain doses daily, the total excretion for three days was 5.5, or a decrease of 0.5 gramme for the three days, and this was the largest decrease that took place during this experiment. In another the total quantity of phosphates excreted before the administration of the drug was 8.8 grammes, and the total quantity excreted during three days with 5-grain doses was 6.6 grammes, a decrease of 2.2 grammes. Here, also, this was the largest decrease during the investigation. All through this case the diminution of the phosphates was more marked than in some of the others.

Excretion of the Fluid Constituents of Urine.—With the smaller doses (less than 20 grains) no constant result was obtained, the excretion of three days without administration being sometimes greater and sometimes less than when administered. Thus, for three days without the drug, the total quantity excreted was 3,880 cubic centimetres, and, in the three succeeding days with the drug, the total quantity excreted was 3,440 cubic centimetres.

Again, in three days without the drug the total quantity excreted was 3,480 cubic centimetres, and in three days with 10-grain daily doses was 3,810 cubic centimetres. But when daily doses of 20 grains and upwards were given there was a decrease of excretion of fluid constituents when the subject was under the influence of the drug. Thus, when daily doses of 20 grains were given the total excretion for three days was 3,540 cubic centimetres, and on the corresponding three days without the drug 4,500 cubic centimetres, or a total decrease in the three days with chloralamide of 960 cubic centimetres, or a daily decrease of 320 cubic centimetres. Again, when 25 grains were given, the total excretion for three days was 3,100 cubic centimetres, and a corresponding three days without 3,440 cubic centimetres, or a decrease in three days of 340 cubic centimetres, or a daily decrease of 113 cubic centimetres. This result was characteristic of the whole series of observations, and it seems to point to the conclusion that large doses diminish the excretion of the fluid constituents. The reaction, colour, and odour of the urine remained normal during the whole time. No albumen was detected.

Pulse.—The pulse-rate, which was observed before administration, and at intervals of one, two, three, and four hours after, did not show any alteration with the smaller doses, but when doses of 20 grains and upwards were given there was an occasional acceleration during the first hour or two to the extent of four to ten beats per minute.

Respiration: Skin: Temperature.—The rate of respiration, which was observed at similar periods as the pulse-rate, did not show any marked change from the normal with the smaller doses, but with doses of 20 grains there was noticed diminished frequency in the number of respirations, and this was most evident when the subject was asleep. Breathing was easy, full, and tranquil. The action on the skin and temperature was negative.

Effects on Digestion.—When it is considered that a prolonged regulated diet of itself tends to blunt the edge of the appetite, the results of these experiments showed that chloralamide had no apparent deleterious effect. In no case was it evident that its administration in any way impaired the desire for food. No irritation to the gastro-intestinal tract was observed. In no case was pain complained of, neither did vomiting nor diarrhœa follow its use, and constipation at no time supervened. Occasionally slight morning headache was complained of; but even here it was difficult to prove that it was caused by the drug. This non-irritating effect of chloralamide to the gastro-intestinal tract was further confirmed by other clinical observations in many cases of insomnia, in which it seemed clear that neither appetite nor digestion was disturbed. No thirst was complained of during exhibition.

Hypnotic Action.—Records of its hypnotic action were carefully taken, though the chief object in this part of the investigation was not so much to test its hypnotic value as to note its effects on the excretions of the kidneys and digestion. With the smaller doses there was no evidence of any sleep-inducing power; but when doses of 20 grains and upwards were given and the subject placed in favourable surroundings for sleep, the hypnotic influence became evident. As a rule, sleep came on in about half an hour after the dose. The sleep induced was pleasant, tranquil, and easy; awakening was gradual, and without mental confusion, headache, or depression. In one case with doses of 25 grains there was talkative excitement, slight mental confusion, and a restless condition of the whole body, although this motor disturbance was most marked in the lower extremities. Along with these conditions there were temporary giddiness, staggering gait, flushed face, and slight frontal headache. As these phenomena so persistently followed the administration of the drug, in this case at least, it would appear that they were due to it. It has to be observed, however, that even here there was no disturbance of the appetite.

Clinical Observations in Cases of Insomnia.

In a large number of cases of insomnia where chloralamide was employed as a hypnotic the result was distinctly satisfactory. Sleep was induced within a short time after exhibi-

tion, was pleasant, and lasted from five to eight hours, and with few exceptions the patient awoke much refreshed, and without headache, mental confusion, depression, or drowsiness. The drug was given chiefly in cases of insomnia, when no, or only slight, pain was complained of.

Its analgesic action was also observed in cases of neuralgia, where pain was a factor in producing the insomnia. It was evident, however, that in such cases the drug had no markedly alleviating influence on the pain. In cases where the pain was mild the patient stated that, besides the refreshing sleep induced, there was sometimes an alleviation of the pain as well. Possibly the cases in which this was most noticed were pulmonary complaints.

It is desirable to remember that in cases where pain is a prominent factor much analgesic action is not to be expected.

In addition to the direct hypnotic action of the drug, it was frequently observed that the patient being once put in the way of sleep, there followed a series of sleepful nights. Still more frequently was it noticed that on the night succeeding the administration of the drug sleep supervened spontaneously. That this did not depend upon deferred action of the drug is shown by the fact that the patients stated that they had no feeling of drowsiness or depression during the day.

In no case was it noticed that a craving for the drug was developed, although in some cases it was given for two or three weeks almost nightly.

Chloralamide so far resembles paraldehyde in the fact that a point of tolerance is not speedily reached. In some cases the same dose produced a like result week after week. This was specially noticeable in a noisy fatuous female, who, besides being excitable and emitting intolerable clucking noises, suffered from insomnia. Doses of 35 grains, in about half an hour, allayed excitability and induced a sleep of six to eight hours. The drug was given in the same quantity nightly for a month with equally good results throughout.

There were some cases, however, in which unpleasant results followed the administration of the drug; these were comparatively few. In these there were pre-somnial excitement, motor irritability, giddiness, and headache. One case especially showed mental exaltation and confusion of thought, and inco-ordination of the upper and lower extremities—indeed, many of the features of alcoholic intoxication. Headache was also complained of in this case.

In none of the cases in which the drug was tried was there observed any disturbance of the gastro-intestinal functions. In no cases was vomiting observed. This non-disturbance is of much importance in the selection of a hypnotic.

Chloralamide contrasts favourably with sulphonal as to deferred action. It was frequently noticed that, following a dose of sulphonal, the hypnotic action did not take place for a number of hours, so that sleep was projected into the following day, whereas with chloralamide sleep, if it supervened at all, came quickly, and passed off within six or eight hours. Another claim for chloralamide over sulphonal is the fact that sleep is more speedy in its onset after administration. The comparatively easy solubility of the substance may so far explain its more rapid action. Its slightly bitter taste formed no material objection where its use was indicated. It was given in doses of 25, 30, 40, and 45 grains. The most satisfactory, however, was a dose of 30 grains dissolved in cold water, to which were added a few drops of hydrochloric acid and some flavouring syrup.

The following examples are types of many cases:

Case I. *Insomnia from Senile Changes.*—J. G., aged 76. Insomnia for two weeks; dose of 25 grains taken at 10 P.M., sleep followed till 4 A.M., and then from 4.30 to 12 noon. Subsequent doses generally gave a sleep of eight hours. Patient was much gratified with the effect of the drug.

Case II. *Mitral Regurgitation.*—W. J., aged 74. No pain, but extreme nervousness; insomnia for about a week. Dose of 30 grains; about two hours thereafter sleep followed, and continued for six hours. Following night no powder was taken; sleeplessness occurred. Next night chloralamide was given in same doses, and same result followed.

Case III. *Neurasthenia and Insomnia.*—T. J., aged 76. After a dose of 15 grains there followed sleep from five to six hours, from which patient awoke refreshed. Powders were continued from time to time with equally satisfactory results. This patient stated that on the night succeeding the taking of the powder he generally slept well without a further dose.

Case IV. *Phthisis, Alcoholic Tendency, and Insomnia.*—J. S., aged 42. Bromide of ammonium in 30-grain doses, no effect. Opium 1½-grain doses gave a restless sleep, with morning headache. Thirty grains chloralamide at bedtime, half an hour after exhibition produced five hours' sleep. Patient stated that he frequently slept well without a hypnotic from 11 P.M. to 1 A.M., when he awoke and continued sleepless. Chloralamide given at 1 A.M., sleep followed in half an hour, and continued seven hours, and he awoke refreshed. Sulphonal in 15-grain doses had been tried in this case with no appreciable effect.

Case V. *Dilated Heart and General Anasarca and Insomnia.*—J. M., aged 84. Twenty-grain doses of sulphonal produced what patient stated to be "feelings of intoxication," followed by one or two hours of sleep. Thirty grains bromide of ammonium had no effect; 25 minims nepenthe gave short uneasy sleep, with dry tongue and headache in the morning. Twenty-five grains chloralamide given, there followed in half an hour sleep from 12 P.M. to 5 A.M. No confusion nor headache on awakening, but marked refreshment. The powders were given frequently, and continued to act well.

Case VI. *Chronic Bronchitis: Insomnia.*—C. S., aged 70. Chloralamide 30 grains at 8.30 P.M.; slept very soon after, and sleep continued till 5 A.M., occasionally awakened by coughing, but felt much refreshed. No powder following night; did not sleep so well. Next night 15 grains chloralamide at 8 P.M.; no hypnotic effect observed at 12 P.M.; another dose of 30 grains given, slept till 7 A.M.

Case VII. *Phthisis: Cough.*—M. G., aged 20. Fifteen-grain doses of chloralamide at bedtime gave a good night's rest; patient expressed great comfort, and had no unpleasant feelings on awakening. Subsequent doses produced like good results.

Case VIII. *Hysteria.*—J. M., aged 23. Insomnia for some time. Chloralamide 25-grain doses answered, and sleep pleasant and refreshing.

Case IX. *Locomotor Ataxia: "Lightning Pains."*—W. W., aged 45. Insomnia for some time. Chloralamide 25 grains produced four to five hours' sleep; awoke, and reslept for three hours. Satisfactory results followed exhibition of the drug.

Summary.

The following summary embodies the results of the observations detailed in this contribution to the study of chloralamide:—

1. The reflex irritability of the spinal cord was diminished.
2. Peripheral sensation was not reduced.
3. On frogs there were hypnotic action, slowed respiratory and cardiac actions, abolition of reflexes, and subsequent recovery of the normal condition.
4. Blood pressure was slowly reduced with large doses.
5. Pulse rate was not affected.
6. Respirations were reduced and finally abolished.
7. The conductivity of motor nerves was destroyed, and was not restored by subsequent washing in salt solution.
8. The irritability of muscle substance was destroyed, and was not restored by subsequent washing in salt solution.
9. The excretion of urea was increased by small doses—0.3 to 0.6 gramme—but was diminished by large doses—2 to 3 grammes.
10. The excretion of phosphates was diminished with both large and small doses.
11. The excretion of the fluid constituents of the urine was not constantly affected by the smaller doses, but was diminished by the larger doses.
12. Reaction of urine was not influenced.
13. Colour and odour of urine were not affected.
14. No albumen was detected.
15. Action on the skin was negative.
16. Temperature was not affected.
17. Digestion did not appear to be interfered with.
18. Hypnotic action in the healthy was induced with doses of 1.25 gramme and upwards.
19. In painless insomnia the results were highly reliable.
20. In insomnia with moderate pain the results were fairly reliable.
21. In insomnia with acute pain it was not reliable.
22. The analgesic action was feeble.
23. The hypnotic effect followed usually within half an hour after exhibition.
24. The sleep induced was tranquil, pleasant, and natural, and the awakening free from confusion or depression.
25. No deferred action.
26. No craving for the drug was noticed.
27. The point of tolerance was not readily reached.
28. The doses found most reliable were from 2 to 3 grammes.
29. Giddiness and inco-ordination and headache sometimes followed administration.
30. In senile insomnia, pulmonary diseases, and hysteria the results were highly satisfactory.

In conclusion, I have pleasure in thanking Professor J. Theodore Cash, F.R.S., for suggestions and kind assistance and the unstinted use of his apparatus and laboratory.

Dr. Donald has been appointed one of the Visiting Surgeons of Chalmers' Hospital, Banff, N.B., *vice* Dr. Barclay, resigned.

ON THE USE AND DOSE OF ANTIFEBRIN FOR CHILDREN.

By J. T. RICHARDS, B.Sc., M.B.,

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ANTIFEBRIN and antipyrin have not long waited for official recognition, being both included in the *Additions, 1890, to the British Pharmacopœia*. The statement of an official dose should make rare in future the experience, frequently recorded in the past, of witnessing a result more intense than was expected, sometimes even fatal, from what the physician regarded as an ordinary dose. This will be the case only if the usage is strictly followed with these, which we adopt with other powerful drugs, namely, to give in the first instance, to an unaccustomed patient, a dose near the minimum of the *Pharmacopœia*. The dose there authorised of antifebrin (acetanilide) is 3 to 10 grains, and of antipyrin (phenazone) 3 to 20 grains.

Several notes on antifebrin which have very recently appeared in the BRITISH MEDICAL JOURNAL illustrate the different degrees of freedom with which it is administered. Caution is carried to the furthest point in a report of cases by Drs. Sahli and Favrat, of Berne,[1] where 3 grains are spoken of as a dose larger than it is prudent to give, before trial has been made with less. On the other hand, 10 grains have been recommended as a safe quantity. Mr. Readman, in one of the notes referred to,[2] advises in typhoid fever a dose of 5 to 10 grains to begin with, followed by smaller doses. A case was recorded in the JOURNAL of the previous year,[3] in which the temperature fell to 95°, and remained below normal for more than twelve hours, with shivering, coldness of the surface, extinction of pulse at the wrist, deathlike pallor, and sighing respiration, after a dose of 10 grains. Recovery only occurred under the most vigorous stimulation continued all night. Here 2 grains afterwards proved sufficient.

The above observations, and others by Mr. Hawkins-Ambler[4] and Surgeon Rose,[5] have reference to adults. Dr. Herman Bronner,[6] describing a case of purulent pericarditis, mentions that he gave to the patient, 11 years of age, 7½ grains in a dose, with the result of producing distinct collapse. Dr. Gordon lately recommended antifebrin as a hypnotic in bronchitis and broncho-pneumonia, and stated the dose for children as 2 to 5 grains, depending on the age.[7] For permission to report the following cases, which occurred in the Wirral Children's Hospital, Birkenhead, while I was house-surgeon there, I am indebted to Drs. F. Johnston and Alice Ker, hon. medical officers of the hospital.

CASE I.—Child, aged 8 years, suffering from acute pulmonary tuberculosis. Having given to this patient one dose of 3 grains, I considered that an effect greater than was quite safe had been obtained, although there was no shivering. The temperature did not fall below 97°. The boy, who on preceding nights had been kept awake by violent cough, slept heavily, so as to be aroused with some difficulty. He perspired much more profusely than usual. His lips were of their natural colour. The pulse was 105, and respirations 38 per minute, both showing a decline less marked than the fall in temperature. The antifebrin was not repeated for a week, during which the two lowest temperatures (taken every four hours) were 100.4° and 101°. On subsequent occasions, 1½ grain was given, at different periods of the day, and was followed each time by a fall of temperature in two hours to normal, as appears in the table here given.

Date.	Hour.	Temperature preceding.	Dose.	Temperature after Antifebrin. 1 Hour.	2 Hours.	4 Hours.	6 Hours.	8 Hours.	10 Hours.
			grs.	°	°	°	°	°	°
Mar. 22	6 P.M.	104.6	3	—	103.2	98.6	97.0	100.0	104.4
,, 29	2 A.M.	104.8	1½	101.2	99.0	99.4	100.0	101.4	102.6
,, 29	10 P.M.	104.2	1½	100.6	97.0	96.8	100.6	104.4	—
,, 30	6 P.M.	104.2	1½	100.8	98.4	100.2	—	104.2	—
Apr. 1	2 A.M.	105.2	1½	100.0	98.2	99.0	—	104.8	—
,, 1	10 P.M.	104.4	1½	101.0	98.0	99.0	—	103.2	—

CASE II.—Child 4 years old, suffering from scald. In this case (which had occurred before that described above) 3 grains produced a satisfactory and not an excessive result. The temperature was 102.4°, and the child had had two convulsions when this dose was administered. After four hours it was 98.4°. It having risen again four hours later to 102°, the dose was repeated, and produced a fall in the next four hours to 96.2°. The child slept well, but not too heavily; there was no more twitching nor any signs of collapse. When the temperature returned, after another four hours, to 103.6°, the third dose of 3 grains brought it down only to 101°. There was no important rise afterwards, and the child recovered.

CASE III.—An infant, 9 months old, badly scalded over the chest and arms. The temperature was high, and the condition generally most unpromising for many weeks. In the course of the third and fourth weeks, when some very high temperatures occurred, antifebrin was used. The dose at first was one-third of a grain, but the action was slow and insufficient. Thus on one occasion the temperature was 105·6°, when this quantity was given, and four hours afterwards was still 105°. The same dose then repeated brought down the temperature in four hours more to 97.6°. A few days later a temperature of 107.2° was verified by trial with a second thermometer, and the child appeared to be on the point of convulsions. The skin over the whole body was extremely dry and covered with thick hard scales, the sequel of a papular eruption. In a hot pack these were shed, there was profuse perspiration, and the temperature two hours afterwards had fallen to 101.2°. Half a grain of antifebrin had been given at the same time, but the successful result and the preservation of the child's life were clearly due to the pack. On several days before recovery was established half a grain was administered, and sometimes repeated after four hours, without producing any great or rapid decline of temperature. It appears that doses large in proportion to the age would have been well borne in this case as in the second.

I have not in any case adopted the plan favoured in several communications—that of giving the antipyretic in small doses at regular intervals, so as to keep the temperature always below a certain point. It appears preferable to reserve any antipyretic for occasions when the higher degrees of fever are causing discomfort and danger, which call specially for relief. Consequently I have not yet used antifebrin for children suffering from typhoid, in whom it is seldom necessary to reduce the temperature by drugs unless it exceeds 104° F., and tepid or cold sponging alone fails to bring it down. When in any febrile condition of childhood a remedy of this class is admissible, a moderate dose of antifebrin—prescribed with directions for its repetition, after an interval of at least two hours, only in the event of the first dose having failed to take effect—can be employed with good result, to which its diaphoretic and sedative actions contribute.

[1] BRITISH MEDICAL JOURNAL, SUPPLEMENT, November 22nd, 1890, p. 59.
[2] BRITISH MEDICAL JOURNAL, November 29th, 1890, p. 1238.
[3] *Ibid.*, September 14th, 1889, p. 600.
[4] *Ibid.*, January 24th, 1891, p. 172.
[5] *Ibid.*, February 7th, 1891, p. 284.
[6] *Ibid.*, February 14th, 1891, p. 350.
[7] *Ibid.*, January 4th, 1890, p. 13.

UNIVERSITY OF GÖTTINGEN.—On April 25th a new medical clinic and a new pathological institute were formally opened in the University of Göttingen. Professor Ebstein, the head of the former, had the Order of the Red Eagle, Fourth Class, conferred on him in honour of the occasion. Professor Orth, director of the Pathological Institute, received the Royal Crown Order, Third Class, at the same time.

THE Superior Sanitary Council of Austria has recently called the attention of the Minister of the Interior to the necessity of establishing special institutes for the study of the nature, causes, and means of prevention of infectious diseases. It is urged that the institutes should be situated in the neighbourhood of large public hospitals, from which they could be supplied with abundant clinical and pathological material.

MALTA (REMITTENT) FEVER.

AN ANALYSIS OF CLINICAL NOTES OF FORTY-TWO CASES OCCURRING IN H.M.S. "AGAMEMNON."

By Staff-Surgeon CHAS. C. GODDING.

(Communicated by the Director-General of the Medical Department of the Navy.)

Definition.—A paroxysmal fever with daily remissions.

General Observations.—Ten cases occurred in 1888 and 32 in 1890. Relapses are excluded. The temperature charts given are limited to the first few days. For the purposes of description I will divide the disease into three types; these types, however, nearly always running one into the other.

I.—Enteric Type.

C. B., aged 21, stoker, on June 11th, 1890, complained of severe rheumatic pains in the right thigh, otherwise he felt well. Profuse sweats occurred on the nights of June 12th to 16th. Purging and pains in the epigastrium on June 17th to 18th, lasting about 20 hours and not recurring till June 25th, when the stools were formed. (See Chart 1.) The enteric

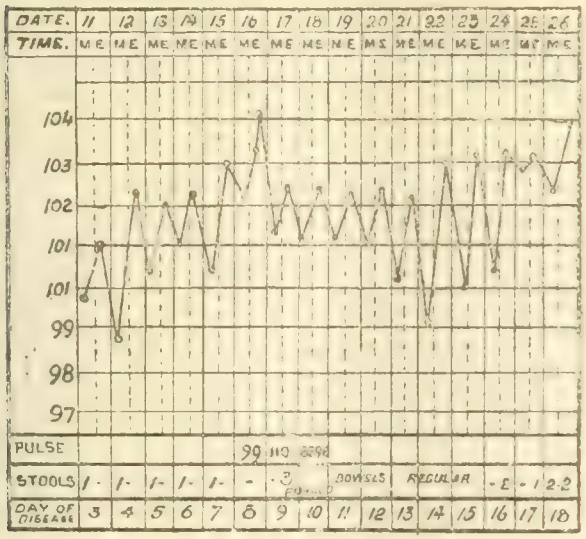


Chart 1.—Enteric type.

symptoms had passed off by June 29th. On July 1st there was more rheumatism, pulse slightly dicrotic, great prostration, and a little talkative delirium. No eruption of any kind. In this case the typhoid or pythogenic poisons predominated These cases are always severe, but now comparatively rare at Malta; they generally supply the fatal cases. Out of the 42, 3 cases, or 7 per cent., were of this type; 2 occurred in 1888, 1 patient dying.

In the less severe cases the temperature rises by daily gradations, but in the more severe the patient is smitten down in a few hours; he may be delirious in 48 hours, and perhaps dead. I can recall several instances which occurred in 1880 and 1881. The temperature is high from the beginning, there is great abdominal tenderness, dry, brown tongue, and other typhoid symptoms. Many of these cases may be pure typhoid, but I think the malarial poison exists in nearly all, shortening the premonitory stage, heightening the fever, and decreasing the chances of recovery.

Ten years ago, at Malta, this type was more common and virulent than now, and depended entirely, I believe, on the bad water supply. The water for everybody was then obtained almost entirely from rain water collected in tanks, impurities of all kinds being washed in. The soluble poisons were drunk, often in fatal doses, the insoluble filth sank, and when these tanks were occasionally cleaned out in dry seasons—perhaps once in several years—the refuse rivalled night soil in offensiveness.

II.—Remittent Type.

H. W., aged 32, seaman, was seized on June 13th, 1890, with sudden præcordial pain. He had acute right sciatica on June 18th, and both ankles were swollen.

On June 20th, the tongue was brown and dry, and the bowels purged. This state lasted during that day only, but returned on June 26th. There was no eruption nor abdominal tenderness. On July 1st, he had severe sciatica on both sides, and was unable to walk. In this case the malarial poison predominated. Fourteen of the cases were of this type, or 33 per cent.

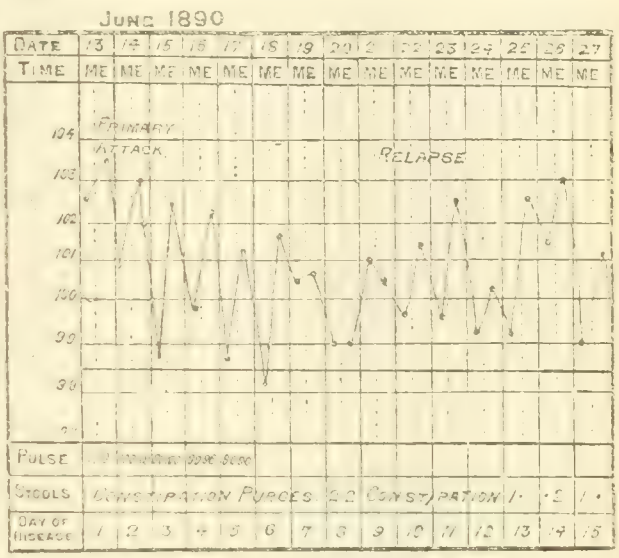


Chart 2.—Remittent type.

In these cases there is a high initial temperature, the remissions are well marked, and there is a daily decline for from seven to ten days, till the temperature approaches the normal; the patient may then go on to recovery in the mild cases, but generally has a relapse at no very distant date.

III.—Hybrid Types.

W. P., aged 40, a stoker, felt ill on the evening of May 3rd with headache, chills, stiffness in joints, and free sweating during the night. The bowels were regular. The appetite was lost on the first day (May 4th). Profuse night sweats continued till May 8th, when they diminished. On the afternoon of May 10th he had shivering, headache, and *malaise*, and on May 25th he had articular rheumatism, increasing anæmia, and loss of flesh. The second relapse occurred on June 10th, and left orchitis on June 11th, followed by general rheumatism. He was invalided on July 2nd after sixty days' sickness.

These cases have received many names: (1) From the locality, as Malta fever, etc.; (2) sweating fever; (3) typho-malarial; (4) "undefined climatic fever" of Sir William Moore. Twenty-five cases out of the 42, or about 60 per cent., were of this type. They run a very irregular course; the primary attack lasts a short time, commences in a trivial way as rheumatism, simple continued fever, sore throat, or with a bruise or sprain which has inflamed. From this type the few recoveries are generally made, but in these so-called recoveries patients are constantly attacked with rheumatism for months subsequently. On the other hand, these cases frequently relapse, and the relapses may be very severe. I look upon this type as representing the modified penalty we now pay for the previous insanitation; it depends greatly on blood poisoning by the gases emanating from the bottom of a very foul harbour, which simply correspond to sewer gases.

Etiology: Predisposing Causes.

1. *Season.*—At Malta this disease commences almost invariably in the spring, April and May being the worst months. Of the cases under consideration, 17 commenced in April, 14

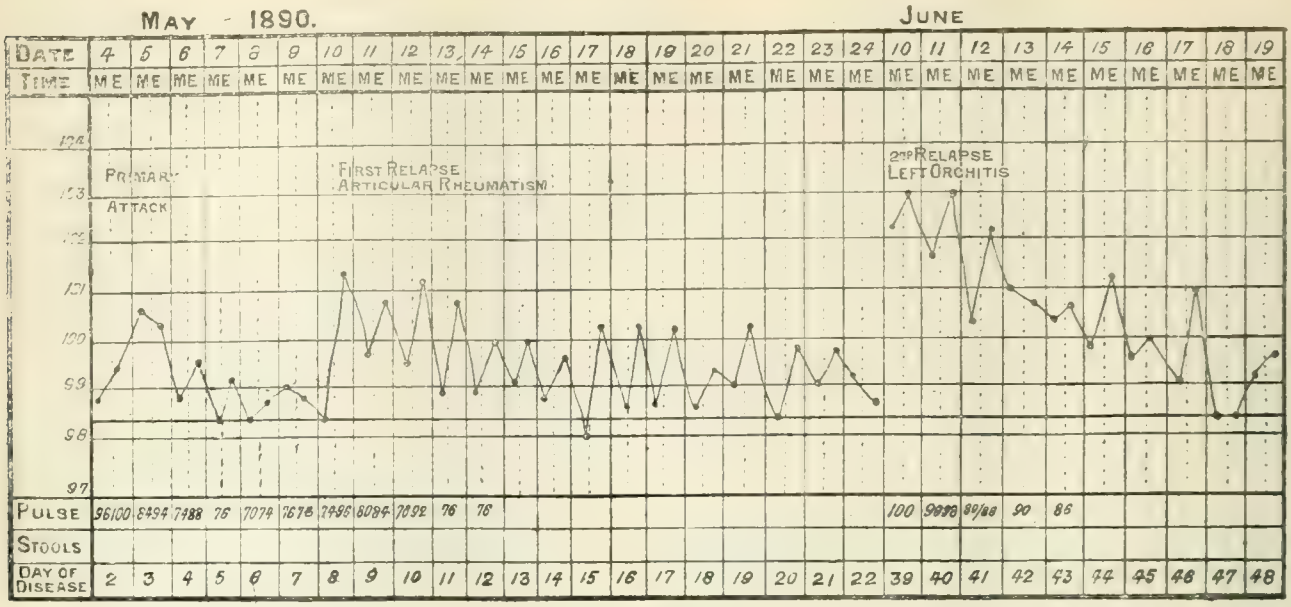


Chart 3.—Hybrid type.

in May, and 5 in June. The spring is very treacherous: there are cold winds, and it is cold in the shade, with, frequently, an almost tropical sun. A cold wet season increases the number of cases of tonsillitis and rheumatism.

2. *Exposure to Sun.*—In three or four cases the disease directly followed exposure to the sun on hot days, and in several cases the attack appeared to be hastened by this cause.

3. *Injuries.*—In 4 cases small bruises and sprains determined an attack, the injured part becoming swollen and inflamed with general fever. The injury was rapidly recovered from, but the case drifted on into this hybrid fever.

4. *Age.*—No age appears to be peculiarly liable.

Exciting Causes.

1. *Malarial.*—This poison plays an important part in the causation of this disease, giving some cases of pure remittent, and more rarely of intermittent, type. True ague is not often seen. Patients suffering from this fever very rarely improve when taken from one part of the Mediterranean to another; cases occur similar to those at Malta all over the station—Gibraltar, Cyprus, and the coast of Syria, where malarial fevers have been long known to exist, may be especially mentioned.

2. *Pythogenic.*—To name the insanitary condition of Malta is "to tell an oft-told tale." As previously remarked, the improved drainage and water supply have brought their usual good effects, and a less virulent disease now prevails. This fever is doubtless largely filth-produced, the poison concentrating its forces on the lymphoid structures of the alimentary canal (tonsils and Peyer's patches) as in pure typhoid, so giving rise to typhoid symptoms, and accounting for the resemblance between typhoid and this fever. But the disease must not, for this reason, be assumed to be typhoid; tubercle and pure remittent fever attack the same structures, these lymphoid spaces being battle grounds common to several diseases where germs and phagocytes combat. The nature of the complications also prove how much is due to this cause—namely, (1) rheumatism, (2) sore throat (follicular and suppurative tonsillitis), and the adynamic character of the disease—the irregular temperatures and profuse sweats.

Duration of Disease.

The cases lasted from one week in one case only to six or seven months. Of the 42 cases under notice, 8 only made perfect recoveries, and were from one to six weeks under treatment; 3 other cases remain in the ship, and are subject to frequent attacks of rheumatism. Of the remainder, 1 is dead, and the others have been invalided after periods of sickness varying from three to six months. No eruption was noted in any case.

Notes on Symptoms and Complications.

Orchitis was noted in 7 cases—2 double, 4 left, and 1 right. These cases generally have the appearance of acute hydrocele; there is intense neuralgic pain; the testis is mostly, and the epididymis slightly involved; they occur at any period of the disease.

Rheumatism occurred in nearly all cases at some period of the attack. Many of those who return to duty suffer from this as a sequela for months subsequently. Periosteal enlargements are rare.

Pneumonia was observed in 3 cases, the signs rapidly passing away in 2.

One death occurred among the 42 cases, about 2½ per cent. The patient had marked enteric symptoms, and died from secondary pneumonia.

Invalidings.

In my opinion, every man who has been six weeks sick and is not recovering should be at once invalided, as only change of climate can cure him. Patients who are sent home quickly recover quickly; those who linger on at the station drop into a very anæmic and despondent condition, and are proportionately longer convalescing after their return home; so that early invaliding is good both for the patients and for the service.

Diagnosis.—The majority of cases point strongly to a malarial origin. There is (1) headache, backache, cold chills with high temperature, followed by profuse sweats; (2) an acute attack, lasting seven to ten days, morning remissions, occurrence of relapses, increasing debility, and pernicious anæmia; (3) absence of albumen in the urine; and (4) low rate of mortality. It differs from true remittent in (1) absence of splenic and hepatic enlargements; (2) quinine is nearly powerless to cure it; and (3) the character of the complications—rheumatism, orchitis, and sore throat.

The differential diagnosis from typhoid must be found in the following points: (1) Invasion more sudden; (2) temperature generally different; (3) eruption absent, though not always so; (4) enteric symptoms usually very fleeting, and often seen with so low a temperature as to be incompatible with typhoid; (5) tongue quite different; (6) disease continues much longer than typhoid; and lastly (7) relapses commence differently.

Prophylaxis.—(1) Improved sanitation; (2) to keep the ships away from Malta as much as possible in the spring;

(3) to ensure the men wearing straw hats as much as possible in the sun.

Treatment.—Conducted on three principles: (A) To destroy malarial poison, antiperiodics—(1) quinine; has direct influence on malaria; (2) sodæ salicyl.; antiseptic, antipyretic, and useful in rheumatism; (3) liq. arsenicalis; antiperiodic. (B) Purification of blood by oxidising the organic poisons—(1) chlorine: gas held in solution and obtained by action of hydrochloric acid on chlorate of potassium; (2) potassium iodide; (3) saline purgatives, to remedy constipation and free the intestines of ptomaines, etc. (C) Tonic and alterative—(1) quinine, mineral acids, and strychnine; (2) arsenic, strychnine, and quassia; (3) iron and strychnine.

The disease really defies all kinds of treatment. The plan which has offered some signs of success is to give large doses of quinine (20 to 30 grains) during the remission, and repeat it in decreasing doses; arsenic and iodide of potassium, in doses of 10 grains three or four times daily, should be commenced early. I had great hopes that the chlorine water would have proved useful, and gave it liberally in several cases, but it was a hopeless failure. The one efficient remedy is change of climate.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

LATERAL DEVIATION OF THE TONGUE.

POINTING of the tongue to the right or left is so generally recognised as a symptom in paralytic seizures, that I thought it might be worth while to note down all cases of illness attended during a certain period of time where deviation from the central line was observed. Of notes of 300 cases of illness taken during that time, I find that the percentage of deviations in two quite different sets of patients was identical. 40 instances being observed, or about 13 per cent. of the whole. In 25 of these the tongue pointed to the right, in 15 to the left, for the most part to a marked degree. In eight instances the patients had had, or were subject to, epileptic seizures. Four cases were chronic alcoholics. I could not trace any connection between the deviation of the tongue and the use of either hand.

F. ROWLAND HUMPHREYS, L.R.C.P.Lond.

Haverstock Hill, N.W.

TREATMENT OF SOME FORMS OF CORNEAL OPACITIES BY RUBBING.

THE methods of treating corneal opacities are numerous, all having the same aim, that is, of mechanically removing or thinning the opaque cornea. None of these methods, however, can be regarded as satisfactory, and if any improvement be effected by their use, it is usually very slow in coming, and a patient with an otherwise sound eye has difficulty in getting good vision owing to a small blot in the way.

On reading Costomiris's[1] attempt to revive the treatment of affections of the cornea, particularly opacities, by licking, it occurred to me that as few could be induced to undertake such a task, an artificial tongue in the shape of an ordinary india-rubber pencil eraser, might serve the same purpose. I accordingly adopted the following method.

Having first anæsthetised the eye with cocaine, I gently rubbed the opaque portion of the cornea with the rounded end of a rubber eraser for about half a minute or less. No pressure was used; the weight of the rubber itself gave sufficient pressure for the purpose. This "rubbing" was repeated every second day for a considerable period with satisfactory results, as will be seen below.

The first case in which the treatment was tried was that of M. McK., aged 24. Has had central nebulæ in both eyes "for years." March 11th, r. v. = $\frac{6}{36}$, l. v. = $\frac{6}{18}$ partly. Both eyes subjected to the treatment. March 18th, r. v. = $\frac{6}{36}$, l. v. = $\frac{6}{18}$. March 25th, r. v. = $\frac{6}{24}$, l. v. = $\frac{6}{12}$ partly. April 1st, r. v. = $\frac{6}{18}$, l. v. = $\frac{6}{9}$ barely. June 2nd. r. v. = $\frac{6}{12}$, l. v. = $\frac{6}{9}$. Treatment was then stopped. On seeing the patient six weeks after she still retained the same improved vision.

[1] Société Française d'Ophtalmologie. *Compte Rendu.* Sixième Session.

The next case was that of M. R., aged 10. Has a large nebula in right eye and a central nebula in the left eye. Treatment commenced on March 24th, r. v. = fingers at 7 feet, l. v. = $\frac{6}{24}$. April 3rd, r. v. = fingers at 7 feet, l. v. = $\frac{6}{24}$. April 6th, r. v. = fingers at 7 feet, l. v. = $\frac{6}{18}$ partly. April 25th, r. v. = $\frac{6}{36}$ dimly, l. v. = $\frac{6}{12}$ barely. May 10th, r. v. = $\frac{6}{60}$, l. v. = $\frac{6}{12}$. Treatment then ceased. Neither of the two patients attended regularly. A third made similar improvement. A fourth showed no improvement, but this was subsequently found to be due to a diseased fundus.

I would recommend this method of treatment as suitable for cases in which small central nebulæ interfere with vision. It might, however, be tried in cases where larger portions of the cornea are affected, but great improvement in vision cannot be expected in such cases. The opaque spot should be gently stroked or rubbed with the least pressure possible. Vigorous rubbing will only irritate the eye unnecessarily. A drop of a weak solution of atropine might with advantage be instilled into the eye after each application of the rubber.

It might perhaps appear premature on my part to bring to notice the results of a few cases only, but as suitable material has been slow in coming, I thought that possibly those who have large clinics might like to try this novel treatment.

Aberdeen. GEORGE FERDINANDS, M.D.

CASE OF SUDDEN AND UNEXPECTED DELIVERY IN THE ERECT POSTURE.

THERE being only a limited number of cases of sudden and unexpected delivery in the erect posture on record the following case is perhaps worthy of mention:

S. D., aged 21, who had previously, after a lingering labour, given birth to one child, was recently visiting a friend, when she felt a sensation of giddiness. She therefore left and started on her way home. Having walked fifty yards a sudden pain in the abdomen was experienced; the pain was so acute that she retired to a neighbouring outhouse. She had no sooner arrived there than she gave birth to a full term male child. The child fell head foremost on to the stone floor. The fall was broken by the cord, the cord was ruptured, and no hæmorrhage occurred; the child sustained no injury, not even a bruise being apparent, and is still alive (two months after the occurrence). The mother walked back to her friend's house, and has made a good recovery.

There had been a miscalculation of two months in this case of the probable date of parturition, and the mother had no idea of the cause of the pain until the child fell from her.

E. HUGH SNELL, M.B., B.Sc.Lond.,
Obstetric House Surgeon to the Queen's Hospital, Birmingham.

POISONING BY BELLADONNA PLASTER.

MRS. W., aged 23 years, was confined four months ago. The baby was nursed till three months old, when it was thought advisable to "dry the breasts." The patient applied belladonna plasters to the breasts, and she was told not to interfere with them till they fell off of themselves. Being on a visit to friends and not feeling well, she was brought to see me on February 28th. She was very pale and anæmic, complaining of frontal headache, dimness and haziness of sight, dryness of mouth and throat, thirst, and loss of appetite. She remarked that her breasts were sore, and that there was a disagreeable smell proceeding from them. On examination I found that she had two filthy sodden plasters on her breasts. When these were removed the skin presented a well-marked pustular eczematous condition over the area covered by the plasters, from which a very offensive odour of decomposing matter emanated. Over the arms and forearms on both extensor and flexor surfaces and over the front of the knee-joints, the lower fifth of the thighs, and the upper fifth of the legs there was a rash of a distinctly urticarial type, attended with considerable itching. The pupils were widely dilated. The breasts were ordered to be bathed with hot water, and then smeared over with vaseline. I saw the patient on March 3rd, and found all the symptoms quietly subsiding.

Amongst the frequenters of out-patient departments it is no unusual thing to see these offensive plasters on the breasts. Far more efficacious and cleanly applications are the liniment or the extract of belladonna rubbed up with

glycerine, the breasts to be carefully bathed with hot water night and morning. In cases of pleurodynia and myalgia these applications, when rubbed into the skin, besides being cleaner, give more immediate and permanent relief than the plaster on account of the accompanying massage.

P. Rhys Griffiths, B.S., M.B.(Lond.),
Medical Officer to Out-Patients, Cardiff Infirmar

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

THE SALOP INFIRMARY.

CASE OF ACUTE RHEUMATISM WITH HYPERPYREXIA: RECOVERY.

(Under the care of Edward Burd, M.D.Cantab.)

R. D., aged 29, a tailor, was admitted on August 19th, 1889. His previous history was good. On August 9th he was seized suddenly with pains in the legs and the front of the chest. On August 8th profuse sweating had occurred, and within the next few days his ankles and knees became painful and swollen. He had also some diarrhœa and was delirious at night.

On admission the temperature was 103.4° F., the pulse 98; he was sweating profusely, and abundant sudamina were present on the trunk and extremities. All the larger joints were tender, hot, and swollen. Cardiac dulness was normal; there was a soft systolic murmur at the apex, and scattered pericardial friction over the whole cardiac area. The lungs and abdomen were normal. There was no albumen in the urine. Salicylate of soda in doses of 20 grains every four hours was ordered, and the joints were enveloped in cotton wool. A blister had been applied before admission over the cardiac region.

On August 20th the temperature was 104.1°. Antipyrin, gr. xv, was given, the temperature falling one degree in consequence. The patient not having slept, morphine, gr. $\frac{1}{3}$, was administered hypodermically at intervals of four hours, but failed to produce sleep.

On August 21st and 22nd the temperature ranged between 102° and 103°, the pulse from 112 to 120. Four ounces of brandy were ordered. The antipyrin was repeated, but did not reduce the temperature, nor did increased doses of morphine give sleep. Three doses of chloral of 30 grains each had a similar negative result.

On August 23rd the temperature was 104°. The patient was delirious and violent. The brandy was increased to 8 ounces.

On August 24th the temperature in the morning was 100°, the pulse 112. Muscular twitching was present. During the day three doses of paraldehyde, ♏ xxx, at intervals of three hours, were given without producing sleep. At midnight on August 24th the temperature was 104.8°. Quin. sulph., gr. x, was given, and an ice cap applied. Half an ounce of brandy was ordered every hour.

On August 25th, 6 P.M., the temperature was 100.2°; low muttering delirium, with much restlessness, was present. Repeated doses of morphine failed to cause sleep. The temperature at midnight was 105°. Antifebrin, gr. v, was given, followed by two hours' sleep, but no fall in temperature. There was incontinence of urine and fæces.

On August 26th, at 2 P.M., the temperature, after quin. sulph. gr. x, was 104°; at 5.0 A.M. the temperature was 106°. Antifebrin, gr. x, was given, but the temperature rose to 107.8°. The patient was now comatose, occasionally convulsed, cyanosed, and pulseless. He was packed in sheets wet with iced water, constantly renewed. The temperature steadily fell 2° per hour until at midday it was 101.2°, when the ice pack was discontinued. As the temperature fell, consciousness returned, and by 1.0 P.M. the patient expressed himself as better, though some delirium still remained. From this time he improved steadily, but insomnia continued, in spite of 20-grain doses of sulphonal.

Eleven days after admission, however (temperature 99.1°), the patient slept four hours after morphine gr. $\frac{1}{4}$. On September 7th a faint systolic murmur could still be heard at the apex, but, on September 18th, the heart sounds were normal, and the patient was quite convalescent.

Remarks by Dr. Burd.—The chief points of interest about this case seem to be the persistence of the insomnia and the powerlessness of drugs in some conditions to reduce temperature. The first point is best shown by tabulating the hypnotics given and the sleep obtained therefrom.

Moderate doses of morphine	...	no sleep.
Chlor. hyd., 3 doses of 30 grs.	...	,,
Paraldehyde, 3 doses of 30 min.	...	,,
Morphine, $\frac{1}{3}$ gr.	...	2 hours' sleep.
,, $\frac{1}{4}$ gr.	...	no sleep.
Sulphonal, 3 doses of 20 grs.	...	,,
Morphine, $\frac{1}{3}$ gr.	...	$2\frac{1}{2}$ hours' sleep.
,, $\frac{1}{3}$ gr.	...	1 hour's sleep.
,, $\frac{1}{4}$ gr. (twelfth day)	...	$4\frac{1}{2}$ hours' sleep.
Total	...	10 hours' sleep.

With regard to the hyperpyrexia, this affords another instance of the uselessness of drugs in hyperpyrexia—at all events in the case of acute rheumatism. Dr. Julius Pollock has justly remarked: "It is unfortunate in this condition, where most we want its aid, salicylate of soda, though originally introduced as an antipyretic, should entirely fail, nor can I say much of the other reputed febrifuges." As is usual in such cases, the hyperpyrexia was preceded by the nervous symptoms, and hence is probably not the cause of such symptoms. The cause may be, as Dr. Andrew has suggested, some defect of elimination of morbid material by the skin, *vide* the copious eruption of sudamina at one period and at another the extreme dryness of skin attending the onset of nervous symptoms. It is interesting to observe, also, that the attack occurred during a spell of extremely hot weather in August, rheumatic hyperpyrexia apparently occurring most frequently at such times, or at any rate in connection with a high external temperature. I am certainly inclined to think that a mistake was made in not resorting earlier to the cold pack.

For the notes of the case I am much indebted to Mr. J. F. Harries, late house-surgeon to the infirmary.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Thursday, May 7th, 1891.

Timothy Holmes, M.A. Cantab., President, in the Chair.

The Value of Tuberculin in Surgical Tuberculosis.

This was a special meeting for the discussion of Mr. Watson Cheyne's paper on the value of tuberculin in the treatment of surgical tuberculosis, which was read at the last ordinary meeting of the Society on Tuesday, April 28th.

Mr. Barwell, who had moved the adjournment of the debate, compared the cautiousness of Mr. Watson Cheyne's paper with the exaggerated accounts which had been originally or previously given forth of the value of this drug. He then examined Mr. Watson Cheyne's conclusions. First, with regard to the reaction. The pyrexia and the alarming symptoms were very similar to those which resulted from a dose of sepsin, which was followed by albuminuria, enlarged spleen, purpura, and a sallow tinge of skin. Koch's fluid was not, however, merely sepsin, but contained also peptones, extractives, and about 1 per cent. of an alkaloid. This alkaloid was probably a ptomaine allied to sepsin, and was very poisonous. It was manufactured in the culture medium by the growth of the tubercle bacillus. There was no means known as yet of equalising the quantity of this alkaloid in Koch's solution, and this might account for the alarming symptoms which occasionally supervened. If small doses were employed tolerance was produced to the impairment of its efficacy. When a wound became septic there were certain alterations which occurred in the granulations, such as drying up or shrivelling, or else an overgrowth of them, or they became absorbed. Mr. Watson Cheyne's photographs of sections had shown tuberculous granulations undergoing alteration by infiltration with leucocytes, and he wished to know if other

forms of pyrogenic poisons could produce a similar result. From a diagnostic point of view Koch's fluid had failed. Mr. Watson Cheyne had called attention to the changes produced by the drug in a tuberculous nodule in the wall of a blood vessel, and had stated that the same result was not produced in large tuberculous masses. If these were not affected he did not see that much good would be obtained, though Mr. Cheyne had stated that he thought that contact with vigorous healthy tissues would suffice to destroy or remove the tuberculous masses. Koch's fluid did not deprive the bacilli of their infective properties, and Virchow was of opinion—with which he agreed—that it was liable to produce general tuberculosis. The results published in this country could be summarised as follows: Mr. Hutchinson had not seen one case of lupus cured; of Dr. Heron's thirty-one cases, four were worse, nine were *in statu quo*, and the rest were improved. Mr. Cheyne's cases of lupus were remarkable: one, apparently cured in December last, had relapsed in a month: of the rest, not one was cured, even with the assistance of vigorous surgical treatment. He could not see that Koch's fluid had been of any help.

Dr. Douglas Powell thought that Mr. Watson Cheyne's paper was of the highest merit and the best that had yet appeared on the subject. His own observations had been on cases which were less well adapted than Mr. Cheyne's for combined clinical and pathological observation. He was bound to admit that he was in a measure disappointed, but his feeling was not nearly so pessimistic as Mr. Barwell's. He had had thirteen cases which had seemed to him suitable for the treatment since December last. One case of double tuberculous pleurisy with suspicion of disease at one apex, with bacilli and a hectic temperature, did not improve and was apparently exhausted by the treatment. Death occurred, five weeks after the treatment had been commenced, of general tuberculosis. Of two cases of double phthisis in the second stage, in one the course of the disease was unchecked, in the other, there was some temporary improvement, but now, three months after the commencement and three weeks after the cessation of the treatment, there was distinct advance in the physical signs. One case in the third stage of phthisis was injected a few times but without any good result, and the treatment was left off. In one case with old fibroid excavation of the right lung and an early deposit of tubercle in the left lung, with old syphilis, contracted three or four years ago shortly before the lung mischief had shown itself, the right lung did not react, but the left did, with the result that the signs diminished. After thirteen inoculations it was determined to discontinue the treatment, as no further good seemed likely to result, and it might, by lowering the patient's health, render him again susceptible to his syphilis. So he was put on a course of iron, quinine, and mercury, and he left the hospital improved. Another case, a lady, the wife of a medical man, preferred to try the treatment to going to Australia. She had catarrhal phthisis. Under a two months' course she improved generally, and her local physical signs diminished. She then became pregnant, and the treatment was discontinued. Another case with dense tuberculous consolidation of the central portion of the right lung (there were tuberculous bacilli in the sputum of all the cases treated) was treated for six weeks with very small doses—0.004 cubic centimetre being the largest given—with the result that there was rapid softening of the right lung. Whilst this was going on the patient's condition gave rise to considerable anxiety, as he suffered from rheumatic pains, became more hectic, had slight albuminuria, sweated, and vomited. Though these symptoms commenced fifteen days after the treatment was discontinued, yet they could be distinctly traced to the rapid softening of the consolidated lung, as the expectoration was very profuse. The patient then began to amend, and was now in a distinctly better condition than he was at the commencement of the treatment. Another case had scattered caseous phthisis of both lungs, with most disease in the right upper scapular region. The cough was not troublesome; there was scanty expectoration with a few tubercle bacilli. Under treatment there was general improvement. The scattered signs cleared up, but those in the right scapular region increased from the formation of a small cavity. The patient had been under treatment since December 15th, and had lost 3 lbs. in weight, but was otherwise improved. Four cases of incipient one-sided phthisis all did well. In three cases of lupus, two at first showed marked improvement, with relapse after cessation of the treatment, and they were now under the combined treatment. The third case was one of lupus of the eyelid. The patient was blind after a severe previous illness, accompanied by much headache. The injections gave rise to severe headaches, and were discontinued for fear of starting active disease of the brain. One case of gland disease improved at first, but the glands afterwards suppurated whilst the patient was in the country. There were many cases in which he had refused to adopt the treatment. He had not seen any of the terrible catastrophes that one had read of. In only one case had an excessive reaction given him cause for anxiety, and that was after the second injection. The treatment was continued more cautiously, and no cause for alarm again occurred. In one other case there was a danger of pyæmia. Mr. Watson Cheyne considered sepsis to be a contra-indication, but the chief incidents of the second stage of phthisis were due to the material which was in the cavities undergoing septic change. These incidents were necessary accompaniments, and it was needful to sustain the patient's strength through this eliminatory period, and then the means adopted for this purpose were often successful. The question then arose whether it was possible to hasten this period of elimination. With tuberculin it could certainly be done, and then the question arose in what cases it would be safe to do so. The answer to this could only be decided by experience. He doubted if Mr. Cheyne's method of frequent inoculations was adapted for the treatment of internal tubercles, as it was impossible to provide efficient drainage, etc. The result of frequent injections seemed to be to stimulate the tissues to throw off the tuberculous stuff and to get the better of any left behind. The natural effect of the stimulation of the healthy tissue was to bring about fibroid change, which was the natural safeguard against the further spread of the tubercle and the natural accompaniment of its arrest. He thought that the use of inoculations for too long a period or too often might hinder the formation of fibrous tissue. He said that Dr. Dreschfeld had long ago pointed out that arrested tubercle might be relighted up by a catarrh, leading to an infiltration of the tissues with a pabulum in which the bacilli could grow. In early cases, in which there were small tuberculous centres, with a catarrhal condition of the surrounding tissues, and with necrosis in small areas, tuberculin might hasten fibroid formation, and, having obtained some success, it would be wise to trust to hygienic and general measures to complete the obsolescence of the tubercles. During the course of many cases of phthisis the disease seemed to come to a temporary standstill and then to break out again. In such cases the continuation of the treatment would be of no use as a preventive, and might be prejudicial to spots that were already fibroid. He thought tuberculin would occasionally be useful in some cases of internal tuberculosis.

Mr. Marsh, after complimenting Mr. Cheyne on his paper, said that everybody was anxious to know if the remedy would be able to deal single-handed with tubercle, as mercury could with syphilis, or if it was a useful accessory to other forms of surgical treatment. From his evidence, Mr. Watson Cheyne had concluded that it could not be regarded in the light of a specific, as his advice was not to adopt it in an early stage of the disease. If it was not an efficient remedy against incipient disease, there was but little chance of its being so in the later stages. Was tuberculin then a useful accessory in combination with other methods? In the treatment of tuberculous joint diseases, surgeons were divided as to which of two courses to adopt. The one which he himself employed was the expectant one, by means of rest, diet, etc., and he was now quite convinced that by this method a satisfactory result could generally be obtained; but the period of time needed, from six to eighteen months, was very long, and it would have been very fortunate if tuberculin could have cut this shorter, but this he feared would not turn out to be the case. The other method, adopted by some surgeons, was an early and thorough removal of the diseased tissues by operation, with a more or less mutilated limb as a result. It was possible that tuberculin might help to circumscribe the extent of these operations.

Dr. DELEPINE showed a few specimens, which he had obtained six years ago from tuberculous synovial membranes, in which the appearances exactly resembled those which Mr. Cheyne had exhibited at the last meeting, from cases treated with tuberculin, and which he contended were the result of ordinary inflammatory processes. He also showed a section of lung, full of bacilli, removed from the body of a patient, who had been treated with Koch's fluid. Such a case demonstrated, he thought, the undesirability of starting the catarrhal products into the alveoli of the lungs.

Dr. HIME, of Bradford, thought that Mr. Cheyne was very wise to suspend his judgment. He differed from Mr. Barwell in thinking that the general reaction produced by tuberculin, was very similar to the effects of septic infection. The curative results obtained both here and abroad were, he thought, on the whole very gratifying. When a patient with phthisis came to him losing 1 to 1½ lb. a month, with anorexia, night sweats, and profuse expectoration, who, after a course of six or eight weeks' treatment, showed general improvement, the result was, as far as it went, satisfactory, as every day that the patient was in a good state of health he was better able to resist the disease and a permanent cure was more likely to ensue. Although he had not seen any alarming results even from enormous doses, yet he thought it was wise to begin with small ones.

Dr. THEODORE WILLIAMS said that his own experience with the drug was most disappointing. He referred to a typical case of very early phthisis, with slight physical signs at one apex, and with a few tubercle bacilli in the sputum, but without pyrexia. Under treatment with small doses of the drug the case did very badly, as after ten injections of tuberculin, varying from 1 mm. to 1.5 mm., a large cavity formed, occupying the whole of the upper lobe, with infection of the other lung—a result which would hardly have resulted if the ordinary methods had been followed. All his cases in which the treatment had been tried had done badly, whereas cases in the first stage treated with cod-liver oil and tonics, and sent to sea or to the mountains, got practically cured.

Dr. ABRAHAM felt that the results were not equal to the first expectations. Of those cases which he had himself seen several had improved, but one or two had become worse. There was no relation between the quantity of tuberculous disease present and the reaction, and it was of no real diagnostic value. He thought that Mr. Cheyne's method of continuous injections would be found irksome and difficult to carry out. There was little fear of the disease being disseminated by the treatment. The results which he had obtained in two guinea-pigs were contradictory, as one had died with general tuberculosis, but the other was living and healthy.

Dr. DRYSDALE had followed Dr. Heron's cases at the Victoria Park Hospital, and also Mr. Cheyne's cases, and had come to the conclusion that he would not try the treatment himself.

Dr. WETHERED had watched 35 cases of phthisis which had been treated by this method. Of these, 17 were in the first stage, 9 in the second, and 9 in the third; 15 of those in the first stage improved and 2 remained *in statu quo*: of those in the second stage, 7 improved, 1 was *in statu quo*, and 1 was worse; of those in the third stage, 4 improved, 3 were *in statu quo*, and 1 3 were worse. In the first and second stages of the disease it had certainly appeared to him to be of use, and in no one case did a cavity form. There was great amelioration of the symptoms, especially of the cough. A neurotic lady with phthisis, whose cough was most intractable, after five weeks of the treatment almost entirely lost it. A patient in the Victoria Park Hospital lost his cough after the treatment was commenced, though for the previous three months nothing had been able to relieve it. Dyspnœa, night sweats, and loss of appetite were also improved by the treatment. For these reasons he thought that it ought to be tried. The administration of large doses did not appear to give better results than small ones. He agreed with Mr. Cheyne that the treatment had been prematurely cried down and that its dangers had been magnified.

Dr. J. EDWARD SQUIRE had chiefly used the remedy in cases of pulmonary tubercle, but he had also injected cases of joint and other surgical diseases for the surgeons at the Hospital for Sick Children at Great Ormond Street, with the result that they had thought so little of it that it was soon discontinued. His want of success might have been due to the fact that he had only used the small doses recommended by Koch. The matter of dosage was a very important one. In medical cases rapid elimination was not required, but a slow action to allow of the formation of fibrous tissue around the tuberculous patches. In his cases of lupus improvement was followed by relapse. He thought that it should still be tried, but, for the present, only experimentally.

Mr. HURRY FENWICK had tried tuberculin in ninety cases of urinary tuberculosis, and he classified his remarks under the three headings of (1) the dangers, (2) the ocular appearances, and (3) the therapeutics which occurred with the use of the drug. The presence of septic processes, as Mr. Watson Cheyne had pointed out, was very important and very unfavourable. The swelling of the peri-tuberculous tissues led to suppression and retention of urine, and the use of the lymph was liable to produce hæmorrhages. The tuberculous deposits could, by means of the cystoscope, be seen to swell up in the same way as in the skin, and new deposits came into sight. It could only be of use therapeutically in the earliest stage of vesical tuberculosis.

Mr. WATSON CHEYNE, in reply, stated that in speaking of sepsis he had only been thinking of pyogenic cocci, and not of the various organisms found in phthisical cavities. There was no reason why his continuous method should be irksome, as a nurse could perfectly well give the injections. That tuberculous diseases could be kept at a standstill by the treatment seemed to be shown by the fact that when it was left off cases often quickly relapsed. The reason why he did not advise its use before operation was that tolerance would be established, and so a valuable assistance would be lost in the after-treatment. He was in hopes that by its use less extensive operations in joint diseases would be sufficient. He agreed with Dr. Delépine that there was nothing specific in the inflammation after the use of tuberculin; but what had struck him so much was the remarkable predominance of the organising appearances in the tubercles in his specimens. Out of his collection of sections of synovial membranes made before the introduction of tuberculin, he could hardly pick out more than one or two specimens which showed such marked retrogressive changes as those which he had shown to the meeting, though he had seen similar appearances in sections of old fibroid phthisis of the lungs. This might, however, be due to the fact that ordinarily synovial membranes, when removed, were getting worse. He could not agree with Dr. Theodore Williams about his own cases of phthisis. All the four medical men that he had treated had improved remarkably in general condition, and also to some extent locally. If early cases of phthisis treated in the ordinary way could recover so readily, how was it that the mortality from this disease was so high? Physicians had been more excited about this remedy than surgeons, and were always so after fresh remedies against tubercle. This did not look as if cases of early phthisis yielded readily to ordinary treatment.

TUESDAY, MAY 12TH, 1891.

TIMOTHY HOLMES, M.A.Cantab., in the Chair.

Thirteen Cases of Paget's Disease of the Nipple, with special reference to the Causation of the Malady by Psorosperms.—Mr. ANTHONY A. BOWLBY in this paper gave a short account of thirteen cases of Paget's disease of the nipple, and, after a brief review of cases already recorded, analysed those described by himself. A more complete description of the special clinical characters of the disease, as demonstrated by the cases detailed, was then given. The histology of the morbid tissues was then described, and the observations of MM. Wickham and Darier as to the presence of bodies resembling psorosperms were commented on. The author remarked that bodies of the same nature as those described by the French observers were to be found in all the cases which formed the subject of the paper, and expressed the opinion that these bodies were probably psorosperms. The pathology of Paget's disease was then discussed; and after giving reasons for believing that all changes in the breast were secondary to those in the nipple, and were not in any way causative of the so-called eczema, the author expressed the opinion that the disease was parasitic in its origin. He next discussed the influence of the psorosperms in causing cancer.

He concluded by expressing the opinion that there was no evidence that the cancerous growths in the cases under consideration were directly due to any specific action of the psorosperms, and gave various reasons for such a conclusion.

On Paget's Disease of the Breast.—Mr. J. HUTCHINSON, jun., reported the results of examination of five cases of chronic eczema of the breast, with reference to the occurrence of parasitic bodies in that disease (coccidia or psorosperms). Specimens were shown illustrating various appearances in the surface epithelium, which the writer believed confirmed M. Darier's statement that coccidia were to be found, and sometimes in great numbers. These appearances had not been found in cases of eczema other than the chronic disease know as Paget's disease; neither were they found in all supposed examples of the latter. The writer had observed them in three out of the five cases examined. Brief reports of each were given, and the subject was illustrated by lantern demonstrations of micro-photographs, etc.—Mr. D'ARCY POWER said that he had been experimenting on the origin of cancer by means of inoculations, and he had inoculated a rat with fresh scrapings taken from Mr. Morrant Baker's case of Paget's disease mentioned by Mr. Bowlby in his paper. For six days nothing occurred, then a puriform discharge containing epithelial cells and some of these coccidia or coccidia-like structures. The discharge ceased for a time but reappeared after four days, again disappeared and reappeared four days later, and then the rat got quite well again. Since then he had reinjected it with coccidia from a rabbit's liver, and again produced the puriform discharge. This was the only instance in which he had obtained any result whatever from inoculation with cancerous material of any sort, though he had made a large number of experiments.—Dr. THIN traced the history of our knowledge of this disease from Sir James Paget's original paper, in which he had shown that there was some connection between an inflammatory condition of the nipple with subsequent tumour formation in the breast. His own paper which Mr. Bowlby had referred to followed next, and shortly afterwards Mr. Butlin's paper, in which he described the inflammatory process as passing down the ducts to the tumour. In this paper Mr. Butlin called the disease of the nipple "eczema." Not long afterwards Dr. Thin read a paper to show that the nipple disease was something totally different from eczema, and he thought it a pity that the term eczema should still be retained for this condition. He had recently examined a case of this disease for coccidia unsuccessfully, but he had found an immense number of these bodies in some of his old preparations. He thought, however, that they were nothing else than epithelial cells in various stages of degeneration, and he had seen exactly similar appearances in epithelial cells from a cancer of the lip, and these appearances had been published in his paper in the BRITISH MEDICAL JOURNAL in 1881. The peculiar disease caused by the secretion preceded the tumour formation, and was no known skin disease.—Mr. JONATHAN HUTCHINSON, jun., in reply, said that the great difficulty was to determine whether the bodies seen were coccidia or altered epithelium cells. He suggested that scrapings should be taken from a future case, and watched upon a warm stage under the microscope to see if there were any signs of movement in these bodies, as, if so, it would go far to show that they really were coccidia. The fact that those in the scrapings from nipples did not take Neelsen's stain might be due to the fact that they belonged to a different species, of which many were known to exist.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 8TH, 1891.

BERKELEY HILL, M.B., F.R.C.S., Vice-President, in the Chair.

Two Cases of Resection of Intestine by Senn's Method.—Mr. ARBUTHNOT LANE read accounts of two cases in which he had removed portions of the bowel and restored the continuity of the intestine by Senn's method of approximation plates. The first was a case of Littre's hernia occurring in a woman, aged 53. It was femoral, and situated on the right side. On exposing the sac it was found to be much inflamed, its contents stinking and pultaceous, and the knuckle of bowel in an obviously irrecoverable condition. Having thoroughly cleaned the bowel and sac, the abdomen was opened in the middle line, and the loop of intestine, whose segment had been strangulated, was drawn out from the abdomen, the constriction of the femoral ring having been previously divided. It was then seen that only a portion of the calibre of the bowel had been included in the sac, and that its condition was irrecoverable. Subsequent examination of the strangulated portion showed that, though there was no obvious perforation, nothing remained in many parts of its wall but the peritoneal coat. About 3 inches of the bowel, including the strangulated area, were excised, and the mesentery belonging to it ligatured. The divided ends of the proximal and distal segments of the intestine were closed by inverting their coats and by running along them a continuous Lembert suture. Incisions were made in the convexities of the segments, about 3 inches from their closed ends, and into these Senn's plates were introduced. The apertures were then brought accurately together by means of the silk ligatures. After this, two continuous Lembert sutures were applied to render the apposition of the plates more perfect, and a broad graft of omentum was placed around and fixed by means of several fine silk sutures. For a few days the patient was nourished by enemata, and later by peptonised milk. Twelve days after the operation she was enjoying a fish dinner. She experienced no pain or discomfort worth mentioning, and her abdomen remained soft and comfortable throughout. It was necessary to give her some opium for a few days after the operation to restrain a tendency to diarrhœa. She left the hospital three weeks and four days after the operation. The second case was a woman, aged 55, who had suffered from a strangulated femoral hernia for five days before her admission. She was very collapsed, and her abdomen was much distended. It was at once apparent that she would not stand any very prolonged operation. The sac was much inflamed, and contained a quantity of pus and fæces and a perforated loop of small intestine. This was ligatured and carefully cleansed, the constriction being then divided. The abdomen was opened and the damaged loop drawn out. About four inches of bowel were excised, the ends closed and the plates inserted. It was then found that the proximal gut was very rotten, and the sutures attached to the plates tore through the softened bowel frequently. Finally, the plates were brought together in much haste as the patient had become moribund, and a graft of omentum was attached. Mr. Lane regretted very much that he had not time to remove a further portion of the proximal bowel, but the patient's condition rendered any further delay impossible. She lived five days and two hours, the bowel yielding two hours before her death, which resulted from the escape of the intestinal contents into the peritoneal cavity through a small slough in the proximal bowel. Mr. Lane urged that the following treatment should be adopted in the future: First, that in cases where a strangulated loop of intestine was gangrenous or ulcerated the proximal and distal portions of the intestine should be short-circuited by means of Senn's plates, the proximal portion being at the same time relieved of much of its contents. If the condition of the patient were such as to permit of further operative interference, and provided the adhesion of the intestine to the neck of the sac and its vicinity were not too extensive, the damaged loop should be resected at the same time, otherwise it should only be incised and freely drained. Secondly, that, as a very large proportion of cases of strangulated hernia died from obstruction after herniotomy, owing to the strangulated loop not recovering itself sufficiently to allow of the passage of the contents of the bowel through it, in any case in which the condition of the strangulated bowel aroused suspicion in the mind of the operator as to the possibility of its not recovering, the abdomen should be opened in the middle line, and the condition of the damaged intestine, as to its transmissibility, fully explored. That, if there were any doubt about it, the intestine should be short-circuited, and if the condition of the damaged loop were such as to suggest ulceration and subsequent perforation it should be excised also. He considered the present mortality after herniotomy a disgrace to the surgery of the present day, and only to be obviated by more efficient and thorough treatment than that at present adopted.—Mr. B. JESSETT remarked that the second patient had but a poor chance of recovery, in consequence of her having come under treatment at too late a period. He thought, too, a

larger portion of the bowel might have been removed in that case. Two cases of the kind operated upon by himself had done well; in one there was a fæcal fistula communicating with the vagina, in the other there was intestinal obstruction. In another case death had occurred twenty minutes after the operation, which was done for ulceration caused by pressure of an ovarian cyst. In certain advanced cases he considered that the operation might be deferred for a short time, until, in fact, the stomach had been first washed out, and an interval for recovery therefrom permitted.—Dr. Morotti had performed several operations of the kind on the lower animals according to the method advocated by Dr. Halsted, which he recommended for its great simplicity and the rapidity with which it could be done.—Mr. Lockwood congratulated Mr. Lane upon the course he had pursued and upon the successful result. Resection and suture were the proper treatment for cases of gangrene of the gut. The method of treatment by incision was almost invariably fatal. The statistics which he himself had collected gave a mortality of 90 per cent. in cases of gangrene of the intestine, and since he had called attention to the point other statistics had been collected by others which showed that this average was in no way exaggerated. The method of treating gangrenous intestine by excision failed because it did not give relief, or prevent the spread of the gangrene or ulceration, with subsequent peritonitis: and if these immediate dangers were escaped from the patient often died from inanition, because the surgeon was uncertain what part of the intestine had been opened—perhaps jejunum. Resection did away with these dangers, and was a much more scientific procedure. Doubtless surgeons had been deterred from doing resection because of the idea that it was a long and formidable operation, but recent advances had obviated this, and Senn's modification of Jobert's method could be done in about ten minutes after practice. It was a question whether the resection should be done through the original wound, enlarged for the purpose, or through a fresh incision in the middle line.—Mr. Clutton said that as the treatment of this condition by artificial intussusception with rubber rings (Senn's method) had been mentioned, he would like to say that he had tried it, and seen others try it, but the attempt had not been successful. To invaginate the upper and dilated end into the smaller and contracted one was extremely difficult, took a long time, and was almost bound to fail, as the two openings did not correspond in size. He should certainly not try it again for such a condition as that described by Mr. Lane. He thought the way that Mr. Lane operated was the best, and he would do as he had done, open the abdomen and apply Senn's approximation plates from above. The abdomen was in this way less likely to be soiled than by attempting to do it through the narrow channel of a hernial opening.—Mr. Parkin said that at Guy's Hospital during the last ten years there had been 345 cases of strangulated hernia, of which 272 had been operated upon. The mortality on the entire number had been 22 per cent.; and on the cases submitted to operation alone it had been 34 per cent. Of the 79 deaths, in 16 there were accidental complications causing death, in 2 the strangulation was unrelieved, whilst probably some of the deaths ascribed to exhaustion might have been ascribed to the latter cause. In 11 cases in which an artificial anus was produced, the average subsequent duration of life was seven days. Of 22 cases of gangrene with perforation, only 1 recovered. The usual treatment of such cases was certainly not satisfactory.—Mr. C. Symonds remarked that in Mr. Barker's first case of gastro-enterostomy the detail was similar to that now advocated as new.—Mr. Jessett thought, however, that the two methods were totally different.—Mr. Harrison Cripps dissented especially from Mr. Lane's assertion that all the old methods of treating gangrenous gut were barbarous, and that the only rational method of treatment was that advocated by Mr. Lane. Undoubtedly the rate of mortality in patients operated upon for gangrenous gut was very high, but this mortality was rather due to the fact that such delay had occurred as practically to reduce the patient to a dying condition, and that, in these circumstances, the majority would succumb, whatever treatment was adopted. In one case in which Mr. Cripps had found the gut gangrenous, by cutting off the portion, and gently passing an india-rubber tube through the proximal opening, he succeeded in relieving the patient of a large quantity of wind and fluid fæculent material, all acute symptoms subsiding, although she died some weeks later from bedsores, being an old woman. In this case, any form of operative treatment would have been immediately fatal. Though in a certain limited number of cases in which the patient was not too far exhausted, it was possible that an operation by Senn's plates, or other means of establishing anastomosis, might be successfully employed, yet he considered that, in such a case as that brought forward by Mr. Lane, where the patient was in so extreme a state of exhaustion at the time of the operation as only to be kept alive by copious subcutaneous injections of spirit, the operation would certainly extinguish the last chance of life. The account given by Mr. Lane himself of the fatal issue in this case certainly afforded no evidence in favour of the procedure in extreme cases; and in conclusion, Mr. Cripps said he would wish strongly to protest against the teaching of Mr. Lane that, in every case of gangrenous gut, irrespective of the patient's condition, the operation for anastomosis should be undertaken, and that all older methods should be discarded as barbarous.—Mr. Lane, in reply, still maintained that the old methods of treatment were barbarous. At one hospital, for instance, seventeen cases of gangrene were all fatal, and yet they had been treated on the lines advocated by Mr. Cripps: in other words, as little as possible was done. He, therefore, quite failed to see the value of Mr. Cripps's argument. Senn had discarded his end to end method, which was quite unsuited for those cases.

A Tuberculous Sequestrum removed from the Neck of the Femur without Injury to the Joint.—Mr. Charters Symonds read notes of two cases in which he had removed such a sequestrum. Both patients were children, one aged 3 and the other 5. In both there was a large chronic abscess on the front and outer aspect of the thigh, without any joint pain. Both children could run about without pain and with only a very slight limp. The movements of the joints in each case were only slightly impaired, and not more than could be attributed to the mechanical presence of the abscess. In the first case the presence and situation of the sequestrum were suspected, in the second it was searched for after the abscess was opened. In both a minute sinus was found leading through the front of the neck into a cavity in the neck. The channel was enlarged by gouging away a little bone from the outer side and the sequestrum removed. In both the capsule was seen lifted up by the abscess; in the first it was accidentally opened by a slip of the knife, in the second it was intentionally pricked, and in both cases a few drops of clear fluid escaped. Both sequestra involved the epiphysial aspect of the neck, and in the first case the piece of bone was of considerable size. In the first case, operated on in 1887, the wound was stuffed and drained, and the child was not well for more than a year. In the second, operated on in May, 1889, according to the method introduced by Mr. Barker, the large abscess after being scraped out was sewn up and this was followed by primary union. Both children were shown. The elder, a boy aged 7, had a perfectly useful joint, possessing all the normal movements, and, moreover, there was no shortening and no irregular growth. The other, the first operated on, had a limb of the full length, but the joint was fixed. Mr. Symonds attributed the superiority of the result in the second case to the method of operating employed, and thought the ankylosis in the first case due either to the result of chronic synovitis extending from the cavity, or to the fixation caused by the splint.—The Chairman hoped the case might lead other surgeons to increased accuracy of investigation, that the mischief might be detected before it had proceeded too far.—Mr. Barker congratulated Mr. C. Symonds upon the diagnosis and treatment of the two cases. They opened up a new field for the operator on tuberculous hips. They showed that a class of cases which if neglected would infallibly require excision might, if diagnosed and treated early, be saved from that procedure which all regretted to be obliged to resort to. Such cases, if left to themselves, no doubt usually ran on to separation of the head of the femur and infection of the whole joint, requiring more or less extensive excision. But now every surgeon would be on the look out for them, and would prevent such an occurrence by a timely operation such as that described by Mr. Symonds. Mr. Barker had been on the look

out for such a case for a long time past, and during the last week had diagnosed and operated upon one. The disease was found in exactly the same position as in the cases related, and was treated by his (the speaker's) method of hot water flushing and immediate and permanent closure, with, so far, the best results. The case would afterwards be published. Mr. Barker could confirm all that Mr. Symonds had said about the search for the small opening into the neck of the femur, and the difficulty of finding it. In his case the surfaces of the joint were certainly not yet infected, for all movements were complete, although the cavity in the neck and head was large enough to receive the last joint of the little finger, and the surrounding shell of bone was very thin. This cavity would now probably fill up with firm material, and the child would be none the worse for the formerly diseased hip, having a soundly healed wound, and no sinus or abscess, and no shortening. Such cases, although hitherto rarely recognised, were probably not so very rare, and in the future would be diagnosed and operated on successfully by the method referred to.—Mr. Watson Cheyne congratulated Mr. Symonds on the excellent results obtained in these cases, more especially in the last. He was inclined to think, however, that in cases where the sequestrum was in the usual situation, and involved the surface of the bone, it must very rarely happen that the joint escaped and that the pus made its way outwards outside the capsule. On the other hand, this would more frequently occur where the deposit was in the substance of the neck and did not involve the surface. In fact, he had utilised the almost certain involvement of the joint in cases where the surface of the bone was implicated as a means of diagnosis in four cases in which he had removed tuberculous deposits from the neck of the femur. In three cases sequestra were removed from the usual situation below and just outside the epiphysial line without any suppuration being present. The diagnosis was made first by excluding acetabular disease by rectal examination, next by thickening about the trochanter and neck of the femur implying bone disease, and thirdly by thickening of the capsule implying communication with the joint. In these three cases the sequestra were diagnosed and found in the usual place in the neck of the femur. In a fourth case absence of thickening of the capsule showed that the deposit did not communicate with the joint, and therefore did not involve the surface of the bone, and consequently an incision was made over the outer side of the trochanter and a channel scooped out along the neck of the femur till a caseous mass was found just outside the epiphysial cartilage; the case made an excellent recovery.—Mr. Symonds showed that one of the sequestra of the bone exhibited had obviously come from the front of the neck. The cases were rare, but perhaps less so than was generally thought to be the case. The sinus was always at the upper part of the abscess.

Cerebral Abscess Twice Trephined: Hernia Cerebri: Recovery.—Mr. Stephen Paget described this case. A boy, aged 12, after a discharge from the left ear, had for some weeks intense headache, with giddiness and strangeness of manner; there were also points of exquisite sensitiveness in the left temporal, malar, and occipital regions. A week after admission to the West London Hospital sudden vomiting supervened, then right facial paralysis, weakness of right arm, partial aphasia, and left optic neuritis. Mr. Paget trephined over the left fissure of Rolando, and let out an ounce of pus. Eleven days after, the abscess having refilled, he trephined again lower down, on a level with the lower opening. Two days later an offensive blood clot was found in the discharge; probably from the meningeal hæmorrhage, which had occurred five days after the first trephining. The abscess cavity was then syringed through daily with perchloride. There was for some time after this a small hernia cerebri at the upper wound, but this was cured by elastic pressure. The wounds healed soundly, and the boy made a good recovery, save for some paralysis of the right side of the face. Mr. Paget called attention to the chief surgical features of the case, and to the curious sort of aphasia from which the boy had suffered, being unable to give the right names to objects, though he recognised the names when he heard them. It was also to be observed that, all through his illness, even at its height, the boy had a voracious appetite, eating and drinking enormous quantities of food. Mr. Paget quoted five cases published where the same voracity for food and drink had occurred after severe injuries of the front part of the brain. He thanked Mr. Eccles, the house surgeon, for his devotion and skill in the management of the case.—The Chairman congratulated Mr. Paget on the issue of his case.—Mr. Barker asked as to the exact position of the abscess, and why the first trephine aperture had been made so high up.—Mr. L. A. Dunn referred to a case which he had recently treated at the East London Children's Hospital. The patient was admitted with otorrhœa, a small abscess behind the right ear and high temperature. The abscess was opened, and the middle ear thoroughly cleansed through the incision. The febrile symptoms continued, and in addition the left arm became powerless, so he trephined first over the right fissure of Rolando, and explored the brain without result; and then above and behind the right ear as recommended by Mr. Barker. On incising the dura mater a quantity of foul gas and pus escaped. The patient died ten days later. The *post-mortem* examination showed extensive suppurative meningitis of the right side, caused by a cerebral abscess, which had opened on to the surface of the brain.—Mr. Symonds thought it was useless to trephine when the temperature was high, as meningitis was probably already present.—Mr. Bruce Clarke mentioned a case with a temperature of 105° F. in which he had trephined with great benefit.—Mr. Barker asked whether it was an abscess of the brain or merely a subdural abscess. There was a great difference between the two.—Mr. Clarke said he mentioned the case to show that the temperature could not be taken as a guide in respect of the advisability of operation.—Mr. Symonds observed that he assumed the presence of cerebral symptoms.—Mr. Paget, in reply, said that in future he would not perform such an operation without Fraser's admirable *Atlas of Diseases of the Brain* at his side. He insisted upon the curious nature of the excessive hunger and thirst which his patient exhibited, and said it almost suggested the presence of a nervous thirst centre. He observed that, except on the supervention of the touch of pleurisy, there was no rise of temperature.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, May 7th, 1891.

Henry Power, M.B., President, in the Chair.

Arterio-venous Aneurysm of the Orbit.—Mr. Richard Williams (Liverpool) read a description of a case of arterio-venous aneurysm of the orbit. The patient, a youth, aged 14, had received a kick from a horse on the left temple. The left eye had been "swollen out" ever since the accident, and the swelling was gradually increasing. At the upper and inner angle of the orbit there was an oval swelling, about the size of a small walnut, which distinctly pulsated. Ligature of the common carotid was performed, and the pulsation ceased, but returned in some degree later, and then gradually subsided, until one day, whilst weeding in the garden, the eye felt suddenly painful, and the lids became swollen. Since then the pulsation entirely ceased, and the appearance and vision of the eye became normal, all that remained being slight ptosis and contraction of the pupil. Mr. Williams cited other cases in which recovery had occurred after compression or ligature of the common carotid, and expressed his opinion that this latter was the most satisfactory method of treatment.—Mr. Wherry (Cambridge) had tied the carotid in a lad exhibiting similar symptoms, after sustaining a fracture of the base of the skull. Subsequently there was double ptosis and optic neuritis. Grave symptoms followed the operation. Coma lasted fourteen days; there was hemiplegia on the opposite side of the body with contraction of the limbs, and almost complete loss of reason. No doubt the brain had been seriously bruised at the time of the accident; probably some thrombosis had occurred, and extended rapidly when the blood supply was diminished by ligature of the carotid. The immediate recovery from the operation was all that could be desired.—Mr. Frost mentioned a case under his own care in which the condition had remained stationary for some years, and the man was able to follow his occupation as a wheelwright. He deprecated early interference in such cases, as a considerable number of spontaneous recoveries were on record.—Dr. Mules (Manchester) mentioned a case in which intermittent pressure on the carotid was applied by the

patient himself.—Mr. CHARLES LEE (Liverpool) said he had had the advantage of seeing both the cases mentioned by Mr. Richard Williams, and he was an advocate for early operation. In one of the cases mentioned, operation had been postponed. Severe hæmorrhage occurred from dilated veins of the eye on the affected side, and the sight was lost.—Mr. SILCOCK mentioned a case he had shown to the Society some years ago; no operation had been performed, and the man was now in practically the same condition.—Mr. TATHAM THOMPSON (Cardiff) referred to three cases of arterio-venous aneurysm of the orbit. One, a girl under 10, perforated the orbit by falling on a knitting needle. The aneurysm which ensued was completely cured by electrolysis. In the second case, also in a child, the orbit was penetrated by the frame of an umbrella. In the third, a woman, aged 40, during a severe paroxysm of vomiting in pregnancy, experienced the sensation of a pistol crack in the eye, and ever after heard a buzzing noise. The *bruit* could be stopped by pressure on the carotid.—Mr. CROSS (Bristol) referred to a case in a child, 15 months of age, in which the symptoms appeared after a fall. No operation was performed. Recent rapid increase in the symptoms made it doubtful if the case was not one of new growth.

Parageusia with Ophthalmoplegia.—Mr. WHERRY (Cambridge) read an account of the case of a gentleman, aged 47, who was first seen on December 9th, 1890. He had homonymous diplopia, worse on looking to the right. The right eye was kept shut in walking to avoid dizziness and double images. No signs were present of tabes dorsalis or of optic neuritis. Both pupils were dilated, did not act to light or in accommodation. The vision in each eye was not affected. He could read J 1 at 10 inches, and write perfectly with both eyes, using his accustomed glasses. Three days previously the attack began when he was in his usual good health. He noticed at table that everything tasted bitter; he thought that saliva collected a little more on the left side of his mouth; he had then occasional diplopia. On December 16th there was marked divergence and crossed diplopia, but each eye separately would move well to the canthi; with no weakness of any single muscle, convergence was impossible, and all near work was done with one eye, the left for choice. Some patches of numbness were noticed on the outer side of the left thigh and on the left little finger. Severe nocturnal pain in the head and scalp were relieved by hot compresses. The taste symptom had been a serious distress; even water was too bitter to be touched. Hungry and with a clean tongue, the patient was unable to dine. A glass of champagne was tried and found to be impossible. This parageusia lasted acutely during five days. The external squint and dilatation of the pupils remained until ten days later, when all pain disappeared. The pupils were smaller, acted slightly to reflected light, and attempts at convergence could be seen. After another ten days the pupil acted to light, and convergence and single vision were possible with effort. The symptoms finally passed away about two months from the onset. There was a history of syphilis twenty years before. The patient was married, with three healthy children. In the treatment iodide of potassium was pushed to 110 grains daily. Butcher's meat and alcohol were avoided, and a mid-day sleep was obtained. Mr. Wherry thought it probable that the ocular symptoms were due to a syphilitic lesion affecting the nuclei of the third nerve about the aqueduct of Sylvius. The palsy of convergence and dilated pupils without affection of the accommodation pointed to a very minute lesion, and offered interesting clinical evidence of the existence of centres which separated the various functions. In reference to the distressing disturbance of taste, it might be found to be more common in functional disorders, and cast a doubt on the origin of the attack. The patient himself thought it was due to a cerebral haemorrhage during sexual excitement.—Mr. SPENCER WATSON inquired if the sense of smell had been affected.

Emphysema of the Conjunctiva.—Mr. TATHAM THOMPSON read notes of the case of a clergyman, aged about 30. After breakfast on the day he was examined, and whilst blowing his nose rather violently, he felt a sudden "shock," a sensation as of something gradually covering the right eye, and a peculiar "stiffened" feeling in it. He had no pain. On examination the right eye was found to be displaced downwards two-thirds of an inch, and forwards half an inch. Both lids were tensely stretched, purplish in colour, and with superficial veins engorged. Cornea clear, but surrounded by, and partly overhung by, an enormous chemosis of the ocular conjunctiva, of a bluish colour, and almost non-vascular. This "bullous" conjunctiva protruded far between the lids. Crepitation was readily elicited on palpation. The conjunctiva was snipped in a radial manner, the air escaping with each snip, the remainder squeezed out, and the eye returned by steady pressure and massage. All uncomfortable symptoms at once subsided, and vision rapidly returned. The eye was still slightly displaced down and forwards, and it was found that ten or eleven years before he had been operated on by Mr. Edgar Browne for exostosis of the orbit, and there had been slight permanent displacement since then. The eye was kept lightly bandaged for twenty-four hours, and forty-eight hours afterwards all traces had disappeared. There had been no recurrence.—Mr. MARCUS GUNN asked if the exact position of the exostosis was known.

Eyelashes in the Anterior Chamber.—Mr. LAWFORD (for Mr. G. D. JOHNSTON, of Vancouver) read notes and showed a sketch of a man who received a wound of the cornea by a piece of wire. Five eyelashes were carried into the anterior chamber, and were subsequently removed by operation, with recovery of a useful eye.

Eyelash in the Anterior Chamber.—Mr. ERNEST CLARKE reported the case of a boy, aged 13, under his care, who wounded his eye with a knife. An eyelash was carried into the eyeball, the root of the cilium remaining in the corneal wound. It was extracted eight days after the accident.—The PRESIDENT alluded to the case of a sailor who received a wound from a clasp knife, by which an eyelash was carried into the anterior chamber, where it remained for some months, and gave rise to very slight irritation.—Mr. CRITCHETT mentioned a somewhat similar case.

The Formation and Pathology of Pyramidal and Central Anterior Capsular Cataracts.—Dr. MULES read a paper on this subject, limiting his observations to the class of cases where there was no proof of previous corneal perforation. From a case of his own, where persistent bands of pupillary membrane remained attached by their apices to a central cataract, and by their bases to the larger circle of the iris, he inferred that the central spot was a patch of cretified pupillary membrane, with or without a lymph cone, and he instanced McKenzie's observation of the ease with which many of these spots could be brushed off the capsule, leaving it intact, as confirmatory of his own view; he further pointed out the importance of this explanation in reference to other congenital lenticular opacities.—Mr. MARCUS GUNN said that he had suggested a nearly similar explanation for some cases of anterior capsular cataract in a paper he published in the *Ophthalmic Review* a few years ago.—Mr. HARTRIDGE mentioned the case of a boy, aged 14, in whom an extensive perforation of the cornea occurred, and where the lens was for some days in contact with the cornea, yet the resulting nebula was very insignificant. It was only in young children that capsular cataract was believed to follow such accidents. He thought perforation of the cornea might leave very little evidence besides damage to the lens. The hypothesis put forward by Dr. Mules would require the persistence of pupillary membrane in many more cases than were at present met with.—Mr. STEPHENSON said that he met with remains of pupillary membrane very frequently.—Dr. MULES said, in reply, that it had been stated by Wells that perforating ulcer of the cornea in these cases need leave no nebula. The author of the paper had never seen such a case. Those he mentioned showed no trace of a nebula, and gave no history of any inflammatory change. In three the condition was unilateral.

Living and Card Specimens.—Mr. LAWFORD: (1) Retinal Hæmorrhage and Exudation, with Venous Thrombosis; (2) Subconjunctival New Growth, ? Gumma.—Mr. R. WILLIAMS: Dermoid of Cornea and Conjunctiva.—Mr. SPENCER WATSON: Dermoid of Cornea and Conjunctiva.—Mr. ERNEST CLARKE: Absence of Iris, with Opacity of Lens, after Injury.—Mr. LANG: New Growth, ? Sarcoma, at Sclero-Corneal Junction.

MEDICAL MAGISTRATE.—Surgeon-General Thomas Farrant has been placed on the Commission of the Peace for the County of Cork.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MAY 6TH, 1891.

J. WATT BLACK, M.D., President, in the Chair.

Specimens.—Dr. WM. DUNCAN: (1) Extirpation of the Uterus for Cancer; (2) Broad Ligament Cyst. Dr. GRIFFITH: Double Hydrosalpinx.

Tetany in Pregnancy.—Dr. DAKIN read a paper on this subject. He gave a brief description of tetany or tetanilla, and then described a case at length. This case, in addition to the fact that it was an instance of a very rare disorder of pregnancy, had the peculiarity that the spasms never completely relaxed during the three days of the disease. The contractions were accompanied by, and were probably due to, very severe vomiting, and the two diseases combined led to a fatal issue, in which tetany dealt the final blow by involving the muscles of respiration. The author then, from the few recorded instances of the disease during pregnancy, constructed a typical case, with which he compared the case detailed in the paper. The differential diagnosis between this disease and other spasmodic affections which might be confounded with it (tetanus, hysteria, spinal meningitis, uræmia, one form of epilepsy, and ergotism) was discussed, the treatment briefly referred to, and general conclusions drawn. A table of all accessible recorded cases was appended, and references given to authors who had treated the subject of tetany generally and in special aspects.

Death following Injection of Acid Nitrate of Mercury.—Dr. JOHN PHILLIPS read a paper on this subject. The patient was a married nullipara, aged 25, when first under observation, her complaint being sterility and dysmenorrhœa. Three years later, whilst separated from her husband, she became pregnant, and with the object of ridding herself of the nine or ten weeks' conception, about a tablespoonful of acid nitrate of mercury was injected into the vagina. The same evening vomiting set in, and intense pain, for which morphine and cocaine were given. The face was pinched, and of a markedly abdominal type. Temperature 102° F., and the pulse 112, wiry, but regular. The stools became frequent and blood-stained. The urine was scanty, and was passed involuntarily. The vagina was in a sloughy condition; a vaginal douche brought away some bloodstained flakes. The uterus was enlarged, and the os soft and patent. Carbonate of ammonia was administered, but she sank and died. A *post-mortem* examination was made by Mr. Pepper. The bladder contained bloody urine, the blood evidently being derived from the kidneys. The folds of the vaginal mucous membrane were covered by a hardened slough. The cervix was untouched, but there was some slight detachment of the decidual membrane. The uterus contained a ten weeks' fœtus with its membranes intact. The mucous membrane of the whole of the large intestine and the lower part of the small intestine was blackened, and in a state of superficial slough. Peritonitis had commenced. The mucous membrane of the stomach was healthy. Dr. Phillips remarked that the peritonitis was due probably to absorption from the sloughy mucous membrane of the vagina. He pointed out that there was no fœtor of breath, no sponginess of gums, and no enlargement of the cervical glands.—Dr. BOXALL thought it hardly fair to say in the present case that no wound existed, as an eschar was produced. In mercurialism from vaginal douches, the symptoms were generally abdominal pain, diarrhœa, and tenesmus, and only rarely salivation or spongy gums.

Sequel to a Case of Serous Perimetritis.—Mr. ALBAN DORAN read a paper on this subject. The first paper on this case was published in the 21st volume of the *Obstetrical Transactions*. The patient died in August, 1890, about three years after the exploratory incision. The girl grew tall, but became ill and weak and emaciated. Dr. Ilott, of Bromley, watched the case to its termination. She showed tuberculous disease of the chest as well as the abdomen, pyrexia, cough, sweats hectic; tubercle was found in the abdomen and chest. Both ovaries were much enlarged, and converted into cysts filled with dirty yellow pultaceous material. The Fallopian tubes were swollen into two oval fluctuating cysts.—Mr. TARGETT had examined the specimens microscopically, and could find no bacilli. He thought the condition was due to chronic inflammatory disease of gonorrhœal origin. The girl, although unmarried, admitted coitus, and so there was a possibility of gonorrhœa. She never menstruated again after the operation. If she had had gonorrhœa it was possible that the parts were thereby prepared for the easy invasion of tubercle. The probability of primary tuberculous disease of the tubes was far greater. There was a family history of tubercle. Reference was made to the writings of Pozzi, Kelterborn, and others. In all probability the disease began as tuberculous salpingitis, which set up tuberculous peritonitis. This was relieved by the abdominal incision. The patient finally succumbed to pulmonary phthisis. The dull yellow spongy tissue cut into at the operation was not found at the necropsy.—Dr. HORROCKS remarked that the case was of great interest, as it had been so well and so patiently followed to its termination. He did not think that when bacilli were not found in a specimen one could say that the case was not tuberculous.—Dr. GRIFFITH referred to cases recorded by Verneuil and Goupil, in which pelvic inflammation was apparently connected with tuberculous disease, and remarked on the apparent infrequency of this connection in England.—Mr. DORAN replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, MAY 1ST, 1891.

T. GUNTON ALDERTON, M.R.C.S., L.R.C.P., President, in the Chair.

Specimens.—Dr. CLEMOW showed specimens of Hydatid Cysts from the lumbar region of a man aged 24.

Chronic Rheumatic Arthritis.—Dr. SYMONS ECCLES read a paper on chronic rheumatic arthritis, under which term he included all forms of chronic arthritis not due to a wound of the joint or disease of bone, believing that whatever might be the predisposing cause the exciting cause was the same. Exposure to cold and damp after fatigue was shown to influence the chemical and physical state of joints and muscles. Acidity in excess was thus produced, and so favoured the deposition of uric acid as shown by Dr. A. Haig, whose views on the etiology of rheumatism were supported by the clinical features observed in over 100 joints affected by chronic arthritis. For such cases in which there was no evidence of suppuration or advanced destruction of tissue the indications for treatment being the alleviation of pain, the removal of the inflammatory products, and the restoration of healthy nutrition. Dr. Eccles employed a combination of massage, stabile galvanism, and exercises, with appropriate constitutional remedies.—Dr. A. HAIG said he was particularly interested in the observations of Dr. Eccles on the effects of cold and damp following fatigue. Under such a combination of circumstances the alkalinity of the blood would be diminished, and tend to precipitate the urate on the joints and other fibrous tissues as suggested by Dr. Eccles. In acute disease the lesions thus caused might be repaired in a few days, but if the urate were present for more than a few hours extensive irritation was set up which might smoulder in the tissues, even after the removal of the urate, eventually producing effects which were called rheumatoid. The treatment was first to foster the removal of the urate and prevent its reprecipitation, and this was best carried out by diet; and for the treatment of the damaged structures he knew of nothing more likely to restore their healthy nutrition than massage and galvanism.—The discussion was continued by Drs. THOROWGOOD, THUDICHUM, SAVILE, and LLOYD; and Dr. ECCLES replied.

Appendicitis.—Dr. LUNN read a paper on two cases of appendicitis. Case I. A boy, aged 8, had been quite well until two days before he was seen, and the bowels had acted naturally. On January 10th the abdomen was greatly distended; dulness, and tenderness with a sense of resistance, were well marked in the right iliac fossa. It was decided to watch the case. On January 20th a muco-purulent discharge was passed from the anus. The patient was collapsed, but the dulness completely disappeared. The boy rallied and made an uninterrupted recovery. Case II. A cabman, aged 58, was admitted suffering from obstinate vomiting and constipation. There was intense abdominal pain, chiefly in the right side, the flank being dull, while the rest of the abdomen was tympanitic. Abdominal section was performed thirty-four hours after admission. The right colon was found to be gangrenous and adherent to the belly wall. While search was being made for the appendix vermiformis fæces suddenly began to

pour out from a perforation. This was clamped and stitched to the abdominal wall, a false anus being made, but the patient became collapsed, never rallied, and died twelve hours after the operation.

Dietetic Treatment of Obesity.—Mr. Towers-Smith read a paper on the dietetic treatment of obesity for periods of two or more months. In the initial stage of the treatment, lasting fourteen days, purely nitrogenous food only was given, in the second stage an addition of 25 per cent. of carbohydrates, and in the third 50 per cent. were allowed, all largely diluted. In cases treated eighteen months and two years previously, on returning to ordinary diet—always avoiding sugar and beer—the reduction in weight and bulk remained the same as effected by the treatment.—Drs. Clemow, Savill, and Campbell Pope took part in the discussion; and Mr. Towers-Smith replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Wednesday, May 6th, 1891.

C. Haydon White, M.R.C.S., L.R.C.P., President, in the Chair.

Cases.—Dr. Handford showed a boy, aged 7½, who, after three weeks' illness, was found to have pus in each pleural cavity. On the left dulness reached to the fourth rib, and on the right to the fifth, and behind on each side to the middle of the scapula. The respirations were 56 per minute. On February 13th the left chest was opened, under chloroform, in the sixth space in the posterior axillary line, three-quarters of an inch of rib being removed. The breathing was much relieved by opening the chest, possibly by allowing the mediastinum to bulge over to the left, and thus giving more room to the right lung. Ten days later the right chest was opened in the seventh space, below the angle of the scapula, and one inch of rib removed. Both tubes were finally left out at the end of nine weeks. Three weeks later both wounds were healed by sound cicatrices, and respiration was normal over the whole of both lungs. The boy had gained 7 lbs. since he was weighed on first getting up.—Mr. Anderson showed a man, aged 56, whose right hand and wrist commenced to swell a year before. There was distension of synovial sheaths, involving those of both flexor and extensor tendons, and extending from front to back between the carpal bones. There was undue mobility of the carpus, but no grating. No bare bone could be felt. Various remedies having failed, amputation was proposed.—Mr. Tresidder showed a similar but less severe case in a woman aged 72.—Dr. Stewart showed two women from whose vocal cords he had removed papillomata; a man with Syphilitic Ulceration of Vocal Cords; and a man with Paralysis of the Left Vocal Cord.

Specimens.—Dr. Handford showed Spleen from Hodgkin's Disease; Larynx with Subglottic Abscess; Seven Hearts illustrating Mitral Stenosis complicated with Aortic Disease.

Water Supply in Rural Districts.—Dr. J. S. Tew read a paper on this subject. He reviewed the improvements which had been made and which were contemplated in the water supply of such towns as Manchester, Liverpool, Birmingham, etc., pointing out the benefits derived from such supplies, not only for the towns for which the schemes were specially designed, but also for the country districts around, and through which the conduits passed. The distribution of the local water supplies was also described, and several recent instances given of the spread of infectious disease by means of drinking water. He also gave an analysis of enteric fever cases personally investigated during the year 1890, which numbered 102, and which gave a proportion of 1 case among 510 persons, an average age among those attacked of 13½ years, a death-rate of 0.36 per 1,000 living, and a case mortality of 18.6 per cent. Among these cases, 5 per cent. were without reasonable doubt traced to specially polluted water, while in from 20 to 25 per cent. the water was either of inferior quality or was liable to pollution. The lowering of the ground water, as measured by the neighbouring surface wells, in relation to the autumnal prevalence of enteric fever, was also entered into at some length, and the ground water theory of the spread of this fever was upheld. The chart for the year 1890 showed that two-thirds of the cases of enteric fever occurred in the months of August, September, October, and November, and a tabular collection of cases distributed over five years showed that 189 occurred in those months out of a total of 341 cases. It was also considered that in most of those cases where epidemics of enteric fever appeared while the ground water was rising, other more potent factors were agents in its production—usually drinking water directly polluted by sewage or personal contact—and it was urged that in investigations into the causes of this fever the water supply and drainage should receive primary attention, but that inquiries into the fruit, vegetable, and meat supplies were also of increasing importance.—The President and Mr. Wills discussed the subject.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Friday, May 1st, 1891.

John Poland, F.R.C.S., President, in the Chair.

Report on Specimens.—The report of the Committee on the specimens exhibited by Dr. MacGavin and Mr. Mainwaring on December 5th was adopted. The pedunculated tumour, 2 lbs. in weight, which was removed by Dr. MacGavin from the labium majus of a young woman, was found on microscopical examination to be a fibromyoma. A similar specimen was recorded by Cornil and Ranvier, removed by Demarquay, and two others were figured, one by Schröder and the other by Zweifel in Billroth and Lücke's *Handbuch*. Mr. Wainwaring's specimen consisted of a large and irregular epitheliomatous (squamous) ulcer, involving the base of the bladder and prostate.

Chronic Metritis.—Dr. Gervis read a paper on chronic metritis. He discussed its etiology, tracing its origin on the one hand from acute inflammatory attacks—septic, non-septic, traumatic, gonorrhœal, etc., and on the other from passive conditions of congestion induced by such causes as fibroids, displacements, retained fœtal products, lacerations of cervix, and certain diseases of the heart and liver. He gave reasons for believing that subinvolution was essentially a chronic metritis of puerperal origin. In connection with its symptoms, he showed its bearing on the general health, and in regard to treatment he laid much stress on the importance of diet and general management, in addition to such local measures as might be necessary.—Remarks were made by Dr. Horrocks, Mr. Lockhart, Dr. MacGavin, and Dr. F. T. Tayler.

Specimens.—Dr. Ernest Clarke exhibited an adult after recovery from severe compound comminuted fracture of the lower end of the femur involving the knee-joint. The articulation had been treated by antiseptic washings, and already (some months after the injury) a considerable amount of flexion was permitted on walking. Dr. Clarke also showed two specimens of Congenital Malformation of the Heart.—Mr. Courtenay J. Fuller showed microscopical sections of a Tuberculous Ganglion of the Wrist from a boy affected with disease of the hip and posterior calcaneo-astragaloid joint. The mass, which had the characteristic appearance of grey tuberculous tissue, was dissected off the flexor sublimis tendon. It was found to extend downwards beneath the annular ligament.—Mr. Fuller also exhibited a typical specimen of Impacted Extracapsular Fracture of the Neck of the Femur, from a woman, aged 57. The two signs upon which the diagnosis was made during life were eversion of the limb and very marked increase in the antero-posterior width of the great trochanter, together with some contusion of the thigh.

An inquest was recently held on the body of a woman at Chapel End, Nuneaton, who had died from inversion of the uterus. The jury found that the cause of the inversion had not been proved, but were of opinion that the midwife who had been in attendance was guilty of great negligence. The coroner censured the midwife, pointing out that she ought to have sent for a medical man with more speed.

Successful Vaccination.—Mr. Reginald Maples, L.R.C.P., Public Vaccinator of Kingselere Union, and Mr. J. S. Gettings, Medical Officer and Public Vaccinator of the Ogley Hay District of the Lichfield Union, have each received for the fourth time grants for successful vaccination in their respective districts; and Dr. W. H. Torbock, Public Vaccinator to the Fourth and Fifth Districts of the Liskeard Union, has received a like grant for the third time.

REVIEWS AND NOTICES.

A Textbook of Physiology. By M. Foster, M.A., M.D., LL.D., F.R.S., Professor of Physiology in the University of Cambridge, and Fellow of Trinity College, Cambridge. Fifth edition, largely revised. Part III. The Central Nervous System. London: Macmillan and Co. 1890.

Part III of Professor Foster's well-known textbook on physiology does not complete the work. It deals solely with the central nervous system, and in its preparation the author acknowledges the able co-operation of Mr. Langley and Dr. Sherrington, and the valuable advice of Dr. Gowers in several matters.

As an exposition of the anatomy and physiology of the central nervous system, the present edition is a great improvement on the previous one. The text, as might be expected in a work by Dr. Foster, is very lucid, although the subject matter is one extremely difficult to make plain to students. It cannot be said, however, that the work now before us will be of much service to the average medical student. It must be confessed that the diagrams introduced are too complicated for the beginner, and a short, simple exposition of the anatomy and physiology of the central nervous system is a great desideratum for those who are intending to practise medicine, and do not intend to become expert physiologists. When considered, however, as a textbook for the candidate for university degrees, Dr. Foster's textbook will be found all that is to be desired, although it may be a question whether the omission of the names of the authorities for the statement is not a doubtful advantage. It is an advantage in one sense, namely, that the text is not broken up, but it is a disadvantage from the point of view of historical interest. In some respects, therefore, the former editions of Dr. Foster's work are of more utility than the present, and would be considered of much greater utility if there were not intrinsic evidence in the text of careful sifting on the part of the author and his assistants of physiological statements and facts.

The slight criticisms that have been made do not in any way detract from the great value of this part of Dr. Foster's textbook as a clear and accurate exposition of our present knowledge regarding the physiology of the central nervous system.

La Topographie Cranio-Cérébrale: Applications Chirurgicales. Par M. René-Leon le Fort, M.D. Paris: F. Alcan. Lille: J. L. Danel. 1890.

M. le Fort, after briefly noticing in the first chapter the work of various observers on cerebral topography, and the processes by which they have arrived at their conclusions, proceeds at once to discuss his own and M. Debierre's method which he names "Procédé de l'autogravure." After a general chapter on the cranium and the brain, the author discusses the principal fissures and convolutions of the brain in detail, giving the variation in different skulls and in adults and children. Considerable space is given to the fissure of Rolando, and to the fissure of Sylvius, and the description is illustrated by two well-known plates after Messrs. Anderson and Makin. A chapter on the relation of the central portions of the brain to the surface gives only meagre information as compared with the work just issued by Professor Alex. Fraser. In the chapter on the arteries, veins, and sinuses, we notice nothing new, although the plates drawn in colours are good examples of care and artistic skill. The chapter on the modification in cranio-cerebral topography in infants and old people is worthy of study, as it gives a summary of former knowledge on the subject, together with the author's own observations, the conclusions being given tersely at the end of the chapter.

Since other causes than age, such as sex, race, and pathological deformity may modify the topographical relations in the brain, a chapter is devoted to the consideration of such peculiarities.

Whilst accepting in the main M. Le Fort's conclusions regarding the cases in which the operation of trephining the skull should be performed, and the small risk attending it when all antiseptic precautions are observed, we should differ from the author when he doubts the efficacy of operative intervention in diffuse acute inflammatory affections of the meninges, since successful cases of tapping the ventricles of the brain have occurred in the hands of English, American, and Continental surgeons. The wisdom of partially removing a malignant tumour of the brain in the hope of "giving considerable relief," also appears to be very doubtful.

The last chapter should be read by every surgeon who may have to operate on the brain. The author here formulates rules by which any part of the brain can be mapped out. For example, to map out exactly the fissure of Rolando, the following directions are given: Mark the sagittal line, that is the median line from the root of the nose to the occipital eminence; when this is 29 centimetres, the summit of the fissure of Rolando is 154 millimetres from the root of the nose.

When it is 30 centimetres, the top of the fissure is 159½ millimetres.
" 31 " " " " 165 "
" 32 " " " " 170 "
" 33 " " " " 175½ "
" 34 " " " " 181 "
" 35 " " " " 186 "
" 36 " " " " 191½ "

The fissure is 5 millimetres further forward in dolichocephalic and 5 millimetres further backward in brachycephalic skulls.

If the summit of the fissure of Rolando and the centre of the zygomatic arch be joined by a line, it gives the general direction of the fissure of Rolando with an exactitude sufficient for all practical purposes. The author is so enthusiastic as to write that if the rules he has formulated be carried out, "one may see the surface of the brain through its coverings as if they were replaced by glass."

The Essentials of School Diet. By Clement Dukes, M.D., B.S.Lond., etc. London: Percival and Co. 1891.

The art of making girls and boys into men and women is not to be regarded only from the standpoint of the scholar or of the athlete, nor from that of both these useful authorities combined, for "mind stuff" resolves itself, on ultimate analysis, into something strikingly like appropriate food stuff; and Dr. Dukes's book on *School Diet* comes as a useful and not too early complement to a mass of recent literature, in which the importance of a joint physical, intellectual, and moral training has been fully urged. There are nowadays very few schools indeed whose authorities are consciously mindful to find their profits in butchers' bills reduced to the limits of a bare necessity. Yet it is no extravagant assertion that, with but too few exceptions, greater injustice is done to pupils and to parents by the underfeeding of the former than in any other way.

Despite the best and most generous intentions, it is impossible to feed adequately a large number of children, varying in age, in appetite, in health, and in delicacy, unless the caterer has mastered the fundamental truths of the problem to begin with, and is also capable of close observation of, and intelligent reasoning on, the phenomena which come before him. Hitherto, the preliminary data of such a knowledge have been obtainable only from scattered references in physiological treatises, or have been attained by a series of empirical ventures carried out on the *corpus vile* of the pupil himself. It is not surprising that the result is, for the most part, far from satisfactory; and no small debt of gratitude is due from scholars, schoolmasters, and parents alike to the authority who has presented the essentials of this all-important subject in a form at once practical and popular, and fortified by the weight of his own ripe experience.

The medical officers of schools will also find in this little book much useful information and a convenient work of reference. Dr. Dukes is impartial in his strictures, wherever stricture is deserved. Admitting the generally good intentions of schoolmasters, and in many cases the good results which their continuous and intelligent supervision have secured, he clearly indicates the sources, the consequences, and the remedies of shortcomings which are admittedly too common. At the same time, he has no sympathy with the faddist and the grumbler, be he parent or child, and he points out the far-reaching unwisdom of those parents whose foolish lavishness in the shape of hampers and excessive pocket-money during the school term is not less injurious than the

unhealthy indulgences allowed to their children during the holidays at home. His remarks on the diet and the exercise appropriate to girls deserve to be widely known and more generally adopted by schoolmistresses and mothers.

There is very little that calls for unfavourable criticism in this book. A certain amount of repetition is necessary to a clear and adequate presentment of its teachings. On one point, however, we would go a good deal further than the author. By the adoption of no precautions should we be induced to sanction the use of milk from a farm dependent for its water supply on a well contaminated with farmyard manure; and if the school doctor and the medical officer of health would but jointly exercise their just powers in all such cases, gross abuses of this kind would soon cease to exist, simply because it would no longer be possible to make them pay.

THE BARBARITY OF CIRCUMCISION AS A REMEDY FOR CONGENITAL ABNORMALITY. By HERBERT SNOW, M.D.Lond., etc., Surgeon to the Cancer Hospital. London: J. and A. Churchill. 1890.

DR. SNOW has a strong objection to circumcision as a remedy for congenital phimosis, and brings forward facts and arguments in this little book in order to prove that the operation, whilst causing much suffering to helpless children, is as a rule quite unnecessary. Although, as is acknowledged in the preface, no one could expect without presumption to abolish this practice altogether, it is probable that many of those who peruse this book will be induced to question the propriety of resorting very frequently to circumcision in the treatment of certain abnormal conditions of the prepuce.

The first chapter is devoted to an historical sketch of circumcision as a religious rite. Dr. Snow's work is too small for a satisfactory discussion of so large a subject, but he has collected many interesting facts, and presents good grounds for the view he holds that circumcision, as regularly practised by very numerous races of diverse origin, is essentially a sacrificial and religious act, and has no title to any hygienic character and purpose.

In a subsequent section there is a full discussion of the arguments in favour of removal of the prepuce in cases of supposed congenital abnormality. The author holds that the operation does not conduce to local cleanliness in after-life, or to greater chastity, and, moreover, that it does not serve to protect the subject from venereal disease or render him less prone to cancer. In many cases, it is asserted, death has been caused by circumcision, and the operation in most instances entails as an immediate result much suffering, and as a remote result contraction of the meatus urinarius. Even in cases of acquired phimosis and in adult subjects circumcision, it seems, is not devoid of risk. Indeed, Dr. Snow would reserve the operation for some few exceptional cases of chronic acquired phimosis. With regard to the congenital form, he holds that the common-sense and most satisfactory treatment is dilatation associated in complicated cases with limited incisions. With the results of such treatment the author states that he is eminently satisfied. There can be little doubt, we think, that circumcision has been frequently performed in cases in which careful and prolonged bloodless plan of treatment might have effected a cure. Dilatation, however, is by no means a novel plan of treatment, and, as Dr. Snow tells us, it "must have been repeatedly resorted to by many practitioners of the past." Many and varied forms of instruments have been devised for carrying out such treatment, some of which are described in this book. This fact, together with that of the advocacy of circumcision in cases of congenital phimosis by many very cautious and experienced surgeons, would seem to us to suggest that the dilatation method may not be invariably satisfactory, and that a certain number of cases may remain in which operative treatment will be found necessary.

HYPNOTISME ET CROYANCES ANCIENNES. Par le Dr. L. R. REGNIER. *Progrès Médical.* Paris.

THIS is an interesting book. It contains an account of the various kinds of magic and witchcraft which have been recorded in different parts of the world from the most ancient times down to the present.

The author is careful to differentiate between the states of religious ecstacy into which certain devotees were thrown, and the condition now recognised as hypnotism. He describes the latter condition as a peculiar state of the nervous system which one can artificially produce among a great number of individuals, and which is characterised by a condition of complete or partial unconsciousness, with total forgetfulness on awakening of what has happened during the hypnotic state. This definition is too sweeping, for there are many phases of hypnosis in which the subject has a distinct recollection of everything that has transpired, yet in whom an undoubted hypnotic condition has been maintained.

Dr. REGNIER takes us back to the ages of the "Vedas," and an interesting description is given of the sorceries and superstitions of the Indians, Egyptians, Greeks, and Persians, whilst the subject of demoniacal possession is discussed and recorded examples quoted. This latter part is illustrated by several quaint drawings copied from *Le Sabbat des Sorciers*, by Bourneville and Leteinturier.

From the account given of "animal magnetism," we gather that in 1636 Daniel Schwinter hypnotised some of the lower animals; that this was also done by Father Kircher, and again by Braid some fifty years ago. Dr. Regnier is of the opinion—and we are inclined to agree with him—that although the uses of hypnotism for criminal purposes are capable of demonstration as *expériences de laboratoire*, it is doubtful if any crime has been proved to have taken place under its influence.

It is well to sound a note of warning as to the harm that may be done by too frequent or too prolonged hypnosis as practised by showmen; and this Dr. Regnier is careful to do. With regard to the reality of the hypnotic phenomena, he states, "the facts demonstrated by Braid, reproduced by Heidenhain, by Charcot, and since by a crowd of *savants*, have established the fact upon a sufficiently solid basis that hypnotism is not a sham, but a true physical phenomenon."

NOTES ON BOOKS.

Manuel d'Asepsie, Applications à la Chirurgie à l'Obstétrique et à la Médecine. Par C. VINAY. (Paris: J. B. Baillière et Fils.)—In this book the main point touched upon is the employment of heat in disinfection, especially in the preparations for operations, in the disinfection of sputum, clothes, etc. Although there is nothing new in the book it may prove useful to those who are interested in the work which has been recently done with regard to aseptic surgical dressings and the employment of heat for disinfection purposes.

Guy's Hospital Reports. Edited by N. DAVIES-COLLEY, M.A., M.C., and W. HALE WHITE, M.D. Vol. xlvii. (London: J. and A. Churchill. 1890.)—The volume of *Guy's Hospital Reports* for 1890 has just been issued. Its earliest pages are occupied by a notice in memory of Sir William Gull, which is illustrated by a very characteristic portrait reproduced by the autotype process. The most important scientific paper appears to be an article by Mr. A. H. Tubby, M.S., on "The Pathology of Acute Infective Periostitis and Acute Necrosis of Growing Bone," which is one of the first fruits of the rich harvest which we are promised from the workrooms of the Royal College of Surgeons of England. Another paper also affords an indication of the growing intimacy of the relations between experimental pathology and practical surgery; it is by Dr. J. W. Washbourn and Mr. W. H. A. Jacobson, and is entitled, "Two Doubtful Cases of Tuberculosis, in which the Diagnosis was cleared up by Inoculation." Mr. Percy Evans contributes an experimental article on antiseptics and disinfectants from the bacteriological laboratory of Guy's Hospital, and Dr. Washbourn relates the results of cultivation and inoculation experiments from a case of glanders. Among the strictly clinical papers we may note Mr. Davies-Colley's report upon the treatment of anthrax by the external and internal use of ipecacuanha. Dr. Hale White has a note "On Primary Malignant Disease of the Liver." Dr. Goodhart has a characteristic little article on *bruits*; Mr. Clement Lucas contributes a study of the frac-

ture of the coracoid process; and Mr. Golding-Bird an article on "Congenital Wry Neck and Facial Hemiatrophy"; Mr. Targett contributes a series of collected cases of primary sarcoma of the tongue.

Klinische Abhandlungen. Von Dr. G. A. SACHARJIN, emer. ord. Professor und Director der medicinischen Facultäts-Klinik an der k. Universität zu Moskau, etc. (Berlin: Augustus Hirschwald.)—This pamphlet contains four papers. The first is entitled "Ueber den klinischen Unterricht," and deals with the most important general methods of clinical study. The second paper, "Die Calomel-Therapie," discusses the action of calomel in various diseases. The author ascribes great benefit to the use of calomel in hypertrophic cirrhosis of the liver, and in severe cases of biliary colic with fever. The dose in the latter case was 1 grain every hour, 7 to 12 grains being given. The treatment improved the condition of the patients. In one case of hypertrophic cirrhosis improvement occurred under calomel. The third paper, "Ueber Blutentziehung," discusses, on familiar lines, the conditions of disease in which the abstraction of blood is of service. The fourth paper, "Die Lues des Herzens," deals with syphilitic myo-, peri-, and endocarditis from the clinical standpoint, the author resting the diagnosis during life chiefly on the history of syphilis and on the results of specific treatment by mercury and potassium iodide. The arguments brought forward regarding the clinical diagnosis of syphilitic heart disease are not conclusive. No *post-mortem* examination was obtained in any of the ten cases observed.

The Doctor's Holiday, or a Mediterranean Trip in Search of Health. (Liverpool: Turner and Dunnett.)—In some eighty pages the author, who is anonymous, sketches the chief features of a pleasant trip which he recently took. He started from Liverpool on board a steamer trading to certain ports in Spain, Italy, Austria, and Greece, and was so much benefited by the trip, which was undertaken on account of dyspepsia and general "seediness," that, instead of "losing weight any longer, 2 stone were put on during the excursion." Not only, however, was the direct object of the voyage thus achieved, but also a most agreeable time was spent at various places on the coast; and also at Rome, and in a railway journey across Italy, undertaken whilst the vessel was voyaging from Naples to Ancona. Amusing adventures of various kinds were met with, especially at Gibraltar, Genoa, Naples, Pompeii, Rome, Ancona, Fiume, Venice, Trieste, Zante, and Valencia. It is not, as far as we can find, anywhere stated how long a time the journey occupied, but, as the vessel remained at some of the ports several days whilst discharging and taking in cargo, it seems that about six or eight weeks elapsed after departure from Liverpool before the Mersey was again reached. Unfortunately, the expenditure of money entailed by the voyage is ambiguously stated, and, to any reader who would wish to undertake a similar journey, no more enlightenment on this point is afforded than is contained in the words that it was all done "at a total cost for the entire trip, excluding presents and steamer's fare, of £15."

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

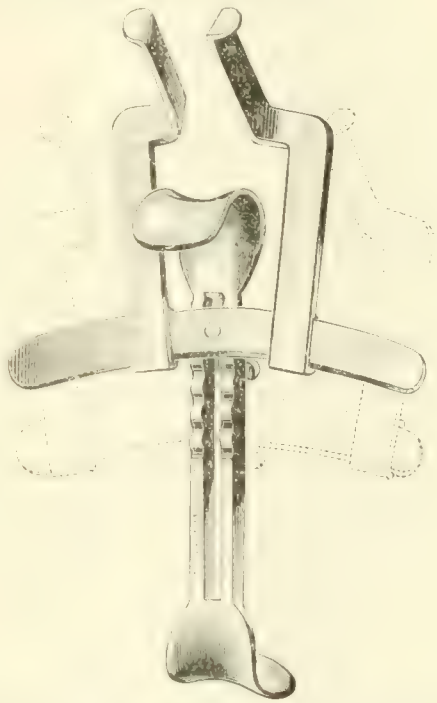
BODY BELT.

IT is far more generally the custom in the Colonies and in India to wear a body belt than in this country. It is undoubtedly a great safeguard against abdominal disorders when the body is exposed to the vicissitudes of climate alternately very hot and very cold. Messrs. Knight, Humphrey and Co., 1, Castle Street, Liverpool, have sent us a very good form of belt made of knitted woollen material, which can be worn with a minimum of inconvenience. Smaller sizes of these belts, which, however, do not appear as yet to be manufactured, would be extremely valuable for young children, many of the digestive diseases common at that age being due, or, if not due, at any rate maintained, by abdominal chill.

SELF-RETAINING OPERATING SPECULUM (REGD.).

THIS speculum consists of a modified Sims's speculum and of two lateral bars working at right angles along a basal one; the latter is provided with a double curve so that the distal extremities of the side bars when opened become somewhat more widely separated than the proximal ends, whilst the resistance of the vagina causes them to jam against the basal one in such a way as to lock them.

The patient must be in the lithotomy position and the legs supported by a Clover's crutch. The lateral bars are then introduced into the vagina and separated as far as possible; the greater the resistance of the vagina the greater the firmness with with the blades remain locked. By passing a small pad of lint wrung out of carbolic lotion beneath the outer part of the lateral bars before their separation, the preliminary of shaving the labial hair is dispensed with. Thus introduced the speculum will materially assist in the operation for the repair of a ruptured perineum.



The posterior wall of the vagina can further be retracted by the modified Sims's speculum: this is retained in position by a turn of the button. The vulvar orifice is thus distended to its furthest limits without the necessity of having an assistant on each side to hold a retractor. The speculum is withdrawn by first freeing the posterior blade and then the lateral bars are released by pressing somewhat outwards the vaginal limb, whilst at the same moment the basal end is slightly pressed towards the middle line. Every part of the instrument has been designed with a view to aseptic cleanliness and in actual practice it has been found of very great service; in one case even the struggles of a patient, who had accidentally come from under the influence of the anæsthetic, were ineffectual in displacing the speculum in the slightest degree.

Combined with a modification of a Simpson's pessary to hold the uterus well up against the abdominal wall, the speculum may be expected greatly to facilitate the operation for recto-vaginal fistula. It has been made by Messrs. Mayer and Meltzer, of Great Portland Street, W.

JOHN SHAW, M.D.Lond.,
Obstetric Physician to the North-West London Hospital.

DR. N. S. DAVIS proposes to organise an American Medical Temperance Association during the meeting of the American Medical Association at Washington this month.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MAY 16th, 1891.

WHAT NEXT?

The scheme of the Senate of the University of London for the reform of University Education in London is dead; so undoubtedly dead that not the great Dr. Servans himself would undertake to galvanise it into even momentary life again. The most crowded meeting of the Convocation of the University which has perhaps ever been held has upon a fair and square, Yea or Nay, vote rejected the draft charter by a majority of more than two to one. It is beside the mark to say—as some of the friends of the scheme have been saying since the meeting on Tuesday—that the charter had the support of a large number of the most distinguished members of the University, and was rejected by a majority of beardless art graduates. Even if the taunt were true, it would not alter the fact that the beardless graduate has his rights, and has exercised them, and there is an end of the matter. But the taunt serves to emphasise a fact often insisted upon in these columns, but often ignored—namely, that no solution of the University question in London can be entirely satisfactory, even from the point of view of the medical schools, which ignores the arts and science faculties.

When the medical grievance was first fully stated in the report of the Metropolitan Counties Branch of the British Medical Association, a prolonged discussion arose in these columns; we then ventured to point out that if the University of London could be so modified as to meet the needs of London students, that would afford the readiest solution of the difficulty. This view found ample support in the report of the Royal Commission subsequently appointed. The report of that Commission recommended that reasonable time should be allowed to the Senate and Convocation of the University of London to consider whether they would apply for a new charter to extend the functions and duties of the University to teaching, to associate with it teaching colleges, and to remodel the constitution of the Senate by establishing as electoral bodies the teachers of the constituent and the associated colleges and institutions. These are the conditions which the successive schemes of the Senate have attempted to fulfil. The draft supplemental charter was the final result of their deliberations and negotiations, and it has been rejected by Convocation. The University of London has thus failed to carry out the unanimous recommendation of the Royal Commission. We must therefore fall back upon the alternative proposal contained in the report. It will be as well to quote the exact terms of this alternative, which was signed by Sir William Thomson, Sir George Stokes, and Mr. Welldon, the three technical members of the Commission:—

"Considering that the London University has long since ceased to be in any sense a teaching university, and has become merely an examining board: that in this capacity it has established a high reputation, and is doing a useful work for the whole empire: and considering the very large number of candidates who present themselves for the various examinations leading up to a degree, we doubt the possibility of effectually combining the functions of an examining, and of a teaching as well as examining university in the University of London, and on this account we should have preferred the establishment of a new teaching university for London, leaving it to the London University to continue to discharge its present functions. At the same time we feel that there are objections which may be urged against the plan of having two distinct universities in London discharging totally different functions, though we are not disposed to attribute so much importance to these objections as some of our colleagues."

We are therefore led to this point, that the recommendation of these three gentlemen becomes practically the operative recommendation of the Commission. Mr. Bompas, who was put forward to represent the opinion of those graduates who were opposed to the scheme, clearly accepted this position in the very able speech which he delivered at the meeting on Tuesday last. One of his chief arguments was this fact—that the teaching members of the Commission had recommended not that the University of London should be deprived of its imperial character, but that a new teaching university should be formed.

The vote of Convocation must be accepted as an expression of opinion in favour of the formation of a new university in London. To find the elements out of which such a university can be composed is the problem now before us. On the one side we have University and King's Colleges, and on the other we have the two Royal Colleges of Physicians and Surgeons and the medical schools in London other than University and King's Colleges. The Royal Commission reported strongly against the proposal to give university powers to the Royal Colleges, while the Commission was clearly not indisposed towards the formation of a teaching university with University and King's Colleges as a basis. To a teaching university thus founded the other medical schools in London would undoubtedly feel the strongest objection.

No reference to the claims of the provincial colleges has been made in these remarks, because it seems probable that they will be satisfied in some other way. The arguments in favour of the foundation of a midland university have never yet, so far as we are aware, been placed in an authoritative manner before the public, but the breakdown of the London scheme will undoubtedly give a great impetus to this movement.

It will also quicken the demand which, as we lately mentioned, the higher educational bodies of Wales are preparing to prefer for university powers of their own. The Principality has certainly made great strides in educational matters in the last decade. Ten years ago its intermediate education was in an apparently hopeless state, and higher education, except in theology, had but just started into existence within its bounds. To-day a system of public intermediate schools is being rapidly beaten

into shape, three public colleges are already in full work, and each of them, notwithstanding that their foundation preceded that of the schools, has managed to distinguish itself in some especial manner.

THE LONDON WATER SUPPLY.

We have already alluded to the special difficulties attending the introduction of a system of water supply for the metropolis whereby the existing water companies would be left entirely out of consideration, and a separate and competing supply would be offered to the inhabitants by a central authority. However excellent schemes of this kind may appear to be in theory, their successful application at the present time is so doubtful that it is necessary, in the interests of clear discussion, to put them on one side. To do so is not to exhibit sympathy with the companies as deserving institutions. With the exception of those who are directly interested in them, we presume that no one would approach the question with any feelings of this kind; but existing circumstances must be faced, and Londoners must make up their minds to suffer, perhaps even more than they have already done, for the great initial mistake of allowing the institution and maintenance of gigantic monopolies in one of the first necessities of life. If however the simplest way out of the difficulty is to purchase the properties of the water companies, it would be in the highest degree absurd to do so at their own valuation. The real value of that which is to be purchased must, if possible, be ascertained, and the task is anything but easy.

It appears that the London County Council intend to ascertain—by what we hope will be a thorough and searching public inquiry—the exact nature and quality of the different waters as now supplied by the companies, and whether the sources from which they are drawn are such as are, and will continue to be, entirely unobjectionable from a sanitary point of view. Such an inquiry, if properly carried out, would be hailed with general approval, and would, if successfully completed, undoubtedly enable the Council to insist upon proper and reasonable terms of purchase, should they be placed, as is more than probable, in the position of purchasers; but if the inquiry is conducted in a hole-and-corner fashion, it will merely make the existing confusion worse confounded. The examination of every expert who is or has been concerned in the analysis of the London water supplies, or in the inspection of the works and systems of the companies, would obviously be most important, and no narrow considerations or professional jealousies should be allowed to stand in the way of it.

It is only of recent years that anything approaching a regular system of water examination has been instituted in the metropolis. Before the institution of any official system, attention was drawn from time to time to the condition of the supplies by various experts who had occasion to look into the matter, and it is of no little interest to compare the state of things some twenty or thirty years ago with those now existing. Even by the imperfect methods in use at that time, the waters, as actually supplied by the companies to the London consumer, were repeatedly shown to be grossly polluted, and it must be admitted that the official and non-official examination of the waters and the publication of the results have, in the course of years, produced a vast improvement in their general quality. In such an inquiry as that which is to be undertaken the whole past history of the companies ought to be laid bare, in order that their present position and their power of controlling the quality of their supplies may be clearly appreciated.

The present system of official water examination is peculiar and not entirely satisfactory. Analyses are made and reports are drawn up by various authorities acting independently of one another, and making use of different processes. There is an official water examiner appointed under the Metropolis Water Act, and there is a water examiner to the Local Government Board. The water companies, acting in conjunction, employ the services of three distinguished chemists to examine daily samples of the supplies, and these gentlemen issue a monthly report, addressed, not to the companies, but to General Scott, the Metropolis Water Examiner, a report which he presumably does not ask for and does not want. There was also, but only for a short period, owing to his departure from London, a semi-official bacteriological water examiner; and one or two metropolitan public analysts examine the waters supplied to their parishes on behalf of the local authorities. These arrangements are somewhat crude and ill-organised, and while as already pointed out, some very good results have been obtained by them, the public mind has been confused by the multiplicity of reports, and unedifying professional squabbles have occasionally taken place *coram publico*. It is plain that all the experts concerned should be examined before the Committee of Inquiry of the London County Council, as well as before the Select Committee of the House of Commons.

A careful study of the various reports on the analysis of the supplies will certainly show one thing, namely, that at certain times the quality of the waters derived from the Thames is exceedingly bad. None of these waters can at any time be justifiably described as of "high organic purity," and yet "general excellence" and "average high quality" are terms constantly used in regard to them. It is idle to claim as a circumstance favourable to a company that the average quality of its water has been "fair" or "good" during a month or a year, if for a week, or a few days, or only one day, it has contained much more than the "average" quantity of organic matter, and has therefore then been bad. Whenever the supplies are worse than usual, much ingenuity is expended in seeking excuses for the companies. We are told occasionally that the quality of a water has "somewhat deteriorated," but that such deterioration is due only to the presence of an unusual amount of vegetable matter, and is more apparent than real. During the first two months of the present year, for instance, waters derived from the Thames were in a very bad condition, especially in the case of two of the companies. While it was strongly insisted upon as an incontrovertible fact that the increased amount of organic matter was of vegetable origin, it was stated that "in no single sample" was there "anything to suggest" an increase of animal matter in solution. The curious statement is also constantly made that the waters are "efficiently filtered." This term, which occurs even in the official reports, is one to which different meanings may be attached. Efficient filtration is presumably intended to mean the removal of suspended matters, and not the adequate purification of the waters, which is what it ought to mean. Dr. Frankland, in his report for February, expresses himself un-

usually strongly on the state of the waters: "The water abstracted from the Thames by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies, was in all cases of very inferior quality. . . . . That supplied by the Grand Junction Company on the 5th ult. surpassed in respect of organic impurity any sample of Thames water examined by me during the last quarter of a century. It was opalescent from imperfect filtration, and was not in a fit state for dietetic use."

We are not prepared to subscribe to the statement that the pollution was due to vegetable matter alone. The analytical data upon which such a statement is based are of an uncertain nature, and too much reliance ought not to be placed upon them. It is to be remembered that the Thames is a river grossly polluted by sewage. Drains, cesspools, and sewers are in connection with it in all directions. In times of flood more than the usual amount of filth is washed out into the river from such sources, together with additional scourings from cultivated lands. No filter will act so conveniently as to differentiate between animal and vegetable organic matter, and destroy or keep back the former while it passes the latter; and even assuming that the greater amount of organic matter contained by Thames water is of vegetable origin, an increase in the latter must, under the circumstances, be also accompanied by an increase of the pollution due to sewage. Moreover, it is a gross mistake to assume that vegetable pollution is a matter of small consequence. It is of less importance, from a sanitary standpoint, than sewage pollution, but it is in itself a serious bar to the use of a water for drinking purposes. When, for instance, such water is stored in cisterns, the organic matter in it rapidly decomposes, and the results are obvious. The whole question of the quality of the London water supply is one which demands a searching investigation by some independent public authority, in order that the obscurity with which it has been surrounded may be dispelled, and that, in the result, the public may have the real issues clearly before them.

LEGAL AND ILLEGAL USE OF THE TITLE OF M.D.

THE rights and legal status of the medical profession are, as is well known, regulated in the main by the provisions of the Medical Act, 1858. Under it the *Medical Register* has been established, and the right to recover fees for medical or surgical attendance is restricted to such persons as are on the *Register*. Section 40 further provides for the imposition of a penalty on any unqualified person who may hold himself out as a doctor, etc.[1] Prosecutions are from time to time instituted under this section, and convictions obtained against persons who offend against its provisions. As a rule, such persons have no legally recognised qualification, and are not on the *Register* at all; but it is well to remember that the words used are large enough to include the case of a registered practitioner who wilfully and falsely assumes a title which he is not authorised to use, as well as the case of an absolutely unqualified person who calls himself a medical practitioner. In either case the offence which the law aims at preventing has been committed, for the offender has defrauded the public and the medical profession by falsely pretending to have qualifications for treating disease which he does not really possess.

When such prosecutions come before magistrates, the question to be determined is one of fact—namely, did or did not the defendant wilfully and falsely take or use any name or title implying that he is recognised by law as a physician, etc.? and, like other questions of fact, it must be determined according to the evidence bearing on the particular case. It is difficult from a perusal of the reported decisions to lay down any rule applicable to all prosecutions under this section; and, except by remembering that the facts necessarily differed in the different cases, it is difficult to harmonise the different decisions. In the year 1860, a Mr. Kelly, whose name appeared on the *Medical Register* as M.R.C.S. and L.S.A., was prosecuted for calling himself "Dr. Kelly." He justified his assumption of the title by producing a diploma from the University of Erlangen in Bavaria, and calling evidence to show that such a diploma could only be obtained after examination, and that it entitled the person named in it to use the title of Doctor of Medicine, and to practise medicine, throughout Germany. On these facts the magistrates refused to convict, and their decision was upheld by the Court of Exchequer, who said that Mr. Kelly could not be considered as having wilfully and falsely assumed a title to which he had no right. Baron Bramwell pointed out that the object of the Statute was to prevent persons pretending to be duly qualified and assuming a title to which they were not entitled, when in fact they had no qualification for it, as, for instance, "if anyone wilfully and falsely called himself M.D. when only a Member of the College of Surgeons."

Another case was fully considered by the Court of Exchequer in 1872. The defendant, a druggist, who was not on the *Medical Register* at all, had attended patients as a medical man, and had called himself and sent in bills signed as "Thomas Andrews, M.D." He produced a diploma as Doctor of Medicine, granted by the University of Philadelphia in the United States; but it was not shown that any course of study or examination was required for such a diploma, and the defendant had never been to Philadelphia. It was alleged that such a document might have been, and, in fact, probably was, purchased without the person named having giving any proof of being qualified. The magistrates convicted, and the Court upheld the conviction, holding that there was ample evidence that the defendant had wilfully and falsely assumed the title of M.D., as he must have known his diploma to be worthless as an indication of his merit, learning, or skill as a physician, or as giving him any of the privileges of a registered medical man.

The section came again under consideration in 1877. The defendant was not on the *Medical Register*, but he gave medical advice, and held himself out as "Dr. John Hamilton, Doctor of Medicine of the Metropolitan Medical College of New York." He had in his possession a diploma in which he was so described, but no evidence was given to show how or under what circumstances he had obtained it. A metropolitan police magistrate refused to convict on the ground that the defendant "did not wilfully or falsely pretend to be or use the name of a doctor of medicine" contrary to the

[1] The words of the section are important. "Any person who shall wilfully and falsely pretend to be, or take or use the name or title of, a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner or apothecary, or any name, title, addition, or description implying that he is registered under this Act, or that he is recognised by law as a physician or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall, upon a summary conviction for any such offence, pay a sum not exceeding £20."

Act, "as he only represented himself to be and used the name of Doctor of Medicine of the Metropolitan Medical College of New York;" and it was not shown that he was not entitled so to describe himself. The High Court refused to disturb this decision on the ground that it was a question of fact for the magistrate. Mr. Justice Hawkins, however, threw out a hint that if a fresh summons was taken out, and further evidence was forthcoming, the result might be different. Whether any further proceedings were taken the reports do not show; but the case, as reported, does not throw much light on the meaning of the section, except as applicable to the facts, or rather absence of facts, there in evidence.

The last case bearing on the subject was heard on April 28th last, before the magistrates at Aston, in Warwickshire, two of whom happen to be medical practitioners of good professional standing. The defendant, Mr. S. E. L. Smith, is on the *Register* as L.S.A., but it was shown, according to the report in the *Birmingham Daily Post*, that he habitually styled himself M.D. and L.R.C.P. (which he explained as meaning "legally registered general practitioner," but which might easily be mistaken for the more usual affix L.R.C.P.). The assumption of the letters M.D. was justified by a diploma as M.D. obtained from the University of Indianapolis, in America. The defendant, it was stated, had not been to America to pass his examination or pursue his studies, but he had gone through the form of answering written questions as a preliminary to obtaining the diploma. No precautions, however, seem to be taken to ensure that such answers given are given by the candidate without assistance, or even by the person who seeks to obtain the diploma. A diploma obtained under such circumstances is obviously no adequate guarantee of the learning or skill of the person whose name appears in it. The magistrates found that Mr. Smith had wilfully and falsely assumed the title of M.D., in a manner prohibited by the Act.

The decision may no doubt seem hard to some of our readers, for many general practitioners style themselves "Doctor," or are so styled by their patients, when they have no legal claim to the title. Several witnesses were called by Mr. Smith in his defence to say that they too called themselves "Doctors," though not possessing any registered degree which gave them any right to the title. It was elicited, however, that some, at any rate, had obtained foreign degrees of M.D., such as are recognised as registrable by the Medical Council, and they might therefore be excused for assuming the letters M.D., as Mr. Kelly was. It must be remembered that since the passing of the Medical Act, 1886, no foreign medical diploma is registrable in this country unless it is recognised by the Council. No degree granted to a man in his absence is likely to be so recognised: and it would seem that no degree which is not recognised could entitle its holder to assume any style or title implying that he is qualified by it to practise medicine, etc. If he chooses, as Mr. Hamilton did, to state exactly what his diploma is—neither more nor less—he may escape the penalty prescribed by the Act of 1858; but if he relies on such a diploma to support a general claim to call himself, or practise as, a doctor or physician or otherwise in this country, he may well find that he has overstepped the limits of legality and rendered himself liable to a penalty.

THE Council of the Royal Medical and Chirurgical Society will hold a *conversazione* on June 16th.

WE are happy to be able to state that Sir Henry Thompson, whose recent indisposition has been somewhat magnified by the anxiety of his numerous friends, is now completely re-established in health and strength.

DR. THEODORE WILLIAMS, whose term of office as Physician to the Hospital for Consumption, Brompton, expired a few weeks ago, was on May 7th unanimously re-elected Physician for a further term of five years by the Committee of Management.

DR. THEODORE THOMSON has been appointed an Inspector in the Medical Department of the Local Government Board, in the room of the late Mr. John Spear. As medical officer of health for Aberdeen, and more recently for Sheffield, Dr. Thomson has acquired considerable experience in the science of public health.

THE Vestry of Battersea having considered a report by Mr. Cassal, the public analyst for the district, upon his analyses of samples of water supplied by the Southwark and Vauxhall and the Lambeth Waterworks Companies in that parish, and having regard to the important nature of the matter, have ordered that a copy of the report should be forwarded to the Local Government Board.

DR. HILL GRIFFITH has arranged to give another post-graduate course consisting of eight practical lessons on the use of the ophthalmoscope and the estimation of refraction, at the Royal Eye Hospital, Manchester, on Wednesdays at 4.30 P.M., commencing May 20th. This course, which was, we believe, one of the earliest instituted in this country, has in previous years met with considerable success.

THE ROYAL SOCIETY.

AMONG the fifteen candidates who were selected at the last meeting of the Council of the Royal Society for election into the Society appear the names of two members of the medical profession, Dr. D. J. Cunningham, Professor of Anatomy in the University of Dublin, and Dr. W. D. Halliburton, Professor of Physiology at King's College, London. Dr. F. O. Bower, Regius Professor of Botany in the University of Glasgow, and Professor Percy Frankland are also among the successful candidates.

MIDWIVES BILL.

A FORTNIGHT ago we were requested to state that one of the circumstances which induced the promoters of the Midwives Bill to withdraw it in response to the representations of Sir Walter Foster was that the Lord President of the Council had given a virtual pledge to grant a Select Committee for the consideration of the whole subject next session. Dr. Rentoul has been in communication with the Lord President, and asks us to state that Lord Cranbrook has informed him that the statement is unauthorised, and that neither he (Lord Cranbrook) nor the Government had given any pledge. It would seem, therefore, that Mr. Fell Pease and his supporters in the House of Commons have placed an incorrect construction upon the remarks made by the Lord President to the deputation of February 27th.

MUNICIPAL LIABILITY FOR INJURIOUS FOOD.

THE town of Carcassone in France was recently condemned by the Civil Tribunal to pay indemnities of 100 francs and 50 francs to two of its inhabitants in respect of damages they had sustained by illness caused by eating mushrooms purchased in the public market. The grounds of the decision were that persons buying mushrooms had a right to expect that their innocuous quality had been verified by the inspec-

tor of markets before they were publicly exposed for sale, and that this official having neglected his duty the municipality was liable for the consequences of such neglect. They certainly do manage some things better in France than in some other countries, where *Caveat emptor* is the "custom of the trade" in nearly everything relating to food and drink.

HYGIENE IN THE HOUSE OF COMMONS.

There is no reason to believe, as might have been inferred from questions recently asked, that the ventilation of the House of Commons is not in a satifactory state. Considering the sources from which the air is drawn, it is, of course, inevitable that the terrace or the neighbouring courtyards should furnish an occasional odoriferous whiff which may enter the chamber or the lobbies, and offend the nose of some stray legislator who may chance at that particular moment to "sniff the tainted gale." But beyond such slight and passing inconvenience, everything is working well under Mr. Prim, the experienced resident engineer, and it is quite certain that the success of the "Shone" system has been complete, and that no sewer gas can now find its way in from the main system of drainage.

THE TREATMENT OF INEBRIETY IN GERMANY.

The second report of the Institution for the Treatment of Inebriates at Ellikon-on-Thur, which has recently been issued, shows that, during the year 1890, 55 persons were under treatment. Of 36 discharged in the course of the year, 17 were found after strict inquiry to have remained total abstainers up to the date of the report, 11 had continued temperate, though not abstaining entirely, 6 had relapsed, and 2 had become insane. Of ten patients discharged in 1889, 7 had remained total abstainers up to date, and 3 had relapsed.

ILLEGAL CHILD DEALING.

The conviction and imprisonment of the man Roodhouse and his wife for obtaining money under false pretences affords one more instance of the ingenuity of the dishonest in obtaining money by any method rather than a legitimate one. The prisoners adopted the happy expedient of advertising their willingness to take charge of children, of course for remuneration; and having thus acquired a child, the next thing was to find, also by advertisement, some well meaning person who was willing to adopt a child; this time, of course, without remuneration. By having different addresses and keeping the two kinds of advertisements in quite distinct areas, the prisoners were able to conduct their special business with success for some time; but for the present happily their enterprise has met with a rebuff, and it will be some eighteen months before they again have the opportunity of endeavouring to live by their wits.

PURPURA AMONGST BOARDED-OUT PAUPER CHILDREN.

In the recent report by the Local Government Board inspector of the boarded-out children purpura is mentioned as a good index of the neglect of such children, and from the way in which it is spoken of it may be inferred that the purpura is of tolerably common occurrence. The children in question are paupers, either orphans or deserted by their parents, who are, by the authority of the Local Government Board, sent by the Boards of Guardians to homes in the country outside their own union, the homes being under the care of committees certified by the Local Government Board, and subject to the special supervision of a female inspector appointed by the Board, and it is in the report for 1889-90 of the present holder of that office that the reference to purpura occurs. In that report we are told that there is no real difficulty in deciding between purpura and fleabites. As a matter of fact, however, the appearances in the two cases are very closely similar, the only safe guide we know of being that in true purpura the spots are not all of the same size and shape, but that vibices and ecchymoses will be found mixed up with the more common lenticular spots. Of course it might be said that this is, after all, beside the question, and that a child covered with fleabites is a child that has been neglected—a proposition we are not careful to deny. But that true purpura is at all common amongst these children we are very loth to believe: improper feeding would unquestionably be one of the main factors in its causation, and if it should be proved to exist to any considerable extent we think that the conduct of the foster parents of such children should be most thoroughly investigated. But a tolerably large experience of children in out-patient practice at children's hospitals justifies us in saying that in London, at any rate during the past decade, purpura has been decidedly uncommon, and we are unwilling to believe that under the much more favourable hygienic surroundings of country life its occurrence should be less rare. In conclusion, we may observe that the inspector does not say in what proportion of cases she has found purpura, and we have a suspicion that her diagnostic differential points between purpura and fleabites may have sometimes played her false.

THE UNIVERSITY QUESTION IN ITALY.

The university question is exercising the minds of educational reformers in Italy. The belief seems to be pretty generally entertained that at present there are too many universities, and a number of different schemes for the reorganisation of the whole system of higher education are under consideration. The subject was discussed by a "University Congress" which met at Milan in 1887, and a similar meeting is to be held at Venice in the first week of September of the present year. Among the questions to be debated are the following: the number, distribution, and organisation of universities and other institutes of higher education; liberty of teaching and liberty of study, and their limits; the administration of universities, appointment of professors, etc.

ADULTERATED FOREIGN BUTTER.

In spite of the Merchandise Marks Act, the Margarine Act, and the Sale of Food and Drugs Acts, large quantities of adulterated butter are constantly consigned to the English markets from abroad, and are distributed and sold in all directions through the medium of the retail vendors. In many cases—perhaps in most—neither the wholesale merchants nor the retail sellers are in any way aware of the fraud, through their neglect in not assuring themselves that their goods are genuine. It is true that the adulteration is skilfully carried out and that the tasting "tests" of the most experienced trade experts are entirely without value as a means of detection, even when the "margarine," or foreign fat, amounts to as much as 70 or 80 per cent. by weight of the so-called "butter;" while the adulteration of butter with comparatively small amounts of foreign fat, such as 20, 15, and 10 per cent., is extensively carried on. In his last report the British Consul-General at Havre states that, in spite of the vigilance of the authorities—we are not told to what extent this vigilance is exercised—and the various prosecutions which have taken place, the mixing of margarine with butter is largely carried on in Normandy, and the attention of several local chambers of commerce has been called to the frauds perpetrated. A Caen journal recently published an article, stating that large quantities of margarine were constantly arriving in that town from Havre, and were delivered secretly to dealers in the adulterated article, and the *Patriote de Normandie* has reported the trial at Falaise of two persons accused of having sent over 18 cwts. of butter, described as "*très extra*," to London, which was found to contain 35 per cent. of margarine. The latter was said to have come from a manufactory at Malaunay, near Rouen, and the two persons accused were sentenced, one to a month's imprisonment and a

fine of 1,000 francs, and the other to a fine of 200 francs. From this it would seem that "they manage these things better in France." Whoever heard of such an exemplary sentence as the former one being inflicted for a fraud of this kind in England? It is not only from Normandy, but from all parts of the Continent and from America that we receive adulterated butter. It appears that a syndicate of farmers and butter merchants has been formed in Normandy to protect themselves from this dishonest form of competition, as "great injury is being done to the Normandy butter trade." Such a course of action may do good, and might be useful elsewhere. In this country merchants must protect themselves by having their consignments properly examined: and the public can only rely upon such an application of the Anti-Adulteration Acts as the authorities, both local and central, will accord to them, and hope for the infliction of rather more adequate punishments in proved cases. Modern methods of analysis admit of the detection of very small proportions of foreign fats in butter, however skilfully the admixture may have been made, and this circumstance could be taken advantage of far more extensively than is at present the case both here and abroad for the protection both of the honest merchant and of the consumer.

FALSE MEDICAL CERTIFICATES OF THE CAUSE OF DEATH.

It is impossible to overestimate the amount of public and professional mischief which results from the alliance of qualified with unqualified medical practitioners. In a recent prosecution by the Registrar-General, a registered medical practitioner in Shoreditch was charged with giving a death certificate stating that he attended a deceased child on February 6th last, whom, in fact, he had not attended before its death, and who had only been seen by a neighbouring chemist acting as the assistant of the registered practitioner. The child in question, it appeared from the evidence of its mother, as reported in the lay press, had only been attended by the chemist, but two hours after the death of the child the registered practitioner called, and gave a certificate of the cause of death. The defendant pleaded justification, on the ground that his assistant, the chemist, consulted him as to the cases attended by him at the so-called dispensary, and showed him the prescriptions he had given, and, therefore, that he considered that the child was under his care and treatment. The magistrate at the North London Police Court—Mr. Corser—did not take the same view of the case, and decided that attendance at the house on the day of the death of the child did not constitute the attendance on the child contemplated by the Registration Act, and that, therefore, the certificate was false within the meaning of the Act. The defendant urged that the late coroner, Sir John Humphreys, had justfied similar action on his part some years ago; but Mr. Corser, disregarding this, fined him £5 and costs.

PARLIAMENTARY PARALYSIS.

It is fortunate that the Whitsuntide recess has now come to save the House of Commons from legislative paralysis. Between seventy and eighty members are down with influenza, two of the chief clerks are off duty from the same cause, and the Grand Committee on Law was not able to raise the necessary quorum of twenty to consider the Public Health Amendment (London) Bill last Monday. Happily, the epidemic has not aspired so high as the Speaker, and it is generally admitted that it would be difficult to find a microbe so bold as to try a fall with such a tough customer as Mr. Courtney, but there is something very like a scare about, and every day some fresh victim disappears temporarily from the "green benches." Under these circumstances we are not surprised to see that the interrogators have been at work, and that the front bench has been plied with questions of a more or less medical complexion. We now have it on the high authority of the Local Government Board that this epidemic is of an infectious character; and on Tuesday afternoon the irrepressible microbe appeared on the scene. Had not Mr. Caldwell been a Scotchman, we might have suspected that he was trying to make a joke and endeavouring, in facetious fashion, to obtain some prolongation of the holidays. But the hon. member for St. Rollox was evidently serious; and Mr. Plunket gave him a serious reply. Without entering into the pathological niceties involved in the query, or pinning his faith to a bacillus which nobody has seen, he announced that vigorous measures of fumigation would at once be taken and sulphur freely burnt in the committee rooms. However sceptical we may be as to the sufficiency of such means, good will have been done by directing attention to the hygienic imperfection of this part of the House. Cold and draughty in winter, they are absolutely unprovided with any means of ventilation, save the casual opening of a window, which is speedily shut up with a defiant snap when the chill air begins to impinge too freely on someone's unprotected head. The condition of the atmosphere at the end of a long day's work renders one able to appreciate what the Black Hole of Calcutta may have been, and the evidence points strongly in the direction of the Sheffield witnesses in a particular Bill having infected the learned counsel as well as the members of the Committee themselves, and, we believe that Sir F. Mappin should properly ascribe his own attack to his practical sympathy with the physical infirmities of his constituents rather than to the draughts and chills on which he now places the responsibility.

BARBERS AND CONTAGIOUS DISEASES.

Antisepsis is now the law of the land in Germany, and it is not long since some violation of its rather changeable precepts was punished with imprisonment. The victim in that case was a midwife, but medical men have, we believe, been threatened with similar penalties. Barbers are, in some parts of Germany, subject to strict rules as to the disinfection of their razors, curling irons, etc. That enactments of this kind might with advantage be made general not only in the Fatherland, but in other countries, is shown by a case recently reported to the Berlin Dermatological Society by Dr. Oesterreicher. A man, aged 30, presented himself, with a papulo-squamous eruption, enlargement of the lymphatic glands in the neck and elsewhere, mucous patches on the soft palate and other secondary syphilitic lesions. The patient denied all knowledge of any primary infection, nor did the most minute examination of the genitals reveal any suspicious appearance. On the left side of the face, however, there was an area of cicatricial thickening exactly resembling a healed hard chancre; this, the man stated, was a result of a cut received some time before whilst in the hands of the barber. Dr. Oesterreicher had no doubt that the disease had been inoculated in that way. In 1884, Dr. Löbl, of Vienna, reported a number of cases in which sycosis, herpes tonsurans, and alopecia furfuracea, had been communicated by dirty razors and other implements of the hairdresser's *armamentarium*, and urged the desirability of making it compulsory for these artists always to disinfect their instruments before use.

THE NEW HOSPITAL AT DERBY.

The old-fashioned county town of Derby, true to its reputation of being "slow and sure," is at last astir. In regard to its infirmary, as it was practically condemned in the Government Blue Book of 1864 by Messrs. Bristowe and Holmes, it may be said to have been very slow; but, if so, it is now doing its best to be very sure. There is, in a word, to be a new hospital, built on the most approved principles by Messrs. Young and Hall. The most recent hospitals in London and the provinces have been visited, so as to adopt their merits and avoid their blunders. The Queen will lay the foundation stone on May 21st. The mayor of the town has thrown himself most heartily into the undertaking, and

has taken the most energetic steps to give Her Majesty a right royal reception. His donation to the building fund is but a fraction of what he is spending, and in addition he is giving time and energy to the work without stint. There is, in fact, fair promise of the money—between £70,000 and £80,000—being raised with comparative ease. Circumstances have combined in a very remarkable manner to bring this about. It is less than twelve months ago, on the outbreak of typhoid fever amongst the nurses—and, alas! the death of one of them—that the alarm was raised. The weekly board, presided over by Sir W. Evans, Bart., acted with promptness and energy, and determined that no half measures should be trusted. It is only bare justice to add that the honorary medical staff has proved itself equal to the occasion. Besides spending time and money on the elaboration of the details—which have subsequently been submitted to the careful consideration of the most distinguished hospital experts, Miss Nightingale, Sir Douglas Galton, Mr. Burdett, and others—they have collectively promised more than two hundred guineas, and they are well aware that their labours have only just begun. Everything, in fact, at the present moment gives abundant promise of a result in the highest degree satisfactory to all parties, and fully worthy of the county which, as the home of Miss Nightingale, is entitled to stand first in all that concerns hospital improvement.

FACTORY LEGISLATION.

WHILE the Standing Committee of the House of Commons were considering whether the age at which children might be employed in factories and workshops should not be raised to 12 years, and after rejecting that went on to refuse to sanction the proposal which would fix the age at 11, the Imperial Parliament of Germany was discussing the proposal to fix the age for German children at 13. The German Bill, which has now become law, enacts that after April 1st, 1894, children under 13 years may not be employed in factories, and above this age only after their elementary education is no longer obligatory on the parents. Several other clauses make provision for the protection of juvenile hands, especially with reference to the intervals of their work. The provision in the German Act with regard to women after confinement also goes further than that in the English Bill, for it enacts that a woman shall not work for four weeks after confinement, and that for the next fortnight she shall only be allowed to work upon a medical certificate of fitness. Women are forbidden to work at all during the night, with some specified exceptions, and eleven hours must be under any circumstances the maximum day's work. Another important innovation in the Bill is the recognition for the first time, as far as we are aware, in connection with the labour question, of the principle of local option. In future communes may limit or entirely forbid work on certain days. It is stated that Mr. Sydney Buxton, having ascertained that a considerable number of members who are opposed to raising the age of juvenile employment to 12 are prepared to vote for a proposal fixing the age at 11, has altered the wording of the amendment which he moved during the consideration of the Factories and Workshops Bill by the Standing Committee; and when the measure again comes before the House he will submit his propositions in the form of separate clauses. By this means it will be competent for a vote to be taken on each proposal. After Whitsuntide a meeting of the members interested in the question will be held, with the object of agreeing upon concerted action.

AN AMERICAN REFORMATORY.

AN interesting little book[1] has been published recently, giving an account of an experiment which has been carried on for fifteen years in the State of New York. The institution is intended for males from 16 to 20 years of age who are not known to have been previously sentenced to a State prison. For these it is recognised that there is still a reasonable hope of reformation. The inmates are put under a good diet and regimen, pushed through a well chosen scholastic education, and are finally taught to work at some useful trade from which they can earn a living when they are discharged. They are incited to exert themselves to earn their own liberty by a system of good marks and promotion, nor are they set free until by their industry and good conduct they have earned their own liberation. The industries carried on in the reformatory now are the manufacture of hardware, carpentry, cabinet making, and tinware. Formerly they used to make stoves, hollow glassware, and shoes; but, owing to some restrictive enactments, apparently intended to protect outdoor industries, the Elmira manufactures are not now worked at a profit. In 1889, we are told "absolutely nothing was realised." At this time the average number of prisoners was 922. Their board cost about 21 pence a day. Up to 1889, £392,825 had been expended on this reformatory. The author (Mr. Winter) shows a persevering zeal in presenting everything in a good light, though in such an undertaking there must be foils and drawbacks. He claims a positive improvement and reform of at least 78 per cent. of the prisoners. Out of 541 who ceased correspondence and were lost sight of, it is assumed that one-half must have reformed. Only 15 per cent. were certainly known to have returned to criminal practices. Much of the success of the system is attributed to the superintendent, Mr. Brockway, who is allowed great power, and who is ably seconded by Dr. H. D. Wey, the physician of the reformatory. Not only is physical training used in this institution, but there is a direct stimulus applied to their moral and religious faculties. From the beginning they are treated as responsible beings, with a will to work out their own reformation, and this is widely different from the hopeless fatalism of so many of the European criminal anthropologists. It must, however, be borne in mind that the formal studies of these European philosophers have been prosecuted on the habitual delinquent, who very rarely becomes an inmate of the Elmira Reformatory.

[1] *The New York State Reformatory in Elmira*, by Alexander Winter. London: Swan Sonnenschein. 1891.

SCOTLAND.

MARISCHAL COLLEGE, ABERDEEN.

ON Tuesday (May 12th) a deputation of the University Court met a deputation of the Improvements Committee of the Town Council, and considered the various schemes for the opening up of Marischal College. The scheme which was found most suitable would cost, it was stated, £60,000; it provides for the clearing away of the houses at present in front of the quadrangle. The Conference was most harmonious throughout, both parties being agreed about the urgent necessity for some scheme being begun early.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held in their hall on May 7th, Dr. Angus Fraser, Vice-President, in the chair. The Chairman read notes of an interesting case of acute general tuberculosis, which he illustrated with a number of admirable specimens, which were shown under a series of microscopes. Dr. John Gordon read clinical notes on the use of orexin, which he had found useful in cases where he had used it. Dr. Ferdinands discussed the use of an india-rubber tongue in the treatment of corneal opacities of a superficial character. This he was induced to try, and, so far, with success, on considering the fact that in certain countries, as Greece, the human tongue was employed in similar conditions. Dr. Williamson showed samples of chloride of ethyl, which he recommended as a local anæsthetic in dentistry or other minor surgical operations.

THE REVISED DEATH-RATE OF GLASGOW.

The census returns show the population of the municipality of Glasgow, including the shipping population, to be, on April 5th, 567,675, but, for statistical purposes, it is the population of June 30th that is wanted. Dr. Russell adds, for normal increase to that date, 1,339, making the population on which he will calculate the death-rate 567,000. During the ten years, 1881-90, there were registered 131,406 deaths, an average of 13,140 per annum. The mean population of the decade was 538,000, so that the mean death-rate of the decade was 24.2 per 1,000. In the preceding decade (1871-80) it was 28.6, and between 1861-70 it amounted to 30.4, while, in the first six years following the commencement of registration, it was 29.9. The last decade shows, therefore, when compared with its predecessor, a decrease of 4.2 in the mean death-rate. This means 22,596 lives saved in the ten years; and Dr. Russell anticipates still further progress in the same direction, aided by the additional powers of the Glasgow Police (Amendment) Act, and the Houses of the Working Classes Act. It may be noted that Dr. Russell's estimate of the population at midsummer, 1890, was 567,656, while the Registrar-General's figures were 532,282. The result of this under-estimate by the Registrar-General is that the death-rate has appeared to be 1.5 per 1,000 higher than it really was.

PUBLIC HEALTH APPOINTMENTS.

The Berwickshire Council have appointed Dr. R. C. McWatt, Duns, to be the county medical officer, at a salary of £105 per annum. On several previous occasions during the past five months we have protested against appointments on such terms as derogatory to the worth and dignity of the medical profession, and as only fit to bring the Public Health Clauses of the Local Government (Scotland) Act into absolute ridicule. As a contrast to the ill-advised parsimony of Berwickshire, it is satisfactory to be able to note the terms of the appointments made by the County Council of Midlothian, Peebles, and Selkirk. After most careful consideration of the wants of the county, it was agreed to offer a salary of £600 per annum. Several highly-qualified gentlemen offered their services, and Dr. Brock was selected.

IRELAND.

THE UNIVERSITY OF DUBLIN.

The tercentenary of Trinity College will be celebrated in the year 1892, and it is expected that the occasion will be made worthy of the splendid reputation of this old seat of learning. Already committees are busy in elaborating the preparations for the week's festivities. Nearly one hundred Universities will be asked to send representatives. Honorary degrees will be conferred upon a number of men distinguished in arts, divinity, medicine, and law. The hospitalities of the Provost and Fellows, and of the citizens generally, will be on a large scale, and nothing will be omitted that can help to make the occasion a very marked one in the history of Dublin.

THE ELECTIONS AT THE COLLEGE OF SURGEONS.

The election of President, Vice-President, and Council of the College of Surgeons for the ensuing year will take place on the first Monday of June. Mr. Croly it is understood will be re-elected for one year; the system of biennial presidencies will thus be inaugurated. Dr. Carte, the Vice-President, has declared that he will not seek re-election, so that a vacancy will be created for his chair. Dr. Cranny has announced his intention of seeking the office; but he has never served on the Council, and in the opinion of many Fellows it is essential that the presiding officers should have intimate knowledge of the working of the body whose proceedings they have to control. Mr. Robert Moore, who last year contested the vice-presidency, has been asked to come forward, but has declined. The names of Mr. H. R. Swanzy, Mr. W. Thomson, and Mr. Thornley Stoker, have also been freely mentioned, but we understand that these gentlemen also are disinclined to become candidates at present. It is, however, unlikely that the vice-chair will be reached this year without a contest. Mr. Theodore Stack has come forward as a candidate for the Vice-Presidency of the College of Surgeons. He has been urged to offer himself as a representative of the dental branch of the profession, which he has done so much to place on a high footing. He has been on the Council of the College for some years, he is professor of dentistry in the medical school, and he enjoys much popularity.

PRESENTATION TO SIR WALTER FOSTER.

On May 13th an address signed by over 300 past and present students of the Birmingham School of Medicine was presented to Sir Walter Foster on the occasion of his resignation of the office of physician to the General Hospital. The presentation was made by Mr. Jordan Lloyd, who presided at the dinner which preceded the more formal part of the ceremony The following address was read by Mr. Leonard Gamgee, as representing the present students:—"To Sir Walter Foster, Knt., M.P., M.D., F.R.C.P., Consulting Physician to the General Hospital, Senior Professor of Medicine in Queen's College, Birmingham, Member of the General Medical Council: We, the undersigned past and present students of the Birmingham School of Medicine, and other members of the medical profession, feel that we cannot let pass the occasion of your resignation of the post of honorary physician to the General Hospital without expressing our appreciation of the benefits we have received at your hands, and of the valuable services you have rendered to the Birmingham Medical School. Your connection with the Queen's and General Hospitals extending over a period of twenty-five years—the value and originality of your clinical lectures, the soundness of your teaching, and your never-failing kindness and courtesy, have been such as to merit the highest esteem of the successive generations of students who have profited by your instruction. We trust that you may be spared for many years to enjoy health and prosperity, and may continue an active member of that profession which you have served so faithfully and so well."

Mr. Jordan Lloyd, in making the presentation, sketched Sir Walter Foster's career as a medical teacher from the time when, in 1860, he first came to Birmingham to teach anatomy, and referred to the important public services rendered by him as President of Council of the British Medical Association and as direct representative on the General Medical Council.

Sir Walter Foster, in reply, said that an honour such as they had done him generally came to a man at the end of his professional career, whereas in his own case it came at a time when he had no thought of surrendering the practice of his profession and remained professor of medicine. The hours which he had spent in teaching within the wards of the General Hospital during the twenty-one years that he had held office there had been among the happiest in his life. He had always striven to impress on his students that medicine was a noble profession. In all his public work he had never forgotten that he was a medical man first and a public man afterwards. In his public capacity he had been able to do things for the profession which he could not have done as a practitioner. He believed the time was fast approaching when there would be legislation in which they as a profession would be greatly concerned—legislation for the diminution of human misery and for the mitigation of those sufferings which fell so heavily upon the poorer classes. The medical profession stood between these poorer classes and the dreadful conditions in which they lived, and therefore there was no profession which was more competent to aid in the amelioration of these miseries and sufferings than the medical profession. And when that legislation was achieved, he hoped and believed that medical men would have greater powers of usefulness conferred upon them. He concluded by thanking all who had taken part in the presentation of the address.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

To the Editor of the BRITISH MEDICAL JOURNAL.

SIR,—At a meeting held at the Mansion House, on December 5th, an Executive Committee was formed to take measures for the purpose of establishing in England a British Institute of Preventive Medicine. The work to be undertaken in the Institute was to be similar to that carried out in the Pasteur Institute in Paris, and in the Hygienic Institute in Berlin. The Executive Committee comprises Sir Spencer Wells, Sir James Crichton Browne, Sir Henry Roscoe, Sir Jacob Wilson, Sir George Humphry, Professors Huxley, Victor Horsley, E. Ray Lankester, and Pemberthy; Dr. Bridgwater, Dr. Holman, Mr. Jonathan Hutchinson, Mr. Watson Cheyne, Dr. Donald MacAlister, Dr. Withers Moore, Mr. Sidney Turner, Mr. Ernest Hart, and myself, with Professor C. S. Roy and Dr. Armand Ruffer as secretaries.

On February 13th, 1891, Messrs. Hunter and Haynes, the solicitors to the Executive Committee, made an application to the Board of Trade, praying that the Institute might be registered as a limited liability company, with the omission of the word "limited," in order that the public, who are to be asked for subscriptions, should be impressed with the fact that the objects of the Institute were of a purely charitable and scientific nature.

Shortly afterwards our solicitors were informed by Mr. Courtenay Boyle, Secretary to the Board of Trade, that a number of petitions had been sent in praying the Board to withhold its licence on the ground that experiments on animals would necessarily be performed in the Institute. The Executive Committee then requested me to write a letter—a copy of which I enclose—to the President of the Board of Trade pointing out why, in our opinion, our opponents should not gain their point. This letter was posted by our Secretary, Dr. Armand Ruffer, on Wednesday, May 13th, 1891, but on the same day the solicitors to the Committee received a communication from the President of the Board of Trade informing them that the Board, without giving any reason, had decided to withhold its licence from the Institute.

As Chairman of the Committee I now write to you, Sir, asking you for some space in your columns to point out these facts to the medical profession, and to ask their support in the struggle against prejudice and ignorance. I have asked the President of the Board of Trade to receive a deputation in order to lay the matter fully before him, and should he agree to do so, I hope the medical profession will help us in rendering the deputation as influential and representative as possible. In any case, should Sir Michael Hicks-Beach's decision be unfavourable, they hope their medical brethren will assist them in bringing this matter before Parliament and the public.—I am, etc., JOSEPH LISTER.

P.S.—The Executive Committee of the British Institute of Preventive Medicine would be glad to receive suggestions, etc., from gentlemen who would be willing to help them. All letters, communications, etc., should be addressed to Dr. Armand Ruffer, 19, Iddesleigh Mansions, Westminster, London, S.W.

[Copy.]

"To the Right Honourable Sir Michael Hicks-Beach, Bart., President of the Board of Trade.

"SIR,—On February 13th of the present year Messrs. Hunter and Haynes, solicitors to the Executive Committee of the British Institute of Preventive Medicine, applied to the Board of Trade for permission to have the Institute registered as a limited liability company, with the omission of the word "limited." The objects for which the Executive Committee are anxious to establish the Institute are sufficiently explained in the "Memorandum of Association," and in making this application they wish to impress the public, who are to be asked for subscriptions, with the fact that the objects of the Institute are of a purely charitable and scientific nature.

"Shortly stated, the work to be undertaken by the British Institute of Preventive Medicine would be the same as is carried out in similar institutions in France, Germany, Italy, Roumania, Austria, Turkey, and Brazil. In all these countries bacteriological institutes have been founded by the State. The advantages to the community at large from scientific work in hygiene has led to the endowment of such institutes with land and capital, in order that bacteriological investigations may be carried out by skilled workers under the best possible conditions. The Committee do not expect that the English Government will do the same for them, but they may reasonably expect that it will not impede a charitable and scientific scheme.

"The Committee has been informed by Mr. Courtenay Boyle, Secretary to the Board of Trade, that a number of petitions have been sent in, praying that the Board of Trade may be moved to withhold its licence from the proposed Association; and—thanks to the courtesy of the same gentleman—they have been able to obtain a copy of these petitions, which copy was considered by the members. To their great astonishment, they found that the only objection brought forward was the fact that it is proposed to perform experiments on living animals in the Institute. It is not their intention to discuss here the ethics of vivisection, but to point out why, in their opinion, the petitioners should not be allowed successfully to oppose the application of the Committee.

"The Committee do not ask the Board of Trade to grant them a licence to perform such experiments. It would be absolutely useless for them to do so, for the granting of vivisection licences is, and always has been, under the control of the Secretary of State for the Home Department, who, should they wish to perform experiments on animals, may or may not allow them to do so. The Board of Trade has not the power of giving a vivisection licence. What the Committee do ask from the Board of Trade is that it shall permit the Institute to be registered under Section 23 of the Companies Act, 1867, so that they may ask the public for subscriptions to an undertaking of national importance.

"The case of the Marine Biological Association is parallel. No difficulty or question was raised about the Board of Trade granting their permission to that body to register in the way above noted, but should the members wish to perform experiments on living animals they have to get the permission of the Home Office. The Committee beg, therefore, to submit that the granting by the Board of Trade of the licence asked for would not in any way encroach upon the province of the Home Office, as the question of vivisection will come before the Home Secretary if ever a licence to perform experiments on living animals is applied for.

"One of the reasons which make the Committee anxious to obtain the licence of the Board of Trade is that it appears that the Institute cannot be registered under the Companies Act, 1862, as a limited liability company, without serious interference with its prospects. They enclose counsel's written opinion, wherein it is evident that should the Institute be so registered under the Act, it would at any time be possible for the members to wind up the company and divide the money. No one would endow the institution with funds under such conditions; whereas the Board might make it a condition of granting their licence that all the property of the Institute should be applied to the advancement of science and kindred subjects only, and not be distributed among the members. In this way a security would be given that the funds would be applied for the purposes intended.

"The question is one of great public interest and importance, and the Committee trust that, if you hesitate to comply with their request to permit the Institute to be registered as a limited liability company with the omission of the word "limited," you will do them the honour to receive a deputation, in order that the facts may be more fully placed before you.

"Requesting the favour of an early reply,

"I have the honour to be, your obedient servant,

"JOSEPH LISTER,

"13th May, 1891. Chairman of the Executive Committee."

PRESENTATION.—Dr. Gibson, of West Vale, Halifax, has received from the members of his West Vale Male Ambulance Class a beautiful cut glass and silver claret jug, in recognition of his services as teacher. Dr. Gibson subsequently presented four silver souvenirs to those students who had best answered the written questions.

THE RECONSTITUTION OF THE UNIVERSITY OF LONDON.

Meeting of Convocation of the University: Rejection of the Draft Charter.

A meeting of Convocation took place on May 12th. Dr. F. J. Wood was unanimously re-elected Chairman of Convocation, and Mr. H. E. Allen Clerk of Convocation.

The Chairman explained that he had, on behalf of Convocation, signed a vote of condolence upon the death of the late Chancellor.

Lord Herschell proposed that the draft supplemental charter be approved. He remarked that it was the result of immense deliberation between the Senate and very many diverse bodies; and that it would have been well if all who had come there to record their votes concerning it could have come with open minds, and have listened to the arguments of both sides before deciding. The opponents of various kinds had dexterously included the objections of one another in the various documents they had issued, but they failed to agree with one another. In 1884 an association had been formed which advocated the formation of a teaching university in London, feeling that it was not creditable to this great city that no such university was then in existence. In February, 1885, it had been carried by Convocation that if the views of that association were carried into effect it would be to the advantage of the University. Whether there should be a second University in London was apparently the *crux* of the whole question. Unfortunately, in framing a new constitution one had to deal with many colleges and educational bodies, each with its separate interests; one had to start with things as they were. Two views especially had guided those who had framed the new constitution: one the effect on the University, the other the effect on public education; and if there were any conflict between the two the privileges of the University should certainly give way before the interests of the public. If another university should come to exist in London it would undoubtedly be confounded with the present University of London. Moreover, he thought that such another university, if it existed, must inevitably tend to lower the value of the degrees of the present University and of itself, and would therefore tend to lower public education generally. Again, the creation of a small university out of King's and University Colleges would commence the process of the creation all over the country of small local universities, the majority of which would probably lower the standard of degrees, which would react on the standard of education. And if several teaching bodies were detached from the present University it would be more and more cut adrift, and by so much lose its touch with the different teaching bodies. The unattached students, not connected with any college, would also suffer. Now it was the business of the Senate to endeavour faithfully to carry out the recommendations of the Royal Commission. But when the Senate came into contact with the two Colleges (King's and University), they found the Colleges had unfortunately adopted a position of an uncompromising character, inasmuch as they (the Colleges) considered that the recommendation of the Royal Commission failed to carry out the views which the Colleges had urged. The Senate found some of the arguments of the Colleges weighty, and a *modus vivendi* was sought, the Senate endeavouring to meet the Colleges as far as possible. For example, as to one difficulty, that of the examination of the Colleges' students, the Senate arranged that the examinations should be conducted by the examiners of the University and of the Colleges conjointly. In the next place, the Provincial Colleges objected to the affiliation of the London Colleges alone, and Convocation had already resolved that to oust the Provincial Colleges from the scheme would be unjust to those Colleges, and the result was the draft charter which they were discussing that night. It must be remembered that no one could possibly produce an ideal charter which could reconcile all the opposing interests. He believed that not even a committee of archangels could do that. But, as the scheme encountered opposition from almost every quarter, he had hopes of it; it showed it was fair and just, and that, as a compromise, it was probably a good one. It would certainly grant all the legitimate aims of the London Colleges; and would be of advantage to both them and the University itself. As to the point that the examinations being conducted by different bodies would tend to the formation of different standards, he did not believe it. They would all be conducted on the same syllabus, and he thought there would be no difficulty in keeping the examinations always at the same level. And although the pass examinations would be conducted by the different affiliated bodies, it was not so with the honours examinations, which would still be conducted by the University alone. The Boards of Studies were the solution of this difficulty, to which the objections were two—both extreme: one that the Boards would do too much, the other that they would effect too little; probably the mean between these two extreme points was the true one. There would always be a Standing Committee of the Senate to safeguard the interests of the unattached students, so that he could not in any way see how the interests of those students could in any way be endangered or prejudicially affected. In fact, if members of Convocation would look at this and other parts of the scheme from a proper point of view, as men of common sense, and with wide sympathies, he doubted not it would meet with their approval. The true motive of action that day should be the interests of higher education generally, not those of this or that institution. The last objection he would notice was this: It was said that by the scheme the representation of Convocation on the Senate would be diminished. The importance to be attached to that objection was not now what it once was. Formerly the Crown nominees were appointed from the outside, but now they were almost all distinguished graduates of the University, who felt as much interest in the University as any other members of Convocation; so that Convocation was now in that way much more largely represented than formerly on the Senate. He thought also that the closer connection likely to be formed between the University and the medical colleges and schools was likely to result in the advantage of the University and of the schools and colleges. It was true the scheme on this point was not yet absolutely formulated, but he thought there was nothing in the past actions of the Senate to deter Convocation from trusting the Senate in the future with the settlement of a scheme which should certainly not lead to the lowering of the degrees. The multiplication of examinations on the same subjects for students was an unmitigated nuisance; and any lessening of them, as was contemplated by the scheme, without a lowering of the standard, would be a great advantage. But it was said the scheme was complicated and could not work. Let them wait and see. Everything which had come to pass had in its time been pronounced to be impossible. At any rate, he would remind Convocation that they were not masters of the situation. The President of the Council might propose modifications, and the scheme if so altered would again come to Convocation for approval or rejection. But if they rejected the scheme that night, they must so do knowing that the Senate was under compulsion from the Privy Council. They must either give a general approval, in which case they would still retain certain control over the scheme; or by rejecting it then, they must expect to see the matter taken out of their hands to be dealt with as others might think best.

Sir Richard Quain said that as a graduate of fifty years' standing he could not be silent; he therefore seconded the resolution. The opposition was to two points in the scheme, of which he would address himself to one especially—the question of the medical degrees. London was the greatest clinical school in the world, but London medical students had to wander off elsewhere to seek medical degrees. One great obstacle to their graduating in London was the matriculation examination of the University. If the scheme were carried it would result in an immense advantage to the London medical schools and their students. If the scheme were rejected it was still possible for the Senate, in accordance with clauses of the Medical Act of 1858, to unite with any one or more of the medical bodies to carry on its examinations. It would surely be better for Convocation still to keep its control over the Senate than for the Senate to act in this matter without Convocation. It came to this, in fact, since nine medical colleges had approved of the scheme, and only

two (University and King's Colleges) had rejected it, should those two Colleges rule the other nine? It would be better that those two Colleges should take the right hand of fellowship, and accept the scheme as they did last June. The two Colleges had during the last three years sent up a very small proportion of the students who had graduated in the various faculties of the University.

Mr. H. M. Bompas, Q.C., asked Convocation to reject the scheme; if passed it would, he believed, endanger the interests of higher education in this country. The Royal Commission consisted of six members—three eminent lawyers without much university experience, and three men of great experience in university matters. The three former deemed it best that the University of London should first be asked to modify its charter, with the object of forming a teaching university in London; but the three latter (the practical men) said it was impossible to do it, and this charter proved the correctness of their views. Degrees at Oxford or Cambridge, passed after a very slight examination, showed that men for three years of their lives had associated with men of high culture and wide attainments, and meant nothing more; the University of London degrees meant, on the contrary, that any man possessing them had attained a high standard of knowledge on the subjects in which he had been examined. But the future B.A., for instance, would not, on the face of it, show whether the graduate had obtained it for residence at a college, or whether he had any special knowledge. At present the degrees were granted for knowledge, and knowledge only; and that principle must be upset when each college examined its own pupils. The scheme, moreover, was complicated, and all experience showed that divided responsibility meant failure. Which of the new bodies of the University would be responsible if anything went wrong? The Senate would blame the particular Board of Studies; whilst the Board would shelter itself behind the statement that the Senate and not itself was ultimately responsible for everything. Again, a system that depended on the Colleges and the University working together might be possible if they were all in happy union; but it was notorious that University and King's Colleges were opposing the scheme. How, therefore, was it possible that they should all work together harmoniously? Convocation, by rejecting the charter, could, he believed, save the University, and hand it down with its glories undiminished. It had raised the standard of education everywhere, and they could save it from becoming bound in the future to other bodies which were without its interests or traditions.

Dr. P. H. Pye-Smith said the real question was, should the University continue as it is; in other words, remain a mere examining body? Mr. Bompas's contention was for this. Ten years ago Convocation asked the Senate to enlarge the powers of the University, and the Senate unfortunately failed to respond to that request. This refusal was the origin of all the woes since undergone. Then came the scheme for a teaching University, largely due to Sir E. Fry's energy, skill, and initiative. Then came the Royal Commission. In carrying out the recommendations of the Commission, the difficulty of the Senate was to combine them with the desires of Convocation. Practically, said he, the scheme was the scheme of Convocation, and he asked that body to face the practical problems before them. Should the University go on developing or remain as it is? If the charter were accepted, there would be yet many difficulties to overcome; but Convocation would doubtless be able to arrange them with the Senate. If, however, the scheme were rejected, Convocation would deprive itself of all power in the future, and would find itself simply stranded. With the scheme sanctioned, the Senate and the University would remain masters of the situation. The medical problem was undoubtedly difficult. The first trouble was to get the eleven or twelve medical schools of London to combine. This was done. Then, without lowering the standard of examination, the Senate had increased the facilities for passing the examinations. And by the proposed scheme, if the student passed a certain standard before the Conjoint Board he would simply obtain the licence of that body; but if he should be reported to have passed the examination in a higher standard then he would gain the pass degree of the University. By the arrangement between the Senate and the two Royal Colleges, the standard of examination would not be at all lowered, but rather raised, as Sir Andrew Clark had pointed out when he came in a deputation from the Colleges to the Senate. In the new charter all the medical schools would be on the same footing, the youngest being affiliated as much as the oldest and richest of them all. The scheme was not really complicated, but many people objected to it because they could not think of a university as endeavouring to advance high education. If University and King's Colleges should be commissioned to form a university, their trouble had barely yet begun. The difficulty was to divide a cake into four parts which should satisfy people each of whom thought he ought to have more than half. If the scheme passed he was sure the University would in the future hold a still higher position than it had done in the past.

Mr. R. H. Hutton was going to vote against the scheme, because it gave the degree-giving power to people that disbelieved in the present degrees, and had no allegiance to the University. These Colleges also were disbelievers in the University and its examinations. The new Senate would not be a real governing body at all. The scheme, in fact, had an enormous number of ganglia, and no cerebrum at all—it was a kind of centipede. The great majority of the arts candidates for degrees were non-collegiate, and the scheme as now drafted would not retain their confidence. It was indeed a hybrid, and would not maintain the reputation of the University.

Dr. Sansom also opposed the scheme. He thought the corporations had done excellent work, and had raised the tone of the medical schools of London generally. But the new scheme would not solve the medical problem. It made the promise to the student's ear, but finally broke it; for the student who had obtained the M.B. degree must still pass another examination for the M.D., in which he must obtain two-thirds of the maximum number of marks in order to pass, and this proportion a very small number of students could achieve. The scheme did not provide a remedy for the grievances of London medical students. According to the proposed scheme, a student could pass his matriculation examination at King's or University College, but not at any other of the medical schools; and no one could doubt that this would act detrimentally to those other schools, and in favour of the two Colleges. Looking at the scheme altogether, he would describe it as a case of hypertrophic paralysis.

Mrs. Scharlieb, M.D., said that she had been asked to state that the women members of Convocation, especially those of the medical faculty, were by a large majority opposed to the scheme.

Dr. W. J. Collins was glad to find that even on the Senate there were those who, like Mr. Hutton, opposed the scheme. He called to mind how Lord Granville some three or four years ago on Presentation Day had said that they must maintain the imperial character of the University and the high standard of its degrees. And it was because he believed that both these sources of pride to the University were being imperilled that he hoped they would reject the scheme.

Lord Herschell, in reply, said that the opponents of the scheme were evidently opposed to one another, and, in fact, had answered one another; particularly was this the case amongst the medical graduates. If, as Dr. Sansom had said, the other schools would suffer to the advantage of King's and University Colleges, surely these latter should have supported the scheme, but they were amongst its foremost opponents.

A division was taken, and the scheme rejected by 461 votes against 197, majority 264.

Dr. R. F. Weymouth and Mr. H. A. Nesbitt proposed that the report of the Annual Committee should be received. Carried unanimously.

Sir Philip Magnus and Dr. T. B. Napier moved the reception of the report of the Special Committee on the Reconstitution of the University. Carried unanimously.

Mr. J. Sully and Mrs. S. Bryant moved a series of resolutions stating the desirability of instituting a Degree in Education for Teachers. Mr. H. G. Howse and Mr. G. Eastes moved an amendment to refer the consideration of the whole subject to the Annual Committee for report to Convocation. The amendment was carried.

The Annual Committee was then elected.

Meeting of the Royal College of Surgeons.

A meeting of Fellows and Members of the Royal College of Surgeons was held on Monday, May 11th, to consider the scheme for the reconstitution of the University of London submitted to them by the Council of the College. Mr. Thomas Bryant, President, occupied the chair.

In opening the proceedings, the President said that, on the part of the Council of the College, he greeted the meeting with all good feeling, and with some hope that it would as a body support the Council in its prolonged efforts to help the rising generation of medical students to obtain a London degree. The action of the Council in this matter was in harmony with the resolution passed on March 24th, 1884. The two Colleges made the application to the Government in the usual way, and for the purposes which had been described, and the powers asked for were very definitely refused. They were not refused, however, before a Government Commission had been appointed by the Crown under the presidency of Lord Selborne, and a thorough investigation of the whole question of degrees had been made. The Commissioners were satisfied that a great demand existed for medical degrees attainable in London; that it was right that this demand should be made; that the difficulties in the way of supplying the demand might be more easily overcome if the ground were occupied by one University only, and not by two; and lastly, that the constitution of the existing University might be adapted for that purpose. On these lines the College of Surgeons, in connection with the Royal College of Physicians, had been steadily working with the University of London. He asked that the scheme might be carefully considered on its own merits; it was, indeed, for that purpose alone that the meeting had been called. The scheme had weak points in its construction; it was not, perhaps, the best possible scheme, but the Council believed the object in view would be satisfactorily attained; London students materially assisted to obtain a high degree; the standard of the examinations of the two Colleges raised; and the influence of the teachers increased. None of the institutions brought into the scheme would suffer materially, if at all. The two Royal Colleges simply helped the University to give a degree. If the scheme broke down or failed to satisfy the requirements of the Commissioners and the Government, a second university would be created by the side of the older institution; a competition for giving degrees would then of necessity arise. Competition in teaching tended to improvement, but competition in giving degrees acted downwards, to the detriment of the profession, and to the injury of the public.

Mr. Lawson Tait then moved: "That, in the opinion of this meeting, no scheme for amalgamation with the University of London for the granting of a medical qualification, and no scheme for a conjoint examination with the College of Physicians for such, or a similar purpose, can be satisfactory so long as the Society of Apothecaries is not included in such scheme." He said he regarded the scheme from a totally different point of view from that of the President. How the scheme was ever to grant anyone in London a degree as doctor of medicine which he could not now obtain, he failed to understand. His view was confirmed by an article, which had appeared that morning, in the *Times*. If the object was to enable a person to get a cheap M.B. and not allow him to use the title of Doctor, what was the use of the scheme? They stood just where they were. Connected, as he had been, with the government of a medical teaching body, he had had to follow closely the changes attempted in the development of medical education and reform. An initial mistake had been made, and they had had a tangible proof of the evil results of the mistake in not including the Society of Apothecaries. He had been told that it was not the College of Surgeons who kept the Apothecaries' Company out, but the College of Physicians, and they could easily understand the College of Physicians adopting that course because it was a sort of successor of the Apothecaries' Company. At one time the ordinary titles for qualification to practise were the College and the Hall; they heard nothing in those days of Pall Mall. The Society of Apothecaries at that time gave a very good examination, and it had the merit of introducing, long before anybody else, a test examination in preliminary education. The qualifications of the Apothecaries' Company stood high in public estimation, and certain Government offices were open to those who held their qualification, which were not open to those who only held a surgeon's diploma. The exclusion of the Apothecaries' Company was acting in the direction that had been indicated by the President, producing a competition downwards, which of all things was to be deprecated. Instead of killing the Company, it had been started into new life. If they meant to have a successful University in London, and to reform the methods of education and qualification, they would have to begin again and include the Apothecaries' Company in the University of London. It was not simply a London University, but an Imperial University.

Mr. T. Carter-Wigg seconded the motion.

Mr. Joseph Smith complained that copies of the scheme had not been forwarded to the Members as well as to the Fellows of the College. He also asked what would be the result if the meeting did not approve of the scheme submitted to it. He said he agreed with Mr. Lawson Tait's observations. The mischief complained of had arisen from the refusal of the College to incorporate the Apothecaries' Hall in its scheme of amalgamation. A resolution had been unanimously passed at a meeting of the Members that no amalgamation should take place unless the Apothecaries' Hall was included, and a day or two after that resolution the Council completed its arrangements. The present scheme did not help the London medical student in the least to obtain an M.D. degree in any better or easier way than he could obtain it at present.

The President, in answer to Mr. Smith, said that it would have been a serious matter to issue copies of the scheme to 12,000 Members of the College. As to the result of the present meeting, any resolutions passed would, of course, be reported to the Council, who would then consider what steps should be taken.

Surgeon-Major Ince said that nothing had pained him so much as to see a prominent surgeon coming forward and advocating the interests of a commercial company. He should have expected from such an authority some steps to elevate the profession instead of degrading it. It had been said that the College of Physicians was the successor of the Apothecaries' Company. Was not the College of Surgeons the successor of the Barber-Surgeons? The Council might as well be asked to invite the Barber-Surgeons to join the scheme, as to invite the Apothecaries' Company.

Mr. Nelson Hardy said that as the seconder of the original resolution passed seven years ago, he thought they were greatly indebted to the Council of the College, and also the sister College, for having done the utmost in their power to endeavour to carry that resolution into effect. He objected to Mr. Tait's proposal. If the proposers of the original resolution had expected or advocated any such proposal as Mr. Tait had brought forward, they would have been laughed out of court. As to the article in the *Times*, those who knew the connection existing between the writers in the *Times* and certain of the corporations of London would not be surprised to read such an article. The Apothecaries' Company had practically disappeared from the horizon, and the holders of its diplomas were themselves not satisfied with it. He opposed the resolution, and hoped that it would be negatived by a large majority.

Surgeon-Major Smith said that if the provincial schools were to be left out in the cold, he in conjunction with all his old fellow students of Queen's College, Birmingham, would oppose it to the utmost.

Mr. Lawson Tait, in reply, said that the Apothecaries' Company was a qualifying body, and the more it was degraded the more it would qualify in a downward direction.

The resolution was then put and carried by twenty-three to twenty-one.

Mr. Walter Rivington proposed: "That this meeting regrets that the Council of the College has not seen fit to place before the Fellows and Members the scheme for the reconstitution of the London University before formally accepting this scheme in the name of the College." He said that so long ago as March 24th, 1884, it was affirmed at a meeting in the theatre that it was desirable that no alteration in the constitution and relations of the College should be effected

without the consent of the Fellows and Members, convened to discuss such alteration, and the Council acted on the principle of that resolution in regard to the proposed alteration in the charter and by-laws. Why, after swallowing that camel, they should now strain at a gnat somewhat puzzled him. On October 30th, 1890, a deputation from the Fellows' Association waited on a Committee of the Council, and had an opportunity of thoroughly discussing various points. They then recommended that the Council should call the Fellows together to consider the scheme of the University of London before it was finally accepted. The proposal, however, was not adopted by the Council, one of the reasons given being that it was a very intricate question, that very few on the Council understood it all, and that none of them could pass an examination in it. Perhaps they therefore came to the conclusion that, as the Council was so much superior to the Fellows and Members, it would be useless to submit it to them. But was not that a case of the blind leading the blind, and might they not both fall into the ditch? The scheme would not at all remedy the medical grievance. The great obstacles to students taking degrees at the University were the Matriculation Examination and the Preliminary Scientific, and the scheme only dealt with the later stages where the shoe did not pinch. The constituency of the College numbered one-half or two-thirds of the members of the medical profession in England, and it appeared a great pity that the Council should have excluded itself from the benefit of co-operation with such a large body. It was now too late to make any suggestions for the improvement of the scheme. The College stood in an anomalous position. The Fellows of the College of Physicians had had the scheme before them; the graduates of the London University had power to confirm or reject it; but what opinion would the public form of the Fellows and Members of the College of Surgeons if they found they were not trusted by the Council? The scheme did not excite any party feeling whatever. His motion commended itself to all, whether they were for or against the scheme, to which it was not hostile in any way. They were all equally interested in the question of how to make medical degrees in London more accessible to students; and as the question was an intricate one, requiring a great deal of consideration, the constituency might have been consulted in order that the question might be thoroughly threshed out and made to serve the interests of all.

Dr. Danford Thomas, as representing the Association of Members, seconded the motion. He said that Association felt that good might have resulted from some consultation with the Council before the scheme was matured. To call the Members together at the last moment was hardly polite to them. They were desirous of assisting the Council in all matters, and they felt that they had been placed in a very anomalous position. The meeting itself was an anomalous one, and all such gatherings must be unless there was some alteration in the constitution of the College.

Dr. W. J. Collins, as a graduate of London University and also as an independent Fellow of the College, expressed his regret that there had not been some opportunity of making suggestions with regard to the scheme. There was one felicity which the graduates of the University of London had over the Fellows of the College of Surgeons: they were able to discuss resolutions before they were carried. There was no possibility of any effectual opposition on the part of the Fellows and Members. The matter had been decided over their heads. He had very little reason to doubt that the vote of the University would not be favourable to the scheme. The difficulty was to find who were in its favour. Certainly the graduates were not, nor University College, nor King's College, nor the students, for to the number of 450 they had sent in a petition urging that it might not be adopted. It would tend to destroy the unity and value of the degrees, and their impersonal character by enabling an examiner to "brand his own herrings."

Mr. George Brown also supported the resolution. He said that hundreds of students went annually from London to Edinburgh, Glasgow, Aberdeen, and other places in order to get medical degrees. It was trifling with the meeting to call it together after a scheme had been settled. He trusted that they would be unanimous in showing the Council that they did not approve of it. If any further action became necessary he hoped that the Fellows and Members would be called together in good time.

Dr. Robert Barnes, in supporting the motion, said the Council was a small body, the members of which were not always chosen on account of their pre-eminent capacity for business. They were committing the College to a certain course of action, perhaps in their ignorance, for they could not have a just appreciation of the feelings, wants, and necessities of the vast bulk of the profession.

The resolution was put and carried by a very large majority.

A third resolution on the agenda paper was: "That no increase of the power or influence of the Council of the College over medical education and examination is desirable under present circumstances."

The President said he had a very strong opinion that that resolution was out of order, and he would rule in that way unless it was the very strong wish of the meeting that it should be put.

On this there were loud cries of "No, no," and Mr. Timothy Holmes then moved it. He said the Members had never been consulted on the scheme, and therefore knew nothing about it. Under these circumstances it was not desirable that the Council should have a larger influence on medical education and examination.

Mr. Cable seconded the resolution, which was carried by 30 to 6, and the meeting terminated with a vote of thanks to the President for his impartial behaviour in the chair.

THE INFLUENZA EPIDEMIC.

There was a further marked increase last week in the fatality of influenza in London. The deaths directly referred to this disease, which had increased from 3 to 37 during the four weeks of April, suddenly rose to 148 during the week ending May 9th. This number actually exceeded by 21 the highest number recorded in any one week during the outbreak of influenza in the early part of last year. These 148 fatal cases are exclusive of 33 in which influenza is given as a secondary cause of death, and which were more or less directly due to this disease. Compared with the mortality of different ages from the disease last year, the proportional mortality among elderly persons last week showed a very remarkable increase; for while, during the epidemic of 1890, only about 20 per cent. of the deaths from influenza were of persons aged upwards of 60 years, the proportion last week was nearly 45 per cent. The deaths from diseases of the respiratory organs in London last week were 584, and exceeded the average by 240, or no fewer than 70 per cent; these 584 deaths included 230 fatal cases of pneumonia, which were more than double the average. A large proportion of these deaths, though primarily referred to pneumonia, was due to influenza.

The epidemic has now become more or less fatally prevalent in nearly all the large provincial towns, and in many of them has caused a far higher rate of mortality than in London. During the last four weeks the death-rate in London has risen from 20.5 to 24.0 per 1,000; but in the twenty-seven provincial towns the mean rate has increased from 24.1 to 32.9, and last week the rate exceeded the average in the corresponding periods of the preceding ten years by as much as 50 per cent., while the excess in London was little more than 25 per cent. In four of these provincial towns where the disease is very fatally prevalent, namely, Bradford, Manchester, Leeds, and Sheffield, the rate of mortality last week exceeded 40 per 1,000.

Our Sheffield Correspondent writes: It is now generally admitted that the influenza epidemic is declining. Medical men are finding considerable difference in the number of fresh cases. Apart from this, the death-rate is decreasing. The last week, ending May 9th, it was 59.1, whereas in the previous week it had reached to 70.3. The number of deaths attributed to influenza was 100, to pneumonia 52, and bronchitis 62. It will be seen that the number assigned under each of these heads is still very high, and whilst influenza deaths have only receded from 112 to 100, pneumonia and bronchitis have come down from 76 and 97. The severity of the epidemic has caused a very heavy run upon sick clubs, and among the poor the need of assistance has given rise to an "influenza fund." The surrounding districts appear to have suffered equally with Sheffield. The

death-rate at Rotherham for the week ending May 1 even reached to 78.2 per 1,000, but the next week it decreased to 48.

Our Liverpool Correspondent writes: The epidemic of influenza at present prevailing in Liverpool has affected the population much more extensively than that which occurred in 1889-90. In the previous visitation there were comparatively few unequivocal cases of the complaint, and the general death-rate of the city was not notably increased thereby. During the last few weeks the cases have been numerous, and many of them severe. At the Royal Infirmary, the Royal Southern, and the Northern Hospitals several nurses and domestics are laid aside with the disease, and consequently the ability to receive patients applying for admission has been considerably curtailed. At the Stanley Hospital a great number of cases of influenza have presented themselves as out-patients, and at the Wootton Convalescent Home the number of cases was so great among the inmates that it has been found necessary to refuse admission to all applicants for the present. The spread of the disease has been followed by a marked increase in the general mortality. During the week ending May 3rd, 324 deaths were registered in the city, being an increase of 34 on the corrected averages of the last ten years, and 46 more than in the corresponding week last year, making a yearly death-rate of 27.2 per 1,000. For the week ending May 9th the total deaths in the city amounted to 370, of which 21 were attributed primarily to influenza, 80 to bronchitis, and 44 to pneumonia. This represents a rate of mortality of upwards of 31 per 1,000.

Dr. W. A. Carline (Lincoln) writes that the Lincoln April Fair closed on April 25th. On April 27th there was a sudden increase in the number of cases of influenza, and it has been exceedingly prevalent ever since.

In London the epidemic has become extremely prevalent. As will have been observed from the daily papers, a large number of politicians have been amongst the sufferers. The House of Commons gossip attributes this to infection introduced by Sheffield witnesses who came up a week or two ago in large numbers to give evidence.

The epidemic has appeared in the Isle of Man and in various parts of Wales, but as yet the Continent of Europe appears to have escaped almost altogether. H.M.S. *Thunderer* was quarantined at Gibraltar on her arrival from Portsmouth owing to the large number of cases on board.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary meeting of the College was held on Thursday, May 14th, 1891.

The newly-elected Fellows were admitted.

A communication was read referring to the Public Health (London) Law Amendment Bill, and to the question of whether medical officers of health in London should not be prohibited from engaging in general practice. As there was no necessity for an immediate decision, the subject was postponed.

Sir Dyce Duckworth was re-elected representative of the College in the General Medical Council; on the proposal of Sir Henry Pitman, the thanks of the College were voted to Sir Dyce Duckworth for his services during the past five years.

The Registrar then brought forward the report of the Committee of Management on the five-years curriculum and the different schemes contained therein. He explained that the Committee were tolerably unanimous on several points, namely, that the additional year should be devoted to clinical work; that elementary biology should be substituted for elementary physiology; that the subject of materia medica should be broken up into two parts, of which the first should deal with purely pharmaceutical questions only, it being felt to be a great mistake to require a knowledge of the actions and uses of drugs from the student at an early period of his career; and that a short course of instruction at a fever hospital should be required. The chief point on which they were not agreed was as to the number of examinations. The representatives of the College were agreed in thinking they should not be increased, and that the examinations should remain much on the old lines. One change to meet a practical difficulty they did recommend—namely, that whereas one paper of only six questions was at present set to cover the large number of subjects included, they proposed either that the paper should be lengthened, or that two papers should be set. The chief argument that had been used in favour of a fourth examination was that men would idle their time away if too long a gap were given them between the second and the final examination; but they were of opinion that that was not such a real objection at the end of the curriculum as it would be at the beginning, and they further thought that it was undesirable to interrupt a man during the period of his clinical studies. He then read letters from the Secretary of the Royal College of Surgeons respecting the action taken by the Council on this subject, stating that the Council had adopted the four examinations proposed in the second scheme of the Report of the Committee of Management, and adopting that scheme with certain modifications in part relating to the earlier examinations, and permitting half of the last year to be spent with a general practitioner, and making compulsory instruction in ophthalmic surgery and attendance at a fever hospital. He also read a communication from the Physiological Society containing a resolution to the effect that the first year ought to be devoted to elementary physics, biology, and chemistry. He concluded by proposing that the report should be referred to the Council of the College for consideration and report; and that that body should be empowered to confer with others, whether Fellows or Members of the College or not. This was seconded by Sir Henry Pitman.

Dr. Priestley urged that it was most important that the course of midwifery lectures should be extended from three to six months. He said that this time was always given in Scotland, on the Continent, in the United States, and in Canada; and the teachers on this subject in London were unanimous in demanding that the extended course should be required. The domain of obstetrics had much increased of recent years, and it was quite impossible to teach the subject in the time allotted to it.

Sir Henry Pitman noticed with satisfaction that the Committee were fairly agreed as to the curriculum, but he felt very decidedly the objection to which allusion had been made to the long interval which was to elapse between the second and final examinations. His experience led him to think that the average medical student would certainly devote the first part—perhaps the first half—of that period to idleness; and he pointed out that, in the scheme adopted by the Council of the Royal College of Surgeons, there were not really four examinations, but the third examination, which was already composed of several portions, was to be divided, and one part—the purely clinical—taken a year after the other. He approved of the proposal to take therapeutics at a later stage than at present, and in support of his views as to the idleness of average students he quoted statistics showing the percentage of rejections in recent examinations.

Dr. Playfair strongly supported the views urged by Dr. Priestley. He said that London schools stood alone in the amount of time they gave to the study of midwifery and diseases of women, which was one peculiarly suited for systematic instruction, and was one which the practitioner would have to deal with to a very large extent.

Dr. Cullingworth asked that the amended scheme, which had been adopted by the Council of the Royal College of Surgeons, should be printed and circulated, and the President said this should be done.

The Registrar's motion was then put and carried.

The Quarterly Report of the Examiners for the College licence was received and adopted.

Dr. Coupland asked whether the Committee appointed to consider the University of London scheme were still in office; to which the President replied that they were, and that they would shortly be summoned.

The Comitia was then dissolved.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members, in commodious apartments, at the Offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 18th and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

One of the two scientific scholarships of the value of £150 per annum, tenable for one year subject to annual renewal by the Council, will shortly fall vacant. The Scientific Grants Committee are prepared to receive applications addressed to the General Secretary stating the particulars of the intended research qualifications and work done.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The thirty-ninth annual general meeting of the Metropolitan Counties Branch will be held at the Holborn Restaurant on Tuesday, June 9th, at 5.30 P.M.—H. RADCLIFFE CROCKER, M.D., 121, Harley Street, W.; ANDREW CLARK, F.R.C.S., 71, Harley Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT. The annual meeting for the election of officers will take place at the Royal Forest Hotel, Chingford, on Thursday, June 4th, at 6 P.M. At 6.15 the members and their friends will dine together. Sir W. Mac Cormac, President of the Branch, will preside, and will be supported by Sir Guyer Hunter, K.C.M.G., M.D., M.P., and a large number of past presidents. The dinner will be followed by a smoking concert. Tickets 7s. 6d. each; morning dress. Members intending to be present are requested to communicate with the honorary secretary as early as possible, but not later than Saturday, May 20th.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston, N.E.

MIDLAND BRANCH.—The annual meeting will be held at Derby on Thursday, June 18th. Members desirous of reading papers, etc., are requested to communicate before Monday, June 1st, to W. A. CARLINE, M.D., Honorary Secretary, Lincoln.

MIDLAND BRANCH: NOTTS DISTRICT.—A meeting of this District will be held at the General Hospital, Nottingham, on Friday, May 22nd, at 3.30 P.M., for the purpose of nominating a President-elect for the Branch. The following papers will be read:—Dr. Stewart: The Tuning Fork in Diagnosing Deafness, with case. Dr. Cattle: Suppurating Hydatid bursting through the Lung. Dr. W. B. Ransom: Cases of Hysteria treated by Suggestion. Dr. Michie: Case of Intestinal Resection for Tumour of Small Intestine. Dr. Handford: The Treatment of Typhoid Fever—Antipyretic or Antiseptic? Pathological specimens will be exhibited by several members. Tea and coffee will be provided.—H. HANDFORD, M.D., Honorary Secretary, 14, Regent Street, Nottingham.

SOUTH MIDLAND BRANCH.—The annual meeting of this Branch will be held at Cambridge, in conjunction with the Cambs and Hunts and East Anglian Branches, on Thursday and Friday, June 18th and 19th.—C. J. EVANS, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The third general meeting of the present session will be held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, May 28th, at 3 P.M.—GEORGE RICH, Honorary Secretary, St. Mary's Road, Stafford.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.—The next meeting of the members of the Essex District and their friends will be held at the White Hart Inn, Brentwood on Thursday, May 21st, at 2 P.M. The train leaving Witham at 12.9, and Chelmsford at 12.27, will stop at Brentwood for the convenience of members wishing to attend the meeting. Programme and business agenda: To arrange the place and date of the next meeting. To elect an Honorary Secretary for 1891. "Reform of the In-patient Departments of Medical Charities," motions proposed by Dr. Rentoul at the last annual meeting (BRITISH MEDICAL JOURNAL, July 26th, 1890, p. 246). "Medical Defence Union," the Honorary Secretary will give a short account of the progress and work of the Union during the past year. The following papers have been promised: Dr. W. E. Steavenson (London): On the Choice of a Battery, and its Use in General Practice. C. B. Keetley, F.R.C.S.Eng. (London): On the Indications for Surgical Interference in some Common Affections of the Head and of the Abdomen.—C. E. ABBOTT, Honorary Secretary, Braintree.

EAST ANGLIAN, SOUTH MIDLAND, AND CAMBS AND HUNTS BRANCHES.—A combined meeting of the above Branches will be held at Cambridge on Thursday and Friday, June 18th and 19th.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the Palace Hotel, Hastings, on Thursday, May 28th, at 3.30 P.M. Dr. Spencer will preside. Dinner at 5.30 P.M., charge 6s., exclusive of wine. Gentlemen who desire to read papers or show cases should communicate, without delay, with the Honorary Secretary, T. JENNER VERRALL, 97, Montpellier Road, Brighton.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will be held at the Hospital, Gravesend, on Thursday, May 28th, at 4 P.M., Mr. O. R. Richmond, in the chair. The dinner will take place at the Old Falcon Hotel, at 6.15 P.M.; charge, 6s. 6d. (exclusive of wine). To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, Mr. O. R. Richmond, The Grange, Gravesend, not later than Tuesday, May 25th. All members of the South-Eastern Branch are entitled to attend this meeting and to introduce professional friends. Communications:—Mr. G. Hartridge: Injuries of the Eye and their Treatment. Mr. R. Bryden: A Case of Acute Glossitis. Mr. A. Boyce Barrow: Some Diseases of the Rectum. Dr. Firth: A Case of Hæmoptysis.—A. W. NANKIVELL, Honorary Secretary of the District, St. Bartholomew's Hospital, Rochester.

GLOUCESTERSHIRE BRANCH.—The annual meeting will be held at the Queen's Hotel, Cheltenham, on Tuesday, May 19th, at 4.30 P.M., under the presidency of Dr. Watters. The dinner will take place at 6 P.M.; tickets 6s. each. Agenda:—1. To receive balance sheet. 2. To elect two secretaries for 1892. 3. To elect a representative on the Council of the British Medical Association, and one on the Parliamentary Bills' Committee. 4. Declaration of the result of the voting papers for officers for 1891-1892. 5. To consider a letter from the British Medical Association on the subject of Dr. Rentoul's motions on hospital and dispensary administration. 6. By invitation of the Council, a demonstration of the Ling System of Gymnastics as applied in the treatment of Medical and Surgical Diseases will be given by Mr. D. von Brun, Cheltenham.—G. ARTHUR CARDEW, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—An ordinary general meeting of the Branch will be held in 1, Crown Street (Milne's Library), on Wednesday, May 20th, at 8 o'clock P.M. Business: 1, Minutes; 2 (*a*) Exhibition of Large Renal Calculus, (*b*) Specimens of Anchylostomata Duodenale under the microscope, (*c*) Photographs of some Interesting Cases, by Dr. Irvine K. Reid, Government Medical Officer, British Guiana; 3, Case of Supposed Tumour of Brain with recovery: exhibition of patient by Dr. Rose; 4, Some Notes on Cases of Meningitis, by Dr. Macgregor; 5, Laminated Epithelial Plug (Keratosis Obturans) removed from the External Auditory Meatus, by Dr. Mackenzie Booth.—C. T. URQUHART, Honorary Secretary.

MELBOURNE AND VICTORIA BRANCH.

THE ordinary monthly meeting of this Branch was held on February 18th, 1891, in the hall of the Medical Society. The President, Dr. SHIELDS, occupied the chair, and there was a large attendance of members.

New Members.—The minutes of the special general meeting (January 2nd, 1891) having been read and confirmed, the PRESIDENT announced that the following fifteen gentlemen had been elected members of the Branch:—Drs. J. H. Webb, R. J. Loosli, F. W. Morton, J. Amess, A. W. Rinder, J. H.

Courtenay, F. G. Hamilton, A. B. Bennie, G. Shirres, A. S. Aitchison, E. K. Overend, A. W. Crooks, H. E. Astles, W. L. Mullen, A. W. F. Noyes. He said there were now 169 members on the roll.

Dr. Koch's Fluid.—The question was considered whether any restriction, and if so of what nature, should be placed upon the use of inoculation by fluid from, or alleged to be from, Professor Koch's laboratories.—Dr. MULLEN moved: "That in view of the fact that the medical remedy known as Koch's lymph, or tuberculin, is a powerful poison, and that untoward results are likely to follow its indiscriminate use, this Society respectfully requests the Pharmacy Board to take the necessary steps to have the lymph included in the schedule of poisons."—Dr. BARRETT seconded the motion.—Dr. GRESSWELL, chief medical adviser to the Board of Health, said that in dealing with such a remedy it was necessary that every precaution should be taken, and he had, therefore, pleasure in supporting the resolution.—Dr. HENRY thought it would be unwise to attempt to restrict the use of the lymph any further than had been suggested in the motion. Through the press he thought the public in the colony had had, perhaps, better opportunities of judging of its value than the mass of the people of Great Britain, for in Victoria there was a superior method of education. He supported the motion.—Dr. G. A. SYME did not see that the sale of the lymph could be in any way restricted, although his opinion was that its sale ought to be restricted. A committee ought to be appointed by the Societies or the Government to conduct further experiments in the colony, and especially to see whether the lymph imported retained its original properties. He thoroughly supported Dr. Mullen's motion.—Dr. HOOPER asked, first, if there was any precedent as regarded other countries for this measure of having the lymph classified as a poison. It was a step which might form a precedent.—Dr. MULLEN stated that in Vienna they had taken restrictive steps against the use of the lymph. In France they were so particular as to how it was used as to render its application almost prohibitive; in fact, there had been great difficulty in getting it admitted across the border from Germany, on account of its dangerous character and the want of knowledge concerning its composition. Although nothing had certainly been done in England, that was no reason why Victoria should not take action. The resolution, if passed, would have at least the effect of checking the unrestricted sale and importation of the lymph. It was difficult to see what more could be done. Other measures, supposing this one were passed, might be considered—measures binding members of the Branch, if not binding to general practitioners. Every medical man was *primâ facie* fit to use the remedy. Moral suasion would not have much effect beyond the members of the Branch. The discussion was continued by Dr. BRETT, the CHAIRMAN, Dr. NEILD, Dr. HAIG, and Mr. CANDLER, the district coroner, after which the motion was put and carried unanimously.—Dr. GRESSWELL, in order further to test the feeling of the meeting, moved: "That this Branch recommend that persons inoculated with lymph which is, or which is alleged to be, Koch's, or which is manufactured in the way in which Koch states he prepares his lymph, should be in charge of at least two medical practitioners, and that full details of the case should be recorded in the form of a report to the Board of Public Health." Dr. NIELD seconded the motion.—Dr. BRETT moved, as an amendment: "That the words 'Board of Health' be omitted." He said that the members of the Board of Health were not medical men, and the members of the profession ought not to be required to report to them on such cases, but they could send, if necessary, reports to the medical journals, or to the Branch.—Dr. HOOPER seconded the amendment.—Dr. GRESSWELL said he would be prepared to substitute "a Committee of the Council of the British Medical Association with the Committee of the Victorian Medical Society."—Dr. HENRY said it was not at all necessary that medical men should be placed under patriarchal restrictions. He would be very sorry to see a resolution of this kind passed.—Dr. BARRETT also objected to a resolution of a binding character being adopted, but approved of the suggestion that there should be two doctors in such cases.—After discussion by Dr. MULLEN, Dr. KENNY, Dr. FETHERSTON, Dr. NEILD, Dr. TALBOT, and Dr. ASTLES, Dr. BARRETT proposed that, in place of the words omitted, the words "through the usual medical channels, for example, either at society meetings or in the journals," be inserted.—After some further debate, Dr. GRESSWELL consented to Dr. BARRETT's amendment, and the motion, as amended, was carried unanimously.

Proposed Amalgamation of the Branch with the Medical Society of Victoria.—The CHAIRMAN stated that the Medical Society of Victoria had taken the initiative with respect to the amalgamation of the two societies, and gave an account of the negotiations which had been carried on between them with that view.—After a prolonged debate, in which Drs. BARRETT, KENNY, NEILD, HENRY, H. F. LAWRENCE, SYME, HAIG, BRETT, COBB, and HOOPER took part, the sense of the meeting was found to be against the proposal, and the question was accordingly declared by the CHAIRMAN to be dismissed. [An official notification to that effect has been received by the General Secretary of the British Medical Association from the Honorary Secretary of the Melbourne and Victoria Branch.]

BRITISH MEDICAL ASSOCIATION.

FIFTY-NINTH ANNUAL MEETING.

THE fifty-ninth Annual Meeting of the British Medical Association will be held at Bournemouth on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1891.

President: WILLOUGHBY FRANCIS WADE, B.A., M.B., F.R.C.P., J.P., Senior Physician, Birmingham General Hospital, 27 Temple Row, Birmingham.

President-elect: JOHN ROBERTS THOMSON, M.D., F.R.C.P., Consulting Physician, Royal Victoria Hospital, Bournemouth, Monkchester, Bournemouth.

President of the Council: WITHERS MOORE, M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Burgess Hill, Sussex.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital.

An Address in Medicine will be delivered by THOS. LAUDER BRUNTON, M.D., F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, London.

An Address in Surgery will be delivered by JOHN CHIENE, M.D., F.R.C.S.Ed., Professor of Surgery at the University of Edinburgh.

An Address in Public Medicine will be delivered by EDWARD COX SEATON, M.D., Lecturer on Public Health at St. Thomas's Hospital, London.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

A. MEDICINE.—*President:* P. H. PYE-SMITH, M.D., F.R.S. *Vice-Presidents:* WILLIAM GEORGE VAWDREY LUSH, M.D.; THOMAS BARLOW, M.D. *Honorary Secretaries:* WM. FRAZER, M.D., "Elmhurst," Madeira Road, Bournemouth; H. MONTAGUE MURRAY, M.D., 27, Savile Row, W.

B. SURGERY.—*President:* JOHN WARD COUSINS, F.R.C.S. *Vice-Presidents:* J. D. G. DOUGLAS, M.D.; WM. WATSON CHEYNE, F.R.C.S. *Honorary Secretaries:* A. GUNTON TURNER, M.R.C.S., "Holmwood," Bournemouth; A. A. BOWLBY, F.R.C.S, 43, Queen Anne Street, W.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President:* W. J. SMYLY, M.D. *Vice-Presidents:* ALLAN MCLEAN, M.D.; A. H. G. DORAN, F.R.C.S. *Honorary Secretaries:* H. A. LAWTON, M.R.C.S., 74, High Street, Poole, Dorset; MONTAGU HANDFIELD-JONES, M.D., 35, Cavendish Square, W.

D. PUBLIC MEDICINE.—*President:* J. BURN RUSSELL, M.D. *Vice-Presidents:* H. F. PARSONS, M.D.; JOHN COMYNS LEACH, M.D. *Honorary Secretaries:* C. H. W. PARKINSON, M.R.C.S., Wimborne Minster; P. W. G. NUNN, L.R.C.P., "Maplestead," Christchurch Road, Bournemouth.

E. PSYCHOLOGY.—*President:* P. MAURY DEAS, M.B. *Vice-Presidents:* HENRY JOHN MANNING, M.R.C.S.; D. NICOLSON, M.D. *Honorary Secretaries:* P. W. MACDONALD, M.D., Dorset County Asylum, Dorchester; WILLIAM HABGOOD, M.D., Belmont, Sutton, Surrey.

F. PATHOLOGY.—*President:* W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* KINGSTON FOWLER, M.D.; W. RUSSELL, M.D. *Honorary Secretaries:* W. G. SPENCER, M.B., 35, Brook Street,

Grosvenor Square, W.; E. Hyla Greves, M.D., Rodney House, Poole Road, Bournemouth.

G. Ophthalmology. — *President:* N. C. Macnamara, F.R.C.S. *Vice-Presidents:* Rowland W. Carter, M.D.; Malcolm M. McHardy, F.R.C.S.Ed. *Honorary Secretaries:* J. B. Lawford, M.D., 55, Queen Anne Street, W.; Bernard Scott, M.R.C.S., "Hartington," Poole Road, Bournemouth.

H. Diseases of Children.—*President:* J. F. Goodhart, M.D. *Vice-Presidents:* T. W. Trend, M.D.; T. B. Scott, M.R.C.S. *Honorary Secretaries:* Sidney Phillips, M.D., 62, Upper Berkeley Street, W.; Dennis C. Embleton, L.R.C.P., "St. Wilfred's," Michael's Road, Bournemouth.

I. Therapeutics.—*President:* Wm. Vicary Snow, M.D. *Vice-Presidents:* Sidney Coupland, M.D.; A. G. Barrs, M.D. *Honorary Secretaries:* Christopher Childs, M.D., 2, Royal Terrace, Weymouth; John Rose Bradford, M.D., 52, Upper Berkeley Street, W.

Honorary Local Secretary: James Davison, M.D., "Walderslow," Bournemouth.

Programme of Proceedings.

Tuesday, July 28th, 1891.
9.30 A.M.—Meeting of 1890-91 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees: and other business.
4 P.M.—Sermon by the Right Rev. the Lord Bishop of Winchester.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address.

Wednesday, July 29th, 1891.
9.30 A.M.—Meeting of 1891-92 Council.
10 A.M to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Dr. T. Lauder Brunton, F.R.S.

Thursday, July 30th, 1891.
9.30 A.M.—Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery by Professor J. Chiene.
7 P.M.—Public Dinner of the Association.

Friday, July 31st, 1891.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Public Medicine by Dr. Edward C. Seaton.

Saturday, August 1st, 1891.
Excursions.

The Annual Museum.

The Museum in connection with the fifty-ninth annual meeting of the British Medical Association will be arranged in the following Sections:—

Section A.—Foods and Drugs, including Prepared Foods, Pharmaceutical and Chemical Preparations, Antiseptic Dressings, etc. (Honorary Secretary, Mr. MacGillicuddy, Pendennis, Bournemouth.)

Section B.—Pathology, comprising Casts, Models, Apparatus, Microscopical and Macroscopical Specimens, etc. (Honorary Secretary, Dr. Bright, Roccabruna, Bournemouth.)

Section C.—Anatomy and Physiology, comprising Specimens and Apparatus as above. (Honorary Secretary, Dr. G. Schofield, Durham House, Bournemouth.)

Section D.—Surgical Appliances and Books, comprising New Books, Atlases, Diagrams, Tables; Medical and Surgical Instruments and Appliances, Ambulances, etc. (Honorary Secretary, Dr. Grabham Lys, Royal Victoria Hospital, Bournemouth.)

Section E.—Sanitary Appliances, comprising Apparatus and Appliances connected with Sanitation, Equipment of Houses, Public Institutions, Hospitals, etc.; Improvements in Drainage, Water Supply, Ventilation, Illumination, and Clothing. (Honorary Secretary, Mr. W. H. L. Marriner, Westbourne Tower, Bournemouth.)

The Secretary of the Museum will be glad to hear from members of the profession who are willing to send objects for exhibition in the Sections of Anatomy and Physiology and Pathology. There is no hospital museum in the neighbourhood. (Address, Mr. George Mahomed, Astolat, Bournemouth.)

To Non-Professional Exhibitors.

Inventors and manufacturers wishing to exhibit in the annual Museum are invited to apply for space early to the Honorary Secretary of the Museum, Mr. George Mahomed, Astolat, Bournemouth.

The charge to exhibitors (other than members of the medical profession) will be 2s. per square foot of table space in Sections A, B, C, D, and 6d. per square foot of floor space in Section E, and in Section D for ambulance appliances.

In considering applications for space the Committee will give preference to *bonâ fide* inventions and improvements not previously exhibited.

A Catalogue will be printed, prepaid advertisements will be inserted in the Catalogue.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretary of each Section in which they propose to exhibit.

2. Communications on general matters connected with the Museum should be addressed to Mr. G. Mahomed, Astolat, Bournemouth.

3. Intimation of proposed exhibits must be made to the Honorary Secretary before June 20th.

3*a*. A brief description of each exhibit must be forwarded to the Secretary of the Section concerned not later than June 30th.

4. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Bournemouth," with the name of the Section for which they are intended. Packages should not be addressed to a firm's representative at the Museum.

5. Exhibits must be delivered between July 15th and 21st.

6. Every packet must bear a card showing the name and address of the exhibitor.

7. The Committee will exercise every care regarding the objects entrusted to them, but all risks and expenses must be borne by the exhibitor.

8. The arrangement of signs, placards, etc., will in every case be subject to the approval of the Committee.

9. No exhibits will be received except on the understanding that the above regulations will be complied with.

A. G. S. Mahomed, M.R.C.S.,
Honorary Secretary Museum Committee,
Astolat, Bournemouth.

SPECIAL CORRESPONDENCE.

BERLIN.

The New Koch Institute.—Property in Prescriptions.

In last Saturday's sitting of the Prussian Diet, an animated debate took place on the proposed annual grant of 165,000 marks for a clinical and scientific Koch Institute to be affiliated to the Charité Hospital. Dr. Graf, of Elberfeld, the member who on November 29th last put the question to the Government that drew forth von Gossler's famous speech, while admitting that the therapeutic value of tuberculin was exceedingly doubtful, contended that its scientific importance was of the very highest order. He quoted von Thiersch, von Bergmann and others, who were unanimous in their opinion that the remedy should not be given up, and ended by declaring that it was the duty of Germany to accede to this demand of the Budget Commission. Herr Broemel said that the question under consideration was not only a medical one, but had a constitutional side as well, and Parliament was entitled to a full and exhaustive answer as to whether the proposed institution was necessary and useful. The words "high scientific value" did not decide the question. As to the practical results of the treatment, taking together all that had been published, the result was a decided *non liquet*. On the other hand the dangers of the treatment were unquestionable. These dangers were hardly alluded to in Koch's two publications, but there could be no doubt that in many cases the results had been disastrous. Parliament had the full right to inquire whether the Government had proceeded with proper caution in the matter. It would have been more for the good of humanity if there had been less *mise-en-scène* and more openness. In the use of the remedy a great want of the usual medical caution had been shown, and this was in great part due to the fact that the nature of the remedy had been kept a secret. Koch himself had felt the impropriety of such

a course. Herr von Gossler had told them that he took upon himself the entire responsibility of the step, but what was the world to do with the responsibility of a retired Prussian Cultusminister? At the Wiesbaden Congress doubts had been expressed as to whether all the bottles of tuberculin were of the same degree of concentration. Until it could be exactly dosed, the use of the remedy must always be attended with risk. In this state of affairs it seemed imperative to return to experiments on animals, and imperative, too, that Koch should publish the results of his own experiments on animals. He (the speaker) quite agreed that the State should do all in its power to secure the continuation of these investigations. But there must be no more secrecy; there must be no more experimenting on human bodies with a secret remedy. Herr Geheimrath Althoff, speaking for the Government, said that the institution would not be used for experiments with a secret remedy. It would be governed by the maxim, *salus aegroti suprema lex esto*, and all the scientific work and the discoveries that might be made within its walls would be freely published. An institute of the sort had been planned for many years, and Koch's discovery had only served to accelerate the execution of the project. The whole medical world was unanimous in its opinion that we were on the threshold of a new therapeutic era, and that the fight against infectious diseases should be taken up with renewed vigour. That was the object of the new institute; that was its *raison d'être* and its justification. Professor Virchow said: The institute in question is not exactly destined for the treatment of tuberculosis. I will not say that tuberculosis is quite excluded from it, but certainly when its programme was first laid down, Koch himself was of opinion that the tuberculous affair was settled, and that he had no reason to occupy himself with it further. The plan is a much wider one, namely, to find out how this remedy can be applied to other diseases. Now, if the first supposition be incorrect, it may be questioned whether the inference as to other diseases is as important as was supposed, when the establishment of this great institution was decided upon. I have never given an opinion as to the value of the Koch treatment as a whole, simply because I should not know how to express myself about it. I have only made a certain number of observations, which, it is true, gave a certain bias to the whole question, and above all, favoured quiet and impersonal investigation—so greatly needed in such a difficult question. Dr. Graf is optimistic. He has no right to speak of the value of the treatment until the value has been proved; and, in point of fact, it has not been proved. But it would be foolish if we were to say that the remedy is of no value; it is a poison, a dangerous substance. The whole matter has had extraordinary developments, which no one could have predicted, and thus hope became aroused that by means of so powerful a drug great results would be attained. Nor can we say that this hope has been destroyed. Speaking accurately, not one single case is known in which a cure of any form of tuberculosis has resulted from the treatment.....I can express no opinion as to whether the remedy will continue to be used, say in ten years, or whether by that time sufficient experience will have been gathered. All I can say is the following: The Government Commissioner has told us that the plan for the institute is of old standing. Nevertheless, no one will deny that finally it was taken up with the greatest haste and precipitation.....We have been told in Commission that negotiations are now to be entered into with the other departments of the Charité as to how matters are to be arranged. We were of opinion that these negotiations should have come first. At the time when Koch was considered omnipotent in the domain of protective medication, it may have seemed justifiable to dispossess, so to speak, all other clinicians and directors of departments, and to say: "You understand nothing about the whole matter; we shall take all that from you—Koch will manage it all." Now there is another side to the question. These other departments serve for clinical instruction; in them young doctors prepare themselves for treating infectious diseases later on. Now I hear that a lecture theatre is to form a part of the new institute, but its whole plan is not clinical. That would not coincide with the objects in view. On the other hand, clinical instruction cannot be given so low a place as to do without sufficient material. As regards this material, it often happens, for instance, that the professor of the infectious diseases of children finds himself without material. And if there is another person who takes away the cases of measles and scarlatina, the children's clinic will become a desert. As regards enteric fever the case is similar. In short, it is impossible that the superiority which this institute was designed to have should be maintained for any length of time—impossible that it should monopolise the advantages which up to the present all the clinics have shared in. I will not dwell on the fact that financially there is a similarly unjust arrangement. Koch's scientific assistants are to begin with salaries such as are not drawn by many of our professors.....Without dwelling on details, I may remark that the annual expenses represent a sum which is about equal to that received by all the scientific departments of the University together for purposes of investigation.....I can only hope that the outlay may bring the hoped-for results. I will not oppose details, but I trust that in future the matter will be approached in a soberer and also a juster spirit. After a few supplementary remarks from Graf and Broemel, the debate closed and the sum was voted.

As the question of the ownership of prescriptions is being so much discussed in England at present, it may interest the readers of the BRITISH MEDICAL JOURNAL to know that in Prussia—though no special law on the subject exists—the prescription is invariably considered the property of the patient. A prescription can be made up again and again, as often as the patient wishes, unless it contain dangerous substances, in which case the prescription must be marked "*ad libitum*" or "*reiteretur*" by the physician. There is no limit to the time within which a prescription must be presented.

MELBOURNE.

Subcutaneous Injection of Strychnine in Snake Bite.—Poison of the Scrub Tick.

In a country so infested with poisonous snakes as Australia anything bearing on the treatment of snake bites must necessarily be of the greatest value. Dr. Mueller, claims to have discovered a remedy for snake bites by his method of subcutaneous injection of large doses of strychnine (about 12 to 20 minims of the *B. P.* liq.) at very short intervals. Sufficient trials have not been forthcoming to satisfy the profession of the correctness of Dr. Mueller's statement, and, with a view of arriving at something definite on this matter, Dr. T. S. Bancroft, of Brisbane, has been conducting some original experiments with snake poisons and strychnine. He separated the venom of the black snake and made experiments to ascertain what quantity would be necessary to kill a full grown guinea-pig, subcutaneously injected. Five experiments were then made to see the effects of hypodermic injections of different quantities of strychnine. Four more experiments were made to determine the effect of the injection of venom and strychnine mixed in different proportions. The results of these experiments demonstrated that the effects of the venom are not in any way mitigated by the amount of strychnine injected. In one instance a quarter of a grain of venom with a fortieth of a grain of strychnine caused death as quickly as six times the quantity of venom administered by itself, while, with a sixtieth of a grain of strychnine, death came as soon as if the venom had been doubled. Dr. Bancroft believes that, theoretically, strychnine should be valueless, seeing that it stimulates, and finally paralyses, the very same nerve centres that snake poison paralyses. If the venom dose has been a poisonous one then strychnine is powerless to avert death. The effect of the two substances acting together, the one having a stimulating and the other a paralysing property, would be to exhaust the nerve sooner than if the paralysing substance were acting alone. An antidote to snake poison should be such a substance as could decompose the venom or combine in some way with it to make it insoluble. No substance we know of can do such a thing without at the same time killing the organism. The supposed stimulating properties of alcohol are mythical, as are also those of ammonia. Permanganate of potash is only useful when it comes into contact with the poison itself. Theoretically, the digitalis groups are the only drugs that could be of

any use on account of their action on the muscular substances of the heart. The best treatment is to cut into the bite and suck the poison out. While recognising the great interest attached to Dr. Bancroft's experiments, it will be noted that he does not deal with the matter on the same lines as Dr. Mueller does, for, in Dr. Bancroft's cases the strychnine was administered in one dose only and simultaneously with the venom. In Dr. Mueller's cases the strychnine was repeated and given in much larger doses.

Dr. Bancroft has also written a paper on a remedy for the scrub tick. As the method of dealing with the poison may be of value to those living in scrub countries, a summary of the paper may not be out of place. He says there are many kinds of ticks which attach themselves to man and dog, but it is from the scrub tick alone that harm arises. The scrub tick is flat, brown in colour, and about one-eighth of an inch in length and breadth. When distended it is as large as a pea. The female tick only, like the mosquito, appears to bite. Ticks attach themselves by their mouth organs, and never become buried under the skin, as some persons have imagined. The tick is particularly active in summer, and is found under leaves, ready to drop on any moving object. The poison appears to be absent, or only in a minute quantity, when it first attaches itself. A solution made of eight ticks and a few drops of water injected under the skin of a dog, produced no effect, but the same dog afterwards succumbed to the bite of two ticks. The tick sucks blood from the animal to which it has attached itself, and it is presumed that some poison, probably of the nature of a ferment, passes from the tick into the animal. Most mammals are susceptible to the attacks of the scrub tick; even horses have been killed by it. Human beings would succumb were the ticks suffered to remain long enough in the skin, but by reason of the irritation caused they are discovered a few hours after attaching themselves, and are invariably removed. The guinea-pig and kangaroo dogs seem to be insusceptible to the poison. Dogs that have recovered from tick bite become tick-proof. The native Australian animals are tick-proof by heredity. Dogs influenced by tick poison generally show signs of paralysis on the sixth day, and die about the seventh or eighth. The tick takes about a fortnight before it is ready to bite again. Providing a tick be removed from a dog before the fourth day after attaching itself, no symptoms will arise. To make a dog tick-proof proceed in the following manner: Make a slight cut, not sufficient to bring blood, behind the ear of the dog, and gently press the snout of the tick into the wound, when it will, as a rule, bite and hold on. Two ticks should be placed on the dog; after they have been on two days, remove them. Grease, turpentine, or kerosene smeared over them will kill them. Allow a week to elapse, and then place two others upon the dog, and remove them after being on three days; then allow another week to elapse, place two more ticks upon the dog, and remove them before the fifth day. After this the dog will be tick-proof. Valuable dogs who live in a locality where ticks abound should be carefully examined every two days.

CORRESPONDENCE.

DEGREES FOR LONDON MEDICAL STUDENTS.

SIR,—Your correspondent, Dr. Shore, is perfectly correct—as my experience at University College teaches me—when he states that "if an academical year is given to the study of elementary science under proper teachers, 80 to 90 per cent. of the students will pass" the Preliminary Scientific Examination of the University of London. But he is grievously wrong when he proceeds to state that London is not as efficient in the way of appliances for the more scientific portion of medical education as Cambridge, Edinburgh, Manchester, Durham. The truth is that London is better provided with both teachers and teaching appliances in zoology, botany, physics, and chemistry than are the cities mentioned by Dr. Shore. But those teachers and those appliances are not located within the precincts of St. Bartholomew, nor are they placed in the back premises of any of our big London hospitals any more than are the corresponding appliances at Cambridge, Manchester, and Edinburgh tacked on to the infirmaries of those towns and managed by hospital committees.

The eminent teachers and first-rate teaching appliances connected with science are in London to be found where they ought to be, namely, in the great academical institutions, University and King's Colleges, and in the Royal College of Science. There they are, and the fact that they are not universally made use of by medical students is due to the mistaken enterprise of the detached medical schools of the London hospitals, who, instead of encouraging their students to get their scientific education at the really efficient colleges which I have named, attempt in a purely selfish and competitive spirit to provide teaching in sciences which they are unable to deal with in an adequate manner, in order to secure the subsequent attendance of students at their legitimate curriculum of proper medical instruction. The fact is notorious, and is the real cause of the difficulties attending university degrees in medicine in London.

Surely it is time that this unworthy system of grasping competition should be abandoned and an organisation be established among the medical schools of London, by which the science teaching necessary for medical students should be assigned to the great Colleges, which have adequate laboratories, well-paid professors of European reputation, and skilled assistants and demonstrators, actually at work and ready to receive and to teach an increased number of students.

It would be easy—in fact, it is already guaranteed—to secure arrangements by which students who take their science classes at University College should be absolutely free to pass on for their clinical work to any of the London hospitals.—I am, etc.,

Oxford. E. RAY LANKESTER.

SIR,—It ought not to be forgotten that the rejection of the draft charter by Convocation of the University of London does not by any means put the University of London out of the running. It is still within the rights of the Senate to take advantage of the nineteenth clause of the Medical Act of 1858. This clause is as follows: "Any two or more of the colleges and bodies in the United Kingdom mentioned in Schedule (A) to this Act may, with the sanction and under the directions of the General Council, unite or co-operate in conducting the examinations required for qualifications to be registered under this Act." It will be remembered that some years ago the University actually consented to enter into an arrangement of this kind, and that the negotiations broke down at the last moment.—Yours, etc., FELLOW.

SIPHON DRAINAGE OF THE CHEST.

SIR,—The first annotation (377) in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of May 2nd mentions a method of siphon drainage of the chest as Bülau's method. I originated this method about twenty-five years since, and have practised it from that time. In the *Transactions of the Obstetrical Society of London* for 1872, vol. xiv, p. 4, Dr. Playfair published full details of the method, expressly saying (p. 7), "for the first idea of the plan I am indebted to a conversation with my friend, Dr. T. J. Walker, of Peterborough." The publication of that paper, and the discussion which followed it, led to the general adoption of my method, and it is hardly right that it should now be placed to the credit of, and be named after, a German surgeon. Even in so small a matter the adage applies. *Palmam qui meruit ferat.*—I am, etc.,

Peterborough. T. J. WALKER, M.D.

MEDICO-LEGAL AND MEDICO-ETHICAL.

REGINA v. KERR.

A most unpleasant and regrettable incident, arising out of the conviction of Kerr for the murder of Sebra Troughear, has just been closed. After the conviction of the prisoner, and after the commutation of his sentence, a memorial, influentially signed, was presented to the Home Secretary demanding his unconditional release on the ground that the evidence

of rape was inconclusive, and that the woman might have died a natural death. The memorialists, fortified by the opinion of Dr. Lediard, penned, amongst other things, the following paragraph:

The only discovery they (that is, Drs. Barnes and Maclaren) *made suggestive of rape, beyond the mark near the navel, was that, on parting the lips of the vagina, marks of bruising were, in their opinion, just seen within the orifice; they discovered no tear, and there was no trace of blood within or from the orifice.* The doctors, it appears, removed the womb and vagina, and carried them away for further examination, but it was not known to the prisoner's advisers at the time of the trial that they had been removed, and consequently nothing was said as to the possible effects of removal. This is done by cutting round the orifice, and then taking hold of the womb and drawing it and the vagina through the opening cut in the belly. *It was on examination of the parts after this operation and not before that the doctors for the first time noticed a small tear near the right side of the orifice, and a larger tear three-quarters of an inch long a little higher up, and several small effusions of blood in the lining beyond the tear. There was no blood from the tears or any trace of bruising around them.* Sebra Troughear, though unmarried, had in her younger days given birth to two children, and it is improbable that if penetration had once been effected, there would have been any tearing caused by the act of coition. On the other hand, *nothing is more probable than that, in taking out the vagina, there should be a strain upon the membrane, and that it should show traces of the strain in the shape of tears.* Traces of seminal fluid were searched for and not found, though the fluid would certainly have been traceable if there.

We have quoted at some length in order that our readers may be able to judge for themselves. The passages in italics are those to which Drs. Barnes and Maclaren took especial exception, regarding them as amounting to a charge of manufacturing evidence. This, after some delay and correspondence and interviews, Dr. Lediard and the memorialists have assured Drs. Barnes and Maclaren is not and never was intended, and for our part we see no difficulty in accepting this assurance.

We are glad to have this opportunity of announcing the termination of what at one time threatened to be a most unseemly dispute between highly respected members of the profession. Dr. Lediard's disclaimer and repudiation of any intention to cast any slur upon Drs. Barnes and Maclaren are perfectly satisfactory. The only regrettable thing is that he did not make this declaration a little more speedily, for though we are quite able to see that no slur was ever intended by the statements in the memorial, he knew that Drs. Barnes and Maclaren and many of their friends did not take that view, and the repudiation would have been not less satisfactory to them if it had come sooner and with a little more spontaneity. In all cases where the evidence is purely circumstantial there is *a priori* some possibility of mistake, and we can well understand Dr. Lediard's conviction, though we may not share it, that in this case a mistake has been made.

It is understood that Dr. Lediard intends to act upon his belief, and will take further steps to secure the release of the convict.

One lesson to be learnt from all this is that a suspected prisoner should always be represented at the *post-mortem* examination of his alleged victim. Had this been so in the case now before us a very great deal of misconception would have been avoided.

The case was one of exceptional difficulty and we cannot conclude this notice without observing how highly we have been impressed with the services rendered to the public by Drs. Barnes and Maclaren in this case, and especially by their careful microscopical examination of the various articles submitted to them for report; indeed, without this latter evidence it is more than likely that the conviction of the prisoner could not have been obtained.

THE LIABILITY OF VENDORS IN ADULTERATION CASES.

THE case of Hotchin *v.* Hindmarch, an appeal from justices at South Shields, which came before Lord Coleridge and Justice Mathew on May 7th, raised the important questions whether a milkman or a servant can be convicted under the Adulteration Act of selling milk or any other article in an adulterated condition when he sells on behalf of his employer, and also how far a vendor is exempted from liability under the 25th Section of the Act of 1875, which deals with the protection of retailers by "warranties" from wholesale dealers. Hotchin, a milkman, had been convicted under Section 6 of the Act of 1875 for having sold to Hindmarch, an inspector of the urban sanitary authority of South Shields, milk which, on analysis, was certified by the public analyst to contain 12 per cent. of added water. Hotchin told the inspector at the time that he was in the service of the Farmers' and Cleveland Dairy Company, Limited, as foreman, the name of the company being painted on the cart from which the milk was sold; but the justices overruled the objection that the company were the sellers. The defendant then relied on the 25th Section of the Act, on the ground that the milk was purchased by the company with a "written warranty," that it was genuine, and that neither he nor the company had any reason to believe it was otherwise. It was stated in evidence that the milk of which the adulterated sample was a portion, was consigned to the company by rail, each can being labelled "Thirty-four imperial gallons of warranted genuine new milk, with all its cream on, from R. Thompson, Dumfries, to the Farmers' and Cleveland Dairy Company, South Shields;" that there was no protection against the milk being tampered with during the journey of ninety miles; and that the milk on arrival was not submitted for analysis and not "tested," although "testing" was occasionally practised "by Hotchin, 'the defendant, "with a lactometer." A written contract between Thompson and the company was produced, in which he agreed to supply them for a certain period "with the whole of his dairy of genuine good new milk of the best quality, with all its cream on," and in which he (Thompson) "warranted each and every supply of milk delivered under the contract to be pure genuine new milk." In regard to this defence the magistrates found that the defendant had no reason to believe that the milk he sold was the same as that sent, and that he was not exempted from liability under the 25th Section. Lord Coleridge, in giving judgment and upholding the conviction, stated that the Sale of Food and Drugs Act was directed against adulteration, and pointed to particular acts done by particular persons, one of which was selling the adulterated article. The question as to what was "selling" had been raised. From several sections it appeared that this meant the physical act of transfer of the article, and that the person was liable who did such act. The 6th Section was that no person shall sell an article which is adulterated, if he, in fact, did so, he was liable to be convicted even though he was a servant. Under the 25th Section there would be a defence if the seller showed that he purchased the article as pure, and sold it as he purchased it; and it was urged that the seller must mean the purchaser of the commodity afterwards to be sold. That was an ingenious argument, but if it were admitted the Act might just as well not have been passed, and a fraudulent dealer had only to make such a contract, and neither he nor the actual seller would be liable, however much the article might be adulterated. He would not yield to such an argument, for if admitted it would make the Act entirely nugatory. In this case the magistrates found that there was nothing to show that the milk sold was the milk sent, and further it appeared that the milkman might have had the milk analysed, or even "tested," and had not done so. He considered that the 25th or "warranty" section did not apply, but even if it did, the case did not raise a defence under that section. In concurring, Justice Mathew said that in point of fact the milk sold was adulterated, and the defendant sold the milk so adulterated. He had committed an offence in the terms of the Act of Parliament. The Act did not except servants, and if they had been excepted it would have been of little avail. The Legislature clearly meant to deal with the person who actually sold, and if he were not liable, then, though he had himself adulterated the article, he could not be convicted, and his innocent employer would be liable. He agreed that no defence could be raised in this case under Section 25. The appeal was dismissed.

ILLEGAL USE OF MEDICAL TITLES.

DR. LESLIE PHILLIPS (Honorary Secretary, Medical Defence Union, Limited) writes: I find that an erroneous impression still obtains in some quarters that the Medical Defence Union are responsible for the recent prosecution of Mr. S. E. L. Smith, of Aston, Birmingham, which resulted in his being convicted under Section 40 of the Medical Act, 1858, in a penalty of £20, for "unlawfully, wilfully, and falsely using the title of M.D.," and in two further penalties of £2 each for illegally assuming the titles of "Physician" and "Surgeon." It was proved that he used a brass plate inscribed "M.D., Physician and Surgeon," and others of a similar kind; that he signed medical and vaccination certificates as "M.D.," and had appended to his signature to a wine testimonial the letters "M.D., L.R.C.P., L.M., L.S.A.Eng.," though his only qualification registered or registrable was, and is, "L.S.A.Lond., 1885."

I trust you will again allow me to state that the Medical Defence Union had nothing whatever to do with the prosecution in any shape or form. The only connection of the Union with the matter is that, the Council having from time to time received several complaints of the illegal use of medical titles as above by Mr. Smith, in consequence, the solicitors of the Union were, in October, 1890, instructed to write to him, pointing out that the course he was pursuing "might place him in an undesirable position." Mr. Smith replied: "I do not assume anything which I do not possess, or which I have not honourably and legally obtained." The Council of the Union having given this warning in consequence of the complaints they had received decided to take no further steps in the matter either by prosecution or otherwise; as many members of the Union are of opinion that the powers of the Union should only be actively exercised against unmistakable quacks; that is, persons who hold no qualification whatever; and not in such a case as the one in question, in which the offender is a qualified practitioner whose name is duly entered on the *Medical Register*.

The matter therefore dropped so far as the Union was concerned. It was not until some five months after the termination of the correspondence above referred to that the magisterial proceedings, which resulted as above mentioned, were taken at the instance of someone else.

I desire to state most explicitly that neither the Union, nor the Council, nor any officer of the Union, had anything whatever to do with the prosecution, and that not a farthing of the funds of the Union has been or will be applied directly or indirectly for the purposes of that prosecution.

Several questions, however, of considerable interest to the profession, have arisen out of the proceedings. Thus, it has been contended that the penal provisions of Section 40 of the Medical Act, 1858, cannot be brought into operation against any duly registered medical practitioner. No doubt the section was primarily intended to meet the case of unregistered quacks, for whose suppression it is as a rule employed; and it is obvious that cases where a duly qualified and registered medical practitioner assumes medical titles which he does not possess must necessarily be of happily rare occurrence. I may say that the legal advisers of the Union are clearly of opinion that Section 40 is wide enough to include in its net all offenders in this respect, whether registered or unregistered. That this view is correct seems clear from the remarks of Baron Bramwell in 1860 in the well known case of Ellis *v.*

Kelly 30 *L. J.*, M. C., 35, where the learned judge said, "It appears to me that on the true construction of Section 40, if any person wilfully and falsely call himself a Doctor of Medicine he will be liable to a penalty, although he was in reality a Member of the College of Surgeons or of the Apothecaries' Company, and was so registered." The only question, therefore, is what constitutes "wilfully and falsely." The same learned judge, in a later case, decided in 1872—Andrews *v.* Styrap, 26 *L. T.*, N. S., 704—and expressed his entire agreement with the following exposition of these words by Baron Martin in his judgment in the same case—namely, "wilfully, for he did it on purpose," and "falsely, because he pretended thereby to be on an equal footing with any regularly bred physician or M.D."

The law, therefore, is clear, and the rule of practice approved by some of the leading medical corporations is in accordance with it. By way of a single illustration I may refer to the following resolution passed by a general meeting of the Royal College of Physicians of London held on April 10th, 1876:—"No Fellow, Member, Extra Licentiate, or Licentiate of the College is authorised or entitled by virtue of any diploma or licence granted by the College to assume the title of doctor, or to append to his name the title of doctor of medicine, or the initial letters M.D., or any other letters indicating that he is a graduate in medicine of a university unless he has obtained a degree in medicine from a university recognised by the College, and legally entitled to confer such degree."

There is no doubt that medical, like public, opinion changes rapidly, and of late years it has become common (in some parts of the country, at any rate) for medical men who would not for a moment think of using the title "M.D." to style themselves "Dr." on their brass plates, visiting cards, etc., although they do not possess any, or any legally recognised, degree of M.D. or even M.B. It may be urged that nine persons out of ten address their medical men as "Dr.," but that of itself seems to afford no sufficient reason for the medical man so styling himself, if he be not legally entitled to do so. Speaking generally, it may be said that no diploma, and, indeed, nothing short of a registrable M.D. degree, can confer the right to use the title of "Dr."

Whether fresh legislation is necessary or desirable is a moot point, on which considerable difference of professional opinion will no doubt be found to prevail. I am only concerned to call attention to what the existing law is, and to point out that it is loyally recognised by our great medical corporations, and that the individual practitioner who makes a law unto himself and then pleads custom for it, is likely to find himself in an awkward predicament.

MEDICAL FEES.

C. E. S. F. writes: Can I claim a fee in the following circumstances? I gave evidence in an assault case before the magistrates, and was asked by them to see the injured man before the case, which had been remanded, again came on. I had not intended doing so otherwise: afterwards, when receiving my fee for evidence, I asked the clerk to pay me for the attendance on the assaulted man on that occasion. He referred me to the superintendent of the police, saying he was the responsible party. He, however, returned the account sent in, and referred me back to the magistrate's clerk; he answered again that he was not responsible.

*** The only course which we can advise our correspondent to take is to apply to the magistrate at whose request he attended the assaulted man. Probably if this application had been made on the evidence being given at the adjournment, the magistrate would have made an order. The visit was not made at the request of the police, and they cannot, therefore, be held responsible. Even if the police require the assistance of a medical man in places outside the metropolitan police district, it will always be well to have an understanding as to payment of the medical fee, because, although the fees allowed in the metropolis are very generally, we believe, allowed throughout England for similar services, we are not aware of any order of the Treasury applicable beyond the metropolis which would permit of the recovery of the fees as of right. It has been laid down that a mere stranger directing a surgeon to attend a poor man is liable for his fee, but we should not advise our correspondent to claim in this way from the magistrate personally, if he did not feel himself at liberty to make the order for payment in his magisterial capacity.

THE ABUSE OF THE PROVIDENT SYSTEM.

A CORRESPONDENT sends us the following advertisement, which appeared in the *Bath Herald* of May 9th, 1891: "Doctors' Club Wiltshire Friendly Society.—One penny weekly, children halfpenny. Medical officer, Dr. Briscoe. Application to be made to Mr. E. Parsons, Laura Place." The person to whom application is to be made, our correspondent informs us, is a steward of one of the branches of the friendly society. We are glad to learn from him that such a medium for obtaining club patients is without precedent in that neighbourhood, and we trust that the precedent now unfortunately set may not be followed.

ADVERTISING BY CARD.

A MEMBER AND DR. R.—In response to "A Member's" query: "Is there no way of stopping this touting for other people's patients?" we can only reiterate the opinion to the effect that the one and only effective remedy for such derogatory and trade-like procedures would seem to be an application to the respective colleges. Our correspondent will do well to transmit to the colleges concerned one of the cards in question, and enclose therewith a courteously worded note setting forth all the circumstances, in accordance with the tenour of the advice given in the BRITISH MEDICAL JOURNAL of April 25th, page 935, under the heading of "A Card."

FREE ATTENDANCE ON DENTISTS.

M.D. asks:—Is it customary for medical men to attend dentists, their wives and families gratis, and *vice versâ*. In this town there are two dentists, father and son, each with families, every member of which expects me to attend them without fee, confinements included. On the other hand, the dentist neither charges me nor my wife, in spite of my protests. I need hardly say the two dentists have very much the better of their self-determined bargain.

*** The principle involved in the "self-determined bargain" above referred to is, we have reason to believe, a modern innovation. Although the supervision of the dental profession is now vested in the General Medical Council, and thus officially recognised, yet such recognition does not entitle dentists as a right to gratuitous medical attendance for themselves and families. Under any circumstances, some limitation to such an assumed claim upon the family doctor is desirable. We are not aware that there is any generally recognised rule upon the point.

L.S.A.'S AND THE TITLE OF "DR." AND PHYSICIAN.

J. D. S.—Mr. J. R. Upton, solicitor and clerk to the Society of Apothecaries, informs us that, in his opinion, a L.S.A. whose diploma is dated subsequently to June 30th, 1887, "the appointed day," could not be legally prevented from styling himself physician and surgeon on his tablet, provided he did not describe himself as L.R.C.P. or M.R.C.S.; nor could he, he thinks, be prevented from prefixing "Dr." to his name, that being no more than the popular appellation of the general medical practitioner. He adds that it would be undesirable for a L.S.A. whose diploma bears date prior to June 30th, 1887, to call himself physician, having regard to some recent proceedings at Birmingham, as to which, however, he understands an appeal is pending.

MARRIED WOMEN AND MEDICAL FEES.

A BILL is now before the Legislature of Maryland, U.S., the object of which is to protect medical men against an injustice of which they are frequently the victims when they have to attend well-to-do women whose husbands have an imperfect notion of their legal obligations as to maintenance. The principal clause of the Bill provides that married women shall be jointly liable with their husbands for medical services rendered to such married women or their children, that they may be sued jointly with their husbands for such services, and that judgments obtained in such suits may be a lien on their separate property.

NAVAL AND MILITARY MEDICAL SERVICES.

INCREASING SOBRIETY OF THE ARMY.

THE abstainers among English troops in India now reach the large number of 16,576. With this increased proportion of abstinent soldiers in India there has been, happily, a corresponding improvement in the direction of temperance among our forces at home. Last year only 4½ per cent. of our army in Britain were fined for drunkenness, and fully one-half of these fines were for first offences. This increased temperance has meant a substantial addition to the available strength of the army as satisfactory as the moral advance.

INDIAN PAY.

OBSERVER writes: In reply to inquiry by "Medical Staff," he will find the pay of Rs. 433. 10. 2 monthly totally inadequate for himself and family. When he has paid rent, servants, horses and carriages (indispensables), and bazaar account, all will be swallowed up. But he must also reckon on frequent expensive moves. If serving in Madras, Burmah service must be encountered; officers of Indian regiments get Rs. 100 a month while serving in Burmah, medical officers nothing.

EXAMINATION FOR SURGEON-MAJOR.

F. B.—The Director-General has been good enough, in reply to an inquiry, to inform us that the next examination for promotion to surgeon-major will probably take place in the early spring of next year, but that no date has yet been fixed.

ALEXANDER MEMORIAL PRIZE.

F. P. M.—The competition for the Alexander Memorial Prize is not open to officers of the Indian Medical Service.

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 5s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

A SURGEON-MAJOR lately home from foreign service is willing to entertain an exchange to the Mediterranean or Egypt. Address "Observer," 1637, British Medical Journal Office, 429, Strand, W.C.

THE NAVY.

INSPECTOR-GENERAL EDWARD MORTIMER has succeeded Inspector-General Fisher in charge of the Royal Naval Hospital at Plymouth, the latter being about to retire from the service.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:

	From	To
Deputy Surgeon-General G. L. Hinde, C.B.	Bombay	Dover.
,, F. W. Wade	Dover	Woolwich.
,, J. Warren	Woolwich	Bengal.
,, T. Walsh	York	,,
,, J. Y. Donaldson, M.D.	Madras	York.
Brigade-Surgeon C. M. Cuffe, C.B.	Bengal	Canterbury.
,, J. H. Hughes, M.D.	,,	Cork.
Surgeon-Major H. W. A. Mackinnon, D.S.O.	Canterbury	Aldershot.
,, A. H. Ratigan	Burnley	Birmingham.
,, R. G. Thomsett	Gibraltar	Netley.
,, O. G. Wood, M.D.	Egypt	Dublin.
,, J. J. Greene, M.B.	,,	,,
,, J. Hoysted	Gibraltar	Dover.
,, H. Charlesworth	,,	,,
,, A. W. Browne	Nova Scotia	Edinburgh.
,, J. P. Hunt, M.D.	Gibraltar	Woolwich.
,, H. J. M'Laughlin, M.B.	Birmingham	St. Helena.
Surgeon H. J. R. Moberly	Portsmouth	C. of Gd. Hope
,, J. H. A. Rhodes	Penang	Dublin.
,, C. J. Addison	Aldershot	Netley.
,, G. J. Coates, M.D.	Malta	Cork.
,, H. W. Hubbard	,,	Devonport.
,, G. E. Weston	Nova Scotia	Chatham.
,, S. J. Rennie	Dublin	Enniskillen.
,, F. H. M. Burton, M.B.	Preston	Burnley.
,, H. A. de Lom	Barbadoes	Home Dist.
,, H. P. Birch	Ceylon	Netley.
,, S. F. Frever, M.D.	Bengal	Dublin.
,, G. E. Moffet, M.B.	Gibraltar	Edinburgh.
,, C. W. Johnson, M.B.	Birmingham	Carnarvon.
,, S. E. Duncan	Malta	Netley.
,, A. E. Morris, M.D.	Dublin	Buttevant.
,, W. H. Bean	Madras	Netley.
,, J. H. Daly	Bengal	Dublin.
,, G. J. A. Tuke	,,	,,
,, H. G. Hathaway	Dublin	Navan.
,, T. Daly	Bengal	Templemore.
,, B. Forde, M.B.	Cork	Mauritius.
,, C. W. R. Healey	Dublin	Aldershot.
,, J. W. Jennings	Chester	Preston.
,, J. E. Carter, M.B.	Dublin	Belfast.
,, D. D. Shanahan	,,	Cork.
Quartermaster C. Johnson	China	Netley.

Quartermaster M. Hewitt, appointed on April 21st, has been posted to Singapore.

THE MEDICAL STAFF.

SURGEONS E. M. HASSARD and F. T. WILKINSON, serving in the Bengal command, have leave of absence for six months on medical certificate.

Surgeon-Major POOLE ROBERT GABBETT is seconded for service on the Staff, he having been appointed Surgeon to Lord Wenlock, Governor of Madras.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR W. A. GILLIGAN, Bengal Establishment, is appointed to the officiating medical charge of the 19th Bengal Lancers, *vice* Surgeon-M. A. Ker, on field service with the Hazara Expedition.

Surgeon P. J. LUMSDEN, Bengal Establishment, is appointed to the temporary medical charge of the Guides Cavalry, *vice* Surgeon-Major A. Duncan, proceeded on field service with the Hazara Expedition.

Surgeon H. W. G. MACLEOD, Bengal Establishment, is appointed to the medical charge of the 19th Punjab Infantry, *vice* Surgeon-Major J. W. Johnston, who has retired from the Service.

Surgeon H. E. DRAKE-BROCKMAN, Bengal Establishment, on return from field service with the Miranzai Expedition, is reappointed to the officiating medical charge of the 19th Punjab Infantry, *vice* Surgeon H. W. G. Macleod.

Surgeon P. W. O'GORMAN, Bengal Establishment, on return from field service with the Miranzai Expedition, is reappointed to the officiating medical charge of the 20th Punjab Infantry, *vice* Surgeon-Major W. E. B. Moynan, on sick leave.

Surgeon H. F. WHITCHURCH, Bengal Establishment, is appointed to the officiating medical charge of the 24th Punjab Infantry, *vice* Surgeon-Major H. J. Linton, on furlough.

Surgeon C. E. L. GILBERT, Bengal Establishment, is appointed to the medical charge of the 30th Punjab Infantry, *vice* Surgeon-Major F. C. Chatterjee, transferred permanently to civil employment.

Surgeon D. T. LANE, Bengal Establishment, on return from field service with the Miranzai Expedition, is reappointed to the officiating medical charge of the 30th Punjab Infantry, *vice* Surgeon C. E. L. Gilbert.

Surgeon C. N. C. WIMBERLEY, Bengal Establishment, is appointed to the officiating charge of the 33rd Punjab Infantry, *vice* Surgeon H. E. Banatvala, on furlough.

Surgeon-Major J. LEWTAS, M.D., Bengal Establishment, Joint Civil Surgeon of Simla, is directed to reassume medical charge of the Army Head-Quarters and Establishment at Simla, *vice* Surgeon-Major C. W. Owen, C.M.G., C.I.E., proceeding on furlough.

Brigade-Surgeon EDRIC SELOUS, late of the Bengal Establishment, died at Sydenham on May 5th. He entered the service as Assistant-Surgeon February 10th, 1859, and, having been made Surgeon-Major twelve years therefrom, retired with the honorary rank of Brigade-Surgeon February 1st, 1882.

The Governor-General in Council has issued an order sanctioning the depatch of a force for operations in Manipore, to be styled the Manipore Field Force. It is composed of three columns, Deputy Surgeon-General C. P. Costello, of the Bengal Establishment, Administrative Medical Officer Assam District, being the Principal Medical Officer to the Kohima Column, and Surgeon-Major P. N. Mookerjee, of the Madras Establishment, the Principal Medical Officer to the Tammoo Column.

The Governor-General has also sanctioned the despatch of a force for operations in Miranzai and on the Kohat Frontier, to be styled the Miranzai Field Force. Brigade-Surgeon R. Harvey, of the Bengal Establishment, is the Principal Medical Officer.

THE VOLUNTEERS.

SURGEON W. FREW, M.D., First Volunteer Royal Scots Fusiliers (late the 1st Ayrshire), is granted the rank of Surgeon-Major (ranking as Major), May 9th.

Acting-Surgeon A. HOPKINSON, 1st Cadet Battalion Manchester Regiment, has resigned his appointment, which was dated February 2nd, 1889.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

OFFICE OF REGISTRARY.—For the office of Registrary, vacant by the death of Dr. Luard, the Council of the Senate nominated Mr. J. W. Clark, Superintendent of the Museum of Zoology and Comparative Anatomy, and Mr. C. E. Grant, the Assistant Registrary. A poll of the Senate was taken on Wednesday, May 13th, when Mr. Clark was elected by 362 votes, Mr. Grant receiving 178.

DEATH OF THE HIGH STEWARD.—By the death of the Earl of Powis, of St. John's College, the office of High Steward of the University is vacant. An election by the Senate will take place on May 26th. Lord Derby, Lord Rayleigh, and Lord Walsingham are spoken of as likely to be voted for.

ANTIQUARIAN COMMITTEE.—Professor Macalister, M.D., F.R.S., has been appointed a member of the Antiquarian Committee.

ADDITIONAL EXAMINERS.—On account of the large number of candidates for the Final M.B. Examination, Dr. William Ewart and Mr. H. W. Page have been appointed additional Examiners in Medicine and Surgery respectively.

SIR GEORGE HUMPHRY.—A special Court of Governors of Addenbrooke's Hospital has been summoned for May 20th, at which Dr. Butlin, the Vice-Chancellor, will, on behalf of the subscribers, present to the hospital a bust of Sir George Humphry. The Lord Lieutenant of the County, who is President of the Court of Governors, will be in the chair.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, were, at the ordinary meeting of the Council, on Thursday, May 14th, admitted Members of the College:

Abram, G. S., L.R.C.P.Lond., University College Hospital
Allan, A. W., L.R.C.P.Lond., Thistle Villa, Thornton Heath
Allott, J. E. C., L.R.C.P.Lond., 401, Old Kent Road
Ashworth, W. R., L.R.C.P.Lond., 36, Hill Street, Stoke-on-Trent
Atkey, P. J., L.R.C.P.Lond., 296, Upper Richmond Road, Putney
Barber, G. W., L.R.C.P.Lond., 46, Thornton Road, Thornton Heath
Bartlett, F. W., L.R.C.P.Lond., Fore Street, Brixham, Devon
Baskett, B. G. M., L.R.C.P.Lond., 10, Albert Villas, Cotham, Bristol
Boake, Basil, L.R.C.P.Lond., 47, Cullenswood Avenue, Dublin
Box, C. R., L.R.C.P.Lond., Holmwood, Upper Wallington, Surrey
Brett, W. G., L.R.C.P.Lond., 63, Shepherd's Bush Road, W.
Brown, R., L.R.C.P.Lond., St. Bartholomew's Hospital, E.C.
Busfield, J., L.R.C.P.Lond., 52, Harbut Road, Clapham Junction
Carling, A., L.R.C.P.Lond., 76, Union Grove, Wandsworth Rd., S.W.
Clegg, R., L.R.C.P.Lond., Monte Rosa, Accrington, Lancashire
Collings, E. B., L.R.C.P.Lond., 14, Regent Street, Barnsley, Yorks.
Collins, R. H., L.R.C.P.Lond., 5, Cancell Road, Brixton
Colyer, A. R., L.R.C.P.Lond., Rydal Mount, Streatham Hill
Constant, T. E., L.R.C.P.Lond., 41, Harmer Street, Gravesend
Corner, A., L.R.C.P.Lond., Manor House, Poplar, E.
Cornish, E., L.R.C.P.Lond., 37, Devonport Road, W.
Cory, E. R. H., L.R.C.P.Lond., The Elms, Buckhurst Hill
Dale, C. B., L.R.C.P.Lond., 23, Percy Circus, W.C.
Dalzell, A., L.R.C.P.Lond., Clifton Hall, Workington, Cumberland
Davies, D. L., L.R.C.P.Lond., 4, February Street, Upper Brook Street, Manchester
Dawson, C. L., L.R.C.P.Lond., 176, Regent's Park Road
De Renzie, H. C. C., L.R.C.P.Lond., The Chaplain's House, H.M. Prison, Wandsworth
de Segundo, C. S., L.R.C.P.Lond., 2, Aldridge Road Villas, W.
De Silva, A. H. C., L.R.C.P.Lond., 14, Nixon St., Newcastle-on-Tyne
de Wet, P. C., L.S.A., 39, Vincent Square, S.W.
Dudgeon, R. H. B., L.R.C.P.Lond., 26, Jolliffe Street, Liverpool
Ellis, J. C., L.R.C.P.Lond., The Rectory, Llanfairfechan, N. Wales
Featherstone, G. W. B., L.R.C.P.Lond., York House, Blenkarne Road, Wandsworth
Finch, E. J., L.R.C.P.Lond., 24, Addison Terrace, Notting Hill

Ford, F. C., L.R.C.P.Lond., 14, Woburn Square, W.C.
Fox, A. C., L.R.C.P.Lond., 29, Adamson Road, Hampstead
Francis, J., L.R.C.P.Lond., 2, Lyndhurst Villas, Bargate
Francis, L. J., L.R.C.P.Lond., 11, Warwick Crescent, W.
Freeman, J., L.R.C.P.Lond., Woodboro House, Bristol
Gardener, W. F., L.R.C.P.Lond., 71, South Lambeth Road
Gornall, J. G., L.R.C.P.Lond., 51, Lambeth Palace Road
Hale, G. E., L.R.C.P.Lond., St. George's Hospital
Hall, J. M., M.B.R.U.I., 258, Old Ford Road, E.
Halstead, D. G., L.R.C.P.Lond., Slindon, near Arundel
Harden, E. H. T., L.R.C.P.Lond., 441, Camden Road, N.
Hawke, E. D. H., L.R.C.P.Lond., 44, King Henry's Road, N.W.
Hawley, A., L.R.C.P.Lond., 1 Jesson Street, Coventry
Hebblethwaite, A. G., L.R.C.P.Lond., Westroyd, Mirfield, Yorks
Hey, C. E. M., L.R.C.P.Lond., 27, Natal Road, Streatham
Hoffman, A. W. W., L.R.C.P.Lond., 16, Beaudesert Road, Hammersmith
Holton, G. W., L.R.C.P.Lond., Littleworth House, Hednesford, Staffs
Home, J. A., L.R.C.P.Lond., 2, Kew Gardens Road, Kew
Mott, A. T., L.R.C.P.Lond., 3, Henrietta Street, Covent Garden
James, L. E., L.R.C.P.Lond., Richmond House, Hemberton Road, S.W.
Jeffreys, A., L.R.C.P.Lond., Briton Ferry, South Wales
Johnson, F., L.R.C.P.Lond., Claridge House, Sevenoaks
Jones, H. T., L.R.C.P.Lond., Llanfalteg, R.S.O., South Wales
Jordan, J. F., L.R.C.P.Lond., Selly Hill, Birmingham
Keyworth, A. F., L.K.Q.C.P.I., Springfield House, Marple
Kirton, C. S., L.R.C.P.Lond., 89, Windsor Road, Forest Gate
Knevitt, H., L.R.C.P.Lond., Merryfield, Merton Park, Surrey
Lander, F. J., L.R.C.P.Lond., Nottingham General Dispensary
Lansdown, C. E., L.R.C.P.Lond., 99, Bromfield Road, S.W.
Lawson, A., L.R.C.P.Lond., 12, Harley Street, W.
M'Connell, J., M.B.R.U.I., Castor, Peterborough
Marshall, F. E., L.R.C.P.Lond., Mona Lodge, King's Road, Kingston
Milton, W. F. E., L.R.C.P.Lond., 39, Fentiman Road, S.W.
Olivey, W. J., L.R.C.P.Lond., 3, Stormont Road, S.W.
Patterson, C. S., L.R.C.P.Lond., 317, City Road, E.C.
Powell, C. M., L.R.C.P.Lond., 7, Furnival's Inn
Porter, C., M.D.R.U.I., Rochestown, co. Cork
Price, A. E., L.R.C.P.Lond., 9, Clifton Crescent, Folkestone
Rake, A. T., L.R.C.P.Lond., 171, Norwood Road, S.E.
Rannie, J., L.R.C.P.Lond., Marischal College, Aberdeen
Rawes, C. K., L.R.C.P.Lond., 85, Kent House Road, Penge
Richardson, H., L.R.C.P.Lond., 114, Highbury New Road, N.
Rider, A. G., L.R.C.P.Lond., 127, Highbury Hill, N.
Rodd, M. L. B., L.R.C.P.Lond., 87, Dumford Street, East Stonehouse
Rogers, W. G., L.R.C.P.Lond., 6, Dean Street, Borough
Rowlands, F. M., L.R.C.P.Lond., The Bank, Wolverhampton
Rudd, A., L.R.C.P.Lond., 58, Maryon Road, Charlton
Saunders, J. H., M.B.Melb., 44, Blomfield Road, W.
Scudamore, L. G., L.R.C.P.Lond., 23, Granville Park, Blackheath
Seton, B. G., L.R.C.P.Lond., Derwent House, Anerley
Smith, E. N., L.R.C.P.Lond., 42, High Street, Huntingdon
Spensley, J. R., L.R.C.P.Lond., 109, Cazenove Road, Stoke Newington
Spurr, J., L.S.A., 1, Alexander Terrace, Wood Green
Spurrell, W. D., L.R.C.P.Lond., 40, Falmouth Road, S.E.
Stilwell, G. R. F., L.R.C.P.Lond., St. Thomas's Hospital
Swinton, F. E., L.R.C.P.Lond., 105, Shooter's Hill Road, Blackheath
Syrett, E. F., L.R.C.P.Lond., 1, Ashley Gardens, Victoria
Tebbs, W. H. A., L.R.C.P.Lond., 249, New Cross Road, S.E.
Thomas, A., L.R.C.P.Lond., 92, St. Paul's Street, N.
Thorpe, R., L.R.C.P.Lond., 56, Highbury Hill, N.
Thurston, H. S., L.R.C.P.Lond., 16, Royal Avenue, S.E.
Watts, T., L.R.C.P.Lond., 9, Belmont Road, Bolton
Wellington, R. H., L.R.C.P.Lond., 38, Fellows Road, N.W.
West, L. F., L.R.C.P.Lond., Banks Hill, Morley, Leeds
Wilks, H. L. E., L.R.C.P.Lond., 47, Arbuthnot Road, S.E.
Williams, H. B., L.R.C.P.Lond., 38, Tyrwhitt Road, S.E.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations and having now attained the legal age (25 years) was admitted a Fellow of the College.

Thompson, Walter, L.R.C.P.Lond., The Grange, Tadcaster, Yorks, diploma of Member dated November 10th, 1887.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At a meeting of the President and Fellows, held on Friday, May 1st, 1891, the following Licentiates in Medicine were admitted to the Membership under By-laws xvii and xxvi:

T. S. Cogan, Lic. Med. 1867, Surgeon-Major A.M.S. (retired); W. R. Macaulay, Lic. Med. 1864, London; R. F. Maguire, Lic. Med. 1871, Castleknock; I. McD. O'Farrell, Lic. Med. 1869, Brigade-Surgeon A.M.S.; H. Shea, Lic. Med. 1868, St. John's, Newfoundland.

At a meeting of the President and Fellows, held on Friday, May 8th, 1891, the following registered medical practitioners took the declaration and signed the roll of Licentiates in Medicine of the College:

*W. Greenwood, M.R.C.S.Eng. 1886; R. K. Johnston, M.D.Univ.Dubl. 1885; *S. Whitten, L.S.A.Lond. 1886.

* Also duly admitted Licentiates in Midwifery of the College.

The Diploma in State Medicine, given conjointly with the Royal College of Surgeons in Ireland, was granted to

C. O'Neill, M.D.R.U.I.

The President admitted to the Licences in Medicine and Midwifery the following candidates who have been successful at the Final Professional Examination under the Conjoint Scheme with the Royal College of Surgeons in Ireland:

M. F. Cahill, R. A. Crawford, H. M. Cullinan, F. F. Mahon, J. C. Ryan, J. A. Thompson, A. W. L. Zimmer.

UNIVERSITY OF DUBLIN.—At the Previous Summer Commencements (Comitia Æstiva Prioria), held on Wednesday, May 6th, 1891, in the Examination Hall of Trinity College, the following Degree in Medicine was conferred by the University Caput in the presence of the Senate:

Doctor in Medicine.—J. H. R. Glenn.

THE CONJOINT SCHEME OF THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND AND ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following are the results of the examinations held in April, 1891:

First Professional Examination.—A. T. Benson, J. G. Berne, C. A. Black, E. A. Bourke, E. A. Culligan, G. S. Davidge, C. J. Fallon, Miss Marie Goodwin, R. Hassard, G. Martin, E. J. Moore, D. O'Brien, M. G. Sterling, W. F. Thomline, W. A. Twigg, E. Tynan, and J. H. Walsh.

Second Professional Examination.—H. C. Beasley, W. Burke, J. P. Cassidy, T. C. Cummins, T. S. Fagan, H. S. Falkner, T. W. P. Hayes, P. J. Heneghan, A. N. Lavertine, T. P. Linde, W. L. Martin, M. M. Maughan, J. Maunsell, jun., A. J. Moran, J. S. Morgan, C. E. Murphy, A. E. M'Cann, J. D. O'Donnell, W. O'Donnell, P. Peacocke, J. F. Sheppard, E. Smith, W. A. E. Wills, C. R. Chichester, and H. La Nauze Hewitt.

Third Professional Examination.—J. Armstrong, E. H. Beamen, H. Flynn, D. H. Foley, F. W. Foot, P. G. Garland, F. J. Greeves, E. W. W. Guinness, J. P. Jameson, W. S. Kane, G. Q. Lennane, E. A. Malcomson, J. S. Proctor, G. Russell, and J. Ashornhill.

Fourth, or Final, Professional Examination.—M. F. Cahill, Dublin; R. A. Crawford, Newbliss, co. Monaghan; H. M. Cullinan, Dublin; F. F. Mahon, Dublin; J. C. Ryan, Killaloe, co. Clare; J. A. Thompson, Lisnakeagh, co. Fermanagh; and A. W. L. Zimmer, Bavaria.

Passed in Medicine:

W. E. Moore, Warrenpoint, co. Down.

Passed in Surgery:

H. Moore, Dublin.

Passed in Midwifery:

W. M. Meeke, Dublin.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, May 11th.

Vaccination.—Lord DE RAMSEY, in reply to Lord STANLEY OF ALDERLEY, said the Vaccination Act did not contain any provision as to hard labour, and therefore prisoners could not legally be made subject to that punishment. Under the present Act a prisoner might be compelled to work, and might be punished by an alteration of diet for neglect of work, but the Prison Commissioners were empowered also to make rules as to the nature and amount of the employment. Such a thing as oakum picking, for instance, would be unauthorised. Prisoners who were convicted not of an offence, but of non-compliance with an order of the Court to pay a sum of money, were now treated as debtors under the rules of the Secretary of State, and were subject to the special rules applying to debtor prisoners.

HOUSE OF COMMONS.—Thursday, May 7th.

Pollution of the Thames at Staines.—Mr. RITCHIE, in answer to Mr. ATHERLEY JONES, said as regards the Staines Urban Sanitary District the arrangements with respect to the disposal of sewage were very unsatisfactory, and he thought there was little doubt that some of the sewage from this district found its way unpurified into the Thames above the intake of water companies. This matter had been the subject of repeated communications to the Local Board, but hitherto they appeared to have failed to realise their responsibility in the matter. With regard to the Staines Rural Sanitary District, an inspector of the Local Government Board, in his report, stated that in no one of the past seven years for which he had record had the district been free from typhoid fever, and that this disease had been very high in rank among the zymotic causes of death. The Thames Conservancy Board had proceeded against the Staines Local Board, but the proceedings failed, and they had since served notice upon more than one hundred individuals. The time allowed for compliance with the notice was now expiring, and it was proposed to proceed against some of these as test cases.

Monday, May 11th.

The Factories and Workshops Bill.—The CHANCELLOR OF THE EXCHEQUER, in answer to Mr. BUNTON, said the First Lord of the Treasury preferred not to come under any obligation with regard to the consideration of the Factories and Workshops Bill on report, but some days' notice would be given.

Tuesday, May 12th.

Distribution of Sanitary Reports.—Mr. RITCHIE, in reply to Mr. ROWNTREE, said, as regards the reports of the Medical Department of the Local Government Board, the Board were in the habit of forwarding copies of such reports on local inquiries to local officers who had given assistance to the Board's inspectors in the inquiries. It was also the practice of the Board to distribute a certain number of copies of the Annual Report of the Medical Officer of the Board. In the case also of special reports, such as that on the small-pox epidemic at Sheffield, a considerable number of copies had been distributed among officers of sanitary authorities. Any

applications that the Board might receive for such reports would be considered with the desire to meet them, so far as was practicable, within the limits which might be fixed by the Treasury. It was quite within the power of a sanitary authority to purchase, at the cost of the rates, reports of this character, which they might consider would assist their officers in the discharge of their duties.

The Influenza Epidemic.—Mr. PLUNKET, in reply to a question from Mr. CALDWELL as to the number of members of the House of Commons absent through influenza, and the advisability of thoroughly cleansing and fumigating the House, said he was well aware of the ravages which the prevailing epidemic had made amongst the members of the House, and he had given directions that the House should forthwith, and during the recess, be fumigated with sulphur, which, he was advised, was the best method of preventing the spread of the disease. In reply to a question by Mr. VINCENT, the CHANCELLOR OF THE EXCHEQUER said that the attention of the Government had been called to the seriousness of the epidemic.

OBITUARY.

HENRY HENSLEY, M.D.St. And., M.R.C.S.Eng., L.S.A.,

Senior Physician Bath Mineral Water Hospital.

HENRY HENSLEY was born at Bath, April 11th, 1818, and was educated first at a private school at Charmouth, and afterwards at the Grammar School at Bath, where he was a boarder in the time of Dr. Pears. He commenced his medical studies under his elder brother Lewis, who for many years practised in Great James Street, Bedford Row, and while living with him attended lectures and hospital practice at King's College. He also studied for a time at Paris and at the Rotunda Hospital, Dublin. An old friend and fellow-student with him at Dublin writes of him:

"His memory will always be associated among those who knew him there with a strength and dignity of character, combined with a geniality of manner and a hatred of anything mean or cruel, which made him the protector of some of the students less vigorous than himself who needed protection, and the upholder, in a community of students of various nationalities, of gentlemanly and courteous behaviour which until his coming among us had been sadly wanting."

Shortly after obtaining the qualifications of M.R.C.S. and L.S.A. in 1839, he was appointed house-surgeon to the Middlesex Hospital, where he remained until shortly before he commenced practice at Bath.

In 1846 he was appointed Physician to the Institute for the Blind, Deaf, and Dumb. He took the M.D. degree at St. Andrews in 1857, and in 1868 was appointed Physician to the Bath Mineral Water Hospital. His acuteness in observation, soundness of judgment, and the extensive experience he gained in his work there made his opinion highly valued among his colleagues, while his perfect freedom from all taint of quackery, and his great consistency of character, evident even to a stranger who might go round the hospital with him, commanded and gained their respect.

A late resident medical officer associated with him in work at the hospital for five years writes of him: "Kindness to his patients was in him always the most dominating feature. If a patient were uncomfortable he would always try to find out the cause, and rectify any errors which led to it, often going far out of his professional capacity without considering the inconvenience to himself, frequently toning down the more rigid lines of hospital discipline with a tact which prevented the other patients feeling anything of the nature of jealousy; .....amidst all his duties, professional and social, the claim of the poor hospital patient was never lost sight of.....It will not be saying too much to say that to do good was his aim in life."

He had at one time a considerable private practice. He took great delight in a garden, was a keen observer of Nature, had considerable knowledge and taste in art, and, as his well-filled sketchbooks testify, was himself no mean artist; many of these sketches were made on the excursions of the annual meetings of the British Medical Association, which for many years he regularly attended, greatly enjoying the opportunities of thus meeting old friends.

Dr. Hensley died on April 21st from a painful affection of the bladder, which for some months prevented his leaving the house, or attending to his practice.

GAY SHUTE, F.R.C.S.,

Consulting Surgeon Miller Memorial Hospital.

MR. GAY SHUTE died somewhat suddenly on March 4th, at Croom's Hill, Greenwich. A year ago serious symptoms began to manifest themselves, and in October last his medical attendants thought he could not recover from the sharp attack of pneumonia and cardiac trouble which placed his life in jeopardy. Although in his 78th year at that time, Mr. Shute possessed a marvellous constitution, and ultimately made a wonderful recovery, and continued to see patients up to October last. On the evening of May 3rd he became suddenly indisposed, and died early on the following morning.

Gay Shute was born on November 1st, 1812, at Gosport, where his father was in practice. The family subsequently moved to Watford, where he was educated privately. He commenced his medical education at University College Hospital in 1829; he became a Member of the Royal College of Surgeons in 1834, and a Member and Licentiate of the Society of Apothecaries in 1836. In 1860 he obtained the Fellowship of the Royal College of Surgeons. He was much trusted by his professional neighbours, and at one time few difficult cases of midwifery occurred in that portion of South-East London where he practised without his aid being sought. He had had a considerable experience as a young man at the Chichester Infirmary, where he held the post of house-surgeon for five years.

At the age of 30 he purchased the practice of Mr. Frederick Cotton Finch, at Bexley House, Greenwich, and subsequently removed to Dr. Watford's house at Croom's Hill, where he died. He was twice married, first to Miss Rixon, of Chichester, by whom he had seven children, four sons and three daughters, of whom two sons and two daughters are still alive.

Mr. Shute was a man of fine physique, who had never known a day's serious illness until last year. He devoted himself heart and soul to his patients, and his death is very generally mourned in the district. His funeral was attended by many hundreds of people, the business establishments being closed, and the Church of St. Alphege, Greenwich, being crowded by sympathising patients and friends.

WALTER WILSON YOUNG, M.D.,

Aldershot.

DR. YOUNG, who died last week at the age of 51, was born at Hamilton, near Glasgow. He studied at the University of Edinburgh, where he graduated M.B. and C.M. in 1865. Shortly afterwards he settled in the town of Aldershot, where he pursued the active practice of his profession for over five-and-twenty years. His skill, especially in surgical and obstetrical cases, and his kindness and attention to his patients, of whatever station in life, won him the confidence and esteem of all classes.

He held several public appointments, including those of parish medical officer and public vaccinator, and police surgeon. In 1878 he graduated as M.D., presenting a thesis on Diseases of Joints.

About twelve months ago symptoms of Bright's disease began to develop, and although he continued in the full discharge of his professional duties, it was latterly with manifest difficulty that he performed them. An acute attack of nephritis in March last confined him to bed, and he never regained strength, but sank gradually, and died on April 30th.

ADELIA McCULLOCH KNIGHT, M.B.

MISS ADELIA KNIGHT, whose death from typhlitis at the early age of 25 occurred at Vienna on May 8th, was born in South Australia, and was the first Australian lady who had received the degree in medicine of the University of London. Her career was a most promising one. She passed the matriculation examination of the University of London at Adelaide, where she attended the University and carried off the Sir Thomas Elder prize for physiology in 1883. In 1885 she came to England, and entered at the London School of Medicine for Women and the Royal Free Hospital, where she won several distinctions. After passing the M.B.Lond. Examination in November, 1889, with honours, she was appointed resident

medical officer at the New Hospital for Women, and in that capacity carried out the alterations consequent on the removal of this institution from Marylebone Road to larger premises in the Euston Road. Last June the trustees of the Helen Prideaux prize unanimously conferred it upon her, this prize being the highest distinction connected with the London School of Medicine for Women. In accordance with the terms of the award, she proceeded for further study to Vienna, where she died. Her loss will be long and deeply felt.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

MEDICAL OFFICERS OF HEALTH AND OTHER PRACTITIONERS.

An adjourned meeting of the East Anglian and Midland Divisional Executive Committee of the Medical Defence Union was held at the Council Chamber of the Urban Sanitary Authority, Cambridge, on Friday, May 8th. Among those present were Dr. Barnes, Divisional President; Dr. Beckett, President for Cambs; Dr. Grove, Hunts; Dr. Balding, Herts; Drs. Mead, Anningson, Joy, Fegan, etc. On the motion of Dr. Barnes, who was unavoidably absent at the former meeting, Dr. Balding again occupied the chair.

The Honorary Secretary (Dr. Mead) read a copy of a letter which had been addressed to Dr. Joy in accordance with the resolution at the last meeting requesting information as to the grounds upon which Dr. Joy appeared to question the accuracy of certificates of death given in four fatal cases, and Dr. Joy's letter repudiating any intention to cast any reflection on the accuracy or *bona fides* of Dr. Fegan's action in cases undoubtedly of great difficulty and obscurity in their origin, and expressing his regret that any interpretation had been placed upon his report hostile to Dr. Fegan, especially as at the time they were on very friendly terms. A letter was also read from the Central Council of the Union advising on the matter.

The Chairman, Drs. Grove, Beckett, and Mead, and other gentlemen expressed their satisfaction at Dr. Joy's letter and Drs. Joy and Fegan's subsequent explanations in answer to questions from the Committee, and also at the retractation of any statements published by the Editor of the *Thetford Times* likely to be injurious to Dr. Fegan. The speakers commented on the obscurity and consequent necessity for carefulness in diagnosis of diseases of this class, and said that the public interests would undoubtedly suffer if medical men with later information and consequently wiser after the event were to sit in judgment on those who had to face the serious responsibilities and doubts of earlier and undeveloped stages.

Dr. Barnes proposed, and Dr. Grove seconded the following resolution, which was carried unanimously: "That this meeting is of opinion that the explanations given are satisfactory, and they hope that medical officers of health will be careful to so word their reports as to avoid a meaning being attached to them prejudicial to their medical *confrères*, and they are of opinion it is not advisable that the names of sufferers from infectious diseases should be included in a report intended for publication."

Dr. Mead mentioned an application from a medical officer of health in Essex who was threatened with an action by an owner for having spoken of the insanitary condition of property to an intended tenant. Dr. Mead expressed the opinion that in such cases it would be better for medical officers to mention the facts in their reports, and direct inquirers to the paragraphs containing them, than to make any direct statement to inquirers. In the case mentioned the Council were of opinion that, if any proceedings were taken, the medical officer should be defended by the Union.

The Committee unanimously resolved to thank Drs. Barnes, Beckett, Balding, Beverley, and Mead for the trouble they had taken in these matters, and the Mayor of Cambridge and Dr. Anningson for the use of the Council Chamber.

The Honorary Secretary (Dr. Mead) was requested to confer with Dr. Anningson, the Honorary Secretary of the Cambridge and Huntingdon Branch of the British Medical Association, and arrange for the holding of a meeting of the division during the June meeting of the Branch at Cambridge.

On the motion of Dr. Barnes, seconded by Dr. Beckett, it was resolved that the resolutions should be sent to the medical journals.

HEALTH OF ENGLISH TOWNS.

During the week ending Saturday, May 9th, 6,155 births and 5,555 deaths were registered in twenty-eight of the largest English towns, including London. The annual rate of mortality in these towns, which had increased from 22.5 to 26.8 per 1,000 in the preceding three weeks, further rose, owing to the increasing fatality of influenza, to 28.9, a higher rate, with three exceptions, than in any week on record. The rates in the several towns ranged from 18.0 in Bristol, 19.1 in Brighton, 19.2 in Bolton, and 23.3 in Sunderland to 40.0 in Bradford, 43.6 in Manchester, 48.3 in Leeds, and 59.3 in Sheffield. The very high rates in thelast mentioned towns were due to the fatal prevalence of influenza. In the twenty-seven provincial towns the mean death-rate was 32.9 per 1,000, and exceeded by as much as 8.9 the rate recorded in London, which was only 24.0 per 1,000. The 5,555 deaths registered during the week under notice in the twenty-eight towns included 442 which were referred to the principal zymotic diseases, against numbers increasing from 420 to 462 in the preceding three weeks; of these, 189 resulted from whooping-cough, 112 from measles, 43 from diarrhœa, 31 from "fever" (principally enteric), 32 from scarlet fever, 31 from diphtheria, and one from small-pox. These 442 deaths were equal to an annual rate of 2.3 per 1,000; in London the zymotic rate was 2.0, while it averaged 2.5 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Brighton, 0.4 in Cardiff, and 0.5 in Norwich and in Derby to 4.1 in Huddersfield, 4.9 in Manchester and in Leicester, and 5.4 in Portsmouth. Measles showed the highest proportional fatality in Bradford, Preston, Bristol, Huddersfield and Portsmouth; scarlet fever in Bradford; whooping-cough in Liverpool, Oldham, Plymouth, Leicester, and Manchester; and "fever" in Leicester. Of the 31 deaths from diphtheria in the twenty-eight towns, 24 occurred in London, and 2 in Manchester. One death from small-pox was registered during the week under notice, in Liverpool, but not one in any other of the large towns; 33 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and not one in the Highgate Small-pox Hospital on Saturday, May 9th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on the same date was 911, and showed a further decline from recent weekly numbers: 79 new cases were admitted during the week, against 84, 85, and 100 in the previous three weeks. The death-rate from diseases of the respiratory organs in London was equal to 6.8 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 867 births and 625 deaths were registered during the week ending Saturday, May 9th. The annual rate of mortality in these towns, which had been 22.1 and 23.1 per 1,000 in the preceding two weeks, further rose to 23.9 during the week under notice, but was 5.0 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Greenock, and the highest in Glasgow and Paisley. The 625 deaths registered in these towns included 72 which were referred to the principal zymotic diseases, equal to an annual rate of 2.8 per 1,000, which exceeded by 0.5 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic rates were recorded in Dundee, Glasgow, and Paisley. The 300 deaths registered in Glasgow included 11 which were referred to whooping-cough, 10 to measles, 7 to scarlet fever, and 3 to diphtheria. Eight fatal cases of measles were recorded in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 6.0 per 1,000, against 6.8 in London.

HEALTH OF IRISH TOWNS.

During the week ending Saturday, May 9th, the deaths registered in sixteen of the principal town districts of Ireland were equal to an annual rate of 24.7 per 1,000. The lowest rates were recorded in Sligo and Limerick, and the highest in Galway and Waterford. The death-rate from the principal zymotic diseases averaged 1.7 per 1,000. The 165 deaths registered in Dublin were equal to an annual rate of 24.4 per 1,000, against 27.5 and 23.0 in the preceding two weeks, the rate for the same period being 23.3 in London and 16.5 in Edinburgh. The 165 deaths in Dublin included 4 which were referred to the principal zymotic diseases (equal to an annual rate of 0.6 per 1,000), of which 2 resulted from typhoid fever, and 2 from diarrhœa.

THE DUTIES OF MEDICAL OFFICERS OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

Dr. D. Hooper, Physician to the Surrey Dispensary (9, Trinity Square, S.E.) writes: This Act I find does not require the medical officer of health or his inspector to visit notified cases; the whole and sole duty of the medical officer of health is to keep a register of them. Now, it is well known that many practitioners have notified as typhoid, diphtheria, scarlet fever, and erysipelas cases that are of a different character, and the consequences are very serious, for not only are statistics false and misleading, but uninfected patients are taken to the hospital and there exposed to the risk of infection and death. Moreover, the fees paid for these false reports represent so much money thrown away. As remedies for these evils, I would reduce the number of health officers, enlarge their districts, and increase their duties and salaries. They should give all their time to their work and do no private practice (their salaries should be such as to enable them to live without it); they could then visit every notified case, decide as to its nature, disinfect if necessary, inspect the house, and certify for or against removal to hospital. In short, they could do their duty without fear, favour, or feelings, whereas at present, being local medical

men, they cannot be expected to criticise the diagnosis of their brother practitioners in the same district. I would also insist upon higher qualifications for the office of medical officer of health, and make the D.P.H. a *sine quâ non*. And, lastly, the election of officers should be vested in some thoroughly independent body outside the district.

MEDICAL NEWS.

The General Council of the Department of the Haute Garonne in France has voted a sum of 3,000 francs towards the establishment of a chair of hydrology in the University of Montpellier.

London County Council.—At the polling for the vacancy in North Hackney on Monday last Dr. Forman gained an easy victory. The votes recorded in his favour were 2,526, and those for his opponent (Mr. Trick) were 1,736.

An examination of candidates for fifteen commissions in the Army Medical Staff will be held on August 24th next. Further particulars will be seen in the advertisement columns.

Dr. Henry Frazer died on May 10th, at his residence in Armagh, after some weeks' illness, from pneumonia, aged 43. Dr. Frazer was medical officer of the Armagh Workhouse, Physician to Shiel's Institute, and Apothecary to the County Infirmary.

The vacancy in the Demonstratorship of Physiology at King's College, London, created by the appointment of Mr. C. J. Martin, M.B., B.Sc., as Demonstrator of Physiology at Sydney University, has been filled by the appointment of Mr. P. T. B. Beale, F.R.C.S., and Mr. T. G. Brodie, M.R.C.S., L.R.C.P., as joint demonstrators.

German Congress of Internal Medicine.—The following subjects have been proposed for discussion at the next meeting of the German Congress of Internal Medicine, which will be held at Leipzig in 1892: The Physiological and Therapeutical Value of Iron; Meningitis in its Different Forms; Electrotherapy; the Treatment of Severe Pneumonia.

Brighton Home of Rest for Nurses.—Princess Christian opened this week at Brighton a Home of Rest for Nurses, of which Mrs. Bedford Fenwick is honorary secretary, the Lord Mayor treasurer, and the Duke of Abercorn and Mr. Justice Jeune trustees. The home will afford accommodation for sixteen visitors.

Sanitation in Italy.—In connection with the fourteenth Congress of the Italian Medical Association, which is to meet at Siena on August 15th, there is to be held an Exhibition of Rural Hygiene and Sanitary Engineering. The exhibition is to consist of instruments, apparatus, designs, etc., relating to public and private hygiene; only Italian exhibits will be admitted.

A course of Bacteriology will be commenced in the new Pathological Laboratory of University College, London, on June 1st. The course, which will last six weeks, will consist of lectures and practical laboratory work, and will embrace all the advanced bacteriology required for all Public Health examinations. It will be conducted by Professor Victor Horsley.

Food Inspection in New York.—From a report recently issued by the New York Board of Health it appears that during 1890 there were confiscated in that city 1,200,000 pounds of tainted meat and fish, and 1,056,000 pounds of bad fruit and vegetables. The milk inspector examined 97,000 samples of milk, and 299 arrests were made for milk adulteration.

Two recent limited epidemics of small-pox in New England are worthy of note owing to their mode of origin. In one instance (*Bost. Med. and Surg. Jl.*), a soldier returned from Texas to Meriden, and shortly afterwards the children in the family had an eruption diagnosed as chicken-pox. The diagnosis was confirmed by the health authorities, but subsequent events proved that the disease was modified small-pox. The second epidemic occurred at Waterbury, and was traced to the rag department of a paper mill.

The *London Gazette* of Tuesday announces that Her Majesty has been pleased, with the advice of her Privy Council, under and by virtue of the provisions of the Medical Act, 1886, to nominate Sir John Simon, K.C.B., F.R.S., and Thomas Pridgin Teale, Esq., F.R.C.S., to be again for the term of five years, from May 23rd, 1891, members of the General Council of Medical Education and Registration of the United Kingdom.

Jefferson Medical College.—Dr. J. M. Da Costa has resigned the Chair of Practice of Medicine in Jefferson Medical College, which he has held for nineteen years. Dr. Hobart A. Hare has been elected Professor of Therapeutics in the same institution, in succession to Dr. Bartholow. Dr. Brabaker, who was appointed to fill the vacancy caused by Professor Bartholow's sudden retirement, made no application for the permanent post.

Medical Men in Munich.—Official statistics recently published show that there are at present 323 civilian practitioners of medicine and 31 military doctors on the effective list in Munich. The population of the city being 348,317, the proportion of medical men to inhabitants is 1 to 983. Besides these, 22 dentists, 177 cuppers or bathers of the new order and 1 of the old order, and 182 midwives find more or less scope for their professional abilities in the capital of Bavaria. The number of public hospitals in Munich is 14, and there are besides 10 private institutions for the sick.

A Practical President.—The "depopulation" of France and the means of checking the progress of the evil are subjects that have for some time engaged the attention of the Académie de Médecine, but the deliberations of that learned body have not yet led to the discovery of an effectual remedy. In the meantime the President of the Académie (M. Tarnier) has taken the highly practical step of offering a bounty of 100 francs (£4) to every married couple in his native commune Arc sur Ville—who shall enrich the French Republic with an additional citizen during the year 1892.

National Health Society.—On May 9th the Duke of Westminster, president of this society, occupied the chair at a crowded gathering, when the Duchess of Westminster distributed the society's medals and certificates to the candidates who had passed examinations in domestic and personal hygiene, first aid to the injured, home nursing, and elementary physiology. More than 2,500 ladies had attended the society's lectures during the past year, and the Devon County Council had voted a sum of money for these lectures to be delivered to the wives and daughters of farmers, artisans, and labourers in that county.

Presentation.—Mr. John Taylor, on the occasion of his silver wedding day, was presented by his friends and patients in the neighbourhood with a Ralli cart, a horse and harness, also a dining-room timepiece, a silver coffee pot, and hot water jug. The Court Alexandra 4104 of the Ancient Order of Foresters presented a handsome set of silver salteellars in morocco case, with suitable inscription; and the Board of Guardians of the Ticehurst Union passed the following resolution: "That the hearty congratulations of the Board be communicated to John Taylor, Esq., medical officer for Ticehurst and the workhouse, on the happy event of his silver wedding. That his great and valuable services are thoroughly recognised and appreciated, and that this Board feel thankful that they have such an efficient officer, and one who is always ready to attend on the poor and rich alike."

The St. Petersburg Institute of Experimental Pathology.—Directors have now been found for four of the eight departments of the Institute of Experimental Pathology, which the Russian capital owes to the enlightened munificence of Prince Alexander of Oldenburg. Dr. J. S. Pawlow, Professor of Pharmacology in the Military Medical Academy, has been appointed head of the Physiological Department: Dr. N. W. Uskow has charge of the Pathologico-Anatomical Department; the Bacteriological Department has been entrusted to Dr. Winogradski, a pupil of M. Pasteur's. Professor Nencki, of Berne, has apparently reconsidered his decision, and has accepted the post of Director of the Department of Physiological Chemistry, on the condition that he is to re-

ceive a salary of 6,000 roubles a year, with a house rent free, and that his twenty years of professional service abroad are to count towards his pension. Professor Pawlow and Dr. Uskow have already entered on the duties of their respective offices.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession, in foreign countries, who have recently died, are Dr. Mandon, Professor of Therapeutics in the Medical School of Limoges; Dr. N. Albarellos, formerly Professor in the Medical Faculty of Buenos Ayres; Dr. Victor Felix Szokalski, some time Professor of Ophthalmology at Warsaw, and author of a *Manual of Eye Diseases*, written in Polish, and of numerous papers on ophthalmological subjects; Dr. Joseph Leidy, the distinguished American physiologist, Professor of Anatomy in the University of Pennsylvania, and President of the Academy of Natural Sciences of Philadelphia, at a very advanced age; Dr. F. W. Tatarinow, a well known specialist in children's diseases at Moscow; Dr. H. D. Garrison, one of the founders of the Bennett Medical College at Chicago, in which he was Professor of Chemistry for many years, and well known in America as a writer and lecturer on scientific subjects; Dr. Charles T. Parkes, Professor of Anatomy and afterwards of Surgery in Rush Medical College, Chicago; Dr. Julius Jensen, Director of the Municipal Lunatic Asylum at Dalldorf, aged 49; Dr. Friedrich Briemann, formerly Director of the General Asylum for the Insane at Prague, aged 87; Dr. J. K. Thacher, Professor of Physiology in Yale College; and Dr. Almerico Christin, Professor in the Veterinary School of Naples, and a well known writer.

MEDICAL VACANCIES.

The following Vacancies are announced:

BOROUGH OF PLYMOUTH.—Medical Officer for the Borough Lunatic Asylum, Blockadon, near Plymouth. Salary, £400 per annum, with furnished house, gas, coals, and vegetables. Applications, endorsed "Medical Officer, Lunatic Asylum," to J. H. Ellis, Town Clerk, Guildhall, Plymouth, by May 16th.

BOYLE UNION (Gurteen Dispensary).—Medical Officer. Salary, £110 per annum and fees. Applications to Mr. John Kilroy, Honorary Secretary, Clomanure, Gurteen, Ballymote. Election on May 20th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Surgeon; must be F.R.C.S.Eng., and reside within four mile radius. Applications to the Chairman of the House Committee by May 26th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Honorary Pathologist. Applications to the Chairman of the House Committee by May 26th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board, residence, and washing provided. Applications to T. Storrar-Smith, Secretary, 24, Finsbury Circus, E.C., by May 28th.

COUNTY BOROUGH OF SHEFFIELD.—Medical Officer of Health. Salary, £500 per annum; must devote his whole time. Applications to the Chairman of the Health Committee, Town Clerk's Office, Sheffield, by May 27th.

COUNTY OF CAITHNESS.—Medical Officer of Health. Salary, £300 per annum, with £50 travelling and other expenses; must not engage in private practice, and reside in Wick. Applications to James Burns, County Clerk, Thurso, by May 25th.

COUNTY OF ROXBURGH.—Medical Officer for the County; to also act as Medical Officer under the Public Health Acts for the five districts of the county. Salary, £350 per annum and travelling expenses. Applications, with eighteen copies of testimonials, to the Chairman of the Medical Committee, Broomlands, Kelso, by May 28th.

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION. Assistant Surgeon; not under 30 years of age. Salary, £160 per annum, rising £10 after six months, and £10 per annum afterwards up to £250, with midwifery fees. Applications to the Secretary, Mr. H. Bullivant, 73, Abbey Street, Derby, by May 23rd.

ECCLES AND DISTRICT MEDICAL ASSOCIATION.—Assistant Medical Officer. Applications to Mr. J. Ramsdale, 15, Byron Street, Patricroft.

GENERAL HOSPITAL, Birmingham. Honorary Surgeon. Must be Fellow of one of the Colleges of Surgeons of the United Kingdom. Applications to Dr. J. D. M. Coghill, House Governor, by June 1st.

GENERAL HOSPITAL, Birmingham.—Assistant Physician for three years. Honorarium, £100 per annum. Applications to Dr. J. D. M. Coghill, House Governor, by June 1st

GENERAL HOSPITAL FOR SICK CHILDREN, Manchester.—Junior Junior Resident Medical Officer; double qualifications: must devote his whole time. Salary, £80 per annum, with board and lodging. Applications to the Chairman of the Medical Board by June 1st.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—Honorary Pathologist; double qualifications. Applications endorsed "Pathologist" to the Secretary by May 20th.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff.—Dental Surgeon. Applications, endorsed "Dentist," to the Secretary by May 20th.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; double qualifications; unmarried, and not more than 27 years of age. Salary, £100 per annum, rising to £125 after twelve months, with furnished apartments, board, washing, and attendance. Applications, endorsed "Application for Appointment of Medical Officer," to Committee of Visitors, Knowle, Fareham, by May 20th.

HARTLEPOOL UNION.—Medical Officer and Public Vaccinator for the Greatham District. Proposed salary, exclusive of fees, £50 (if also appointed Medical Officer to the Greatham Hospital, joint salary £100) per annum; must reside within the district. Applications, endorsed "Medical Officer," to Geo. Kilvington, Union Clerk's Office, by May 27th.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE.—Fourth Assistant Medical Officer. Applications to Dr. Phillips, Virginia Water.

NOTTINGHAM BOROUGH ASYLUM, Mapperley Hill.—Assistant Medical Officer, unmarried. Salary, £125 per annum, with apartments, board and washing. Applications to the Medical Superintendent by May 25th.

NOTTINGHAM BOROUGH ASYLUM, Mapperley Hill. Locum Tenens for a month. Remuneration, £2 2s. per week, with apartments, board, and washing. Applications to the Medical Superintendent.

PARISH OF KIRKMABRECK.—Medical Officer. Salary, £30 per annum. Applications to John Carson, Inspector of Poor, Creetown, N.B., by May 20th.

PARISH OF ST. LEONARD, SHOREDITCH.—Resident Assistant Medical Officer for the Workhouse and Infirmary; double qualifications. Salary, £100, increasing £10 annually to £120, with rations, furnished apartments, and washing. Applications to Robert Clay, Clerk, 213, Kingsland Road (of whom application forms can be obtained) by May 18th.

QUEEN'S COLLEGE, Birmingham.—Professor of Medicine. Applications to Professor B. C. A. Windle, Dean of the Faculty, by May 16th.

ROYAL BERKS HOSPITAL, Reading.—Physician. Applications to the Secretary, John T. Hugo, at least ten days before the election on June 2nd.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Five Examiners in Anatomy; Four Examiners in Physiology; Examiners for Parts 1 and 2 of the Examination in Public Health; Five Examiners in Elementary Anatomy; Two Examiners in Elementary Physiology (First Professional Examination); and four Examiners in Midwifery (for the Third or Final Examination). Applications to Edward Trimmer, Secretary, by May 28th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand.—House-Surgeon. Applications to T. Beattie-Campbell, Secretary, by May 27th.

SALFORD UNION.—Assistant Medical Officer for Union Infirmary; double qualifications. Salary, £130 per annum, with furnished apartments. Applications, endorsed "Assistant Medical Officer," to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by May 26th.

SHEFFIELD UNION.—Medical Officer for the Central District of this Union. Salary, £80 per annum, with extra fees. Applications to Joseph Spencer, Clerk, Union Offices, Westbar, Sheffield, by May 20th.

SKIRLAUGH UNION.—Medical Officer and Public Vaccinator for the District of Aldbrough. Salary, £40 per annum, exclusive of fees, and inclusive of certain medicines and appliances. Applications to Thos. A. McCoy, Clerk, Beverley, by May 20th.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay.—Junior House-Surgeon and Dispenser; double qualifications; unmarried. Salary, £80 per annum, with board, lodging, and attendence. Applications to Capt. Phillpotts, R.N., Honorary Secretary, by May 16th.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. Annual fee, £30. Twenty copies of printed applications and testimonials to the Secretary of the Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by June 30th.

MEDICAL APPOINTMENTS.

ABRAHAM, P. S., M.D., M.A., B.Sc., F.R.C.S.I., appointed Honorary Physician to the Western Skin Hospital, Great Portland Street.

ALLAN, F. J., M.D., appointed Clinical Assistant to the Western Skin Hospital, Great Portland Street.

ALLDEN, Sidney, M.D.Durh., appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton.

ANDREW, Robert, M.B., C.M.Edin., appointed Medical Officer to the Parish of Kennoway, Fifeshire, *vice* Wm. Craig, M.B., C.M.Edin.

ATKINSON, Walter Alexander, M.B., B.S.Durham, appointed Certifying Factory Surgeon for the Camberwell District.

BAILEY, T. Ridley, M.D.Edin., reappointed Medical Officer of Health for Bilston.

BALDWIN, T. A., M.D., L.R.C.S.Irel., appointed Medical Officer for the Cottingham District of the Sculcoates Union, *vice* Dr. Chambers, resigned.

BEALE, P. T. B., F.R.C.S., appointed Joint Demonstrator of Physiology at King's College, London, *vice* C. J. Martin, M.B.

BIERNACKI, J., M.B., C.M., L.R.C.P. and S.Ed., etc., appointed Resident Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat.

BRODIE, T. G., M.R.C.S., L.R.C.P., appointed Joint Demonstrator of Physiology at King's College, London, *vice* C. J. Martin, M.B.

COATS, Wm. Henry, M.A., M.B., L.R.C.P., L.S.A., L.S.Sc., F.C.S., appointed Medical Officer and Public Vaccinator for the Patrington, Skefling, Easington, Welwick, and Kilnsea District of the Patrington Union.

DODSON, Arthur E., M.R.C.S., L.R.C.P., L.S.A., appointed Medical Officer Royal Victoria Patriotic Asylum for Girls, Wandsworth Common, *vice* Mr. C. St. Aubyn Hawkin.

EDIE, R., M.B., C.M.Edin., appointed House-Surgeon to the Oxford Eye Hospital, *vice* Dr. J. Gordon.

ELAM, W. H., F.R.C.S., appointed Medical Officer for the East Barnet Sanitary District.

EUSTACE, Jn., M.B., C.M.Dub., appointed Clinical Assistant to the Royal Asylum, Edinburgh.

FAUSSET, J. D., M.D.Dub., L.M. and L.S., appointed Medical Officer of Health for the Fleetwood Urban Sanitary District of the Fylde Union.

GIBSON, J. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Aldershot District of the Farnham Union, *vice* W. W. Young, M.D., resigned.

GIMBLETT, W. H., L.R.C.P., appointed Medical Officer to Homerton College, also to the Linen and Woollen Drapers' Institution.

GREENE, W. G., appointed Medical Officer to the Howth and Baldoyle Dispensary District, *vice* Dr. Neary.

HARRINGTON, Henry N., M.R.C.S., L.R.C.P.Irel., appointed Medical Officer to the Birkenhead Post Office.

HEARN, Richard Thomas, M.D., appointed Physician to the National Institution for the Blind, Leeson Park, Dublin, *vice* Dr. Nolan, resigned.

HEELAS, Walter W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Medical Officer to the Sick Children's Hospital, Newcastle-on-Tyne, *vice* Dr. G. Thyne.

HICKENS, Frank, M.D.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Stithians District of the Redruth Union.

JAMESON, A. S., M.B., C.M.Aberd., reappointed Parochial Medical Officer of Slains, Aberdeenshire.

KIDD, Archibald, M.R.C.S. and L.R.C.P., appointed House-Surgeon to the Middlesex Hospital.

LAIRD, Thomas, M.B., C.M.Glasg., appointed Medical Officer of Health, Soothill Upper Urban Sanitary of the Dewsbury Union, *vice* C. Clay, M.R.C.S., resigned.

LANGFORD, P. P., M.R.C.S., appointed Medical Officer for the East Finchley Sanitary District.

LITTLE, Wm. Maxwell, M.D., C.M.Edin., appointed District for Selangor, Straits Settlements.

LOWNDS, C. J., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glas., appointed Medical Officer for the Earnley Tyas Urban Sanitary District of the Huddersfield Union, *vice* H. A. Lownds, resigned.

MCKEOGH, Thomas, L.F.P.S.Glas., L.A.H.Dub., appointed Resident Apothecary to the County Mayo Infirmary, *vice* M. A. Rynne, M.A.

MARTIN, C. J., M.B., B.Sc., appointed Demonstrator of Physiology at Sydney University.

MURIEL, C. J., L.R.C.P.Lond., M.R.C.S., appointed Assistant Surgeon to the Norfolk and Norwich Eye Infirmary, *vice* Dr. Morse, resigned.

OLDHAM, Montague W., M.R.C.S., L.R.C.P., L.S.A., appointed Surgeon to the Coventry Provident Dispensary.

PANTING, John, M.A.Cantab., M.R.C.S., L.R.C.P., appointed House-Physician at the Middlesex Hospital.

PYE-SMITH, R. J., F.R.C.S., L.R.C.P.Lond., reappointed Honorary Surgeon to the Sheffield Hospital and Dispensary.

RADFORD, W. J., L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Medical Officer at the St. Marylebone General Dispensary, 77, Welbeck Street, W.

ROBERTSON, J. Begg, M.B., C.M.Edin., appointed Assistant Medical Officer to the Fife and Kinross District Asylum.

ROBERTSON, Robert, M.B., C.M.Glasg., appointed Medical Officer to the Lanarkshire Steel Company's Works, Flemington, Motherwell.

SHAW, Ernest A., B.A., M.B., C.M.Cantab., appointed Pathologist and Anæsthetist to the West Riding Lunatic Asylum, Wakefield, *vice* Edwin Goodall, M.D.Lond.

ST. JOHNSTON, George, M.R.C.S., L.R.C.P., appointed House-Physician to the Queen's Hospital, Birmingham.

STOTT, H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Friern Barnet Sanitary District.

THOMSON, Theodore, M.B.Lond., L.R.C.S.Edin., D.P.H.Camb., appointed Inspector to the Medical Department of the Local Government Board.

WILKINSON, J. H., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Guest Hospital, Dudley, *vice* E. H. Strong, M.R.C.S., L.R.C.P.

WILLIAMS, C. Theodore, M.A.Oxon., M.D.Lond., reappointed Physician to the Consumption Hospital, Brompton.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: Affections of the Cornea. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Voelcker: The Pathology of Tuberculosis in Children (Demonstration).

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: Mental Stupor, Dementia. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: Pruriginous Affections of the Skin.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Mr H. B. Robinson: Cystic Tumours of Jaw. Mr. C. A. Ballance: Large Aural Exostosis. Mr. E. Roughton: Lipoma of Spermatic Cord with Hernia. Dr. S. Sharkey: Ulcerative Colitis. Dr. J. F. Payne: Syphilitic Caries of Calvaria in an Infant. Dr. F. Semon: Anomalous Tumour from Ary-epiglottidean Fold. Dr. H. D. Rolleston: Myocarditis limited to the Right Side. Dr. S. Delépine: Cultures of Psorospermiæ. Mr. C. A. Ballance and Mr. S. G. Shattock: Negative Results of Psorospermial Inoculation in Animals. Card Specimens:—Dr. S. West: Secondary Sarcoma of Lung. Dr. A. F. Voelcker: Tuberculosis of Thyroid. Dr. Rolleston: Lung invaded with Colloid Carcinoma. Mr. H. B. Robinson: Ulcerative Colitis.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Kingston Fowler: Arrest of Pulmonary Tuberculosis, with Cases. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: Glaucoma.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 8 P.M.—Annual Meeting. Dr. A. Campbell Munro: Measles: an Epidemiological Study.

ROYAL MICROSCOPICAL SOCIETY, 8 P.M.—Mr. E. M. Nelson: Illuminating Apparatus. Mr. T. B. Rossiter: On a new Cysticercus and the Tænia produced from it.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7 P.M.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Charlton Bastian: Selected Cases of Disease of the Brain. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Barlow: Rheumatism in Children. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. George Stoker: Syphilis and Phthisis of the Larynx.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Clinical Evening. Cases will be shown by Messrs. Squire, Hill, Spicer, Pepper, Juler, and others.

NEUROLOGICAL SOCIETY OF LONDON, St. Mary's Hospital, 8.30 P.M.—Dr. Beevor: On some points in the Actions of Muscles. Dr. Waller: On the Sense of Effort. Dr. Mott: The Results of Hemisection of the Spinal Cord in Monkeys.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Professor Crookshank: Lecture: Cultivation of Bacteria. Practical Work: Examination of Various Cultivations. Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Kingston Fowler: Arrest of Pulmonary Tuberculosis, with Cases. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Liver and Spleen.

CLINICAL SOCIETY OF LONDON, 8 P.M.—Living Specimens:—Mr. Bruce Clarke: Case showing a new method of Amputation just below the Knee-joint. Mr. W. H. Bennett: Symmetrical Enlargement of Parotid Glands. Dr. Calvert: (1) Case of Congenital Cranial Synostosis; (2) Case of Hysterical Hiccough. Mr. W. H. Battle: Case of Fæcal Abscess after Operation. Mr. E. H. Fenwick: Case of Congenital Scrofula. Dr. Herringham: Case of Hereditary Chorea in an Elderly Man. Dr. Bolton Tomson (introduced by Dr. Savill): Two Cases of Hereditary Muscular Spasm. Mr. Brodhurst: Case of Scoliosis with Rotation. Dr. Savill: Case of Hysterical Rachialgia. Papers, 9 P.M.—Dr. Sidney Phillips: A Case of Typhoid Fever, with occlusion of the femoral artery during convalescence, and with acute maniacal attacks. Dr. Ord and Dr. Copeman: A Case of Leucocythæmia under observation nearly three years. Dr. Maclagan: Cases of Neuritis and Spurious Arthritis. Dr. Remfry: Case of Pulmonary Embolism.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

BULLEN.—On April 16th, at Benares, India, the wife of Surgeon J. W. Bullen, M.D., Medical Staff and Staff-Surgeon, of a daughter.

CHETHAM-STRODE.—On April 30th, at 101, Bethune Road, Stamford Hill, N., the wife of R. Chetham-Strode, M.B., of a son.

LE MOTTÉE.—At Chakrata, North-West Provinces, India, on April 11th, the wife of Surgeon-Major G. H. Le Mottée, Medical Staff, of a daughter.

PATERSON.—On May 8th, at Stanley House, Aldershot, the wife of Charles Edward Paterson, M.D., of a daughter.

DEATHS.

BURNIE.—On May 1st, at his residence, Haughton House, Bradford, William Burnie, M.D.Edin., L.R.C.P.Edin., in the 76th year of his age.

LILLY.—At Guernsey, on May 10th, John Hoyland Lilly, L.R.C.P.Edin., L.F.P.S.Glas., of Bitterne, Hants, formerly Medical Superintendent of the Western Infirmary, Glasgow, and Physician Superintendent of the City of Glasgow Fever Hospital, aged 45.

ROWLANDS.—On May 3rd, at Ebenezer, near Carnarvon, William Rowlands, M.D., aged 36 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily. 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.* W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.45; females, Th., 8.45. *Operation Day.*—Tu., 2.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 1, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.* Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

BOOKS ON SYPHILIS.

I. M. S. asks which works on syphilis, published in the English language, give the most exhaustive information regarding the disease, especially from a clinical and pathological point of view?

*** *Syphilis and Local Contagious Disorders*, by B. Hill and Cooper. *The Pathology and Treatment of Venereal Diseases*, by Bumstead and Taylor. *Syphilis*, by Hutchinson, is a smaller work, and though not a systematic or exhaustive treatise, is full of valuable information.

ANSWERS.

JUSTITIA.—We are advised that £5 would be a reasonable fee under the circumstances mentioned.

LAYMAN.—We are not prepared to discuss the hypothetical cases put by our lay correspondent.

E. P. K.—The value to be attached to peeling of the skin as an evidence of recent scarlatina cannot be stated absolutely. All the facts in the case must be taken together; but there are, no doubt, cases in which extensive peeling of a characteristic kind would be conclusive evidence for all practical purposes.

RUSTICUS.—If a large work on the anatomy, physiology, and pathology of the eye is wanted, Noyes's *Diseases of the Eye* (Wm. Wood and Co.) would be found useful. If a smaller work is preferred, either Swanzy's *Diseases of the Eye* or Carter and Frost's *Ophthalmic Surgery* (Cassell) might be obtained.

B. A.—We are not acquainted with any works on physics or chemistry specially designed for Public Health examinations. An elementary knowledge of chemical and physical principles is required, but candidates are not specially examined in these subjects, and all the information necessary is contained in good works on hygiene. *Hygiene and Public Health*, by Dr. Arthur Whitelegge (Cassell and Co., London, 1890), and *Public Health*, by Dr. Louis Parkes, may be recommended.

SURGEON, ETC.—The advertisements are, no doubt, designed to attract the weaker sort of "Spiritualists" suffering from physical ailments. Magnetic healers and clairvoyant diagnosers flourish exceedingly in the United States.

MEMBER B.M.A.—By the law of England an habitual drunkard cannot be subjected to restraint, unless guilty of some criminal offence or insane, unless he voluntarily appear before two justices and sign an agreement to surrender his liberty in some licensed retreat, for any period not exceeding twelve months. Full particulars are to be found in *Inebriety, its Etiology, Pathology, Treatment and Jurisprudence*, by Dr. Norman Kerr, 2nd edition. H. K. Lewis.

A. B. C.—1. The old apprenticeship deed was for five years. Any digression therefrom could only be by mutual arrangement. 2. The number of undergraduates studying medicine at Cambridge University has very much increased during the last ten years. The number at present is said to be over 400.

EXAMINATION FOR L.R.C.P.I.

CANDIDATE.—We may remind our correspondent that the qualification about which he asks is now "L.R.C.P.I.," not "L.K.Q.C.P.I." The examination is, we are informed, thoroughly practical, and great weight is attached to the clinical portion of it. Candidates are allowed to select their own textbooks on the various subjects of examination, which are: Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. Toxicology is held to be included under Medical Jurisprudence, and Gynæcology under Midwifery.

Removal of Hair from the Face.

Dr. Carey Coombs (Castle Cary, Somerset) writes: Electrolysis is simple and effectual in the case of a small beard or moustache. No special electrodes are needed, though a needle-holder is a help. Attach a silver suture wire to a very fine sewing needle and connect the wire with the negative pole of a battery. Three or four small Leclanché elements will answer the purpose. To the positive pole attach, by the usual cord, any sponge-holder. This is to be kept (wet) on the skin of the neck or shoulder. Then, with a pair of dressing forceps, seize a single hair, pass the needle by the side of the hair into the follicles. Bubbles of gas appear, and, with very slight traction, the hair comes out. The number removed at one sitting will depend on the patience of the fair barbarian. Fresh lime, applied in a moist state, will remove fine downy hair without much injury to the skin.

NOTES, LETTERS, Etc.

Prize.

The Philosophical Society of Berlin offers a prize of 1,000 marks (£50) for the best essay on the relation of speculative philosophy to the empirical study of nature. Essays which may be written in German, French, English, or Latin, must be sent in before April 1, 1893.

An Enormous Ovarian Cyst.

Dr. Norberto Maglioni, of Buenos Ayres, recently removed an ovarian cyst weighing 37 kilogrammes (about 81lbs.) from a woman aged 75. Before removal the abdomen measured 1 metre 38 centimetres in circumference. Healing took place by first intention, and was complete in eight days. The case is reported in the *Anales del Circulo Médico Argentino* for February, 1891.

A Learned Assistant.

M.R.C.S. writes: In reply to "Member," I observe that his letter bears quite a humorous tone, as treating upon a matter of fun and not of any grave import, in which light, however, I feel disposed to view it. It seems to cast an imputation upon the Royal College of Surgeons, and I think that it ought to be looked into, that any misunderstanding may be rectified and due apologies made, or that such a thing as applied to a Member of the Royal College of Surgeons may not appear again.

Dermatological Prize.

Dr. Alfred Eddowes (Old Burlington Street, W.) writes: May I point out that in the British Medical Journal of May 9th there is a slight mistranslation of the title of the essay which Dr. Unna has selected for competition for his prize this year? "Connective tissue, etc.," should read "elastic tissue, etc." (*elastisches Gewebe*).

A Consulting-room Thief.

Dr. W. H. Gimblett (Hackney, N.E.) writes: It may be interesting to the readers of the British Medical Journal to know that the "consulting-room thief" is still at large. He visited me at the above address on May 4th—of course, at other than the consulting hours—making exactly the same request as at Dr. Quiller's, of Clapham Common. His appearance was the same as described by Dr. Quiller in the British Medical Journal of April 18th. As far as I am aware at present, I am the loser of Brunton's *Pharmacology and Therapeutics*. No doubt if he had not been disturbed other things would have gone as well. He left the name of Davenport.

The Treatment of Pneumonia.

Dr. J. D. Windle (Southall, Middlesex) writes: Surely Dr. C. R. Illingworth's pathology and his treatment of the disease are quite at variance with modern teaching, nay, even with common sense. (*a*) Most pathologists are agreed that pneumonia is a specific febrile disorder, due to a definite micro-organism, the diplococcus pneumoniæ. Of course this does not refer to catarrhal pneumonia, which is usually an extension from the bronchi, but to ordinary (that is, croupous) pneumonia. (*b*) It seems to me a sort of see-saw treatment to give drugs to cause hypersecretion, then immediately to check it, as Dr. Illingworth avowedly does. (*c*) As to all inflammatory diseases requiring depressant and not stimulant treatment, it would be interesting to see Dr. Illingworth's statistics of his cases of asthenic pneumonia treated on these lines. Of the twenty-two cases he mentions, one naturally infers that they were of a marked sthenic character, except the fatal one, which was probably of the very opposite kind. (*d*) Finally, Dr. Illingworth very dogmatically says, "I never take a temperature." Let us hope the nurse in charge of the case performs this very important duty for him.

Dr. C. R. Illingworth (Clayton-le-Moors) writes: Dr. David Jones argues, with Dr. Hughes, that iron proves useful in pneumonia because the disease has a micro-organismal origin. Iron is also useful in many forms of debility, in hæmorrhage, Bright's disease, and bronchitis; but to allege that its good effects in those complaints are due to a similar cause would, in my opinion, be just as reasonable.

In so vitally important a matter, with the pneumonic and bronchitic complications of influenza working ravages in our midst, I would urge further attention to the iron treatment of chest mischief, and the *modus operandi*. Meanwhile, with confidence begotten of experience and success in the treatment of bronchitis and pneumonia, I prescribe iron, because it increases the fibrin-forming power of the blood, and thus checks the effusion of watery secretions into the bronchial tract.

Bromide of Ammonium.

Dr. G. P. Best (Cedars Road, S.W.) writes: It is a mistake to suppose that ammonium bromide has any hypnotic action at all comparable with that of the potassium salt. In an attack of influenza my wife had two winters ago, I found the latter salt the most really effective drug I used, both in its direct hypnotic effects and in the general results to the system accruing from the perfect rest obtained through its use. In a renewed attack just past, I gave my preference to the ammonium salt on the theoretical ground that, the depression being extreme in the case, the more stimulant salt would be safer, and probably better to use. But the clinical test soon dispelled the idea. I returned to the potassium salt with some reluctance, but the effect, special and general, was so markedly superior to that of ammonium bromide, that I am disposed to ask if any one knows any cause why the latter should not be expunged from the *Pharmacopœia*. The multiplicity of drugs is a real obstruction in the way of the clinician, and the ridding the *Pharmacopœia* of even one useless or superfluous drug is a boon not to be lightly esteemed.

Sawtell Fund.

Messrs. V. D. Harris (31, Wimpole Street), G. T. Penny (Oakfield Road, N.), and H. Taylor (180, Kennington Park Road, S.E.), write: Will you kindly allow us, in the columns of the British Medical Journal, to acknowledge with thanks the following subscriptions which have been either paid in or promised, in answer to the appeal which was sent out on behalf of the widow and children of the late T. H. Sawtell, M.D. Lond., M.R.C.P., M.R.C.S., who died, in February last, of pulmonary consumption, after several years' illness, leaving very inadequate provision for his family.

	£	s.	d.		£	s.	d.
Sir Andrew Clark	5	5	0	Mrs. Barlow	1	0	0
Sir Dyce Duckworth	3	3	0	Mr. G. Brown (*Hospital Gazette*)	2	2	0
Sir James Paget	2	2	0	Mr. Webber	1	1	0
Sir William Savory	5	5	0	Dr. L. Heath	1	1	0
Mr. Morrant Baker	5	5	0	Mr. Patmore Sheehy	5	5	0
Dr. Andrew	5	5	0	Mr. Webb	0	10	6
Mr. Howard Marsh	5	5	0	Mr. Walter Pye	1	1	0
Dr. Church	5	5	0	Dr. Twining	1	1	0
Mr. Harrison Cripps	5	5	0	Miss Edelston	0	10	6
Dr. Champneys	5	0	0	Dr. Kirsopp	0	10	6
Mr. Langton	10	0	0	Dr. Albert Venn	3	3	0
Mr. Percy Shadbolt	5	5	0	Mr. G. H. Hames	3	3	0
Mr. Robert Bruce	1	0	0	Mr. Kingston Barton	2	2	0
Dr. Brunton	2	2	0	Mr. W. H. Hatfield	1	1	0
Mr. Butlin	5	5	0	Mr. G. S. A. Waylen	5	0	0
Dr. W. Collingridge	3	3	0	Mr. B. J. Vernon	3	3	0
Mr. Cumberbatch	5	0	0	Mr. H. W. W. Goodsall	1	1	0
Dr. Gee	5	0	0	Mr. Crecy Parnell	2	2	0
Dr. Clement Godson	5	0	0	Dr. W. G. Burnie	2	2	0
Dr. Walter Griffith	1	1	0	Mr. F. A. Hall	1	1	0
Mrs. Beckford	5	0	0	Mr. R. E. W. Brewer	5	5	0
Mr. E. Howley Palmer	10	0	0	Mr. W. M. Burgess	1	1	0
Dr. Frederick Orton	10	10	0	Mr. W. Odell	1	1	0
Dr. F. de H. Hall	2	2	0	Mr. Alban Doran	2	2	0
Dr. V. D. Harris	5	5	0	Dr. H. Goude	1	1	0
Mr. Macready	3	3	0	Mr. F. H. Carter	3	3	0
Dr. Norman Moore	2	2	0	Dr. A. F. Stevens	2	2	0
Mr. Henry Power	5	0	0	Dr. S. Hendle (Darwen)	2	2	0
Mr. T. Smith	5	5	0	Mr. Mark H. H. Vernon	2	2	0
Dr. Herbert Taylor	5	5	0	Dr. James Adams	1	1	0
Mr. Willett	5	5	0	Dr. C. E. Harrison	3	3	0
Dr. Firth	2	2	0	Mr. H. Goodsall	3	3	0
Mr. Lockwood	1	1	0	Dr. M. J. Anderson	1	1	0
Dr. Ormerod	2	2	0	Mr. J. Mills	2	2	0
Dr. Samuel West	2	2	0	Dr. T. G. Alderton	1	1	0
Dr. George R. Howat	5	0	0	Dr. A. Baldock	1	1	0
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Dr. E. Jepson	1	1	0	Dr. E. C. Cripps	1	1	0
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Dr. W. Fairbank	1	1	0	Mrs. Ralli	5	0	0
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Mr. F. S. Eve	2	2	0	Rev. Mr. Robertson	2	2	0
Dr. T. Buzzard	3	3	0	Mr. Mac Fadyan	3	3	0
Dr. Bradshaw	3	3	0	Rev. C. W. Edmonstone	2	2	0
Mr. Alfred Peace (Bridgwater)	2	2	0	Mr. Colliver	1	1	0
Dr. T. W. Shore	2	2	0	Dr. H. Lewis Jones	5	0	0
Mr. E. Barnett	1	1	0				

As it is proposed to close the subscription list at the end of May, we should esteem it a favour if all subscriptions were paid in by that time; we should also be much obliged if any error which may have occurred in the above list be pointed out to us.

Virchow Testimonial Fund.

The following additional subscriptions have been received:

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A. C. E. Harris, M.B., F.R.C.S.	1	1	0	Byrom Bramwell, M.D.	1	1	0
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				Sir Dyce Duckworth	2	2	0

Adherent Membranes and the Queen's English.

E. M. S. writes: It seems to the frivolous reader fortunate for Dr. Roberts, who writes "I lately confined Mrs. M.," that he is not her husband, or Lords Halsbury and Esher might have had a say in the matter. Seriously, however, is there any justification for this use of

"confine" as applied to the doctor? Surely the child is the confining cause, and Nature, doctor, and midwife are the releasing agents. This seems to be a real abuse of language, especially when there is a word like "deliver" ready and willing for Dr. Roberts's pen. Otherwise the policeman will be on the warpath, and writs of habeas corpus will flit round the medical doorplates.

*** We rather question "E. M. S.'s" correctness in his derivation of the verb "to confine." On his side he has a standard authority, who compares it to the Middle English "Our Lady's bands or bonds" used in the sense of "enceinte," but there appears to be no historical proof of any relation between the two terms. The substantive "confinement" and the verb "to be confined" cannot be found in English literature earlier than the close of the eighteenth century. They seem to be illustrations of that tendency to euphemism in matters supposed to be indecent or indelicate, which characterises our modern womanhood, and which made its appearance in the last century. "Labour" or "childbirth" were indelicate terms, but a person so affected was "confined" to her bed or apartment. So the word "confined" or "confinement" replaced the earlier and more explicit term; and finally, as all such objectionable euphemisms do, dominated the adopted term to the exclusion of the original meaning. For instance, John Abernethy as lately as 1804 speaks of a young lady patient of his as "recovering slowly after her confinement"—a sentence which now could bear but one meaning, but Abernethy merely used the word as implying confinement to the patient's room by ordinary illness. A dozen other words could be mentioned which the same fate has befallen; for example, "belly" has been replaced by "stomach," which in its turn gives way in young lady's parlance to "chest." The substantive and verb "confinement" and "confine" have (unfortunately) been adopted during the present century into medical literature, and must now be considered, not in the light of their original derivation, but of their present meaning, that is, "confinement" must be taken as equivalent to the French "accouchement" (which has a like euphemistic origin), while to the verb "confine" may be given an active sense—the one our correspondent dislikes—exactly as the verb "accoucher" has an active as well as a passive meaning in French, translatable in English "bring to bed." So, as the "accouchement" "confines" the patient to her room, the doctor who attends her may in like euphemism be said "to confine" her, that is, he is the active cause + Nature of her delivery, which modern delicacy preferred to call her "confinement"—a term now in its turn becoming indelicate. At all events, the verb active "to confine" is not used by Dr. Roberts for the first time. It is to a certain extent useful, and is no more objectionable than the substantive or verb which "E. M. S." accepts, of which it is, after all, only the inevitable development and natural outgrowth; language, like trees, being in constant process of growth and increase, both active and passive verbs being daily invented from substantives for convenience, being adopted into the language for a like reason, and although incapable of defence on strict philological lines, becoming as much a part of our speech as words which Shakespeare knew and used.

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(**A**) Mr. C. A. Altmann, Port Lincoln; Dr. Abercrombie, London; Dr. J. Adams, Eastbourne; Dr. R. S. Anderson, Spennymoor; Mr. W. A. Atkinson, London; Dr. S. Allden, London; Mr. A. Appelbe, Belfast; Dr. J. Aikman, Guernsey; Dr. F. J. Allan, London; Brigade-Surgeon E. Amesbury, Brighton; Mr. C. E. Abbott, Braintree. (**B**) R. C. Benington, M.B., Newcastle-on-Tyne; T. R. Bailey, M.B., Bilston; J. Biernacki, M.B., Stockport; Mr. G. F. Blake, Dublin; Dr. H. Barnes, Carlisle; Dr. E. Burd, Shrewsbury; Mr. T. H. Bagshaw, Salford; Dr. D. Bruce, Netley; Dr. W. P. Biden, Hyères; Bouillon Fleet Company, London; J. F. Boa, M.B., Bishop's Castle; Dr. J. Berry, London; Mr. C. S. Buck, Milverton; Dr. T. Bridgwater, Harrow; G. P. Best, M.P., London; Dr. W. Blair, Jedburgh; Mr. A. Berrill, South Woodford; Dr. Binnie, Brandon Colliery. (**C**) Mr. E. Caudwell, Manchester; Mr. A. Cooper, London; Mr. A. W. Cadman, London; Dr. T. Churton, Leeds; Messrs. T. and A. Constable, Edinburgh; Mr. W. Cheyne, London; Dr. A. E. L. Charpentier, Uxbridge; Dr. L. Caresi, Naples; Surgeon-General Cornish, London; Dr. C. Coombs, Castle Cary; Dr. G. A. Carden, Cheltenham; Dr. W. A. Carline, Lincoln. (**D**) Director-General of the Army Medical Department, London; Messrs. Down Brothers, London; Dr. J. G. Dill, Brighton; Mr. A. Doran, London; Dr. Denby, Bradford. (**F**) Mr. Adams Frost, London; Dr. G. Ferdinand, Aberdeen; Dr. H. Frere, Bradford; Mrs. Fisher, Brighton; Mr. H. Frowde, London; Mr. M. Forbes, Edinburgh. (**G**) Mr. W. H. Gimblett, Hackney; Dr. S. Guttmann, Berlin; Mr. E. Guelpa, Paris; Messrs. Goddard, Massey, and Warner, Nottingham; Mr. W. Gurner, London; Mr. J. Good, Robertsbridge; Dr. J. Griffiths, Cambridge; Dr. J. Grant, Ringwood; Mr. J. Gibson, Greetland; Dr. A. H. Griffith, Manchester; Mr. H. Goodman, Downham. (**H**) Dr. F. T. Heron, Rathmines; Dr. H. Handford, Nottingham; Dr. D. Hooper, London; Mr. W. Holder, Hull; Sir Guyer Hunter, M.P., London; Dr. Halliburton, London; Dr. V. Harris, London; Mr. C. Hirsch, South Hampstead; Dr. Peter Horrocks, London; Dr. J. W. Hunt, London; Mr. Victor Horsley, London; Dr. P. J. Hensley, London; Mr. C. Hogg, London. (**I**) Dr. C. R. Illingworth, Accrington. (**J**) Dr. H. N. Joynt, Birmingham; Surgeon-Major W. T. Johnston, Brindisi. (**K**) Mr. A. Kidd, London; Messrs. King, Mendham and Co., Bristol; Mr. E. C. Kingsford, East Molesey; Dr. Norman Kerr, London; Mr. C. P. King, Chepstow. (**L**) Professor E. Ray Lankester, London; Dr. E. Liveing, London; Dr. H. G. Lys, Bournemouth; Mr. C. B. Lockwood, London. (**M**) Mr. E. Merck, Darmstadt; M.S.; Miss E. Miller, Plymouth; Dr. W. Murrell, London; Mr. L. A. Mott, Cheltenham; A Member B. M. A.; Dr. D. E. B. Marsh, Newport, Mon.; M.B., M.A.; Dr. W. McMurray, London; Mr. F. H. Moore, Liverpool; Dr. Mead, Newmarket; Mr. H. A. H. McDougall, Wincanton; Dr. Myrtle, Harrogate; Mr. W. Marriott, London. (**O**) Dr. W. Ogle, Derby; Dr. C. O'Neill, Belfast; Mr. M. W. Oldham, Coventry. (**P**) Dr. C. E. Paterson, Aldershot; Dr. Leslie Phillips, Birmingham; Mr. J. Panting, London; Mr. T. Pennington, Willenhall; Mr. C. A. Pearson, London; Dr. L. Parkes, London; Dr. F. T. Paul, Liverpool; Mr. D'Arcy Power, London; Mr. J. Poland, London. (**R**) Mr. G. W. Ridley, Newcastle-on-Tyne; Dr. R. R. Rentoul, Liverpool; Dr. J. Reynolds, Brixton; Mr. H. A. Riles, Tottenham; Mr. G. A. Raverty, Upper Clapton. (**S**) Messrs. Street and Co., London; Secretary of the West London Medico-Chirurgical Society; Mr. L. W. Swabey, Jullundur; Surgeon-Major I.M.D.; Dr. Sykes, Mexborough; Mr. G. St. Johnston, Birmingham; Secretary of the Royal Microscopical Society, London; Secretary of the Nottingham Medico-Chirurgical Society; Dr. F. W Smith, Leamington; Mr. A. H. Stokes, Sandown. (**T**) Mr. J. Tay, Bristol; Sir Henry Thompson, Falmouth; Dr. H. C. Tweedy, Dublin; Dr. J. Taylor, Ticehurst; Mr. H. H. Tooth, London. (**U**) Mr. P. Ukarji, London; Dr. C. T. Urquhart, Aberdeen. (**V**) Mr. T. J. Verrall, Brighton. (**W**) Dr. W. Wilson, London; Mr. W. E. Walter, Chippenham; Dr. T. Williams, London; Dr. G. T. Walters, Stonehouse; Dr. T. J. Walker, Peterborough; Messrs. A. W. Watson and Co., Hong Kong; Mr. W. Wykesmith, Wimborne; Dr. J. A. Wilson, Springburn; Dr. H. Woods, London. (**Y**) Miss M. Yates, London; etc.

BOOKS, Etc., RECEIVED.

Manual of the Domestic Hygiene of the Child. By Julius Uffelmann, M.D. Translated by Harriet Ransom Milinowski. Edited by Mary Putnam Jacobi, M.D. London and New York: G. P. Putnam's Sons. 1891.

Supplement to a Textbook of Pharmacology, Therapeutics, and Materia Medica. By T. Lauder Brunton, M.D., F.R.S. London: Macmillan and Co. 1891.

Memoires et Bulletins de la Société de Médecine et de Chirurgie de Bordeaux. 1er et 2e Fascicules, 1890. Paris: G. Masson. 1890.

Atlas of Clinical Medicine. By Byrom Bramwell, M.D. Vol. I, Part I. Edinburgh: T. and A. Constable. 1891.

Guy's Hospital Reports. Edited by N. Davies-Colley, M.A., M.C., and W. Hale White, M.D. Vol. xlvii. London: J. and A. Churchill. 1890.

Battles fought in Yorkshire. By Alex. D. H. Leadman, F.S.A. London: Printed by Bradbury, Agnew and Co. 1891.

The Physical Diagnosis of the Diseases of the Heart and Lungs and Thoracic Aneurysm. By D. M. Cammann, B.A.Oxon., M.D. London and New York: G. P. Putnam's Sons. 1891.

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AN ADDRESS
ON
MEDICINE AND MEDICAL ORGANISATION IN JAPAN.

Delivered, by request, to the Medical Faculty of Tokio.

By ERNEST HART.

(*From a Shorthand Report in the "Japan Mail," April 9th.*)

The Character and Contrasts of Japan.—The Imperial Japanese University and its Professors.—The Museums and Hospitals.—Praise and Criticism.—Suggested Subjects for Study by Japanese Physicians from their Special Field of Observation.—Medical Organisation; Proposals to form Associations such as the British Medical and the Medical Sickness and Provident Associations: Outlines of Organisation.

GENTLEMEN,—I will ask you first to allow me to say a word or two of prefatory introduction, expressing to you my impressions on one or two points of what I have seen during the short time that I have had the privilege of being in your beautiful country. First of all, I must express my pleasure at meeting so many of the heads of the medical profession in the Far East. Let me offer my heartfelt acknowledgments of your kind reception. It is always a delight to find oneself in an assembly of medical colleagues. There we exchange mutual impressions: we make and renew friendships; we add to knowledge; we find new inspiration in the fresh thoughts and original observations of men of learning and experience, and we strengthen the impulses to self-devotion and higher effort, which are the accepted aims of our profession throughout the world. Those are the main objects for which we have established the periodical meetings of the British Medical Association, and we find that the organisation of a great association with branches, properly administered, tends to promote unity, affection, respect, and the growth of knowledge in each part of the empire and throughout the whole profession. But before describing to you that organisation, let me say a few words special to this occasion. I feel this to be an occasion of peculiar interest. This beautiful Land of the Rising Sun saw the early dawn of a civilisation stretching far back into the records of time. It possessed and enjoyed an intellectual culture, an art culture, of a very abstract, metaphysical, and refined kind, in past ages when many European countries such as my own were rude, barbarous, and uncultivated. Your records, and still more your preserved monuments of art, such as the mural paintings of the Temple of Horuiji, dating a thousand years back; the spiritual religious paintings of Kanaoka, dating 800 years ago; your vigorous statues; the exquisite lac, and the elaborate embroideries of the Royal Treasury at Nara, all testify to an advanced art in Japan, as do the writings of the priests to a highly-developed system of thought and philosophy at a time when in Britain and in Gaul all was yet primitive and undeveloped. As centuries passed on your peculiar arts and your refined philosophies underwent some new developments, but were untouched by the innovations of the then rapidly progressing nations of Europe. From the fifteenth down to the eighteenth century your feudal system maintained peace, and favoured the growth of a series of art products and conceptions which compare with those of a corresponding period of time in Italy; but it was at the cost of an isolation which shut you off from modern thought in the West, and which helped to crystallise existing knowledge in Japan, but to arrest progress. Forty years ago the barriers fell, and with the restoration of the Imperial power of the Mikado came the entrance of Japan into the comity of nations of the West. She has taken her place in the great councils of the world, never, we may hope and believe, to derogate or depart from it.

Chief among the rapid and enormous changes that have occurred within these few decades has been the rapidity with which you have acquired and assimilated European science, social organisations, and law, and have applied technical and industrial procedures. Since I have been here His Imperial Majesty the Emperor has launched an ironclad ship of war complete and equipped according to the latest requirements of the terrible science of war, built in your own dockyards and by your artisans, and efficiently manned by native seamen, and this is only the latest of a series so built; and I have the high authority of Captain Ingles, R.N., for saying that it would be difficult to discover any point of inferiority to a high European standard, whether in ships or in men. The telegraphs and telephones which traverse this vast and ancient city of Tokio in which I am speaking, the railways, the tramcars, the electric lighting, testify to an eagerness for modern study, a power of rapid assimilation, and an executive facility which is without precedent in Asiatic history, and in respect to the rapidity and completeness of the transformation has certainly no parallel in the history of the world. This is a country and a city of strange contrasts—none more striking than on the day last week when I passed from the tombs and the memorial shrines of the Tokugawa Shoguns to the Imperial University. On one hand, at Shiba, were the gorgeous and silent shrines, resplendent with lac and gilding and colour, but fading and ill cared for, the forest of colossal lanterns whose light has departed for ever, and despoiled by the vigilant hand of the furtive robber of some of their most valuable accessories. There was the majestic seated image of Iyeyasu, who moulded the feudal system with so strong a hand and such far-seeing despotic will. All was eloquent of a day which has but just passed away, but which was vitally continuous with the Japanese civilisation of centuries ago, and which reflected with precision the elaborate art, the regal splendour, but the arrested knowledge, the distorted philosophies and the suppressed individuality of bygone days. Thence I came to the University buildings, themselves seated in the broad-acred park of the castle enclosure, till lately occupied by the great Daimyo, the Prince of Kaga. A modern building, strictly English in its utilitarian ugliness, with a board room which might have been in Cheapside, and with an organisation compiled of types selected in England and in Germany—it is a true university, with its colleges of law, medicine, engineering, literature, and science, each with its full staff of professors, and equipped with laboratories, libraries, workshops, hospitals, and museums. In the Faculty of Medicine I found a staff of fifty-five professors and assistant professors, many of whom have followed their studies for several years in the great centres of medical knowledge in Europe, and some of whom have graduated with high distinction in foreign universities. The arrangements for five years' preliminary study in languages and in physical science, and for a four years' compulsory professional curriculum of strictly professional education, were of the most approved standard, and are more than we have yet been able to enforce in Great Britain. The teaching combined the best features of the English and German systems. The practical laboratory teaching in such departments as those of Professor Osawa in physiology, of Professor Yoshikyo Koganei in anatomy and histology, of Professor Miura in pathology, Professor Takahashi in pharmacology, etc., was, I found, up to the latest scientific knowledge and on the best practical methods; the system is well planned and efficiently carried out. The work which I saw being done, much of the physical and microscopical researches by the Japanese students of Japanese professors, would be a credit to any students of to-day in any university, and reflect the highest honour on both professors and students. You have favoured me with a series of monographs and published articles and pamphlets containing the results of original research in the most important departments of medicine and the allied sciences; these I shall study, and I shall hope to communicate some information derived from them to the medical profession in England. Many of them are, however, known and esteemed by the best scientific men in Europe. The specimens which have been put aside for me of new active principles derived from Japanese drugs by Professor Takahashi I propose to hand to Professor Fraser of the University of Edinburgh, whose name and researches in kindred subjects are, I find, familiar to you. Your hospitals, with all their departments for medicine, surgery, gynæcology, and ophthalmology have greatly interested me. Finally, I shall be able to report to my colleagues at home that Japan has raised herself as it were by one leap from the deep valleys of the old Asiatic medical superstitions to the upper level of advanced medical

science and practice, and that by no superficial methods, but by thorough-going, sound, and real study, and good work.

Let me say a word or two by way of passing observation and suggestion grounded on our British experience. We have not always found that merely university teaching suffices to turn out students well armed to cope with the daily requirements and constantly varying exigencies of practice. We are studying now how to avoid too encyclopædic and minute detail of study for the ordinary student and for the general medical practitioner. You may likely find that something less elaborate may be needed for the mass of practitioners, and that a difference may usefully be made in the field of study and limits of examination for those who are graduating for professorships and consulting practice, and for those whose life will be passed in ministering to the daily needs of the poor and of the general population. Not all are called upon to be familiar with histological refinements or to practise chemical research. Deductive knowledge too exclusively pursued becomes a snare, and theory is often insufficient if practical skill and resource have not been developed.

I may venture also to express a hope that the Government liberality which has been so wisely and generously exercised may be extended further. The museums will soon—nay, indeed, do now—require more space and better fittings; and the University Hospital has not yet been supplied with all that is needed to satisfy a severe critic in its buildings or its fittings. Your training system of nurses is, according to European ideas, good; but to secure a high class of women the salaries appear to be inadequate. Bathing is so great and so important a part of your domestic institutions that I was a little surprised not to see more complete and better bathing arrangements in your hospitals. They do not compare with those in European hospitals at present; and I may also venture to add that, whereas in Japanese homes nothing is more striking and delightful to the European eye than the extreme cleanliness and neatness which become in themselves a beauty, I have not always observed the same cleanliness and neatness in the hospitals; nor have I seen that custom of making the hospital ward more beautiful, giving it colour, introducing pictures and flowers, and adding newspapers, which we in England have come to regard as a valuable addition to the equipment, and which is supplied by the liberality of kind patrons, and, in the case of pictures, by the artists themselves. Let me add, as I am speaking among medical men and for medical ears, that I observed that in those hospitals that I have seen which were under thoroughly medical control the administration was better than in those which were administered by laymen or by lay directors.

I observed with great pleasure the part which women are beginning to take in administering hospitals here; and I saw with admiration how greatly the munificence of Her Majesty the Empress of Japan has contributed to set an example which ought to be fruitful, not only amongst the ladies of Japan but also among the men, for with us the hospitals, as you know, are mainly supported by private and voluntary contributions, and it is to private and voluntary contributions that the whole of the great hospital system of London, which forms one of its greatest glories, is due. It was formerly the custom here for men of wealth and for nobles to devote large sums to keeping up shrines, memorial temples, and tombs. That time is to some extent passing away, and if, following the example of the Empress, they should contribute largely out of their means to the foundation and the maintenance of hospitals and universities, they would be doing that which in Europe has been customary now for some centuries, and has greatly contributed to the public welfare.

Pardon these few words of friendly criticism where there is so much to admire. There are many things on which we may look to you for valuable contributions to our further knowledge. Among them, if I may be allowed to enumerate, there are the etiology and communicability of leprosy, which some among you find strong reasons to doubt, and the question of its prevention and treatment; the pathology and prevention of what we call beri-beri and you call *kakké*, as to which your specially appointed committee is conducting researches for the result of which we are looking with much interest. Your experience will be very valuable to us as to the influence of prolonged lactation (over from one year to three years according to Japanese custom), first, on the health and longevity of the mother; secondly, on the diminution of infant mortality, which is, I believe, very small in Japan; and, thirdly, its influence on the rate of increase of population (for that purpose we should require to have careful statistics of the average number in a family), and whether there is any other cause than prolonged lactation which increases or diminishes the number of children in one family. The habit of prolonged lactation does not exist in Europe, and its influence would be very important for us to know.

Then we should like to know something exactly and scientifically of that remarkable experience of yours of the comparative immunity of your people from scarlet fever, and of the alleged rarity of its spread. I am informed by experienced physicians here that this, which is with us the most contagious disease by personal contact, is here hardly to be considered contagious from person to person. We want specific details as to the variations of the disease, its incubation, and its results upon the kidneys, in fact, an accurate record clinically and scientifically in order to determine whether it is specifically identical, or whether it differs in any way from the scarlet fever which we know.

Then it would be very interesting to us to have from some of your experienced surgeons complete information as to a curious form of what we know as senile gangrene, occurring here apparently among adults of middle age otherwise seemingly in ordinary physical condition, such as some of the cases Dr. Takagi pointed out to me in going round his wards. Then you would communicate to us observations which would be important as to the influence of those very hot baths which your population are in the habit of taking, a habit which is contrary to European experience, and as to which we have little information on the precise difference of the physiological effect of a bath at 95° F., and one at 105° to 120°. Baths at 120° are unknown to us in Europe, and information as to the influence on health and disease would be most welcome. I am told by Dr. Baelz that the treatment of infantile pneumonia by very hot baths at 105° is with him very successful. This would be at once a field for interesting information if it were communicated by you to our physicians. There are other points, such as the hæmorrhages in typhoid fever, which with us are of the worst possible prognosis; they mean most commonly a very serious case, and inspire the gravest fears. I am told that here, on the contrary, hæmorrhages in typhoid fever are common, and are comparatively benign. That also points to a difference of type, on which comparison and information would be very valuable to us. Massage or shampooing is with us a comparatively recent introduction; with you it is an ancient and long practised art. What have you to tell us of the value of massage in medical cases, and of its real value—not in the hands of the uneducated *amma* but in the hands of the educated physician, carefully and methodically carried out as we are beginning to carry it out in Europe? These are among the subjects on which we should be pleased to offer you the hospitality of our medical periodicals, and as to which we should be glad to receive communications at the meetings of our British Medical Association.

Speaking as the Editor of the BRITISH MEDICAL JOURNAL, which is the journal of the Association, and speaking also as one of its members holding an official position, I may say we should heartily welcome everything which would bring the members of the Japanese profession into more frequent and more direct communication with the British medical profession, and which would allow us an opportunity of seeing them from time to time at our meetings, and reading their communications in our pages. The British are very sympathetic towards the Japanese, and we have the vanity to speak of you as the English of the East, which, knowing that we have not as bad an opinion of ourselves as we might have, you will understand is in our minds an unforced and voluntary compliment. Now if you are disposed to think of following one precedent which we have in England in our Medical Association, I shall briefly summarise some of its features, and I shall place in the hands of your seniors here all the documents and papers which may be necessary to give you such detailed information as you may subsequently require. The British Medical Association owes its origin to an eminent provincial phy-

sician, then Dr., afterwards Sir Charles, Hastings, who founded it some fifty-six years ago. Its declared objects then were, and they have never been departed from, first of all the elevation of the standard of professional knowledge and the improvement of medical education; secondly, the collection of information from all parts of the empire as to local prevalent diseases and the best means of treating diseases according to locality; of studying epidemics, and of considering local conditions so far as they might affect the public health; and, thirdly—and this is amongst its most important and its always most valued objects and results—the cultivation of a sentiment of friendship and unity amongst all the medical men of the empire, and the raising of professional ethics and of conduct towards one another to the highest standard of professional duty and courtesy. The British Medical Association is essentially a representative institution. It is one in which for purposes of association, and of meeting, the members of the profession, however humble in pretension or however great in position, meet for the time on an equal footing. Each must meet the other as a friend and a brother, each making his contribution to knowledge or to the general unity and power of the profession. It is an institution founded in the first instance, as you see, by a provincial practitioner, with the object of extending, not from the centre to the periphery, but from the periphery to the centre, so that every medical man, in however remote a district or colony, may feel himself a member of the whole body, and may have an opportunity of communicating with the centre. The arrangements are such that the whole body of men have the opportunity of periodically meeting at convenient times and places in their own locality, forming there a committee for their own self-government, according to a common and general pattern, and sending from each local centre a representative who comes every three months to form one of a central committee, and to meet his colleagues from the other parts of the kingdom.

Each of these local bodies, which have arranged themselves by a sort of natural growth according to geographical necessities, constitutes what we call a Branch. Each Branch has a set of by-laws, formed with absolute uniformity, but modified to suit the necessities of each locality. Before the Branch can be recognised these by-laws must be approved and accepted by the General Committee. The funds of the Association are supplied by an annual subscription from each member. That subscription includes a small contribution required for carrying on the work of local organisation, and the general expenses of the Central Committee and of their publications. I need not trouble you with the details of its growth, but I will tell you that at present, at the end of fifty years, our position is this. For the annual subscription of £1 1s., or $6, each member has all the privileges of attending the great general meeting, which takes place every year in a different part of the country by invitation, the medical men and the authorities of each town vieing with each other from year to year in inviting the pleasure and the honour of meeting the Association, and giving to their professional brethren a hearty welcome at this annual gathering. On these occasions not only do the medical men themselves, so far as the resources of their homes permit, invite their medical visitors to stay with them in their houses, but the principal inhabitants of the town take pleasure, at the suggestion of the medical men, and knowing the event is to happen, in extending similar hospitalities to the medical practitioners who assemble. The total number of members of the British Medical Association, all of whom must be British subjects, is about 14,000, so that it has grown to be a great organisation starting from small beginnings. Its Branches have each their local meetings at such times and places as are most convenient to themselves. In some places where there are not many medical practitioners they meet rarely. Where the district is extensive the place of meeting is changed from time to time, and arrangements are made for local meetings at which papers are read, cases are shown, discussions are held, and probably a friendly dinner takes place afterwards. So great is the power of numbers and of union that the influence of the Association is now very considerable, and its funds have grown to a great point. The total income of the Association from subscriptions is £14,500.

The British Medical Journal, which is supplied to the members for their subscription of a guinea, is a weekly journal which has grown now to 120 or 140 pages weekly, constitutes, in fact, a volume in itself, which gives the members information from every part of the world on medical subjects. It supplies, in virtue of its great circulation, an income of £13,000 to £14,000 a year from advertisements; so that the Association is able not only to supply this great mass of literary matter, but also, in virtue of its prosperity, to put aside a sum of £2,000 a year, which it assigns in donations and studentships for scientific research to assist medical men who desire to carry on medical investigations. It is also collecting a valuable library, and it is able to defray the expenses of a Parliamentary Bills Committee, which exercises great influence over the welfare of the nation in respect of sanitary questions and over the welfare of medical men in all public departments. Being so numerous it is in a position to study all sanitary questions, all questions of public law, and all questions of the organisation of army and navy medical officers, and to make representations to Parliament which, coming from such a great body of men—a large proportion of whom are able to influence local members of Parliament—are always listened to with respect. I need not trouble you with the enumeration of the questions—but on points of sanitary law, the health of the people, drainage, water supply, the organisation of the Poor-law medical service, the condition of army and navy medical officers—on all these, as they arise, the Government finds it an advantage to be able to hear from such a highly organised body what their views are, and the medical men find it of great advantage to express, by organised means, to Ministers, to departments, or to Parliament what they think about questions affecting the public welfare. These duties are largely carried out by the Parliamentary Bills Committee, of which I have had the honour for many years to be Chairman, on which every Branch of the Association is represented by one member, so that this Central Committee is always in touch with the local Branches, and, on the other hand, the local Branches are all represented on the Parliamentary Bills Committee. It only remains for me to say that we shall be happy to afford any information or assistance to you if you should at any time think of adopting an organisation of the sort—of course, with such modifications as may be suited to the genius and customs of your nation. We shall be glad to send copies of the British Medical Journal to your libraries, and otherwise to do that which will show our brotherly feelings towards the faculty in Japan.

A word or two now of a much younger institution, in which I learn that you are much interested, and which has also proved itself to be most useful to medical men. It had long been felt that it was exceedingly desirable that some means should be provided to enable medical men—whose very living depends upon their good health, and whose means of livelihood often cease if their health fails—to provide against sudden calamities of sickness or accident. The merchant or official has in times of illness the income of his business or of his office still going on, even if temporary disablement should overtake him. When the doctor himself falls ill, however, his income often, and sometimes permanently, ceases. In that respect he resembles the artisan or the barrister; he lives by the daily work of his brain just as the artisan lives by the daily work of his hands. How then to provide something which should put the doctor at ease in his mind when times of sickness suddenly overtake him without his having been able to put by money adequate to provide for them? That is a difficult problem, which has more than once engaged the attention of thoughtful men; and which it has always been found very difficult to solve on account of the complexity and costliness of the machinery necessary to control the demands on such a fund, and to carry it out in a thoroughly trustworthy and reliable way on a sound financial basis. An effort of this sort was made in England some years ago and failed by reason of its difficulty. But a few years ago, when the subject was again raised by some of our medical men, it seemed to me that the extensive organisation of the British Medical Association and the wide circulation of the journal which I edit, and our knowledge thus obtained of each other would enable me to make that effort again on a better footing, and possibly with a more successful result. And so about seven years ago, after making the necessary preliminary inquiries and after getting some actuarial bases of the expectation of life of the average medi-

cal man so as to obtain accurate tables, we had a meeting at Liverpool, at which we resolved to found a society for providing an adequate weekly payment to medical men disabled by sickness or by accident, and with some provision for permanent disablement. I will not give you the figures, which would weary you, but I will tell you briefly the result. We based the whole structure upon this: that the society must be absolutely mutual, that is to say, that there should be no aiming at any other profit than the profit to the subscribing medical men themselves; that there should be no shares, no capital, no interest to be paid except to the medical men themselves. We therefore decided that we would not commence until we had a sufficient number of subscribers to this new institution to ensure a sufficiently large average for stability—which our actuary fixed at two hundred medical men. By our general meeting and by making the whole facts and propositions known in the BRITISH MEDICAL JOURNAL, we were able to commence with that number. That was little more than six years ago. The whole basis of payment was accurately calculated by the proper authority, whom we call an actuary, and tables were prepared showing what annual sum needed to be paid by each of the 200 medical men, in order to enable every one of them to have a claim for the payment, according to their subscription, of either £2 or £4 weekly when disabled by sickness. The payment varied, therefore, according as they desired to receive £2 or £4, and it varied, of course, according to the age at which a subscriber entered, and, therefore, according to the expectation of sickness. To give you an idea of the kind of payments necessary, I may say that for the higher sum of £4 a week a man, aged 30, would pay about £10 a year. If his illness lasted for six months he would be entitled to the £4 a week for the whole six months; if it went on for more than six months and permanently disabled him—if it were a case such as we often have of a permanently disabling illness or an accident, he would be entitled after the first six months to half that amount—£2 a week for the rest of his life. We have already had three such permanent claimants on the fund in the course of the first six years, who joined in perfect health, and they have been receiving and will receive that sum for the rest of their lives. We find that an average of, I think, 10 per cent., of the members are disabled by sickness or accident each year. Medical men were found to be exceptionally liable to accident. The sick members receive their payments every week on receipt of a certificate from the medical men attending them, showing that they are disabled by illness from attending to their practice, but in no case is any payment made except upon such certificate, which must be renewed every week. Every man who desires to retire after having been a member for twelve months can do so with the approval of the committee, and on doing so receives nearly 75 per cent. of the money which he has paid in, 25 per cent. being forfeited by his retirement, and representing the risk incurred and insured against while a member. The same payment entitles every man, whether sick or well, to a pension of £50 a year from the time of his attaining the age of 65, and by a slight addition to the annual payments his family become entitled to a sum of £200 at his death. That institution has been found to be so useful, that at the end of six years we have over 1,000 members. The result of the actuarial inquiry at the end of the first five years has been to show that we have made a profit, that is to say, the receipts have been in excess of the requirements to the amount of £3,000, which was put in reserve to diminish the future payments of members. We have accumulated to meet future demands £40,000, which is invested, the property of the members, and every year the sphere of usefulness of the Society improves and the number of its members increases.

I think my brief account of that Society may perhaps be suggestive and useful to my colleagues here in Japan. Of course all our tables, and regulations, and calculations, and other documents are entirely at your service, if at any time in the future they may be useful to you. In conclusion, gentlemen, I thank you very sincerely for the kind attention you have given to me.

IT is stated that the Austro-Hungarian Government intends to appoint lady doctors to the hospitals for Mohammedan women in the occupied provinces of Bosnia and Herzegovina.

REPORTS
TO THE
SCIENTIFIC GRANTS COMMITTEE
OF THE
BRITISH MEDICAL ASSOCIATION.

REPORT ON THE PROTEIDS OF MILK.

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THE following experiments were made with cow's milk, and it will be convenient to describe them under the headings of the various proteids which have been described as existing in milk.

I.—CASEIN.

Most writers appear to use this word indiscriminately for the principal proteid in the milk itself, and for the curd which is the result of the action of rennet on milk. It appears important that the two substances should be distinguished by different names; and I would suggest that the proteid pre-existent in milk should be called caseinogen, and the less soluble curd formed by rennet, casein. These two terms convey to the mind the relationship of the two substances to one another, and are moreover framed on the same pattern as the names of other substances, like fibrinogen and fibrin, myosinogen and myosin, which bear similar relationships one to the other. In each of these three cases we have a soluble proteid (-ogen), the precursor of a less soluble one, and the change is in all three instances the result of the action of a ferment.

Casein is obtainable by one process only, namely, by the action of rennet on caseinogen in the presence of certain calcium salts (Hammarsten). Caseinogen, on the other hand, can be obtained from milk by two methods; it can be precipitated either by saturating the milk with neutral salts, like magnesium sulphate or sodium chloride, or by adding a certain amount of acid, preferably acetic acid, to the milk. I have found that by a combination of these two methods, it is possible to obtain very easily a preparation of caseinogen which is perfectly free both from fat and from calcium salts.

Milk is saturated by shaking it vigorously with excess of finely powdered magnesium sulphate crystals; the precipitated caseinogen is on standing carried to the surface of the mixture by the entangled fat globules, and is then collected on a filter. It is washed with a saturated solution of magnesium sulphate, until the washings give no evidence of the presence of albumin. Distilled water is then added to the residue on the filter; the caseinogen, in virtue of the magnesium sulphate still adherent to it, dissolves, and the solution of caseinogen which passes through the filter is collected; the fat is left undissolved on the filter. The solution of caseinogen so obtained is then again saturated with magnesium sulphate and the process repeated. The solution that is obtained in this way does not however clot with rennet, on account of the large amount of salt present, which exercises an inhibitory influence on this as on many other ferment actions. The process of dialysis to get rid of the salt is a very lengthy one, and the following will be found better. Excess of acetic acid is added to the solution; the precipitate of caseinogen so formed is collected, washed with dilute acetic acid, and lastly with distilled water; it is then dissolved in a weak alkali, preferably lime water, and once more precipitated by acetic acid, washed, and redissolved as before. The solution so obtained is an opalescent one, and on the addition of rennet no coagulation occurs; the addition of a few drops of 0.5 per cent. phosphoric acid, however, leads to the formation of the necessary amount of calcium phosphate, and the subsequent addition of rennet produces a firm curd, which soon, especially at 40° C., contracts, squeezing out a clear whey.

Another question, which appears to me to be important to settle, is the place that caseinogen and casein should occupy in the classification of proteids.

It is easy to give casein its proper place; it should be classed with fibrin, myosin, and gluten as proteids more or less insoluble, which are produced by ferment actions from other proteids of more soluble nature.

It is by no means so easy to assign caseinogen its proper position. The precursors of fibrin, myosin, and of gluten are globulins. Is caseinogen also a globulin? It is generally classed as an alkali-albuminate, and, to me, it seems with insufficient reason, for alkali-albumin is not coagulated by rennet, and is easily soluble in dilute acids. Still, it is not a globulin, for its solutions are not coagulated by heat. A perfectly neutral solution of caseinogen in dilute magnesium sulphate or sodium chloride solution, when heated to 50° C., becomes opalescent. This opalescence disappears on cooling. If the solution is heated to a higher temperature the opalescence increases up to 80° C. Beyond this temperature it does not increase, but flocculi of coagulated proteid are never deposited. If the solution be heated only just up to 80° the opalescence can be made to disappear by cooling the solution, but if the solution be kept at 80° C. for any length of time, or if it be heated, even momentarily, above 80° the cloudiness is rendered permanent, and does not disappear on cooling.[1] If, instead of a neutral, a very faintly acid, solution be employed (the small amount of caseinogen precipitated by the acid being filtered off), the same series of phenomena is observed; opalescence, however, begins at a somewhat lower temperature (about 40° C.), and becomes permanent also at a somewhat lower temperature (70° to 75° C.) than is the case with a neutral solution.

Caseinogen has doubtless certain resemblances to alkali-albumin; it has also certain resemblances to the globulins; for instance, in whey it may be precipitated by neutral salts. It, however, differs from both, and therefore should not be classified with either.

Hammarsten, in his recently published textbook, places caseinogen among the nucleo-albumins, but its marked and distinctive characters are such that I should be more inclined to place it in a class by itself, intermediate between the albuminates and the globulins.

2.—Lact-Albumin.

The albumin of milk (lact-albumin) is, in its general characters, similar to serum-albumin. It is coagulated at about the same temperature, but its specific rotatory power is different. Sebelien[2] gives its specific rotatory power as $(\alpha)_D = -36°$ to 37°, and concludes from this that lact-albumin is not identical with serum-albumin, which has a specific rotatory power of 57°.

My own observations on lact-albumin have shown that there are other slight differences between the two albumins, and, therefore, support Sebelien's view of their non-identity. These observations have been in two directions, viz., (a) heat coagulation, and (b) precipitability by certain salts.

(*a*) *Heat Coagulation.*—It was found that when examined in a faintly acid solution, with the precautions I have previously described,[3] opalescence occurred at about 70°, and the separation of distinct flocculi appeared at 77° C. The greater quantity of the serum-albumin obtained in a similar way from serum separates out at a somewhat lower temperature (73°), but I do not consider this difference sufficient in itself to show that the two proteids are different. It is rather in the manner of the precipitation than in the temperature at which it occurs, that a very striking distinction between serum-albumin and lact-albumin is noticed.

If a solution of serum-albumin be heated gradually opalescence sets in rather below 70°, and a flocculent precipitate occurs at 73°, the precipitate being immediately dense; and if the temperature be maintained at 73°, it increases somewhat in amount for the succeeding few minutes. If this be filtered off, and the filtrate again heated to 73°, a small amount of precipitate may again occur; if, however, the temperature of 73° be maintained for ten minutes no further precipitation occurs at that temperature, however long it be kept up. If, however, the temperature be raised four or five degrees a fresh precipitation occurs, and a third one above 80° C. On these grounds I formerly concluded that serum-albumin may be by fractional heat-coagulation differentiated into three proteids, which I called α, β, and γ serum-albumin.[4]

The albumin of milk is, however, so far as the method of heat coagulation will decide the question, a single proteid, coagulating with very remarkable slowness at the temperature of 77° C. At a higher temperature the precipitation occurs more quickly, but even at 100° C. it is half an hour or more before a filtrate is obtained free from coagulable albumin.

I may here take this opportunity of making a reply to Dr. Haycraft,[5] who has recently in a very courteous manner made certain criticisms regarding my work on serum, and regarding certain somewhat similar observations made by MM. Corin and Berard[6] on egg-albumin. Haycraft's criticisms relate to the method of fractional heat coagulation, and the sum and substance of them may be put concisely as follows:—The coagulation point of a proteid is considerably raised by diluting its solution, and a very dilute solution may not coagulate even on boiling. Without doubting the possibility of fractionating some proteids, this factor in determining the temperature of coagulation has been neglected by Corin and Berard and by Halliburton, and therefore a doubt is cast upon the results they have obtained by fractional heat coagulation. In order that the proteids separated may be considered distinct from one another it is necessary that other differences besides that of mere heat coagulation should be demonstrated to exist. It is thus possible that serum-albumin and egg-albumin may be single proteids, and the fact that various precipitates at different temperatures are obtainable can be explained in one of two ways: either that the heat when applied for a long time alters the character of the proteid in solution so that its temperature of coagulation is heightened, or that the result is simply the effect of dilution; a solution of serum-albumin, for instance, is raised to 73° C., and the precipitate which occurs is filtered off; that left in solution is now more diluted, hence its coagulation temperature is higher.

These criticisms are exceedingly valuable, and considerably shake my former opinion that serum-albumin consists of more than one proteid. They show that in determining the temperature of coagulation of a proteid two chief factors have to be taken into account in addition to the degree of heat applied, namely, the amount of acidity and the concentration of the solution. The first of these I recognised, the second I missed. Then I must again freely admit that no differences other than those of coagulation temperature can be demonstrated to exist between the three varieties of serum-albumin; it is therefore unsafe at present to affirm that these are distinct from one another, seeing what a variable factor is the temperature of heat coagulation. Since the publication of my paper on the serum proteids, however, Kauder[7] has arrived at much the same conclusion concerning serum-albumin as I did, only by a different method, namely, that of elementary analysis; he finds that the discrepancies between different analyses are too great to come within the limits of experimental errors, and considers that they can only be accounted for by the presence of more than one proteid in varying admixtures.

There is thus a certain amount of evidence that serum-albumin is not a single substance, and evidence that it is a single substance is at present wanting. Granting, however, for the sake of argument, and in view of Haycraft's experiments that it is a single substance, the question arises, What explanation can be given of the fact that various precipitates are obtainable at different temperatures? Haycraft has suggested three possible explanations, namely, that the coagulation point rises in virtue of (1) the solution becoming continually more dilute; (2) its becoming less acid; (3) changes which are being produced in the proteid itself by the action of the high temperature to which it is subjected.

Haycraft appears to lay most stress on the first of these three; I am inclined to regard the third as the most important. Neumeister[8] has shown that the action of acidified hot water will in a very short space of time convert albumin

[1] I find this fact has been also noted by Dogiel, *Zeitsch. f. physiol. Chem.*, ix, p. 591.

[2] Maly's *Jahresbericht*, vol. xv, p. 184. Original paper in Swedish.

[3] *Journal of Physiol*, vol. v, p. 155.

[4] *Journal of Physiol.*, vol. v, p. 158.

[5] J. B. Haycraft and C. W. Duggan, British Medical Journal, vol. i, 1890, p. 167.

[6] Corin and Berard, *Arch. de Biol.*, vol. ix, p. 1.

[7] *Arch. f. experim. Path. und Pharmakol.*, vol. xx, p. 411.

[8] *Zeitschr. f. Biol.*, vol. xxiv, p. 272.

partially into primary albumoses; it is therefore exceedingly probable that less profound changes, resulting in the raising of the coagulation point, will be produced in a similar way.

I imagine that Hayeraft differs from me on this point, as the acidity of his solutions was not kept constant; in fact, he expressly states that his solutions of egg-albumin were always alkaline in reaction; his solutions of serum-globulin appear to have been neutral, and in this case dilution had very little influence in raising the coagulation temperature. With regard to acid solutions, he speaks as follows: "We have not made so systematic an investigation upon the effect, on its coagulating point, of diluting acid solutions of albumin, but we have assured ourselves that the more dilute solutions coagulate at a higher temperature":[9] one or two illustrative experiments with egg-albumin are then given. I feel assured, however, that he will on further investigation find that although dilution of alkaline solutions of proteids raises their coagulation point, yet if those solutions be neutral, or, better still, have a faint and constant degree of acidity, the disturbing influence of dilution is reduced to a minimum.

I still believe that fractional heat coagulation is a most valuable method of indicating the presence of more than one proteid in solution. Without confirmatory evidence of other differences between the proteids, it is, however, not in itself an absolute means of distinction between them. It is least liable to give trustworthy results when the temperatures at which the individual proteids coagulate are, as in the case of serum-albumin, high, or close together. It is most valuable when the temperatures of coagulation are low and far apart; for instance, in the separation of fibrinogen from serum-globulin, in the separation of the proteids of the muscle plasma, of lymph cells, and of the proteids which can be dissolved out of kidney cells, liver cells, and nervous tissues. In all these cases (some of which are not yet published) I have obtained other evidence of differences between the individual proteids, quite apart from their temperatures of heat coagulation.

I am even inclined to think that there is still something to be said for the view I formerly expressed that serum-albumin is not a single proteid; and I would especially mention the following points that bear out this view:

a. The fact that other proteids coagulating above 70° (such as serum-globulin and lact-albumin) cannot be similarly differentiated, as they would be if all the facts of fractional heat coagulation were explicable by Hayeraft's hypotheses.

b. The confirmatory experiments on elementary analysis made by Kauder.

(*b*) *Precipitation by Salts.*—It was until quite recently believed that one of the distinctions between globulins and albumins was that the former are precipitated by saturation with neutral salts, and the latter are not. We now know that this is only true in reference to certain neutral salts like magnesium sulphate and sodium chloride, but with regard to certain other salts like ammonium sulphate,[10] sodio-magnesium sulphate, and potassium acetate, the difference is only one of degree. These three last-mentioned salts precipitate both globulins and albumins; they, however, precipitate the globulins more readily than the albumins, complete saturation not being necessary to precipitate the former.

In the paper already referred to, I showed that saturation with certain pairs of salts will precipitate serum-albumin from its solutions. In the case of magnesium sulphate and sodium sulphate, this is due to the formation of the double sulphate of magnesium and sodium ($MgSO_4Na_2SO_4 6H_2O$), and in other cases there is also probably a formation of similar double salts.

I have now found that, although lact-albumin is in the main similar to serum-albumin in this particular, it differs from it slightly in being only incompletely precipitated from its solutions by sodio-magnesium sulphate, or by double saturation with magnesium sulphate and sodium chloride.

III.—Lacto-globulin.

This proteid is described as occurring in milk by John Sebelien.[11] He states that casein (caseinogen, as I should call it) is completely precipitated by saturating milk with sodium chloride. This is filtered off. The filtrate is then warmed to 35° C., and a very small precipitate of a proteid which is thus produced, but which was not further investigated, is then filtered off. The filtrate from this is, lastly, completely saturated with magnesium sulphate, and a flocculent precipitate of a proteid then occurs. This proteid appears to be identical in its properties with serum-globulin. It is coagulated at 74°-76° C., and the name lacto-globulin is given to it.

My own experiments have shown the truth of the main fact here described. If one saturates milk with sodium chloride, filters off the caseinogen so precipitated, and then saturates the filtrate with magnesium sulphate, a precipitate of a proteid is obtained. My interpretation of this fact is, however, different from that of Sebelien. Sebelien has overlooked the fact that saturation with the two salts is capable of precipitating albumin as well as globulin. The proteid which Sebelien calls lacto-globulin is in reality lact-albumin. If it be collected on a filter, washed with water saturated with the two salts, and then dissolved in water and subjected to dialysis, it remains in solution after the removal of the salts, whereas a globulin would be precipitated under these circumstances. In order to obtain the precipitate described by Sebelien, it is immaterial which salt is used first. The salt with which the milk is saturated first precipitates the caseinogen, the salt with which the filtrate from this is saturated precipitates the albumin. The precipitation of the albumin is, however, incomplete, and so differs from what occurs in the case of serum-albumin.

I have attempted to solve the question whether a globulin exists in milk in another way. Milk is saturated with magnesium sulphate: if a globulin were present this would be carried down with the caseinogen. But I have never found that such a globulin is present, as the precipitate, when redissolved and heated, does not coagulate on heating.

My conclusion is, therefore, that milk contains no globulin. This, however, does not cast any doubt on Sebelien's statement[12] that the imperfectly formed milk secreted during the first few days of lactation, and which we call colostrum, contains abundance of globulin. I have not myself had the opportunity of examining colostrum, but Sebelien's analyses appear quite conclusive. He ascertains the quantity of proteid precipitable from colostrum by acetic acid (caseinogen), and in another portion the quantity precipitated by saturation with magnesium sulphate (caseinogen and globulin); the difference between the two, which is often considerable, gives the amount of globulin.

4.—Lacto-protein, Proteoses, and Peptone.

Many observers have stated that milk contains a small quantity of a proteid which is either a peptone or a peptone-like substance. The name lacto-protein has been given to it. Most of these observations were made some years ago, before the properties of the proteoses and peptones were carefully distinguished from one another, and before ammonium sulphate was known as a reagent for the separation of true peptones from other proteids. These observers all found a third proteid in milk, which, although it gave the biuret reaction, was later recognised to be a proteose,[13] and not a peptone.

Neumeister[14] was the first to show the fallacy of the method adopted by these investigators, not only with regard to milk, but also in connection with blood, lymph, and other fluids. The substance, called peptone by some and hemi-albumose by others, is really a primary proteose (that is, proto- or hetero-proteose) formed artificially during the manipulations by the hydrating action of the acidified hot liquid. The only method by which peptone may be separated with certainty from other proteids is to saturate the fluid with ammonium sulphate and filter. The only proteid not precipitable by this means is peptone, which is therefore found in the filtrate. Using this method, he found that peptone was absent, and Sebelien[15] has confirmed this statement. I had

[9] *Proc. Roy. Soc. of Edinburgh*, 1888-9, p. 381.
[10] J. Wenz, *Zeit. f. Biol.*, xxii, p. 1.
[11] Maly's *Jahresb.*, vol. xv, p. 184.
[12] *Zeit. f. physiol. Chem.*, vol. xiii, p. 135.
[13] This term is better than albumose, which should be restricted to the products of digestion of albumin. The term proteose includes albumoses, globulins, vitelloses, etc.
[14] *Zeit. f. Biol.*, vol. xxiv, p. 272.
[15] *Zeit. f. physiol. Chem.*, vol. xiii, p. 135.

also, previous to the appearance of these two papers, arrived at the same conclusion from examining a large number of specimens of cow's milk, I also searched for peptone in stale (acid) milk, and in whey—obtained after the action of rennet on milk - but in all cases peptone was absent.

I then proceeded to examine milk for proteoses by a method which is also that adopted by Neumeister. To the milk ten or twelve times its volume of absolute alcohol is added. This precipitates all the proteids. The precipitate is collected and allowed to stand under absolute alcohol for some weeks (in my experiments for ten weeks). The prolonged action of the alcohol is to render all proteids, except albumoses and peptones, insoluble in water. The precipitate is again collected, dried in an exsiccator over sulphuric acid, extracted with water, and the watery extract examined.

Several specimens of fresh and sour milk, and the whey from fresh and sour milk were investigated, with the result that fresh milk contains no peptone, and no substance of the nature of a proteose, and, moreover, that no formation of such a substance occurs under the influence of the rennet ferment. Sour milk (and the same is true for sour whey) contains abundance of a primary proteose. It thus appears that during the fermentation process called the souring of milk, there is not only a change in the carbohydrate leading to the formation of lactic acid, but also a change in the proteids, leading to the formation of a peptone-like substance or proteose.

This latter observation confirms the statements of several investigators who have described peptones (? proteoses, or proteoses *plus* peptones) in koumiss, kephir, and similar preparations from milk.

5.—Whey Proteid.

It was Hammarsten who first described the appearance of this proteid upon the occurrence of the rennet fermentation. Caseinogen, when acted on by rennet, becomes converted into casein, and this second proteid, which remains in solution. As it is not coagulated by heat, some have surmised that it is of the nature of a peptone or proteose, and some have used the name lacto-protein for this substance as well as for the peptone-like substance, which they considered to exist in the unaltered milk. I have prepared this substance in two ways: 1. Caseinogen obtained as already described is dissolved in lime water, a few drops of rennet extract and of 0.5 per cent. phosphoric acid added, and the resulting clot of casein filtered off. The whey proteid remains in solution, and may be precipitated by saturating with magnesium sulphate. 2. I have obtained a larger supply of this substance by adding rennet to milk, filtering off the curd so formed, and saturating the whey with magnesium sulphate. The precipitate so produced is washed with a saturated solution of magnesium sulphate, and dissolved by the addition of water.

The reactions of the substance obtained by either method are the same. Like caseinogen it is not coagulated by heat, but its solutions only become opalescent when heated, the opalescence disappearing when the solution is cooled.[16] Unlike caseinogen, it is not precipitable by acetic acid, nor has rennet any coagulating action on it. It is not a peptone, as it is precipitable by saturating its solutions with ammonium sulphate. It is not a proteose, as it is precipitated and rendered insoluble by the prolonged action of alcohol; it gives with copper sulphate and caustic potash a violet, not a pink (biuret), reaction. It is precipitable by nitric acid, and though this precipitate dissolves to a very slight extent on heating, it is not increased again on cooling. It is not a globulin, as it is not coagulated on heating. Though it is difficult to assign to this proteid its proper place in the classification of proteids, I should be inclined to put it into the special class of proteids nearly related to the globulins, which I have already suggested should be made for the admission of caseinogen.

6.—General Conclusions.

The principal points to which I have endeavoured to draw attention in this paper are the following:

1. The principal proteid in milk, called "caseinogen," is precipitable by certain neutral salts, or by acetic acid, and may be most satisfactorily prepared free from impurities by a combination of these two methods.

2. The term "casein" should be restricted to the curd formed from caseinogen by the action of rennet.

3. In the classification of proteids, casein should be grouped with other insoluble proteids like fibrin and gluten, formed by ferment activity from pre-existing more soluble proteids.

4. Caseinogen should be included in a new group made to include it and whey proteid. These proteids are very similar to the globulins; the chief difference being that their solutions are not coagulated by heat like the globulins, but only rendered opalescent. This opalescence, if the heating has not been continued too long, disappears on cooling.

5. Lact-albumin is very similar in its properties to serum-albumin. Not only does it differ, however, from serum-albumin in its specific rotatory power and elementary composition, as has previously been shown, but in its behaviour on heat coagulation and in precipitability by certain neutral salts.

6. Caseinogen and lact-albumin are the only proteids contained in milk.

7. The proteid described as lacto-globulin does not exist: it is owing to the error of not recognising that the two salts—sodium chloride and magnesium sulphate—when both present to saturation precipitate albumin, that this proteid has been supposed to exist.

8. The proteids variously called lacto-protein, peptone, and hemi-albumose do not exist in milk. This mistake has arisen from faulty methods of analysis.

9. When milk turns sour, owing to the lactic acid fermentation, primary proteoses, chiefly proto-proteose, are developed.

10. The proteid called whey proteid, which is formed during the rennet fermentation, is not of the peptone or proteose class, but should be included with caseinogen in a new class of proteids allied to the globulins.

I am indebted for a grant in aid of the expenses involved in the above research to the Scientific Grants Committee of the British Medical Association. A fuller account of the investigation has already been published in the *Journal of Physiology*.

[16] After prolonged boiling after acidification a small formation of flocculi was sometimes observed.

REPORT ON
THE CONTRACTION OF THE PAPILLARY MUSCLES, AND ITS RELATION TO THE PRODUCTION OF CERTAIN ABNORMAL CARDIAC SOUNDS.

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AND
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Dr. Waller,[1] from an elaborate survey of the electrical changes in the mammalian heart by means of the capillary electrometer, arrived at the conclusion that the contraction by which the ventricle discharges its contents, commences at the apex and closes at the base. A suggestion is also mentioned that the contraction of the whole heart, beginning at the venous orifices of the auricles, is propagated by the ventricular curtains and papillary muscles to the apex, and thence upwards towards the base of the ventricle. Of course, if this were the case, the papillaries would contract somewhat earlier than the apex of the ventricle; and this interval, accepting Dr. Waller's data of 5 metres per second as the rate at which the wave of contraction travels, and 10 centimetres as the length of the ventricles, would be about one-fiftieth of a second.

Roy[2] has recorded the contractions of the papillary muscles and the ventricle in curarised dogs, in which respiration was artificially maintained. The heart was exposed by the formation of a window in the thoracic wall, and a fine hooked wire, protected by a collar, was inserted through the left auricle, and hooked over one of the mitral flaps. A thread passed

[1] *Phil. Trans.*, 1889, p. 169.
[2] *Practitioner*, vol. 14, January to July, 1890.

from the wire round a pulley to a light lever. On comparing the tracings thus obtained, it was found that a break in the ascending portion of the ventricular curve corresponded with the commencement of the papillary contraction. Later on, in the same series of papers, Roy states that the "arrest or slowing of the shortening of the ventricular muscle, which results from the contraction of the papillary muscles, is synchronous with the first superposed wave of the pulse tracing." In other words, the latter is due to the contraction of the papillary muscle. Hence he terms this "a papillary wave," rejecting the term "percussion wave."

We have recorded simultaneously the contractions of the papillary muscles and ventricle in the excised heart of the rabbit. As a rule, we employed one of the papillary muscles of the left ventricle, since these are much stouter and less vulnerable than those of the right side. By an incision in the left ventricular wall, the papillaries are readily exposed, and a fine hook inserted into one of them near the point from which the chordæ tendineæ spring, and the latter are then removed. To the hook a fine silk thread was fastened, and carried up to the upper of two of Gaskell's levers. A hook in the apex of the ventricle was connected in a similar manner with the lower lever. The ventricle was firmly clamped in the auriculo-ventricular groove, in order to eliminate any auricular disturbance, and the heart was supplied at intervals—that is, when not registering—with normal saline solution at 40° C. If the ventricle contracted before the papillary muscle, we expected to find an irregularity in the upper curve. But we found that the contraction of the ventricle itself exercises no pull at all upon the upper lever, since after the papillary muscles had ceased their activity, the upper lever recorded none of the ventricular movements.

In Fig. 1, written four minutes after death, it is noticed that the papillary muscle commences to contract about one-twentieth of a second later than the apex.

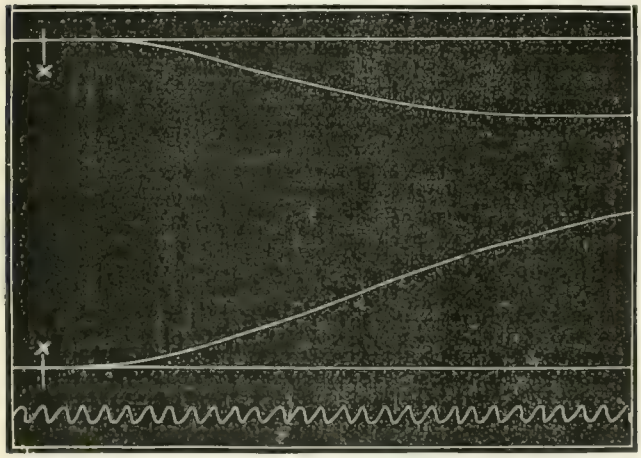


Fig. 1.—The upper line records the papillary contraction, the middle line the apex curve; the lowest line registers the vibrations of a tuning fork, with 50 double vibrations a second; *x*, *x*, points of correspondence of the two levers.

In Fig. 2, written about eight minutes after death, the papillary muscles are seen to be already in an advanced state of exhaustion, the curve being short and shallow. The occasional alternating character of the ventricular contraction without any apparent difference in the papillary tracings, is also worthy of remark.

We always found, like Roy, that the papillary muscle curve is shorter than that of the ventricle, and we never observed a difference as regards the commencement of the two curves of less than one-twentieth of a second. The papillaries, however, speedily lag more and more behind the ventricles until they cease altogether. Since at the very earliest, three or four minutes must elapse after the death of the animal before the preparation is ready for experiment, and during the whole of this time the heart has been deprived of blood and the vulnerable papillaries have consequently lost in vigour, we think it extremely probable that the shortening of the two muscles under normal circumstances is practically simultaneous. Certainly it must be admitted that this difference is not greater than one-twentieth of a second, and it is herefore difficult to see how the shortening of the papillaries can make itself apparent in the pulse curve, since the ventricle forms an absolutely closed cavity for one-tenth of a second. With regard to the question whether the subsequent relaxation registers itself upon the pulse tracing we are unable to make any definite statement.

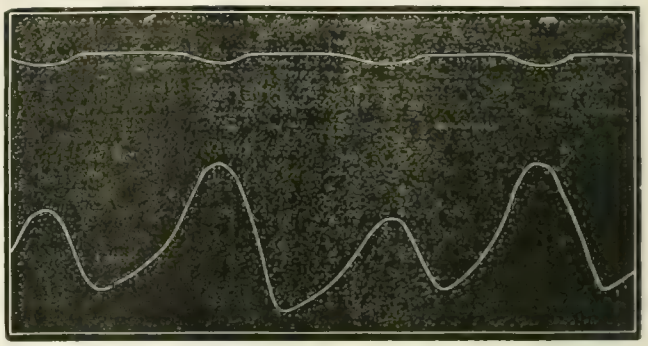


Fig. 2.—The upper line denotes the papillary contraction, the lower the contraction of the ventricle.

The early exhaustion and pronounced vulnerability of the musculi papillares appear to us to be of considerable importance, since they offer a simple and adequate explanation of certain clinical phenomena. It is well known that these muscles are particularly prone to all forms of structural degeneration and that their condition constitutes the most delicate index of the general state of cardiac nutrition. In fact, they might be termed "the cardiac extremities," since from their single attachments to the ventricular walls they must necessarily derive their entire blood supply from the nutrient vessels which enter them at their bases. In short, their circulation must be of a terminal character. It is therefore obvious that the musculi papillares are at the outset even structurally predisposed to exhaustion and degeneration, and that any condition which tends to lower the nutrition of the heart as a whole must affect them with a magnified degree of intensity.

Under certain conditions, especially those associated with continued pyrexia, the first sound of the heart is apt to lose its definite character and become "muffled" or "toneless." This change is, *cæteris paribus*, evidently associated with a modification or suppression of the valvular elements induced by sudden tightening of the auriculo-ventricular flaps, since the papillary muscles no longer perform their functions vigorously as heretofore. And this explanation is supported by the fact that, while the occurrence of a "toneless" first cardiac sound has always been recognised in such cases as the earliest sign of heart failure, the empirical use of stimulants is generally found to restore the sound to its normal state.

Anæmic Murmurs.—Of the theories suggested in order to account for the existence of these murmurs, one group assumes an irregular vibration of membranes, another the formation and vibration of fluid veins.[3] In the former the seat of production must be the mitral curtains or the commencement of the pulmonary artery. The cause of the abnormal oscillation has been attributed to anatomical changes in the cardiac muscle. It has been demonstrated that murmurs and fatty degeneration of the cardiac fibres may be produced in animals rendered anæmic by blood-letting; also similar changes have been observed in man as the result of anæmia. An objection has been raised, in the case of animals recently bled, namely, that there is no time for anatomical changes to be produced. Fritsch's observations prove that a distinct murmur is audible over base and apex about three hours after delivery. When the patient sat up in bed, and the heart thereby became accelerated, the murmur vanished. On compression of both iliacs or abdominal aorta, as well as after digitalis and alcohol, the murmur likewise disappeared.

[3] Schrwald, *Deutsche med. Wochenschrift*, May, 1889, where a full list of the literature is given.

With regard to the second group of theories—that of fluid veins—these are supposed to be produced either by insufficiency of the mitral or tricuspid valves, or by stenosis of the pulmonary and aortic orifices. In the case of the mitral, which is by far the commonest area of occurrence, a fatty degeneration of the papillary muscles is stated to be generally present, the valves therefore do not close so promptly, but give rise to a slight degree of regurgitation, or a dilatation of the left ventricle exists, including an expansion of the mitral ring. Sehrwald[1] assigns their causation to the formation of fluid veins, but places the locus of production in the left auricle. This necessitates the assumption of an active dilatation of the left auricle, with the production of a negative pressure, and a suction force. The frequent occurrence over the pulmonary area (second left intercostal space) is explained by the fact that the left auricle lies behind the origin of the aorta and pulmonary artery, its appendix embracing the root of the latter. We believe, however, that the suction power of the left auricle is exceedingly trivial, insignificant, and quite inadequate. Moreover, the objections which Sehrwald urges against the sudden production of fatty changes in the papillaries, in cases of bleeding and after parturition, cannot be used against the existence of a functional derangement of the same structures, which we have already shown can be so readily induced in them by an insufficient blood supply. The effects of compression of the iliacs and the erect posture may be explained by the fact that under these circumstances the papillary muscles must receive an augmented supply of blood.

This functional derangement may exist only temporarily, but if the cause be prolonged it will lead to degeneration of these muscles. In cases of long-standing anæmia, where an organic change in the condition of the papillaries may safely be assumed, compression of the femorals and brachials simultaneously, leads, as we have shown experimentally, to no definite alteration in the character of the anæmic murmur. If the theory of Sehrwald be correct, the murmur should disappear or be fundamentally modified.

We therefore conclude that the existence of fluid veins in these cases is exceedingly improbable, and that functional and organic changes in the papillary muscles constitute a very important factor in the production of anæmic cardiac murmurs.

ON RAPID DILATATION OF THE CERVIX AND UTERINE CAVITY BY HEGAR'S GRADUATED BOUGIES.[1]

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The recognised methods of dilating the cervix and uterine cavity for various morbid conditions are numerous, but I think they may be classed into four principal groups, namely:

1. Gradual dilatation by sponge, laminaria, or tupelo tents, the process requiring at least twenty-four hours to effect the desired result.

2. Lawson Tait's continuous elastic dilatation by means of special bougies, the treatment extending over a somewhat indefinite period.

3. Rapid dilatation by means of Hegar's bougies, Hank's or Duncan's dilators.

4. A combination of tents and dilators.

The disastrous effects, especially of a septic nature, often following the use of sponge tents, are well known to every practitioner, and although these accidents are not so liable to happen with laminaria and tupelo tents, still their use is not unattended by danger, and it is with the object of bringing the results of a somewhat extended trial of Hegar's dilators before the profession that I have made this contribution. Mr. Lawson Tait, in describing his own method, makes a sweeping assertion concerning the one I am advocating, and it is one of the objects of this paper to entirely controvert this assertion. He says in his work, *Diseases of Women and Abdominal Surgery*, vol. i, p. 109, "The methods employed for dilatation by Hegar and others by the use of the graduated stems seem to me just as dangerous as the use of the tangle tent, and certainly is a piece of work so arduous for the surgeon that I for one could not find time to use it. It means that the operator must sit at the bedside for some hours exercising a good deal of force, to the exhaustion of himself as well as to the infliction of much pain on the patient."

Hegar's vulcanite dilators are not depicted in many of the more modern textbooks, but the best figures are to be seen in Lewers's paper[2] and in an article by Fritsch in the *Handbuch der Frauenkrankheiten*.[3] The first set I used were made with the handle separate from the bougie portion of the instrument. I found, however, that these were continually breaking at the joint, and I therefore procured a set made in one piece, otherwise identical with those originally designed by Hegar. There are two positions in which these bougies may be used:

1. In the dorsal decubitus, when a Sims's speculum is necessary to retract the perineum and posterior vaginal wall; a volsella is then used to seize the anterior lip of the cervix and steady the uterus, and the bougies are then inserted in succession.

2. In Sims's left lateral decubitus, when a speculum is not wanted, nor is the volsella. But I have used regularly an instrument invented by Dr. M. Handfield-Jones, and have found it of such great value that I should now never think of attempting to operate except with its aid. It consists of a strong pair of forceps with a powerful catch on the handles; the distal ends are hollowed out into two cavities, which, when applied on either side of the bougie handle, hold it perfectly tight and rigid; the first and second fingers of the right hand are introduced into the vagina and the point of the dilator inserted into the cervix: pressure is made as in the operation of perforation of the fœtal skull, the forceps being held backwards in the line of the pelvic axis—that is, if the uterus is normally situated—and after a longer or shorter period the cervix gives way and the dilator passes in. After being retained there for two or three minutes, as circumstances require, the forceps is slipped off and applied to another of the next size, the already introduced one extracted, and the fresh one inserted in the same way. Hegar's dilators are made in sizes from 1 to 26. I found that numbers 1 to 7 were fragile, and therefore had a set of solid steel bougies made and numbered from 1 to 14, somewhat after Duncan's model. These have a circular depression at a distance of $2\frac{3}{4}$ inches from the blunt intrauterine end, and on the site of the usual angle. No. 14 is slightly smaller than No. 8 Hegar, so that a continuous graduated series is at the operator's command, from No. 1 steel bougie to No. 26 Hegar—that is, from the size of a circle with a diameter equal to that of a very small sound to one with a diameter of $1\frac{1}{8}$ inch. With such an amount of dilatation I feel quite sure that any gynæcological operation can be performed—and, indeed, version in an early pregnancy, as is related by Dr. Lewers.

I have never so far met with a case of cervical laceration in my own practice, although I am aware that such lacerations do occur, and are considered a serious drawback to this method. I believe, however, that they happen entirely as the result of passing the bougies into the cervix too rapidly, and not allowing one to become loose in the cavity before removing it and inserting a larger one.

The advantages of this mode of treatment appear to be: (1) the necessity of no assistant beyond the anæsthetist; (2) the great power which can be brought to bear on the point of the dilator at the os uteri; (3) the great facility that exists of graduating this power; and (4) the ease with which antiseptic precautions can be carried out.

The only disadvantage that I am aware of is that in patients who are unable to take an anæsthetic in Sims's position thus rendering the dorsal decubitus necessary—its feasibility is not so great. The importance of the strict use of antiseptics in conjunction with these dilators cannot be too rigidly insisted upon; the bougies should always lie in a flat tray, the antiseptic solution being made as hot as

[1] *Loc. cit.*

[1] Read in the Section of Obstetric Medicine and Gynæcology at the Annual Meeting of the British Medical Association held in Birmingham, July, 1890.

[2] *Lancet*, 1887, vol. ii, p. 507.

[3] Die Entzündungen der Gebärmutter, p. 1017

Table of Thirty-one Cases of Dilatation of the Cervix and Uterine Cavity by Hegar's Graduated Bougies.

No. of Case.	Date of Operation.	Age and Condition.	Children.	Morbid Condition.	Particulars of Operation.	Duration of Dilatation.	Antiseptic Used.	Result. Immediate.	Result. Remote.	Remarks.
						Min.				
1	Jan. 6, 1884	31, M.	2	3 mths. miscarriage, menorrhagia 6 wks., septic	Sea tangle tents 24 hrs., D. to 23 H., placental remains removed, iodine	40	Hot lot. acid carbol. (1 in 40)	R.	Cure	Again pregnant.
2	Aug. 5, 1884	24, M.	0	Dysmenorrhœa, sterility 3 years, stenosis intr. o uteri	Steel bougies, then D. to 18 H.	42	,, ,,	,,	Pregnancy	Now mother of two children.
3	May 2, 1885	22, S.	0	Dysmenorrhœa with eclampsia, stenosis o internum and extern.	D. to 12 H.	20	,, ,,	,,	Great relief	Married in 1889, now pregnant.
4	July 14, 1885	27, S.	0	Menorrhagia from endometritis, dysmenorrhœa, catamenia lasting 9 to 12 days	D. to 12 H., pure nitric acid applied	24	,, ,,	,,	Well in 1889	—
5	Oct. 17, 1885	22, S.	0	Dysmenorrhœa, with endocervicitis	D. to 12 H., strong iodine applied	18	,, ,,	,,	No marked relief	Ovaries removed in Soho Hospital in 1886.
6	March 15, 1886	25, M.	0	Intense dysmenorrhœa worse since marriage sterility	Steel bougies, then D. to 12 H.	32	,, ,,	,,	Pregnancy 3 mths. later	Normal labour.
7	June 10, 1886	27, M., W.	0	Gonorrhœa, followed by gonorrhœal endometritis	D. to 12 H., pure nitric acid applied	18	,, ,,	,,	Cure	Became widow in 1888, married again 1889, now pregnant.
8	July 7, 1887	28, M.	0	Dysmenorrhœa and sterility, stenosis	D. to 12 H.	24	Hot liq. hydrarg. perchlor. (1 in 2,000)	,,	Relief for 2 yrs.	Gradual relapse.
9	Oct. 7, 1887	25, M.	0	Dysmenorrhœa, sterility well marked stenosis	Steel bougies, then D. to 12 H.	45	,, ,,	,,	Permanent cure	Pregnancy followed 7 mths. later.
10	Oct. 22, 1887	28, S.	0	Intense dysmenorrhœa and stenosis.	Steel bougies, then D. to 12 H.	40	,, ,,	,,	Entire relief for 14 mths.	Gradual return of pain.
11	Jan. 8, 1888	29, M.	2	3 mths. miscarriage 10 days before sapræmia hæmorrhage	D. to 24 H., swabbed with Edinburgh tinct. iodi.	32	Hot Condy and water	,,	Cure	Catamenia now regular.
12	April 28, 1888	26, M.	3	3½ mths. miscarriage 3 days before, flooding	D. to 22 H., placental remains removed, swabbed with iodine	30	,, ,,	,,	,,	For 6 mths. catamenia excessive from want of care, now normal.
13	June 8, 1888	24, M.	0	Sterility, fungous endometritis	2 years local treatment, then D. to 16 H., and pure HNO_3 applied	24	Hot liq. hydrarg. perchlor. (1 in 2,000)	,,	Relief for 9 mths.	Gradual return.
14	Aug. 15, 1888	33, M.	2	5 mths. miscarriage 7 wks. before, flooding dipsomania	D. to 20 H., polypoid mass removed from anterior wall, swabbed iodine	36	,, ,,	,,	Cure	Pregnancy again and miscarriage at 6 mths.
15	Sept. 11, 1888	32, M.	1	3½ mths. miscarriage 1 mth. ago, flooding	D. to 21 H., placental remains removed, iodine	56	Hot Condy and water	,,	,,	Within 48 hrs. pink rash gradually spread over whole body (? iodism).
16	Sept. 18, 1888	36, M.	4	Menorrhagia 3 mths., polypus at fundus	D. to 25 H., *écraseur* to pedicle	45	Hot liq. hydrarg. perchlor. (1 in 2,000)	,,	,,	Well at present.
17	Nov. 2, 1888	32, M.	2	Menorrhagia and dysmenorrhœa, small fibroid posterior uterine wall	D. to 26 H., capsule of fibroid incised, enucleated	66	Hot perchloride solution and iodoform gauze	,,	,,	,, ,,
18	March 18, 1889	24, M.	2	Gonorrhœal endometritis, menorrhagia, dyskinesia	Rest and tentative treatment 6 mths., D. to 12 H., iodine	40	Hot Condy and water	,,	,,	Well in January, 1890.
19	April 5, 1889	39, M.	3	Metrorrhagia, offensive uterine discharge	D. to 24 H., cavity in anterior uterine wall scraped	32	Hot iodine and water	,,	Well after a year	Cavity contained granulating tissue, not malignant.
20	May 25, 1889	32, M.	4	4½ mths. miscarriage 10 days before, septicæmia	Uterus retroflexed, D. to 20 H., two pieces of placenta removed	65	Hot Condy and water	,,	Cure	Condition critical for 11 days, temp. 104.5°, now well.
21	July 15, 1889	26, M.	2	2 mths. miscarriage 6 days before, flooding	D. to 22 H.	24	Hot lot. acid carb. (1 in 40)	,,	,,	—
22	Aug. 30, 1889	32, M.	1	4 mths. miscarriage 2 days before	Retroverted uterus, D. to 24 H., *débris* removed	46	,, ,,	,,	,,	Displacement as before.
23 } 24 }	Oct. 2, 1889	24, M.	1	4 mths. miscarriage 9 wks. before, profuse irregular flooding	D. to 20 H., adherent piece of tissue peeled off, iodine	56	Hot liq. hydrarg. perchlor. (1 in 2,000)	,,	*Vide* context	Mitral regurgitant murmur.
25	Nov. 10, 1889	26, S.	0	Dysmenorrhœa, endometritis	D. to 12 H., much gelatinous material scraped away, nitric acid applied	34	,, ,,	,,	Relief	Remains well.
26	Nov. 14, 1889	25, M.	0	Gonorrhœa 6 mths., gonorrhœal endometritis	D. to 12 H., yellow gelatinous material scraped out, HNO_3	35	,, ,,	,,	Well	—
27	Dec. 13, 1889	27, M.	2	3 mths. miscarriage 4 days before, hæmorrhage, rigors	D. to 22 H., placental remains scraped off anterior wall	32	Creolin and hot water	,,	Cure	Normal periods since.
28	April 2, 1890	26, M.	1	4 mths. miscarriage 6 days before, hæmorrhage, incessant pain	D. to 22 H., placental remains removed, iodine	24	Hot lot. acid carb. (1 in 40)	,,	,,	,, ,,
29	May 22, 1890	33, M.	0	Profuse hæmorrhage 18 mths.	D. to 22 H., scraped with sharp curette	36	Hot liq. hydrarg. perchlor. (1 in 2,000)	,,	Temporary relief	No hæmorrhage, scrapings showed malignant disease.
30	May 28, 1890	27, M.	3	Fungous endometritis, dysmenorrhœa	D. to 12 H., HNO_3 applied	18	,, ,,	,,	—	Was curetted 6 mths. ago, but rapid return.
31	June 6, 1890	19, M.	1	5 mths. miscarriage 7 days before, flooding	D. to 22 H., piece of placenta removed, iodine	32	Hot iodine and water	,,	—	—

D = Dilatation. R. = Recovery. H. = Hegar.

possible and of the proper strength by the addition of boiling water. The choice of the mixture used depends much upon the circumstances under which the operation is performed. In the appended 31 cases I have resorted to the use of five—and I think reliable—reagents.

The solution of perchloride of mercury (1 in 2,000) was used in 13 cases, carbolic acid solution (1 in 40) in 10 cases, iodine and water (of a dark sherry colour) in 2 cases. Condy's fluid and water in 5 cases, and creoline (Jeyes' preparation) in 1 case. I make it a rule to take pellets of the corrosive sublimate with me, so that three of these make the necessary standard solution with boiling water; the dilators should be just covered in this fluid in the flat tray.

For the vaginal douche, before and after the operation, I usually employ iodine, especially if an intrauterine injection is necessary; the only disadvantage I have so far experienced was in Case XV, where an urticarious rash appeared within forty-eight hours over the whole body, and was doubtless due to iodism. Although creolin was found to be bland and unirritating to the vaginal tract, its opacity prevented the numbers on the dilators being seen when lying in the tray, and its penetrating smell was, in addition, intensely disagreeable.

As regards the amount of dilatation necessary in each case, I found that up to Hegar 12 was requisite for swabbing out the uterine cavity, up to 20 or 22 for removal of placental remains, and up to 26 for any intrauterine manipulations, such as incising the capsule of a fibroid, or applying the *écraseur* to a polypus. If the case is one in which it is not needful to dilate the uterus above Hegar 12, I swab out the cavity well with iodine tincture on cotton wool, or, in certain cases, with fuming nitric acid. If above that dilatation is necessary, the intrauterine injection is best given with the double-barrelled celluloid tube, or that of Bozeman modified by Fritsch.[4]

Indications for the Operation.—(1) For hæmorrhage after incomplete abortion and removal of the remains of the decidua; (2) For repeated hæmorrhage in the non-pregnant condition where other remedies have failed and other sufficient causes absent; (3) For dysmenorrhœa and sterility from stenosis of the cervix; (4) For examination and treatment of the various conditions of the endometrium by means of the curette and otherwise, that is, in malignant disease, fungous, and gonorrhœal endometritis; (5) For removal of intrauterine tumours. It may be mentioned here, also, that it is a not uncommon experience to find that the mere dilatation will often arrest hæmorrhage when no morbid condition can be discovered.

Summary of Cases.—Of the 31 cases detailed in the table, it will be seen that 12 were operated upon for causes directly arising from pregnancy, that is, from retained and adherent products of conception (I, II, 12, 14, 15, 20, 21, 22, 23, 27, 28, 31); of these, one required a secondary dilatation (23), and as there are some interesting points in its course it is given more fully later on. In Cases I, XI, and XX, septic symptoms had commenced, and although in the two former they disappeared at once after operation, in XX they continued (although the hæmorrhage ceased), and ultimately terminated by a left femoral phlegmasia and a prolonged period (11 months) of amenorrhœa. In this case, and in XXII, the uterus was retroflexed, a condition which added much to the tediousness and difficulty of the operation. Case XXIII was that of a young married lady, who had been attended by her medical attendant for a four months' miscarriage seven weeks before I saw her with him; she had been losing more or less severely during the whole of that time. When I first examined her, her condition was one of profound anæmia, her greatest complaint being the constant cardiac palpitation.

As may be seen in the table, she was treated by dilatation up to Hegar 20, and an adherent piece of decidua removed, but another portion was so intimately adherent that it was allowed to remain. On getting up, fourteen days later, she was seized with pain and passed large quantities of black clot and bright liquid blood; she fainted repeatedly, and for several hours her condition was most grave. Firm vaginal packing stayed the hæmorrhage for a time, but it recurred with great violence on its removal. I therefore dilated again up to Hegar 16, curetted and swabbed the uterine cavity with lin. iodi., some villous looking material came away on the curette; the uterine wall was found to be so thin over the site of the adherent decidua that nothing more was done. The vagina was plugged with a carbolised bandage sprinkled with iodoform daily for a week. No further hæmorrhage occurred, and although her progress was slow, she ultimately made a perfect recovery.

None of the other cases call for comment; on removal of the placental remains, the patients made a rapid convalescence, no cellulitis or febrile symptoms arising in its course. It will be seen that the time occupied by the operation was as much as 65 minutes in one case and as little as 18 minutes in another; so that the cervical pregnancy-softening does not facilitate the dilatation as one would suppose.

The only case (I) in which I used preliminary dilatation by bougies of sea tangle did not occupy any shorter time than usual, the operation lasting forty minutes.

The cases of dysmenorrhœa and stenosis, attended by sterility in those who were married, are six in number (II, III, VI, VIII, IX, X). The immediate results were evident in 4 cases (II, III, VI, IX), in that pregnancy followed. In two it will be seen that relief was only temporary.

Of gonorrhœal endometritis I have met with three typical instances (VII, XVIII, XXVI). In all of them the antecedent history was quite clear, and the usual remedies and vaginal injections had been used with a negative result. Dilatation up to Hegar 12 was found sufficient; a yellowish gelatinous material came away on the bougies, and was probably diseased endometrium. Nitric acid was applied in Cases VII and XXVI with good results in both, but in Case XVIII I injected gently into the dilated uterine cavity a drachm of the Edinburgh tincture of iodine; in this case the Fallopian tubes were apparently beginning to be affected, and it was thought that the penetrating effect of iodine would be here of great value. As regards the three cases in which morbid growths were removed and of which short notes are given in the table (XVI, XVII, XIX), Case XVII was a protracted operation; the dilatation was difficult owing to an obstacle above the internal os uteri and posteriorly; this was found to be a small fibroid; I incised the capsule of this and scraped the greater part away, plugging the cavity with iodoform gauze. Healthy granulation went on, until the contraction of the cervix prevented further observation. I have knowledge of two somewhat similar cases, but where the growths were high up at the fundus uteri and almost inaccessible: in one the capsule was simply incised, with a complete cessation of hæmorrhage; the other was cut into and scraped, but so far sufficient time has not elapsed to allow of the result being definitely known. In Case XIX, the patient's medical attendant had removed a small apparently polypoid "bud" from the external os uteri; the hæmorrhage continued, but in addition an offensive discharge appeared. On dilatation the finger passed into a small cavity half filled with soft granulating tissue. The question of malignancy naturally arose, but the microscope showed nothing definite; I scraped out the hollow with a curette, and as far as could be ascertained a year afterwards there was no return.

The above facts speak for themselves, and I cannot but conclude that for exploration of the uterine interior and treatment of any disease there, this method of rapid dilatation is much superior to any other, both in rapidity of completion and absence of septic sequelæ.

[4] *Handbuch der Frauenkrankheiten*, p. 899, fig. 133.

BOTTINI'S GALVANO-CAUSTIC TREATMENT OF ENLARGED PROSTATE.

By ETTORE MOROTTI, M.D.

Assistant to the Regius Professor of Surgery in the University of Pavia.

In the treatment of enlarged prostate two points should be kept in view, namely, (1) to increase the expulsive power of the bladder; (2) to remove or lessen the mechanical impediment to the outflow of the urine. To meet the latter indicating, Professor Bottini, of Pavia, has introduced a method of procedure which consists in the destruction of the obstructing portion of the prostate by means of what he calls a "thermo-galvanic cautery." The instrument consists of two

portions, namely, an "incisor" apparatus and a special battery. The former resembles Mercier's instrument, except that the cutting part is of platinum instead of steel; it is a catheter-shaped metal tube (see Fig. 1), the lumen of which is divided into four separate compartments. Two of these are for the conducting electric wires, the other two being channels for the passage of a stream of cold water which runs to the distal extremity of the instrument by one and returns by the other, thus preventing the apparatus from becoming overheated. The conducting wires end in two small platinum plates (Fig. 1, E) one-third of a centimetre in breadth by two in length, placed parallel to each other at a distance of one millimetre and joined towards the beak of the instrument, from which they are separated by the length of one centimetre. These plates when heated to a dull red, are applied to the hypertrophied tissue which is thus destroyed without the loss of a single drop of blood.



Fig. 1.

Fig. 2 represents the knife of the galvanic incisor; it consists of a narrow strip of platinum curved into the form shown. A wheel in the handle, resembling that applied to many lithotrites, permits the knife to be screwed backwards and forwards; when the instrument is to be introduced the blade is screwed down until it is completely sheathed in the curved point of the instrument.


Fig. 2.

The battery employed consists of four accumulators, generating fully three times as much electro-motor force as Bunsen's couples, and remaining active for quite twenty-four hours without loss of intensity or of tension. It can be charged easily and in a few minutes with a dynamo, or with one or more Bunsen's couples, or any other pile. The distribution is made by column commutators; in case of need, however, chain commutators would serve the purpose, as they have actually done more than once. The battery remains charged for many months, and may thus in case of necessity be used immediately without any trouble. The several accumulators are hermetically closed, and may thus be turned over without a drop of liquid being spilt. A feature which makes the battery particularly convenient in practice is its portability.[1]

Professor Bottini performs his operation in the following manner: The patient's urethra should be habituated to the instrument before cauterisation of the prostate is attempted. Chloroform is only occasionally required. Unless the bladder is quite empty no water need be injected. The patient being in position as for lithotrity, the instrument is introduced in the usual way. When the point is in the bladder it is turned downwards, as in searching for a stone, and gently drawn forwards so as to cause the beak to hitch against the prostate and bring the cautery into contact with the part on which it is desired to act. If there is any doubt, the exact position of the instrument should be ascertained with the finger in the rectum. The current is next turned on and the point pressed against the hypertrophied tissue. A stream of water, at a temperature of 40° to 50° F., is then made to circulate through the instrument, from a common pail or an Esmarch's irrigator of a capacity of six to eight litres, suspended at a suitable height. By gently elevating the handle of the instrument the point is made to burn its way slowly through the prostate. When the sound of burning is distinctly heard, the point should be gently moved backwards and forwards until the projecting lobe is completely divided. By experiments on dead human bodies, and on living animals, Professor Bottini was able, with the plates at red heat, to produce in one minute an eschar about one centimetre thick, and one of double that thickness if the action was prolonged for another minute.

When it is judged that sufficient tissue has been destroyed, the current should be shut off, but the instrument should be left *in situ* for two or three minutes, so as to allow it to become cool before it is withdrawn. The knife should next be restored to its sheath, and the instrument pushed into the bladder so as to make sure that it is not caught anywhere, and then withdrawn. For the after-treatment, if the patient cannot pass water in the natural way, Nélaton's soft catheter should be used. The eschar usually separates from the tenth to the fifteenth day. Professor Bottini has operated in this manner in fifty-seven cases with two deaths: these, however, occurred in the early days of the operation. In thirty-two cases a perfect cure was effected, in eleven there was improvement, and in twelve the result was *nil*. The method is not altogether free from danger unless the greatest care is used, and it should be reserved for cases in which strangury is persistent.

If the hypertrophy is only moderate in degree, Professor Bottini recommends that the obstructing lobe should be entirely destroyed with the cautery; in advanced cases, however, the surgeon should be contented with tunnelling a passage through it. Both these procedures are contra-indicated when kidney disease is present, or is even suspected to exist.

[1] The whole apparatus, battery and incisor, can be obtained from Carlo Mira, Via Ospedale, Milan.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ANKYLOSIS OF LEFT KNEE-JOINT: TRAUMATIC ANEURYSM.

CHUNIA, a Brahmin female, aged 26 years, was admitted into the Muttra Dispensary on August 29th, 1890. She had ankylosis of the left knee-joint of over a year's standing, the result of an attack of rheumatism. The joint was quite stiff, the leg being fixed at an acute angle to the thigh. She was very miserable, and unable to stand or walk.

Having anæsthetised her, I proceeded forcibly but gradually to straighten the limb, and, after using considerable violence, I got the limb perfectly straight: however, just as I was making my final effort, I suddenly heard a sound, different to that caused by the breaking down of adhesions, loud though muffled in character, and felt the sensation as though some deep-seated structure had given way. I instantly desisted from further violence. Immediately after the sound was heard the limb began to swell, the swelling extending from the popliteal space almost to the ankle.

I had no doubt in my mind that some considerable vessel had given way, and, to verify my surmise, I inserted a small trochar and cannula into the tumour: on removing the former, through the latter came a copious flow of bright arterial blood. For a short space I anxiously deliberated what should be done: whether operative measures should be resorted to, or expectant treatment only adopted.

On consulting with my assistant surgeon, Babu Massmohan Dass, we determined to avoid surgical interference, and to give the patient the alternative chance; consequently the limb was uniformly bandaged from the toes to the centre of the thigh, and then fixed in an elevated position. The patient, very carefully watched, was left thus for twenty-four hours, after which space of time the bandage was removed, and the tumour found considerably reduced in size. Cold applications were now resorted to, the limb being still kept in an elevated position. In one week's time the tumour had entirely disappeared, and the limb was placed in a McIntyre's splint, and gradually straightened.

The patient, after four months' residence in hospital, was

discharged with a fairly useful limb. There was considerable deformity at the knee-joint, but she could get about with comparative ease, which before was out of the question, locomotion being impossible.

The case is interesting in that it shows the risks attendant on manipulating ankylosed joints, and also that simple methods of treatment, as in this case adopted, may be sufficient to produce a perfect cure; indeed, I think it proves that in all cases of so-called traumatic aneurysm, expectant treatment should always primarily be adopted.

The vessel ruptured was almost certainly the popliteal, for the following reasons: 1. Nature of original operation. 2. The sound came from the position of the vessel. 3. Swelling extended from popliteal space downwards, and was of enormous size. 4. Complete failure of tibial pulse. 5. Marked loss of temperature. 6. The practical test with trochar and cannula.

Had the ruptured vessel been the peroneal or other smaller vessel, the swelling would not have been so large or defined, there would probably not have been complete failure of the tibial pulse; and, again, there was no reason why any other vessel should have given way when the knee-joint was being manipulated, except, of course, in the case of disease; but the woman was young and strong, and could give no history of syphilis or other disease except her attacks of rheumatism.

J. Fayrer, M.D., F.R.C.S.E., Medical Staff.

DOUBLE SULPHATE OF IRON AND MAGNESIUM.

The combination of sulphate of iron and sulphate of magnesium in mixtures is a time-honoured one. The relative proportions in which they are prescribed vary largely. These two sulphates, if used in calculated proportions are, however, capable of forming definite salts. The one to which I wish to call attention has the formula, $FeSO_4+MgSO_4+6H_2O$. It may be conveniently prepared by dissolving equal molecules of sulphate of iron and Epsom salts (278 parts by weight of sulphate of iron, and 246 of sulphate of magnesium) in a minimum quantity of boiling water, with the addition of a little dilute sulphuric acid to prevent the formation of oxides. The solution should then be evaporated until it becomes quite thick from the salt gradually crystallising out; and, after allowing it to cool, the deposited salt should be dried, without strong heat, by placing it on filter paper. The double sulphate thus prepared is a crystalline powder of a greenish white colour, about as fine as common salt. It is readily soluble in water, and keeps admirably. If the water of crystallisation is driven off by heat, as in the preparation of "ferri sulphas exsiccata," the resulting powder soon absorbs moisture, and deliquesces.

The double sulphate, prepared as above, is in a form convenient for use; but, if desired, it can be recrystallised, and larger crystals so obtained. Given in 10-grain doses three times a day, the double sulphate appears to have no definitely astringent or aperient influence, and hence is a convenient salt for administration over a considerable period of time in anæmia or chlorosis. A dose of 40 grains produced a slightly aperient effect, with a little flatulence and intestinal pain.

The corresponding double sulphate of iron and ammonium is already largely used in chemical analysis, on account of its being much more stable and less easily oxidised than sulphate of iron itself; and I think that similar qualities, combined with freedom from constipating influence, render the above "magnesium ferrous sulphate" worthy of taking a place among the medicinal preparations of iron.

I have used the following prescription with good results in several cases: R Ferri et magnes. sulphat. ʒij; aquæ chloroformi ad ʒvj; ʒss ter die.

Highgate, N. Hugh Woods, M.D.

CHLORALAMIDE.

I have prescribed this drug lately with benefit in cases of insomnia. I have at present a patient, aged 80, with granular kidneys and a dilated heart. I prescribed 30 grains of chloralamide, which produces refreshing sleep and entirely takes away the desire to micturate in the night, which is an important action in an old man. The drug produces a most refreshing sleep and a sense of well-being in the morning, without any headache. I regret, however, on each morning after the drug has been taken there has been profuse epistaxis, and a great deal of congestion of face and neck on the following day.

I send this in the belief that it is dangerous to prescribe the drug when the kidneys are damaged in any way so as not to allow the drug to be freely excreted.

East Ilsley, Berks. Robert Main, M.D.

AN EFFECTUAL AND EASY METHOD OF PLUGGING FOR EPISTAXIS.

Observing the excellent method given by H. A. Rawlins, M.R.C.S., in the British Medical Journal of March 14th, 1891, I am prompted to give a method I have used for many years for the relief of epistaxis, and also for safety from its occurrence after operations within the nares. It has no advantage over the method of Mr. Rawlins, excepting that I use cotton wool, which is present in nearly every household, while lint is not always to be had at once.

The method is thus: Take an elongated quantity of cotton wool, lengthwise of the fibres, which when doubled upon itself will be somewhat conoidal, and completely fill the naris it is intended for, especially the posterior end; but before doubling it upon itself fortifying the cotton by spiral turns of soft thread, such as is used by grocers, then, doubling the mass upon itself you have a cone of cotton, three or four inches long or more, from the smaller end of which extend the strings, which ought to be tied together, the knot to include some of the fibres of the cotton at the ends. Now, if thought necessary, this mass can be saturated with a solution of alum, but preferably it may be anointed with a little lard or vaseline. Now with a thin probe or knitting needle in the right hand the mass of cotton is to be caught in its fold at its larger and what ought to be the distal end of the cone while the strings are caught in the fingers of the same hand, and you have now the cone of cotton wool extended upon your probe or knitting-needle and secured in your right hand, while with the left hand the point of the nose can be elevated and with a rather quick thrust the conoidal mass of cotton is carried back until the yielding sensation is imparted to the hand which indicates that the distal end of the cone has emerged through the opening of the posterior naris into the pharynx. The slender probe or knitting-needle or grooved director, as you please, is now easily withdrawn by giving it a sudden retractive start, and the knotted ends of the strings are then cut off and tucked into the naris out of sight, to be easily hooked out and grasped for the removal of the cotton plug that it secures in its spiral folds.

It ought to be remembered that the direction of the floor of the naris, when the patient is sitting erect, is directly backward and a little downward, and also that the combined calibre of all the choanæ at the posterior naris is much greater than at the anterior naris. Hence, to plug successfully the cotton conoid ought to be three or four times larger at the distal than at the proximal end when *in situ*. And again, in making the insertion, do so with a quick motion and keep your probe close to the floor of the naris. A trial of this simple method will prove so efficient that I believe the surgeon will ever after resort to it in preference to any other.

Pittsburg, Pa., U.S.A. W. H. Daly, M.D.

Presentation.—Dr. F. J. Butt has been presented by the Hoole (Chester) St. John Ambulance Class with a silver-mounted malacca cane, suitably engraved, in recognition of his services as their instructor. All the members of the class who presented themselves were successful in gaining certificates.

At the last sessional meeting of the Institute of Chemistry at Burlington House, a paper was read by Dr. Odling on "The Relation of the Chemical Society to Professional Chemistry;" it was followed by a lengthy discussion. In the evening the Fellows and Members dined at the Albion, Aldersgate Street, Dr. W. A. Tilden, the President of the Institute, occupying the chair. The toast of "The Learned Societies" was replied to by Sir William Thomson, President of the Royal Society, and by Mr. Thomas Bryant, President of the Royal College of Surgeons.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GUY'S HOSPITAL.

CASE OF FRACTURE OF THE SPINE, WITH PARALYSIS: LAMINECTOMY ON THE THIRD DAY: COMPLETE RECOVERY.

[Under the care of Mr. GOLDING-BIRD.]

(From notes taken by the Dresser, Mr. MEADOWS.)

E. F., aged 32, married, fell, on December 27th, 1890, down the well of a stone staircase, alighting thirty feet below on a landing, on her back, the edge of the bottom stair striking her across the loins. She had been confined only three weeks, and was in a bad state of health, and there was reason to believe that puerperal mental aberration occasioned the fall. When admitted she was quite conscious, and had been so from the first, being able to give a detailed account of her accident. She was a delicate-looking woman, and appeared much wasted, and she had, after a previous confinement fifteen months before, suffered from puerperal mania. Her only complaint was of severe aching pain across the lower part of the back, aggravated by the slightest movement, with loss of power over the lower extremities, and an examination showed the following facts: There was partial loss of sensation in both lower extremities and in the abdominal walls, but she could localise a pin prick; both legs could be very slowly and with great deliberation drawn up a few inches, but neither foot could be raised off the bed; the left leg was more affected than the right. Respiration was mostly diaphragmatic; the upper ribs could, however, be raised. There was complete loss of power over the abdominal muscles. All the limb reflexes were normal; there was no ankle clonus. Control over the bladder and rectum was lost. Temperature 100.8°, pulse 84. A local examination of the back showed no wound or bruising, but on following down the vertebral spines a space was detected as wide as the thumb, between the eleventh and twelfth dorsal vertebræ, and the spinous process of the twelfth was pushed out laterally towards the patient's left side; it was loose and evidently broken off. Manipulation at the seat of injury caused cramplike pains in the calves of both legs.

During the following day (December 28th) the local conditions were unchanged, and the patient lay quietly in her bed; but the pulse rose to 90, and the temperature to 101°.

The morning of December 29th the patient was decidedly worse. Movement was all but entirely lost in the legs; if any difference existed between them, the left was the worse. Mr. Golding-Bird then decided to operate, remarking that the ingravescent character of the symptoms might point to hæmorrhage; whilst the nature of the accident rendered it likely that the laminæ were depressed upon the cord.

The patient was placed under an anæsthetic, and a vertical incision five inches long was made over the spinous processes at the seat of injury. The erector spinæ was found much lacerated, and was easily detached on both sides so as to expose the neural arches of the eleventh and twelfth dorsal vertebræ thoroughly. These were found separated from each other by about an inch, all the supra- and interspinous structures being torn through; and the finger could be placed, without further dissection, at once on the dura mater. The eleventh vertebra appeared also as though it had been driven a little forwards in advance of the twelfth, and the arch of the eleventh pressed unduly upon the cord. Both laminæ of the twelfth vertebra were snapped across and displaced laterally, together with their spinous process; whereby, also, the two pieces of the left lamina overrode one another, and the undermost piece pressed firmly upon the theca vertebralis. Unable to elevate this portion, the whole neural arch was removed, and as the eleventh vertebra also pressed unduly on the cord, apparently from slight pushing forward of the whole vertebra, it was also removed, the laminæ being divided with Hoffmann's forceps. A firm blood clot was now seen on the exposed dura mater; it was removed, and the theca beneath appeared uninjured and healthy. The wound having been well carbolised, it was freely dusted with iodoform, and closed with silver wire, no drainage tube being employed. It was hermetically sealed with layers of gauze soaked in collodion and iodoform. Prior to the closing of the wound extension was made by traction on the hips and shoulders of the patient, but it appeared to have no influence upon the spine. No protective apparatus other than a flannel roller was at first employed, and the patient was returned to her bed.

At 10 P.M. (eight hours after operation) the temperature was 99°, and the patient complained of pain down the fronts of both legs, and "pins and needles" in her feet. The next day (December 30th) the condition remained unchanged; but on December 31st an examination showed complete return of sensation in the legs, and some movement of the toes on the right side.

January 3rd, 1891. The dressing was changed, but the wound had united. A careful examination showed good movement in the toes of the right foot, and the right leg could be slightly flexed, but there was no movement in the left leg. Plantar reflex was present on the right side, absent on the left; both knee-jerks absent; no ankle clonus. The catheter had still to be used.

January 9th. The right foot could be freely moved; the leg raised from the bed, and strongly flexed at the knee; the left leg could be just lifted from the bed, and slightly flexed at the knee.

The rest of the history may be thus summarised: Eighteen days after the operation she was to all appearances quite well; she sat up in bed (when the nurse's back was turned), and even attempted to get up. A week later it was clear that she was becoming maniacal and suicidal, so she was isolated; her mental condition now improved somewhat, and five weeks from the accident she was allowed to sit up in a chair, and on February 24th she was sent home, wearing a poroplastic jacket as a safeguard. She walked perfectly well, and was as active as though she had never suffered from the accident.

REMARKS.—As in compound fractures of the cranial vault there is a marked difference in respect of treatment between one produced by a heavy blow and another by a sharp pointed instrument, so in fractures of the spine the line of treatment to be adopted must be determined largely by the manner in which the fracture has been produced. When it can be ascertained that it is due to direct violence, as in this case, it has always seemed to me (and this case bears this view out) that we ought to cut down and explore for bone (lamina) driven on to the cord, just as in a puncture through the skull we always trephine for fragments of the inner table, which are often extensive where the outer wound is quite insignificant. But such cases of direct fracture are not so common as those where, falling from a height, the patient alights on the lower part of the body, breaking the spine higher up, and in such a way that the total upper part overshoots the lower, cutting the cord in two as though by a pair of scissors. In such cases operation can hardly be expected to be of service. But often the history given of the accident is so obscure, and the result of an examination so uncertain, that it becomes a matter of pure speculation whether the paralytic symptoms are due to pressure by a broken neural arch, or by blood clot, or to division of the cord by a fracture of the vertebral bodies. Cases of spinal fracture are in their results some of the most sad and disappointing that can be met with in practice: for, even when life is saved, the after-condition of the patient is, to say the least of it, almost always most unsatisfactory. Seeing, then, the doubt that usually surrounds the precise nature of the fracture, and knowing what an unfavourable future lies before the patient, a surgeon is surely justified in every case in urging upon the patient the propriety of an exploratory operation, in the hope that the condition found on exposure of the bone may be a relievable one.

Laminectomy is a recognised operation and a perfectly safe one, whilst for its performance no special instruments are required, though special forceps for cutting the laminæ are preferred by some surgeons. This case shows that even two consecutive neural arches may be completely removed without the slightest detriment to the stability of the spinal column. That the patient's paralytic symptoms were not due to "shock," but to actual pressure on the cord (and therefore likely to have been lasting had no operation been performed)

is shown by the fact that the left side was the worse, and it was two pieces of the left lamina of the twelfth vertebra that overlay one another and compressed the cord. A further argument for laminectomy in spinal fracture is a physiological one, and it indicates the time when the operation should be performed. In limited depressed simple fracture of the skull, though symptoms of compression are present, complete recovery may be seen, though the bone is not elevated; but this is no argument for leaving a depressed lamina alone. In the case of the brain, the pressure is exerted over grey ganglionic matter, of which limited parts may be destroyed without permanent loss of function in the periphery over which that ganglionic mass presides; but the spinal cord is mainly a mass of conducting fibres, the destruction of even a minute area of which represents a large area of brain matter "thrown out of circuit," and rendered permanently useless: hence a degree of displacement of a neural arch appreciable to the examining hand of the surgeon is no criterion of the degree or extent of harmful pressure upon the cord. Inasmuch as nerve fibres, when divided, begin within three days to degenerate, laminectomy for spinal fracture should be undertaken within that period, for though paralysis from pressure of the cord may exist for much longer and yet be recovered from, thus showing the pressure to have been not destructive of the fibres of the cord; yet if we wait long enough to judge of the severity of the lesion by the disappearance or not of paralytic symptoms, we shall certainly have waited too long for operation to offer a chance of success if the latter of these results unfortunately supervenes.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MAY 19TH, 1891.

W. H. DICKINSON, M.D., F.R.C.P., President, in the Chair.

Columnar Carcinoma of Lower Jaw.—Mr. H. BETHAM ROBINSON described a specimen removed from a man, aged 49, by Mr. Sydney Jones, on October 18th, 1889. Ten weeks before admission he had a severe blow on the right side of the lower jaw, causing a little bleeding into the mouth but no wound of the skin. This was followed in three weeks by pain and swelling. On admission there was a tumour the size of an orange on the outside and below the lower jaw fixed to the bone, and felt from within the mouth to be wrapping round its lower border. It extended from just outside the symphysis to the anterior border of the masseter. The skin was adherent and slightly reddened. No enlarged glands. On section it was rounded, with a fairly well defined edge. The bone was not expanded, but its outer surface was eroded by the growth. It had a fibrous appearance, and scattered through it were small cysts. Microscopically there was seen to be a fibrous stroma with extensive round-celled infiltration. Embedded in this were epithelial masses arranged in a lobulated manner. On the outer side of these masses the epithelium was columnar, but in the centre the cells became spheroidal and in some parts vacuolated. There were no epithelial nests to be seen. The soft tissue in the interior of the bone showed no growth at all, only a little inflammatory round-celled infiltration, and from this, coupled with the non-expansion of bone, it could be stated definitely that its origin was not central. The tumour strictly was not one "of the lower jaw" but "involving the lower jaw." The author had been unable to find any record of a similar tumour in pathological literature, but it bore some likeness histologically to some of the cystic jaw tumours described by Mr. Eve in his lectures at the Royal College of Surgeons, in 1882. As to the origin of the growth, it must have started from one of the skin appendages or from some epithelial remnant in relation with the first branchial bar. If from the latter, which seemed to be the more probable, there was good reason for its resemblance to certain cystic jaw tumours which might arise from similar rudiments embedded in the maxilla; and again, it was known that curious cystic epitheliomata arose in the neck lower down, whose origin could only be associated with similar remnants in relation with the lower arches and clefts. The only other point worthy of notice was the rapidity of its growth, dating from an injury only three weeks previous. The history was probably incorrect or the injury was the attracting cause.

Spheroidal-celled Carcinoma of Upper Jaw.—This tumour was removed from the upper jaw of a man, aged 55, by Mr. Clutton, in September, 1890, and to him Mr. ROBINSON was indebted for being allowed to bring this case before the Society. It had been growing about two years. There was no obstruction of the left nostril, but some fulness of the jaw below the orbit, and some bulging into the mouth between the cheek and gum, but no bulging of the palate. The growth on removal was found to extend to the back of the maxilla, through the orbital plate into the left nostril, and through the anterior wall of antrum. It was all thoroughly removed, as well as the enlarged gland below the jaw. The growth was rather soft and of a whitish colour. Under the microscope the growth was seen to be an epithelial tumour, varying considerably in structure. The epithelium was arranged in alveoli, and was of a spheroidal shape; in some of the alveoli the cells were identical in shape throughout with well-marked nuclei, but in others they were very swollen with nuclei not so well marked, and were vacuolated. There was no evidence of nest formation. The connective tissue showed extensive round-celled infiltration. The type of this tumour was that of a glandular carcinoma—a very rare, if not previously unknown, tumour in this situation. On removal, it looked like a columnar-celled growth, but the author was unable to find in the sections any trace of columnar epithelium at the periphery of the cell masses. Mr. Robinson suggested that the growth probably started, as columnar epitheliomata of the upper jaw did, in the lining membrane of the antrum, but the new growth was derived, not from the surface epithelium, but from the secretory glands in the mucous membrane. Recurrence had since taken place.

Exostosis of External Auditory Meatus.—Mr. BALLANCE showed this specimen. He said that the patient, a married woman, aged 24, was admitted under his care into St. Thomas's Hospital in October last. The history was as follows: From the age of 12 some swelling and occasional pain of a severe character had been noticed, and during the whole of this time there had been otorrhœa. The discharge had latterly been very offensive and the pain unbearable. On examination, a mucous polypus was seen projecting into the concha, and beyond this the meatus was found obstructed, except at the upper and anterior part, where a fine silver probe found a small channel which led into the deeper part of the meatus. At the operation no difficulty was found in removing the growth, which was attached to the bone forming the posterior inferior part of the canal. The outer surface of the osteoma was convex, and was on the same level as the rest of the surface of the temporal bone. The inner part of the bony meatus and the tympanum were enlarged, carious, and filled with inspissated pus; posteriorly the dura mater was exposed, and in front the tympanum was in communication with a large deep-seated abscess, situated in the zygomatic and infra-auricular regions. Mr. Ballance brought the specimen forward as the disease did not seem to be very common. The patient made a good recovery. She said that her father had been operated on for something in the ear. The growth was three-quarters of an inch in diameter, fairly circular, and on removal a hole fully half an inch deep was left in the side of the skull.

Lipoma of Spermatic Cord with Hernial Sac.—Mr. ROUGHTON showed a specimen taken from a dissecting room subject. It exhibited a small inguinal hernia, in front of and adherent to which was a small lipoma, continuous with the subperitoneal fat near the internal abdominal ring, by a thin pedicle. He suggested that the lipoma had arisen in the subperitoneal fat, and travelled down the cord, drawing the hernial sac after it.—The PRESIDENT asked if the fat could be due to the presence of irritation from the hernia.—Mr. ROUGHTON thought that the lipoma had preceded and caused the hernial sac.—Mr. STEPHEN PAGET had seen an exactly similar case, and thought that the lipoma was of accidental occurrence. He did not think that the hernia was due to the lipoma.—Dr. ROLLESTON mentioned a specimen which was in the museum of St. George's Hospital.—Mr. ROUGHTON, in reply to Mr. Paget, referred to Mr. Hutchinson's paper on the subject.

Ulcerative Colitis.—Dr. SEYMOUR J. SHARKEY read a paper

based upon notes made by Dr. C. D. Green, with whom he had seen the case in consultation. M. P., aged 33 years, married, with one child aged 6 years; there had been no miscarriages. He first saw her in January, 1890, when she had a longitudinal fissure on the dorsum of the tongue, which took several weeks to heal. Iodide of potash had no effect upon it. There was no evidence of syphilis. On September 16th, 1890, he was sent for to see her; she complained of diarrhœa and abdominal pain, which did not yield to treatment, but got steadily worse. The motions were mostly finely divided and dark in colour, with from time to time an admixture of blood. There was occasional vomiting. He had taken the temperature often but not every day, and on one occasion only did he find any rise, and that only to 101° F. The diarrhœa was constant, and uninfluenced by diet. The patient had an attack of erythema nodosum involving both arms and both legs, which ran an ordinary course. She gradually and slowly emaciated, and died exhausted in about ten weeks from the commencement of her illness. There had been abdominal pain and tenderness for some days prior to death. At the necropsy he had found the whole length of the large intestine from the cæcum to the termination of the rectum extensively ulcerated, and so thin that it was difficult to remove it from the body without tearing it. Two perforations had taken place, one in the cæcum and the other in the sigmoid flexure. The ulcers were for the most part confluent, but here and there were some more isolated, the edges of which were well defined. In one or two places a slough could be seen. Only one ulcer was found in the small intestine, rather high up. The rest of the organs were healthy. In the large intestine it might be seen that the inflammation and ulceration had made great havoc. The greater part of the mucous membrane was gone. Here and there irregular islands remained, but over the greater portion of the bowel the muscular coat was exposed, and the surface as a whole was pretty smooth. One or two perforations were seen. Two other very similar cases were described, in which profuse diarrhœa, with blood and mucus in the motions, terminated fatally, and similar ulceration of the large intestine was found. In one case very high fever was present all through the course of the disease. Such cases had not received much attention, and were not as a rule taken into consideration when an obscure case of diarrhœa presented itself clinically. Mild cases perhaps not infrequently recovered, but such as had been described seemed to terminate regularly in death. It was not improbable that several causes might be capable of giving rise to ulcerative colitis, and it was not certain that in some, at any rate, the same cause was not in operation which produced true dysentery.—The PRESIDENT considered that the last two cases described by Dr. Sharkey were not to be distinguished from dysentery.—Mr. H. B. ROBINSON showed a card specimen bearing on this subject. There had been no symptoms except hæmorrhage and mucus in the stools, and for two days previously marked constipation. The diagnosis made was malignant disease. Left inguinal colotomy was performed, and a large ulcer was found in the bowel. The patient died three days later, and the intestine was found to be much thickened, and there was a large ulcer in the sigmoid flexure, with several small punched-out ulcers in the rest of the intestine. The patient had never been out of England.—Dr. ALLCHIN thought the cases commoner than was usually supposed. He did not think that the cases were really dysenteric. During life there were areas of tenderness along the course of the colon. The symptoms were generally of short duration.—Mr. GOODALL had seen two cases during the last two years. It was always of importance to examine the rectum for signs of ulceration.—Dr. SHARKEY, in reply, said he had not sufficient experience of true dysentery. The pathological appearances were identical with those of true dysentery. In the latter disease the symptoms were very variable. He agreed with the importance of examining *per rectum*. The disease was in his experience most common in women, in contradistinction to the experience of Dr. Hale White, who had found most cases in males.

Syphilitic Caries of Calvaria in an Infant.—Dr. PAYNE showed a specimen from an infant which had been admitted into St. Thomas's Hospital when nine weeks old, suffering from diarrhœa, and stoppage of the nose with "snuffles." The symptoms and general aspect led to the diagnosis of congenital syphilis, though there was no eruption on the skin, and small doses of mercury with chalk were given. Under this treatment the "snuffles" subsided, and the general condition improved. However, while under observation the bones of the skull, which were natural on admission, were noticed to become irregular, with deep depressions, but there was no external sign of inflammation. The child died in a month with symptoms of bronchitis. At the *post-mortem* examination the cranial bones were found to be irregularly excavated on the upper surface under the periosteum, which was intact, with an appearance like that of syphilitic caries in the adult, being quite unlike the usual craniotabes met with in congenital syphilis. The nasal bones were unaffected. Caries of this kind seemed to be, if known at all in congenital syphilis, exceedingly rare.

Right-Sided Myocarditis.—Dr. ROLLESTON showed a heart in which there was marked interstitial myocarditis and fatty infiltration limited to the right auricle and ventricle. The pericardium was very firmly adherent indeed all over the right side of the heart; over the left side the adhesions were thin and not nearly so firm. The heart weighed 20 ounces; the right ventricle was dilated and hypertrophied, its endocardium was covered with a thin film of adherent and decolorised *ante-mortem* clot. The tricuspid orifice was widely dilated; the segments of the tricuspid and pulmonary valves were normal. There was thickening and slight stenosis of the mitral valve, and hypertrophy of the left ventricle. The myocardium of the left auricle and ventricle was healthy, while that of the right auricle and ventricle was manifestly altered. It was of a pale yellow colour, and to the touch was brittle and inelastic. On microscopic examination there was fatty infiltration independent of and antecedent to the inflammatory changes to be described, and there was interstitial fibroid change spreading in from and most marked under the adherent and thickened layer of the pericardium. The interstitial growth of fairly recent fibrous tissue separated and compressed the muscular fibres of the heart wall, which were granular, and had in many, though not in all, cases lost their transverse striation. This limitation of the change in the myocardium to the right auricle and ventricle seemed to depend on the fact that the adhesion and thickening of the pericardial surfaces were far more marked over the right or anterior aspect than on the left or posterior. The greater intensity of the inflammatory process on the right side had thus been propagated to the myocardium. The greater intensity of the adhesions on the front of the heart was probably due to the effusion which accompanied the pericardial inflammation collecting by gravity, the patient probably being in the horizontal position, behind the heart, and thus preventing early adhesions there, while they were allowed to form anteriorly.

Cultivations of Psorospermiæ.—Dr. SHERIDAN DELÉPINE, who read this paper, said that bodies resembling psorospermiæ had been observed by him several times during the last two years in tumours of the skin and mucous membranes and of the liver, obtained from various human subjects. These bodies were identical with those described by Darier and those exhibited lately at the Royal Medical and Chirurgical Society by Mr. Bowlby and Mr. Hutchinson, jun. The entire absence of definite characters or reactions rendered it impossible to speak positively of the nature of these psorospermial cells. This did not necessarily prove that they were not psorospermiæ. In order to solve, if possible, this difficulty and to prepare the ground for inoculation experiments, the author had, for the last few months, cultivated psorospermiæ obtained from the rabbit's liver, and had succeeded in following their development through various stages—interlamellar films of distilled water, serum, nutrient gelatine, and other fluids were inoculated. By this method the changes occurring in individual psorospermiæ could be followed for weeks. Briefly speaking, the following changes had been observed: In nutrient albuminous fluids subdivision of the protoplasmic contents of the encapsulated bodies occurred rapidly—in less than a week. At the end of that time about one-half of the parasites under observation contained two or four oval bodies. These so-called psorospermiæ or spores did not retain long their oval or round shape, but soon assumed an elongated form and showed slow amœboid motions, becoming, in turns, cylindrical, pyriform, fusiform

oval, and round. In most cases not more than four of these bodies were found, but occasionally five, six, and perhaps more were observed. They became at times very slender, and seemed to coalesce so as to form a long coiled filament within the capsule. They sometimes assumed the crooked form described by Eimer and Schneider, but this was not universal. Small round bodies, highly refracting light and much resembling blood corpuscles in shape, were found in all these vermiform bodies—sometimes one, generally two or more. These bodies were all found on the surface of many organisms as if in the act of passing through the capsule. Their escape, however, was not actually observed. Similar bodies also became more and more numerous in the surrounding nutrient medium. At the end of a month some of these small protoplasmic masses had nearly doubled in size, others were elongated, and not a few showed evidences of multiplication. These small bodies seemed to show no evidence of structure, but one end was often brighter than the other. It is therefore possible to observe very definite changes in psorospermiæ cultivated in suitable media. If by the same methods similar changes can be demonstrated in the bodies observed in tumours and in Paget's disease the nature of these bodies would cease to be doubtful.

Anomalous Tumour of the Larynx.—Dr. Semon and Mr. Shattock showed a laryngeal growth which had been removed by the former with the galvano-caustic snare from the left ary-epiglottidean fold of a gentleman, aged 44. The patient had been sent to Dr. Semon by Dr. Malbranc, of Naples, with the diagnosis, which had been corroborated by Professor Massei, of angioma of the larynx. On examination a tumour was seen, of the size of a small mulberry, springing apparently from the left pyriform sinus, and overhanging the entire left posterior part of the larynx; it was mostly bluish, in part bluish-red, somewhat lobulated, and had a smooth surface, so that its appearance entirely seemed to justify the diagnosis. Even after removal the tumour entirely made the impression of an angioma, but on microscopic examination it turned out to be a genuine papilloma, completely encased in a shell of partly recent partly organised blood clot. The interesting features about the case were (1) the unusual situation of the papilloma, (2) the occurrence of spontaneous hæmorrhage, which in laryngeal papillomata was practically unknown, and (3) the formation of a complete blood shell around the real tumour, which entirely concealed the true nature of the latter. The authors were not aware that a similar case had ever been reported.

A Case of Leprosy.—Dr. S. Delépine and Dr. C. Slater, in bringing forward this subject, said they were indebted to Dr. Cavafy for permission to publish some observations made by them on a case of leprosy under his care in 1889. The observations consisted of: (1) Numerous attempts to cultivate the bacillus made independently at two different periods during the life of the patient, and on both occasions with negative results. (2) Attempts to demonstrate the bacillus in the blood and lymph obtained from tubercles in various stages and in the exudation from ulcers. These also gave negative results, except that in a small ulcer of the ear bacilli were found abundantly in the pus. (3) Repeated examination of the sputa during the last year of the patient's life. The sputa contained a very large number of bacilli which could not be differentiated positively from the bacillus tuberculosis, but presented peculiarities in number and distribution. These were not, however, sufficiently marked to justify a definite diagnosis. (4) Examination of the lesions found in various organs after death. The lungs being extensively diseased this case seemed to afford a good opportunity of investigating the question whether the lung lesions were tuberculous or leprous. The existence of a leprous phthisis had been doubted by many observers. Inoculations being out of the question for several obvious reasons, the investigation was necessarily confined to a study of the properties of the bacilli, of their distribution in the tissues, and of the nature of the lesions. The various staining methods given for differentiating the bacillus of leprosy from that of tuberculosis were found to be untrustworthy: (1) Because all the methods which successfully stained the bacillus of leprosy were found to stain undoubted tubercle bacilli. (An account of this research will be found in a paper by Dr. Slater.) (2) Because the same bacillus varied in staining reaction according to the organ from which it was obtained. The study of the distribution of the bacilli and the nature of the lung lesions showed numerous differences from ordinary tuberculous phthisis, and many points of analogy with appearances found in organs other than the lungs. The authors concluded, with Bonome and Arning, that a true leprous phthisis existed. Among various anatomical facts, interesting as bearing on questions of etiology or on points in dispute, the following seemed specially worthy of mention: (1) The existence of masses of bacilli, both discrete and in typical leprous cells, in the Haversian canals and spaces of the bones of the little finger, in which the usual mutilating lesions were commencing. (2) Of the ulcers examined, only one of those found in the skin showed any bacilli in the exudation. In the intestine nearly all the ulcers showed abundant bacilli in the necrosed elements at the bottom of the ulcer, and in the cellular infiltration forming the walls. In the lung the walls of the cavities were covered with an almost pure culture of bacilli, with hardly any admixture of cells or cell *débris*. (3) The intestinal lesions were almost entirely confined to the large intestine, and did not present the usual characters of tuberculous ulceration. These lesions were, undoubtedly, much more recent than those of the skin. (4) There seemed strong evidence that the skin was primarily affected, and that the parasite gradually extended from the surface of the body to the deeper parts in great measure along the lymphatics.

Negative Results of Psorospermial Inoculation in Animals.—Mr. S. G. Shattock and Mr. C. A. Ballance recounted a series of experiments made upon different animals with the object of seeing whether experimental infection could be brought about from the psorospermial bodies so common in the rabbit's liver. They were led to do this after Darier's description of the presence of psorospermiæ in the epidermis in Paget's disease of the nipple, and the alleged association of psorospermia with carcinoma in general. The experiments were made upon rabbits, monkeys, dogs, and rats; and although the results had been negative, the authors thought it worth while to record them in order that others who took up the same inquiry might modify the method adopted, or experiment with other forms of psorospermiæ, or with other classes of animals. The plan consisted in picking out the psorospermial material from the livers of rabbits just killed, and with this at once inoculating the animals referred to. The chief experiments were performed on rabbits as being the most likely to receive injection. The method was to scarify the ear on the inner aspect (under chloroform), or to make one or more long valvular incisions, and then to press or rub into the wounds, after bleeding had ceased, quantities of the psorospermial material. Similar vaccination experiments were made upon the ears of two monkeys, and also on the ears of dogs. The wounds healed by scabbing and without suppuration. In the case of the rabbits small firm rounded elevations, or, in the case of the incisions, elevated lines appeared at the part, but these did not increase, and microscopic sections of the ears showed the elevations to be due to reparative hyperplasia of the injured cartilage; no trace of the psorospermiæ remained. The authors also injected into the internal jugular veins of two healthy dogs large quantities of the psorospermial material suspended in sterilised distilled water or in warm salt solution; but careful examination after death (five or six months later) showed no lesions whatever in the viscera; the lungs were perfectly healthy. Although nothing could be held as finally disproved from such experiments, the authors submitted that Darier's views must be tried by Koch's postulates; until a culture had been made from cases of Paget's disease, or from carcinomatous tumours, and the lower animals or human subject experimentally infected, nothing could be taken as proved in regard to a causal relation between psorospermiæ and the conditions with which they were alleged to be associated. The authors found a successful culture fluid in the blood serum of the rabbit, sterilised discontinuously, and used in the fluid state.

Extreme Contraction and Cicatrisation of Stomach due to Corrosive Poisoning.—Mr. Golding-Bird and Dr. Pitt exhibited a man, aged 34, who was suddenly seized with symptoms of acute irritant poisoning, in November, 1888, suffering with intense epigastric pain, frequent vomiting, and hæmatemesis. The incessant vomiting continued, and three months later he

had greatly emaciated. An œsophageal bougie passed without difficulty, but all food caused intense pain and was returned at once unchanged. At the end of January, 1889, Mr. Golding-Bird performed gastrostomy, with a view to dilating the pylorus. What appeared to be the stomach was attached to the abdominal wall. This was opened the next day, and food was introduced through the opening. The patient died from inanition five days later. At the inspection the stomach was found drawn up under the ribs, and contracted to a sac, five inches long and two and a quarter broad. The mucous membrane was almost entirely destroyed, and the pylorus would only admit a No. 8 catheter. The lower part of the œsophagus was cicatrised and scarred, with some contraction at the cardiac orifice and also two inches higher up. The opening had been made in the duodenum owing to the abnormal position of the stomach.

Card Specimens.—Dr. S. WEST: Secondary Carcinoma of Lung. Dr. VOELCKER: Tuberculosis of Thyroid Body.—Dr. ROLLESTON: Myxo-Sarcoma of Lung.—Mr. H. B. ROBINSON: Ulcerative Colitis.—Dr. W. H. ALLCHIN: Pigmented Intestine and Adrenals, from a Case of Addison's Disease.—Mr. J. H. TARGETT: Entero-Cystoma from Ox.—Dr. LAURISTON SHAW: Contraction of the Stomach from Chronic Inflammation.—Dr. F. HAWKINS: (1) Aneurysms above and Involving the Sinuses of Valsalva, Death by Rupture of one into the Pericardium; (2) Malignant Tumour of Ileo-Cæcal Valve.

Annual General Meeting.—The meeting concluded by being formed into the annual general meeting to receive the reports of the Morbid Growths Committee, the secretaries' and council's reports, and to elect the officers for the ensuing year.

Officers and Council.—President: Sir G. M. Humphry, M.D., LL.D., F.R.S. *Vice-Presidents:* Sir J. Fayrer; W. T. Gairdner, M.D., LL.D.; F. W. Pavy, M.D., F.R.S.; P. H. Pye-Smith, M.D.; Sir J. Lister, Bart., D.C.L., LL.D., F.R.S.; J. N. C. Davies-Colley; J. W. Haward; H. T. Butlin. *Treasurer:* W. Cayley, M.D. *Honorary Secretaries:* S. G. Shattock; F. C. Turner, M.D. *Council:* W. H. Bennett; S. Coupland, M.D.; F. G. D. Drewitt, M.D.; W. Ewart, M.B.; R. G. Hebb, M.D.; P. Kidd, M.D.; W. A. Lane, M.B., M.S.; D. B. Lees, M.D.; F. W. Mott, M.D.; G. N. Pitt, M.D.; D'A. Power, M.A.; M.B.; C. A. Ballance; E. Crookshank; R. J. Godlee, M.S.; W. Hickman; J. Hutchinson, jun.; G. H. Makins; H. W. Page, M.C.; S. West, M.D.; G. S. Woodhead, M.D.

Treasurer's Report.—The TREASURER, in presenting his report, stated that the expenses of the Society had been much heavier than in previous years, the chief additional expense falling under the two items of coloured illustrations for the *Transactions*, and hire of microscopes for the use of members at the meetings. He suggested that the expenses under these headings might have to be curtailed.

Address of Retiring President.—After the usual votes of thanks, Dr. W. H. DICKINSON bid farewell to the Society as its President in the following words:—It only remains for me to say a few words in acknowledgment of what has been said on this the last occasion of my meeting this Society as its President. I deeply feel the honour which you have conferred upon me, and shall look back upon my term of office as one of unalloyed gratification, both from the uniform courtesy and consideration which I have received from the members and from the kindness and cordial co-operation I have experienced at the hands of the officers, especially the secretaries, to whose efforts more than to any other circumstance the prosperity of the Society is due. In this acknowledgment I desire to include, not only the present officers, Dr. West and Mr. Shattock, to whom I owe much, but also Mr. Godlee, to whom I owe no less, who was secretary in the earlier part of my time of office. I think it will be admitted that the Society has in no respect fallen off from its old reputation, but has advanced with the times and kept on the crest of the wave of progress. A change which I consider to be a most judicious one has, as already stated, been made in the rules, in virtue of which we are free to discuss pathological processes in the widest sense without any restriction as to the exhibition of specimens. We are no longer a society for the display of pathological products, but one which takes for its function the science of pathology in its widest scope. The matters which have recently been before us would move the astonishment of our founders could they be made aware of them, more especially what relates to micro-organisms, whether animal or vegetable, in their relation to disease. Only recently we have had before us new observations with regard to the essential causes of cancer and of diphtheria, with regard to which though it is too early to speak confidently, as I am sure their authors would be the first to allow, yet they show in what manner and to what ends we are working. The practical possibilities in the future as the results of the kind of work we do include a harvest of tangible good not less than could be anticipated were the treatment and prevention of disease among our recognised aims. The harvest is near. Let us be content if we only sow the seed leaving it to others to reap the crop which, but for us and our fellow labourers, they never would have seen. I need not dwell upon the melancholy topic—the losses by death which the Society has sustained during the past year; this has been dealt with in the Council's report. But I cannot forbear to refer to a circumstance of another kind, though the same report has not failed to do justice to it. I refer to the approaching completion of his 70th year by our distinguished honorary member, Professor Virchow. Professor Virchow occupies so exceptional a position that the Council has proposed to take a no less exceptional course and to signalise the event by the congratulatory address which has been read. That it may be long before the eminent, I may say supereminent, member of our Society claims notice of a different kind must, I am sure, be the wish of everyone who honours transcendent ability associated with uprightness and public spirit. Let me end as I began by reiterating my sense of the honour which the Society has bestowed upon me, and if I may venture on my departure to prophesy, let it be of the increasing prosperity and scientific importance of this association—issues which I am sure will be promoted by the accession of my respected teacher, Sir George Humphry, to the position which has been far less worthily occupied by me.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

FRIDAY, APRIL 24TH, 1891.

LOMBE ATTHILL, M.D., in the Chair.

Two Cases of Abdominal Section.—Dr. W. J. SMYLY related the following cases: 1. A woman, aged 35, who had had four abortions and four children, complained of constant shooting pain in the pelvis and lower iliac regions, and profuse leucorrhœa. Both ovaries and tubes were enlarged and fixed, and that on the right side was prolapsed into Douglas's pouch. On April 3rd abdominal section was performed. The appendages were removed on both sides; the tubes were very brittle, and broke across when the ligature was tied, and in consequence some pus must have got into the peritoneal cavity, for although it was thoroughly flushed out and drained, she died of acute septicæmia on the fourth day. In determining the risks of salpingo-oöphorectomy, the history of the case was of the utmost importance with regard to prognosis. Pus resulting from puerperal infection was very much more dangerous than gonorrhœal, and the latter than tuberculous. The time since infection was also of importance, the pus losing its virulence with age. 2. A woman, aged from 50 to 60; married twenty-four years; never was pregnant. About two years ago she noticed a swelling of the abdomen, which apparently had not increased much since. On palpation, a cystic tumour was found in the medial line reaching to within a finger's breadth of the umbilicus. Menstruation stopped for twenty years. She had occasional pain and difficulty in micturition. The uterus was small and atrophied, and the tumour was found to be one of the right ovary; otherwise the patient was in good health. Abdominal section was performed on April 3rd, 1891, when it was found that the pedicle had been twice twisted, that there were very numerous adhesions, and that the tumour was practically in a macerated condition. The adhesions were with great difficulty separated, the whole thing being got away piecemeal, the operation lasting a couple of hours. The patient made an uninterrupted recovery.

Specimens.—Dr. R. L. HEARD exhibited a case of Partus

Corpore Conduplicato at term, occurring in a multipara.—Dr. Alfred Smith showed an Ovarian Tumour.

Treatment of Stump after Myomectomy and Hysterectomy.—Mr. M'Ardle read a paper on the treatment of the stump after myomectomy and hysterectomy. After referring to a case in which a fatal result attended the extraperitoneal method, he directed attention to the causes of death after the intraperitoneal treatment, which, although at present less successful than its rival, must be looked forward to as the ideal manner of dealing with the pedicle. In reference to the origin of lethal processes, Mr. M'Ardle held (1) that caustics, astringents, and other applications to the stump acted no small part; (2) that the present methods of securing temporary hæmostasis tended to produce destruction of the vein walls and surrounding tissue, thus favouring phlebitis, general inflammation of the tissues of the stump, or even necrosis of that structure; (3) that solutions which interfered with the function of the peritoneum were frequently used as flushing material after operation, thus favouring sepsis. Mr. M'Ardle suggested the covering of the stump with omentum as a means of hastening the healing of the wound and shortening the operation.—Dr. W. J. Smyly adhered to the extraperitoneal method, first, because statistics showed it to be safer; secondly, because it was easier in performance and occupied less time.—Dr. More Madden spoke in favour of the intraperitoneal method in most instances.—Remarks were also made by Mr. O'Callaghan and Dr. Bagot.—Mr. M'Ardle replied.

Section of State Medicine.

Friday, May 1st, 1891.

T. W. Grimshaw, M.D., Registrar-General for Ireland, in the Chair.

The Fifth Year of Medical Education.—Dr. Falkiner read a paper in which, referring to the resolutions of the Medical Council of 1889-90, he pointed out that, in order to be qualified for holding a Poor-law appointment, six and not five years of study were required. In defence of the short period of study at present in vogue, Dr. Falkiner referred to the abuse of hospital and other charities, and also the state of degradation that some of the English general practitioners had fallen into. He urged that the expense of medical education was fully equivalent to the value received by the student, and objected to any increased outlay. He advocated the method adopted by the Conjoint Board of England, who in the minor subjects make the examination and not the certificate of the teacher the standard of their degrees, and finally spoke strongly of the pupil's residence in a general hospital with an out-patient department as the true foundation of the medical student's training.—Dr. Donnelly said that, being connected with the Whitworth and Hardwicke Hospitals, and also holding a dispensary appointment, he had special opportunities of seeing the wants of medical students. Some students who attended the Poor-law dispensary to learn vaccination had accompanied him to the patients' homes, and he had been told that more genuine knowledge of the practice of medicine had been acquired than would have been attained at hospital in the same time. When a senior student or junior practitioner attended the practice of a Poor-law dispensary, he saw the case in its entirety, as he would be called upon to treat it in after-life with all the social surroundings, etc.—After some remarks from Dr. Newell, Mr. R. Montgomery said that, after over twenty-five years of examinations in the Apothecaries' Hall, he found that general answering had deteriorated. He thought attendance under dispensary officers would be most advantageous. Students after leaving hospitals were unable to give that knowledge to minor ailments in the way of prescribing which was so essential. Pharmacy was the deficiency. The additional year was advantageous, as it would lessen the number of men going to the profession, and perhaps lessen the disgraceful practice carried on in England of 6d. and 1s. dispensaries.—Dr. J. W. Moore noticed that Dr. Falkiner considered the fifth year proposed by the General Medical Council to be in reality a sixth year, since a diploma in State Medicine, with a year's curriculum, would in future be required in addition to the proposed five years' curriculum. But, in his opinion, the suggested reform by the General Medical Council would really reduce the curriculum to three years, the first year of medical study being practically spent in non-medical schools and non-medical courses, while the proposed fifth year would be practically spent by the candidate as "an unqualified assistant," that anomalous individual upon whom had descended the heaviest wrath of the General Medical Council in recent years. He was strongly in favour of a prolonged period of genuine medical study, such as existed in Sweden and Norway; but he considered that a fifth year should be spent either in the wards of a clinical hospital or in a first-rate Continental school, such as that of Vienna, Berlin, or Paris.—After remarks from Dr. R. K. Johnston, Mr. Tobin, Dr. Doyle, Surgeon-Major Macnamara, and Dr. Savage, the Chairman claimed to have some special knowledge of the various questions connected with medical education and examinations, having been a private teacher, a lecturer for several years, and the occupier of three separate chairs, a clinical physician and examiner. He was also the drafter of the conjoint scheme of examination for Ireland, which had been adopted with comparatively slight modification by the colleges. With respect to the great pressure on the students' time now complained of, he was afraid students were not as industrious now as they were thirty years ago. With respect to the list of examinations and number of courses, he stated that practically these were the same as formerly, as some of the compulsory courses had been struck out and others inserted. The cost of medical education was, he believed, much less than it was fifty or sixty years ago, when it was common to pay £600 or £700 apprentice fees, and other expenses besides. He mentioned the case of a friend whose father paid over £2,000 for three sons as apprentices when money was of much more value than at present. With regard to attendance at a Poor-law dispensary as a suitable way of obtaining instruction in practical medicine and surgery, he agreed that such institutions would be useful and desirable; but when it was remembered that there were some three-fourths of the members of the profession engaged in general practice, and that of these a great number held public or *quasi*-public appointments, and that many of them were quite unfit to act as teachers, he could not see that, under the present circumstances, it was desirable to accept certificates of study from such a large class as must necessarily be included. They were sure of the instruction given at clinical hospitals, but could not be sure of what might be given at the dispensaries. As to the suggestion that general pharmacy was not sufficiently studied, he was of opinion that it got quite enough of attention; it was no more the business of the medical practitioner to make tinctures and extracts than to make splints and to sharpen instruments. In conclusion, he sympathised with Dr. Falkiner's proposals; but was unable to see how they could be carried out.—Dr. Falkiner replied.

A Novel Water-Closet.—Mr. Tobin exhibited a model of a water-closet, invented and patented by Surgeon-Major W. H. Macnamara, which was described in the British Medical Journal of January 31st, 1891, p. 234.—Dr. Cosgrave, Mr. R. Montgomery, Dr. Donnelly, and the Chairman spoke favourably of the sanitary merits of the invention, and Surgeon-Major Macnamara replied to a number of questions.

Leeds and West Riding Medico-Chirurgical Society.

Friday, May 1st, 1891.

T. Churton, M.D., President, in the Chair.

Immediate Treatment of Rupture of the Perineum.—Mr. Croft strongly advocated the practice of suturing immediately after delivery, as being simpler and less troublesome to the patient than the remote operation. The danger of sepsis was lessened by closing a raw surface, and the well-known after-effects of the accident were prevented. The essential points of the operation were that the surface should be clean (aseptic), the wound completely closed, and the sutures passed as deeply as possible to ensure a good hold of the muscles. An ordinary full-curved needle with catgut was usually sufficient, but in deep lacerations silver wire was more reliable. Gut or fine silk was preferable for rectal stitches. In all cases the immediate operation was advisable; but where the laceration was only skin deep sutures were not so necessary, provided the raw surface could be kept perfectly clean, an open wound being

always a source of danger to a puerperal woman. Notes were given of 38 cases which had been carefully watched.—Mr. Wm. Hall thought that most cases of slight rupture of the perineum did not require suturing; and if the rupture was so severe as to require it, the best time to perform the operation was after the puerperal month, and not directly after the confinement, when the patient (generally a primipara) was in an exhausted condition. He had attended upwards of 9,000 labours.—Dr. Hellier agreed with Mr. Croft that a good many cases of displacements, etc., he saw were due to rupture of the perineum, and that the operation should be done directly after delivery, when it was comparatively easy, and generally attended with good results.—Dr. Draper (Huddersfield) thought, unless suturing was carefully done, patients were more liable to septicæmia.—Dr. Allan had attended over 1,000 cases, and agreed with Mr. Croft as to the advisability of immediate suture.—Dr. Chadwick related a case he had seen in which the perineum was ruptured, and the rectum torn up for a considerable extent. Good union was obtained simply by tying the patient's legs together. No sutures were applied.

The Hour of Dying: an Analysis of 2,500 Cases.—Dr. Allan said the statistics of the Leeds Workhouse gave the following figures as the hour of death among the inmates for the past few years:

12 to 1 P.M.	...	...	88
1 „ 2 „	...	...	106
2 „ 3 „	...	...	107
3 „ 4 „	...	...	113
4 „ 5 „	...	...	104
5 „ 6 „	...	...	103
6 „ 7 „	...	...	105
7 „ 8 „	...	...	102
8 „ 9 „	...	...	98
9 „ 10 „	...	...	99
10 „ 11 „	...	...	94
11 „ 12 „	...	...	106
			1225

12 to 1 A.M.	...	...	88
1 „ 2 „	...	...	107
2 „ 3 „	...	...	100
3 „ 4 „	...	...	98
4 „ 5 „	...	...	122
5 „ 6 „	...	...	125
6 „ 7 „	...	...	119
7 „ 8 „	...	...	103
8 „ 9 „	...	...	118
9 „ 10 „	...	...	93
10 „ 11 „	...	...	103
11 „ 12 „	...	...	99
			2500

Dr. Allan remarked that the figures differed from those given by Dr. Paul in a paper recently read at Leeds. Dr. Paul placed the maximum between 3 and 4. His own figures showed there was a distinct increase between 4 and 7 A.M. This might be due to the temperature, which was generally the lowest before dawn. Mental depression was then greatest.—Dr. Cameron thought these statistics were of great value, but a larger number of cases was required, especially under circumstances where the temperature was not kept steady, as it usually was in large institutions.—Dr. Major referred to some statistics on the subject published by Dr. Robert Lawson with regard to the Wakefield Asylum.[1] The cases were there classified as acute and chronic, and it was found that the largest number of deaths among the chronic cases occurred between 9 and 10 A.M., and of the acute cases between 3 and 6 A.M., while there was another maximum in the afternoon.—Dr. Eddison remarked on the fall of temperature in most houses about 4 A.M., as well as in the open air, as experienced by campers-out.

Discussion on the Use of Tuberculin.—The President, in opening the discussion, said his own experience had been limited by a preliminary want of zeal brought about by the acknowledged inefficacy of the fluid to destroy the bacillus. At first public expectation had been carried so far that a patient was sent for treatment from another town who survived only three days. Two other patients with phthisis were treated; both reacted well to every injection, and both died in about two months. A case of lupus refused treatment after one injection on account of the pain caused by it. The other patients did not complain at all of pain. In spite of some relics of confidence and hope to be found among some eminent investigators, to whom it would be very unwise to refuse wholly to listen, he did not at present intend to continue experiments with tuberculin. Possibly, however, the discussion of the evening might alter that determination.—Dr. Chadwick showed five cases of lupus which had been under this treatment. He had not made use of tuberculin in phthisis, but should certainly do so. He had had apparently excellent results in all the cases of lupus, large doses, up to a gramme, having been borne without any ill results. He believed many cases were in part syphilitic, and treatment by tuberculin might fairly be associated with ordinary anti-syphilitic treatment. He had encouraged all his patients to take cod-liver oil.—Mr. Atkinson had tried the remedy in eighteen cases. Ten of these were lupus, and the results were poor, though there was some comparative improvement, but they were hard pressed for beds and the experiment was not perhaps sufficiently prolonged. Eight were joint cases, three being dactylitis. Two of the latter, in which there was thickening but no suppuration, healed satisfactorily, the third went to the bad. He thought further trial should be made.—Dr. Bampton considered that the few good results which had been noticed from the treatment were due to the fever caused by the reaction, and compared the results obtained in lupus and other complaints by inoculation with the microbe of erysipelas. He thought there was no reason to believe it had any specific effect on the tuberculous tissue.—Dr. Eddison had used the tuberculin in two cases only. One man at present in the hospital had gained 3 lbs., and felt better. The second was neither better nor worse.—Mr. Littlewood had seen many cases recently in Berlin. After a prolonged trial, von Bergmann had returned to the practice of scraping in cases of lupus. The results of the surgical treatment of lupus were fairly satisfactory, but the injection treatment caused more pain and inconvenience to the patient than a surgical operation. No case could be considered cured till a year had elapsed without recurrence.—Dr. Trevelyan thought the dose should be more carefully suited to the case than had been generally done. The outbreaks of fresh tubercle, said to be due to the injection, had come too soon to be due to that cause.—Mr. Lawford Knaggs thought Dr. Chadwick's cases were very satisfactory. Patients objected to surgical operations, and greatly preferred the treatment by injection.—Mr. Ward related the following cases: (1) well-marked joint-disease in the left knee, which was very large. The epididymis of one testis was also affected. Injections up to 4 centigrammes were given, but with no apparent change in the joint. He therefore excised it. The disease was entirely confined to the synovial membrane, of which enough was removed to fill a pint pewter dish. The wound healed by first intention. (2) A child, aged four years, with disease of the ankle; after treatment by injection the joint was excised. The diseased part, as in the former case, was very easily defined and detached, and healed in three weeks. (3) A case of lupus, which improved. He had a strong feeling that the injection treatment defined the tuberculous growth so as considerably to facilitate removal.

Specimens.—The following specimens were shown: Dr. Churton: Heart with Syphilitic Endocarditis, gummata in the ventricular wall, and aneurysm of the left ventricle.—Mr. Atkinson: Heart with Organising Pedunculated Clot Adherent to the Right Auricle. Mr. Littlewood: Kidney with Chronic Tuberculosis and Calcareous Deposit, removed by nephrotomy.—Dr. Jacob showed (1) microscopic sections of the above. (2) Photograph of a case of Molluscum Fibrosum, with microscopical sections of the growths. (3) Microphotographs of various Morbid Growths.—Dr. Allan: (1) Coal Miner's Lung with Anthracosis. (2) Ensiform Cartilage, with a small hole through which an omental hernia protruded. (3) Heart with Mitral and Aortic Disease, with extensive vegetations on the valves. The pericardium was also adherent. (4) Hydrocele Fluid containing Cholesterin Crystals.—Dr. Trevelyan showed various specimens mounted, for teaching purposes, in glycerine jelly.

[1] *West Riding Asylum Reports*, vol. iv.

REVIEWS AND NOTICES.

Practical Treatise on Electricity in Gynæcology. By Egbert H. Grandin, M.D., Chairman, Section on Obstetrics and Gynæcology, New York Academy of Medicine, and Josephus H. Gunning, M.D., Instructor in Electro-Therapeutics, New York Post-Graduate Medical School and Hospital. Illustrated. New York: William Wood and Company. 1891.

We have frequently had occasion to insist upon the highly specialised character of works on the application of electricity to diseases of women. Such a work must be constructed after a different literary and scientific form from that which is

suitable to works on other medical subjects. Mental capacities of a totally different character are needed for the compilation of a medical work and for the preparation of a manual on one of the most specialised branches of natural philosophy; hence it is an advantage that this treatise is issued by two authors—the one a gynæcologist, the other an electrician. No book on electricity can be so written that he who runs may read, yet it is fair to add that this treatise is more readable than many others of its kind. The reader, however, cannot skim through it. Directions for the application of an electrical apparatus require study line by line.

A new system, in which physics are blended with biology and therapeutics, involves the great danger that its advocates may mystify their disciples, and that mystification may lead to worse evils. Drs. GRANDIN and GUNNING seem aware of this peril; they insist upon a sound understanding of their subject. They note that the gynæcologist much approach the study of electricity by a far different route from that followed by the neurologist. They also dwell upon contra-indications to the use of electricity, but not at sufficient length. Naturally their bias is strongly in favour of electricity. The test subject in a work of this kind must always be electrolysis for uterine fibroid. The disease in question is sometimes very grave in its effects, sometimes quite a trifling malady even when the tumour is large. Radical surgical measures are fraught with peril. No man, therefore, can be blamed for trying a new method which is apparently less perilous than hysterectomy, and which seems to promise permanent relief. At the same time, a very close scrutiny into the reports of its advocates is needed, and it must be admitted that electrolysis has not as yet satisfied the highest authorities. In this treatise the chapter on electrolysis contains some very good drawings representing the application of the apparatus to pelvic organs. At least, the reader is shown how to set to work. Too many manuals of electricity contain little besides blocks from dealers' catalogues. The two drawings of a case before and after electrolysis are prepared on so good a principle that we regret that there are no more of their kind. The chapter on static electricity also deserves honourable mention. On the whole, however, this treatise is of a kind almost as unsuited for literary criticism as a manual of trigonometry. We willingly grant that it deserves its title "practical." It is not of that class of book which Bacon said is to be tasted, nor of the kind to be swallowed, but rather of the third class which is to be chewed and digested.

A TREATISE ON RHEUMATISM AND RHEUMATOID ARTHRITIS. By ARCHIBALD E. GARROD, M.A., M.D., M.R.C.P. London: C. Griffin and Co. 1890.

IN the work before us the author has certainly succeeded in giving a very complete and clear account of the phenomena of rheumatism and the rheumatic state. In the last chapters rheumatoid arthritis is fully considered. After an interesting historical sketch the author defines the province of rheumatism. The difficult subject of the pathology is well discussed, and its various theories reviewed. It is pointed out that the lesions in rheumatism are mostly such as are met with in the infective diseases. The etiology is considered under the influences which (1) control the prevalence of the disease and (2) determine the individual attack, the latter being particularly well treated. The symptoms of rheumatic fever are next dealt with. The important subject of rheumatism in children, as yet not sufficiently widely known, is admirably treated. The valuable work of Dr. Cheadle in this direction is of necessity often referred to. The characters of the arthritis of rheumatism are next considered. The all important subject of endocarditis and pericarditis is well described. We should like to have seen even more attention given to the subject of evanescent murmurs, and also to the gradual development of valvular disease after the rheumatic attack, without any further rheumatic manifestation. Rheumatic pleurisy and pneumonia are next described, and among the rheumatic affections of the nervous system hyperpyrexia is fully considered.

As regards the relation of chorea and rheumatism, Dr. GARROD believes that in the majority of cases chorea is a manifestation of the rheumatic state, but that there are many attacks which arise entirely independently of rheumatism. We should be inclined to think that chorea is always a manifestation of the rheumatic state, even if it be the only one in the particular individual in question. Due weight must at the same time be allowed to the other etiological factors, namely, the instability of the nervous centres and fright. The pathology which would make chorea dependent on a temporary overgrowth of the fibrous structures in the nervous centres can hardly be looked upon as quite satisfactory. The relation between some skin diseases and the rheumatic state is put at times, we think, somewhat too positively. Sore throat, subcutaneous nodules, and myalgia each come under consideration in their relation to rheumatism.

The author then describes some of the rarer accidents of the rheumatic state. The discussion of scarlatinal rheumatism both early and late is interesting. A chapter on chronic rheumatism then follows.

The treatment, both old and new, of acute rheumatism is fully and ably described. The very important matter of diet is first considered. The question of the effects of the salicylate treatment on visceral rheumatic lesions is discussed. The treatment of the complications of rheumatism is given, as also that of chronic rheumatism. In addition, the treatment by mineral waters and baths is considered, but no direct mention is made of the Turkish bath. In some instances of chronic rheumatism we have seen undoubted benefit derived from its prudent use.

The author then passes to the consideration of rheumatoid arthritis, chiefly, as he tells us in the preface, to compare its phenomena with those of rheumatism, for its nature is essentially distinct. The etiological relations and clinical symptoms are well described. Special reference is made to the muscular wasting, excessive knee-jerks, types of deformity, glossy skin, and Heberden's nodes. The polyarthritic forms — both primary and that secondary to rheumatism, gonorrhœal arthritis, etc., as well as the mon-arthritic variety—are considered. Under the morbid anatomy it is pointed out that the changes are degenerative as well as inflammatory, and Dr. Garrod believes these latter to be secondary to the former.

Then follows a discussion on the pathology of the disease, the author advocating the dystrophic theory. It is to be regretted that, with the strong likelihood there is that this disease is of nervous origin, there is no real anatomical proof forthcoming. The treatment, including a description of the electric bath by Dr. Steavenson, is fully given.

Although it might be thought that a book on such a subject as this should, as a rule, be the outcome of a prolonged experience, yet in the work before us there is evidence of much clinical investigation and research, and Dr. Garrod has unquestionably rendered a very valuable service. In this book will be found most of what is known of rheumatism and rheumatoid arthritis in a concise and, at the same time, comprehensive form. The author has been at much pains to make the work as complete as possible, and the very extensive bibliography at the end adds to its value.

A SHORT DICTIONARY OF MEDICAL TERMS: BEING AN ABRIDGEMENT OF MAYNE'S VOCABULARY. London: J. and A. Churchill. 1891. Pp. 160.

A MEDICAL DICTIONARY for half-a-crown is, indeed, a model of lexicographical cheapness. What scientist, even the poorest, cannot afford two shillings and sixpence for the enlightenment of his ignorance? Before purchasing this work he probably imagined that "antimony," for instance, was a vegetable; here he receives the entirely satisfactory, if somewhat meagre, assurance that it is "a metal." If he seeks to know the property or composition of "antifebrin," what can be more enlightening than to read that "it is a medicine with strong antifebrile properties?" "Paregoric" is "mitigating or easing pain," a definition somewhat confusing to the young druggist asked for a "pennyworth of paregoric" for the first time. "Os" is simply a bone, the "os uteri" being, at this rate, indeed undilatable. The popliteal is an oval space. A trocar is a hollow instrument; a trephine (Oh, shade of Percival Pott!) is a modern one. Cancer is "a malignant epithelial disease," of which the common forms are "scirrhous, encephaloid, and colloid!" "Talipes valgus is clubfoot, with distortion outwards or eversion; the patient" (most cleverly) "walks on the outer border of his foot." Nor is his brother,

afflicted with talipes varus less marvellous in his gymnastics; he has "clubfoot with distortion inwards, and walks on the inner border of the foot!" "Hare lip" is a "congenital cleft or division, of one or both lips, most frequently" (we should say, very much most frequently) "the upper." The information given under the head "Percussion," is at least original; it is "the act of striking any part of the body with the fingers (direct) or an instrument (mediate) and listening so as to ascertain its condition by the means of the note produced." Under this definition we should certainly say that Mr. Wackford Squeers, of Dotheboys Hall, was the most eminent professor of mediate percussion on record. It is perhaps questionable if a "Bacterium is one of the lowest known forms of animal life;" but it is not questionable that for mingled grammatical elegance and essential accuracy, the definition of "pannus" takes high rank; pannus is, we are told, "a thick membranous excresence, and (*sic*) stretching over the cornea, being two or three pterygia occurring together." Perhaps, however, from a grammatical point of view, the following is equally elegant and correct: "Bronchophony: sound of the voice heard by means of the stethoscope in the bronchial tubes" (but, oh, what a size must those bronchial tubes be!). Of the eucalyptus globulus, we are told that "it is said to possess the properties of neutralising or destroying the influence of miasmata in districts where fevers arising from these, as causes, are endemic. The effects thus produced have been declared to be confirmatory, through planting the tree at the Cape, Cuba, etc."

Our anonymous author has many virtues; he is cautious, for instance, and will not admit that Dalton certainly suffered from colour blindness, and wrote about it; but, lest his readers should be misled, he modifies the fact into "it is said."

He is nothing if not original, especially in his aids to pronunciation. Most authors make the "a" in clavicle short, and the "u" in cutaneous long; he, on the contrary, writes clăvicle and cūtaneous. He has cŭboid and cūtis, trĭceps, ophthalmoscōpe, rĭgor, tŭbercŭlosis, tūmĕfaction, and many more suggestions of like strange sound—strange to English ears at least.

Finally, he is economical: in etymology (he gives none); in scientific information (there is hardly a chemical formula or a pathological fact in the book); and in the number of terms of which he treats (such minor ones as atresia, balanitis, Basedow's disease, charbon, colpitis, compression, farcy, floating kidneys, tendon reflex, knee-jerk, ankle clonus, gastric fever, Graaffian follicles, Graves's disease, king's evil, Landry's paralysis, lithontriptics, litholapaxy, ozone, psoas abscess, gastrostomy, dengue, yellow fever, lobular, tetany, and scores equally unimportant are omitted).

Of those words which are inserted, the definitions are frequently most luminous. What, for example, could better describe scarlatina than this: "A disease characterised by contagious fever, swollen face, and a scarlet eruption on the skin in patches, ending in three or four days in the desquamation of the cuticle?" Here the reader is not confused by any useless information as to incubation period or sequelæ, throat or tongue, while in "typhoid fever" even the duration of the disease is omitted as unnecessary; we are simply informed that it is "long." In its description, Peyer's patches are ignored, but we learn that typhoid is usually attended with diarrhœa and ulceration of the intestines. Sciatica is defined to be a neuralgic affection of the sacro-sciatic nerve. Rubeola was "formerly synonymous with measles. Now applied only to German measles," of which the definition is: "A distinct disease with short incubation and a rash at first like that of measles, and afterwards changing to resemble that of scarlatina, which (*sic*) appears on the first day."

There are several verbal errors in the *Dictionary*, such as tiliacotian, for Taliacotian, arthragia for arthralgia, etc.

If we were obliged to give a concise description of this work we should call it an incomplete vocabulary of medical terms with many unscientific and faulty definitions, which has the single merit of cheapness. For what class of readers it is intended there can be little doubt. It can but appeal to that large class of general readers who would like to study medical literature if they could only understand its "hard words," or at best to the ill-educated medical student to whom the most ordinary scientific terms present initial difficulties of magnitude in his understanding of lectures or medical books. It can be of no use whatever to even the most humble scientist or philologist.

NOTES ON BOOKS.

The A B C Holiday Guide, with Hotel and Apartment List. May, 1891. (Offices, 26, Bouverie Street, E.C.)—This new serial embodies a useful idea; it gives a short descriptive account of most of the leading health resorts in this country with lists of hotels, apartments, and boarding houses in each. The difficulty of obtaining information even as to the hotels in an unknown watering place is often considerable, while to paterfamilias with a small income and a large family the task of searching for suitable lodgings up and down the streets and terraces of an unfamiliar seaside town is a penance of the most dreary kind. The *A B C Holiday Guide*, which is sold at an extremely low price, supplies the kind of information wanted. Many recent events have proved the need of paying great attention to the sanitary arrangements of the house and neighbourhood into which a young family is to be launched for the summer holiday; otherwise the search for health may result in finding disease and even death. We are glad to see that this principle has been recognised by the compiler of the *Guide*, and that tentative arrangements, which in time will no doubt be extended and perfected, have been made for supplying information as to the sanitary condition of the lodging-houses mentioned.

Topographie Cranio-Encéphalique: Trépanation. Par Dr. Paul Poirier. (Paris: Lecrosnier and Babé. 1891.)—Surgeons generally will now agree with the author's statement in the first paragraph of his preface, that "an exact knowledge of cranio-cerebral topography is to-day an absolute necessity." This sentence gives a key to the purpose of the work before us. There will here be found many practical anatomical descriptions which will be of assistance to operators. One example may be given. In speaking of trephining the mastoid process, the author says: "The mastoid vein, often very large, traverses obliquely the middle third of the process. It may be opened by the first insertion of the gouge; the part is then inundated with blood, and the surgeon is surprised to find the sinus so near the surface." Little hints of this kind are very useful. The book is thoroughly up to date, both in the detailed description of the operation of trephining, in the diseases for which it may be necessary, and in the anatomical guides. The work also possesses several very valuable coloured illustrations, which seem to be very carefully as well as artistically executed.

Bakteriologische Diagnostik: Hilfstabellen zum Gebrauche beim praktischen Arbeiten. Von James Eisenberg. Dritte völlig umgearbeitete und sehr vermehrte Auflage. (Hamburg und Leipzig: Verlag von Leopold Voss. 1891.)—The third edition of Eisenberg's *Bakteriologische Technik* is on a very different scale from either the first or the second, and that there was the need for such a book is evidenced by the fact that new editions have been so frequently called for. It has expanded from a small book (second edition) of 159 pages to a volume of over 300; and although the main body of the book is simply enlarged, corrected, and brought up to date, a number of additional tables, and much new information have been given in the appendix. Dr. Eisenberg gives lists of the organisms found in the mouth, in water, air, earth, milk, cheese, blood, urine, fæces, and so on, so that any one working at any special subject may at once obtain information as to the more important micro-organisms that have been found in these positions. The number of organisms described has been increased from 138 to 376, each description, as in previous editions, being given in tabular form under the following headings: Position in which the organism grows, form of arrangement, movement, method of growth on various media and under various conditions, formation of spores, of gases, liquefaction of gelatine in the presence of air, staining characteristics, and

the effect of inoculation on man and animals. We have thus a full description of the morphological and physiological characteristics of each organism in a readily accessible form. In an appendix Dr. Eisenberg has collected descriptions of the various media now used in the cultivation of bacteria, and also of the methods of staining and examining these organisms, so that the book as it stands will serve as a capital laboratory handbook for those working at bacteriology.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN AMBULANCE CHAIR.

Mr. Hugh M. Smellie, M.B., C.M. (visiting surgeon to the Jarrow Memorial Hospital), and Mr. J. Dickenson Leigh, M.B., L.R.C.P. (resident surgeon Jarrow Memorial Hospital), write to recommend the ambulance chair shown in the accompanying drawings.

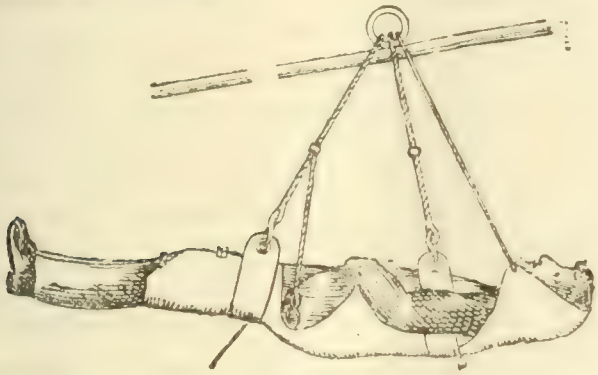


Fig. 1.

The chair is made of sailcloth, stiffened at the back with leather; at the sides are fixed leather straps and buckles, by means of which a disabled person is secured in the chair.



Fig. 2.

There are brass eyelet holes at the front and back of the chair, to which iron clip hooks and rope slings are connected, and these slings join into an iron ring. By simply fastening a rope to the ring, the chair, with the patient, can be raised or lowered by two persons hand over hand, or, more easily, by means of a block and tackle. In the act of raising or lowering, the patient is prevented from coming into contact with any obstacles or projections by a person holding the guide rope attached to the chair.



Fig. 3.

Fig. 1 shows the chair with a subject in the act of being raised in a horizontal position; this position is particularly suitable for a person suffering from an injury to the thigh or hip. Fig. 2 shows the subject in what might be termed a sitting posture. In Fig. 3 the patient is represented in a perpendicular position, which is assumed for the purpose of raising or lowering the person through a very small or narrow opening. When the disabled person has been raised or lowered to the required spot, he need not be removed from the chair if further transport be necessary, but, if a stretcher be at hand, can be put on it with the chair still attached. If a stretcher be not obtainable, the patient can be carried by simply removing the chair and slings from the block (if one has been in use), and then by passing a handspike, pole, plank or batten, or a boat's oar (see Fig. 1), through or under the ring for the slings, two men can conveniently move the patient to any distance. The chair can also be made use of in shipwrecks in cases where a sick or disabled person has to be brought ashore by the rocket life-saving apparatus.

The inventors and proprietors are Messrs. John F. and Thomas H. Singleton, 143, Albert Road, Jarrow.

MIDWIFERY FORCEPS.

Dr. A. C. Hutchinson sends us a pair of forceps made for him by Messrs. Maw and Co. The novelty of them is in the points that one blade is made with a white handle, the other with a black one, so that the blade needed can be quickly identified; and, also, that the handles are provided with a catch, by which they can quickly be fastened together, if this is thought desirable.

Mr. R. Rauschke, surgical instrument maker, 35, Bond Street, Leeds, writes, with reference to "An Improved Mouth Prop or Gag," British Medical Journal, May 9th: "I have had now in stock for some years, made by me some years ago, after directions by Mr. Brunton. I fail to see that there is any difference between the two gags. Instead of the spiral spring a band of elastic can be used, which will answer the same purpose."

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MAY 23rd, 1891.

WHAT DISEASES SHOULD BE NOTIFIED AS PUERPERAL FEVER?

There can be no doubt that considerable difficulty is often experienced in deciding whether a particular case of *post-partum* illness should or should not be regarded as "puerperal fever," and notified as such to the sanitary authority. Most practitioners would rather not call an illness "puerperal fever" if they can conscientiously believe that another name is appropriate to it. On the other hand, if they omit to report as such a case which some one else, believed by the friends to possess superior knowledge, thinks should be given that name, they lay themselves open to the charge either of incompetence or lack of frankness.

One of the conditions of a system of popular government like ours is that legislation must be in accordance with the general feeling and opinion of the time. If in advance of the time it is sure to fail in its object. In sanitary legislation the medical theories acted on must be those generally accepted; they must be in harmony with the views, not of the most recent investigators, but of the great bulk of doctors, old and young, town and country, English, Scotch, and Irish. A law based on theories not yet accepted by the bulk of those on whose judgment the carrying out of the law depends would raise an amount of opposition and misunderstanding that would go far to make it an absolute failure.

We imagine that some such reasons as the above influenced those by whose advice the term "puerperal fever" was inserted into the "Notification of Infectious Diseases Act" (1889). Just as "continued fever" was a sufficient diagnosis before typhus and typhoid fever had been differentiated, so until the last twenty years, or even more recently, nothing more was known of puerperal fever than that it was a severe febrile disease affecting lying-in women. Even now no other definition can be given to it. It used to be thought that all such cases were essentially alike, although they might differ in detail. One distinguished American obstetrician, we believe, still holds the view that there is a specific febrile disease affecting lying-in women and no other persons. It was thought that puerperal fever was often epidemic. Such views as these were acted on by the late Dr. Farr, when the term "metria" was introduced as the equivalent of puerperal fever, and we presume this is the view tacitly accepted in the Act we have referred to.

The object of the Act is to enable, in the interest of the public, such precautions to be taken as shall prevent infectious disease being communicated by a patient to other persons; and abundant experience has shown that in most of the diseases named in the Act prompt action in isolation, disinfection, etc., is successful in doing this. In others the mode of propagation is so far obscure that the inquiries which notification may set going must be productive of increase in our knowledge, and therefore our power of prevention. No similar statements can be made about any of the diseases comprehended under the vague term "puerperal fever." They are not epidemic. This was proved in the most conclusive way by the late Dr. Matthews Duncan. The pupils of that eminent man can remember how, with grim humour, he used to say that when a great lady died in her confinement all the doctors said there was an epidemic; but if a poor woman in the Edinburgh Cowgate died after delivery no one thought of an epidemic then. "Puerperal fever" includes septicæmia, septic intoxication (the sapræmia of Matthews Duncan), pyæmia, phlegmonous inflammation of cellular tissue (the "erysipelas malignum internum" of Virchow), wound diphtheria or gangrene, as well as the less formidable conditions of endometritis, cellulitis, perimetritis, and fever from slight transient causes. All these are wound diseases; they are spread by want of cleanliness. If isolation be required it is isolation of those attendant on the patient, not of the patient. Cases must be very exceptional in which any good can come of the interference of the local sanitary officer; and in the few instances—likely to become fewer and fewer—in which investigation might do good public attention would be certain to be drawn to the matter, even were there no notification. Every argument for reporting deaths after childbirth applies equally to cases of febrile illness following surgical operations.

It is unfortunate that so vague a term as "puerperal fever" should have been thus legally stereotyped. But as it is so, it appears to us that the best way in which medical men can act harmoniously together for the public good—and no profession has ever been more ready to sacrifice its private interests for the public benefit—is in every case of febrile illness after delivery, not clearly arising from some cause quite independent of the process of labour, either to report the case or else to consult the medical officer of health for the district to ascertain from him in what class of cases he hopes for good results from their notification to him and to act in accordance with his advice. There is now abundant proof that such cases are very rare in the experience of those who carefully observe antiseptic precautions in their practice, and if now and then a doctor, by styling a case puerperal fever, for which he might have found a less formidable appellation, should incur the undeserved censure of some hastily-judging persons, his doing so will increase for him the respect of others, who will understand and appreciate his desire to be perfectly candid with those who trust him and to do his duty to the public.

UNIVERSITY EDUCATION IN WALES.

Though the power of conferring medical degrees is not among the things aimed at by the promoters of a university charter for Wales, their movement cannot but be watched with interest by the medical profession. The three Welsh university colleges at Aberystwyth, Bangor, and Cardiff have always shown strong scientific leanings, and have not been

slow to recognise the important claims of intending students of medicine. Students are now prepared in all three not only for the Preliminary Scientific Examination of the University of London, but for the corresponding examinations of the Scotch universities, by whom the professors of chemistry and natural history in the Welsh colleges are recognised as extra-academical lecturers. The Welsh student who aims at a Scotch degree is thus enabled to spend the first year of his course within reach of home. A similar recognition has just been accorded to Bangor by the Royal College of Physicians of Ireland. The South Wales College at Cardiff contemplates a more ambitious step, and as soon as the necessary funds are forthcoming will apply for recognition as a place of study in anatomy, physiology, and materia medica, so that it may take charge of the student until the first M.B. of London, or the corresponding stage elsewhere, is reached. As the Cardiff Infirmary is within a few minutes' walk of the College, and the scheme has received the cordial support of the infirmary staff, the students of the "Welsh metropolis" will have ample opportunity of gaining that early familiarity with the aspects of disease and that early practice in simple surgical manipulation which is so desirable in the eyes of most practical men—more opportunity, it may be safely said, than would be available for the accumulated classes that Professor Ray Lankester wishes to see taught in Gower Street and the Strand.

Jealously as attempts to multiply universities in the United Kingdom ought to be guarded, it must be admitted that Wales has some particular claims for consideration. It was early noted by a shrewd English observer that if the students in arts and science at Aberystwyth carried less of the Scandinavian spirit of emulation into their studies than their English fellows, they displayed, *per contra*, an individual interest in their work, and a love of learning for its own sake more suggestive of Bonn or Heidelberg than of Oxford or Cambridge. If this be so, there may be room for doubt whether the rigid rule of Burlington Gardens is the best adapted to nurture so sensitive a plant, and whether a system of training more allied to that of Oxford would not be more favourable to its development. The Oxford plan of education in arts, indeed, has always had peculiar attractions for Welsh students, and the Welsh grammar schools, it is alleged, are now working under the serious disadvantage of having to prepare one section of their pupils for an Oxford career, and another to follow up the very different course prescribed by the Examining Board in London.

When the new county schools are established a fresh difficulty will appear, to which thoughtful Welsh educationists are looking forward with some anxiety. These schools will be supported in part by county rates, in part by direct grants. The use of public money implies some sort of public inspection; and "inspection" is not a word of agreeable associations in a schoolmaster's ear. Are the intermediate schools, like the elementary schools, to be practically governed by permanent secretaries in Whitehall, and to be at the mercy of an official inspectoral caste? Or is a local "department" to be created, which, it may be safely predicted, would exaggerate most of the faults of its original? The true way out of the difficulty, as many persons both in and out of Wales assert, is the creation within the principality of a truly educational or academic body, sufficiently strong and sufficiently representative to be safely entrusted at need with public inspectorial functions, and yet in full sympathy with the real aims and requirements of education. Whether there exist in Wales at present the materials for such a body, or whether a university capable of satisfying the peculiar circumstances of Welsh education can be devised at all, are questions on which we should hesitate to pronounce; but Wales seems to have taken up the matter in earnest, and we doubt not that any scheme which may be devised will receive the attentive consideration of the Government at the present conjuncture.

PUNISHMENT IN SCHOOLS.

THE discussion at the last meeting of the Medical Officers of Schools Association recalls attention to a matter in which everyone must take some interest—past, present, or prospective. As one of the speakers pointed out, education without provision for punishment of some kind is practically impossible; but that is no reason against punishment being always of such a nature, so adapted to the individual and to the fault, and so inflicted, as to constitute in itself a valuable part of education for both pupil and master. There are many school offences which can be adequately met by a legitimate interference with the liberty of the pupil during the time usually allotted to recreation; provided always that this shall not assume any form of "keeping in;" in other words, that there shall be no deduction from the full allowance of fresh air and of exercise which forms the necessary complement to the tale of intellectual work. As might be expected, the ordinary written imposition, which is still too much in vogue, was unhesitatingly condemned. Indeed, the only excuse ever given for the punishment by "lines," which tend, in their monotonous execution, to deform the body, deprave the handwriting, and dull the intelligence, is that it gives so little trouble to the master who inflicts it, and who, it may be added, shows by its infliction that he takes a shortsighted view of his peccant pupil's welfare. It was contended that a good deal might be done by a system of small rewards for industry and good conduct, by some partial relaxation of the usual discipline, or some shortening of the usual hours of work, for example, which would operate as a sort of punishment by negation to those who fail to reach the prescribed standard. The obvious objection to such a system is that it tends to operate injuriously on the painstaking dullard, who thus become classed with his idle though sharper-witted fellow; while, on the other hand, the naturally bright and industrious lad is always sure of his reward in place or prizes.

It was admitted by all possessing practical experience of the plan, that punishment drill is extremely effective, and, when properly carried out, singularly free from objections; for it entails a certain amount of useful exercise and bodily training, even while it grieves the culprit's heart by temporarily depriving him of his usual share in the games which are going on around him, but in which he may not join. At the same time, it possesses in itself the great advantages of training to instant obedience, and of forming a habit of ready discipline, which helps hereafter to make punishment uncalled for. It should, however, be carried out always as a "punishment parade," and not so managed as to make the practice of drill itself (an excellent form of training which should be incumbent on the whole school) a thing abhorrent and derogatory.

There must, it is to be feared, be a residuum of offences which personal chastisement alone can adequately meet, and the only permissible form of inflicting this is by caning or birching on the gluteal region. Its severity must be justly apportioned to both the offence and the offender; it should never be inflicted in hot blood, or by the person against whom the offence was committed. A great deal of sentimental foolishness has run to waste over the degradation which is supposed to be inseparable from such punitive methods. In one sense the term is truly applicable to all forms of punishment alike. But these lachrymose enthusiasts ignore at least two momentous facts: first, that the suffering of physical pain is not *per se* a degradation; and, secondly, that while any offence which calls for so severe a punishment is in itself degrading to the offender, the omission of prompt and condign punishment may entail by present immunity a future of far greater degradation still, both physical and moral.

Finally, a strong plea should be urged against routine either in kind or measure. The master who really knows his work knows each of his boys also. It is obvious that the punishment which will be regarded as a mere trifle by one child may, by reason of his training or his temperament, form the abiding terror of another; and only a thorough appreciation of the many-graded individuality of childhood, in addition to the other precautions mentioned, can save punishment now and again from either degenerating into farce or being exaggerated into torture. Nor should punishment of any kind ever be inflicted upon those who have not been certified as medically fit to undergo it. Schoolboys and schoolgirls certainly have a right to the safeguards which are unhesitatingly extended to criminals as well as to soldiers.

We have received, too late for publication this week, a memorial to the President of the Board of Trade, praying that the Royal British Nurses' Association may not be licensed under the 23rd Section of the Companies Acts. The memorial is signed by a large number of the leading members of the medical profession.

The French Government has conferred the Order of the Legion of Honour on Dr. O. Lassar, General Secretary of the Tenth International Medical Congress, held at Berlin in August, 1890, in recognition of his "great and successful labours" in the organisation of the meeting.

A Committee, which includes most of the leading members of the medical profession in Munich, has been formed for the purpose of erecting a fitting memorial of the late distinguished surgeon Professor von Nussbaum. Contributions will be received by the Treasurer of the Committee, Herr Benno Wassermann, Kaufingerstrasse 34, Munich.

The annual meeting of Fellows of the Royal College of Surgeons for the election of members of Council will be held at 2 P.M., on Thursday, July 2nd. Five additional applications for permission to work in the laboratories of the Royal Colleges of London have recently been received. This raises the total number of persons entitled to work in these laboratories to eighteen.

THE CROONIAN LECTURES.

Dr. Burdon Sanderson will deliver the Croonian Lectures of the Royal College of Physicians "On the Progress of Discovery relating to the Origin and Nature of Infectious Diseases during the last Twenty-five Years," at the Examination Hall, The Savoy, W.C. The first lecture will be given on June 9th, and not, as previously announced, and as is stated on the cards of invitation, on June 2nd. Subsequent lectures will be given on June 16th, 23rd, and 30th, at 5 P.M.

THE GENERAL MEDICAL COUNCIL.

The first business which will occupy the General Medical Council at its meeting next week will be the election of a President in the room of the late Mr. John Marshall. A considerable number of cases of discipline will have to be considered. A great part of the time of the session will probably be occupied in the discussion of important reports from the Education Committee on preliminary examinations in general education, and on laboratory instruction of candidates for diplomas in public health.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

Sir Michael Hicks-Beach has consented to receive a deputation representing the British Institute of Preventive Medicine on June 5th. It is to be hoped for the honour of Great Britain that the President of the Board of Trade will not persevere in his ill-advised refusal to grant the desired licence under the Companies Acts, which is a mere legal formality. At a time when the Governments of other countries are spending large sums of money in founding or maintaining such institutions, it is astonishing to find a Minister in this country, which set the world so grand an example in the early days of hygiene, subjecting a voluntary association to a petty annoyance of this nature.

SANSKRIT MEDICAL LITERATURE.

An article in a recent number of the *Times* gives incidentally a brief account of the steps now being taken to print the numerous manuscript works on medical subjects written in Sanskrit which exist in the libraries of India. Pandit Avinash Chandra Kaviratna has edited the text of Susruta with a commentary in Sanskrit, and has published a Bengali and a Hindi translation of this classical work. He has also edited, with a Sanskrit commentary, Charaka, who is supposed to be an older writer than Susruta, and is now publishing an English translation. Charaka's name is mentioned by Avicenna, but the great bulk of Sanskrit medical literature, which it is said would fill a "fairly large library," is comparatively recent. Greek influence, it is said, may be traced in most of these writings, but there is perhaps a substratum of original thought. Some medical works were translated from Sanskrit into Arabic in the eighth century A.D.

WHOLESALE POISONING AT A WEDDING FEAST.

Detailed reports of the disastrous wedding breakfast in the neighbourhood of Louisville, in Kentucky, put a different complexion on the occurrence and destroy all the sensational romance of the story. Sixty guests assembled at the wedding and sat down to the banquet in the afternoon: of these no fewer than forty were subsequently seized with symptoms of irritant poisoning, the time of onset varying from four to sixteen hours after the meal. Five of the persons so attacked had died up to the date when the facts were placed on record, and as that was only some ten days after the occurrence, it is possible that other victims may yet have to be enumerated. By a process of exclusion the salad was fixed upon as the incriminated article, none of those who escaped having partaken of it. The salad was accordingly examined by Dr. H. M. Goodman. Its composition was curious if correctly given, namely, chicken, celery, olive oil, mustard, salt and pepper: and some chicken broth was mixed with it. A careful examination failed to detect any metallic poison, nor did it give the tests for tyrotoxicon, but the residue obtained after extraction by the Stas-Otto method gave certain undoubted ptomaine reactions, and 1 cubic centimetre

of this injected into the leg of a chicken caused death in three quarters of an hour. There was strong reason to suspect the chicken broth of being the chief cause, for one of the cooks admitted that she had tasted some of the chicken the day before and that she had been subsequently attacked with symptoms very similar to those of the rest of the victims, and she had not tasted any of the other articles that were served at the banquet. The chickens were killed and cooked on a Monday, and were left standing in the water in which they had been boiled till the following day, the wedding being on the Wednesday, and the weather at the the time being hot. The symptoms began with pain in the abdomen followed by vomiting and watery diarrhœa, and it is pointed out that the delay in their appearance is consistent with ptomaine poisoning, but not with metallic poisoning.

HIDEOUS CURIOSITIES.

A WORD of caution is necessary concerning the gruesome collection of instruments of torture which has been opened this week at Louis Tussaud's. "The Iron Virgin of Nüremberg" is a fearful instrument, shaped like a woman, the front part opening on hinges, and the interior studded with long steel spikes, so arranged as to pierce brain, eyes, chest and abdomen, when the victim is held in her embraces, and the hinged front closed. Persons travelling abroad who have in former times seen this and similar instruments of torture have been haunted for several days by painful impressions, which in healthy people do no harm, but which on delicate, nervous women and children might produce injurious effects. The "tenaille mammère" (torturing tongs) used in tearing Damien's temples in 1757, the torture girdles of the Spanish Inquisition, the Spanish horse, and the hideous iron masks and horns, are calculated to live in the memory and dwell in the minds of their beholders in a manner that might easily be fraught with mischief to many sensitive persons.

UNIVERSITY COLLEGE.

THE prizes won by the students in the Faculty of Medicine at University College during the past academical year were distributed by Sir Richard Quain, M.D., on May 14th. The report, read by the Dean, stated that during the past year 346 students had attended the classes of the Medical Faculty and the practice of the hospital. Sir Richard Quain, in the course of an interesting address, said that more than half a century ago he sat amongst the students in the same hall, anxiously awaiting what might be in store for him, and he was glad to come amongst them again after a long and busy professional life. He congratulated the recipients of distinctions that day, and encouraged them to make new efforts to succeed. He spoke at length of the professors who had been connected with the college in the days of his youth, all of whom had left indelible marks on the history of medicine. The system of teaching which they had initiated had led to the widespread improvement of medical science in this country. He urged the students to make the most of their opportunities, to cultivate habits of close and unremitting observation, and to bear constantly in mind a sense of the responsibilities which they were about to incur. He asked them to think how much they owed to their Alma Mater, to their profession, and to themselves. If they did all this, whether adequately rewarded or not, they would have the satisfaction of knowing they had done their duty. On the motion of Mr. Erichsen, a cordial vote of thanks was given to Sir Richard Quain for his address.

THE METROPOLITAN POLICE.

A HIGHLY commendable order has been issued by Sir Edward Bradford, the new Commissioner of Police, to the effect that in all cases where there is reason to suspect that prisoners, whether suffering from drunkenness or not, have received any injury, or are suffering from any disease at the time of their apprehension or while being detained in custody, medical aid is to be at once sought, the divisional surgeon being sent for in every case that seems in the least to require his aid; the Commissioner desires that the previous police orders on the subject will be liberally interpreted by those who have charge of stations. In following thus in the footsteps of his predecessor, Mr. Monro, who, during his brief reign at Scotland Yard, showed his full appreciation of the value of medical services, Sir Edward has deserved well of the public, and we may hope that under his rule the heading "Drunk or Dying?" will appear less frequently in the daily press. It is to be regretted, however, that on another subject closely connected with police surgeons' work, with reference to which a question was recently asked in the House of Commons, Sir Edward has not been able to act as liberally. During the influenza epidemic of last year all constables suffering from that debilitating disorder were, on the recommendation of the police surgeon attending them, allowed full pay instead of a shilling a day being stopped at a time when it was specially required to procure extra nourishment, etc. This year a memorandum from headquarters has been issued, stating that full pay will not be allowed to men suffering from influenza. We feel sure the matter only requires to be properly represented to the Commissioner to have this point also "liberally" dealt with.

LEPROSY COMMISSION.

DRS. RAKE and Buckmaster, and Surgeon-Major Thomson, arrived at Simla on April 26th, joining Messrs. Barclay and Kanthack, who had been here since March 9th. The former, after a tour through the North-West Provinces of Oudh, spent several weeks at Almora, in the Kumaun district. Here histological and bacteriological observations were made to study the distribution of the bacillus lepræ in the human body, and how far the latter might be disseminated by the soil and water. At the same time over 100 vaccinations with calf lymph were performed on lepers, with a view to investigate Dr. Arning's conclusions, and to see with what frequency the bacillus lepræ can be found in the vesicles of vaccinated lepers. A few animal experiments were also made at Almora. While awaiting the completion of their laboratory, which was fixed for May 15th, the Commissioners were employed in preparing as much of the report as the results of their travelling inquiry, which is now practically concluded, allow. Messrs. Barclay and Kanthack have been continuing their cultivation experiments.

METHYLATED SPIRIT IN DRUGS.

A CHEMIST has recently been fined £25, with the alternative of three months' imprisonment, in each of two cases in which he was charged with selling as a medicine for internal use friars' balsam in the manufacture of which methylated spirit had been used instead of spirits of wine. The proceedings were instituted by the Inland Revenue authorities, at whose instance samples had been taken on two occasions at the defendant's shop, and the magnitude of the penalties inflicted is, no doubt, entirely due to this circumstance. The offence alleged against the defendant certainly constitutes a very obvious fraud on the public; it was, in fact, stated in the course of the cases, which were heard together, that the cost of methylated spirit was about 2s. 3d. per gallon, and that of spirits of wine 23s. per gallon, and that the medicine made with the methylated spirit was not of the nature that a purchaser would expect or desire; but it is usually the case in prosecutions of this kind that the injury to the public is made to sink into insignificance in comparison with the injury to the revenue—in other words, the protection of the public is regarded as a matter of far less importance than the protection of the revenue. Had the proceedings been taken under the Sale of Food and Drugs Act, it is more than probable that some trumpery fine of a few shillings, or at the utmost one or two pounds, would have been inflicted. Indeed, under this Act the maximum penalty for such an

offence is only £20, while it appears to be £100 under the Act enforced in these cases. The offence is undoubtedly far more serious from the point of view of the consumer than that of slightly sugaring and diluting beer, in regard to which offence so many prosecutions have recently been instituted by the Somerset House authorities for precisely the same reason, namely, the protection of the revenue. These authorities have nothing to do with the suppression of adulteration, which, so far as they are concerned, may be carried on to any extent so long as the revenue is not affected thereby.

FRENCH HERBALISTS.

THE "General Association of the Herbalists of France," finding their existence threatened by the proposed new law as to the practice of pharmacy in France, have appointed a deputation to wait on M. Floquet, President of the Chamber of Deputies, and present a petition to him setting forth that the maintenance of their "profession" in all its existing rights and privileges is necessary in the interests of the public health. They therefore express a hope that the "justice and equity" of legislators will not allow them to be improved off the face of the earth as rash innovators propose. In justice to these pillars of the sanitary commonwealth, however, it should be stated that the French *herboriste* stands on a different footing from his unsavoury English homonym. Our herbalists prey on the public without, so far as we are aware, going through the formality of taking out a licence of any kind for the purpose. The French *herboriste*, on the other hand, is duly recognised by law as a compounder and dispenser of simples. By the law passed on the 31st Germinal, in the year XI of the Republic One and Indivisible (April 11th, 1803), confirmed by decree dated 25th Thermidor, XII (August 13th, 1805), no one is permitted to practise as a *herboriste* without having passed an examination on medicinal plants, and the precautions necessary for their desiccation and preservation at a regularly-constituted school of pharmacy, or before a "jury" composed of a professor of medicine and two pharmacists. If he satisfies the examiners, he receives a certificate which must be duly registered at the offices of the municipality, or in Paris at the Prefecture of Police. *Herboristes* are forbidden to sell any pharmaceutical preparation, and their shops and stock-in-trade are subject to annual inspection by the proper authorities.

MEDICAL PROVIDENCE.

A MEETING of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held on Wednesday, May 13th, at 47, Wimpole Street, W., under the presidency of Dr. F. de Havilland Hall (one of the Vice-Chairmen). It was reported that seven new members had joined in April, making the total since the commencement seven years ago 1,387, the effective membership now being between 1,100 and 1,200. The deaths of two members were announced. It was stated that the epidemic of influenza had begun to make itself felt, and that twenty-five members were claiming the sickness pay of the Society, the larger number at the maximum rate of four guineas per week. Of these, twelve were from influenza, and notification of fresh cases was being received daily. The Society was in a position, however, to meet all claims without any strain or anxiety, the sickness fund alone having a reserve fund of over £20,000 and an income of £120 per week. Each case of claim had been fully certified and carefully supervised and verified. It was stated that a further sum of £3,200 had been invested in securities of good local authorities, and arrangements were being made to invest a further £2,500 in a similar manner all at 3½ per cent. This will bring the total of the society's investments up to £18,000, the whole being made in the names of the trustees (Mr. Ernest Hart, Dr. W. M. Ord, Sir T. Spencer Wells, Bart., and Mr. J. R. Upton) for the sole use and benefit of the members. Full particulars of the work of the Society, copies of its accounts, valuation report, and rules, with proposal forms, etc., may be obtained (free of cost) on application to the Secretary, Mr. C. J. Radley, 26, Wynne Road, Brixton, London, S.W.

CREMATION.

DR. W. HOLDER recently succeeded in inducing the Burial Committee of the Hull Corporation to adopt a most important resolution as to cremation. It was to the effect that the Committee should petition the President of the Local Government Board to bring in a Bill to give power to local burial authorities to establish crematoria in which might be consumed the bodies of those who had expressed during life a desire that their bodies might be quickly reduced to ashes after death. It has been found that under the present law local authorities cannot use their funds for this purpose. The Hull Committee also resolved to request the delegates to the annual meeting of the Association of Municipal Corporations of the United Kingdom to move that Association to present a similar petition. Dr. Holder deserves the greatest credit for his action in this matter; it is a great achievement to have moved a corporation to take action to obtain the necessary powers. Even a permissive Bill would do great good, and would probably soon lead to the establishment of numerous crematoria. The sentiment against cremation is growing weaker year by year, as is evidenced, for instance, by the fact that Dr. Holder's resolution was carried unanimously. Meanwhile the number of crematories in other countries is rapidly increasing; thus we read this week that a crematory is about to be erected at Heidelberg. A site has been given for the purpose by the municipality, and the cost of erection is estimated at 44,000 marks (£2,200).

THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE Congress will be opened on August 10th at 3.30 at a meeting in St. James's Hall, over which the Prince of Wales will preside. The promises of support which are being received, both from this and from other countries, are most encouraging, and the assistance offered by some cities in this country has taken the very practical shape of substantial contributions towards the expenses. The City of Dundee has drawn up a statistical statement of its recent sanitary progress, and it is hoped that this example may be followed by other municipalities, in which case the collected reports will be published in a separate volume. Delegates have been appointed by the Governments of France, Italy, Denmark, Holland, Turkey, Switzerland, United States, New Zealand, Victoria, and Hong Kong, as well as by numerous foreign universities and societies. The headquarters of the Congress will be in the house of the University of London, and most of the Sections will meet within that building. The Demographic Division will make use of the School of Mines in Jermyn Street. The programme of the Section which deals with the relation of the diseases of animals to those of man has just been issued. The first paper on its list is one on the propagation and prevention of rabies, by Dr. Roux, of the Pasteur Institute; Dr. George Fleming and Mr. Victor Horsley will take part in the discussion. The subject of animal parasites communicable to man will be discussed by Professor Ralliet, of Alfort, Dr. Carsten, of Amsterdam, and Professor Brown. The comparatively new subject of the infection of food will be treated by Professor Brieger, of Berlin, whose work in connection with ptomaines is so well known, and by Dr. Edward Ballard, whose reports on food poisoning cases in this country have contributed so much to our knowledge of the subject. The relation of certain bovine to certain human diseases will be discussed by Dr. Klein, who will treat of the relation of cow disease to epidemic disease in the human subject, and by Dr. Ostertag, of Berlin, and Dr. Vacher, who will deal with the inspection of meat. At the

joint meeting, on August 3rd, with the Section of Bacteriology the question of tuberculosis will be considered, and papers will he read by Professors Bang, of Copenhagen, and McFadyean, of Edinburgh, and Dr. Sims Woodhead. On the last day of the Congress Professor Chauveau, of Paris, and Mr. Duguid will deal with anthrax, and Professors Perroncito, of Turin, and Crookshank with the general subject of epizoötic diseases communicable to man. The corresponding secretary of the Section is Mr. Ernest Clarke, 12, Hanover Square, W. The *conversazione* to be given at the College of Surgeons will be held on Monday, August 10th.

THE BRITISH ASSOCIATION.

THE annual meeting of the British Association for the Advancement of Science will be held this year at Cardiff from August 19th to 26th under the presidency of Dr. William Huggins, the astronomer. Visitors to the International Congress of Hygiene and Demography will thus have an opportunity of attending the meeting of the British Association afterwards, and of visiting the West of England at a most favourable time of year. At an earlier period of the year it was thought that the labour strikes at Cardiff would seriously jeopardise the success of the meeting. These have fortunately been settled, and there is every prospect of a successful meeting. The various towns in the neighbourhood of Cardiff have joined with it in making active preparations. Several interesting excursions are being arranged, and the local committee have pushed forward the arrangements for the various Sectional meeting rooms and the halls for lectures, *conversaziones*, and other functions connected with the Association. This year a new arrangement as to the hours of meeting of the Sections will be inaugurated. The Sections will meet at 10 A.M. and go on till 1 P.M.; there will then be an interval of an hour, and at 2 P.M. the Sectional Committees will meet; the General Committee and other committees will meet at 3.30 P.M. This arrangement will considerably lighten the work of the meeting, allow of more time for the Sectional Committees where the real business of the Section is conducted, and at the same time give more opportunity for social intercourse among the scientific workers. No alteration will take place in the evening arrangements.

A CONGRESS OF DEAF MUTES.

THE Association of Deaf-Mutes represents a constituency of 5,000 deaf-mutes resident in the State of New York: the proceedings of the thirteenth Convention have just been published, and present some facts of general interest. The point principally dealt with was the causation in inheritance of deaf-mutism; this factor is placed by the Association in their published statistics at 0.75 per cent. It is said that in France the percentage of deaf-mutes whose parents are themselves deaf-mutes does not reach 1 per cent. Against these figures must be placed the results of consanguineous marriages; they have furnished 6.4 per cent. in the schools of the Association during the last twenty-five years, and in Connecticut the percentage is 10.30, in Georgia 26 7; in France the proportion of deaf-mutes furnished by consanguineous marriages varies from 6 per cent. at Lyons and Toulouse to 40 per cent. at Le Puy. A strong plea was put forward by the Convention for further support to the schools, on the ground of the special needs of these pupils for individual teaching, and varied modes of training according to individual capacity, including various forms of industrial training. Probably, while many of the deaf-mutes show good mental ability, a large proportion do not; it is much to be regretted that statistics of the physical condition and brain development of children in institutions for this class are not regularly published. In an account of the examination of fifty-one deaf-mutes published in the BRITISH MEDICAL JOURNAL, 1889, indications of brain disease were found in five cases, and in three congenital cases the cranium and palate were defective. The importance of prolonging the period of education and founding trade schools was dwelt on by several of the speakers or signers, for it would appear in every case the observations were delivered in duplicate in signs and by speech, the Rev. Dr. Gallaudet acting as official interpreter.

MORE CLINICAL ART.

SINCE we last wrote a few lines on the medical side of this Royal Academy, we have improved the Whitsuntide recess by carefully searching through the catalogue for fresh clinical material, and comparing the titles with the actual pictures themselves. Sometimes the connection is obvious enough; at others there is a sort of conundrum-like unexpectedness of material retort when we come to view the canvas hanging on the wall which is confusing to the ordinary mind. There can be no doubt about the meaning of "No. 739," where Carl Schloesser shows us a prosperous German doctor sitting among his books and chemicals, and looking rather casually at his patient; and the "Convalescent" (338) has a touch of pathos which will make it popular with the multitude. But may we venture to suggest to Miss Sherrard that this sad-looking girl, with pale thin cheeks, and faint hectic flush, which seems to come from the setting rather than the rising sun, suggests to us none of the sentiment of recovery? To our thinking, she is steadily going down-hill, and the air of pensive resignation with which she looks at the bunch of daffodils in her hand suggests the Laureate's lines:

> When the flowers come again, mother, beneath the waning light,
> You'll never see me more in the long gray fields at night;
> When from the dry dark wold the summer airs blow cool,
> On the oat grass and the sword grass, and the bulrush in the pool.

The "Consumptive" would be a much better name for this impressive picture than the "Convalescent." Not far off, in the third room, at "No. 287," there is a capable-looking nurse ready to give her services if required; but, unhappily, in Miss Gotch's picture, No. 725, "In the midst of life we are in death," things are already beyond human aid. Here we have a realistic, and we are bound to say somewhat commonplace, representation of a dead sailor lying on the floor of his cottage. He has not yet been removed from the stretcher on which he has been carried up from the beach, and his family are grouped around with a stoicism which might almost pass for indifference. In "Called Home" (546), Mr. Savage Cooper has given us a bit of winter tragedy, and depicted a mother and child lying dead in the snow. The lower part of the canvas is dark and heavy, flakes are falling fast, and the sky is lowering, but a few inches higher up the atmosphere suddenly becomes brilliantly radiant, and two plump angels without any apparent means of locomotion float somewhat laboriously upwards. If these represent the souls of the deceased, all we can say is that this kind of thing has been much better done before, notably by Blake, and that there is no charm of artistic sentiment here to remove the inherent absurdities of the situation, and to lessen the sharp contrast between the miserable dead lying below and the obtrusive physical vigour of the celestial beings aloft. "Found Dead" (1209) and "Beautiful in Death" (418) are merely small and careful portraits of dead birds; and now we come to our two conundrums. "The New Baby" (376) may raise the hopes of mothers and obstetricians as they run their eyes over the catalogue, but it turns out to be nothing more or less than a horticultural enthusiast, in dressing gown and skull cap, inspecting an infant cactus just pushing its head through the earth. But what is the meaning of No. 52—"For Curable Cases Only"? We are here introduced to a young lady, unhappily hung too high for complete inspection, who is making the most of the "materials," and is concocting a "night cap" for someone out of a whisky flask and lemons and sugar, with just a little hot water to keep up appearances. Possibly the patient may be convalescent from influenza, and this may be a contribution to the study of this mysterious disease. Miss Gibson ought to give us some psychological insight into the intentions of a scene

which is calculated to puzzle the British public almost as much as Ibsen's plays. Before taking our leave of Burlington House, let us spend a few moments before Father Damien's sad earnest face, as it has been sketched in water colours by his friend, Mr. Clifford. One cannot say much for the technical qualities of this drawing, but it must be intensely interesting to all who followed and admired the life work of this real Christian martyr, and the artist has had the good taste to subdue all prominent evidences of leprous infection, for if we except a couple of warty growths on the cheek, some irregularity of outline on the forehead, and a tolerably evident thickening of the ear and neck, nothing can be seen of the terrible malady which not long after cut short Father Damien's invaluable life. Finally, we are glad to find that our predictions were truly prophetic, and that Fildes's Doctor is undoubtedly the picture of the year. On Easter Monday the crowd was seldom less than ten deep before it, and even the somewhat fitful glances which we could cast in its direction through the sea of human heads enabled us to come away more than ever deeply impressed with its simple earnestness and pathos, and with the masterly and unobtrusive skill of its technical qualities. Works such as this are indeed creditable to British art.

INSANITY DURING GESTATION.

Rarely has a more striking instance of this form of homicidal mania been given than is to be found in the reports which reach us from America of the case of Mrs. Highbee, who recently caused the death of four of her children during the period of gestation, and under circumstances which left no doubt of her insanity. The first child died last October, the mother being then between two and three months pregnant with her sixth child. The symptoms were supposed to be due to cholera infantum; but when, in about a fortnight, a second child sickened with somewhat similar symptoms, the question of brain disease arose. About a fortnight after the death of this one a third child was taken ill in the same way, and also died. It was noticed by all who knew her that a great change had come over the mother, and that from being a kind, careful, affectionate mother, she had become stolid, and apparently indifferent to the welfare of her children, and not in her right mind; but it was not until after the death of a fourth child, which happened shortly afterwards, the mother having meanwhile moved from the country into a neighbouring town, that any suspicion of foul play took definite shape. The mother objected to a *post-mortem* examination on the ground that if the doctors could not tell what was the matter with the children during life, they would not be able to afterwards; and she always declared that the doctors had been the cause of the death, and that in each case the child was not really ill till the doctor came. But it was ascertained that she said as each child sickened that it would die, and did not give the medicines ordered or take care that the child had any nourishment. After the death of the fourth child the bodies of two of them were disinterred, and arsenic was found in the stomach and liver in each case. The mother was thereupon put upon her trial, and was found insane. It transpired that there was a history of insanity, and that during each of her previous pregnancies her mental condition had been peculiar, and she was described as having been very hysterical. She stoutly denied being hysterical or having poisoned her children, but the evidence of a complete change of character since the death of the first of her victims was overwhelming. Her delivery was expected to take place last April, and it would be very interesting to know whether that was followed by a recovery from her mania.

SANITATION IN ITALY.

Professor Ruata has republished a popular address which he delivered at a conference of the Sindics and clergy of the district of Clusone in September, 1890. Though filling the Chair of Materia Medica and Pharmacology at Perugia, Professor Ruata appears to be conscious almost to scepticism of the limits of therapeutics, while he is an enthusiast in the cause of preventive medicine. He is constantly urging on his countrymen the necessity for sanitary improvement. He maintained that every case of preventable death was morally one of homicide, and if the guilt could be brought home to any person the punishment should be in some degree commensurate with the offence. He insisted on the lamentable consequences of ignoring evils because they were constantly and everywhere present. A tramcar accident by which three persons were killed and half a dozen injured was reported minutely in every newspaper in Italy, while a most severe outbreak of small-pox (146 cases and 20 deaths in a village with 614 inhabitants) was scarcely heard of in the county town not twenty miles distant. Cholera in four years caused 50,000 deaths and then ceased, enteric fever in the same period carried off 110,000, and continues to attack some quarter of a million with 27,000 deaths every year, yet the populace were absolutely frantic over the former while they remained indifferent to the latter. The relative mortality of measles and whooping-cough might be small, but the former caused absolutely more deaths every year than scarlatina, which might be saved by notification and rigid isolation. The lecture contained many telling anecdotes and striking ideas, and the speaker confessed to one pious fraud. Having in vain endeavoured to obtain the quarantining of a house where measles had broken out, the Sindic refusing "to put an entire family to such inconvenience for so trivial an ailment," 300 children were attacked, and 40, including one of Ruata's, died. The same thing occurring some years later in another village, he succeeded in making the parents and neighbours believe that the case was one of virulent small-pox. The voluntarily enforced isolation was complete, and not another case appeared in the district.

SCOTLAND.

Mr. A. Stodart Walker (Faculty of Medicine) was on Tuesday unanimously elected President of the Edinburgh University Union.

COMPENSATION OF A DAIRYMAN.

The Public Health Committee of the Edinburgh Town Council have this week recommended that a dairyman in the neighbourhood of the city should be paid the sum of fifty guineas as compensation for the loss sustained by him in connection with the late outbreak of scarlet fever, and as a recognition of his services in aiding the public health officer to trace the cause of the epidemic.

THE ROYAL SOCIETY OF EDINBURGH.

The eleventh ordinary meeting of the Royal Society of Edinburgh was held on Monday, May 18th. Lord McLaren presided, and several papers of considerable interest were read. Dr. Buchan, of the Scottish Meteorological Department, communicated further details of records made at Ben Nevis Observatory, specially with reference to the movements of the barometer in relation to the force and direction of the wind. Dr. Berry Hayeraft, Assistant to the Physiological Department of the University of Edinburgh, gave an account of certain experiments made by him upon the movements of the heart. Dr. H. Robert Mill, of the Scottish Marine Station, made a communication on the physical geography of the Clyde Sea Area, with observations on the salinity and chemical composition of its waters.

SCOTTISH MICROSCOPICAL SOCIETY.

The seventh ordinary meeting of this Society was held in Edinburgh, on May 15th, Professor Rutherford presiding. Mr. H. J. Stiles, M.B., read a paper on the development of

the mammary gland, giving the results of an elaborate investigation of its development in the human subject, the calf, pig, dog, rabbit, and other animals, which had convinced him that the secreting acini of the gland are developed from the epiblast, as Kölliker long ago stated, but which Creighton had endeavoured to disprove. The paper was illustrated by an elaborate series of microscopic specimens demonstrating the author's views. Mr. W. H. Barrett, M.B., gave a demonstration of some new methods of handling paraffin sections, which he had devised, and which will enable the microscopist to overcome embarrassing difficulties in a simple way. Professor McFadyean presented a communication on disseminated necrosis of the liver. Mr. Ballantyne, of Messrs. Lizars and Co., Glasgow, exhibited a new photo-micrographic camera, made by him on the design of the late Mr. Schulze, whose skill as a photographer of microscopical objects is well known. The instrument is remarkably compact, and apparently well adapted for the purpose. He also exhibited his No. 2 student's microscope, which he had made on the suggestion of the late Mr. Schulze. The instrument is designed to meet the requirements of the bacteriologist as well as the ordinary histologist.

UNION OF THE GLASGOW OPHTHALMIC INSTITUTION WITH THE ROYAL INFIRMARY.

A CHANGE of great importance to the Glasgow Medical School has just taken place. The Royal Infirmary, large as it is—last week it had 600 in-patients—and fully equipped in most departments, had yet no ophthalmic wards, and only recently had begun to attempt something in the way of treating outdoor eye patients. This state of things was regarded as unworthy of the position of the Royal Infirmary. Some months ago we stated that negotiations had been entered into between the managers of the Royal Infirmary and the directors of the Ophthalmic Institution for the union of the two institutions. We are glad to be able to state that the agreement has now been concluded. The Ophthalmic Institution has handed over to the infirmary its whole property, equal to £11,000, and its annual subscriptions, amounting to about £1,500: and in return the Royal Infirmary has undertaken to erect on its ground, or in close proximity to it, a modern building, provided with the necessary appliances specially devoted to the eye department. The students attending the clinic of Professor Wolfe, at St. Mungo's College, will thus be under most favourable conditions for ophthalmological study. The Ophthalmic Institution has, during its 23 years of existence, rendered valuable service both in the training of students and by the original contributions to ophthalmic science, which have emanated from it, and it may be expected that under the new conditions its usefulness will be enhanced. With the exception of practical midwifery, St. Mungo's College is now in a position to ensure to its students, in the wards and outdoor departments of the great hospital with which that College is connected, full and complete practical instruction in every branch of medicine and surgery.

OVERESTIMATE OF THE POPULATION OF ABERDEEN.

THE medical officer reports that through an overestimate of the population previous to the census, an error has been made in the death-rate. The population is almost 3 per cent. less than it was believed to be, and accordingly the death-rate was nearly 3 per cent. higher than the figure at which it had recently been put. On this calculation the death-rate of Aberdeen for the past month, which is given as 18.47, and is based on the uncorrected population, is too low by 0.55. Calculating on the previous census the estimate of population was 125,790, whereas the actual number of inhabitants on April 5th was 121,633. The population of St. Nicholas has been overestimated by fully 5,000, whereas that of Old Machar has been underestimated by about 1,000.

DEPARTURE OF PROFESSOR STRUTHERS FROM ABERDEEN.

DR. JOHN STRUTHERS, the Emeritus Professor of Anatomy, on taking his departure from Aberdeen on Saturday for Edinburgh, where he is henceforth to reside, received an ovation at the railway station from a very large assemblage of students who had gathered to greet him farewell. Dr. Struthers's academical connection with Aberdeen goes back for more than a quarter of a century. The Students' Representative Council on Saturday appointed a committee consisting of Mr. George Duncan, Mr. Adam Mackay, and Mr. Alex. Brown to draw up a suitable minute in reference to the services rendered by Dr. Struthers to the students.

TYPHOID OUTBREAK AT BUCKIE.

IT appears, unfortunately, to be the fact that cases of typhoid fever are not decreasing in number at Buckie. The police commissioners have replied to the Board of Supervision that all necessary disinfectants were being supplied, that in many cases the Board's officer had carried out the disinfection, that the Notification of Diseases Act had been adopted, and that a medical officer had been appointed. The Provost, Dr. Duguid, has reported that he has found no trace of sewage or organisms which are dangerous to health in the Hilton water supply, but had found chlorides in small quantity.

IRELAND.

MR. LOUIS BYRNE, F.R.C.S., has been appointed Surgeon to Jervis Street Hospital, in room of Mr. Thomas Myles, now Surgeon to the Richmond Hospital, Dublin.

THE REGIUS PROFESSORSHIP OF SURGERY, TRINITY COLLEGE, DUBLIN.

THE Academic Council of Trinity College, Dublin, has fixed June 5th for the election of a Regius Professor of Surgery. Dr. E. H. Bennett, who holds the teaching chair, is no longer a candidate for the vacant office. It appears that the legal opinion obtained is to the effect that it would be contrary to the spirit of the statutes to allow one person to fill the two positions. The candidates now are Sir George Porter, Bart., Sir William Stokes, Dr. Edward Hamilton, Dr. C. B. Ball, and Mr. J. K. Barton. The election is looked forward to with great interest.

THE VICE-PRESIDENCY OF THE COLLEGE OF SURGEONS.

IT is understood that Dr. Carte has now determined to seek re-election to the Vice-Presidency of the College of Surgeons, contrary to his previous resolve. There will consequently be three candidates in the field—Dr. Carte, Dr. Cranny, and Mr. Theodore Stack.

FEVER IN TULLAMORE PRISON.

ABOUT eleven cases of typhoid fever have occurred among the prisoners confined in this gaol; none of the cases have been of a serious character, with the exception of Mr. Cullinane, but who is now doing well. In order to lessen the danger to the other prisoners, some, whose sentences had nearly terminated, have been discharged, while all the male prisoners who are in good health will be transferred to Clonmel, where there is accommodation for them in a block of buildings separated from the other prisoners, and the three female prisoners will be located in Grangegorman Prison.

PRESENTATION.—The members of the Richmond, Yorks, Branch of the St. John Ambulance Association have presented Mr. A. Barber, M.B., with a beautiful gilt and oak clock as a mark of their appreciation of ambulance lectures given during the winter.

THE MEDICAL FACULTY IN JAPAN.

Mr. Ernest Hart, who has paid a spring visit to Japan, and who is now on his way home through Canada, writes under date April 7th from Tokio as follows:

Most of us are acquainted with the eager earnestness with which the Japanese have, since issuing from their self-enforced seclusion, which lasted for centuries, adopted, since the restoration of the Mikado in 1864, European methods of instruction, and the remarkable aptitude which many of the Japanese students in London have shown for reaching great proficiency in abstract science as well as in technical knowledge and industrial arts. Men like Takagi, Miyaki, Sasaski, and others have left behind them an excellent record in our medical colleges. By far the larger number of Japanese students who come to Europe, however, are educated in the German universities—at Berlin, Strassburg, Vienna; for the Japanese are very eclectic—they have taken their medicine and surgery from England and Germany, but of late years their scientific predilections in medicine have found more satisfaction in Germany than in Great Britain; only a small proportion of the profession talk English, while most of them not only talk German, but lecture in German, and a good deal of their best work is published either in *Virchow's Archiv* and other leading German periodicals, or in the German *Medical Transactions* of the University, of which I shall later give some account.

The feeling towards England is, however, very strong and friendly, and immediately on reaching Tokio, the former seat of the Shogunate under its old name of Yedo, and the present seat of the Imperial Government and metropolis of Japan, I was very warmly welcomed by the leading medical faculty as well as by the Ministers and others, many, who as delegates or diplomatists had been at my house and visited my Japanese collection in London, taking the opportunity of reciprocating and outdoing any courtesies which I had been able to offer, and doing everything which could be thought of to make my visit instructive and agreeable—to lay open all the art treasures, the scientific institutions, and the domestic and social habits of every class, and to give me opportunities of conference with the most distinguished and ablest men of every class. If, therefore, I bring home an imperfect estimate of the great resources, marvellous progress, exquisite beauty, and complicated difficulties of this remarkable country, the fault will be with the dulness of my apprehension and the inadequate time at my disposal for the great task involved in even a superficial survey of parts of the subject.

I must approach with some care the medical part of the subject later on, when I have time to collate my notes and abstract the voluminous material which has been placed at my disposal.

Meanwhile, it may be of interest to the readers of the British Medical Journal to know that it is in the hands of many Japanese practitioners. It was lying on the professor's table when I entered Dr. Miyaki's room. I found the Japanese medical paper of that week quoting liberally from its pages. The prompt hospitality of our Japanese colleagues led them to honour me by an invitation to a banquet before I had been many days in Tokio, and in the address which I was invited to give will be found some preliminary comments on the state of Japanese medicine. At the request of my auditors, I also gave an account of the organisation of the British Medical Association. This is likely to bear fruit; and at a subsequent dinner to which the Medical Society of Tokio has invited me I shall further develop them and apply it to Japanese needs. Such a propaganda can but be honourable to our Association and useful to the inhabitants of the Far East.

The address which I gave to this influential and interesting audience will always be connected in my memory with the cultivated and picturesque surroundings, of which I must give a short account, not to omit the local colour.

The address and banquet were at Koyokau, "the red maple house," a club, restaurant, and tea house, in one of the most beautiful districts of this broad-acred and romantic city.[1] A European friend who was present with me has made a note of the picturesque surroundings and incidents of the ceremony which may be of interest. It runs as follows:—

[1] Tokio covers 100 square miles, and contains about 900,000 inhabitants.

We arrived in a *jinrikisha* at the door of the Maple Club. We were received by a bevy of Japanese maidens, dressed in daintily coloured *kimonas*, who sat on their heels on either side of the entrance hall. Bowing their heads to the ground, and chattering in low musical voices, they bade us welcome. Shoes or boots were left at the doorstep, and guided by one or two of the *muismes*, or serving maids, we are conducted into a large upper room. It was perhaps 100 feet long, 10 feet high, and measured 7 mats, or 21 feet across. At each third of the room a carved panel divided it to the height of 2 feet from the ceiling. In these carved divisions slid the panels by which the room can be shut off into two or three separate compartments as required. Along the whole of one side of the long room were the windows, which consisted of panels beautifully fitted into grooves and made to slide over one another, so that in summer weather one side of the room could be opened entirely to the balcony, which overlooked the garden, where in true Japanese fashion a miniature river wound under a tiny bridge, and through a wood of dwarfed forest trees. The panes of the two upper thirds of the panels were filled with a finely made and translucent paper, but the lower third was filled with glass. On the opposite side of the room was the *Jokonoma*, or sacred recess, where on a raised dais stood a huge vase filled with great branches of the blossoming tulip tree, behind which hung a *kakemono* of storks and cherry blossoms. From the ceiling were suspended candelabra fitted with the incandescent electric light.

The audience consisted of twenty-seven Japanese medical men, most of whom had graduated in European universities. They sat on low spring cushions on the floor ranged against the wall or panels of both sides of the long room. At the head of the room sat Mr. and Mrs. Ernest Hart on raised cushions out of consideration for their European incapacity to sit on their heels. Next to Mr. Hart was Dr. Takagi, now Chief Medical Officer of the Navy, and once a student at St. Thomas's Hospital. His complete command of the English tongue enabled him to fulfil admirably the duties of interpreter, and he translated the address sentence by sentence to the attentive and interested audience. All but six were in European dress, all were shoeless, and as they sat listening with profound attention and in absolute silence, they warmed their hands over the charcoal *chibachi* or braziers placed on the floor before them.

The address ended, and the vote of thanks given, the electric light was turned on, and the festive part of the evening began. The little serving maids who had welcomed us in the hall began trooping in, and, going down on their knees, placed before each guest a square lacquer tray containing viands of different kinds. The *menu* of the Japanese dinner is long, complicated, and multifarious. It consists chiefly of fish, cooked and uncooked, and of soups exquisitely made, in which various solid foods are suspended. Bamboo shoots, octopus cutlets, birds' nests, sharks' fins, are delicacies which give variety to the dinner. Little wooden chopsticks do duty for knives, forks, and spoons, and the soups are drunk out of small lacquer bowls. The dinner generally begins with raw fish eaten with soy, and ends with tea, rice, and pickles. Three times the little maids on their knees placed a tray containing bowls of soup and dishes of eatables before each guest, and while the guests ate, the maids waited silently, sitting on their heels, filling and refilling your lacquer cups with saki, or removing empty dishes. Dinner was long, lasting some hours, but dining is with the Japanese less the serious business of eating than the lighter one of being amused; and to make the time pass easily and merrily, *gaisha* dances and clever jugglery were interlarded with courses of fish on lacquer trays. Complete ease and freedom, controlled by the perfect manners of an Eastern people, prevail at a Japanese dinner, and if one friend wishes to talk to another at the other end of the room, he slips the panel behind him, passes into the verandah or passage, and entering the room again by sliding the wall panel behind his friend, sits down on the floor before him.

A movement is on foot at Buda Pesth to have the meeting of the International Hygienic Congress in 1893 held in that city. Professor Fodor is taking an active part in furthering the scheme, and the Hungarian Government has already been approached unofficially on the subject.

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Fifteenth List.

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REGISTRATION OF MIDWIVES IN AMERICA.

AN "Act to Regulate the Practice of Midwifery in the State of Minnesota," which has been before the Legislature of that State for some time, has now become law. It provides that every person beginning the practice of midwifery in the State of Minnesota, if a graduate in midwifery, shall present his or her diploma to the State Medical Examining Board for verification of its genuineness. If found genuine a licence is granted on payment of one dollar, authorising the holder to practise midwifery in the State for one year. If the person wishing to practise is not a graduate, such examination in midwifery as the Board shall require must be passed, and if the result is satisfactory, a licence entitling the holder to practise midwifery for one year will be granted on payment of two dollars.

All persons heretofore practising midwifery in any of its branches in the State must register their names with the Secretary of the State Medical Examining Board, with an affidavit duly executed before a notary public, or a written certificate from a legally authorised practitioner of medicine, setting forth the time and places in which they have been engaged in such practice. A licence entitling them to practise midwifery for one year will be issued to them on payment of one dollar. Another clause provides that every person licensed in the manner described shall each year subsequently register his or her name with the Secretary of the State Medical Examining Board, and shall obtain a renewal of the licence on payment of one dollar. The Board may refuse licences to persons guilty of unprofessional or dishonourable conduct, and may revoke licences for like causes, for neglect to make proper returns to the various health officers of births and deaths, and of cases of puerperal fever and other contagious disease occurring in their practice. Any person shall be regarded as practising midwifery within the meaning of the Act who shall publicly profess to be a midwife or who shall for a fee attend a woman in childbirth; but nothing in the Act is to be construed as prohibiting students of medicine or midwifery to practise under the direct supervision of a preceptor, or as prohibiting gratuitous services in cases of emergency.

The Act does not apply to physicians and surgeons duly authorised by the State Board of Medical Examiners or to commissioned surgeons of the United States army or navy. Persons practising midwifery without complying with the provisions of the Act shall be punished by a fine of not less than ten, or more than fifty dollars, or by imprisonment in the county gaol for a period not less than ten, or more than thirty days. The Act appears to be regarded by its promoters only as a preliminary measure in which the "vested interests" of existing midwives are handled with sufficient tenderness to disarm opposition. When the legislative mind has been educated up to the proper standard it is intended to "regulate the practice of midwifery" in a more thorough-going fashion.

THE Russian Minister of Education has laid before the Imperial Council a scheme for the establishment of a course of medical education for women. The new college, which is to be known by the name of "Female Medical Institute," is to be situated in St. Petersburg. Only women between 20 and 25 years of age who hold "maturity" certificates of proficiency in the two ancient languages will be admitted as pupils.

THE NEW DERBYSHIRE GENERAL INFIRMARY.

THE new Derbyshire General Infirmary, the foundation stone of which was laid by the Queen on May 21st, will consist of thirteen blocks. The centre is occupied by a double administration block. On the ground floor is a casualty department with separate entrance, waiting room, consulting rooms, and a small ward for urgent cases. The second administration block, which is behind the first and connected with it by a corridor, contains on the ground floor stores, and on the upper floors kitchen, offices, and larders. The part of the building contains in addition dining rooms for nurses and servants, as well as bedrooms and sitting rooms for porters. To the rear of this block, again, is a laundry with a separate washhouse for infected linen, disinfecting chambers, cremator, and heating apparatus.

On each side of these three blocks are two pairs of ward blocks connected together with the administration buildings by a covered bridge with free ventilation opening into the main corridor. The covered bridge is of low pitch, the object of the whole arrangement being to isolate each ward from aërial contact with other wards.

The wards are 127 feet long, 29 feet wide, and are arranged to hold twenty-four beds each. Each bed is separated from its neighbours by a window, and each patient will have 145 feet floor space, and 1,890 feet cubic space. The floors will be laid with teak or some similar hard wood bedded directly on concrete, and the framework of the floors and ceilings will be of iron bedded in concrete. In the finishing of the walls, floors, ceilings, windows, and doors, all internal angles will be rounded, in order to provide no avoidable lodging places for dust. The wards will be warmed partly by open fireplaces placed in the centre with descending flues, and partly by steam coils placed in window recesses, and provided with fresh air from outside.

At the further end of the wards are two towers connected with the wards by covered bridges containing the sanitary offices and the bath rooms. Between these towers are balconies for the use of convalescent patients.

At the north-west part of the site there is a two-storey building devoted on the ground floor to diseases of the eye. It contains two wards for six beds each, and has, in addition to the usual ward offices, a separate operation room with a recovering room attached. The upper floor of this block contains two wards for children, with the necessary offices.

The out-patient department occupies the corresponding position at the opposite side of the site. It is a one-storey building, containing immediately inside the entrance two small waiting lobbies for new patients entering into a general waiting hall. Off this hall are placed the four consulting rooms, each of which is provided with a small examining room. From these consulting rooms the patients will go to a second waiting room, where they will wait their turn to receive their medicines from the dispensary. Behind the dispensary is the pathological department and museum.

The chapel opens off the main corridor to the east of the administration block, and in a similar position on the opposite side is the operation room, with which is connected a small room for preliminary administration of anæsthetics. The operation room will be lined with marble slabs up to height of between 7 and 8 feet, above which the walls and ceiling will be painted and varnished. The floor will be laid with "mischiati," which consists of marble chips bedded in cement, and forms a very hard impervious surface. In all its details every effort will be made to secure as entirely "aseptic" conditions as possible.

The home for nurses is a detached building on the western part of the site, and will afford accommodation for forty-eight nurses. Each nurse will have a separate bedroom and separate sitting room, and reading rooms will be provided for the staff nurses and probationers respectively.

The mortuary block (No. 13) is also a detached building, and will contain, in addition to the mortuary and *post-mortem* room, a separate chamber where bodies will be placed for friends to view, and an ambulance house and stable.

The general style of the building is late Elizabethan red brick, with stone mullions, cornices, and mouldings. The architects are Messrs. Young and Hall.

The fund for rebuilding the infirmary now amounts to upwards of £44,500.

THE INFLUENZA EPIDEMIC OF 1836-37 AND 1889-91.

SOME questions of importance in the study of epidemiology are only answerable by the historical method of research—that is, by the careful study and comparison of the published records of previous epidemics with each other, and especially with good descriptions of prevailing ones. By such means the unity of type in nominally similar outbreaks of disease occurring at long intervals can be confirmed or otherwise, and such questions as identity of incidence, or of external conditions in different epidemics of the same disease occurring in different places at varying periods of time can be finally settled, while the comparative fatality of the same disease under differing conditions can be shown.

An admirable inquiry into the outbreak of 1836-37 was undertaken by the Provincial Medical and Surgical Association (which subsequently became the British Medical Association); the result of this inquiry was summarised in a report by Dr. Streeten in the *Transactions* of the Association for 1838.[1]

In the first place there can be no doubt that, in many particulars, this epidemic was identical with the existing one; we recognise, for instance, what is called the acute stage, lasting from two to five days, characterised by more or less urgent fever, while to the second or more chronic stage, lasting from five to ten days, not constantly present, we should probably now give the name of sequelæ. The other initial symptoms of "oppressive pains of the head, especially over the region of the frontal sinuses, with diffused muscular pains of the shoulders, loins, and legs," are common to both epidemics; but there can be no doubt that the catarrhal symptoms of the earlier outbreak are either entirely absent in the present epidemic, or only present in modified form as preventable sequelæ, while in 1836-37 they were urgent, characteristic, and apparently essential features of the disease.

The returns from many practitioners on this point were summarised as follows: they described "a suffused state of the eyes with discharge of tears, sneezing, tingling, and acid discharge from the nostrils; sense of pain and weight of forehead: soreness of the fauces; hoarseness; cough; expectoration; dyspnœa and pain, and sense of constriction about the throat and chest." So notoriously, indeed, did these catarrhal affections characterise the earlier occurrence of influenza, that ordinary severe catarrh is commonly spoken of, even up to the present day, as "influenza;" while the prevailing epidemic is differentiated by the adjective "Russian" from these attacks of ordinary catarrh.

The bronchial mucous membrane also seems to have been markedly affected. "The sense of tightness and constriction about the throat and chest, with more or less soreness beneath the sternum, is very generally noticed in the replies [from practitioners], but the symptom to which the greatest prominence is given is the cough, which is variously described as being short and harassing, troublesome and frequent, harassing and incessant, preventing sleep, very distressing from its aggravating the pain of the head, severe and violent, or as coming on in frequent paroxysms of long duration." Dr. Shapter, too, states (p. 537) that the early catarrhal symptoms were quickly followed by an overwhelming feeling of lassitude and prostration of strength, with in many cases a loss of all muscular power, together with great anxiety of the præcordia, and agonising fears of death; a sensation of painful rawness of the fauces and trachea, a voice hoarse and hollow, frequent short cough, for the most part dry; stricture and acute lancinating pains of the chest. By the stethoscope were heard *râles*, sonorous and sibilous, and almost always in some part of the thorax, generally the lower portion, a well-marked crepitation."

Of the other symptoms, he writes: "The tongue is covered with a copious white mucus, with inflamed elevated papillæ showing themselves at the tip and edges. Bowels not confined and easily acted upon—in fact there was rather a tend-

[1] Report on the Influenza or Epidemic Catarrh of the Winter of 1836-37, by Robert J. N. Streeten, M.D., with Observations of the Meteorological Phenomena, by William Addison, F.L.S. *Transactions of the Provincial Medical and Surgical Association*, vol. vi, Part II, 1838, p. 501, *et seq.*

ency to diarrhœa than otherwise; appetite gone; occasional thirst; pulse small, quick but soft. Paroxysm generally severe during the night. In this stage of the disease I was sensible of a peculiar and very characteristic odour proceeding from those affected: though not able properly to describe it, I may state its general character to have been that of a flat musty smell.[2] About the fifth or sixth day a mucous discharge from the nose came on, together with a muco-purulent expectoration in coughing. The various symptoms now gradually declined, leaving the patients in a state of great general weakness, together with a peculiar aching feel, and loss of power in the muscles of the legs."

From this and other similar reports we can hardly help coming to the conclusion that the manifestation of this earlier epidemic was, in some respects, different from that of the present one, being in all directions more severe. It is hardly necessary to remark that no note of temperature was taken in those preclinical-thermometer days.

The death-rate was, according to the best information attainable, from 2 to 2½ per cent. of those attacked. Nor is it probable that the total deaths directly and indirectly attributable to the epidemic would show a higher ratio than this. At all events, in the few cases where the registers of burial were consulted, a large increase in the total deaths was noticed. At Bolton the average burials at the parish church for the five years preceding 1837 during the first quarter of the year were 288. In 1837 they numbered for the same period of the year 420, an excess of 132. In the two large burial grounds belonging to the city of Exeter, the burials during the first two months of the year 1836 were 125; while in January and February, 1837, they amounted to 227, an increase of 102.

The treatment of the epidemic appears to have been enlightened. In those days of venesection general bleeding was, by almost unanimous consent, forbidden, as increasing the dangerous tendency of the complaint. "The main features of this [general plan of treatment] were a very cautious employment of evacuant remedies in general; the use of diaphoretics and mild aperients in the earlier stage, with a diluent diet, regulated temperature, and cessation from all active pursuits; in the more severe cases occasional local bleeding and counter-irritants to the throat and chest, and confinement to bed. In the second stage expectorant and anodyne medicines, with sulphate of quinine or mild tonics, where there was much debility remaining." Of the value of opiates there was some difference of opinion. Local blood-letting in very small quantity from the Schneiderian mucous membrane was said to relieve the distressing headache in a marked and immediate manner.

The period of the year at which the epidemic occurred coincided much more nearly with that in which it prevailed in 1889-90 than in the present outbreak. It appeared about December, 1836, had its greatest intensity in February, 1837, and disappeared about March or April—a few cases apparently lingering till May.

The meteorological observations of Mr. Addison, inserted at the close of the general account of the disease, are worthy of remark, while his concluding words are worthy of repetition:—"This condition—melting snow—was operating at the outbreak of influenza in January, 1837; but did it produce the disease or did it only co-operate in giving greater effect to other causes? That it did not produce the disease is evident, because this occurred in situations on the Continent nearly about the same time, where there was no melting snow, and because the same disease had occurred before in this and other countries in the summer months."

In 1833 it was very general in this country in April and May, and again in June, 1831, partially. Dr. Bardsley, speaking of the influenza of 1802, says: "The present epidemic cannot have originated from any remarkable severity of the weather or sudden changes in the temperature of the atmosphere; no season has been apparently less unfriendly to the human constitution than the whole of the late winter and early part of spring." The epidemic catarrhs of 1762 and 1782 prevailed during uncommonly warm and steady weather in the months of May and June. The remarkable epidemic catarrh of 1580, which, according to Sennertus, "*totam fere Europam imo fere omnes mundi regiones pervagata est*,[3] raged chiefly during the sultry weather of autumn. In the month of September, 1830, influenza prevailed at Manilla, with the thermometer varying from 78° to 92°."[4] "Without uselessly multiplying instances or authorities, it must be evident that the exciting cause of influenza cannot be found in sudden vicissitudes of temperature, great heat or cold, damp weather or melting snow, however much all or any of these circumstances may predispose to or originate the more ordinary catarrhs, eruptive fevers, and other disorders of spring, autumn and winter."

The general opinion of the profession, however, was that the disease was not conveyed from individual to individual by contagion—an expression of belief very common in the case of other epidemics both before and since, where the invasion of a country by disease has been apparently simultaneous. Some observers sought to prove "an epidemic influence." Others, in contradiction to Mr. Addison's philosophical and convincing report, saw in prevailing north and north-east winds, and sudden changes of temperature, sufficient causes of the epidemic.

THE epidemic was extremely prevalent in the East-end of London during the week ending May 16th, but we believe that it has since materially declined.

The number of deaths directly referred to this disease, which had increased from 3 to 148 in the preceding five weeks, further rose to 266 during the week ending May 16th. This number was more than double the highest number recorded in any week during the influenza epidemic of last year, and was exclusive of 52 cases in which influenza was given as a secondary cause of death. The mortality among young children from this disease was considerably greater than during the outbreak of 1890, and 34 deaths were recorded among children under 5 years of age, while only 7 occurred among persons aged between 5 and 20 years. The mortality among elderly persons from influenza showed a very marked increase. The deaths referred to diseases of the respiratory organs in London last week were 620, and were nearly double the corrected average; they included 207 cases of pneumonia, which were more than double the average. Doubtless many of these deaths, though primarily referred to pneumonia, were really due to influenza.

So far as our inquiries have gone, it would appear that influenza is not prevalent in Ireland.

THERE are good grounds for believing that the epidemic is now rapidly decreasing in those districts in which it has been most widespread. In Leeds, Hull, and Sheffield reports appear to show that the number of cases is now very much reduced. Even in those towns in which the disease appeared at a later date, its chief prevalence appears to be over.

OUR Birmingham correspondent writes: There has been a severe epidemic of influenza during the last three weeks. The number of cases has been considerable and the type of the attack severe, complications being frequent. It seems at present as though the outbreak was subsiding.

THE epidemic now extends as far north as Aberdeen. Our correspondent in that city writes as follows: Influenza has again broken out in Aberdeen, and has now become rather prevalent, and many of the cases are of a somewhat severe type. Dr. Hay, the medical officer of health for the city, has drawn attention in his report to the Town Council to the fact of influenza making its appearance again; and states that the death-rate from respiratory diseases was considerably above the average, and suggesting that its elevation was due, probably, to the presence of the epidemic in the city.

A FULL analysis of the effect of the recent change to winter weather upon the prevalence and severity of the disease is likely to yield interesting results, but it would only be possible to make such an analysis when complete returns are obtainable.

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[2] This odour has been noticed by some in the present epidemic.

[3] *Medical and Physical Journal*, vol. ix., p. 527.

[4] *Medical Gazette*, vol. viii., p. 525.

THE following interesting note from Dr. P. M. Davidson, of Congleton, affords some evidence on this head: "In a little more than a fortnight," he writes, "I have attended 173 cases of influenza. For some days previous to Thursday, May 14th, the weather was very fine, and the temperature high, and on the three previous days—Wednesday, Tuesday, and Monday—I had 37, 24, and 19 new cases. Early on Thursday morning there was a severe hail storm, and on that day, Friday, Saturday, Sunday, and Monday there were frequent showers of snow, quite wintry weather, with a very low temperature. My fresh cases fell to 2, 1, 1, 1, and 3, but immediately on a moderate rise of temperature on Tuesday and Wednesday, May 19th and 20th, increased to 8 and 11. An isolated instance of this kind would not, of course, prove that influenza spreads more rapidly in warm than in cold weather, but I thought the facts worth calling attention to, as the point could be so easily settled now that the disease is so prevalent, and that the same kind of weather we have had here was experienced in most parts of England at the same time."

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members, in commodious apartments, at the Offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 18th and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The thirty-ninth annual general meeting of the Metropolitan Counties Branch will be held at the Holborn Restaurant on Tuesday, June 9th, at 5.30 P.M. H. RADCLIFFE CROCKER, M.D., 121, Harley Street, W.; ANDREW CLARK, F.R.C.S., 71, Harley Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT. The annual meeting for the election of officers will take place at the Royal Forest Hotel, Chingford, on Thursday, June 4th, at 6 P.M. At 6.15 the members and their friends will dine together. Sir W. Mac Cormac, President of the Branch, will preside, and will be supported by Sir Guyer Hunter, K.C.M.G., M.D., M.P., and a large number of past presidents. The dinner will be followed by a smoking concert. Tickets 7s. 6d. each; morning dress. Members intending to be present are requested to communicate with the honorary secretary as early as possible, but not later than Saturday, May 20th.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston, N.E.

MIDLAND BRANCH.—The annual meeting will be held at Derby on Thursday, June 18th. Members desirous of reading papers, etc., are requested to communicate before Monday, June 1st, to W. A. CARLINE, M.D., Honorary Secretary, Lincoln.

SOUTH MIDLAND BRANCH.—The annual meeting of this Branch will be held at Cambridge, in conjunction with the Cambs and Hunts and East Anglian Branches, on Thursday and Friday, June 18th and 19th.—C. J. EVANS, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The third general meeting of the present session will be held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, May 28th, at 3 P.M.—GEORGE RICH, Honorary Secretary, St. Mary's Road, Stafford.

EAST ANGLIAN, SOUTH MIDLAND, AND CAMBS AND HUNTS BRANCHES.—A combined meeting of the above Branches will be held at Cambridge on Thursday and Friday, June 18th and 19th.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the Palace Hotel, Hastings, on Thursday, May 28th, at 3.30 P.M. Dr. Spencer will preside. Dinner at 5.30 P.M., charge 6s., exclusive of wine. Gentlemen who desire to read papers or show cases should communicate, without delay, with the Honorary Secretary, T. JENNER VERRALL, 97, Montpellier Road, Brighton.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will be held at the Hospital, Gravesend, on Thursday, May 28th, at 4 P.M., Mr. O. R. Richmond, in the chair. The dinner will take place at the Old Falcon Hotel, at 6.15 P.M.; charge, 6s. 6d. (exclusive of wine). To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, Mr. O. R. Richmond, The Grange, Gravesend, not later than Tuesday, May 25th. All members of the South-Eastern Branch are entitled to attend this meeting and to introduce professional friends. Communications:—Mr. G. Hartridge: Injuries of the Eye and their Treatment. Mr. R. Bryden: A Case of Acute Glossitis. Mr. A. Boyce Barrow: Some Diseases of the Rectum. Dr. Firth: A Case of Hæmoptysis.—A. W. NANKIVELL, Honorary Secretary of the District, St. Bartholomew's Hospital, Rochester.

DORSET AND WEST HANTS BRANCH.—The next meeting will be held at Bournemouth, on Wednesday, May 27th, 1891. The business meeting will be held at the Royal Bath and East Cliff Hotel at 3.15 P.M. *Agenda:* Secretaries' accounts for 1890. Report of election of Branch Council. Election of a representative of the Branch on the Council of the Association. Election of a representative on the Parliamentary Bills Committee. Election of new members of the Branch. Dr. Lush to move, "That, in consequence of the annual meeting of the Association being held this year at Bournemouth, the next meeting of the Branch be held in October. Place of the autumn meeting. To receive a report from the Committee on the Midwives Registration Bill. Discussion: "Embolism and Thrombosis"—to be opened by the President. Communications: Mr. Gardner: A New Dilator. Mr. Lawton: Notes on a Case of Hydrophobia. Dr. Grieves: A Case of Acromegaly. Mr. D. Curme: A Case of Ossification of the Falx Cerebri. Dr. MacDonald: Pathological and Microscopical Specimens with Notes. Dr. Davison: Case of Disease of Stomach. The President and members of the Bournemouth Medical Society request the pleasure of the company of the members of the Branch to luncheon, at the Royal Bath and East Cliff Hotel, at 2 o'clock. Dinner at 6 o'clock; charge 6s. each, without wine. Members intending to be present are requested to communicate with Dr James Davison, Bournemouth, by Monday, May 23rd.—WILLIAM VAWDREY LUSH, M.D.; C. H. WATTS PARKINSON, Honorary Secretaries.

SOUTH-WESTERN BRANCH.—The fifty-second annual meeting of this Branch will be held at the Royal Albert Hospital, Devonport, on Friday, May 29th, 1891, under the presidency of Dr. John Rolston. Programme of proceedings: 11.30 A.M., meeting of Branch Council at Mr. G. T. Rolston's residence, 8, Osborne Villas, Stoke; 12.30 to 1.30 P.M., luncheon, by invitation of the President-elect, at his residence, Clarendon Villa, Stoke; 2 P.M., general meeting; President's address; report of Council and general business. Mr. G. Jackson, F.R.C.S. (Plymouth), gives notice of the following resolution: "That in the opinion of the meeting it is desirable that all vaccinations should be made in four places, statistics clearly showing the superiority of the protection obtained against small-pox by those persons who have four well-defined marks, as compared with those who have only one or two such marks." Mr. J. M. Ackland, Exeter, will show a specimen of Buccal Concretion. Mr. M. H. Bulteel, Stonehouse, will show a Tarnier's Couveuse. Mr. J. D. Harris, Exeter, will show, with notes, Papilloma removed from the Right Vocal Cord. Mr. G. Jackson, Plymouth, will show, with notes, Exostosis removed from the Ear. Mr. F. Everard Row, Devonport, will show (1) Water Colour Drawing of Case of Lymphosarcoma; (2) Vesical Calculus. Mr. E. Rundle, Truro, Notes of a Case of Osteomalakia. At the conclusion of the meeting, a visit will be made to the warships in Her Majesty's Dockyard, by the kind permission of Vice-Admiral Sir Walter Hunt Grubbe, K.C.B. 6.30 P.M., annual dinner at the Royal Hotel; tickets 6s each, exclusive of wine. The naval Commander-in-Chief, His Royal Highness the Duke of Edinburgh, has graciously intimated that he will have much pleasure in dining with the members of the South-Western Branch, unless absent from the port on duty. It is also hoped that many members will remain till the following day, which is fixed for the official celebration of Her Gracious Majesty's birthday. A grand review will be held in the Brickfield of all the troops in the garrison, including detachments of sailors from the war ships and of boys from the training ships, as well as of volunteers. There will also be excursions by land and water in all directions (see daily papers). The Committee of the United Service Club have passed a resolution: "That all members of the South-Western Branch of the British Medical Association be considered as honorary members of the Club for three days." Members proposing to attend the annual dinner are requested to communicate with the Honorary Secretary not later, if possible, than May 22nd, and to enclose remittance for 6s. to P. MAURY DEAS, Honorary Secretary, Wonford House, Exeter.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN ordinary general meeting of this Branch was held at Milne's Library, Aberdeen, on April 15th, 1891. Dr. ALEXANDER REITH in the chair.

Minutes.—The minutes of the last meeting were read and approved.

Cases.—Dr. EDMOND showed a Case of Hæmophilia Neonatorum. The child at birth presented large areas of purplish red discoloration of the skin on the chest, shoulders, legs, arms and back. It passed a large quantity of blood, *per rectum*, on the first day. At the end of a month the areas of discoloration were little changed, being perhaps a little paler. There remained a curious plexus of enlarged veins in the middle line of the abdomen and lower part of the chest.—Dr. HUTCHEON showed a Case of Syphilis with a very Extensive and Characteristic Eruption. Within ten days of infection a hard chancre appeared, with a discharge from the urethra. A few days later a rash, varying in colour from bright red to a coppery tint, appeared on the neck and gradually extended over the back and limbs. On the flexor aspects of the legs and arms there were symmetrical patches of psoriasis about 6 inches in length. Both legs were œdematous and had the colour of raw ham.—Dr. MACKENZIE BOOTH showed a child suffering from Condylomata Lata; no history of infection could be discovered. Dr. Mackenzie Booth also read notes of a Case of Avulsion of the Tuberosity of the Patella, and described the method of treatment.—In the absence of Dr. OGILVIE WILL Dr. BOOTH read extracts from a paper published by Dr. Will in the BRITISH MEDICAL JOURNAL of January 22nd, 1887, on Fracture of the Tubercle of the Tibia. The result of treatment was very successful.

Communications. Dr. FERDINANDS made some remarks on a Case of Embolism of the Central Artery of the Retina.—Dr. THISELTON URQUHART read notes of a Case of Unusual Cerebral Injury.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE annual meeting of this Branch was held at Limmer's Hotel on May 14th, Sir WILLIAM MAC CORMAC, President of the Branch, in the chair.

Officers and Committee.—The following were elected for the ensuing year: *Vice-President:* J. W. J. Oswald, M.D. *Representative of the District on the Council of the Branch:* J. Brindley James. *Honorary Secretary:* Hector W. G. Mackenzie, M.D. *Committee:* L. A. Dunn, Lewis Lewis, F. Oldfield, R. J. W. Oswald, R. Percy Smith, M.D., J. W. Washbourn, M.D.

Dinner. The Chairman was supported by Dr. Bristowe and Dr. Oswald. Among others present were Dr. Percy Smith, Mr. Brindley James, Mr. L. A. Dunn, Dr. Rutherfoord, Dr. Glover Lyon, and Dr. Hector Mackenzie. Sir WILLIAM MAC CORMAC, in proposing the toast of the South London District, referred to the successful meetings of the past session, and the excellent papers read. Such meetings not only tended to the advancement of knowledge, and kept the general practitioner in touch with recent advances, but also promoted that spirit of good fellowship which, important in all professions, was especially so in the medical world. Dr. OSWALD, in responding to the toast of the Vice-President, proposed by Mr. BRINDLEY JAMES, gave a short account of the work of the past session. He thought it was a great boon to the busy practitioners of the vast South London District to have such meetings held in their midst, and to have opportunities afforded them of meeting in the three great hospitals of South London—Guy's, St. Thomas's, and Bethlem. He hoped that the measure of success of the past would be much greater in the future, and that many more would take advantage of the meetings.—The health of the Chairman was proposed by Dr. BRISTOWE, and Sir WILLIAM MACCORMAC replied.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE annual meeting of this District was held at the Kent and Canterbury Hospital on May 14th, Mr. BRIAN RIGDEN in the chair. The usual business of the annual meeting was transacted.

Vote of Thanks to Dr. Tyson.—Dr. Tyson, on his resignation of the office of Honorary District Secretary, was accorded a very hearty vote of thanks for his services during the past six years.

Election of Honorary Secretary.—Mr. Thomas F. Raven, of Broadstairs, was elected District Secretary in Dr. TYSON'S place.

Koch's Treatment of Tuberculosis.—Dr. FITZGERALD read a paper on Koch's Treatment of Tuberculosis.—Dr. BOWLES contributed a paper on Treatment by Tuberculin: Experiences at Berlin and Folkestone.—Dr. Fitzgerald was critical and sceptical; Dr. Bowles hopeful of good results in the future.

Cases.—Mr. PRESTON showed cases of: 1. Congenital Dislocation of the Crystalline Lens in three members of a family. 2. Coloboma of Choroid and Iris.

SPECIAL CORRESPONDENCE.

PARIS.

Clinical Teaching in Paris.—A Model Sanitary Dwelling.

THE Surgical Society held a meeting recently, M. Lannelongue being in the chair, to discuss the present clinical teaching in the Paris hospitals. The discussion was very animated, and a commission was appointed to investigate the question, and suggest a remedy for the defects which were acknowledged to exist. The members of this commission are MM. Tillaux, Horteloup, Lucas-Championnière, Reclus, and Brun. The Société des Hôpitaux has also discussed the question at several of its meetings, and now suggests the following changes: That chemical, bacteriological, and pathological laboratories be attached to different hospitals according to the needs of each one. Probably this change will be objected to by those who consider that laboratories are not well placed in hospitals, and that bacteriological research is all but impossible in such places; the constant sweeping, cleaning, shaking beds, etc., increasing the legions of germs to be avoided in a pure cultivation. Again, pathological laboratories in hospitals evidently render an antiseptic atmosphere more difficult to obtain. The Society further suggests that the number of medical men admitted to the competitive examinations of the Bureau Central should be increased by twelve, and that the doctors of the Bureau Central should replace the hospital doctors at the out-patients' consultation: that the State create sixteen clinical chairs, the Minister of Public Instruction to decide on the title to be given to those who fill these chairs; that special diseases be taught in the hospitals, the pupils who attend these lessons paying an extra fee for them. In *Médecine Moderne*, M. Juhel Renoy describes how the "chefs" go their rounds in the hospital wards, and conduct the gratis consultation for out-patients. The interesting cases and the dying attract the most attention. In the outdoor department the "chef" selects the patients to be treated in his wards, then leaves the remaining portion to the "interne," or house surgeon. He, in his turn, after examining a certain number, leaves the rest to the "externe," or dresser. In a pamphlet on the reform of medical education, recently issued by M. Louis Malassez, of the Collége de France, the following reforms are said to be necessary: More money for the laboratories; reorganisation of the Faculty lectures; more work done by the younger professors, and less done, or pretended to be done, by the seniors.

In the Champ de Mars a sanitary dwelling, designed by Dr. Goupil, is on view. Adhesive cement, which never changes condition, is substituted for bricks and mortar. The cost of such a habitation is £96.

MELBOURNE.

Proposed Formation of a Neurological Society.—Abdominal Section for Hydatid Cysts.—Spermin.

THE first steps towards the formation of a Neurological Society were taken a short time ago, when a number of gentlemen met at the house of Dr. Neild for that purpose. Dr McCreery, the Superintendent of the Kew Asylum, who has taken a very active interest in the movement, was voted to the chair. Dr. McCreery informed the meeting that all the medical officers of the asylums in Victoria had notified their intention of joining. About thirty names were handed in, and it was arranged that a meeting for the inauguration of the Society should very shortly be held.

A very interesting laparotomy was performed by Dr. Balls-Headley, at the Women's Hospital, recently, for the removal of a large number of huge hydatid cysts in a young woman of 21 years, who, till a few days before the operation, had experienced very little discomfort from their presence. The cysts were everywhere in the abdomen—in Douglas's pouch, over the fundus of the uterus, over the liver, and, as a very rare seat, a good-sized one was discovered in the right ovary, which, with a segment of the tube, was also removed. The patient made an excellent recovery.

Dr. Louis Henry has lately been investigating the qualities of spermin. His experiments, both chemical and clinical, have been extended over a period of six months, and he has manufactured the crystals by three processes, namely, the ammonia-baryta process, the sulphuretted hydrogen and phospho-tungstic acid process, and a modification of these two. In each instance the yield of crystals from offal which consisted of the testicles of rabbits, hares, drakes, and roosters was infinitesimal; about forty ounces of offal yielding but a couple of grains. The crystals were in clusters of feathery spears. The clinical experiments, of which a large number were made in all classes of patients suffering from debility, phthisis, paralysis, old age, etc., were all of a negative character. In some instances over two grains of the salts were subcutaneously injected without any physiological result whatever. Dr. Henry injected himself, with similar results.

EGYPT.

Hot-weather Mortality.—Enteric Fever among Egyptians.—The late Cairo Season.—The Local Press and Sanitation.

As usual at this season of the year, the weekly mortality exceeds the birth-rate in Cairo and Alexandria, the excess of deaths being entirely due to the enormous number of young children who succumb to affections returned as *gastrite*, *gastro-entérite*, and *diarrhée*. At the best of times the death-rate under 5 years of age is seldom less than 50 per cent. of the total; but during the season of the low Nile it gradually mounts up to 60, 70, or even sometimes 80 per cent. In 1888 there were in Cairo 526 deaths of little children during one week in July out of a total of 660 of all ages. For the same week in 1889 the figures were 332 and 453; and there seems every prospect that this year the disproportion will be equally striking.

How far enteric fever is responsible for this slaughter of the innocents is a point which urgently demands elucidation. It is generally supposed that Egyptians do not suffer from this disease during adult life, and some medical men in the country hold the theory that this immunity is owing to their all having passed through it in their infancy. There is a good deal that is plausible in this theory, but it requires to be supported by facts, and it would be well if medical men who practise among the natives would direct special attention to the matter.

The Cairo season may be now considered completely over, all except a very few of the more belated visitors having taken their departure. The general health has been on the whole extremely good; for though there were a few cases of enteric fever, all happily recovered without any serious consequences.

It is evident, however, that a city aiming at a reputation as a sanatorium should not trust to good fortune alone for the absence of deaths from preventable causes among its visitors. The unrivalled climate is not of itself all-sufficient, and should be supplemented by attention to sanitation. The local press is very severe on English officials for what it considers their culpable negligence in not apportioning the funds at their disposal for sanitary works, and calls on the correspondent of the *Times* again to intervene. Last year during the cholera scare extra attention was paid to cleansing generally, and whether *post* or *propter hoc*, the mortality promptly diminished by 15 per cent. In any case the experiment is worth trying again, for the total sum expended on preventive measures throughout the country turns out to have been only about £16,000, including quarantine charges.

THE newly formed Hungarian Balneological Society held its inaugural meeting at Buda Pesth on May 3rd.

BIRMINGHAM.

Hospital Saturday Fund.—The Staff of the General Hospital.

AFTER most determined efforts the Hospital Saturday Fund has this year realised, and, indeed passed the splendid total of £10,000, and there are yet many contributions to come in. This result has not been obtained without the most generous self-sacrifice on the part of the committee, of whom two members should be specially mentioned, namely, the Chairman, Mr. Alderman Cork, and the Honorary Secretary, Mr. Smedley. The former has for years been engaged in the most active work for the town, and it is a matter for the utmost regret that he is at present disabled by prolonged ill-health, induced greatly by overwork.

The vacancy in the office of physician to the General Hospital has been filled by the election of Dr. R. M. Simon. The much-regretted death of Mr. Bartleet creates a vacancy in the office of surgeon. The only candidates so far announced are the two assistant-surgeons—Mr. Haslam and Mr. Barling.

CORRESPONDENCE.

DEGREES FOR LONDON MEDICAL STUDENTS.

SIR,—It is curious that Professor Ray Lankester agrees that "if an academical year is given to the study of elementary science under proper teachers 80 to 90 per cent. of the students will pass" the Preliminary Scientific Examination of the University of London, while, at the same time, he ignores the fact that this standard of efficiency has already been attained at St. Bartholomew's. Other schools will answer for themselves, but I beg you will allow me to show that he is wrong for supposing that "efficient teachers and teaching appliances" are not "located within the precincts of St. Bartholomew." What test constitutes efficiency? The test which will commend itself to practical people is that of the success or non-success of the students. If Professor Lankester had read carefully my letter in the BRITISH MEDICAL JOURNAL of May 9th, he would have learnt that the average of successful students from St. Bartholomew's during the past seven years has been 80 to 90 per cent. He adopts these figures as representing his own standard of efficiency at University College. How, then, can the teaching of science have been less efficient at St. Bartholomew's? If, however, it should be contended that the percentage of successful students at pass examinations is not the best test of the efficiency of the education, then the capacity of the teaching to enable students to take honours must certainly be a sufficient test, for, as Professor Lankester well knows, these must have had highly efficient teaching and ample opportunities for laboratory work. At the Preliminary Scientific and Intermediate Scientific Examination, in July, 1890, ten places in honours in zoology were awarded, seven of which were given to St. Bartholomew's men, and one each to students from the Royal College of Science, and University Colleges, Aberystwith and London, that is to say, of the students who received their zoological training at St. Bartholomew's, seven times as many gained honours as from the larger number educated at University College, with the efficiency of which Professor Lankester is perfectly satisfied. This shows that if efficient teachers of preliminary medical science are "not located within the precincts of St. Bartholomew," they are certainly not to be found at the institutions which he has named.

Professor Lankester states that "the real cause of the difficulties attending University degrees in medicine in London" is to be found in what he calls "the mistaken enterprise of the detached medical schools of the London hospitals, who, instead of encouraging their students to get their scientific education at the really efficient colleges.....attempt, in a purely selfish and competitive spirit, to provide teaching in science, which they are unable to deal with in an adequate manner in order to secure the subsequent attendance of students at their legitimate curriculum of proper medical instruction." The insinuation implied in the words "selfish and competitive spirit" I decline to answer. I do, however, take exception to the substance of this statement, which is founded on the assumption that professional teaching in biology, chemistry, and physics, is not part of "the legitimate

curriculum of proper medical instruction." Medical men who have received a university scientific education are necessarily better able to judge how and to what extent science should be taught to medical students than pure scientists can possibly be. These sciences are a necessary (though preliminary) part of medical training, and the teaching of them should form a part of the duties of the medical schools as much as the teaching of physiology and anatomy. Science should not be taught in the same technical way to medical students as to those who aim at other technical scientific professions.

The real difficulty of medical degrees in London is, as I stated, in my former letter, that too little attention is paid to this part of medical education by some of the hospital schools, and this would not be remedied, but rather a new difficulty added, if their students were to be largely diverted to the colleges where the curriculum of education would not be specially adapted to the wants of medical students.—I am, etc.,

T. W. SHORE, M.D., B.Sc.Lond.,
Lecturer on Comparative Anatomy and Biology at St. Bartholomew's Hospital.

SIR,—Convocation has decided wisely; the University of London does not deserve to be pulled down: its position is a pre-eminent one, and nothing else can fill its place. Still the London students of medicine should be able to obtain the coveted M.D. degree as easily as the students of other places, without forsaking the London schools. All that is wanted is a suitable name for a new teaching university in London. It is a medical university, and no other, that is called for: a university to enable the practising members of the profession—the general practitioners to call themselves "doctors." M.D. is the coveted prize: and M.D. of the "Sydenham and Harvey University" should be title enough to satisfy any ordinary practitioner. Of course, the degree of the University of London would still be the "degree of degrees" throughout the British Empire.

The multiplication of universities throughout the country would be a degradation of degrees, but there is not a metropolitan or provincial college or school that need feel any jealousy against a university with which they may all be associated, such as a "Sydenham and Harvey," might be made. The diplomas of the Colleges of Physicians and Surgeons should be honorary, like the M.D. degree of London, but the licence of the Society of Apothecaries, and the degree of the proposed new university, in the absence of the possession of either of the honorary degrees, should be compulsory—not, perhaps, both compulsory, but one or other of them should be obtained as the minimum qualification for any legally-qualified practitioner. There must, and ever will, be grades of practitioners. The present (reformed?) professional status is throwing much into the hands of the chemist and druggist; but as my object has been only to suggest a name, I need not refer to other matters, however much consideration they may deserve, for the present at least.—I am, etc.,

JOHN GABB, M.R.C.S., L.S.A.

P.S.—Perhaps "Harvey and Sydenham" would be more appropriate for the name, as Harvey was Sydenham's predecessor.

Bewdley.

LONDON DIPLOMATES AND THE TITLE OF "DR."

SIR,—If L.S.A.'s of later standing than June 30th, 1887, would not be, as Mr. Upton thinks, prohibited from calling themselves physicians and surgeons, it would seem strange indeed if practitioners with the qualifications M.R.C.S. and L.S.A. of earlier date should not have the same legal status. If the different Colleges of Physicians had wished to limit the title of physician to medical consultants and physicians to hospitals practising medicine only, they could have forbidden, one would think, their Licentiates to adopt it. This course was not taken by any of the Colleges. The Apothecaries' Hall became practically the substitute of the London College of Physicians during a lengthened period, in which the latter body failed in its duty to the public and profession. The London College of Physicians and its former substitute, under new regulations as regards the examinations, now work side by side—it is to be hoped in a spirit of amity. The L.S.A. having had to undergo similar tests to those of his brethren of the various Colleges of Physicians, and having had precisely the same right conferred upon him of examining and prescribing for patients, it would seem strange if he should be legally debarred from using the same title, though many L.S.A.'s would probably not think it necessary to adopt it. There can be no doubt that an L.S.A. could, if desirable, tell a patient that he is legally qualified to practise as a physician. The term apothecary is to a very great extent a misnomer, and would be more appropriate for a pharmaceutical chemist. L.S.A.'s by no means always dispense their own prescriptions, either personally or by deputy.

In case of any legal decision affecting licentiates of the Hall, it is to be trusted that the nature of its examinations and how they originated will be fully understood by counsel. I am, etc.,

MED. PRACT.

SIR,—Will you kindly allot me a few lines in the BRITISH MEDICAL JOURNAL of this week to emphatically contradict Mr. Nelson Hardy's statement at the meeting of Fellows and Members of the College of Surgeons, that the Society of Apothecaries is disappearing from the horizon, and that the holders of its diploma are dissatisfied? The first assertion is certainly not borne out by the facts, if one may judge by the increasing number of candidates who are coming forward for its licence, a popularity chiefly due to gentlemanly treatment and absolute fairness to its candidates. As regards the second, I have spoken to several of the new licentiates, who agree with me in saying that I am perfectly satisfied with my diploma, but I am not satisfied with its single title. I believe all the new licentiates will endorse my statement, that all we now desire is a title sufficiently distinguishable from the old licentiate, who had no surgical qualification.—I am, etc.,

L.S.A. (Medical Act, 1886).

THE MIDWIVES BILL.

SIR,—As this Bill has frequently been discussed in the columns of the BRITISH MEDICAL JOURNAL, perhaps you will kindly allow me a word of explanation as to why the promoters have withdrawn the Bill from the papers of the House. I may say at once it was not for the reason that there is any less desire for a good measure dealing with the question, as they believe the opposition comes from a comparatively small number of members of the profession, as is evidenced by the numbers both of the petitions against the Bill and the signatures attached thereto. On the other hand, most of the principal obstetricians and others have warmly supported the Bill, or a modification of it, and the deputations both of doctors and ladies who waited upon the Lord President of the Council were so fully convinced that a Select Committee would be granted at an early day next session that the promoters deemed it much wiser to withdraw a Bill which pressure of public business prevented from being properly discussed this session, with the determination, if possible, of pressing forward the measure to a conclusion next session, and they feel confident of success when they again take up the matter. In the meantime any improvements which may be suggested in the Bill will be fully considered and, if possible, adopted.—I am, etc.,

London. H. FELL PEASE.

SIR,—Perhaps my "interpretation" of Lord Cranbrook's speech was "erroneous," but it was shared by others, and was, I still venture to think, justified by the general drift and tone of his remarks. Of course no Minister, and certainly not an "old parliamentary hand" like the Lord President of the Council, would give an *actual* "pledge" to a deputation on a controversal question like the Midwives Bill, but reading between as well as on the lines of his words, my impression was and is that he meant to convey to us some kind of "virtual" or "implied" understanding that if opportunity offered, and the circumstances of the time were favourable, he would grant a Select Committee to thresh out the whole subject. I have no means of information beyond what I actually heard, and the best plan now is to quote Lord Cranbrook's *ipsissima verba*, so that everyone may form his own conclusions. And if Dr. Rentoul will then kindly sup-

ply the text of his communication from the Lord President, the evidence will be complete.—I am, etc.,

ROBERT FARQUHARSON.

The following is the shorthand writer's report of Lord Cranbrook's remarks as published in the BRITISH MEDICAL JOURNAL of March 7th, p. 543: "With regard to the question of a Select Committee, he had not laid the matter before his colleagues, whom of course it would be necessary to consult, and he could therefore not give an answer that day. In the House of Commons the number of committees this year was very great; it would not be easy during the present session to get members for a committee of a character required for a measure so intricate. With respect to the House of Lords, there was a very large committee sitting, occupied in taking evidence in an inquiry into the hospitals of London, and there again the same difficulty presented itself. Mr. Pease deserved great credit for endeavouring to solve a very difficult question, and one which he (the Lord President) frankly owned he thought would be easy to solve, but it was found that the difficulties grew so much upon them, that he was obliged to say, speaking for the Government, that they could not this year support the Bill which Mr. Pease had brought forward; nor did he think there would be a chance to amend it this year to make it acceptable to the medical profession and to the public, and to do justice to the midwives already in practice."

ABUSE OF THE PROVIDENT PRINCIPLE.

SIR,—At last I hope a movement may be made for the much-needed help of the abused club doctor. For this cause I became a member of the British Medical Association. It was with much pleasure I read your leader in the BRITISH MEDICAL JOURNAL of May 9th with the above heading. Having had over thirty years' experience of club practice, and am still largely engaged in it, I ought to know something of its hardships. To make a bare living for my family and myself in a wide country district I must take all the clubs I can procure. This obliges me to keep an assistant. I object to unqualified assistants; but the club fees are so small I cannot afford to pay for a registered assistant.

It may be asked, Why not raise your fees? If I did so, neighbouring practitioners would take them; and even were we agreed to refuse to take less fees than 5s. to 6s. per head per annum, the clubs would at once advertise and procure qualified men who would take 2s. or 3s. We are told to unite. This will never be in our profession. The only remedy I can suggest is that the General Medical Council shall regulate the fees, and that no registered practitioner be able to take less or smaller fees than those determined upon by the Council. If someone in the profession, such as Mr. Lawson Tait, would interest himself on behalf of the hard-worked, miserably-paid club doctor, he would confer a blessing on many now struggling for a miserable existence. I know many men who have much larger incomes than the doctor, yet claim his services and medicine and visits of three to five miles away at 4s. per annum, but the club doctor must not complain or he would be asked to retire; and so, on the principle of half a loaf is better than no bread, we go doggedly on. Such is the life of worry, genteel poverty, work, and anxiety of the club doctor, until

Death ends our woes,
And the kind grave shuts up the mournful scene.

—I am, etc., A GRADUATE.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

SIR,—The Council of the Royal College of Surgeons in Ireland is composed exclusively of Fellows resident in the city of Dublin. More than half (I believe nearly two-thirds) of the electorate reside either in the provinces or abroad, and yet this large body of Fellows has no direct representation on the governing body of their College. I ask, is this fair? Many of the leading Dublin surgeons don't think it is, and have loyally welcomed the candidature of Dr. Kelly, of Drogheda, and myself on former occasions. We both intend to offer ourselves at the coming election for seats on the Council, and I trust we will receive the support of the city and county Fellows, as well as those in the army, and navy, and abroad.—I am, etc.,

Omagh, co. Tyrone. EDWARD THOMPSON.

THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

SIR,—The letter from Sir Joseph Lister, published in the BRITISH MEDICAL JOURNAL of Saturday, May 16th, shows that the opponents of physiological and pathological investigation are still watchful and busy in what they conceive to be their mission. On the other hand, may not the failure of the promoters of the "College of Preventive Medicine" to incorporate their institution under the Board of Trade certificate be a measure due to faulty tactics on their own part?

When this new institution was conceived it was, I believe, spoken of as a "Jenner-Pasteur" institute. Endeavours were made to gain pecuniary support to the extent of £1,500 a year from various learned and scientific societies, so that the new college or institute might be located at Cambridge, and the Council of the British Medical Association guaranteed a subscription of £300 a year for five years, so that such an institution might be established in this country. The alteration of name, in the *Times* advertisement, notifying the application to the Board of Trade, was tolerably certain to be noticed by the opponents of pathological inquiry, and they probably reasoned that the promoters of the new institute were endeavouring to obtain their objects under some sort of concealment of the true nature of their work. The change of name, but not of objects, has been so far disastrous to the scheme.

In the year 1886, some old public officials, amongst whom may be included Sir Joseph Fayrer, Sir Thomas Crawford, Sir John Watson Reid, Sir W. Guyer Hunter, and myself, being thoroughly impressed with the unsatisfactory provision for public health teaching in this country, determined to do what we could to put the matter on a better footing, and with the aid of Mr. James Cantlie and Dr. W. R. Smith, the College of State Medicine was duly incorporated in the beginning of 1887.

The objects are duly set forth in the Articles of Association, and may be here briefly indicated:—

1. To establish and endow laboratories for research in hygiene and bacteriology.
2. To appoint professors in hygiene, bacteriology, and other branches of State Medicine.
3. To found a library of reference.

The College of Preventive Medicine, while covering much the same ground as the College of State Medicine, proposes, I observe, to go further, in the establishment of hospitals for men and animals. The College of State Medicine, established in 1886, has been most kindly helped by the trustees of the Berridge bequest, who granted the Council £1,000 towards the expenses of fitting and furnishing public health and bacteriological laboratories. In the former a number of gentlemen have worked in preparation for public health qualifications, and in the latter it is sufficient to state that for the past two years all the bacteriological investigations of the Local Government Board, under Dr. Klein's direction, have been conducted. The College offers every facility to those occupied in original research.

The establishment of the College of Preventive Medicine in Cambridge for teaching purposes would, I think, be a mistake. Our experience shows that the steady workers at bacteriology are the gentlemen who hold minor appointments in hospitals and colleges, and who have some spare time on their hands, but who have already entered on the career they intend to follow.—I am, etc.,

W. ROBT. CORNISH, Surg.-Gen., F.R.C.S., C.I.E.,
Hon. Sec., the College of State Medicine.
Great Russell Street, W.C.

MEDICO-LEGAL AND MEDICO-ETHICAL.

IRREGULAR DEATH CERTIFICATE.

AN inquest was recently held at West Boldon, on the body of a child who had died after tracheotomy for diphtheria. The case seems to have excited a good deal of attention in the neighbourhood; the child had been buried, the death certificate being signed by Dr. J. Grant. The coroner ordered the exhumation of the body. According to the evidence given at the inquest, as reported in the *Sunderland Daily Echo*, the child was attended by Charles Grant, unqualified assistant to his father. The operation of tracheotomy was performed by making a transverse incision, but this unusual method of performing the operation does not appear to have hastened death. It would appear that Dr. J. Grant was in the habit of signing blank death certificate forms, which were subsequently filled in by his unqualified son. The certificate in

this case was signed, he is reported to have said, "in the ordinary way we used to sign the certificates of death." There can be, we take it, no question that the signing of certificates in this way is most reprehensible; it is clearly illegal, being contrary to a law framed in the public interest. It is also inimical to the interests of the medical profession.

THE CASE OF REGINA v. KERR.

SIR,—With reference to the article on the case of Regina *v.* Kerr on page 1,098 of the BRITISH MEDICAL JOURNAL, we shall feel obliged if you will allow us to state that the two first paragraphs in italics quoted from the memorial give an entirely erroneous account of what we saw at the *post-mortem* examination. The tears were seen near the bruises before a knife was used; there had been bleeding from the tears, and we were cross-examined as to the source of the blood on the genitals at the trial. We need hardly say we do not subscribe to the opinion quoted, that in taking out the vagina tears should be found on the membrane unless the operation is done very carelessly.—We are, etc.,

Carlisle. HENRY BARNES, M.D.
RODERICK MACLAREN, M.D.

"SIXPENNY DOCTORS."

A MEMBER (Bristol) writes: Your correspondents appear to consider sixpenny fees *infra dig.* and derogatory to a respectable profession: so they are in my humble opinion, but I can assure you that to some of our Bristol "cheap Jacks" sixpence would be considered quite a big fee. They are quite satisfied with the following charges: One penny a week for the whole family, halfpenny for a child, threepence a visit, with as much medicine (?) in each case as their patients like to swallow; midwifery fees, sixpence a week from the time of engagement until about ten shillings has been paid; vaccination, sixpence. In order to obtain their patients at a penny a week, a questionable-looking individual is employed to canvass from house to house, he receiving for his trouble a percentage on all fish he manages to net. The individual in question is not particular to the class of people as long as he can obtain the promise of a penny; if any refuse, he finds out the name of the usual medical man, and of course runs him down, at the same time praising the "penny a week" man. A day or two later a boy may be seen, following in the footsteps of the canvasser, collecting the promised pence.

Some may perhaps doubt such men being really legally qualified practioners, but I can assure them that some glory in the degrees of B.A., M.B., C.M., M.R.C.S., and L.R.C.P. They are not only recognised and met in consultation by our leading *confrères*, but are invited to medical and social meetings under the plea that they are unacquainted with the antecedents of these qualified practitioners.

Now, is there a remedy against such practice as I have described? Yes; let all respectable medical men refuse to meet them in consultation, and the whole thing would at once be crushed, without having to trouble the respective colleges.

FEES FOR ATTENDANCE ON THE FAMILIES OF MEDICAL MEN.

B. writes: A. B., aged 18, the son of a country surgeon, while suffering from an act of indiscretion, consulted a local practitioner; a medical bill of over £5 was eventually sent. Not being in a position to pay, for the first time it was referred to his father. The father demurred, not only on medico-ethical grounds, but also as to its being illegally contracted without his knowledge or consent, whereupon a county court summons was issued, half of bill was offered, and the whole of costs paid into court, but refused. Not being able to leave an important case, the whole of bill and costs had to be paid by the father to his brother practitioner.

ADVERTISING IN THE COLONIES.

H. T. B.—It is to be feared that qualified medical practitioners who resort to pictorial advertisements in newspapers in order to obtain practice would not be amenable to any condemnation expressed by medical opinion. We should recommend our correspondent to forward copies of the newspapers containing the advertisements to the Colleges from which the person in question obtained his diploma, and to send at the same time a covering letter signed by English graduates and diplomates practising in the district.

NAVAL AND MILITARY MEDICAL SERVICES.

MYOPIA.

B. F. J.—Probably moderate myopia of the left eye would not disqualify for the medical services.

RANK AND TITLES.

A NAVAL MEDICAL OFFICER writes: When the present agitation began I was much opposed to my brethren in the army assuming titles that seemed to conceal their identity as medical men; but my opinions have now completely changed. Military titles by the institution of honorary rank received a new and wider significance; they denote military grade, but the distinctive function is indicated by the name of the corps or department attached; *per se*, they do not necessarily denote functions of command either limited or unlimited. Is there any reason, therefore, why they should not be borne by medical officers in common with other branches of the army? Relative rank is entirely discredited, and its absurdity is well illustrated in a Commissary General "ranking as" Major General, and yet being styled Honorary Colonel. Mr. Stanhope and his military advisers may adopt compound or polysyllabic titles for medical officers as a way out of a difficulty, but such never will or can come into general social use. In the executive branch of the navy there are no fewer than ten grades of officers each with a distinctive title, from Naval Cadet to Admiral, yet only two are in use colloquially, namely, Captain and Admiral. The Lieutenant, although he may rank with an army Captain or Major, has to put up with plain Mr. That the concession of honorary military rank and title would create a similar demand among naval medical officers is entirely unfounded: the latter consider that the veriest bogey raised up before the Camperdown Commission. The cases of army and naval medical officers are in no way parallel.

If Mr. Stanhope and his advisers adopt a *non possumus* attitude, history will repeat itself; although in the end Junkerism must yield, yet meanwhile the medical staff will be recruited from a class both socially and professionally undesirable, and who will be the first to point the finger of scorn, and complain of these Queen's hard bargains? Will it be the *fons et origo mali*, my "military advisers?"

INDIAN MEDICAL SERVICE.

SURGEON W. R. EDWARDS, M.D., Bengal Establishment, is appointed Surgeon to Sir Frederick Roberts, Commander-in-Chief in India, *vice* Surgeon-Major C. W. Owen, C.M.G., C.I.E., resigned, dated April 1st.

THE ZHOB VALLEY OPERATIONS.

THE *London Gazette* of May 12th contains the general order and despatches from the Government of India, and from the general officers commanding, relative to the late operations of the Zhob field force against the Kidarzais and others. Major-General Sir George White, the commanding officer, gives a detailed account of the operations, which were explorative as well as militant, and bestows unstinted praise on all engaged in it. The character of the country, he says, in some instances prevented the use of transport animals, and entailed upon officers and men exertions and exposure of an exceptional kind. He singles out for special mention, among others, Deputy Surgeon-General S. A. Lithgow, C.B., D.S.O., "an officer of great experience in the field, who did much to promote the success of the expedition," and Surgeon-Major G. J. H. Evatt, who had charge of two sections of the 23rd British Field Hospital "and worked with characteristic zeal, ability, and powers of organisation."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

ZOOLOGICAL STATIONS.—Applications for permission to work at the zoological stations at Naples and Plymouth are to be sent to Professor Newton on or before May 28th.

NEW BUILDINGS FOR THE MEDICAL SCHOOL.—The Museums Syndicate propose to make certain structural alterations in the Old Anatomy School so as to fit it for the professors and lecturers in medicine, surgery, midwifery, and medical jurisprudence.

DEGREES.—On Thursday, May 14th, the following degrees were conferred: *M.D.*: Edmund Carver, M.A., St. John's. *M.B. and B.C.*: R. A. Bickersteth, M.A., Trinity; C. H. Leaf, B.A., Trinity; H. Greaves, B.A., Caius; F. Belben, B.A., Christ's; J. E. Creswell, B.A., Cavendish.

TEACHER OF CHEMISTRY.—Mr. A. Hutchinson, Demonstrator of Chemistry in Gonville and Caius College, has been recognised by the Medical Board as a Teacher of Chemistry.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES. Easter Term, 1891. Examined and approved:—

Part I (Surgery and Midwifery).—J. Attlee, Joh.; G. H. A. C. Berkeley, Cai.; Bradford, Cai.; Cropper, Trin.; Daniel, Trin.; Devereux, H. Selw.; Dixon, Trin.; Drake, Clare; Edmondson, Joh.; L. G. Glover, Joh.; Grimsdale, Cai.; Kent, Trin.; Law, Christ's; Lee, H. Cav.; Miller, Queen's; Phear, Trin.; J. J. Perkins, Emman.; L. Roberts, Cai.; Senior, Queens'; H. Simpson, Joh.; Stack, Pemb; Troutbeck, Cai.; Wallace; Ware, Joh.; Watkins, Cai.; G. Wilkinson, sen., Emman.

All the above are Bachelors of Arts.

UNIVERSITY OF ABERDEEN.

ATHLETICS.—With the advent of good weather the cricket, tennis, golf, and swimming clubs have begun active practice, and the matches already held have resulted creditably for the 'Varsity. The 'Varsity sports and the Swimming Club sports are announced to take place early in June.

MEDICAL STAFF CORPS.—The Medical Staff Corps, which now musters 102 officers and non-commissioned officers, had their first march out for the season, under the command of Surgeon Macgregor, M.D., on Saturday, May 9th. There was a good turn out, and the corps appeared to be in good training. In the evening a successful smoking concert was held in

Hay's Restaurant. Surgeon Riddell was in the chair, and Surgeon Macgregor, Quartermaster De Lessert, Chaplain Smith, and a few civilian guests were present. A capital programme, which bore a most suggestive design, was presented and was well received. A marching column of upwards of 50 officers and men has been arranged to proceed to Aboyne for June 4th to 8th, and another division is to go into training at Aldershot. Altogether the corps is one of the most energetic bodies in local volunteering.

'Varsity Battery.—The 'Varsity Battery, which is a company of the City Artillery, though mostly consisting of Arts students, has a considerable number from Marischal, and is commanded by Captain Traill, M.D. The battery has done good work in the local competitions at Barry Links and at headquarters and is still in a vigorous condition. Drill was resumed for the summer on May 12th.

University Council.—The question of providing distinctive costumes for the graduates was discussed at a meeting of the Council on Saturday, when it was decided by 13 votes to 3 to ask a committee of the Council to inquire into and report on the academic costume of graduates in Aberdeen and other universities with a view to the adoption of a system of distinctive costumes, showing differences of degree, faculty, and university. The minority protested against the continuance of what they considered a childish absurdity, opposed to common sense and the democratic tendency of the age. Dr. Bain made a statement as to the proposed extension of Marischal College buildings, mentioning that a sum of £47,000 would probably be required to cover the cost of buildings. Dr. Angus Fraser, in a trenchant criticism of the proposed University extension, advocated the removal of the arts classes from Old Aberdeen to Marischal College as a means of improving the attendance of arts students and of increasing the amount of public donations towards the extension fund. Dr. Fraser's interesting proposal is being much discussed in university circles.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Election of Examiners.—At a meeting of the President, Vice-Presidents, and Council, held on May 15th, the following examiners were elected for the ensuing year:—*Anatomy and Surgery*: J. Barton, F.R.C.S.; Sir W. Stokes, F.R.C.S.; R. L. Swan, F.R.C.S.; W. Thompson, F.R.C.S. *Physiology, Histology, and Pathology*: R. G. Patteson, F.R.C.S.; J. A. Scott, F.R.C.S. *Chemistry and Physics*: R. J. Montgomery, F.R.C.S. *Midwifery and Gynæcology*: S. R. Mason, F.R.C.S. *Ophthalmology*: A. H. Benson, F.R.C.S. *Dentistry*: D. Corbett, jun., F.R.C.S.; R. Hazleton, F.R.C.S.; G. M. P. Murray, F.R.C.S.; H. G. Sherlock, F.R.C.S.; W. Stoker, F.R.C.S.; M. A. Ward, F.R.C.S. *Public Health*: H. Auchinleck, F.R.C.S.; D. E. Flinn, F.R.C.S.; R. G. Patteson, F.R.C.S.; W. C. Stubbs, B.L.; J. C. Wilmot, C.E. *Midwifery Diploma*: S. R. Mason, F.R.C.S.; J. O'Donovan, F.R.C.S.; W. Roe, F.R.C.S. *General Education*: F. J. Davys, F.R.C.S.; R. Morton, F.R.C.S.

Royal College of Surgeons, Edinburgh.—The following gentlemen, having passed the requisite examinations, have been admitted Fellows of the College since last publication:—

W. Keiller, L.R.C.P. and S.E., 40, Lauriston Place, Edinburgh; M. Sinnetamby, L.R.C.P. and S.E., 7, Torrington Square, London, W.C.; A. B. Santiago, L.R.C.P. and S.E., 21, Devonshire Hill, Hampstead, London, N.W.; T. Luson, M.B., C.M., Cromer, Norfolk; W. M. Leslie, M.B., C.M., 41, Glengall Road, London, E.; L. E. Jowers, M.R.C.S.Eng., 27, Old Steyne, Brighton; A. Miles, M.B., C.M., 27, St. Bernard's Crescent, Edinburgh; J. W. T. Anderson, L.R.C.P. and S.E., Aden; A. G. P. Gipps, M.R.C.S.Eng., Royal Hospital, Haslar, Gosport; A. L. Kerr, M.B., C.M., 52, Burton Crescent, London, W.C.; W. G. Black, M.R.C.S.Eng. 20, Ellison Place, Newcastle-on-Tyne; and H. G. Terry, M.R.C.S.Eng., 16, Green Park, Bath. A. C. F. Rabagliati, M.B., C.M., 9, Walmer Villas, Bradford, was admitted a Fellow of the College without examination.

The following gentlemen, having passed the necessary examinations, received the Diploma in Public Health of the College:—

S. P. Hallows, M.B., C.M., Harle Syke, near Burnley; J. B. Ronaldson, F.R.C.S.E., Ennerdale, Haddington; M. J. Oliver, M.B., C.M., Lochside, Kelso; J. N. Burns, M.B., C.M., 4, Park Place, St. James's, London, W.; D. C. Longden, M.B., C.M., 137, Warrender Park Road, Edinburgh; S. B. Burns, M.B., C.M., Mauldslie Cottage, Carluke; J. C. Wood, L.R.C.P. and S.E., 32, Frederick Street, Sunderland; C. Mackenzie, M.B., C.M., High Street, Tain; J. G. Macaskie, L.R.C.P. and S.E., etc., Bamborough, Northumberland; A. Thom, M.D., Crieff, Perthshire; T. J. Monaghan, L.R.C.P. and S.E., Accrington, Lancashire; M. Calder, L.R.C.P. and S.E., 12, Union Street, Greenock; A. Seddon, L.R.C.P. and S.E., 87, Warrender Park Road, Edinburgh; R. S. Jaques, L.R.C.P. and S.E., 49, Aberdeen Walk, Scarborough; J. Wheatley, M.D., the Infirmary, Blackburn; E. R. Morton, L.R.C.P. and S.E., 17, Victoria Street, London; and J. Rankine, L.R.C.P. and S.E., Stirling.

Royal University of Ireland.—Medical Degrees Examination, April-May, 1891.—The Examiners have recommended that the following be adjudged to have passed the undermentioned examinations respectively:—

Doctor of Medicine.—E. J. McWeeney, M.B.

M.B., B.Ch., B.A.O.: Upper Pass Division.—*Anna L. Church, Royal College of Surgeons, Ireland; *T. Jones, Queen's College, Cork; J. B. McLaren, M.A., Queen's College, Belfast; C. G. McVicker, B.A., Queen's College, Belfast, and Edinburgh University; *Hester D. Russell, London School of Medicine for Women; *E. J. Walker, B.A., School of Physic, Trinity College, Dublin, Royal College of Surgeons, and Catholic University School of Medicine, Dublin.

*Those marked with an asterisk may present themselves for the honour examination.

Pass Division.—H. L. Atkinson, B.A., Queen's College, Belfast; R. Boyd, Queen's College, Belfast; C. L. W. Bunton, Queen's College, Galway, and Royal College of Surgeons; R. F. Carse, Queen's College, Belfast; Frances L. Dick, London School of Medicine for Women; J. Dodd, Queen's College, Cork and Catholic University School of Medicine; P. Goold, Queen's College, Cork; S. Hamilton, B.A., Queen's College, Galway, and School of Physic, Trinity College, Dublin; W. Hartland, Queen's College, Cork; J. F. Kelly, Catholic University School of Medicine; N. O. McConnell, Queen's College, Belfast; J. McLeish, Queen's College, Belfast; T. S. MacSwiney, Catholic University School of Medicine; S. E. M. Moxley, L'Hôtel Dieu, Paris, and Queen's College, Cork; H. W. H. O'Reilly, Queen's College, Galway; J. A. O'Sullivan, Queen's College, Cork; A. G. Robb, Queen's College, Belfast; R. G. C. Thornton, Queen's College, Cork; R. B. Wagner, Queen's College, Cork; J. T. Wallace, B.A., School of Physic, Trinity College, Dublin.

OBITUARY.

JOHN HAYLAND LILLY, L.R.C.P.Ed., L.F.P.S.Glas.

Those who remember the foundation of the Western Infirmary in association with the Glasgow University School of Medicine will hear with regret of the death of Dr. Lilly.

The transference of the University from its old site in the East End to the Gothic pile of buildings on Gilmore Hill, with all its useful accessories, had, as its one drawback, the loss of the splendid clinical opportunities afforded by the Royal Infirmary. It became necessary to establish a new hospital in close proximity to the University which should provide a sufficient amount of clinical material for the students' education; of this hospital Dr. Lilly was the first superintendent. He had had an excellent preparatory training in the City of Glasgow Fever Hospital, of which he had been physician superintendent, and previously in the wards of the Royal Infirmary, of which he had been one of the house-surgeons. That training he had now full opportunity of applying in aiding in the organisation of a hospital on lines adequate to the great duties it would be required to fulfil.

The labour which occupied his fresher energies ceased with its success, and he sought refuge from routine in private work. As partner to Mr. Seaton at Bitterne, Hants, he spent twelve years in the active and useful practice of his profession; but disease laid her finger upon him and, despite two difficult operations by Mr. Henry E. Clark, of Glasgow, undermined his health. Probably his unsparing work during the influenza epidemic of last year had some say in the recurrence of the disease. Whether that be so or not, all who knew him will recognise that in public and in private life he was a man whose *rôle* was to be useful, and as such he will be remembered and missed.

WILLIAM BURNIE, M.D., L.R.C.S.Edin.

We regret to announce the death of a well-known and much respected general practitioner, Dr. William Burnie, of Bradford, a Vice-President and past President of the Yorkshire Branch of the British Medical Association. The deceased had suffered from internal cancer for over a year, and since September last had been confined to his house, receiving such relief as medical aid could afford at the hands of his son, Dr. W. Gilchrist Burnie, and Mr. W. L. Roberts.

Dr. Burnie, who had reached the ripe age of 76, was born in Dumfriesshire, and settled in Bradford in 1836, having previously taken the degree of M.D.Edin. He subsequently removed to London, where he practised with success, and held the post of honorary senior physician to the Islington Dispensary. After a fifteen years' residence in London Dr. Burnie returned to Bradford, and became one of the firm of Messrs. Douglas, Kay, and Burnie. On the death of Mr. Kay (Mr. Douglas having previously retired), the large practice of

the firm was carried on solely by Dr. Burnie until 1879, when he took into partnership his son, Dr. W. Gilchrist Burnie.

During his residence in London Dr. Burnie contributed to the *Spectator* a series of articles on the subject of medical reform, which attracted wide attention. From a notice which appeared in the *Bradford Observer* we learn that Dr. Burnie took a considerable part in the movement which resulted in the throwing open of the medical appointments of the Bradford Infirmary to general practitioners. Dr. Burnie was on several occasions pressed to join the medical staff of the infirmary, but declined. He, however, always showed a warm unofficial interest in the institution, and privately gave his services to many works of benevolence and philanthropy. For many years he acted as honorary medical adviser to the workers of the Bradford Town Mission. He was three times President of the Bradford Medico-Chirurgical Society, and was a Fellow of the Medical Society, London. He was also a representative Governor of the Yorkshire College, and a Vice-President of the Bradford Philosophical Society. Our contemporary concludes by saying that Dr. Burnie "will be missed in a wide professional and scientific circle, and his lost figure is that of one who has taken his share of work and honour, with the recognition of more than one generation." He leaves a widow and two sons and one daughter. His funeral was attended by a large number of personal friends.

GEORGE RAE, M.A., M.B., C.M.

Dr. George Rae died at his residence in New Pitsligo, Aberdeenshire, on Sunday, May 3rd. Dr. Rae was born at Killyquharn, Aberdour, N.B., in 1854, and was thus in his 37th year. After receiving his early education at the school of his native parish, he went to Aberdeen Grammar School, and thence to the University, and graduated M.A. in 1873. He then began the study of medicine, and after a good career graduated M.B., C.M. in 1878. For two years he was assistant to Dr. Mitchell, New Deer, when he was appointed medical officer for the parish of Tyrie, which appointment he held for several years. At the time of his death he was medical officer for the parish of Aberdour. Dr. Rae was much respected and esteemed by a wide circle of friends. To the poor he was specially generous. His remains were interred in Aberdour churchyard.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE DISTRIBUTION OF OFFICIAL SANITARY REPORTS.

The recent statement made by the President of the Local Government Board in the House of Commons as to the distribution of the reports of the results of Governmental inquiries on sanitary matters to officers officially responsible for the health of the people, relates to a matter of interest to every medical officer of health in the kingdom. We have frequently urged in these columns that medical officers of health should be kept officially informed of the results of the public work of the central department, and should, with that object, be furnished with copies of the sanitary reports made by the officers and scientific investigations of that department. It is only by such interchange of information that the experience of one district can be put to practical use in other districts and the teachings of arduous official inquiries be saved from oblivion. Herein should lie the practical value of the good work of the Medical Department of the Local Government Board. Mr. Ritchie, in replying to the question we have referred to, pointed out that it is quite within the power of a sanitary authority to purchase, at the cost of the rates, reports which they may consider will assist their officers in the discharge of their duties, but it requires only a slight acquaintance with ordinary sanitary administration to learn how very parsimonious in such matters local authorities usually are, and it is scarcely fair to require the officers themselves to purchase official reports out of their usually slender remuneration. We should have been glad if Mr. Ritchie had promised to move the Treasury to be a little more generous and afford him the means of supplying to health officers, more liberally than he does at present, copies or abstracts of the valuable reports of his Medical Department.

NEGLECT OF VACCINATION IN CORK.

In six of the Cork dispensary districts there are at present no fewer than 931 defaulters, and this condition of things appears to have arisen by the relieving officers, after noticing the defaulters, not submitting the list to the medical officer for comparison with the vaccination register book in order to ascertain if any have complied with the notice. Besides this, in many instances the certificates of successful vaccination performed by other practitioners are not forwarded to the registrar, a circumstance which leads to a good deal of confusion. The guardians should enforce compliance with the provisions of Section 5 of the Vaccination Amendment Act, 1879.

ZYMOTIC MORTALITY IN LONDON.

The accompanying diagram shows the prevalence of the principal zymotic diseases in London during each week of the first quarter of this year. The fluctuations of each disease during the period under review, and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-pox.—Three deaths from this disease were registered in London during the first three months of this year, the average number in the corresponding periods of the preceding ten years, 1881-90, having been 147. Of these 3 fatal cases, 2 belonged to Greenwich and one to Rotherhithe sanitary areas; they were all recorded in the Metropolitan Asylum Hospitals, to which 12 small-pox patients were admitted during the first quarter of the current year, of whom 7 remained under treatment at the end of March last.

Measles.—The fatal cases of measles, which had continuously increased in the preceding six quarters from 218 to 1,034, declined to 452 during the first three months of this year, and were 158 below the corrected average number. Among the various sanitary areas of the metropolis the highest proportional fatality of measles was recorded in Holborn, Clerkenwell, Shoreditch, Bethnal Green, Wandsworth, Woolwich, and Plumstead.

Scarlet Fever.—The deaths referred to this disease, which had risen from 167 to 296 in the preceding three quarters, declined again to 168 during the first three months of this year, and were little more than half the average number in the corresponding periods of the previous ten years. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 1,681 and 1,593 at the end of the last two quarters of 1890, had further declined to 1,026 at the end of March last. The number of cases admitted to these hospitals, which had increased from 1,082 to 2,419 in the preceding four quarters, declined to 1,237 during the first three months of this year. The mortality from scarlet fever last quarter showed no marked excess in any of the sanitary areas of the metropolis.

Diphtheria. The fatal cases of diphtheria in London, which had increased from 227 to 494 in the preceding three quarters, declined again to 355 during the quarter under notice, but exceeded by 97, or nearly 40 per cent., the corrected average quarterly number. The number of cases of diphtheria admitted into the Metropolitan Asylum Hospitals, which had steadily increased from 185 to 369 in the four quarters of 1890, declined to 312 during the first three months of this year, and 162 patients remained under treatment at the end of March last. Among the various sanitary districts diphtheria was proportionally most fatally prevalent in Hammersmith, St. Giles, Holborn, London City, Shoreditch, Bethnal Green, and Whitechapel.

Whooping-Cough. The deaths referred to this disease, which had declined from 1,227 to 410 in the preceding four quarters, rose again to 700 during the first three months of this year, but were 401, or more than 35 per cent., below the corrected average number. Among the various sanitary areas, whooping-cough showed the highest proportional fatality in Fulham, Islington, Holborn, St. Saviour Southwark, St. George Southwark, Newington, and Bermondsey.

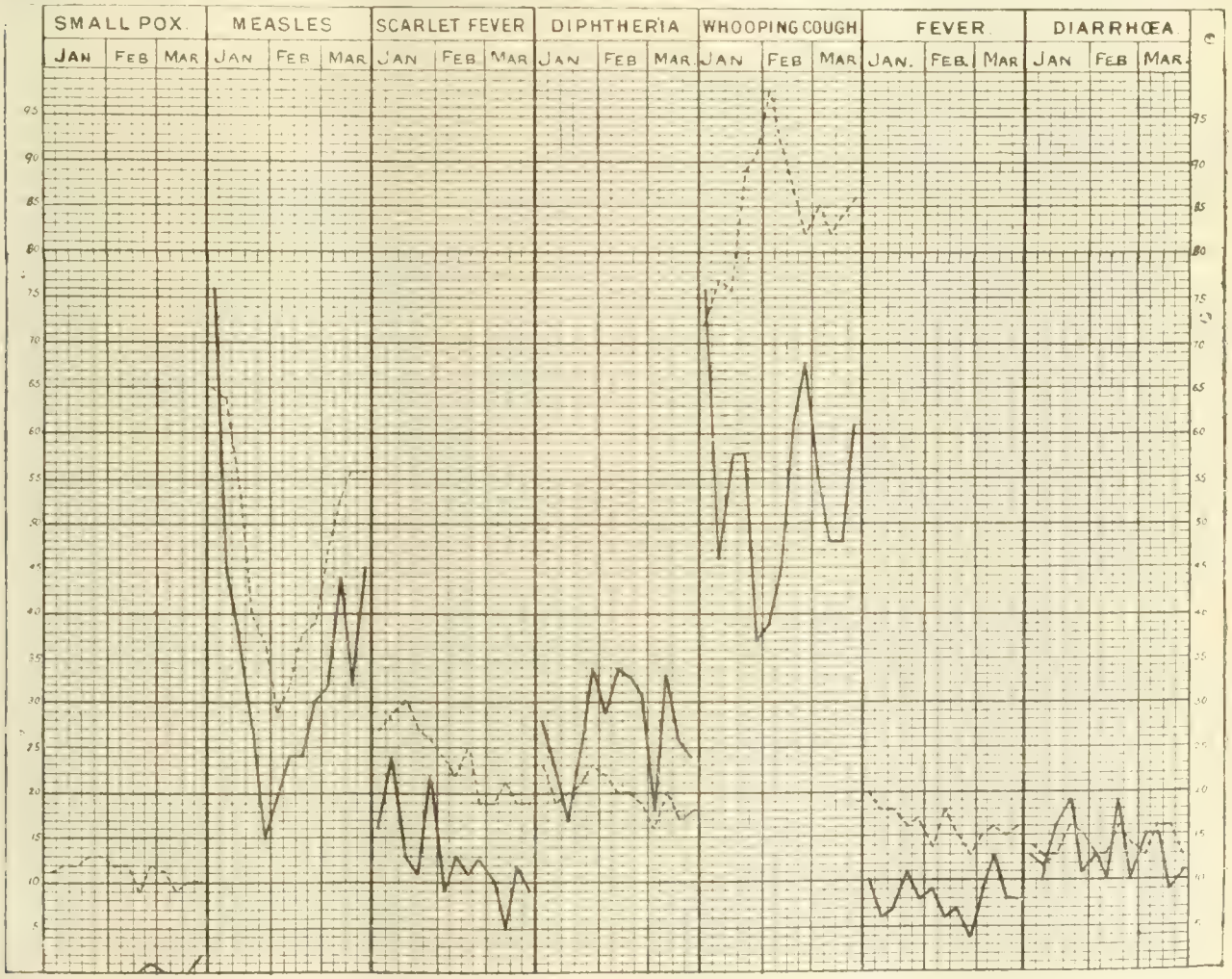
Fever.—Under this heading are included deaths from typhus, typhoid fever, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had increased from 92 to 277 in the preceding three quarters, declined to 106 during the quarter under notice, and were 105, or as much as 50 per cent., below the corrected average. Of these 106 deaths from fever, one was certified as typhus, 99 as enteric or typhoid fever, and 6 as simple and ill-defined fever. The Metropolitan Asylum Hospitals contained 105 cases of enteric fever at the end of March last, against numbers increasing from 51 to 151 at the end of the preceding three quarters; 152 new cases were admitted during the first three months of this year, against 80, 204, and 274 in the preceding three quarters. There was no marked excess of "fever" mortality last quarter in any of the sanitary areas of the metropolis.

Diarrhœa.—The 173 fatal cases of diarrhœa registered in London during the quarter under notice almost corresponded with the corrected average quarterly number.

In conclusion, it may be stated that during the first quarter of 1891 the 1,957 deaths referred to these principal zymotic diseases were as many as 862, or 30 per cent., below the corrected average number in the corresponding periods of the preceding ten years, 1881-90. The mortality from diphtheria showed an excess, but that from each of the other principal zymotic diseases was considerably below the average. Among the various sanitary areas the highest zymotic death-rates last quarter were recorded in Fulham, Holborn, Clerkenwell, Shoreditch, Bethnal Green, Whitechapel, St. George-in-the-East, St. George Southwark, and Woolwich.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, 5,963 births and 5,772 deaths were registered during the week ending Saturday, May 16th. The annual rate of mortality in these towns, which had increased from 22.5 to 28.9 per 1,000 in the preceding four weeks, further rose, owing to the increasing fatality of influenza, to 30.1, a higher rate than any week on record. The rates in the several towns ranged from 16.1 in Hull, 19.1 in Brighton, 23.3 in Sunderland, and 23.6 in Cardiff to 40.2 in Leicester, 41.9 in Manchester, 43.5 in Leeds, 50.0 in Bradford, and 51.6 in Huddersfield. The very high rates in the last-mentioned towns were due to the fatal prevalence of influenza. In the twenty-seven provincial towns the mean death-rate was 33.3 per 1,000, and exceeded by as much as 7.2 the rate recorded in London, which was 26.1 per 1,000. The 5,772 deaths registered during the week under notice in the twenty-eight towns included 401 which were referred to the principal zymotic diseases, against 462 and 442 in the preceding two weeks: of these, 167 resulted from whooping-cough, 104 from measles, 45 from diarrhœa, 34 from "fever" (principally enteric), 32 from diphtheria, 19 from scarlet fever, and not one from small-pox. These 401 deaths were equal to an annual rate of 2.1 per 1,000; in London the zymotic death-rate was 1.8, while it averaged 2.3 per 1,000 in the twenty-seven provincial towns, and ranged from 0.0 in Brighton, 0.5 in Birkenhead, 0.6 in Wolverhampton, and 0.8 in Sunderland to 4.2 in Bristol, 4.6 in Plymouth, 4.9 in Leicester, and 6.5 in Portsmouth. Measles caused the highest proportional mortality in Huddersfield, Leicester, Bristol, Blackburn, and Portsmouth; scarlet fever in Preston; and whooping-cough in Liverpool, Salford, Manchester, Plymouth, Leicester, and Newcastle-upon-Tyne.



DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE FIRST QUARTER OF 1891.

NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the preceding ten years, 1880-89, corrected for increase of population.

The mortality from "fever" showed no marked excess in any of the large towns. Of the 32 deaths from diphtheria in the twenty-eight towns, 19 occurred in London, 2 in Leicester, and 2 in Salford. No fatal case of small-pox was registered during the week under notice, either in London or in any of the large provincial towns; 35 small-pox patients were under treatment in the Metropolitan Asylums Hospitals, and not one in the Highgate Small-pox Hospital, on Saturday, May 16th. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on the same date was 924, and showed a slight increase upon the number at the end of the previous week; 118 new cases were admitted during the week, against 100 and 79 in the preceding two weeks. The death-rate from diseases of the respiratory organs in London was equal to 7.2 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, May 16th, 913 births and 630 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 22.1 to 23.9 per 1,000 in the preceding three weeks, further rose to 24.1 during the week under notice, but was 6.0 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Greenock, and the highest in Glasgow and Paisley. The 630 deaths registered in these towns included 83 which were referred to the principal zymotic diseases, equal to an annual rate of 3.2 per 1,000, which exceeded by 1.1 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow and Paisley. The 291 deaths registered in Glasgow included 11 which were referred to whooping-cough, 9 to measles, 5 to "fever," and 4 to scarlet fever. Five fatal cases of measles were recorded in Edinburgh, and 10 in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.4 per 1,000, against 7.2 in London.

HEALTH OF IRISH TOWNS.

In sixteen of the principal town districts of Ireland the deaths registered during the week ending Saturday, May 9th, were equal to an annual rate of 27.2 per 1,000. The lowest rates were recorded in Armagh and Waterford, and the highest in Newry and Lisburn. The death-rate from the principal zymotic diseases averaged 1.4 per 1,000. The 179 deaths registered in Dublin were equal to an annual rate of 26.4 per 1,000 (against 23.0 and 24.4 in the preceding two weeks), the rate for the same period being 21.0 in London and 22.9 in Edinburgh. The 179 deaths in Dublin included 6 which were referred to the principal zymotic diseases (equal to an annual rate of 0.9 per 1,000), of which 4 resulted from whooping-cough, 1 from typhoid fever, and 1 from diarrhœa.

VACCINATION AWARDS.

M B.—The private vaccinations of a public vaccinator cannot be reckoned for the purposes of award under Section 5 of the Vaccination Act, 1867, nor should they be entered in his register of public vaccinations. That register is closely examined by the Government inspector on the occasion of his periodical visits, and it is upon his recommendation or otherwise that awards are made. One of the points which he invariably looks into is the regularity with which the public vaccinator adheres to the stational arrangements laid down by his contract with the guardians. Article 1 (1) of the Official Regulations of February 18th, 1868, prescribes that where a public vaccination station has been provided for a district, "no person resident within two miles thereof, and not being an inmate of the workhouse, shall be vaccinated under contract elsewhere than at such station, unless the vaccinator in the particular case be of opinion (which, if so, he is hereby required to note in his register) that, for some special reason, the person whom he purposes to vaccinate cannot properly be vaccinated at the station;" and, if the inspector finds that domiciliary vaccination has been unjustifiably excessive, he reports the facts to the Local Government Board, with the probable result that the public vaccinator loses his award altogether.

MEDICAL NEWS.

Dr. B. London, of Carlsbad, has received the Cross of an Officer of the Star of Roumania.

During the last academic year the number of registered students in the Paris Faculty of Medicine was about 4,000.

Medical Magistrates.—Drs. Evan Jones (Ty-Mawr, Aberdare) and Thomas J. Webster (Brynglâs, Merthyr Tydvil) have been placed on the Commission of the Peace for the county of Glamorgan.

Workhouse Infirmary Nursing Association.—At the eleventh annual meeting of the Workhouse Infirmary Nursing Association, Her Royal Highness the Duchess of Teck, the President of the Society, distributed the medals and gratuities. Miss Twining, in a brief address, described the objects of the Association and the special work for which the nurses were trained, encouraging them to elevate their calling by their energy and devotion. Twenty nurses had earned medals, and twenty-seven were the recipients of gratuities: of the latter, four had served the Association for ten years.

The Duke of Westminster has shown his appreciation of the work of the National Health Society by making a donation of £100 and raising his annual subscription to £20.

The Royal Infirmary, Liverpool.—Since the election of Mr. Rushton Parker to the post of full surgeon to the Royal Infirmary the office of assistant surgeon has remained vacant. While the new infirmary was being erected, and the work was carried on on a greatly reduced scale, it was not thought that the services of an assistant were needed, but now that the full complement of beds is again in use it becomes necessary to appoint a successor to the office. The election, which is by the trustees, has been fixed for June 2nd. There are at present four candidates in the field: Messrs. Damer Harrisson and George Hamilton, surgeons to the Northern Hospital; Mr. W. Thelwall Thomas, F.R.C.S., Demonstrator of Anatomy in the School of Medicine; and Mr. Robert Bickersteth, whose father and grandfather have been successively connected with the infirmary, either as surgeons or consulting surgeons, during the last eighty years.

General Practitioners' Union.—A general meeting of the Executive Committee of the above Union was held on May 13th, Mr. George Brown in the chair. The other members of the Committee present were Drs. Hugh Woods, J. B. Cook, F. H. Alderson, T. R. Atkinson, J. Dawson, W. E. Dawson, and A. C. Dove (Honorary Secretary). The following gentlemen were elected District Secretaries:—A. Phillips Hills, M.R.C.S.Eng., for Battersea; Cecil A. Digby, M.D., for Staffordshire; and John Grout, L.R.C.P., for Worcestershire. The following registered medical practitioners, having been duly proposed and seconded, were elected members of the Union:—J. Adams (Barnes), D. M. Barry (Grampound), R. F. Benham, G. G. Bird, T. E. Bowkett, H. W. Brighouse, A. H. W. Clemow, C. A. Digby (Hednesford), E. O. Fountain, J. Godding, E. C. Greenwood, J. H. Griffin, J. Grout (Lye), J. H. Gwynne, P. Z. Hebert, A. P. Hills, W. H. Horsman, A. Hunt, H. J. Jones, R. W. Jones, A. Kisch, C. F. Knight, F. Lawrance, R. H. Lloyd, W. C. Luffman, W. Y. Martin (Walkden), W. Moore (Stourport), E. Norton (Folkestone), R. F. Owen, W. L. Penny, H. C. Pope, C. H. Sers, J. P. Simpson, P. J. Slevin (West Drayton), G. Stevenson, H. C. Strover (Sandy), G. A. F. Tait, M. Townsend, C. A. P. Truman (Reading), and H. Walker.

The Better Protection of Children.—The annual report, which was presented the other day at the second anniversary meeting of the National Society for the Prevention of Cruelty to Children, must be regarded as very satisfactory, for though it is true that the balance sheet still shows a deficit, this is much less than it was a twelvemonth ago, and the scope and amount of the Society's work has immensely increased in that period. A considerable portion of their work consists in protecting children against unnatural parents. The mere list of horrible barbarities against their children, of which parents have, at the instance of the Society, been convicted, is appalling, and would, under almost any other conditions, have been deemed incredible. If they had done no other work than this they would deserve the support of all who take any interest in the welfare of those who are unable to help themselves. The work they are doing in the matter of infant life assurance must be well known to all our readers, and they have been not less active and perhaps even more successful in their crusade against baby farmers, their chief prize in this direction having been the conviction of Mrs. Reeves and the well-merited sentence of ten years' penal servitude passed upon her. The Society has only been at work two years, but it has succeeded in spreading itself all over England in that time and now has no fewer than 60 centres, besides 2 in Wales and 3 in Ireland. There is still plenty of work for the Society, and we trust it will be generously supported by the public during the current year.

MEDICAL VACANCIES.

The following Vacancies are announced:

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board, washing, and lodging. Applications to Joseph Eastwood, Secretary, 15, Richmond Terrace, Blackburn, by May 26th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Surgeon; must be F.R.C.S.Eng., and reside within four mile radius. Applications to the Chairman of the House Committee by May 26th.

CANCER HOSPITAL (Free), Fulham Road, S.W.—Honorary Pathologist. Applications to the Chairman of the House Committee by May 26th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board, residence, and washing provided. Applications to T. Storrar-Smith, Secretary, 24, Finsbury Circus, E.C., by May 28th.

COUNTY ASYLUM, Whittingham, Preston, Lancs.—Assistant Medical Officer and Pathologist. Salary, £200 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent.

COUNTY BOROUGH OF SHEFFIELD.—Medical Officer of Health. Salary, £500 per annum; must devote his whole time. Applications to the Chairman of the Health Committee, Town Clerk's Office, Sheffield, by May 27th.

COUNTY OF CAITHNESS.—Medical Officer of Health. Salary, £300 per annum, with £50 travelling and other expenses; must not engage in private practice, and reside in Wick. Applications to James Burns, County Clerk, Thurso, by May 25th.

COUNTY OF ROXBURGH.—Medical Officer for the County; to also act as Medical Officer under the Public Health Acts for the five districts of the county. Salary, £350 per annum and travelling expenses. Applications, with eighteen copies of testimonials, to the Chairman of the Medical Committee, Broomlands, Kelso, by May 28th.

DERBY AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Surgeon; not under 30 years of age. Salary, £160 per annum, rising £10 after six months, and £10 per annum afterwards up to £250, with midwifery fees. Applications to the Secretary, Mr. H. Bullivant, 73, Abbey Street, Derby, by May 23rd.

DUNSTABLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer. Salary, £180, rising £10 annually to £220, with residence, large garden and conservatory, rent and taxes free. Applications to F. W. White, Honorary Secretary, Princes Street, Dunstable, Beds, by May 26th.

DUNSTABLE FRIENDLY SOCIETY'S MEDICAL ASSOCIATION.—Dispenser. Salary, £50 per annum. Applications to F. W. White, Honorary Secretary, Princes Street, Dunstable, Beds, by May 26th.

GENERAL HOSPITAL, Birmingham.—Honorary Surgeon. Must be Fellow of one of the Colleges of Surgeons of the United Kingdom. Applications to Dr. J. D. M. Coghill, House Governor, by June 1st.

GENERAL HOSPITAL, Birmingham.—Assistant Physician for three years. Honorarium, £100 per annum. Applications to Dr. J. D. M. Coghill, House Governor, by June 1st.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer; double qualifications; must devote his whole time. Salary, £80 per annum, with board and lodging. Applications to the Chairman of the Medical Board by June 1st.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon, unmarried, and doubly qualified. Salary, £50 per annum, with residence, board, and washing. Applications to Oaks Webster, Secretary, by June 3rd.

HARTLEPOOL UNION.—Medical Officer and Public Vaccinator for the Greatham District. Proposed salary, exclusive of fees, £50 (if also appointed Medical Officer to the Greatham Hospital, joint salary £100) per annum; must reside within the district. Applications, endorsed "Medical Officer," to Geo. Kilvington, Union Clerk's Office, by May 27th.

KIDDERMINSTER INFIRMARY.—House-Surgeon, unmarried. Salary, £140, rising £10 annually to £170, with rooms in the infirmary and attendance. Applications to the Secretary by June 5th.

LEAMINGTON AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Resident Medical Officer, over 28 and under 40 years of age, married man preferred. Salary, £200 per annum, with residence, etc., and £50 for cab hire. Applications to Mr. J. B. Richardson, Secretary, 91, Queen Street, Leamington, by May 28th.

LIVERPOOL ROYAL INFIRMARY.—Honorary Assistant-Surgeon. Applications to the Chairman of the Committee ten days before election on June 2nd.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent. Assistant House-Surgeon for six months. Board, apartments, and washing provided. Applications to R. Hordley, Secretary, by June 2nd.

NOTTINGHAM BOROUGH ASYLUM, Mapperley Hill.—Assistant Medical Officer, unmarried. Salary, £125 per annum, with apartments, board and washing. Applications to the Medical Superintendent by May 25th.

ROYAL BERKS HOSPITAL, Reading.—Physician. Applications to the Secretary, John T. Hugo, at least ten days before the election on June 2nd.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Five Examiners in Anatomy; Four Examiners in Physiology; Examiners for Parts 1 and 2 of the Examination in Public Health; Five Examiners in Elementary Anatomy; Two Examiners in Elementary Physiology (First Professional Examination); and four Examiners in Midwifery (for the Third or Final Examination). Applications to Edward Trimmer, Secretary, by May 28th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand.—House-Surgeon. Applications to T. Beattie-Campbell, Secretary, by May 27th.

SALFORD UNION.—Assistant Medical Officer for Union Infirmary; double qualifications. Salary, £130 per annum, with furnished apartments. Applications, endorsed "Assistant Medical Officer," to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by May 26th.

SOUTHPORT INFIRMARY.—Assistant to the House-Surgeon for six months. Board and residence provided. Applications to Lieutenant-Colonel S. W. Wilkinson, Honorary Secretary, by June 1st.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. Annual fee, £30. Twenty copies of printed applications and testimonials to the Secretary of the Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by June 30th.

VESTRY OF FULHAM.—Medical Officer of Health, double qualifications, under 45 years of age. Salary, £400 per annum. Applications, marked "Applications for Medical Officer of Health," to the Clerk to the Vestry, Town Hall, Walham Green, by May 30th.

WARNEFORD HOSPITAL, Leamington Spa.—House-Surgeon; must devote his whole time. Salary, £100 per annum, with board, lodging, and washing. Applications to J. Warren, Secretary, by May 25th.

WORCESTER AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary, £140 per annum, with residence, and part of midwifery fees, also £20 per annum for cab hire. Applications to Mr. G. B. Gibson, Gasy Row, Worcester, by June 4th.

MEDICAL APPOINTMENTS.

BAILEY, J. Harold, M.B., Ch.B.Vict., appointed House-Surgeon to the Manchester Southern Hospital for Women and Children, and to the Manchester Maternity Hospital, *vice* A. W. Senior, M.R.C.S., L.R.C.P., resigned.

BENSON, Annette M., M.B., B.Sc.Lond., appointed Resident Clinical Assistant to the Paddington Infirmary, Harrow Road, *vice* W. S. Carpenter, M.R.C.S.E.

CARGILL, L. Vernon, appointed Clinical Assistant to the Royal South London Ophthalmic Hospital, St. George's Circus, *vice* Mr. J. L. Jaquet.

CROUCH, E. T., M.R.C.S., L.S.A., appointed Honorary Surgeon to the Royal Portsmouth, Portsea, and Gosport Hospital.

DICK, James, M.D.Glas., L.R.C.S.,Edin., appointed Medical Officer for the Harrington District of the Whitehaven Union.

EVANS, William George, F.R.C.S.Eng., L.R.C.P.Lond., appointed Clinical Assistant to the City of London Lunatic Asylum, Stone, near Dartford.

EYTON-JONES, J. A., L.S.A., appointed Medical Officer for the Gringley District, Yorks.

GILPIN, Frank, M.R.C.S., appointed Medical Officer, Stratford-on-Avon.

GRAHAM, P. F., M.D., M.Ch., M.A.O., appointed Medical Officer to the No. 1 District of the Limerick Union, *vice* F. W. O'Connor, F.R.C.S.I..

GRIFFITHS, Gilbert H., M.R.C.S., L.R.C.P.Lond., appointed House-Surgeon to the Wallasey Dispensary, *vice* Dr. Whiteley.

HALLIBURTON, W. D., M.D., B.Sc., M.R.C.S., appointed Examiner in Physiology at Oxford University.

HENDERSON, Jane B., L.R.C.P., L.R.C.S.Edin., appointed Third Assistant Medical Officer to the Holloway Sanatorium, Virginia Water.

KER, Alice, M.D., appointed Honorary Surgeon to the Birkenhead Lying-in Hospital, *vice* Dr. Lamb, deceased.

KINGDON, Edward Owen, M.R.C.S., L.R.C.P., appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator to the No. 3 District of the Holsworthy Union, *vice* Dr. John G. R. Symons.

LAING, Charles F., M.B., C.M.Glas., appointed Assistant Medical Officer to the Greenock Parochial Asylum and Poorhouse at Smithston, *vice* G. A. Bannetyne, resigned.

LOGAN, Thomas, M.D.Aberd., L.F.P.S.G., appointed Medical Officer North Brierley Union.

LUMLEY, B., M.R.C.S., reappointed Medical Officer for the Northallerton District of the Northallerton Union.

MACKENZIE, William Leslie, M.A., M.B., C.M., D.P.H., appointed Medical Officer of Health to the counties of Kirkcudbright and Wigtown.

MACVINE, John W., M.B., C.M., appointed House-Physician to the East London Hospital for Children.

MONTEAGLE, H. W. B., M.D.Glasg., appointed Medical Officer to the Manchester and Salford Provident Dispensaries Association.

MORTON, A. Stanford, M.B., F.R.C.S.Eng., appointed Assistant-Surgeon to the Moorfields Ophthalmic Hospital.

O'GORMAN, R. P., L.K.Q.C.P., L.R.C.S.Irel., appointed Medical Officer to the Manchester and Salford Provident Dispensaries Association.

POWELL, George William, B.A., M.B., B.Ch., appointed Extra Acting Physician to the Birmingham and Midland Free Hospital for Sick Children, *vice* C. W. Suckling, M.D.

ROBINSON, James, M.D.Brussels, L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer of Health for the Turton Urban Sanitary District.

RUTHERFORD, Thomas, M.B., C.M.Glasg. appointed Medical Officer for the County of Bute.

SALTER, F. J., L.R.C.P., L.R.C.S.Edin., appointed Assistant House-Surgeon to the Devonshire Hospital, Buxton.

SHAW-MACKENZIE, J. A., M.B., M.R.C.S., appointed Pathologist to the Chelsea Hospital for Women, Fulham Road, *vice* Dr. Morris.

SHIELS, George Franklin, M.D., C.M., F.R.C.S.Edin., appointed member of the Board of Examiners of the State of California Medical Society.

SMITH, Henry, M.B., C.M.Durh., appointed Medical Officer for the St. Nicholas District of the Durham Union.

SMITH, Robert G., M.A., B.Sc., M.R.C.S., appointed Assistant Medical Officer to the City of Newcastle Asylum, Gosforth, *vice* Alex. Simpson, M.B., C.M., resigned.

TIPLADY, William, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glas., L.M., appointed Acting Surgeon to the 25th Volunteer Brigade Royal Highlanders.

VICKERY, W. H., M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer to the North-West London Hospital, *vice* C. H. Fowler.

WARD, W. F., L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer for Scrosby, Retford.

WEAR, Algernon, M.B., B.S.Durh., appointed Resident Medical Officer to the Ida Hospital General Infirmary, Leeds, *vice* C. Leonard Lake.

WHEATLEY, James, M.D., B.S.Lond., D.P.H., appointed Medical Officer of Health for Blackburn, *vice* Dr. Barwise.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: Conjunctival Diseases. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. O. Sturges: Tuberculosis in Children.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Dr. J. R. Bradford (Arris and Gale Lecturer): On the Physiology of the Vasomotor System. Lecture I.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND, University College, 4.30 P.M.—Specimens:—Professor Thane, Mr. Lawrence. Papers:—Sir W. Turner: On the Relations of the Dentary Arcades in the Crania of Australian Aborigines. Professor Cleland: On Burial in Sand for Preparation of Bones. Dr. Herbert Spencer: On Ossification in the Head of the Humerus at Birth. Dr. Wardrop Griffith: On a Case of Congenital Malformation of the Heart. Mr. Lockwood and Dr. Rolleston: On the Situation of the Vermiform Appendix.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Theo. Hyslop: Delusional Insanity and Moral Insanity. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: The Tinea Group (Cryptogamic Affections).

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Dr. Sheridan Delépine: On the Changes observed in Healthy Arteries and in Tendon Ligatures during the first four weeks after Ligation. Dr. George Thin and Dr. Frank J. Wethered: Symptoms and Pathology of a case of Acute Inflammation of the Mucous Membrane of the Ileum from Climatic Causes.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Kingston Fowler: Clinical Demonstration on Cases of Mitral Disease. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. B. Lawford: Atrophy of the Optic Nerve.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Dr. J. R. Bradford (Arris and Gale Lecturer): On the Physiology of the Vasomotor System. Lecture II.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Buzzard: Selected Cases of Disease of the Nervous System. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Octavius Sturges: Broncho-pneumonia and its Relationship to Lobar Pneumonia and Empyema. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. G. C. Wilkin: The Common Forms of Disease of the Pharynx, Nasopharynx, and Fauces.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Mr. Lawson Tait: Further Observations on the Method of Restoring the Perineum.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Lecture: Tuberculosis, Human and Bovine. Practical Work: Examination of Sputum. Hospital for Consumption, Brompton, 4 P.M.—Dr. J. Kingston Fowler: Clinical Demonstration on Cases of Aortic Disease. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Gastro-intestinal Tract.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Dr. J. R. Bradford (Arris and Gale Lecturer): On the Physiology of the Vasomotor System. Lecture III.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Theo. Hyslop: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

PARKER.—On May 17th, at 7, Bloomsbury Place, W.C., the wife of Herbert Parker, M.R.C.S., of a daughter.

TATE.—On May 18th, at Woolwich, the wife of Alan Edmondson Tate, M.R.C.S., L.S.A., Surgeon, Army Medical Staff, of a daughter.

DEATHS.

BOOKEY.—At Mereside, Hanmer, Flintshire, on May 17th, from pleuro-pneumonia, Dr. Thomas Leeson Bookey, aged 42, deeply regretted. Friends please accept this intimation.

HIRON.—On Whit Monday, at Studley, John Hickman Hiron, M.R.C.S., second son of the late John Hiron, Esq., of Chipping Camden.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

TREATMENT OF STOMATITIS.

RHAMNUS would be obliged if some reader could recommend a good mouth wash to use in a case where the patient has very soft spongy gums and tongue liable to small recurring ulcers. The patient had syphilis some years ago and was well treated with mercury, etc. The gums are the chief trouble, on account of bleeding whenever touched with toothbrush, etc.

ANSWERS.

MAX.—We would recommend our correspondent to communicate with Mr. J. R. Upton, clerk to the Apothecaries Society, Blackfriars, E.C.

MEDICAL STUDENT.—The patient should consult a physician.

AN EXPLOSIVE MIXTURE.

DR. J. GRANT.—Potassium permanganate gives up oxygen to all organic matter, and with those substances which are readily oxidised, such as glycerine, sugar, syrup, etc., the oxidation is so rapid that the heat produced is sometimes sufficient to cause combustion.

NOTES, LETTERS, Etc.

DR. JOHN GORDON (Aberdeen) writes that he omitted to mention that the chloralamide employed by him in his observations, detailed in the BRITISH MEDICAL JOURNAL of May 15th, was kindly supplied to the Aberdeen Materia Medica Laboratory by Messrs. A. and M. Zimmermann, 6 and 7, Cross Lane, St. Mary-at-Hill, London.

DEGREES IN SPAIN.

OFFICIAL statistics recently published show that the following professional titles were conferred by the General Direction of Public Instruction in Spain, from 1880 to 1889, both years inclusive: Doctors of Medicine and Surgery, 388; Doctors of Pharmacy, 80; Licentiates of Medicine and Surgery, 5,591; Licentiates of Pharmacy, 1,822; Medical Practitioners of the Second Class, 51; Surgeon Dentists, 87; Medical Assistants, 1,812; Midwives, 443. It would seem, from these figures, that there is at least one country in Europe where an "accessible M.D. degree" is even less common than in England.

CHLORIDES IN DIPHTHERIA.

DR. ALBERT WILSON (Leytonstone) writes: In the BRITISH MEDICAL JOURNAL of May 9th, quoting a paper I read at the Pathological Society, there is a small error I wish to correct. I said that hydrarg. perchlor. in the strength of 1 to 5,000 (not 1 to 500) and iodine 1 in 500 would prevent the growth of the diphtheria coccus. It is an important fact for those who rely on hydrarg. perchlor. in the treatment of diphtheria. I do not think the efficacy of a 5 per cent. hydroch'oric acid solution in diphtheria is sufficiently known. It is rapid and certain in ordinary cases, but not sufficient in very severe cases. It is the hydrochloric acid in tinct. ferri perchlor. which checks the diphtherococci. The iron is inert.

DIVERTICULUM OF ŒSOPHAGUS.

MR. J. F. CRAIG, M.A., M.B., C.M. (Gosta Green, Birmingham) writes: I was called to a man, J. O., aged 55, who was recovering from an attack of acute bronchitis, and who was then suffering from a stabbing pain in the region of the heart. I diagnosed angina pectoris, and prescribed accordingly. Next day his son called, and said that shortly after I left, he suddenly brought up a piece of rind of bacon with strip of fat attached, and that since then the pain had all but gone. The piece of bacon—which he brought with him—measured seven inches long and

about half an inch wide, the edge of the fat being only slightly jagged. On going very carefully into the matter, I found that he had not tasted bacon or ham since the beginning of his illness, over seven weeks before, but he remembered having a hurried meal consisting largely of bacon about that time.

I take it that this is hardly a case of simple stricture, as in that case the fat would have been acted on in some way by the passage of other food. I am, therefore, inclined to believe that the bacon must have been lodged in some sort of diverticulum just above the cardiac end of the stomach, and that from the pain there was probably commencing ulceration.

Although we sometimes hear of pins and sharp-edged substances getting lodged in the œsophagus, I think the above sufficiently interesting to justify its being noticed.

The Pollock and Bellamy Memorial.

THE friends and former pupils of the late Dr. Julius Pollock and Mr. Edward Bellamy will be glad to learn that the steps which we mentioned a few weeks ago were being taken to raise a fund to perpetuate the memory of these gentlemen, in connection with their labours as senior physician and senior surgeon respectively, have been successful. A considerable sum of money has already been subscribed, and the form which the memorial shall take was decided at a meeting of the subscribers, held on Tuesday last, when it was decided that the most appropriate form of memorial would be the formation of an anatomical museum in the new extension of the Charing Cross school buildings. The wisdom of this resolution will not be questioned. Dr. Pollock, as treasurer of the school, was intimately identified with all the improvements which have taken place during the last few years, while entirely new and commodious buildings have been erected and a new wing has been added to the hospital. Mr. Bellamy was well known from his contributions to anatomy, and for many years has been identified with the teaching of anatomy at the school. As the completeness and extent of the museum proposed to be thus formed will depend to some extent upon the contributions to the memorial fund received by the treasurer, it is hoped that former Charing Cross students and other friends who have not yet subscribed will take an early opportunity of doing so. Subscriptions may be sent to Mr. Stanley Boyd (Dean), 131, Harley Street, W.; Mr. R. C. Ackland, 13, Savile Row, W.; or to Mr. G. T. Bishop, at the hospital.

Dr. Stevens's Testimonial Fund.

MR. CLAUDE C. CLAREMONT (Millbrook House, Hampstead Road, London) writes: The resignation of Dr. Henry Stevens of the office of inspector of vaccination, an office he has held for twenty-eight years (fourteen years in connection with the Medical Department of the Privy Council under Sir John Simon, and for a subsequent like period in the service of the Local Government Board), affords, in the opinion of many medical men to whom he is well known, a fitting opportunity to express, by a testimonial, their appreciation of Dr. Stevens's zealous and faithful services in the cause of public health.

Dr. Stevens, in conjunction with the late Dr. Seaton, prosecuted the original inquiry into the state of public vaccination in England and Wales. This lasted for four years, and at the end of that period they reported that, in their opinion, the cause of the falling off, both in quantity and quality, of vaccinations was due (*a*) to the injudicious and, in many cases, unworkable arrangements for attendance at vaccination stations; (*b*) to the insufficient remuneration of the public vaccinators; and (*c*) to the fact that the onus of getting compliance with the vaccination laws rested solely on the public vaccinators.

To meet these drawbacks, the Lords of Her Majesty's Privy Council first rearranged the stational attendances; secondly, procured a grant of money from Parliament to supplement the payment to public vaccinators; and, thirdly, boards of guardians were urged to appoint suitable officers to enforce the compliance with the Vaccination Acts (this was afterwards made compulsory by Act of Parliament).

At the conclusion of the preliminary inquiry, public vaccination was made a permanent inspectorate, Dr. Stevens taking the inspection of the Northern Counties down to and including Cheshire and Yorkshire for a few years, and afterwards he inspected a belt across England, comprising the Eastern and Midland Counties, and North and South Wales.

Subsequently, on an increase of the inspectorial staff, there were allotted to Dr. Stevens the five Home Counties of Surrey, Kent, Sussex, Hampshire and Berkshire, to which was added the metropolis, which Dr. Seaton was unable to inspect, and afterwards, when Dr. Seaton became Medical Officer of the Local Government Board, the educational vaccination stations throughout the country, including Edinburgh and Glasgow, and afterwards Dublin, were referred to Dr. Stevens for inspection.

Dr. Stevens is now in failing health, after a lifetime devoted to a vital branch of medical science. At such a time it is felt it will be gratifying to him to know that his efforts have not been unappreciated, and that there are many of his medical *confrères* glad of the opportunity to express in a tangible form their regret at the retirement from active duty of one who has worked so long and so well.

I shall be pleased to receive the names of any medical men who will associate themselves with me in this movement. Sir R. N. Fowler, Bart., M.P., has kindly consented to act as Treasurer of the Fund, and subscriptions may be sent addressed "Dr. Stevens's Testimonial Fund," care of Messrs. Prescott, Dimsdale, Cave, Tugwell and Co., 62, Threadneedle Street, London, E.C.

Committee: Claude C. Claremont, M.R.C.S., etc. (Chairman); F. Lowe Webb, M.R.C.P., etc., London; W. F. Grindley Pearse, L.R.C.P., etc., London; J. Francis Staines, L.R.C.P., etc., London; Victor A. Jaynes, M.R.C.S., London; John Sinclair, M.D., etc., Liverpool; Nathaniel E. Roberts, M.B., etc., Liverpool; Edmund Robinson, M.D., Birmingham; John B. Buist, M.D., Edinburgh; William Husband, M.D., Edinburgh. *Secretary:* Louis B. Claremont, L.R.C.P., etc., 31, Malden Crescent, London, N.W.

Testimonial to Dr. R. R. Rentoul.

THE following communication has been forwarded to the Editor:

Dear Sir,—A number of medical practitioners feel strongly that it would be not only ungrateful, but unjust, if they allowed the major portion of the expenditure connected with the successful opposition to the two Midwives Registration Bills to fall upon Dr. Rentoul. We recognise that, had he not initiated the now widespread opposition to these Bills, most probably one of them would now be law. It is deeply to be regretted that the Bills were not from the first opposed by powerful Associations, instead of the expenses, not to mention the time and anxiety spent, being allowed to fall upon an individual. It is not too much to say that a calamity to the public and the profession has been averted by the opposition to these Bills. As a personal expenditure of over £160 has been incurred by Dr. Rentoul, we trust you will subscribe, and induce all who have benefited by the work done to subscribe, to the above testimonial, thereby showing that, as a body of men, we are not insensible to services rendered. Subscriptions should be forwarded to Dr. Hugh Woods, Hon. Treasurer, 11, Archway Road, Highgate, London, N.—Yours faithfully,

HUGH WOODS, 11, Archway Road, Highgate, N.
LOVELL DRAGE, Burleigh Mead, Hatfield, Herts.
WALTER BUCHANAN, Paddock House, Chatham.
COLIN CAMPBELL, Uppermill, Saddleworth.
GEORGE BROWN, Colchester.
A. ORLANDO JONES, Harrogate, Yorkshire.
CHARLES R. ILLINGWORTH, Clayton-le-Moors, Lancashire.
H. MAINWARING HOLT, Norton Malton, Yorkshire.
RICHARD THOMAS JONES, C.C., Penygarth, Harlech.
LEONARD KIDD, Carlton House, Enniskillen.
J. E. DUNN, Preston.
JOHN BROOM, St. Paul's Road, Clifton.
JOSEPH THORNLEY, Halliwell Road, Bolton.
GEORGE BROWN, 9, Adam Street, Strand.
R. WEDDALL THOMAS, Rye Lane, Peckham.
CAMPBELL BOYD, Denmark Hill, S.E.
CLEMENT H. SERS, Queen's Road, Peckham.
JAMES DAWSON, Highbury New Park.
F. H. ALDERSON, Hammersmith, W.
GEO. B. MEAD, Newmarket.

The following subscriptions are acknowledged:

	£	s.	d.
Dr. Lovell Drage, Hatfield..	1	1	0
Dr. George Brown, Colchester ...	1	1	0
Dr. Orlando Jones, Harrogate ...	1	1	0
Dr. C. R. Illingworth, Acerington ...	0	10	6
Dr. Colin Campbell, Saddleworth	1	1	0
Dr. Walter Buchanan, Chatham ...	1	1	0
Dr. R. Thos. Jones, C.C., Harlech ...	0	5	0
Dr J. Paget Tomlinson, Kirkby Lonsdale ...	1	1	0
Dr. J. McNaught, Newchurch ...	0	10	0
Dr. R. G. White, Haughley	0	5	0
Dr. E. Kaye Smith, St. Leonard's-on-Sea ...	1	1	0
Dr. J. A. Collinson, Hanwell	0	5	0
Per Editor of *Hospital Gazette*.			
Dr. George Brown, Editor of *Hospital Gazette*	1	1	0
Dr. R. Weddall Thomas, Peckham ...	1	1	0
Dr. C. H. Sers, Peckham ...	1	1	0
Dr. Alfred Freer, Stourbridge	0	7	6
Dr. J. Atkinson, Crewe ...	2	2	0
Dr. C. J. Renshaw, Ashton-upon-Mersey	1	0	0
Dr. John Broom, Clifton ...	0	10	6
Dr. Campbell Boyd, Denmark Hill, S.E.	1	1	0
Dr. James Craig, Llandudno	0	10	6
Dr. Charles P. Creed, West Kensington, W.	0	5	0
Dr. Herbert A. Lawton, Poole	0	5	0
Members of Sheffield Medico-Chirurgical Society *per* Dr. W. S. Porter	2	2	0
Dr. William Ogle, Derby ...	1	1	0
Dr. Hugh Woods, Highgate	1	1	0
Dr. D. B. Balding, Royston	1	1	0
Dr. George Oliver, Harrogate	0	10	6
Dr. H. C. Strover, Girtford	1	1	0
Dr. James Dawson, Highbury	0	5	0
Dr. F. H. Alderson, Hammersmith	0	5	0

The Treatment of Pneumonia.

DR. C. R. ILLINGWORTH (Accrington) writes: Dr. Windle must prove that my pathology in pneumonia and my treatment are opposed to common sense. That they are not in accordance with modern teaching is no argument against them. 1. Pathologists who believe in a pneumococcus causing croupous pneumonia, and treat cases accordingly, will not be able to show a better record of cures than I have shown; and I deny that pneumonia is a specific febrile disorder. 2. I do not state that I give drugs to cause hypersecretion. I give acetate of ammonia to remove the congestion in the pulmonary capillaries. 3. All the cases were sthenic cases, with hot skin, flushed face, and very quick pulse. They were cases of croupous pneumonia. But this is a side issue. Never mind the asthenic cases at all. There is quite enough to argue about with the sthenic. Can Dr. Windle show a better record of 22 cases? 4. Finally, as regards the temperature, it is only one of the many modern medical fads in pneumonia, very useful as a diagnostic agent in many disorders, but utterly useless as regards treatment and the guides to it in pneumonia. Lauder Brunton advocates the use of digitalis to reduce the temperature. But digitalis is a cardiac depressant, and as the drug depresses the heart's action Dr. Windle will find the temperature commensurately falling with the pulse. Of what use, therefore, is the thermometer in such a case?

Treatment of Influenza.

DR. A. HANBURY FREER (Frizinghall) writes: During the last epidemic of influenza I wrote to the BRITISH MEDICAL JOURNAL, pointing out the value of a method of treatment I had seen advocated by Dr. Illingworth, of Acerington. By this means such sequelæ as bronchitis and pneumonia were avoided, recovery was rapid, and convalescence never prolonged. In view of the large number of deaths from bronchitis and pneumonia following influenza in the present epidemic—many of which deaths, I believe, would have been avoided had Dr. Illingworth's method been adopted—I quite agree with Dr. Illingworth when he says[1] that further attention should be paid to the iron treatment of chest mischief and its *modus operandi*.

[1] BRITISH MEDICAL JOURNAL, May 16th, 1891.

My attention has been called to a paragraph in *Chambers's Journal* of February 22nd, 1890, page 121, pointing out the value of petroleum in lung, throat, and bronchial disease. I have more than once heard an old gentleman give a vivid description of how a bad cough, a cold, or, as in his own case, a severe attack of catarrhal influenza during the last epidemic, has been cut short, and even cured, by one dose of petroleum. He had learned its use out in Texas. I should be glad to know if any of your readers have had any experience of this drug, or can inform me as to how the curative properties of the oil are exerted.

HALVIVA IN INFLUENZA.

DR. G. YEATES HUNTER (Retired Brigade-Surgeon Bombay Army) writes: I venture to invite your attention to the fact that halviva is of undoubted efficacy in influenza, as I have experienced in my own case and have seen in the cases of others. Influenza, judging from the nature of the accompanying fever, the general *malaise*, the aching, and the intense prostration, would seem to be one of the numerous manifestations of malaria, hence probably the value of "kreat-halviva" in its treatment.

QUININE IN WHOOPING-COUGH.

DR. J. REYNOLDS (Brixton) writes: In the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of May 9th (No. 424), "Quinine in Whooping-cough," Professor Emil Ungar, of Bonn, advocates the free use of quinine in this complaint, and advises large doses to be given; and further, states that the differences of opinion as to the value of this mode of treatment are due to the difference in the dose employed. This is exactly correct. In the *Lancet* for 1876, I advocated the treatment of whooping-cough by the administration of large doses of quinine, and have ever since that time (now fifteen years) treated every case of pertussis that has occurred in my practice in this manner, and with unvarying success. I usually order the quinine to be dissolved in hydrobromic acid, and add a little bromide of potassium, as this seems not only to help to allay the cough, but to prevent the unpleasant cerebral symptoms which large doses of quinine, when given in the ordinary manner, are apt to induce.

I feel sure that an extended trial of this remedy will prove that, of all the drugs which have from time to time been exhibited for the alleviation of this distressing malady, not one can compare with quinine in harmlessness, speed, and certainty of favourable result. As regards the dose: In the case of a child 3 years old, I give three grains every four hours, and have never yet seen any disagreeable symptoms arise during the treatment. Of course, the bitter taste is a minor objection, but so far as my experience goes, it is soon overcome by a little firmness on the part of the mother or nurse.

DIFFICULT LABOUR OWING TO CORD ABOUT CHILD'S NECK.

DR. A. E. L. CHARPENTIER (Uxbridge) writes: On April 23rd, at 6 P.M., I was called to Mrs. P., a multipara, who had been in labour for five hours. The presentation was the head in the first position, and the labour progressed favourably until the head passed the vulva. I then perceived that the cord was wound once and a half round the child's neck. With every pain the child's face became cyanosed, and the tension on the cord became very great, but the child made no further progress. As matters were becoming serious for the child I tied the cord in two places and cut it between the ligatures at the neck, when the labour terminated naturally.

On measuring the cord it was found to be only eighteen inches in length, so that the twisting round the neck only allowed about six inches from the neck to the attachment of the placenta.

LETTERS, COMMUNICATIONS, ETC., received from:

(**A**) Dr. Aikman, Birnam, Guernsey. (**B**) Dr. T. Lauder Brunton, London; Mr. A. H. Benson, Dublin; Mr. W. P. Bridges, Parkhurst; Mr. W. L. Batten, Calne; Mr. R. W. Burnie, Bradford; Mr. H. T. Batchelor, Queenstown; Dr. J. M. Booth, Aberdeen; Dr. Berdoe, London; Dr. H. Barnes, Carlisle; A. Barber, M.B., Richmond, Yorkshire; J. H. Bailey, M.B., Manchester; Mr. James Berry, London. (**C**) Mr. J. H. Crisp, Chippenham; Dr. J. L. Callaghan, Colyton; Mr. T. L. Craister, Cala, Cape Colony; Mr. E. Clarke, London. (**D**) Mr. R. Denison-Pedley, London; H. Dickie, M.B., Morpeth; Dr. P. M. Deas, Exeter; Mr. J. Dane, Boston; Dr. V. Dickinson, London; Dr. W. H. Daly, Pittsburg; Mr. W. Dale, Shanklin. (**E**) Mr. W. R. Edmond, Chew Magna; Mr. A. R. Edwards, London; Mr. J. H. Edwards, Birmingham; Mr. H. F. C. Eagle, London; Mr. R. R. Edwards, London; Mr. T. S. Ellis, Gloucester. (**F**) Surgeon-Major J. Foss, Chelsea; A. H. Frere, M.B., Frizinghall; F.R.C.S., Medical Staff; Mr. J. W. Fry, Wateringbury. (**G**) Mr. G. Gravells, Bedford; Mr. J. Gibson, Greetland; Dr. A. Graham, St. Leonard's-on-Sea; Mr. J. Gabb, Bewdley; Mr. C. D. Greenwood, Clapham; Mr. J. Graham, Dumbarton; A Graduate; Mr. G. B. Gibson, Worcester. (**H**) Mr. C. Hogg, St. Leonard's-on-Sea; Mr. J. W. Harrison, Sheffield; Dr. N. Hanika, Manchester; Mr. J. D. Harris, Exeter; Brigade-Surgeon G. Hunter, London; Mr. J. Hutchinson, London; Dr. W. D. Halliburton, London; Dr. W. Harrison, Matlock; Dr. W. P. Herringham, London; Dr. P. Hicks, Leamington; Mr. F. E. Henbeck, West Ham. (**I**) Dr. C. R. Illingworth, Accrington; Impetus. (**J**) Mr. S. E. Johnson, Sharpbrook; Mr. F. B. Jessett, London; Mr. E. Lloyd Jones, London; Japan. (**K**) Dr. Norman Kerr, London; Dr. Alice Ker, Birkenhead; Mr. A. A. Kanthack, Simla; Deputy Surgeon-General Kilkelly, Dublin; Messrs. Krohne and Sesemann, London. (**L**) Sir J. Lister, London; The Long Suffering One; Dr. Lush, Weymouth; Mr. T. Leeds, London; Mr. G. R. Leeper, Ederpey; Mr. Jordan Lloyd, Birmingham; The Liquor Cornish Co., London. (**M**) P. Michelli, London; Mr. J. Y. W. MacAlister, London; Max; Dr. J. W. Moore, Dublin; Mr. G. Meadows, Hastings; Messrs. S. T. Matthews and Co., Birmingham; A Member; Dr. H. W. G. Mackenzie, London; Mr. C. A. Morton, Bristol; M.S.; Mr. A. S. Morton, London; Dr. R. Main, Newbury; Mr. E. Mead, High Ongar; Mr. J. B. McKay, Princes Risboro; Dr. H. A. H. McDougall, Wincanton. (**O**) Dr. W. Ogle, Derby. (**P**) Mr. G. C. Pauli, Bristol; Mr. H. Fell Pease, M.P., London; Dr. R. J. Purdon, Belfast; Practitioner: Dr. F. Payne, London; The President of the Pharmaceutical Society, London; Major L. W. Pead, Altcar. (**R**) Mr. R. Rauschke, London; Mr. T. F. Raven, Broadstairs; Professor Rutherford, Edinburgh; The Registrar of the Royal College of Surgeons of Edinburgh; Mr. A. W. Mayo Robson, Leeds; The Registrar of the Royal College of Surgeons in Ireland, Dublin; Dr. Rowland, New Amsterdam. (**S**) Dr. Sykes, Mexborough; Mr. H. Solomon, Manchester; Mr. R. G. Smith, Gosforth; The Secretary of the Crystal Palace, Sydenham; The Secretary of the General Practitioners' Union, London; Dr. T. W. Shore, London; Mr. G. T. A. Staff, St. Ives; Dr. G. F. Shiels, San Francisco; Mr. T. Smailes, Hanley; Mr. J. Scott, Bromley; Mr. W. Johnson Smith, London; Mr. P. L. Sclater, London; The Secretary of the Workhouse Infirmaries' Nursing Association, London. (**T**) Mr. E. Thompson, Omagh: Dr. Trevelyan, Leeds; Mr. J. H. Targett, London; Mr. E. Trimmer, London. (**U**) Un Pauvre Bossu. (**W**) Mr. O. S. Wraill, Over Darwen, Mr. J. Walsh, Oldcastle; Dr. H. Woods, London; W. G.; Dr. Wolfe, Glasgow; Dr. S. Wilks, London; Mr. F. C. Wood, Nottingham; Dr. S. White, Sheffield; Mr. H. Wilkinson, Dassett Magna; Mr. T. J. Webster, Merthyr Tydvil; Dr. E. Willoughby, London; Mr. J. H. White, Monte Caseros, Corrientes; Dr. J. Wheatley, Blackburn. (**Y**) Mr. S. Yearsley, Crewe, etc.

BOOKS, ETC., RECEIVED.

Medico-Legal Experience in Calcutta. By S. Coull Mackenzie, M.D. Edinburgh: E. and S. Livingstone.

Anatomy. Part IV. Abdomen. Catechism series. Edinburgh: E. and S. Livingstone.

Application de la Méthode Antiseptique aux Accouchements. Par Dr. Just Lucas-Championnière. Paris: A. Coccoz. 1891.

My Doctors. By a Patient. London: Skeffington and Son.

La Grande Chirvrgie de Gvy de Chavliac. Chirvrgien, Maistre en Médecine de l'Université de Montpellier, composee en l'an 1363. Revue etc par E. Nicaise. Paris: Félix Alcan. 1890.

Des Déformations Osteo-articulaires. Par le Dr. Albert Lefebvre. Paris: Félix Alcan. 1891.

Materia Medica and Therapeutics. By John V. Shoemaker, A.M., M.D. Philadelphia and London: F. A. Davis. 1891.

The Physical Signs of Cardiac Disease. By Graham Steell, M.D. Second Edition. Manchester: J. E. Cornish. 1891.

Notes on Surgery for Nurses. By Joseph Bell, M.D., F.R.C.S.Edin. Edinburgh: Oliver and Boyd. 1891.

The Revelation of Trinity. By S. B. G. McKinney, M.A. London: Elliot Stock. 1891.

Manuale di Terapia clinica delle Malattie veneree, sifilitiche e della Pelle. Del Dottore Luigi Carusi. Napoli: Stab. Tipografico dell' Iride. 1891.

Quain's Elements of Anatomy. Edited by Edward Albert Schäfer, F.R.S., and George Dancer Thane. Vol. I, Part II. General Anatomy. By Professor Schäfer. Tenth edition. London: Longmans, Green, and Co. 1891.

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A PLEA FOR THE SCIENTIFIC STUDY OF INSANITY.

Being the Substance of Addresses delivered before the Royal Academy of Medicine of Ireland and the Medical Institution of Liverpool.

By J. BATTY TUKE, M.D., F.R.C.P.E.,

Medical Superintendent of the Saughton Hall Institution for the Cure and Care of the Insane.

History of the Study of Insanity.—The Reliance placed on Psychology.—Its Insufficiency as a Basis for the Study of Insanity.—Insanity a Symptom produced by many Morbid Conditions.—The Etiological Method of Investigation.—Illustrated by the Study of Over-excitation.—Physiological Hyperæmia of the Cortex.—Transition to a Pathological Condition.—The Lymphatic System.—Mania and Melancholia related to the Intensity of the Pathological Process.—Secondary Disturbances of Brain Nutrition.—Treatment.—The Dangers of Amusements.—The Need for Well-trained Hospital Staffs.—Hospitals for the Insane.

I COME to ask you to consider a question of the highest importance, not only to the medical profession, but to the public at large; that question is, Does the study of insanity occupy that position in the realm of medicine which it ought to occupy? In my opinion it does not; it does not stand on the same level as other departments of medicine, and is regarded by the profession and the public as in a great measure dissociated from them. It has been often said that general and so-called psychiatric medicine stand divorced. With this statement I cannot agree, for the simple reason that I do not believe the two have ever been formally joined in the bonds of matrimony; and the object of this address is to show, first, the causes and consequences of separation; secondly, how union may be brought about, and the results which may be anticipated from it.

The main reason why this union has never occurred is that the study of insanity has not been conducted on the same principles as those on which general medicine has been founded. Anatomy, physiology, and pathology have been almost, if not entirely, ignored; and psychology has afforded, in association with clinical impressions, the institutes of so-called psychiatric medicine. Brief reference to the history of the subject will enable us to understand how this has come about.

The study of insanity in any form is barely a hundred years old. The revulsion of public feeling against the system of cruelty and neglect under which the insane had suffered for centuries produced at the end of the last century a great change in their condition. The large proportion were relegated to asylums, where for the first time they came under the supervision of medical men. Almost inevitably the prominent symptom—mental aberration—forced itself on the minds of these observers, and their patients grouped themselves according as the prominent symptoms were exaltation, depression, or obfuscation of feeling. Nomenclature was based entirely on psychological considerations, and, although a large variety of such classifications were advanced, they all resolved themselves practically into the one enunciated two thousand years before by Hippocrates. The varieties of insanity were considered under the terms mania, melancholia, and dementia, which, to all intents and purposes, assumed, in the mind of the profession and the public, the position of diseases. This position of matters necessarily served to concentrate attention unduly on the psychological aspect of the condition, and to keep in the background the study of the physical conditions, of which the mental aberrations were mere symptoms. The one exception to this rule was general paralysis of the insane, which was marked off as a distinct pathological entity, possessing a fairly consistent etiology, symptomatology, and pathology. So strong was this psychological influence, and so long did it continue unchecked, that we find in the Official Nomenclature of Diseases drawn up in 1871 by a Joint Committee of the Royal College of Physicians of London, all the insanities (general paralysis included) ranged under the head of Disorders of the Intellect, of which six were enumerated—mania, melancholia, dementia, paralysis of the insane, idiocy, imbecility. Surely nothing could show more thoroughly to what an exorbitant extent psychology had dominated the study, and had influenced the profession, than this formal renunciation of any connection between disease and insanity on the part of such an important medical body, which emphasised its opinion by designating the insanities "disorders." Thanks to the works of Van der Kolk, Morel, and certain members of the Scottish school, this nosology was materially changed in the issue of 1881, when the same body advanced a fairly good, although somewhat confused, system of nomenclature, based partly on etiology, partly on psychology, and partly on clinical considerations.

The dominating influence of psychology shows itself strongly in the literature of the subject. Almost without exception, authors have commenced their works by disquisitions on mental philosophy. Many of these attempts to analyse mind, and to follow the course of its action in insanity, are of a very high order, and are doubtless of great value to the philosopher of abstract science; but the very highest of them brings us no nearer to the main conception that the insanities are symptoms of various morbid conditions of the brain. It was not till the end of 1889 that a systematic book on insanity was published, beginning with a description of the organ through which mind is manifested, and through disease of which madness in every form arises. To Bevan Lewis belongs the high honour of first directing attention to the absolute necessity of study of the minute anatomy of the brain, and of showing throughout his colossal work how any conception of cerebral morbid processes is impossible without an intimate knowledge of nervous histology. In like manner, physiology and pathology have been neglected. The vast advances which experimental physiology has made within the last quarter of a century have had but slight perceptible influence on the general current of thought; and pathology, in the broad sense of the word, has been equally inactive. It is true we have been made fairly acquainted with the morbid changes found in the brains of the insane; and that (again thanks to Bevan Lewis) a chain of evidence is being constructed, showing the possible and probable connection between certain lesions and certain classes of symptoms. But utter vagueness exists as to the cerebral conditions in the early stages of insanity—conditions which, I submit, must be attacked by the physician in order to obtain cure. It is to the study of these initial morbid states that we must apply ourselves; they are the originators of symptoms; and, until we understand their nature, treatment cannot be applied, except empirically.

To all intents and purposes the department of medicine which undertakes the treatment of the insane is guided by psychology and clinical experience. We can always gain an insight into the position of a science by examining the papers set to candidates professing acquaintance with it, and seeking special recognition and honours following on the passing of examinations on the subject. The Medico-Psychological Association of Great Britain and Ireland has instituted examinations for a "Certificate of Efficiency in Psychological Medicine," which is granted on candidates passing certain examinations. The candidates are for the most part assistant medical officers of asylums. I have examined the questions set at various times for this examination, and have failed to find a single instance of one bearing on anatomy or physiology. It is true in the official notice of these examinations it is stated that candidates must be examined on the "Healthy and Morbid Histology of the Brain and Spinal Cord;" but, as I have said, healthy anatomy finds no place in the various published papers. The candidates are fairly tested in morbid histology, but the mass of the questions bear on psychology and clinical experience. Amongst the psychological questions we find: "Give an Account of the Will. How far do the Phenomena of Insanity illustrate it?" and amongst the pathological, "Explain the Pathology of Loss of Memory." Amongst the clinical questions we find a large number bearing on the candidate's views on certain clinical groups; but so vague and conflicting is the literature of the subject that anyone might undertake to answer the majority of these questions in two different ways—one diametrically opposed to the other—and quote authority for either statement. Take, for

instance, general paralysis. The most contradictory opinions are expressed in the various textbooks as to its etiology and pathology. One set of writers asserts—and I am sure rightly—that its symptoms are caused by a subinflammatory condition of the membranes and cortex; another that they are the result of a "premature senility;" and, in like manner, the mere description of the symptoms of such a condition as puerperal insanity is of the most varied character. It may be urged that great disparity of opinion exists on many points in medicine, and that an absolute consensus of opinion exists on few. This is so; but surely no one will venture to say that the foundations of general and so-called psychiatric medicine are equally firm, or established on similar principles. No; the general conception of insanity is on the same level as that of "the dropsy" a century ago; and its varieties, mania, melancholia, and dementia are not one whit more pathologically definite than the anasarca, ascites, and hydrothorax of that period; and they must remain so till such time as the subject is studied by the same lights as those which enabled the anatomist and pathologist to break up the generic term dropsy into a series of widely different conditions possessing a common symptom.

As I have said, the official nosology and some textbooks recognise certain etiological or clinical groups of insanity, such as puerperal mania, senile dementia, and epileptic insanity; but, without exception, mania, melancholia, and dementia maintain their nosological position as distinct diseases, as concrete morbid conditions, and we seek in vain for any attempt to explain their causation on pathological principles. Whenever any one of these conditions is believed to have resulted from so-called "moral" causes, the reader is left to infer that a psychological continuity exists between cause and effect, without the intervention of any morbid cerebral factor. When a man becomes melancholic after a period of depressed emotion, the melancholia is suggested as an extension of the emotion; or, when another becomes maniacal after a period of excitement, the mania is suggested as its prolongation.

I would like to ask you to consider what grounds there are for regarding these three states of mind as concrete conditions, and for maintaining them in the position of diseases. Certain clinical observations serve to show that they have no right to any such position. In the first place, during the prodromal period of many cases of insanity, excitement and depression alternate: secondly, in many acute cases, mania and melancholia co-exist; that is, it is impossible to say whether they are cases of maniacal melancholia or of melancholic mania; thirdly, as many cases run their course the symptoms are consecutively mania, melancholia, and dementia; and, fourthly, in the condition called *folie circulaire* the same sequence of symptoms occurs time after time. A man may be melancholic in one week, maniacal the next, and demented the week after. In such cases, then, how is it possible to apply any one of these terms to indicate the actual nature of the disease under which a patient is labouring? Mania, melancholia, and dementia are merely convenient clinical terms to express the mental condition of a patient at a given time, and have no higher function. That there is no necessary psychological connection between the character of the emotional cause and that of the symptom is shown by the fact that in many cases depressing emotions are followed by maniacal symptoms, and that undue excitement may result in morbid depression. I trust that sufficient has been said to show that psychological considerations afford insufficient foundations for the scientific study of insanity, and should only play a subservient part in nomenclature.

How, then, must we regard insanity? It is not a disease. It is a symptom produced by many morbid conditions, which may arise primarily in the brain; or, secondarily, from depraved conditions of the general system. As we analyse cases as they present themselves, we find their insanity is traceable, in something like 90 per cent., to eight great classes of causes:—

1. Idiopathic morbid processes (that is, commencing primarily in the encephale itself), produced by (*a*) over-excitation of the cortex; (*b*) the subacute inflammation of general paralysis; (*c*) acute inflammatory action.
2. Traumatic injury.
3. Adventitious products, tumours, apoplexies, etc.
4. Secondary effects of other neuroses; epilepsy, hypochondriasis, hysteria, etc.
5. Concurrent effects on the brain of diseases of the general system; syphilis, tuberculosis, etc.
6. Toxic agents.
7. Concurrent effects on the brain of evolutional and involutional conditions; adolescence, pregnancy, the puerperal, the climacteric, and the senile periods.
8. Heredity.

Certain of these causes produce demonstrable changes of tissue; for example, the inflammations, the hyperæmia of over-excitation, traumatism and adventitious products, epilepsy, syphilis, toxic agents, and senile degenerations; others presumably produce changes in the various central constituents, the presumptions being founded on clinical and pathological analogies. It is not that the morbid action of these causes is undemonstrable, but that they are not yet demonstrated, mainly because the conditions produced do not often prove rapidly fatal. Heredity as a cause occupies the peculiar position of acting in two ways; first, as a predisposing cause, and so being a factor common to most forms of insanity; and secondly, as, in certain cases, acting as the sole factor, inducing symptoms without the intervention of any traceable active exciting agency.

Any classification based on etiology can only be held as provisional till such time as a nosology of the various conditions can be founded on the highest scientific platform—that of pathological anatomy. It is possible that as this line of inquiry is followed up certain classes of cases may be found to have been placed under one group which may require to be broken up; or, on the other hand, that subsequent investigation may show that the same pathological conditions may underlie varieties which have been erected into species on grounds of origin or appearance which are not essential.[1] Such rearrangements may be, and indeed have been, made in every department of medicine. But I submit to you that the etiological method of investigation leads directly to special attention being given to the consideration of the changes produced in the convolutions brought about by the action of the various causes; that it has been successfully pursued as regards certain of them; and that, if followed up in connection with others, it must result in important disclosures.

It would be impossible in the time at my disposal to attempt to refer to the effects in morbid action of the several causes adduced. I shall therefore confine myself to the consideration of one only, over-excitation of the brain, and endeavour to show how it may bring about structural changes, which in their turn produce mental symptoms. And I choose this class of causes for two reasons: first, because it will enable me to lay before you certain anatomical considerations which are applicable to the insanities at large; and secondly, because, so far as I know, no attempt has as yet been made to follow its results in morbid action.

Over-excitation of the brain is universally acknowledged as an inducer of insanity without the intervention of any other morbid factor; and the term "idiopathic" is strictly applicable to that form of irritation, the cause of which is undue exercise of the function of that organ, and the effects of which are expended on the encephale. Over-excitations, whether produced by such emotions as joy, sorrow, fright, anxiety, by worry, or by unduly prolonged intellectual action, are generally spoken of as "moral" causes, and in many works on insanity and in asylum reports are placed in strong contradistinction to "physical" causes, the psychical influence of the former being apparently held to be sufficient to account for the subsequent phenomena, irrespective of their action on the tissues of the brain. Very generally, as I have said, a psychical continuity is suggested, and no attempt has been made to connect the action of the cause with its effects in disease on the cortical constituents. But due consideration of the facts of anatomy and physiology ought to serve to demonstrate that no distinction exists between "moral" and "physical" causes; that, in effect, the former are as much physical as traumatism or alcoholic poisoning.

There is sufficient evidence to prove that when the psychical

[1] For example, puerperal insanity; insanity occurring during childbed may possibly be of toxic origin, or may be due to anæmia, or may be due to idiopathic causes.

functions of the cortex are actively exercised hyperæmia of the active region is an immediate consequence. The observations of Mosso cannot be called in question, and I have had under observation two cases in which distinct hyperæmic bulging of the cortex through openings in the skull occurred during mental action. The bulging was steadily maintained whilst mental action continued; in degree it depended on the intensity of the action, and steadily increased according to the length of time it persisted until a certain maximum point was gained. With the withdrawal of stimulus the bulging gradually disappeared. The deduction to be drawn from this phenomenon is aptly put by Crichton Browne: "The blood vessels are clearly made for the brain, and not the brain for the blood vessels; and the amount of blood supplied to the brain and its several parts is determined, not by vascular domination, but by the functional activity of the nervous tissues."

The vessels directly involved are those which supply the cortex of the superior frontal and superior lateral aspects of the cerebrum, and are the terminal twigs of the three cerebral arteries, which are disposed in the cortex in an extremely rich plexus. When we look at this rete mirabile can it be doubted that it plays a leading part in the phenomena of cerebral action and that implication of its anatomical and physiological conditions must result in great and rapid perversion of function? The vasomotor influences which govern this rich plexus are probably of two kinds, vaso-constrictor and vaso-dilator. The vasomotor centre is, under ordinary circumstances, in a state of moderate tonic excitement; but there is experimental evidence to show that alterations in blood pressure may be produced reflexly by stimulation of the cerebral cortex acting on the medullary centre.

Time will not serve to discuss now in full the question of vaso-dilator nerves. I therefore quote the conclusions of Gaskell: "The presence of special vaso-dilator nerves for the blood vessels of every part of the body is an accepted article of faith for almost all physiologists of the present day. Owing, however, to the fact that in most instances such nerves are found mixed up with the vasomotor nerves the evidence upon which their existence is based is, in the majority of instances, indirect rather than direct. Fortunately we possess among the vaso-inhibitory nerves a few examples, the separate existence of which is beyond dispute," namely, the inhibitory nerves of the heart, the vaso-dilators contained in the chorda tympani and small petrosal nerves, and the nervi erigentes. Considering the close analogy between the active functional congestion of the cortex and of the glands it may be fairly assumed that, as the chorda tympani, the glosso-pharyngeal and other nerves pass to their ultimate areas of distribution they send off vaso-dilator fibres to the membranes and convolutions.

Moreover, we must take into account the interesting experiments of Roy, on which he founds a theory that the products of metabolism have considerable effect on the capillaries of a region called into activity. His opinion is based on the absence of anatomical proof of the existence of cerebral vasomotor or vaso-dilator nerves, and on the effects of injection of filtrates prepared from brains showing acid reaction. The injection of such filtrates is followed rapidly by hyperæmia. Roy concludes: "that the chemical products of cerebral metabolism contained in the lymph which bathes the walls of the arterioles of the brain can cause variations of the calibre of the cerebral vessels; that in this reaction the brain possesses an intrinsic mechanism by which its vascular supply can be varied locally in correspondence with the local variations of functional activity."

In the present state of knowledge of the subject it is impossible to come to a definite conclusion as to the mechanism of functional cortical hyperæmia. I cannot now advance various arguments leading me to the belief that both sets of nerves may exercise influence; that stimulation of the vaso-dilator system is the immediate producer of functional hyperæmia; that subsequent inhibition of the vasomotor system of nerves assists to maintain it; and that the products of metabolism, especially under diseased conditions, also exercise a powerful influence.

Functional hyperæmia is in every respect a condition of health, one necessary for the provision of temporary nutriment during temporary activity, ceasing with the withdrawal of stimulus, when the calibre of the vessels is reduced to its original dimensions through the constricting nervous influence. Anatomical arrangements favour it. The rich plexus of vessels in the pia mater is always full—it might be said, over-full—in conditions of health; for the greater veins of this membrane enter the superior longitudinal sinus at an angle so as to direct the blood as it enters the sinus against the general backward current (Moxon), and thus maintaining a mild mechanical congestion. The increase of bulk of the convolutions due to functional hyperæmia is, under conditions of health, provided for by the displacement of cerebro-spinal fluid into the elaborate system of lymph spaces in the pia, the subdural space, and the dura mater, and into the cisterns at the base. All these spaces and cisterns are in direct communication with the ventricles, and with the great spaces in the spinal column. The fluid reaches the extra-skeletal lymphatics by perivascular and perineural conduits, in fact, it escapes by every foramen of the skull and spinal column.

However much functional hyperæmia may be a condition of health, demands on the local circulation may be so great, and may be so long continued in consequence of the persistence of intellectual and especially of emotional activity, that, as in other organs, the physiological line may be passed, and pathological conditions may be induced, not confined to the vessels themselves, but extending to the tissues they supply. If the nutrition of the cells is unduly interfered with for any long-continued period of time a series of changes ensues, not only in the cells themselves, but also in the vasomotor and vaso-dilator control systems, which may be temporary or permanent according to circumstances. The circulatory apparatus is adjusted to meet the increased demand, but the cells being stimulated beyond the health limit, a condition of unstable equilibrium between nutrition and function is reached, and consequently, instead of normal discharge of energy, irregularity of discharge is produced by the prolonged maintenance of over-vascularity. The continuous excitation demands a greater supply of nutriment, and in consequence gradually increasing strain is laid on the vaso-control system, till at length one of two events occurs—either a diseased balance between nutrition and function is reached, or the balance is completely destroyed. In the first case, discharges take place at a lower level of cell nutrition and function; in the second, vascular changes become so advanced that what must be regarded as a series of subinflammatory processes ensues. To take a parallel example from the field of general pathology—the over-exercise of function of the special cells of the kidney, whether induced by excess of blood, by effete substances, or by the presence of poisonous agents, is the immediate cause of parenchymatous nephritis—and we have the first symptoms of the disease associated with cell changes, followed by vasomotor disturbances, which, in their turn, react on the cells and tissues of the organ through histological alteration of the vascular and lymphatic apparatus.

The implication of the relation of nutrition to function constitutes the preliminary or primary factor in the production of the prodromal symptoms; the arteries of the cortex are dilated, and send an abnormal amount of blood inwards, and as a result there is increased and sustained pressure in the veins. If recognised, appropriate treatment may often procure reduction of hyperæmia, prevent degeneration of tissue, and procure recovery; but if the condition is neglected the sequence of events common to all tissues under similar circumstances of irritation ensues. A subinflammatory stage is reached, evidenced by much greater than normal deposits of leucocytes between the sheath and the muscular coat, and by various degrees of proliferation of the nuclei. Both leucocytes and nuclei break down, and a *débris* is formed, which, along with masses of blood pigment, occupies the spaces in large quantities, and can be found distributed along the whole course of a vessel to its ultimate ramifications. This *débris* has been found in quantities so large as to interfere with the patency of the lymphatic sheath, and to procure its distension by the obstruction of exudation fluid.

Implication of the lymphatic circulation is one of the most important—if not the most important—of the pathological factors in the production of idiopathic insanity. Allow me to remind you what the relations of the lymphatic system are

to the cell itself. Each cerebral vessel, as it enters the cortex, is surrounded by a sheath given off by the inner layer of pia mater, which surrounds it to its ultimate ramifications, and is called the hyaline sheath. Each cell is surrounded by a capsule, which is an extension of the hyaline sheath, the two being connected by the spur-like process of Obersteiner. Thus each cell possesses a lymphatic envelope, which discharges the products of metabolism through the spur-like process into the hyaline sheath surrounding the vessel, which, in its turn, debouches into the hyaline or lymphatic sheath of the vessel, and the lymphatic fluid is thus conveyed into the spaces between the arachno- and the visceral pia, and thence to the great cisterns already mentioned. Implication of this lymphatic apparatus may act in two ways—first, by submitting, through diminished drainage, the cells to the action of waste products; and, secondly, by affecting the conductivity of vasomotor fibres. The spur-like process of Obersteiner is a very fine tubule, and necessarily easily occluded. Not only does the occurrence of exudates in the hyaline sheath dam back the flow from the capsule, but the deposits of leucocytes, proliferated epithelium cells, and masses of pigment may actually occlude the openings of these processes. Under these circumstances, the cell lies bathed in a poisonous fluid, the reaction of which is acid, and so opposed to its healthy alkaline constitution. Degradation is a necessary consequence, shown first by granularity of the protoplasmic body of the cell, and subsequently by changes of a more profound nature. But exudation fluid may also affect the exercise of the function of the vaso-constrictor fibres. It is more than probable that a certain amount of pressure may be caused, and it is well known that pressure at first tends to stimulate, and, if continued, to paralyse the action of such nerves. In this case also the acid exudate acts in a similar manner, procuring intensification of function followed by exhaustion from extreme stimulation.

In whatever manner exudates act on the vaso-constrictors, it is certain to be finally in the direction of reduction of inhibitory function and consequent dilatation. When the pia mater becomes infiltrated, as it often does, there can be little doubt that pressure acts strongly on the branches of the system running between its layers. Whenever a vaso-constrictor nerve is involved in an inflammatory mass, we have the same condition as where it is accidentally cut; and this alone would be sufficient to account for the obstinate congestion of the brain, causing delirium or death, not only in cases of idiopathic insanity, but also in many other affections.

Mendel, Fürstner and Kousnezoff have produced cerebral hyperæmia artificially, and have described the various changes occurring after its establishment; the chief of which are hypertrophy of connective tissue of the vessels and neuroglia, and degeneration of the cells and nerve fibres. I can only speak from the experience derived from the examination of four cases of idiopathic insanity, which proved fatal within two months of the development of mania and melancholia, as to the period at which the products of subinflammatory processes show themselves and exercise influence. In two cases—one symptomatised by mania, the other by melancholia—deposits of leucocytes, pigment and nuclei of epithelium were found in considerable quantities, either in aggregated masses at the bifurcations, or scattered throughout the length of the vessels (between the hyaline sheath and the muscular coat) taken from the superior convolutions, and the proliferation of nuclei was marked. In two other cases—one symptomatised by mania (death having resulted from exhaustion), and the other by excited melancholia (the subject of which committed suicide) stasis of a very well-marked character was found; the lumen of many cortical vessels of all sizes was occupied by blood corpuscles, the perivascular lymphatics were much distended and blocked by *débris*, and wide spaces between the sheath and the brain substance were shown in the maniacal case. There can be little doubt that these morbid products are deposited much earlier in the case than two months, but in the absence of data it is impossible to assign a definite period for their appearance. It is highly improbable that such intensity of diseased action occurs, save in extreme cases, but in the first two instances adduced the pathological products were not much more strongly marked than those presented in subjects of older standing insanity of a milder type. In such I have constantly found the products described, and have noted the evidence of extensive exudation. It is not often that the observer is fortunate enough to get the cellular capsule and its process in absolute relation to the lymphatic sheath: but in three instances I have procured evidence of their continuity, and noted the distension of the whole apparatus, the cell lying in a clear open space in connection with a wide canal. This can be easily demonstrated, as regards the capsule alone, in chronic cases. If, as B. Lewis asserts—and I entirely agree with him—each cell is surrounded by a looped capillary, and if this vessel becomes implicated to the extent of stasis, or even short of it, it is not difficult to understand how degeneration of cell protoplasm is hastened by two sets of action; toxic from within, and deprivation of nutriment from without.

But further morbid instrumentality is at work. We have direct evidence that during sleep the cortex of the superior convolutions is anæmic; according to Mosso's experiments and observations the supply to the cortex is much diminished, the vessels—both arteries and veins—being contracted, and the brain is smaller. Insomnia is one of the earliest symptoms of incipient insanity, and continues during its acute period; sleep is not obtained in its natural degree till convalescence or terminative dementia is reached. It cannot be doubted that this insomnia is due to hyperæmia. In those rare cases of insanity in which there is no interference with the periodicity or intensity of sleep, the fact of its presence ought to influence diagnosis. Sleep is the condition necessary for the recuperation of cell tissue; in its absence the downward tendency to degeneration must necessarily be assisted.

The question which now naturally presents itself is, How can we reconcile the dependence of three such apparently widely divergent morbid mental symptoms as mania, melancholia, and dementia on one common pathological condition? The arguments founded on clinical observation which I have already used to show that we have no right to regard these three states of mind as concrete conditions, or maintain them in the position of diseases, are again applicable: they alternate, they coexist, or they occur in regular sequence in many given cases. But further, we may argue for the unity of pathological causal conditions by reference to the phenomena of general paralysis and acute alcoholism. In general paralysis of the insane, the inflammatory nature of which is beyond doubt, a certain proportion of cases are characterised by exaltation of feeling, another by depression, and a third by obfuscation from beginning to end, whilst in certain others we may have all varieties and degrees of symptoms. The effect on the brain of the administration of certain poisons, markedly alcohol, is a sequence of psychical phenomena of much the same character; the drunkard runs the full gamut of symptoms in a couple of hours. These observations point, not to a difference in kind of primary causation, but to variation of symptoms in accordance with the progress and nature of pathological processes, which vary principally in accordance with the constitution of the tissues of the individual. It must be borne in mind that the deposits of inflammatory products and congestion are not identical or constant in the individuals of a series of subjects, because the individuals and their tissues are not constant quantities. We have thus a constant condition of irritation acting on inconstant subjects. We know that the pathological results of over-taxation of brain function are accompanied by morbid excitement of action of the organ; but we are apt to forget that, although mania is accompanied by exaltation and melancholia by depression of feeling, they are both manifestations of excitement of feeling. Given this common psychological condition of excitement of feeling, we must seek for an explanation of the varieties of its phenomena either in some quality or quantity of its exciting cause, in some peculiarity of its pathological products, or in some idiosyncracy of the affected individual. We derive no material assistance from psychological considerations, for there is no necessary connection between depressing emotions and melancholia on the one hand, or between stimulating emotions and mania on the other. Intense grief produces mania as often as melancholia, and the insanity of the man of saturnine disposition is as often as not characterised by mania. The peculiarity of the exciting cause

appears to be not its psychological characteristics, but its intensity and rapidity of incidence, the latter depending not only on the former but also on the stability or instability of tissue. According as excitement of feeling is rapidly produced, so the more likely is mania to be the symptom, especially when it acts on an extremely irritable but unstable protoplasm. It is not only the hereditary constitution of the cortical cells and their networks to which we may look for evidence of instability and irritability, but also the ganglia which govern the vasomotor systems of nerves. Inherent weakness of these centres may play an even more important *rôle* in the production of insanity than instability of the peripheral ganglia, more especially as regards the rapidity of its production. May not hereditary instability exist as frequently in the cells of the vasomotor or vasodilator as in those of the cortex? That melancholia often supervenes on depressing emotions, gradual in their incidence and action, does not imply a psychological nexus, but that as their irritating influence is slowly applied to cells of low vitality and nutritive power, so the results of the irritation are slowly produced; and, as in the case of every organ of the body, we have variety of degrees of symptoms in conformity with the rapidity of the progress of pathological events. In extreme cases of recent excitement, maniacal or melancholic, I have found stasis and the products of inflammation: in chronic cases the same appearances are presented, although in a less degree, whatever the symptom may have been: and, if we have any right to connect *post-mortem* demonstration with the indications of disease during life, the inference is unavoidable that considerable variety of clinical phenomena may be dependent on a common cause acting on differently constituted tissues.[2]

It is unnecessary here to enter on a description of the further gradual degradation of brain elements, all of which suffer in the event of hyperæmia not being overcome. Suffice it to say that the result is disorganisation, more or less complete, which, so far as the mental functions are concerned, means terminative dementia.

But, beyond impairment of the psychical functions of the brain, another important function is apt to become impaired as a consequence of morbid hyperæmia. The general system of the patient suffers at an early period from implication of the "trophic," or, to speak more accurately, the nutrition-governing, function of the brain. That organ being diseased, the power it possesses over metabolism becomes lessened, which is soon manifested by impaired nutrition. The patient rapidly becomes pale and dusky in complexion, the skin does not act normally, the hair becomes dry and harsh, the chylopoietic viscera perform their functions inadequately, the muscular tone—in fact, the tone of the whole system—becomes markedly lowered; and in women menstruation becomes irregular or is absent. To this implication of other systems, consequent on the impairment of the control function of the cerebrum, can be traced a large amount of the errors which exist as to the causation of idiopathic and other insanities. The secondary condition is very frequently set down as the primary cause. The insanity may be referred to derangements of the stomach, when these are in fact, concomitantly with the mental disturbance, results of the cerebral mischief. In like manner, arrested menstruation is often insisted on as the proximate morbid influence.

I am compelled to confine myself on the present occasion to the demonstration of the results in pathological action of purely idiopathic causes, merely assuring you that evidence of the results in morbid action of many other classes of causes is not difficult of production. My belief is that the time is not far off when we will be able to base a classification of the insanities on the highest platform of pathology—morbid anatomy. Taking our stand in the meantime on etiology, we start from the point which is most likely to lead us to the consummation of our hopes, which could never be arrived at from a study of psychological symptoms. From a social and legal point of view these form the essence of a given case, but that they ought to assume the same position to the physician is to my mind very highly questionable. To take, again, the prominent example—general paralysis of the insane—in the majority of its subjects the predominant symptom is exaltation of feeling, but, in a smaller proportion, melancholia and dementia are the characteristics of the disease. The pathological condition is the same in all; therefore the mental symptoms are of secondary importance. Analogies might be adduced in other forms.

In my desire to concentrate attention on the thesis that insanity is a symptom of active idiopathic morbid cerebral processes, I have been obliged merely to allude to other prominent examples, markedly general paralysis, the traumatic, syphilitic, toxic, and puerperal insanities. All these are the result of disease produced directly by the action of morbid factors. We are told by certain authors that insanity at large may be accounted for on the theory of "dissolution" beginning in the convolutions. I honestly confess I cannot grasp the idea or reconcile it with the results of pathological and clinical observation. That certain forms of insanity are connected with involutional changes in the individual is undoubtedly true, but to say that the forms I have just alluded to bear any such relation is to me as difficult to understand as would be the assertion that pneumonia, tuberculosis, or inflammatory nephritis, were evidences of involution. The propagation of such an idea widens the breach between the insanities and disease at large, and serves to divert the attention from the search after methods of overcoming those actual morbid processes, of which insanity is only one of the symptoms.

If we accept this position the subjects of most of the insanities are very sick people indeed; that they are so I have no doubt, for they may, in the first place, be in danger of their lives, and, in the second, they are in imminent danger of lapsing into that living death, terminative dementia. In order to prevent permanent implication of the cortical substance each case demands special hospital treatment conducted on identically the same principles as those which regulate practice in our general infirmaries, and conducted under similar conditions as regards rest, nursing, and therapeutic agents. This is, or should be, easily attainable for patients of the upper and middle class; but for those derived from the poorer class the existing system of asylum structure, management, and treatment makes it almost unattainable. I am not going to repeat the opinion expressed on many previous occasions that the structure of our lunatic asylums is very faulty, that individual treatment of the patients is impossible so long as the energies of the medical officers are expended and frittered away on administrative duties, and that treatment is not directly applied to the relief of the morbid brain conditions, and consists in too great a degree in attempts to attack the mental symptoms by psychological agencies. My contention is that the large majority of recent cases, rich and poor, require strict hospital treatment under circumstances of curative rest and calm. No class of cases requires the attention of trained nurses more than the subjects of recent insanity: the head nurse of each ward or department should have been trained in a hospital for at least a year. We all know the value of the trained nurse in ordinary disease: I can assure you my experience is that the constant observation of such officers is specially valuable amongst the insane, many of whom can give no indication of symptoms of disease of the general system, and where clinical phenomena often require to be interpreted much in the same manner as those of sick children. I hold that rest and quietude are absolutely demanded. Exercise must be employed with the utmost care. In the early stages of many forms of insanity it is absolutely baneful, and often aggravates symptoms. Most idiopathic cases, for instance, are for the first few weeks best treated in bed or on the sofa, careful massage taking the place of exercise. By this method functional hyperæmia of the muscles is easily induced without any expenditure of energy. Where there is anything approaching to emaciation, or even flabbiness of muscle, considerable quantities of oil may be used by the rubber, and the patient often gains weight by sleeping in oily blankets. This is far superior to the system of overloading the stomach with large quantities of oily food, which the atonic digestive apparatus is not able to deal with, and which is liable to increase gastric affections. Simple well-considered diet in moderate quantities is ample to procure good results. It may be suggested that the restlessness and excitement (whether maniacal or melancholic)

[2] This argument will be found more fully discussed in the article "Pathology," by Dr. Sims Woodhead and myself, in the forthcoming *Dictionary of Psychological Medicine*, by Dr. D. Hack Tuke.

of certain patients render such treatment difficult or impossible. Difficult it may be, but not impossible, in the presence of a well trained hospital staff; and as such treatment is persevered in difficulties disappear. Rest and quietude I hold to be essential in such cases. The congregation of patients is most objectionable. The seclusion of cases of hysteria and sufferers from nervous exhaustion has been strongly advocated, and I am sure rightly; how much more is it called for in the cure of the hyperæmic brain, the subject of which is liable to irregularity of cortical discharge? Restriction to the bedroom under charge of competent nurses affords the best opportunity of obtaining quiet and of avoiding objects of irritation. This is impossible in the ordinary asylum ward except for a restricted number of cases; but in a properly constructed hospital, where the rooms should be large and numerous, it would be readily attainable.

For many years past I have doubted whether the constant excitement of balls, parties, theatricals and other amusements is good for the insane. It appeals to the popular conception of psychological treatment for a psychological complaint, but I have no hesitation in saying that for the mass of the insane it is not good. It may be of a certain value for certain chronic cases, as it would be valuable in an ordinary workhouse, but as a curative agent it may be discarded. Why should an excited crowd live in an atmosphere of excitement? I have known many cases of terminative chronic mania and melancholia, and of *folie circulaire*, recover after a course of steady treatment conducted under circumstances of complete rest and quietude. It may be said that recent cases are not generally sent to entertainments; but they live in the atmosphere of excitement caused by them. The knowledge that a weekly ball occurs, the preparations for it, the bustle attending it over the whole establishment, the restriction from being present, all tend to maintain the restlessness of the acute case. In separate hospital blocks this would be avoided. I am far from saying that amusements carefully administered are not good for the chronic insane; in certain convalescent cases even they may prove beneficial; but all those in whom active disease is present are better withheld from its unsettling influence.

Therapeutic treatment is too large a question to enter on on the present occasion. To be of any avail it must be preceded by most careful and systematic clinical examination, aided by every diagnostic instrument and process at our command. Treatment founded on the character of the mental symptoms may be entirely erroneous. Take the case of "acute mania," which is equally dependent on sthenic and asthenic conditions. We may have it in a florid person labouring under idiopathic insanity, and in the anæmic subject of the insanity of lactation; manifestly the same remedial measures are not applicable to the two cases. These are extreme instances, but many occur in which the determination of such matters as the condition of the blood, the proportion of urinary excretory products, and the reaction to electrical stimuli, afford important indications as to treatment. Cases of almost any class when subjected to treatment during the prodromal periods are readily amenable to therapeutic agents; and even when further advanced rapid recovery is often obtained by their employment. But it must be remembered that the brain is liable to suffer under pathological conditions from a circumstance which does not affect many other organs: it can obtain no vicarious aid, it cannot cast its functions on other systems, it must do its own work, and rid itself of the products of waste and disease. Long continued treatment is therefore often necessary; but steady continuous hospital treatment obtains cure in many cases which at first appeared hopeless; half-hearted efforts continued for a few weeks or months are therefore not sufficient; the physician must work at his case as a physician till the last glimmer of hope is lost.

In Scotland, I am glad to say, great efforts are being made to obtain true hospital treatment. In connection with certain Royal and District asylums, hospital blocks, separate and apart from the main buildings, are being constructed where patients will be submitted to curative influences apart from the excitement of asylum life. They will, in these hospitals, be treated, it is to be hoped, as sick people suffering from disease of the brain. But there is another great desideratum. The treatment of the insanities must be brought more directly under the observation of the general practitioner and the student of medicine. At present all so-called "mental cases" are prohibited from entering general hospitals, and the graduate or licentiate may enter on the exercise of his profession, without ever having see a case of insanity. This is one of the great causes of the breach between the insanities and general medicine. The advisability of establishing in London a hospital for the treatment of recent and acute cases has been under discussion. The scheme is at present in abeyance, chiefly owing to the opposition raised against it by asylum superintendents, in whose arguments, or rather statements, I have failed to find anything substantial. The experiment was well worthy of trial; no one could have suffered from it, the insane might have benefited by it, and the study of the insanities might have been largely developed by their subjects being brought under the observation of physicians whose experience of disease extended over all its phases. The subject was discussed at various meetings of the Medico-Psychological and British Medical Associations. Few could help feeling deep disappointment at the almost unanimous expression of perfect satisfaction with the existing state of matters regarding the treatment of insanity. No faults, no shortcomings were admitted; administration was held to be perfect, and a higher scientific position to be unattainable. So long as the insane were well housed, well treated, well aired, and well amused, the asylum physician exhausted the chief resources of his art. Hospital treatment, as opposed to asylum treatment, was scouted; and scientific investigations was, by certain speakers, jeered at. How far such opinions are in consonance with those of the general public may be questioned; but it is certain they are not in accord with the feeling of an important and rapidly increasing section of the medical profession.

I have said elsewhere, and I say it again, that an asylum is not the best place to teach the future general practitioner how to observe and treat the insanities. He finds there cases more or less confirmed, and the initial symptoms, which are really the most important for him to be conversant with, are never brought under his notice. In connection with all our great hospitals small wards should be established where recent and acute cases could be submitted to treatment. Such wards would not be nearly so difficult of management as the delirium tremens wards which at present exist; they would save hundreds yearly from being sent to asylums by procuring their early recovery; they would allow the student to become accustomed to the observation of a type of disease which afflicts three in every thousand of the community; they would afford the practitioner the knowledge of a condition which he does not at present possess, but which the law presupposes he is in possession of, inasmuch as it confers on him considerable powers over the liberty of the subject; and they would serve gradually to draw the study of the various diseased conditions of which insanity is a symptom within the confines of general medicine. The professional and popular conception of their position would undergo great modification, and as time goes on such terms as mental disease, psychiatrie, psychological medicine would fall into desuetude, and along with them the prejudice, superstition, and misconception which they help to maintain, would cease to exist.

University of Buda-Pesth.—At the festal commemoration of the 111th anniversary of the reorganisation of the University of Buda-Pesth, held on May 12th, the Rector Magnificus, Professor Schulek, delivered an address on "The Clinical Problems of the Present Day," and announced his intention of giving 2,000 florins towards the establishment of a hospital where poor students might be properly cared for in sickness. This sum, he hoped, would be the nucleus of numerous donations which would speedily enable them to build a hospital rivalling that recently opened by the Emperor in Vienna. On May 14th Professor Friedrich von Koranyi celebrated the twenty-fifth anniversary of his appointment as Professor. There was the usual junketing, and encomiastic oratory flowed in a full tide. Professor Koranyi, who is 63 years of age, received more than 200 congratulatory telegrams. The Medical Society of Buda-Pesth has decided to build a house for itself at an estimated cost of 48,000 florins.

ON THE DISCORDANT ACTION OF THE DOUBLE BRAIN.[1]

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The old metaphysicians felt the difficulty of reconciling the persuasion of the unity of the mental operations with the evidence that in its relations to the material world the mind was so closely connected with a double organ. Even in our own day the conjoined functions of the two hemispheres is a question which physiologists are shy of examining. The question arises, Do the two sides of the brain perform the same functions? Have we a double set of sensations, perceptions, apprehensions, and mnemonic images? and how is the simultaneous action of both sides of the body kept up, and the feeling of unity of thought, feelings, and actions sustained?

It is now generally received that the corpus callosum is a real commissure, uniting by its radiating fibres analogous parts of the hemispheres, and uniting heterologous parts of the occipital with the frontal lobes through an underband of longitudinal fibres. This view is confirmed by the experiments on the corpus callosum published by Dr. Mott in the British Medical Journal of May 17th, 1890. It is, however, surprising that the complete absence of this organ has been noted half a dozen times without entailing any apparent functional deficiency, for examination of the literature shows that where there has been imbecility there has always been some other grave defect. On the other hand, the cases of Eichler, Paget, Malinverni, Golly, and the second case of Kaufmann and that of Erb show that where the brain is otherwise well developed there may be no disturbance of mobility, co-ordination, general or special sensibility, reflexes, speech, or intelligence, whether the defect of the corpus callosum be primary or secondary. This view has been also confirmed by observations of destruction of the corpus callosum from disease. We know that the limbs of each side perform simultaneous movements under the direction of the opposite sides of the brain, and that it is easier for them to perform analogous movements than different ones. Nevertheless, we have the power of simultaneously executing different actions which require distinct mental conceptions for their direction—as, for instance, in piano playing.

The power of attending to two or three subjects at once can be increased by cultivation. It is no doubt possessed by some men in greater proportion than by others. Plutarch says that Julius Cæsar during his campaigns would go on, sitting on horseback, dictating to two secretaries; and Pliny tells us that Cæsar used to read and write at the same time, or to dictate and listen, or that he would keep four clerks employed at once writing to his dictation.[2] In the debate on this subject at the annual meeting at Leeds, I was surprised to hear a distinguished psychologist question the statement that a man could attend to two mental operations at once; but at the very next meeting my own experience afforded me a proof of the case in point. At the request of the Secretary of the Section I wrote out some remarks which I had made, and at the same time kept on listening to the debate, which I could perfectly recall. In general, when two mental operations are thus transacted at once, the mind gives its main attention to one of them, and the memory runs along a particular train of thought, so that the concomitant ideas are quickly forgotten. Of course, the more powerful the concentration of mind, the more the mind is occupied with one single process. The absent-minded man falls into one train of thought, and loses the parallel observations by which men usually keep up a knowledge of their situation, the when, where, and how of ordinary life.

Most of the sensory fibres from the peripheral organs cross to the opposite side of the brain, a smaller portion going to the same side. A larger portion of the nerve fibres from each retina crosses to the opposite optic ganglia, but a smaller portion, representing the temporal side of one retina and the nasal side of the other does not cross, but passes to the same side of the brain, so that each visual area of the brain receives impression from both eyes. The innervation of the oculo-motor muscles is arranged on a corresponding plan.[3] Dr. Dupuy reported to the Biological Society of Paris (May 25th, 1889) the case of a young woman who had the power of moving her eyes in different directions at the same time. When she did so she saw objects only with one eye, and when she tried to observe with the other at the same time she was seized with giddiness. Dr. Dupuy regarded this as a proof that there were two distinct perceptive centres. He was supported by Brown-Séquard, who took occasion to enforce his view that the two hemispheres are identical in function and can replace each other.

In like manner the fibres which conduct motor impulses from the hemispheres to the muscles do not all cross over to the opposite side of the body. They may be divided into three sets; those which mainly supply the muscles of the same side as those going to the muscles of the neck and trunk, those which go to both sides in almost equal proportion as to the muscles of the jaw, throat, larynx, and diaphragm, and those which mainly cross to supply the other side of the body. Such are those given to the muscles of the arm and leg. In no case does one side of the body derive either its sensory or motor nervous influences from one side of the brain alone, but from both, though in varying proportions. Thus paralysis of sensation from an injury to one side of the brain is never complete, for each side of the brain always represents a certain though minor amount of sensation from the same side of the body. In like manner loss of motor power may be stated as the loss of 95 per cent., or of 50 per cent., as it affects one or other motor centre. In the latter case paresis is not apparent, as the muscle being innervated from both sides of the brain, the loss of one half of its innervation is made up by the increased activity of the other side of the brain. On the other hand, it appears from close observation that in paralysis of one side of the body there is also a loss of power on the opposite side of the body, which derives a certain though smaller amount of innervation from the injured side of the brain.

Though certain areas of the brain seem to have a closer connection with the innervation of definite groups of muscles than other portions of the cortex, it has been found that when these parts have been removed or destroyed the muscles dependent upon them are for the time thrown out of action. After a longer or shorter interval the paresis disappears, and the lost motor function is reassumed. Such experiments have often been repeated on the brains of animals, and have been confirmed by lesions of the cortex observed in man. One good instance was given by Dr. Byrom Bramwell, in which a tumour occupied the middle of the motor zone on one side of the brain, as was well displayed by a photograph, without any paralysis having been observed during life. It has been assumed that in such cases it is the analogous portion of the opposite hemisphere which takes up the lost function of the injured side; and this no doubt holds good in some cases. At the same time, while dealing with this question, it would be unfair to pass over the objection of Goltz, who removed the motor centres in one side of the brain, and then waited for the animal to recover from the injury to the motor powers and from the loss of sensation. On the theory that this recovery was owing to the corresponding part of the opposite hemisphere taking up the functions of both sides, removal of the motor convolutions should have been followed by paralysis on both sides of the body; but the temporary paralysis only affected the muscles of the opposite side. A similar experiment was performed by Luciani and Tamburini.

Some physiologists hold that the lost motor function is in time taken up by another part of the same side of the injured brain; others that the innervation is supplied by the vicarious action of the corpora striata. M. Herzen, of Lausanne, states that if the sigmoid gyrus be extirpated in a dog, there follows temporary paralysis of the opposite limb;

[1] At the Annual Meeting of the British Medical Association held at Leeds I introduced a discussion on "The Discordant Action of the Dual Brain in Insanity," in which some eminent psychologists took part. My address was given orally, not read from a paper, but the following pages contain the substance, with a few additions from original notes and new readings.

[2] *Pliny*, lib. vii, cap. 15.

[3] See the able paper on Oculo-motor Centres, by Dr. Spitzka, *Journal of Nervous and Mental Diseases*, July, 1888.

but if this operation be performed in a newborn dog before the tenth day, if the pup survive it grows up without any noticeable deficiency save some slowness in the movements of the opposite side, which soon passes away. On the supposition that it is the sigmoid gyrus of the opposite side which has assumed the function of both gyri, extirpation of the uninjured convolution should now cause motor deficiency in both sides; but in an experiment which Herzen made on a young dog, this was found not to be the case. On removal of the second sigmoid gyrus no paralysis whatever followed on either side. On removing the sigmoid gyrus of the same side in a dog of the same litter hitherto uninjured, the usual symptoms of cross paralysis appeared.

Dr. Sherrington has found that destructive lesions of one side of the motor zone of the cortex were followed by bilateral degenerations of the pyramids of the spinal cord; but when the cortical destruction occupied the motor centres for the limbs alone, the bilateral character of the descending degeneration was not so marked.

The well-known relation of the limb centres to the word centres is not invariable. There have been cases of left hemiplegia with aphasia in persons who were not left-handed; there have been cases where destruction of the lower third frontal convolution of the left brain has not induced motor aphasia; and cases where destruction of the left temporo-sphenoidal gyri has not induced sensory aphasia. We may fairly suppose, therefore, that in some brains the speech centres are not on the same side as those of the arm which is most used for fine work. In other cases the functions seemed to be shared between both sides of the brain, just as some men can use both hands equally well or nearly so. Hughlings Jackson thinks that as regards speech the right half of the brain acts automatically along with the other half, and that on the left brain automatic action passes into voluntary action. He regards the short exclamations which often survive in aphasia as the result of the action of the uninjured side of the brain. This, at least in early life, may be educated into speech under the control of the will and intelligence.[4] It has been observed by Buchwald, Erlenmeyer, and others[5] that some patients, after losing the power of their right hand from paralysis, in beginning to use their left hand to write, trace the letters from right to left, producing what has been called mirror writing. Left-handed imbeciles are apt to indulge in this style of writing, and sometimes even left-handed children, with no intellectual want, have been observed to do this without noticing the reversed character of their writing. It may be asked, is the image or impression or change in the brain tissue, from which the image is formed in the mind of the mirror writer, reversed like the negative of a photograph; or if a double image be formed in the visual centre, one in the right hemisphere of the brain and the other in the left, do the images lie to each other in opposite directions?

There are a number of observations on record where one hemisphere has been destroyed through disease or injury without any apparent loss of function. This may be considered a proof that both sides of the brain have the same potential function. In some cases the deficiency was not even noticed till after death. It is thus clear that just as we can see with one eye, or hear with one ear, so one side of the brain may suffice for the ordinary exercise of the mental powers, for sensation and motor innervation. In some cases it was the right hemisphere that was found wanting; in others the left. In many cases of destruction of one hemisphere there was more or less paralysis of the arm; in others no paralysis was observed. Much commoner are instances of partial destruction of one side of the brain with a minor amount of injury to the other side, producing paralytic idiocy or paralytic dementia. These cases illustrate in an indirect way the general axiom that it requires injury to both hemispheres to produce complete mental derangement.

In some cases of more or less complete destruction of one hemisphere we find it stated that the power of continued mental exertion was lessened, in others the mental powers did not appear to be weakened, but no severe tests were applied. The presumption is that there would be a loss of reserve force. On examining the brain of Bichat, who died at the early age of 31, it was found that one of the hemispheres was much larger than the other, and had pushed aside the falx cerebri. This atrophy of one side of his brain did not prevent Bichat becoming one of the greatest anatomists that France ever produced.

From a review of the cases, we should judge that where one side of the brain remains healthy, the integrity of the intellectual, moral and emotional faculties may be preserved, perhaps might be better preserved with a total destruction of one hemisphere than with a diseased hemisphere transmitting irritation to its fellow. I have had opportunities of observing the effect of wounds of one side of the brain. Sometimes the patient is in a state of delirium or stupor, which perhaps is owing to the inflammation extending to the other side through the membranes. At other times the patient seems reasonable and collected, but when he attempts to carry on a conversation, or make some unusual exertion, there is a feeling of fatigue, soon passing into distress, which obliges him to stop. The reason of this, no doubt, is that while at rest the healthy hemisphere is sufficient for the process of spontaneous thought without fatiguing the other, but when, through a severe call, the healthy brain begins to exert itself, it drags the other into play, both acting at once. The result is that the disease of the other hemisphere gets aggravated, which produces the feeling of exhaustion and distress.

In insanity both sides of the brain are generally diseased, but not infrequently one side of the brain is more affected than the other, and here we may expect to find an unequal action. The healthy brain struggles with the insane impulses of the diseased one, tries to correct its hallucinations, or to bridle its strange impulses. Sometimes it succeeds in doing so, and if the disease abates we have one of those cases of abortive insanity which are seen by the consulting physician more often than the superintendent of an asylum.

One-sided hallucinations are not uncommon in insanity. In this country they have been carefully studied by Dr. Alexander Robertson. Sometimes the patient hears threatening words in one ear and soothing and encouraging ones in the other, or he sees with one eye a figure. I know of a patient, a single woman aged 36, who imagined that a large green fish followed her about and bit her between the shoulders. It used to look over her right shoulder at her with its large round eyes. When asked if she heard voices she said: "It seems to come over my shoulder (right); it is like that green fish with big eyes. It does not say anything, but I don't like the look of it." On glancing over her left shoulder she could not see the green fish.

I have been consulted by persons who were haunted by a fixed idea—sometimes profane or disgusting—which they regard with horror. It is probable that this distressing condition is dependent upon some local irritation of one side of the brain.

There are cases of melancholia in which there is an extreme dislike to any exertion, but the patient is found afterwards to have noticed everything and remembered everything. This is to be explained by the extreme distress following any voluntary exertion which would set the diseased side of the brain in action. Then there are patients in every asylum who complain of the intrusion of thoughts and impulses which they refer to another person.

These are symptoms which are readily explained by the assumption of unequal disease of the brain. Then there is a feeling of changed personality. This is no doubt owing to a real change in his feeling and mental tendencies, which, in fact, constitutes the insanity. That it is sometimes accompanied by a lesion of one side of the brain may be seen from the following case, which was reported to me by my valued friend, the late Dr. Grierson of the Roxburgh District Asylum.

J. V., admitted to Roxburgh District Asylum in 1864, suffering from mania. Dr. Grierson got the charge of this asylum three years afterwards, when the acute symptoms had subsided. The man fancied that he was not J. V., but Mr. W., the laird of H. This delusion had led to his being placed in the asylum, and he held to it tenaciously. During the course of his stay his sister came in as a patient, but he refused to recognise her, as he was not J. V. Save the grievance of being kept out of his estate, he seemed satisfied with his

[4] BRITISH MEDICAL JOURNAL, April 12th, 1890, p. 826.

[5] See the paper on Mirror Writing in the *Blot on the Brain*. In this book the reader who wishes to pursue the subject will find many references to support and explain the statements made in the present article.

position in the asylum. He was cleanly in his habits, fed himself, and never sought to converse with any one, but would answer questions reasonably enough. He never read anything. Sometimes he would talk away, apparently to no one in particular. In general he was in good humour, but he was easily teased, irritated, and excited. He had been a stone-breaker before becoming insane, and still continued to work at this, in which he was very skilful. Now and then, suddenly throwing down his hammer, he would fly with his fist at some imaginary person, after which he would return to his work. He had the use of all his muscles. This went on for years without variation. His general health was good, but a progressive dementia was observed. After having been twenty-one years in the asylum, he was found one day lying upon his stone heap. The left arm and leg were found to be paralysed. The speech was affected, but there was no aphasia. After a week he died. The viscera of the thorax and abdomen were found healthy. On removing the skull cap the saw penetrated into a cavity. The right hemisphere was found softened down to the lateral ventricle, and quite disintegrated, the cavity occupied by a grumous fluid. Dr. Grierson believed that the destruction of the right hemisphere must have been the work of years; the left hemisphere seemed healthy.

Sometimes a patient seems, as it were, to struggle with two impulses which paralyse his will so that he cannot commence or execute movements. In other cases the lunatic seems to yield alternately to conflicting impulses. Then there are cases of double personality where the patient thinks another being shares his body with him. I had once the charge of an imbecile boy who used often to address himself: "You have been a bad boy to-day, F." Sometimes he would strike himself hard blows on the face, and then roar out.

The natural disparity in the weight of the two hemispheres found in the sane is increased with the insane.[6] Sometimes it is the right brain which is found heaviest, sometimes the left; in the majority of brains examined the difference was in favour of the right hemisphere. The average disparity, whether on the right or left side, is about 16 grammes. Inequality in weight has been found to be most marked in general paralysis, idiocy, and epilepsy.

Dr. J. Murray Lindsay, of the Derby County Asylum, has kindly furnished me with a detail of the different weights above 1 ounce in 41 brains out of 279 necropsies in which the hemispheres were weighed separately. Of these overweights, 24 were on the right and 17 on the left side. The disparity mostly ranged from 2 ounces to 4 ounces. The greatest overweight was 9 ounces on the left in a case of mania. On Dr. Lindsay's list the inequalities were most marked in mania and epileptic idiocy (one case). I had once under my care a boy of 11 years, an epileptic imbecile, left-handed. He sometimes had fits implicating the right side of the body only, when he retained consciousness and could answer questions. The left hemisphere was smaller than the right. The right side of the encephalon weighed 20¾ ounces, the left side 15½ ounces.

In 21 observations taken from the casebooks of the West Riding Asylum, the preponderance was in the right hemisphere in 11 cases, on the left in 9 cases, and in 1 the balance was equal. The inequalities ranged from 5 to 40 grammes; in 1 (general paralysis) it was 60 grammes on the right; in 2, on the left, the overweights were as high as 90 grammes (sclerosis of right) and 400 grammes (cyst on right side of brain). Whether the disparity is owing to the addition of adventitious deposit, or to unequal subtraction through atrophy, or to both, has not yet been made out.

Whether cases of somnambulism or double consciousness such as those of Felida and Léonie are to be explained, as Luys and others have suggested, by the supposition of one hemisphere being alternately active and inactive, is a question for which I cannot venture to claim space at present. It has been objected to this explanation that persons have been recognised to be, not only in two separate states, but in three or four, each having its own memory. I am, however, inclined to think that there are conditions in dreams and trances which depend on an unequal distribution of blood in the two hemispheres or in different parts of the brain.

[6] See Marandon de Montyel, *Annales Médico-Psychologiques*, Tome Sixième, 1887.

Doctors Dumontpallier and Bérillon have sought to prove the functional independence of each hemisphere by experiments in the hypnotic state. They claim to be able to inhibit one side of the brain, while the activity of the other side is sustained; to arrest movements of one arm, while the other arm continues to act; to banish sensation from one side of the body while it is sustained on the other side; to introduce ideas of one complexion in one ear, and ideas of another complexion into the other: so that the subject is sad or fearful on one side of his brain, joyful or content on the other. To give an exact appreciation of these most interesting experiments would greatly prolong this article. The reader will find a full account of them in *Hypnotisme Expérimental: La Dualité Cérébrale* (par Edgar Bérillon, Paris, 1884) and a summary in *The Blot on the Brain*, p. 352.

ON POINTS OF AFFINITY BETWEEN RHEUMATOID ARTHRITIS, LOCOMOTOR ATAXY, AND EXOPHTHALMIC GOÎTRE.

By JOHN KENT SPENDER, M.D.Lond.,
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In actual practice we soon discover that Nature does not provide abrupt classifications and symmetric groupings. Thus, the phenomena of locomotor ataxy depend upon distinct internal lesions, and the phenomena of goître (whether there be exophthalmos or not) are associated with distinct external lesions. Now, some of the same phenomena are also found in a large number of cases of rheumatoid arthritis. The three diseases overlap each other, so to speak, at several points. Does not this go to prove that there is an arthritis which is essentially neural, apart from all diathetic contamination? These curious facts have a wide significance, and are of much interest to workers in the comparatively untilled ground of rheumatoid arthritis. If it be true, as Dr. Todd said, that a knowledge of gout is a passport to all humoral medicine, it is possible that a knowledge of rheumatoid arthritis will provide a key which will open many secret avenues of neural medicine.

Pigmentation of Skin.

I believe that I may fairly claim priority in observing and recording some *differentiæ* of rheumatoid arthritis during its early stage. These differential symptoms are striking and obtrusive. They belong to no other group of the large family of arthritis. Many rheumatoidal people, belonging mostly to an age between 50 and 65, possess neither the distinction nor the energy to display nerve disturbances; but nearly every case of undoubted rheumatoid arthritis in early or middle life shows marks of cerebro-spinal sympathy in one or more ways. Look for pigment; feel the hands for cold sweats; examine the heart for quick beating and often high tension; and ask whether there be severe or paroxysmal neuralgia. The probability is great that you will catch at least one of these connotative signs. Assuming, then, that there is before you a neural arthritis with a yellow or melasmic bronzing of some part of the body usually sheltered from light, the judgment may at first lean to disease of the adrenal glands. Only for a moment need we dwell upon this, or upon the bare possibility of arsenical poisoning. To Dr. David Drummond, of Newcastle-on-Tyne, we are indebted for a record of the fact that a pigmentation, like that which is associated with tuberculous disease of the adrenal glands, is a frequent accompaniment of exophthalmic goître. The favourite situations of the discoloration are around the prominent eyeballs; on the face generally; neck, armpits, and areola of nipples; abdomen, and inner part of both thighs. The patches are sometimes clearly defined, but often they fade imperceptibly into normally coloured skin. Wherever pigment occurs naturally, there it is found increased; and the colour varies from a pale yellow to a deep brown.

Very like these are those disturbances in the chromatogenous function of the skin which I have described as a common feature of rheumatoid arthritis. The pigment patches are more or less large; their hues are infinitely varied, and they are seen on many parts of the body. Across the forehead there may be a light bronze smear. Beneath

the lower eyelids the streak is sometimes very dark, and shines with metallic lustre. The dominant tints on the face are lemon and orange and citron. Occasionally the neck looks as if it had been soaked in a walnut dye; and in one case the complexion of the face resembled that of a mulatto, and it was partially covered with a brown seborrhœa. The arms and hands are often severely pigmented.

Trousseau called attention to leucodermia as a feature of exophthalmic goitre; and in three cases of rheumatoid arthritis I have seen round white patches of skin on the front of the forearm. The pigment of arthritis assumes many forms, one of the most common being yellow spots or freckles; but these are, I believe, never seen in exophthalmic goitre. Further, a larger number of goitrous cases are complicated with discolorment of skin than cases strictly rheumatoidal.

Tachycardia.

In exophthalmic goitre the disturbance of the heart's action may exist for months before any other symptom.

My original observation on the quickness of pulse which characterises so many cases of early rheumatoid arthritis has been confirmed by distinguished physicians—Sir Dyce Duckworth, Dr. Sansom, Dr. Archibald Garrod, and Dr. Pye-Smith. This form of tachycardia is not at all uncommon; certainly in every urban hospital or infirmary a case must exist now and then, and would be easily found if looked for. How is it interpreted? Is the subject of it called irritable or excitable, or is the tachycardia ascribed to old and forgotten myocarditis? What explanation is given in the official lecture room? Last November we took a kind of census of this symptom at our Mineral Water Hospital, in order to test the numerical severity of the cases of tachycardia then in the house and under my care. Of fifty-four patients occupying my beds, eighteen were unquestionable examples of rheumatoid arthritis, and nine (eight females and one male) had more or less quickness of pulse (average pulse not below 90). Now concerning the nine people above mentioned: the mean age was a trifle more than 42; four of the women were married and had children, and four were single; and the average rate of the pulse (taken in the sitting position) was 104. I have never found a material difference whether the patients were lying or standing, or after moderate exercise. The heart's action is not accelerated by emotion, sudden sights and sounds, or by pain. In none of our cases was there any apparent disease of the valves or the walls of the heart. The pulse is rarely small or feeble; sometimes it might be called hard and tense. We heard no cardiac murmurs, either at base or apex. In these points there is somewhat of a contrast in the behaviour of the circulation in exophthalmic goitre and rheumatoid arthritis respectively. But these diseases intimately touch one another in the frequency of the venous hum, which varies in character, intensity, and tone. It is the true vascular hum of pure anæmia and chlorosis. The anæmia of rheumatoid arthritis is of special significance in the tone of its tints and pallors, telling us in a manner not to be mistaken that scrofula and "consumption" are not far away.

In my private and hospital practice it is a matter of routine to search for an enlarged thyroid gland. The occasional coincidence of this enlargement with a moderate rheumatoid arthritis is not sufficiently recognised, but it should be sought for whenever there is a dark stain on the neck. Only one lobe of the gland may be affected. Inquiry about the behaviour of the thyroid should be pushed back to early womanhood. Extreme crippling arthritis, associated with exophthalmos and "paroxysmal hurry" of the heart, occurred in an aunt of mine, my father's eldest sister. Very lately Dr. Sansom entrusted to my care a young married lady suffering badly from arthritis of a pronounced rheumatoidal type; and she has a sister afflicted severely with the ocular and vascular symptoms of the so-called Graves's disease.

Tremor and Spasms.

That special upset of motorial function which is shown in tremors is common to both Graves's disease and rheumatoid arthritis. In the former there may be choreic movements of the limbs, and such a disturbance of the respiratory muscles as to cause breathlessness and almost dyspnœa. Tremblings of the head and rapid shakings of the arm are quite common in the history of goitre, and are now and then seen as a phenomenon of rheumatoidal degeneration. I may quote the case of a middle-aged woman, a housekeeper, who was under my care in the summer of 1888, on account of a to-and-fro spasm of a rheumatoidal left arm. The heat of the axilla on the affected side was noteworthy. To the bare touch the sensation of heat was quite acute, and on one day (a cold and wet afternoon in July) the clinical thermometer gave a reading of 100°—exactly 2° in excess of the temperature on the other side. A remarkable example of tremor occurred in a rheumatoidal lady, aged 36, entrusted to my care by Dr. Andrew, of Edinburgh. A shaking of the right arm began in November, 1888, after the death of a child. It did not go on during sleep, or when she was alone and quiet: but anything which caused surprise (whether joy or pain) began or intensified the trembling. It conformed strictly to the type of paralysis agitans, and was quite as uncontrollable.[1]

Akin to the motorial aberration of tremor is the occurrence of muscular spasm. It is only in accordance with the analogy of compound nerves elsewhere that the motor portion of the pneumogastric nerve should be occasionally in trouble; and we see how profound this disturbance may be in the irregular movements of the trapezius muscle, and of the neighbouring portion of the sterno-mastoid. If the partial stoppage of the inhibitive function of the pneumogastric nerve be the proximate cause of the tachycardia, we may measure thereby what the molecular shaking of the spinal accessory must be. These functional shocks of the great eighth nerve are important bonds between rheumatoid arthritis and locomotor ataxy. In the early stage of both diseases there may be the so-called gastric crises, cramp of the stomach and vomiting; a pseudo-asthma, or a transient dyspnœa: and difficult swallowing from inco-ordination of the pharyngeal muscles. This lack of harmonious action in the pharyngeal muscles may be so complete as to lead to regurgitation of solid and liquid food through the nostrils.

Pain.

It is in the grand element of pain that we see the closest sympathy between locomotor ataxy and rheumatoid arthritis. The pain of a rheumatoidal limb may come and go in the same way. As a matter of chronology, pain now and then visits a rheumatoidal patient almost before any articular symptom can be detected. The wife of a medical man whom I saw in 1887 had a painful condition—acute and paroxysmal—of the whole right arm. There was nothing to account for it except an early and slow osteo-arthritis of the carpus and elbow-joint. In 1888 a lady was sent to me from the north of England for the treatment of sciatica. There was a melasmic smear on each temple, and the bright orange splash on the forehead. The freckles on the skin over the knee-joint told their own tale, and a careful clinical examination revealed a "grating" and a difficulty in the movements of both knee- and hip-joints. The sciatica was purely secondary to the arthritic changes. I do not discuss the connection now; my plea is that it is much more than a chance event. Generally the specific rheumatoidal neuralgia of the lower limb is, so to speak, pain in bulk: the sufferer clasps the thigh all round, and says that the pain is in every part of it. Sudden pains run up the arm—often beginning in a particular finger—and a grievous neuralgia, which simulates that of locomotor ataxy, is often felt in the region of the shoulder and the upper arm.

The burning and gnawing pain, the tinglings, and the sensations of cold and heat are common to both the diseases that we are now considering. But they are linked together in the closest way by the ruin of joint structures. Much mystery has been thrown around what is called Charcot's joint lesion, as though it were a special trophic affair. Few people have, I imagine, really believed this; and it is refreshing to find that Dr. Frederick Taylor, in his excellent *Manual of Medicine*, plainly professes his belief in the identity of the rheumatoidal and Charcot lesions. The same view is supported by Dr. Archibald Garrod, in his complete monograph on *Rheumatism and Rheumatoid Arthritis*; and he quotes Mr. Morrant Baker as a surgical authority on the same side.

Some Uncommon Symptoms.

I travel a little outside the title of my paper in order to

[1] This patient so far convalesced that the trembling gradually left her.

glance at some erratic phenomena which cannot be formulated just yet.

Bulbar Warnings.—In early rheumatoidal troubles we see, now and then, warnings and resemblances of bulbar paralysis.

Athetotic Contractions.—The mimicry of athetosis in the grasp of the rheumatoidal hand is sometimes most remarkable. The fingers may bend and extend without any coherence or consistency of action. Abduction and adduction may be equally irregular; and I have seen the fingers engaged in slow involuntary movements when the attention has been directed elsewhere.

Glossy Skin.—"Glossy skin" belongs to the group of dystrophies and anæsthesiæ, so well described by Dr. Ord. This condition of skin—*atrophodermia neuritica*—is a common sequel of neuritis. When the fingers are affected they become smooth, shining, and dry; they taper in form, and their colour is pink or red. The nutrition of the nails is more or less injured. If anything were needed to prove the inadequacy of the naked surgical doctrine that rheumatoid arthritis is a result solely of mechanical wear and tear, it would be the phenomenon of glossy skin. As a sequel of pure rheumatism or pure gout, this symptom shows that rheumatoidal degeneration has begun, and that it should be treated as such without delay.

The danger which lurks in glossy joints is illustrated by a petty accident which happened to me last winter. A lady of middle age, sent to me by Dr. Miller, of Fort William, had bent rheumatoidal fingers, and there seemed no harm in trying to extend them by degrees. One day, however, I put her under the influence of methylene in order to apply a little more force than usual; and I had the misfortune to split the skin on the flexure side of the terminal joints of two fingers, with sudden and profuse hæmorrhage. Fortunately I had means for staunching blood at hand, and I prudently desisted from doing anything further.

Influenza.—My last remark refers to the connection between rheumatoid arthritis and influenza. In several cases I have been able to identify the beginning of the rheumatoidal lesions with a severe attack of influenza in the winter of 1889-90. So convinced were the patients of the sequence of the diseases that in every instance it was mentioned to me as a fact about which no doubt could exist. The influenza passed off, but an ominous weakness was left behind. During this interregnum of depression and spanæmia a slow inflammatory process seized the carpal and tarsal articulations; there might be a gradual quickening of the pulse, but no pyrexia. There is a real danger of being led to treat these cases as if they were of the ordinary rheumatic kind: but no blunder can be more damaging to the patient or more hurtful to the credit of the practitioner. In one instance the substantial good which I had accomplished for a rheumatoidal patient, an elderly lady, during three visits to Bath in 1888 and 1889, was entirely undone by a single bad attack of influenza in February, 1890; and about a year ago she came once more to Bath, somewhat in despair, and as crippled as ever.[2]

My chief object in this paper has been to point out the lines which our clinical inquiry may most profitably take; and that inquiry may lead us ere long to a broad generalisation that shall embrace phenomena now grouped under various titles. I have purposely refrained from speculation; our appropriate function at present is to collect and record facts. The work is full of interest, and there is every encouragement to go on. My debt of obligation to our Mineral Water Hospital is beyond all words; the clinical material gathered within its walls is of priceless value to the candid observer who has a "Platonic passion for knowledge," and the just mind which can sift and weigh that knowledge when found.

[2] In Sir Henry Holland's *Medical Notes and Reflections*, 3rd edition, p. 97, are some interesting remarks on the way in which the influenza of 1837 was followed by a cluster of other diseases of an asthenic type.

ETHER DRINKING IN MICHIGAN.—It is stated that ether drinking is prevalent in the northern counties of the State of Michigan principally among the Finns, Swedes, and Poles. It is generally taken in the form of compound spirits of ether and is mixed with whisky.

CASES ILLUSTRATING THE SURGICAL RELATIONS OF GOUT.[1]

BY LAWFORD KNAGGS, M.C.CANTAB., F.R.C.S.,
Ophthalmic Surgeon to the Leeds Public Dispensary.

ON commencing practice, one looks with suspicion and some scepticism upon conditions which older men speak vaguely of as gout, remembering the dictum of Sir Henry Thompson—a "refuge in time of trouble for practitioners of feeble diagnostic power is gout, particularly suppressed gout; therefore, beware of it." As time goes on and case after case comes under review, a larger experience reverses this judgment, and one becomes more and more impressed with the importance of recognising the gouty diathesis, not only on account of its power in modifying disease, but also from the marked success which attends upon its appropriate treatment. The impressions gained in student life of the irregular forms of gout are in the main vague and unsatisfactory; nor is this surprising when we see how summarily gouty conditions are disposed of in some of our leading surgical textbooks. In the last edition of Erichsen's *Surgery*, under causes of acute synovitis, we read: "In other cases it appears without apparent external cause, and is then usually due to exposure to cold, especially in rheumatic or gouty constitutions. In these cases it commonly happens that more joints than one are implicated at the same time; the affected articulations are more frequently those that are most exposed by having the thinnest covering of soft parts and by being especially subjected to variations of temperature, such as the knees and ankles." Under symptoms, the pain is described "as usually sharp, but when the disease occurs in rheumatic or gouty constitutions it is of a gnawing character." Under treatment, "if the patient be gouty, colchicum should be given." Eight lines in four pages are devoted to a recognised but obscure condition, and one that is by no means uncommon. When gouty conditions are under observation or discussion, either in the out-patients' rooms, or in the wards of the hospital, one always feels the want of something definite by which the constitutional state can be securely linked with the local disease. I see now that circumstances and custom are at fault. The analysis of the urine, both chemical and microscopical, assists greatly to establish an accurate diagnosis.

The best opportunity of knowing the various conditions which gout may assume is to be found in private and family practice. The general practitioner has an intimate knowledge of the idiosyncrasies and family predispositions of many of his patients. He detects the unity of the operating cause in the predominating skin affection; the erythema in one, the eczema in another. He tracks gout in the sclerotic and conjunctival inflammations, and even in the iris itself. In others, again, he sees in the mucous membranes confirmation of his views. The derangements or inflammations of the bronchial, gastro-intestinal, or genito-urinary tracts are not, in these people, simple inflammatory conditions, and to be dealt with as such, but as part and parcel of a distinct dyscrasia. He finds the children of these families subject to lithiasis, oxaluria, eczema, or dyspepsia, and, knowing that their grandfathers and great uncles were "martyrs to gout," how can he fail to grasp the indication of the family tendency, and to connect it with the constitutional diathesis?

There are many surgical conditions which have come before me in practice—complications of gout—which it may be not without interest to describe shortly; commencing with the urino-genitary organs.

CASE I. *Urethritis.*—A gentleman, aged 40, healthy looking, well made, and of somewhat florid appearance, consulted me about a muco-purulent discharge from the urethra, which had appeared a few days before. He was married, had had no impure connection, and had no reason to think that his wife had any irritating vaginal discharge. Inquiry elicited that he had lately suffered from flatulence, and that beer never suited him. His urine was acid, contained a trace of albumen, pus cells and oxalate of lime crystals in some quantity. He was put upon 3 grs. of bicarbonate of potassium with 3 minims of liq. strychninæ, three times a day, and advised to avoid sac-

[1] Read before the Yorkshire Branch of the British Medical Association.

charine substances, and take a holiday. The crystals quickly disappeared, and with them the discharge. I see him at intervals for dyspeptic symptoms, and frequently find them associated with oxaluria.

Case II. *Epididymitis.*—A gentleman of middle age not long ago consulted me for an acute inflammation of the left epididymis, which occurred suddenly without apparent cause. He was married, and had no symptoms of gonorrhœa, stricture, or stone. His family history was rheumatic and gouty, but he had never suffered from either. Recent anxiety had probably impaired his health. The urine was acid and free from albumen, but contained large quantities of small oxalates, and also hyaline casts. The disease was caused by the irritation of the crystals, but the constitutional state led to their formation.

Case III. *Cystitis.*—This occurred in a lady, between 50 and 60 years of age, in whose family the gouty constitution was very predominant. After a period of impaired health, not sufficient to lead her to seek advice, it became necessary to confine her to bed in consequence of an accident, and the cystitis slowly developed without any local cause. The urine was highly acid, in spite of rigid dietary and full doses of citrate of potash; it was turbid with mucus, and contained a considerable quantity of pus, but no crystals. Under salicylate of soda, the condition gradually subsided, though the urine continued highly acid, and for a short period in convalescence deposited uric acid crystals in abundance. Health was eventually completely restored.

Case IV. *Nephritic Calculus (?)*—This patient was a boy who had been known to pass sometimes oxalates, and sometimes uric acid crystals for years. There was a history of attacks resembling renal colic. On one occasion he had a severe attack of hæmaturia, and the left kidney could be felt on bimanual examination to be much enlarged and very tender. This condition quickly subsided, but he is still accustomed to pass uric acid crystals from time to time in such abundance as to form a deposit in a test glass sometimes from a quarter to half an inch in thickness. The family history on both sides is unmistakeably gouty, many of his nearest relatives, young and old, being to my knowledge sufferers from conditions associated with gout.

Case V. *Vesical Calculus.*—This was the case of an old farmer whom I treated for long for dyspeptic troubles associated with oxaluria and sometimes uric acid crystals in the urine. At last he came with painful micturition and commencing cystitis. I removed a mulberry calculus from his bladder weighing 4 drachms. He lived for a month after the operation, but being 76 years of age, there was too small a margin of recuperative power.

Gouty Synovitis.—Two forms have come under my observation; one in which the joint becomes very painful and tightly distended with fluid in a few hours without any apparent cause and without warning; in the other, which seems the most common, the joint gradually fills with fluid, the patient continuing his ordinary habits, until increasing discomfort and weakness of the joint led him to seek advice. I have seen many instances of this kind. One was in a very florid middle-aged woman whose health was impaired by menorrhagia, and in whom the condition was associated with excessive flatulent dyspepsia, and a copious deposit of uric acid crystals in highly acid urine. Another was in an apparently healthy man with a gouty family history, whose business engagements compelled great irregularity in his habits. His urine was strongly acid, and contained oxalates and pus. A still better example occurred in a young lady, the only delicate one in a very robust but gouty family. She was accustomed to pass at times considerable quantities of uric acid crystals; and I have attended her younger brother twice for conditions which had been regarded as gout by a physician of the greatest eminence, from whose diagnosis I saw no reason to dissent. The most troublesome case of synovitis that I have known occurred as the immediate result of a strain at football. The patient was a remarkably healthy young fellow, but as a child he suffered for years from lithiasis, which resisted all treatment. Lately he has consulted me for asthmatic breathing, which almost certainly depends upon his constitutional fault. His ancestry has shown a marked disposition to gout.

Skin Diseases.—Some skin diseases have a close relation to the gouty dyscrasia, especially the erythemas and the eczemas. The family predisposition in these cases will usually be marked, and lithuria or oxaluria with highly acid urine a frequent accompaniment. Some of the herpetic eruptions appear also to have an allied origin. In gouty subjects certain articles of diet appear to be capable of developing a simple herpetic eruption. A gouty gentleman with whom I am acquainted could at will produce herpes labialis by taking for a few days a glass or two of table beer. And so herpes zoster or shingles is an eruption often originating in the gouty subject. I may mention the case also of a man, about 35 years of age, who consulted me some years ago about a very bad acne eruption over the face. It had persisted for a considerable time, and had resisted all efforts to cure it. He spent the greater part of his time indoors as a book-keeper, and suffered from flatulence, much aggravated when he took beer and sweets. His urine was loaded with oxalates. He was put upon bicarbonate of potassium, calumba, and strychnine, his bowels regulated, sulphur ointment prescribed for the eruption, and directed as to diet, exercise, and holiday. The acne quickly improved, and was soon cured, the general health much benefited. He is accustomed to have relapses of the acne when from confinement his health deteriorates, then generally accompanied with oxaluria and flatulent dyspepsia, but all yields to the original treatment. It is worth noting that he attaches greater importance to the medicine than to the local treatment. A year or two after I first saw him I treated his mother for an attack of genuine gout in the great toe.

Ear Disease.—I was consulted by a man, aged 55, some years ago for inflammation of the membrana tympani, which soon passed away. He has been twice under my observation since for the following condition. One ear had been deaf for many years, and in it there was constant tinnitus. Recently he had also attacks of giddiness which, when severe, caused him to fall, and made him feel poorly and unfit for work for a day or two. He associated these rounds with the deaf ear, and they were not only disagreeable but dangerous, as he had to work in front of a furnace. His florid aspect, worn down teeth, ribbed nails, flatulent dyspepsia, and constant high coloured and muddy urine marked the gouty diathesis. On the first occasion his giddy attacks were completely relieved by a course of salycilate of soda. The second time neither this, nor bicarbonate, nor iodide of potassium seemed to have any beneficial influence; but, as soon as he was placed on nux vomica, he began to improve, the giddy attacks diminished, and gradually disappeared. A second case is that of a lady between 60 and 70 years of age. She is one of two sisters, who are both very gouty, with a strong family gout history. The sister suffered with true gout in the great toe at 21. I have attended this patient at different times with the following gouty conditions, namely, slight inflammation of the great toe joint, sciatica, inflammation of the lymphatics of the leg, an erythematous rash persisting for weeks but giving immunity from distressing attacks of vomiting and deafness, accompanied by pulsating noises in the head and ears. She also had one ear deaf for many years, but she will occasionally become so deaf quite suddenly in both ears that she can only hear when shouted at. The deafness, which is accompanied by distressing tinnitus, will persist for days or even weeks, will vary in intensity, and then clear up, and leave her able to hear everything that goes on. These attacks of deafness sometimes precede and sometimes follow a round of severe vomiting, but sometimes they occur quite independently. When in better health long intervals pass without their being very pronounced. Her urine nearly always deposits urates, and is very acid, and sometimes contains oxalates. She can hasten her attacks by injudicious feeding, and rather likes to run the risk. A third case, a gentleman, about 60, subject to occasional oxaluria, consulted me about attacks of giddiness, which came on suddenly and partially prostrated him. He referred them to a deaf ear, in which was troublesome tinnitus and an old perforation of the drum. A well-known consultant had told him that he suffered from Ménière's disease. It occurred to me that it might be due to gout, and, as a matter of fact, he quite recovered under the steady use of nux vomica.

Eye Diseases.—Various diseased states of the eye are acknowledged, or suspected, to have a gouty origin, though the con-

nection is not always very obvious. I will preface my first case with the following family history, on account of its instructiveness: The father first consulted me for a giddy fainting attack, and had marked oxaluria and a small retinal hæmorrhage. I see him from time to time for dyspepsia with oxaluria. The mother has gouty burnings in some of her finger-joints, flatulent dyspepsia, sometimes oxaluria, and, of late, liability to bronchitis. A son suffers from oxaluria, has a presystolic *bruit*, which gradually developed under my observation during a period of ill-health, without any antecedent rheumatic history. All the above look the picture of health. A daughter was recently under treatment for indigestion—likewise passing oxalates in considerable quantity and hyaline casts, in which numerous oxalates were embedded.[1] The case in point was that of another daughter. She had not been well for several months, when she suddenly developed an attack of acute iritis in one eye without apparent cause. I subsequently found that the two eyes were unequal, the affected one having a fair degree of myopic astigmatism, the other being almost emmetropic. Looking back upon the case now, I am convinced that the constitutional predisposition was an important factor, although at the time I did not realise it. A more marked instance was that of a man aged 40, whom I saw two or three years ago with Dr. Paterson, of Heckmondwike, for serous iritis in both eyes. Two days after a severe blow on the head he went to bed quite well, but was roused in the night by intense pain in both eyes. The next morning they were intensely inflamed, lids swollen, perception of light gone (?). When I saw him two days later matters were mending, and he could perceive the light of a candle. He had had attacks of regular acute gout in the toes and other joints, and was said to have had it in the stomach. His teeth were worn down, and his nails ribbed, and he had a gouty aspect. In everything save the part affected this resembled an attack of regular gout. He was treated in accordance with this supposition, and he made a very satisfactory recovery in about a fortnight. Cases of choroiditis occur in which a gouty origin may be suspected,[2] and it is not uncommon to find conjunctivitis developed in gouty people as the result of the irritation of chalky deposits in the Meibomian glands.

The tendency to congestion or inflammation which may be determined by a local defect, or by some irritation too slight under ordinary conditions to have that influence, is one of the most interesting feature of the gouty diathesis. Many, though willing to admit the substantial accuracy of the facts here related, may doubt the correctness of the interpretation placed upon them. Certainly, there is little to lay hold of but the completeness of the links in the gouty chain of evidence. Some points are usually more or less clear. There is often in the appearance of the subjects an aspect of health—often of robust health. They are usually well formed and well grown, differing widely from those of a scrofulous or tuberculous habit; though occasionally the two diseases are found combined. The majority are adults, and many attain to middle or advanced life before they first begin to be troubled. Many of these patients at times are unable to digest saccharine substances and fruit, and suffer from dyspepsia with oxaluria or lithiasis. Probably most of those thus suffering, who come under treatment in private practice, have an inherited or acquired gouty constitution. Ask if they can digest beer, and they will often tell you they never touch it, because it is the one thing that does not agree with them: then remember Sir James Paget's observation and suspect gout. The worn down teeth and ribbed nails are often present. These irregular manifestations of gout develop when the general health is depressed. Many of them disappear coincidently with its improvement, often without any local treatment. The aural cases I have described illustrate this fact; but in others, the local treatment is very essential; but if the constitutional condition is neglected, relapses or prolonged trouble result. A full recognition of the frequency of the gouty diathesis, as a factor in many of the ordinary forms of disease, is invaluable to the practitioner.

[1] Since the above was written another daughter has developed chronic synovitis of one knee, and her urine was very acid and contained oxalate of lime crystals. In every other respect she was perfectly healthy. I have also learnt that some years ago the father was attacked suddenly in the night with acute pain in the great toe, which became red and swollen and laid him up for several days. This was called rheumatism.

[2] A patient in whom a recent outbreak of choroiditis has appeared to me to have a gouty origin, has developed, with improving health, an unmistakeable acute gouty inflammation of a phalangeal joint in one finger. Many years ago she had episcleritis.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

MALIGNANT DISEASE OF SCROTUM AND PENIS.

Mukhan, a Brahmin, aged 17 years, came to the Muttra Dispensary on July 10th, 1890. His face was anæmic, and expressed great suffering and anxiety. The body generally was much emaciated, but he presented no symptoms of acute or organic disease of the lungs. From the centre portion of the left side of the scrotum protruded a fungoid mass about the size of a small hen's egg. The environing tissues were all involved, boggy, and infiltrated. In the right testicle the disease had not extended quite so far; all the tissues surrounding, however, were involved, as well as the penis itself, the foreskin being much elongated, and having the appearance of a fungus. The lad had the greatest difficulty in passing urine, and begged of me—so frightful had been his sufferings—to do something to relieve him. I therefore determined to remove the whole mass, viz., penis, testes, and scrotum. The testes were first exposed by vertical incisions, extending from the situations of the external rings on either side, and extending to the bottom of the scrotum; they were then removed, as in the operation for castration. Next, the scrotum was removed, as in the operation for scrotal tumours. Finally, the penis itself was amputated at its root. After removing all the parts, it was found that the commencement of the edges of the longitudinal incisions could be approximated; this having been done, all the rest of the wound, that is, the parts immediately surrounding, and below, the penis, were left to heal up by granulation; a catheter was passed, the wound dusted with iodoform, and the entire mass covered over with lint soaked in a solution of corrosive sublimate.

The patient experienced but little shock, and the parts healed most kindly: he was discharged cured on August 15th. Since his discharge I have seen him very often. The last time was in December last; he walked over to see me from his native village, distance eight miles. The parts had entirely healed, he passed his urine freely, and his general appearance was most striking. Instead of the thin, worn out, and worried looking lad of a few months back, he was looking quite fat, chubby, and cheerful.

J. Fayrer, M.D., F.R.C.S.E., Med. Staff.

HYSTERICAL LARYNGEAL DYSPNŒA.

In the night of May 13th I was asked by a medical man to see a young woman, who, it was thought, would require tracheotomy. She had very marked laryngeal dyspnœa, with stridulous inspiration and marked retraction of the chest. At intervals the laryngeal spasm became so extreme that no air entered: she struggled for breath, the pulse nearly stopped, and then with a stridulous inspiration air began to enter again. On examination of the larynx I found there was no laryngitis, but the cords were strongly adducted. Her voice, though weak, was clear. Inhalation of a few whiffs of chloroform and the application of a hot sponge over the larynx had no effect. The history of the case was that a fortnight previously she began to suffer from these attacks of dyspnœa, which were very frequent and severe for the first few days, and then had gradually diminished in frequency and severity until they had quite ceased by May 10th. On the night of the 12th she had a severe one, but was never quite so bad as on the following night when I saw her. For a week before the attacks began she had suffered from rigidity of the muscles of the back. She had lately complained of "cramps" in the arms and legs, which I thought might be hysterical tonic spasm, and so decided to try galvanism. This I did over the larynx and in the course of the pneumogastric nerves, using thirty cells, but beginning with twenty. In

five minutes the spasm, which had been urgent for five hours, had ceased. I then examined her larynx, and found the cords well abducted at the end of phonation. During that night there was only one very slight and short recurrence, and there have been only two since (May 17th), most trivial in character.

CHARLES A. MORTON, F.R.C.S., Registrar Bristol General Hospital, Pathologist Bristol Children's Hospital.

INFLAMMATION AND SUPPURATION OF SOFT PALATE WITH HEART FAILURE.

A MAN, aged 61, whose health had been failing for about a couple of years, and who had never thoroughly recovered from an attack of bronchial catarrh from which he had suffered a year previously, sent for me on February 23rd. I found the soft palate to the left of the uvula inflamed and swollen; there was very little external tenderness, no enlarged glands; the mouth was easily opened, and there was no dribbling from the mouth or nose.

On the 24th the swelling felt to the finger of the size and shape of a pigeon's egg, and was very tense, and it continued to increase in size until about noon on the 25th, when there was a sudden discharge from the mouth; and whereas previously he had had great difficulty with his breathing, and could only swallow a drop or two of fluid with great pain and difficulty, he now took up a glass of milk and swallowed it with comparative ease. When seen, shortly after, his throat was covered with a yellowish-white discharge, but this had entirely disappeared when he was again seen an hour or two later, and the swelling was less. From the time of the discharge he had very little further difficulty, either in breathing or swallowing. The swelling continued to decrease, and patches of discharge that were occasionally seen on his throat were never adherent, but easily washed off either with the spray or by swallowing. There was never any raw or bleeding surface, the mucous membrane always being smooth and unabraded. From first to last there was no glandular enlargement and no albumen. His heart became intermittent about the fourth day, and continued to get worse, though there was no very great prostation until the eighth day. From that time he gradually sank and died from heart failure on the eleventh day. The temperature was never very high, but the pulse became very quick as much as 120 after the first few days. His wife slept with him for the first three or four nights after the throat symptoms developed, and must have freely inhaled his breath. His sons and daughters were constantly in the room with him, and sitting near his head, and friends also came and saw him, and one friend, only just recovering from bronchial catarrh, sat near his pillow and close to his mouth, and talked to him for a considerable time; and I also was with him two and three times a day for a lengthy visit each time, and freely inhaled his breath. He was kissed by his near relatives, and not one of us had any bad symptoms. Moreover, on the third day, I casually examined the throat of a child of my own with the tongue depressor I had but a few minutes before used for this patient, it having simply been rinsed in cold water and wiped on a towel, and no evil effects whatever followed.

It was suggested by a gentleman who saw the patient in consultation with me that it was diphtheria. That I entirely disagreed with this diagnosis the above notes will clearly show and I think the freedom from infection bears me out in my opinion. There has not been any diphtheria in the village or immediate neighbourhood to my knowledge for two or three years past. An improperly nourished heart, due to deficient aëration of the blood, and the obstruction to its action consequent upon the great impediment to the breathing acting upon a system already weakened from failing health were, in my opinion, the causes of the heart failure.

Fulbourn. F. L. NICHOLLS, L.R.C.S. and L.M.Ed.

DEATH DURING THE ADMINISTRATION OF CHLOROFORM.

THE patient, a woman, aged 30, was admitted into the Samaritan Hospital under the care of Mr. Alban Doran for operation on April 11th, 1891. The following is her history: she had enjoyed good health up to 14 years ago, when she bruised her right knee; the injury was neglected, and, two years later, her leg was amputated by Sir W. Savory. She afterwards married; in 1889 severe pains in left iliac fossa set in and became constant. In the autumn of 1890, a tumour began to rise above the pubes, and the patient was troubled with nausea and vomiting. When admitted into the above institution on April 11th, she was very weak, the tumour rose as high as the umbilicus, and the uterus was fixed, the left side of the pelvis being very tender, evidently through local inflammation. Small quantities of pus were passed daily in the urine, and the evening temperature was high, pulse usually 90, regular and small in volume. She suffered also from a slight cough at night. Mr. Doran proposed to remove the tumour if possible, and accordingly on May 9th, at his request, Mr. Stormont Murray administered chloroform by means of Junker's inhaler; she had barely been taking the anæsthetic two or three minutes when she gave a deep sigh, turned very pale, pupils dilating, and expired. All restorative measures were adopted, artificial respiration being carried on for half an hour without avail: she seemed to die from syncope. At the necropsy, performed by Dr. Allchin, the body was found to be in a very emaciated condition, the heart was dilated (with very thin walls); there was only one coronary artery; the left chambers were healthy; right ventricle full of fluid blood: there were large cavities in apices of both lungs; the tumour (evidently ovarian) arose from the left side of the uterus, and was intimately connected below with a mass of hard malignant disease, which communicated with the rectum and bladder. The kidneys contained malignant deposit, the blood throughout the body was of a very thin and watery consistence.

C. STORMONT MURRAY,
Administrator of Anæsthetics to the Samaritan Hospital.

THE TRANSMISSION OF INFLUENZA.

THE following narrative appears to me so suggestive that I send it for publication. Five persons were attacked in succession. The details given, and especially the date of the attack in each case, show that the disease was directly transmitted from one patient to another, and that no person caught the disease in any other way.

On April 24th, the house contained Mrs. W., in her 88th year, but otherwise in good mental and physical condition, Miss H. (her companion), myself, and two servants. On this day L. came to assist the housemaid in cleaning: L. suffered this day from the first symptoms of influenza. She did not sleep in the house, but returned the next day, and was then very decidedly ill. She was unable to return again, and had a well-developed attack which lasted about a fortnight, but was not seen by any medical man. During the two days, April 24th and 25th, she was working with the housemaid in the upper rooms of the house.

On April 27th, the cook went into the infirmary in order that a tumour of the breast might be excised. She returned on the evening of May 6th, slept in a spare bedroom, and left again on the morning of May 8th. I have good reason to believe that she has escaped the disease. On April 28th the housemaid began to suffer, but did not until April 30th go to bed, where she passed some days, and then gradually recovered. Miss H., whilst continuing to assist Mrs. W., attended to her. On April 30th, Miss H. was attacked, but did not go to bed till May 4th, when she seemed very ill. She remained in bed till May 8th, when she was somewhat better.

On May 2nd, Mrs. W., who had for years been free from cough or cold, had both to a slight amount, but without other symptoms of influenza; the cough gradually increased, but there were no threatening symptoms until the evening (? afternoon) of May 8th, when collapse appeared imminent; death followed on the evening of the 11th, apparently from failure of the heart.

On the evening of May 6th, I had headache, etc., and remained in bed till the evening of May 8th, when I was decidedly better. As soon as I heard about the dangerous state of Mrs. W., I arose and remained in attendance until her death. The symptoms of influenza gradually returned, and have persisted up to the day of writing—May 19th—notwithstanding treatment and remaining in bed.

On May 1st, Mrs P. brought her cook; the latter remained mostly in the kitchen, and slept in a spare bedroom. She has had no illness. Mrs. P., was in constant attendance on

Mrs. W., her mother, and on Miss H. until May 8th, when she showed signs of illness. She went home about noon on May 9th, but returned next morning; her symptoms were on the whole slight, but continue to the present time.

Dr. Yeats has throughout given me every possible assistance, and Dr. Dreschfeld kindly saw Mrs. W. on several occasions. The facts just given are sufficient to justify me in recommending: (1) that during epidemics of influenza, all unnecessary communication with outsiders, workmen, washerwomen, etc., should be avoided; (2) that any person attacked should be at once isolated; at the same time any elderly person in the same house should be isolated as much as possible from the rest of the family; (3) that, in adition to isolation, disinfection, especially by ventilation, should be carried out as thoroughly and persistently as it can be; (4) further, it seems possible for the medical man sometimes to transmit the disease, and therefore proper means of prevention should be used.

Dudley Road, Manchester. THOMAS WINDSOR.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

GREAT NORTHERN CENTRAL HOSPITAL.

COMPLETE PARALYSIS OF PHARYNX AND LARYNX AFTER DIPHTHERIA: EXTREME PROSTRATION: RECOVERY AFTER SUBCUTANEOUS INJECTIONS OF STRYCHNINE.

(Under the care of Dr. CLIFFORD BEALE.)

F. N., a previously healthy young man, aged 22, was admitted on February 9th, 1891, suffering from increasing general weakness, especially of the lower limbs, and partial paralysis of the pharyngeal muscles, the soft palate being motionless and insensitive. The voice was "nasal," and fluid food occasionally returned through the nose, but deglutition was unimpaired for solid food. He had been attacked two days after Christmas, 1890, with diphtheria, from which he had suffered acutely for two weeks, the symptoms of paralysis coming on within a fortnight of the presumed recovery from the acute disease. General muscular weakness and the pharyngeal paralysis were at first the only symptoms. The knee jerks and superficial reflexes were still present but delayed. All the functions appeared to be normal except the action of the bowels, which was very sluggish. There were no ophthalmic symptoms; the lungs were quite free, and the heart's sounds fair. The pulse was about 88, and the temperature subnormal. For the first ten days there was no obvious change, but on the eleventh the breathing became shallow and a troublesome cough came on, which was manifestly due to the entrance of food into the air passages. The muscular weakness was not quite so great, but the knee jerks were quite absent. Two days later the patient's condition was very much worse. The voice was entirely lost, as also the power of coughing, and by the laryngoscope it was seen that the vocal cords were motionless in the cadaveric position, and that only the most feeble adductor movements could be induced by the attempts at phonation. The patient was then in such a complete state of prostration that nutrient enemata could no longer be retained, and attempts to feed through an œsophageal tube were equally unsuccessful owing to the completely paralysed state of the muscles of deglutition. A certain amount of congestive broncho-pneumonia had been set up by the attempts already made, and the patient was quite unable to rid himself of the bronchial mucus, so that it was necessary to invert the upper part of his body ever the edge of the bed from time to time to allow the discharges to trickle out. The heart's action was very rapid and feeble, and it appeared that nothing but a fatal termination could be possible.

Subcutaneous injections of strychnine (3 minims of the liquor strychniæ) were administered, and within a short time a decided improvement in the strength of the cardiac action was noted; and little by little, as these injections were repeated, a steady improvement took place. On the following day the respiratory movements were deeper, and the sputum could be forced out, although no cough could be produced. In the course of the next two days the general improvement continued, and nutrient enemata could be retained; the muscles of respiration and deglutition showed decided increase of power. The soft palate was motionless still, but there was slight return of sensation on one side of it. The laryngoscope showed that slight movements of adduction were produced in the vocal cords, although they could not be abducted beyond the cadaveric position. On March 2nd, a painful purulent discharge due to suppurative inflammation of the middle ear set in. The patient seemed to be losing ground again, and the muscular weakness became very much more marked in the limbs, while signs of the broncho-pneumonia, which had almost subsided, reappeared in the left lung. Once more the injections of strychnine were resorted to, 5 minims being given every four hours. Improvement followed, and within five days the soft palate was seen to move well for the first time, full sensation having returned to it. The laryngeal movements were perfect as far as adduction and tension were concerned, but abduction, although much more free than it had been, was still far from complete. During the next month, while the powers of respiration, phonation, and deglutition were completely restored, there was no corresponding recovery of muscular power in the limbs. By slow degrees these movements have been nearly recovered under careful rubbing, faradisation, and practice of movements in a wheel chair. The patient is now convalescent.

REMARKS.—The chief interest in this case centres round the fact that recovery is possible after the most extreme degree of paralysis after diphtheria. The patient at his worst had all the aspect of a dying man, being absolutely prostrate, unable to move, only breathing by the most shallow respiratory movements, and unable to rid himself of the mucus in his tubes without mechanical inversion. He had, moreover, the peculiar sour, earthy smell which has so often been described as associated with the approach of death. The mode of recovery of the laryngeal movements is especially interesting, as illustrative of the law insisted upon by Dr. Semon and others, that paralysis of the vocal cords affects the movements of abduction before those of adduction, and that recovery takes place in the reverse order, adductor power being recovered before the movements of abduction return.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 26TH, 1891.

TIMOTHY HOLMES, M.A. Cantab., President, in the Chair.

On the Changes observed in Healthy Arteries and in Tendon Ligatures during the first four weeks after Ligation.—Dr. SHERIDAN DELEPINE and Mr. C. T. DENT, who read this paper, first explained its origin. They gave a detailed account of the state of healthy arteries five, nine, thirteen, seventeen, twenty, and twenty-three days after ligation in their continuity. They summed up these results as follows: I. (1) When a healthy artery is tightly tied in its continuity and the ligature is efficiently applied, a permanent obstruction is invariably obtained, whether a clot forms or not, and whether the point of ligation is near a collateral branch or not. (2) Up to the fifth day the proximal end of the occluded artery is gradually filled up with coagulated blood, which by the fifth day forms a plug composed of clots of various ages. Through the unequal shrinking of the various clots channels are produced, chiefly at the periphery of the thrombus, and into the crevices thus formed fresh blood penetrates. Thus a "spurious circulation" is established. (3) From the fifth to the thirteenth day the proliferating elements of the intima penetrate into the sides of the clot and bridge over its surface. By the thirteenth day tracts of young fibrous tissue extend all through the clot, and a thick layer of flattened cells, continuous with the intima, covers the proximal surface of the clot. (4) The remains of the clot are gradually absorbed,

and by the thirteenth day only a few scattered masses of pigment indicate the previous existence of the thrombus. As the absorption goes on, the plug shrinks, and ultimately its surface becomes concave. (5) While these changes are going on within the vessel, similar processes occur in the exudation surrounding the ligature outside the artery. Embryonic vessels form in this region as well as in the artery. At first these embryonic vessels are simply solid columns or tracts of spindle-cells, and are therefore only "potential vessels." (6) By the twenty-third day both the extra-arterial and intra-arterial new vessels begin to extend through the degenerated muscularis close to the seat of the ligature. Inosculation of the new vessels takes place, followed by canalisation, and thus true circulation is able to take place through the new set of true vessels. (7) The ligature during the whole of this time undergoes slow absorption, and is gradually replaced by young connective tissue. II. From these results the following inferences were drawn: (1) That tight ligation of healthy arteries results in sound and permanent obstruction within two weeks. (2) That tight ligation with flat tendon ligature does not injure the fibrous coat of the artery, even though it be applied with sufficient force to cause complete rupture of both internal coats. (3) That the obstruction of the vessel by young fibrous tissue, replacing the clot, is complete long before the flat tendon ligature shows any sign of being absorbed or of giving way. III. (1) The use of tendon was advocated because this material is very uniform in structure, and because the shape presents certain advantages. (2) Tight ligation was said to be advisable, because it gives results which are constant, and which are obtained speedily and with certainty. IV. The use of the loose ligature was deprecated, and in criticising that method allusion was chiefly made to Messrs. Ballance and Edmunds's paper, on account of its being one of the most recent and important contributions to the subject. Loose ligation should be avoided because: (1) The method does not give constant results. (2) It does not give the same results as tight ligation within the same time. (3) It does not offer any advantages whatever as regards the operative procedure, and, if anything, is more troublesome to carry out than the recognised method. V. In conclusion, the authors discussed the question briefly from the clinical point of view, and stated their conviction that the results of their investigation were supported by practical experience. They considered that tight ligation was the method least likely to lead to injurious consequences to the ligatured vessel, and most likely to bring about the effects which it was commonly desired to obtain by the operation.—The PRESIDENT thought it more prudent to tie the vessel with such an amount of force as to divide the inner coat of the vessel. No extra danger was incurred by so doing and the obliteration of the lumen was certain. Accumulated experience showed that surgeons who had adopted this method had not been less successful than those who used the loose ligature.—Mr. MACNAMARA agreed that the tight ligature gave the greatest chance of recovery and a prosperous issue to the case. He had recently ligatured three large arteries in the human subject with a good result. He had used silk, which he thought was safer than tendon, and he kept the parts at rest for a considerable time after.—Mr. BALLANCE said that the microscopical details narrated were identical with those he had himself described at the Royal College of Surgeons. He considered that the authors in giving their conclusions had generalised upon an insufficient number of experiments. The ligature he advocated was the occluding ligature, which he held acted at a greater pressure even than the ligature which divided the coats of the vessel. It was constantly successful, whereas the tight ligature had given rise to many disasters. He asked the Society to suspend their judgment on this question till the work of Mr. Edmunds and himself was published.—Mr. SPENCER WATSON remarked that the experiments had been done on healthy animals, whereas the surgeon was often called on to deal with a diseased vessel.—Mr. DENT, in reply, held that the smoother and more homogeneous tendon was better than silk for the purpose of ligature. The conclusions in the paper had been drawn from the study of a very large number of experiments published both here and abroad, and did not rest merely on the six which had been narrated.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 22ND, 1891.

Sir DYCE DUCKWORTH, M.D., LL.D., F.R.C.P., President, in the Chair.

Living Specimens.—Dr. CALVERT showed a remarkable case of Congenital Cranial Synostosis in a child, aged 15 weeks. The bony union was firmest at the junction of the coronal and sagittal sutures.—Mr. BRUCE CLARKE showed a man upon whom he had performed a modification of Stephen Smith's method of Amputation below the Knee-joint, leaving a small portion of the head of the tibia, and without impinging on the joint.—Mr. W. H. BATTLE exhibited a case of Fæcal Abscess after Operation in a girl, aged 18. There had been a fæcal discharge at the umbilicus for upwards of seven years, which had occurred as a sequel to typhoid fever. It proved to be connected with the sigmoid flexure and an abscess cavity. Plastic operations having failed to close the opening in the gut, he cut it across and brought out the ends at the abdominal opening. Patient's condition was now that after inguinal colotomy. The parents would not consent to further operation for closure of the fistula.—Mr. HURRY FENWICK showed a man whose right Testicle showed signs of Tuberculous Deposit, the left having previously been removed for the disease. Tuberculous deposit had also been scraped from the prostate. His last child presented caseous masses at the back of the neck, elbow, and knee. He observed that cases of congenital scrofula were very rare.—Dr. BOLTON TOMSON showed a case of what he diagnosed to be Friedreich's Disease (Hereditary Muscular Spasm). There was marked loss of power in the hand and face as the result of exposure to cold; the affection was manifested to the third and fourth generations.—Mr. BRODHURST showed a girl, aged 23, the subject of Scoliosis with Rotation, treated by rest and instrumental support, with very satisfactory result after ten years' treatment.

A Case of Typhoid Fever with Occlusion of the Femoral Artery during Convalescence, and with Acute Maniacal Attacks.—Dr. SIDNEY PHILLIPS read notes of a case of typhoid fever in an adult male. The attack was a mild one, but the heart's action weak and irregular from the first. During convalescence sudden pyrexial attacks occurred. The first rise was to 103°, with sudden pain in the right hypochondrium; the second to 103.4°, and the left common femoral artery became blocked, with absence of pulsation in it and in the popliteal and tibial arteries. Retention of urine occurred at the same time. The limb became powerless, with slight anæsthesia. There was slight œdema of the leg and foot, and the affected limb became hotter than its fellow. The surface thermometer showed on one day a difference of five degrees. The rise of temperature lasted three weeks. Pulsation gradually recurred in the limb, which completely recovered. In the third attack of pyrexia the temperature rose to 103.2°, subsiding with epistaxis. The fourth, fifth, and sixth attacks of fever were accompanied by outbreaks of excitement—almost of acute mania—and in one the temperature rose to 106.1.° The patient eventually got quite well. Dr. Sidney Phillips said the plugging of the artery might have been from thrombosis or from embolism, probably the latter; such plugging of the large arteries was not very common as a sequela of fevers, and frequently led to gangrene, as in the case lately recorded in the *Lancet* by Dr. Drewitt. A rise of temperature in the affected limb after occlusion of the main artery was not usual, and even if the ordinary collateral circulation was sufficient to keep the temperature of the part up to the normal, it could not be credited with raising the temperature above the normal. It seemed probable that the shock of the embolism led to a reflex paralysis of the spinal centre, producing retention of urine, and that the same shock in the same way led to paralysis of the vasomotor constricting nerves of the arteries of the lower limb, allowing an unusual hyperæmia. Dr. Gaskell had shown that these nerves originated in the anterior cornua of the spinal cord, and passed out in the anterior nerve roots to the sciatic plexus: anything, therefore, which would produce a paralysing influence on the spinal centres for the bladder might also paralyse the centres of origin of the vasomotor nerves to the arteries of the leg. Referring to the maniacal attacks, Dr. Phillips observed it was not common to get such attacks as immediate sequelæ of

fever with such rises of temperature, the patient being quite calm and the temperature normal in the intervals. Possibly they were embolic in origin, but more probably were only signs of functional nerve disturbance in an emotional individual.—The PRESIDENT inquired whether there was any history of neurosis or mental instability in the patient's family; also whether the patient had any headache after the maniacal attacks.—Dr. HALE WHITE suggested that the symptoms pointed rather to thrombosis of the vein than to blockage of the artery.—Dr. PHILLIPS said he knew little of the patient's family, but he had not heard of any neurotic taint in any of its members. He was certain the artery was blocked, but thought it possible the vein might have been also plugged.

A Case of Leucocythæmia under observation nearly Three Years.—Dr. ORD read notes of the case. A. J., a schoolmaster, aged 36, was first seen on May 5th, 1888, and was under almost continual observation until the time of his death on January 19th, 1891. When first examined, the spleen occupied the whole of the left side of the abdomen, and in the umbilical and hypogastric regions passed to the right of the middle line. The organ was firm and the outline well defined. The patient had first noticed general enlargement of the abdomen towards the end of 1886, and attributed the splenic enlargement to a fall early in 1887. There had been no sickness or diarrhœa, no loss of appetite, no emaciation. He complained of gradually increasing weakness, palpitation, vertigo, and bleeding from the nose and gums. While under observation the spleen gradually increased in size, but not continuously, exertion or excitement causing rapid enlargement, rest in bed being followed by diminution in bulk. When he was last admitted in December, 1890, the organ extended from the seventh rib in the axillary line to Poupart's ligament, and at least two inches to the right of the middle line at the level of the umbilicus. There was at no time any evidence of peritoneal inflammation, but the spleen became tender after exertion. The liver also underwent steady enlargement, at first firm, afterwards softer in character, but without pain or tenderness. There was slight but gradually increasing ascites. The accessory symptoms were few; he suffered severely from headache; he had from time to time hæmorrhages from the nose and gums, and retinal hæmorrhages were also observed. There was no marked variation in temperature. There was a variable presence of albumen in the urine. He was treated by rest, feeding, and the administration of hypophosphite of soda and arsenic. At the *post-mortem* examination, made thirty hours after death, the spleen was found large, firm, and smooth, 7¼ lbs. in weight, occupying the whole of the left hypochondriac and iliac regions. The liver was enormously enlarged and very friable; the kidneys were enlarged, pale, and firm. No enlargement of any gland was found. The blood was everywhere of the consistence of thick chocolate, and there was no coagulation. Points of interest: First, the duration of the disease, which certainly went as far back as 1886; secondly, the comparative absence of complications; thirdly, the beneficial effect of arsenic in the treatment. Examination of the blood by Dr. S. M. Copeman: The blood was frequently examined while the patient was in hospital. It was always more opaque than usual, owing to the presence of an unusually large number of white corpuscles, for the most part granular in appearance, and presenting no amœboid movements. The proportion between the white and red corpuscles at various observations varied between one to eight and one to four. Three varieties of white corpuscles were recognised—one of normal size, which stained deeply with methylene blue: one three times as large, not staining so deeply with that reagent, and a third about half as large again as an ordinary leucocyte, resembling cells found by Dr. Sherrington in the blood in cholera. The red corpuscles occasionally showed a tendency to the formation of rouleaux, but at times this was altogether absent. Nucleated red corpuscles were found from time to time, and blood platelets were, as a rule, present in increased numbers. On standing, the red corpuscles rapidly broke down, and the hæmoglobin first underwent reduction, and then, under favourable circumstances, appeared as rectangular crystalline plates. The latter phenomena disappeared when the patient was under the influence of arsenic. The amount of hæmoglobin in the blood was reduced to between 51 per cent. and 32 per cent. of normal, these figures giving the highest and lowest records. Colourless oblong crystals, such as had been described by Charcot, were sometimes found in the blood after standing. These were also found in large numbers in the blood obtained *post mortem*. The specific gravity of the blood was considerably lowered, the last recorded observation being 1043.5.—Dr. WILBERFORCE SMITH inquired what doses of arsenic were given.—Dr. FLETCHER LITTLE asked what was the preparation of arsenic used. He had found occasionally that when liquor arsenicalis had disagreed the liquor arsenici hydrochloricus had agreed well with the patient.—The PRESIDENT said that the case was difficult of discussion: it rather required deep consideration and thought, and would well repay perusal when printed. It was remarkable that the patient lived so long beyond the period of time usual in these cases. He thought many of the clinical observations made in the course of the case were very valuable.—Dr. F. TAYLOR said that if two years were taken as the average duration of the malady, surely there must be many cases that lasted longer, as did this case, in order to bring the average up to that point. He related the case of a boy in domestic service, who became more and more pallid, whose abdomen then enlarged, especially the spleen, and who was found to have the blood of leucocythæmia. He had lived three years. He asked what was the condition of the visible anæmia in Dr. Ord's case. Was the skin persistently pale or not? In his case of leucocythæmia, above related, the boy was not at first as pallid as one would have expected. Possibly this might have been due to the condition of the sympathetic nerve allowing blushing, and hence masking the pallor. Another boy, who had come to Guy's Hospital with enlarged ankles and spleen, and who had eventually died, was not pallid.—Dr. ORD, in reply, said that the paper was rather of the character of *mémoires pour servir*. The arsenic had been given in the form of liquor arsenicalis, in a dose varying from 5 to 10 minims thrice daily soon after meals. It was sometimes given alone, sometimes with phosphate of soda. The arsenic was only occasionally discontinued, and then to the grief of the patient. He was somewhat pallid, but would not from his appearance have been thought of as a patient suffering from a mortal disease. His blood, when drawn and placed upon blotting paper, did not appear to be less coloured than the blood of a healthy man.—Dr. COPEMAN said that some of the white corpuscles were always found to contain granules which could be stained like the corpuscles in the blood of patients suffering from cholera, and which resembled the corpuscles found in animals inoculated with anthrax poison, provided the animals lived a sufficient length of time after the inoculation. He hoped to be able to show these specimens on an early occasion.

Pulmonary Embolism after Pelvic Hæmatocele.—Dr. LEONARD REMFRY read notes of this case. The patient was admitted with abdominal tumour and commencing intestinal obstruction. After a few days obstruction became complete. The tumour was aspirated *per vaginam*, and found to be a hæmatocele. An incision was made, the cavity washed out, and a drainage tube inserted. Irrigation was done daily. There was rapid relief of symptoms and steady convalescence. The last morning on which the douche was used the patient was suddenly taken with intense dyspnœa and cyanosis. The breathing became weaker and weaker, and finally ceased. Artificial respiration was kept up for three hours, followed by the administration of oxygen. Rapid improvement ensued under the latter. Corneal reflex was absent three hours and a half. Consciousness was very gradually recovered. There were paroxysms of dyspnœa and cyanosis at intervals for twenty-four hours. There was deficient expansion of chest, and pain referred to the right side. There were crepitations and afterwards tubular breathing in the right lung. The patient gradually but completely recovered. Dr. Remfry gave six reasons for considering the case to have been one of pulmonary embolism: 1. The suddenness of the attack. 2. The simultaneous breathing, followed by sighing respirations, and finally cessation of breathing. 3. The rapidly developed cyanosis, which disappeared only after forty-eight hours. 4. The occurrence subsequently of localised pneumonia in a small area of the middle of the right lung. 5. The inferior expansion of the right side of the chest, which was noticed directly after the attack. 6. The occurrence of attack after manipulations

which might easily have dislodged a clot.—The PRESIDENT said that if anyone entertained doubts as to the embolic nature of the illness, it would be for such an one to make good his contention. The evidence seemed to be strongly in favour of embolism.—Dr. CHAPMAN said that he had known a case of the kind due to embolism.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, MAY 20TH, 1891.

JOS. EWART, M.D., President, in the Chair.

Measles, an Epidemiological Study.—Dr. CAMPBELL MUNRO said that the mean death-rate from measles throughout England and Scotland had risen from 277 per million of the population in the decennium 1871-80 to 422 in 1881-90. At Jarrow, with a marked decline in the total and the zymotic mortality, the deaths from measles had risen from 274 per million in the former period to 927 in the latter. Careful investigation had convinced him of the evident connection between the spread of measles and school attendance. The school attendance rose from a mean of 95 in the decennium 1871-80, to 164 in 1881-90. In Jarrow in 1887, with no data beyond those afforded by the deaths and a very imperfect voluntary notification, Dr. Munro's attempt to check the progress by closure of infant schools was far from successful, but in 1889 the compulsory notification had come into force, and the results of his action, which were exhibited in a diagram, were most satisfactory. At South Shields, where measles was not notified, and the schools were not closed, no such speedy extinction of the disease was observed. Dr. Munro was convinced that those medical officers of health who believed that all attempts to stay the progress of an epidemic of measles were futile, and that no good could follow from notification, were in error. Compulsory notification was an essential condition of action; if this were done promptly, and all children from infected houses excluded from the schools, no further steps might be necessary. If, however, from six to ten new and independent cases occurred within one week in an average-sized school, the infant department should be at once closed; in the senior departments, where the children had passed the age of greatest susceptibility, and a large proportion had probably already had the disease, strict personal supervision and exclusion of any giving the least ground for suspicion would in most cases suffice. At the same time, the infected houses should be indicated to the managers of all Sunday schools who should be induced, as at Jarrow, to carry out the like exclusion of all suspected children.—A discussion followed, in which Dr. WILLOUGHBY and others took part.

Influenza.—Dr. SISLEY read a short note on the prevalence and modes of propagation of influenza as observed in the epidemic of 1889-90 in this country.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY, MAY 8TH, 1891.

H. E. ARMSTRONG, M.R.C.S., President, in the Chair.

London Public Health Amendment Acts. Resuming the consideration of recent and prospective sanitary legislation, the Society approved with little alteration the amendments that the Council had suggested in the Public Health London Amendment and Consolidation Bills. Among these were the inclusion of bakehouses, marine stores, brick burning, and the storage and removal of offal, manure, etc., among those for which the County Council might issue by-laws; the extension to private houses, under certain circumstances, of the smoke clauses; the repeal of all provisions for the recovery by the Asylums Board of the cost of their maintenance from the patients themselves; the exemption of existing appointments from the conditions of Clause 35 (1); the accordance of liberty to the sanitary authority to make extraordinary and temporary appointments without the sanction of the Local Government Board; and the withdrawal of Section 35, subs. 2, which required the medical officer of health to reside within or close to his district. The latter provision would have the effect of deterring men of high professional standing from seeking appointments to the worst localities, where the services of such men were most needed. In the Consolidation Bill, Section 55 (1 *a*) they recommended that a certificate of efficient disinfection be received from the medical officer of health only, and not from any medical practitioner, and that the clauses of the existing Factories and Worshops Acts (including bakehouses), and of those now before Parliament, placing the sanitary control of the same in the hands of the local sanitary authority, be incorporated into this Bill, with the proviso that all fines, etc., be paid to the sanitary authority. Mr. Gainsford Bruce's amendment restricting the practice of medical officers of health in the metropolis provoked a warm debate, some speakers deprecating any restriction; others, however, maintained that while they should, provided they enjoyed adequate salaries and fixity of tenure, be debarred from medical, or at any rate from general medical, practice, no restrictions ought to be imposed on them as to their holding professorships, acting as visiting physicians to fever hospitals, or as experts and consultants in medico-legal cases and matters connected with the public health, since such liberty could not only have the effect of attracting the ablest men, but, so long as it did not interfere with their official duties would rather increase their efficiency and tend to prevent them from sinking into a kind of higher grade of sanitary inspectors. On the assumption that the amendment would be taken as a precedent for the whole country it was denounced *in toto* on behalf of the holders of small provincial and rural appointments who formed the majority of medical officers of health.

Crematory.—Mr. KEITH YOUNG then gave a description from a model of a new "cremating furnace specially designed for destroying hospital refuse," which he had, with the assistance of Mr. Brophie and the resident medical officer, erected at the Middlesex Hospital, in which advantage was taken of the properties of incandescent perforated fire bricks and an arrangement of valves working automatically for directing the air currents to obtain the complete combustion of the gaseous products. The apparatus, costing £150, was very compact, and perfectly free from smell.

Influenza.—Mr. ROGERSON, M.R.C.V.S., made some remarks on the influenza of horses, as observed by him in the stables of the Midland Railway Company at St. Pancras.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

FRIDAY, MAY 8TH, 1891.

E. H. BENNETT, M.D., President, in the Chair.

Specimens.—Dr. FRASER showed Two Brains, with Large Cysts in the Left Hemisphere, obtained from subjects in the dissecting room. One was from a man aged 54, in which there was well marked external evidence of brain disease. The second brain was obtained from a female subject, of about 30, in whom little, if any, external evidence of extensive brain lesion could be detected. No clinical history could be obtained. The situation of the cysts in both brains, which were filled with colourless fluid, was nearly alike. The posterior portion of the inferior frontal, the lower half of the ascending frontal and parietal gyri, and parts of the supramarginal and angular gyri, had disappeared in both. In the female brain, in addition, the first and part of the second temporal convolution, as well as all the central lobe, except its basal portion, had also disappeared. The cysts did not communicate with the lateral ventricles, although in both they were only separated from these cavities by a thin membrane. The naked-eye evidence of degeneration was also alike, the anterior pyramids being absent on the left side, and the crura cerebri on the same side reduced to one half their normal size. The cranial nerves and the right hemisphere of both brains were normal as far as naked eye appearances went. Dr. Fraser also showed the dissection of a youth with Diseased Lower Dorsal and Upper Lumbar Vertebræ, in which the sinuses had passed over the rami of the pubic bones, then behind the adductor muscles in both limbs to the flexor aspect of the thigh.—The PRESIDENT exhibited an Osteosarcoma of the Lower Jaw, which he had removed from a girl, aged 17, in November, 1890. It gave a sense of fluctuation when in position in the jaw, and was removed by enucleation out of its bony case, being contained in a distinct capsule. The false sense of fluctuation was due to the mobility of the tumour within its capsule. Drs. BAKER,

Patteson, and Wheeler spoke; and Dr. Bennett replied.—Dr. Graves showed a case of Carcinoma of the Stomach which he had removed *post mortem* from a girl aged 21. For some time before death, there had never been any hydrochloric acid in the vomit. Drs. Bond, M'Weeney, Patteson, and Earl discussed the case; and Dr. Graves replied.—Dr. Graves showed a rare Tumour of the Neck. It was separable from the skin, and was very hard; it was completely surrounded by a fibrous capsule which sent trabeculæ in between the masses of horny epithelium of which the tumour was composed. He was unable to give it a name, but he believed, as it had been growing since birth, that it was a fœtal enclosure of epithelium in the cleft of the neck. Mr. Wheeler said the tumour, which was situated in the posterior superior triangle, was removed from a boy, aged 12. Drs. M'Weeney and Bewley also spoke.—Dr. M. A. Boyd exhibited the Heart, Kidneys, Liver, Spleen, and also portions of Arteries and Veins of Lower Extremities of a patient who died from general dropsy with moist gangrene of the lower limbs. There was a large infarct in the spleen, and the kidney was studded over with similar infarcts in its cortex. There was embolic plugging of both femoral arteries and thrombosis of the veins of both lower extremities. The peritoneum exhibited evidences of septic inflammation. The microscope showed numerous chains of cocci in the kidney infarcts. The thrombosed and inflamed veins of the enormously-swollen lower limbs were regarded as the source of the septic infection of the blood, probably erysipelatous in character. As there was no evidence of endocarditis or valvular disease to account for the embolic infarcts, they were regarded as due to septic cocci.—Dr. M'Weeney showed a slide of one of the Kidney Glomeruli under a one-twelfth oil imm. objective, showing the cocci in pairs, and short chains lying between the capillary tuft and Bowman's capsule. He also showed microscopic slides exhibiting the Septic Emboli.

Psorospermosis. Dr. Patteson made a further communication upon psorospermosis.—Dr. Graves said, without any prejudice to the report of the Reference Committee, that he had been unable to recognise the bodies as being in any way different from altered epithelium, and that he had seen similar bodies in many growths which certainly were not malignant.—Remarks were made by Dr. Bewley, Dr. M'Weeney, Mr. Story; and Dr. Patteson replied.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Tuesday, May 5th, 1891.

Robert Mercer, M.R.C.S., in the Chair.

The late Dr. Burnie. The Chairman, after speaking feelingly in reference to the late Dr. Burnie, proposed the following resolution of sympathy with Mrs. Burnie and family: "That this Society, deeply regretting the decease of Dr. Burnie, one of its founders and three times elected its President, places on record in the minutes its appreciation of the loss which not only the Society has suffered, but also the profession of the town, through the death of one of its ablest and most respected members, and that a copy of this resolution, together with an expression of sympathy, be forwarded by the Secretaries to Mrs. Burnie and her family."—Mr. Miall seconded the resolution, and Dr. Rabagliati also spoke a few words endorsing the remarks of the previous speakers.

Communications.—Dr. H. Bronner read notes of a case of Double Empyema in a youth of 18; patient shown.—Mr. Miall, Dr. Bell, Dr. Rabagliati, and Dr. Kerr took part in the discussion.—Mr. Miall read Statistics of Operations for Strangulated Hernia in the Bradford Infirmary.—The Chairman said he did not think that there could be much improvement in hospital cases, as these were generally at the last extremity before admission was sought.—Dr. Rabagliati and Dr. Kerr also spoke.

Recovery after Perforation in Typhoid Fever.—Dr. Major read notes of a case. The patient was a man, aged 21. The illness began on January 17th, 1891, and the symptoms pursued the ordinary course in typhoid—temperature ranging from 103° to 105° F.—until February 4th. On that day he was taken suddenly worse. When seen the temperature had dropped to 97.6°; pulse small, thready, quick. Any pressure over the lower part of the abdomen caused severe pain. Late in the day the abdomen became enormously distended. From February 6th until February 15th the abdominal swelling and pain continued; bowels constipated; temperature 100° to 102°; dry, brown tongue; violent, noisy delirium; slight dulness in lower abdominal region. After February 15th the temperature gradually subsided and became subnormal. The tympanites diminished, and as it did so a solid hard mass was found rising out of the pelvis and occupying the lower part of the abdomen. By the 22nd this mass felt somewhat softer, and its superior limit was less clearly defined. On the next day Dr. Major saw the patient in consultation with Dr. Sergeant. *Per rectum*, a large mass was felt occupying the pelvis, evidently continuous with that felt in the lower part of the abdomen. Abscess was diagnosed to be forming, and an opinion was expressed that surgical interference would soon be called for. Two days afterwards a large gush of dark-looking fluid from the bowel took place *per anum*, and completely saturated the bed. About half an hour afterwards there was another gush. In about three days after this all traces of the swelling had disappeared. Convalescence soon followed, and went on to complete recovery. Dr. Major submitted the following conclusions:—1. That the case was one of undoubted enteric fever. 2. That the sudden occurrence of the symptoms of collapse, as described on February 4th, pointed clearly to perforation of an intestinal ulcer. 3. That the succeeding extensive abscess resulted from the perforation of the gut. 4. That the sudden gush of dark fluid *per rectum* (pus and blood) resulted from the abscess bursting through the rectum. 5. That the case, therefore, was an example of recovery after perforation of the bowel in typhoid fever.

Specimens.—Dr. Firth showed two specimens of Renal Disease.

MANCHESTER PATHOLOGICAL SOCIETY.

Wednesday, May 13th, 1891.

G. A. Wright, M.B., F.R.C.S., President, in the Chair.

Ununited Fracture of the Tibia in a Child.—Mr. F. A. Southam showed a specimen of ununited fracture of the tibia and fibula from a boy, aged 6 years. When 2 years old "the bones had been broken" for the correction of a deformity due to bowing of the leg. The fracture was not, however, repaired, and though another operation was afterwards performed, it remained ununited. Four years subsequently, when he came under Mr. Southam's care, there was wasting, with marked shortening of the leg, and complete absence of union at the junction of the middle and lower thirds. Two osteoplastic operations were performed at an interval of six months, bone grafts taken first from the femur of a rabbit and afterwards from a healthy amputated foot being inserted between the ends of the tibia. No union resulting, the leg was amputated as it was quite useless. Examination of the bones after removal showed mere fibrous union; the grafts had disappeared, and there was no attempt at new formation of osseous tissue. Attention was directed to the rare occurrence of non-union after fracture in children, and also to the unsuccessful results of operative interference when this defect was met with at an early period of life, reference being made to the observations of Sir James Paget on this subject in his *Studies of Old Case Books*.—Mr. G. H. Broadbent asked what had been done with the periosteum—whether it had been left on the grafted bone or had been detached—and suggested that it might be advisable to retain a large portion of it, even allowing it to project over the edges, so as to allow of it being sutured to each end of the periosteum of the part operated upon, and thus encourage the formation of bone.

Acromegaly.—Dr. J. S. Bury exhibited a brain and thyroid gland taken from the body of a woman aged 23. She had lost strength, and suffered from severe headache for three years, and eighteen months before her death her sight began to fail. When admitted under Dr. Ross the following symptoms were observed: Great prominence of the orbital arches; a low, retreating forehead; enlargement of the nose, lips, tongue, and body of the lower jaw. The voice low pitched and monotonous; the speech slow and deliberate. The right lobe of the thyroid unduly prominent. The hands, feet, and digits greatly developed, the increase in breadth and thickness being the

most marked. Kyphosis and slight scoliosis of the cervical and upper dorsal vertebræ. The abdomen enlarged, and its wall thickened. The limb muscles soft and flabby, but no paralysis. With the exception of severe headache starting in the left temple, no sensory disturbance. Reflexes normal. Taste, smell, and hearing unaffected. The left eye nearly blind; temporal hemianopsia of the right eye. Sugar in the urine, and death from coma. At the necropsy a large pulpy tumour at the base of the brain, excavating the sella turcica and extending from the optic chiasma (which, with the optic tracts, was much compressed) to the cerebellum. Microscopically, it had the structure of a glioma. Each lobe of the thyroid was enlarged, and contained a cyst. Some pendant masses of tissue attached to the front of the pericardium, similar to pieces of a persistent thymus, showed only fat cells under the microscope. The heart and liver were enlarged. The uterus was infantile; there were small cysts in each ovary. Dr. Bury reviewed the clinical history and morbid anatomy of acromegaly, and discussed its affinities. He said it was noteworthy that in both acromegaly and cretinism the thyroid gland was either diseased or atrophied. Persistence of the thymus, hypertrophy or neoplasm of the pituitary body were less constant features of acromegaly. Nevertheless, it was significant that the anterior lobe or glandular portion of the pituitary body originally developed from the mouth cavity; and that in acromegaly the posterior parts of the mouth, namely the palate, the tonsils, and uvula were usually increased in size.—Dr. HUTTON expressed the opinion that it was impossible to distinguish between the symptoms due to the disease itself and those dependent upon the cerebral tumour; and that in the absence of any *post-mortem* examination of the bones it was not safe to conclude that the case was purely one of acromegaly.

Extensive Ulceration of the Leg.—Mr. A. W. HARE exhibited a specimen of ulceration of the leg which had persisted for twenty-six years, ultimately attacking the bones and giving rise to spontaneous fracture. Microscopic examination of the floor of the ulcer showed that it was the seat of epitheliomatous change.—Mr. G. H. BROADBENT asked what was Mr. Hare's experience in reference to the popular belief that the healing of long-standing ulcers was liable to be followed by serious results. From his own observation, he believed that there were good grounds for such popular beliefs. He was not inclined to agree with Mr. Hare that the great increase of weight which the patient had gained since the operation was altogether a favourable sign, and he would like the subsequent history of the case brought before the Society at some future time.

REVIEWS AND NOTICES.

THE THERMAL SPRINGS OF AUSTRALIA. By LUDWIG BRUCK. Sydney: Office of the *Australian Medical Gazette*. 1891.

THE author of this small pamphlet of forty pages professes to give "the fullest possible description" of the mineral springs of Australia, and undertakes to compare them with the "most famous of those of a similar character in Europe." As the author does not appear to be a medical man, it is not surprising to find him making some rather startling statements in the latter part of his enterprise; and even in the descriptive part we miss greatly the hand of an expert.

Victoria seems to be richest in mineral springs, and the most important and popular of these is at Hepburn, a town situated 2,000 feet above the sea level, eighty-one miles north-west of Melbourne. It is here defined as an "earthy and acidulous chalybeate water," and it is said to resemble in composition and uses the waters of "Cheltenham, Spa, Schwalbach, Wildungen, and others." This is one of the author's somewhat startling comparisons. In Europe we do not consider Cheltenham and Wildungen as like one another, or either of them as exactly an alternative to Spa and Schwalbach. It appears, like many of the other Australian springs mentioned, to be fairly rich in alkalies and earthy carbonates, and to contain a small amount of iron. The non-medical character of the author will probably account for this water being described as of "great value" in tuberculosis and in scarlet and typhoid fever.

Next in importance seem to be the Clifton Springs, in a beautiful situation close to the sea, thirty-four miles by steamer from Melbourne. Here, again, it is exasperating to be told that the principal spring is "very much like" that of Tunbridge Wells, and "also similar in composition" to the Racoczy at Kissingen. From the analysis given, it seems to be a much stronger water than the latter, containing about 50 grains of chloride of sodium, nearly 20 grains of salts of magnesia (sulphate, chloride, and bicarbonate), and 1½ grain of bicarbonate of iron in a pint. We also find the author recommending one of these springs as a "table water," although it contains as much as 43 grains of chloride of sodium and 10 grains of sulphate and chloride of magnesia to the pint. Clifton seems to possess several highly mineralised springs bearing some analogy to those of Homburg, and, as it is on the coast, sea-bathing is also provided.

About fifty miles from Melbourne, and 2,000 feet above the sea level, is the "Ballan" spring. It is rich in alkaline carbonates, and is known as the "Victorian Seltzer." It contains about 20 grains of the alkaline bicarbonates to the pint. The preceding and many minor springs mentioned are all in Victoria. New South Wales possesses in "Rock Flat," 267 miles from Sydney, an alkaline saline spring, apparently not unlike a cold Ems water. The other springs mentioned in this province are either of no great importance, or they are very imperfectly known.

Queensland boasts of "hot" springs at Innot of a temperature of 180° F., 900 miles north-west of Brisbane; the composition of these springs has scarcely been accurately ascertained. Taken internally, they are said to be aperient. There is a small bath establishment there capable of accommodating twelve patients only. Three more hot springs are mentioned, but very little information about them is given.

This small publication may answer a useful purpose in calling attention to the existence of valuable medicinal springs in Australia, as well as to the desirability of some really competent person examining into their composition and uses, and the amount and constancy of the supply.

THE WATERING PLACES OF THE VOSGES. By HENRY G. WOLFF. With a Map. London: Longmans, Green, and Co. 1891.

MR. WOLFF, whose interesting book entitled *Rambles in the Black Forest* has been widely read, has now produced another small volume devoted to an exploration of the adjacent health resorts on the other side of the Rhine, namely, those scattered amidst the Vosges Mountains, or lying along their outskirts. Few of these, as he remarks, are well known or greatly resorted to by English invalids. Contrexéville is perhaps the only one of all those he describes that can be said to possess anything like a popular reputation in this country. A few English invalids may occasionally be found at Plombières, and others may be met with who prefer the open and pleasant situation of Vittel to the shut in and unattractive position of Contrexéville; but how often do we hear of an English patient being sent to Luxeuil, or Bussang, or Bains-les-Bains, or Martigny-les-Bains, or even to that very considerable and important French bath, Bourbonne-les-Bains? It is in these places, as well as in some of the smaller spas of Alsace, such as Châtenois, Niederbronn, Sulzmatt, Sulzbach, Wattweiler, etc., that Mr. Wolff has been exploring and taking notes. The result is a very useful and readable little volume, agreeably written, and containing most ample and exact information with regard to the composition of the different springs, the accommodation provided for visitors, the attractions of the surrounding country, and the cases suitable for treatment. As Mr. Wolff is not a medical man, in dealing with this last branch of his subject, he has wisely chosen to reproduce the opinions of medical experts, and he quotes largely from the writings of Dr. Burney Yeo, Dr. Macpherson, Dr. Vintras, Dr. Constantine James, and others who have studied the effects of the waters at these French resorts.

A good map is placed at the beginning of the volume. To all those who want to obtain information about the "watering places of the Vosges" Mr. Wolff's book may be confidently recommended.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SPRING SESSION, 1891.

Tuesday, May 26th.

THE chair was taken by Mr. WHEELHOUSE, Chairman of the Business Committee.

New Representative.—The official notification was received respecting the appointment of Mr. Thomas Bryant as representative of the Royal College of Surgeons of England, and Mr. Bryant was introduced accordingly.

Election of President.—Mr. BRUDENELL CARTER said he had much pleasure in proposing that Sir Richard Quain be elected President of the Council. They all knew for how long a series of years Sir Richard had been not only a member, but an ornament of their body. They all knew his thorough mastery of every detail of the business of the Council. They all knew the distinguished service which he had hitherto rendered to them in the important office of Senior Treasurer; not least, perhaps, in his occasional and pertinent reminders of the costliness of eloquence. Apart from these claims and high qualifications, there was, he thought, a peculiar fitness in conferring the office of President upon one of those members of the Council who belonged to them by virtue of nomination by the Crown. The representatives of the Corporations, and the direct representatives of the profession, all had special duties to their constituents; but the nominees of the Crown were in a peculiar sense national representatives, charged with the duty of endeavouring to hold an even balance between all conflicting interests, and to adjust them for the public good. This was, pre-eminently, also the duty of the President: and therefore there was much reason for the selection of a Crown nominee for that high office. The subject was one on which he need not enlarge: but, on the grounds already stated, he had pride, as well as pleasure, in moving that Sir Richard Quain be elected.—Sir WM. TURNER seconded the nomination of Sir Richard Quain. The choice of the Executive Committee, he said, had fallen on Sir Richard Quain as their acting President, who had rendered the Council signal service in that capacity.—Sir Richard Quain was then unanimously elected President of the Council.—Mr. WHEELHOUSE, in vacating the chair, welcomed the incoming President, announcing to him, in a few graceful words, the formal resolution of the Council appointing him President.—Sir RICHARD QUAIN, having taken his seat, said that he could find no words to express his feelings on that occasion. During a life now reaching over seventy odd years he had known many joys and many sorrows, but the act of the Council had fully compensated him for any of the latter. He knew of no greater honour than that of being appointed to preside over such an assemblage, and his satisfaction would have been more complete could he only feel more worthy of it. He should, however, do his best, and he was encouraged by the recollection that he had for twenty-eight years been an assiduous member of the Council, and had gained very great experience of the working of the business of the Council. He felt he was undertaking very grave responsibilities, but he confidently anticipated receiving the same support from the Council as had invariably been accorded to his predecessors in office. The Council to his knowledge had ever been desirous of discharging faithfully the functions confided to them by Parliament, and he hoped that as they were getting older and more in touch with the various licensing bodies they would be enabled to merit the esteem and respect of the profession more and more. The Council would see the work that had been done during the past six months in the agenda and minutes. In conclusion, he expressed the deep sorrow he had felt at the death of his fellow-student and old friend, Mr. Marshall, whose wide sympathies, extraordinary knowledge of mankind, and desire faithfully to discharge his duties in every walk of life had gained the respect and esteem of his colleagues everywhere. This, he said, would be better expressed in the full resolution, which he read, and which, after a few sympathetic remarks from Dr. HAUGHTON, was unanimously adopted.

The Council cannot enter upon the duties of another session without first conveying to Mrs. Marshall and the family of the late President an expression of the great sorrow they feel for the loss they have sustained, and offering them the tribute of the Council's sincere and affectionate sympathy. By his long, able, and untiring services to the Council, by his unfailing kindness and courtesy to its individual members, by the patient and well-balanced judgment with which he at all times conducted its affairs, and by the dignity with which he represented the Council on all public occasions he had endeared himself alike, not only to his colleagues and the officers of the Council, but to all with whom his labours brought him into official contact. The Council accordingly feel that they cannot refrain from offering to his family an expression, not only of the sorrow of its entire body, but also of the sense of the personal loss entertained by its members individually by the death of so worthy a colleague and President.

Business Committee.—The Council then proceeded to the election of the Business Committee. Mr. Wheelhouse, Dr. Moore, and Dr. Struthers were re-elected.

Examination Returns.—The following yearly tables (subject to correction) were received and entered upon the minutes:

(a) Table showing results of professional medical examinations during 1890; *(b)* Table showing results of preliminary examinations during 1890; *(c)* Table showing exceptional cases in regard to length of courses of study during 1890; *(d)* Table showing results of professional dental examination during 1890; *(e)* Table showing results of competition for commissions in the Medical Department of the Royal Navy; *(f)* Table showing results of competition, held on August 11th, 1890, for commissions in the Medical Staff of the Army; *(g)* Table showing results of competition, held on February 9th, 1891, for commissions in the Medical Staff of the Army.

Sir DYCE DUCKWORTH and Dr. GLOVER called attention to certain shortcomings and discrepancies in the returns, particularly in reference to the non-appearance therein of the numbers of candidates passed and rejected for the Fellowships of the Scottish licensing bodies. It was understood that application would be made for the desired information.—Dr. STRUTHERS called attention to deficiencies in the returns of the results of preliminary examinations. None were given from Oxford, Cambridge, or Edinburgh.—Votes of thanks were ordered to be sent to the Directors-General of the Services for the tables received from them.—The President was requested to ask of the Indian Government a return of the results of examinations for the Indian Medical Service.

Communications from Privy Council.—The following communications from the Lord President of the Privy Council transmitting "a further memorial of Mr. Thomas Laffan" was received and entered upon the minutes.

Council Office, March 3rd, 1891.

SIR,—Adverting to my letter of February 8th, 1887, and to your reply of March 2nd following, I am directed by the Lord President of the Council to transmit to you a further memorial of Mr. Thomas Laffan, Physician, of Cashel, praying for the enforcement, in the matter of the General Medical Council, of the 19th Section of the Medical Act, 1886.

Bearing in mind the strong sympathy with the utilisation of the clinical material in county infirmaries and union hospitals expressed in the report of the Committee appointed by the Medical Council to consider my letter together with Mr. Laffan's former memorial, and also the statement in that report to the effect that the Royal University take the same view, and are prepared to consider individual applications for recognition, the Lord President would be glad to learn from the Medical Council whether any progress has been made in the direction indicated. His lordship would also be glad to be favoured with any observations the Medical Council may desire to offer on the other points referred to in Mr. Laffan's Memorial, especially as to the alleged abandonment of the visitation of teaching and examining bodies.—I am, Sir, your obedient servant,

C. L. PEEL.

The Registrar of the General Medical Council.

The Memorial of the undersigned Thomas Laffan, Physician, of Cashel, to Her Majesty's Most Honourable Privy Council, praying for the enforcement, in the matter of the General Medical Council, of the 19th Section of the Medical Act, 1886.

MY LORDS,—I beg again to memorial your lordships, under Section 19 of the Medical Act of 1886, on the subject of the failure of the General Medical Council to exercise the powers, perform the duties, and do the acts imposed on said Council under the Medical Acts, and the Act of 1886. I appealed to your lordships by a memorial dated February 4th, 1887, against the same Medical Council, and I subsequently sent forward a second memorial, to which your lordships replied on March 4th of same year. In that reply your lordships gave as a reason for not exercising the coercive powers of the Privy Council over the General Medical Council that the latter had under consideration the inclusion of union hospitals within the field of clinical instruction. I beg to point out to your lordships that they have been considering it ever since, and that, as everyone expected who understands the interest which they have in preserving to their own hospitals the monopoly of clinical instruction, they have not yet brought their considerations to a close. I beg to point out to your lordships that at a meeting of the General Medical Council, held on November 22nd, 1887, and reported in the official minutes of that body, and in vol. ii of the *Lancet* for 1887, p. 1083, a Committee of that body quotes without contradiction the allegation that medical men recently qualified are unfit to take sole charge of the sick, and they recommend such change in the curriculum as would render it imperative on the stu-

dent to obtain a more complete clinical knowledge, and they add that such change would be viewed with favour by members of the Council, and by the profession generally. I beg further to point out to your lordships that we have the official testimony of the visitors of the General Medical Council that the existing clinical material is already too limited. It therefore clearly follows that the means required for such better practical training cannot be had in that portion of the clinical field which is now alone thrown open to students. Yet in face of these facts, the members of the General Medical Council have failed to enlarge the clinical field by the recognition of union hospitals, while they have still further aggravated the overcrowded condition of the aforesaid existing clinical fields by adding on another year of clinical study, the whole of which may, and the half of which must, be spent at the aforesaid already overcrowded hospitals.

The half-year's non-compulsory instruction at said hospitals may, indeed, possibly be spent with a general practitioner; but inasmuch as it is to be purely voluntary, it will be as unavailed of as a corresponding permission to attend the existing hospitals during this identical fifth year has always been found to be where such permission has been freely accorded, as it notoriously has been in many clinical hospitals.

Moreover, it is a matter well within the experience of the Medical Council that no mere voluntary regulation has ever yet been acted upon by students, no matter how important it may have been; and, further, that no clinical hospital could supply the kind of training contemplated by the six months' apprenticeship. I desire further to point out that the system of visitation under which it had become possible for some light to be let in on the defects of teaching and examining bodies has since been quietly abandoned, and notwithstanding the fact that the completest proof has been forthcoming of the necessity for the continuance of such visitation the Council persists in leaving the bodies unvisited. The complete proof to which I refer was the discovery, by means of outside and accidental information, that the University of Glasgow had granted degrees on wholly inadequate examinations and training.

It is to be observed that these visitors were very far indeed at any time from being independent parties, and that latterly they were the mere servants of the Council, and yet that body dare not venture on their continuance. I therefore appeal to your lordships to exercise the powers conferred on you by Section 19 of the Medical Act of 1886, to compel a body which guards its own interests, and its own interests alone, to do its duty by the public and by the profession by ceasing to oppose interested obstacles to the adequate education of the profession.—I have the honour to remain your lordships' obedient servant,

(Signed) THOMAS LAFFAN.

It was proposed by Mr. WHEELHOUSE and seconded by Sir WM. TURNER that the foregoing communication should be referred to a committee (to be appointed) to report thereon during the present session. The following gentlemen were elected to serve on the committee:—Sir Wm. Turner, Sir John Banks, Mr. Moore, Dr. Glover, Sir Dyce Duckworth, Dr. Haughton, Dr. Leishman, Sir Walter Foster, Dr. Kidd, Dr. Heron Watson, and Mr. Macnamara.

The motion was agreed to.

The Colonial Register.—Communications from the Lord President of the Council applying Part II of the Medical Act (1886) to South Australia, were read and ordered to be received and entered upon the minutes.

Withdrawal of Licence.—A communication was read from the clerk to the Society of Apothecaries intimating that the name of Wm. Montague Hall Welby had been erased from the list of Licentiates of the Society, and was ordered to be entered upon the minutes. Mr. Welby's name had already been removed from the *Register*.

Report of Election Committee.—The report of the Special Election Committee in reference to the procedure to be followed in respect of the forthcoming election of direct representatives on the Council was brought up for adoption, but after some discussion it was referred back to the Committee for further consideration and report, with directions that legal opinion should be taken as to the date of the determination of office of existing direct representatives and as to date of election.

Withdrawal of Diploma.—A communication was read from the Royal College of Surgeons, intimating

That, as Mr. Alexander Paterson, admitted a Member of the College on November 15th, 1866, has refused to make the statutory declaration required by the Council, and as the advertisements issued by him are, in the opinion of the Council, in the terms of Clause 2, Section 16, of the By-Laws, "prejudicial to the interest" and "derogatory to the honour of the College," and "disgraceful to the profession of surgery," he be removed from being a Member of the College.

This communication was received and entered upon the minutes, whereupon the Registrar was directed to erase this qualification from those in virtue of which Mr. Paterson had been registered.

Dr. GLOVER asked whether the delinquent would be allowed to remain on the *Register* in virtue of his Scotch qualifications. He urged that it was incumbent on the Council to take steps in the matter failing action on the part of the University of Edinburgh, of which the delinquent was a graduate.

Sir WM. TURNER said he was not aware that the attention of the University of Edinburgh had been called to the matter, and in any event he knew of no power to remove the names of graduates.

Dr. GLOVER proposed that the case should be referred to the Executive Committee to report thereon.

Sir JOHN SIMON objected to the Council undertaking this washing of dirty linen on a large scale on behalf of the various bodies and universities. He urged that the bodies and universities which did not possess any disciplinary powers should forthwith take steps to secure them, and expressed his great regret that they had not already done so.

The PRESIDENT pointed out that the Council had been asked to do a certain thing, and had done it. The matter therefore was at an end.

Dr. GLOVER gave notice of his intention to bring forward a motion on the subject.

Six Years' Curriculum for University Graduates.—Dr. HAUGHTON moved:

That, in the opinion of the Medical Council, university graduates in medicine should be required to have spent not less than two years in the study of mechanics, physics, chemistry, and natural history; and not less than four years in the study of medicine, surgery, and midwifery.

He urged that universities in conferring medical degrees should differentiate themselves from the corporations and other bodies giving licences or qualifications to practise. He animadverted on the practice of facilitating the degree in medicine to practitioners who had long since forgotten what little science they had ever known. He thought that four years was ample for the student to acquire all necessary knowledge in medicine, surgery, and midwifery, provided he were already well versed in the non-medical and preliminary sciences.

Mr. MITCHELL BANKS urged that it would be very undesirable to open up the curriculum question once again, and moved "the previous question," which was carried, and the matter dropped.

The CHAIRMAN of the Business Committee explained that a great deal of Committee work remained to be done, and it would be impossible to draw up the agenda for the morrow unless the Council devoted the rest of the time to elaborating the work in committee.

The Council therefore adjourned at 4.30 P.M. The various Committees at once assembled.

Wednesday, May 27th.

Sir RICHARD QUAIN, President, in the Chair.

Case of William Ainslie Goodall.—The first business was to receive and enter upon the minutes communications and documents concerning the case of one William Ainslie Goodall, now registered as resident in Montreal as L.K.Q.C.P.I. 1885. It transpired that the Royal College of Physicians of Ireland had erased his name from the roll of Licentiates in Medicine, his name having already been removed from the *Medical Register* of the province of Nova Scotia for 1890-91, by order of the Provincial Medical Board, for "infamous conduct in a professional respect."

The said William Ainslie Goodall was summoned to appear before the Council to-day, May 27th, on the charge

That he was associated with a notorious objectionable concern called "London Staff," and had adopted the reprehensible modes of practice of that organisation by offering to practise gratuitously and to guarantee cures, and by issuing objectionable and disreputable advertisements to the public, for which conduct his name had been erased from the *Medical Register* of the Province of Nova Scotia, and from the roll of Licentiates of the Royal College of Physicians of Ireland.

The registered letters addressed to the defendant had been returned by the Post Office, the defendant not being known at the address given. He did not appear before the Council, so Mr. Farrer, solicitor to the Council, brought forward the case, reading the documentary evidence which had been collected bearing thereon.

After some remarks from Dr. ATTHILL, the motion was put from the chair

That the qualification of this person be removed from the *Register*.

This was agreed to, and the motion to erase the name from the *Register* was deliberated upon *in camerâ*.

On strangers being readmitted, the PRESIDENT announced that the name had been ordered by the Council to be erased.

Case of John Keys. Mr. Keys had been summoned to appear before the Council on the following charge, as formulated by the Council's solicitor:

That he had continuously throughout the year 1890 acted as cover to one Tasker Spence Keys, a person who was not registered or qualified to practise as a registered medical practitioner, that was to say, that he had in concert with the said Tasker Spence Keys, and by permitting him the use of his name, enabled the said Tasker Spence Keys, at 72, Carlisle Street, Cardiff, and elsewhere in Cardiff, improperly to practise and to sign medical certificates as if he had been a duly qualified registered medical practitioner.

From the statement of the case by the Solicitor to the Council, it transpired that the said John Keys is a practitioner living in Dublin. He was complained of on February 12th, 1889, by Dr. Maurice Evans, of Cardiff, as employing his brother, Tasker Spence Keys, an unqualified person, in the conduct of a practice at Cardiff, a qualified person, named Darley, acting as cover, "J. Keys, Surgeon," being on a brass plate on the door of the house where the practice was carried on. The Registrar informed John Keys and Mr. Darley of the complaint. They both replied that Tasker Keys had nothing to do with the practice, that he was a student in Edinburgh and owner of the said house in Cardiff, where his wife lived, and which she managed for Darley. This was thought a sufficient explanation. Dr. Evans again, November 22nd, 1890, wrote the Registrar to state that Tasker S. Keys was still practising under cover of Thomas Webb, a qualified person, and enclosed a newspaper report of an inquest on Beatrice Rose Smith, an infant, who had been attended both by Tasker Keys and Webb, the death certificate being signed by Tasker Keys "for Dr. John Keys." The jury and coroner blamed the practice of handing over patients to unqualified men, and the coroner remarked on the certificate. Dr. Leslie Phillips also wrote to point out this. The Solicitor, by the President's direction, wrote to John Keys for an explanation; also to Dr. Webb, but this last letter was returned through the dead letter office. In December, 1890, Mr. Keys replied as before, adding that he was selling the practice.

Mr. Keys was present in person, but was also represented by Counsel (Mr. Hugh Williams).

The Solicitor (Mr. FARRER) was proceeding to read certain extracts from local papers, when Counsel for defendant objected to these advertisements being admitted as evidence.

Mr. MUIR MACKENZIE, legal adviser to the Council, explained that the ordinary forensic rules of evidence did not apply before the Council, seeing that they had no power to take evidence under oath. They were, therefore, constrained to take whatever information they could get which would serve to elucidate the truth.

At Sir JOHN SIMON'S suggestion it was agreed to take note of the objection, and proceed with the statement.

Mr. HUGH WILLIAMS (for defendant) explained that he courted a full inquiry, but when there was a conflict of testimony in public documents he should protest against unauthenticated documents being put in when duly authenticated records (from the coroner's court) were available.

Among other documents read were the depositions of witnesses at an inquest held on the body of a woman who died consequent on unrelieved placenta prævia. The depositions were to the effect that she was seen on several occasions by the aforesaid unqualified practitioner (Tasker Keys); that Mr. Thomas Webb, the qualified assistant employed by defendant, was called in by Tasker Keys very late, when the woman was moribund, and on his (Webb) telling Tasker Keys that in future he would have to act under him, he (Tasker Keys) retorted that Webb (the qualified man) was the assistant, and not he: that thereupon they "had a row," and Webb had to leave; and that another medical man was ultimately called in, who diagnosed the nature of the case, and did what was possible, but too late, to save the woman's life.

Defendant, in his letters to the Registrar, repudiated the charge of acting as "cover" to or in concert with the said Tasker Keys, at 72, Carlisle Street, Cardiff, urging that he superintended the practice himself, and provided a qualified assistant to replace him in his absence. Moreover, he had since severed his connection with that practice by selling it to a Dr. Phillips, forwarding for the inspection of the Council a copy of his agreement with the latter.

Mr. WILLIAMS, Counsel for the defendant, then addressed the Council on behalf of his client. He disclaimed any desire to shelter his client behind technical objections as to the nature of the evidence, or in any way to avert or avoid a complete and searching inquiry into the circumstances of the case. He traced the career of the unqualified Tasker Keys, who, he said, was a simple student and assistant. He read a passage from the original agreement with Mr. Darley, a qualified assistant, with respect to the practice at Carlisle Street, Cardiff, to the effect that he (Tasker Keys) was not to interfere in the conduct of the practice in any way, which practice was to be carried on on behalf of John Keys by the said Mr. Darley. He argued that indiscretions on the part of a qualified assistant at times when he was not in a condition to attend to his duties could not engage the responsibility of his principal. He urged that the Medical Act did not contemplate preventing, and, as a matter of fact did not prevent, unqualified practitioners from carrying on the practice of medicine. He said the charge was really that Tasker Keys was carrying on such a practice, and if this were so why was he not proceeded against? He quoted a case in which a claim was brought for the recovery of fees for attendance by an unqualified assistant, residing at a branch surgery 25 miles distant. Lord Coleridge non-suited the plaintiff, but from the fact that his lordship did not characterise the arrangement as illegal, Mr. Williams argued that it was not *per se* illegal. He urged that if Tasker Keys had acted as assistant to Mr. John Keys, qualified assistant, that did not constitute an offence under the Medical Act, and any fault, if fault there was, was imputable to the qualified assistant and not to the principal whose interests had been betrayed. He pointed out that one of the incriminated certificates was signed "for Mr. John Keys," so that there was no pretence on the part of Tasker Keys to be a qualified practitioner. He strongly objected to the admission of the affidavits of the solicitor who had undertaken the researches, as being an *ex parte* statement. The husband of the woman on whom an inquest was held stated in evidence that he knew that Tasker Keys was not a qualified man, so that he could not be said to be practising as a qualified man under cover of his brother. As soon as Mr. John Keys discovered the irregularities he dismissed his then qualified assistant and disposed of the practice. He maintained, moreover, that Mr. John Keys would have been perfectly justified in putting his brother there as unqualified assistant. The law did not prohibit it. In the particular instances alluded to he urged that the intervention of Tasker Keys was wholly unauthorised by his brother and was in opposition to his express instructions. He maintained that there was not a tittle of evidence to show any connection between Mr. John Keys and his brother. As a matter of fact Tasker Keys had been up for his final examination at Edinburgh, and had been absent several months in preparing for it, though, as it happened, he had been unsuccessful. He concluded by offering Mr. John Keys for examination.

Mr. MUIR MACKENZIE then examined Mr. John Keys, the defendant, as to his position with regard to the various persons named. He (Mr. Keys) said that there was no name on the door in Carlyle Street until he put his own there, although that of Mr. Arthur, his predecessor, had been there. He arranged to give Mr. Arthur £20 for the practice, but he had not paid that amount. His brother was the tenant of the house before Mr. Arthur came there, and before he (Keys) bought the practice of Mr. Arthur. He himself was the tenant of his brother, to whom he paid £78 a year to cover rent and the board and lodging of his qualified assistant. His brother resided in the house still. Dr. Edwards had left, not, he believed, on account of complaints of his being called upon to "cover" an unqualified person, but because he could not raise the sum to buy the practice as he proposed to do. He admitted having had complaints of his "covering" an unqualified practitioner while his brother was practising in his name. His qualified assistant always forwarded to him periodical accounts of the receipts; these had always fallen short of the expenses, so that he had lost a good deal over the practice. He had kept it on in spite of his losses because he hoped to be able to dispose of it ultimately, and not out of any regard to his brother; he had now definitively relinquished all connection with the practice. Practically he had paid nothing to Mr. Arthur for the practice, and he had disposed of it to Dr. Phillips for the nominal sum of five shillings. His brother was still the tenant of the house, but had been in Dublin since this trouble occurred; Dr. Phillips was at present in charge of the house. Mr. Corrigan had been

his qualified assistant and had left, but not, he believed, on account of any indisposition to act as "cover," for that he was not asked or expected to do. Mr. Corrigan had written him while his assistant in reference to the reports that had been circulated by Dr. Wallace as to his (Corrigan) acting as "cover," and had advised an action for slander. (Counsel for the defendant produced the letters in question.)

At Mr. Muir Mackenzie's suggestion, Mr. Corrigan was allowed to explain the references that had been made to him by the defendant and his counsel. He said he had left on account of a dispute with Tasker Keys. He admitted having sent the report of the inquests to Mr. Keys after leaving, heading them "a nut to crack." He had immediately set up in practice for himself close by, and kept an assistant—a qualified assistant. In reply to a question, he said that the other assistant, Mr. Webb, had been sent away because he would not swear at an inquest what Tasker Keys considered necessary to get him clear. He said that Mr. Keys had written him after he left, and said in the letter that——

Defendant's Counsel, having ascertained that the letter was still in his possession, warmly protested against witness being allowed to give his garbled version, and claimed the production of the letter. He urged that such evidence was not and could not be admissible.

After some discussion, the Council decided to allow Mr. Corrigan to explain, reserving the point as to the production of the letter for subsequent consideration.

Mr. Corrigan, continuing, said Dr. Wallace had called his attention to the fact that he was acting in an unprofessional manner, and gave him the past history of the practice. At one time Mr. Tasker Keys had a plate with "Surgeon" on the door, but this had been removed, presumably for fear of consequences. He had mentioned this fact to various medical men at Cardiff; he had seen the plate.

Cross-examined by defendant's Counsel (Mr. Hugh Williams), he admitted having gone away for the night to Taunton to a ball on one occasion, and on another occasion he had been absent a week buying cattle in Ireland; during this time he left Tasker Keys in charge of the practice, a qualified friend of his having promised to afford assistance in case of need; he had received a scurrilous letter from Mr. Keys. It was sent before he had despatched the newspapers to Mr. Keys. In it was the passage, "I will hold the practice at all risks, and you will find me a hard nut to crack." He had signed the agreement with Mr. Keys (produced) without reading it, on account of the short time at his disposal. He had never seen Mr. Keys at Cardiff; he sent him periodical reports. Questioned as to his position in regard to Tasker Keys, he said that in reality he (Keys) was the principal; it was Tasker Keys who kicked Webb, the other qualified assistant, out; he did not receive orders from Tasker Keys, nor did he (Corrigan) give Keys orders. He had asked his friend to look in in case any patient should appear to be likely to die. Bills were sent out in the name of "Corrigan and Keys," but he had seen bills in the name of Tasker Keys; patients all supposed that the Keys referred to was Tasker Keys; the latter had only attended two or three midwifery cases, but they did not have much midwifery; one of them was the fatal case of placenta prævia.

The Council then proceeded to deliberate on the case *in camerâ*, and on adjourning soon after, it was understood that the further consideration of the case was adjourned to Friday next to allow of the production of certain documents.

Thursday, May 28th.

Sir Richard Quain, President, in the Chair.

Office of Treasurer.—The first business of the meeting was to receive the resignation of Sir Richard Quain as Treasurer of the Council, Mr. Thomas Bryant being nominated to take his place.—Sir Wm. Turner proposed a vote of thanks to the retiring Treasurer, which was seconded by Sir Walter Foster, who bore testimony to the very great and important services rendered by Sir Richard Quain. The motion and vote of thanks to the retiring Treasurer were agreed to, and Sir Richard Quain returned thanks.

Visitation and Inspection of Examinations.—A motion was brought forward by Dr. Struthers to appoint a committee to consider the subject of the visitation and inspection of examinations under the Medical Act (1858 and 1886), and to report to the Council during its present session. Dr. Struthers proposed that the committee should be a large one.—Mr. Wheelhouse seconded the motion.—Sir John Simon thought the Examination Committee would be the proper body to report on such a question. He insisted on the importance and urgency of resuming the system of inspection. He adhered to the opinions he had already expressed as to the nature and scope of these inspections. He pointed out that the principle of such inspections had been defined as "systematically covering within stated periods of time the pass examinations in all branches of knowledge which the Council deems essential." He thought this would be done at a cost of, say, £1,000 a year. He thought a definite plan should be brought forward in virtue of which the Council would inspect all examinations. He thought that to limit the inspection to certain topics was to fall short of their duty. It should include all the examinations of all the bodies.—The President said that no doubt the Committee would take cognisance of Sir John Simon's weighty observations.—The motion to appoint a committee was agreed to, and the following were nominated to serve thereon: Dr. Struthers (Chairman), Mr. Wheelhouse, Mr. Bruce, Sir Dyce Duckworth, Sir Walter Foster, Mr. Michell Banks, Dr. MacAlister, Mr. John Simon, Dr. David Watson, Sir John Banks, Dr. Moore, and Dr. Kidd.—The list was agreed to.

Training in Obstetrics.—Dr. Glover moved:

That it is urgently necessary for the examining bodies to require of candidates for their diploma additional guarantees of practical education in obstetrics; and that candidates at the final examination be required to produce proofs that they have personally conducted at least six, and been present at at least twenty-four additional labours, and of having attended as pupils for six months a lying-in hospital, or the lying-in department of a general hospital or a maternity institution with arrangements for clinical teaching approved by the examining body granting the diploma.

He regretted having to bring up this subject once again; but he urged that it was one of the most important before the Council. He urged that one of the principal duties of the Council was to ensure the standards in midwifery as well as in medicine and surgery. He pointed out how very different were the requirements of the Council in so far as concerned clinical experience or hospital practice as regards midwifery when compared with those bearing on medicine and surgery. He asked what were twenty cases of midwifery as compared with three winters' and two summers' hospital work in medicine and surgery? He maintained that such a disproportion of requirements in respect of subjects which the law put on an equality was altogether indefensible. Midwifery, moreover, was a subject upon which it was impossible to examine students, so that it was the more important to ensure an adequate training. He regretted that the principal objections to his motion had come from the able and eloquent profession of the Scotch universities—universities which were the admiration and envy of the world, in all respects save in midwifery instruction. He characterised as extraordinary the statement of Dr. Leishman that he could give more practical instruction in one case than the student would take haphazard in thirty. He doubted, however, whether even Dr. Leishman could teach the whole art of obstetrics at one sitting. The only way to learn obstetrics was to see a large number of cases. Even if Dr. Leishman could do what he said, he never had an opportunity of putting his powers to the test, seeing that he never accompanied students to the bedside. Possibly a difficulty might arise as to the requisite number of cases; but if the number could not be provided in one place it could be in another. He said the addition of a year to the studies would probably lessen the number of men wanting cases at any one time. He protested against the idea that twelve cases attended with a general practitioner would be considered as in any sense an equivalent to three months' training in a lying-in institution. It was the most vulnerable point, and one upon which the Council exposed itself to adverse criticism. He concluded by expressing the hope that the Council would proceed to place obstetrics on a footing of equality with medicine and surgery.—Dr. Atthill said he experienced a feeling akin to shame at having to rise and second so obvious and so necessary an improvement in the training of students in this department. He urged that it was the minimum that the

Council could require, and the necessity for which would be endorsed by practitioners throughout the country. As an experienced obstetrician, and no less experienced teacher, he ridiculed the proposition that the art of obstetrics could be taught from one case. He thought that it was a disgrace to the Council that it should hesitate to enforce a fairly good standard for students in this department. The resolution only asked that the student should have personally conducted at least six cases. That was a small number enough, but still it might suffice because the student would have an opportunity of seeing many others. There ought to be no difficulty in providing the requisite number of cases. If necessary maternity departments might be opened in general hospitals, and probably would be opened forthwith if this rule were passed. There was nothing to prevent these six cases being attended under the care of the general practitioner, but he attached great importance to that part of the motion bearing on attendance on a maternity.—Mr. WHEELHOUSE said he would be neglecting his duty to his constituents if he failed to speak strongly in favour of this motion. He regarded it as little short of a reproach to the Council that it could be said to regard three cases as sufficient instruction for a candidate in obstetrics. He said that obstetrics was better taught forty years ago than at present, and he urged that if the Council laid down rules under which men would be admitted to practise midwifery, they ought to be at least as exacting as for medicine and midwifery, and to ensure that men had had a proper training before being entrusted with the lives of women and children.—Dr. LEISHMAN said that the motion seemed to him to be based on the initial fallacy that a student's training was to be measured by the mere number of cases he had attended. He protested against such a misstatement, and he reiterated what he had previously said as to the greater benefit attending careful clinical instruction in one case than haphazard attendance on a large number. He pointed out that the matter had already received very careful attention at the hands of the Council, and the Committee had borne in mind the possibilities of providing the material at certain schools. He urged that the fact that there was no lack of material at London, Dublin, or Glasgow did not justify their making rules which could not be complied with at institutions otherwise situated. Anxious, however, to meet the views of members, he proposed as an amendment:

That every student should be required to attend for three months the practice of a lying-in hospital or maternity institution, and to have personally conducted at least twelve cases of labour under the superintendence of one of the members of the staff of the institution.

Dr. ATTHILL said he did not attach so much importance to the number of cases as to the training in a proper institution.—Dr. WILKS said that so far as he had been enabled to ascertain London students attended a far larger number than that provided for in the motion, and he did not think that the motion concerned London members.—Dr. TUKE seconded Dr. Leishman's amendment.—Dr. KIDD, speaking as a teacher of midwifery of 30 years' standing, urged that present requirements were wofully inadequate. There was no branch of practice in which ignorance was so quickly fatal or was followed by such lamentable results as in obstetrics. He pointed out that a man might attend even 30 cases and not see a single complicated case or learn anything of the after-treatment. For this reason he thought a six months' course of training at a special institution was indispensable.—Sir JOHN BANKS quoted the regulations of the Royal University of Ireland, which were far more severe than those proposed by Dr. Glover, which he had great pleasure in supporting.—Dr. WILKS asked what Dr. Glover meant by the lying-in department of a general hospital?—Dr. GLOVER explained that at present several of the maternity institutions in London were not available for the clinical instruction of students, but the large general hospitals had large outdoor maternity departments.—Dr. HAUGHTON expressed his regret at having been absent at the last meeting, when the whole question was discussed, and ended in such a miserable fiasco—a fiasco such as to make him feel positively ashamed of the Council of which he was a member. He urged that the Council ought not, and should not be permitted, to allow the convenience of particular localities to influence their decisions on such a momentous question. If locality A B or C undertook to teach or train a larger number of medical students than they could provide with bodies to dissect, fevers to study, or women to deliver, that was their own affair, and they must take the consequences. In any case, it was unnatural and unseemly that such considerations should be allowed to influence the Council.—Mr. BRUDENELL CARTER pointed out that attendance on any number of normal cases did not qualify a man to attend abnormal cases. Hence it was important the teacher should supplement the unavoidable defects in clinical and practical instruction. He could not support Dr. Glover's motion, but would in the first place vote for the amendment.—Dr. STRUTHERS thought the number of cases suggested was absurdly large. He said that an ordinary case of midwifery was not nearly as urgent as one of strangulated hernia, retention of urine, etc. He thought it would be as reasonable to insist that candidates in surgery should have done six tracheotomies and been present at twenty-four. He asked what was meant by being present. He objected to members saying they were ashamed of the conduct of the Council. He urged that the votes of last session simply showed that there was great difference of opinion on the subject. He should oppose both motion and amendment.—Sir DYCE DUCKWORTH said there was no urgency at all: the standard of education and attainment in obstetrics in England was admirable, and he should vote for leaving matters as they were.—Sir JOHN SIMON explained why he found himself unable to vote for Dr. Glover's motion, and even felt a difficulty in supporting Dr. Leishman's amendment. He objected to their going into such nice details. It was for the Council to lay down principles, and not to specify numbers. They ought to leave the responsibility of putting principles into practice with the several Boards. He discussed the conclusions arrived at by the Council in the past, pointing out how they had gradually been drifting into particularities. Fortunately surgeons had not asked that students should be compelled to see so many cases of strangulated hernia. He could say that there had been many more deaths due to ignorance in the department of aural surgery than in general surgery: yet it had not so far been proposed to make special training in that department compulsory. He thought the provision as to attendance at a lying-in institution was absurd, apart from being impertinent. To be logical they ought to insist that every student should have seen a breech presentation, a shoulder presentation, and so on. The question of numbers might land them in a great difficulty. He recalled that in Edinburgh, when extra needs for dissection were created, it became necessary to "make" dead bodies to supply the demand. But he did not clearly see how they could artificially make up any deficiency in the number of labours. He thought it would be preferable to make a recommendation to the examining bodies, and so stop this obstetrical ball from rolling.—The PRESIDENT said that probably every member of the Council had made up his mind how he would vote, and he thought the discussion might advantageously be brought to an end.—Sir WM. TURNER objected to calling on Dr. Glover for his reply at this stage, the more so because he hoped Dr. Glover would adopt Sir John Simon's suggestion, and withdraw his motion.—Dr. GLOVER said that this he certainly would not do.—Mr. MITCHELL BANKS urged that nothing more could be said on this subject, and important business was coming on from the Education Committee.—Dr. PETTIGREW had hoped that someone would move "the previous question," because it was intolerable that matters should thus be brought up over and over again.—Sir WALTER FOSTER said that on the last occasion they had come to a lame and impotent conclusion, but he hoped that on this occasion they would settle the matter once for all by conceding the reform asked for. If the Council inspected the examinations efficiently, then they might dispense with the necessity for drawing up and enforcing regulations. It was obviously unfair to compare strangulated hernia with an ordinary midwifery case. The proper comparison would be with cases of *post-partum* hæmorrhage or placenta prævia. The regulations of the Council in respect of midwifery were the subject of scoff and satire. (Cries of dissent.) He maintained that this was the case. In the House of Commons they said, in reference to the Midwives Bill, "Why, you want to give your midwives a better education than your medical men." That was hardly complimentary to the pro-

fession or to the Council. He should support the motion on the ground that training in midwifery ought to be as carefully provided for as in the other branches.—Sir Wm. Turner characterised the motion as the most obscure he had ever read, and asked Dr. Glover to explain his meaning.—Mr. Macnamara thought that all reproach of grandmotherly legislation might be removed by leaving out the provision as to numbers.—Dr. Atthill, as seconder, agreed to this suggestion, and proposed an alternative reading for the original motion.—Dr. Glover then replied. He explained that some, at any rate, of the six cases might be attended during the period of pupilage. Addressing himself to the observation of Sir John Simon, as to the want of a sense of proportion, he said that different bodies were as widely apart in respect of their opinions on the matter as the poles, and who was to decide when they differed? When there was a defect in medical education it was to the Council and not to the teaching or examining body that remarks were addressed.—Sir John Simon proposed inserting words to show that the cases might be attended under the supervision of registered medical practitioners.—Sir William Turner intervened to ask what the pupil was supposed to do during his six months at the lying-in hospital. He was to attend thirty cases with a medical practitioner if he liked. What then remained for him to do at the lying-in institution?—Mr. B. Carter rose to a point of order. He asked whether they would be asked to vote on the original or on the proposal modified at the suggestion of Sir John Simon.—The President explained that it would rest with the Council to allow or refuse the permission to alter the original motion.—Dr. Glover said he would be pleased to adopt the suggestion of Sir John Simon in that respect. If the student had attended his cases out of doors he would not be called upon to attend them in the institution, and *vice versâ*. He instanced the case of instruction in infectious diseases. He hoped, with the concession he was prepared to make, the Council would adopt the motion. The alterations were to reduce the number to twenty, under the superintendence of a registered practitioner.—The President then put Dr. Leishman's amendment, modified as follows:

That the candidates before their final examinations shall produce evidence of having attended for six months the practice of a lying-in hospital or maternity institution the arrangement of which for clinical teaching has been approved by the body granting the qualification.

The amendment was put to the vote and carried by 18 to 7. The names of those voting for and against were taken down at the instance of Dr. Struthers.—On being put as a substantive motion, Mr. Bryant rose to oppose this on the ground that it would be impossible to carry out. He thought it was absurd to restrict the student to six idle months in attendance at a maternity institution. He hoped that means might be found to render available the lying-in institutions of London for the instruction of students.—Sir William Turner moved, as a further amendment, "That, in respect of obstetrical practice, every candidate should prove that he has taken part, under authorised supervision, in at least twelve labours, either as pupil at an institution or as pupil under a registered medical man, but in neither case to be allowed unless approved of by the medical authority."—Dr. Pettigrew seconded the amendment. Dr. Atthill expressed surprise at Mr. Bryant's attitude.—Dr. Glover said the amendment was altogether inadequate.—Dr. Leishman supposed that the amendment (now become the substantive motion) would take the place of Recommendation 18, page 6, passed in 1888.—Dr. Struthers urged that Dr. Leishman should withdraw his motion in favour of Sir William Turner's.—Sir Wm. Turner's amendment was then put to the vote and was carried by 14 to 11. On this being put as a substantive motion, Dr. MacAlister moved as an amendment, "That the Council having duly considered the question of the amount of obstetrical instruction that should be required of candidates for medical qualifications adhere to the resolution of May 26th, 1888." This was approved by 17 votes to 8. On this being put as a substantive motion, Dr. Bruce proposed as an amendment that Resolution 18 should read with "and" instead of "or." Sir Walter Foster objected on a point of order that the resolution was not before the Council.

The standing orders were suspended.

Some discussion ensued on the point of order, and Dr. Bruce was allowed, at Sir William Turner's suggestion, to let his proposition take the form of a rider, subject to the substitution of "and" for "or" in the second line.

Dr. Bruce's amendment was negatived, and Dr. MacAlister's amendment, put to the Council as a substantive motion, was formally adopted, and the Council adjourned.

EPSOM COLLEGE.

The annual meeting of the Governors of the Royal Medical Benevolent College was held on May 28th at 37, Soho Square. It was proposed by Sir John Jennings and seconded by Sir Edward Sieveking that Dr. C. Holman (Treasurer) take the chair. The report read by the Secretary bore ample evidence to the large amount of excellent work which the College is doing. Reference was made to the great loss which the College had sustained by the death of the Earl of Granville, who for twenty-six years had been the valued president of the institution. Since September last the charitable and educational departments had been separated, and the benevolent work of the institution was now transacted at Epsom by a bursar. Mr. John F. France, who had followed up his former munificence by a seventh presentation to the School of St. Anne's Society in favour of the orphan daughters of medical men, was appointed a Vice-President. Sir A. W. L. Hemming was appointed a member of Council in the place of Sir Arthur Watson, nine other members being reappointed. The Chairman pointed out that, while they had received very many important gifts, the annual subscriptions were a decreasing factor. The Anstie Memorial Fund, tenable for four years at Oxford or Cambridge, had been founded. The condition of the school was most satisfactory, and the numbers had increased rapidly. Sir Edward Sieveking, in moving a vote of thanks to Dr. Holman, spoke of the great value of his services to the College.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

HYPODERMS.

Messrs. Allen and Hanburys, Plough Court, Lombard Street, E.C., have sent us specimens of compressed tabellæ of various drugs, intended for the extemporaneous preparation of hypodermic solutions. These "hypoderms" possess the advantage of rapidly dissolving in water without the aid of heat or trituration. The disintegration is stated to be effected by combining with the constituent, which is in the form of an acid salt, an alkaline carbonate, so that when the hypoderm is placed in water an effervescence occurs which breaks up the compressed mass, and thus a solution is formed in a few seconds. The hypoderms are put up in small tubes, and the specimens sent were enclosed in a convenient pocket case containing a syringe, needles, pipette, and graduated tube.

Presentation.—Mr. George Haynes Fosbroke, of Bidford, who recently resigned the office of medical officer of health for the combined sanitary districts of Stratford-on-Avon, Evesham, and Alcester, on his appointment as Medical Officer of Health for the County of Worcestershire, was, at a public dinner, presented by his medical friends with a handsome timepiece, in recognition of his valuable services for a period of seventeen years, and as a mark of esteem and friendship.

An extraordinary case of alleged false declaration has recently engaged the attention of the magistrates at Winterton, in North Lincolnshire. According to the reports it would appear that an unqualified assistant named Steedman succeeded in passing himself off as a registered practitioner named Macredy, and that it was almost by an accident that the misrepresentation was discovered. To add to the romance of the story the unqualified assistant had become married to the sister of his principal.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, MAY 30th, 1891.

THE UNIVERSITY QUESTION IN LONDON.

University and King's Colleges have this week received formal notice from the Clerk to the Privy Council that they are to appear by counsel at an early date in support of their petition to the Privy Council, praying that "Her Majesty may be pleased to grant a charter to a body of persons to be appointed in the manner described in the petition, to be a University in and for the London district, having power to grant degrees in the faculties of arts, science, and medicine, with power to add other faculties." It thus appears that Lord Cranbrook does not intend to refer the matter back to the Royal Commission appointed in 1888. The concluding paragraph of the report of the Commission distinctly pointed to the opinion of the Commissioners being in favour of such a reference. It is probable, however, that in view of the very full discussion which has since ensued—a discussion which has given every interest an opportunity to make itself heard—the Lord President is now anxious to push the matter forward during the present session of Parliament.

It will be remembered that the Royal Commission had practically to consider three petitions from bodies in London, each of which proposed a different solution of the university problem in London. There was the petition of the Royal Colleges of Physicians and Surgeons to be formed into a Senate of Physicians and Surgeons; there was the petition of the University of London, praying for permission to attempt a reconstitution which would meet the difficulty; and there was the petition of University and King's Colleges.

The Royal Commission distinctly rejected the petition praying for the constitution of a Senate of Physicians and Surgeons, and it postponed the full consideration of the petition of University and King's Colleges in order to give the Senate and the Convocation of the University of London "a reasonable time" to consider whether they would apply for a new charter. The Senate and the Convocation of the University of London have failed to agree; the majority by which Convocation rejected the Senate's draft charter clearly proved that no such scheme stood any chance of being rendered acceptable to that body; and the University, therefore, is not in a position to make an application for a new charter.

It is now the turn of University and King's Colleges to try their hand at the creation of a University. That they will be able to do this single-handed nobody, probably, believes; if success is to attend their efforts it can only be through some form of compromise which shall safeguard the interests of the medical students at the other medical schools in London. The Royal Colleges of Physicians and Surgeons in London, and the medical schools in London, as well as the other petitioners whose petitions were referred to the Royal Commission, will doubtless be afforded an opportunity of appearing before the Privy Council and stating their case.

It is, on the whole, a matter for congratulation that Lord Cranbrook sees his way to pushing forward towards a solution of the difficulty, without waiting for the somewhat tedious methods of an inquiry conducted by a Royal Commission. The anomalies which at present exist, especially with regard to the medical faculty, are so glaring that a remedy must obviously be found, and the sooner it is found the better. A curious example of the difficulties encountered by London medical students is afforded by a letter from a correspondent who signs himself "A Physician but not a Doctor." It may have been observed that in the British Medical Journal for May 16th an opinion by Mr. Upton, the Clerk of the Society of Apothecaries, was published to the effect that an L.S.A. whose diploma bears date subsequent to June 30th, 1887, could not be legally prevented from styling himself Physician and Surgeon, or from prefixing Doctor to his name. Mr. Upton is not only the Clerk to the Society of Apothecaries, but a lawyer of large experience, and his opinion upon the point must have great weight. At the same time, we believe that no legal decision in this direction has ever been given, and that, therefore, it is advisable that Mr. Upton's opinion should be received with caution. Even though a particular degree of M.D. may be unregistrable, it does not necessarily follow that the holder could be successfully prosecuted for calling himself "Dr."—that must depend upon the mode in which a degree is obtained. If a degree is obtained after a mere sham examination, in which no precautions whatever are taken against fraud, it is more than likely, judging from the recent decision, that he could be convicted of "wilfully and falsely" assuming the title.

Practitioners in the position of our correspondent would probably be well advised to continue to exercise the virtue of patience, and to be content for the present with the status of physician and surgeon, to which we are advised they have an unquestionable right. It is probable that their patience will be rewarded at no distant date, for it ought to be clearly recognised by all who are now engaged in attempting to meet the medical grievance that a gross injustice will be done if special arrangements are not made in favour of licentiates of the Royal Colleges who are already in practice.

THE SCIENTIFIC STUDY OF INSANITY.

We publish to-day a "Plea for the Scientific Study of Insanity, by Dr. J. Batty Tuke, of Edinburgh; and though in many points we disagree with him, we think his address deserves notice. He is not singular in lamenting the slow progress of mental medicine, but he does not appear to recognise that mental physiology is still far behind the physiology of nutrition and growth.

He seems to think the physicians in asylums are not working along proper lines, and that future advances in the knowledge of insanity and of its treatment must depend on the microscope. We shall be more inclined to accept this when we see any prospects of getting at the basis of consciousness

and of its disorders from an objective material standpoint. It is generally believed that many questions of mental disorder must for ever elude the mere histologist; and it is a sign of the times to find a physician, more especially one who has devoted his life to the cure of the insane, expecting to find a material basis for all insanity. Insanity may be the expression of brain disease, or of the disease of some other bodily organs, or it may be the result of surrounding conditions. Surely the insanely jealous, or the equally insanely conceited, man may be the product of his environment, and unless we are prepared to look for local centres of jealousy and conceit, can we expect to find a physical basis for all such cases?

The general experience of physicians seems to be that insanity depending on brain disease is of a very unfavourable nature; whereas that depending on bodily disorder, or on the surrounding conditions, may be more easily influenced for good. The belief in thorough materialism would prevent, in the opinion of many, the proper treatment of many of the insane. It is this view that Dr. Tuke combats.

Doubtless asylum physicians are expected to do too many things, but we believe the old maxim of further employing the most busy of men, as such men always find time for more work, holds good with them. We do not agree with Dr. Batty Tuke in thinking there would be a great gain if all insane patients in the earlier stages of their disease were placed in bed, though we would go so far with him as to admit that in many cases rest is to be preferred to stimulation. The real point of the address appears to us to be that a physical basis must be recognised as the root of all insanity, and that hospital medical treatment will cure. We remember that Dr. Batty Tuke was one of the supporters of the London County Council Hospital for the Treatment of the Insane. He still thinks this a most desirable object.

We trust that more and more men will be taught the outlines of mental medicine in asylums, though Dr. Batty Tuke seems to doubt the value of such teaching. The treatment of the insane in general hospitals has been tried and has failed. The late Sir William Gull was physician to the insane wards at Guy's, and did not think highly of the plan, and the results of purely hospital treatment of all the insane is not very encouraging, we believe, in some Continental cities.

We still believe in clinical study rather than in histological research, or rather, we prefer that the one should precede the other. Anatomy as studied in the deadhouse is defective; the study of living function is much more useful, and more is yet to be done for the insane by living than by dead work. There are many other issues raised by Dr. Batty Tuke, but we believe his enthusiasm leads him too far, and that at present better education of nurses and the encouragement of science among asylum physicians will do all that we have a right to expect till greater progress is made in mental physiology.

THE OXFORD MEDICAL SCHOOL.

On Tuesday next Convocation of the University of Oxford will be asked to take a step which will complete the work that has been done at Oxford during the past seven years, to give the University a medical school capable of thoroughly training students in all subjects short of medicine and surgery and the allied purely professional studies.

When Professor Burdon Sanderson left London and accepted the Professorship of Physiology at Oxford, a new laboratory, perfect in its arrangement for teaching and research work, was provided for him by the University. This addition to the science laboratories enabled students to work at all the preliminary subjects for medicine, with the exception of human anatomy. To render the curriculum complete, a Readership in Human Anatomy was established in 1885, and in that year Mr. Arthur Thomson gave instruction in this subject to a class consisting of three students. A sum of money was collected by members of the University, and a small dissecting room and lecture theatre were built. These were, however, too small, and in the following year the Curators of the University Chest built, at a cost of £500, a temporary iron-roofed building with rather more accommodation both for the teaching staff and the students. So rapidly, however, has the department increased, that an application has now been made to Convocation to provide permanent buildings for the proper accommodation of this important branch of medical study.

The three students who constituted the advanced medical class in the University in 1885 had last year increased to forty-seven, and it is computed that there are this year no fewer than sixty-seven students at Oxford who are working at the subjects for the first M.B. examination. Such a rapid increase in the medical school could not have been predicted, and by itself it affords ample justification for the £7,000 asked of Convocation to provide a permanent home for the teaching of human anatomy.

An influential committee, consisting of the following members, namely, the Vice-Chancellor, the Provost of Queen's College, the President of Corpus College, Professor Price, Mr. Robinson, Mr. Wakeman, Mr. Harcourt, Mr. Chapman, and Mr. Poulton, has already considered the claims of human anatomy upon the University, and they report in favour of the grant, stating that additional accommodation for this subject is urgently required, and that the existing temporary buildings cannot be satisfactorily enlarged.

If this grant passes Convocation, Oxford will be fully equipped to teach chemistry, physics, botany, zoology, physiology, and human anatomy. It will, in fact, be able to train its medical students until they leave for the wide field of clinical education in medicine and surgery, which London can provide better than any other English school.

Unfortunately there appears to be considerable opposition to the grant amongst certain members of Convocation, and it is therefore much to be desired that all the Oxford medical graduates will muster in force to record their votes in its favour, and thus furnish Oxford with a complete preliminary medical school worthy of the University.

The annual dinner of the Army Medical Staff will take place in the Whitehall Rooms of the Hôtel Métropole on Monday, June 8th, at 7.30 P.M. Officers intending to be present should send their names without delay to Brigade-Surgeon J. Hector, Naval and Military Club, 94, Piccadilly, W.

The President of Council and Fellows of the Royal Medical and Chirurgical Society will give a *conversazione* to the members of the profession on June 23rd. The arrangements are not yet complete, but we understand that among other interesting objects to be exhibited will be a very complete collection of electrical apparatus for use in surgery.

The subject of Dr. Lauder Brunton's Cavendish Lecture, before the West-London Medico-Chirurgical Society, is "Elimination and its Uses in Preventing and Curing Disease." The date has not yet been fixed.

THE MIDWIVES BILL.

We have received from Dr. Rentoul, of Liverpool, a communication in reference to the letters of Mr. Fell Pease and Dr. Farquharson in the last number of the British Medical Journal. The only portion of this communication which is relevant to the correspondence in question is the following: "Dr. Farquharson next asks me to lay before the public the Lord President's reply to my question. There is no call for doing so. His lordship states that he 'does not think it necessary to correct anonymous statements,' and also, 'the Government is under no pledge through me, and anyone is welcome to know that.' If Dr. Farquharson is not content with this, then, perhaps he will communicate with the Lord President."

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Committee of the above Association was held on Thursday last at 36, Grosvenor Street, Mr. George Pollock, President, in the chair. The main business was the settlement of the policy of the Association with regard to the forthcoming election at the College. Ultimately it was agreed, on the motion of Mr. Timothy Holmes, to refer the whole subject to a subcommittee consisting of Mr. George Pollock, Mr. Timothy Holmes, Mr. Walter Rivington, Mr. Richard Davy, and Mr. Percy Dunn (Honorary Secretary) for consideration and report. The subcommittee arranged to meet on May 28th. As soon as the subcommittee has agreed on its report, a meeting of the General Committee will be summoned, before whom the report will be placed, and afterwards the report will probably be issued in the form a circular to all the Fellows.

DOES DRINKING INCREASE WITH PUBLIC HOUSES?

The *Essex Standard* has done excellent public service by compiling, from a recent return, tables showing the ratio of convictions for drunkenness to the number of public houses in a group of East Anglian counties and boroughs. The remarkable fact is brought out that, with one or two exceptions, the greater the number of licences, the lower the proportion of convictions for drunkenness. For example: Cambridgeshire, with the large number of 4.5 licences per 1,000 of the population had only 0.70 of drunken convictions per 1,000 souls. The Borough of Norwich, too, with the still more generous allowance of 6.4 licences per 1,000, had only 0.43 of drink convictions. Yarmouth, on the other hand, has the pre-eminently large number of such convictions of 5.6 per 1,000, with only 3.6 licences per 1,000 inhabitants. The idea that mere reduction of the number of licensed houses would diminish the intoxication of the locality has not, however, as the *Essex Standard* thinks, emanated from the ranks of abstainers. In many places fewer houses have meant larger and more enticing gin palaces, with a more varied and larger stock of intoxicant beverages. In this way intemperance has frequently increased on the diminution of licences. It should also be borne in mind that the number of drunken commitments varies, in different districts, with the degree of strictness with which the Watch Committee administers the law.

THE RECENT FATAL FIRE.

It is always an ungracious task to find fault, particularly when a person has done his best, and especially when he has done a great deal more than might have been expected. Such are the thoughts suggested by the lamentable fire by which three persons lost their lives a few nights ago. From the report of the officer in charge we learn that he found Lord Romilly and one of the servants still alive, and that after doing artificial respiration he put them into a cab to be taken to the hospital, but that both died on the way there. It is clear that with assistance on the spot he would have had a better chance of saving their lives, and that a persistence in the artificial respiration, exposure to a free current of air, and the administration of stimulants would have given the patients a better chance. We may infer that the vapour from the burning oil was not wholly irrespirable or the victims would have died from suffocation, whereas it is certain that they must have been speedily rendered insensible from asphyxia, while respiration was still possible. Of course it does not follow that with the best medical aid on the spot these two lives would have been saved.

MR. PLUNKET AS A SANITARY REFORMER.

It must be a long time since the House of Commons has been scrubbed and fumigated so effectually as during the Whitsuntide recess. Sulphur candles have been burnt in the Committee rooms; a mysterious patent disinfectant called "Thiocamf" has been sprinkled in odd corners; and, perhaps best of all, doors and windows have been freely flung open, and strong currents of air have searched out the secret homes of dust and germs. We hear on all sides that the result of Mr. Plunket's operations has been very satisfactory, but unless something can be done to remove certain structural defects in the Committee rooms we fear that they will continue to be stuffy and depressing, and that Sir John Mowbray will not cease to deplore the difficulty of persuading members to serve on private Bill Committees. The inlets for air in the wainscoating are far too small, and, the passages being practically unventilated, the powerful upward draught from within sucks through the doors the thick and fusty atmosphere which half poisons the counsel and witnesses outside. Critical remarks are constantly being made about the dust and dirt of the rooms, and from what we have heard we are convinced that these complaints are not overdrawn. The reason, and perhaps we may say the excuse, is that there is a divided jurisdiction between the Serjeant-at-Arms and the Office of Works, and that the cleaning staff is far too small. Three men are not enough to look after so many rooms, and we would suggest their numbers being reinforced by some bustling housemaids with brooms and dusters, who would systematically work into every hole and corner, and make the public abode of our Legislators as clean and sweet as their private homes.

THE POLLUTION OF RIVERS.

The report of Mr. Fosbroke, medical officer of health to the Worcester County Council, on the pollution of the river Stour and on the sanitary condition of the Stourbridge Division generally, furnishes abundant evidence of the necessity that exists for such appointments, especially in those parts of the country where overgrown manufacturing villages take the place of well-ordered towns separated by wide intervals of purely rural and agricultural districts. The Stour is a a tributary of the Severn, from which, lower in its course, several towns derive their water supply, among them Gloucester, which recently suffered from an outbreak of enteric fever, owing to the specific contamination of the water by the sewage of Kidderminster, where the disease was raging. The Stour is polluted with sewage, with acid factory waste, and every imaginable form of filth, until it resembles an open sewer, in which neither plants nor fishes, —the two great purifiers of water courses—can live. The local sanitary authorities and their medical officers, even with the best intentions, are powerless where concerted action is essential. Combined undertakings for the disposal of sewage are necessary, involving an expenditure that cannot be undertaken except by a body possessed of powers of borrowing on the security of local taxation. The "best possible means" clause of the Public

Health Acts for the treatment of sewage previously to its discharge into rivers has too often failed to work satisfactorily, even in the case of considerable towns; but in the Rivers Pollution Act they have everywhere proved utterly a dead letter. As Messrs. Davis, in their recent work on the pollution of the Irwell, have clearly shown, there are well-known methods for rendering practically innocuous the wastes from nearly every industry. Several of these methods may be made sources of actual profit, but, too generally, through sheer apathy, manufacturers neglect to avail themselves of them. It seems high time that the Legisture should define from time to time what is in each case the "best possible" procedure. The standards fixed by the Rivers Pollution Commissioners are useless, since it is not so much the actual nature of the waste, as the proportion it bears to, and the effect it exerts on, the volume of the river that determines the sufficiency of a method of treatment, to say nothing of the fact that the letter of the recommendations could be observed by merely diluting the waste by pumping from the stream, the result being the same as if it had been discharged in its original state.

THE AMERICAN MEDICAL ASSOCIATION.

THE forty-second annual meeting of the American Medical Association, held in Washington in the week ending May 8th, was presided over by Dr. W. T. Briggs, of Nashville, Tennessee, who delivered an inaugural address, in which he discussed the general position of the Association, and traced its beneficial influence on the medical life in America, especially in the matter of the elevation of the standard of education. The address in medicine was given by Dr. E. L. Shurly, of Detroit, who took for his subject "The Relation of Micro-organisms and Toxæmia to the so-called Zymotic Diseases." The address in Surgery was given by Dr. Joseph M. Matthews, of Louisville, Kentucky, who dealt with the subject of "Stricture of the Rectum." A resolution to petition Congress to appoint an officer of Cabinet rank, to be called the Secretary of Public Health, was adopted. A report from a special committee on the proposed Jenner Vaccination Centennial was considered, and it was decided to hold such a ceremony on May 14th, 1896. A committee was appointed to select an orator to deliver a eulogy on the great discoverer and to collect and compile the literature of the subject, as well as appropriate papers; and to publish all materials thus collected in a sumptuous volume, with suitable illustrations. The report of the Board of Trustees stated that the circulation of the *Journal* of the Association was 5,450 copies. Dr. H. O. Marcy, of Boston, was elected President of the Association for the ensuing year, and it was decided to hold the meeting of 1892 at Detroit. The number of members who attended the meeting was estimated at about 1,000. The work in the sections seems to have been of a high standard, and the attendance in most cases is reported to have been good.

ST. BARTHOLOMEW'S HOSPITAL.

DR. SEDGWICK SAUNDERS, medical officer of health for the City of London, has submitted a report on St. Bartholomew's Hospital to the City Commission of Sewers. From this it appears that the total number of persons residing in the hospital is about 950, of whom 600 are patients. Only 6 cases of death from zymotic disease had occurred during the last twelve years among the permanent residents. The number of cases of diphtheria admitted into the hospital had increased very much from 71 in 1889 to 140 in 1890 many of them being of an unusually malignant type. No case of the disease could be traced to the sanitary defects, and he attributed the incidence on the permanent staff (1) to importations from without, and (2) to local conditions of the atmosphere in the wards appropriated to diseases of an infectious nature. The report goes on to advise the Commission to order the demolition and removal of the whole of the drainage. It strongly condemns the lines on which the existing drains were laid, their enormous size, and the dangers attending their numerous connections with the public sewers: they are tortuous and irregular, and in many portions quite inaccessible for cleaning purposes. Having regard to the disposition of the buildings and their varied uses, Dr. Saunders suggested that the drainage ought to be remodelled in sections. He sketched a plan of relaying the drains in three sections, and if this were done, one section being completed before another was commenced, it would not be necessary to interfere with the daily working of the hospital.

THE NEW DERBY INFIRMARY.

THE Queen was accorded a most enthusiastic reception on visiting Derby to lay the foundation stone of the new infirmary. Before the ceremony, Her Majesty was presented with a number of loyal addresses from various public bodies, and Dr. Ogle, senior physician to the infirmary, presented the following address from the members of the medical profession in Derby:

We, the undersigned members of the medical profession in Derby, desire most respectfully to approach your Majesty and to tender to you our grateful thanks for this your most considerate act of regard for the welfare of the sick poor by coming to lay the foundation stone of a new hospital for this town and county. That your life of unceasing sympathy with all who are in trouble may long be spared, and that you may be granted the blessing of health and strength to rule over a loyal and united people is our constant and earnest prayer.—J. Wright Baker, Wm. Legge, Frank Iliffe, Alfred O. Francis, W. Iliffe, Edmund Vaudrey, E. Collier Green, F. Cassidi, Robt. Lawrie, R. W. Gentles, J. Lister Wright, George Rice, Henry Barrett, H. B. S. Curll, William Ogle, F. Borough, Wm. Grafton Curgenven, T. Lawrie Gentles, John A. Sharp, S. Rutherford Macphail, Josiah C. Castor, C. B. Dalton, Thomas Highton, W. Patterson, J. H. Hodson, R. M. Wilson, G. R. Sims, John Wm. Wheatcroft, Walter G. Copestake, C. A. Greaves, Henry J. Foulds, T. Henderson Pounds, Frederick L. Moore, W. Benthall, A. Bell, George D. Moon, C. H. Hough, Wm. Henry Wright, J. Acton Southern, Chas. W. Fletcher.

An address on behalf of the nurses of the Derby and Derbyshire Nursing Association—fifty-one in number—was also presented. After the presentation of the addresses Her Majesty drove to the infirmary, where an address was read by Lord Scarsdale, to which the Queen made a brief reply. After the formal ceremony of laying the foundation stone, which bore a suitable inscription, the following presentations were made: The Bishops of Southwell and Derby, the High Sheriff, the architects, the senior physician (Dr. Ogle), the senior surgeon (Dr. Curgenven), the house-surgeon (Dr. C. H. Taylor), the matron (Miss Pratt). A banquet was given in the evening by the Mayor, which was attended by a large number of representative men.

THE JUBILEE OF THE PHARMACEUTICAL SOCIETY.

THE Pharmaceutical Society of Great Britain has this week celebrated its jubilee. The Society was formally constituted on May 25th, 1841, and on Tuesday last, May 26th, 1891, the President, Mr. Michael Carteighe, welcomed a large gathering at the house of the Society in Bloomsbury Square. Addresses of congratulation were presented in the name of many learned societies at home and abroad; Sir Dyce Duckworth spoke for the Royal College of Physicians, and Sir William Thomson for the Royal Society. The Association Générale des Pharmaciens de France was represented by its President, M. A. Petit, the Société de Pharmacie de Paris by M. Patein; the Union Pharmaceutique de Flandres by M. Jean Guys; the Deutsche Apotheker Verein by Herr Froelich; and the Pharmaceutische Gesellschaft in Berlin by its President, Dr. H. Thoms. Kindred societies in St. Petersburg, Prague, Denmark, Sweden, Australia, and America also sent representatives or congratulatory letters. The Hanbury Gold Medal, founded to commemorate the late Mr. Daniel Hanbury, F.R.S., was presented to Dr. Hesse, who acknowledged the honour done to him, and in accordance with a characteristic German custom, presented a memoir on Coca Alkaloids, for publication in the *Journal* of the Society. On the following evening the Society entertained a number of distinguished guests at dinner. The large hall of the Criterion Restaurant was crowded by a distinguished audience,

who cheered to the echo when a septuagenarian member, Mr. Horner, replied to the toast of "The Founders of the Society," and when Sir Lyon Playfair, in a speech which contained some interesting reminiscences of a term of pupilage under Dr. Pereira, proposed the toast of "The Pharmaceutical Society of Great Britain and the Health of the President." The toast of "The House of Commons" was acknowledged by Mr. Gainsford Bruce, M.P., while Sir Dyce Duckworth and Mr. T. Bryant reponded for "The Medical Profession." For "The Learned Societies" Professor Michael Foster responded in a humorous speech, and was followed by Mr. Timothy Holmes, President of the Royal Medical and Chirurgical Society. Mr. Carteighe set a good example to other chairmen in the speed and grace with which he got through the toast list; his own speeches were models of terseness and self-restraint.

DEATH UNDER CHLOROFORM.

OUR Liverpool correspondent writes: A death during the administration of chloroform recently took place in the Liverpool Royal Infirmary. The patient, a man, aged 36, of good physique and presenting every appearance of robust health, was admitted on account of varicose veins, which it was proposed to submit to operation. Chloroform was administered. The patient, who had manifested a good deal of nervousness as regards the anæsthetic, struggled violently, and the inhalation was immediately discontinued. He then suddenly turned pale and ceased breathing. Artificial respiration was commenced, but he became livid and never breathed again. The pulse was not perceptible, and there is no evidence that it continued after the breathing ceased, but of this there was no certain observation. A *post-mortem* examination was made, when it was found that the heart was soft and flabby to a conspicuous and unusual degree, and its muscular fibres presented under the microscope a central strip of fatty granules. The liver weighed 90 ounces, and was in a condition of fatty hypertrophy. The kidneys were granular, with a few small cysts and adherent capsules. The brain was shrunken, and the pia mater thickened and infiltrated with turbid fluid. As already mentioned, the appearance of the patient altogether belied the extensive disease of his organs, and it is doubtful whether the most careful examination could have detected the latter, especially as, at the time, no history was forthcoming to suggest it. The jury found, in accordance with the medical evidence offered, that death was due to syncope induced by violent struggling of the respiratory and other muscles, aided by a small dose of chloroform, and by serious malnutrition of the heart, liver, kidneys, and brain; adding that they considered that the chloroform had been well and skilfully administered.

SIR GEORGE HUMPHRY.

A SPECIAL court of the governors of Addenbrooke's Hospital was held last week, when a bust of Sir George Murray Humphry was presented to the hospital. The meeting was presided over by the Lord Lieutenant of the county, and the presentation was made by the Vice-Chancellor of the University, who dwelt upon the extraordinary development in the medical school of Cambridge during the fifty years that Sir George Humphry and Sir George Paget had been connected with the University. The number of candidates for the Natural Science Tripos this year was no fewer, he said, than 120, and a large proportion destined themselves for the medical profession. Testimony to the value of Sir George Humphry's services to the hospital was paid by the chairman, the Rev. H. Hall, and Mr. J. Hough, who spoke on behalf of the governors, while Dr. E. Carver, surgeon to the hospital, and Sir George Paget, consulting physician, bore witness to the value of Sir George Humphry's character and example. Dr. Donald MacAlister briefly recalled the circumstances of some earlier presentations to Sir George Humphry himself, referring in particular to the enthusiasm exhibited at the dinner which was held in Cambridge a few months ago. He spoke of the attachment which his old students felt for Sir George Humphry, and said that he possessed so peculiar an art in imparting instruction that his subject was described by his pupils not as anatomy or surgery, but as "Humphryology." In conclusion, he handed to the Lord Lieutenant, for presentation to Lady Humphry, an album containing a list of the subscribers' names.

GERMAN ANATOMICAL SOCIETY.

THE German Anatomical Society held its fifth general meeting at Munich on May 17th to 19th, under the presidency of Professor v. Kölliker. From seventy to eighty members were present, among whom were Professors Bardeleben (Jena), Bonnet, Braune, Flemming, Froriep, Henke, His, Gerlach, Kollmann, Merkel, Nussbaum, Oellacher, Rabl, Retzius (Stockholm), Schwalbe, Stieda, Strahl, Toldt, Tomiti (Pisa), Waldeyer, and many others. Many foreigners were present, Belgium, Holland, and Italy being particularly well represented. Among those present at the inaugural meeting were His Royal Highness Prince Ludwig Ferdinand, Doctor of Medicine; the Bavarian Cultus-Minister, Herr von Müller; and Government Councillor Bumm, as representing the University of Munich. Professor v. Kölliker, in his presidential address, stated that the Society now numbered 250 members, and included not only German anatomists but many foreign celebrities. He reiterated an opinion, which he said he had expressed before, that much confusion and loss of time would be saved if scientific papers were written only in German, English, French, or Italian. Good work was done by the Nomenclature Committee, and the scientific programme included some important papers. The proceedings were brought to a close by a dinner, which was largely attended, and is described by the *Münchener medicinische Wochenschrift* as "very animated."

LONDON PLAGUE SPOTS.

THE Report of the Mansion House Council upon the Dwellings of the Poor for the year ending December 31st, 1890,[1] which has recently been issued, contains much interesting and suggestive matter. In pursuance of the energetic policy followed in previous years the Council in 1890 made formal complaint as to the sanitary condition of two important districts Shoreditch and Ham and succeeded in inducing the Home Office and the Local Government Board to order a public inquiry in both cases, the result in each being the substantiation of the charges upon which the inquiry was based. A considerable amount of useful work appears to have been done by the more active of the local committees, who have now the assistance of trained inspectors appointed by the Council, and it is satisfactory to note that several of the committee refer specially to their cordial relations with the medical officers of health. The story of the conversion of the formerly notorious Woolwich Local Board is told in amusing fashion by the Rev. J. W. Horsley, who does not forget to give due credit to the medical officer of health. Separate cottage dwellings are strongly advocated in preference to blocks on the "flat" system. In the report of the Shoreditch inquiry the Commissioners (Mr. Cubitt Nicholls and Dr. Seaton) make some severe but well-deserved comments upon the disgracefully insanitary construction of certain "model" blocks of dwellings. Examples from other districts are given elsewhere, and might easily be multiplied. The Mansion House Council rightly urge that the water supply should everywhere be constant, and that it should never be cut off on account of arrears of rates, nor cut off under any circumstances without immediate intimation being given to the sanitary authority. The Report contains useful epitomes of the Housing of the Working Classes Acts (1885 and 1890) and the other sanitary laws affecting dwelling houses. There are also a concise account of the sources, cost, and management of the London water supplies, a list of test questions to be propounded to candidates for the vestries, special at-

[1] London: Cassell and Co., Ltd.

tention being directed to the status and remuneration of the medical officer of health and the adequate number and efficiency of sanitary inspectors—at least 1 for every 2,500 inhabited houses—and a table showing the area, population, rateable value, number of inhabited houses, and sanitary staff of each of the forty metropolitan sanitary areas. During the eight years of their existence the Mansion House Council have done much to advance the cause of sanitary reform in London, and, at the close of another year of successful work, they have a strong claim to the further support for which they ask.

AN ANTI-CÆSAREAN SOCIETY.

Now that Cæsarean section has become established as a legitimate operation, it will interest operators to bear in mind that so great was the prejudice against it at the end of the last century that an "École Anti-Cæsarienne de Paris" was founded in Paris, at the end of 1799, by Dr. Sacombe, an obstetrician of some eminence. As a preface to his *Eléments de la Science des Accouchements*, he published a "Prayer of Humanity to the French Government." It is a long declamation calling on the Consuls to forbid Cæsarean section by law. The arguments are strongly coloured by the stormy state of the political atmosphere at the time the appeal was prepared. It is true that Dr. Sacombe notes some very bad results, and questions, on good grounds, the authenticity of recently reported cures. The great argument against Cæsarean section is, however, the fact that kings, queens, and men patronised by Robespierre advocated it. Henry VIII, whose other matrimonial eccentricities are duly noted, "caused the belly of his fifth (*sic*) wife, Jane Seymour, to be opened" in order to save Edward VI. A complicated charge is brought against Catherine de Medicis. It is made out that she induced Protestant ladies to have the operation performed, on the ground that they were "suspects" as to contracted pelvis. Dr. Rousset, who advocated this roundabout method of extirpating heresy, was honoured by Catherine in consequence. It is not surprising to learn, further on, that Dr. Sacombe was of the reformed faith, and he takes care to note that the term "suspect" had the same meaning under the reign of Catherine de Medicis "as in our days under the reign of Maximilian the First." The share which that terrible Jacobin took in promoting the operation is carefully recorded. The fair sex, we are informed, seemed liberated from all danger of any more Cæsarean sections, "until, unhappily, only too faithful to the disorganising principles of the tyrant, the École de Médecine of Paris (founded under the tyranny of Robespierre) sanctioned by its example the crimes of Henry VIII, the Medicis, and François Rousset." We are told that Henry VIII's motive in sacrificing Jane Seymour was his too great impatience to marry Anne of Cleves. The obstetricians favoured by Maximilian Robespierre operated without necessity under the influence of *auri sacra fames*.

MEDICAL NOMENCLATURE AND THE "SPIRIT OF THE LANGUAGE."

Ethical and æsthetic considerations greatly influence nomenclature. This truth is recognised at the medical schools; indeed there is a legend, founded on truth, that a certain examiner at the College of Surgeons used to pluck every candidate who talked about "Steno's duct" or "Wharton's duct." Men who begin by using such terms, this surgeon of the old type argued, would end by calling new diseases after their own names. At present, the French are foremost in the crusade against the latter practice. A terrible catalogue of diseases named after men has gone the round of the French papers. This catalogue shows that the neurologists are the greatest sinners. By a strange irony, the name of one of the best masters of pure English amongst living surgeons, a writer who especially objects to the practice in question, has been applied to two utterly different maladies, one affecting the bones, the other attacking the nipple. On the other hand, the Americans and Germans are more especially concerned about harmonising medical literature with the "spirit of the language" and the "genius of the language." Grammarians warn us against expressions of this kind, yet they indicate truths. Thus, in English, a word does not look well if it begins with "vr" or "sr," as in some Eastern languages, or ends in "tl," as in many Mexican words. Diphthongs, in the opinion of many writers, give a pedantic look to English words. The opinion prevails very strongly in America. Indeed, "hemorrhage" and "fetus" look quite natural in a New York or Boston paper. Scholars are divided as to how far a writer of English is justified in converting "æ" into "e." There are reasons for believing that "æ" is represented by the French "é," German "ä," and English "a" in "day." The Americans, however, are probably justified in completing the Anglicising of Græco-Latin technical terms. English, unlike German, has much of the Latin element in its composition. Hence certain terms have undergone a wholesome philological digestion. Germans cannot claim a similar advantage. In German scientific literature, therefore, Greek and Latin words, raw and unmodified, are jumbled up with long, clumsy, native compound terms, assimilation being impossible. A further inconvenience is the question of gender. In French, there is some trouble and many anomalies, as "le vagin," which is masculine; though "gaine" (sheath), the true form in French of the original Latin word, is correctly made feminine. The presence of a useless neuter in German greatly increases the difficulties of assimilating foreign words. A German literary paper has recently published an article entitled "Die Tiber oder der Tiber?" Dr. Kocks, in the *Centralblatt für Gynäkologie*, insists that the gender of foreign words must depend, not on their original source, but on the "Geist der deutschen Sprache." So the Teuton must say "die Massage," "der Cervix," "der Forceps," and "das Fieber." So, again, the Briton and the American must, like Mark Twain, regret the absence of "one good square responsible sex," and be cautious about "der," "die," "das," before technical terms, when speaking to a German medical man in his own tongue. Nevertheless the Germans are in the right in questions relating to their own tongue: technical names must follow a general law, in English as in German, a law thus expressed by Horace, aptly quoted by Dr. Kocks: "*usus quem penes arbitrium est et jus et norma loquendi.*"

UNCONTROLLABLE VOMITING OF PREGNANCY.

This subject, of so deep interest to the practitioner, is at present occupying the attention of a large number of British and foreign obstetricians, as the pages of our Supplement can testify. Sixteen years ago there appeared in the Journal the now celebrated paper by Dr. Copeman, which was read all over the globe, and gave his name to the "method" or "practice" which he advocated. Copeman's method simply means dilatation of the cervix with the fingers. Undoubtedly it has proved of the highest service, whatever may be the precise nature of its action. Dr. Graily Hewitt, whose work on *Severe Vomiting during Pregnancy* appeared last year, traces the disorder to flexions, with inflammatory changes in the uterus, the vomiting, when established, causing uterine impaction. Other authorities, such as Dr. Henry Bennett and Dr. Marion Sims, trust in the application of counter-irritants to the cervix. Dr. Amand Routh, in a paper read in April at a meeting of the Harveian Society, strenuously advocated the painting of the cervix with a strong solution of iodine. The believers in flexion and in counter-irritants explain the benefits of Copeman's practice in a manner favourable to their own theories: it necessitates pulling on the cervix, and thus remedies a displacement; it involves handling of the cervix, thus constituting in itself a form of counter-irritation. There may be truth in all these theories. Dr. W. A. Duncan's practice of applying cocaine to the cervix may act as a sedative; but here again the defenders of counter-irritation

maintain that it really acts as a counter-irritant through the mechanical disturbance of the cervix required for its application. There is also a purely therapeutic school of obstetricians who put their trust in bromides, menthol, and other drugs. It happens that all contending parties can lawfully claim long series of cures on undoubted clinical evidence. On this fact Ahlfeld, Kaltenbach, and other obstetricians base their theory that the uncontrollable vomiting of pregnancy is a pure neurosis; it has been cured by sudden fright, or by anxiety about other matters besides the pregnancy. These observers, in turn, explain away all the other theories. Dilatation, counter-irritation, and rectification of displacements cure by acting on the patient's mind, they believe. Moral treatment alone may cure the vomiting. There remains, unfortunately, the fact that in many cases nothing stops the vomiting save termination of the pregnancy. The induction of labour is not without risk; the practitioner is unwilling to resort to it when the vomiting has not lasted long, whilst later on the patient may be fatally enfeebled by constant sickness; hence the gravity of the entire question becomes self-evident. No wonder so much is written on hyperemesis gravidarum, but much more remains to be done before anything like a sound routine practice, suitable to others than hospital obstetricians of extremely specialised experience, is established to the benefit of humanity and the comfort of the practitioner.

BLOWS AND MENINGITIS.

An inquest was recently held in the Croydon district, involving grave charges against a schoolmaster. The deceased, a boy of 9, came home from school one day, complaining that the master had hit him on the head. A week after this he again complained of having been hit upon the head with a ruler. From this day cerebral symptoms rapidly set in, he became unconscious, and died a week later. The *post-mortem* examination showed that death was due to meningitis, and that there was an old abscess cavity in the brain. What the situation of this abscess was, and what its relation, if any, to the meningitis we cannot gather from the report of the inquest given in the newspapers; but the case would seem to be closely analogous to one that occurred some years ago, where a child died with symptoms of basic meningitis after having been hit upon the head by his schoolmaster; and it was found that he had basic meningitis resulting from a ruptured cyst in the occipital lobe of his brain. What happened to the schoolmaster on that occasion we do not remember, but the case caused a good deal of excitement at the time. In the present case, however, the master denied having ever hit the child on the head, and no evidence was produced to support the statement of the parents. In this respect, perhaps, the case more closely resembles another we can recall where a child died from tuberculous meningitis: but as the parents insisted that the child's illness dated from a blow on the head by the schoolmistress, an inquest was held: and when the parents had had their say, the mistress went into the witness-box, and, producing all her books, showed that the child had never even been to her school. It is always right to treat these charges with a good deal of suspicion.

THE GENERAL MEDICAL COUNCIL.

The first business of the General Medical Council on assembling on Tuesday was to elect a president in the room of the late Mr. John Marshall, who had discharged the duties of that office with so much zeal and ability. It will surprise no one to read that the Council unanimously elected Sir Richard Quain to the vacant chair. Sir Richard Quain has had a long experience on the Council, and has a wide acquaintance with public business. As Chairman of the Pharmacopœia Committee, he has for many years conducted this important part of the business of the Council with singular tact and ability, and has also had special experience as Chairman of the Finance Committee. He may be trusted to conduct the work of the Council in a business-like and impartial manner. A further step was made in perfecting the system of imperial reciprocity in medical degrees by the extension of Part 2 of the Medical Act (1886) to South Australia. An abortive attempt was made by Dr. Haughton to still further extend to six years the curriculum for university graduates, and the Council adjourned on its first day at an early hour. The second day was entirely occupied by the consideration of disciplinary cases, raising questions of unprofessional advertising and of "covering" unqualified practice. The visitation and inspection of examinations, which has been in abeyance since the last elaborate inspection in 1888, was referred to a special committee for consideration and report, during the present session, if possible. A motion, similar to that made in previous years, for increasing to thirty the number of midwifery cases to be required of medical students, was brought forward by Dr. Glover on Thursday and discussed on the usual lines. In the end it was rejected, in favour of an amendment by Dr. Leishman, which in its turn was lost in favour of a resolution to maintain the existing requirements.

SCOTLAND.

THE CAMERON PRIZE.

Sir Joseph Lister was last autumn awarded the Cameron prize by the University of Edinburgh, and, as the holder of this, he visited Edinburgh on May 22nd, and gave a "brief lesson" on antiseptic surgery. The Principal of the University presided, and there was a large gathering of students, professors, medical men, and others. The Cameron Prize is given annually to the practitioner or member of the medical profession who shall be adjudged to have made the most valuable addition to medical therapeutics during the year preceding, and, in determining such question, the word therapeutics shall be taken in its widest sense, as including every agent or agency capable of influencing the human body in the maintenance or improvement of health, avoidance or cure of diseases, or the "alleviation of suffering." The prize is of the value of £98.

VACATION SCIENCE COURSES.

The fifth session of the Vacation Science Courses will begin on August 3rd, and end on August 29th. The courses, in which practical work takes a prominent place, include sociology (conducted by Professor Patrick Geddes, Dr. Ernst Grosse, of Freiburg, and Professor A. C. Haddon); general biology (Professor Geddes, Dr. de Varigny, of Paris, and Mr. J. Arthur Thomson); zoology (at Granton Marine Station, under Mr. J. Arthur Thomson); and botany (Professor Geddes and Mr. R. Turnbull). Further information may be obtained from Mr. J. Arthur Thomson, M.A., 30, Royal Circus, Edinburgh.

TYPHUS FEVER IN PORT GLASGOW.

An epidemic of typhus fever has prevailed in Port Glasgow since May 15th. Since that day eighteen cases have been removed to Greenock Infirmary, and one case has terminated fatally in the patient's home. This is the greatest number of cases of infectious disease removed to hospital in so short a period for the past quarter of a century.

FIRE IN GARTNAVEL LUNATIC ASYLUM, GLASGOW.

Fire broke out in the eastern block of the asylum buildings on Sunday last, in a portion of the building used as a dormitory, but at the time—afternoon—unoccupied. The upper floor and roof were destroyed, but the fire-master succeeded in preventing the flames spreading, and none of the inmates suffered hurt. Damage to the extent of £600 is estimated to have been done to the building.

THE SALE OF DISEASED MEAT AND ADULTERATED FOOD.

The watchfulness of the sanitary authorities of Glasgow over the food supply of the city is every now and again being brought before the public by a prosecution. A week ago a farmer was fined £10 for sending to the city four quarters of a cow found to be diseased. The farmer owned to the cow having been ill after calving, and lest it should die he killed it, and, getting a butcher to dress the carcass, sent the quarters to a meat company, in whose premises they were seized. He thought "they must be very particular about meat in Glasgow if they found any fault with it. It was good meat, but lean." In spite of this opinion the penalty, with the alternative of two months' imprisonment, was imposed. It is interesting to notice that in Aberdeen, a week before, a cattle dealer was brought before the police-court for being the owner of a diseased carcass, seized at the Caledonian Railway Station, where it had been consigned to Glasgow. In reply to a question put by the magistrate, why he had not sent it to London, the dealer replied that he understood that only first-class meat was admitted there. So that in time, if the Glasgow authorities continue their crusade against unwholesome meat in an energetic fashion, Glasgow may yet destroy her reputation as a receiver of diseased meat. The sale of tinned French peas, coloured with sulphate of copper, which the sanitary authorities some time ago warned shopkeepers against, is also receiving attention. Three cases were lately before the police-court, in which two grocers and a fruit merchant were charged with the sale of coloured peas. In each case the prosecution did not press for a penalty, on condition that each respondent delivered up his stock of tinned peas to be destroyed, and paid the expense of the prosecution.

IRELAND.

The members of the Londonderry and North-West of Ireland Branch of the British Medical Association recently entertained the President (Dr. David J. Browne) at a complimentary dinner in the Northern Hotel, Londonderry; Dr. Watson (Limavady), Vice-President, occupied the chair, and there was a large attendance of members, the proceedings being characterised by great enthusiasm. A number of toasts were proposed, the Chairman paying a high compliment to Dr. Browne's skill as a practitioner, and his character as a gentleman. Dr. Browne suitably replied.

DEATH OF DR. M. RODERICK O'CONNOR, OF LIMERICK.

This well-known Limerick physician died last week at the early age of 39, from pneumonia, complicated with erysipelas. He had not been in good health for some months past, but his death was unexpected. Dr. O'Connor was greatly esteemed in Limerick and the surrounding district.

ROYAL MEDICAL BENEVOLENT FUND.

The annual meeting of the Royal Medical Benevolent Fund Society of Ireland will be held at the Royal College of Surgeons in Ireland, Stephen's Green, Dublin, on Monday, June 1st, 1891, at 4.30 P.M. The chair will be taken by the President of the College. Dr. E. J. Blakeney, of Roscommon, has been appointed honorary secretary and treasurer for the Royal Medical Benevolent Fund Society of Ireland for the co. Roscommon, in the room of Dr. Stafford, resigned.

SWIFT'S HOSPITAL, DUBLIN.

A new entrance is being made to Swift's Hospital, and a new avenue and gate lodge are being constructed. The grounds will be thereby enlarged and opened up, and the whole surroundings much improved. The plans were made by Mr. Rawson Carroll, architect of the New Royal Incurable Hospital. The Medical Superintendent, Dr. John Molony, has been directed by his Board to visit and report on several of the endowed and Royal Asylums of England and Scotland for the purpose of further improvements which are in contemplation by the Governors of the hospital.

MEDICAL LUXURIES FOR PAUPERS.

At the South Dublin Union last week Mr. Barnardo moved that the attention of the Local Government Board be called to the large numbers of patent medicines ordered by the medical officers. He complained that, amongst other things, a special cream, a special soap, and a fruit salt were asked for, and he created a laugh by mentioning "tincture of the lily of the valley," which was obviously regarded as a scent. Several guardians urged that the doctors should not be interfered with, and it was suggested that some of the articles mentioned were for the officers. The motion was lost by 14 to 12; but all the same, it does not appear that there was any undue interference with the functions of the medical officers in calling attention to a matter which is fair subject for criticism. Even "officers" should not be provided with costly luxuries at the expense of the ratepayers. If they want special creams and soaps they should be allowed to buy them, and no sanction should be given to the ordering of remedies the effects of which can be as efficiently and more cheaply secured by other means.

LADY GRADUATES IN IRELAND.

At the recent medical examinations at the Royal University in Ireland, the lady students who presented themselves obtained high places. Miss Hester D. Russell, of the London School of Medicine for Women, carried off the only honour awarded in the degree examination, namely, second class. The Exhibition of £25 which is attached to the honour was not given to her, as she was disqualified by collegiate standing. Miss Anna L. Church, of the College of Surgeons, Ireland, was in the upper pass division, and was one of those recommended to be allowed to compete for honours. Miss Frances L. Dick, of the London School of Medicine for Women, passed for the degrees of M.B., B.Ch., and B.A.O. In the "Second Examination" in medicine, Miss Emily Winifred Dickson, of the Royal College of Surgeons, Ireland (daughter of Mr. T. Dickson, M.P.), was bracketed second class with Mr. McMath, and obtained an exhibition of £15.

TULLAMORE.

The outbreak of typhoid fever in Tullamore Prison is subsiding, and all the cases are progressing favourably. There has also been some sickness in Clonmel Prison, and to each place a staff of trained nurses has been sent from the Richmond, Whitworth, and Hardwicke Hospitals in Dublin. Sir Charles Cameron and Dr. Woodhouse have examined the prisons, and will report to the Government on their sanitary condition. There is stated to be reason to believe that the outbreak was due to impure milk supplied to the inmates.

ROYAL COLLEGE OF SURGEONS.

The annual meeting of the College of Surgeons is summoned for Saturday, May 30th. The annual election will take place on Monday, June 1st. The principal interest is centred in the contest for the vice-presidency, which is sought for by Messrs. Carte, Cranny, and Stock. There would have been no contest had Dr. Carte declared in the first instance that he would seek office for a second term. But when it was known that he had resolved to retire candidates came forward, and matters had gone too far to allow them to retire when Dr. Carte changed his mind. The new President will be Mr. H. G. Croly, who will be unopposed, and who will thus be the first "biennial" President. For the Council there are several new candidates, namely: Mr. William Stoker, Dr. Purefoy, Dr. Thompson (Omagh), Dr. Lentaigne, and Mr. O'Callaghan (Carlow).

INFLUENZA.

THERE was a further increase last week in the fatality of influenza in London. The deaths directly referred to this disease, which had risen during the preceding six weeks from 3 to 266, further rose to 319 during the week ending Saturday, May 23rd, and were considerably more than double the highest number recorded in any week during the epidemic of last year. In addition to these 319 deaths, there were 60 cases in which influenza was certified to have occurred in the course of other diseases. While the mortality among children from influenza showed a marked decline, the mortality among elderly persons still showed a considerable excess, nearly half the fatal cases of this disease registered last week in London being of persons aged upwards of 60 years. The deaths referred to diseases of the respiratory organs in the metropolis last week were 601, and were nearly double the average; these included 219 cases of pneumonia, the average number being only 99. Doubtless many of these deaths, though primarily attributed to pneumonia, were due to influenza.

In most of the large English provincial towns there was a decline last week from the exceptionally high rates prevailing during the preceding week, although the mean rate in the twenty-seven provincial towns dealt with by the Registrar-General exceeded the average by nearly 50 per cent. The death-rate last week exceeded 40 per 1,000 in Bradford, Manchester, Halifax, and Oldham, where the epidemic is exceptionally fatal; on the other hand, the death-rate in Huddersfield, Leeds, Leicester, and Sheffield showed a very marked decline from those recorded in recent weeks.

OUR Sheffield correspondent writes: The influenza is showing a continued and very marked decline, and the epidemic will soon be numbered among the memories of the past. The death-rate for the week ending May 23rd has come down to 26, lower than it has been since April 11th, during which week the first death from influenza was noted. The nervous depression with or following influenza has shown itself particularly in two instances; one was a servant, who leapt from a window on the day she was seized with the disorder; she sustained a fracture of leg, and was admitted to the General Infirmary, where she succumbed. The death appeared to be due rather to pneumonia than directly to the injuries sustained, and the coroner's jury returned a verdict to that effect. The other instance was that of a medical man, who also threw himself out of a high window, with fortunately a less serious result than in the other case. He had suffered from influenza, and had been overdone by the hard work occasioned by the epidemic. A large number of medical men have suffered in a greater or less degree from influenza; fortunately, however, the results have been favourable.

OUR Leeds correspondent writes that the death-rate from lung disease other than consumption shows a decline, and that there is reason to believe that the epidemic has now passed its height. The highest rate of mortality in Leeds occurred a week later than in Sheffield and four weeks later than in Hull.

OUR Edinburgh correspondent writes: The medical officer of health for the city of Edinburgh stated on Tuesday last that five deaths had been reported in the city last week in which influenza was mentioned as a contributory cause.

OUR Glasgow correspondent writes: Though Glasgow has not been attacked by influenza as several towns in England have been, yet Dr. Russell's latest report to the Health Committee shows that that disorder has played a not unimportant part in the matter of the health of the town. During the first fortnight of May, a lower mortality from infectious disease has been accompanied by an increased mortality from pulmonary and miscellaneous causes, showing a considerable amount of general ill-health. An examination of the statistics for the six months November, 1889, to April, 1890, and for a similar period in 1890-91, showed (1) that the number of deaths attributed to influenza was almost the same in both periods—twenty in the former and twenty-one in the latter period; (2) that the number of deaths from pneumonia was similar in both periods—662 in the former and 658 in the latter period; (3) that the deaths from bronchitis were over 18 per cent. higher in the latter than in the former period, the mean temperature of the season 1890-91 being three degrees lower than that of 1889-90, namely 39.6° as against 42.4°. These facts seem to confirm the view of the Registrar-General of England that influenza and cold both raise the mortality from lung affections, the former by producing excess of fatal pneumonia, and the latter by producing excess of fatal bronchitis. Dr. Russell's opinion, therefore, is that influenza has been unobtrusively prevalent during the past six months, which, combined with the colder spring, has produced a pulmonary mortality quite abnormal to the prevalent climatic conditions in themselves, a mortality which the influenza element tends to maintain. During the first fortnight of May, seven deaths have been ascribed to influenza, one of a child aged 1 year, two of persons between 20 and 40 years, and four above 60, so that in sixteen days there have been registered more fatal cases than in any month either in 1889-90 or 1890-91.

HYPERPYREXIA.

DR. JAMES GIBSON (Greetland, Halifax) sends the following notes: On May 9th I was called to see a boy, aged 10, who had been feverish and restless all night. I found his temperature was up to 105.4°. He complained of severe headache, backache, boneache, and sore all over. As we have an epidemic of influenza here at present, I put him on the usual treatment for that malady; after sweating him well, I found his temperature about 5.30 P.M. had risen to 107 4°. I tried him with antipyrin and antifebrin, but all to no purpose, as his temperature rose to 109°. I suggested a cold bath, but the parents objected. He died about 7 P.M. same day. An uncle of this boy died last year with influenza in twelve hours, with a temperature of 108°, and this also refused to yield to treatment.—Mrs. H., aged 27, began on May 11th with the usual signs of influenza. She went on pretty well until May 13th, when I found the temperature was 105°. The usual remedies were tried to reduce the temperature, but were of no avail, as it gradually rose to 109°, and she died at 3 o'clock in the afternoon.—On May 22nd I was called to see a married woman, who was suffering from influenza, temperature 103.6°. I prescribed, and saw her on May 23rd, and although she said she had been perspiring freely all the time from my first visit, the temperature was the same as on the previous day. I attended again at 5.30, when she told me she was very sleepy; the temperature had now reached 107.4°. I gave 10 grains of antifebrin, and saw her in three-quarters of an hour, when I found her unconscious, and the temperature 109.6°. I suggested the cold pack, which was tried, and although I waited an hour and a quarter beside her, taking the temperature every five minutes, it never moved, and ten minutes before death was 109.6°.—On May 20th I saw a case of influenza with a temperature of 105.4°. Ten grains of antifebrin brought this down to 101.4° in an hour or so. She went on well until May 24th, when it again rose to 105°. Antipyretics reduced this very little more than half a degree. Although perspiring tremendously, the temperature began to go up again at night, notwithstanding antipyretics. The cold bath was recommended and resorted to; she was lifted out between sheets, and placed in a slipper bath, with aired water, which was gradually cooled down to cold. The temperature began to fall in seven minutes, and reached 96° in less than half an hour, the time she was in. She was stripped and put to bed, and is now doing well. The temperature on May 25th was 99°.

DR. GEO. B. BEALE (South Tottenham) writes to say that the highest temperature he has seen in either of the two epidemics of influenza has been 105.8°, observed last week in a child six months old.

RELAPSES.

DR. ALEXANDER FORSYTH (Greenwich) writes: The epidemic through which we are passing differs in many respects from that of last year. The most important difference, however, is that last year the disease had the type of a continued fever, whereas now we are dealing with a fever which has two distinct periods, a fever which seems to run its course in three

or four days, leaving the patient comparatively well so far as his own sensations and expectations go, and then comes the fifth day, when something else happens. The patient is not so well as yesterday, nothing strongly marked, headache has come on again, or backache is more troublesome, all so slight as not to be worth the name of a relapse. But it is a relapse—a very insidious and dangerous relapse—for it ushers in the most fatal stage of the disease, and unless we recognise it as a relapse, and warn our patients of its advent, then follow the series of symptoms which in previous relapsing fever epidemics occupied the first stage, namely, coryza, cough, inflammation of tubes, congestion and œdema of lungs, and suffocation. My rule has been to send patients to bed as soon as they are attacked till the fever abates (the first stage), and to warn them to lie in bed on the fifth day. Why should we give such a disease the innocent name of influenza? It is a relapsing fever, and the very name puts us on our guard.

Rainfall.

Mr. W. F. Freeman, F.R.C.S. (Reading), writes: The winter months of 1889-90 and of 1890-91 were alike noted for a very small amount of rainfall and for two serious epidemics of influenza. Is there any connection between the meteorological condition and the epidemic? The past fortnight of the present month has been remarkable for a large excess of rainfall, and coincidently with this excess is noted a rapid decline of the epidemic. The best epitome of the different observed epidemics of influenza is, I think, to be obtained from Aitken's *Practice of Medicine*, but although the meteorology of each record is discussed, the amount of rainfall throughout Europe during each of the previous few months is not noted.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

The greatest interest is shown in medical, scientific, parliamentary and legal circles in the deputation which is to wait upon Sir Michael Hicks-Beach, the President of the Board of Trade, at 7, Whitehall Gardens, on June 5th, at 11 A.M. The deputation will be introduced by the Chairman of the Executive Committee, Sir Joseph Lister, and, although a few days only have elapsed since the invitations to attend have been sent out, the following, among others, have already expressed their willingness to be present:—

The Duke of Westminster, K.G.
Sir Henry Acland, Bart.
Sir William Bowman, Bart.
Sir Joseph Lister, Bart.
Sir Spencer Wells, Bart.
Sir Frederick Abel, F.R.S.
Sir Benjamin Baker, F.R.S.
Sir James Crichton Browne, F.R.S.
Sir Frederick Bramwell, F.R.S.
Sir George Humphry, F.R.S.
Sir Lyon Playfair, M.P., F.R.S.
Sir William Houldsworth, M.P.
Sir Henry Roscoe, M.P., F.R.S.
Sir Robert Rawlinson, F.R.S.
Sir Edwin Saunders
Dr. Clifford Allbutt, F.R.S.
Dr. Louis C. Parkes
Professor E. Ray Lankester, F.R.S.
Dr. A. W. Barrett
Dr. Lauder Brunton, F.R.S.
Dr. Pye-Smith, F.R.S.
Mr. G. H. Makins
Dr. Glynn (Liverpool)
Dr. Fleming (Royal Veterinary Col.)
Mr. Victor Horsley, F.R.S.
Dr. Coupland
Mr. D'Arcy Power
Dr. Murray (Newcastle)
Prof. J. Burdon Sanderson, F.R.S.
Professor G. J. Romanes, F.R.S.
Dr. Sidney Turner
Professor Stewart
Dr. Sherrington
Dr. W. Hunter
Mr. Pickering Pick
Prof. Michael Foster, F.R.S.
Dr. Hill (Master of Downing College, Cambridge)
Dr. Sturges
Dr. Starling
Dr. Washbourn
Dr. Oliver (Newcastle)
Dr. Gaskell, F.R.S.
Dr. Beevor
Mr. Bland Sutton
Dr. James Oliver
Dr. G. Harley, F.R.S.
Mr. Haldane, M.P.
Professor Boyd-Dawkins
Professor Liveing
Dr. Marcet, F.R.S.
Professor Dewar
Professor Geikie
Dr. Jacob (Leeds)
Dr. Thomas Barlow
Dr. Buzzard
Dr. Charlton Bastian, F.R.S.
Dr. J. T. Walker
Mr. Thiselton Dyer
Mr. Sutton (Royal Agricul. Soc.)
Mr. Beddard
Mr. Macnamara
Mr. Everett Millais
Dr. Meymott Tidy
Professor Penberthy
Mr. Watson Cheyne
Professor C. S. Roy, F.R.S.
Dr. Armand Ruffer

And many others.

The Earl of Derby, Sir William Roberts, Professor Huxley, Dr. Byrom Bramwell, Professor Sylvester, Mr. Walter Gilbey, and a number of gentlemen well known in the medical and scientific worlds, have written letters regretting their inability to be present, and expressing their sympathy with the objects of the Institute.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The three members of Council who retire this year are Sir William Mac Cormac (Vice-President), Mr. Sydney Jones, and Mr. Septimus Sibley. The two former were elected in 1883, together with Mr. Cooper Foster, who was replaced after his death by Mr. Sibley in 1886. Thus Mr. Sibley is a "substitute member," filling up the remainder of the eight years of office, which would have been held by Mr. Foster had he survived. Of the retiring members, two — Sir William Mac Cormac and Mr. Sibley—have announced their intention to offer themselves for re-election. The first is a representative surgeon, and his services at the International Congress in 1881 are not forgotten. The second, a worthy example of the first-class general practitioner, deserves the support of those Fellows who act on enlightened principles and desire reform. The last day for receiving the applications of candidates is June 8th. The Secretary of the College has issued a circular this week, stating that those who desire voting papers must fill up and sign a form forwarded with the circular. No application for a voting paper which has not been received by the secretary before 2 o'clock on the afternoon of Monday, June 22nd, will be valid. The voting papers will be sent by post to the Fellows who have already applied for them on Friday, June 19th. Fellows of the College are particularly requested to furnish the secretary with their correct addresses. It is to be trusted that no Fellow will fail to understand that the documents in question are not proxy papers, but voting papers.

The Council of the Royal College of Surgeons of England consists of twenty-four members, including the President and Vice-Presidents. Three members retire yearly, so that at the end of eight years all who were on the Council at the beginning of that period must have been replaced or re-elected. In this list the date after "C" refers to the year of election as member of Council, the date after "P" to the year of Presidency.

President.—Mr. Bryant; C, (1) 1880, (2) 1888; P, 1890.
Vice-Presidents.—Mr. Thomas Smith; (1) 1880 (substitute), (2) 1884.
Sir William Mac Cormac; C, 1883.
Other Members of Council.—Sir Spencer Wells; C, (1) 1871, (2) 1879, (3) 1887; P, 1882.
Sir William Savory; C, (1) 1877, (2) 1885; P, 1885, 1886, 1887, 1888.
Mr. E. Lund; C, (1) 1878, (2) 1886.
Mr. Jonathan Hutchinson; C, (1) 1879, (2) 1887; P, 1889.
Mr. W. Cadge; C, (1) 1880, (2) 1888.
Mr. J. W. Hulke; C, (1) 1881, (2) 1889.
Mr. Christopher Heath; C, (1) 1881, (2) 1889.
Mr. Sydney Jones; C, 1883.
Mr. G. Lawson; C, 1884.
Mr. M. Berkeley Hill; C, (1) 1884 (substitute), (2) 1886.
Mr. Durham; C, 1884.
Mr. Macnamara; C, 1885.
Mr. Oliver Pemberton; C, 1885.
Mr. Septimus Sibley; C, 1886 (substitute).
Mr. Reginald Harrison; C, 1886.
Mr. Willett; C, 1887.
Mr. Pick; C, 1888.
Mr. Howse; C, 1889.
Mr. Langton; C, 1890.
Mr. Beck; C, 1890.
Mr. Mitchell Banks; C, 1890.

The following analysis of the composition of the Council may prove useful to our readers:

1. Members of Council attached to medical schools in London:	
St. Bartholomew's	4
Guy's	3
St. Thomas's	2
University College	3
Middlesex	2
St. George's	1
Westminster	1
London	1
Total number attached to London schools	17
2. Members attached to special hospitals in London	2
3. Members in general practice in London	1
4. Provincial members (all hospital surgeons)	4
Total	24

The four provincial members are Mr. Lund (Manchester), Mr. Cadge (Norwich), Mr. Pemberton (Birmingham), and Mr. Mitchell Banks (Liverpool). The election of the latter gained another seat for the provincials last year. The metropolitan medical school representatives now fill just under three quarters of the seats.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The thirty-ninth annual general meeting of the Metropolitan Counties Branch will be held at the Holborn Restaurant on Tuesday, June 9th, at 5.30 P.M.—H. RADCLIFFE CROCKER, M.D., 121, Harley Street, W.; ANDREW CLARK, F.R.C.S., 71, Harley Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The annual meeting for the election of officers will take place at the Royal Forest Hotel, Chingford, on Thursday, June 4th, at 6 P.M. At 6.15 the members and their friends will dine together. Sir W. Mac Cormac, President of the Branch, will preside, and will be supported by Sir Guyer Hunter, K.C.M.G., M.D., M.P., and a large number of past presidents. The dinner will be followed by a smoking concert. Tickets 7s. 6d. each; morning dress. Members intending to be present are requested to communicate with the honorary secretary as early as possible, but not later than Saturday, May 20th.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston, N.E.

MIDLAND BRANCH.—The annual meeting will be held at Derby on Thursday, June 18th. Members desirous of reading papers, etc., are requested to communicate before Monday, June 1st, to W. A. CARLINE, M.D., Honorary Secretary, Lincoln.

SOUTH MIDLAND BRANCH.—The annual meeting of this Branch will be held at Cambridge, in conjunction with the Cambs and Hunts and East Anglian Branches, on Thursday and Friday, June 18th and 19th.—C. J. EVANS, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE AND NORTHERN COUNTIES BRANCHES.—A joint meeting of the Northern Counties and Aberdeen, Banff, and Kincardine Branches of the British Medical Association will be held at the Gordon Arms Hotel, Elgin, on Saturday, June 20th, 1891, at 2.50 P.M. It has been proposed that visits be paid to the Cathedral, Pluscarden Priory, Gray's Hospital, etc. Dinner will be served in the Gordon Arms Hotel at 3 P.M. Members are invited to bring medical or lay friends with them. Further particulars as to train and coaching arrangements will be given in future notices.—J. MCKENZIE BOOTH and C. THISELTON URQUHART, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—The annual general meeting of this Branch will be held at Birkenhead on July 2nd, 1891. Members wishing to propose resolutions, read papers, or show cases, will please communicate at once with the Honorary Secretary, so that their names may duly appear on the circular convening the meeting.—CHARLES E. GLASCOTT, Honorary Secretary, 23, St. John Street, Manchester.

WEST SOMERSET BRANCH.—The annual meeting will be held at the residence of the President-elect, Mr. Charles Randolph, at Milverton, on Thursday, June 25th, at 2.15 P.M. Mr. C. Randolph will be happy to see gentlemen and offer them refreshments at his house before the business of the meeting commences. Dinner will be served at the White Hart, Milverton, at 5 o'clock. Members intending to be present, or having communications to bring before the meeting, are requested to send notice to Mr. C. RANDOLPH, or to the Honorary Secretary, W. M. KELLY, M.D.

EAST YORK AND NORTH LINCOLN BRANCH.—The annual meeting will be held at the Station Hotel, Hull, on Wednesday, June 3rd, at 1 o'clock. There will be an adjournment for lunch at 2 o'clock; tickets 3s. 6d. each. Business, election of officers. Communications: the President, Mr. E. P. Hardey, will give an address on Obstetrics. Dr. J. Frank Nicholson: The Complications of Influenza. Dr. Lowson: Urachus and Allantoic Cysts in the Abdomen. Mr. R. H. B. Nicholson: (1) Further notes on Cases of Lupus treated with Tuberculin. (2) Enterectomy for Intussusception. (3) Suture of Tendo Achillis.—H. W. PIGEON, Honorary Secretary, 6, Albion Street, Hull.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

A MEETING of this District was held at the Greyhound Hotel, Croydon, on Thursday, May 14th, SHADFORTH MORTON, M.D., of Croydon, in the chair.

Communications.—Dr. GEO. MACDONALD read a paper on the Treatment of Certain Forms of Laryngeal Disease, including Subacute Laryngitis, Laryngitis Sicca, Œdematous Laryngitis, and Chronic Laryngitis. He drew attention to the importance of nasal disease as a factor in the causation of the latter.—Mr. CHARTERS J. SYMONDS read notes of seven cases of Chronic Intestinal Obstruction, in five of which the sigmoid was opened, and in two the ileum. He preferred the inguinal to the lumbar operation, as being easier, quicker, with less shock and distress to the patient, and as giving more information. Mr. A. MAUDE showed a case resembling Acromegaly, and described the clinical and pathological features of the disease.

Dinner.—After the meeting fifteen members and visitors dined together.

Proposed Conjoint Meeting of East and West Surrey Districts.—It is hoped that the next meeting will be a conjoint one of the East and West Surrey Districts, to be held at Reigate in October, of which due notice will be given in the BRITISH MEDICAL JOURNAL.

EAST ANGLIAN BRANCH: ESSEX DISTRICT.

THE spring meeting of this district was held at the White Hart Inn, Brentwood, on May 21st. The chair was taken by Mr. A. W. WALLIS, of Brentwood, in the absence of the President of the Branch.

Next Meeting.—It was decided to hold the next meeting at Witham in the autumn.

Election of Honorary Secretary.—Mr. C. E. Abbott, Braintree, was re-elected Honorary Secretary for the ensuing year.

Reform of the In-Patient Departments of Medical Charities.—It was decided that the consideration of Dr. Rentoul's motions (BRITISH MEDICAL JOURNAL, July 26th, 1890, p. 246) be postponed until the annual meeting of the Branch in June.

Medical Defence Union.—The HONORARY SECRETARY gave a short account of the objects of the Union, and read the divisional report forwarded by Dr. Mead, Honorary Secretary of the Union for East Anglia.

Papers.—Owing to the unavoidable absence of Dr. W. E. STEAVENSON, the paper on The Choice of a Battery, and its Use in General Practice was read by Dr. SYDNEY BEAUCHAMP, who kindly, at short notice, came from London, and gave an instructive demonstration of the various forms of Batteries and Electrical Appliances used in Medical Practice.—Mr. C. B. KEETLEY (London) read a paper on the Indications for Surgical Interference in some Common Affections of the Head.

Votes of Thanks.—Votes of thanks were accorded to the readers of papers, the Chairman, and Honorary Secretary, and were duly acknowledged.

BRITISH GUIANA BRANCH.

THE second quarterly meeting of this Branch was held in the Pathology Room of the Public Hospital, Georgetown, on April 23rd. There were present:—Surgeon-General GRIEVE, M.D., in the chair; Drs. Anderson, Wallbridge, Williams, Law, Delamere, Hill, Godfrey, Shannon, Barnes, von Winckler, and the Honorary Secretary.

Branch Representative and Auditors.—Surgeon-General Grieve's nomination to be the Branch representative at home was unanimously agreed to, as was also the nomination of Drs. Ozzard and Ireland as auditors for the year.

Segregation of Lepers.—Dr. BARNES, medical superintendent of the Leper Asylum, read a paper on the segregation of lepers. He reviewed shortly the evidence for and against the communicability of leprosy, spoke of the discovery of the bacillus lepræ, of the fact that no doctors or nurses of any of the West Indian asylums had ever been known to acquire the disease, and drew attention to defects in all the cases of reported communicability. Passing to the question of compulsory segregation, he pointed out how it had hitherto failed to stamp out the disease. Finally, while admitting the possibility and probability under unknown conditions of the disease spreading from individual to individual, he pointed out how in other diseases, where the evidence of the spread (as, for example, syphilis and phthisis) was much clearer, no one asked for compulsory segregation. He advocated the isolation of leper beggars, and of those who were helpless, and not in a position to maintain themselves in a special place, that is, leper asylums.—Dr. GODFREY proposed a vote of thanks to Dr. Barnes, and expressed himself as generally agreeing with the views held by him.—After remarks from Dr. LAW and Dr. HILL, Dr. ROWLANDS quoted some figures from a recent paper on the subject in reference to Norway, where the statistics went to show that in something like 30 years leprosy, without compulsory segregation, had diminished by about two-thirds. He maintained that the degree of communicability of leprosy could only be of slight intensity, and that therefore there was no need for compulsory isolation.—The PRESIDENT said the disease might be communicable under very peculiar circumstances, but he was of opinion there was no real danger in lepers mixing in ordinary life. Speaking for himself, he thought if there was any severe case in the lower walks of life the party affected should go into the hospital for treatment, and he also thought those chargeable for

the upkeep of such institutions should see that such cases—if they thought there was any risk—were sent to places provided for them. He did not think that compulsory segregation was required in such a community as this. The idea that leprosy was increasing was only an assumption, and as an answer to leprosy being communicable he referred to the coolie population, where, instead of being looked on with fear, the leper coolie was an interesting being and became a cherished object of charity to them and went about begging. The decrease in the disease was no doubt on account of the great sanitary and other improvements that had been effected in recent years.

SPECIAL CORRESPONDENCE.

BERLIN.

Proposed Alterations in the Medical Curriculum.

At the last meeting of German physicians (*Aerztetag*) a committee, consisting of Professors Bardeleben, Krabler, Merckel, Penzoldt, Ruge, and von Ziemssen, was elected for the purpose of formulating proposed alterations in the plan of medical study. These alterations find expression in the following programme: 1. In the interest of thoroughness of training, it is advisable that the study of medicine at the university should extend over ten half-years, exclusive of the time required for hospital practice. 2. The arrangement of the course of study to remain as it is at present, attention being given to the following proposals: (*a*) In the study of anatomy more stress should be laid on a thorough practical training; (*b*) the same holds good for chemistry; the medical student should go through at least a half-year's practical work in the laboratory; (*c*) the preliminary examination (*Vorprüfung*) should be passed before clinical studies are permitted; (*d*) more attention than heretofore should be given by the faculty to regular theoretical courses on general and special pathology, therapeutics, general and special surgery, pathological anatomy, and materia medica. These courses should be attended before practical clinical studies are entered on. 3. Instruction in the chief clinics alone cannot be considered sufficient for the practical training of the student. It should be accompanied by practical courses and by policlinical work. 4. The passing the present medical examination cannot be considered a sufficient preparation for exercising the medical profession. Independent medical practice should be preceded by at least a year's work as assistant in a hospital. It is desirable that this should become a matter of legislation, the hospitals suitable for the purpose to be designated by the authorities.

CORRESPONDENCE.

ON THE CONTRACTION OF THE PAPILLARY MUSCLES.

Sir,—In a paper which appeared in the British Medical Journal of May 23rd, p. 1117, Messrs. W. S. Fenwick and W. Overend give an account of some experiments which they have made on the above subject, employing the excised heart of the rabbit, regarding which, though unwillingly, we feel it necessary to say a few words. They refer to papers by "Roy" in the *Practitioner* of last year; the reference should be to "Roy and Adami."

It is not our business to criticise adversely the methods and results obtained by these observers. Such criticism would be all the more ungracious on our part seeing that, on the whole, Messrs. Fenwick and Overend's work confirms our own upon the same subject. They say, however, "Certainly it must be admitted that this difference" (in time between the commencement of the contractions of the ventricular wall and of the papillary muscle) "is not greater than one-twentieth of a second, and it is therefore difficult to see how the shortening of the papillaries can make itself apparent on the pulse curve, since the ventricle forms an absolutely closed cavity for a tenth of a second." In making this statement, Messrs. Fenwick and Overend seem to have overlooked the fact that in our articles upon the heart beat and pulse wave we showed that the superposed wave in the curve of intraventricular pressure which appears in the pulse as the so-called percussion wave corresponds in time, not with the commencement of the contraction of the papillary muscles, but with the first rapid shortening of these when the auricular valves are being pulled downwards. In the curves we have given on p. 251 of our papers it can be seen that we have placed the beginning of the papillary contraction as taking place at the moment of opening of the sigmoid valves; and, as these curves also show, the superposed pressure wave (percussion or papillary wave of the pulse) occurs during the period of contraction of the musculi papillares, and not with the commencement of the contraction.

As Messrs. Fenwick and Overend's statement might lead to a misconception on the part of those unacquainted with what is undoubtedly a difficult subject, we think it right to note that our statements on the matter have been wrongly quoted.—We are, etc.,

C. S. Roy.
Pathological Laboratory, Cambridge. J. G. Adami.

THE PROTEIDS OF MILK.

Sir,—The elaborate researches by Professor Halliburton on the composition of milk, published in the British Medical Journal of May 23rd, however interesting they may be as a contribution to the already varied literature of this important subject, are certainly depressing in their effect on those who, like myself, have been disposed to accept the careful inquiries and the critical experiments on which Professor Duclaux has founded his contention that there is only one proteid in milk, and that lactoproteine, lact-albumin, and casein are but one and the same body, namely, casein in different degrees of solution.

This contention, so congruous as it is with the inferences derivable from a survey of the physiological relations of milk in general, has the no small advantage of at the same time simplifying the theory of its composition, which is a very appreciable one to those who have to teach it, as well as of rendering intelligible the changes which take place in it when operated upon by rennet for the purposes of cheesemaking.

It can hardly be supposed that Professor Halliburton is unacquainted with the views of Duclaux, which have been so admirably summarised from his original memoirs in his monograph on "Le Lait;"[1] and yet it is difficult to understand how, if he were acquainted with them, he should have ignored the powerful arguments on which Duclaux bases his criticism of the views of Hammarsten and others in regard to the separate identity of the proteids of milk, to which the paper referred to seeks to give support.

Looking at the distinguished position which Duclaux holds in the scientific world, it is not too much to say that any attempt to bolster up the older theory on this subject must, if it is to obtain recognition, be prefaced by a destructive criticism of the facts which Duclaux adduces in support of his contention.—I am, etc.,

Gloucester. Francis T. Bond, M.D.

THE ABUSE OF THE PROVIDENT PRINCIPLE.

Sir,—While some attention is being given to the abuse of the provident system, the following new developments may not be without interest:

In a well-known town in the Midlands is a friendly societies' medical association, embracing no fewer than 11,000 persons, consisting of members of clubs, their wives and families; also the members of a separate club conducted by the truly provident committee of the association (members of the working class), which provides medical attendance and drugs, etc., at the rate of a penny a week for adults, and a halfpenny a week for children. They tout for members among the patients of practitioners in the town.

They employ one surgeon at the rate of £220 a year, and a person described on a board over the dispensary door as a "Medical Officer," who is unqualified.

The new developments I refer to are:

1. The employment of an unqualified man by totally irresponsible persons to do the work of at least two medical prac-

[1] "Le Lait:" *Etudes Chirurgiques et Microbiologiques.* Par E. Duclaux, Professeur à la Faculté des Sciences. Paris: 1887.

titioners under circumstances where surely "due personal supervision and control" cannot be exercised by his qualified colleague, for the profit, not of a member of the profession, but of some speculative working men.

2. The lowering of fees among the practitioners in the town, who have to attend patients on the same terms, or stay at home in dignified ease, through a kind of "sweating" system.

3. The secretary, treasurer, "sick visitor," and others receive salaries which, as the amount is arranged by themselves, possibly are fairly liberal. Also they have purchased a house, and erected a commodious dispensary, waiting and consulting rooms, etc.; all this being done at a cost of £220 a year paid to a medical practitioner who has to incur the responsibility of superintending the exertions of the unqualified "medical officer."

I can personally vouch for the accuracy of the above statements. I enclose my name, but not for publication.—I am, etc.,

QUERCUS.

SIR,—I endeavoured to call the attention of the profession to the subject of the leader on the abuse of the provident principle by friendly societies some ten years ago—an abuse which is growing with the multiplication of these so-called "medical friendly societies." It was difficult then, as now, to sufficiently excite the interest of those who should be the leaders of the profession, so as to secure such unanimity of action as would alone assure success. This apathy is partly bred of ignorance of the effect of these societies on the future welfare of the profession, partly of indifference, by reason of these societies not directly affecting adversely the class of consultants.

Young medical men are constantly advised that these appointments as medical officer to friendly societies afford a good introduction and stepping stone to private practice; but learn too late that they have sold themselves, professionally, both body and soul, to the demon of cheapness, called in modern times "sweating." May be, after a year or two of this slavery, they kick away the rotten ladder by which they have tried to ascend, and set up on their own account an open cheap dispensary.

Among the objections to the rules of these friendly societies are: 1. There is no wage limit to their membership. 2. Their subscriptions are half what the minimum should be. 3. The medical officers only get a portion of these inadequate fees, that is to say, a profit is made out of the medical man's services. 4. The midwifery fees are scandalously small. In last week's paper I saw an advertisement holding out a midwifery fee of 6s. 3d. as a bait—a fee that an unqualified midwife would scarcely accept for the event, whilst the medical man probably has to put in ten visits besides, that is, at the rate of 6d. a visit and 1s. for the confinement, whether instrumental or not, and vaccination given in. I calculated that in one society the medical officer would have been remunerated at the rate of 2d. a visit—about one-third the amount that a messenger boy would earn for going from one house to another. Small wonder that the expectancy of life of medical men is but half that of the clergy. What is the remedy? I suggest the same course of action that proved so eminently successful with regard to the pay of medical officers for the services. Let a notice and warning be posted in every medical school and hospital in the United Kingdom. This might be undertaken by the Council of the British Medical Association. Let members of hospital staffs warn newly-fledged medicos of the evil tendency of these societies. The vulnerable point of these friendly societies is that the members have to content themselves with the services of its one medical officer or his assistant, who, although adequately qualified, is generally young and inexperienced. To have the choice of all the well-known local medical men would be a great counter-attraction, therefore the establishment of public provident dispensaries with a wage limit is indicated, open to all the medical men of the district, and managed by them, and kept open to new arrivals, so that young medicos may have a fair and honourable opening to practice. Too frequently the jealous exclusiveness of senior practitioners drives the juniors into the less reputable bypaths of practice. Let a tariff of fees suited to the locality be agreed upon. It is always forgotten that there would not be less medical work to be done if there was no underselling.—I am, etc.,

AUGUSTUS HENRY BAMPTON, M.D.

Ilkley-in-Wharfedale.

SIR,—Permit me to endorse every word of "A Graduate's" letter. For ten years I worked for 2s. 6d. a member a year. This year I am allowed 3s. 6d. Even that, however, is inadequate for the amount of work done in a radius of three miles. Where is the man who will stand forward and work out the needed reform?—I am, etc.,

CLUB SURGEON.

DEGREES FOR LONDON MEDICAL STUDENTS.

SIR,—Your correspondent "L.S.A.," quoting from a necessarily condensed report of the proceedings at the College of Surgeons, objects to a couple of sentences in it which do not quite accurately represent what I said at much greater length in reference to the Society of Apothecaries. My statement was, and is, that the old apothecary has died out; that even from the form of diploma now granted (which was produced and read by Mr. Lawson Tait) the very name of his art has disappeared, and he is licensed, not to act as an apothecary, but to practise medicine, surgery, and midwifery; that the best of the Society's licentiates had not been content in the past, and, in my opinion, would not be content in the future, with its licence alone, but had sought, and would probably continue to seek, the diplomas granted by the Royal Colleges in addition; and that hence the whole question as regards the Society resolved itself into one of vested interests. That was, of course, only the expression of my individual opinion: but it is not much shaken, I must confess, by finding that there are holders of the licence, like your correspondent and his friends, who, while perfectly satisfied with their diplomas, are not satisfied with the legal title which alone it confers, and are very anxious not to be confounded with the old licentiate by whom the fame of the Society, such as it is, has been made.

Let me add that now the Colleges of Physicians and Surgeons have again, so to speak, a comparatively free hand given them by the rejection of the late scheme, it is to be hoped that no vested interests of any kind will be permitted to stand in the way of removal of the undoubted grievance under which London medical students labour. The six hundred and odd students who yearly enter at the London medical schools pay for their education and qualifications sums which cannot amount to less than a total of £80,000 a year; if these sums were so expended as to produce the best results, all London students ought to have opportunities for learning their profession such as would satisfy even Professor Ray Lankester, and opportunities for obtaining their degree equal to those enjoyed by their fellow-students in Edinburgh, Dublin, or Manchester.—I am, etc.,

Dulwich, S.E. H. NELSON HARDY.

SIR,—I do not sympathise with the teacher who carps at examinations to the students preparing for them. But if a teacher finds that the results of any given examination evince more than the normal amount of uncertainty attaching to every examination of various and varying examinees, and that the effect of the uncertainty, repeated year by year, is to discourage steady work and to put a premium upon the spirit of adventure which leads a man to trust to his luck, it becomes the duty of the teacher to call attention to the fact.

Therefore I state as my opinion, formed from the experience of the last seven years, and emphasised by the results of the last examination, that the uncertain character of the First Fellowship Examination in Physiology of the Royal College of Surgeons causes serious injury to the healthy study of this subject, and, by diffusion, to healthy and conscientious medical study in general.

My experience is that individual candidates cannot and do not derive the same preparation by sound work for this examination that they do, for example, for either the intermediate M.B.Lond., or—but not with quite the same degree of certainty—for the Second Conjoint. The contrast is briefly this, that at the Intermediate a sound man will probably pass, an unsound man will probably fail; while at the First Fellow-

ship of the Royal College of Surgeons a sound or an unsound man may pass or fail, with little if any margin of probability in favour of the former.

This is a deliberate opinion, gradually formed from repeated experience of an examination, the ill effect of which upon sound as distinguished from sham study I have watched in operation year by year. I assign no cause, and specify no instance, although I could do both, but rest my judgment upon seven years' comparison of results between the Intermediate M.B.Lond. and the First Fellowship of the Royal College of Surgeons. Believing, however, that it is the desire of the administrators of any examination to ensure that the balance is held level, and that the proper way to bring to their notice that the balance (judged by its results) is not level, is public and not private remonstrance, I have given this expression of my deliberately formed opinion.—I am, etc.,

AUGUSTUS D. WALLER,
Lecturer on Physiology at St. Mary's Hospital Medical School.

P.S.—Although most unwilling to give instances, I may go as far as to state that four cases of failure occurred at the last examination of admittedly sound men, all having passed the Intermediate M.B., two having taken honours at the B.Sc., one starred for the gold medal in Physiology. This was from two medical schools, and is a large margin of experimental error.

SIR,—For family reasons I was unable to continue study at the university where I matriculated, and eventually took the diplomas of L.R.C.P., L.R.C.S.Ed., L.S.A.Lond. Being anxious to call myself Doctor on my plate and cards, and not feeling sure about the L.R.C.P., which in my opinion is merely a licence to practise medicine, and does not constitute one a physician, I took the M.R.C.P., by doing which I imagined, as I was then a physician, I could legally call myself Doctor.

Subsequent correspondence in the BRITISH MEDICAL JOURNAL made me uncertain on the point, and, to make doubly sure, I took a foreign, unregistrable, M.D. degree.

In the leader in the BRITISH MEDICAL JOURNAL of May 23rd I find, as the M.D. is not registrable, it is of no use; but, to my surprise, I see on page 1100 that the Clerk to the Society of Apothecaries says that an L.S.A., subsequent to June 30th, 1887, can call himself Doctor.

Briefly, then, my M.R.C.P. and M.D. are of no use; but if I take the new diploma of L.S.A., which in my case would mean passing an examination in surgery only, I can then legally call myself Doctor. Is this so? To an average medical mind, the fact of passing an examination in surgery would seem to have nothing to do with the question; and I should be greatly obliged if you would give me your opinion on the case. To me it seems most extraordinary. If such is the case, naturally everyone will take the new L.S.A., and not bother themselves with M.D.'s or M.R.C.P.'s.—I am, etc.,

A PHYSICIAN BUT NOT A DOCTOR.

SIR,—It would seem a great pity to establish a mere makeshift university, a university in name only, for the benefit of the medical profession. Such an institution would not seem likely to be of national benefit. Better than this, one would think, if London students were enabled, with as little inconvenience as possible, to obtain a medical degree at one of the existing universities, Victoria or Durham. There are many who hope to see a new teaching university, embracing various faculties, established in the metropolis. Should such a scheme grow to maturity, Westminster would appear to be by far the best site. The title of University of Westminster would from its associations be everything that could be desired from a national point of view, and it would have the great advantage of being perfectly distinct from that of the University of London.—I am, etc.,

MEHR LICHT.

SIR,—The demand and, I take it, the just demand of London trained men is for an M.D. degree obtainable in a moderate time and by a reasonable amount of industry, mental capacity, and memory; and it is difficult to avoid thinking that the promoters of the defunct scheme were laughing in their sleeves when they brought it forward as a solution of this difficulty. It is surely an intolerable anomaly that in such schools as Edinburgh, Glasgow, Aberdeen, Durham, etc., the average student takes his M.D. as a matter of course, while in London he has to be content with diplomas and the title of Mr.; for no one can maintain that the time (implying money), the application, and the retentive memory required for the attainment of the London M.D. are at the command of the ordinary student. Naturally and justly enough those who, having all these advantages, have attained the London degree, are extremely averse to seeing it in any way cheapened, but there is another solution of the difficulty. Let the present M.D.Lond. remain in all its pristine inaccessibility, and let the medical schools at present unattached to any other university be formed into a medical university of England, with power to grant, after a reasonable examinational test, an M.D. degree (of say, Royal University, England). There has arisen among the public a demand for Doctors of Medicine, an ignorant demand truly, but still a demand that has to be reckoned with, and hence we find students leaving London to spend a year at Durham; grey-haired practitioners of fifteen years' standing resorting to the same degree emporium, or perchance to St. Andrews; and a large number of London diplomates studying, not "military history, in the neighbourhood of the field of Waterloo," but the art of degree getting. This unsatisfactory state of things is bound to continue until the London trained man, student and practitioner alike, obtains his just demands for an accessible degree.—Yours etc.,

Hanwell. T. A. COLLINSON.

THE TRAINING AND TEACHING OF NURSES.

SIR,—May I ask you to kindly publish in your next issue the accompanying petition, signed by members of the medical profession who are or have been directly identified with training and teaching nurses?—I am, etc.,

J. E. WAINWRIGHT.

To the Right Honourable the President of the Board of Trade.

The humble petition of the undersigned physicians and surgeons, who are directly concerned in, or have given large attention to, the education of nurses in the nurse-training schools of Great Britain,

Sheweth as follows:

It has recently come to our knowledge that a self-constituted body of ladies and gentlemen, styling itself the British Nurses' Association, has applied to the Board of Trade for a licence under the 23rd Section of the Companies Act of 1867, and that under Clause 8 of its Memorandum of Association it proposes:

"To form, control, and carry on

(1) A register of trained nurses.

(2) A register of certificated midwives, and to determine from time to time what tests shall be specified by candidates for registration, as evidence that they possess skill and knowledge in their profession;"

or, in other words, that the British Nurses' Association aims at exercising, under cover of a licence from the Board of Trade, the power of granting certificates of competency in nursing, and so of controlling the education of nurses—a power such as has hitherto only been conferred on really representative bodies by Royal Charter or by special Act of Parliament, and is not within the scope of the Companies Acts.

Against this scheme of registration we desire to protest on the following grounds:

1. That a self-appointed association, such as the British Nurses' Association, is not a fitting or competent authority to determine, in the interest either of the nursing profession or of the general public, who should be put on the register, or who should be excluded from it.

2. That no written or oral examination of nurses in the technical details of their duties can possibly lead to any approximate estimate of their real fitness and competence as nurses, and least of all an examination conducted apart from hospitals, and by persons not specially qualified; for a nurse's qualifications depend mainly on practical experience, or natural gifts and moral qualities, which a mere examination, however well conducted, can never adequately test.

3. That the effect of the proposed register of nurses, by granting certificates of competency professing to be authoritative, while being necessarily imperfect and untrustworthy, would be to mislead instead of guiding both the public and medical practitioners, and to lower the standard of nursing by placing numbers of insufficiently trained and inferior nurses on the same level as their highly trained and thoroughly competent sisters.

4. That the authorities of the nurse-training schools are alone in a position, from their experience and special knowledge, and from their intimate acquaintance with the individual nurses who have been trained under their care, to certify who are fit and properly trained nurses, and that the certificates of efficiency given by them are sufficient, and are infinitely more valuable and trustworthy than any certificates otherwise acquired could possibly be.

5. That no association, having for its object to test and guarantee by certificate the educational and other qualifications of its members, has ever yet had accorded to it such powers and privileges as the British Nurses' Association aims at acquiring, until it has been shown by actual results that its action has been beneficial to the public and to the body it purports to represent, and that it has the support of the leading members, as well as of the large majority of the rank and file, of that body.

The large nurse-training schools of Great Britain, including the Nightingale School, to whose labours the vast improvement which has of late taken place in the education and status of nurses is wholly attributable, are, almost without exception, unrepresented in the British Nurses' Association, and are opposed to its registration scheme.

Sir W. BOWMAN, Bart., F.R.S.
J. S. BRISTOWE, M.D., F.R.S.
JOHN CROFT, F.R.C.S.
SYDNEY JONES, M.B.
HENRY GERVIS, M.D.
THOMAS BRYANT, F.R.S.
G. NEWTON PITT, M.D.
J. W. WASHBOURNE, M.D.
E. C. PERRY, M.D.
W. ARBUTHNOT LANE, F.R.C.S.
J. C. STEELE, M.D.
W. H. ALLCHIN, M.B.
THOMAS BOND, F.R.C.S.
F. DE HAVILLAND HALL, M.D.
GEORGE COWELL, F.R.C.S.
J. B. POTTER, M.D.
C. N. MACNAMARA, F.R.C.S.
STANLEY BOYD, M.B., F.R.C.S.
FREDK. WILLCOCKS, M.D.
JOHN CURNOW, M.D.
HENRY G. SUTTON, M.D.
STEPHEN MACKENZIE, M.D.
FREDERICK TREVES, F.R.C.S.
A. ERNEST SANSOM, M.D.
JAMES ANDERSON, M.D.
CHARLES MANSELL MOULLIN, F.R.C.S.
T. GILBART SMITH, M.D.
WAREN TAY, F.R.C.S.
FREDERIC S. EVE, F.R.C.S.
THOMAS H. OPENSHAW, F.R.C.S.
FREDK. H. SMITH, B.A., M.B.
W. A. MACKINNON, C.B.
J. B. C. READE, C.B.
W. NASH, M.D.
S. B. PARTRIDGE, F.R.C.S.
CHARLES D. MADDEN, L.R.C.S.I.
Sir THOMAS LONGMORE, C.B.
Sir W. AITKEN, M.D., F.R.S.
J. LANE NOTTER, M.A., M.D.
A. M. DAVIES, M.R.C.S.
W. F. STEVENSON, M.B.
JOHN E. MORGAN, M.D., M.A.
JAS. ROSS, M.D., LL.D.
THOMAS HARRIS, M.D.
JUDSON S. BURY, M.D.
D. J. LEECH, M.D.
JAMES BARR, M.D.
EDWD. H. DICKINSON, M.D.
J. DRESCHFELD, M.D.
T. CUMING ASKIN, M.D.
CHAUNCY PUZEY, M.R.C.S.
DAMER HARRISSON, F.R.C.S.
G. G. HAMILTON, M.B., F.R.C.S.
R. D. MOTHERSOLE, M.B.
W. ALEXANDER, F.R.C.S.
JOHN CAMERON, M.D.
E. H. W. SWETE, M.D.
GEO. W. CROWE, M.D.
E. WALPOLE-SIMMONS, M.D.
H. G. BUDD, M.R.C.S.
T. BATES, M.R.C.S.
G. HYDE, M.R.C.S.
G. R. J. FLETCHER, M.R.C.S.
THOMAS ANNANDALE, F.R.C.S.
JOHN CHIENE, F.R.C.S.Ed.
JOHN DUNCAN, M.D., F.R.C.S.Ed.
A. G. MILLER, M.D., F.R.C.S.Ed.
C. W. CATHCART, M.B., F.R.C.S.
JAMES W. B. HODSDON, M.D., F.R.C.S.Ed.
JAMES FINLAYSON, M.D., F.F.P.S. Glasg.
WM. J. FLEMING, M.D., F.F.P.S. Glasg.

NAVAL AND MILITARY MEDICAL SERVICES.

THE LOSS OF THE *UTOPIA*.

HIS Excellency General Sir Lothian Nicholson, K.C.B., commanding the forces at Gibraltar, has conveyed to the officer commanding the Medical Staff Corps (Surgeon-General Meadows), the following expression of regard for the services rendered by officers and men on the occasion of the wreck of the steamship *Utopia*, which occurred on March 17th: "The willingness with which they have discharged their exceptionally difficult and painful duties in connection with the disposal of the bodies of victims from the *Utopia* disaster, shrinking from none of the hard, and oftentimes revolting work thereby entailed upon them, prompts me to place on record my high sense of their most excellent conduct, and to request you to convey to them the thanks, not only of the Government, which I have the honour to administer, but of the public at large."

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

WANTED, by a Surgeon likely to go India next trooping season, an exchange with an officer of similar rank, who has come home this trooping season.—Apply, "C. H.," 1874, British Medical Journal Office, 429, Strand, W.C.

THE NAVY.

FLEET-SURGEON EDWARD MEADE has been placed on the retired list, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. His commissions are thus dated:—Surgeon, August 4th, 1862; Staff-Surgeon, February 19th, 1876; and Fleet-Surgeon, February 11th, 1882. He was Staff-Surgeon of the *Penelope* at the bombardment of the Alexandrian forts in July, 1882, and during the Egyptian war; he received the medal with clasp and the Khedive's bronze star.

THE MEDICAL STAFF.

SURGEON-MAJOR G. B. STUART, M.B., Grenadier Guards, has retired on retired pay. He entered the service as Assistant Surgeon, April 1st, 1871; became Surgeon, March 1st, 1873; and Surgeon-Major, March 26th, 1886. He was appointed to the 2nd Dragoons in 1875, was transferred to the 1st Battalion Grenadier Guards in 1877, and to the 2nd Battalion on promotion to Surgeon-Major in 1886.

Surgeon H. I. POCOCK, serving in the Bengal command, is appointed to the civil medical charge of the Muttra district, in addition to his military duties.

Surgeon R. P. HETHERINGTON, M.B., on arrival from England, is posted to duty in the Secunderabad district, Madras command.

Surgeon WILLIAM A. CARTE, M.D., from the Coldstream Guards, is appointed Surgeon-Major Grenadier Guards, *vice* G. B. Stuart, M.B., retired, May 6th. Surgeon Carte received his first commission May 30th, 1885, and was appointed to the Coldstream Guards, July 22nd, 1885.

Brigade-Surgeon J. B. HAMILTON, M.D., serving in Bengal, is appointed to the temporary administrative medical charge of the Allahabad District, *vice* Deputy Surgeon-General T. Rudd, M.D., transferred to the Meerut District.

Brigade-Surgeon J. E. FANNIN, serving in Bengal, and Surgeon W. J. CROFTON, M.B., serving in the Bombay command, have leave of absence for six months on medical certificate.

Brigade-Surgeon A. F. CHURCHILL, M.D., is directed to officiate on the administrative medical staff of the Bengal army, with temporary rank of Deputy Surgeon-General, from March 1st.

Surgeon A. SHARPE, M.D., has been appointed Senior Medical Officer in West Africa, *vice* Surgeon W. J. Macnamara, M.D.

Surgeon-Major ALFRED LEWER has retired on retired pay. His commissions were dated: Assistant-Surgeon, December 1st, 1856; Surgeon, March 1st, 1873; and Surgeon-Major, January 21st, 1874. He has no war record in the Army List.

Deputy Surgeon-General J. WARREN, appointed administrative medical officer Bombay Presidency, in succession to Deputy Surgeon-General G. L. Hinde, is posted to the Poona district.

Quartermaster THOMAS WARRINGTON died at Gibraltar, March 17th, 1891, at the age of 47. He was appointed Quartermaster, Medical Staff, with the honorary rank of Lieutenant, March 23rd, 1887.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR (ranking as Lieutenant-Colonel) ARTHUR LUKE HACKETT, Madras Establishment, is promoted to be Brigade-Surgeon, January 27th. His first appointment was dated April 1st, 1867; that of Surgeon-Major being 12 years therefrom.

The retirement of Brigade-Surgeon ROBERT GRAY, already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

Surgeons H. F. CLEVELAND and J. JACKSON, of the Bombay Establishment, have passed the examination in Hindustani by the higher standard, and Surgeon E. L. C. SMITH, also of the Bombay Establishment, has passed in Persian by the lower standard.

The services of Surgeon D. M. DAVIDSON, Bengal Establishment, medical officer to the Charman Extension North Western Railway, are placed at the disposal of the Home Department.

Surgeon L. J. PISANI, Bengal Establishment, is appointed medical officer to the Charman Extension North Western Railway.

Surgeon-Major W. BEATSON, Bengal Establishment, civil surgeon of Bhangulpore, is appointed to the executive charge of Bhangulpore Central Gaol, in addition to his own duties, during the absence of W. Leonard.

Surgeon-Major J. ANDERSON, Bengal Establishment, civil surgeon of Bareilly, is appointed to the visiting medical charge of Pilibheet.

Surgeon-Major D. F. BARRY, Bengal Establishment, civil surgeon of Seetapore, is appointed to the visiting medical charge of the Kheree district, from March 26th until the arrival of a civil surgeon.

Surgeon-Major E. S. BRANDER, Bengal Establishment, civil surgeon of Etawah, is appointed to the visiting medical charge of the Minpoorie district, from March 20th until the arrival of a civil surgeon.

Surgeon J. O. PINTO, Madras Establishment, is appointed to the officiating medical charge of a wing of the 27th Native Infantry at Cuttack.

Surgeon-Major T. E. L. BATE, Bengal Establishment, who has been permitted to return to duty before the expiration of his furlough, is appointed Inspector-General of Prisons, Punjab, *vice* Brigade-Surgeon R. Gray, retiring from the service.

Brigade-Surgeon W. S. FOX, Madras Establishment, is permitted to retire from the service, dated April 18th. He joined as Assistant-Surgeon March 31st, 1865, and rose to be Brigade-Surgeon January 4th, 1887.

Surgeon E. R. DA COSTA, half pay Madras Establishment, is restored to the effective list from April 6th, the date of his arrival at Bombay, and is posted to do duty in the Madras district.

Surgeon-Major W. R. EDWARDS, M.D., Bengal Establishment, is appointed Surgeon to Sir Frederick Roberts, Commander-in-Chief in India, *vice* Surgeon-Major C. W. Owen, C.M.G., C.I.E., resigned.

Surgeon-Major G. H. D. GIMLETTE, Bengal Establishment, Residency Surgeon and *ex officio* Assistant Resident in Nepaul, is confirmed in the appointment of Agency Surgeon in Baghelcund.

Surgeon W. B. BROWNING, Madras Establishment, District Surgeon and Superintendent of the Gaol at Madura, is appointed Second Medical Officer at Ootacamund.

Surgeon-Major A. F. DOBSON, Madras Establishment, is permitted to return to duty from furlough.

The services of Surgeon-Major S. L. DOBIE and Surgeon F. G. MAIDMENT, both of the Madras Establishment, are placed at the disposal of the Public Department.

Brigade-Surgeon L. C. NANNEY, Madras Establishment, South Indian Railway Volunteer Rifles, is permitted to resign his appointment as Honorary Surgeon, at his own request.

Surgeon W. B. BANNERMAN, Madras Establishment, is appointed to the officiating medical charge of the 27th Native Infantry at Berhampore.

The undermentioned 2nd class Civil Surgeons, all of the Bengal Establishment, are transferred as follows:—Surgeon-Major W. H. CADGE, from Alighur to Fyzabad; Surgeon-Major G. M. NIXON, from Minpoorie to Alighur; Surgeon-Major J. MORAN, from Banda to Goruckpore; Surgeon-Major E. B. RUTTLEDGE, from Goruckpore to Deyrah Dhoon; Surgeon-Major M. D. MORIARTY, from Kheree to Meerut.

Surgeon G. H. BAKER, Bengal Establishment, Supernumerary Civil Surgeon, is transferred from Pilibheet to Banda.

Surgeon C. M. THOMPSON, M.B., Madras Establishment, Secretary to the Surgeon-General with the Government of Madras, is appointed to act as Superintendent of the Lunatic Asylum at Madras, without prejudice to his own duties, as a temporary measure.

Surgeon-Major J. ARNOTT, M.D., Bombay Establishment, is appointed Physician to the European General Hospital, *vice* Brigade-Surgeon A. N. Hojel, retired. Surgeon H. P. DIMMOCK, also of the Bombay Establishment, is appointed Obstetric Physician to the Jamsetjee Jejeebhoy Hospital, *vice* Surgeon-Major Arnott.

Surgeon-Major WILLIAM HILBERS, late of the Indian Medical Service, died on May 23rd at Brighton, aged 75.

THE VOLUNTEERS.

ACTING-SURGEON T. D. GRIFFITHS, M.D., 1st Glamorgan Artillery, has resigned his appointment, which was dated February 21st, 1880.

The undermentioned Acting-Surgeons are promoted to be Surgeons in their respective corps, May 16th: W. J. LAWRIE, M.D., 2nd Volunteer Battalion Scots Fusiliers (late the 2nd Ayrshire); A. G. PATERSON, M.D., 1st Volunteer Battalion Berkshire Regiment (late the 1st Berkshire); and N. STARK, M.B., 1st Volunteer Battalion Highland Light Infantry (late the 5th Lanarkshire).

Acting-Surgeon P. P. YOUNG, 1st Volunteer Battalion Cheshire Regiment (late the 1st Cheshire) has resigned his appointment, dated June 10th, 1882.

Mr. ROBERT JOHN PATON, M.B., is appointed Acting-Surgeon to the 2nd Volunteer Battalion South Wales Borderers (late the 1st Monmouthshire), May 16th.

Mr. MILTON PRENTICE LEDWARD, M.B., is appointed Acting-Surgeon to the 1st Cadet Battalion of the Manchester Regiment, May 23rd.

Acting-Surgeon T. D. KEY, 1st London (City of London) Artillery, is promoted to be Surgeon, May 23rd.

Surgeon A. R. HOPPER, 8th Lancashire Artillery, is granted the rank of Surgeon-Major, ranking as Major, May 23rd.

Acting-Surgeon T. C. EAGER, 2nd Volunteer Battalion West Surrey Regiment (late the 4th Surrey), has resigned his appointment, which was dated July 18th, 1883.

Acting-Surgeon J. H. HOUGH, 4th Volunteer Battalion Suffolk Regiment (late the 2nd Cambridgeshire), is promoted to be Surgeon, May 23rd.

Surgeon G. CRAN, M.D., 5th Volunteer Battalion Gordon Highlanders (late the 1st Kincardine and Aberdeen), is granted the rank of Surgeon-Major, ranking as Major, May 23rd.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PARTNERSHIP AGREEMENTS.

D. writes: Dr. A. agrees to act as assistant to Dr. B. for twelve months with a view to a partnership, his services for the twelve months to be in lieu of a premium, but if the receipts exceed a certain amount (which it will do), he is to have the excess over and above the amount specified to the amount of £100, and out of all above that to pay one-third of the surgery expenses and horse and man. If no arrangement is come to at the end of twelve months as regards the partnership, then an equivalent at the rate of one-ninth of the receipts for the twelve months will be paid him for his services, besides his board, washing, and lodgings; but he wants to stipulate in the bond that he may start practice in the neighbourhood on his own account in three years afterwards, or at any time within a radius of three miles.

*** Such an arrangement would be most unreasonable as well as inequitable. In case the proposed arrangement ceases at the end of twelve months, Dr. A. should be pledged on no account to practise within a radius of ten miles of Dr. B.'s practice. Should, however, a partnership, on the other hand, continue, then the senior partner should be protected by a similar clause for at least ten years.

FEES OF SUBSTITUTES AND CONSULTANTS.

M. Our correspondent, having been sent for by the patient late in the evening, and finding it necessary to pay a second visit before F. could conveniently be expected to attend, was fully justified in charging for his services. In rendering his account to the patient under the circumstances stated, he did not, as alleged, "commit a grave breach of professional etiquette." On the other hand, if the third visit was made in the absence of pressing necessity, or at the special request of the patient, it would ethically be regarded as an exceptional and questionable procedure, and would justify remonstrance on the part of F.

With regard to the second case, that of A. and B., we may note that in cases of consultation it is usually held as a duty devolving on the family doctor to intimate to the patient, where necessary, what the consultant's customary or expected fee is, and, as far as possible, to see that it be paid at the time, unless for pecuniary or other valid reasons deferred payment be deemed expedient. If, therefore, A failed to do so, or to subsequently communicate thereon with the consultant, the latter would be justified in transmitting his professional account to the patient, or executors, as the case may be, without seeking the intervention of the family medical attendant, though preferably through him.

FREE ATTENDANCE ON DENTISTS.

A MEMBER OF THE BRITISH MEDICAL ASSOCIATION writes: I am very pleased to see "M.D.'s" remarks in the BRITISH MEDICAL JOURNAL of May 16th on "Free Attendance on Dentists." It would be a comfort to all parties if there could be some definite understanding on the subject. I am practising dentistry in a large provincial town, and it sometimes happens that after an hour or two of hard work operating I am told by my patient that her husband is a "medical man," and she supposes I won't expect a fee from her. Further inquiries sometimes disclose the fact that they live ten or even twenty miles away, and are quite unknown to me. Am I expected to attend gratuitously the families of all medical men within a radius of twenty miles?

Again, after two sittings of an hour each, which means two hours' hard work operating, I have been told by my patient: "I am a medical student, so I suppose you won't expect a fee from me." Am I expected to see gratuitously a hundred or more students from the medical college if they wish to come to me?

A dentist cannot visit his patients of an evening as a surgeon can, and in the short dark days the loss of an hour or two of the best light for operating in is often a matter of serious consideration. Speaking from my own experience, I am obliged to differ from "M.D." when he says that the dentists have "very much the better of their self-determined bargain."

I have no desire to enter into a correspondence on the subject, but only wish to express a hope that the stone which has been set rolling will not be allowed to stop till the matter has been fully discussed, and an understanding arrived at between some of the leading medical practitioners and dentists as to when and from whom a fee should be expected.

RUMOURED RETIREMENT FROM PRACTICE.

A. O. P.—The course suggested by our correspondent would be contrary to the ethics of the profession, and might not unfairly be held as a covert attempt to obtain practice by indirect means. A wise and perfectly legitimate step would be to solicit two or three judicious friends to contradict the rumour.

RESIDENT AND VISITING STAFFS.

INQUIRER writes: In a general hospital a nurse is taken ill, and her superior sends for the honorary physician without any intimation or request to the resident physician, who, according to the rules, is to attend persons taken ill in the house. Then the honorary physician visits the patient after the hour at which the dispenser leaves, and gives a prescription to be dispensed by one of the resident physicians. There is a rule of course that the resident is required to dispense medicines for his patients after dispensary hours. The questions are: (1) Is he justified in refusing to dispense the prescription of the honorary physician for a patient the resident has not seen when the honorary has access to the dispensary: and should not the latter have asked the resident to see the patient in conjunction previous to writing the prescription and forwarding it by a servant?

*** The proper course for the resident to have pursued under the circumstances would have been to have dispensed the medicine, and then to have written a courteous and friendly note to the honorary physician calling his attention to the rule. We see no reason to doubt that the latter acted in ignorance of the rule. The resident might have also called the attention of the head of the nursing department to the rule, as it was through her mistake that the whole trouble arose. Unless the relations between the honorary staff and the resident had been very much strained, a resident certainly would not be justified in refusing to dispense a prescription.

INDIA AND THE COLONIES.

INDIA.

A GENEROUS BENEFACTOR.—Mr. Nusserwanjee Manockjee Petit, the younger son of Sir Dinshaw Petit, has given 50,000 rupees towards the Charitable Dispensary at Khetwady, bringing his total of benefactions to 10 lakhs.

HOSPITAL FOR EUROPEANS AT SRINAGAR.—Dr. Duke, the Residency Surgeon in Kashmir, proposes to build a hospital for Europeans at Srinagar, where the Maharaja has offered a site. The cost of the building is estimated at about 12,000 rupees, and the establishment will cost 600 rupees monthly. Subscriptions may be sent either to the Punjab Banking Company or to Messrs. Grindlay and Co., London and Bombay.

THE LADY DUFFERIN FUND.—The Raja of Durbhunga has offered a sum of 15,000 rupees towards the expense of building a dispensary for women. It is to accommodate six in-patients, and will be under the charge of a lady doctor, with whom a native assistant-surgeon will be associated. The Raja has also promised an annual sum of 5,000 or 6,000 rupees towards the maintenance of the dispensary. He writes: "I can assure you that both the Ranee—who has personally derived much benefit from the treatment of lady doctors, and therefore fully realises the advantage of such institutions—and myself will do our best to make it a success, and shall be willing to extend its scope if necessary." The Bengal Branch of the Lady Dufferin Fund has accepted the Raja's offer, and Rajnagar has been chosen as the site of the new dispensary.

HONG KONG.

INJECTIONS OF KOCH'S FLUID IN CASES OF LEPROSY.—Mr. Cantlie (Hong Kong) on March 27th injected seven lepers in

various stages of the disease with 0.01 g. of Koch's fluid. On March 23rd, of the seven men, four had an increase of temperature as follows: 99.6°, 100.5°, 101.3°, 101.5°. Of the others, three had low temperatures: 97°, 97.3°, 97.5°. On March 23rd six of the seven lepers were again injected with the solution of the same strength as before. In the evening the temperature in four was higher than after the previous injection, namely, 101.6°, 102°, 102.3°, 103.4°. The other two had low temperatures: 97°, 97.3°, two of the patients being the same as had low temperatures in the morning. On March 24th, the temperatures in each of the cases that had been high had fallen, and the temperature of the two who had depression was raised. By the fourth day all had normal temperatures. On March 27th one of the lepers was again injected at 10 A.M., and at 1.30 P.M. the temperature had risen to 99.8°; while at 5.30 P.M. the temperature was 104.3°. This patient was not seen next day, but upon the following morning the temperature was 99.7°. The following points appeared to be plain: 1. Lepers far advanced, that is, with hypertrophies and ulcers, show depression of temperature. (It may be that these patients had fever, which had passed off between the time of injection and their next visit, but from inquiries made this did not seem probable.) 2. That in early cases, such as those with facial hypertrophy and red maculæ on the limbs, the temperature increased and the spots became much redder. 3. That the blood of all the lepers showed bacilli after the operation, which was not the case before. 4. The bacilli in the blood seemed identical with tubercle bacilli, and when it is remembered how similar the two are in their behaviour to reagents and in appearance, the possibility of identity or species alliance at least is, in Mr. Cantlie's opinion, considerable. The Chinese go so far as to classify lupus as one of the varieties of leprosy, and if the behaviour of leprosy and tubercle under Koch's treatment present points of identity perhaps, Mr. Cantlie adds, a step further in the argument is attained.

MALTA.

Medical Inspection of Steamers.—No wonder ship agents and others complain of the vexatious interference exercised by the Board of Health at Malta in respect of vessels visiting that island if the memorial to the Government of Malta, signed by all the chief shipping agents in the island, and published in *Fairplay*, fairly represents the existing state of matters as regards that institution. It is indeed desirable that public opinion should intervene to prevent the continuance of a state of things which is as mischievous as it is useless and antiquated. That a vessel calling at any port should be subjected to such detention is simply absurd and should not be tolerated. The Maltese have, no doubt, a perfect right to take such measures as may seem good in their eyes to protect themselves against disease or aught else that may be imported; but that they have any right to insist for that purpose on imposing on ships visiting their ports conditions which are productive of no benefit to anyone and cause inconvenience as well as loss to many must be totally denied, and the sooner the regulations are modified to this intent the better for all. The inspection, as described by Messrs. Smith and Co., should be discontinued. For all sanitary purposes it should be sufficient that the medical officer or master of the vessel be required to declare officially that his ship is free from disease. Surely what is good enough for English ports for the requirements of the Local Government Board should be sufficient for Malta. It is sad to see a dependency of England clinging to such antiquated notions and practising under the British flag that which has long been considered obsolete at home. We may hope that the important subject of coercive measures in respect of the prevention of the extension of disease may be thoroughly considered at the approaching International Congress of Hygiene, with a view to the doing away with such a state of things as that which now exists at Malta.

SOUTH AUSTRALIA.

Tuberculin.—The Government has approved of the report of the Koch Lymph Board, which consisted of Dr. Paterson (colonial surgeon), Dr. Whittell (health officer), Dr. Perks (superintendent of the Adelaide Hospital), and Professor Watson. The lymph has been forwarded to the Adelaide Hospital. The Board recommends that the injection of tuberculin be considered an extraordinary operation, which, under the regulations of the hospital, must be conducted in the presence of three of the four members of the medical staff, and in all cases only after the patient's consent has been obtained.

NEW ZEALAND.

The Treatment of Inebriety.—We learn from the *Lyttleton Times* that Dr. Hacon and others are taking active steps towards the opening of a home for the treatment of inebriates. Strange to relate, the Mayor of Christchurch, who presided at a meeting, thought that prevention was better than cure and that such a home would be labour ill spent and money wasted. Dr. Hacon had no difficulty in showing that inebriates required treatment like the subjects of any other disease, and he trusted that the accommodation which there was formerly for inebriates at Sunnyside Asylum, but which had somehow been withdrawn, would be restored. He also advocated greater simplicity in the mode of entrance. The Mayor does not seem to understand that no amount of prevention can cure present inebriates, and that those who are most interested in the cure are usually the most interested in the prevention of inebriety. It has been found that the association of inebriates with lunatics is bad for both, and that a special institution is required for the sound treatment of each. We wish the present effort in New Zealand every success.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Dr. W. D. Halliburton has been elected Examiner in Physiology at the University of Oxford.

UNIVERSITY OF CAMBRIDGE.

Third Examination for Medical and Surgical Degrees. Easter Term, 1891. Examined and approved:—

Part II (Medicine, etc.).—Abram, Cai.; H. K. Anderson, Cai.; W. H. Beaumont, Down.; Bennetts, Cai.; G. Calthrop, Cai.; Carruthers, Christ's; Carter, Pemb.; Colclough, Cai.; Colvin Smith, Cai.; Crosby, Cai.; Devereux, H. Selw.; Dumbleton, Pet.; Earl, H. Cav.; Felce, Jesus; Fisher, H. Cav.; Gimson, H. Cav.; Gornall, Cath.; R. H. Hall, Pemb.; Head, Trin.; Latter, Pemb.; J. Lea, Cai.; S. Lewis, Joh.; Low, Clare; Morris, Trin.; Palmer, Down.; Pethick, Down; Phear, Trin.; Richards, Down.; Richardson, Cai.; Roberts, H. Cav.; Rowland, Cai.; Savory, H. Cav.; A. H. Smith, King's; Surridge, Cai.; A. H. Thompson, Trin.; Watts, Joh., West, Joh.; Wilks, Cai.

High Steward.—Lord Walsingham, F.R.S., late President of the Entomological Society, was on May 26th elected High Steward of the University, in the place of the late Earl of Powis.

Museum of Zoology.—Mr. J. W. Clark, the Registrary, announces his intention of resigning the office of Superintendent of the Museum of Zoology. Some rearrangement of the duties and emoluments of the office will probably take place.

Change in Regulations for Third M.B. Examination.—After October 1st, 1892, candidates for the Third M.B. Examination will be required to produce certificates that they have studied practical pharmacy and dispensing, and have attended in the fever wards of a general hospital or in a fever hospital for three months in each instance.

Examiners in Medicine, etc.—Dr. Bradbury, Dr. Ord, and Dr. Dreschfeld are appointed Examiners in Medicine; Dr. Galabin and Dr. Playfair Examiners in Midwifery; Mr. H. W. Page, Mr. G. E. Wherry, and Mr. A. Willett Examiners in Surgery for the ensuing year.

Degree.—E. J. D. Mitchell, Caius, was on May 21st admitted to the degrees of M.B. and B.C.

UNIVERSITY OF LONDON.

M.B. Pass Examination, May, 1891:—

First Division.—F. G. Bushnell, University College; C. Coles, St. Bartholomew's Hospital; J. N. Collins, London Hospital; D. R. Green, University College; J. G. Hewitson, University College; A. C. Lankester, St. Thomas's Hospital; Florence G. Longbottom, London School of Medicine for Women; C. G. Mack, St. Mary's Hospital; L. Roberts, St. Bartholomew's Hospital; W. G. Rogers, Guy's Hospital; E. G. Rows, University College; J. A. Waring, University College.

Second Division.—A. E. Berry, Owens College and Manchester Royal Infirmary; G. A. Berry, Owens College and Middlesex Hospital; H. A. Burrowes, Liverpool Royal Infirmary; W. A. Clark, St. Bartholomew's Hospital; J. H. Clayton, Birmingham Medical School; H. V. Hickman, Guy's Hospital; T. H. Ionides, University College; H. Mason, Queen's College, Queen's Hospital, and General Hospital, Birmingham; E. L. N. Pridmore, University College; Mildred Ernestine K. Staley, London School of Medicine for Women; W. W. H. Tate, University College; F. R. P. Taylor, Westminster Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the Diploma of Fellow at a meeting of the Board of Examiners on Monday, May 18th:

A. G. R. Foulerton, M.R.C.S.Eng., student of St. Bartholomew's Hospital; C. B. Voisey, M.R.C.S.Eng., of Owens College, Manchester, and St. Mary's Hospital; F. N. Windsor, of Owens College, Manchester, and Cambridge University; C. F. M. Ward, of Queen's College, Birmingham; F. H. Marson, of Durham University and Queen's College, Birmingham; W. Edgcombe, of University College, Liverpool; J. Musgrove, M.R.C.S.Eng., of Edinburgh University; W. G. Laws, of Durham and Edinburgh Universities and St. Thomas's Hospital; G. Lawrence, of Cambridge University and Guy's Hospital; and J. Hartley, M.R.C.S.Eng., of Middlesex Hospital.

Eleven candidates were referred.

Passed on Tuesday, May 19th:

F. H. Langlands, of Melbourne University and Middlesex Hospital; F. C. Scotson, J. B. Carter, and J. Stephenson, of Owens College, Manchester; H. B. Dickinson, of University College, Liverpool; C. W. Curtis, of Middlesex Hospital; A. E. Martin, M.R.C.S.Eng., of Durham University and London Hospital; A. H. Cheatle, M.R.C.S. Eng. and W. Turner, of King's College.

Eleven candidates were referred.

Passed on Friday, May 22nd:

E. Cotterell, M.R.C.S.Eng., of University College; K. Lawson, of Middlesex Hospital; and E. W. Ormerod, of Cambridge University and St. Bartholomew's Hospital.

Eighteen candidates were referred.

Passed on Saturday, May 23rd:

J. S. Sloane, H. B. Maingay, and H. S. Elworthy, of St. Bartholomew's Hospital; W. F. Lucas and F. E. Rock, of Middlesex Hospital; W. J. Harris, of Cambridge University and Guy's Hospital; C. S. Pantin, J. B. Leathes, R. H. Luce, and D. W. Samways, of Guy's Hospital.

Eleven candidates were referred.

Passed on Monday, May 25th:

H. A. D. Dickson, of St. Thomas's Hospital; E. S. Cardell, of St. Bartholomew's Hospital; A. Foster, M.R.C.S.Eng., of St. Mary's Hospital; A. Chaning-Pearce and D. M. Beddoe, of Guy's Hospital; F. W. J. Coaker and G. B. Robinson, of London Hospital.

Thirteen candidates were referred.

One hundred and three candidates presented themselves for this examination, 39 of whom passed, and 64 were referred for six months.

SOCIETY OF APOTHECARIES OF LONDON.—Pass List, May, 1891. The following candidates passed:

In Surgery:

V. H. Barr, Guy's Hospital.
H. B. Bates, Liverpool University College.
G. T. B. Blick, St. Mary's Hospital.
T. F. Daniels, Manchester Royal Infirmary.
H. E. Fittway, University College.
E. Middlebrooke, University of Iowa.
W. K. Steele, Guy's Hospital.
H. E. Tomlinson, Yorkshire College, Leeds.
L. Whitby, Royal Free Hospital.

In Medicine, Forensic Medicine, and Midwifery:

F. G. Bullmore, St. Mary's Hospital.
R. T. Cassall, University College.
G. E. T. Haydon, London Hospital.
R. M. Hughes, University College.
W. J. C. B. Pitt, Birmingham Queen's College
H. W. Roberts, St. George's Hospital
W. Robinson, Middlesex Hospital.
H. B. Shepherd, Middlesex Hospital.
H. E. Tomlinson, Leeds, Yorkshire College.
E. B. Wrench, Cambridge University and St. Thomas's Hospital.
W. Wright, St. Bartholomew's Hospital.
W. S. Wright, St. Mary's Hospital.

In Medicine and Forensic Medicine:

T. F. Daniels, Manchester, Owen's College.
R. A. Smith, Sheffield and Leeds.

In Medicine and Midwifery:

M. Jenkins, Guy's Hospital.
J. F. Brown, Toronto University.

In Midwifery and Forensic Medicine:

H. S. Cooper, Westminster Hospital.

In Midwifery:

W. E. S. Jones, Guy's Hospital.

In Forensic Medicine:

W. H. Savery, Sheffield.

To Messrs. Cooper, Haydon, Hughes, Middlebrooke, Preston, Shepherd, Tomlinson, Wrench, W. Wright, and W. S. Wright was granted the Diploma of the Society qualifying for registration and entitling them to practise Medicine, Surgery, and Midwifery.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Friday, May 22nd.

Vaccination.—Mr. CHANNING asked the President of the Local Government Board whether Dr. Ballard's report upon the case of Emily Maud Child, who died, according to the finding of the coroner's jury at Leeds, on July 1st, 1889, of syphilis, acquired at or from vaccination, had been printed; whether he would lay a copy upon the table of the House; and whether he would direct a copy to be forwarded to the father of the child. —Mr. RITCHIE said he was not aware that the report had been printed. It was not the practice of the Local Government Board to give publicity to the reports of their inspectors, which had always been regarded as of a confidential character, but he had thought it right to submit this particular report to the Royal Commission on Vaccination, now sitting, and he understood that the report had been under their consideration, and might be the subject of evidence before the Commission.

Infant Insurance.—Sir H. MAXWELL, in moving the second reading of the Industrial Assurance Bill, and in referring to those provisions dealing with the question of infant insurance, said a Select Committee of that House had inquired very carefully into that matter, and the conclusion they came to was that, although undoubtedly there was evidence of the existence of many cases in which the present facilities had been abused, still the probability was that the extent of that evil had, from its very nature, so impressed itself on the public mind as to cause people to think the evil much more general than it was. His own opinion was that, although there were undoubtedly cases of great cruelty and crime arising out of the insurance of infant life, the prevalence of it was not so great as had been supposed. The Committee, at all events, came to the conclusion that a great hardship would be inflicted on numbers of deserving people were insurance for children's funeral expenses to be absolutely prohibited. It was not one of the least creditable motives of poor parents that they should wish to make cheap and easy provision for the decent burial of their children. These societies and companies, bad and costly as they were in many respects, still supplied a want among the working classes, which up to the present had not been otherwise supplied. Therefore the Bill, instead of prohibiting infant insurance, merely regulated the system and surrounded it with precautions which would limit the risks of abuse. In asking the House to read the Bill a second time he did not claim that it was at all a perfect measure. The subject dealt with was highly complicated, and it was proposed to send the Bill to the Standing Committee on Trade.—The Bill was read a second time, and ordered to be referred to the Standing Committee on Trade.

Tuesday, May 26th.

Influenza.—In reply to Mr. MORTON, Mr. RITCHIE said no local authority had passed an order extending the Infectious Disease (Notification) Act to influenza. He was advised that influenza was an infectious disease, and therefore within the terms of the Act.

OBITUARY.

ROBERT MARTIN, M.D., F.R.C.P.

By the death of Robert Martin, M.D., F.R.C.P., on May 13th, the medical profession has sustained a great loss. He was born on August 29th, 1827, at Pulborough, Sussex, where his grandfather, Peter Patrick Martin, had established himself in general practice in 1774, and had been succeeded by his son, Peter John Martin, who died in 1860.[1] Both these were men of talent, and were widely known not only for their professional skill, but also for their literary and scientific attainments. Robert Martin's father, Peter John, held distinguished rank as an authority on archæology and geology; and this, too, without any injury to his reputation as a shrewd and successful practitioner. He was also a man of refined and accurate taste in literature and in music. If intellectual and moral qualities are transmitted from father to son, we cannot be surprised to find that Robert Martin, with such an ancestry, was richly endowed with those which lie at the foundation of the character of a great physician.

In 1837, when about 10 years old, he was sent to the Clapham Grammar School, at that time presided over by a most excellent head master, Charles Pritchard, D.D., now Savilian Professor of Astronomy at Oxford and Fellow of New College. Of the advantages which he enjoyed there, and of the distinguished men who had been his schoolfellows, he often spoke with much satisfaction. In 1844, he obtained a Tancred studentship and went up to Caius College, Cambridge, where, as an undergraduate, he won sundry college prizes and a scholarship in chemistry and botany. In 1851, having spent his time partly in Cambridge, partly at St. Bartholomew's Hospital in London, he took his M.B. degree, and in the following year became a Licentiate in Medicine of the University. He then went abroad, and studied at Göttingen, Vienna, and Paris.

[1] For obituary notice of Peter John Martin, see BRITISH MEDICAL JOURNAL, May 26th, 1861.

In 1854, he became a Member of the Royal College of Physicians, and brought himself under the notice of the Governors of St. Bartholomew's by coming forward as a candidate for the vacant assistant physicianship, to which Dr. Baly was elected. Two months later he was appointed Lecturer in Natural Philosophy in the hospital school. In September of the same year the two wards temporarily devoted to cholera patients were placed under his care, and on the death of Dr. Roupell from cholera he became assistant physician.

In the spring of 1855, Dr. Martin and his surgical colleague, Mr. Holmes Coote, then junior assistant surgeon to the hospital, joined the band of young physicians and surgeons sent out by the Government to take charge of the Civil Hospital at Smyrna for the sick and wounded of the army of the Crimea. He returned to his hospital duties at St. Bartholomew's in the spring of 1856, and in August of that year was appointed warden of the college, and in the following October administrator of chloroform, an office which he held for nearly three years. In 1859, he took his M.D. degree at Cambridge, and was also elected a Fellow of the Royal College of Physicians. In April, 1861, he resigned the wardenship, and took a house in Queen Anne Street, No. 19, which had been previously occupied by Dr. Baly and by Sir George Burrows. In June of the same year he was appointed Lecturer on Forensic Medicine, *vice* Dr. Black.

In 1865, on the death of Dr. Kirkes, he became full physician, and shortly afterwards resigned the lectureship on forensic medicine. In October, 1867, after some months' absence from duty necessitated by gradually increasing ill-health, he resigned his appointment at St. Bartholomew's. In 1876, he was made consulting physician to the hospital. At the Royal College of Physicians he was member of Council in 1873-5-6, and censor in 1878-9.

Such were the surroundings of a career full of the richest promise up to the time when in the very moment of complete success it was blighted and cut short by ill health. But the courage and steadfastness with which he faced his hard lot, the patience with which he endured the pain of disappointed hopes, and the absence of all bitterness of feeling towards others, when such bitterness, if in itself unreasonable, could only have been regarded as a venial human infirmity—all this must have left with his friends a far nobler memory of the man himself and of his real greatness than the most unbounded professional success could have done. And few men had, in early life, better grounds for looking forward to success than Dr. Robert Martin. His fine physique and gentle manner, in which there was no lack of firmness, gave the impression of both physical and mental power, whilst his ever ready and genuine sympathy won the confidence of his patients, and placed him with them at once on the footing of an old friend. Guided by senses unusually keen and admirably trained, by an acute intellect, and by a calm, shrewd judgment, which took account without any bias of all the circumstances of a case before coming to a decision, his diagnosis was singularly successful, and very rarely indeed failed to be verified by the event. Few men equalled him in the accurate estimation and correct interpretation of the quality of the pulse, and this more than once stood him in good stead in insurance work. Any person only slightly acquainted with him might easily have supposed that he was not well read in the literature of his profession; this, however, would have been a great mistake, for he was almost constantly engaged in the careful and complete investigation of some point or other of practical importance in pathology or in practice. But he was very reticent, and would often refrain altogether from joining in some discussion in which he was well qualified to have taken a leading part.

Unfortunately his own contributions to medical literature were few and slight. A paper "Cases from the Wards," in the first number of the *St. Bartholomew's Hospital Reports*, in 1865, and an admirable preface to Dr. Latham's works, which he edited for the New Sydenham Society in 1875, are the most important. But the influence of men like Martin is to be found not so much in the tangible work which they leave behind them, and which, with very few exceptions, soon becomes obsolete, as in the stimulus they impart to their own generation, whereby it is made to contribute its full quota to the ever-increasing sum of human knowledge and progress.

JOSEPH LEIDY, M.D.,

Professor of Anatomy and Zoology, University of Pennsylvania.

Dr. Joseph Leidy, one of the foremost representatives of biological science in the United States, passed away on April 30th, after a short illness. He was born in Philadelphia in 1823, and even as a schoolboy showed an eager interest in the study of natural science and a remarkable talent for drawing, which in his subsequent career stood him in good stead. In 1840 he began the study of medicine, taking his M.D. degree in the University of Pennsylvania in 1844 with a thesis on the "Comparative Anatomy of the Eye of Vertebrated Animals." Immediately after graduation he became assistant to Professor Hare, who at that time occupied the Chair of Chemistry, a position which, in 1845, he exchanged for what was probably the more congenial one of Prosector of Anatomy. In 1853 he succeeded Professor Horner in the Chair of Anatomy, which—with that of Zoology and Comparative Anatomy, which was soon afterwards joined to it—he continued to hold till his death.

Joseph Leidy was one of the first in America who used the microscope as an instrument of scientific research, and in 1848 he published his *Researches on the Comparative Structure of the Liver*, which established his reputation as a histologist. He gave much attention to the subject of parasites, and in 1853 published a beautifully illustrated monograph on the *Flora and Fauna within Living Animals*. He made a systematic investigation of the lowest forms of life found on the American Continent, the results of which were given to the world in his well-known work *The Fresh Water Rhizopods of North America*. A complete bibliography of his numerous contributions to scientific literature cannot be attempted here; we can only indicate a few of the principal monographs, such as "The Fossil Horse of America" (1847), "Ancient Fauna of Nebraska" (1853), "Memoir on the Extinct Sloth Tribe of North America" (1855), "Cretaceous Reptiles of the United States" (1865), "Extinct Mammalian Fauna of Dakota and Nebraska; together with a Synopsis of the Mammalian Remains of North America" (1869), "Contributions to the Extinct Vertebrate Fauna of the Western Territories" (1873), "Description of Vertebrate Remains from the Phosphate Beds of South Carolina" (1877), etc. In 1880 he was awarded the Walker Prize by the Boston Natural History Society, and the Lyell Medal by our own Geological Society for his contributions to palæontology. In 1886 the University of Harvard conferred on him the degree of LL.D.

In his own special province Leidy was acknowledged as one of the ablest teachers of his time. In 1861 he published an *Elementary Textbook on Human Anatomy*, in which he endeavoured to simplify the needlessly complex nomenclature of that science, and to describe the body at first hand as he saw it. A second edition of this valuable work appeared in 1890. Some idea of Leidy's life of unremitting work may be gained from the fact that his published works and papers amount in all to more than a thousand.

During his thirty-eight years of teaching he was as popular as a man as he was venerated as an instructor, and the youngest student felt that he had in him a friend to whom he could always turn with confidence for help in difficulty and counsel in perplexity.

HENRY TIZARD, M.D.St.And., M.R.C.S.Eng., L.S.A.

The sudden death of Dr. Tizard has deprived the borough of Weymouth of one of its most efficient officers and of a highly-respected townsman. Dr. Tizard was engaged in paying professional visits when he was seized with a fainting fit, and died shortly after reaching home.

Dr. Tizard, who obtained the diploma of M.R.C.S. in 1848 and of L.S.A. in 1847, was the oldest medical man in practice in that town. He was, at the time of his death, medical officer for the Melcombe Regis Parish of the Weymouth Union, and was for many years honorary surgeon to the Weymouth Rifle Corps; he was subsequently promoted to the post of battalion surgeon, and accompanied the Volunteers to camp year after year. Dr. Tizard had held for a considerable period the post of medical officer of health for Weymouth, and was a magistrate of long standing.

The deceased, who had been twice married, leaves a widow and numerous family to mourn his loss. The funeral, by the request of the family, was not of a public character, but the

Mayor and Corporation, together with some of the borough magistrates and representatives of the medical profession and of the guardians were present.

SAMUEL HODGSON, M.R.C.S.

Mr. Samuel Hodgson, late of 5, Dingle Hill, Liverpool, died at Nottingham on May 18th, aged 78. He retired from active practice eighteen months ago. His death was due to influenza and bronchitis. Mr. Hodgson was well known to Liverpool men, having practised for fifty-two years in the best suburban district of that city—Princes Park and Aigburth. He began medical life as apprentice in Blackburn, studied in London (where he was house-surgeon to Mr. Liston) and in Paris, and came to Liverpool as assistant to Mr. Wainwright, whom he succeeded in practice.

Devoted to his professional work, he still found time for much general reading, so that after his retirement he wrote to a friend saying how happy he was in the continuous society of his books, as compared with the brief periods of intermittent study during his active life.

He was greatly respected by his patients for his simple upright character. One of them said: "We never hear him speak of the other cases or people he is attending." He was truly a man in whose spirit there was no guile.

JOSHUA SOUTHWOOD, M.D.St.And., F.R.C.S., L.S.A.

We have to record the death from influenza of Dr. Joshua Southwood, who has been for no less a period than fifty-two years resident medical officer of the Metropolitan Dispensary, Cripplegate. Dr. Southwood was one of the old-fashioned school of practitioners, but retained, even up to the week before his death, his health and activity, and moreover, in a very marked degree a very acute power of diagnosis. He remembered many of the great teachers who made Guy's Hospital famous, and was able to give graphic accounts of the surgical practice in the pre-chloroform days, as well as of the cholera epidemics in London. At one time he did a large practice in the City, and this brought him into contact with the most celebrated consultants of the past generation, of whom he could give excellent descriptions. Dr. Southwood was able to do his work up to Friday, May 15th, and he died on the following Wednesday, aged 81. The large attendance at the funeral service, which was held at St. Giles's, Cripplegate, on Saturday last, and included many of the poor of the neighbourhood, testified to the universal respect in which Dr. Southwood was held in the City.

PERCY FORBES WINSLOW.

We regret to announce the death, in his twenty-third year, of Mr. P. F. Winslow, eldest grandson of the late Dr. Forbes Winslow, and son of Dr. L. Forbes Winslow, on May 17th. Educated at the University of Tours and Harrow School, he entered as a student at Charing Cross Hospital, where he had just completed his education, when he was stricken with blood poisoning whilst in residence at the hospital. He was much liked by his fellow-students, was secretary of the Students' Club, a non-commissioned officer in the Volunteer Medical Staff Corps, and a prize winner there. His amiability and gentlemanly manners made him liked by all. Floral offerings sent by his fellow-students twenty of whom attended at the interment at Barnes on May 21st and by the sisters and nurses of Charing Cross Hospital of themselves speak as to the respect and love in which he was held. He gave promise of a great future, and is another sad instance of one cut off in his very prime, after having passed through the hardships of a thorough medical training.

HOSPITAL AND DISPENSARY MANAGEMENT.

HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

It is proposed to improve the arrangements at the City of of London Hospital for Diseases of the Chest, Victoria Park, by erecting sanitary towers to contain the lavatories, water-closets, etc. The Lord Mayor recently presided at a meeting at the Mansion House to raise the necessary funds. Among those who supported the claims of the hospital to public support at this meeting were the late Sir Robert Fowler, M.P., the Bishop of Bedford, and Sir Risdon Bennett.

CITY OF DUBLIN HOSPITAL.

At the annual meeting of the City of Dublin Hospital the report showed that the receipts from ordinary sources were £3,415 5s. 2d., the current expenditure £4,768 13s. 1d., showing a deficiency under this head of £1,353 7s. 11d. The receipt of legacies, amounting to £1,188, reduced this deficiency to a sum of £165 7s. 11d. This amount, with £916 18s. 3d. outstanding debts due to the bank and to sundry creditors, less £534 6s. 1d., the amounts due and outstanding on December 31st, 1889, represents a total deficit of £548 0s. 1d. on the year's working. During the past year the work of the hospital has been actively carried on, 1,088 patients having passed through the wards and 14,578 having been attended at the out-patient department. The number of deaths in the hospital was only 61.

MERCY HOSPITAL, CORK.

During last year 538 patients were under treatment in the wards, and 5,146 in the extern departments. There was a much larger number of patients treated last year than in any previous year, and many cases could not be admitted in consequence of the want of funds, the cost of maintenance having exceeded the means of support, and the institution is now considerably in debt. Considering the admirable work done by the hospital, the support accorded by the public is extremely meagre, and the outlook for the present year is in consequence not a happy one for those who have the care of the institution at heart.

NORTH INFIRMARY, CORK.

During last year 942 patients were inmates of the hospital, and 25,323 attended at the extern department. The hospital is deserving of the support of the citizens, and it is to be regretted that the financial report should show a deficit of upwards of £700 on the year's work. It is hoped that this debt will be speedily wiped out and the hospital placed in a satisfactory position. Lady Combermere's handsome bequest will be chiefly expended in erecting a new and more commodious institution.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, 5,178 births and 5,502 deaths were registered during the week ending Saturday, May 23rd. The annual rate of mortality in these towns, which had increased from 22.5 to 30.1 per 1,000 in the preceding five weeks, declined again to 28.7 during the week under notice. The rates in the several towns ranged from 17.0 in Brighton, 17.1 in Newcastle-upon-Tyne, 20.7 in Nottingham, and 20.8 in Bristol to 43.0 in Bradford, 44.0 in Manchester, 45.2 in Halifax, and 50.4 in Oldham. The high rates in the last mentioned towns were due to the fatal prevalence of influenza. In the twenty-seven provincial towns the mean death-rate was 30.8 per 1,000, and exceeded by 4.9 the rate recorded in London, which was 25.9 per 1,000. The 5,502 deaths registered during the week under notice in the twenty-eight towns included 361 which were referred to the principal zymotic diseases, against numbers declining from 462 to 401 in the preceding three weeks; of these, 145 resulted from whooping-cough, 102 from measles, 36 from diphtheria, 30 from diarrhœa, 24 from scarlet fever, 24 from "fever" (principally enteric), and not one from small-pox. These 361 deaths were equal to an annual rate of 1.9 per 1,000; in London the zymotic rate was 1.6, while it averaged 2.1 per 1,000 in the twenty-seven provincial towns. No deaths resulted in any of the zymotic diseases in Brighton, Norwich, Birkenhead, and Huddersfield; while in the other towns the zymotic death-rate was equal to 3.6 in Leicester, 3.9 in Manchester, 4.1 in Oldham, and 4.3 in Portsmouth. Measles caused the highest proportional fatality in Salford, Blackburn, Halifax, Hull, Bristol, and Portsmouth; and whooping-cough in Bradford, Liverpool, Newcastle-upon-Tyne, Manchester, and Leicester. The mortality from scarlet fever and from "fever" showed no marked excess in any of the twenty-eight towns. Of the 36 deaths from diphtheria in these towns, 21 occurred in London, 4 in Oldham, 3 in Salford, and 2 in Sheffield. No fatal case of small-pox was registered during the week under notice, either in London or in any of the large provincial towns; 31 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and not one in the Highgate Small-pox Hospital on Saturday, May 23rd. The number of scarlet fever patients in the Metropolitan Asylum Hos-

pitals and in the London Fever Hospital on the same date was 927, against 911 and 924 at the end of the preceeding two weeks. Sixty-six new cases were admitted during the week, against 79 and 118 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 7.0 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, May 23rd, 825 births and 622 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 22.1 to 24.1 per 1,000 in the preceding four weeks, declined again to 23.8 during the week under notice, and was 4.9 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Leith and Greenock, and the highest in Glasgow and Paisley. The 622 deaths registered in these towns included 84 which were referred to the principal zymotic diseases, equal to an annual rate of 3.2 per 1,000, which exceeded by 1.3 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow, Edinburgh, and Paisley. The 622 deaths registered in Glasgow included 13 from measles, 9 from whooping-cough, and 4 from diphtheria. Thirteen fatal cases of measles were recorded in Paisley, and 6 of whooping-cough in Dundee. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.6 per 1,000, against 7.0 in London.

HEALTH OF IRISH TOWNS.

In sixteen of the principal town districts of Ireland the deaths registered during the week ending Saturday, May 16th, were equal to an annual rate of 22.9 per 1,000. The lowest rates were recorded in Armagh and Lurgan, and the highest in Dundalk and Kilkenny. The death-rate from the principal zymotic diseases averaged 1.0 per 1,000. The 173 deaths registered in Dublin were equal to an annual rate of 25.5 per 1,000, against 24.4 and 26.4 in the preceding two weeks, the rate for the same period being 26.1 in London and 22.7 in Edinburgh. The 173 deaths in Dublin included 7 which were referred to the principal zymotic diseases (equal to an annual rate of 1.0 per 1,000), of which 5 resulted from whooping-cough, 1 from diphtheria, and 1 from typhoid fever.

MEDICAL FEES FOR INQUESTS IN WORKHOUSES.

W. R. H. writes to ask whether he, as medical officer of a county workhouse (paid by salary with rations), is entitled to a fee of £2 2s. for giving evidence at an inquest and making *post-mortem* examination, by order of the coroner, of a patient who died in the workhouse in consequence of an accident.

*** We are advised that the medical officer of a workhouse is entitled to a fee of one guinea for attending to give evidence at an inquest by order of the coroner. For making a *post-mortem* examination by order of the coroner, with or without an analysis of contents of stomach, we hold he is entitled to a fee of £2 2s. We understand that some county councils, relying on Section 22, subsection 2, of Coroners Act, 1887, appear inclined to raise the question as to whether medical officers of workhouses can claim the fees allowed by the Act to others. We have no doubt the law is sufficiently definite to enable them to recover the fees in question.

MEDICAL NEWS.

The authorities of the district hospital at Sarajevo have decided to appoint a female medical officer, whose special function it shall be to examine Mohammedan women.

Professor Kohts, Director of the Clinic of Children's Diseases at Strassburg, has received and accepted a "call" to Berlin.

A fire, fortunately extinguished before any serious consequences ensued, occurred at the Royal Victoria Hospital, Bournemouth, on Tuesday last.

The death is announced of Mr. William Ebenezer Poole, for upwards of twenty-five years Registrar of the Medical Society of London.

Congress of Hygiene.—The Hungarian Minister of Education has appointed Ministerial Councillor Dr. Ludwig Markusovsky and Professor Josef Fodor to represent him at the forthcoming Congress of Hygiene and Demography.

Cottage Hospital at Rush.—The Kenure Cottage Hospital, which has been endowed in the most generous manner by Sir Roger and Lady Palmer, was opened last week. Dr. Charles Fahie is the medical officer, and will be assisted by an efficient nursing staff.

Presentation.—Dr. Buckley Pogson having resigned the post of Resident Medical Officer at the Durham County Hospital was, on Wednesday last, presented with a handsome clock, as a wedding present and mark of esteem, by the matron and nursing staff of that institution.

Mr. Henry Terry, Northampton, has been allowed a pension of £39 a year on resigning the office of Medical Officer to the Hardingstone Union Workhouse and Milton District, after a service of forty-five years. This is a little less than two-thirds of his salary.

Clinical Instruction in Belgium.—On May 14th the Belgian Chamber of Representatives passed a *projet de loi* compelling the administrative authorities of the hospitals of Ghent and Liège to open their wards to the Medical Faculties of the Universities of these towns for purposes of clinical teaching.

The Metropolitan Provident Medical Association will hold a drawing room meeting at 24, Park Lane, on June 3rd, at 4.30 p.m., over which Lord Brassey will preside. The Earl of Derby, K.G., will move a resolution in support of the work of the Association, and the Rev. Prebendary Eyton and Mr. Albert Pell are announced to address the meeting.

An Ethnological Congress will be held in Paris in September, 1892, in connection with which there will be an exhibition of living specimens of the different races of mankind. Several well known explorers have undertaken to do their best to make the collection of "specimens" as complete as possible.

Lunacy in New York.—The Report of the Commission in Lunacy of the State of New York shows a material decrease in the proportion of lunatics to population. This satisfactory result is attributed by the Commissioners partly to improved methods of registration and partly to better housing and attention and better treatment generally.

At the last meeting of the Council of Queen's College, Birmingham, Dr. C. W. Suckling was elected joint Professor of Medicine in the room of Sir James Sawyer, whose retirement was recently announced. Dr. Suckling was educated at Queen's College, and has been for some time Physician to Queen's Hospital and the City Infirmary.

Biology in New York.—The trustees of Columbia College have decided to devote the late Mr. Charles M. Da Costa's bequest of 100,000 dollars to the establishment of a biological laboratory to be built on the grounds of the Medical School (the College of Physicians and Surgeons). The professor in charge is to be designated the Da Costa Professor of Biology.

There was formally opened last week in St. Patrick's Road, West Brighton, by Mr. Edward Albert Sassoon, a commodious and well appointed auxiliary of the Norwood Home for Convalescent Jews, established in memory of Judith, Lady Montefiore. It affords accommodation for ten men, ten women, and ten children, and has cost between £2,000 and £3,000.

The Rotherham Guardians lose the services of a veteran in Dr. Hardwicke, who has resigned the post of Medical Officer to the workhouse, after having held it for very nearly half a century. The kindly manner in which the guardians spoke of his lengthened services, and the wishes they expressed for his continued health and happiness are very pleasing to note.

Lectures at the Royal College of Surgeons.—Mr. William Anderson's lectures at the Royal College of Surgeons on The Varieties, Pathology, Diagnosis, and Surgical Treatment of Contraction of the Fingers and Toes will be given on June 8th, 10th, and 12th. Mr. Reginald Harrison's lectures on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture will be given on June 15th, 17th, and 19th.

The Leste.—At the last meeting of the Meteorological Society Dr. A. Coupland Taylor gave an account of the hot wind of Madeira called the *leste*. It is a dry and sometimes very hot wind from the E.N.E. or E.S.E., and corresponds to the sirocco of Algeria and the north wind from the deserts which blows in South Australia. It is most frequent during July, August, and September, and lasts for about three days.

Insane Asylum in China.—The insane asylum for Chinese projected by Dr. J. G. Kerr, of Canton, and Dr. E. P. Thwing, of Brooklyn, will probably be established on the island of Honam, opposite Canton. It will be placed in the charge of Wan, a native practitioner trained by the late Dr. Mackenzie, and it is hoped that in time paying patients may be obtained and the institution thus rendered self-supporting. It is hoped

that the sum of £5,000, needed for the erection and equipment of the necessary buildings, may be obtained by international subscriptions, as was the case with the first general hospital in China, founded by Dr. Peter Parkin in 1834.

Medical Temperance in America.—At the temperance breakfast to the members of the British Medical Association at the last Brighton meeting, Dr. N. S. Davis, then President of the American Medical Association, was warmly welcomed. At that gathering an English medical abstainer, after stating that the British Medical Temperance Association comprised some 450 abstaining English medical practitioners in its ranks, suggested that Dr. Davis should, on his return to the United States, form a similar society among his American medical brethren. This suggestion has now been followed out, and an American Medical Temperance Association has been founded. Dr. Davis is President, and Dr. T. D. Crother Secretary.

Care of the Feeble-Minded and Epileptic.—A conference, convened by the Council of the Charity Organisation Society, was held on May 25th, in the rooms of the Society of Arts, with the object of directing public attention to some of the difficulties experienced in dealing satisfactorily with the feeble-minded and epileptic. Mr. T. Holmes occupied the chair. Miss Stacey, of Birmingham, read a paper on the better care of feeble-minded paupers. The following resolution was passed: "That it is desirable that boards of guardians have permissive power to deal with feeble-minded and epileptic cases, similar to the powers which they now possess for placing adults and children who are blind or deaf and dumb in suitable institutions."

Political Doctors in Austria.—Among the 353 members of the Austrian House of Deputies there are ten members of the medical profession. These are Dr. Johann Dvorák, Vice-President of the Central Association of Bohemian Medical Men; Dr. Emanuel Engel, Dr. Josef Heilsberg, Dr. Franz Kindermann, Dr. Franz Moriz Roser, and Dr. Josef Sil, Dr. Johann Georg Waibel, Dr. Gustav von Wiedersberg, formerly Assistant to the Professor of Pathology, now a large landed proprietor; Dr. Heinrich Wielowiejski, *Privat docent* of embryology and landowner; Dr. Basil Wolan, formerly Professor of Medical Jurisprudence. The Austrian House of Lords numbers 214 members, among whom Professors Billroth, Brücke, and Schneider represent the medical profession.

At the annual general meeting of the Medico-Chirurgical Society of Glasgow, held on May 8th, the following gentlemen were elected office-bearers for session 1891-2:—President: Dr. Joseph Coats. *Section of Medicine:* Vice-President: Dr. S. Gemmell; Councillors: Dr. Robert Pollok and Dr. Alex. Miller; Secretary: Dr. G. S. Middleton. *Section of Surgery:* Vice-President: Dr. Hector C. Cameron; Councillors: Dr. James Paton and Dr. D. Macartney; Secretary: Dr. John Barlow. *Section of Pathology:* Vice-President: Dr. J. L. Steven; Councillors: Dr. A. Milroy and Dr. R. M. Buchanan; Secretary: Dr. T. K. Dalziel. *Section of Obstetrics:* Vice-President: Dr. S. Sloan; Councillors: Dr. J. K. Kelly and Dr. M. Cameron; Secretary: Dr. Lawrence Oliphant; Treasurer: Mr. Henry E. Clark, 24, India Street; General Secretary: Dr. Walker Downie, 4, Woodside Crescent.

Literary Intelligence.—Dr. Charles W. Dulles has retired from the editorship of the Philadelphia *Medical and Surgical Reporter*, in which he is succeeded by Dr. Edward T. Reichert. The *Semaine Médicale*, which is certainly one of the most enterprising among existing medical journals, has published a *Guide Médical de Paris*, which is likely to be of great use to foreign doctors and students who wish to make the best use of their time in the French capital. It contains full information as to the organisation of medical study and teaching in Paris, the laws affecting practitioners, the sanitary administration of France, the Assistance Publique, etc. —MM. J. B. Baillière have recently published a new work on surgery, *Nouveaux Eléments de Pathologie et de Clinique Chirurgicales*, by Dr. Fr. Gross, Professor of Clinical Surgery at Nancy, and Drs. J. Rohmer and A. Vautrin, *agrégés* in the same Faculty.—The first number of the *New York Medical Examiner*, a new monthly journal devoted to medical matters in connection with life, accident, and masonic insurance, etc., appeared in April. The editor is Dr. G. W. Wells.

The Staining of Tubercle Bacilli.—In a short note in the *Deutsche med. Wochen.*, 1891, No. 15, Professor B. Fraenkel claims that he was the first to use a decolorising acid along with a contrast stain in order to save time in the examination of sputa for tubercle bacilli. He is undoubtedly justified in making this claim, but he is not justified in assuming that his paper was of such very great importance that it must necessarily fall into the hands of every clinical observer working at tubercle bacilli. Dr. Gabbett did not use Professor Fraenkel's method, except in so far as he happened to combine his acid with the methyl-blue, and he states in his letter in which he makes his method known "possibly this method may have been already suggested; if so, it has escaped my notice." This should be quite sufficient for Professor Fraenkel. It is what a modest man would write under the circumstances, and it entirely does away with Professor Fraenkel's charge that Gabbett's method of staining the tubercle bacillus is a slight or immaterial modification of his method. We are sure that Dr. Gabbett will not claim priority as regards the general question, but he may certainly claim that his own method was quite original.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries and the colonies who have recently died are Dr. Carl Wilhelm von Nägeli, Professor of Botany in the University of Munich, aged 74—only two days before his death he celebrated the fiftieth anniversary of his graduation as Doctor of Medicine—his remains were conveyed to Zürich to be cremated; Dr. Frank J. Weed, Dean of the Medical Department of the Wooster University of Cleveland, U.S.A.; Dr. S. M. Bartlett, of Washington, aged 74, a grandson of Dr. J. Bartlett, who signed the Declaration of Independence; Dr. Abraham Coles, of New Jersey, well known in America for his scholarly accomplishments—among other translations of mediæval Latin hymns, he made thirteen different metrical versions of the *Dies Iræ*; Dr. Philip Leidy, of Philadelphia, within a few hours of his brother, the distinguished anatomist; Dr. Richard Gundry, Medical Superintendent of the State Hospital for the Insane, at Spring Grove, Maryland, and sometime Professor of Materia Medica, Therapeutics, and Psychology in the College of Physicians and Surgeons, Baltimore, aged 62; Dr. Edward Nusser, Member of the Superior Sanitary Council of Austria, aged 75; Dr. Cazin, of Berck-sur-Mer, a member of the French Academy of Medicine; and Sir Francis Murphy, M.R.C.S.Eng., the First Speaker of the Legislative Assembly of Victoria, aged 82. Sir Francis Murphy was born at Cork, and, after having been admitted a Member of the College of Surgeons he emigrated to New South Wales in 1836. Some years afterwards he abandoned the practice of the medical profession, and became largely engaged in agricultural and grazing operations. He was for many years a member of the Council of the University of Melbourne.

MEDICAL VACANCIES.

The following Vacancies are announced:

BRISTOL CITY LUNATIC ASYLUM.—Second Assistant Medical Officer; double qualifications; unmarried. Salary, £120 per annum, with furnished apartments, board, and washing. Applications to the Chairman of the Visiting Committee, Council House, Bristol, by June 13th.

COUNTY ASYLUM, Whittingham, Preston, Lancs.—Assistant Medical Officer and Pathologist. Salary, £200 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent.

DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House-Surgeon. Appointment for six months; board and washing provided, and £10 bonus. Applications to the House-Surgeon, by June 11th.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon; double qualifications. Salary commencing £80 per annum, with board and residence. Applications, endorsed "House-Surgeon," to Chairman of the House Committee, by June 2nd.

GENERAL HOSPITAL, Birmingham.—Honorary Surgeon. Must be Fellow of one of the Colleges of Surgeons of the United Kingdom. Applications to Dr. J. D. M. Coghill, House Governor, by June 1st.

GENERAL HOSPITAL, Birmingham.—Assistant Physician for three years. Honorarium, £100 per annum. Applications to Dr. J. D. M. Coghill, House Governor, by June 1st.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester. —Junior Resident Medical Officer; double qualifications; must devote his whole time. Salary, £80 per annum, with board and lodging. Applications to the Chairman of the Medical Board by June 1st.

GUY'S HOSPITAL, S.E.—Five additional Assistant Dental Surgeons; must be L.D.S.Eng. Applications to the Dean by July 1st.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House-Surgeon, unmarried, and doubly qualified. Salary, £50 per annum, with residence, board, and washing. Applications to Oaks Webster, Secretary, by June 3rd.

HULL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon; appointment for five years. Applications to the Chairman, Committee of Management, by June 8th.

HULL ROYAL INFIRMARY.—Four Honorary Assistant-Surgeons; appointment for five years. Applications to the Chairman, Committee of Management, by June 8th.

KIDDERMINSTER INFIRMARY.—House-Surgeon, unmarried. Salary, £140, rising £10 annually to £170, with rooms in the infirmary and attendance. Applications to the Secretary by June 5th.

LIVERPOOL ROYAL INFIRMARY.—Honorary Assistant-Surgeon. Applications to the Chairman of the Committee ten days before election on June 2nd.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent. Assistant House-Surgeon for six months. Board, apartments, and washing provided. Applications to R. Hordley, Secretary, by June 2nd.

QUEEN'S COLLEGE, Birmingham.—Medical Tutor and Demonstrator of Anatomy; must devote his whole time. Applications to Professor B. C. A. Windle, Dean of the Medical Faculty, by July 4th.

QUEEN'S COLLEGE, Birmingham.—Demonstrator of Anatomy. Applications to Professor B. A. C. Windle, Dean of the Medical Faculty, by July 4th.

ROYAL BERKS HOSPITAL, Reading.—Physician. Applications to the Secretary, John T. Hugo, at least ten days before the election on June 2nd.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary, by June 4th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, W.—Honorary Physician. Applications to Frank Stokes, Secretary, by June 1st.

ST. MARY'S HOSPITAL, Paddington.—Dental Surgeon. Appointment for five years. Applications to the Secretary by June 12th.

ST. THOMAS'S HOSPITAL.—Resident Assistant Surgeon; must be F.R.C.S.Eng. Applications to Mr. E. M. Hardy, Treasurer's Clerk, by May 30th.

STOCKPORT INFIRMARY.—Assistant to the House-Surgeon for six months. Board and residence provided. Applications to Lieutenant-Colonel S. W. Wilkinson, Honorary Secretary, by June 1st.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. Annual fee, £30. Twenty copies of printed applications and testimonials to the Secretary of the Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by June 30th.

VESTRY OF FULHAM.—Medical Officer of Health, double qualifications, under 45 years of age. Salary, £100 per annum. Applications, marked "Applications for Medical Officer of Health," to the Clerk to the Vestry, Town Hall, Walham Green, by May 30th.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Physician. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WEST LONDON HOSPITAL, Hammersmith Road.—House Surgeon. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WORCESTER AMALGAMATED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary, £140 per annum, and part of midwifery fees, also £20 per annum for cab hire. Applications to Mr. G. B. Gibson, Gasy Row, Worcester, by June 4th.

MEDICAL APPOINTMENTS.

ALLAN, Charles J., M.B., C.M.Edin., appointed Medical Officer of the Burgh of Bonnyrigg, Midlothian.

ARNISON, W. D., M.D.Dunelm, appointed Senior House-Physician to the Royal Infirmary, Newcastle-on-Tyne, *vice* Dr. Baigent, resigned.

ATKEY, P. J., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Throat Department of St. Thomas's Hospital.

BALLANCE, H. S., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

BEVILLE, F. W., L.R.C.P., M.R.C.S., reappointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

BLACK, W. A., M.B., C.M.Edin., appointed Medical Officer and Public Vaccinator for the Parish of Annan, Dumfriesshire.

BOX, C. R., B.Sc.Lond., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

BRODRICK, C. Cumberland, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Tavistock Rural Sanitary District, *vice* M. Williams, resigned.

BURTON-FANNING, F. W., M.B.Cantab, etc., appointed Physician to the Jenny Lind Infirmary for Sick Children, Norwich.

CALVERT, W. D., L.R.C.P.Lond., M.R.C.S.Eng., appointed House-Surgeon to the Sussex County Hospital, *vice* G. G. Hodgson, M.R.C.S.

CAMERON, Alex., M.D., C.M.Glas., reappointed Medical Officer of the Workhouse of the Caistor Union.

CLABBURN, C. H., M.B., C.M.Edin., appointed Medical Officer for the Kitton District of the Stamford Union.

COBBETT, L., L.R.C.P., F.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

FORDE, T. A. M., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Throat Department of St. Thomas's Hospital.

FORWARD, F. E., F.R.C.S., L.R.C.P., reappointed Non-Resident Ophthalmic House-Surgeon to St. Thomas's Hospital.

GRABHAM, Michael, M.A., M.B., B.Sc.Cantab, appointed Resident Clinical Assistant to the Birmingham City Asylum.

GRIFFITH, W. S., M.A., M.B., B.C.Cantab, L.R.C.P., M.R.C.S., reappointed House-Surgeon to St. Thomas's Hospital.

GROWSE, William, B.A.Oxon., M.R.C.S.Eng., L.R.C.P.Lond., appointed as one of the Medical Officers on medical staff of the Convalescent Home, Kenilworth, *vice* Dr. Atkinson, resigned.

HARPER, J. R., L.R.C.P., M.R.C.S., appointed Resident Accoucheur to St Thomas's Hospital.

HAWKINS-AMBLER, George A., L.R.C.P.Irel., M.R.C.S., appointed Medical Officer of Health for the Whitley Urban Sanitary District of the Huddersfield Union.

HISLOP, John T., L.R.C.S., L.R.C.P.Edin., L.F.P.S.Glas, appointed Medical Officer and Public Vaccinator to the Milton Abbott District of the Tavistock Union, *vice* F. M. Williams, resigned.

HUTCHINSON, Joseph, L.R.C.P.Edin., M.R.C.S., appointed Medical Officer for the Fawley and Exbury District of the New Forest Union.

KELLOCK, T. H., M.A., M.B., B.C.Cantab, L.R.C.P., F.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

LACK, T. L., M.R.C.S., L.M., reappointed Medical Officer of Health for the Forehoe Union.

LAKE, C. Leonard, M.R.C.S., L.R.C.P., appointed House-Surgeon to the "Noble's Hospital and Dispensary," Douglas, Isle of Man.

LOW, H., M.A., M.B., B.C.Cantab, L.R.C.P., M.R.C.S., reappointed Non-Resident House-Physician to St. Thomas's Hospital.

MACKAY, Alexander, M.A., M.B., C.M., appointed Resident Surgeon in Aberdeen Sick Children's Hospital, *vice* Dr. Richard Eden, resigned.

MACKINTOSH, A., M.D., L.F.P.S.Glasg., reappointed Medical Officer for Chesterfield.

MORRIS, J. J. N., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

MUDGE, J., L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer for the Marazion District of the Penzance Union.

OWEN, William, M.R.C.S., appointed Medical Officer for the Wells Street Workhouse of the Parish of St. Matthew, Bethnal Green.

PARSONS, William, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health for Godalming.

PLAYFAIR, Hugh, M.B., M.R.C.S., L.R.C.P., appointed Assistant Physician Accoucheur to King's College Hospital.

PRICE, A. E., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

RAIMES, A., M.B., C.M.Edin., reappointed Medical Officer of Health for the York Rural Sanitary District.

ROUILLARD, L. A. J., M.B., B.C.Cantab, L.R.C.P., M.R.C.S., reappointed House-Surgeon to St. Thomas's Hospital.

SANDIFER, H. S., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

SHAW, Raymond H., M.B., B.S.Dunelm, appointed House-Surgeon and Assistant Secretary to the West Herts Infirmary, Hemel Hempstead, *vice* Dr. W. D. Arnison, resigned.

SPENCER, Walter, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the East Retford Urban Sanitary District of the East Retford Union.

STEPHENSON, O. T., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Fifth District of the South Stoneham Union, *vice* C. J. Symonds, L.R.C.P., M.R.C.S., resigned.

STILWELL, G. R. F., L.R.C.P., M.R.C.S., L.S.A., appointed Non-Resident House-Physician to St. Thomas's Hospital.

STOKES, W. G. G., B.A., M.B., B.C.Cantab, L.R.C.P., M.R.C.S., reappointed House-Surgeon to St. Thomas's Hospital.

TOLLER, S. G., L.R.C.P., M.R.C.S., reappointed House-Surgeon to St Thomas's Hospital.

UMNEY, W. F., L.R.C.P., M.R.C.S., appointed Senior Obstetric Clerk to St. Thomas's Hospital.

USHER, C. H., B.A., M.B., B.C.Cantab., appointed Non-Resident Ophthalmic House-Surgeon to St. Thomas's Hospital.

WADDELOW, J. J., L.S.A., appointed Assistant House-Accoucheur to King's College Hospital.

WALKER, George, M.R.C.S., L.R.C.P.Lond., appointed Resident House-Surgeon to the Great Yarmouth Hospital, *vice* Mr. C. A. Duckett.

WATSON, George A., M.B., C.M.Edin., appointed Assistant Medical Officer to the Birmingham City Asylum, *vice* Dr. Sprogue, resigned.

WHITFIELD, Arthur, M.R.C.S., L.R.C.P., appointed Assistant House-Physician to King's College Hospital.

WHITTINGTON, T. P., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Rural Sanitary District of the Neath Union.

WOODFORDE, W. T. G., M.D.Lond., reappointed Medical Officer of Health for Abingdon.

WYMAN, C., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

DIARY FOR NEXT WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—*Professor Berry*: On Goitre: its Pathology, Diagnosis, and Surgical Treatment. Lecture I.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: On Cataract. Hospital for Sick Children, Great Ormond Street, 4 P.M. —Mr. J. H. Morgan: Congenital Deformities of Hands and Feet.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 40, Leicester Square, W.C., 8 P.M.—Mr. F. H. Balkwill: Notes on Morphological Dental Irregularities in some of the Skulls in the Museum of the Royal College of Surgeons of England. Mr. Sewill: The production of Caries by artificial means out of the mouth; illustrated with microscopic sections. Mr. A. W. Barrett: (1) A Clamp extemporised to arrest Alveolar Hæmorrhage. (2) An Underhung Bite, probably due to Incomplete Development of Upper Maxilla, dependent upon non-eruption of Wisdom Teeth. Mr. Ackery: Unilateral Absence of Teeth in a patient, aged 35.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: General Paralysis of the Insane. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: Arsenic as a Drug.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor Berry: On Goitre: its Pathology, Diagnosis, and Surgical Treatment. Lecture II.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. T. H. Green: Demonstration of Clinical Cases. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: Choroidal Affections.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Dr. Kelson, Mr. Alban Doran, and others. Dr. Herbert Spencer: On Visceral Hæmorrhages in Stillborn Children: an Analysis of 130 Necropsies, being a contribution to the Study of the causation of Stillbirth; with exhibition of museum and microscopic specimens. Dr. John Phillips: The Influence of Purpura Hæmorrhagica upon Menstruation and Pregnancy.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Ormerod: Varieties of Tremor. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Mr. J. H. Morgan: Cases of Defective Gait in Children. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. W. R. H. Stewart: Some of the Causes of Ear Disease.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor Berry: On Goitre: its Pathology, Diagnosis, and Surgical Treatment. Lecture III.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Professor Crookshank: Lecture: Actinomycosis. Practical Work: Sections of Actinomycosis. Hospital for Consumption, Brompton, 4 P.M.—Dr. T. H. Green: Demonstration of Clinical Cases. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Kidneys and Genito-urinary Tract.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

ACKLAND.—On May 25th, at 24, Southernhay, Exeter, the wife of J. McKno Ackland, M.R.C.S., L.D.S.Eng., of a son.

HILLSTEAD.—On May 21st, at 71, Upper Richmond Road, Putney, the wife of Herbert John Hillstead, M.B., of a son.

LANGFORD-JONES.—On May 21st, at Tan-y-Graig, Bangor, N.W., the wife of R. Langford-Jones, M.R.C.S.Lond., of a son.

MAKEHAM.—On May 23rd, at 330, New Cross Road, S.E., the wife of H. W. Payne Makeham, M.R.C.S., L.R.C.P., L.S.A., of a daughter.

STRUGNELL.—On May 20th, at 114, Brixton Hill, the wife of Walter T. Strugnell, M.B.Lond., M.R.C.S., of a son.

DEATHS.

COSSAR.—At East Craigs, Corstorphine, N.B., on May 21st, Thomas Cossar, M.D., F.R.C.P.E., aged 71 years. Friends will please accept this (the only) intimation.

FORBES-WINSLOW.—On May 17th, at Rivercourt, Hammersmith, Percy Forbes, eldest and much-beloved son of Dr. L. Forbes-Winslow, aged 22, student at Charing Cross Hospital, after five months' terrible suffering, the result of blood poisoning.

HOGGAN.—On May 18th, at Nice, George Hoggan, M.B. and C.M.Edin. Cremated at Père-la-Chaise on his 54th birthday, May 24th.

JOSEPH.—At Moi Mir, Little Bay Mines, Notre Dame Bay, Newfoundland, on April 24th, 1891, Alice Jane Duder, wife of Louis E. Joseph, M.B., C.M., Surgeon Newfoundland Consolidated Copper Mining Company.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily. 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, T., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2, Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.45; females, Th., 8.45. *Operation Day.*—Tu., 2.

ST. MARY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 6.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.*—Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

M.D. asks whether there is any distinction which could be procured from any society or order in recognition of the services of a lady who, by her own efforts, succeeded in establishing a special hospital where none existed before.

CLIMATE OF DEVON AND CORNWALL.

S. L. D. asks to be recommended a book or books which give the temperature and rainfall of places on the coasts of Devon and Cornwall. He wishes to find one with a climate suitable to an Indian officer who suffers from asthma.

MEDICAL STUDY IN PARIS.

DR. JAMES CAMERON (Dundee) writes: The courses and lectures at the Ecole Pratique of the Faculté de Médecine de Paris—are they open to British medical graduates, and, roughly, what are the fees charged? The clinics at the various Paris hospitals—are they free, or is the system the same as in this country necessitating attachment for terms or sessions?

*** All lectures and public courses of the Paris Faculty of Medicine, and all the official clinics are open to foreign medical men of any nationality without fee. A small fee is required for dissection. Full information as to courses, etc., will be found in the *Guide Médical de Paris*, just published by the *Semaine Médicale*. The work can be obtained from the Manager of that Journal, 18, Rue de l'Abbé-de-l'Epée, Paris, on remitting four francs.

ANSWERS.

"UN PAUVRE BOSSU" and J. F. B. are recommended to consult their medical attendants. We do not give medical advice.

W. A. E.—Dr. Joseph Jones's *Medical and Surgical Memoirs* are to be obtained from the author at 150, Washington Avenue, New Orleans.

A MEMBER.—No method of curing cataract without operation has yet been discovered. The person referred to in our correspondent's letter has never been able to bring forward a successful case, although for many years he has traded upon the credulity of the public, the majority of his victims being English.

STAINS FOR MICRO-ORGANISMS.

H. T.—A capital little work on *Section Cutting and Staining* is that by Walter S. Colman, M.B.Lond., published by H. K. Lewis, London, 1888. The method of staining fuchsine bodies will be found in Dr. Russell's paper in the BRITISH MEDICAL JOURNAL of December 13th, 1890, page 1356. The best method of staining for coccidia of Paget's disease is with Ehrlich's hæmatoxylin, rubine, and methyl orange. Stain first in hæmatoxylin, discharge most of the colour with very dilute acetic acid, wash in ordinary tap water, then stain for ten or fifteen minutes in a mixture of equal parts of saturated solutions of methyl orange and rubine, mount in balsam instead of methyl orange and rubine; cosine may be used as a contrast stain.

A. B.—The best method of staining tubercle bacilli is the Ziehl-Neelsen method, with or without Gabbett's modification. Dissolve 2 parts basic fuchsine in 10 parts alcohol and 100 parts of 5 per cent. carbolic acid solution, filter, heat in a watch glass until steam rises, then place the cover glass, surface downwards, on this for two or three minutes, wash a second in a 25 per cent. sulphuric acid, then in absolute alcohol, and if most of the stain has disappeared, transfer to a watery solution of methylene blue, wash in water and examine in a drop of distilled water. The bacilli are red, cells blue. The contrast is very good. Gabbett uses the acid along with the methylene blue so that he is decolorising and contrast-staining in one process. There are numerous other short methods, but this is at once both a simple and an efficient method.

NOTES, LETTERS, Etc.

SAWTELL FUND.

DRS. V. D. HARRIS, G. T. PENNY, and H. TAYLOR desire to acknowledge, with many thanks, the following additional subscriptions to the above fund: Professor J. W. Groves, £5 5s.; Mr. John Adams, £2 2s.; Mr. Arthur C. Roper, £1 1s.; Mr. Henry Stear, £2 2s.; and to make the following correction: Mr. Harrison Cripps, £2 2s.

VIRCHOW TESTIMONIAL.

THE American Committee which has just issued an appeal for contributions towards the testimonial which it is intended to present to Professor R. Virchow on his seventieth birthday, includes the names of Drs. Hayes Agnew, of Philadelphia; Gustav Baumgarten, of St. Louis; W. T. Bellield, of Chicago; J. S. Billings, of Washington; H. C. Chapman, of Philadelphia; F. Delafield, of New York; W. H. Draper, of New York; R. H. Fritz, of Boston; J. E. Graham, of Toronto; Abraham Jacobi, of New York; A. L. Loomis, of New York; W. T. Lusk, of New York; H. M. Lyman, of Chicago; W. Osler, of Baltimore; W. Pepper, of Philadelphia; G. Ross, of Montreal; Nicholas Senn, of Milwaukee; F. C. Shattuck, of Boston; J. Collins Warren, of Boston; W. H. Welch, of Baltimore; and J. T. Whittaker, of Cincinnati.

THE LATE PROFESSOR JOHN MARSHALL, F.R.S.

SUBJOINED is the second list of subscriptions to the Marshall Memorial Fund. Those who wish to contribute to the Fund are requested to send their subscriptions to the Treasurer, Mr. John Tweedy, 100, Harley Street, W.

	£	s.	d.		£	s.	d.
Dr. Tempest Anderson	1	1	0	Dr. W. R. Gowers	2	2	0
Mr. P. Ballard	1	1	0	Mr. J. Penn Harris	2	2	0
Dr. W. Banks	1	1	0	Sir Wm. Jenner (second contribution)	3	3	0
Dr. J. Beddoe	1	1	0	Mr. Morris Lewis	1	1	0
Mr. C. J. Bond	0	10	6	Mr. H. Littlewood	1	1	0
Dr. R. Boxall	1	1	0	Mr. W. H. Paine	1	1	0
Mr. W. Cadge	1	1	0	Dr. H. Colgate	2	2	0
Mr. W. H. Copley	1	1	0	Mr. Rushton Parker	1	1	0
Dr. D. A. Davies	0	10	6	Mr. Oliver Pemberton	1	1	0
Dr. E. Diver	0	10	6	Mrs. O. Pemberton	1	1	0
Dr. W. McD. Ellis	1	1	0	Sir Richard Quain	5	5	0
Professor W. H. Flower	1	1	0	Dr. Walter Rickards	2	2	0
				Dr. F. J. Thompson	1	1	0

POLLOCK AND BELLAMY MEMORIAL FUND.

MR. STANLEY BOYD, Dean of the Charing Cross Medical School, has sent us the following first list of subscribers to this fund:

	£	s.	d.		£	s.	d.
J. M. Ackland (promised)	5	5	0	Rev. Macarthy	1	1	0
R. C. Ackland	2	2	0	John Marriott	2	2	0
W. R. Ackland	2	2	0	Dr. F. W. Mott	1	1	0
Richard Barwell	1	1	0	Dr. H. M. Murray	1	1	0
R. F. Bate	1	1	0	Ed. J. Nix	3	3	0
E. Gibson Berkley	1	1	0	A. W. Orwin	1	1	0
Cornelius Biddle	1	1	0	W. Henry Pearce	2	2	0
T. P. Borrett	1	1	0	Stephen Thos. Phillips	1	1	0
Stanley Boyd	5	5	0	J. Francis Pink	1	1	0
Dr. J. Mitchell Bruce	5	5	0	W. Ruthven Pym	2	0	0
A. W. Cooke	1	1	0	A. E. Reade	1	1	0
Rev. Cumberlege	2	2	0	Dr. Amand Routh	2	2	0
Arthur Dodson	1	1	0	J. G. Victor Sapp	1	1	0
R. C. Driver	2	2	0	Sister Frances	1	1	0
John Fairbank	5	5	0	Henry Skelton	1	1	0
E. Farr	1	1	0	B. Wilfred Thomas	1	1	0
Harold Gardner	1	1	0	James Turton	1	1	0
E. Gee	1	1	0	H. M. Turner	1	1	0
Miss Gordon	1	1	0	Herbert F. Waterhouse	1	1	0
G. O. Grenfell	1	1	0	H. R. Whitehead	1	1	0
Ed. T. Gregory	1	1	0	C. Wigan	2	2	0
W. Halley	1	1	0	Dr. Fredk. Willcocks	1	1	0
S. G. F. Harris and C. Harris	1	1	0	C. J. Woollett	1	1	0
H. A. Hooten	1	1	0	S. Wyborn (promised)	1	1	0
S. F. Larcombe	1	1	0				
A. H. Leech (promised)	2	2	0	And other smaller sums, making the total up to	99	7	6
John Lynes	1	0	0				

A WARNING.

MR. THOMAS HAMILTON (Stoke Newington, N.) writes: On Monday, May 25th, a man of gentlemanly appearance called at my house. He gave the name of Higgins, and asked if I was in. My servant said I was out, but would most likely be in soon to lunch. He was shown into my consulting room, where my wife saw him, and he informed her he had come from the country to consult me. He said he would not wait then, but return in half an hour after having had some lunch. He did not, however, and carried off a box of surgical instruments. The man is tall, about 6 feet; very fair complexion, light sandy hair; moustache, no whiskers; looks about 30; long, loose, fawn-coloured overcoat; brown bowler hat.

SIR FREDERICK LEIGHTON'S ATHLETE STRUGGLING WITH A PYTHON.

MR. T. S. ELLIS (Gloucester) writes: Visitors to the Royal Academy Exhibition who examine this striking group in marble will find that the great toe is bent at such an angle that the nail touches the ground. May I ask those who may care to do so to consider whether this feature, if it were possible in Nature, would accord with the mission of art?

Of the two bones of the great toe (specially developed in man) the first is, in vigorous action, held down to the ground by a powerful combination of muscles in the sole, thus ensuring that the long flexor

muscle shall have the same effect on the final one. But here the great toe is as if the sole muscles and the bony arch of the foot, designed to protect them from the weight of the body (both also human characteristics), did not exist.

I have, in *The Human Foot*, discussed the position of all the toes, as given by sculptors, at a length inadmissible here. I would now only remark that the highest ideal is not that of grasping organs but, rather, of being designed to give, on a small basis, the best possible foot-hold by pressure against the solid ground on which there is nothing to grasp.

ON RAPID DILATATION OF THE CERVIX AND UTERINE CAVITY BY HEGAR'S GRADUATED BOUGIES.

DR. ALEXANDER DUKE (Dublin) writes: On reading the paper by Dr. John Phillips under the above heading in the BRITISH MEDICAL JOURNAL of May 23rd, it seems to me that he claims too much for that instrument; nor do I think his conclusions will be agreed to by most gynæcologists. The sweeping statement in the latter part of his paper, namely, "that for exploration of the uterine interior and treatment of any disease there, this method of rapid dilatation is much superior to any other both in rapidity of completion and absence of septic sequelæ" I entirely deny. I quite agree with Mr. Lawson Tait that "it means sitting at the bedside for some hours exercising a deal of force to the exhaustion of himself as well as the infliction of much pain on the patient."

I should like to ask Dr. Phillips how he avoids pushing up the uterus when he uses no volsella (in the Sims position), nor any counter pressure or support, and how the uterine ligaments are expected to act after this rough treatment? I have always held that if dilatation can be effected by means of one instrument, it will be a vast improvement on the method of using a number. The insertion and withdrawal alone of such even the most tolerant uterus will naturally resent. As the designer of a rapid uterine dilator (now in use by a number of the leading gynæcologists), I hope I may be excused for not agreeing with Dr. John Phillips in his praise of Hegar's instruments, more especially as he does not state whether he has tried all the other forms before giving such unqualified credit to the "German bougies."

DR. ARTHUR H. N. LEWERS (Wimpole Street, W.) writes: I see that Dr. John Phillips, in his paper "On Rapid Dilatation of the Cervix" in the BRITISH MEDICAL JOURNAL of May 23rd, refers to one of mine on the same subject which appeared in the *Lancet* about four years ago. We are both agreed in preferring, as a general rule, rapid dilatation to dilatation by tents. But as to the details of the method, it seems to me to be most important to draw down the cervix, and fix it with a volsella when the dilators are being passed; while I gather from Dr. Phillips's paper that, although he also adopts that method, he considers it equally good practice to pass the dilators, held firmly in a specially constructed pair of forceps, without fixing the cervix. The advantage of fixing the cervix during dilatation is that the amount of the force used can be much more accurately appreciated, and that the whole of the force is exerted in the right direction. When a dilator of the usual length, about 4 inches, is held firmly in a pair of the forceps Dr. Phillips describes, it is mechanically equivalent to a dilator as long as the forceps and the dilator held in it together. Now the amount of leverage in action varies directly with the length of the dilator used, and therefore with a long instrument a comparatively small force at the handle may be multiplied to a dangerous degree at the part of the cervix under dilatation. With proper precautions rapid dilatation of the cervix is a perfectly safe method, and in a large number of cases, I should think not fewer than fifty, in which I have employed it no bad result has followed. But fatal results are not unknown, and have most probably been due to deep lacerations in the neighbourhood of the internal os. When a long dilator is used, and the cervix is not fixed, a much greater force may be in action than the operator has any idea of, and under such conditions the risk of laceration cannot be inconsiderable. I am, of course, only referring to cases where the degree of dilatation required is that necessary to allow of the finger being passed into the uterus.

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BOOKS, ETC., RECEIVED.

Pathogénie du Choléra Morbus. Par Le Dr. Ladislas Druzylowski. Paris: G. Steinheil. 1891.

Cookery for the Diabetic. By W. H. and Mrs. Poole, with preface by Dr. Pavy. Price 2s. 6d. London: Longmans, Green, and Co. 1891.

Introduction à l'Étude Clinique et à la Pratique des Accouchements. Par le Professor L. H. Farabeuf et le Dr. Henri Varnier. Paris: Georges Steinheil.

Zoology Notes for Students of Medicine and Science. By Alexander Johnstone, F.G.S. Price 3s. 6d. Edinburgh: E. and S. Livingstone.

Lessons in Elementary Biology. By T. Jeffery Parker, B.Sc., F.R.S. Price 10s. 6d. London: Macmillan and Co. 1891.

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A LECTURE
ON
ARSENIC AS A DRUG.

Delivered as part of the London Post-Graduate Course.

By JONATHAN HUTCHINSON, F.R.S., LL.D.,
Consulting Surgeon to the London Hospital.

GENTLEMEN,—There are certain forms of skin disease against which arsenic appears to possess specific power. They yield immediately to its influence, and with the most astonishing certainty. Of these, the condition known as pemphigus diutinus or persisting pemphigus stands foremost. As a rule, no fresh bullæ are produced after the administration of the arsenic has been commenced, and the patient quickly regains health, with perfect soundness of skin. There are, I am aware, a few exceptional cases, especially those which occur in elderly subjects and those which are complicated by disease of the mucous membrane of the mouth.

I fear that we learn but little by the observation, which is now generally admitted, that arsenic is an almost universal specific against pemphigus. As to the cause of what pemphigus is, we are quite ignorant, and equally so as to how arsenic acts in preventing its development. There are a few other rare affections of the skin concerning which one can speak with the utmost positiveness as regards the prompt efficiency of arsenic in their cure. I possess a portrait of a very typical case of the rare malady known as dermatitis herpetiformis. The woman who was its subject had the skin of her trunk and limbs covered with a vesicular eruption which resembled herpes zoster in its corymbiform arrangement. I had this woman under observation for six or seven years on account of repeated relapses of her disease. She was always cured in the most definite manner and very quickly by the use of arsenic. A boy who was the subject of one of the plates in the New Sydenham Society's Atlas suffered severely from an erythematous eruption of a peculiar type, which developed on his limbs and trunk, and which never yielded until arsenic was given, when it disappeared with the utmost promptitude. His mother finally got into the habit of giving him the mixture whenever she noticed that his temper was irritable, as this symptom was a sure precursor of his eruption. I believe that he finally got quite rid of his liability.

A man whom I have recently had under observation had suffered for many years, and in spite of much treatment, from an intensely pruriginous and vesicating eruption possibly allied to pemphigus. When he came to me he had, singularly enough, never had arsenic given. Its effect was magical. The little bullæ ceased to appear, the itching ceased, and, as he could now sleep well, he rapidly improved in health. Contrary, however, to what is generally observed in common pemphigus, we have been quite unable to leave off the drug. If it is suspended, the invariable result is that in a few days the skin begins to itch again, and some fresh vesicles are produced. We have been obliged also, in order to maintain the cure, to increase the dose, and to give it in quantities larger than the patient can suitably bear. In connection with this liberal administration of it, I have had repeated opportunities of observing its effects upon the palms and soles. It makes these burn and itch and perspire. In the instance of the soles, the profuse perspiration has on several occasions caused the epidermis to become sodden and to peel.

In the treatment of common psoriasis, although the effect of arsenic is quite as definite and certain as in pemphigus, it is not nearly so immediately curative. Sometimes its effects are first manifested by the patches taking on a congested condition and becoming very irritable. In a large majority of cases it will in the end, if well pushed, cause the eruption almost wholly to disappear. It seldom or never, however, brings about a complete cure, and of late years we have been so much accustomed to reinforce it by efficient local measures that it is not always easy to estimate the proportion of our indebtedness to it. I believe that both its efficiency and its safety are in ratio with the youth of the patient. My own experience as regards the effect of arsenic in lichen planus has not been by any means uniform. In some cases it has seemed to do a great deal of good, whilst in others the eruption got worse while it was continued, and disappeared satisfactorily when tartar emetic was substituted for it. I have never seen this eruption yield to arsenic in a definite and rapid manner.

If you ask me as regards the value of arsenic in eruptions of the eczematous type, I must speak with great caution. My impression is that, if given in anything like full doses, it usually irritates and makes the eruption worse. If given in minute doses it certainly does not always hinder the cure by local measures, but it is very doubtful if it materially helps it. The late Mr. Startin and Dr. Hunt—both of whom made the cure of the disease their special aim in practice—were both in the habit of prescribing arsenic in eczema; but they used also local means at the same time, and it was impossible to say which was the means of cure. In cases of common acne, sycosis (non-parasitic), and various other chronic affections of the skin we are, I expect, most of us in the habit more or less frequently of adding small doses of arsenic to the rest of the remedies used. Even in the cryptogamic affections, more especially in chronic ringworm, some are inclined to put a certain amount of confidence in it. There is a general impression abroad that under all morbid conditions of the skin arsenic has a tendency to improve its nutrition. Thus, it is supposed to brighten the complexion, make the skin more transparent, and give glossiness to the hair. If it does really effect these objects—concerning which point I may confess to some doubt—they are to be brought about, I feel sure, only by using it very sparingly.

The observations just made may suitably lead us to discuss the question as to whether arsenic is a tonic. In certain morbid conditions—those, for instance, in which pemphigus and herpes are prone to occur—it certainly has a tonic influence, and the general health improves wonderfully under its use. It may, however, easily be the fact that this does not prove that it is a direct tonic, but only that by removing a troublesome and irritating disease it favours general improvement of health. Of this, however, I think we may feel quite sure, that if arsenic is to act as a tonic, everything depends on the smallness of the dose. It has been my almost invariable experience in patients in whom we had pushed it for the cure of any special disease, that they were very willing to leave it off, having usually felt languid and out of health during its continuance.

I have formed an unfavourable opinion as to the influence of arsenic upon elderly persons, and, unless the disease imperatively demands it, I never prescribe it for them. More especially is caution, I think, necessary if any symptoms of nerve degeneration are present. An old gentleman who suffered from paralysis agitans was, as I have good cause to remember, invariably made worse by the very smallest doses of arsenic. A physician whom we consulted insisted, although warned, in prescribing it, and the fact that we had done so was concealed from our patient. Although very small doses were given its effect was at once recognised, and so much annoyance was caused that we had difficulty in retaining our patient's confidence. I have met with other similar instances of susceptibility, but always in the aged. It is remarkable how very seldom in the young or middle-aged we encounter anything of the nature of idiosyncrasy in reference to arsenic. Opium, quinine, the iodides, mercury, and many other drugs are each in turn in not a few persons productive, even in the smallest doses, of symptoms of urgent disagreement, but very rarely indeed do we encounter anyone who shows special susceptibility to arsenic. At any rate this is, I think, true as regards its first use; there are a certain class in whom long continued use instead of producing tolerance appears to have the opposite effect. With the young arsenic appears usually to agree well, and even very young children, although they but seldom need it, will bear full doses without any ill effects.

Amongst the facts which have been thoroughly established as regards the possible effects of arsenic, we may, I think, now claim that it is an undoubted cause of peripheral neur-

itis.[1] Its influence in inducing herpes zoster when given for the cure of other skin diseases affords us the most common example of this. It is, however, by no means the only one. It has been observed by those studying cases of poisoning by arsenic, and is especially noted by Christison, that local and unsymmetrical forms of paralysis not very infrequently result. During its medicinal use patients not infrequently complain of local numbness, more especially of portions of the skin of the lower extremities. Numbness and tingling of the soles of the feet are by no means infrequent symptoms.

When in 1864 I first published cases of herpes zoster produced during the administration of arsenic, the observation was received with some scepticism, and it was thought that it might concern what was merely a coincidence. The observation has, however, been since confirmed by many others, and quite recently hospital statistics have been published by Dr. L. Neilsen, of Copenhagen, showing that herpes occurs far more frequently in those who are taking arsenic than in others. Dr. Neilsen found that in 520 cases of psoriasis for which arsenic was prescribed shingles followed in 10, while of 220 in which iodide of potassium was given there was not a single instance of it. I regard the establishment of the connection between arsenic and zoster as of great importance on account of the definiteness of the light which it is calculated to throw upon other questions. It is certain that the zoster does not usually occur in the beginning of the treatment but only after the drug has been used some time, and it also appears probable that the arsenic may be resumed after a time without material risk of reproducing the herpes.

It is a very important question, especially in reference to chronic skin diseases requiring its use during long periods, whether arsenic is prejudicial or otherwise to the general health. I have had under observation many patients suffering from psoriasis or lupus erythematosus, who have taken it more or less continuously for several years. My impression is that if given in small doses, with the exception of the risk that it may cause shingles, its effects are usually inappreciable, and that there is no danger of its cumulative influence. I have already, in speaking of its effect as a tonic, expressed some doubt as to whether, in a general way, patients are better for its use. My belief is that they are usually glad to leave it off. I am quite sure that this is the case if it has been pushed in anything like full doses. In cases of lupus erythematosus, for instance, in which it produces no effect unless it is pushed, the usual result is that patients feel languid and depressed, and experience a certain degree of emaciation. Almost without exception in these cases the disuse of the remedy is attended by a sense of general improvement of the health. In this respect arsenic appears to me to contrast strongly with the true tonics, such as quinine and nux vomica, more especially with the latter. It does not seem to matter how long a patient may have taken nux vomica, he will miss it, as he would a glass of bitter beer, when it is suspended. It is wholly otherwise in the case of arsenic. If arsenic be given in full doses for long periods, although it may be doubted whether there is any reason for styling it a cumulative drug, yet I am sure that its employment is not without danger. There are certain symptoms which ought to lead us to take alarm. If the patient has numbness and tingling in the palms and soles, or if there is numbness of any particular part of the skin, or if there is decided loss of flesh, then it ought to be suspended. Irritation of the conjunctiva is, of course, a well-known symptom of disagreement; but, in my experience, it has not been observed so frequently as some of the others just mentioned; and to them I must add liability to diarrhœa, and, in a certain number of cases, extreme irritability of the bladder. I cannot conceive of a patient receiving any general injury to health from arsenic whilst remaining under regular medical supervision, for the symptoms never set in suddenly. If, however, a patient who has experienced great relief for his skin affection has obtained a prescription which he uses on his own responsibility, and with, perhaps, considerable increase of the dose ordered, it is then possible that serious, or even fatal, results may ensue. One case of this kind has occurred to myself. A gentleman who suffered from a most severe form of psoriasis, and who had found the greatest possible benefit from arsenic, whereas nothing else relieved him, increased the doses at his own discretion, and did not come to see me for more than a year. When, at length, he returned to me, he was emaciated, staggered in his gait, and was partially paraplegic. His nervous symptoms rapidly developed, and, after violent convulsive seizures, he passed into coma and died. In connection with this case I may remark that I have seen several others in which the use of arsenic appeared to cause or to increase the liability to epileptic attacks, and one or two others in which a form of partial paraplegia seemed to be definitely connected with its use. That it exerts a peculiar influence over the nutrition of the nervous system, which may display itself in different parts, and in very different ways, is, I think, unquestionable.

A few words must be said as regards the influence of arsenic on the skin in persons previously in health. When it is given for the cure of skin diseases it is sometimes difficult to tell whether the results are due to it or are parts of the original malady. Now and then, however, we have opportunities, when it is prescribed for maladies quite apart from the skin itself, of observing results concerning which there can be no fallacy. Such, for instance, occur when it is prescribed in order to delay the growth of cancer, or for the cure of chronic disease of the nails. Its effects upon the nutrition of the skin in such cases (supposing the doses to be large) are usually, I think, that the skin becomes brown and muddy-looking; it is also dry and harsh on the trunk and limbs generally, although there may be perspiration in the palms and soles. The discoloration may be attended with actual pigmentation, and may increase until it almost resembles the tint of Addison's disease. In extreme cases not only is there dryness and discoloration, but scaly patches may form on the knuckles, elbows, and knees, much resembling common psoriasis, but less well circumscribed. A much commoner result than this is, however, disturbance of the nutrition of the skin, not over the body generally, but over the palms and soles only. On these parts, in addition to dryness, corns may form, and in certain very rare cases these corns pass on into epithelial cancer. A peculiarly dry condition of the palms and soles, with tendency to the formation of corns, is by no means an infrequent result of long-continued courses of arsenic, and should, I think, always lead to its discontinuance.

Certainly one of the most remarkable facts as regards the influence of arsenic is that it appears to prevent certain affections which are very similar in nature to those which it causes. There are certain rare cases in which herpes recurs over and over again in the same locality; and respecting these I can speak with the greatest positiveness that the liability to recurrence is usually suspended during the continuance of arsenic. I am speaking of cases in which the herpes occurs on the skin, and is grouped exactly like zoster, although usually more limited in extent. The far more common forms of recurrent herpes which we see on the genitals, on the lips, and sometimes inside the mouth, are, I believe, just as definitely under the control of the drug. The latter must, however, be steadily continued. One of the most convincing proofs that the arsenic is really the means of arresting it is that the eruption recurs when it is suspended. I have had some most remarkable cases of liability to herpes in the mouth recurring every month for one or more years, in which the liability ceased immediately the drug was given. A portrait of one such, showing the severity of the herpes, is in the collection of the Royal College of Surgeons. In these cases, after the arsenic has been continued for a considerable time, the usual result is that it may be left off without any risk of recurrence of the disease. This cannot be done in the early stages, for scarcely less remarkable than the promptness of the disappearance when it is prescribed is the promptitude of the recurrence when it is suspended.

[Mr. Hutchinson quoted many cases in illustration of the statements made at different parts of his lecture. He concluded with the following summary]:

Thus, then, whilst I think that we may hold that our clinical knowledge respecting this powerful and most important drug has much advanced during the last quarter of a

[1] In the remarks made above, I have restricted myself to my own experience. Dr. Imbert Gourbeyre has in several articles, and finally in a monograph on the consequences of arsenical poisoning, collected a very considerable bibliography on the subject. His facts have been well recapitulated with important additions in a paper by Dr. Dana, of New York, published in *Brain*, January, 1887.

century, we cannot claim to have made any discovery as to its mode of action. We know for certain that it will cure psoriasis, pemphigus, and their allies, and that it will prevent the recurrence of recurrent herpes and many other relapsing maladies. We never cease to wonder at the extreme rapidity and certainty with which, in some of these, its effects become manifest. How those effects are brought about, however, we cannot even guess. We know also that it may, whilst curing some diseases, produce others, and that herpes zoster is one amongst several different type-forms of peripheral neuritis which may result directly from it. That it has some peculiar affinity for nerve tissue, and some peculiar influence upon nerve function, we may safely believe, but further than this we can scarcely go. As regards its general employment as a remedy for skin diseases, whilst recent observations have strengthened our faith in certain directions, they have limited it in others, and they have impressed upon us the great need of caution. They leave us with the practical creed that we may, as heretofore, freely avail ourselves of its services, but that we must, perhaps rather more than has heretofore been felt necessary, watch its effects, and be prepared, if need be, to forbid its further use.

ON THE PHYSIOLOGICAL ACTION OF CARBON MONOXIDE OF NICKEL.

By JOHN G. McKENDRICK, M.D., F.R.S.,
Professor of Institutes of Medicine, University of Glasgow;
AND
WILLIAM SNODGRASS, M.A., M.B.
[From the Physiological Laboratory, University of Glasgow.]

By the kindness of Mr. Ludwig Mond, we have had the opportunity of examining the physiological action of carbon monoxide of nickel, a substance of unique chemical composition represented by the formula $Ni(CO)_4$. This substance was discovered by Mr. Mond co-operating with Dr. Carl Langer and Dr. Friedrich Quincke, and its chemical properties have been described by them.[1] It is a clear liquid of high refractive power, boiling at 43° C. at 751 millimetres, and having a specific gravity of 1.3185 at 17° C. The fluid is soluble in alcohol, benzene, chloroform, and pure olive oil. It readily evaporates on exposure to the air, the remainder, even in a well-stoppered bottle, undergoing decomposition. For this reason, it must be kept in sealed glass tubes, and we found it difficult to preserve it when the point of the tube was broken off and a small quantity removed for purposes of experiment, however quickly we sealed up the point in a blowpipe flame.[2]

The method of administration adopted was by subcutaneous injection. The following experiments were in the first instance made upon frogs:—

EXPERIMENT I.—At 11.3 A.M., 1.14 cubic centimetre injected under skin of the back. The substance evidently acted as an irritant, as the animal contorted its body and rubbed the skin over the seat of the injection with its hind limbs. At 11.30, there was paralysis of fore and hind limbs. At 11.50, respiration was very slow. At 12.20, the animal was dead. The blood was of a bright red colour, and when examined with the spectroscope showed two absorption bands in the position characteristic of carbonic oxide hæmoglobin. The two bands persisted after the addition of sulphide of ammonium.

EXPERIMENT II.—At 2.48 P.M., 0.54 cubic centimetre injected under skin of back. At 2.51, the frog croaked repeatedly, and rubbed irritated spot with its hind limbs. At 2.53, we observed that the eyes were remarkably prominent. At 2.56, it rubbed its head with its fore limbs. At 3.12, the eyes were much retracted. The web of the foot, examined under the microscope, showed a very slow blood stream in the vessels. At 4.20, there was slow respiration, and 4.22 the animal was dead. A spectroscopic examination showed two absorption bands, irreducible by sulphide of ammonium.

EXPERIMENT III.—At 3.25 P.M., 0.3 cubic centimetres injected under skin of the back. At 3.31, the frog rubbed its back with its hind limbs and its head with its fore limbs. At 3.32, the eyes were retracted. At 3.46, the circulation in the web was very slow. At 3.58, there was gasping respiration. At 4.2, there was almost complete stoppage of circulation in the web. At 4.8, the animal was killed. The heart was beating feebly, and a drop of bright red blood taken from it showed the double absorption band irreducible by sulphide of ammonium.

These experiments all pointed to the poisonous action being similar to that of carbonic oxide.

EXPERIMENT IV.—At 10.33 A.M., 0.3 cubic centimetres injected under the skin of the back of a white mouse. At 10.36, there was slow, prolonged breathing; 10.38, convulsive twitchings of limbs, especially of hind legs; 10.39, a general spasm; 10.39½, fibrillar twitchings of muscles; 10.40, gasping breathing, lying on back paralysed; and at 10.48 the animal was dead. On opening the body, the tissues were seen to be of a bright red colour, and the vessels were full of bright red blood. The blood from the heart showed a double absorption band in the spectrum, not changed by addition of sulphide of ammonium. The animal died in fifteen minutes.

EXPERIMENT V.—At 10.43, a small rabbit, weighing 330 grammes, had 1 cubic centimetre injected under skin of back. It died in twenty minutes. There was marked paralysis of the limbs, appearing first in the hind limbs. The respirations became extremely rapid and gasping towards the close of life. This was the first case in which the temperature of the rectum was taken at intervals. The first reading, immediately before receiving the injection, was 35.5° C.; the temperature steadily fell, and at the moment of death it was 32° C. This observation directed us to the remarkable reduction of temperature caused by $Ni(CO)_4$. The next experiments illustrate this point.

EXPERIMENT VI.—A larger rabbit than the subject of Experiment V was taken, but the weighing was unfortunately overlooked. The animal was wrapped in a towel, and a thermometer was kept in the rectum during the greater part of the experiment. Great care was taken to keep the thermometer always at the same distance in the bowel, as it was found that pushing it a little further in or drawing it a little further out caused considerable variations. The following are the readings:—

12 noon, 37.3° C.; 12.5, 39.1; 12.10, 38.9; 12.12, 38.8 (0.13 cubic centimetre of $Ni(CO)_4$ injected under skin of back); 12.13, 38.5; 12.14, 38.5; 12.16, 38.4; 12.17, 38.4; 12.18, 38.35; 12.20, 38.2; 12.21, 38.2; 12.22, 38.1; 12.23, 38.0 (no convulsions, respirations slower); 12.24, 37.85; 12.25, 37.7; 12.26, 37.68; 12.27, 37.6; 12.28, 37.5; 12.28.5, — (twitching of right hind leg); 12.29.5, 37.4; 12.30, 37.35; 12.31, 37.28; 12.32, 37.19 (twitching of right hind leg); 12.33, 37.1; 12.34, 37.0; 12.35, 36.91; 12.36, 36.81; 12.37, 36.8 (slight twitching); 12.38, 36.8; 12.39, 36.7; 12.40, 36.6; 12.41, 36.5; 12.42, 36.47; 12.43, 36.39; 12.44, 36.31; 12.45, 36.25; 12.46, 36.18; 12.47, 36.1; 12.48, 36.01; 12.49, 35.94; 12.50, 35.95 (thermometer pushed slightly farther in); 12.51, 35.95; 12.52, 35.9; 12.53, 35.89 (micturates on instrument); 12.54, —; 12.55, —; 12.55.5, 35.72; 12.56, 35.7; 12.57, 35.51; 12.58, 35.49 (twitching of right hind leg resumed); 12.59, 35.4; 1 P.M., 35.38; 1.1, 35.3; 1.2, 35.27; 1.3, 35.26; 1.4, 35.2; 1.5, 35.11 (marked twitching); 1.6, 35.09; 1.7, 35.06; 1.8, 35.02; 1.9, 35.99; 1.10, 34.91; 1.11, 34.9; 1.12, 31.88; 1.13, 34.9 (micturates on thermometer); 1.14, 34.9; 1.15, 34.82; 1.16, 34.72 (animal allowed to run about a little; shows weakness of hind limbs; vessels in ear full of bright red blood); 1.29, 33.3 (animal lies quiet on table without being held; slight tremor in right hind leg; twitching of right upper eyelid); 1.31, 32.5; 1.47, 31.93; 1.51, 31.6; 1.55, 31.4; 2.0, 31.0; 2.5, 30.47; 2.12, 30.0; 2.15, 29.5; 2.17, — (severe convulsive seizure, gasping); 2.20, 29.3; 2.25, 28.6; 2.34, 28.1 (rabbit placed in a large jar of pure oxygen); 2.47, 26.3; 3.0, 26; 3.5, — (respirations 52 per minute); 3.13, — (respirations 40 per minute; taken out of jar of oxygen and placed in a box before the fire to warm the body, which had become perceptibly cold; the temperature rose up to 28.5); 4.30, — (animal died after a severe convulsive spasm).

This experiment shows that, after a subcutaneous injection of 0.13 cubic centimetres of $Ni(CO)_4$, the temperature steadily fell from 38.8° C. to 26° C., and that the animal died in four hours eighteen minutes. There was a fall of temperature of 12.8°.

EXPERIMENT VII.—A rabbit, weighing 572 grammes, was wrapped in a towel and the temperature of the rectum was taken at intervals.

12.10 noon, 38.9° C. (thermometer in rectum); 2.15, 37.0; 2.20, 37.0; 2.25, — (thermometer accidentally came out); 2.30, 36.5; 2.35, 35.8; 2.36, 35.5 (thermometer removed); 2.38, 35.6; 2.45, 35.6; 2.50, 36.0; 2.55, 35.9 (animal released and allowed to run about); 3.5 to 3.20, 36.6 (temperature remained fairly constant).

As already stated, we found that a slight variation in the

[1] *Journal of the Chemical Society*, August, 1890, vol. lvii.

[2] A notice of a communication on $Ni(CO)_4$ by M. Hanriot appears in *Nature* of April 9th, 1891, as having been communicated by him to the Société Chimique on February 27th. In this notice it is stated that M. Hanriot found the substance to be more poisonous than carbonic oxide, and that the blood gave the characteristic spectrum of CO-Hæmoglobin. Our work was carried on independently at intervals during last winter.

distance to which the thermometer was pushed into the rectum caused a considerable variation in the reading, and to secure accuracy we had a mark on the thermometer, and the instrument was inserted up to this mark in each observation.

3.21 P.M., — (0.06 cubic centimetre injected below skin of back); 3.27, — (rabbit less lively; slight paresis of hind limbs), 3.30, 35.8° C. (vessels in ear full of bright red blood); 3.35, — (fore limbs weak; animal resting on belly); 3.40, 34.7; 3.45, — (marked weakness of right leg); 3.47, — (both legs extended); 3.50, 31.3; 4.4, 34.2 (head falling forwards); 4.10, 33.2 (no attempt to pull itself together when the animal's limbs were moved); 4.20, 33.7 (as animal felt cold, it was placed before the fire); 4.30, 33.9 (after gasping respiration, animal died).

In this case 0.06 cubic centimetre killed the animal in one hour ten minutes, and the temperature fell from 36.6° to 33.9°, a fall of 2.7°. The seat of the injection was somewhat congested. Chemical tests showed the presence of nickel in the tissue of that region. The blood also gave reactions showing the presence of nickel.

As 0.06 cubic centimetre of the pure liquid Ni $(CO)_4$ represented 1 minim of the fluid, and as we were desirous of giving smaller doses, we next attempted to use a solution of 1 of Ni $(CO)_4$ in 10 of chloroform. This we termed the one-tenth solution, and 1 minim represented 0.006 cubic centimetre of pure Ni $(CO)_4$.

The following experiments were performed with this solution:—

EXPERIMENT VIII.—Rabbit weighing 720 grammes. Respirations 54 per minute. Temperature of rectum taken repeatedly at intervals and found to be fairly constant at 38.3°.

3.47 P.M., — (1 minim (0.006 cubic centimetre of Ni $(CO)_4$) of nico-chloroform solution injected under skin of back); 3.55, 37.1° C.; 4.5, 36.2; 4.10, — (respirations 48 per minute); 4.13, — (animal eating); 4.15, 35.6; 4.20, — (eating freely); 4.25, 35.75; 4.35, 35.7; 4.45, 36.2; 4.55, 36.3; 5.5, 36.5; 5.15, 36.5; 5.25, 36.0; 5.35, 35.9 (animal left running about in a warm room); 7.0, 36.4; 8.30, 37.0 (animal seemed vigorous and uninjured).

EXPERIMENT IX.—On the following day, at 10.35 A.M., the same rabbit had a temperature of 37.35°.

10.50 A.M., — (1 minim (0.006 cubic centimetre of Ni $(CO)_4$) of nico-chloroform injected under skin of back; the fluid showed a slight turbidity of a greenish colour); 10.50, 36.5° C.; 11.0, 36.35; 11.10, 36.2; 11.20, 35.9; 11.30, 36.0; 11.40, 36.0; 11.50, 35.9; 12.0, 36.0; 12.10, 35.6; 12.20, 35.8; 12.30, 35.7; 12.50, 35.7; 4.40, 36.7.

The animal throughout the experiment appeared to be little affected, but there was a fall of temperature. In both Experiments VIII and IX the temperature rose after the effect of the injection passed off.

EXPERIMENT X.—The same rabbit as was subjected to Experiments VIII and IX was again used. At 1.35 the temperature of the rectum was 38°, and it was found to be fairly constant. The solution of $Ni(CO)_4$ in chloroform showed a dirty greenish precipitate, which was suggested to be hydrated oxide of nickel, produced by the chloroform not being anhydrous.

1.36 P.M., — (2 minims (0.012 cubic centimetre of $Ni(CO)_4$ of nico-chloroform were injected under the skin of the back); 1.45, 37.9°; 2.0, 38.0; 2.5, — (animal drowsy, as if affected by chloroform); 2.20, 37.2; 2.50, 37.0; 3.15, 37.0; 4.10, 36.8; 4.35, 36.5.

In this experiment there was a slight fall of temperature. The rabbit, although carefully looked after, was found dead in its hutch two days later. The bladder was distended with urine, the kidneys were congested; there was serous fluid in the pericardium; the left ventricle was empty, and the right was full of clot. No trace of nickel could be discovered in the heart, blood, and urine. Probably the chloroform solution had decomposed, and no $Ni(CO)_4$ was present. The slight fall of temperature may have been due to the chloroform.

We attempted, but without success, to use a solution of $Ni(CO)_4$ in pure olive oil. Thus, the point of a small sealed tube containing 0.75 cubic centimetre of $Ni(CO)_4$ was broken underneath the surface of 86 cubic centimetres of pure olive oil.

EXPERIMENT XI.—A rabbit weighing 1,290 grammes at 2.46 had a temperature in the rectum of 38.1° C. At 2.49 20 minims of olive oil solution of nico ($\frac{3}{5}$ cubic centimetre of $Ni(CO)_4$) were injected under the skin of the back. At 3 o'clock there was no perceptible effect. At 3.4 the temperature was 38.1° C.; at 3.24, 37.7° C.; at 3.43, 37.6° C.; and at 4, 37.6° C.

EXPERIMENT XII. A small house mouse had 10 minims ($\frac{1}{75}$ cubic centimetre of $Ni(CO)_4$) of olive oil solution of nico injected under skin of back. No effect observed.

We next made a solution of $Ni(CO)_4$ in pure anhydrous chloroform as follows: A small sealed tube, containing 0.75 cubic centimetre of $Ni(CO)_4$ was broken in a dry well-stoppered bottle, containing 16 cubic centimetres of anhydrous chloroform. Thus there was 1 of $Ni(CO)_4$ in 21 of chloroform, and 1 minim represented about $\frac{1}{300}$ cubic centimetre of $Ni(CO)_4$.

EXPERIMENT XIII.—A rabbit, weighing 1,460 grammes, was the subject of the next experiment.

2.34 P.M., — (injected 10 minims of chloroform—solution of nico=$\frac{1}{30}$th cubic centimetre of $Ni(CO)_4$); 2.36, 39.0°; 2.50, 38.6 (weakness of hind limbs); 2.57, 38.5; 3.00, 38.3; 3.5, 38.25; 3.10, 38.2; 3.15, 38.0; 3.20, 37.9; 3.25, 37.7; 3.30, 37.5; 3.35, 37.2; 3.40, 37.0; 3.45, 36.8; 3.50, 36.6; 3.57, 36.3; 4.0, 36.2; 4.7, 36.1 (animal eating turnip); 4.12, 35.8; 4.15, 35.5 (animal left with complete paralysis of hind limbs, and temperature still falling); 6.45, 33.2 (hind limbs still paralysed; no eating; pupils dilated); 7.35, 32.8 (next day the animal was alive, and the hind limbs were paralysed); 11.15, 29.5 (in rectum); 12, 31.3 (in mouth); 12.30, 32.2 (in mouth); 3.30, 32.5 (in mouth); 5.30, 32.5 (the animal was kept in a box near the fire); 6.20, 33.5; 8.30, 34.7; 9.40, 34.4 (still paralysed in hind limbs).

At 10.40 A.M. on the following day the temperature of the rectum was 31.3°. The animal was weak, refused food, and the bowels were loose. Next morning it was found dead.

This experiment shows that the $\frac{1}{30}$ cubic centimetre (0.033) of $Ni(CO)_4$ in 0.4 cubic centimetre of anhydrous chloroform was lethal, and caused a fall of temperature of no less than 9.5°.

As it is known that chloroform causes a fall of temperature, a control experiment was performed, in which the same quantity of anhydrous chloroform was given as in Experiment XIII, but without $Ni(CO)_4$.

EXPERIMENT XIV.—A rabbit, weighing 1.342 grammes, had, at 4 P.M., 10 minims (0.4 cubic centimetre) of anhydrous chloroform introduced below the skin of the back.

4.0 P.M., 38.8°C.; 4.25, 38.5; 4.30,—(rabbit drowsy); 4.35, 37.6; 5.0, 37.3; 5.15, 36.9; 5.30, 36.1; 5.45, 35.5; 6.0, 34.7; 6.15, 34.3; 6.25, 34.1, 8.30, 35.2 (rabbit running about); 9.17, 36.0; 4.35, 36.0.

At 10.45 A.M. next day the temperature was 38.2°, and the animal was quite well. This experiment showed a fall of temperature of 4.7° in the course of two hours twenty-five minutes, when the temperature began to rise, and the normal temperature was regained next morning. In Experiment XIII the temperature had fallen 5° in about the same period of two hours twenty-five minutes, but it continued to fall for twenty-four hours longer, when it began slowly to rise. The effect of $Ni(CO)_4$ was therefore much greater and more persistent than the effect of the chloroform in which it was dissolved.

As 1 cubic centimetre of the liquid $Ni(CO)_4$ at 17.0° C. contains 0.4470 gramme of nickel, we next studied the action of a corresponding amount of nickel in an aqueous solution of nitrate of nickel, of such a strength that 1 cubic centimetre contained 0.4470 gramme of nickel. Two solutions of this in water of the strengths respectively of 1 in 300 and of 1 in 20 (the same strength as in Experiment XIII) were used.

EXPERIMENT XV.—A rabbit, weighing 1,836 grammes, had at 4.30 a temperature in the mouth of 38.9°. Ten minims (0.4 cubic centimetre) of $\frac{1}{300}$th solution of nitrate of nickel in water containing the same amount of nickel as $\frac{1}{30}$th cubic centimetre of nico were injected under skin of back. The temperature was unaffected. At 6.16 it stood at 39.1°, and at 8.45 at 38.6°. Then 10 minims (0.4 cubic centimetre) of 1 in 20 solution containing the same amount of nickel as $\frac{1}{30}$ cubic centimetre of nico (as in Experiment XIII) were injected below skin of back. At 9.15 the temperature was 38.9°, at 9.40 at 37.6°, and at 10.50 on the following day it was 38.8°. We may conclude that a reduction of temperature is not caused by a quantity of nickel equal to that in the doses of $Ni(CO)_4$ which produced the remarkably persistent fall of temperature as in Experiments VI and VIII.

We next endeavoured to examine roughly the gases of the blood after poisoning by $Ni(CO)_4$.

EXPERIMENT XVI. A rabbit, weighing 997 grammes, at 2.58 had 2 minims (0.08 cubic centimetre) of pure $Ni(CO)_4$ injected below skin of the back.

2.58 P.M., temperature of mouth, 38.7° C.; 3.13, 37.6; 3.21, 37.5; 3.30, 36.3; 3.40, 36.1; 3.50, 35.1; 4.4, 33.1; 4.47, — (animal died after severe convulsions).

The animal was bled from the neck, and the blood was quickly introduced into a Torricellian vacuum produced by a mercurial gas pump. A small quantity of gas was obtained, and this was found on analysis to contain carbonic oxide.[3] No trace of nickel was found in the gases, but it was found in the blood from which the gases were drawn.

Two experiments were made in which the animal was

[3] The gas analyses were performed by Dr. G. G. Henderson, Chemical Laboratory, University of Glasgow.

caused to breathe an atmosphere containing the vapour of $Ni(CO)_4$.

EXPERIMENT XVII.—A rabbit, weighing 1,090 grammes, was placed in a bell jar containing 24 litres of air. A small tube containing 0.6 cubic centimetre of $Ni(CO)_4$ was broken inside the jar, and the fluid evaporated very quickly. As 1 cubic centimetre of the liquid $Ni(CO)_4$ at 17° C. contains 0.87146 gramme of CO, which at 0° and 760 millimetres yields 696.5 cubic centimetres of gas, 0.6 cubic centimetre would yield about 417.9 cubic centimetres of CO gas. As 1 molecule of $Ni(CO)_4$ contains 4 molecules of CO, the animal breathed an atmosphere containing 0.432 per cent. of $Ni(CO)_4$ gas.

3.0 P.M., animal placed in jar; 3.7, agitated muscular tremors; urination; defæcation; 3.13, animal sitting up on hind legs; no paresis; vessels of ear full of bright red blood; 3.25, weak in movements, but no marked symptoms; removed from jar; 3.26, temperature of mouth, 37.3° C.; 3.40, trembling and weak in legs.

The animal was found dead next morning, showing a lethal effect after breathing an atmosphere containing 0.432 per cent. for twenty-five minutes.

EXPERIMENT XVIII.—A rabbit, weighing 489 grammes, was placed at 3.45 in the 24-litre jar, the air of which contained 0.58 cubic centimetre of $Ni(CO)_4$=0.41 per cent.

3.45 P.M., animal placed in jar; 3.46, vessels in ears full of bright red blood; animal agitated; 3.56, no very evident effect, except animal rubbing its nose with forepaws; 3.57, another quantity of 0.69 cubic centimetre of $Ni(CO)_4$=0.49 per cent. of $Ni(CO)_4$ gas was added; the air contained now nearly 0.9 per cent. of $Ni(CO)_4$; 4.0, violent convulsions; animal lying on belly with the hind legs stretched out; great difficulty in breathing; the animal was quickly removed and placed in a large jar of pure oxygen; 4.10, died in severe convulsions.

It was rapidly bled, and the blood was passed into a vacuum and a small quantity of gas was obtained. This gas contained carbonic oxide, but no trace of nickel. The metal was found in the blood. Quantitative measurements of the gases were not made, as the object at this stage of the inquiry was to ascertain the presence or absence of carbonic oxide in the blood.

CONCLUSIONS.

The general results of the investigation may be briefly summarised thus:—

1. $Ni(CO)_4$ is a powerful poison when injected subcutaneously.
2. The vapour of $Ni(CO)_4$ in air, even to the extent of less than 0.5 per cent., is dangerous.
3. The symptoms are those of a respiratory poison, and are similar to those caused by carbonic oxide.
4. The spectrum of the blood of an animal poisoned by $Ni(CO)_4$ is that of carbonic oxide hæmoglobin, and it is not reduced by sulphide of ammonium.
5. When the substance is injected subcutaneously, it is probably in part dissociated in the tissues, as there is evidence of the existence of nickel in these tissues; but the nickel also finds its way into the blood and is found there.
6. The substance produces a remarkably prolonged fall of temperature even when given in small quantities. This may be accounted for by the hæmoglobin being prevented to a large extent from supplying the tissues with oxygen. Nico, as we may for convenience term this substance, makes it possible to give graduated doses of carbonic oxide, and thus reduce temperature by directly interfering with the respiratory exchanges occurring in the tissues. The objections to its use as an antipyretic are that, owing to its poisonous properties, it is difficult to inject it subcutaneously in sufficiently small doses, while it is not easy to obtain a solution in any menstruum in which decomposition will not take place. If a convenient method of dissolving it could be devised, $Ni(CO)_4$ might become a valuable antipyretic, the *modus operandi* of which is intelligible. We are at present experimenting in this direction.

We intend to continue the investigation, more especially as to (*a*) the solubility of the substance, (*b*) the quantitative effects on the gases of the blood, and (*c*) the quantitative effects on the gases of the air breathed by an animal under its influence.

PASTEURISM IN HUNGARY.—A muzzling Act appears to be rather urgently needed in Hungary, to judge from certain statistics which have recently been published. Between April 15th and May 1st, of the present year, no fewer than thirty new patients were admitted to the Pasteur Institute at Buda-Pesth. The total number of patients treated at the institute already amounts to 731.

A MODIFICATION IN THE FORM OF SOUND FOR FINDING SMALL VESICAL CALCULUS.

BY SIR HENRY THOMPSON, F.R.C.S.,

Surgeon Extraordinary to His Majesty the King of the Belgians; Consulting Surgeon and Professor of Clinical Surgery to University College Hospital, etc.

I HAVE never been quite satisfied with any sound employed for the purpose of determining the presence of a small calculus in the bladder, and have modified the form for myself several times during the last twenty or thirty years. It is in my opinion difficult to exaggerate the importance of finding a model perfectly adapted to attain the object required. Hence any improvement, however slight, is a matter worthy of serious consideration.

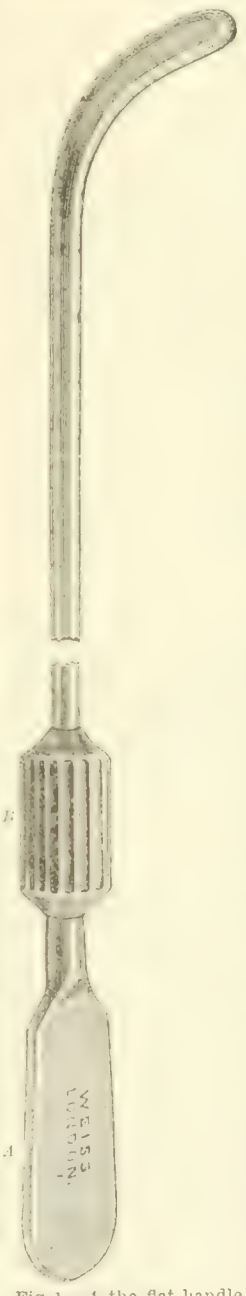


Fig. 1.—*A*, the flat handle; *B*, the cylindrical portion; *C*, the beak showing its widest diameter.

The discovery of vesical calculus in its earliest stage has always been for me a subject of great interest, and one to which I called special attention many years ago. I believe I may fairly claim to be the first who regarded the ability to ascertain and demonstrate the presence of a stone when very small as an extremely important—as it was at that time an unusual—achievement of surgical art.

I now venture to offer my latest form of sound as one possessing better qualifications for the purpose named than any I have yet seen or employed.

There are two chief considerations to be borne in mind in designing such an instrument.

First, it should be so formed that all the necessary movements can be made with facility; that (*a*) the operator may pass it easily into the bladder, and also know with certainty the direction of the beak when lost to view; and (*b*) that he should be able to rotate it with ease between the finger and thumb, when the beak is turned downward behind the neck of the bladder, especially when, from enlargement of the prostate, the well-known depression exists there in which calculus is likely to lodge.

The first condition is attained by using the flattened handle of a good old pattern; the second, by placing close to it a small cylinder, a combination which now appears to me better than the entirely cylindrical handle which I originally introduced for lithotrites and sounds about the year 1860 for the purpose named. The shaft of the sound should be rather slender, and the under surface of the flat handle is rough, while the upper is polished, so that the direction of the beak (upwards or downwards) is recognised by touch.

Secondly, there should be special adaptation in the form of the beak to strike a very small concretion, and elicit a note therefrom. This is accomplished by flattening the beak a little in the opposite plane to that of the flat handle.

It must be manifest to all on consideration that, long as we have been contented to employ a beak of cylindrical contour, this form is specially adapted to avoid direct impact on encountering a small calculus, since these bodies have mostly a nearly spheroidal or ovoid form, and naturally glance off when contact occurs. In fact, a blade flattened in the direction above described is more certain than a cylindrical one to make direct contact, and will transmit to the operator a greater sense of resistance and a more audible note.

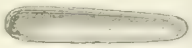


Fig. 2 shows the beak in its narrowest diameter.

The wider measurement of the beak which I have employed for ordinary purposes may be from 20 to 22 French scale, the narrower about 14 or 15, becoming a little thicker, although still flattened, towards the extremity. Such an instrument passes easily in any fairly healthy urethra, and, in the presence of most forms of enlarged prostate, with rather increased facility in comparison with the ordinary form.

It should never be forgotten in connection with seeking a small calculus that the dense fluid medium in which our instrument acts greatly increases the difficulty—as compared with the same action occurring in air—of obtaining rapid and direct contact with a small body of which the specific gravity is comparatively light. Hence the need of flatness and breadth of surface to ensure a direct blow, and the means of moving rapidly to ensure an audible note.

The drawing represents the instrument, which was made for me by Messrs. Weiss about a year ago, and I have had reason to be satisfied with its efficiency in detecting small calculi and fragments present in the bladder.

ON THE VICISSITUDES OF OPIUM.

By SAMUEL WILKS, M.D., F.R.S.,
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I HAVE read with much interest and instruction the address on therapeutics by Dr. Gairdner, and been much struck with his remarks on the vicissitudes which many remedies undergo in the course of a few years. He particularised mercury and antimony. I much wish he had added to these opium with its preparations, and had attempted to explain its chequered history, and why, with some practitioners, it had fallen almost into desuetude, being replaced by other drugs. For my own part I can give no other explanation for this change than that of fashion, the tendency to drop an old established habit or custom for a new one.

When a student, between forty and fifty years ago, I was taught that opium was a remedy of the most potent and valuable kind, having of necessity a widespread utility owing to its action on the nervous system whereby it diminished the functional activity of every organ of the body, whether this was brain, liver, kidney, intestine, or uterus. It consequently lessened the wear and tear of the tissues and so tended in many conditions to sustain or prolong life. In a similar manner it would arrest many morbid actions depending upon acute cell growth, as in inflammations, and was a remedy, therefore, in all diseases terminating in "itis." This was illustrated by cases which could be confirmed by the eye, as the rapid subsidence of a sore throat under a dose of laudanum, or the quickly healing large sloughing ulcer in the leg under the continued action of the same drug; a treatment, I may remark, largely pursued by Mr. Aston Key. What I was then taught I have never had any reason to dispute; for a long practice has confirmed me in the truth of these doctrines, and I have continued the use of opium and morphine as heretofore, having found no other drugs to replace them.

How often, therefore, must have been my surprise when meeting sometimes intelligent and well-educated young men in consultation over acute cases of disease to be informed that they had not prescribed opium because there was no pain or sleeplessness to warrant its use, never having heard that the drug was administered for any other objects than to relieve these symptoms. And not only have I found this ignorance of the best properties of opium, but with some medical men an actual dread of it, some ill-defined fear of its excessive harmfulness so as to make it a drug to be avoided by all possible means, and that every substitute should be thought of in its stead. Thus even in cases of pain and insomnia I constantly find numberless drugs, including chloral, sulphonal, bromidia, exalgine, cocaine, etc., given in vain, when a grain of opium has had the desired result. The attendant has afforded me no further explanation of his conduct than that "he dare not give opium." For my own part I have seen more evil results from the long continued use of chloral and bromides than from opium. In cases where the respiration is involved the fear is explicable, but then very often groundless. It is well known that opium in large doses has the effect of lowering the respiratory process and drying up secretion in the bronchial tubes; therefore judgment is required in its administration; but speaking from my own experience I have no hesitation in saying that opium has been one of my most valuable remedies in the treatment of chest disease. In pneumonia I have been in the habit of prescribing solid opium and Dover's powder three or four times a day, or laudanum or morphine in the liquid form. The late Sir W. Gull never abandoned the use of opium in pneumonia. In pleurisy it is absolutely necessary in many acute forms, and in chronic cases of empyema, where drainage has been practised, the life of the patient during a very protracted illness could never have been endured without the daily use of opiates. Then again in bronchitis the fear of opium is very widespread. When I suggest its use I am met by the remark that it will stop secretion and kill the patient and that remedies are being given to promote secretion. When I hear such a vague assertion without discussing the merits of the case, I am wont to make another general assertion of a like kind, that I want to stop secretion and not promote it, just as I should try and arrest cell growth in pneumonia and not try to promote it. So widespread is this fear of opium that I have seen it stated in a medical work as an aphorism, "Never give opium in chronic bronchitis." I call this erroneous and absurd, for no reason is given why in chronic catarrh of the bronchial tubes the object should be to promote the process rather than check it. The secretion which accompanies heart disease does, I believe, relieve the lung; but this is altogether another matter. I will only mention one example amongst many of the value of opium in bronchitis. An old gentleman, between 70 and 80 years of age, had been suffering long from bronchitis; he expectorated a large quantity of mucus, was constantly coughing, and had in consequence most restless nights. My suggestion of an opiate to the medical man was met in the usual way—the fear that it would stop secretion and be followed by a rapidly fatal result. We, however, at last agreed to give a full dose at bedtime and to meet on the following day. We found the patient delighted to see us, and he expressed his thankfulness for a good night and cessation of the cough. The expectoration had ceased and scarcely a *râle* could be heard in the chest. From that time he recovered. I am fully aware how susceptible children are to opium and with what caution it must be given. I remember two cases of so-called inflammation of the lungs in children where an overdose was given and the patients lay for hours in an insensible and most precarious condition. When they did recover, however, from the effects of the opium, their bronchitis was gone. In disease of the heart the cases are too numerous to mention in which I have seen the efficacy of opiates. For example, one is called to see a patient sitting up in his chair with dropsy, dyspnœa, and the usual symptoms. The main complaint is the awfully restless night which he looks forward to with horror. As soon as he feels sleepy and nods his head he starts up with a gasp; in these circumstances the medical man says he fears to give a sedative, for if he sent his patient to sleep his nerve centres would no longer respond to this sense of breathlessness, and he would die. Having very little knowledge of scientific therapeutics I do not discuss the question, but I recommend a night draught of a quarter of a grain of morphine. I do not remember a single case of any harm resulting and the experience of its success is overwhelming. The heart itself is often benefited, for every medical man must have seen cases where inordinate action of the heart was quieted by an opiate.

Then again, in Bright's disease, I have every reason to remember the value of opium owing to the very general and widespread fear of its use. I believe those who are considered authorities have spoken of the great susceptibility of patients suffering from this malady to its influence, and, therefore, without contradicting them, simply state that nothing in my own experience has led me to confirm it. I have, therefore, no hesitation in giving opium or morphine when I find a patient sleepless and restless as is often observed in old cases before the access of the more marked uræmic symptoms. I have given it with the best effects.

My greatest difficulty in the use of opium has been owing to the idiosyncrasy of the patient, rendering some persons remarkably susceptible to its operation, and these have usually been members of the same family. I allude to the action on the heart and the tendency to syncope. On the other hand there are those who may be said to live on opium—a violent neuralgia, sickness, and even want of appetite, are all speedily removed by an opiate. One example will suffice. A lady had been kept awake all night by a violent crushing headache and constant vomiting; she had a dinner party coming off and considered herself, therefore, most unfortunate. When I saw her in the morning I injected a quarter of a grain of morphine in her arm; in ten minutes she was tranquil, then went to sleep, woke to have her tea, and was ready in the evening to receive her guests at dinner as well as ever. I could relate many such instances.

I need not particularise the large number of nervous diseases in which opium constitutes a most valuable remedy, but merely mention a case lately under my care. An old gentleman had fallen into a melancholia, he felt himself a ruined man, would not eat, was constantly moving about and had little rest at night. For the insomnia, chloral, bromides, sulphonal, paraldehyde, etc., had been given. The medical man would not give opium for fear of "locking up the liver." As, however, I did not fear instant death from such a result I persuaded him to give the patient a quarter of a grain of morphine every night. This was done, it quieted the patient's nervous system, and in a few weeks he had recovered.

I have said enough to show to the younger members of the profession that I consider opium has been able to stand the test of experience, and is as valuable a drug as our predecessors thought it to be. There are those readers, no doubt, and I trust they are numerous, who will agree with most which I have said and declare that I have preached nothing new. My object in writing was not to state any novelty, but merely to declare that after a long experience, opium holds its own. The new class of remedies, valuable as they are to relieve pain or produce sleep, cannot supersede opium, seeing they have none of the other properties which render this drug so widely useful.

NOTES OF A CASE PROBABLY REFERABLE TO A RECENTLY DESCRIBED FORM OF SPINAL DISEASE.

By Professor GRAINGER STEWART, M.D., F.R.S.E.,
President of the Royal College of Physicians of Edinburgh; Physician in Ordinary to the Queen for Scotland; Professor of the Practice of Physic and Clinical Medicine, University of Edinburgh.

Mr. —— was originally brought to me in the summer of 1889 by my friend, Dr. Spalding, of Snebridge. He was 48 years of age, and had lately returned from New Zealand on account of the failure of his health. He had been seen by various neurologists, and a variety of opinions had been expressed as to the nature of his case. The patient was a thin, wiry man, who had led an active life, and lived somewhat freely in the Colonies, although he had never been intemperate; had never been addicted to sexual excesses, or suffered from syphilis. He stated that he had always been very healthy till the middle of January, 1889, when he noticed a slight tingling in the tips of the fingers of both hands. This sensation increased till it became distinctly painful, and after exertion, such as writing, he had to give it up on account of feeling his wrist and forearm painfully tired. If he made a wrong step in walking, or struck his foot against any impediment, he felt a tingle both in legs and arms, which he likened to a feeling produced by a stroke on the ulnar nerve. Gradually these symptoms increased, the sensitiveness of hands and feet becoming very marked, his writing becoming shaky, and walking difficult. He complained of various peculiar sensations in his limbs, such as coldness, tingling, numbness, and abnormal enlargement; and he found that muscular movement increased the discomfort in his extremities. If, for example, he raised his hands to brush his hair, the uneasiness markedly increased. All his symptoms were aggravated in cold weather, or if he from any cause got chilled; but his sensibility was little, if at all, impaired, even in the parts in which the sensations were most pronounced. There was no abnormality of the special senses nor of the muscular sense.

As to the motor functions the organic reflexes were natural, as were also the skin reflexes. The knee-jerk was exaggerated, but there was no ankle-clonus. Voluntary motion was somewhat impaired, especially for finer movements. Writing had become difficult, and he felt a certain awkwardness of gait, but he could walk along a straight line pretty well, and turn round without much difficulty, and closing his eyes did not aggravate his symptoms. There was no special interference with co-ordination. There was no vasomotor or trophic change in bones, joints, or skin, but he tended to become thin and anæmic, and his muscles wasted to some extent. His cerebral and mental functions were normal, as were also the spine and cranium.

The case did not distinctly conform to any recognised type of nervous disease, but it appeared more nearly to approach certain forms of peripheral neuritis than any other. Accepting this as our provisional diagnosis, we agreed to recommend rest, good diet, careful massage, and localised electrisation with nervine tonics, particularly strychnine. Under this treatment he improved for some time until he was tempted to take a long and fatiguing walk on a hot evening, and this effort induced considerable exhaustion, and was followed by an aggravation of all his symptoms. When seen again late in the autumn of the same year the symptoms had become aggravated, although not altered in character, only there was a distinct degree of diminution of sensibility in the hands and feet, and he showed more awkwardness than before when he attempted to walk along a straight line. Still he did not sway about like an ordinary ataxic patient when his eyes were closed, and his knee-jerks persisted, and, on the whole, his case was not to be diagnosed otherwise than before. At that time the treatment by suspension was being tried in locomotor ataxy and other nervous diseases, and Dr. Spalding and I agreed to try it with him. It was repeated on five or six occasions but without benefit, and on the last occasion it was followed by a degree of faintness which led to our discontinuing the treatment.

During the colder part of the winter of 1889-90, he went to the Riviera, and was under the care of my friend Dr. Rendall, of Mentone. He improved considerably, and in July, 1890, Dr. Rendall reported that the patient had been so well as to require little medical attendance during the winter. On leaving Mentone he had resorted to Aix-les-Bains and tried some hydropathic treatment there. He then felt himself distinctly better than he had been during the autumn, but the legs and hands remained weak, and the peculiar sensations persisted. After a short stay in Aix, he came on to London, and there, having fallen in with some old friends, he seems to have over-fatigued himself considerably. A further aggravation of all his symptoms followed, and when he came to Scotland he was much disheartened, feeling himself in all respects worse.

In the autumn (1890) I found him thinner, weaker, and more anæmic than before, but careful examination gave no further evidence either of locomotor ataxy or of antero-lateral sclerosis, and his symptoms simply showed an increase of all the features which we had at first recognised. He complained bitterly of the coldness of our climate and wished to return to New Zealand, but he had become so weak that Dr. Spalding and I dissuaded him from attempting so long a journey, and advised him to go again to the Riviera and winter in Mentone. When he left us he was pale and thin, complained much of the various morbid sensations in his legs and arms and also in his head. Sensibility was diminished, but by no means lost; the motor powers were considerably weaker, but he was not paralysed, neither was there special

failure of co-ordination, although in walking it was observed that he occasionally knocked his heels together and tended to stumble.

He caught cold in London, and had a bad journey through France, and, on reaching Mentone, was quite unfit for exertion. He was confined to his room most part of the winter, and suffered much from diarrhœa and increasing debility. In the month of April I had the opportunity of seeing him in Mentone along with Dr. Rendall, and found him in all respects much worse. He was emaciated and anæmic, and his weakness was such that he could scarcely walk across his room. He was even unable to stand without assistance. When in bed he was able to move his feet about, although not vigorously, and he could write, although with effort and with but a poor and tremulous result. No satisfactory explanation of his diarrhœa was discovered, and there was no disease superadded, but the condition of the nervous system showed again an increase of the earlier symptoms.

It is clear that the history and features of this case do not conform to those of any well-recognised type of nervous disease. I have never seen a case of peripheral neuritis in which an increase of the patellar reflex existed, and the course of the case did not correspond to any example of neuritis that I have seen. The same remark applies to the suggestion which might be made that the case is one of locomotor ataxy; and in addition to the difficulty of the knee-jerk in such a diagnosis we have to recognise the absence of marked failure of co-ordination and of all that series of early symptoms which have been so familiar to the profession since the days of Trousseau. Neither is it referable to the category of Dr. Gowers's cases of ataxic paraplegia, in which the symptoms proper to locomotor ataxy are modified by the results of sclerosis of the antero-lateral columns of the cord. There is, however, a condition which has been described by Drs. Putnam and Dana—the former writing in March, 1889, the latter in April of the present year—which seems to correspond pretty closely to the symptoms met with in my patient.

Dr. Dana summarises the symptoms of the cases which he watched somewhat in the following way: The disease exhibited at its onset a numbness of the extremities, attended and followed by progressive enfeeblement: the enfeeblement was not attended by paralysis of any special groups of muscles, but culminates at last in paraplegia. In some cases there were ataxic symptoms, but spastic phenomena, with exaggerated knee-jerk and ankle-clonus, were more common. Anæsthesia was met with in some cases; girdle and lancinating pains were very rare. The arms were less affected than the legs. The vision and other special senses and the speech were not disturbed. Mental symptoms approaching dementia were observed in the terminal stage in one case, and the patient usually suffered from great emaciation; and anæmia, often attended by obstinate diarrhœa, was among the marked features. The general course was that of a rapidly progressive affection—rapid as compared with the ordinary system-diseases of the cord. It was more common among women than men, and was more apt to occur after middle life. The cause was not certainly determined. It did not seem, in the cases observed, to be due to syphilis or alcoholism. The pathological changes met with consisted in a combined sclerosis of the lateral and posterior column, ultimately associated with a softening at certain levels. Treatment had only been followed by temporary improvement, and the remedies which Putnam and Dana have found most useful were iron and other tonics.

The case which I have sketched manifestly corresponds in many of its features with those mentioned by the American authors whom I have quoted, and I publish these notes in the hope of drawing the attention of physicians in this country to this little-known form of disease.

An anonymous donor has presented to the county of Surrey a convalescent home for male patients, at Seaford, Sussex. It has been erected at a cost of £25,000, including £10,000 set aside as an endowment, and will accommodate fifty patients. The President is the Duke of Cambridge; the Vice-Presidents, the Duke of Connaught and the Duke of Teck.

The Hungarian Prime Minister has expressed himself as in favour of the proposal to hold the International Hygienic Congress of 1893 in Buda-Pesth.

ON THE TREATMENT OF ANEURYSM OF THE AORTA BY IODIDE OF POTASSIUM.

By GEORGE W. BALFOUR, M.D., LL.D., F.R.C.P.E.
Physician to Chalmers' Hospital.

In March, 1887, a clergyman entered my consulting room with the words: "I have been perfectly well for over a year; I have been doing half duty for the last three months, and, with your permission, I intend doing full duty henceforth." His history was as follows: On December 24, 1885, the Rev. W. A. called upon me, and gave me the following account of his case, written out by his own medical attendant, Dr. Gorman, of Rutherglen:

"On several occasions during the last few years, and at intervals usually of many months, the Rev. W. A. has been attacked with sudden disturbance of the heart's action. Generally this has occurred without any evident cause, and under various circumstances. When out visiting, when reading quietly at home, or when lying in bed, the heart would begin to beat more rapidly and forcibly, and this would go on increasing till the pulse rose to 140, and a jarring impulse was communicated to the whole body. This condition was accompanied by a distressing tight feeling in the chest, but there was no marked difficulty of breathing or feeling of suffocation. This would continue for a short time, and then subside so quickly that at the end of an hour not a trace of any disturbance was discoverable. Inhalation of nitrite of amyl gave no relief, but brandy always speedily brought the attack to a close whenever it was tried. When I saw him after the attack there was no unusual murmur, nor anything abnormal to be detected. Rather more than two months ago—October, 1885—had a cold with a raw throat and a slight cough, and for this he kept indoors for two days. Then early one morning he awoke—about 3 A.M.—with a feeling of suffocation, and a strong desire to cough; but the attempt to cough brought on a violent laryngeal spasm, under which he struggled for fully ten minutes, as I was informed, before he got relief. By the time I arrived the spasm was gone, his voice was a little rough, his pulse quick, and his whole body and bedclothes soaked with excessive perspiration. Early in the morning of the seventh day following this attack, Mr. A. had another and a more severe paroxysm of a similar character. During the interval he had been out of bed, but not out of his bedroom, and had been troubled with a little cough, which was, however, soft and loose. Eight days subsequently Mr. A. had a third attack, lasting longer and more severe than ever. After this there was more cough, and at the end of each cough an attempt at laryngeal stridor. At this time a child in the house began to cough suspiciously like whooping cough, and it was suspected that Mr. A. might have whooping cough. I heard him cough several times; there was no true whoop, not even a repeated coughing, but after one or two harsh expiratory sounds, a slight—not croupy—stridor was heard. I consulted with Dr. Joseph Coats, the pathologist, who is also an expert laryngoscopist. He only found slight increased vascularity of the larynx and of the rima glottidis. On getting out of bed to be examined by Dr. Coats, Mr. A. was seized with a fourth attack, slight and short in comparison to his previous paroxysms, as we were told. To me it seemed like a fit of whooping cough, the cough ending in laryngeal stridor, exactly like what is popularly termed a "dumb kink." Dr. Coats did not think the appearances in the larynx sufficient to account for the attacks; he thought there was slight dulness on percussion over the first rib on the left side close to the sternum, and was inclined to suspect a commencing aneurysm of the aorta pressing on the recurrent laryngeal nerve. The pulsation behind the left sterno-clavicular articulation seemed to him to be abnormally increased. No *bruit* of any kind could be detected, nor was the systolic sound at the cardiac apex markedly prolonged. Dr. Coats thought that the action of the vocal cords during inspiration was insufficient. I examined Mr. A.'s larynx on several occasions, both before and after this, but I never could detect paralysis of either of the abductors. The neck was swollen and puffy, the thyroid body large but soft. Fomentations were applied and iodine liniment painted on, which somewhat reduced this swelling.

"At first Mr. A. was treated with inhalations of steam, afterwards with steam from an infusion of hops, along with bromide of potass, etc. After the second attack he had a mixture of chloroform and ether to inhale, latterly chloroform alone, the hop inhalations being continued. The merest sniff of chloroform stopped the cough, and it was resorted to at once on the slightest sensation of laryngeal irritation. Mr. A.'s own impression is that but for the chloroform he would have many more of his distressing paroxysms. Dr. Coats, having the idea of aneurysm in view, prescribed large doses of iodide of potass, to which I had the less objection that it is often useful in asthma. At first I gave 90 grains in the day, combined with the bromide of potass; latterly he has been taking only 40 grains in the day. He has improved under this treatment. What we wish decided is the question of aneurysm and the condition of his heart."

This letter was brought to me by Mr. A. on December 24th, 1885. He seemed a strong, healthy-looking man of 49, with equal pulses at both wrists. The left side of the face was a little more puffy than the right, and upon stripping him, the left side of the neck, especially just above the clavicle, was seen to be markedly puffy compared with the right side; the apex beat was nearly below the left nipple. On percussion, the only abnormality detectable was that there was slight dulness in the first interspace on the left side, extending outwards for about half an inch from the sternum. On auscultation, no abnormal murmurs were anywhere detectable; the systolic sound in the mitral area was loud and distinct but well closed; the second sound in the pulmonary area was not accentuated; in the aortic area it was distinctly accentuated, and still more markedly so over the left sterno-clavicular articulation, the sternal end of the first rib on the left, and in the left carotid artery; over these parts also the systolic pulsation conveyed through the stethoscope was unusually forcible.

The lungs were healthy, no cough, only the history of laryngeal paroxysms, and no marked paralysis of the left vocal cord. Nevertheless, I considered the signs and symptoms to be sufficient to justify me in confirming Dr. Coats's suspicions and affirming the existence of an aneurysmal dilatation of the aorta, with a small bulging at its left, just where the left carotid comes off, chiefly in front but also extending slightly downwards, so as to distend the loop of the left recurrent laryngeal nerve upon any accidental rise in the blood pressure, and so initiate laryngeal spasm.

Many years ago I had a patient with a small aneurysm of the posterior part of the arch of the aorta, about the size of half a walnut, which in its ordinary condition pressed only slightly on the right bronchus, producing a slight rise in pitch of the percussion note all over the right lung, with comparative faintness of the breath sounds. When from any cause the blood pressure rose, the aneurysm dilated and pressed right across the lower part of the trachea, and in one of those attacks the patient died from suffocation; so that the idea of occasional paroxysm of laryngeal spasm due to a permanent cause of this character was quite justifiable. The localised dulness was limited but well marked; the swelling on the left side of the face and neck indicated the position of the tumour, chiefly on the anterior surface of the aorta, pressing upwards and outwards upon the innominate vein, blocking chiefly the current through the internal jugular vein, and that but incompletely, while the localised accentuation of the aortic second sound was quite sufficient to indicate the aneurysmal character of the tumour, the absence of a *bruit* being of no consequence, as intrathoracic aneurysms seldom have any *bruit*. The heart was nearly normal, being only slightly dilated and hypertrophied.

I recommended Mr. A. to resign his connection with the church, that he might be for ever removed from all the excitements of clerical life, including preaching. This he was unwilling to do, so in the meantime I recommended three months' perfect rest either in bed or on a sofa. Alcohol in every form was strictly forbidden, plenty of milk enjoined, and a good supply of plain nutritious food. To cure or even to improve an aneurysm the patient must not be starved, but well fed if he is to have any iodide. Starvation interferes with the cure, which is brought about not by coagulating the blood within the sac, but by hypertrophying the walls of the sac. Possibly the iodide may have some effect in producing hypertrophy of the fibrous tissues; indubitably its most important effect is to cause a permanent lowering of the intra-arterial blood pressure. An aneurysm is produced by an injury to the middle coat, or to the two internal coats of the artery, so that at that affected spot the walls of the vessel are enfeebled and distend under the influence of the normal blood pressure. But if we lower the blood pressure beneath the normal, then the vessel behaves itself like a hollow muscle opposed to an obstacle it can cope with—it no longer dilates, it hypertrophies. The pulsation and pressure symptoms diminish more or less completely, and the patient is restored to life and comparative comfort; and though perfect health is out of the question, it is remarkable how much exertion some of these patients are fit for. There is one old patient of mine who has plied as a cabman on the streets of Edinburgh for more than ten years, not only driving, but lifting luggage about without any trouble. Now and then he comes into Chalmers' Hospital for a week or two of rest and treatment, and then goes back to work.

To obtain so important an improvement it is not needful to give large doses of the iodide, but we must give enough. The proper course is to put the patient in the recumbent posture for a couple of days, so as to get his normal pulse in recumbency always five or more beats lower than when erect. Next we begin with five grains of the iodide of potassium (the iodide of sodium has not the same effect) in some bitter infusion, preferably chiretta, every eight hours; this dose is continued for two or three days, the pulse rate being taken at the same hour daily. After two or three days the dose of the iodide is raised to 10 grains every eight hours for three or four days, the pulse rate being carefully taken in the same manner. In this way the dose may be gradually increased until a dose is reached under which the pulse rate is found to rise, then we must stop the medicine for a day and go back to the previous dose. The moment the pulse rate rises the benefit ceases, and the constitution begins to suffer. Only seldom is it needful or advisable to raise the dose over 10 grains every eight hours; commonly enough 5 grains is quite sufficient. The maximum of benefit is obtained by a dose just below that which lowers the blood pressure so far as to cause the pulse rate to rise. Two, or at the most three, weeks is quite long enough to continue the remedy every eight hours. Afterwards it is sufficient to administer it every twelve hours, and to continue it from three to six months to put the patient in a very comfortable position. The length of time the remedy has to be continued depends very much upon the size of the aneurysm when the treatment is commenced.

Mr. A.'s case was an extremely favourable one; the aneurysm was obviously very small, and had not existed long. He never had another spasm after the treatment was commenced. On March 29th, 1886, I saw Mr. A. for the second time; the swelling of the face and neck was much lessened, but the local accentuation of the second sound and audible systolic local thump were still well marked. There had been no recurrence of the spasms. I advised the continuance of the iodide, with quiet life in the country for other three months. I saw him again at the end of the following June, when the aneurysmal signs were found to be very much modified; there had been never any return of the spasm, and he was practically well. I saw no more of Mr. A. till March, 1887, when he saluted me with the words with which this history is commenced. I never saw him again, and his subsequent history is a somewhat sad one. After thirteen months' silence Mr. A. commenced to preach half the day—that is, to take one full service including a sermon each Sunday—visiting the sick for a few hours daily during the week. Gradually, as his strength returned, he increased his labours, doing full duty, including two sermons each Sunday, besides his weekday work. In this way he succeeded in rebuilding his large congregation. During February, 1889, he had a week of evangelistic meetings addressed by a friend, at all of which, however, he was present, taking part in the prayers only. Towards the close of these meetings, on February 22nd, he came home about 10 P.M., in the highest spirits. He took supper, read a little, and went to bed. Shortly after 11 he awoke with a headache, asked his wife to sponge his head, and before she could get vinegar and water for the purpose he was speechless, was paralysed on the right side, and speedily became unconscious. He died after fifteen hours' illness,

during the last three of which he was violently convulsed. It is possible that this seizure was embolic in character, but considering that during the last year of his life he had been getting stouter, and that he had been complaining very frequently of severe headaches, it seems much more probable that his sudden death was due to rupture of a vessel, induced by the mental excitement of the few last days of his life. I regret there was no *post-mortem* examination. His father, I may mention, had an apoplectic seizure at the same age (52), which he survived for ten years, crippled by paralysis. It is very satisfactory to note that so far as the aneurysm is concerned he was practically cured and restored to usefulness, having had no recurrence of his serious symptoms from the moment he was put under appropriate treatment. The completeness of the cure of course depended largely upon the patient having put himself under treatment at an early period of his disease, and this again was due to the severity of his symptoms. But even when an aneurysm has made much greater progress than in Mr. A.'s case, the treatment by iodide of potassium, properly carried out, is capable of relieving suffering and prolonging life.

At this moment I have under my care a lady who, twelve years ago, was found to have an aneurysm springing from the upper part of the descending aorta, pressing backwards and projecting with a fluid pulsation through the ribs, between the left scapula and the spine. The tumour was not only eating away the ribs, but into the spinal column and pressing on the nerve roots. Numbness and tingling were constantly present on the left side, and every now and then acute nerve storms of almost unbearable pain shot through the nerves up the neck and down to the finger tips and points of the toes, also round the left intercostals, and often terminating in a violent fit of uncontrollable sickness. Unfortunately there was not a single narcotic in all our then repertorium that the patient could tolerate; one after the other was tried in vain, they only complicated matters and made the patient worse. By-and-by, however, the iodide told, the sac began to contract and the pressure symptoms to diminish, the sufferings gradually and slowly ceased. Bedridden for ten years, and often suffering the most intense agony, the patient for the last two years has been moving about free from pain, except when this is excited by some accidental twist or over-exertion. All the objective signs of the aneurysm are still evident enough, though modified from what they were. The pulsating tumour is diminished in size and firmer in character, and the subjective symptoms have slowly and gradually disappeared, coincident with the shrinking of the sac. There could not possibly be a case more instructive, or one in which the remedial powers of the iodide of potassium could be more severely tested or more evident.

APPARENTLY SUCCESSFUL CULTIVATION OF THE BACILLUS LEPRÆ.

By A. A. KANTHACK, M.B., B.S., F.R.C.S.,
AND
Surgeon-Major A. BARCLAY, M.B.,
Members of the Leprosy Commission.

[*A Preliminary Communication.*]

We have succeeded in isolating and cultivating from leprous tissues, removed under all aseptic precautions from patients *intra vitam*, a bacillus which may fairly claim to be the true bacillus of leprosy. The original material was obtained from three lepers, whose ears were enormously thickened. In each of the three cases the lobe of the ear was cut off with sterilised knives, after all the parts had been scrupulously cleaned in the ordinary manner. Then the removed mass, which was about as large as a good-sized pigeon's egg, was divided into two parts with another sterilised knife, and from the centre of the mass a small piece was removed and at once dropped into ordinary nutrient *bouillon*. Three tubes were thus charged, one from each case. One of the tubes became contaminated with the staphylococcus albus, but the other two remained pure and have given the same results.

Examining these two latter tubes three days later, the *bouillon* was seen to be clear, and cover glass preparations showed free bacilli, morphologically identical with the bacilli of leprosy, which also resisted the decolorising power of nitric or hydrochloric acid; in fact, they could easily be stained by the Koch-Ehrlich method. No other bacilli could be discovered by the microscope, and subsequent agar-agar plate cultivations showed this bacillus alone to be present in the *bouillon*. A glycerine agar tube was now inoculated and kept at body temperature for several days. After twenty-four hours a minute colourless transparent nodule resembling a dewdrop was noticed on the surface of the agar, and by the fourth day slight growth in the depth of the nutrient medium was visible. The interstitial growth never, not even after weeks, became very well marked, the bacillus being strongly aërobic. By the fifth day the surface of the agar was covered by a greyish-white pellicle, resembling dew-drops. The microscope at this stage revealed a small and slender bacillus, which reacted to Koch-Ehrlich's method of staining, and undoubtedly was a pure cultivation of the bacillus found in the *bouillon*. It differed from the leprosy bacillus as found in the tissues in this: that (*a*) it took up aqueous methyl blue much more rapidly, and (*b*) did not retain the fuchsine with such tenacity; otherwise, morphologically and in other respects, it resembled this bacillus closely. Stained by Gram's method, the gentian violet was well retained.

The other *bouillon* tube which had not been contaminated gave exactly the same results. Several agar tubes were now inoculated from the original growths on agar. It was, however, found that though at first the bacilli reacted well to Koch-Ehrlich's method, they gradually lost this power. With advancing age, however, they regained it more or less, and now, that is, after a month, in every specimen a goodly number of bacilli is found to retain the red stain well.

It was soon ascertained that the bacilli grew exceedingly well at the ordinary (Indian) temperature, and this facilitated matters much. Gelatine and glycerine *bouillon* tubes were now inoculated from the original agar cultivations. The gelatine soon liquefied, and after a week or so a pellicle like the one on the agar covered the liquefied gelatine. Before the pellicle was formed, the bacilli did not react well to the Koch-Ehrlich method of staining. But as soon as the pellicle was well marked, the great majority of them reacted well, and the bacilli in fact were unmistakably like the leprosy bacilli in the tissues, and they now took up the methyl blue less rapidly, as before. In the glycerine *bouillon* tubes also a week or ten days later a similar pellicle was observed, the *bouillon* remaining clear, and the liquid in the immediate neighbourhood of the pellicle being mucoid and ropy. The bacilli in their morphological and chemical characters were identical with those obtained from the gelatine. It was found that as soon as this pellicle was well marked on either gelatine or glycerine *bouillon*, then the Koch-Ehrlich reaction offered most success, and aqueous methyl blue the worst. It must, however, be remarked that in some specimens the fuchsine was rather badly retained, in others almost all bacilli retained it well. Gram's method always gave good results at this stage.

On potatoes, which were sterilised in test tubes, and prepared according to the methods recommended by Roux and Hueppe, not even after four weeks was any growth visible. As potatoes are in the majority of cases acid, a growth was attempted on neutral and faintly alkaline potatoes, but with no result. Eggs, inoculated after the manner employed by Professor Max Wolff (Berlin) for actinomyces are at present under observation; and animals are likewise being experimented on. The bacilli, as might have been expected, showed, in a hanging drop, sluggish spontaneous movements.

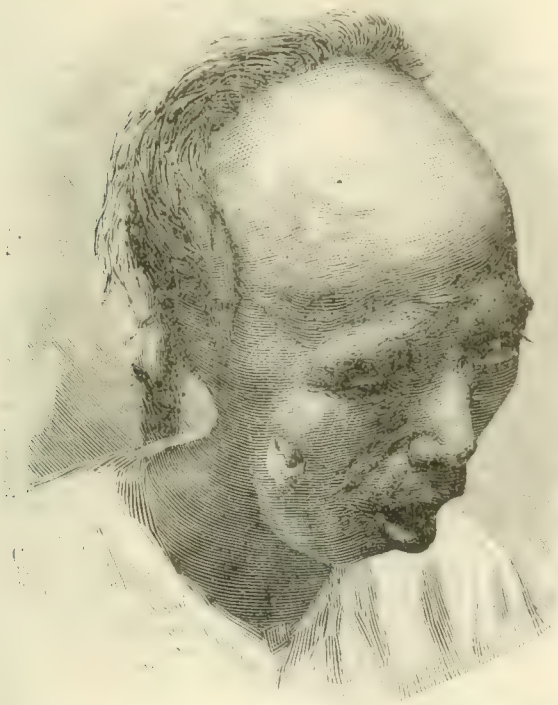
We consider our bacillus to be a pure cultivation of the bacillus lepræ, for the following reasons: (*a*) The manner in which the material was obtained excluded contamination from outside; (*b*) two cases under exactly the same conditions gave absolutely identical results; (*c*) in the original tubes free bacilli, which undoubtedly were leprosy bacilli, were found, and these gave rise to a growth on agar-agar, which, chemically and morphologically, agreed with the bacillus of leprosy with the slight differences stated above; (*d*) cultivations on gelatine and glycerine *bouillon* were still more convincing.

Animal experiments have not given definite results as yet, but it must be remembered that such in the case of leprosy are always conducted with great difficulty. Even implantation of tissues into animals has only once been successful in the hands of Melcher and Ortmann, of Königsberg. We are thus, necessarily to a great extent, tied down to reasoning from chemical and morphological phenomena. And, as far as these are concerned, we think that we may claim more for our bacillus than Uffreduzzi, Giantureo, and Boinet before us could do. There seems to be no doubt that the staining reaction, to a great extent, depends on histological and chemico-physiological changes, and it may be fairly hoped that in time we may succeed in making our bacillus as resistent against nitric acid (20 per cent.) as the bacillus in the tissues. In conclusion, we wish to state that tubes have been despatched to several Continental laboratories to invite the criticism of authorities like Professors C. Fraenkel and Baumgarten, and that we hope shortly to give a more detailed account of our work.

UNILATERAL ABSENCE OF EAR, BILATERAL SUPERNUMERARY AURICLES, AND DEVELOPMENTAL DEFORMITY OF RIGHT SIDE OF FACE AND FEATURES.

By JAMES CANTLIE, F.R.C.S.,
Hong Kong.
[Formerly Assistant Surgeon to Charing Cross Hospital.]

MAN A FOOK, Chinese male, aged 38; previously a silk worker in Canton, but now a beggar in Hong Kong, not from inability to work, but from being thrown out of employment owing to the works having been burnt twelve months ago.



Front View.—1. The face is observed to be oblique, owing to the lower jaws projecting downwards on the right side. 2. The forehead is seen to remain smooth when the left is wrinkled. 3. The right eyebrow is placed three-quarters of an inch lower than the left. 4. The right eyelid aperture is a mere slit. 5. The right eyeball is undeveloped, its place being held by a mere immovable stump of connective tissue. 6. The right nostril is almost infantile. 7. The mouth droops to the right, and is drawn to the left in attempts to whistle. 8. The right naso-labial line is present not from muscular action, but owing to the oblique development of features.

The Right Side of the Head shows: 1. Absence of any trace of the ear in the usual position; instead the skin is quite smooth, the mastoid process is unnaturally prominent in consequence, but smaller than normal. 2. The zygoma is absent, and the malar bone presents a small nodule, cartilaginous to the feel, at the spot where the zygoma ought to join it. 3. There is no temporal muscle. 4. The pterygoid ridge of the sphenoid can be felt close to the skin. 5. There is no masseter muscle. 6. Most interesting of all, the coronoid process of the lower jaw is undeveloped, the ramus running up as a mere round rod to support the condyle. 7. One inch and a half in front of the tip of the mastoid process, and one inch below the level of the same, is a heap of tough subcutaneous (probably cartilaginous) tissue, with a depression or concha near the centre. This might be regarded as the representative of the normal ear; but that it is not so may be seen by examining and studying the conditions met with on the left side.

The Left Side shows a perfect ear, but in front and below the tragus, and below and in front of that again are subcutaneous tough tissues with a central concha-like depression, almost identical with the excrescence on the right cheek.

The excrescences are almost identical in appearance, position, and apparent structure; and one is forced to the conclusion that, whilst the left is present with a perfectly developed ear, and the right side shows no other structure, therefore the right ear is totally absent.

There is no hearing on the right side, and sight, smell, and taste are absent. The right side of the tongue is smaller than the left, the right upper jaw seems compressed, the right Eustachian tube cannot be felt through the mouth, and the right palate is immovable, and speech is seriously interfered with, the patient speaking with a mumble, and almost all articulation is by lower jaw movement, and not by the tongue or lips.

The hyoid bone is present. The limbs are symmetrical. Circumference of the skull, which is fairly symmetrical, 19½ inches; cross measurement from mastoid to mastoid, 13 inches. Both measurements are considerably below the average.

The conclusions are: 1. That the right ear is entirely absent. 2. That the excrescences upon either cheek represent embryonic attempts at ear formation which by some restraining influence were wholly stopped, but that, whilst all further attempt failed on the right side, a complete ear was developed on the left. 3. That the excrescence on the right side is in no way representative of the right ear, as an almost exactly similar excrescence exists on the left side with a completely perfect ear; therefore, that the homologue of the left perfect ear is altogether absent on the right side, but that the homologue of the left excrescence or accessory auricle is met with as the right excrescence or accessory auricle. 4. That it is unique, as no case of entire absence of the ear has been recorded. 5. The conclusion as to the developmental condition appears to be that a local arrest took place during the development of both ears at the upper end of the first post-oral cleft, ending in the production of the accessory auricles met with on either cheek. That the causes of the arrest were withdrawn on the left side, whilst they obtained upon the right. 6. That the first post-oral cleft had on the left side extended beyond the seat of the first attempt of a new ear development begun upon the freshly formed part of the cleft. That on the right side no growth or extension of the cleft took place, therefore further attempts were impossible. 7. The nature of the developmental change in the petrous bones were probably of an ossific nature, preventing the possibility of the epiblastic depression necessary for the formation of the different regions of the ear. 8. That the facial nerve was never formed, accounting not only for the absence of right facial movement, but also for the absence of the development of the right muscles of mastication, owing to the motor supply of the facial nerve to the ganglion being undeveloped. 9. That some local obstruction to development during the early weeks of fœtal life took place in the middle fossa of the right side of the skull, interfering with the formation of the eye and ear. The condition does not seem to be the result of cerebral but of cranial trouble.

A NEW METHOD OF INJECTING FLUIDS INTO THE PERITONEAL CAVITY OF EXPERIMENTAL ANIMALS.

By W. F. STEVENSON M.B., M.Ch.Dub.,
Assistant Professor of Military Medicine;
AND
DAVID BRUCE, M.B., C.M.Edin.,
Assistant Professor of Pathology; Royal Victoria Hospital, Netley.

When injecting fluids in the ordinary way into the peritoneal cavity of experimental animals there is a danger of wounding the intestines with the point of the hypodermic needle. We have therefore been led to try a method which seems to reduce this danger to a minimum, a short description of which we now propose to give.

The needle used (Fig. 1) is curved in shape, its anterior half

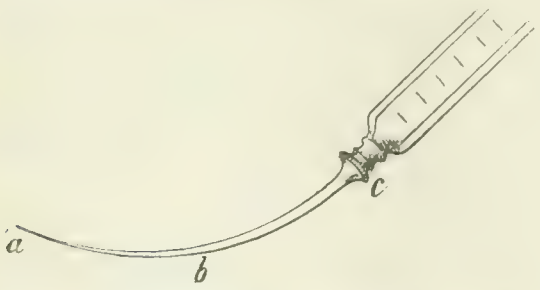


Fig. 1.

(*a* to *b*) is solid and needle-pointed, its posterior half (*b* to *c*) hollow. At *b* there is a small hole through which the fluid flows. Of course it is immaterial what syringe or injecting apparatus is used with this needle. After filling the syringe with the fluid it is desired to inject, the fore and hind extremities of the animal—for example, guinea-pig—are held by an assistant in such a way as to make lax the abdominal parietes. The experimenter then with his left forefinger and thumb (Fig. 2) pinches up the abdominal wall, taking care to



Fig. 2.

include the peritoneum and to exclude any coil of intestine. The assistant now reaches forward his left forefinger and thumb, and seizes hold of the abdominal wall in close proximity to where the experimenter has pinched it up. The point of the needle is driven through at the point *a*, so as to bring the central opening of the needle into the middle of the pinched-up tissues.

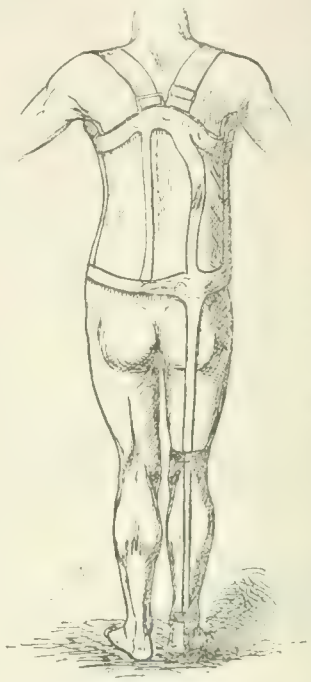
On relaxing the pressure of the fingers the abdominal wall opens out on the needle, leaving the point still projecting through the skin and the hole in the peritoneal cavity. After a sufficient quantity of the fluid has been injected, the abdominal walls are again approximated and the needle withdrawn.

MEMORANDA;

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

SPINAL CARIES ASSOCIATED WITH HIP DISEASE.

The association of hip-joint disease with caries of the spine is probably not of frequent occurrence, yet that it does occur from time to time no further proof is needed than the fact of my having had three cases within the last two years.



The following diagram illustrates a mechanical support which I have found useful, since it enables the patient to be up and about on crutches. As the usual plan has been to keep such cases in bed for a considerable time, it seemed to me that it might be worth while mentioning the method I have employed. The plan adopted is to give the patient absolute recumbency until the acute symptoms have subsided, and then to apply the splint, which it will be seen consists of a spinal jacket with a Thomas's hip-splint fixed to it. One of my patients is so far well as to be able to get about without any artificial support, and another has been able to have the hip-splint detached, but is still wearing the spinal support. The great advantage of this apparatus is that the general nutrition of the patient does not suffer during the time that the diseased spine and hip have absolute rest.

Leeds. A. W. Mayo Robson, F.R.C.S.

A CASE OF SANTONIN POISONING.

The following case appears worth recording, on account of the infrequency of cases of santonin poisoning and of the comparative smallness of the dose, although cases of poisoning with even smaller doses are not unknown.

About 11 P.M. I was called to see a little girl, aged 3½ years, who was said to be delirious, the chief symptom of the so-called delirium being the fact that she declared everything in the room looked like grass. This appeared to be particularly true with regard to those objects which were blue—for example, she said that there was grass in her mother's eyes, which were blue. On examination, nothing abnormal could be detected, save some slight vulvitis; the temperature was normal and pulse 80, heart and lung sounds clear, pupils equal and slightly dilated, no diarrhœa, no prostration, and no rash. The child had vomited once about half an hour before I arrived; tongue slightly coated. There was no true delirium, and the patient answered rationally in all respects except as to colour. The majority of articles about the room were said to be green like grass; but whilst this was by far the most predominant colour before the child, articles were seen in other colours (but always false) besides green; for example, a white pillow-case was said to be yellow, red was invariably called green. In a normal condition the child was able to name rightly the chief simple colours. On inquiry, I found that about 7 P.M. she had been given a worm powder, the prescription for which was R P. santonin. gr. iij, p. sacch. alb. gr. iij, ft. pulv. i. During the night incontinence of urine occurred, the urine itself being of an intense saffron colour, and staining everything with which it came in contact. Next

morning the child was quite well and saw things in their natural colour. The powder had been accurately dispensed, and the santonin itself was fresh and of the usual white colour.

Brondesbury, N.W. J. Anderson Smith, M.D.Lond.

A SINGULAR CASE OF SELF-MUTILATION.

J. C., aged 17 years, an epileptic imbecile of very low order of intelligence, was found by an attendant, in the ward lavatory, bleeding from the mouth and with his fingers down his throat. On being questioned as to what he was doing, he said he had gone for a drink, but was seized with "lock-jaw," and could not open his mouth; in order to do so he passed his fingers down his throat and pulled forcibly, when he felt something give way. He then found that he was bleeding, and became frightened.

When seen soon afterwards the bleeding had ceased; he complained of "lock-jaw," but did not seem to have any difficulty in opening his mouth or swallowing. On examination it was found that he had torn the soft palate almost completely away from its attachment to the fauces on the left side, the only part remaining intact being near its junction with the hard palate, where the shining tendinous fibres of the tensor palati muscle that pass round the hamular process could be distinctly seen.

When I questioned him about the injury he said he was trying to get stones out of his throat; he had got one out and could feel another there; and it was in trying to reach that one that he hurt himself. I need hardly say that no stones were ever found, nor any evidence of their presence; in fact, on different occasions, he varied his account considerably, but would never admit that he did it purposely; and the nature of the injury and the attendant circumstances seem to warrant the conclusion that it was accidental, not deliberate.

Under appropriate treatment the wound healed rapidly, without any untoward symptoms. At no time was there enough swelling of the parts to cause any difficulty in breathing or swallowing, nor did fluids at all tend to pass up into the nose.

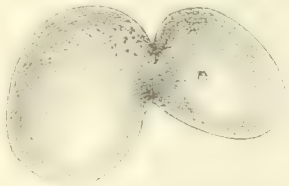
In conclusion I have to thank the medical superintendent for his permission to make use of the case books, and for his assistance in preparing this note. E. A. Milner, M.B.

Metropolitan Asylum, Leavesden, Herts.

AN UNUSUAL DIFFICULTY IN LATERAL LITHOTOMY.

A boy, aged 2½, was brought to me suffering from prolapse of the anus. So constantly was this condition present and so characteristic was its history, that I had little doubt its true cause lay in the presence of a vesical calculus. The sound confirmed this belief, and demonstrated the presence of a comparatively large stone. As in somewhat similar circumstances I have had happy experience of the suprapubic operation I meant to employ it here, and with this in view I sought and obtained the able assistance of Dr. Frank and Dr. Charles Battersby. The child being deeply under chloroform and the prolapsed rectum returned, the rectal bag was introduced and slowly distended, but it was violently expelled. In children, however, the bag is not always absolutely necessary, and the injection of the bladder was at once proceeded with. But here the same difficulty arose. With repeated and careful efforts the bladder dulness never rose more than a finger's breadth above the pubes, and even then the small amount of fluid retained was quickly returned. For the first time I realised the force of M. Guyon's dictum, that in some such cases the sensibility to contact can be suppressed but not the sensibility to distension; and, fearing the possible production of injury to the vesical walls, the boy was placed for lateral lithotomy.

On a No. 1 curved staff the bladder was readily opened, and before the instrument was withdrawn (here following the valuable lesson learned from Mr. Cadge), a straight pair of dressing forceps with hollowed blades was introduced by its side. By means of their expansion the vesical outlet was well dilated, and then the stone was seized. Efforts at extraction were, however, futile, even when the grip had been more than once altered; so, withdrawing the forceps, the finger was introduced. Then the difficulty was revealed, for, lying close upon, but somewhat transversely as regarded the neck, was a twin stone, the smaller division of which was the nearest. I was unable to turn it sufficiently to catch it lengthwise, and thus perhaps fracture the line of junction: and as I had unhappily no lithotrite at hand, it occurred to me (as there seemed a difference in the plane of the halves of the stone) that were I able to grasp it with strong forceps obliquely across its entire surface, I might in that way crack its union. With this intention the tissues of the neck were divided in the direction of the first incision to the extreme limits of prudence, and, although this gave working space, the stone remained unbroken.



The forefinger was then hooked round the gap in the stone, and the extremity of the thumb being thrust deep into the rectum the calculus was split in two. Its parts were then easily removed, and were found afterwards to weigh respectively 86 and 45 grains. Somewhat smart hæmorrhage from the deep part of the wound necessitated the insertion of a full sized tube and tampon, which was withdrawn on the following day.

Convalescence was rapid and satisfactory, and the boy passed his urine entirely by the urethra on the sixth day after he was cut. The woodcut represents the stone in its primary form. John A. Macdougall, M.D., F.R.C.S.Ed.

Consulting Surgeon to the Cumberland Infirmary.

URETHRAL AND VESICAL CALCULUS.

Latteh, a Hindu, aged 26, came to the Muttra Dispensary with symptoms of stone in the bladder, and stated that for the past ten years he had been passing gravel (off and on), and that latterly it was with the greatest difficulty that he managed to pass urine at all.

The patient was anæsthetised, and an attempt made to pass a sound into the bladder; its passage, however, was stopped by a calculus situated in the urethra. The stone was so firmly impacted that I was unable to move it one way or the other. The tissues surrounding the object were grasped between the index finger and thumb of the left hand, whilst with the right I made a free incision on to the stone, of course laying open the urethra. The stone was encysted, and had to be dissected out from its adherent tissues. After removing it the sound was easily passed into the bladder, and immediately came in contact with several calculi; these were now removed by lateral lithotomy. From the bladder three pieces were removed which, by their facets, showed that they had originally combined to form one stone; the portion removed from the urethra had also belonged to the original stone.

After the operation a catheter was passed into the bladder, and the cut urethra carefully stitched with horsehair over the instrument, the sides of the external wound being only partially approximated. The lithotomy wound was treated as usual. In thirteen days the patient was discharged completely cured. Six days before his discharge I saw the patient, and then the urethra wound was almost completely healed, and my assistant surgeon, Babu Massmohan Dass, informs me that when he left the dispensary he was perfectly cured, and passed his urine normally.

The case is interesting in that the patient did so well under the double operation, and more especially because of the satisfactory result of the urethral wound.

J. Fayrer, M.D., F.R.C.S.E., M.S.

Dr. A. Tucker Wise, against whom, it may be remembered, the Swiss law as to medical practice by foreigners had been invoked in the Grisons, has recently obtained the Swiss Federal medico-chirurgical diploma after examination, and is now free to settle in Davos.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

STRANGULATED EPIDIDYMIS OF INCOMPLETELY DESCENDED TESTIS PRODUCING SYMPTOMS LIKE THOSE OF STRANGULATED HERNIA: CASTRATION: CURE.

(Under care of Mr. CONNELL WHIPPLE.)

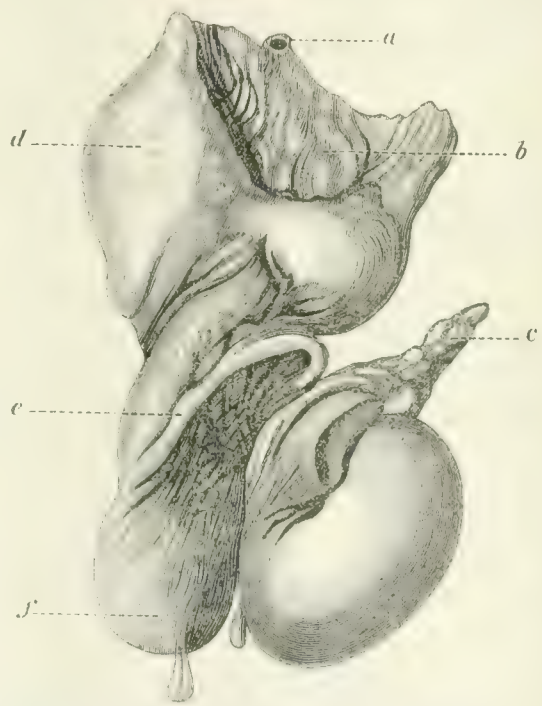
[Notes by W. GIFFORD NASH, House Surgeon.]

A. H., aged 16, was admitted on January 21st, 1891, at 4.45 P.M. He stated that for seven or eight years he had noticed a lump in his left groin, which occasionally disappeared within his abdomen. This he believed to be his left testicle. The day before, at 4 P.M., he strained himself, and felt something give way in the left groin. At 2 A.M., on the 21st, he noticed a lump in the groin, and at 8 A.M. began to vomit. He consulted a medical man, who diagnosed a strangulated hernia, and sent him to the hospital with a note to say he had had stercoraceous vomiting. Bowels acted slightly, at 2 P.M. to-day, before that two days ago.

On Examination.—In the left groin is an hour-glass shaped swelling. The lower half of this is the left testicle, lying in the upper part of the scrotum. The upper, lying over the external abdominal ring, about the size of a hen's egg, is very tense, quite dull on percussion, and gives no impulse on coughing.

The pubes was shaved and washed, and at 5.15 P.M. methylene was given. Mr. Whipple made an incision over the upper swelling, and a dark-coloured tense sac was exposed. This was opened, and some blood-stained fluid gushed out. A dark claret-coloured coiled mass presented, and after careful examination this was made out to be a much-enlarged strangulated epididymis. Lying in the lower half of the sac was the body of the testis, about normal size, and attached to it and forming a circle round its hilum was a band of omentum. This tag was torn through, and the proximal part of the omentum, which was unaltered in appearance, was returned within the abdomen through a large inguinal canal. The epididymis appeared to be twisted twice on its own axis. This was pulled down and untwisted. The epididymis was ligatured as high up as possible, and it and the testis were removed. The pedicle was dropped back into the abdomen. The sac was ligatured in two halves, and cut away, and the pillars of the external abdominal ring sutured. A small tube was inserted, and the wound sutured. On January 24th the tube was omitted, and on January 27th the sutures removed. The patient got up on February 2nd, and was discharged on February 7th.

The specimen removed was sent to the museum of the Royal College of Surgeons of England, where Mr. J. H. Targett very kindly examined it and reported as follows: "The preparation consists of the body and epididymis of the left testis, and the adjacent portion of the mesorchium. The relations of these parts are well illustrated in the accompanying woodcut. The body of the testis is normal. Between it and the globus major *(f)* there is a deep groove, at the bottom of which lies a loop of omentum, which completely, but not tightly, encircles the attachment of the body of the testis to the epididymis. The torn end of this loop of omentum is marked (*c*). The mesorchium (*b*) measures nearly two inches across, and is irregularly swollen on either side from distension of the vessels and extravasation of blood between the layers of the peritoneum (*d*). The position of the vas deferens is indicated at (*a*). At the junction of the mesorchium and epididymis, in the position of the globus minor, there is a well marked constriction, which appears to have resulted from a severe twisting of the epididymis upon the mesorchium. To this torsion the acute strangulation of the epididymis was probably due, as well as the hæmorrhage into the fatty tissue of the mesorchium."



a, Vas deferens; *b*, mesorchium; *c*, tag of omentum; *d*, hæmorrhage into mesorchium; *e*, digital fossa; *f*, globus major.

REMARKS BY W. GIFFORD NASH.—There seems to be no doubt that this was a case of strangulation of the epididymis, and not traumatic or gonorrhœal inflammation. The strangulation was caused by swelling, due to twisting of the epididymis (mesorchium). The seat of strangulation was the external abdominal ring. The epididymis, as is usually the case in these misplaced testes, did not assume the usual canoe shape or bear its usual relations to the testis. The body of the testis itself was not altered in appearance. The cause of the incomplete descent of the testis, no doubt, was the band of omentum which surrounded the hilum of the testis. I have looked through the *Surgeries* of Gross, Ashhurst, Holmes and Hulke, Erichsen, Bryant, and Heath, and cannot find any similar case of strangulation by torsion of the epididymis; but several instances of inflammation of misplaced testes are recorded, one or two of which gave rise to very similar symptoms. Curling[1] mentions a case in which a testis in the groin became inflamed, was mistaken for a strangulated hernia, and operated on. When the nature of the case was discovered castration was performed. Jacobson[2] relates two cases of inflamed testes in groin, one of which proved fatal from peritonitis. With regard to the diagnosis of strangulated hernia in our case, the existence of an hour-glass shaped swelling in the groin, the lower half of which was the testis and the upper a tense, elastic swelling, giving no impulse on coughing, lying over the external abdominal ring, and extending along the inguinal canal, taken with the general symptoms of strangulated hernia, pointed very strongly to this being the nature of the swelling.

[1] *Diseases of Testis*, p. 88.
[2] Holmes and Hulke, *System of Surgery*, vol. iii, p. 470.

MEDICINE AND MUNICIPALITIES IN SPAIN.—At the municipal elections, held in Spain on May 10th, members of the medical profession were among the successful candidates in some of the most important centres of population. In Madrid Dr. Esquerdo, the distinguished alienist; Dr. Menendez Tego, a well known balneologist; Drs. Novellas and Díaz Argüelles, and several other medical men were elected. It is of good augury for the future of sanitary progress in Spain that medicine should be so well represented in the public bodies in whose hands is the guardianship of the public health.

GUY'S HOSPITAL.

TWO CASES OF ANGULAR CURVATURE: PARAPLEGIA: LAMINECTOMY: RECOVERY.

(Under the care of W. ARBUTHNOT LANE, M.S., F.R.C.S., Assistant-Surgeon to Guy's Hospital and to the Hospital for Sick Children, Great Ormond Street.)

CASES of paraplegia consequent upon spinal disease which have been treated by operative measures, and with success, are still of sufficient rarity to merit being put on record, since it is only by a considerable familiarity with the varying symptoms presented by each that one can hope to separate clinically those cases that are likely to be benefited by prolonged rest in the recumbent posture from those demanding more or less urgent surgical interference.

In one of two[1] successful cases I recently published, a very brief delay would probably have been followed by a rapidly fatal result. The cases that form the subject of this brief communication form a suitable pendant to the other two. It is interesting to note that the mode in which the cord is compressed in consequence of disease of the spinal column varies widely; in two of these cases the cord was jammed between fixed bony points, while of the others, in one it was crushed by a caseating tuberculous mass of granulation tissue, and in the other by the wall of a large abscess.

CASE I.—W. S., aged 16, was admitted on August 29th, 1890. He had been under the care of Dr. Hugh Stott, to whom I am indebted for the earlier history and progress of the case. The boy's family history was very good. Three years ago he fell from a window 20 feet from the ground, striking his side. He was not much hurt, and was able to continue his work on the following day. A year ago he noticed a pain in his back. It was at times very severe, but did not prevent him following his occupation. In November, 1889, he found that there was a projection in his back. He was treated with a Sayre's jacket, which he wore for three months. It was not reapplied, and he managed to get about with difficulty. In March, 1890, he began to lose power in his legs, especially the left. This gradually increased, till he was able to perform no voluntary movement of his lower extremities, and sensation in the legs and abdomen was very much impaired. He had occasional trouble with the sphincter of the rectum. From March till his admission he was treated by rest in the recumbent posture.

On admission the boy had no power of voluntary movement over his legs. His abdomen was distended, and when he coughed the abdominal muscles did not contract. The abdominal reflexes were absent. Knee- and ankle-clonus were very marked. There was no plantar reflex. Sensation up to the level of the sixth rib was much impaired, but not absent, except around the left knee. The spinous process of the fifth dorsal vertebra formed the apex of a rather abrupt angular curve.

On September 1st the spines and laminæ of the fourth, fifth, and sixth dorsal vertebræ were exposed and removed. The cord was then found to be splayed out over the firm wall of a tense abscess cavity, which came into relation with its anterior surface. On opening this abscess a large quantity of curdy material welled out, and on introducing a sharp spoon it passed into a cavity in and about the bodies of the dorsal vertebræ as large as a tangerine orange. It contained caseous matter and comparatively large fragments of necrosed bone. These were removed, and the cavity was filled with glycerine and iodoform. A drainage tube was left in the skin wound for thirty-six hours, and when the second dressing was removed on the eighth day the wound was found to have healed perfectly. Sensation and movement returned very rapidly, a marked improvement being observed within forty-eight hours of the operation.

The amount of movement and sensation increased steadily up to a certain point, the patient being able to move the legs with ease. After a time, however, the amount of voluntary power diminished, and finally almost disappeared, though sensation remained but little impaired.

A second operation showed that the cord was surrounded by abundance of caseous material, which had extended into the muscles and parts in the vicinity for a considerable distance. As much as possible of this material was removed, but with little benefit, the patient leaving the hospital in a condition only a little better than that which existed before admission.

CASE II.—The second case was sent to me by Dr. Bernard Scott, of Bournemouth, as he considered the condition to be one only likely to be benefited by operative treatment. It resembled the first of my four cases, in that the cord was compressed between two bony points, the existence of the possibility of which is denied by most pathologists. Another point of great interest about the case is the fact that, though the cord seemed to be very much reduced in its antero-posterior diameter at the seat of compression, yet the patient recovered movement with greater rapidity than did the others. K. B., aged 21 years, was healthy till four years ago, when she had a large gland in the neck. About this time she fell downstairs hurting her back. Two months later she had pain in her back, and could not sit up in a chair. After some weeks' rest in bed she was able to walk about without pain. About two and a-half years ago she noticed a prominence of the back. At the same time time her right knee-joint became swollen and painful. About Christmas, 1889, she first lost power in the left leg, and later sensation became much impaired in it. After the same changes had developed in the left leg as in the right, she was placed in the recumbent posture for about seven weeks without benefit. She was admitted on October 28th, 1890. She was a very delicate-looking girl, and had pulpy change in her right knee-joint, the knee being dislocated backwards a little. There was a distinct projection just below the centre of the dorsal spine. It was peculiar in that the spine of the tenth dorsal, with those of the subjacent vertebræ, was displaced forwards, lying in a plane which was considerably in front of that occupied by the spine of the ninth dorsal vertebra. The feet were blue and cold. She was able to perform no movement of the legs; and, with the exception of some slight vague sensation on sticking a pin into the sole of the foot, she could not feel in her lower extremities. She had no consciousness of the position of her legs. There was plantar reflex, ankle-clonus, and depressed patellar reflex on the left side. No ankle-clonus or plantar reflex was present on the right side. Sensation of an imperfect character was observed over the abdomen. There was no line of hyperæsthesia. The abdominal reflexes were fairly marked.

On November 5th the spinous processes and laminæ of the ninth, tenth, and eleventh dorsal vertebræ were exposed and removed. It was found that the cord was compressed very forcibly between the body of the tenth and the lamina of the eleventh dorsal vertebræ, a very abrupt and considerable change in its antero-posterior diameter being observed in consequence. A drainage tube was left in for forty-eight hours.

On the day following the operation, though there was no perceptible improvement in sensation, the patient insisted that her legs felt different to what they did before.

On November 12th she could distinguish between hot and cold, but could not localise the place touched with any certainty. Painful spasms in the legs commenced, and her pulpy knee gave her pain when it was flexed.

On November 20th she made movements with the muscles of the left leg, and the sensation in both limbs had improved.

On November 30th she could move the muscles of both legs freely, but was unable to move the right knee, as it was very painful. The left she could flex and extend without any difficulty. Sensation was apparently normal in both legs. The right knee-joint, which was completely disorganised, was excised with an excellent result.

About five months after the first operation complete paraplegia again developed with much rapidity, and was accompanied by cystitis. The cord was exposed without delay, and was found to be splayed out over a tense abscess. This was freely opened; much pus, curdy material, and carious bone were removed from the bodies of three vertebræ, and daily injections of iodoform and glycerine were introduced into the cavity through metal drainage tubes, which were removed after several weeks. The girl recovered complete voluntary control over her legs. I am now waiting for the diseased bones to ankylose firmly before sending her home.

[1] BRITISH MEDICAL JOURNAL, April 26th, 1889; *Lancet*, July 30th, 1890.

I have now operated on 8 cases, all of which were very bad subjects for operation, since they were very feeble, some having tuberculous disease in other parts as well. Of these, 1 died from hæmorrhage from a polypus in the rectum while the spinal condition was progressing in a most satisfactory manner; 1 (W. S.) relapsed, and was only slightly benefited by operation; 1 has up to the present shown no improvement; while 5 are at this moment apparently permanently relieved of their paraplegic symptoms. Not one of these cases could have derived anything but harm from prolonged rest in bed, and the indiscriminate adoption of such treatment is obviously most iniquitous and unscientific.

REPORTS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

MONDAY, MAY 11TH, 1891.

DAVID NEWMAN, M.D., President, in the Chair.

Cholecystotomy.—Dr. E. DUNCAN, for himself and Mr. PARRY, gave an account of a case in which jaundice of six weeks' standing, with complete absence of bile from the stools and a distended gall bladder, had given occasion for the performance of this operation. Cancer of the pancreas was found, and there was a secondary nodule obstructing the common bile duct. Mr. Parry referred to the difficulty which existed in some cases in determining the cause of obstruction, even when the distended bladder had been opened. The nodule, in this case at the orifice of the common bile duct, might easily have been mistaken for a stone.—Dr. HECTOR CAMERON expressed the opinion that the long-continued presence of gall stones was apt, when the cancer age was reached, to set up cancerous growth.—Dr. HUGH THOMSON could not understand the object of the operation in the absence of distinct symptoms of gall stones.—The PRESIDENT was of opinion that where cancer and gall stones were found together the gall-stone formation was secondary to the catarrhal state produced by the obstruction.—Dr. FINLAYSON considered it open to question whether it was wise to open a gall bladder unless there was a fair chance of getting gall stones or unless there were symptoms in the neighbourhood of the gall bladder suggesting the possibility of its rupturing.—Dr. DUNCAN, in reply, pointed out that, while there was no clear evidence of gall stones, there was no tumour beyond that of the gall bladder itself to suggest malignant disease. Rupture of the gall bladder was itself a danger sufficient in such case to justify an exploratory operation.

Specimens.—Dr. JOSEPH COATS showed a specimen of Horse-shoe Kidney, and called attention to the fact that the ureters came off forwards and downwards, not inwards, as commonly represented. Dr. Coats also showed a specimen of Fracture and Dislocation of the Cervical Spine, in which it seemed to him that an immediate attempt at reduction, as by suspension, might have been beneficial. In reply to Mr. MAYLARD, he admitted that here, as probably in most cases, the most serious injury to the cord was inflicted at the time of the injury, but he still thought some relief might have been obtained by stretching. Dr. HECTOR CAMERON showed: (1) A Multilocular Colloid Ovarian Cystoma, one compartment of which was lined by epidermis, and contained hair and teeth set in a mass of bone; (2) A Dermoid of One Ovary, the size of a turkey's egg, from a case in which the other ovary was the seat of a multilocular colloid cystoma. Mr. H. RUTHERFURD directed attention to the analogy of the colloid ovarian tumour and the dermoid. The colloid often contained well-formed mucous glands. It seemed unjustifiable to assume that the dermoid was specially, and in all cases, of congenital formation. On the inclusive theory, all tumours might be of congenital origin.

Card Specimens.—Dr. COATS showed: (1) Aneurysm of a Renal Artery; (2) An Autoclave Steriliser, for sterilising by steam under pressure; (3) Some Cultures.—Mr. H. RUTHERFURD showed specimens, with microscopic sections of (1) Squamous-celled Epithelioma of the Leg; (2) Epitheliomata of the Dorsal Surface of the Fingers of the type of rodent ulcer.—Mr. MAYLARD showed an Epithelioma of the Hand, with microscopic sections.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SPRING SESSION, 1891.

Friday, May 29th.

Sir RICHARD QUAIN, President, in the Chair.

ON the reading of the minutes, Mr. B. CARTER objected to the record that the report of the Education Committee was ordered to be received and entered on the minutes.—The PRESIDENT pointed out that receiving a report was a mere formality, and did not involve its adoption.

Dental Business.—A report from the Dental Committee on the case of Henry Louis Goodman was received and entered on the minutes. Mr. Goodman was in attendance to answer the charge:

That he had issued and published, and caused to be issued and published, advertisements and other public announcements falsely describing himself in them as Surgeon Dentist to the Queen's Household, and Surgeon Dentist to the Household of Her Majesty the Queen and His Royal Highness the Prince of Wales, the effect of such advertisements and public announcements being to convey to the public the false idea that he held an appointment in the Queen's and Prince of Wales's households, and that, after being repeatedly warned against continuing to issue and publish the said false and misleading descriptions, he had persisted in issuing and publishing the same, and had not withdrawn them.

Mr. FARRER (Solicitor to the Council) pointed out that the report was conclusive as to the facts of the case; the duty of the Council was, therefore, limited to considering what was to be done under the circumstances. He read *inter alia* a statement from the defendant explaining why he had used these titles. He, however, said he had abstained from repeating the offence since his attention had been called to it by the Council, and he claimed to have honestly complied with the wishes of the Council in the matter. He read part of the summing up of the Recorder of London, in a compensation for disturbance case in which he was concerned, who stated that "he was not to blame," that "he was probably right" in using this title. At the same time, he was prepared to give an undertaking never to use it again. In response to the President, he said he unequivocally withdrew any claim to the title. In response to Sir Dyce Duckworth, he declined to say when he had begun to practise dentistry. He was 38 years of age. He did not believe that he had gained anything by the use of the title. The Council then proceeded to deliberate in private on the case, strangers being ordered to withdraw. On the readmission of strangers, including the defendant, the PRESIDENT informed him that the Council had come to the conclusion under the circumstances, and in view of his promise, to treat him with leniency, and not to remove his name from the *Dental Register*.

Case of John Keys.—This adjourned case came on for further consideration, and Mr. Corrigan on this occasion produced the original letter, an allusion to which was embodied in his previous statement.—Counsel for defendant obtained permission to address the Council in reference to Mr. Corrigan's further evidence and animadverted on Mr. Corrigan's statements and past conduct.—The Council then proceeded to deliberate *in camerâ*, strangers being ordered to withdraw. After a prolonged deliberation the defendant was recalled, and the PRESIDENT stated that it was his painful duty to have to inform him that the Council had arrived at the conclusion that he, John Keys, had committed the offence charged against him, and that that, in the opinion of the Council, constituted "infamous conduct in a professional respect," and that his name had been ordered to be erased from the *Register*.

Destination of Penalties under the Medical Acts.—Dr. GLOVER brought forward a motion:

That the Council represent to H.M. Government: That the appropriation which is claimed in London under the Metropolitan Police Acts, for fines imposed within the metropolitan area, differs, in regard of fines under the Medical Acts, from the appropriation in force in other parts of the United Kingdom, and is practically such as to prevent within the metropolitan area prosecutions, which for the protection of the public ought from time to time to be undertaken in respect of offences committed against the Medical Acts; and that, in the opinion of the Council, it is urgently to be desired, either that the metropolitan appropriation of fines under the Medical Acts should be assimilated to the appropriation of such fines in other parts of the United Kingdom, or else that, for the metropolitan area, the Government, as appropriating the fines, should

undertake the responsibility of such prosecutions as are requisite for enforcing the Medical Acts.

He pointed out that the subject had been before the Council many years before. He read the 42nd Section of the Medical Act and dwelt upon the injustice involved by the fact that the Police Act (passed before the Medical Act) was not made to agree with the latter in respect to the destination of penalties recovered under that Act. He gave several examples of the working of the regulation at present in force. He further explained that no "costs" could be awarded under the Medical Act, and even if they were so they would be of such small amount as to be totally inadequate for the purpose. He was making this request on behalf of the Medical Defence Union, who were quite unable to carry out the Act while thus handicapped in the matter of expenses. He recalled the history of the matter before the Council, expressing the hope that the Council would, without further delay, proceed to take such steps as might be thought best to secure the end in view. He added that the Medical Defence Union was doing very excellent work in the interests of the profession and for the protection of the public, but so far as the metropolis was concerned they found themselves utterly unable to proceed with any more prosecutions.—Sir JOHN SIMON, who seconded the motion, said it would be sufficient to adopt the principle, leaving the particular method to be adopted to be subsequently decided upon.—The motion was then put to the vote and carried *nem. con.*—Sir WALTER FOSTER then proposed that a deputation, to consist of the President, Dr. Glover, Sir John Simon, and Sir Walter Foster, should wait on the Home Secretary and urge the matter on his attention.—This proposal was also adopted *nem. con.*

Report of Pharmacopœia Committee.—The PRESIDENT brought up the report of the Pharmacopœia Committee. The report stated that 32,000 copies of the *Pharmacopœia* of 1885 had been issued; 10,125 copies of the *Additions* published last year had been issued. The report included a historical memorandum drawn up by the Registrar; from this it appeared that 40,000 copies of the *Pharmacopœia* of 1867 were issued, and 15,000 copies of the *Addendum* published in 1874. Altogether 100,000 copies of the *British Pharmacopœia* and 25,125 of the *Addenda* had been issued. The report having been received and adopted, Sir DYCE DUCKWORTH (seconded by Mr. R. MACNAMARA) proposed a vote of thanks to Sir Richard Quain for his many years of service on that Committee; this was agreed to by acclamation.—The PRESIDENT briefly replied.

Printing of Documents in Penal Cases.—Sir JOHN SIMON urged that it would be an economy of time if the essential documents in penal cases were printed, and a confidential copy thereof forwarded to members beforehand.—After some discussion the motion was modified so as to leave the selection of the documents to be printed to the discretion of the President. This was agreed to.

Committee on Memorial.—A motion was brought forward by Sir WM. TURNER to the effect that the report of the Committee on the Lord President's letter and the contained memorial should be received, approved, and ordered to be forwarded to the Lord President of the Privy Council as the answer of the Council to the memorial in question.

The report stated with regard to the complaint as to the non-recognition of union hospitals in Ireland, that the Council did not impose any restriction on the medical authorities as to the institutions in which candidates are to receive clinical instruction, but leaves it to those authorities to recognise the institutions that possess the requisite qualifications for imparting the necessary clinical instruction. The report pointed out that the Council had therefore not failed in its duty in this respect; and if the union hospitals in Ireland desired to be recognised as fields for clinical instruction, application should be made to the respective medical authorities. As to the complaint that the Council had abandoned the visitation, or rather inspection of examinations, the report stated that the Council had not abandoned such inspection. The examinations of all the authorities were systematically inspected and reported on in 1887-8 by special inspectors. Their reports were discussed by the Council, and referred to the medical authorities. The final consideration of these reports, together with explanatory remarks of the bodies inspected and the report of the Examination Committee, took place at the meeting of the Council on June 6th, 1890, when the opinion was expressed by the Council that the examinations of all the bodies had been sufficient for the purpose of conferring the right of registration. The report further stated that the Council were prepared to continue the inspection of examinations. In conclusion, it was pointed out that the reference to the University of Glasgow appeared to allude not to any medical degree, but to a single examination for the diploma of Public Health, an examination over which the Council had been advised that it had no power of inspection.

—Sir WALTER FOSTER approved, and Dr. GLOVER dissented from, the finding of the Committee.—Dr. GLOVER asked for information from the Irish members whether union infirmaries were utilised in Ireland, and whether Mr. Laffan's institution in particular had been excluded from such infirmaries as were thus utilised.—Dr. ATTHILL said the Royal College of Physicians in Ireland had considered the matter, and had come to the conclusion that these institutions were not suitable for clinical instruction.—Mr. MACNAMARA explained the course adopted by the body he represented. He stated that there were two distinct classes of hospitals in Ireland—the county infirmary and the union infirmary. The former were excellent schools for clinical teaching, while the latter were not. Many union hospitals had been shut up for lack of patients.—Dr. MOORE confirmed this view of the case, and Sir JOHN BANKS said that the surgeons of the county infirmaries were often men of high standing, and he particularly wished to distinguish between these institutions and the workhouse infirmaries.—The motion was then agreed to.

Report of Election Committee.—Sir WILLIAM TURNER brought up the recommitted report of the Election Committee, modified after consultation with Mr. Farrer, the Council's solicitor. As rearranged, the dates suggested for the election are as follows: Notice of election to be published on November 9th; precept to be issued (date fixed by returning officer), November 20th; final day for receipt of nomination papers, November 23rd; meeting of Branch Councils to receive precept, November 24th; issue of voting papers, November 24th to 28th; last day for return of voting papers, December 5th; counting of votes, December 7th to 10th; meeting of Branch Councils to certify result of election, December 11th; declaration of the poll by the returning officer, December 12th. On Sir William Turner's motion, this report was received and entered upon the minutes.—Dr. BRUCE raised a question as to the Council's undertaking the expense of publishing correct lists of voters, which he thought ought not to fall upon candidates.—This led to some discussion, and was then allowed to drop on the understanding that it would be brought up again on another day.

Dental Business.—On the motion of Sir WALTER FOSTER, seconded by Mr. WHEELHOUSE, the Council adopted the resolution passed by the Executive Committee on November 24th, 1890, to the effect that the special exemptions as to certificates and examinations required from dental students who commenced their education before the passing of the Dentists' Act be revoked as from July 22nd, 1891.

Memorial of Ophthalmological Society.—A memorial from the Ophthalmological Society of the United Kingdom, in favour of including ophthalmic medicine and surgery in the ordinary curriculum, was received and ordered to be entered upon the minutes.—Mr. B. CARTER pointed out that the object was to direct attention to the importance of this subject, but he did not propose that any action should be taken in the matter.—Dr. STRUTHERS suggested that in such cases an instruction to the inspectors of examinations would meet the case.

The Council then adjourned.

Saturday, May 30th.

Sir RICHARD QUAIN, President, in the Chair.

Laboratory Work for Diplomas in State Medicine.—After a preliminary objection by Mr. BRUDENELL CARTER, who believed that the recommendations required redrafting, Dr. STRUTHERS moved, and Mr. WHEELHOUSE seconded, that the Council resolve itself into a Committee of the whole Council for the consideration of the recommendations of the report of the Education Committee now submitted on laboratory work for diplomas in State Medicine. The motion was carried.—Dr. STRUTHERS then moved:

That the following proposals, in accordance with the recommendations of the report of the Education Committee on Practical Laboratory Instruction for diplomas in State Medicine, be considered as separate motions: I. That it is desirable that the regulations of the medical authorities under which they grant diplomas in State Medicine, should, in order to give effect to the resolutions of the Council of June 1st, 1889, and November 25th, 1890, contain: (1) In respect to giving effect to resolution (c): A full programme of the practical instruction in a laboratory or laboratories prescribed for candidates for the diploma; with rules for insuring that such instruction has been received.

Dr. Struthers said that the general drift of the report was not that they should make new recommendations, but rather that they should confine their attention to the more essential

points in the existing ones, and that these recommendations should be sent out with a copy of the report to the various teaching bodies, so that those who wished to reconstruct their methods would have plenty of material before them. They had received satisfactory answers from the Royal Colleges of London, the University of Cambridge, and the University of Edinburgh. Others were more unsatisfactory, while others were altogether unsatisfactory, as would be seen from the report, such being especially the case with the answers given by the Royal Colleges of Physicians and Surgeons of Edinburgh. They did not seem to know what public health laboratories meant.—Mr. WHEELHOUSE seconded the motion.—Mr. MITCHELL BANKS said that on the last occasion on which they met they had a great educational matter to deal with. It was owing to the amount of information they then gained that the Council was enabled to come to the unanimous and pronounced decision which brought about the greatest reformation in regard to the education of medical men of our time. The educational matter now before them was of equal moment. It would be noticed that the resolution was concerned with a method by which various licensing bodies were given an opportunity to mature the various schemes they have before them. It was not always possible for a teaching body at once to bring themselves in line with the Council. When they looked through these resolutions they would see that this was not a terminal matter at all, but rather the holding out of an opportunity to these bodies to put themselves in harmony with the conditions imposed.—Mr. MACNAMARA observed that in Dublin there was a very good laboratory in the Royal College of Surgeons, but it was felt that this laboratory was not sufficient for giving the necessary instructions. They were therefore fitting up another, independent of and separate from the one which they used for instructing the ordinary medical pupils. They were trying to carry out the Council's views in this respect.—Dr. HERON WATSON reminded the Council that it was not dealing with an entirely new subject; it would be a pity if they passed resolutions on every minute detail, and entered into every particular in matters of education. It would be better if the Council would postpone these resolutions until the autumn session, and in the meantime send the recommendations and the report to the various bodies. The Council would then not only receive from them their absolute assent, but would have from them a larger statement on those points in which it did not seem that they could carry out the requirements of the Council. He would propose, therefore, as an amendment:

That the Council resolve to forward the recommendations and report of the Education Committee to the various bodies named in Schedule A of the Medical Act for their information and consideration, with the request that they shall forward to the Committee before July 31st of next year any observations they may wish to make on the matters contained in these recommendations and report to the Council, and that the Council shall take up the consideration of the whole subject on an early day of its next meeting.

Dr. LEISHMAN, in seconding the amendment, expressed himself as being against grandmotherly legislation. What they wanted to do was to suggest general principles, and leave the various bodies to carry out the details.—Mr. MACNAMARA said he was prepared to support the Chairman of the Committee on Education, but he objected to accepting all these recommendations.—Sir JOHN SIMON said that to postpone these motions to the next meeting would be to postpone them until the next May meeting, for the November meeting should confine itself to disciplinary cases. The resolutions amounted to little more than an explanation of their views. The fact was, that if they carefully read the answers sent to the Committee, it would be seen that the questions were ignored.—Sir WM. TURNER referred the Council to the report of 1869 in regard to this matter (page 78), which, he said, afforded a precedent for the course it was proposed to adopt now. Mr. MITCHELL BANKS said that he hoped that this course would not be adopted. The Council was not propounding anything new; all that they proposed to do was simply to define a course. They were trying to enforce general principles, and they wanted to know how the various bodies were carrying them out. They did not intend to trust merely to "honest intentions."—Dr. STRUTHERS said there was nothing new in the report. They were making no alterations of any kind. They had to complain that members had not read the arguments contained in the report, but only the recommendations of the report. They were simply sending them to the bodies for information. What was to be gained by a delay of three months?—The PRESIDENT said all the meetings of the Council were for the conduct of business. Disciplinary cases were left until November, but there was nothing in the regulations that made a distinction between the meetings. On being put to the meeting, the amendment was lost, only four voting for it. The motion was then carried, the original motion being then adopted.—Dr. STRUTHERS then proposed, and Mr. WHEELHOUSE seconded, the next resolution (2), which was as follows:

In respect to giving effect to Resolution (*c*): A programme of the examination held for granting the diploma, describing fully the nature and extent of the examination, as regards the subjects, or portions of subjects, comprised in it, and the time assigned to each of its parts, and the methods (especially the practical methods) by which the candidate's knowledge is tested in each.

The resolution was adopted without discussion. The next resolution (3) was as follows:

In respect to giving effect to Resolution (*d*), as amended by the Council on November 25th, 1890: A statement of any rules the medical authority may have made in regard to the method of carrying out that resolution, and of ensuring that any such rules have been duly attended to. It is recommended that these rules include that every candidate shall be required to give evidence that he has had, and has availed himself of, opportunities of seeing the chief groups of diseases affecting the lower animals, and capable of transmission to man.

After a few words upon it by the proposer, Dr. STRUTHERS, Mr. MITCHELL BANKS, and Dr. ATTHILL, Dr. GLOVER said he hoped the recommendation would be carried. It was one approved by Dr. Ballard, one of the first authorities on this subject; it was one, moreover, that would commend itself to every member of the Council, and to the medical profession generally.—Sir J. SIMON said that Dr. Ballard was a consummate master of his subject, and he was of opinion that a man of high sanitary qualifications should have a fair knowledge of the diseases of animals.—Dr. ATTHILL thought it was very desirable that every candidate should, as far as possible, have opportunities to see examples of the diseases of lower animals capable of transmission.—Sir WM. TURNER asked for a little more explanation. Was it in the minds of the Committee that the kind of evidence that the candidate was to bring forward was such as might be obtained by visiting slaughter houses with a medical officer of health, and seeing animals that were intended for consumption as food, and so seeing the morbid changes that take place in the body? Or was it intended that the candidate should also see sick animals?—Dr. STRUTHERS said that question was discussed on page 39 of the report. Dr. Ballard was of opinion that candidates should see not only dead, but living, cases. He should be familiar with such diseases as the foot and mouth disease, pleuro-pneumonia, etc.—Mr. BRUDENELL CARTER thought the recommendation should be as wide as possible, so as to include pathological changes as well as active disease.—Sir JOHN SIMON having proposed an alternative reading of the second sentence of the resolution, a further alternative reading, proposed by Dr. MACALISTER, was, after some discussion, adopted; the motion now standing as follows:

(3) In respect to giving effect to Resolution (*d*), as amended by the Council on November 25th, 1890, a statement of any rules the medical authority may have made in regard to the method of carrying out that resolution, and of ensuring that any such rules have been duly attended to. These rules should, in the opinion of the Council, include the requirement that the candidates produce evidence of having received practical instruction in those diseases of animals which are transmissible to man.

The resolution in this form was adopted.—Dr. STRUTHERS proposed, and Mr. WHEELHOUSE seconded the next resolution, which, after a slight amendment, read as follows:

II. That each of the medical authorities be requested to forward to the Registrar of the Council, at the end of October next, a copy of the regulations, in the form in which they then stand, under which it grants diplomas in State Medicine.

Dr. HAUGHTON proposed to substitute December for October, on the ground that there would be no time between the time of receiving the reports and the November meeting of the Council for the Committee to consider them. The question would then come before them at their next May meeting.—Dr. CHURCH supported Dr. Haughton.—Mr. MITCHELL BANKS deprecated the shunting of business from one meeting to another.—Dr. GLOVER was glad the President had given the reading of the regulations which he had, that the meetings were equal, legally speaking.—Dr. MACALISTER supported the view that October, as the beginning of the medical year, should stand in the resolution, which in this form was adopted.—The next two resolutions were adopted without

discussion, on the motion of Dr. STRUTHERS, seconded by Mr. WHEELHOUSE:

III. That the information thus received be laid before the Education Committee, for report to the Council at its next meeting, as to whether the regulations of the several medical authorities, in regard to granting diplomas in State Medicine, have been brought into conformity with the resolutions of the Council.

IV. That a copy of the Report, containing the answers received from the medical authorities, in reply to the letter of the President of December 11th, 1890, in regard to practical laboratory instruction for diplomas in State Medicine, be sent, with the recommendations now made by the Council, to the several medical authorities by which diplomas in State Medicine are granted.

Dr. STRUTHERS proposed, and Mr. WHEELHOUSE seconded, the following resolution:

That, in the opinion of the Council, the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, instead of each holding a separate examination for granting diplomas in State Medicine, should combine to form an examining board for that purpose in Scotland.

Dr. HERON WATSON thought the Council should leave the matter alone for the present. He believed he was betraying no confidence in saying that the matter was being considered by the bodies in question, and the question might well be left to them.—Dr. STRUTHERS said there would be no harm in withdrawing the resolution if it would be likely to give offence.—After some remarks by Dr. MACALISTER and Mr. BRUDENELL CARTER, Dr. HAUGHTON said that the same recommendation was made in Resolution VI with regard to two Irish colleges. He thought Resolutions V and VI might be withdrawn, and that the recommendations might be carried out by the bodies themselves after the suggestions from the Council.—After some further discussion, Sir JOHN SIMON proposed that Resolutions V and VI should be postponed.—Dr. GLOVER seconded the motion, and it was agreed to.—On the motion of Mr. WHEELHOUSE, the Council then resumed, and the report of the Committee was adopted.

Applications for Exemption.—The Council next considered a motion by Dr. Haughton in respect to communications from the Irish Branch Registrar in regard to three applications for permission to be registered from three practitioners who failed to register before 1886, owing to absence abroad. The matter was postponed to allow time for printing the papers.

Sir JOHN SIMON proposed, and Sir WILLIAM TURNER seconded, the following resolution:

That there be added to Standing Order XIV the following new rule:—12A. In the case of a practitioner accused of infamous conduct in a professional respect, where, by resolutions of the Council, it has been found that the accused person has committed the offence charged against him, and that the offence is infamous conduct in a professional respect, it shall be competent for any member of the Council to move that the consideration of the question whether or not the name of the accused practitioner be erased from the *Register*, be postponed to a future day to be named; and, in the event of such motion being carried, the Council shall, on such future day, deal with the case as it shall see fit.

The PRESIDENT asked if it were advisable to have such a rule always staring them in the face. Would it not result that there would always be a plea to stay judgment? It was competent for them now to suspend sentence when advisable. But to have this rule passed would tend to tie their hands.—Sir WALTER FOSTER said he could not stay there and not be allowed to stop unprofessional conduct.—The PRESIDENT read a letter from Mr. Farrer, in which he asked if there was any reason why judgment should be severed from sentence.—Dr. PETTIGREW thought it would complicate matters very much if this resolution were passed. When they found a man guilty of unprofessional conduct, he must be condemned at once.—On being put to the vote the motion was lost.

Monday, June 1st.

Sir RICHARD QUAIN, President, in the Chair.

The University Question in London.—The PRESIDENT said that before they entered upon the business upon the programme, he had an important matter to bring before them emanating from the English Branch Council. It was a motion inviting the Council to take cognisance of the scheme afloat for the constitution of another licensing body in London, and to express an opinion thereon in the following terms: "That while this Council views with the greatest sympathy any well-considered efforts to create facilities for London medical students to obtain degrees in medicine, they regard with grave concern, both in the interests of the public and in the interests of medical education, any proposal to found a degree-conferring faculty independent of the existing university and medical licensing authorities, that already number four in London alone."—Sir WM. TURNER rose to a point of order. He asked whether such an important discussion could be entered upon without due notice having been given.—Sir JOHN SIMON sympathised with the point of order, but observed that the matter was one which came well within the competence of the Council to discuss.—The PRESIDENT insisted upon the grave importance of the subject, and suggested that it should at any rate be placed on the programme of business.—Sir WALTER FOSTER entered an earnest protest against the usefulness of the Council in urgent matters being curtailed by too rigid an adherence to technical procedures. Certain matters, if brought forward by the President, ought to command attention at any time. After some further discussion, mostly adverse to immediate discussion, the proposal that the motion be placed at the end of the prearranged programme of business was agreed to.

Report on General Education.—The Council resolved itself into Committee to consider the report of the Education Committee on preliminary examination in general education.—Dr. STRUTHERS brought forward a series of resolutions in accordance with the recommendations of the report of the Education Committee. He began with No. 1, as follows:

That a copy of the communication from the Secretary of State for War, of November 28th, 1890, be sent to the Director-General of the Medical Department of the Navy, the Director-General of the Medical Department of the Army, the Indian Army Medical Office, and to each of the medical authorities, with the request that they will send, confidentially, to the Registrar of the Council the names of any candidates who have been or will hereafter be found in the professional examinations to show manifest evidence of defect in spelling, or other part of general education, in order to assist the Council in ascertaining by which of the preliminary examinations in general education recognised by the Council such candidates have obtained admission to the Medical Students' Register.

Dr. Struthers pointed out that this referred to a very serious allegation. He was anxious that the Council should know which examining bodies had passed the men whose spelling was complained of, but of course such information would be considered as confidential so far as names were concerned.—Dr. LEISHMAN said that he had to read annually many hundred examination papers; and although he here and there came across a man who spelled badly, he had met with nothing to justify such a sweeping accusation. At the same time, he was prepared to admit that there might be a deficiency, and that some improvement was desirable. Four and a-half years ago the Army Medical Service was one of the most popular. Owing to Mr. Stanhope's action it had since become a very unpopular service and some of the men who had entered during this period were notoriously deficient in more than one branch of medical education. He hoped the Council would call the attention of the Secretary for War to the fact that there had been a serious deterioration in the quality and status of the men for some years past owing to his own action; and that the defective spelling was only part of a general lowering of the standard.—Dr. CAMERON pointed out that the attention of the licensing bodies had already been vainly called to this point 14 years before; and after some remarks from Mr. BRUDENELL CARTER, Sir WALTER FOSTER expressed the opinion that the resolution had better be withdrawn. He objected to their asking for names under such circumstances. He had felt very much inclined to ask a question in the House of Commons, in order to ascertain whether the department had any suspicions that the deficiencies complained of might be due to their own action. He proposed to move an amendment to the effect that a courteous answer be returned to the letter with an assurance that the matter was receiving the attention of the Council.—After some remarks from Mr. MACNAMARA, Dr. HERON WATSON moved as an amendment:

That the Secretary of State for War should be applied to, on behalf of the Council, to furnish some of the papers and reports upon which the complaints were based.

Mr. B. CARTER seconded the amendment.—Dr. GLOVER would support the original motion. He denied that there was anything underhand in their seeking to ascertain by which body such men were passed.—Sir JOHN SIMON urged that it ought to be open to all examining bodies to reject candidates upon the same grounds as those claimed by the Secretary of State, that is, that a man who showed himself lacking in subjects of general education should be put back, no matter where he might be in his career. He urged that they should pass a general recommendation to some

such effect that "absence of general education should be recognised at any and every stage of the student's career as sufficing to stop his going further."—The PRESIDENT pointed out that the communication in question called for a specific answer.—Dr. WATSON'S amendment was then put to the vote and lost.—Sir WALTER FOSTER, speaking to the original motion, objected to the Council asking for the production of documents, which would reflect upon the conduct of gentlemen already enrolled in the services.—Dr. STRUTHERS observed that the communications would undoubtedly be treated as confidential.—Dr. GLOVER was prepared strenuously to oppose such a resolution. To punish a man at the end of his student career for bad spelling was, in his opinion, highly unjust. He ought to have been stopped at the outset.—Dr. CAMERON said that in order to find a remedy, accurate information was indispensable.—Sir WALTER FOSTER'S proposed amendment, slightly modified, was then read as follows:

That the Council takes note of the intimation of the military medical authorities that they have introduced regulations making bad spelling a cause of rejection at examinations for admission to the Army Medical Staff, and begs leave to inform the Secretary of State for War that the character of the preliminary examinations for entrance into the medical profession had for some time past received, and is still receiving, the serious consideration of the Council.

After some further desultory conversation, Sir Walter Foster's amendment was put to the vote and rejected by 14 voices to 12. The original resolution (less the word "confidentially") was then agreed to. The Council (in Committee) then passed on to consider the second resolution:

That no preliminary examination will be recognised by the Council which does not include an examination in English classics, grammar and spelling.

After a brief hostile discussion, Dr. STRUTHERS consented to withdraw the motion.—The next resolution provided:

That the bodies conducting Preliminary Examinations in General Education recognised by the Council be informed that the Council do not in future accept any certificate of pass in Preliminary Examination in General Education, unless the whole of the subjects included in the Preliminary Examination for Registration of Students of Medicine have been passed in at the same time.

In bringing forward this motion, Dr. STRUTHERS said he looked upon this as the most serious part of the whole report.—Remarks were made by Mr. B. CARTER, Dr. PETTIGREW, Dr. CAMERON, Sir JOHN SIMON, and Dr. MACALISTER. The last-named pointed out that any such rule would exclude the examination for degrees in arts from recognition as evidence of preliminary examination, seeing that they were always passed in sections. The same remark applied to the Previous and Matriculation examinations.—Sir WILLIAM TURNER suggested that the rule should only apply to the compulsory subjects.—Mr. CARTER moved as an amendment that the words "at the same time" should be altered to "within a period of six months."—Sir JOHN SIMON and Dr. LEISHMAN spoke on the amendment, which Dr. STRUTHERS declined to accept, and it was then withdrawn. The original motion was agreed to.—Dr. STRUTHERS brought forward the next resolution, as follows:

That the examinations forming Group II of the list of Preliminary Examinations at present recognised by the Council be omitted from the list.

[*Note.*—The examinations here referred to are that of the "Apothecaries Society of London, (44) Examination in Arts;" that of the "Royal Colleges of Physicians and Surgeons of Edinburgh, (45) Preliminary (combined) Examination in General Education;" that of the "Faculty of Physicians and Surgeons of Glasgow, (46) Preliminary Examination in General Education;" and that of the "Royal College of Physicians and Surgeons in Ireland, (47) Preliminary Examination—certificate to include mathematics."]

He said that the Committee had been guided by the general principle that it was desirable that the Preliminary Examination should be left in the hands of bodies dealing with general education. He discussed the position at some length.—Dr. CAMERON and Dr. TUKE explained that the bodies they represented either had given up or were about to give up their special preliminary examination.—Mr. B. CARTER asked that legal opinion by Mr. Muir Mackenzie might be read.

Dr. STRUTHERS asked that the "case" submitted to counsel should be first read, so that the Council might know to what questions the opinion was in reply. This, however, was not done, and the REGISTRAR read the opinion in question, which, after a guarded preamble, advised that "the General Council had no power to require the Society of Apothecaries to abandon the Preliminary Examination in Arts for their own licence." Counsel advised that the only step would be to "recommend." After some further remarks by Mr. CARTER, Dr. MACALISTER observed that it had been admitted that the examination was not an essential part of the course for the licence of the Society, while, on the other hand, many students took it with no intention of going any further towards the L.S.A. diploma. It was therefore neither necessary nor sufficient from the point of view of counsel.—After some remarks by Dr. ATTHILL (who thought that it would be to the advantage of the profession if the Preliminary Examination were taken out of the hands of licensing bodies) and by Mr. MACNAMARA, Mr. CARTER explained the position of the Society as regards this examination. He concluded by saying that the Society would willingly and eagerly adopt any suggestion to raise the standard of the Preliminary Examination should the Council consider this desirable, but to deprive the Society of this privilege without very good cause would be unjust.—Sir WALTER FOSTER, as a past friend of the Society of Apothecaries, expressed his dissatisfaction at the defensive line of argument taken by Mr. Carter in this question. The object they all had in view was to improve the condition of medical education, and the smaller the number of examinations the Council had to inspect the more easy it became to maintain an efficient standard. They had rather expected to receive the support of the Society in this respect, and he hoped that the Society would, on reflection, fall in with the suggestion of the Committee.—The PRESIDENT said it was necessary clearly to understand the position of the Council in the matter. Was it intended to compel the Society to abandon the Preliminary Examination? In that case the best course would be that suggested by Mr. Mackenzie, namely, that the Council should not do more than recommend that the examination be abandoned. The Council had so far never gone beyond "moral suasion," and he hoped it never would, especially in view of an adverse legal opinion.—Dr. MACALISTER said that Mr. Mackenzie's opinion had obviously been given under an entire misapprehension of the real question and on a totally erroneous basis. It ought therefore to have not the slightest weight with the Council.—After some remarks by Mr. MITCHELL BANKS, Mr. MACNAMARA proposed as an amendment:

That it be recommended to the governing bodies under Group II that they should discontinue their examination in Arts.

The Standing Orders having been suspended, a long discussion ensued, in which Drs. WATSON, ATTHILL, STRUTHERS, and Sir JOHN SIMON took part.

Mr. Macnamara's amendment was then put to the vote and carried by 14 to 9, the names being taken down at the instance of Mr. Macnamara. It was then put and adopted as a substantive motion.

The Council, having resumed, adjourned until the following day.

Tuesday, June 2nd.

Sir RICHARD QUAIN, President, in the Chair.

Report of Education Committee.—The Council resolved itself into Committee, in order to resume the consideration of the recommendations of the Report of the Education Committee on preliminary examination in general education.—Sir WILLIAM TURNER proposed, as a rider to yesterday's resolution bearing on the preliminary examination of bodies comprised in Group II of the list:

That, in the event of any examinations referred to in Section IV of the Committee's Report being not at once discontinued by the bodies therein specified, they should not be accepted by the Council as valid preliminary examinations except in relation to the professional examinations of the particular bodies which conduct them.

After some discussion Sir William Turner consented to withdraw the motion.—A series of motions was then brought forward by Dr. STRUTHERS (seconded by Mr. WHEELHOUSE) to be considered separately; the first was:

That the examinations enumerated in Group III be omitted from the list, except those conducted by the College of Preceptors (No. 48), by the Educational Institute of Scotland (No. 56), by the Scotch Education Department for the Leaving Certificate (No. 59), and by the Intermediate Examination Board of Ireland (Nos. 52, 53, 54).

[*Note.*—The examinations here referred to are: That of "Queen's College, Belfast, (49) Matriculation Examination;" that of "Queen's College, Cork, (50) Matriculation Examination;" "Queen's College, Galway, (51) Matriculation Examination;" that of "St. David's College, Lampeter, (55) Responsions Examination, to include all the subjects required;" that of the "Pharmaceutical Society of Great Britain, (57) Preliminary and Minor Examinations (*pro tanto*);" and that of the "Pharmaceutical Society of Ireland, (58) Preliminary Examination (*pro tanto*)."]

Dr. Struthers pointed out that the percentage of rejections varied very widely at the different examinations. For example, at the Society of Apothecaries they only rejected 1 in

5, whereas at the College of Preceptors they rejected 3 out of 4.—Mr. BRYANT asked whether Dr. Struthers's remarks on the College of Preceptors had reference to the whole mass, or whether only to the special examinations for medical students. While he admitted that first and second classes in the examinations of the College of Preceptors were unexceptionable, it was not quite the same in respect of the special examination for medical students, at which the "pass" standard was said to be 20 per cent.—Dr. STRUTHERS said the lowest percentage of rejections in any examination of the College of Preceptors was 37 per cent.—Dr. MACALISTER pointed out that the candidates at the examinations of the College of Preceptors were very heterogeneous, and therefore the percentage of rejections did not prove much in respect of the severity of the test. He said that the committee might inquire into the matter when revising the list, and decide which examination of the College of Preceptors should be accepted.—Dr. HAUGHTON said that 20 per cent. pass marks did not necessarily infer a low standard of attainments.—Dr. MACALISTER alluded to the anomalous position of St. David's College at Lampeter, and raised the question as to whether its B.A. degree ought to be recognised by the Council.—The motion was then agreed to.—Clauses VI, VII, and VIII (as follows) were agreed to *seriatim*, without much discussion.

VI. That the following examinations be omitted from the list:—That of "University of California, (80) Examination in the Department of Letters"; and those of "Gymnasia of the Circuit of Dorpat, (93) Examinations of Maturity."

VII. That applications for the recognition of Preliminary Examinations in General Education, in addition to those already recognised by the Council, be referred to the Education Committee for report to the Council.

VIII. That the practice of ante-dating the commencement of professional study to a period before the whole Preliminary Examination in General Education has been passed be discontinued, unless in very exceptional cases, to be decided on as stated in Recommendation No. IX.

Clause IX, to the effect that

All applications for special exceptions to the regulations of the Council in regard to Preliminary Examination in General Education shall be addressed to the Registrar of the General Council, and shall be submitted for immediate decision to a committee of three of its members appointed by the Council, and that the applications and decisions shall be reported to the Council

gave rise to some discussion.—Sir WILLIAM TURNER thought such questions would best be left to the Branch Councils. He did not think the proposal was quite workable. Dr. MACALISTER denied that the proposal was likely to prove unworkable, and he urged that it would be more expeditious than the present system. The motion was agreed to, with certain verbal alterations, and then the Council directed

That the Registrar send a copy of the report, together with the resolutions passed thereon by the Council, to each of the medical authorities and each of the examining bodies whose examinations in Arts are accepted by the Council, with the proviso that the resolutions now passed in regard to Preliminary Examination in General Education take effect on and after January 1st, 1892; but shall not apply to those candidates who, previous to that date, have passed a part of any of the preliminary examinations recognised by the Council.

The Council then resumed, and adopted the resolutions passed in Committee.

The following rider to Clause I, proposed by Sir WALTER FOSTER, was agreed to:

That the Medical Council, in acknowledging the intimation that the Secretary of State for War has introduced regulations making bad spelling a cause of rejection for admission to the Army Medical Staff, begs leave to inform the Secretary of State for War that the character of the preliminary examinations for entrance to the medical profession has for some time received, and is now receiving, the serious attention of the Council.

On the motion of Dr. MACALISTER, it was agreed to add to Clause II the following:

Provided that a university examination required for graduation in arts wherein the specified subjects of general education are included, may be recognised for the purpose of registration.

It was then agreed to. The report of the Education Committee, as altered, was then adopted as a whole.

Examination in Logic.—Dr. CAMERON proposed:

That in the regulations prescribing the subjects required to be passed in the Preliminary Examination in General Education the subject of logic be removed from the list of optional subjects and placed in that of the subjects required of all students.

Dr. TUKE, in seconding the motion, pointed out that no man could be expected to take up the study of a foreign language if he could slip through a merely nominal examination in logic.—Sir JOHN SIMON protested against the Council taking up the question of the subjects of the preliminary examinations, and at Dr. PETTIGREW's suggestion the Council passed to "the previous question."

Recognition of Scientific Study.—Dr. HERON WATSON proposed the following corollary to the resolution of June 5th, 1890, which, he urged, it would complete:

Where in the course of his previous studies in a university of the United Kingdom or elsewhere, or in any school of science or of medicine recognised for this purpose by the medical authority, a candidate shall have attended a course or courses in one or all of the departments of physics, chemistry, or biology, such attendance shall be held as qualifying for his diploma in medicine, provided always that the examination in such subject or subjects is passed before the candidate commences his medical studies, and is of such standard as shall suffice to exonerate him from all further examination on such subject, provided also that he shall not on that account be held to have completed the first of his five years of medical study.

He pointed out that his object was to enable a student who had gone through the course of training for graduation, even though he should not have graduated, to be credited with this course of training.—Sir WM. TURNER seconded the motion, on the ground that chemistry, physics, and biology were now taught at public schools, and that this teaching should be recognised; while the first years of medical study comprised more subjects than could properly be mastered in the time.—Dr. MACALISTER objected to it as encouraging school instead of college instruction. He therefore earnestly deprecated the Council's endorsing this attempt to undo their previous resolution. He concluded by moving "the previous question." This was agreed to, and the matter consequently dropped.

Advance Proof of Medical Register.—The following resolution, proposed by Dr. MACALISTER (for Dr. BRUCE), was unanimously adopted:

That in order to secure a complete list of those entitled to vote at the approaching election of direct representatives, the Registrar be directed to request Her Majesty's Government to cause the printing of the *Medical Register* to be at once proceeded with, so that proof copies, stitched and revised up to date, may be ready for sale as an election roll in November next.

Registration of Single Diplomas.—Certain applications for registration in the *Medical Register* by men who had omitted to register single diplomas before the appointed day fixed by the Council were referred to the Irish Branch Council for consideration.—Dr. HAUGHTON moved:

That the opinion of the law advisers of the Council be taken upon the following question: Taking into consideration Section 46 of the Medical Act, 1857, and Section 2 of the Medical Act, 1886, is it in the power of the Council to register a practitioner after the "appointed day" without his having completed his qualifications in medicine, surgery, and midwifery?

The motion was seconded by Dr. MACALISTER (who expressed grave doubts as to the legality of the course adopted last year in this respect) supported by Sir WM. TURNER, and agreed to.

The Proposed Teaching University.—The last item on the agenda was a resolution reported by the English Branch Council to the General Council for adoption, in regard to the proposed foundation of a new university in London authorised to confer degrees in medicine, to the effect

That while this Council views with the greatest sympathy any well-considered efforts to create facilities for London medical students to obtain degrees in medicine, they regard with grave concern, both in the interests of the public and in the interests of medical education, any proposal to found a degree-conferring faculty independent of the existing University and medical licensing authorities that already number four in London alone.

After some remarks by Sir JOHN SIMON, from which it appeared that at the meeting of the Branch Council at which this resolution was passed, no notice was given, and he himself was not present, Sir WALTER FOSTER said that the matter was one of urgency. It had been for many years past a standing disgrace that men educated in the best medical schools of the kingdom should be debarred from obtaining a degree at the end of their studies. He intended to support the resolution in order to remedy that defect, and in order to give the students of the London schools the same professional standing as their provincial brethren.—Sir WILLIAM TURNER rose to a point of order, on the ground that the speaker's remarks were not *ad rem*, but he was overruled.—Sir WALTER, proceeding, said there was a strong feeling in the medical profession that facilities ought to be provided for those men to obtain degrees in medicine. It was notorious that the development of the London University had been in one direction, and that not favourable to the obtaining of degrees by the general body of the profession. It was a perfectly legitimate ambition, and one that should command the sympathy of the Council. As a medical practitioner of England, he thought they ought to try and do something to assist in carrying this out. He pointed out that the matter had been before a Commission, and had been freely commented upon in the Press of all denominations, and the

Council had remained silent. He urged that it was a matter upon which the Council was entitled to express an opinion, and ought to be consulted. And in order to give the Council a *locus standi*, he was desirous of passing a resolution which should go to the Privy Council, showing that they were aware of what was going on, and that they wanted to have a voice in the final solution of the question. He, therefore, felt that it would be right to adopt this resolution. It would be acting wisely towards the profession by pointing out to the Privy Council that there were already four bodies in London granting medical qualifications, and that the Council viewed with apprehension any addition to the number of these bodies. They certainly did not want any addition to the number of representatives of corporations on the Council, and such an addition was, he urged, neither desirable nor necessary. He particularly insisted upon the anomalous fact that the Council had allowed the Privy Council to go on with this work without offering an opinion, and this, he conceived, was the surest way to act so that when they did say something their views would be disregarded. He urged that whenever a question of this kind came before the Privy Council or before Parliament the Council ought to make its voice heard and should be consulted.—Dr. STRUTHERS seconded the motion.—Sir DYCE DUCKWORTH said that it was certain that London students were at a serious disadvantage, but he thought that a great deal too much had been made of the grievance, and that the M.D. degree should not be presented to gentlemen who had only passed through an ordinary curriculum. To do that would be to degrade the degree of M.D., and this was not the time to enter upon legislation of this kind. Difficulties certainly existed; but they might have been overcome by the existing University had it—or, at any rate, Convocation—not proved so utterly intractable that no practical solution had been possible. They were led to believe that the Privy Council was somewhat sick of the whole matter, and would be ready to confer the asked-for powers upon any body ready and fit to fill up the gap which was alleged to exist. Consequently it was expected that powers would be given to University and King's Colleges to confer degrees in all faculties. This Council had been very properly asked to say that at this time of day no new body should be constituted in London to grant qualifying degrees. In the draft charter, however, of the proposed Albert University there appeared a clause whereby this new university asked that if it be granted the power to give degrees in medicine it should not be compelled to give them except to persons who were already on the *Register*. That this new university should tie its hands in this manner could be unsatisfactory to none, but it was impossible to foretell what it would do with such powers when it got them. The Privy Council should be asked to tie their hands in such a way as not to add a new title to registration. The matter was urgent because the two colleges were now on the eve of appealing to the Privy Council, and before the Council met again, legislation might have been initiated.—Sir WILLIAM TURNER asked whether the English Branch Council had any official documents before it in arriving at this decision. If they had such documents why had they not brought them to the notice of members of the Council. It had been said that the question was a London question. If that were so, then he urged that it ought to be settled at London, and by Londoners, and that the provincial representatives should not be asked to express an opinion.—The PRESIDENT pointed out that the draft charter had disappeared in the official report of the Royal Commission, and it was a matter of public notoriety that the Privy Council had expressed a desire to hear counsel on the matter at an early date.—Sir JOHN SIMON urged that the question had been under discussion for a very long time, and he thought that the intervention of the Council at the eleventh hour in regard to a particular aspect of the question was inopportune. The late President had been a witness before the Royal Commission and had doubtless conveyed the views of the Council.—Dr. MACALISTER pointed out that the subject had entered upon quite a new phase. Hitherto the proposals for increasing the facilities for medical graduation in London involved, not an addition to the number of licensing bodies, but, by assimilation, a diminution in their number. Now for the first time they had been brought face to face—and in spite of Sir William Turner's professed ignorance, it was a matter of public notoriety—with the proposal to establish a new licensing body in London. While admitting the satisfactory restriction imposed in the draft charter he did not think that it was one that could be relied upon implicitly. He recalled the history of the Victoria University, and urged that any such provision would soon be dispensed with. In spite therefore of this limitation, it might well be that, before the next meeting of the Council, that clause, which was in the nature of a sop to Cerberus, would be modified or thrown out, and they would find a fresh licensing body in their midst. The moment, therefore, was opportune for them to apply to the Privy Council, and he thought the Branch Council was justified in asking the General Council whether on general principles it was desirable to add to the number of licensing bodies. This was the one important point, and he embodied this feeling in an amendment which he proposed, namely:

That in the opinion of this Council it is not desirable in the public interest that a new and independent body should be empowered to grant degrees in medicine conferring the right to registration in addition to the four that already exist in London.

Sir DYCE DUCKWORTH seconded the amendment.—Dr. GLOVER said that as a London man, as a London parent, and as a London practitioner, he was very anxious to see the establishment of a real teaching university for London, and he wished to express his entire sympathy with the movement for enabling London students to obtain degrees on reasonable terms. He would protest against the constitution of a university which should not have the power of granting degrees. To ask the Council to take one side in the controversy would be to place it in an unworthy position. The matter had been referred to a Royal Commission, and had occupied the attention of the colleges and schools for years, and yet they were asked in a quarter of an hour to make up their minds and to pass a very questionable resolution. The Council was made up of representatives of bodies with whom the proposed new body would certainly enter into more or less direct competition, and the Privy Council had evidently thought that no impartial opinion was likely to be obtained from such a body. He should bring forward an amendment embodying these views.—Dr. HERON WATSON moved "The previous question," but this was negatived by 12 voices to 10.—The PRESIDENT then put the amendment proposed by Dr. MacAlister. He said that it had ever been the policy of the Council to reduce by all possible means the number of licensing bodies, and after having achieved very good results in this direction it would be sad indeed to permit of any addition to their number. He urged that such a new body as that suggested would infallibly lead to a "battle of the shops," which of all things was most to be deprecated. The London University was sure to be supported by the Government under any circumstances: it was perfectly independent, and had no care except for the interests of education and culture. The other bodies had, on the contrary, to live on what they could get, and a new university would only increase the competition. It was therefore most desirable that representations should be made to the Privy Council, asking that, if the creation of the proposed new university were acceded to, they should not have the power of granting degrees entitling their holders to registration. This was stated to be entirely in accordance with the wishes of the promoters.—After some further historical observations by Sir JOHN SIMON, Mr. MACNAMARA urged that, if the Council did not do something, it would go forth on the wings of the press that they had deliberately refused to act in the matter. It was one of the most important things that had come before the Council that session, and he would rather sit to-morrow to discuss the question fully without remuneration than that it should be said that they had shirked their duty.—Sir WALTER FOSTER defended the action of the Branch Council on the grounds of the notoriety and urgency of the matter. He pointed out that the position was new as well as urgent, this being the first time that it had been proposed to constitute a new licensing body in the metropolis.—The amendment of Dr. MacAlister was then put to the vote, and negatived by 11 voices to 10.—On the original motion being brought forward again, Dr. GLOVER proposed an amendment (subsequently altered to a rider) expressive of the sympathy of the Council with the movement for the crea-

tion of a body to confer degrees on London students, and urging the Government to give the matter earnest attention.—This was seconded by Dr. BRUCE, but was at at once negatived by a large majority.—The original motion by Sir WALTER FOSTER was then put to the vote, and was carried by 12 voices to 6, several members having left the room, and others not voting.—Dr. MACALISTER then proposed that the President be authorised to communicate the foregoing resolution to the Lord President of the Privy Council, coupling with it a request that the Council might be kept informed of any future steps in the matter. This was agreed to, and, after the transaction of the usual formal business, appointment of committees, etc., the Council adjourned, and the session came to an end.

ERRATUM.—We are requested to state, in reference to our report of the election of Treasurers, that the office of Senior Treasurer, vacated by Sir Richard Quain, will be filled by the Junior Treasurer, Sir Dyce Duckworth; Mr. Bryant having been elected to the post of Junior Treasurer.

REVIEWS AND NOTICES.

ARCANA FAIRFAXIANA MANUSCRIPTA. A Manuscript Volume of Apothecaries' Lore and Housewifery nearly three centuries old, used and partly written by the Fairfax Family. Reproduced in facsimile of the handwriting. An introduction by GEORGE WEDDELL. Newcastle-on-Tyne: Mawson, Swan, and Morgan. 1890. Pp. 206.

MR. WEDDELL is to be congratulated on his fortunate find of an interesting and amusing volume of household lore, medical and domestic, which he has been enterprising enough to issue to the general public. It is a pity that he has judged it necessary to publish the volume in facsimile instead of having had it printed. The momentary interest his readers will take in the handwriting of their ancestors could have been well satisfied by the reproduction of representative specimens in the preface; while, as it is, discouragement and weariness must soon result from the manifold difficulties of deciphering cramped and unfamiliar characters through an entire volume.

The true antiquary loves that which is old, not that which seeks to imitate age. His proper work is the elucidation and preservation of the things and thoughts of the past. It is false art and incompatible with this work to copy every blot and every illegibility on a manuscript. The exact reproduction of spelling (for philological purposes), the careful rendering of the manuscript into equivalent print, and the elucidation and illustration of difficult or obscure portions by notes are the work of the judicious antiquarian editor.

In spite of this drawback the book, with its quaint household recipes of all kinds, is extremely interesting, particularly to medical readers. Someone with cynical humour has preluded this book of cures with a verse which might be placed on some of the modern infallible American vegetable nostrums with advantage and perhaps might even sometimes appositely appear on the mixtures and labels of regular practitioners:—

> Your sore, I know not what, doe not fore-slow
> To cure with herbs—which whence I doe not know;
> Place them (well poune't) I know not where: and then
> You shall be perfect whole—I know not when.

Faith appears to have entered largely into the therapeutics of our ancestors. Here, for instance, is a charm "To stanch the bleeding at the nose." We hardly think it would meet with the acceptance of a modern ambulance class, although distinctly a "first aid to the wounded:

> Sanguis manet in te,
> Sicut Christus ferat in se,
> Sanguis manet in tua vena,
> Sicut Christus in sua pena,
> Sanguis manet in te fixus,
> Sicut Christus in Crussifixus.

"Say this over three times, naming the partyes nam, and then say the Lord's Prayer."

There is another remedy for the same accident, nearly, if not quite, as valuable. It is marked with a cross and the word "Probatum," to show its practical efficacy: "For ye bleeding at ye nose: Take a toade, and drie it in Marche, put ye same in some silke or sattene bagg, and hange it about ye neck of ye party next ye skinne, and by Gods grace it will stanch presently."

We occasionally have inquiries in our correspondence column for remedies against nocturnal incontinence of urine. We therefore copy the following: "A medicine for pissing a bedd: Take of the powder of harts horne, and take morne and even ℥j for twelve daies in yor drinke, refrayning from butter, fatt meate, and oyle and pottage for the tyme."

The extraction of teeth appears to have been an easy matter in ancient days; perhaps some modern dentist might like to try the efficacy of this old method: "To pull out a toothe: Take wormes when they be a gendering together, dry them upon a hott tyle stone, then make powder of them, and what toothe you touch with it will fall out. Or take wheat flower, and mixe it with ye milk of spurge, and therof make a paste or dowe, with ye which fill ye hollow of ye tooth, and leave it in a certain time and ye tooth will fall out."

Diagnosis is not neglected in this work. Thus we have: "How to know ye king's evill: ℞ a ground-worme alive, and lay him upon ye swelling or sore, and cover him with a leafe. If it be ye disease ye worme will change and turne into earth, yf it be not he will remain whole and sound."

To our younger and less experienced brethren the following certain methods of prognosis may possibly be useful: "To know whether a sick man shall liue or die certenly prooued manie tymes: Take a penny weight of land cressede, and giue ye sick to eate three daies togeather, fasting, and to drinke a drafte of water after it or wine; if he cast it vp he shall die. Or els take tormentell, bayberries, and mirre *ana* ℥j, make these into fine powder, mix them well togeather; giue ye sick of it to drinck in stale ale ℥j at a tyme; if he caste it vpp he dieth of the same sicknes; if he reteine yt he shall liue, the bayes purge, the turmentall voideth all venome and rawe meates lying in the stomak, and ye mirre suffreth no corruption in the body of man."

This precious aid to prognosis is followed by an equally valuable one:- "For ye same purpose: Take a little of their water and putt into milk, and yf they dye a dogg will not eat it, and yf they live a dogge will eat it."

Here is a suggestion of a pathetic nature. Mary Tudor, with her disappointed affection for Philip, her dying cry that Calais would be found written on her heart, must betake her to the physicians that they might minister to a mind hysterically diseased, and to a broken heart. So, after their kind, they prescribed for her:—"An electuary yt Quene Mary was wont to take for the passion of the hart. Take damask roses half blowne out, cutt of ye whites, and beate your roses very fine, and straine out ye iuice asmuch as you can, you may putt to it if you will, a little rose water, to make it ye more moist. Then take of ye finest sugar that you can gett and make a sirop of it very thick. Then take rubies and beate them very fine, and likewise amber and pearle, a little amber greece, and mingle all these togeather with some of the sirop, till it be somwhat thick, then take it morne and even uppon a knives pointe, a little quantity. You may take it els at any other tyme when you think good. This medicine is very excellent and so approued."

Mary's sister, good Queen Bess, was not troubled with her heart—perhaps she had none. At any rate her infirmity seems to have lain in a different direction, as is shown by the following valuable formula:—"Quene Elisabeth her pother for wind. Take ginger, cinamon, gallingall, of each one ownes; aniseeds, caroway seeds, fenll seeds of each one half an ownes; mace, notmeges, of each tow drames, of setwall, one drame; ponde all and search them together, putt herein one pound of white suger. Use this powder after or before meate att anie time. It expells winde, it comforteth ye stomack, and helpeth disgestion."

We have the often mentioned "weapon salve," a concoction of which nastiness and superstition in equal quantities are the main constituents. There is a prescription "For the swymming in ye head, given by Mr. Vessalius (ye Emperor Charles's phisition) to Quene Mary."

The plan of pouring water or oil into the ear to bring out intrusive insects is not apparently very new:—"To make a worme come out of ye head, take ye marrow of a bull or cowe, and putt it warme into ye eare, and ye worme will come forth for sweetness of ye marrow."

Stimulants found a place in the domestic therapeutics of

our ancestors. Skeat, in his dictionary, derives the word whisky (usquebaugh) from the Irish *uisge-beatha*, or water of life. Usquebaugh, however, appears to have had another meaning than whisky, according to this work, and to have been a spirituous compound into which whisky itself did not enter. Unless, indeed, the spirit called in the three recipes here given "aqua vitæ," is a synonym, as, indeed, it is a translation of the original Irish term. This is one way to make usquebaugh:

"Take a pottle o' aqua vitæ and therein steepe of limmon, mace, and cloues a quarter of an ounce, and of nutmegs and ginger of each halfe an ounce, of carraway and colleander seeds half an ounce of each, of liquorice sliced two ounces, of raisins of the sounne a quarter of a pound, put into it two rootes of elacompana, suecorie, cumfey, and fennill, a little muske, and two ounces of suger candie, lett all these lie in steepe fower or five daies, and let itt runne through a cotten strainer."

Besides the large number of medical formulæ there are many domestic and culinary receipts of which we are sorry to be prevented by want of space from giving examples.

The book was the household receipt book of the Fairfax family; much of it was written by the Rev. Henry Fairfax, in a quiet country parsonage, during the great civil war, in which his relatives, Sir Ferdinand and Sir Thomas Fairfax, took so leading and important a part. While they were making history their womenfolk were making jam and puff paste, and the quiet clergyman, their near relative, was copying receipts for making "a man heare if ever he shall hear," "for the headache," "for the stomach worms," and such like matter, which no doubt he made use of in the treatment of his sick parishioners. To these, as to nine-tenths of the rest of mankind, the success or failure of the trivial daily task was of more importance than the fate of empires. It is only members of Parliament, newspaper writers, and historians who imagine that measures and events of first importance in their eyes, but which leave intact the income and the food supply of the people, can do more than stir up a languid interest in the minds of the male population, or could do as much for their wives as stop them making or induce them to make one single pot of damson jam above or below their usual number.

A Guide to Operations on the Brain. By Alex. Fraser. London: J. and A. Churchill. Pp. 24. Plates 42.

This is the first fruits of the work which Professor Fraser displayed and explained at the Anatomical Society during the Leeds meeting of the British Medical Association. Those who saw the photographs then exhibited went away deeply impressed with a sense of the enormous labour which had been expended upon them, and of their clearness and beauty. These photographs of the human brain have been made upon the following plan: After suitable hardening and preparation, the head was photographed and then dissected layer by layer, each layer being photographed in its turn. Further, the art of composite photography has been utilised, so that the spectator is enabled to gaze through the shadow of the superficial structures upon those which are deeper. The results are most instructive and easy to comprehend. At a glance the clearest notion of the position of the convolutions, of the island of Reil, of the cornua of the lateral ventricles, or of the corpus striatum is obtained, each in their respective relations to the surface. Further, inasmuch as these are conveyed by the truthful aid of the camera, a certainty is arrived at which enhances the value of the plates.

It will be gathered from the foregoing that we are decidedly of opinion that the study of these photographs will prove of the greatest service to surgeons. But there are also points of interest to anatomists. For instance, the separation of the hinder end of the posterior horn of the lateral ventricle by a thick septum is well shown; and also the curve which the intraparietal sulcus makes in the roof of the ventricle.

As photographs the plates themselves are of unequal excellence. Some are of unusual excellence and clearness, and have won the applause of practical photographers to whom we have shown them; others are less clear, but nevertheless convey all that is needed.

Behandlung weiblicher Geschlechtskrankheiten. Von Thure Brandt. Berlin. 1891. Pp. 189.

Those acquainted with foreign gynæcological literature and practice will know that the treatment of diseases of the pelvic organs, which goes by the name of Thure Brandt, has been welcomed and praised by some whose position and reputation entitle them to credit. On this account we may give to the authoritative work on the subject rather more space than we can usually afford to books of its character.

Thure Brandt is, apparently, not a medical man. He is a Swedish teacher of gymnastics, and has been so engaged since 1843. In 1847 a man came to him who had prolapse of the rectum. It had come down, for the first time, shortly before on the same day. Brandt did not know what was the proper medical treatment for such cases. It occurred to him to put his hand on the hypogastrium, press deeply into the pelvis, and then alternately intermit and resume this pressure, so that the parts should oscillate up and down. This movement, he thought, might cause the bowel to be pulled up. It did go up, and did not come down again. Since then he has, he says, cured many chronic cases, mostly in children. In 1859 he treated a woman with metrorrhagia in a somewhat similar manner, the pressure being directed towards the sacro-iliac joint. The bleeding ceased, and did not recur. Brandt thinks the pressure on the veins may have been the effective agent in the cure. In the same year Brandt heard that prolapse of the uterus was frequent in Dalecarlia. "Like a flash," he says, it came into his head that these patients might be cured like the man with prolapse of the rectum. Half an hour's study of a textbook of anatomy revealed to him the fact that the uterus might be grasped by both hands, and thus moved. Since then the methods of moving the uterus have been systematised, and the treatment has been extended to many other diseases. In his old age Brandt visited Jena, was introduced to Professor Schultze, and set to work upon patients in the clinic of that University town. Thus his methods became known.

We shall best give our readers an idea of the kind of thing the Thure Brandt treatment is by translating some of the directions for "uterine elevation" (Gebärmutterhebung). The patient lies on her back on a couch, with her knees drawn up, the feet together, the knees separated. The doctor sits on the patient's left side. With his finger in the vagina, and the hand on the hypogastrium, he brings the uterus as nearly as possible into the normal position, and then presses the cervix upwards and backwards with the finger applied in front of it, while the body of the uterus is pressed downwards and forwards. The nurse who assists stands with her right foot on the ground, and the doctor (sitting by the left side of the couch) places his left knee behind the nurse's leg, so as to give her support. With her left knee the nurse kneels on the couch, her thigh being outside the patient's right foot, and she presses her knee forward, so as to raise the patient's lower extremities as much as possible. The patient's feet are thus freely suspended between the thighs of the nurse. The nurse, bending forwards over the patient, with both hands placed on the hypogastrium, moves the uterus slowly, first upwards then forwards. The doctor, with his finger in the vagina, ascertains that the pressure is properly applied, and keeps the uterus in a position of anteversion. This is the first way. Four different ways of moving the uterus are described, and a fifth way in which the doctor is to do it all himself, without the help of a nurse. During the proceeding the patient's face is to be watched, and at any signs of discomfort the pressure made lighter.

Besides this raising the uterus, there is "uterine massage," which consists in supporting the uterus with the finger in the vagina in a position of anteversion, while the free hand executes a slight circular rubbing movement on the posterior surface of the uterus. According to circumstances, this rubbing is performed on either the whole uterus, or the body, or the cervix. We have also directions for the massage of the uterine appendages and of the pelvic wall. About twenty pages are devoted to the description of manipulations of this kind. Thirty-six pages are given to directions for movement of the limbs and trunk, forty-three different kinds of such movements being classified. Then follow ninety pages in

which the various diseases for which the treatment is applicable are considered, and the kind of gymnastic treatment best adapted for each is specified. Amenorrhœa, dysmenorrhœa, menorrhagia, the menopause, pregnancy, displacements of every kind, cervical catarrh and ulceration, hydrosalpinx, pelvic effusions of all sorts, abnormal size or smallness of the uterus, oöphoritis and peri-oöphoritis, all are to be treated by the Thure Brandt method.

We think our readers can form their own judgment as to the uterine manœuvres described, as to their probable effect on the sensory nerves of the patient, and as to how far this kind of work is consistent with the dignity of the medical profession. Its advocates will, of course, say, "There may be objections to it, but it cures the patients." Does it? We have looked in the book for some proof of this, but there is none; and it is plain that the author has no acquaintance whatever with the methods of scientific research, although we are quite willing to admit his benevolence and his good faith. Cases are mentioned in which the patient during the treatment got well. These we do not question. Is there any nostrum the proprietor of which cannot furnish abundant instances of recovery from all sorts of supposed disease while taking his remedy? What is wanted is evidence that under any novel form of treatment patients improve more rapidly and more certainly than when placed under favourable conditions, observing the laws of health, and being treated in the ways hitherto found beneficial. Not a fragment or trace of evidence of this kind is contained in the work before us.

NOTES ON BOOKS.

Medico-Legal Experience in Calcutta. By S. Coull Mackenzie, M.D. (Edinburgh: E. and S. Livingstone.)—This little volume contains a reprint of papers that have appeared during the last two years in the *Indian Medical Gazette* on various topics of medico-legal interest. It will prove of the greatest use to all who have to give evidence in investigations as to the cause of sudden or violent death in India. Dr. Mackenzie is surgeon to the police in Calcutta, and has made the best use of his opportunities; the little book before us gives us the sum of his experience in a very concise form, besides containing an outline of the more important or rarer cases that have come under his notice. The observations on the phenomena occurring after death will perhaps be the most useful, as in this respect, of course, climate causes the ordinary textbooks to have practically no value.

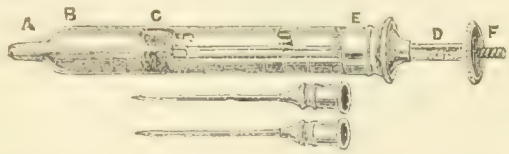
Materia Medica and Therapeutics: an Introduction to the Rational Treatment of Disease. By J. Mitchell Bruce, M.A., M.D. Nineteenth thousand. (London: Cassell and Co. 1891.)—The large circulation this work has already had shows that it meets the requirements of students in an eminent degree. The present edition has been brought up to date so as to include the additions lately made to our *Pharmacopœia*. The book is a comparatively small one, and the author is distinctly trammelled by the amount of material which he has to compress into a small space. The special pharmacology and therapeutics suffer especially from this, but this drawback is to a large extent atoned for by the excellent chapters on general therapeutics at the end of the book. The accounts given of the newer remedies are especially meagre, and in most cases the reverse of gushing, but this is probably a fault on the right side. There are still several details to which exception may be taken, particularly the frequent habit of denoting substances mentioned in the text by their chemical formulæ rather than by their names. In the account given of digitalis there is scarcely any mention made of its action on muscle, and in reading over this section one is left with the impression that its effects on the heart are exerted chiefly through the nervous system. The reasons given for its diuretic action, also, are not as fully stated as appears to be desirable. But on the whole the faults are chiefly those of omission, and can be fully accounted for by the necessity for brevity. There are one or two mis-spellings which we may be permitted to point out; thus, "Arztneimittellehre" occurs twice in the preface, while "phenyl-dimethyl-pyrazalone" is found further on.

Mémoires d'Ophtalmométrie. Par E. Javal. (Paris: Masson. 1890.)—Ophthalmometry, or the direct measurement of the refracting surfaces of the eye, is so little used in this country by the majority of practitioners, that a volume of nearly 700 pages professing to deal with this subject alone will create a certain amount of surprise. We can only echo the pious wish of the editor, that "our *confrères* will not allow themselves to be repelled by the size of the volume, or by the detail with which the subjects are treated." As the book consists of forty-six papers on identical, or closely allied, subjects, a considerable amount of repetition is unavoidable, and few persons, except reviewers, will attempt to read it straight through. It contains, however, a mass of facts which are really most valuable for reference, and it is a great pity that an alphabetical index has not been furnished. The instrument chiefly referred to is, of course, the now well-known ophthalmometer of Javal and Schiotz, the use of which would probably be almost universal were it not for its large size and its costliness. Perhaps the most interesting chapters are those dealing with the eccentric position of the refracting surfaces in relation to the visual axis. The relative frequency of axial myopia and myopia of curvature is another subject which would repay further investigation by this method. On the whole, we should say that this work is one that no one who is interested in the mathematical side of refraction can afford to be without.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW HYPODERMIC SYRINGE.

An efficient hypodermic syringe which can be easily sterilised and repaired is a desideratum with all engaged in pathological research. The accompanying woodcut gives a fair idea of one which I have designed, and which is now made by Messrs. Arnold and Son. It possesses some advantages over the ordinary forms, and in my hands is yielding very satisfactory results. It consists of the following parts: (1) an outer glass tube drawn out at one end into a cone, on to which the needles fit direct, thus saving a joint which generally becomes leaky; (2) a piston composed of an inner flanged rod and an outer flanged tube which fits tightly on to the rod, as shown in the engraving; between the two flanges is placed a disc of elder pith which can be compressed, and thus made to expand



laterally, by approximating the two flanges. The handle of the syringe itself forms the means of approximating these flanges to each other. The pith can be easily replaced when worn out, or some other material may be substituted, but I find that using pith the whole can be sterilised without damage in the "steamer," the moisture only serving to make the pith expand and so fit even better. With this syringe there need never be the fear of a dirty or ill-fitting piston, as the discs can be quickly replaced when necessary, and the expanding arrangement ensures perfect action.

I have, since designing this syringe, been informed that it is very similar to one used by Dr. Roux, of Paris. My only excuse for now describing it is that I have found my syringe very efficient, and do not think that the French form is at all well known in this country.

T. J. Bokenham, L.R.C.P., M.R.C.S.
Scientific Workroom, St. Bartholomew's Hospital.

According to the last fortnightly returns of the Metropolitan Asylums Board the number of small-pox cases in the ships is 30, as compared with 38 in the preceding fortnight.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JUNE 6TH, 1891.

THE ASSOCIATION AND ITS WORK.

The Annual Meeting.

We publish elsewhere in the present issue a preliminary programme of the fifty-ninth annual meeting of the British Medical Association, which will be held at Bournemouth, together with some notes upon the arrangements already made by the Local Committees for the entertainment of the members. These plans promise perhaps a more than usually successful combination of work and recreation. It will be seen that the subjects chosen for discussion embrace many of the most active questions of the day in clinical and pathological medicine and surgery. The great subject of tuberculosis will engage the attention of the Sections of Medicine, of Surgery, and of Public Medicine, discussions having been arranged in the first named on the Etiology and Prevention of Phthisis and on Lupus; in the second on The Value of Professor Koch's Method in the Treatment of External Tuberculosis; and in the last named On the Communicability of Tuberculous Disease from Animals to Man. A discussion of hardly less interest will be opened by Dr. Wilks in the Section of Medicine on The Effects of Alcohol, and all who know his originality and freedom from prejudice will anticipate a highly practical contribution to our knowledge. In the Section of Obstetrics the subjects chosen for discussion are of a most practical nature: Puerperal Eclampsia and Uterine Polypi. The Section of Public Medicine will have the advantage of hearing, from Dr. Franklin Parsons, who last year conducted an investigation for the Local Government Board into the Influenza Epidemic of 1889-90, an address on The Distribution of the Epidemic in the British Isles. In the Therapeutic Section, Dr. Lauder Brunton will give a lantern demonstration of the Experiments conducted by the Hyderabad Commission on Chloroform. Fuller particulars as to these and the other sections not here mentioned will be found in the detailed programme.

The Membership of the Association.

The membership of the Association has now reached an unparalleled total, and its power and influence as a medical institution of the first importance are being rapidly confirmed and consolidated. As the present issue of the British Medical Journal will reach the hands of some members of the profession in the United Kingdom and the Colonies who are not yet members of the Association, we may take this opportunity of describing briefly some of the various fields of activity in which the Association is serving the profession.

The Branches.

Not the least important part of the good work done consists in the opportunities afforded, not only, or perhaps chiefly, at the annual meetings of the Association, but also at the numerous Branch meetings, for the interchange of opinions upon matters of scientific interest or of political importance, and for the formation of friendships among the members of a widely-scattered profession.

The Branches of the Association now number 35 in the United Kingdom, and 19 in the Colonies and dependencies. The great need of our profession at the present day is a greater solidarity of interests, and increased mutual confidence between individuals. The work of the Branches tends to supply these deficiencies, and will continue to do this good work with greater and greater efficiency every year, while the Journal of the Association is a bond which links together all the scattered members of our great confraternity. Since the beginning of the present year the first annual meeting of the recently-constituted Leeward Islands Branch has been held with great success. The formation of the Branch was formally welcomed by the Governor of the colony, who expressed the intention of the Government to seek advice and assistance from it in matters concerning medicine and public health. The Council have also had the gratification this year of according formal recognition to two new Branches formed in Hong Kong and in Burmah respectively.

The Standing Committees.

As may be seen from the balance-sheet recently published the financial position of the Association is sound, and there is evidence of increasing prosperity. The calls made upon the exchequer of the Association come from many sources, but not the least important are those sums which are expended by the Scientific Grants Committee and the Parliamentary Bills Committee. The total sum granted to the former Committee during the past year has amounted to £900, and the abstracts of the reports which appear from time to time in the British Medical Journal show that this sum has been well expended in stimulating scientific inquiry in matters nearly related to the progress of medicine and surgery. A series of recent reports has been collected and published in a volume of over 150 pages, which will be useful for purposes of reference, and affords striking evidence of the amount of excellent scientific work recently done by the Research Scholars and the recipients of grants.

Considerable progress has been made in completing and extending the collection of books which form the Library of the Association. In several instances series of periodicals have been completed by the kindness of various donors. By means of an exchange of duplicates the Library Committee has been enabled to obtain copies of works needed by this Library while supplying deficiencies in several similar institutions. The number of readers during the year has exceeded 2,000.

The work of the Parliamentary Bills Committee is of the most varied kind, and its assistance is being constantly sought in many practical difficulties which arise from time to time in the relation of the profession

to the Legislature. In this way the Committee has been able to render important service to the profession in bringing to the notice of members of the House of Commons the serious consequences which would have ensued from the adoption of the proposal contained in the Government Factories and Workshops Bill for the abolition of certificates of fitness. It will be remembered that these certificates are the only effectual safeguard which the State has been able to impose to prevent the employment in factories and workshops of young children who are, by reason of physical ailments or imperfect development, unfit for such labour. The representations made to the members of the Grand Committee on Trade, backed by the powerful advocacy of Dr. Farquharson within that Committee, were crowned with complete success, and the proposal to abolish the certificates was rejected by a very large majority—a majority so large that there is every reason to believe that the question will not again be raised in the House of Commons. Attention having been directed to the injurious influence of the Mortmain Acts on the finances of medical charities by memoranda prepared for the Parliamentary Bills Committee by Mr. Ernest Hart and Sir John Simon, the whole subject has been carefully considered, and a Bill drafted for the Committee has been recently introduced into the House of Lords by Lord Herschell. The Public Health (London) Law Amendment Bill, which affects the interests of the profession in the metropolis in several matters, has also engaged the attention of the Committee, and a special Subcommittee is at the present time engaged in watching its progress and in proposing amendments. Already modifications in the directions desired have been embodied in the Bill.

Finally, we have the pleasure of announcing to-day what will, we hope, prove to be the solution of the question as to the grievances of army medical officers which has so long engaged the attention of the Parliamentary Bills Committee.

The Therapeutic Committee was appointed in 1887, after the suggestions which had been made by Professor Whitla at the Dublin meeting of the Association. The object of the Committee was partly the dissemination of therapeutical knowledge, but chiefly the organisation of bands of workers who would investigate the action of drugs both in the laboratory and at the bedside. Since its formation the Committee has aided pharmacological researches by several individual workers; the results obtained by some of these have been published, as for example, that by Professor Charteris, on salicylic acid. Last year an extensive therapeutic investigation of the effect of certain hypnotics—sulphonal, paraldehyde, urethan, and chloralamide was undertaken. The results were published in the BRITISH MEDICAL JOURNAL last year. An investigation of the action of the nitrites in relieving dyspnœa and in causing diuresis is now in progress; the results will shortly be published. Dr. Lauder Brunton, who has acted as chairman of the Committee since its formation, having been compelled to resign owing to the pressure of other engagements, his place has been worthily filled by Professor Gairdner, of Glasgow, under whose able guidance and with the skilled assistance of Dr. Mitchell Bruce, who will act as Vice-chairman in London, the Committee will no doubt extend the field of its labours in the promotion of therapeutical research.

MR. STANHOPE'S DECISION.

THE courteous letter, dated May 26th, from Mr. Stanhope to Sir Andrew Clark, which we are enabled to publish to-day, conveys the decision of the War Minister on the long-contested question of the rank and title of army medical officers. The struggle, out of which at last something practical is evolving, has extended over four years, and has been as severe as it has been protracted.

When medical officers were left rankless and with very anomalous titles it was no marvel that a serious agitation speedily arose. It was intolerable that a great body of public servants, essential to the very existence of the Army and sharing in all its dangers, should be placed, through military indifference and jealousy, in the position of camp followers. The matter was taken up by the Parliamentary Bills Committee of the British Medical Association and found free ventilation in the columns of this JOURNAL.

Under such pressure the War Minister resorted to the usual expedient of a Committee, which sat under the chairmanship of Lord Camperdown. This Committee took evidence, and presented a careful report; but it is well known that the chief recommendations of that Commission were set aside by Mr. Stanhope at the instance of his "military advisers."

The medical officers and their friends, seeing that these military authorities would not agree even to compromise, were then driven to formulate demands for complete equality with combatant officers both in rank and title in a Royal Medical Corps. They could not be blamed for the advocacy of such radical measures when their opponents seemed deaf to even the most modest demands, founded alike on justice and common sense.

At this stage the warm sympathy of the medical corporations of the United Kingdom was enlisted, and the War Minister received a fully representative deputation, headed by Sir Andrew Clark, who has since taken a leading part in representing to Mr. Stanhope the views of the profession. At last we are able to announce with much pleasure that wiser counsels have prevailed at the War Office, and Mr. Stanhope now concedes, with a good grace, that which he had previously withheld.

We congratulate him on his honourable courage, and the medical officers on the solution of a question which lately seemed as interminable as intolerable. Possibly some medical officers may not be altogether satisfied with compound titles, but they are undoubtedly a great advance on the existing ones. They at all events express army position of which not even the wilfully blind can feign ignorance, and the concession will, we believe, be recognised as a real attempt to remedy the grievance.

The promise that the rank expressed in the titles shall be "substantive" is a concession of the very first importance; the unmistakable expression of that fact will clear away a whole mass of incongruities. It only remains for Mr. Stanhope to define this substantive rank in such terms, both in warrant and regulations, that it cannot possibly be afterwards undermined, set aside, or whittled down in "Army Orders." The granting of sick leave to medical on the same terms as to other officers is so obvious a piece of justice that the marvel is how it was not conceded long ago; nevertheless, Mr. Stanhope must be thanked for doing away with such an absurd and inequitable distinction, even at the eleventh hour.

It will be noted that he has not mentioned the reduction of the recently increased tours of foreign service, but as in a previous letter he expressed his readiness to revert to the old periods if this were found possible, it may be hoped that this matter also may yet be arranged. The medical officers of the army will, we believe, accept Mr. Stanhope's concessions in the same frank spirit with which he offers them. They indicate a cordial desire on his part to remove the grievances of army medical officers, they are distinct steps in advance, and will, we believe, be found to work well in practice.

PRACTICAL INSTRUCTION FOR PUBLIC HEALTH DIPLOMAS.

Sixteen different examining bodies in the United Kingdom have formulated regulations for examinations in Public Health. Naturally enough, there is considerable variation in the standards and range of subjects required, and still more in the manner in which they are specified. The recent resolutions of the General Medical Council—making laboratory training and practical sanitary work imperative upon candidates—have led to further modifications in the synopses issued by the examining boards, and, as the Education Committee of the Council pointed out in the report discussed at the meeting on Saturday last, "there is difficulty in understanding what the whole of the regulations under which some of the authorities grant the diploma in Public Health really are." The difficulty is one with which the teaching bodies and intending candidates for these diplomas are only too well acquainted, although perhaps inevitable in a period of transition like the present. The clear and well-timed report of the Education Committee will enable the respective examining boards, with or without pressure from the General Medical Council, to bring their regulations into more explicit form, and to ensure the high standard of efficiency which the Council prescribes.

The laboratory work required should comprise the study of air, water, food, clothing, soil, sewage; meteorology, bacteriology, disinfection, parasites, and certain branches of human and comparative pathology. The Committee suggested that use might be made of the resources of the veterinary school, and that candidates should be required to produce evidence of having received practical instruction in diseases of animals in relation to public health. The Council adopted the recommendation of the Committee in a slightly modified form (see page 1230).

The course of laboratory instruction must cover a period of six months after the candidate has obtained a registrable qualification, in a laboratory or laboratories approved by the examining body. Several efficient laboratories are now being organised, and it is important that the other authorities should clearly define in detail, as the Conjoint Examining Board in London have already done, the points upon which practical instruction is required.

The Committee offer no suggestions with reference to the six months' course of practical outdoor sanitary work with the medical officer of health for a county or large urban district, which is to be required in the new order of things. Facilities for this purpose have already been given in Newcastle and elsewhere, but it would be interesting to know how far the new system of pupilage has been accepted by medical officers of health generally, and by their sanitary authorities.

Both courses of practical work must be taken in a post-graduate year, and at least twelve months must elapse after obtaining the first registrable qualification before a candidate is admitted to the examination for a diploma in public health, the object being "to secure the attention of candidates to the higher special studies, undistracted by the ordinary work of the medical curriculum."

The Medical Council has taken strong action to ensure that the next generation of medical officers of health shall be scientific men, well trained in the theory and practice of this special branch of medicine. Let us hope that the sanitary authorities of the future will also advance with the age, and that a true national public health service, worthy of the country, may at last be formed, with a Minister of Health at its head.

OF PSOROSPERMS AND THEIR IMPORTANCE.

The subject of psorosperms is at present exciting so much interest amongst pathologists in this country and in France, that it will be well to review the present state of our knowledge of these organisms. Psorosperms, also called coccidia and pseudo-naviculæ, are classed by most zoologists amongst the protozoa or lowest class of animals, though Robin and a few other writers consider them algæ. Assuming that they are protozoa it appears probable that they form a stage in the life-history of the Gregarinida. Psorosperms usually occur massed together in cysts whose distribution in the animal kingdom is very wide, for they are found parasitic in connection with the alimentary canal and liver of the higher vertebrata, in nearly all the organs of fresh-water fish, and in many of the tissues of the lepidoptera, orthoptera, and arachnids. They are most readily seen, however, in the livers of ill-fed rabbits, where they occur as small whitish nodules. In man, Dr. Delépine—who in a recent paper read before the Pathological Society of London showed how carefully he has studied the subject—says that psorospermial cysts have been described as occurring in the alimentary canal, in the liver, spleen, kidney, urinary bladder, lungs, pleura, heart muscle, skin, and hair.

The contents of the cysts are numerous spore-like bodies, round, oval or spindle-like in shape, each consisting of a firm capsule which may be bivalve, and which contains protoplasm at first homogeneous but subsequently becoming transformed into sickle-shaped bodies endowed with active amœboid movement. These sickle-shaped embryos possess the power of penetrating epithelial cells, and, when they have thus obtained a local habitation, of growing and becoming nucleated.

Considerable importance has been attached to a knowledge of the development of Gregarinida from the fact that when psorosperms infect lepidoptera they may cause the death of their hosts, for it has been shown that they produce silk-worm disease.

It is only within the last few months, however, that M. Darier and Dr. Wickham in France, Mr. Bowlby and Mr. Jonathan Hutchinson, jun., in this country, have pointed out the relationship which these organisms seem to bear to Paget's disease of the breast, and to some other forms of skin affection. In Paget's disease the superficial layer of the epithelium covering the nipple is absent to a great extent, whilst the rete mucosum remains in patches, which are often vacuolated. The general appearance of the bodies in the

tissues in this disease is shown in the drawing made by Mr. Jonathan Hutchinson, jun., to illustrate Dr. O'Neill's report of this case.[1] The "vacuoles" appear, by the light of recent observations, to be probably parasitic in their nature, since they are caused by psorosperms. If this hypothesis should prove correct, it will, of course, materially modify the treatment of the disease, for instead of extirpating it with the knife as the surgeon has hitherto done, it will be treated by the application of strong antiseptic solutions in the manner recommended by Dr. Wickham. The acceptance of this view will also necessitate a modification of the pathology of Paget's disease, and we shall have to agree with Mr. Bowlby, who believes that all changes in the breast are secondary to those occurring in the nipple, and are not in any way the cause of the so-called eczema. It is at present a vexed question whether the cancerous growths in these cases are or are not directly due to any specific action on the part of the psorosperms, but before this point can be settled with any degree of certainty, it is necessary to be able to cultivate the organisms. Messrs. Ballance and Shattock have lately declared that their experiments in this direction had been unsuccessful, whilst Dr. Delépine and Mr. D'Arcy Power announced that their work had yielded evidence of a positive result, though it was as yet too early to speak with any degree of certainty. The question, however, is one of great importance, and we shall watch with interest such further results as may be obtained.

Professor Billroth, who has been seriously indisposed, was able to resume his lectures on May 25th, when he received an enthusiastic welcome from the students.

On May 22nd the French Government decided that the *projet de loi* relative to the practice of medicine in France,[2] which was passed by the Chamber of Deputies, and has since been discussed by the Senate, should lie upon the table.

Medical men in Canada appear to take more interest in politics, or they find more favour with the constituencies, than their brethren in England. There are seventeen representatives of the profession in the Canadian House of Parliament, and we understand that Sir Charles Tupper began life as a medical practitioner.

Sir Andrew Clark, Bart., will deliver a lecture at the City of London Hospital for Diseases of the Chest, Victoria Park, E., on Monday, June 15th, at 4 P.M., in connection with the course of clinical lectures and demonstrations at that hospital, on "Observations on Some Relations of the Human Soil to the Growth of Tuberculous Bacilli and the Evolution and Treatment of Phthisical Lesions."

Among the honours granted on the occasion of the Queen's birthday this year are the following: Brigade-Surgeon Robert Waters, M.D., to be a Companion of the Order of the Bath; and Surgeon-Major James Sutherland Wilkins, of the Bombay Establishment, to be a Companion of the Distinguished Service Order. Dr. Waters, after distinguished services in Gambia in 1869, in the Ashanti war of 1873-74, and with the Nile expedition in 1884-85, retired from the service in April of last year. Surgeon-Major Wilkins served in the Afghan war in 1880, and with the Burmese expedition in 1886-87.

MIDWIVES IN HUNGARY.

Professor Wilhelm Tauffer, of Buda-Pesth, has recently published a work dealing with the question of midwives in Hungary. He holds the midwives of that country largely responsible for the great mortality among lying-in women and newborn children which prevails there. With the view of lessening an evil which is said to be admitted by all who have practical knowledge of the subject, Dr. Tauffer suggests several reforms which have already been discussed in some of the local medical societies. Three hundred copies of the work have been presented to the Hungarian Government for distribution among medical men occupying official positions.

THE CROONIAN LECTURES.

Dr. Burdon Sanderson is recovering from an attack of influenza. At the recommendation of Dr. Buzzard, who has attended him—with Dr. Andrews, of Hampstead—the President of the College of Physicians has sanctioned the postponement of the Croonian Lectures. The lectures will be delivered as soon as possible. Due notice will be given of the date fixed.

THE COMPOSITION OF TUBERCULIN.

The *Deutsche medicinische Wochenschrift* announces, apparently on the best authority, that Professor Koch since his return from Egypt has been principally engaged in isolating the active principle of tuberculin, and defining its chemical characters, so as to make it possible to test its properties in the same way as is done in the case of other medicinal substances. As soon as these researches have been brought to a successful issue—a result which there is reason to hope will be attained within the next few months—Professor Koch will publish a comprehensive work in which full particulars will be given, not only of these later investigations, but of the whole procedure used in the preparation of the remedy.

ENDOWMENT OF A CHAIR OF PHYSIOLOGY AT LIVERPOOL.

At a meeting of the Council of University College, Liverpool, on June 3rd, a letter was read from Mr. George Holt, enclosing a cheque for £10,000 for the endowment of a chair of physiology. The Council adopted unanimously a resolution expressing warm appreciation of the object of Mr. Holt's benefaction, in which they recognised "an added guarantee for the completeness and stability of the College in strengthening the medical department and creating a new bond of union between it and the College as a whole." It was also decided to request Mr. Holt to permit his name to be permanently attached to the professorship. The present holder of the chair (Dr. Caton) sent a letter resigning the position in consequence of increasing work of other kinds.

DR. FERRAN AND HIS "ANTICHOLERAIC" INOCULATIONS.

A delicious instance of the slow grinding of the mills of officialdom has just occurred in Spain. Dr. Jaime Ferrán, of Barcelona, whose name was prominently before the world some years ago in connection with "anticholeraic" inoculations, petitioned the Government last summer, when the cholera epidemic was at its height in Spain, for leave to continue his experiments. Whether these "experiments" were to be confined to the scientific seclusion of the laboratory or were to be carried out as before on the public at large, does not appear. In any case, after chewing the cud of official fancy on the matter for nearly a year, the Royal Sanitary Council has only now made up its mind to reject the petition. The *Siglo Medico* points to this as a proof of the how-not-to-do-it spirit which prevails in Spanish administration. It is, however, obviously open to a different interpretation—namely, that the Sanitary Council, from former experience, thinking Dr. Ferrán's inoculations useless, if not dangerous, but not wishing to appear to place obstacles in the way of scientific progress, judged it prudent quietly to strangle the project with red tape.

[1] British Medical Journal, April 18th, 1891, p. 847.
[2] British Medical Journal, April 18th, p. 871.

FEMALE PHARMACISTS IN FRANCE.

THE new *projet de loi* as to the practice of medicine and the subsidiary arts connected therewith, which is now before the French Legislature, provides for the admission of duly qualified women to the pharmaceutical profession. It is remarkable that France, which has shown itself so liberal in throwing open the portals of the faculties of medicine and law, if not also divinity, to women, should so long have denied them admission to a profession not open to some of the graver objections which have been held to justify their exclusion from other careers. Pharmacy has not always been a close borough of the male sex in France, for in the statutes of the Paris Faculty of Medicine, which were enacted in 1350, mention is made of "*chirurgiens*" and "*chirurgiennes*," "*apothicaires*" and "*apothicairesses*," "*herbiers*" and "*herbières*," without any distinction of professional rights or privileges. It is clear from this that in the so-called "Dark Ages" women could dispense simples and practise pharmacy, as well as surgery, and the Bill now before the French Senate only proposes to restore them to the position in this respect which they held five centuries ago.

OXFORD GRADUATES' MEDICAL CLUB.

THE annual summer dinner of this club was held at Limmer's Hotel and was attended by more than 50 members and their guests. The gathering was presided over by Dr. John W. Ogle, who, at a previous general meeting of the club, had been elected to succeed the late Dr. Fincham, who had been President since the foundation in 1884. In a short speech the new President thanked the members for the honour which they had conferred upon him and congratulated them on their generally prosperous condition. The members had increased from 40 to upwards of 140, and the financial status, as announced by the treasurer (Dr. Church), was upon a very satisfactory footing. They had to mourn the loss of several prominent members besides their late President (Dr. Fincham), notably Dr. Monro and Dr. Gulliver. The health of the retiring secretary (Mr. John H. Morgan) was proposed by Dr. Champneys, and Mr. Morgan, in replying, stated that the only reason for his resignation was that he thought such duties as there were for the secretaries to perform were best entrusted to men who were more recently in touch with the University than he could now claim to be.

THE HINDU LYING-IN CHAMBER.

THE mortality of childbed among Hindu women is notoriously high, a circumstance which is no doubt largely due to the very early age at which they usually become mothers. A still more potent cause is, however, to be found in the shocking and apparently deliberate barbarity with which they are treated during the puerperium. According to the *Indian Medical Record* the lying-in chamber of a Hindu family is ordinarily a little damp ill-ventilated hut or room in some remote corner of the courtyard or compound. In this the expectant mother is placed, and there she remains from eleven to thirty-one days, during which, according to Brahminical law, she is looked upon as unclean. There is only one small inlet to this apartment, and the door is carefully closed to exclude those evil spirits, light and air. In order, probably, to purify the unfortunate woman by heat, wood fires are kept burning in the room both night and day. The smoke has to find its way to the outer air as best it can through any chinks there may happen to be in the roof or walls, which are usually made of bamboo, with a thatching of mats or straw. With the view of more effectually exorcising the unclean spirit, a powder composed of peppercorns or ginger is given to the patient during the first few days; this preparation is administered either in the form of a paste or dissolved in boiling water as a tisane. It is not surprising to learn that the result of this elaborately perverse therapeusis is that something like 40 per cent. of the women subjected to it die of puerperal fever and tetanus within the first fortnight after delivery.

THE ABUSE OF THE PROVIDENT PRINCIPLE.

A CORRESPONDENT in the West of England sends us a peculiarly striking example of the evils of so-called "medical aid societies." In this particular instance it appears that the agent and the collector of the medical aid society are also the agent and collector respectively of a company which undertakes the insurance for small sums of the lives of infants. This society (calling itself "friendly") transacts, it would appear, the ordinary business of what is known as an "industrial assurance" organisation—in other words, it adds 100 per cent. to the pure insurance premium to cover "expenses of management." The other body is a company "limited," which simply trades on the weakness—and often something worse—of a few practitioners. This sends out "agents" to tout for what it is pleased to call "medical insurance" at a cost of a halfpenny per week to juveniles, and one penny per week to adults, offering in return medical attendance at the doctor's surgery, or at the patient's home, if requisite, without further payment. As the society has a number of paid officers, collectors, and agents, who have to be remunerated out of this extremely modest contribution, and London offices certainly not maintained from philanthropic motives, but out of the common fund, it would be interesting to know what portion of the payments reaches the "medical officer" after the "sweaters" have been satisfied. Again, the names of the medical men connected with the society are touted and hawked from door to door, and there is certainly no difference, though there may be a distinction, in doing this under cover and openly and personally. The whole system, indeed, is a breach of the honourable traditions of the profession, and is calculated not only to lower its credit in the eyes of the public, but seriously to diminish the already meagre emoluments of its practitioners.

COUNTRY PRACTICE IN FRANCE.

COUNTRY doctors in England have occasionally been known to grumble at their lot, and no doubt it is often one of hardship and obscure sacrifice, which is only made endurable by the ennobling feeling that, as Carlyle puts it, "whoever else is in the wrong, they are entirely in the right." But hard as is the life of a country practitioner here, we doubt whether that of the corresponding type of medical man in France is not several degrees worse. In a book entitled *Nos Grands Médecins d'Aujourd'hui*, recently published under the pseudonym of "Dr. Horace Bianchon" (the name of Balzac's fashionable physician), there is a chapter on the country doctor, in which his way of life is graphically described: "In his open gig all day he jogs along soft roads and highways, seeing niggardly patients at tenpence a visit, storming at the peasant who always calls him in too late, when the old woman is already at the last gasp, when the child is already born." The miseries of driving long distances on cold winter nights to set a broken leg or bring off a tedious labour are much the same in both countries; but the picture of the French "G. P." has some characteristic touches. He is described as trying, as he drives along, to call to mind what surgical knowledge he possesses: in the patient's house there is nothing but a little cider and a fire made of vine-shoots: the doctor is only called in when the case becomes desperate when the shepherd, the spae-wife, and the bone-setter have been consulted in vain. The two latter we have always with us, but we are not aware that shepherds are counted among the Asclepiadæ in rural districts in this country. The French practitioner's professional earnings are put down at 3,000 francs (£120), an income which many an unqualified assistant in England would despise, and even this slender revenue will show a deficit if the harvest is a bad one. In France, as in England, the doctor's bill is the last to be paid, and he must in many cases be content to take what he can get. Finally, as in France the unkind old saying, *I bi tres medici duo athei*, has an amount of truth which it is far from having here, the doctor, to quote our author, often has not, like his neighbour the *curé*, the hope

of a better world to support him in his weary pilgrimage through the present. Altogether we think the English country doctor will hardly feel inclined to change places with his French compeer.

THE EPIDEMIC OF INFLUENZA.

THERE was a very slight decline last week in the fatality of influenza in London. The deaths directly referred to this disease, which had increased during the preceding seven weeks from 3 to 319, were 310 during the week ending Saturday, May 30th. In addition to these 310 deaths, there were 64 cases in which influenza was certified to have occurred in the course of other diseases. The mortality from influenza among elderly persons still shows a very marked excess, nearly half the fatal cases of this disease registered last week in London being of persons aged upwards of 60 years. The deaths referred to diseases of the respiratory organs in the metropolis last week were 591, and were more than double the corrected average; these included 353 from bronchitis and 189 from pneumonia, the average numbers in the corresponding weeks of the preceding ten years being only 146 and 89 respectively. Doubtless many of these deaths, although primarily attributed to bronchitis or pneumonia, were due to influenza. The fatality of diseases of the circulatory system was also excessive, the deaths numbering 200, and being nearly double the average. Many of these deaths were from the effects of influenza upon a weak or diseased heart. Though in some of the large provincial towns there was a further decline last week from the very high death-rates prevailing in recent weeks, in other towns there was a marked increase; the mean rate of mortality was 32.6 per 1,000, and differed but slightly from that recorded in the preceding week; it exceeded the average by about 50 per cent. The death-rate exceeded 40 per 1,000 in Huddersfield, Manchester, and Salford, in each of which towns influenza showed very fatal prevalence.

SIR WILLIAM MACKINNON, K.C.B.

THE brilliant war service of Sir Wm. Mackinnon has been at last somewhat tardily recognised by promotion in the Order of the Bath. None of the recipients of birthday honours can show a more continuous and exceptionally varied record of experience in the field than the present Director-General of the Army Medical Department, who heard his first shot fired thirty-seven years ago, and has lost no opportunity since then of familiarising himself with the fighting peculiarities of different parts of the world. After he had passed through the Eastern campaign in the Crimea with the Black Watch, Sir William joined Lord Clyde's personal staff, and accompanied his illustrious chief in the complicated and glorious campaign which crushed the Indian mutiny. We next find him in New Zealand, where he spent three years as the sanitary officer to the forces. In the second phase of the Ashanti war he acted as Principal Medical Officer, and it is an open secret that on more than one occasion he added to his professional qualifications a display of military dash and readiness which would have won for him even higher distinction if fate had called on him to serve in the so-called "combatant" ranks. In addition to these strictly warlike experiences, Sir William Mackinnon has been Assistant Professor of Military Surgery at Netley and Principal Medical Officer at Gibraltar, so that he brings to the discharge of his administrative duties an unequalled knowledge of professional detail and a full acquaintance with the old order of things as well as the new. During the greater part of his service he has been honoured with the personal friendship of the Commander-in-Chief, but this has in no degree diminished his independence of character, nor diluted the wholesome Highland frankness with which he is at all times accustomed to express his views; and, indeed, it is well known that his sympathy with the forward movement has tended in no small degree to mould the military mind in the direction of progress, and to bring about a just and reasonable settlement of questions recently in dispute, which cannot fail to make his period of office memorable. We regret to learn that the new K.C.B. has not escaped the fashionable epidemic, but that a sharp attack has obliged him to seek rest and convalescence at Torquay. We wish him a complete and speedy recovery, and ample health and strength to fill his arduous and responsible post for the next five years with the same zeal and efficiency which have distinguished his first two years of official work.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

DR. T. LAUDER BRUNTON, F.R.S., will deliver the Cavendish Lecture "On Elimination, and its Uses in Preventing and Curing Disease" on Friday, June 12th, at 5 P.M., in the Board Room of the West London Hospital. The annual dinner of the Society will take place at the Criterion Restaurant on Wednesday, June 10th, at 7 P.M., the President, T. Gunton Alderton, Esq., in the chair.

ALCOHOL IN WORKHOUSE INFIRMARIES.

AN amusing discussion took place at a recent meeting, on a report presented by a subcommittee appointed to consider the consumption of intoxicants at Bow Infirmary. The reporters stated that alcoholic beverages had been prescribed only by the medical staff, and recommended no interference with their medical discretion. This conclusion was judicious, for the medical officer alone should be held responsible for the treatment of the sick under his care. At the same time, in view of the light thrown on the enhanced therapeutic gain in many workhouses and infirmaries, by the great reduction, and even by a total abstention from the administration of intoxicants as medicinal adjuvants, it behoves the medical officer to be very deliberate in ordering such agents. In several localities the aged and infirm have benefited by the withdrawal of intoxicating drinks. St. Marylebone workhouse, with an average population of some 1,500 paupers, is a case in point. One of the guardians amused his colleagues by the prescription of an abstaining medico who committed the tremendous crime of prescribing three alcoholic tinctures, in the proportion of five drops of rectified spirit to each dose. This, however, was supposed to be outdone by another nephalist doctor, who actually had the audacity to order, for a child, three drops of rectified spirit to each dessertspoonful of the physic. After the recital of such abstinent atrocities the worthy guardian could only hold that abstaining medical men must hereafter be speechless, choked by the mud in which he declared they were deeply sunk. It might be advisable for this zealous guardian to inquire what would be the extent of alcoholic influence on the organism of the minute doses referred to, and whether it was not more scientific and accurate to order exact doses of alcohol than to pour in generous quantities of liquids of uncertain spirituous strength and of variable other potencies.

NON-RESIDENT MEDICAL OFFICERS OF HEALTH.

THE Public Health (London) Law Amendment Bill, in its present form, embodies many important advances in sanitary legislation, which experience has shown to be necessary, and which will materially strengthen the sanitary government of the metropolis. To one of its provisions, however, we must take exception as being unwise and unnecessary. Why should the medical officer of health, appointed or reappointed after a specified date for any district in London, be required to live within a mile of his district? As a rule, perhaps, this condition could be fulfilled without difficulty, and convenience of residence would always have weight with local authorities in making an appointment. It is, however, only one condition, and a minor one, among many others which

have far greater importance, and its enforcement would often exclude some, if not all, of the candidates best fitted for the appointment. The question has in truth long passed out of the theoretical stage. Some of the most able and distinguished medical officers of health in London reside outside the districts under their official charge. The districts in question have the advantage of the services of men of the highest ability—services which they would never have obtained had Mr. Ritchie's proposed clause been in operation. In the provinces the Local Government Board have always encouraged the combination of sanitary districts for the appointment of a medical officer of health, who must of necessity be non-resident as regards all his districts save one, and in at least one such instance the exigencies of railway communication make it necessary that the place of residence should be outside the area altogether. It will not be contended that these appointments have been other than successful in working, or that the facilities for travelling are less in London than elsewhere. What is to happen if no suitable local candidate is forthcoming—say in a small East End district, where medical men with the requisite qualifications and time for sanitary work are not likely to be numerous? Is an unsuitable candidate to be appointed, or does the President of the Local Government Board foresee in the immediate future an improvement in the remuneration and tenure of office in every part of London sufficient to overcome the difficulty? The first essential is to obtain the services of a competent medical officer of health. If he lives in the district so much the better, but residence cannot be made a *sine qua non* without risk of lowering the standard of efficiency. The proposition is, to say the least of it, premature and ill-adapted to the existing conditions, and we trust that upon further consideration it will be withdrawn.

THE WORKING OF THE LUNACY ACT, 1890.

The annual report of the Bethlem Royal Hospital shows that there were 494 cases under treatment during the year 1890, that 127 were discharged recovered, and that 28 died. The number remaining at the end of the year was 229. The rate of recoveries was 51.8 per cent for both sexes, and the death rate 11.8 per cent. Dr. Percy Smith has some further remarks upon the working of the new Lunacy Act, supplementing his paper on the subject read before the Medico-Psychological Association in November last. He complains of the carelessness and ignorance of their duties displayed by the justices specially appointed under the Act to sign orders for the admission of patients into the hospital, and he points out that whilst mere oversights on the part of medical officers of asylums are misdemeanours, according to the Act, which subject them to penalties of varying amounts, the justices can order persons to be sent to asylums upon orders which may be invalid owing to the careless and negligent manner in which they are made out, and thus the very safeguard which the Act is supposed to set up, by the interposition of the "judicial authority" is by that authority overthrown, and persons are thus improperly sent to be "incarcerated" in lunatic asylums. If the specially appointed justices are so incompetent to fill up admission orders, they, and not the medical officers of asylums should be held responsible. It would be well, therefore, if the Commissioners in Lunacy were empowered to deal with the justices direct and not through the asylum medical officers as at present. If every justice who makes out an informal, and consequently an invalid, admission order was compelled by the Commissioners to correct it and put it into legal form, we should soon remedy this grievance. It is neither fair nor right that asylum medical officers should be called upon to sit in judgment upon the justices, or be held responsible for their ignorance or neglect. The correction of invalid orders of admission should rest between the justices making the orders and the Commissioners without reference to the asylum officials. An instructive case is given which places this "judicial authority" in a new light. It is the case of a man "admitted under a reception order made by a judicial authority; no symptoms of insanity appeared within seven days after admission, and he was discharged not insane." A particularly absurd provision of the new Act is that each patient who is admitted without having previously seen a justice shall have a notice handed to him telling him he has a right to see a justice. We are not surprised to hear that "a very large majority of those patients saw the absurdity of the whole thing, and on handing them the paper one heard such remarks as these made by the patient: 'What's the use of giving that to a mad woman:' or 'I don't want to see a judge: God is my judge;' others tore up or burnt the notice or refused to accept it, and others took no notice of it at all." Again under the new Act mechanical restraint can only be used for medical or surgical reasons, or to prevent the lunatic from injuring himself or others. Upon this point Dr. Percy Smith says, "one very destructive patient, whom one would under the old Acts have treated by such harmless and mechanical means (as padded gloves) tore up in about a fortnight" articles of "clothing costing the hospital close upon £50."

STATISTICS OF THE PASTEUR INSTITUTE OF PARIS.

An official report by M. Léon Perdrix, on the antirabic vaccinations performed at the Pasteur Institute in Paris during 1890, which is published in the *Annales de l'Institut Pasteur* of May 25th, 1891, shows that last year the total number of persons treated there was 1,546. Of these, 314 were foreigners, of whom 56 came from England, 21 from Ireland, 4 from our Indian colonies, 1 from Germany, 101 from Belgium, 2 from Brazil, 2 from Egypt, 4 from Spain, 3 from the United States, 19 from Greece, 17 from Holland, 2 from the Dutch Indian colonies, 8 from Hungary, 1 from Italy, 2 from Monaco, 67 from Portugal, 1 from Roumania, 2 from Russia, and 1 from Turkey in Asia. Of the 1,546 persons treated, 11 died of hydrophobia after the completion of the inoculations, being a total mortality of 0.71 per cent.; of the 11 persons who died, 6 died within a fortnight of the completion of the treatment, and 5 at dates beyond that period. According to M. Perdrix, it is only the latter cases which should be counted as having occurred in spite of the treatment, as experiments on dogs have shown that when death takes place at any time within the fortnight immediately following the completion of the inoculations, the nervous centres have been invaded by the virus during the treatment. This reduces the mortality in the 1,540 cases (that is, 1,546 less the 6 who died within the fortnight) to 0.32 per cent. The total number of persons treated during 1886, 1887, 1888, 1889, and 1890 amounts to 9,433, of whom 58, or 0.61 per cent., have died. With regard to the situation of the bites, they may be divided into three groups, namely: (1) bites on the head and face, (2) bites on the hands, and (3) bites on the limbs and trunk. The mortality was 0.85 for the first group, 0.45 for the second, and 0 for the third. Taking the total number of persons treated since 1886, we find that among the 9,433 patients, 789 were bitten on the head and face, with 16 deaths, or a mortality of 2.02 per cent.; 5,265 were bitten on the hands, with 33 deaths, or a mortality of 0.62 per cent.; and 3,379 were bitten on the limbs and trunk, with 9 deaths, or a mortality of 0.26.

CHICKEN-POX OR SMALL-POX?

The *East London Observer* is responsible for a story which deserves quotation, if only as an illustration of the many dangers incurred by omitting the proper precautionary measures in dealing with small-pox. A medical practitioner having made a diagnosis of small-pox in a case under his care gave a certificate to that effect, and ordered the removal of the patient (a child) to hospital. A young woman living in the same house accompanied the child in the ambulance. The medical officer of the hospital found the patient to be suffering from chicken-pox only, and the ambulance took its two passengers home again. Within a fortnight both were

attacked with genuine small-pox, and other inmates of the house were also affected at a later period. The occurrence having been mentioned at a meeting of the vestry, their representative upon the Metropolitan Asylums Board is reported to have stated that the Board "were quite satisfied that the disease was communicated not by the conveyance of the patients in the ambulance, but by their being brought into contact with the disease at the hospital." We are not told whether the case was notified to the medical officer of health, nor is any information given as to precautionary measures carried out or attempted by the medical attendant, the sanitary staff, or the hospital authorities. Very possibly a fuller and more accurate report would materially modify the conclusion which the present version suggests, namely, that the outbreak could not have occurred had due precautions been adopted at any one of the several stages which led up to it. The symptoms suggestive of small-pox, in a child who is really suffering only from chicken-pox, can scarcely be very clear or decisive; and wherever there is doubt, the diagnosis should be confirmed by an expert before the patient is sent to hospital. The revision of the diagnosis at the hospital came rather late, since the patient, and the attendant too, had already been exposed to infection; but had they been effectually vaccinated or revaccinated as soon as the mistake was discovered, or upon their return home, or even within three days after this, all evil consequences might still have been averted. We may safely assume that if such a case were duly notified to the medical officer of health, the necessity for immediate vaccination would be urged upon all persons exposed to infection, and, therefore, the responsibility for its omission would rest with themselves. The possibility of such a chapter of accidents shows not only the importance of prompt notification, but also the justice of the contention that the clinical study of infectious diseases should form part of the ordinary medical curriculum.

DOCTORS AND DISEASES IN COREA.

From a report by Mr. N. Fuji, "Special Student of the Pathological Department in the Imperial University of Tokio," it appears that the inhabitants of Corea are in a deplorably unregenerate state as regards the practice of the healing art. As a general rule, we are told, when a man is ill, instead of calling in a doctor, he tries some "famous nostrum," only seeking counsel from orthodox scientific oracles when his unlicensed remedy has failed to cure him. Young Japan, in the person of Mr. Fuji, looks upon this kind of thing with proper disgust; and there can be no doubt that to the rightly constituted professional mind it indicates the lowest depth of barbarism. Then again we read with a shudder that "every physician hangs an apothecary's signboard on his doorpost or outside his window;" surely every possessor of a legitimate brass plate must give thanks that he is not even as one of these benighted Corean medicine men. The signboard is bad enough, but there is worse behind, for we are told that a physician will actually "sell any kind of medicine" that may be asked for. Have the Corean colleges no by-laws? The examination of patients has to be conducted under difficulties which may interfere to some extent with diagnosis. Thus, if an "honourable gentleman or lady" is ill a thread is bound round his or her illustrious wrist over the radial artery, and the physician conducts the examination outside the room by feeling the other end of the thread, which is passed through a hole in a screen. This method of diagnosis is called "shi myaku," which, being interpreted, means "thread-pulse consultation;" and it must yield information of the highest interest. We venture to surmise, though we are not expressly told so, that "threadiness" is a frequent characteristic of Corean pulses, at any rate in the "upper circles." Even when a doctor is allowed to come so far between the wind and their nobility as to be admitted to the presence chamber, he must not pollute the patient's body with his touch, but must glean such information as he can through the clothing. Specialism is recognised to some extent, there being "needle and moxa doctors," whose practice is confined to the use of these agents. The medical profession is generally handed down from father to son, and there is a convenient arrangement whereby the son of a doctor can qualify, without the vexatious formality of examination, by simply asking permission to practise from the powers that be. While the Government thus shows its appreciation of the importance of medical education, it is not altogether surprising to learn that "the physicians are generally despised by the people." With regard to the diseases of Corea, intermittent fever (called by the natives "hakuchü") is universally prevalent, though the country is generally dry, and there are few marshes or swamps; small-pox is also very common, but vaccination was introduced some years ago by Dr. Koike, a Japanese practitioner, and is coming into use in one or two places. Syphilis and scrofulous diseases are common, but phthisis is almost unknown. Insanity and nervous diseases are also rare. Arthritis deformans is another ill which Corean flesh is not heir to. Lastly, "carious teeth are never found in Corea, either in male or female, old or young." *O fortunatos nimium!*

FRACTURED RIBS IN THE INSANE.

The words heading this paragraph are the title of a highly instructive memoir by Dr. Claye Shaw in the new volume of the *St. Bartholomew's Hospital Reports*. He observes that nothing gives so bad an impression of the management of an asylum as the occurrence of fractured ribs amongst its inmates. Hence he endeavours to throw some light on the pathology of broken ribs in the insane. He has made experiments, and tabulates the weight required to cause fracture of the rib, and the seat of the fracture. He concludes that a considerable difference is found to exist not only in the weight of the ribs on the two sides of the body, but also in the average breaking weight. The lighter rib is often found to bear the heavier weight, and there appears to be no proportion between the weight of the rib and the number of pounds that it is capable of sustaining, whence it would appear that physical conditions of structure have more to do with the strain-resisting power than chemical change. Persons suffering from disease of the heart or blood vessels bear less strain than others. Persons suffering from advanced constitutional disease, such as phthisis, may have ribs that support a strain much above the average, and hence there is no direct relation between constitutional strength and that of the ribs. When a blow causes fracture, this is dependent not so much on the weight of the rib and its power of bearing strain as on other conditions. Altogether the idea that the ribs of the insane are more brittle than those of the sane is true only to a very limited extent, and is almost confined to those affected with degeneration of the circulatory system. Dr. Shaw rightly notes that he has not had the opportunity of testing the breaking weight of the ribs of general hospital patients. Attendants at asylums, he observes, knowing the penalties, are very careful not to give violent blows when patients are in such a position that the natural elasticity of the ribs can act, and that, even if they did, such blows would not cause fracture. Whether the person be sane or insane, a slight blow given when the body is in a certain position will cause fracture, and when that does occur, it is more often than not done accidentally.

SCOTLAND.

Mr. John Webster, LL.D., formerly Provost of Aberdeen, M.P. for the City, and Lord Rector's Assessor in the University Court from 1861 down to 1890, died on May 31st, at his residence at Edgehill, near Aberdeen, in his 81st year, from an attack of influenza.

SCOTLAND AND THE EQUIVALENT GRANT.

THERE is no unanimity as to how the £200,000 accruing to Scotland as Scotland's equivalent to the grant made in behalf of the relief of fees in English schools should be distributed. The parochial boards and some of the municipalities wish it to relieve local rates; the School Boards wish to give education up to the University; a prominent member of Parliament has been urging that half the sum should be laid aside yearly with a view of buying up the Highlands of Scotland. The latest claim for a share of the grant comes from the University Councils, who urge that in the Scottish Universities, and particularly in Aberdeen, a large number of new chairs and lectureships are urgently needed, along with laboratories and other accommodation for practical classes; and if the improvements contemplated by the Legislature at the passing of the Act of 1889 are to be carried out to any extent whatever, so as to keep the Universities abreast of the times, the annual grant provided for them under the Act must be greatly increased.

ABERDEEN STUDENTS AND PROFESSOR STRUTHERS.

AT a meeting of the Students' Council on May 30th the following minute with reference to the departure of Professor Struthers from Aberdeen was submitted by the convener of the committee appointed last week and was unanimously adopted: "The Council recognises in Dr. Struthers a real founder of the fame and prosperity of the Aberdeen Medical School. In the face of great difficulties and often great discouragements, he laboured incessantly for its welfare; and it is not too much to say that its present position among the medical schools of the kingdom is almost entirely due to his fostering care and unwearied efforts on its behalf. As a reformer in other departments of university life Dr. Struthers has been no less active. The best interests of the students and of the university have never wanted in him an earnest and wise friend. Alike as a teacher, as a man of science, and as a man of affairs Dr. Struthers has displayed conspicuous ability. Especially would the Council refer to his work on the General Medical Council, which has in many directions been fruitful of the best results. His numerous publications bear testimony to his scientific knowledge, while as regards his skill as a teacher no better evidence could be got than the great advance that the Medical School has made during his residence as a professor in Aberdeen. It is the sincere wish of the Council, and it may be safely said of all his former pupils, that Dr. Struthers may still have many years of life granted to him to carry on his work as an educationist, and to further the studies which have made his name known wherever the science of anatomy is cultivated." The Council directed that a copy of this minute should be sent to Dr. Struthers.

IRELAND.

THE annual collection in the streets on behalf of the Belfast Royal Hospital was made upon May 23rd, and the amount realised was £230.

IT has been decided to erect a tablet to the memory of the late Dr. W. B. Croker, who died last August while in the discharge of the duties of house-physician at the Royal Hospital, Belfast. The tablet will be erected in the hospital.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

THE annual meeting of the Royal Medical Benevolent Fund Society of Ireland was held on Monday, June 1st, 1891. Mr. H. G. Croly, President of the College of Surgeons, in the chair. The report showed that this year £986 10s. was granted, and that £37,871 had been distributed since 1848. Votes of thanks were passed to the officers and subscribers.

ETHER DRINKING IN ULSTER.

WHAT is said to be the first prosecution under the order scheduling ether as a poison, and rendering its sale illegal by other than chemists and druggists, came before the Maghera Petty Sessions on May 30th. The ether was supplied without a label bearing the word "Poison," and without the name of the retailer on it. A nominal penalty of 1s. and costs was imposed. The magistrates, however, observed that the next similar offence would be severely dealt with.

AN INFECTIOUS DISEASES HOSPITAL FOR BELFAST.

THE Belfast City Council had the subject of founding a new fever hospital for the city before them at their monthly meeting on June 1st. Although the proposal to erect a new hospital for infectious cases at some distance from the city, and such as would afford much-needed accommodation in that department for paying patients, had the support of the mayor and other influential members of the Council, it was defeated by a large majority. In all probability, however, this defeat is only temporary, as the principle in question is understood to be admitted by many of the councillors who voted against the project at the present juncture owing to technical difficulties. Seeing the enormous increase of population of Belfast, as shown by the census returns, and the abnormally high rate of mortality from zymotic diseases, this question cannot be long shelved without serious danger.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE annual meeting of the Royal College of Surgeons in Ireland was held on May 30th, 1891, Mr. Henry G. Croly, President, in the chair. There was a very small attendance, and the business was formal. The annual report, which was adopted, showed a total income of £5,427 14s. 2d., and investments amounting to £10,000, the cash balance being £95 5s. Amongst the matters referred to in the report was a resolution of the Council declining to recognise the Fellowship of the College of Surgeons in England for admission of the holders of that diploma *ad eundem* to a like position in the Irish College. This course was taken because the English College required Irish applicants to declare that they were "on July 19th, 1875, in the *bonâ fide* practice of surgery in England or Wales," the effect of which was, as obviously intended, to exclude Irish candidates. Thirteen gentlemen were admitted to the Fellowship during the year, 62 to the Licence, and 13 to the Licence in Dentistry. The obituary list contains the names of 12 Fellows and of 41 Licentiates. At the annual election of officers of the College on Monday, June 1st, the following Fellows were chosen:—Mr. H. G. Croly, President (second year); Dr. W. Carte, Vice-President (second year); Council: Mr. W. Colles, Secretary to the College; Rawdon Macnamara, Sir George Porter, Bart., Edward Hamilton, P. C. Smyly, George H. Kidd, J. K. Barton, W. I. Wheeler, H. K. Swanzy, E. H. Bennett, W. Stoker, Sir Charles Cameron, Austin Meldon, Henry FitzGibbon, J. B. Story, Kendal Franks, R. F. Tobin, C. B. Ball. The re-election of Mr. Croly was unopposed. For the Vice-presidency there were three candidates—Dr. Carte, Mr. Stack, and Dr. Cranny; Dr. Carte was re-elected by eighteen votes over Mr. Stack. Mr. William Stoker was elected to the vacancy on the Council caused by Mr. Stack's candidature for the Vice-presidency. None of the old members of Council were displaced.

BACTERIOLOGICAL COURSE.—The course of bacteriology, which commenced this week at University College, London, is conducted by Mr. Boyce, assistant to the Professor of Pathology.

THE newly established Medical Faculty at Toulouse was solemnly inaugurated in the presence of M. Carnot, President of the French Republic, during his recent visit.

A GENERAL meeting of the British Laryngological and Rhinological Association will take place on June 19th at the rooms of the Medical Society of London.

RANK OF ARMY MEDICAL OFFICERS.

CONCESSION OF SUBSTANTIVE RANK AND COMPOUND TITLES.

We have received the following correspondence for publication:

House of Commons, June 2nd, 1891.

Dear Dr. Farquharson,—I send you a copy of a letter which I have recently addressed to Sir Andrew Clark, and which I think you may wish to see.—Believe me, yours truly,

Edward Stanhope.

War Office, May 26th, 1891.

Dear Sir Andrew Clark,—In continuation of the correspondence which has passed between us, and in reference to the conversation which I recently had with you relative to the status of the medical officers of the army, I now have the pleasure to inform you that I have given directions for the preparation of a Royal Warrant conferring the following privileges upon the officers in question:—

1. The following substantive ranks to be granted, such ranks to carry precedence and other advantages (except military command, as laid down in present regulations) attaching to the rank indicated by the military portion of the title:

Surgeon Major-General.	Surgeon Lieutenant-Colonel.
Surgeon-Colonel.	Surgeon-Major.
Brigade Surgeon Lieutenant-Colonel.	Surgeon-Captain.
	Surgeon-Lieutenant.

2. Medical officers to be granted sick leave on the same conditions as those which apply to combatant officers.

I trust that this will bring to an end the controversies that have recently prevailed, and which personally I have much regretted.

Thanking you for the assistance which you have given in arriving at a settlement, I remain, yours very faithfully,

(Signed) E. Stanhope.

THE MANAGEMENT AND EDUCATION OF IDIOTS AND EPILEPTICS AT THE BICÊTRE HOSPITAL IN PARIS.

By J. S. RISIEN RUSSELL, M.B.,

Late Senior Resident Medical Officer to the National Hospital for the Paralysed and the Epileptic, Queen Square.

The rendering useful the lives of idiots and chronic epileptics is such an important subject that I make no apology for drawing attention to the excellent system which was devised and is practised at the Bicêtre Hospital in Paris by Dr. Bourneville, to whom my most sincere thanks are due for his extreme courtesy and kindness in giving me every opportunity of seeing the system carried out in its various details.

Dr. Bourneville, the well known editor of the *Progrès Medical*, is the medical officer in charge of the children's department at the Bicêtre, a large municipal hospital situated just outside the fortifications of Paris on the south side. This property is of considerable historic interest, dating as far back as the year 1250. In 1656, Louis XIV founded a General Hospital here, and annexed the Bicêtre to it. At this epoch the hospital and prison received as pensioners beggars, vagabonds, young thieves, etc., and persons of both sexes suffering from venereal disease. The prison was abolished in 1836, and since that time different parts of the present buildings have been constructed at various periods; that for the children was commenced in 1883-84. After repeated but futile attempts by Dr. Bourneville to get the municipal authorities to recognise the importance of separating the children from the adults, and of building a children's department, the Municipal Council at last voted the necessary sum for its construction in 1882. It has been arranged according to the plans of Dr. Bourneville, and under his personal supervision; and he has since worked unceasingly in bringing the department to the state of perfection in which it now is.

The Bicêtre occupies a surface of 215,756 square metres; its population, including attendants and their families, was 3,594 on January 1st, 1891. The hospital is divided into five main divisions; the first comprises two subsections, the former of which, together with the whole second division, is for able-bodied old men; the other section and part of one of the sections of the third division being reserved for the infirm. One section of the third division is for bedridden old men, while the remaining part of the second section is for cancer cases. The fourth division consists of four medical and two surgical wards. The fifth is divided into four sections, two for lunatics, one for epileptics, both *compos* and *non compos mentis*; and the remaining one for 400 children, idiots, imbeciles, paralytics, epileptics, and hysterics. A large number of the children admitted into this department are neither able to walk, talk, nor feed themselves, although old enough to be able to do all of these things; these spend their time during the day in a large nursery, where they have their meals, and where the nurses teach them as follows the primary acquirements in which they are lacking. The instruction in walking is given with the aid of "go-carts." These consist of four legs held together by two broad wooden hoops or bands, the lower one of which is of greater circumference than the upper, and has the castors fixed into it, by means of which the whole contrivance can be rolled about with ease. The children are placed within the hoops, and made to rest their arms on the upper of these while the nurses push them along, and teach them to take steps. The height of the "go-cart" used in each case is such as to allow the child to rest its arms comfortably on the upper hoop, and thus support some of the weight, while the feet touch the ground without the whole of the weight of the body being entrusted to the legs.

As soon as the children are able to walk they are sent to the junior school; at first only for an hour or two daily, but the time is gradually increased until they are able to be transferred entirely to this department. Here great attention is paid to the development of the sense of touch and the muscular sense; the pupils are taught to recognise objects not only by sight but also by touch and by the muscular sense. At first an attempt is made to bring as many of their different senses as possible into action at the same time for the recognition of an object, and it is only after they have learnt to recognise objects in this way that they are taught to recognise them by some individual sense. Blocks of wood of different thicknesses, balls of different sizes, balls of the same size but of different weights, plates presenting all grades of surfaces, from very rough to very smooth (one set of these is of uniform colour, while in another set each plate is of a different colour), strips of wood of the same thickness but of different lengths, pieces of cloth of different colours and different consistences, etc., are all used in the training of these senses; and it is only after they have learnt to distinguish between the widest extremes that the intermediate qualities are presented to them for recognition.

For this further instruction there are boards with depressions of various shapes on them, each depression being painted a different colour. Into these the discs of similar shape and colour are made to fit; here they have both the shape and colour to guide them, but on another board, the shapes being the same, the colours alone are different, while on another the shapes are different but the colour uniform. So, too, the letters of the alphabet are cut out in wood and the vowels are painted red to distinguish them from the consonants; these letters the children name as they place them on the corresponding letters painted on a board. A similar arrangement exists for the figures from 1 to 10, and also for various geometrical figures. In connection with the latter they are taught to remember such simple facts as that a triangle has three sides, that a pyramid has a base and an apex, etc.

They are shown all the vegetables and fruits that are in season, and also the various grains. When teaching them to recognise these articles by name, some simple fact is always associated with it, as oats for the horse, flour to make bread with, and so on. Many of the children are, of course very

clumsy in using their fingers, therefore various devices are had recourse to with a view to correcting this defect. The two following examples will suffice to give a general idea of the methods employed to obtain this result. Two pieces of cloth of exactly the same size, the one with buttons and the other with button holes, are given to them to button together; and two rows of tapes fixed to a cushion, for them to tie together; the tapes opposite to each other being of the same colour, while each pair is of a different colour.

The method of instruction in writing is so exactly similar to that in vogue in all schools as to call for no special comment.

In the advanced school, the main principles are the same, but the details are more complicated; for instance, if some object such as a metal is brought before their notice, it is not simply exhibited in one form, but in all its forms, crude and commercial.

In addition to the ordinary objects constantly met with during their daily life, rarer ones, or the models of these, are presented to them. So, too, they are not only taught to recognise various geometrical figures and to remember simple facts about them, but also to construct such figures with blocks of wood.

Gradually more time is devoted to reading and writing, and all the books used are very copiously illustrated.

The instruction of the pupils is by no means limited to the schoolrooms. Between the different blocks of the building there are gardens, each of which is intended for some special purpose. In one, all the plots of grass are cut to represent squares, triangles, circles, and other such figures; in another the trees and shrubs are trained to represent pyramids, columns, globes, etc.; while in others there are fruit trees or flowers or vegetables, as the case may be, each tree or shrub having a label attached to it on which its name is printed in large letters.

Then there are the following workshops where the older boys are taught some trade: a carpenter's, a blacksmith's, a basket and chair maker's, a brush maker's, a bootmaker's, a tailor's, and a printer's. It is so arranged that those of the older boys who are in the school in the morning work in one or other of the workshops in the afternoon, while those who work in the workshops in the morning go to school in the afternoon. In these workshops they have excellent instructors, and the work done is of a really useful and substantial character—for example, the clothes and boots worn by the boys, all stools, benches, cupboards, and other such articles about the place are made in the respective workshops; all the printing in connection with this department of the Bicêtre is executed here. Objects such as brushes and baskets are sold to other hospitals, as the number manufactured exceeds the requirements of the Bicêtre.

Great attention is paid to the physical training of the boys; the younger ones go through various minor gymnastic exercises every day, and are taught to walk up a few steps and then jump down again, also to wheel small wheelbarrows of different weights. The older boys have an instructor of gymnastics, who puts them through their exercises every morning at seven o'clock, in the summer in a quadrangle in the open air, and in the winter in a large gymnasium. These exercises are exactly the same as one is accustomed to see taught in all gymnasiums, and therefore need no special explanation.

It may be mentioned in passing that at one end of this hall there is a small stage where the boys act from time to time. Some of them also learn to play certain musical instruments.

They all go for a walk twice a week, prior to which they adjourn to a large room where there are boot blocks, and brush each other's boots. The sanitary arrangements are good, and great care is observed in trying to keep the lavatories as clean as possible, and in instilling cleanly habits into the boys. The more backward, who have not yet learnt to call the nurses' attention to their wants, are kept constantly on chairs which allow of their passing their evacuations at all times, while the boys in the junior school are taken to the lavatory four times a day regularly. All the boys have a warm bath once a week, and during the summer the cold douche is administered to each of them every morning, but in the winter it is given only to those who are able to bear it. They have a foot-bath daily, and their heads are washed and examined at the same time.

The only form of chastisement which is had recourse to is that of solitary confinement. The walls of the cells are made as rude and bare as possible. The windows, which are high up out of reach, are made of very strong glass, outside of which are iron bars, the general effect being exactly like that of the cells of a prison. In cases where it is deemed necessary they are confined in a padded cell, and, if necessary, it is darkened. An attendant is constantly present, and can observe the offender through a small aperture without his being observed.

Of course there are many with whom this mode of correction would be of no advantage, as they are not intelligent enough to understand the meaning of it: but all those who are intelligent enough to understand the meaning of such punishment are subjected to it if necessary. The younger boys are confined for one or two hours, as the case may be, while the older ones, many of whom are subject to fearful outbursts of passion, are confined for a day, and in some instances for two or three days—in fact, until the fit of passion has passed off, or until they promise not to repeat the offence for which they were incarcerated.

Up to the present no mention has been made of the girls, as they are in another building outside the walls of the Bicêtre, but exactly the same principles are observed in their management and instruction, the only difference being that various feminine acquirements, such as needlework and washing, are substituted for the trades which the boys are taught.

I need hardly say that the foregoing account does not pretend to be in any way a full account of Dr. Bourneville's system at the Bicêtre, but is intended to give a general idea of the system. No one who has visited this institution can, I think, deny that the system is an excellent one, and that the results which are obtained are most encouraging, and, in many instances, marvellous.

On first entering one of the schoolrooms one can scarcely believe that one is in the presence of idiots, for on a given signal every boy rises to his feet to greet one. The eagerness displayed by some of them for their turn to do certain of the favourite gymnastic exercises, or to perform some other feat for one's edification, is astonishing. The pride with which the older boys read to one, or exhibit specimens of their writing or other work, though comparable to that displayed by much younger children in our ordinary schools, is, nevertheless, proof that they possess no small amount of intelligence; and when we remember that many of these boys on admission could not even walk or talk, although long past the age when these habits are acquired, we cannot fail to admit that the system of instruction to which they owe their present condition must be a good one, and worthy of universal adoption in idiot institutions.

PREPARATIONS OF GLUSIDE OR SACCHARIN.

THREE-FOURTHS of those medical corporations or other official medical bodies of England, Scotland, and Ireland that sent in to the Medical Council suggestions as to additions to the *British Pharmacopœia* included saccharin, and that substance—now termed "gluside"—appears in the recently published *Addendum*. Under these circumstances, a list of typical formulæ in which gluside takes the place of sugar will be of value.

The dose or quantity of gluside as a sweetening agent is $\frac{1}{300}$th of sugar. The "lump" of sugar of the familiar sugar-basin weighs from 150 to 300 grains. The equivalent quantity of gluside clearly will be $\frac{1}{2}$ to 1 grain. One of the largest of ordinary lumps of sugar is not more sweet than a quarter of a grain of gluside; one of the smallest of ordinary lumps would communicate no more sweetness than an eighth of a grain of gluside. The dose of gluside as a medicinal agent must necessarily vary considerably; 5, 10, 15, 20 grains may be administered; 50 and even 80 grains have been given daily without any injurious effect on the system generally.

One grain of gluside will fully sweeten a 6-ounce bottleful of medicine, or 1½ grain an 8-ounce bottleful, giving sweetness equal to that produced by ¾ ounce or 1 ounce of ordinary syrup. The gluside is readily dissolved in these proportions—indeed, 2 grains of gluside may be dissolved, by careful

management, in a single ounce of water. Where sweeter fluids are desired soluble gluside, which is extremely readily soluble in water, should be employed. Gluside is soluble in solution of bicarbonate of sodium with evolution of carbonic acid gas. The latter solution, when warmed and made neutral and evaporated to dryness, yields "soluble gluside" or "soluble saccharin," which is very soluble in water, 100 parts of gluside yielding nearly 113 of neutral "soluble gluside." A stock fluid of the same degree of sweetness as ordinary medicinal syrup, and which may therefore be prescribed in similar quantities, is prepared as follows:

Solutio Glusidi Simplex.—Soluble gluside, 30 grains; distilled water, 1 pint. Dissolve. Each fluid ounce contains 1½ grain of soluble gluside. Each fluid drachm represents ⅛ grain of ordinary gluside. If still stronger stock solutions, and somewhat alcoholic, are desired, the following formulæ may be adopted:

Liquor Glusidi, A.P.A.—(From the *National Formulary* of the American Pharmaceutical Association.) Gluside, 512 grains; bicarbonate of sodium, 240 grains; alcohol, 4 fluid ounces; water, sufficient to produce 16 fluid ounces. Dissolve. Each fluid drachm represents 4 grains of gluside.

Elixir Glusidi, B.P.C.—(From the *Unofficial Formulary* of the British Pharmaceutical Conference.) Gluside, 480 grains; bicarbonate of sodium, 240 grains; rectified spirit, 2½ fluid ounces; distilled water, a sufficiency. Rub the gluside and bicarbonate of sodium in a mortar, with ½ pint of distilled water gradually added. When dissolved add the spirit, filter, and wash the filter with sufficient distilled water to produce 1 pint of elixir. Each fluid drachm represents 3 grains of gluside.

Confections.

Passing now from the modes of including either gluside or soluble gluside in ordinary fluid medicines to the modes of substituting gluside for the sugar hitherto used in the sweetened drugs prescribed by physicians and medical practitioners already mentioned, the following formulæ may be followed. Such preparations could be supplied by any chemist and druggist, or be prepared in any properly appointed drug laboratory. They are given in alphabetical order.

Confectio Opii Glusid. Concent.—Compound powder of opium, 1 ounce; distilled water, 1 ounce; gluside, 4 grains. Mix. Dose, 2½ to 10 grains. This confection is half the bulk but twice the strength of the official confection. The dose is, consequently, half that of the official confection. One part of opium in 20 parts.

Confectio Piperis Glusidata Concent.—Black pepper in fine powder, 2 ounces; caraway fruit, in fine powder, 3 ounces; tragacanth, in fine powder, ½ ounce; gluside, 22 grains; distilled water, 4½ fluid ounces. Rub them well together in a mortar. Dose, 30 to 60 grains. Absence of sugar (honey) renders the above useful when sugar is contraindicated. It is only half as bulk as the official confection but is of double the strength, hence the dose is half that of the official preparation. One part of pepper in 5 parts.

Confectio Scammonii Glusidata.—Resin of scammony, in powder, 6 ounces; ginger, in fine powder, 3 ounces; oil of caraway, ½ fluid ounce; oil of cloves, ½ fluid ounce; gluside, 8 grains; tragacanth, in powder, ¾ ounce; distilled water, 10½ fluid ounces. Mix. Dose, 10 to 30 grains. This confection is of the same strength as that of the confection of scammony of the *British Pharmacopœia*, hence the dose is the same. It should be recently prepared. One part of scammony resin in about 3 parts.

Confectio Sennæ Glusid. Concent.—Senna, in fine powder, 7 ounces; coriander fruit, in fine powder, 3 ounces; figs, 12 ounces; tamarind, 9 ounces; cassia pulp, 9 ounces; prunes, 6 ounces; extract of liquorice, 1 ounce; gluside, 41 grains; distilled water, a sufficiency to make 37½ ounces. Boil the figs and prunes gently with some distilled water in a covered vessel for four hours, then mix the tamarind and cassia pulp, digest for two hours, and rub the softened pulp of the fruits through a hair sieve, rejecting the seeds and other hard parts. To the pulped product add the extract of liquorice, and dissolve with the aid of heat; while the mixture is still warm add to it gradually the already mixed senna and coriander powders and gluside, and mix the whole thoroughly, making the weight of the resulting confection 37½ ounces, either by evaporation or by the addition of more distilled water. Being twice as strong as the old confection, only half of the old dose need be swallowed. Dose, 30 to 60 grains.

Confectio Sulphuris Glusidata.—Sublimed sulphur, 4 ounces; acid tartrate of potassium, in powder, 1 ounce; tincture of orange peel, ½ fluid ounce; gluside, 3½ grains; tragacanth, in powder, 50 grains; distilled water, 3½ fluid ounces. Mix. This preparation would be employed where the sugar of the official confection is contraindicated. The strength, and therefore the dose, are similar to those of the official confection. Dose, 60 to 120 grains.

Confectio Terebinthinæ Glusidata.—Oil of turpentine, 1 fluid ounce; liquorice root, in powder, 1½ ounce; gluside, 3 grains; tragacanth, in powder, 15 grains. Mix. This confection is nearly double the strength of the official confection—1 of turpentine in 2½, as against 1 in 4. Hence the diminished dose—40 to 80 grains. It should be freshly prepared, for the turpentine is liable to evaporate.

Elixirs and Emulsions.

Elixir Cascaræ Sagradæ Glusidatum.—Tincture of fresh orange peel, 2 fluid ounces; rectified spirit, 1 fluid ounce; cinnamon water, 3 fluid ounces; elixir of gluside (*B.P.C.*), 6 fluid ounces; liquid extract of cascara sagrada, 8 fluid ounces. Mix. Dose, 15 minims to 2 fluid drachms. This is the *B.P.C.* formula, with elixir of saccharin, *B.P.C.* (*vide ante*), in place of syrup.

Emulsio Olei Morrhuæ Glusidata (B.P.C.).—Cod-liver oil, 8 fluid ounces; the yolks of 2 eggs; tragacanth, in powder, 16 grains; elixir of gluside, 1 fluid drachm; simple tincture of benzoin, 1 fluid drachm; spirit of chloroform, 4 fluid drachms; essential oil of bitter almonds, 8 minims; distilled water, sufficient to produce 16 fluid ounces. Measure 5 fluid ounces of the distilled water. Place the tragacanth in powder in a dry mortar, and triturate with a little of the cod-liver oil; then add the yolks of eggs and stir briskly, adding water as the mixture thickens. When of a suitable consistence, add the remainder of the oil and water alternately, with constant stirring, avoiding frothing. Transfer to a pint bottle; add the elixir of gluside, tincture of benzoin, spirit of chloroform, and oil of almonds, previously mixed; shake well, and add distilled water, if necessary, to make the product measure 16 fluid ounces. Dose, 2 to 8 fluid drachms.

Emulsio Olei Ricini Glusidata.—Castor oil, 1 fluid ounce; gum acacia, in powder, 180 grains; essential oil of bitter almonds, 2 minims; oil of cloves, 1 minim; gluside, 1 grain; distilled water, sufficient to make 4 fluid ounces. Rub the gluside with the gum and the essential oils in a mortar. Add ½ ounce of the water at once. Add the castor oil by degrees, stirring, and the remainder of the water in the same manner. Dose, ½ to 2 fluid ounces. This is Gerrard's formula. In both the above emulsions the taste of the oil is well disguised.

Gargles.

Obviously any gargle may have gluside added at discretion. For example:

Gargarisma Aluminis Glusidatum.—Aluminis, 20 grains; sol. glusid. simp., 4 drachms; aq. destill., ad ℥ii. Mix.

Mixtures.

Mistura Amygdalæ Glusidata.—Compound powder of almonds, glusid., 1 part; distilled water, 10½ fluid parts. Rub the powder, with a little of the water, into a thin paste, then add the remainder of the water, and strain through muslin. Dose, 1 to 2 fluid ounces. This corresponds in strength with the official mistura amygdalæ, but contains no sugar. It should not be kept more than a few days.

Mistura Cretæ Glusidata.—Prepared chalk, ½ ounce; gum acacia, in powder, ½ ounce; simple solution of gluside, ½ fluid ounce; cinnamon water, 7½ fluid ounces. Triturate the chalk and gum acacia with the cinnamon water, then add the simple solution of gluside and mix. Dose, 1 to 2 fluid ounces. This corresponds in strength with the official mistura cretæ, but contains no sugar.

Mistura Spiritus Vini Gallici Saccharinata.—French brandy, 4 fluid ounces; cinnamon water, 4 fluid ounces; the yolks of two eggs; simple solution of gluside, ½ fluid ounce. Rub the yolks in a mortar, then add the cinnamon water, spirit, and simple solution of gluside. Dose, 1 to 2 fluid ounces. This is the official "mixture," with simple solution of gluside in place of sugar.

Gluside will not usefully take the place of sugar in the official mistura ferri composita, or mistura guaiaci, for it is not to be expected that gluside will prevent oxidation. If the sugar in these official mixtures is objectionable in certain cases, other preparations of iron or of guaiacum must be prescribed. In "mixtures" the "sol. glusid. simp." takes the place of a similar volume of the official syrupus, but for every fluid ounce of simple solution of gluside 1½ grain of soluble gluside may be prescribed, or even the same amount of gluside itself; for, as already stated, 1½ grain of gluside will fully sweeten an 8-ounce bottleful of medicine.

Powders.

Pulvis Amygdalæ Compositus Glusidatus.—Sweet almonds, 8 ounces; gum acacia in powder, 1 ounce; gluside, 6 grains. Steep the almonds in water until their skins can easily be removed, and, when blanched, dry them thoroughly with a soft cloth, and rub them in a mortar to a smooth consistence. Mix the gum and the gluside, and, adding them to the almond pulp generally, rub the whole to a coarse powder. Keep it in a lightly covered jar. This preparation is about one-third stronger than the official pulvis amygdalæ compositus. It is used in making mistura amygd. co. glusid.

Pulvis Cretæ Aromat. Glusid. Concent. (Synonym: *Conf. Aromat. Glusid. Concent.*)—Cinnamon bark, in powder, 4 ounces; nutmeg, in powder, 3 ounces; saffron, in powder, 3 ounces; cloves, in powder, 1½ ounce; cardamom seeds, in powder, 1 ounce; gluside, 36½ grains; prepared chalk, 11 ounces. Mix them thoroughly, pass the powder through a fine sieve, and finally rub it lightly in a mortar. Keep it in a stoppered bottle. If a product of bright colour be desired, the saffron may previously be moistened and triturated with a little water or spirit, or the fresh and faintly damp mixture may be subjected to considerable pressure in the triturating process. The preparation is practically double the strength of the official pulvis cretæ aromaticus the dose, consequently, is one-half. Dose, 5 to 30 grains.

Pulv. Cretæ Aromat. cum Opio Glusid. Concent. (Synonym: *Conf. Aromat. c. Opio Glusid. Concent.*)—Concentrated glusidated aromatic powder of chalk, 4½ ounces; opium, in powder, ¼ ounce. Mix. This preparation, through the displacement of sugar by gluside, is double the strength of the official pulvis cretæ aromaticus cum opio; the dose consequently is one-half. Dose, 5 to 20 grains.

Pulvis Glycyrrhizæ Compositus Glusid. Concent.—Senna, in fine powder, 2 ounces; liquorice root, in fine powder, 2 ounces; fennel fruit, in fine powder, 1 ounce; sublimed sulphur, 1 ounce; gluside, 9 grains. Mix them thoroughly, pass the powder through a fine sieve, and finally rub it lightly in a mortar. Dose, 15 to 30 grains. This preparation is double the strength of the official pulvis glycyrrhizæ compositus.

Pulveres Santonini.—Santonin, 240 grains; gluside, 2 grains; scammony, in powder, 180 grains; bicarbonate of sodium, 60 grains; sugar of milk, 240 grains. Rub together the santonin, gluside, and sugar of milk in a mortar, add the other ingredients, mix and sift. Dose: None to be given to children under 6 months old; from 6 months to 2 years, 2 grains; from 2 to 5 years, 1 grain for each year; 5 to 8 years, 6 grains; 8 to 12 years, 7½ grains; at bedtime.

Syrup Substitutes.

Glusyrupus Aurantii.—Tincture of orange peel, 1 fluid ounce; simple solution of gluside, 7 fluid ounces. Mix. This preparation is equivalent in sweetness to the official syrupus aurantii, the sugar in the latter being displaced by gluside. Dose, 1 fluid drachm.

Glusyrupus Chloral.—Hydrate of chloral, 80 grains; distilled water, 1½ fluid drachm; simple solution of gluside, a sufficiency. Dissolve the hydrate of chloral in the water, and add the simple solution of gluside until the mixed product measures 1 fluid ounce. This preparation has the same strength (10 grains of chloral in 1 fluid drachm) as the official syrupus chloral, and the dose is the same. Dose, ½ to 2 fluid drachms.

Glusyrupus Tolutanus.—Take of balsam of tolu, 1¼ ounce; soluble gluside, 52 grains; distilled water, a sufficiency. Boil the balsam in one pint of the water for half an hour in a lightly covered vessel, stirring occasionally. Then remove from the fire, and filter the solution when cold. Dissolve the soluble gluside in a pint and a half of the water, and mix the two solutions. If necessary, add distilled water so that the product shall measure 48 fluid ounces. Dose, 1 fluid drachm (same strength as the official syrupus tolutanus).

Glusyrupus Zingiberis.—Strong tincture of ginger, 6 fluid drachms; simple solution of gluside, sufficient to produce 20 fluid ounces. Mix, with agitation. Dose, 1 fluid drachm. This preparation is of the same strength as the official syrupus zingiberis.

Effervescing Preparations.

Sodii Citro-Tartras Effervescens Glusid.—Bicarbonate of sodium in powder, 17 ounces; tartaric acid, in powder, 9 ounces; citric acid, in powder, 6 ounces; gluside, 8 grains. Mix the powders thoroughly, place them in a dish or pan of suitable form heated to between 200° and 220° F. (93.3° and 104.4° C.), and when the particles of the powder begin to aggregate, stir them assiduously until they assume a granular form; then, by means of suitable sieves, separate the granules of uniform and most convenient size, and preserve the preparation in well-closed bottles. Dose, 50 to 90 grains, or one or two small teaspoonfuls. The presence of only 8 grains of gluside in the place of 5 ounces of sugar (in the above quantity) results in this preparation being one-sixth stronger that the official sodii citrotartras effervescens—usually regarded as the official substitute for the popular, but wrongly termed, granular "citrate of magnesia;" consequently the dose is slightly less.

IRISH MEDICAL ASSOCIATION.

The annual meeting of the Irish Medical Association was held in the College of Surgeons on June 1st, Mr. W. J. Wheeler in the chair. There was a small attendance.

The annual report set out the work done by the Council during the past year. On the subject of superannuation of the Irish Poor-law medical officers the Council had sought an interview with Mr. Balfour. In reply, he stated that he believed no useful object could be gained by receiving a deputation at present. He had looked into the question carefully, with the view of ascertaining how the position of the Irish officers stood in comparison with that of their English brethren. He found that the law and practice in England could not be relied upon as supporting the claim of the Irish Poor-law officials, and having regard to the very contentious nature of the subject, he was afraid the Government could not hold out any prospect of being able to legislate with regard to it, at all events, in the present session. The Council stated that they would press the matter on the attention of the Government next session. The report further stated that 105 new members had joined, and 23 had resigned. The Treasurer's account showed a balance in the bank of £188 19s. 2d.

On the motion of Dr. Truell, J.P., seconded by Dr. Minchin, the report was adopted.

Dr. Fitzgerald (Newtownbutler) moved:

That the Council are hereby requested to take such steps as may appear to them expedient with a view to have passed a Bill, giving to union officers superannuation as a matter of right. That, in the event of this proving impossible, they are hereby requested to use every advisable effort to secure such beneficial amendments, in order that as many as possible of the abuses of the present system, under which the Poor-law medical officers and the sick poor so grievously suffer, may be removed.

Dr. Denman seconded the motion, which was supported by Dr. J. Dillon Kelly (Mullingar), Dr. A. H. Jacob, and Dr. Davys, and passed unanimously.

Votes of thanks to the press and to Dr. Mackesy, of Waterford, the retiring President, were also passed.

Sir Charles Cameron was elected President, and Dr. St. G. Ashe Honorary Secretary, for the ensuing year.

Madame Pauline Malcy has left 40,000 francs (£1,600) to the Association des Médecins de la Seine to be applied for the relief of the widows and daughters of medical men who have left their families in straitened circumstances. The same lady has also left 20,000 francs (£800) to the French Academy of Medicine for the foundation of a prize for the best work on a subject connected with mental disease.

THE HOSPITALS COMMITTEE.

Hospital Accounts.—Dispensaries.—The London Homœopathic Hospital.—Mr. Lawson Tait.

The Select Committee of the House of Lords appointed to inquire into the administration of the London hospitals and dispensaries resumed its sittings last Monday after the Whitsuntide recess at the House of Lords, Lord Sandhurst, the Chairman, presiding.

Mr. J. W. Gordon (barrister) drew attention to the diversity of the form in which hospital accounts were made up, and gave instances. In comparatively few cases was any statement of the amount of property held by the institution made apparent. What was ordinarily known as a balance sheet was very rarely included in the accounts. Out of 66 hospitals whose accounts he had looked into, 51 did not publish an account. In 15 cases a balance sheet was issued which was more or less complete, but of these balance sheets not more than 7 were complete, if even these were, and the remainder were quite obviously incomplete. The form of account sent out by the Hospital Sunday Fund was for the purposes of its award, which was made upon the basis of a systematic analysis of hospital accounts. As he understood it, the Committee first took the expenditure of the institution to be the original basis upon which the award was given. From that was written off the income from legacies and realised property; then its expenses of management, and upon the result the award was made. He pointed out that this was the reason why in many accounts legacies were not brought into the account, or, if they were, they appeared on both sides. He thought this a very inconvenient way of presenting accounts as far as the public were concerned. His suggested account had been prepared from a totally different point of view, and with the object of bringing income and expenditure under two great heads, the one that which went on from year to year, and the other that which occurred only occasionally, and might be wholly peculiar to a particular year. He then went through the various items, stating his reasons. He did not intend to cast any imputation upon the hospitals, but practically hospitals "cooked" their accounts in order to make it appear that they wanted money; because if they showed a big deficit they got more out of the public. The Witness further asserted that the audit of hospital accounts was in most cases very defective, and handed in a form of auditors' certificate, which he suggested should be made compulsory. In the case of the London Hospital they brought into their accounts legacies to the amount of £21,585, and on the other side of the account they ran it off as expenditure legacies £14,921, on the ground that those legacies were not received in the form of cash, but in the form of stock, so that it was the same thing as if they had received the cash and gone into the market and bought the stock; but the effect was that the expenditure was swollen by that sum, which in the ordinary sense of the term was not expenditure at all. He thought the statement misleading, but that it was not made dishonestly.

Dr. W. Culver James, C.M., F.R.C.S.E., said he was Senior Physician to the Westminster General Dispensary. There were three physicians, three surgeons, and a resident medical officer, a part of whose duty it was to visit patients at their homes. The resident medical officer received £110 a year. The dispensary had a very large out-patient department, and medicine was supplied to the patients. A few patients who had not subscribers' letters paid 1s. for the first fortnight and 6d. for each fortnight afterwards. The majority came by subscribers' letters and paid nothing. Cases of great emergency were received without either letter or payment. The question of linking dispensaries with hospitals had been discussed, and they had advised patients from the dispensary to go to a hospital when circumstances seemed to make it desirable. He thought he might say that they never sent their patients to the hospital for consultative purposes. Patients were visited within a radius of half a mile, but out-patients came from all parts and distances. There was one medical practitioner who sent patients to the dispensary. He considered that occasionally the dispensary competed with the practitioner, and the medical staff were anxious that this should not be, because they considered nothing would be more unjust than that, as a co-operative medical charity, they should in any

way compete with medical men. It was extremely difficult for medical men to give time to look into the character and position of applicants, and he took it that the onus of so doing should fall upon the subscribers, who ought to be careful in giving letters. There was a good deal in the complaint that these charities interfered with the practice of the poorer medical men, but the culprits were the public, who gave the letters carelessly. He did not think that charity was abused as a rule, but sometimes cases did occur. Now and then, when patients had not been for a long time, inquiry was made, and it was found that they had been to a pay doctor, but it was quite possible that a man might have exhausted his means and been obliged to come back to the dispensary. He thought some came to the dispensary who could easily pay the fees of the local practitioner. He did not consider the possession of a subscriber's letter a sufficient guarantee of the want of means of a patient. If a severe accident were brought to the dispensary it would be sent to an hospital. He believed the average cost of each letter to the dispensary was 2s. 6d. The average number of visits was said to be five, but he believed this was putting it too high.

Mr. J. J. JOHNSON (Secretary of the Westminster General Dispensary) said payments by patients had gradually increased from £13 in 1875 to £56 last year. There were 4,600 new letters last year. The receipts last year were £507 and the expenditure £490. The annual subscriptions were £208. The resident officer was generally a young man commencing practice, and he remained as a rule two years. The physicians and surgeons gave their services gratuitously.

Mr. JOHN FAULKNER (Secretary to the Royal General Dispensary, Bartholomew Close) said the dispensary was founded in 1707, being the first established in the kingdom. It was a free dispensary for many years, but now a payment of 2d. a week was required for each patient. Last year there were 5,273 new cases and 13,800 attendances. In addition, 3,969 visits were paid to 1,015 patients at their own homes. Patients were not visited beyond the limits of the city or half a mile from the dispensary. It was not found that St. Bartholomew's Hospital, which was close at hand, competed with them. Patients were not sent to the hospital for consultative purposes. The dispensary had two physicians, two surgeons, a consulting physician and consulting surgeon, and a resident medical officer. It had no nurses. Serious cases would be sent to the hospital. The expenditure was about £900 a year and the income the same. They were very desirous not to take pauper cases or to interfere improperly with the medical profession. They insisted upon a letter of recommendation except in very urgent cases. Every person bringing a letter for the first time had to go before the resident medical officer, who questioned him, and satisfied himself as to his fitness. The letters had to be renewed each month. The resident medical officer received £130 a year rising to £150, and it was thought that a man should not remain more than three years. He was perfectly satisfied that those who came to the dispensary were not in a position to pay a medical man, or, indeed, contribute to a provident dispensary. They did not encourage trivial cases or aim at numbers. The charge of 2d. was instituted in 1865, and had not affected the numbers who attended. Patients did not complain at having to pay the 2d. The average number of visits would be not quite three, and the cost per patient 3s. 4d. He thought a man earning 30s. a week would be a proper person to use the dispensary. They had no paying patients. It was debated, and the medical staff thought it would be unfair to the profession. The dispensary was managed by a committee of twenty-four, who were annually elected.

ON Thursday, Mr. G. A. CROSS, Secretary of the London Homœopathic Hospital, Great Ormond Street, was examined. He stated that the hospital was founded in 1849. It had a capacity of ninety beds, and a working average of about sixty-five. The whole capacity was not available, partly for want of funds and partly because the room was required for the nurses. A good many nurses were sent out to private cases. The hospital was managed by a board. Practically the hospital was a free institution. There were about 10,000 out-patients in a year. The dispenser checked the patients, and had authority to make inquiries respecting them; and medical officers were urged by the board to stop any patient who was considered able to pay. A plan of the drains of the hospital was kept up to date. The gross expenditure for the last year of which there were complete accounts was £4,579, and the income £4,706. About £800 or £900 of the income was derived from invested funds, £1,600 from subscriptions, and about £400 in donations; £250 Hospital Sunday, £80 to £100 Hospital Saturday Funds; about £400 from out-patients' fees. The out-patients paid a shilling for a monthly ticket. The legacies averaged about £2,000, and all over 50 guineas were funded. It was not usual to have a festival dinner, but one was now being organised to raise funds for the rebuilding of the hospital. £30,000 was required for the building, and over £27,000 was promised. The income from the nursing was £1,667, which, less the expenses of the nursing staff, went to the funds of the hospital. The accounts went into the hands of a public auditor once a month. There were sixteen members of the medical staff, including the consulting physician and consulting surgeon. There was no limit of age fixed for the gentlemen who occupied that post. There were two resident medical officers.

In answer to Lord SPENCER, the WITNESS stated that that was the only homœopathic hospital in London, and patients came from the provinces. There were homœopathic hospitals in Liverpool, Birmingham, Bath, Bournemouth, and Hastings. There were students at the hospital, and they generally came after they were qualified at other hospitals. The teaching was generally confined to clinical teaching in the wards. Whilst he could not say that the number of patients who desired homœopathic treatment was increasing, he did not think they were decreasing.

Lord CATHCART: Your drugs cost you nothing?—Yes; but the appliances and other things cost a good deal.

Your out-patients cost nothing but advice?—There is considerable expense attaching to the out-patient department in salaries, bookkeeping, etc.

The term "medical school" on your prospectus is a little misleading.—It is rather forced upon us, for in the original laws of the hospitals it is part of our title. It was originally intended to be a medical school.

The WITNESS further stated that he did not consider the hospital supplied all the homœopathic interests of London. He then urged at some length that the hospitals should be exempted from the payment of rates. He did not think that the funds of the hospitals could be used in litigation with a view of testing the question.

Mr. LAWSON TAIT said he was a surgeon practising in Birmingham. He had a strong opinion that the larger the hospital became the less efficient it was for public purposes, and the higher the mortality. It was very difficult to say why. Anything with more than 200 beds would be a large hospital, and with 200 beds he thought the maximum of safety with convenience of administration was arrived at. The management of large hospitals must be conducted with great care, or they became very expensive. Whilst it was impossible to do without the out-patient departments altogether, they should be greatly curtailed. He thought the proper way to curtail them was to develop the provident dispensaries, and to make the hospitals consulting institutions for the poor, and not places where anyone could run with diarrhœa or dyspepsia. Owing to the large number who attended the out-patient department the diagnosis was ridiculously hurried. He would like to see the Poor-law institutions open to students, because in the Poor-law sick asylums there were persons suffering from most of the diseases prevalent in human life. The better way to work the enormous amount of material at their disposal for teaching would be to establish a system of clinical clerkships by which the student might be in charge of say six beds under the direction of the visiting surgeon. There should be some public board or bureau, but not controlled by the State. He did not desire to do away with the voluntary system of supporting the hospitals. There should also be some system of co-operation between the hospitals, provident dispensaries, and the Poor-law institutions. He thought the results would be much better if the services of the staff were paid.

In answer to Lord SPENCER, the WITNESS stated that many of the special hospitals had arisen to a great extent because

of the opposition of general hospitals. With very few exceptions, it was the custom of the big hospitals to supply their staffs from among their own students. No one could be on the staff of the Edinburgh Infirmary unless he was a Fellow of the Edinburgh College of Surgeons. That used to be a very close corporation indeed. He had known of cases of able men obliged to start institutions because shut out of big hospitals. On the whole, he thought the London system was very satisfactory, but he would like to see a change in the university system. For certain purposes of education he would like to have a kind of medical university to centralise in some way, and to pay more highly the lecturers and teachers on certain subjects. The system of teaching the ordinary ailments of every-day life in workhouses would take the place of the old apprenticeship system. He did not think the large voluntary hospitals would object to come under the control of a central authority if it were made up from units of their own institutions. He did not think there was any danger of such a central system as he suggested gradually leading to the hospitals being supported by the rates. It would be very desirable and advantageous if there was some officer whose special duty was to look after all sanitary matters in hospitals. The number of out-patients in large hospitals ought to be limited to those necessary for the instruction of the students and for special treatment. If the infirmaries were made thoroughly available the instruction so necessary for medical students in ordinary cases would be obtained in the infirmaries. There were not too many schools in London, although perhaps two or three of the smaller ones, such as Westminster and Charing Cross, might be amalgamated. To prevent the abuse of the out-patient department by trivial cases, the resident medical staff should be instructed to reject all cases not demanding special treatment. In short, he considered that, having regard to the imperfect opportunities of learning in respect to infectious and ordinary diseases, the Poor-law infirmaries should be open to younger men, on whom it should be imperative to go through some ordinary course of training such as would enable them to learn infectious and ordinary diseases.

Miss BREW (the matron of the London Homœopathic Hospital), next examined, stated that there were 55 nurses, and of that number 34 were sent out to private nursing. She then gave particulars of the hours of work, rest, recreation, food, and pay of the nurses.

Major VAUGHAN MORGAN (treasurer and chairman of the London Homœopathic Hospital) stated that it was a general and not a special hospital, for no cases were refused. As a hospital administrator, he should have no objection to a central board, provided it had not the power to decide whether or not a hospital should be established. He had a strong opinion as to hospital accounts, believing that it would be very advantageous if all the accounts were made upon the same system.

Mr. ALDER (secretary of St. Saviour's Hospital, Osnaburgh Street) stated that it was established for the treatment of cancer cases, and was managed by Mrs. Palmer. It was a women's hospital, and was established in 1872. Twenty-six beds could be made up. There was no committee of management.

The Committee soon after adjourned.

THE Association of Fellows of the Royal College of Surgeons will recommend the candidature of Mr. Lawson Tait and Mr. Rivington at the coming election of Councillors.

BRACKLEY RURAL.—*Influenza Cases.*—Mr. J. C. Bradshaw reports an almost clean bill of health in respect of zymotic diseases during 1889 and 1890. Measles alone caused mortality in 1889, and this disease, with a few reputed cases of very mild scarlatina, were the only infectious diseases occurring in the whole district. In 1890 there were several cases of diphtheria and scarlet fever and a fatal case of typhoid. The general death-rate which was 13.5 per 1,000 in 1889, rose to 14.3 in 1890. The water supply is said to be generally excellent, and the sewers in various localities have been improved, but in Charlton the water supply is deficient and requires immediate attention. At the beginning of last year a large number of cases of influenza occurred in this district, but the reports contain no particulars.

THE FORTHCOMING MEETING OF THE ASSOCIATION AT BOURNEMOUTH.

THE arrangements for the forthcoming annual meeting of the British Medical Association at Bournemouth, which will be held from Tuesday, July 28th, until July 31st, are now nearly complete. As will be seen from the programme which we publish elsewhere, the arrangements make full provision for the practical and scientific discussion of questions of current interest. The meeting will be held under the presidency of Dr. John Roberts Thomson, and the general addresses to be given by Dr. Lauder Brunton, F.R.S., Professor Chiene, of Edinburgh, and Dr. Seaton will be eagerly looked forward to.

There are to be nine sections, each provided with a carefully prepared programme. The general meetings will be held in the Town Hall, while the sections will be accommodated in the various public buildings in the centre of the town.

The Sanitary Section of the Museum will be located in St. Peter's schoolrooms, while the Section of Public Medicine will sit in the Lecture Hall of the Cairns Memorial House, which adjoins the schoolrooms. The other sections of the museum will be admirably accommodated in the covered tennis court of the Mont Dore Hotel, and the buildings in which the sections, other than that of Public Health, are to meet will immediately adjoin the museum.

While, therefore, scientific work for the meeting is amply provided, the natural beauties and attractions of Bournemouth and the neighbourhood, and the unrivalled variety of excursion and entertainment afforded, will prove a specially attractive feature of the meeting and will doubtless bring together a very large number of members.

Early during the meeting the local Natural Science Society will give a reception for members who are interested in Field Science, and a series of short addresses will be given on natural features peculiar to the district.

The Bishop of Winchester has promised to preach the annual sermon on Tuesday, in St. Peter's Church, which has been kindly granted for the purpose by the vicar, the Rev. Canon Fisher.

On the same day a garden party will be given by the Rev. Dr. West.

On Wednesday evening the President and Local Committee will give a reception at the Royal Bath Hotel, and on Thursday, Dr. Roberts Thomson, will give a garden party at his residence, Monkchester, Bournemouth.

The public dinner of the Association will be held on Thursday at the Royal Bath Hotel. On Friday evening the Mayor and Corporation will give a reception and ball in the winter gardens of the Mont Dore Hotel. This is Bournemouth's first year of incorporation, and the town intends to signalise this accession of dignity and power by giving a right royal reception to the British Medical Association.

Garden parties will also be given by Lord Wimborne, at Canford Manor, and by Mr. Merton Russell Cotes, F.R.G.S., at the Royal Bath Hotel.

A special guide to Bournemouth and the neighbourhood is being prepared for distribution to members of the Association.

As regards Bournemouth itself, among its special features is the central valley beautifully laid out as pleasure gardens, nearly two miles long; through these winds the little stream, the Bourne, to the sea; the town stretches mainly on to the cliffs, which rise by rapid slopes on either side of the valley, the East Cliff, the older Bournemouth, being beautifully wooded with pines, while the West Cliff was an undulating moor with a few pines, but chiefly covered with heath and gorse. As the valley of the Bourne winds round to the west at a distance of a little more than half a mile from the sea, the town becomes protected also on the north by dense pine woods, the Talbot Woods.

One of the most unique features of Bournemouth is the detached character of the houses, each villa standing in its own grounds and garden. One main street runs up each cliff, east and west somewhat inland. There is a fine pier at the mouth of the Bourne; an extensive beach of clean dry sand, from which there is excellent bathing, there being very little difference between high and low water. Above the beach rise

the cliffs of sand and gravel, prettily varied by recesses. Along the edge of both cliffs, amid the gorse, are most enjoyable promenades. Along the coast in both directions, are found picturesque ravines, known locally as chines.

These varied attractions entitle Bournemouth to a very high rank among English watering places. There are abundant *char-à-banc* and steamer excursions daily to places within easy reach at moderate charges. Among the former are Branksome Chine, Southbourne, Christchurch and Heron Court, the seat of Lord Malmesbury, Wimborne Minster and Canford Manor, the seat of Lord Wimborne. The Priory Church of Christchurch, and the Minster Church of Wimborne are among the most notable piles in the South of England, and well repay a visit. In the neighbourhood of Wimborne also is the old British encampment with three ramparts known as Badbury Rings.

Among the sea excursions are numerous points in the Isle of Wight: Alum Bay, Yarmouth, Totland Bay, Cowes, and Ventnor; short excursions are provided from Cowes to Carisbrooke Castle, and from Yarmouth to Freshwater. To the westward there are excursions to Swanage and Lulworth; from the former the magnificent old ruin of Corfe Castle, is easily reached by road or railway, the distance being six miles; Lulworth Cove and the coast to the west of it is considered by many to be one of the most picturesque spots in England.

An excursion will be entertained at luncheon at Swanage by Mr. G. H. Burt, to whose princely liberality and public spirit the development of Swanage is due.

There will be a personally conducted excursion to Christchurch by the Rev. Dr. West, and one to Milford-on-Sea for about fifty members.

On Saturday, August 1st, excursions will be organised as follows:

1. To the New Forest, Rufus Stone at Stoney Cross being the destination; a picnic luncheon will be given in the Forest; the excursion will terminate with a garden party given by Mr. Lawson Tait at his residence near Lyndhurst Road Station, from which members will be able to return to Bournemouth or proceed to London.

2. To Weymouth and Portland; the excursion will start from Bournemouth Pier, and proceed by sea along the coast in the fine steamship *Monarch*, to Weymouth; here they will be entertained at a luncheon by the medical profession of Weymouth, after which they will proceed to Portland, where the convict prison will be viewed, and also the quarries and breakwater, and the Chesil Beach. Dr. Moorhead, of Weymouth, will give a lecture on the geology of the island.

3. To Cherbourg, the French Naval Port, or to Guernsey, in the splendid new steamship the *Windsor Castle*.

4. To Southampton, and the Royal Military Hospital at Netley.

5. To Salisbury, its Cathedral, and Stonehenge. The arrangements for the two latter are in process of completion.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members, in commodious apartments, at the Offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 18th and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

THE Scientific Grants Committee of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences, that they are empowered to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting should be made without delay to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.

One of the two scientific scholarships of the value of £150 per annum, tenable for one year subject to annual renewal by the Council, will shortly fall vacant. The Scientific Grants Committee are prepared to receive applications addressed to the General Secretary stating the particulars of the intended research qualifications and work done.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returnin to the General Secretary on the conclusion of the research ed furtherance of which the grant was made.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The thirty-ninth annual general meeting of the Metropolitan Counties Branch will be held at the Holborn Restaurant on Tuesday, June 9th, at 5.30 P.M.—H. RADCLIFFE CROCKER, M.D., 121, Harley Street, W.; ANDREW CLARK, F.R.C.S., 71, Harley Street, W., Honorary Secretaries.

SOUTH MIDLAND BRANCH.—The annual meeting of this Branch will be held at Cambridge, in conjunction with the Cambs and Hunts and East Anglian Branches, on Thursday and Friday, June 18th and 19th. The President-Elect, Mr. Geo. H. Percival, will introduce for discussion the subject of Surgical Dressings.—C. J. EVANS, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE AND NORTHERN COUNTIES BRANCHES.—A joint meeting of the Northern Counties and Aberdeen, Banff, and Kincardine Branches of the British Medical Association will be held at the Gordon Arms Hotel, Elgin, on Saturday, June 20th, 1891, at 2.50 P.M. It has been proposed that visits be paid to the Cathedral, Pluscarden Priory, Gray's Hospital, etc. Dinner will be served in the Gordon Arms Hotel at 3 P.M. Members are invited to bring medical or lay friends with them. Further particulars as to train and coaching arrangements will be given in future notices.—J. MCKENZIE BOOTH and C THISELTON URQUHART, Honorary Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—The annual general meeting of this Branch will be held at Birkenhead on July 2nd, 1891. Members wishing to propose resolutions, read papers, or show cases, will please communicate at once with the Honorary Secretary, so that their names may duly appear on the circular convening the meeting.—CHARLES E. GLASCOTT, Honorary Secretary, 23, St. John Street, Manchester.

WEST SOMERSET BRANCH.—The annual meeting will be held at the residence of the President-elect, Mr. Charles Randolph, at Milverton, on Thursday, June 25th, at 2.45 P.M. Mr. C. Randolph will be happy to see gentlemen and offer them refreshments at his house before the business of the meeting commences. Dinner will be served at the White Hart, Milverton, at 5 o'clock. Members intending to be present, or having communications to bring before the meeting, are requested to send notice to Mr. C. RANDOLPH, or to the Honorary Secretary, W. M. KELLY, M.D.

SOUTHERN BRANCH.—The eighteenth annual meeting will take place at the Royal Hants County Hospital, Winchester, on Thursday, June 18th, 1891. (President, Dr. Joseph Groves; President-elect, Mr. T. C. Langdon, F.R.C.S.) The general meeting will be held at 12.30. In accordance with the by-laws, two gentlemen will be elected at this meeting as representatives of the Branch on the Council of the Association for the ensuing year. Members desirous of reading papers are requested to forward at once the titles to the Honorary Secretary. The subjects will be announced in the BRITISH MEDICAL JOURNAL of June 13th. No communication must exceed seven minutes in length, and no subsequent speech must exceed five minutes. The Address will be delivered by the President-elect at 2.30. During the afternoon, the members are invited to visit the Cathedral and several places of interest in the locality. The dinner will take place at the Royal Hotel at 5.30 P.M. Tickets 6s. each, excluding wine. The Committee request that those gentlemen who intend to be

present at the dinner will send in their names to Mr. T. C. Langdon on or before Wednesday, June 17th.—J. WARD COUSINS, Honorary Secretary and Treasurer.

SOUTH EASTERN BRANCH.—The forty-seventh annual meeting of this Branch will be held in the Upper Hall, Eastbridge Hospital, Canterbury (next the General Post Office), on Wednesday, June 10th, at 2.30 P.M. The President-elect invites members and their friends to luncheon at his residence, 60, Burgate Street, from 1 o'clock to 2.30 P.M. After the meeting members are invited to visit: The wards of the Kent and Canterbury Hospital; the Cathedral; St. Augustine's College; St. Martin's Church; the Museum; the Sewage Works (about a mile N.E. of the city); the Water Works (a mile S.W.); the Chartham Asylum (4 miles S.W.). Dinner will be served at the Royal Fountain Hotel at 5.45 P.M.; tickets (exclusive of wine), 6s. 6d. each.—CHARLES PARSONS, M.D., Honorary Secretary, 2, St. James' Street, Dover.

MIDLAND BRANCH.—The annual meeting will be held at the Derby Infirmary on Thursday, June 18th, at 2 P.M. After the transaction of the usual business, the following special business in connection with the proposed annual meeting of the Association at Nottingham in 1892 will be taken: To appoint a deputation to convey the invitation to the Council at the meeting at Bournemouth. To nominate a President-elect for the Association in case of such invitation being accepted. Papers: H. Handford, M.D.: Antiseptic Treatment of Diseases of the Stomach. E. Mansel Sympson, M.D.: A Case of Diabetes Mellitus, with Remarks on its Treatment by Salicylate of Soda. T. Henderson Pounds, F.R.C.S.: Aural Vertigo—Notes of a Case. Mr. E. Collier Green: The Old and the Proposed New Infirmary at Derby. Luncheon will be provided by the President-elect, at the Infirmary, at 1 P.M. The dinner will take place at the Midland Hotel, at 5 P.M.; tickets, 7s. 6d. each, exclusive of wine.—W. A. CARLINE, M.D., Honorary Secretary and Treasurer.

PERTHSHIRE BRANCH.—The summer meeting of this Branch will be held at Fisher's Hotel, Pitlochrie, on Tuesday, June 9th, at 1 P.M.—A. R. URQUHART, M.D., Honorary Secretary, The Murray, Perth.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of this District was held at the Hospital, Gravesend, on May 28th, Mr. O. R. RICHMOND in the chair.

Next Meeting.—It was decided that the next meeting should take place at Rochester, in October, and that Mr. F. W. Penfold, of Rainham, should be requested to preside on the occasion.

Representative for Kent.—Dr. Parsons, of Dover, was unanimously nominated representative for Kent on the Council of the parent Association.

Election of Honorary Secretary of District.—A. W. Nankivell, F.R.C.S., St. Bartholomew's Hospital, Rochester, was re-elected honorary secretary.

Communications.—The following papers were read and discussed: 1. Mr. G. HARTRIDGE, Injuries of the Eye and their Treatment; 2. Mr. A. BOYCE BARROW, Some Diseases of the Rectum; 3. Mr. R. BRYDEN, A Case of Acute Glossitis; 4. Dr. FIRTH, A Case of Hæmoptysis.

Dinner. Thirteen members and visitors dined at the New Falcon Hotel.

BRITISH MEDICAL ASSOCIATION.

FIFTY-NINTH ANNUAL MEETING.

THE fifty-ninth Annual Meeting of the British Medical Association will be held at Bournemouth on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1891.

President: WILLOUGHBY FRANCIS WADE, B.A., M.B., F.R.C.P., J.P., Senior Physician, Birmingham General Hospital, 27 Temple Row, Birmingham.

President-elect: JOHN ROBERTS THOMSON, M.D., F.R.C.P., J.P., Consulting Physician, Royal Victoria Hospital, Bournemouth, Monkchester, Bournemouth.

President of the Council: WITHERS MOORE, M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Burgess Hill, Sussex.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital.

An Address in Medicine will be delivered by THOS. LAUDER BRUNTON, M.D., F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, London.

An Address in Surgery will be delivered by JOHN CHIENE, M.D., F.R.C.S.Ed., Professor of Surgery at the University of Edinburgh.

An Address in Public Medicine will be delivered by EDWARD COX SEATON, M.D., Lecturer on Public Health at St. Thomas's Hospital, London.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

A. MEDICINE.—*President:* P. H. PYE-SMITH, M.D., F.R.S. *Vice-Presidents:* WILLIAM GEORGE VAWDREY LUSH, M.D.; THOMAS BARLOW, M.D. *Honorary Secretaries:* WM. FRAZER, M.D., "Elmhurst," Madeira Road, Bournemouth; H. MONTAGUE MURRAY, M.D., 27, Savile Row, W.

The discussion on Wednesday, July 29th, on the Etiology and Prevention of Phthisis will be opened by the President. Speakers: Professor Gairdner; E. Symes Thompson, M.D.; Sir Walter Foster, M.D.; J. B. Yeo, M.D.; J. G. S. Coghill, M.D.; T. W. Blake, M.R.C.S.; R. Robertson, M.B.; M. A. Boyd, M.B.; T. A. Vesey, M.B.; J. Moorhead, M.D.; E. Markham Skerritt, M.D.; A. E. Sansom, M.D.

The discussion on Thursday, July 30th, on Lupus will be opened by Dr. J. F. Payne. Speakers: T. Colcott Fox, M.B.; P. S. Abraham, M.D.; J. Moorhead, M.D.

The discussion on Friday, July 31st, on the Effects of Alcohol will be opened by Dr. Wilks, F.R.S. Speakers: Professor Gairdner; Dr. Ferrier, M.D., F.R.S.; E. Symes Thompson, M.D.; Sir Walter Foster, M.D.; E. Long Fox, M.D.; J. C. Bucknill, M.D., F.R.S.; I. Burney Yeo, M.D.; Isambard Owen, M.D.; E. M. Skerritt, M.D.; J. Moorhead, M.D.; J. Watts Parkinson, M.R.C.S.; A. E. Sansom, M.D.

The following papers have been promised:

BARRS, A. G., M.D. Clinical Observations upon the Cardiac *Bruits* of Chlorosis.
BLAKE, T. W., M.R.C.S. Cancer and Phthisis occurring in Different Members of the Same Family.
COGHILL, J. G. S., M.D. (Subject unannounced.)
HALL, F. de Havilland, M.D. Erysipelas of the Pharynx.
KERR, Norman, M.D. Some Points in the Treatment of Influenza.
LANE, Hugh, M.R.C.S. Differentiation in Rheumatic Diseases.
ROBERTSON, R., M.B. On the Heart Sounds in Pulmonary Phthisis.
VESEY, T. A., M.B. Hydrophobia.
YEO, I. Burney, M.D. Consumption; the Conditions of its Cure.

B. SURGERY.—*President:* JOHN WARD COUSINS, F.R.C.S. *Vice-Presidents:* J. D. G. DOUGLAS, M.D.; WM. WATSON CHEYNE, F.R.C.S. *Honorary Secretaries:* H. GUNTON TURNER, M.R.C.S., "Holmwood," Bournemouth; A. A. BOWLBY, F.R.C.S, 43, Queen Anne Street, W.

Arrangements have been made for the following important subjects to come under discussion: 1. The Value of Professor Koch's Method in the Treatment of External Tuberculosis, to be introduced by William Watson Cheyne, F.R.C.S.: Mr. C. B. Keetley will take part in this discussion. 2. Abdominal Surgery: (i) The Operative Treatment of Peritonitis; (ii) The Treatment of Strangulated Hernia by Median Abdominal Section, to be introduced by Lawson Tait, F.R.C.S. 3. The Present Position of Intranasal Surgery, to be introduced by W. J. Walsham, F.R.C.S.

The following papers have been announced:

COOPER, Alfred, F.R.C.S. Cancer of the Rectum and its Surgical Treatment.
FENWICK, E. Hurry, F.R.C.S. Notes from an Experience of 100 Cases of Urinary Tuberculosis.
GOLDING-BIRD, C. H., F.R.C.S. The Limits to the Curability of Scoliosis—A Clinical Inquiry.
KEETLEY, C. B., F.R.C.S. On the Treatment of Peritonitis and of Hernia by Abdominal Section.
LOCKWOOD, C. B., F.R.C.S. On the Treatment of Peritonitis and of Hernia by Abdominal Section.
LUCAS, R. Clement, M.B., B.S. 1. The Relation of Movable Kidney to Hydronephrosis. 2. A New and Certain Way of Obliterating Hernial Sacs and Performing Radical Cure for Hydrocele.
MACDONALD, Greville, M.D. Intranasal Surgery in Relation to Sneezing and Hay Fever.
REEVES, H. A., F.R.C.S.Ed. On the Treatment of Peritonitis and of Hernia by Abdominal Section
SYMONDS, Charters J., M.S., F.R.C.S., and SPICER, Scanes, M.D. On the Present Position of Nasal Surgery.
WOAKES, E., M.D. On the Pathology, Diagnosis and Surgical Treatment of Necrosing Ethmoiditis.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President:* W. J. SMYLY, M.D. *Vice-Presidents:* ALLAN MCLEAN, M.D.; A. H. G. DORAN, F.R.C.S. *Honorary Secretaries:* H. A. LAWTON, M.R.C.S., 74, High Street, Poole, Dorset; MONTAGU HANDFIELD-JONES, M.D., 35, Cavendish Square, W.

The discussion on Puerperal Eclampsia will be opened by Dr. Galabin, and discussed by Dr. Braxton Hicks, Dr. Aust Lawrence, Professor Auvard (Paris), Dr. More Madden, and others will take part.

The discussion on Uterine Polypi will be opened by Dr. Murphy, and discussed by Dr. Robert Bell, Dr. More Madden, Dr. Godson, Dr. Murdoch Cameron, Professor Auvard, and others will take part.

A Demonstration on Frozen Sections of the Pregnant Cadaver will be given by Dr. Freeland Barbour.

The following papers have been announced:

AUVARD, Professor (Paris). The Medical Treatment of Cervical Metritis.
BELL, Robert, M.D. The Treatment of Chronic Disease of the Uterine Adnexa.
CAMERON, Murdoch, M.D. will show an Improved Crutch for Operations.
DONOVAN, D. D., F.R.C.S. Eclampsia occurring in a Primipara, aged 15½ years.
GODSON, Clement, M.D. Two additional cases of Porro's Operation.
LAWRENCE, Aust, M.D. Early Incision and Drainage in cases of so-called Pelvic Abscess.
MADDEN, More, M.D. On the treatment of Puerperal Convulsions.
PARSONS, J. Inglis, M.D. A case of Epithelioma of the Perineum treated by Electricity.
RENTOUL, R. Reid, M.D. Midwives should be Ended not Mended, and the Public should be supplied with thoroughly Trained Obstetric Nurses.
TRAVERS, William, M.D. A case of a Rapidly Recurring Uterine Polypus.

D. PUBLIC MEDICINE.—*President:* J. BURN RUSSELL, M.D. *Vice-Presidents:* H. F. PARSONS, M.D.; JOHN COMYNS LEACH, M.D. *Honorary Secretaries:* C. H. W. PARKINSON, M.R.C.S., Wimborne Minster; P. W. G. NUNN, L.R.C.P., "Maplestead," Christchurch Road, Bournemouth.

The following papers have been announced:

BROWNE, H. W. Langley, F.R.C.S.Ed. Factory and Workshop Sanitary Inspection.
CAMERON, Spottiswoode, M.D. An Outbreak of Diphtheria at Leeds.
CARPENTER, Alf., M.D. Diphtheria: the Cause of its Increase and the Means to be adopted for its Prevention.
LITTLEJOHN, Harvey. The Notification of Diseases Act. Should Measles or other Diseases be added to the number of Compulsory Notifiable Diseases?
MANLEY, H., M.D. The Powers conferred on Sanitary Authorities with regard to Slaughterhouses, Bakehouses, and Milkshops.
MAY, H., L.R.C.P., and UNDERHILL, C. E., M.D. Vaccination. What Constitutes Efficient Vaccination?
MUMBY, B. H., M.D. The Duty of the Medical Officer of Health with reference to the Examination of Notified Cases of Infectious Disease and the Sanitary Inspection and Disinfection of Premises.
PARKES, Louis, M.D. The Discharge of Town Sewage into the Sea near Watering Places and Seaside Health Resorts.
PARSONS, Franklin, M.D., V.P. The Influenza Epidemic and its Distribution in the British Isles.
THRESH, J. C., M.D. (Chelmsford), and WILLOUGHBY, E. F., M.D. The Water Supply of Rural Communities where (*a*) Streams, (*b*) Ponds, or (*c*) Shallow Wells are relied on.
THURSFIELD, Wm., M.D. It is Imprudent and Inexpedient to treat Scarlet Fever and Diphtheria in the same Isolation Hospital.
WELLS, Sir T. Spencer, Bart., and LEACH, J. Comyns, M.D. The Disposal of the Dead.
WOODHEAD, G. Sims, M.D., and MCFADYEAN, Professor (Edinburgh). The Communicability of Tuberculous Diseases from Animals to Man.

E. PSYCHOLOGY.—*President:* P. MAURY DEAS, M.B. *Vice-Presidents:* HENRY JOHN MANNING, M.R.C.S.; D. NICOLSON, M.D. *Honorary Secretaries:* P. W. MACDONALD, M.D., Dorset County Asylum, Dorchester; WILLIAM HABGOOD, M.D., Belmont, Sutton, Surrey.

The President will deliver an Adress, to be followed by a discussion.

Dr. T. Clifford Allbutt, F.R.S., will open a discussion On the Proposed Hospitals for the Treatment of the Insane.

In conjunction with Dr. Allbutt's paper, Dr. F. H. Walmsley (Leavesden Asylum) will read a paper on the Desirableness of Throwing Open our Asylums for the Post-Graduate Study of Insanity.

Dr. T. Claye Shaw, F.R.C.P., will introduce a discussion on the Surgical Treatment of General Paralysis.

Dr. G. H. Savage, F.R.C.P., will initiate a discussion on the Influence of Surroundings on the Production of Insanity. A contribution on the Truth of the Idea of Heredity by Dr. Wm. Wallace (Glasgow) will form part of this discussion.

The following papers have been announced:

BAKER, J., M.B. (H.M. Prison, Portsmouth). Weak-Minded Criminals; their Psychological and Anthropological Characteristics.
EWAN, J. A., M.B. (Dorset County Asylum). The Value of Sulphonal as a Mental and Motor Sedative.
HYSLOP, Theo. B., M.B. (Bethlem). Psychopathic Epidemics.
LITTLE, A., M.B. (Virginia Water). Some Unusual Forms of General Paralysis.
NICOLSON, D., M.D. The Criminal Acts of Criminal Lunatics.
SMYTH, S. T., M.D. (Bournemouth). Puerperal Insanity.
SNOW, H., M.D. (London). Cancer in its Relations to Insanity.
WARNER, Francis, M.D. (London). Association of Various Conditions of Development in Relation to Brain Power and Nutrition.

Should the Committee of Investigation on Hypnotism present a report, it is proposed that this report be considered and probably discussed on Thursday, July 30th.

In addition to those gentlemen who are to open discussions and read papers, the following will take part in the deliberations of the Section: Professor Gairdner, Sir J. Crichton Browne, Dr. Hughlings Jackson, Dr. Batty Tuke, Professor Ferrier, Dr. Macewen (Glasgow), Dr. Bateman (Norwich), Dr. Fletcher Beach, Dr. Mercier, Dr. Wiglesworth, Dr. Outterson Wood, Dr. Needham, Dr. Gayton, Dr. Strahan.

F. PATHOLOGY.—*President:* W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* KINGSTON FOWLER, M.D.; W. RUSSELL, M.D. *Honorary Secretaries:* W. G. SPENCER, M.B., 35, Brook Street, Grosvenor Square, W.; E. HYLA GREVES, M.D., Rodney House, Poole Road, Bournemouth.

Dr. Hingston Fowler will open a discussion on Arrested Pulmonary Tuberculosis.

Mr. F. G. Eve will open a discussion on Senile Changes in the Bones.

Dr. Phineas Abraham will give a demonstration on Microscopic Sections of Skin Diseases.

Dr. Carey Coombs will give a demonstration with Hæmoglobinometer and Two Cytometers.

The following papers have been announced:

EDDOWES, Alfred, M.D. A short account of Herxheimer's Spirals in the Epidermis and Mucous Membranes, illustrated by microscopical sections of various skin affections.
HAWKINS, Francis, M.D. A series of specimens of Heart Diseases, with verbal demonstration.
JONES, E. Lloyd, M.B. Paper and specimens, The Specific Gravity of the Blood in Disease.
MAGUIRE, Robt., M.D., will show specimens and make a communication on Lymphadenoma of the Solar Plexus with Bronzed Skin.
RATCLIFFE, J. R., M.B., and WILSON, T. Stacey, M.B.. A paper on the Accurate Measurements of the Cubic Contents of the several Chambers of the Heart.
SAVILLE, Thos., M.D. On the Real Anatomical Nature of so-called Arterio-Capillary Fibrosis, its Symptoms during Life, and its Relation to Granular Kidney (during Bright's disease).
SNOW, Herbert, M.D. Paper and specimens, The Insidious Bone Lesions of Mammary Carcinoma (second paper).
WILLIAMS, Roger, F.R.C.S. Paper and specimens, Gynæcomastia.

The following gentlemen have also promised papers:—Dr. Handford, Dr. Sims Woodhead, Dr. W. Russell, and Dr. McMunn.

G. OPHTHALMOLOGY.—*President:* N. C. MACNAMARA, F.R.C.S. *Vice-Presidents:* ROWLAND W. CARTER, M.D.; MALCOLM M. MCHARDY, F.R.C.S.Ed. *Honorary Secretaries:* J. B. LAWFORD, M.D., 55, Queen Anne Street, W.; BERNARD SCOTT, M.R.C.S., "Hartington," Poole Road, Bournemouth.

Two subjects have been set down for special discussion; 1. The Treatment of Infantile Cataract; 2. The Treatment of Lachrymal Disease.

The following papers are announced:

BEAUMONT, W. M., M.R.C.S. Vision Tests as Applied to Railway Servants.
BICKERTON, T. H., M.R.C.S. (Title of paper not received.)
BRAILEY, W. A., M.D. Some Cases of Retinal Detachment.
COLLINS, W. J., M.D., and WILDE, L., M.D. The Pathology of the Ophthalmoplegiæ.
DOYNE, R. W., M.R.C.S. (Title of paper not received.)
EDRIDGE-GREEN, F. W., M.D. A Review of the Tests for Colour Blindness.
GRIFFITH, A. Hill, M.D. Cases of Sarcoma of Choroid causing Death by Metastasis.
GROSSMANN, K., M.D. (Title of paper not received).
LEE, C. G., L.R.C.P. The Value of Electricity in Affections of the Optic Nerve and Retina.
MCHARDY, M. M., F.R.C.S.Ed. Control of Railway Servants' Eyesight.
PERCIVAL, A. S., M.B. The Action and Uses of Prismatic Combinations.
WRAY, C., F.R.C.S. Some Points in the Treatment of Lamellar Cataract.

H. DISEASES OF CHILDREN.—*President:* J. F. GOODHART, M.D. *Vice-Presidents:* T. W. TREND, M.D.; T. B. SCOTT, M.R.C.S. *Honorary Secretaries:* SIDNEY PHILLIPS, M.D., 62, Upper Berkeley Street, W.; DENNIS C. EMBLETON, L.R.C.P., "St. Wilfred's," Michael's Road, Bournemouth.

The two following subjects have been set down for special discussion: 1. The Feeding of Infants up to the Completion of the first Dentition. To be opened by Dr. Henry Ashby, of Manchester; Dr. Cheadle, Professor Baginsky, of Berlin, Dr. Emil Pfeiffer, of Wiesbaden, Dr. Lewis Marshall, of Nottingham, and Dr. Angel Money will take part. 2. The Treatment of Pleurisy and Empyema in Children, and their value. To be opened by Mr. R. J. Godlee; Mr. W. H. A. Jacobson, Mr. Watson Cheyne, Professor Baginsky, of Berlin, Dr. Emil

Pfeiffer, of Wiesbaden, Dr. Angel Money, Dr. G. A. Carpenter, and Dr. Lewis Marshall, of Nottingham, will take part.

The following paper is announced:

EWENS, John, L.R.C.P. Osteotomy Generally; with Special Reference to Tarsectomy in Advanced and Intractable Cases of Talipes Equino-Varus.

I. THERAPEUTICS.—*President:* WM. VICARY SNOW, M.D. *Vice-Presidents:* SIDNEY COUPLAND, M.D.; A. G. BARRS, M.D. *Honorary Secretaries:* CHRISTOPHER CHILDS, M.D., 2, Royal Terrace, Weymouth; JOHN ROSE BRADFORD, M.D., 52, Upper Berkeley Street, W.

A discussion on Koch's Treatment of Consumption, to be introduced by the President (Dr. Snow). The following gentlemen will take part in the discussion: Mr. Watson Cheyne, Dr. E. Markham Skerritt, Dr. Barrs, Mr. Fowler, and others.

A discussion on Anæsthetics will be introduced by Dr. Lauder Brunton. The following gentlemen will take part in the discussion: Dr. Dudley Buxton, Dr. Barrs, Mr. Hartley, Mr. Pridgin Teale and others.

The following papers are announced:

BARRS, —, M.D. On the Use of Digitalis in Aortic Disease.

BUXTON, Dudley, M.D. On Anæsthetics.

DENTON-CARDEW, H. W., M.R.C.S. On the Treatment of Exophthalmic Goitre.

Honorary Local Secretary: JAMES DAVISON, M.D., "Walderslow," Bournemouth. *Honorary Treasurer:* WILLIAM FRASER, M.D., Elmhurst, Bournemouth.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 28TH, 1891.

9.30 A.M.—Meeting of 1890-91 Council.

11.30 A.M.—First General Meeting. Report of Council. Reports of Committees: and other business.

4 P.M.—Sermon by the Right Rev. the Lord Bishop of Winchester.

8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address.

WEDNESDAY, JULY 29TH, 1891.

9.30 A.M.—Meeting of 1891-92 Council.

10 A.M to 2 P.M.—Sectional Meetings.

3 P.M.—Second General Meeting. Address in Medicine by Dr. T. LAUDER BRUNTON, F.R.S.

THURSDAY, JULY 30TH, 1891.

9.30 A.M.—Meeting of the Council.

10 A.M. to 2 P.M.—Sectional Meetings.

3 P.M.—Third General Meeting. Address in Surgery by Professor J. CHIENE.

7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 31ST, 1891.

10.30 A.M. to 1.30 P.M.—Sectional Meetings.

3 P.M.—Concluding General Meeting. Address in Public Medicine by Dr. EDWARD C. SEATON.

SATURDAY, AUGUST 1ST, 1891.

Excursions.

THE ANNUAL MUSEUM.

THE Museum in connection with the fifty-ninth annual meeting of the British Medical Association will be arranged in the following Sections:—

SECTION A.—Foods and Drugs, including Prepared Foods, Pharmaceutical and Chemical Preparations, Antiseptic Dressings, etc. (Honorary Secretary, Mr. MacGillicuddy, Pendennis, Bournemouth.)

SECTION B.—Pathology, comprising Casts, Models, Apparatus, Microscopical and Macroscopical Specimens, etc. (Honorary Secretary, Dr. Bright, Roccabruna, Bournemouth.)

SECTION C.—Anatomy and Physiology, comprising Specimens and Apparatus as above. (Honorary Secretary, Mr. G. Schofield, Durham House, Bournemouth.)

SECTION D. Surgical Appliances and Books, comprising New Books, Atlases, Diagrams, Tables; Medical and Surgical Instruments and Appliances, Ambulances, etc. (Honorary Secretary, Dr. Grabham Lys, Hazlewood, Bournemouth.)

SECTION E.—Sanitary Appliances, comprising Apparatus and Appliances connected with Sanitation, Equipment of Houses, Public Institutions, Hospitals, etc.; Improvements in Drainage, Water Supply, Ventilation, Illumination, and Clothing. (Honorary Secretary, Mr. W. H. L. Marriner, Westbourne Tower, Bournemouth.)

The Secretary of the Museum will be glad to hear from members of the profession who are willing to send objects for exhibition in the Sections of Anatomy and Physiology and Pathology. There is no hospital museum in the neighbourhood. (Address, Mr. George Mahomed, Astolat, Bournemouth.)

The Museum will open on Monday evening and close on Thursday evening.

To Non-Professional Exhibitors.

Inventors and manufacturers wishing to exhibit in the annual Museum are invited to apply for space early to the Honorary Secretary of the Museum, Mr. George Mahomed, Astolat, Bournemouth.

The charge to exhibitors (other than members of the medical profession) will be 2s. per square foot of table space in Sections A, B, C, D, and 6d. per square foot of floor space in Section E, and in Section D for ambulance appliances.

In considering applications for space the Committee will give preference to *bonâ fide* inventions and improvements not previously exhibited.

A Catalogue will be printed, prepaid advertisements will be inserted in the Catalogue.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretary of each Section in which they propose to exhibit.

2. Communications on general matters connected with the Museum should be addressed to Mr. G. Mahomed, Astolat, Bournemouth.

3. Intimation of proposed exhibits must be made to the Honorary Secretary before June 20th.

3*a*. A brief description of each exhibit must be forwarded to the Secretary of the Section concerned not later than June 30th.

4. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Bournemouth," with the name of the Section for which they are intended. Packages should not be addressed to a firm's representative at the Museum.

5. Exhibits must be delivered between July 15th and 21st.

6. Every packet most bear a card showing the name and address of the exhibitor.

7. The Committee will exercise every care regarding the objects entrusted to them, but all risks and expenses must be borne by the exhibitor.

8. The arrangement of signs, placards, etc., will in every case be subject to the approval of the Committee.

9. No exhibits will be received except on the understanding that the above regulations will be complied with.

A. G. S. MAHOMED, M.R.C.S.,
Honorary Secretary Museum Committee,
Astolat, Bournemouth.

SPECIAL CORRESPONDENCE.

EGYPT.

Kasr-el-Aini Hospital.—Inspection by His Highness the Khedive.—Progress in the Provinces.—Alexandria and Provincial Hospitals.—Abbassiyeh Lunatic Asylum.—The New Ministry and Sanitation.

IN his report for 1890, the principal medical officer of Kasr-el-Aini Hospital announces considerable progress in every department. Among the surgical operations performed, the most noteworthy were four hysterectomies, all successful; nine ovariotomies, with one fatal result; a case of ligature of the abdominal aorta for ruptured aneurysm was unfortunately unsuccessful. The mortality in the surgical division amounted to 8.1 per cent., and was due principally to three causes: (1) The concurrence of pulmonary phthisis in many of the cases of chronic diseases of bones and glands; (2) the generally advanced changes in the kidneys resulting from bilharzia, in most of the cases of disease of the urinary system; (3) the extreme severity of the burns, due to the scanty clothing generally worn. But of a total of 116 deaths, 68 were owing to these three causes. The statistics of the other sections are given in less detail, but Dr. Milton hopes that next year all will be fully dealt with. The high rate of mortality of the medical section (33.7 per cent.) is due to the great num-

ber of patients brought to the hospital in the last stages of phthisis and dysentery. The out-patient department has increased enormously. During the year over 120,000 attendances were noted, constituting a daily sick list of more than 300. For these patients no fewer than 900,000 doses of medicine were issued. The foundling department has been completely reorganised, and brought into thorough working order; it reflects the greatest credit on the lady superintendent who has charge of it. The infants were regularly weighed; the average increase in weight in each lunar month was 309 grammes. The following additions were made to the hospital during the year: (1) steam laundry, with hand power machine; (2) kitchen, with most complete English stove; (3) disinfection establishment, in which perfect security is afforded by the employment of steam under pressure: (4) an excellent Turkish bath; (5) hot and cold water pipes all over the hospital; (6) a steriliser for surgical dressings, milk, etc.; (7) a steam disinfector and still for the operating room. A handsome detached residence for the nursing sisters has been built, and the courtyard of the hospital has been laid out in grass plots, and planted with eucalyptus and fir trees. The staff has been strengthened by the addition of a physician (English), an ophthalmic surgeon (English), a chief apothecary (German), and two more nursing sisters, making six in all. Thirty students of the school of medicine have been taken into residence in place of the six house-surgeons of last year.

Surgeon Laffan, A.M.S., in his report on the provincial hospitals, mentions the gratifying fact that His Highness the Khedive visited the whole of these establishments in Lower Egypt during the year, and expressed his satisfaction at their condition, which showed a notable progress since his last visit some years ago. In each hospital he made a careful inspection of every room, inquired into the condition of every patient, and in several instances complimented the medical officers in charge.

It is satisfactory to note that these medical officers are beginning to understand more thoroughly their duties. The registers are better kept, and the attendants seem to work more intelligently and are more heedful of the surgeon's orders. The treatment of the surgical cases, which form nearly two-thirds of the total number of admissions, has improved considerably, greater care being shown in the dressing of wounds and in the personal cleanliness of the patients. No case of grave neglect of duty on the part of a medical officer occurred during the year, which thus contrasts favourably with 1889, when no fewer than seven had to be removed for incapacity or misconduct. The out-patient department in nearly all the hospitals has increased to such an extent that additional attendants will have to be supplied if the work is to be carried on properly. This means additional expenditure; but unfortunately the sanitary budget is not an elastic one, and the financial authorities are with difficulty induced to relax their purse-strings for the benefit of a department which spends freely but brings in no revenue.

The hospital at Alexandria is reported by Dr. Laffan to be almost complete in every respect; the principal requirement being accommodation for infectious cases, which at present are treated in tents. At Port Said a female lock ward is an absolute necessity, as at present the women are housed in an old tumble-down shed. The out-patient accommodation is also insufficient. At Tantah and Mansourah the hospitals are in good order, but *post-mortem* rooms are urgently required. The surgical work done at Tantah by Dr. Yacoub Wardah is most satisfactory. At Chibine-el-Kom the hospital is in very good repair, but requires a bath room and more space for patients. An enclosed garden has lately been added. The hospital at Damanhour is in an old unsuitable building, and is frequently overcrowded from want of space and efficient ventilation. Plans for increased accommodation have been submitted to the Public Works Department. At Zagazig the new hospital, which is so urgently required for this rapidly-growing town, is to be commenced immediately, and the building will be finished, it is said, by the end of the year. The present hospital will then be reserved for infectious cases. In Upper Egypt the hospitals have been much improved, especially at Keneh, Assiout, and Beni Souef. The Fayoum hospital is to be entirely rearranged, and new hospitals are to be erected at Minieh and Sohag.

The Lunatic Asylum at Abbassiyeh also exhibits signs of progress. Lavatories and bath rooms have been added to the upper story, but unfortunately, owing to the system whereby work designed by one department is executed by another, the result has been a minimum of utility at a maximum of expense. Four special wards have been fitted up for first and second class patients. These rooms are well furnished, and everything necessary is supplied, including an attendant for each patient. The charge for a first-class patient is eight francs a day; second class, six francs. The most urgent requirement in the asylum is now a proper kitchen range to replace the wasteful native method.

One of the first acts of the new Ministry, presided over by His Excellency Moustapha Pasha Fehmy, augurs well for the sanitation of Egypt. It was unanimously decided to ask permission of the Powers to apply half the octroi dues of Cairo to the establishment of a comprehensive system of drainage for the city. The sum available amounts to over £70,000 a year, so at last there is every prospect that Mr. Baldwin Latham's scheme will speedily be given effect to. It is sincerely to be hoped that international jealousy may not step in and stop the way, and that the interests of the bondholders may not be considered paramount. The number of deaths in Cairo for the week ending May 21st amounted to 577, being at the rate of 85.0 per 1,000 per annum. More than seven-tenths of this enormous mortality occurred among little children under 5 years of age, of whom 417 perished. It is indeed high time that something should be done to remedy this terrible state of affairs, or the city, instead of being a sanatorium, will sooner or later become uninhabitable.

CORRESPONDENCE.

THE PROTEIDS OF MILK.

SIR,—In reply to the letter from Dr. F. T. Bond in the BRITISH MEDICAL JOURNAL of May 30th, I beg to state that I am perfectly well acquainted with Professor Duclaux's researches on the proteids of milk, and have referred to some of them in my full communication on the subject in the *Journal of Physiology*, vol. xi. By a clerical error Dr. Bond gives the date of publication of Duclaux's monograph *Le Lait* as 1867. This should be 1887.

My own papers on the subject were not written with the idea of bolstering up any theory, but give little more than the results of my own experiments. I purposely refrained from entering into theoretical considerations in connection with the subject of rennet action. It will be quite time to formulate theories of the molecular changes that casein undergoes when we know something of the molecular constitution of casein and other proteids. It is quite possible that all the theories at present in vogue on the subject will pass into oblivion when that day arrives. To my mind, however, the weak point of Duclaux's theory is the subordinate part he attributes to calcium salts in the formation of a rennet curd. The recent work of Dr. Ringer in this country, and of MM. Arthus and Pagés in France, appear to show most conclusively that calcium salts play an essential part in this as in other varieties of coagulation in proteids brought about by ferments.

There is, of course, no reason why Dr. Bond should not use Duclaux's nomenclature, and call lact-albumin by the name of dissolved casein, though it appears to me more appropriate, as the proteid in question is an albumin, to call it such.

In conclusion, may I point out that the chief merit of any theory is its truth, not its simplicity, nor the distinguished position which its originator holds?—I am, etc.,

King's College. W. D. HALLIBURTON.

DEGREES FOR LONDON MEDICAL STUDENTS.

SIR,—Under the above heading, "A Physician but not a Doctor" expresses the opinion that the diploma of L.R.C.P. is "merely a licence to practise medicine, and does not constitute one a Physician."

For the information of your correspondent and others who hold the same view, allow me to direct their attention to the form of diploma granted by the Royal College of Physicians

of Ireland to its licentiates, in which it is distinctly asserted that the recipient of this diploma "is a physician and licentiate in medicine" of the College.

The opinion of a "Physician but not a Doctor" therefore is erroneous, and it was unnecessary for him to obtain the M.R.C.P. or the "foreign unregistrable M.D. degree" in order to be entitled to the title of physician. I am, etc.,

Doncaster. R. CHAMBERS OWEN, M.R.C.S.Eng.

SIR,—Mr. Upton's opinion as to the legality of using the prefix "Dr." without the M.D. coincides with that of a stipendiary magistrate as reported in the BRITISH MEDICAL JOURNAL of April 4th, 1885. A L.R.C.P.Ed. was charged with putting upon his doorplate "Dr. ——." The case was dismissed with costs, and I am not aware that the decision was reversed, or even appealed against. In the face of that decision, it is useless to discuss the "legality" of calling oneself "Dr.," but "convince a man against his will" he's of the same opinion still. The London College of Physicians have a by-law against this practice, which they do not enforce.

The Edinburgh College of Physicians in 1865 informed one of its Licentiates that he was legally entitled (by the charter) to call himself "Doctor" and add the prefix "Dr." on his doorplate.[1]—I am, etc., "DR." NOT M.D.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

SIR,—In the instructive analysis of the composition of the Council of the College of Surgeons, which is published in the BRITISH MEDICAL JOURNAL of May 30th, a remarkable but humiliating fact becomes evident, namely, that out of twenty-four chosen representatives of the surgical profession there is not a single individual who holds a degree in arts from Oxford or Cambridge. Furthermore, I believe there is not one who has been educated at any of the great public schools. Only two are members of the Athenæum Club, and of these one was elected under Rule 2 for distinction in work other than that connected with surgery.

In these days, when the profession is so largely recruited from the two older Universities, these facts amount almost to an opprobrium on the Council of a Royal College; but they may help to account in a large measure for the extremely narrow nature of its views.

To those who can appreciate it there is some truth in the old maxim:

Ingenuas didicisse fideliter artes
Emollit mores, nec sinit esse feros.

F. R. C. S.

THE FIRST FELLOWSHIP EXAMINATION.

SIR,—As a candidate at the recent First Fellowship Examination, and as a graduate of London University, and one who has had considerable experience of examinations, permit me to thank Professor Waller for the attention he has drawn to the difference between the methods and results of the two examinations as regards the same subjects. That the result of the Fellowship examination can never be predicted is perhaps not so peculiar, for there is always some uncertainty in examinations; but at London University a good man will always get through, and the tests to which he is put are so absolutely fair (though strict), and the examiners so entirely competent, that any element of chance is practically eliminated. But the Fellowship examination is quite otherwise, and without quoting instances farther back than the last examination (though such instances could easily be adduced), three graduates of London at the recent B.Sc. have been rejected at the May examination for the First Fellowship, though one of these graduates obtained the marks qualifying for the University Scholarship in Physiology, and another obtained honours. That a physiologist placed so high in the stiffest physiology examination in Great Britain should be rejected at the Fellowship in Physiology is nothing short of a scandal, for there can be no question here as to whether he knew his work.

And in anatomy, two demonstrators of anatomy at leading medical schools in London were similarly rejected in anatomy, to say nothing of other men well up in their work. And this cannot be wondered at when a candidate is asked in the *vivâ voce* to "criticise the theories accounting for the shape of the stapes"—theories which do not exist except in the brains of the examiners, and are not mentioned even in the first English textbooks. Such questions as these, it is needless to add, are not asked at Burlington House, and yet their examinations are notoriously so stiff as to leave no chance of an unsound man scraping through. While Fellowship examiners ask such questions as these there is of course a premium on being coached in those medical schools where the examiners teach, and in no examination is this better exemplified than in the last First Fellowship, for the hospital which supplies an examiner in anatomy and another in physiology has got six men through out of six, whereas that which can train men to get the gold medal in the M.D. examination for the last four or five years, consecutively, has had three men rejected out of three sent up. Such is the First Fellowship examination, and such are the Fellowship examiners.—I am, etc. GERECHTIKHEIT.

[1] BRITISH MEDICAL JOURNAL, February 7th, 1885.

ABUSE OF THE PROVIDENT PRINCIPLE.

SIR,—When the history of the decline and fall of the medical profession (I use the last word advisedly) comes to be written, it will, I think, be found that want of combination and of combined action was the principal cause which reduced a once noble profession to the practice of quackery, and set its members like so many wolves to prey upon themselves and upon society at large. Quantity is much more represented than it used to be and quality much less. The struggle for existence is so keen that men resort to all kinds of dodges and schemes to keep themselves well advertised, and to "buy" patients from each other. Church and chapel are alike made the medium for the furtherance of professional success, and the means adopted are not always of the most Christian character. Insurance agents as paid canvassers blow the trumpet of their particular idol, and fill their nets with a scrupulous disregard for all and everything but their own ends.

Of professional etiquette there is none, and it is an accepted doctrine with men who ought to know better that the end justifies the means, and the club doctor is in the position of the lucky dog who for the time being is in possession of the bone, but he has got to keep his eye very carefully on it if he wishes to retain it, and he knows not how long he may enjoy his precious morsel. Medical men are openly invited to send in tenders for every miserable little club, and the lowest offer is generally the one to be accepted. This is not the seamy side of practice that I depict; it is the condition of affairs which is more or less to be met with except among those whose class of practice renders them independent of clubs.

Is there a remedy for all this? I am afraid not now. The disease has got too firm a hold to make it hopeful that it will yield to treatment. Combined action at first might have rid the profession of this foul cancer spot, but this we have neglected. The public, seeing how we treat each other, do not hesitate to take us at their own value, and our status declines daily. Whoever brings a deliverance from the present condition should have his name writ in letters of gold.—I am, etc.,

2D. A MONTH.

SIR,—I sincerely hope the subject will not be allowed to drop now that the question has once more been raised. There is not the slightest doubt club doctors have been for years groaning under the burden of injustices imposed upon them by these various societies, and the only way out of the difficulty is through the help of their more fortunate brethren holding higher positions in the profession, and they will surely not refuse to lend a helping hand if they are only asked. The poor club doctor himself is helpless; he is entirely at the mercy of these societies. They make their own rules, fix their own charges, compel the doctor to attend them at any time and at their own convenience, and by a system of boycotting he is forced to accept their terms. Not the least galling part of it is the better class of tradespeople and farmers are mean enough to take advantage of the doctor's helpless condition. I certainly think with "A Graduate," the only remedy is in the hands of those whose posi-

tion in the profession gives them authority to regulate the fees, and to remove this shameful state of affairs.—I am, etc.,

FLEUR-DE-LIS.

THE STAINING OF TUBERCLE BACILLI.

SIR,—Under the above heading there occurs, in the BRITISH MEDICAL JOURNAL of May 30th, a notice of Prof. B. Fraenkel's communication to the *Deutsche med. Wochenschr.* on the subject of my modification of the Ziehl-Neelsen method. Permit me to mention, for the information of anyone who may be interested in the matter, that the *Wochenschrift* of April 30th publishes a reply from Dr. Immerwahr, whose article of March 26th (containing the statement that my method was selected for recent investigations at the Moabit Hospital) was the means of eliciting Professor Fraenkel's note. The *Wochenschrift* of April 30th also contains a short reply from me.—I am, etc.,

Eastbourne. HENRY S. GABBETT.

THE "UNCONTROLLABLE" VOMITING OF PREGNANCY.

SIR,—In an editorial on the above subject in the BRITISH MEDICAL JOURNAL of May 30th (p. 1192) allusion is made to a paper read by me at the Harveian Society in April, and I am stated to have "strenuously advocated the painting of the cervix with a strong solution of iodine." This is not quite correct. I advised that the iodine should be applied to the cervix and to the vaginal end of its canal; and stated that since 1883, when I first adopted the theory that the vomiting of pregnancy was reflexly due to a centre of irritation near the os uteri internum, I had used this method of counter-irritation in every severe case, and that I had not as yet failed to relieve the vomiting immediately. A few cases have needed one or two repetitions of the application at the end of from five to fifteen days, when the effect of the counter-irritation had worn away, but the relief then became permanent.

In the paper referred to I argued that a prompt use of this remedy in severe cases would prevent the occurrence of the so-called "uncontrollable" or "pernicious" type of the disease, which differs only in degree and not in kind from the milder forms. Many cases, "uncontrollable" when treated by drugs, local application of cocaine, etc., have yielded to this counter-irritation.

I have taught this method for some years at Charing Cross Hospital, and students have told me how useful it has proved to them afterwards in private practice, and I trust that others may now give it a trial, for I believe it to be perfectly safe, easy, and certain. Hitherto I have found that a solution of iodine made of equal parts of iodine, iodide of potassium, spirits of wine, and water gives the surest results.—I am, etc.,

Manchester Square, W. AMAND ROUTH, M.D.

EXPERIMENTS IN FUMIGATION.

SIR,—The attempts which have been made during the recent recess to "purify" the House of Commons and a portion of the Law Courts afford interesting examples of the so-called "disinfection" of premises reputed to be infected, carried out upon a fairly large scale. With the exception of those strictly scientific branches of hygiene, which, for obvious reasons, are beyond the grasp of the popular mind, there are few, if any, in regard to which more misconception exists, and more absurd generalisations are commonly accepted than in this very subject of disinfection. It is assumed that "disinfection" has been accomplished when gases or vapours of some kind have been casually passed into or produced in a room or building, or even when some powder or liquid feebly impregnated with some antiseptic substance has been thrown about in a haphazard sort of manner. The public have been somewhat pompously informed that "the House of Commons, for the first time in its history, has been thoroughly and scientifically disinfected," but it seems to have been admitted that the primary object of the operations here and in the Courts, was to calm the fears of members of Parliament and of eminent lawyers, and to convince "non-scientific people" that everything possible had been done "to expel the germ of influenza." The First Commissioner of Works, who appears to have played the part of high priest in connection with the curious rites performed in the House of Commons, informed Mr. Macartney, who questioned him on the subject, that the House was, "for the present, at all events, probably the best cleansed and purified house in London." It was natural that the members should receive with "laughter and cheers" and much satisfaction the First Commissioner's statement that after fumigation with sulphur the house and its precincts had been "sprinkled with eucalyptazone," while the libraries had been "purified with a new disinfectant of marvellous power called "thiocamf." These words must have produced a very soothing effect, similar no doubt to that experienced by the old lady who derived so much comfort from "that blessed word Mesopotamia." After the House had risen for the holidays, we are told by the *Daily Chronicle* that "the building was handed over to the experts, who had undertaken to annihilate the influenza microbes." That which weighed most heavily on their minds was how to avoid doing injury to the gilt decorations, and to the bindings of the books in the libraries, more especially as "the authorities declined to run any risk," and as the precious volumes could not be exposed to the possibility of any injury. It was therefore resolved, presumably by the "experts," that "some other agent than sulphur must be found," inasmuch as the "fumes of sulphur" (that is, sulphur dioxide) are injurious to the bindings and gilt letterings of books, and to other articles. Thereupon the substance barbarously named "thiocamf" was hit upon by the "experts." This is described as "a liquid combination of sulphur dioxide, camphor, and other powerful disinfectants, which gives off large volumes of effective germicides by mere exposure to the air of a room, or more rapidly when warmed," and is stated, furthermore, to have been "devised" by no less a person than the Professor of Chemistry in the University of Dublin. I hope that the distinguished chemist who fills this position is not also to be credited with "devising" such an atrocity in nomenclature as the word "thiocamf." The carpets, curtains, cushions, and other furniture having been removed from the house itself, large numbers of dishes containing the "thiocamf," together with sulphur candles, were placed in the chambers below the House, "and the vapour and gasses (*sic*) gradually rose through the perforated iron floor and seats till the chamber was filled with a horrible mixture." These proceedings remind one of those of Master Guy Fawkes, whose proposed method of disinfection, however, would have been far more effective and equally scientific.

In the result the House of Commons has had a good cleansing, and the sulphur fumigation, while it may not have troubled the microbes much, and certainly only those which were freely exposed, supposing them to have been present at all, and very probably did not grievously affect their spores, will have done no special harm, and may have done some good, if only by rendering it necessary to ventilate the place by "powerful gusts of air" from the balmy region of the Thames, driven in "by means of fans on the Embankment." Fumigation by sulphurous acid, unaccompanied by plenty of moisture, is well known to be one of the feeblest forms of purification, more especially in places which are not easily susceptible of proper preparation, and in which, accordingly, the unavoidable leakage is enormous. While the proceedings described may have been useful especially in calming the fears of British legislators, it is highly desirable that the principles on which they were based should not be regarded as capable of universal application whenever and wherever real and effective disinfection, after infectious disease, becomes necessary. The misuse of the term "disinfectant" and "disinfection" produces a dangerous state of false security, about which it is well to sound a note of warning.—I am, etc.,

A CHEMIST.

THE TRAINING AND TEACHING OF NURSES.

SIR,—There seems to be some misconception as to the terms in which the Board of Trade refused the application of the Royal British Nurses' Association. Will you be good enough to publish the exact text in the BRITISH MEDICAL JOURNAL?—I am, etc.,

Cavendish Square, W. A. ERNEST SANSOM, M.D.

Board of Trade, May 25th, 1891. SIR,—In reply to your letter of the 21st inst., I am directed by Sir Michael Hicks-Beach to say that, as the Board of Trade have declined to accede to the application of the Royal

British Nurses' Association "to register as a limited company without the use of the word 'Limited,'" it would appear to be unnecessary for him to see a deputation from your Committee on the subject. As desired, I enclose a copy of the communication sent to Mr. F. S. Randolph on the 6th inst.; also, if your Committee still think an interview with Sir Michael Hicks-Beach necessary, perhaps you will kindly let me know.—I am, yours faithfully, WALTER J. HOWELL. J. G. Wainwright, Esq., St. Thomas's Hospital.

(Copy.)

Board of Trade (Railway Department), London, S.W., May 6th, 1891. SIR,—I am directed by the Board of Trade to say that they have carefully considered the application for a licence under Section 23 of the Companies Act, 1867, authorising the Royal British Nurses' Association to register as a limited company without the use of the word "Limited." The Board of Trade have received a large number of communications from bodies of persons whose interest in hospital nursing is unquestionable, and whose experience entitles them to speak with authority, strongly objecting to the issue of a licence. After careful consideration of the objects of the Association and of the representations made in opposition thereto, the Board of Trade are unable to satisfy themselves that the means which the Association propose to adopt are either adequate to carry out their objects satisfactorily, or so free from objection as to warrant the Board of Trade in the issue of a licence, and, under these circumstances, they are unable to accede to the application. I am, however, to point out that this refusal in no way precludes the Association from registration as an ordinary joint stock company, under which registration they would enjoy the same powers and be subject to no greater responsibilities than would be the case if they were registered without the word "Limited."—I am, etc., HENRY G. CALCRAFT. F. S. Randolph, Esq., 3, Old Serjeant's Inn, W.C.

HOSPITAL SUNDAY FUND.

SIR,—I am anxious, by your courtesy, to remind the public that next Sunday, June 7th, is the day appointed for this year's collection on behalf of the Hospital Sunday Fund.

Hospital Sunday gives everyone an opportunity of making some contribution in aid of those noble institutions which do so much for the relief of human pain and suffering.

Nearly 200 hospitals, convalescent homes, and dispensaries participate in the distribution of this fund, and at least £100,000 is very really needed to meet the requirements of the next twelve months.

In consequence of the prevalence of influenza there has lately been a considerable strain upon our hospitals and dispensaries; may I therefore plead most earnestly for a generous response this year.

Those who may be absent from public worship next Sunday will, I hope, forward their contributions either to some local collection or direct to me here.

Cheques or postal orders should be crossed "Bank of England."—I am, etc., JOSEPH SAVORY,

The Mansion House, London. Lord Mayor.

NAVAL AND MILITARY MEDICAL SERVICES.

MADRAS MEDICAL SERVICE.

A MADRAS CORRESPONDENT informs us, with regard to a notice that appeared in the BRITISH MEDICAL JOURNAL of April 11th, that the fourth deputy surgeon-general appointment, which had been practically abolished, has been restored to the service. This is satisfactory, and the service is thankful to the Government of Madras for this act of justice. It is also, we are given to understand, determined to establish another administrative officer of the same rank for service in Burmah, making five in all.

When the service was reorganised in 1880 a distinct promise was made that the office of Surgeon-General—or, as he is now officially called, Principal Medical Officer—should be held alternately by an officer of the Medical Staff and the Medical Service of the Madras Army. This promise has not been kept. This breach of faith has caused extreme dissatisfaction among the excluded officers. Justly, as we think, they point to the high position taken by the medical officers of Her Majesty's Indian Army both in the London and Netley examinations, and are aggrieved, not only at the breach of faith, but at the slight it more than implies. We unhesitatingly say that the action of the Government of Madras in this matter is as impolitic as it is unjust. There are three deputy surgeons-general of the Madras Service now serving in Burmah, yet when an administrative medical officer was required for the punitive force sent to Manipur, a medical officer of the Medical Staff was sent from Madras for this duty. This certainly needs explanation, and we are not surprised that the *amour propre* of the Madras Service should be wounded by this—at all events, on the surface—additional slight on the medical officers of the Madras army.

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

WANTED, an exchange with a Surgeon home April, 1889, or September to December, 1889. Advertiser goes abroad some time next year.—Address Exchange 2,024, BRITISH MEDICAL JOURNAL OFFICE, 429, Strand.

Wanted, by a Surgeon likely to go to India next trooping season, an exchange with an Officer of similar rank who has come home lately; liberal terms.—Apply "F. D. C.," 52, Manchester Street, Manchester Square.

THE NAVY.

THE following appointments have been made at the Admiralty:—WILLIAM E. ST. L. FINNY, to be Surgeon and Agent at Baldoyle, Houth, and Sutton, May 21st; CHARLES A. MACAULEY, Staff-Surgeon to the *Thunderer*, May 22nd; EDWARD W. LUTHER, Staff-Surgeon to the *Belleisle*, May 22nd; HENRY T. COX, Staff-Surgeon to the *Malabar*, June 8th; COLIN M'CALLUM, M.B., to be Surgeon and Agent at Elie, May 22nd; JOHN JOHNSTONE WILSON, M.B., to be Surgeon and Agent at Anstruther, May 22nd; ROBERT F. YEO, Staff-Surgeon to the *Tamar*, May 27th; EDWARD FERGUSON, Staff-Surgeon to the *Swiftsure*, June 8th; MATTHEW F. RYAN, Fleet-Surgeon, and EDGAR R. DIMSEY, Surgeon, to the *Boadicea*, when recommissioned, June 6th; JEREMIAH SUGRUE, Surgeon to the *Fearless*, when recommissioned, June 6th.

Deputy Inspector-General CHARLES HENRY FULLER died at Plympton on May 25th, at the age of 90. He entered the service as Surgeon January 11th, 1826; was made Fleet-Surgeon July 22nd, 1834; and Deputy Inspector-General January 23rd, 1863. He retired January 20th, 1863.

THE MEDICAL STAFF.

SURGEON HENRY MITCHELL, from the Grenadier Guards, is appointed Surgeon to the 2nd Life Guards, June 3rd. He joined the Medical Staff August 2nd, 1884, and was appointed to the Battalion of Grenadier Guards May 30th, 1888, from which he is now transferred. In 1885 he served in the Soudan campaign, receiving the medal with clasp and the Khedive's bronze star.

Surgeon-Major A. L. BROWNE, M.D., serving in the Bombay command, has leave of absence for six months on private affairs.

Surgeon A. A. PECHELL, M.B., has passed the examination in Hindustani by the lower standard.

Surgeon-Major R. D. HODSON, serving in the Bombay command, is appointed to perform the medical duties of Lawrence School and Civil Establishment, Mount Aboo.

Surgeon-Major H. T. BROWN, serving in the Bengal command, is appointed to the officiating administrative medical charge of the Peshawur District, *vice* Brigade-Surgeon R. Harvey, M.D., I.M.S., appointed principal medical officer, Miranzai Field Force.

The undermentioned officers, serving in the Bengal command, have leave of absence as specified: Deputy Surgeon-General S. A. LITHGOW, C.B., D.S.O., M.D., for four months on private affairs; Surgeon-Major C. WHITE, for six months on private affairs; Surgeon G. W. BRAZIER-CREAGH, for six months on medical certificate.

ARMY MEDICAL RESERVE.

SURGEON EDWARD HEAD MOORE, Falmouth Volunteer Division Royal Engineers, is appointed Surgeon, ranking as Captain, May 30th.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR H. J. HAZLETT, Madras Establishment, is promoted to be Brigade-Surgeon from March 7th. He dates as Assistant Surgeon from April 1st, 1867.

Surgeon S. H. HENDERSON, M.B., Bengal Establishment, in medical charge of temporary gaols on North Lushai frontier, is posted on special duty to Cachar District for employment under the deputy commissioner of that district.

Surgeon-Major H. ARMSTRONG, Madras Establishment, is appointed to the medical charge of the 3rd Light Cavalry.

Surgeon A. F. FERGUSON, M.B., Bombay Establishment, is appointed to act as Deputy Sanitary Commissioner, Central Registration District, during the absence on leave of Surgeon-Major A. W. F. Street.

Surgeon L. F. CHILDE, M.B., Bombay Establishment, is directed to act as Chemical Analyser to Government, in addition to his own duties, during the absence of Surgeon T. D. C. Barry on privilege leave.

Surgeon C. F. FEARNSIDE, Madras Establishment, has passed the examination in Hindustani by the lower standard.

Surgeon-Major W. MCCONAGHY, M.D., Bombay Establishment, is appointed Civil Surgeon of Poona, *vice* Brigade-Surgeon D. E. Hughes.

Surgeon-Major H. MCCALMAN, Bombay Establishment, is appointed Civil Surgeon of Dharwar, *vice* Surgeon-Major McConaghy.

Brigade-Surgeon D. E. HUGHES, M.D., Bombay Establishment, is appointed Deputy Surgeon-General with temporary rank during the absence of Deputy Surgeon-General P. S. Turnbull, M.D., Sind District.

Surgeon-Major A. K. STEWART, Bombay Establishment, is permitted to return to duty.

Surgeon T. W. SHAW, Bombay Establishment, officiating in medical charge of the 12th Native Infantry, is appointed to officiate in medical charge of the 30th Native Infantry (3rd Belooch Battalion) during the absence on leave of Surgeon H. D. Masani.

The services of Surgeon D. M. DAVIDSON, Bengal Establishment, are placed temporarily at the disposal of the Punjab Government.

The services of Surgeon W. R. CLARKE, Bengal Establishment, on special

duty with Revenue and Agricultural Department, are placed at the disposal of the Home Department.

The services of Surgeon E. R. W. C. CARROLL, Bengal Establishment, are placed at the disposal of the Military Department.

Surgeon-Major C. W. CALTHROP, M.D., Bengal Establishment, is appointed to officiate as Medical Storekeeper at the Residency.

The undermentioned officers have leave of absence as specified: Surgeon J. SCOTT, Madras Establishment, medical officer 6th Infantry Hyderabad Contingent, for 250 days, on private affairs; Surgeon-Major G. H. BULL, M.D., Bombay Establishment, 3rd Bombay Cavalry, for three months, on private affairs; Surgeon-Major D. SINCLAIR, Madras Establishment, for two years, on private affairs; Surgeon-Major A. M. CROFTS, Bengal Establishment, medical officer to the Maharajah of Gwalior, and Residency Surgeon, privilege leave for three months; Surgeon-Major H. HAMILTON, M.D., Bengal Establishment, medical officer 10th Native Infantry, for seven months, on medical certificate; Surgeon-Major W. A. C. ROE, Bengal Establishment, civil surgeon Mooltan, for six months, on medical certificate; Surgeon-Major E. M. DAMLA, Madras Establishment, medical officer 4th Infantry Hyderabad Contingent, for six months, on medical certificate; Surgeon-Major S. H. BROWNE, Bengal Establishment, Principal of Lahore Medical College, special leave for six months from May 1st; Surgeon G. S. THOMSON, Bombay Establishment, for six months, on medical certificate.

Surgeon J. JACKSON, Bombay Establishment, on general duty in the Bombay district, is appointed to officiate in medical charge of the 25th Native Infantry (3rd Battalion Rifle Regiment), *vice* Surgeon A. V. Anderson, detailed on field service.

Surgeons A. V. ANDERSON, A. W. F. STREET, and J. B. JAMESON, all of the Bombay Establishment, are detailed for service with the Miranzai Expedition.

Surgeon F. F. PERRY, Bengal Establishment, Professor of Surgery Lahore Medical College, is appointed to officiate as Principal of that institution.

The services of Surgeon J. MURRAY, Bengal Establishment, are placed at the disposal of the Punjab Government as Professor of Medicine and Botany, Lahore Medical College.

The Indian Nursing Service finds a place for the first time in the current issue of the Indian *Army List* following immediately after the Army Medical Staff. The list of names comprises three lady superintendents, five acting superintendents, and twenty-five nursing sisters. The lady superintendents are stationed at Rawul Pindi, Bangalore, and Poona.

THE VOLUNTEERS.

SURGEON and SURGEON-MAJOR (ranking as Major) A. R. TICEHURST, 2nd Cinque Ports Artillery (Eastern Division Royal Artillery) has resigned his commission, with permission to retain his rank and uniform. His appointment as Surgeon dates from May 26th, 1877; that of Surgeon-Major February 1st, 1889.

Acting-Surgeon C. ASHENDEN, of the same corps, has also resigned his appointment, which was dated April 10th, 1875.

The under-mentioned gentlemen are appointed Acting-Surgeons to the corps specified, all to date May 30th: Mr. DAVID DURRAN, M.B., 1st Caithness Artillery; Mr. WILLIAM HENRY BREFFIT BROOK, 1st Volunteer Battalion Lincolnshire Regiment (late the 1st Lincoln); Mr. LANCELOT WILLIAM ANDREWS, M.B., 2nd Volunteer Battalion Lincolnshire Regiment (late the 2nd Lincoln).

Surgeon S. McC. BOYD, Manchester Division Volunteer Medical Staff Corps, has resigned his commission, dated October 26th, 1887.

Surgeon C. J. ALLAN, 6th Volunteer Battalion Royal Scots (late the 2nd Midlothian), is granted the rank of Surgeon-Major (ranking as Major), May 30th.

Surgeon H. J. ROBERTS, 2nd Volunteer Battalion Royal Welsh Fusiliers (late the 1st Flint and Carnarvon), is appointed Captain, May 20th. He joined the corps as Surgeon, March 15th, 1890.

Surgeon D. NEWMAN, M.B., 4th Volunteer Battalion Scottish Rifles (late the 4th Lancashire), has resigned his commission, which bore date February 1st, 1889.

Surgeon J. PRINCE, 2nd Volunteer Battalion Middlesex Regiment (late the 8th Middlesex), has resigned his commission, which was dated February 25th, 1885; he is granted the honorary rank of Surgeon-Major, and is permitted to retain his rank and uniform.

HONOURS FOR THE NAVAL MEDICAL SERVICE.

EX UNO DISCE OMNES writes: The list of birthday honours has appeared, marked, as we have lately been accustomed to find it, by the total absence of any member of the medical branch of the Naval Service. Is it not time that notice should be called to this extraordinary circumstance, and where can be found a channel more appropriate than the organ of the Association whose powerful voice has always been raised when wrong calls for redress?

MEDICO-LEGAL AND MEDICO-ETHICAL.

SENIOR PRACTITIONERS AND JUNIOR CONSULTANTS.

F. H. C.—Personally mortifying to a young aspiring practitioner as are no doubt the persistent refusals to meet him in consultation for the reason that the elder practitioner was a medical man before our correspondent was born, not only are such incidents of frequent occurrence in medical life, but, as we venture to think, naturally so, though somewhat counter to the ethical principle laid down as a guide. We need scarcely observe, after the prominent notice repeatedly given as to the limited space at our disposal for such questions, that the length of our correspondent's communication precludes its insertion; for a like reason, moreover, we must, in response to his request for advice, refer him to the *Ethical Code*, in chap. ii. sect. 4, rules 6 and 10, and sect. 5, rule 9, in which he will find all the information necessary for a due understanding of the relative rights and duties of patient and medical attendant.

OBITUARY.

WILLIAM EDWARD STEAVENSON, M.D.CANTAB., M.R.C.P.

WE deeply regret to have to record the death of Dr. W. E. Steavenson from influenza and bronchitis on June 1st at the early age of 41. He was the son of the late Rev. Joseph Steavenson, vicar of All Saints, Newmarket, and was educated at the Ipswich School. In 1869 he commenced his medical studies at St. Bartholomew's Hospital, and in 1873 was appointed house-surgeon to Mr. Luther Holden. Foreseeing the necessity, now so acutely felt and generally admitted, of obtaining a degree in medicine, he decided at the close of his year of office to go to Cambridge, and accordingly entered himself as an undergraduate at Downing College. Though a natural science prizeman of his college, he did not take a B.A. degree, preferring to wait till he was of sufficient standing to take the M.B. degree.

In 1878 he returned to St. Bartholomew's as house-physician to the late Dr. Patrick Black, and subsequently held office for over two years at the Hospital for Sick Children, Great Ormond Street, as house-surgeon and house-physician. In 1883 he again took office at St. Bartholomew's as casualty physician, and during this period was appointed physician to the newly created electrical department at that institution, a post which he continued to fill to the day of his death. He was also physician to the Alexandra Hospital for Diseases of the Hip, to the Grosvenor Hospital for Women and Children, and to the St. George's and St. James's Dispensary. In 1882 he took the D.P.H. of Cambridge, in 1883 the M.R.C.P., and in 1884 the degree of M.D. at his old university.

From childhood the victim of spasmodic asthma, and the subject of a certain degree of emphysema as a result, Dr. Steavenson never enjoyed robust health, but he never, if he could possibly help it, allowed the state of his health to interfere with the punctual and efficient discharge of his professional duties, and many a time he was to be seen at the hospital when his asthma was quite bad enough to have made any ordinary person shirk work.

His indomitable courage in this respect gained for him the admiration of all who were brought into contact with him, whilst his gentleness of manner and ready sympathy secured the lasting affection of those who were privileged to know him intimately. In all questions of medical politics he took the deepest interest, and was always prepared to state and uphold his views even when in a distinct minority. Nowhere will he be more missed than in the Cambridge Medical Graduates Club, of which he was one of the original secretaries, and the success of which has been largely due to his persevering efforts.

As a practitioner he had already made his mark in the special line he had taken up, and was held in high esteem by a large number of medical men to whom he was personally unknown, but who had found out that in submitting their patients for his advice or treatment, they were dealing with a man who was a master of his subject. His death has left a gap in this respect which cannot immediatly be filled.

Dr. Steavenson wrote several papers, most of which have been published either in the BRITISH MEDICAL JOURNAL or in the *St. Bartholomew's Hospital Reports*, on subjects connected with the electrical treatment of disease, but the two works which are best known and which are certain of a tolerably lasting popularity, are his little book on *Electrolysis in Surgery*, which came out last year, an excellent bit of work of its kind, and his M.B. thesis on Spasmodic Asthma, a subject, unfortunately, on which he was only too well qualified to write. It is safe to say that no future writer on this subject will neglect making frequent reference to it. His *Treatment of Uterine Fibroids by Electrolysis* is also well known. At the Brighton meeting of the British Medical Association he read an important communication on "The Employment of Electricity in the Treatment of Diseases of the Urinary Organs." He also took an active part in the frequent controversies on medical electricity which have appeared in our pages. His energy in practice, teaching, and literature was remarkable when we consider that he never enjoyed robust health. He married a grand-daughter of Benjamin Travers, the distin-

guished surgeon to St. Thomas's Hospital. Dr. Steavenson leaves a widow and one child. The funeral will take place this day (Friday) at 1.30 P.M., at the Highgate Cemetery.

HENRY MONRO, M.D., F.R.C.P.

DR. HENRY MONRO, who died at the age of 74, on May 18th was the second son of Dr. Edward Thomas Monro, and was born in London, on January 10th, 1817. He was the fifth in hereditary succession who practised in London as a psychological physician. He was the grandson of Dr. Thomas Monro, who was a great friend and patron of artists, and especially of Turner.

He was educated at Harrow and Oriel College, Oxford. He entered as a student at St. Bartholomew's Hospital in the year 1840, and married, in 1842, the fourth daughter of the late Sir William Russell, Bart., of Charlton Park, Gloucestershire.

He took his M.B. degree at Oxford in 1844, but did not proceed to M.D. till 1863. In 1848 he was elected a Fellow of the Royal College of Physicians, and at different times filled the offices of Councillor and Censor. Dr. Monro devoted his attention exclusively to the study of the diseases of the insane, and was, up to the time of his death, one of the consulting physicians to St. Luke's Hospital. His main contributions to professional literature dealt with the subject of insanity, and in 1864 he was elected President of the Medico-Psychological Association. In 1850 he published anonymously (but he subsequently acknowledged its authorship) a most admirable essay on Stammering, which will still be read with interest by all who are interested in the subject; his plan of treatment was certainly in his own case completely successful. Dr. Monro was a most regular attendant at the meetings of the College of Physicians, where his constant geniality and courteous manner made him deservedly popular. He was a man of the highest integrity of character, but being of a somewhat retiring disposition was not so well known in the profession as he should have been. Dr. Monro was an artist of no mean capacity, and some years ago he presented a portrait of himself in oils, by his own hand, to the College of Physicians, and also portraits of his father, grandfather, great-grandfather, and great-great-grandfather, some also by his own hand.

He was an ardent admirer and student of art, and had a wide acquaintance with the great collections. He took deep interest in Scottish history, and was proud of the fact that he was a member of the clan of the Monros of Perthshire, and that his ancestors had fought at Flodden.

He was a man of deep religious sentiment, as is shown by the following words spoken by the Rev. Page Roberts, at St. Peter's, Vere Street, on the Sunday following his death:—"The life of Dr. Monro was one of singular purity, of winning graciousness, and of unfeigned religion. He had few of the doubts which in these days distress so many whose studies, like his, force them to the methods of exact science, and who are impelled to look for an evidence in the world of spirit, like that which they require in that of physics and mathematics—'ce gôut de sûreté géométrique,' as Fénelon says. He was an undoubted believer in the Christian faith; but he had a liberal, considerate, and sympathetic sentiment towards those less certain than himself. It may be impossible for some of us to be as untroubled by doubt as he; but it is possible for us to copy his purity of heart, his refinement and gracious accessibility, and his spirit of devotion."

He was attacked by the prevailing epidemic a few days before Whitsuntide; pleurisy supervened and speedily carried him off. He leaves a widow and family, but none of his sons have entered the profession.

FORDYCE BARKER, M.D.,

New York.

THE announcement by telegram of the death of Dr. Fordyce Barker will have caused widespread and keen regret. To say that America has lost one of her most illustrious physicians and distinguished citizens is to express but very imperfectly the extent of the calamity. His position as a man honoured and beloved in England and throughout Europe was altogether exceptional. For many years he was a regular visitor to our shores. Everyone who had once seen his handsome face, beaming with bright intelligence and kindness of heart, longed to see him again. At the annual meetings of our Association he was often present and always welcome. This feeling found cordial expression in the titular honours showered upon him by our societies, colleges, and universities. It is a long list to draw up. Not one who looks over our academical rolls but will recognise his name with pride and affection.

We cannot now describe all his work. His book on *Puerperal Fever* charms by its style, whilst it instructs by the richness of experience and the soundness of its reasoning. He was, we believe, connected with Dr. Fordyce, who holds so prominent a place in the history of English medicine. The portrait of Dr. Fordyce was treasured in his house. All who were acquainted with Dr. Barker were familiar with his peculiar utterance—a hoarse whisper, but still very distinct. It was the result of paralysis of the vocal cords. This defect in no way impaired his power as a speaker or lecturer. His classes at New York were well attended. He was a popular and effective teacher.

He leaves a widow, who traces her descent from Pitt, our great statesman. Her personal qualities, inherited and reflected, endeared her to many friends. He leaves also an only son, who holds an eminent position in the States.

JOHN HICKMAN HIRON, M.R.C.S., L.S.A.

MR. JOHN HICKMAN HIRON, of Studley, Warwickshire, near Redditch, died from pneumonia, after a short illness, at his residence on Whit Monday, aged 45. He was the second son of the late John Franklin Hiron, Esq., of Chipping Camden. He received his professional education at the old Sydenham College and General Hospital, Birmingham, and finished his studies at St. Bartholomew's Hospital, London. He took the qualifications of M.R.C.S.Eng. and L.S.A.Lond, in 1869; shortly afterwards he settled in Studley. He was medical officer and public vaccinator for the Studley district of the Alcester Union, and certifying factory surgeon.

Mr. Hiron was respected and esteemed by a wide circle of patients and friends. He leaves a widow and five children. The interment took place in the churchyard at Studley on May 21st amid general expressions of regard and sympathy from the public, and by the public bodies with which he was connected, who were officially represented at the funeral.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

AT a Convocation held on June 2nd, a grant of £7,000 was passed after considerable discussion to provide the necessary buildings for the teaching of human anatomy. After an attempt by Sir W. Anson to adjourn the question for a time had been defeated, the proposal to grant the required sum was supported by Dr. Church and Dr. Theodore Williams on behalf of the non-resident members of the University, and by the President of Corpus College for the resident members. The proposal was adopted in Convocation by a large majority; £2,000 was also voted to provide additional accommodation for the Professor of Comparative Anatomy, chiefly on account of the increased number of medical students requiring instruction in this subject.

A further grant was passed to provide extra buildings in the Geological Department, and also for the extension of the buildings devoted to the Pitt-Rivers Anthropological Collection.

UNIVERSITY OF CAMBRIDGE.

NAPLES ZOOLOGICAL STATION.—Mr. Newstead, scholar of Christ's, and Mr. MacBride, scholar of St. John's, have been nominated by the University to pursue research in zoology at the Naples Zoological Station, under Dr. Dohrn.

THESIS.—We should have mentioned that the thesis of Mr. E. J. D. Mitchell, admitted to the degree of M.B. at the last Congregation, was on "The Symptoms and Treatment of Acute Intussusception in Children."

HONORARY DEGREES.—Among the recipients of honorary degrees, to be conferred on June 16th, Lord Walsingham, F.R.S., High Steward-elect; the Marquis of Dufferin and Ava; Sir Alfred Lyall, Rede Lecturer; Dr. Elias Metchnikoff, Director of the Pasteur Institute in Paris; Sir Archi-

bald Geikie, F.R.S.; and Professor W. H. Flower, F.R.S., Director of the British Natural History Museum.

UNIVERSITY FEES.—Sir George Humphry, Dr. A. Macalister, Dr. Lea, and Professor Newton are appointed members of a syndicate to inquire into the whole question of the fees now payable by University students for instruction, degrees, etc.

MUSEUMS ASSOCIATION.—The use of the new buildings for anatomy and physiology has been granted to the Museums Association for their annual meeting in July.

CONGRESS OF HYGIENE.—The Vice-Chancellor will receive, in the Senate House, on Saturday, August 15th, delegates for the Seventh International Congress of Hygiene and Demography, and it is understood that arrangements are in contemplation for their further entertainment in the University.

MARINE BIOLOGICAL ASSOCIATION.—Dr. Foster (Professor of Physiology) has been reappointed by the University a member of the Council of the Marine Biological Association.

DOCTOR IN SCIENCE.—William Hicks, F.R.S., M.A., of St. John's College, has been approved for the degree of Doctor in Science.

VICTORIA UNIVERSITY, MANCHESTER.

NEW REGULATIONS AS TO MEDICAL DEGREES.—The University Court of Victoria University, at its last meeting, approved of some very important alterations regarding graduation in medicine. Amongst the most important of these are that in future in the "entrance examination in arts" the number of subjects which candidates were required to select from the prescribed list be reduced from two to one. With regard to the first examination for the degrees of M.B. and Ch.B., it was agreed that the above examination be divided into two parts—part 1 chemistry and physics; part 2 biology. They further recommended that candidates be allowed to pass the two parts separately, and that separate lists, containing the names in alphabetical order, of candidates who had satisfied the examiners should be published for the two parts. And, lastly, a radical change has been made in the manner of awarding the professional honours in connection with examinations for the degrees of M.B. and Ch.B. The following is the scheme adopted by the Court:

(*a*) That honours be awarded in connection with examinations for degrees in medicine and surgery; (*b*) that in awarding honours in medicine and surgery, account be taken only of the second and final examinations for the degrees of M.B. and Ch.B.; (*c*) that no candidate be eligible for an honours degree who has been rejected in either of these examinations; (*d*) that in future candidates who shall have satisfied the examiners in the final examination for the degrees of M.B. and Ch.B. be classed as follows:—1. Those awarded first class honours: 2. those awarded second class honours: 3. those who have satisfied the examiners, the names being in alphabetical order in each case. That in the event of the above recommendations being adopted (*e*) the names of candidates who have satisfied the examiners in the second examination for the degrees of M.B. and Ch.B. be no longer published in two divisions, but simply in alphabetical order; (*f*) that distinction in special subjects be no longer awarded.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

CENSUS POPULATIONS OF METROPOLITAN SANITARY DISTRICTS.

As the estimates of the population of the various sanitary areas of London have been the subject of correspondence from time to time in our columns, we are glad to be enabled to give the precise numbers as enumerated at the census in April last, which will be especially useful to the medical officers of health of the metropolis. This information will set at rest all doubts entertained as to the approximate accuracy of the estimated figures hitherto in use. As the corresponding figures for the previous census in 1881 will doubtless be of interest for comparative purposes, they are also given below.

Sanitary Areas.	Population 1881.	Population 1891.
LONDON	3,815,544	4,211,056
West Districts.		
Paddington	107,058	117,838
Kensington	163,151	166,321
Hammersmith	71,939	97,237
Fulham	42,900	91,640
Chelsea	88,128	96,272
St. George Hanover Square	89,573	78,362
Westminster	60,175	55,760
St. James Westminster	29,941	24,993
North Districts.		
Marylebone	154,910	142,381
Hampstead	45,452	68,425
St. Pancras	236,258	234,437
Islington	282,865	319,433
Hackney	186,462	229,531
Central Districts.		
St. Giles	45,382	39,778
St. Martin-in-the-Fields	17,508	14,574
Strand	32,682	25,201
Holborn	35,910	33,248
Clerkenwell	69,076	65,885
St. Luke's	46,849	42,411
London City	51,439	38,345
East Districts.		
Shoreditch	126,591	124,009
Bethnal Green	126,961	129,134
Whitechapel	71,363	74,462
St. George in-the-East	47,157	45,546
Stepney	58,543	57,599
Mile End Old Town	105,613	107,565
Poplar	156,510	166,697
South Districts.		
St. Saviour, Southwark	28,662	27,162
St. George, Southwark	58,652	59,712
Newington	107,850	115,663
St. Olave, Southwark	11,956	12,694
Bermondsey	86,652	84,688
Rotherhithe	36,024	39,071
Lambeth	253,699	275,202
Battersea	107,262	150,458
Wandsworth	103,172	156,931
Camberwell	186,593	235,312
Greenwich	131,233	165,417
Lewisham*	45,142	65,112
Woolwich	36,065	40,848
Plumstead	71,566	95,699

* Excluding Penge and Mottingham.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, 6,352 births and 5,568 deaths were registered during the week ending Saturday, May 30th. The annual rate of mortality in these towns, which had been 32.0 and 30.5 per 1,000 in the preceding two weeks, rose again to 30.9 during the week under notice. The rates in the several towns ranged from 16.5 in Norwich, 19.0 in Hull, 21.7 in Brighton, and 21.5 in Portsmouth to 39.9 in Oldham, 43.6 in Huddersfield, 44.1 in Manchester, and 45.9 in Salford. The high rates in the last-mentioned towns were due to the fatal prevalence of influenza. In the twenty-seven provincial towns the mean death-rate was 32.6 per 1,000, and exceeded by 3.8 the rate recorded in London, which was 28.8 per 1,000. The 5,568 deaths registered during the week under notice in the twenty-eight towns included 357 which were referred to the principal zymotic diseases, against numbers declining from 461 to 361 in the preceding four weeks; of these, 140 resulted from whooping-cough, 94 from measles, 42 from diarrhœa, 38 from diphtheria, 22 from "fever" (principally enteric), 20 from scarlet fever, and one from small-pox. These 357 deaths were equal to an annual rate of 2.0 per 1,000; in London the zymotic rate was 2.2, while it averaged 1.8 per 1,000 in the twenty-seven provincial towns. No deaths resulted from any of the zymotic diseases in Norwich or Wolverhampton; in the other towns the rates ranged from 0.5 in Birkenhead and 0.6 in Newcastle-upon-Tyne to 2.6 in Leicester, 2.9 in Salford, 3.2 in Manchester, and 3.9 in Nottingham. Measles caused the highest proportional fatality in Hull, Portsmouth, Preston, and Nottingham; scarlet fever in Halifax; and whooping-cough in Liverpool, Leicester, Plymouth, and Manchester. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. Of the 38 deaths from diphtheria in these towns, 27 occurred in London, 3 in Salford, 2 in Manchester, and 2 in Sheffield. A fatal case of small-pox was registered in London, but not one in any of the twenty-seven provincial towns; 25 small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday, May 30th. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on the same date was 916, against 924 and 927 at the end of the preceding two weeks; 88 new cases were admitted during the week, against 118 and 66 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 7.3 per 1,000, and was more than double the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, May 30th, 908 births and 607 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 24.1 and 23.8 per 1,000 in the preceding two weeks, further declined to 23.3 during the week under notice, and was 7.6 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Leith and Greenock, and the highest in Glasgow and Paisley. The 607 deaths registered in these towns included 67 which were referred to the principal zymotic diseases, equal to an annual rate of 2.6 per 1,000, which exceeded by 0.6 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Dundee, Glasgow, and Paisley. The 296 deaths registered in Glasgow included 15 from measles, 10 from whooping-cough, 5 from scarlet fever, 5 from "fever," and 3 from diphtheria; and 13 fatal cases of measles were recorded in Paisley. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 6.6 per 1,000, against 7.3 in London.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Monday, June 1st.

County Medical Officers.—The LORD ADVOCATE, in reply to Dr. CAMERON, said his attention had been called by the question to the appointment by the County Council of Ross-shire of a medical officer for the county without the usual stipulation that he should not be allowed to carry on private practice. The Board of Supervision had not sanctioned the appointment, as the Local Government Act did not make such sanction necessary. The Board, however, had intimated to the county council that the appointment as made might in future endanger the claim of the county council to share in the grant administered by the Secretary for Scotland under the Local Taxation Act of last year in aid of the salaries of medical officers for counties.—Dr. FARQUHARSON asked whether the right hon. gentleman was aware that Dr. Bruce, the medical officer in question, had given up general practice and intended to confine himself to consulting practice.—The LORD ADVOCATE said he believed that to be substantially the case.

Use of Ether and Methylated Spirits.—Sir LYON PLAYFAIR asked the CHANCELLOR OF THE EXCHEQUER whether the steps taken to stop the use of ether and methylated spirit as intoxicants in Tyrone and other parts of Ireland had been successful.—The CHANCELLOR OF THE EXCHEQUER said, as regarded ether, he was informed that the effect produced under the Sale of Poisons Act had been most beneficial. Its use as a beverage was said to have decreased greatly, and was alleged by many to have ceased entirely. It was further stated that the sales of the wholesale chemists in Belfast had fallen off about 90 per cent. He hoped that the drinking of methylated spirits might be prevented by the means taken to render it more nauseous, and by stricter regulations, which had been approved by the Board of Inland Revenue.

INDIA AND THE COLONIES.

INDIA.

MEDICAL AID TO THE WOMEN OF INDIA.—A meeting in support of the Marchioness of Dufferin's fund for supplying medical aid to the women of India was held on May 29th in the Sheldonian Theatre, Oxford. The Vice-Chancellor presided, and with Lord Northbrook, Sir Henry Acland, Lord Reay, and others, spoke of the great work which Lady Dufferin had been instrumental in forwarding for supplying to the women of India the medical assistance of which they so sorely stood in need. As to the results of the movement, it was stated by Lord Reay that the number of women who had received medical aid during 1890 was computed to have been no fewer than 414,000, and by far the greater part of this relief had been afforded by thirty-eight hospitals of various sizes, all directly governed by, affiliated to, or connected with, the association. Thirteen lady doctors and 27 assistant-surgeons and female medical practitioners were now working in connection with the fund, nine of the lady doctors having been specially sent out from England, while the branch returns showed that 204 pupils were studying at the medical colleges and schools in India. Lady Dufferin expressed the hope that the support so greatly needed to carry on England's share of the expenses and the responsibilities of this great Indian charity might be forthcoming.

MEDICAL NEWS.

ABERDEEN University sports are to take place in the university grounds on Friday and Saturday, June 12th and 13th.

DR. UCHERMANN has been appointed Lecturer on Otology and Laryngology in the University of Christiania. This is the first lectureship in these subjects established in Scandinavia.

PRESENTATION. Dr. Saunderson has been presented with an address and purse of sovereigns by the residents of Rhode dispensary district, on his appointment as medical officer of Edenderry district. The address was handsomely illuminated, and bore witness of the unfailing kindness, courtesy, and skill of Dr. Saunderson during the past seventeen years.

THE AMERICAN MEDICAL CODE OF ETHICS.—A member of the San Francisco County Medical Society recently presented a communication to that body, and on the following day extensive extracts from the paper appeared in the local daily papers. A formal charge has been brought against him of violation of the Code of Ethics by connivance in the publication of these extracts, and he is to be placed on his trial for the offence. The *Journal* of the American Association, from which we obtain this information, omits to state before what tribunal the alleged delinquent is to be "tried."

CHILD INSURANCE AND BABY FARMS.—At a conference of members of the Women's Liberal Federation, held on May 29th, under the presidency of the Countess of Aberdeen, in Prince's Hall, a resolution was moved to the effect that further legislation is required as to: (1) the registration of all persons receiving one or more children for hire, and (2) the efficient inspection of their premises by men and women inspectors. An amendment to secure the registration of all persons receiving "two or more" children for hire instead of "one or more" was defeated by a narrow majority, and the resolution was carried.

ROYAL MEDICAL BENEVOLENT COLLEGE.—At a meeting of the Council, held immediately after the annual general meeting, Sir Joseph Fayrer, M.D., K.C.S.I., and the Rev. E. W. Northey, M.A., were elected Chairman and Deputy Chairman, respectively, of the Council; and the three unelected candidates for pensionerships with the largest number of votes, namely, Amelia Armstrong, Mary A. E. Brand, and Julia Middleditch, were admitted under By-law XVII. In the report of the annual general meeting, in the BRITISH MEDICAL JOURNAL of May 30th, it was stated that the benevolent work of the institution was transacted at Epsom by a bursar. This should have read "the educational," because the benevolent work is still carried on at the office in Soho Square.

DEATHS IN THE PROFESSION ABROAD.—Amongst the members of the medical profession in foreign countries who have recently died are Dr. Bonnafont, a member of the Paris Academy of Medicine since 1836; Dr. Combalat, Professor of Clinical Surgery in the Medical School of Marseilles; Dr. W. H. Bolling, one of the most prominent physicians in the Southern States of America, and Dean of the University of Louisville, aged 51; Dr. John F. May, an eminent physician of Washington, and one of the reorganisers of Columbia University, in which he filled the Chair of Anatomy and Surgery for many years, aged 78—he was the first American surgeon who performed amputation through the hip-joint successfully; and Dr. E. Carroll Morgan, of Washington, President of the American Laryngological Society, aged 35.

EQUIPMENT OF ABERDEEN MEDICAL STAFF CORPS.—To maintain the efficiency of this corps it is urged, in a circular lately issued by the officers, that suitable headquarters, including drill hall, orderly room, and stores, must be provided at no distant date. Besides being a body of thoroughly trained bearers, the corps has already done much good work in the way of lectures and practical instruction in the larger public works. The proposed drill hall of the corps would in future form an excellent lecture hall and training school for ambulance work in the city. To provide adequate funds an appeal is made to the public, and it has been resolved to hold a bazaar for this purpose in November of this year. Her Majesty has graciously promised her patronage, and already many promises of assistance have been received. Contributions will be received by Dr. Alex. Macgregor, Surgeon in Command, or any of the officers of the corps.

BEQUESTS.—The late Thomas Talma Hodgkin, of Horsegate Leys, Scarborough, and Lindhead Lodge, Cloughton, whose personality has been sworn under £35,000, besides real estate, has bequeathed to Dr. R. Barrington Cooke, of Scarborough, one of his executors, a legacy of £500, and £100 to each of the following charities: The Royal Northern Sea-bathing Infirmary, the Scarborough Hospital and Dispensary, and the Cottage Hospital, Scarborough. The residue, after the payment of small legacies to his servants, to be divided among four persons, including Dr. R. Barrington Cooke and Mr. Ernest Keys-Wells, M.B.—The Great Northern Central Hospital, Holloway, has received a sum of £500 from Dr. W. F. J. Turner and James R. Upton, Esq., executors to the late Miss J. G. Harrison, being a share of the bequest left by her for charitable purposes. This sum has been added to the fund now being raised for the completion of the hospital.—The late Mr. William Cramond, of Derby, has bequeathed by his will £500 each to the Derby Infirmary, Children's Hospital, and Deaf and Dumb Institution.

Asylums for the Insane in the United States.—No. 62 of the *United States Census Bulletin* is devoted to a series of tables prepared under the direction of Dr. Billings by Mr. W. H. Olcott, to show the number of patients admitted to, and treated in, the principal insane asylums in the United States during the nine years ending 1889. The total number of insane persons treated in both public and private institutions during 1889 was 97,535, whilst in 1881 the number was 56,205, showing an increase in the nine years of 41,330, or 75.53 per cent. It is, however, pointed out in the *Bulletin* that this large increase does not indicate an increase in the proportion of insane persons to population, but rather shows the additional amount of asylum accommodation provided, and a willingness on the part of the public to make full use of all the facilities thus offered. Besides the summary of the statistics collected by the census, the figures for each separate asylum are given in this number of the *Bulletin*. These are so arranged as to show the number of male and female patients admitted and treated in each year, and also the expenditure for the same period.

Literary Intelligence.—A new monthly periodical devoted to pharmacology and new remedies is about to appear in France; it is to be entitled *Progrès Thérapeutique*, and will be under the direction of "a committee of young physicians and pharmacists," with M. A. Vicario as editorial secretary.—Dr. J. C. Culbertson, for many years editor of the *Lancet and Clinic* of Cincinnati, was on May 15th unanimously appointed editor and business manager of the *Journal* of the American Medical Association by the trustees of the Association.—Under the title of *Nos Grands Médecins d'Aujourd'hui*, Dr. "Horace Bianchon" is publishing a handsome 8vo. volume of portraits of the chief French physicians of the day; each portrait is accompanied by a short biography and a list of the principal works of the physician depicted.—Mr. Alfred Haviland is issuing by subscription *The Geographical Distribution of Disease in England and Wales*, being a new and enlarged edition of his *Geographical Distribution of Heart Disease, Dropsy, Cancer, and Phthisis*, which is out of print. The book is to be published in separate parts, each of which will deal with a definite district. The first is the "English Lake District," and this is to be followed by others on the "Thames Basin," the "Severn Basin," "Yorkshire," "North Wales," etc. Any part may be subscribed for separately.

Society for the Relief of Widows and Orphans of Medical Men.—The President, Sir James Paget, presided at the annual general meeting of the Society on May 28th. The report showed a membership of 324, against 333 of last year; 7 only had been elected, and 16 had died or resigned. Sixty-four widows were in receipt of relief, and 15 orphans were receiving grants; 3 orphans were on the Copeland Fund. Two widows and 4 orphans had been added to the list; 3 orphans were ineligible for further grants through age. The grants for the year amounted to £3,151 10s., including a sum of £360 given as a present at Christmas to the widows and orphans. The expenses of the year were £255 15s. 6d. A legacy of £1,500 had been received under the will of Miss Carpue, and one of £500 under that of Mr. Edward Robson Jones. The funded property had been increased by the purchase of £3,100 stock. There was a deficit on the year's working of £158 11s. 8d. The following were elected to fill the vacancies in the Court of Directors: Dr. Russell Reynolds, Dr. Church, Dr. Ogle, Mr. Durham, Mr. Vasey, Dr. Hickman, and Mr. G. Keele. A vote of thanks was passed to the editors of the medical journals for their assistance in making known the objects and working of the society. A special grant of £26 was made to a widow.

British Medical Temperance Association.—The fifteenth annual meeting of this Association was held on May 29th in the rooms of the Royal Medical and Chirurgical Society, 20, Hanover Square; Dr. B. W. Richardson, F.R.S., presided. The report was read by the Honorary Secretary, Dr. J. J. Ridge, and showed 397 members (abstaining medical practitioners) and 118 associates (medical students). A resolution of congratulation, moved by Dr. Norman Kerr and seconded by Dr. Morton, was sent to Dr. Nathan S. Davis and Dr. T. D. Crothers, the President and Secretary of the newly-formed American Medical Temperance Association. The prizes of £10 and £5 offered by the Association annually to medical students in their third year on an examination on alcohol and its action on the body were presented to the successful competitors, Mr. U. L. Desai, of Grant Medical College, Bombay, and Mr. A. E. Couzens, of St. Mary's Hospital. A paper by Dr. MacDowel Cosgrave was then read on Alcoholic Self-Delusion, in which he showed by many facts and experiments how alcohol deluded and impaired the senses and the mind, reducing the strength and vitality, while it led the persons taking it to imagine it was doing them good. A discussion followed, in which Drs. Richardson, Norman Kerr, Lord, Prankerd, Paramore, and Ridge took part, closing with a vote of thanks to Dr. Cosgrave.

MEDICAL VACANCIES.

The following Vacancies are announced:

BIRMINGHAM DENTAL HOSPITAL.—Honorary Dental Surgeon. Must be registered under the Dentists Act, and hold diploma in Dental Surgery. Applications to W. A. Addinsell, Honorary Secretary, 112, Edmund Street, Birmingham, by June 13th.

BRISTOL CITY LUNATIC ASYLUM.—Second Assistant Medical Officer; double qualifications; unmarried. Salary, £120 per annum, with furnished apartments, board, and washing. Applications to the Chairman of the Visiting Committee, Council House, Bristol, by June 13th.

CHURCH LOCAL BOARD.—Medical Officer of Health for the District of Church. Salary, £20 per annum. Applications to John R. Reddish, Clerk, by June 12th.

COUNTY OF ABERDEEN.—Medical Officer for the County, whose services may also be made available as Chief Medical Officer of the eight Districts of the County; must hold no other appointment; must reside in Aberdeen. Salary as County Medical Officer, £400 per annum, and a further £100 if appointed Medical Officer for the eight Districts of the County. Applications (thirty in number and thirty copies of testimonials) to the County Clerk, County Buildings, Aberdeen, by June 15th.

CUMBERLAND INFIRMARY, Carlisle.—Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. Appointment for one year. Applications to the Secretary, by June 10th.

DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House-Surgeon. Appointment for six months; board and washing provided, and £10 bonus. Applications to the House-Surgeon, by June 14th.

DORSET COUNTY ASYLUM.—Assistant Medical Officer for the second asylum. Salary, £120 per annum, with board and furnished apartments. Applications to the Medical Superintendent by June 18th.

GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—House-Surgeon; double qualifications. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by June 30th.

GUY'S HOSPITAL, S.E.—Five additional Assistant Dental Surgeons; must be L.D.S.Eng. Applications to the Dean by July 1st.

HULL ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon. Applications to the Chairman, Committee of Management, by June 8th.

HULL ROYAL INFIRMARY.—Four Honorary Assistant-Surgeons; appointment for five years. Applications to the Chairman, Committee of Management, by June 8th.

MALTON UNION.—Medical Officer of Health for the Malton Rural Sanitary Authority. Salary, £100 per annum.

MOUNTMELLICK UNION, Clonaslee Dispensary.—Medical Officer. Salary, £120 per annum and fees. Applications to Mr. R. H. Corbett, Honorary Secretary, Ballykaneen. Election will take place on June 17th.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer; unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Temporary Assistant Medical Officer. Board, lodging, and washing provided. Applications to the Medical Superintendent.

PARISH OF ST. LEONARD, SHOREDITCH.—Clinical Assistant for Infirmary; double qualifications. Salary, £40 per annum, with rations, furnished apartments, and washing. Applications, endorsed "Clinical Assistant," to Robert Clay, Clerk's Office, 213, Kingsland Road, N.E.

QUEEN'S COLLEGE, Birmingham.—Medical Tutor and Demonstrator of Anatomy; must devote his whole time. Applications to Professor B. C. A. Windle, Dean of the Medical Faculty, by July 4th.

QUEEN'S COLLEGE, Birmingham.—Demonstrator of Anatomy. Applications to Professor B. A. C. Windle, Dean of the Medical Faculty, by July 4th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician; appointment for six months. Salary at the rate of £40 per annum, with board and lodging. Applications to John Harrold, Secretary, by June 13th.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL, St. George's Circus, S.E.—Honorary Assistant Surgeon. Applications to the Secretary by June 15th.

ST. MARY'S HOSPITAL, Paddington.—Dental Surgeon. Appointment for five years. Applications to the Secretary by June 12th.

SUSSEX COUNTY HOSPITAL, Brighton.—Surgeon. Must be Fellow or Member of the Royal College of Surgeons of England, Edinburgh, or Ireland. Applications to Lieutenant-General E. F. Bourchier, Secretary, by June 17th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant Surgeon. Must be Fellow or Member of the Royal College of Surgeons of England, Edin-

burgh, or Ireland. Applications to Lieutenant-General E. F. Bourchier, Secretary, by June 17th.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. Annual fee, £30. Twenty copies of printed applications and testimonials to the Secretary of the Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by June 30th.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Physician. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WEST LONDON HOSPITAL, Hammersmith Road.—House Surgeon. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Appointment for twelve months. Honorarium of £25, with rooms, board, and washing. Application to W. Blake Burke, Secretary, by June 15th.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £40 per annum, with board and residence. Applications to C. E. Pinfold, Secretary, by June 18th.

MEDICAL APPOINTMENTS.

ALLDEN, Sidney J., M.D., M.R.C.S., appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton, *vice* Dr. Kershaw, deceased.

ANNACKER, Ernest, M.D.Berlin, L.R.C.P.Lond., M.R.C.S., appointed Assistant Medical Officer to the Manchester Royal Infirmary, *vice* Isaac Blore, M.D., resigned.

ANNINGSON, B., M.B.Camb., M.R.C.S., reappointed Medical Officer for the Rural Sanitary Districts of the Chesterton Union.

ASHWORTH, W. Rushton, L.R.C.P.,Lond., M.R.C.S.Eng., appointed *pro tem.* Medical Officer for the Colsterworth District of the Grantham Union, *vice* C. T. Heaven, deceased.

ATKINSON, Walter Alexander, M.B., B.S.Durham, appointed Medical Officer to the Camberwell Provident Dispensary, *vice* H. R. Oswald, M.D., C.M.Edin., resigned.

BIRD, James Brown, M.B., C.M.Edin., appointed House Surgeon to the Cumberland Infirmary, Carlisle, *vice* C. H. Powers, L.R.C.P.Lond., M.R.C.S.Eng.

BROWN, James, M.B., C.M.Edin., appointed Medical Officer for the Aldbury District of the Berkhamsted Union.

BRYANT, W. A., M.B., C.M., appointed Junior House-Surgeon to the Blackburn and East Lancashire Infirmary, *vice* W. Hartley Bunting, M.B., C.M.

BUNTING, W. Hartley, M.B., C.M., appointed Senior House-Surgeon to the Blackburn and East Lancashire Infirmary.

CARTER, R., M.D.Aberd., M.R.C.P.Edin., appointed Senior Physician to the Bath Royal Mineral Water Hospital, *vice* H. Hensley, M.D., deceased.

CLEGG, W. W., L.R.C.P., L.R.C.S.Edin., F.F.P.S.Glas., appointed Medical Officer of the No. 1 District (Stratford) of the West Ham Union.

DAVIES, D. L., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the Nottingham Borough Asylum, Mapperley Hill, *vice* C. B. Leaver, L.R.C.P., M.R.C.S., resigned.

DAUNT, Francis Eldon H., L.R.C.S.Ed., L. & L.M.R.C.P.I., L.A.H.Dub., L.M.Rot., appointed Medical Officer to the No. 4 District of the Holborn Union.

EASTON, G. F., M.D., L.R.C.S.Edin., reappointed Medical Officer of Health for the Alnwick Rural and Urban Sanitary Districts.

FIELD, Mr. E., appointed Dispenser to the Salisbury Infirmary, *vice* Mr. Josh. Horne.

HEELAS, Walter W., M.R.C.S., L.R.C.P.Lond., appointed Resident Medical Officer to the Hospital for Sick Children, Newcastle-on-Tyne.

JOYNT, H. Noble, M.A., M.D., Dip.State Med.Dubl.,Univ., appointed Medical Superintendent of the Bradford Fever Hospital, *vice* Dr. Evans.

KEIR, W. J., F.R.C.S., L.R.C.P.Edin., reappointed Medical Officer for the Melksham Rural and Urban Sanitary Districts.

LANE, Hugh, L.R.C.P.Edin., M.R.C.S., appointed Honorary Surgeon to the Bath Royal Mineral Water Hospital, *vice* R. Carter, M.D., resigned.

LOGIE, James, M.B., C.M.Aberd., appointed Medical Officer for the Raglan Sanitary District, Monmouth.

MCALDOWIE, A. M., M.D., M.B., C.M.Aberd., appointed *pro tem.* Deputy Medical Officer for the Borough of Stoke-upon-Trent.

MCCALL, A., M.B., C.M.Glas., appointed Medical Officer for the Conisborough Sanitary District of the Doncaster Union, *vice* R. Hills, M.R.C.S., resigned.

MAYNARD, Edward Forster, M.B., C.M.Edin., appointed House-Physician to the Sussex County Hospital, Brighton, *vice* W. D. Calvert.

METCALFE, A. W., M.A., M.B., B.C.Cantab, M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the York Dispensary.

MORISON, John, M.D.Edin., M.R.C.S., D.P.H.Camb., reappointed Medical Officer of Health for St. Albans, Herts.

PETHERICK, Wallace, L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer for the Hepworth District of the Thetford Union.

RIDLEY, Walter, M.B., M.S., F.R.C.S., appointed Surgical Registrar to the Royal Infirmary, Newcastle-upon-Tyne.

STEPHENS, Reginald, M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Torbay Hospital and Provident Dispensary, Torquay, *vice* W. G. Boase, L.R.C.P., M.R.C.S.

STURROCK, David, M.B., C.M., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer to the Broughty Ferry Police Commission, *vice* Dr. Lang.

WEIR, George W., M.A., M.D.Roy.Univ., appointed Medical Officer of Health for Jarrow Urban Sanitary District, *vice* A. Campbell Munro, M.B., D.Sc.Edin.

WINDER, A. B., M.B., C.M.Edin., appointed Medical Officer of Health for the Thurstonland Urban Sanitary District of the Huddersfield Union.

DIARY FOR NEXT WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor W. Anderson: On the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes. Lecture I.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: Diseases of the Iris. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Angel Money: Selected Medical Cases from the Out-Patient Department.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Drs. G. Thin and F. J. Wethered: Symptoms and Pathology of a Case of Acute Inflammation of the Mucous Membrane of the Ileum from Climatic Causes. Dr. G. Newton Pitt and Mr. W. H. A. Jacobson: A Case of Pancreatic Cyst successfully treated by Laparotomy and Drainage. Dr. Alfred Parkin: The Causation and Mode of Production of Pes Cavus.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Theo. Hyslop: Alcoholic Insanity and Syphilitic Insanity. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: Secondary Syphilis.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor W. Anderson: On the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes. Lecture II.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Mr. R. J. Godlee: Surgery of the Thorax. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. B. Lawford: Toxic Amblyopia.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Mr. Lawson Tait: On Perineorrhaphy. Specimens.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M.—Patients and Card Specimens at 8. P.M. Dr. Brouner (Bradford): On Fifty Cases of Advancement of the Recti Muscles in Cases of Squint by Schweigger's Method. Mr. Story (Dublin): (1) Detachment of Choroid; (2) Sequel of a Case of Lesion of the Optic Chiasma. Mr. Jessop: (1) The Consensual Pupillary Reflex in Cases exhibiting the Argyll-Robertson Pupil Symptom in One Eye: (2) Two Cases of Complete Blindness with Good Pupillary Light Reflex: (3) On the Symptoms following Section of the Optic Nerve. Mr. Scott (Cairo): Perchloride of Mercury in Conjunctival Disease. Mr. Stephenson: Peculiar Form of Retinal Pigmentation. Card Communications:—Mr. Treacher Collins: Epithelial Implantation Cyst. Mr. Tatham Thompson: Emphysema of Conjunctiva. Mr. Stephenson: Peculiar Form of Retinal Pigmentation (two living specimens).

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Dr. Beevor: Locomotor Ataxy. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Abercrombie: Chorea. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Law: Perforation of the Membrana Tympani.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor W. Anderson: On the Varieties, Pathology, and Surgical Treatment of Contractions of the Fingers and Toes. Lecture III.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, 5 P.M.—Dr. T. Lauder Brunton: The Cavendish Lecture on Elimination and its Uses in Preventing and Curing Disease.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Professor Crookshank: Lecture: Leprosy. Practical Work: Sections of Leprosy. Hospital for Consumption, Brompton, 4 P.M.—Mr. R. J. Godlee: Surgery of the Thorax. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Nervous System.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Theo. Hyslop: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

ROBERTSON.—On May 29th, at 2, Ilchester Gardens, W., the wife of J. R. S. Robertson, M.B.Edin., late of the Army Medical Staff, of a son.

MARRIAGE.

PERKINS-CASE—BISHOP.—On May 13th, at Craven Hill Congregational Chapel, W., by the Rev. Sydney H. Case, M.A., assisted by the Rev. Harry Case, Perkins William Perkins-Case, M.D., of Croydon, to Clara Lucas Balfour Bishop, daughter of J. Spencer Balfour, Esq., M.P., of 4, Marlborough Gate, W., and Burcot, Oxfordshire.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

DEAF AND DUMB CHILDREN.

F. G. G. writes: I am anxious to hear of an institution where a congenital deaf-mute can be received for education. She is about 6, the child of a labouring man, and consequently no payment can be made.

*** The British Asylum for Deaf and Dumb Females educates female mutes. Admission is by election, free for three years or annual payment. The Secretary is Mr. W. T. Hillyer, 27, Red Lion Square, W.C. To the Royal Institution for the Instruction of Deaf and Dumb Children at Edgbaston, Birmingham, admission is obtained by election and payment, or payment only. The Secretary is Mr. W. Charlton, Warwick Chambers, Corporation Street, Birmingham. There are also institutions of a similar kind in several other districts. The Jews have a home of their own.

In large towns provision is made for the oral instruction of deaf children under the School Board. If their homes are at a distance, they can be lodged at homes arranged for the purpose, where they may be maintained—at least in part—by the rates.

ANSWERS.

A MEMBER.—A husband has no power over an intemperate wife, either alone or in concert with her nearest male relative, to put her under restraint against her own will.

NOTES, LETTERS, Etc.

AN Austro-Hungarian Dental Congress is to be held at Buda-Pesth from August 15th to 17th.

ZENANA MEDICAL COLLEGE.

DR. GRIFFITH, of the Zenana Medical College, asks us to announce that in connection with the Hospital for Women and Children, he is forming a dispensing and midwifery class for men who are preparing to be medical missionaries, but who cannot afford fees.

HOME FOR AGED DOCTORS IN ALABAMA.

STEPS have been taken in Alabama to found a home for superannuated medical men, the widows and orphans of medical men left in necessitous circumstances, and, under certain restrictions, younger practitioners disabled for work. It is proposed to raise funds by subscriptions, and application has already been made for incorporation.

THE ATHLETE WRESTLING WITH THE PYTHON.

F.R.C.S. writes: There is another error in connection with this statue, besides that of the unnatural contraction of the flexors of the right foot, and that is in the clavicular attachment of the left sterno-mastoid muscle, which has been made to appear as if attached to the middle of the clavicle, instead of, as is usually the case, to the sternal end.

"THE DOCTOR" AT THE ROYAL ACADEMY.

DR. G. BIRT (Stourbridge) writes: The impression left on my mind after a short view of "The Doctor" at the Royal Academy is that the case is one of broncho-pneumonia. The child is on an extemporised bed in the kitchen, as there is no fireplace in the bedroom; there is a basin in which have been made poultices for the chest and back, and the doctor is watching the effect of ammonia and sugar given after a preliminary treatment with antimonial wine. Children will not take ammonia unless it is very dilute, which accounts for a six-ounce bottle of medicine being sent for a child under 2 years of age.

EXAMINATIONS OF THE APOTHECARIES' SOCIETY.

STUDENT writes to draw attention to what he considers a legitimate grievance on the part of candidates at the Primary Examinations of the Apothecaries' Society: that is, that the bodies used at the anatomical portion of those examinations are uninjected. This, he thinks, considerably enhances the difficulty of the test, and is not the case under any other examining board.

HOLIDAY HOMES.

MR. JOHN KIRK, Secretary of the Holiday Homes Fund, Ragged School Union (Exeter Hall, Strand, W.C.), writes: It is not in the BRITISH MEDICAL JOURNAL necessary for me to state the benefits conferred upon poor children attending the 200 schools and missions of the Ragged School Union by a fortnight's holiday in the country. Its most competent advocates are the members of the medical profession, and to their support its extension is widely due. We are now commencing the holiday homes season, and are in need of gifts of money, boots, and clothing. Money can be raised for us in many ways, and as the staff of students of our large hospitals see so much of the sufferings of child life among the London poor, we should be glad if they would individually or collectively help us alike with their own gifts and with their far-reaching influence.

TESTIMONIAL TO DR. R. R. RENTOUL.

DR. HUGH WOODS (11, Archway Road, Highgate, London, N.) writes: The following subscriptions to the above testimonial have been received in addition to those already acknowledged:

	£	s.	d.		£	s.	d.
Dr. W. V. Lush, Weymouth	1	1	0	Dr. G. J. Mackesy, Waterford (President of Irish Medical Association) ...	0	10	0
Dr. T. M. Johnson, Salford	0	10	0				
Dr. J. E. Dunn, Preston ...	1	1	0				
Dr. J. Anderson, Poulton-le-Fylde ...	1	1	0	Dr. W. L. Mackesy, Waterford ...	0	10	0
Dr. Finegan, Liverpool ...	1	1	0	Dr E. Exell, Shefficld ...	0	5	0

Dr. C. H. Watts Parkinson, Honorary Secretary and Treasurer of Dorset and West Hants Branch of the British Medical Association, has forwarded £5 9s. 6d., the proceeds of a collection at a meeting of the above Branch, particulars of which are subjoined:

	£	s.	d.		£	s.	d.
Dr. M. Lawrie, J.P., Weymouth	1	1	0	Dr. G. Mahomed, Bournemouth	0	2	6
Dr. Moorhead, Weymouth...	0	10	0	Dr. Macgillicuddy, Bournemouth	0	2	6
Dr. T. W. Blake, Bournemouth ...	0	10	0	Dr. G. W. Graham, Wimborne	0	2	6
Dr. F. W. R. Winter, Bournemouth ...	0	10	0	Dr. H. Hartford, Christchurch	0	2	6
Dr. A. McLean, J.P., Portland	0	5	0	J. N. T., Bournemouth ...	0	2	6
Dr. A. K. Morgan, Bournemouth ...	0	5	0	Mr. Lawson Tait, Lyndhurst	0	2	6
Dr. J. W. Philpots, Parkstone	0	5	0	Dr. G. M. Spooner, Blandford	0	2	6
Dr. Macdonald, Dorset County Asylum ...	0	2	6	Dr. J. Davison, Bournemouth	0	2	6
				Dr. C. H. W. Parkinson, Wimborne	1	1	0

Subscriptions should be sent to Dr. Hugh Woods, Honorary Treasurer. Subscribers are asked to see that their subscriptions are acknowledged in the columns of the BRITISH MEDICAL JOURNAL.

A SIMPLE METHOD OF REMOVING PTERYGIUM.

DR. J. LAFFAN (R.M.O., Carnarvon, W.A.), writes: I found the following plan successful in removing an old-standing and very unsightly pterygium. With a curved needle I passed a ligature beneath the growth close to the inner canthus and tied the vessels. In two days the ligature came away, and now, two months after operation, there is no trace of the growth.

*** Ligature of pterygium has been in use many years, but the method of employing it described above has, we believe, been abandoned, as it usually fails to effect a permanent cure.

ABUSE OF THE PROVIDENT PRINCIPLE.

M.D. writes: The tale told in the BRITISH MEDICAL JOURNAL of May 23rd by "A Graduate," of the hardships endured by the poor club doctor, is not one bit exaggerated. I, too, have had a long experience of club practice, and know what injustice, insult, and abuse the wretched club doctor has to contend with. Hard work, miserable pay, and a very inferior position as a medical practitioner in the eyes of the public are his portion. I thoroughly concur and sympathise with "A Graduate" in all he says, and I want to know why this condition of things should be allowed to continue. There are thousands like myself, I know, smarting from the same injustices. I believe the true remedy to be in the hands of the General Medical Council; and if, as "A Graduate" suggests, someone like Mr. Lawson Tait, who strikes when and where necessary, and fears no foes, would take the matter up, we should very soon find a vast improvement in the state of things.

APOMORPHINE AS AN EMETIC.

DR. T. L. CRAISTER (Cala, Cape Colony) writes: As I have seen that the use of apomorphine in alcoholism is said to be contraindicated, I give a case *per contra*. One evening I was summoned to X. Y., a young man addicted to drink, who had been on the "burst." He was "in fits." I found him rolling on the floor in strong epileptiform convulsions, which at times required the strength of six men to restrain him; totally unconscious; teeth clenched; strong smell of brandy in the breath; stomach distended. As I could not possibly give aught by the mouth, apomorphine hypodermically was my only chance. I injected a full dose, and in less than ten minutes he turned on his side, or was turned, and completely emptied the stomach of everything—brandy and his supper; in half an hour he knew me, was put to bed, and did well. He has since been a Good Templar. How far did apomorphine help him, or may be save him?

Jenner's Critics.

Mr. G. H. Darwin (Albert Park, Didsbury) writes to us that, in view of the great interest in the discovery by Professor Koch of his lymph and the want of success (so far) of the remedy, he thinks the enclosed account of Jenner's troubles and disappointments to give to the world the very great success of vaccination, copied from accounts in some old writings in his possession, will be of interest:—

It was in the year 1775 Dr. Jenner began to investigate the nature of cow-pox. His attention was first excited by noticing that amongst country people whom he was called upon to inoculate, many resisted every effort to give them the small-pox. These patients he found had undergone a disorder contracted by milking cows affected with a peculiar eruption on their teats. He inquired into this, and found that this disease had been known among the dairies from time immemorial, and that a vague opinion prevailed of its being a preventive of the small-pox. This opinion, however, was comparatively new, for all the old farmers declared they had no such idea in their early days—which was easily accounted for, as the common people were rarely inoculated for the small-pox till the practice became extended by the Suttons, so that the people in the dairies were seldom put to the test of the preventive process of the cow-pox.

In the course of his investigation he found that some who had undergone the cow-pox felt the influence of an inoculation with the variolous matter. This damped his ardour, and more especially as he found, on making inquiries amongst the medical men in the neighbourhood, they all agreed that the cow-pox could not be relied on as a preventive of the small-pox. He found, though, on making further inquiries, that the cow had different varieties of spontaneous eruptions upon her teats, and that whatever sore was communicated to the hands of the milkers obtained the general name of "cow-pox." Thus, then, a distinction was made between the true and the spurious cow-pox. This difficulty being overcome, another painful check was given to the aspiring hopes of Jenner by the discovery that even amongst those who had undergone the true cow-pox there were some yet liable to receive small-pox.

He renewed his laborious investigations of the subject, and at last discerned that the virus of cow-pox was liable to undergo progressive changes, and that when applied to the human skin in a degenerated state it would produce the ulcerative effects in as great a degree as when it was not decomposed, but that when its specific properties were lost it was incapable of producing that change upon the human frame which is requisite to render it insusceptible of the variolous contagion. So that a person might milk a cow one day, and, having caught the disease, be for ever secure, whereas another person might milk the same cow next day, and the virus might act so as to produce a sore and yet leave the constitution unchanged and unprotected.

It was during this investigation that Dr. Jenner thought that the disease might be propagated first from the cow, and finally from one human being to another. He made the first experiment on May 14th, 1796, on a lad of the name of Phipps, who was vaccinated from the hand of a young woman of the name of Sarah Nelmes, who had been accidentally infected by a cow. On July 1st following the boy was inoculated with small-pox matter, and it proved he was perfectly safe. This case inspired confidence. After this a number of children were inoculated in succession one from the other, and, after several months had elapsed, they were exposed to the infection of small-pox; some by inoculation, others by variolous effluvia, and some in both ways, but they all resisted it.

After this there were larger experiments, and when at length it was satisfactorily proved that the inoculated cow-pox afforded as complete a security against the small-pox as the variolous inoculation, Dr. Jenner made it known to the public without either disguise or ostentation. This treatise, entitled *An Enquiry into the Causes and Effects of the Variolæ Vaccinæ, a Disease discovered in some of the Western Counties of England, particularly Gloucestershire, and known by the name of the Cow-pox*, appeared in 1798, in a small quarto of 75 pages.

LETTERS, COMMUNICATIONS, Etc., received from:

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LECTURES
ON
GOÎTRE: ITS PATHOLOGY, DIAGNOSIS, AND SURGICAL TREATMENT.

Delivered at the Royal College of Surgeons of England.

By JAMES BERRY, B.S., F.R.C.S.,

Professor of Surgery and Pathology, Royal College of Surgeons; Surgeon to the Royal Free Hospital and to the Alexandra Hospital for Children with Hip Disease.

Lecture I.

Varieties of Goitre.—Endemic Goitre.—Distribution in Switzerland—in England—Alleged Causes—Climate—Physical Configuration of Soil—"Want of Air and Sunshine" Theory, Erroneous Nature of—Relation to Geology—Drinking Water the Chief Cause—Lime—Magnesia—Iron—Organic Impurities. Goitre in Lower Animals.—Epidemic Goitre.—Attempts to Produce Goitre Artificially.—Symptoms—Pressure Effects—Distortion and Displacement of Trachea—Effect upon Duration of Life.

[The lecturer began by describing the different varieties of goître. All goîtres were divided for practical purposes into five classes: 1, parenchymatous; 2, cystic; 3, fibro-adenomatous; 4, malignant; 5, exophthalmic. It was explained that all these varieties, with the exception of the last, ran very much into one another, so that mixed forms were common (see Fig. 1). Exophthalmic goître, however, it was stated, stood quite apart from all others, both structurally and clinically. With regard to so-called endemic and sporadic goitre, it was considered difficult to know where to draw the line between the two. Probably in this country most goîtres might fairly be considered to belong to the endemic class, but the endemicity being so widely spread over the country, while at the same time so slight, it easily escaped notice. The various alleged causes of goître were then discussed. Instances were adduced to show that neither heat, cold, rainfall, nor rarity of atmosphere had any share in the production of the disease. The physical configuration of the soil upon which goître was found was next considered.]

The Pennine range in Derbyshire and other counties of the centre and north of England is well known to be a great seat of goître; less known but nevertheless very marked is the prevalence of the disease among the Cotswold Hills of Gloucestershire and neighbouring counties.

But, on the other hand, there are many mountainous countries in which goître is very rare or altogether absent. Norway and the Highlands of Scotland may be cited as examples. It is not then the mountainous nature of a country alone that causes goître to occur.

If one of the mountainous districts in which goître is prevalent be examined more closely it will often be found that it is only in certain parts of the mountains that the disease occurs. Thus, in Switzerland, the higher parts of the Alps are much less affected than are the lower and, speaking generally, it may be said that goître is more often found at the foot of a hill or mountain than near the summit.

[The distribution of goître in Switzerland was here described, and it was pointed out that some of the highest inhabited parts of that country were free from the disease. The maximum amount of goître was in the Cantons Fribourg and Berne, in some parts of which, according to Bircher,[1] the percentage of goître among the recruits was as high as 80 or even 90.]

It has been asserted that goître is not so prevalent in the most exposed parts of mountains, but occurs rather in the valleys upon the slopes of the mountains, and this is to a certain extent true. Probably nowhere in the world is the disease so common as it is in some of the deep valleys of North Italy, on the southern side of the Alps, at Aosta for example. In Savoy, at the western end of the Alpine chain, a similar distribution may be noticed. The Rhone valley is a well known example. In our own country to a certain extent a similar prevalence of goître in valleys may be noticed.

Now this prevalence of goître in valleys, and especially in the valleys of mountainous regions has led to a widely accepted, but I fear an entirely erroneous, theory of the cause of goître, namely, that it is due to want of air and sunshine. At first sight the theory seems plausible enough. No one who has visited the valleys in Switzerland in which goître is so prevalent can have failed to notice that many of them are deep, narrow and gloomy. But if the depth, the narrowness, and the gloominess of valleys, and the consequent lack of air and sunshine in them were the real cause of the goître, then we ought to find the disease prevalent in similar valleys in other parts of the world. But I venture again to cite Norway as a country in which such valleys abound. Yet evidence is quite wanting to show that goître is at all common there.

Again, if want of air and sunshine were the cause of goître, surely we ought to find it common among printers and others whose occupations compel them to work at night in crowded and often ill-ventilated workrooms. Miners, too, can hardly be supposed to get their full share of sunshine or of good air, but inquiry among miners and printers has not led to my finding that they are particularly liable to the disease. The horses, too, that work for years in mines, and never see a ray of sunshine are not, I am informed, affected with the disease. Nevertheless, horses as well as other domestic animals are, like man, subject to goître in districts where it is prevalent.

Some of our textbooks state that goître is common in the overcrowded and poorer parts of our great cities, but I am not aware that the statement rests upon any solid foundation of fact. Indeed, I can confidently state that in the East End of London, as well as in the poorer parts of most of the largest English towns, goître is not nearly so common as it is in many country villages situated far more favourably as regards pure air and sunshine. In the village of Chacombe in Northamptonshire I found numerous cases of goître. This village is situated in a more or less sheltered hollow among the hills, and it might be supposed that its position was the cause of the goître. But a mile away is a farmhouse situated upon the very top of the hill in an exposed and open situation; in this house several members of one family have suffered from goître; one of them actually died from suffocation caused by the disease.

Were it necessary to do so, I could cite many more similar examples pointing towards the fact that endemic goître may be found in elevated and exposed situations where good air and sunshine are abundant. It seems clear that though certain valleys contain a great deal of goître, yet the disease is quite absent from others which are equally deep, narrow, and gloomy, equally devoid of pure air and sunshine.

[Maps showing the exact distribution of goître among the recruits in Switzerland and the geology of the country were here exhibited. It was shown that the distribution of the disease was most marked over the region of that great deposit of sandstones, marls, and limestones known as the marine molasse; other geological formations were also shown to be affected, although to a less extent. In discussing the relation of geology to goître it was stated that a connection existed between the two only in so far as the former influenced the water supply. The difficulty and complexity of the subject were mentioned, and it was urged that hasty conclusions should not be drawn from mere observation of the distribution of goître and the surface geology of the districts in which it was found. Allusion was made to the very different mineralogical and chemical composition of strata bearing the same geological name.

The geological and geographical distribution of goître in England was next considered. Statistical information upon the subject in this country was difficult to obtain. The chief sources of information utilised by the author had been (1) monographs already published, (2) facts related to him either personally or by letter by medical practitioners and others in various parts of the country which he had not himself visited; (3) observations made in the course of personal visits to numerous parts of England; information had been derived in some cases from local medical practitioners and from county hospital registers; in others from clergymen, innkeepers, and other inhabitants of the districts visited,

[1589]

[1] *Der endemische Kropf.*, H. Bircher, Basle, 1883.

including large numbers of people themselves actually the subject of the disease.[2]]

I propose now to pass rapidly in succession over the various geological formations of England, and to point out briefly to what extent goitre is associated with each of them. The various formations will be taken in descending order. The tertiary rocks of England occur in two areas forming the London and the Hampshire basins. Taking the former first, the disease occurs very sparingly over the Bagshot sands in some of the villages between Aldershot and Chertsey, for example, at Windlesham, Bagshot, and Pirbright. In Essex it does not occur at Loughton or Chigwell, nor in the neighbourhoods of Harwich, Colchester, or Chelmsford. In the Hampshire basin it is said to occur at Romsey, but it is certainly absent from the neighbourhoods of Lymington, Poole, and Bournemouth.

Over the extensive region of the chalk goitre appears to prevail to a very slight extent, but tolerably uniformly. I found a few cases near Hatfield, Hitchin, and Hadham in Hertfordshire, and at Luton in Bedfordshire, and I have been informed that the disease occurs to a slight extent at villages in the north of Essex (Sible Hedingham, Wethersfield), and on the borders of Suffolk, especially in parts of the valley of the Stour (Cavendish, Melford, Sudbury, and Nayland). It has been asserted that part of Norfolk is affected. Some of the villages a few miles to the west of Swaffham are, however, certainly not affected. I am informed that goitre occurs also upon the chalk in the neighbourhood of Driffield, in Yorkshire. In the villages situated upon the chalk of the North Downs there is very little goitre, and the same may be said of those on the South Downs. The chalk is the source of such an abundant water supply, that it is worth while to draw especial attention to the rarity of goitre in connection with it, especially as it is even now asserted in textbooks that goitre is especially prevalent in the "chalky parts of England."

Coming next to the upper greensand and gault which underlie the chalk and come to the surface as a comparatively narrow band, extending from Devonshire to Yorkshire, and also skirting the Weald district of Kent, Surrey, and Sussex, we find that goitre is rarely present upon either of these rocks. The lower greensand area, on the contrary, is one upon which I have found a considerable amount of goitre. In the south of Bedfordshire it forms the low sandy hills in the neighbourhood of Ampthill, itself a known seat of goitre. I have seen cases at Aspley Guise, Ridgmount, and Woburn—all villages in this neighbourhood. Examination of the books of the Bedford Infirmary shows that a considerable portion of the cases of goitre treated there come from these villages and from others, such as Moulsoe, Eversholt, and Maulden, all similarly situated. I have been unable to find any goitre in many of the villages situated upon lower greensand in the south of Surrey, but it is said to occur at Haslemere.

With regard to the Wealden area, goitre appears to be tolerably common over the central and more hilly parts. Several cases came under my notice at Cuckfield, and I have heard of many others from other parts of the same area. I have reasons for believing that the disease is distributed tolerably uniformly, although not very thickly, over the whole of the central (Hastings sands) area of the Weald. I have been told that it is common at Horsham, but I have not personally examined this district. Villages situated upon the Weald clay appear to be slightly affected. I found several cases at Hadlow, and in neighbouring villages. From a similar district further to the east, a small number of cases have been reported to me.

I have made personal inquiries at most of the villages on the tract of country extending from near Eastbourne to Steyning, immediately north of the South Downs. These villages are situated upon greensands, gault, and Weald clay. I saw no cases of goitre and heard of only an occasional one here and there. Those of the inhabitants who knew what goitre was agreed in saying it was much commoner further north in the Hastings sands area.

Underlying the cretaceous strata, and appearing on the surface in this country to the west and north-west of these rocks, comes the great series of the oolites. It has been stated by most of those who have written upon the distribution of goitre in England that goitre does not occur upon the oolites, except at Helmsley in Yorkshire. My own experience does not lead me to endorse this statement. I have, on the contrary, found that goitre is tolerably common upon the oolites, and is especially frequent in villages situated just at the junction of the oolites with the lias. In Somersetshire it is prevalent at Chinnocks, Stoke-under-Ham, and Chiselborough; the latter village has long been noted as a seat of cretinism. Further north I have found it at Corton Denham, and neighbouring villages. It is said to be common at Wotton-under-Edge in Gloucestershire. I have seen many cases at and near Stroud and in many of the villages situated on the oolites to the east of Cheltenham. Still further east I found that in many of the villages around Northleach, as well as in Northleach itself, the disease was very common. In Yorkshire, it is known to be common at Helmsley, and I have been informed that it is found also in several villages to the east of Easingwold.

[Details of the geological structure of the country around Yeovil, and also in Gloucestershire and other counties, were then given, and the influence upon water supply was pointed out. It was shown that goitre had been found in a large number of villages similarly situated at the junction of the oolitic and liassic formations, and no village upon this line that had yet been examined by the author had been found quite free from the disease.]

I do not wish to say that the amount of goitre upon this line is very great; it is not nearly as great as it is, for example, in Switzerland in the cantons of Berne and Fribourg, or in the lower part of the Rhone valley; still it is sufficiently marked to leave no doubt in my own mind that the geological structure of the ground and its influence upon the water supply are the cause of the goitre in these places. Whether the disease occurs to an equally great extent upon similar lines of junction of limestone, sand, and clay in the higher members of the oolite group, as, for example, at the base of the great oolite, I am unable to say, as I have not at present collected sufficient data to enable me to form an opinion.

The next formation that we have to consider is the lias. The upper members of this series lie immediately under the oolites, and goitre occurs, as I have said, just at the junction of the two, being most common apparently upon the sands that are now considered to be the lowest member of the oolites.[3] Upon the middle lias the disease, so far as my observations extend, is less common. I have found a few scattered cases to the west of Chiselborough and Stoke-under-Ham. In the south of Northamptonshire and the neighbouring parts of Warwickshire, in districts where the oolites are absent, I have nevertheless found a considerable amount of goitre. The village of Chacombe, where goitre is decidedly prevalent, rests upon marlstone (middle lias). The Warwickshire villages of Warmington and Avon Dassett, where the disease prevails to a slight extent, are situated at the foot of hills of similar rock.

My friend, Dr. Bernard Rice, of Leamington, has kindly examined the out-patient books of the Wharncliffe Hospital in that town, in order to ascertain the distribution of the disease in that neighbourhood. He found that out of 22 cases that had come from surrounding villages no fewer than 18 came from the liassic district to the east and south-east of Leamington. On the other side of the town is the new red sandstone, and only 4 cases came from this district. A village in which the disease appears to be especially prevalent is Napton, situated at the foot of a hill of marlstone, underlaid and surrounded by lower lias clay and limestone. So far as I can judge, this district appears to be fairly typical of the distribution of goitre upon the lower lias. The disease is either absent altogether, or is thinly diffused over it. It must not be forgotten, however, that in many parts of England, as for example in the neighbourhood of Cheltenham, the lias is thickly overlaid with drift oolite, not marked upon an ordi-

[2] I desire to take this opportunity of expressing my cordial thanks to all those who have so kindly aided me in making local investigations. Especially am I indebted to Dr. Reglan Thomas, late of Llanelly; Dr. Walter, of Stoke-under-Ham; Dr. Skelding, of Bedford; Dr. Hooper, of Aylesbury; Dr. Adams, late of Ashburton; Dr. Ryan, of Northleach; and Drs. G. and H. Tayler, of Trowbridge; also to my brother, Mr. Edward Berry, F.I.C., who has made numerous water analyses for me, and otherwise given me much help; and my friend, Mr. Charles Cosens, for much assistance in photography and in other ways.

[3] H. B. Woodward, *Geology of England and Wales*, 1887, p. 287.

nary geological map. The water supply in such regions is frequently derived from shallow wells in this drift, and not from the lias at all.

Upon the triassic division of the new red sandstone goître appears to occur very sparingly, if at all. At Westbury-on-Severn, situated upon this rock near the lias, I could not hear of any. Upon the triassic rocks of South Derbyshire it appears to be almost absent—at least, such is the case at Findern, Newton Solney, Foremark, and Repton. Its scarcity upon the trias to the west of Leamington has already been mentioned. Over the large area in which this rock comes to the surface in Nottinghamshire the disease appears to occur but rarely.

The lower division of the new red sandstone is the Permian, often known as the magnesian limestone because a large portion of its rocks is composed of that material. It occurs in this country chiefly as a narrow band extending from Northumberland to Nottinghamshire.

It has long been a favourite belief that magnesian limestone is especially associated with goître, but I doubt whether there is much truth in this. In part of the magnesian limestone area of Nottinghamshire I found goître to be distinctly rare. In other parts it appears to be less common than upon the carboniferous limestone. It is said to be common in the neighbourhood of Knaresborough, in Yorkshire. I ought to mention that the term "magnesian limestone" is used, geologically, to denote a large series of marls, sandstones, and limestones, and that it consists by no means wholly of magnesian limestone in the chemical or mineralogical sense of the word. Magnesian limestone — using the term in the latter sense — is found in other rocks besides those of the Permian series.



Fig. 1.—Transverse section of goître with trachea and œsophagus. Several adenomatous tumours are seen in various stages of formation.

The next series of rocks that engages our attention is the carboniferous. At the top of this series come the coal measures, and upon them goître appears to occur to a moderate extent. The counties best known to me in which this formation occurs are Derbyshire and Yorkshire, and in both of them I found that goître was fairly common upon the coal measures. I have also found it near Llanelly, in Glamorganshire. The millstone grit, on the contrary, appears to be much more free from the disease. I have been informed that at Ilkley goître does not occur in places upon, or supplied by water from, this formation, whereas on the carboniferous limestone not far away the disease is not uncommon. At the Saltaire Hospital in one year, out of 780 applying for treatment, only 4 did so on account of goître.

At Chapel-en-le-Frith in Derbyshire I was informed that cases of goître are more often seen in the districts to the south-east of the town, where the carboniferous limestone prevails, than in other districts where millstone grit and Yoredale rocks are found. I was also told that since the introduction of a new water supply from the millstone grit goître has become less common.

It has been stated that goître is very common in the Peak district of Derbyshire in which the rocks consist chiefly of millstone grit and Yoredale rocks (grits, sandstones, shales, with thin earthy limestones). Upon inquiry at Castleton, on the southern edge of this district, I was assured that goître was much less prevalent in the Peak district than on the carboniferous limestone further south. The millstone grit formation is the source of water supply to so many of the towns in the north of England that the absence of goître from it becomes a matter of considerable importance.

The carboniferous limestone regions of England have been described as the very hotbed of goître, and I am inclined to believe that this is a tolerably accurate statement. Over the whole of this area in Derbyshire, but especially along the eastern border of it, I found numerous cases, for example, in the neighbourhoods of Cromford, Matlock, Youlgreave, Bakewell, Baslow, and Stony Middleton. The same may be said of the region on the north side of Ashbourne, and I am told that the disease is also common over the similar districts in the east of Staffordshire.

In Somersetshire it occurs, I am informed, upon this formation at Clevedon, and I have heard of a number of cases upon various parts of the carboniferous limestone of the Mendip Hills. In Northumberland, on the other hand, it appears to be less common, but it is worth noticing that, in the north of England, this formation loses its markedly calcareous character and is represented largely by sandstones and shales. In the Forest of Dean goître is said to be common, but I do not know whether upon the carboniferous limestone or upon the other rocks of this region.

With regard to the occurrence of goître upon Devonian (and old red sandstone), my information is chiefly of a negative character, but such information as I have tends to show that the disease occurs but rarely upon either of them. At Ilfracombe and probably over the north of Devonshire generally, goître does not occur. The same may be said of the western extremity of Somersetshire. I am informed also that in the neighbourhood of Talgarth, in Brecknockshire, the disease is not prevalent.

Of the silurian and Cambrian and pre-Cambrian rocks which form so large a portion of Wales, I have scarcely any practical knowledge, and consequently cannot say much about the occurrence or otherwise of goître upon them. The little information I have obtained, however, tends to show that here also goître is rare. In Anglesea, for example, I am informed that goître does not occur at all in the north-west portion in the neighbourhood of Amlwch, and is probably absent from the whole island. With regard to granite and other igneous rock, I believe that they are free from goître. At least, I have never heard of any goître upon them, and those districts of them that I have been able to examine, such as Widdicombe on Dartmoor, are quite devoid of the disease.

From the foregoing it will be seen that goître is distributed over a very large surface of this country. Its coincidence everywhere with calcareous rocks, which are also very widely distributed in England, is one of the most marked features of its distribution. It is not only upon limestone but also upon calcareous sandstones that goître is found. Whether it ever occurs as an endemic disease upon non-calcareous rocks is at least doubtful. The igneous, metamorphic, Cambrian, silurian, Devonian, Yoredale, and millstone grit rocks, and some parts of the coal measures and tertiaries, which are non-calcareous, appear to be mainly free from the disease.

[The nature of the water obtained from these rocks was briefly described, and the opinion was expressed that there was, speaking generally, some connection between goître and the amount of mineral matter in the water. Mere hardness was not necessarily a cause of goître; some waters were very hard, and yet did not produce goître; on the other hand, an instance was given of a water in Derbyshire which showed only 7° of hardness, and yet apparently caused goître. Bicarbonates and sulphates of lime and magnesia being the chief hardening ingredients of water, had naturally been considered by some to be the cause of goître, but the author's investigations did not support this view. Iron as a possible cause of goître was next discussed; numerous samples of goître-producing water in Derbyshire and elsewhere had been tested, and found free from this metal. The fallacy of supposing that because a metal is contained in a particular rock it is necessarily present in water derived from that rock was pointed out.

Allusion was made to the researches of Klebs and Bircher upon the micro-organisms present in certain goîtriferous waters of Switzerland and Austria.

The occurrence of goître among the lower animals in goîtrous districts was mentioned. Reference was then made to the attempts of St. Lager[4] to produce goître artificially. This observer fed different animals with sulphate of lime, carbonate of magnesia, and with other salts of various metals. The results were negative. Experiments with sulphide and sulphate of iron, given to mice, produced, he thought, slight swelling of the thyroid. Large doses of sulphate of iron given for four months to a dog produced slight enlargement of the thyroid, but "not enough to deserve the name of goître." Other experiments by Bouchardat with lime and magnesia, and by Maumené with fluoride of sodium, both negative, were mentioned, as were also the experiments of Klebs and Bircher, who attempted to produce the disease in dogs, the former by injecting, the latter by feeding with, goîtriferous water.]

Finally, I come to a set of experiments carried on for nine months by my brother and myself. Although our results, like those of previous observers, have hitherto been negative, I think it may be worth while to record them for the sake of those who may in the future carry on investigations in the same field. We took four sets of guinea-pigs, consisting originally of six in each set. The animals bred so rapidly that our experiments extended over several generations.

To the first set we gave a mixture of various salts of lime, magnesia, potash, and soda; the salts were those contained in the average analysis of waters from two districts in Auvergne,' where 19 and 10 per cent. respectively of the male population are affected with goître. Allowing for the difference in size between man and guinea-pig, we gave the guinea-pigs five times as much of these salts as an average man would take who drank these Auvergne waters. This amount we gradually trebled in the course of the first three months. To the second set we gave sulphate of lime only, in quantity equal to half the total amount of salts given to the first set. This amount was doubled at the end of a month. The guinea-pigs were then taking a daily dose of sulphate of lime equivalent to 200 grains if given to a man. To the third set we gave carbonate of iron in doses equivalent in man to 10 grains daily. We gave this salt in the form of saccharated carbonate. The fourth set formed simply a control set of experiments, and received nothing but their ordinary food and drink. During the first four months and a half the salts were given in the solid form, ground into a fine powder, and mixed with the food. In the last four months they were given partly in this form and partly in solution in water. The animals were all weighed accurately every few weeks, and the doses of salts were regulated in proportion to the weights of the animals. After death each thyroid gland was weighed on a delicate chemical balance, and subsequently examined microscopically.

The results, although entirely negative as far as the production of goître is concerned, tend at least to show that neither sulphate or carbonate of lime, nor carbonate of magnesia, nor carbonate of iron are capable of producing goître in guinea-pigs. That goître can be produced by water has, I think, been shown by experiments that have accidentally been carried out on a large scale upon man himself. I refer to the outbreaks of so-called epidemic goître that have been so often recorded. For example, a regiment of young soldiers has been quartered in a village, and after a few months, or even weeks, a very large proportion of the men have become goîtrous. A town or village has received a new water supply, and shortly afterwards goître has broken out in a large number of the inhabitants. Conversely, a village affected with goître has changed its water supply, and goître has ceased to occur. On the Continent there are noted goître wells to which young men resort who wish to obtain exemption from military service. After drinking the water from these wells for a few weeks, they acquire goîtres sufficiently large to enable them to obtain their wish.



Fig. 2.—Larynx and trachea showing the distortion and displacement usually produced by unilateral goître; the trachea is curved to the left and flattened obliquely by pressure inwards of its front and right walls; from a man, aged 49, whose goître had existed since childhood.

I cannot now enter into detail with regard to these facts, but must refer those who desire further information upon the

[4] *Etudes sur les Causes du Crétinisme et du Goître Endémique.* J. St. Lager. Paris, 1867.

St. Bonnet près Chauriat and Beauregard l'Évêque, see Nivet, *Traité du Goître.* Paris, 1880. P. 272.

subject to the elaborate treatises of St. Lager,[6] Baillarger,[7] Nivet,[6] Hirsch,[8] Bircher,[6] and others.

[The influence of habits of life, exertion, heredity, and intermarriage were then briefly discussed.]

Summing up, there can be no doubt that climatic and atmospheric conditions have little or no share in the causation of goître. That want of air and sunshine has absolutely nothing whatever to do with it is equally certain. Habits, such as carrying weights on the head, violent exertion and the like, play but a secondary part in the production of the disease. That heredity is a cause of goître is extremely doubtful. Intermarriage has almost certainly no share in its causation.

That there exists some definite relation between goître and some poison in the soil upon which it is found is tolerably clear, and there can be no doubt that in the vast majority of cases drinking water is the vehicle by means of which that poison obtains access to the body. Such water is usually, if not always, derived from calcareous soils, but that it is probable that the goître-producing poison is not a salt of lime or magnesia. It has not yet been proved satisfactorily that any salt of iron is the essential constituent. The same may be said of organic matter.

For my own part, I am inclined to believe that the cause will be found to lie in one of the mineral ingredients of drinking water, probably not a salt of iron, but possibly one of the alkalies or alkaline earths, not lime or magnesia. I put forward this belief, however, with the utmost diffidence and hesitation, feeling that at present such evidence as I have does not warrant me in expressing a strong opinion upon the subject.

[Some of the chief symptoms of goître were then briefly discussed, and especial stress was laid upon the mode in which different kinds of goître distorted and displaced the trachea (see Fig. 2). Reference was made to a former paper in which this subject had been treated more fully[9]. The effect of goître upon the duration of life was briefly discussed, and it was concluded that in the great majority of cases the disease did not shorten life. In some cases, however, especially among young people, the pressure upon the trachea was enough to cause death. A long list of such cases that had been collected by the author was referred to. In elderly people, although goître was less often directly the cause of goître, yet it sometimes did shorten life very considerably by diminishing the calibre of the trachea so much that if bronchitis or other similar disease supervened, the patient had a much smaller chance of recovery.]

THE COMPLICATIONS AND SEQUELÆ OF INFLUENZA.[1]

By FRANK NICHOLSON, M.D.Lond.,
Physician to the Hull Royal Infirmary.

THE two recent epidemics have given everyone in practice the opportunity of seeing a large number of cases of influenza—a disease which was quite unknown to any but the older members of the profession. Late in December, 1889, this affection, which had been slowly spreading across the continent of Europe from east to west, and which already had reached England a few weeks previously, made its appearance in Hull, spread rapidly, and after raging for several weeks and affecting a large number of the population, slowly subsided, finally vanishing almost as suddenly and mysteriously as it had arrived. As there had been no epidemic in England since 1847, it was a reasonable hope that we might long be spared another visitation, but towards the end of March in this year it was too obvious that we had to face a further epidemic of influenza, which had apparently chosen Hull as the starting point for its English travels, and which promised to be far more widespread and serious than its immediate predecessor. In April many thousands of cases occurred in the town, but early in May they became less numerous, and the epidemic subsided almost as quickly as it had sprung into existence. I am probably below the mark when I hazard the opinion that quite 40,000 persons in Hull suffered from the disease during the recent outbreak, whilst in many of the East Riding villages almost every house furnished one or more patients.

Though influenza makes a patient feel extremely ill, it is rarely fatal by itself, death, when it occurs, being due to some complication. The symptoms both in last year's epidemic and in the one through which we have just passed, though they varied considerably in different cases and even in the two epidemics, can easily be grouped around a common description.

The illness usually commences somewhat suddenly, with heats and chills and a tendency to shiver, but actual rigors are not common. Severe headache, chiefly frontal and in the backs of the eyeballs, attended often by giddiness, quickly follows, and there is great prostration. With these symptoms one usually finds severe lumbar backache and pains in the limbs, and often a hacking cough, whilst in some cases there is sore throat, coryza, and lachrymation. Occasionally at no period is the temperature raised, but as a rule the mercury rises quickly to 101° or 102° or higher. The pulse, however, often remains quite slow throughout. The tongue generally gets much coated, but is rarely dry in the uncomplicated disease, and there is complete anorexia and perversion of taste; drowsiness is not uncommon, and depression of spirits very usual. The patient refuses all food, and thinks the best champagne unmitigated filth, whilst his views of life are gloom itself. If no complication arise, the disease is quickly at an end, generally in three or four days, but convalescence is always tardy, the physical weakness lingering for a long time, and the patient remaining flat and depressed. I do not find in the textbooks any very full account of the complications and sequelæ, and, as these are exceedingly important, some little consideration of them will be no waste of time.

Those affecting the respiratory organs, alike from their frequency and from their often fatal character, take the first place. The most common of all is bronchitis. It may be only trifling in degree, affecting the trachea and larger tubes; but there is a great tendency for the inflammation to creep into the smaller tubes, placing the patient in the greatest peril, and too frequently proving fatal, especially in the very young or the very old, and in those who previously had been out of health. I have seen a great many severe cases of this complication, and in contrasting it with an ordinary bronchitis have remarked: (1) That the cough is of a specially irritable and hacking character, and is peculiarly troublesome; (2) that the expectoration soon becomes copious, the sputa consisting of greenish-yellow masses, which are particularly thick and tenacious, and cling with great pertinacity to the receptacle, and when floating in water often resemble, as Dr. Peacock has pointed out, some of the large oolitic limestones; (3) that there is often very considerable difficulty in coughing up this thick sticky secretion, which is very apt to clog the bronchi; (4) that dyspnœa is often very urgent, the breathing being of a peculiar blowing and panting character; (5) that on physical examination the front of the chest reveals but few rhonchi, whilst at the bases posteriorly moist *râles* are most abundant, the area over which they are heard steadily rising in height as the disease advances; (6) that it is exceptionally rebellious to treatment; and (7) that on *post-mortem* examination the lungs are extremely inflated, and, instead of collapsing when the thorax is opened, seem actually to protrude.

The next most frequent complication is pneumonia, which may be either lobular or lobar. In the former it generally assumes a slow creeping character, and is usually grafted upon an existing bronchitis. Lobar pneumonia is often met with. I have seen a good many cases, and have observed in contrast with an ordinary acute pneumonia: (1) That the physical signs are often less pronounced; there is frequently not that large area of wooden dulness or loud tubular breathing that is commonly met with; (2) that the sputa less commonly are characteristic—rusty sputa are exceptional, the tinging, if any, being ill marked; (3) that dyspnœa is often an urgent symptom, and frequently of a deep and laboured character; and (4) that there is generally, combined with the pneumonia, a considerable amount of bronchitis, far in excess of what is usually seen in acute pneumonia. This

[6] *Op. cit.*
[7] *Enquête sur le Goître et le Crétinisme*, Paris, 1873.
[8] *Geographical and Historical Pathology*, 1885, vol. ii.
[9] *Path. Soc. Trans.*, 1890.

Read at the annual meeting of the East York and North Lincoln Branch.

struck me very much in three cases which I saw in 1889, before I recognised that influenza had reached us.

Both bronchitis and pneumonia have been very common complications during the 1890 and 1891 epidemics, and my own observations lead me to think that whilst pneumonia was the more common and the graver trouble in the first visitation, in the recent outbreak bronchitis has been more frequently met with and of more serious import.

Pleurisy is occasionally met with, but it is not a very common complication; when it occurs the effusion is very apt to become purulent and form an empyema.

Speaking of phthisis as a sequel, Dr. West remarks that about one-fourth of all the cases of phthisis treated at St. Bartholomew's in 1890 attributed their illness to a previous influenza. My own observations are not sufficiently extensive to be of much value, but I think influenza seems to have a distinct influence in determining the development of consumption.

Hæmoptysis independent of phthisis or other pre-existing disease has been reported, but I have only met with one equivocal case.

Of the complications affecting the circulatory organs cardiac weakness is the most frequent—a feebleness of the heart muscle in which fatal syncope is apt to occur, and which often needs protracted rest for its amendment. Pericarditis is now and then met with, but endocarditis hardly ever if at all.

Phlebitis has occurred in a few cases, chiefly affecting the femoral vein.

The digestive organs are frequently affected. Vomiting is not at all uncommon at the commencement, and I have known it the first symptom in several cases. It usually soon subsides and is generally independent of any structural change in the stomach, but now and then there is actual gastritis, and occasionally hæmatemesis. Atonic dyspepsia, from which the patient may not have suffered for years, is often recalled into existence; whilst momentary waves of nausea now and again distress him for some weeks. Diarrhœa occurs in some 8 or 10 per cent. of the cases, sometimes very slight and needing but little treatment, whilst on the other hand it may be most severe and obstinate with the discharge of mucus, membranous flakes, or even sloughs and blood. In the more severe forms of enteritis meteorism to a considerable degree is frequent. The severer cases of enteritis in the epidemic of 1847 were most frequently met with in conjunction with pneumonia, and, grave as they appeared, generally recovered. Recently I saw a lady of 72, who had an apex pneumonia as a complication followed in a few days by a severe membranous enteritis with very considerable tympanites. From these she was slowly recovering, the lung having cleared and the abdomen having nearly assumed its normal dimensions when cystitis set in and proved fatal.

Jaundice would seem to have been a commoner complication in the 1847 epidemic than in the two most recent ones. There is usually with it a heavy dull pain over the right hypochondrium, with tenderness over the edge of the liver. It does not seem to be a symptom of grave import, and I do not think that any serious liver disease has been met with. Peritonitis is mentioned as an occasional complication.

The urinary organs usually escape any implication. Scanty high coloured urine is the rule, and occasionally a little albumen, but nephritis or permanent kidney trouble would seem to be rarely if ever seen. Hæmaturia now and then occurs, but is rarely serious. I have seen one case of severe cystitis, and Dr. West mentions having had two or three slight cases in the 1890 epidemic. Severe menorrhagia is occasionally the result of influenza, but it would seem to have but little tendency to produce abortion.

The complications affecting the nervous system are of considerable interest. In the epidemic of 1837 drowsiness was so frequent that "sleeping sickness" was a common synonym. In the recent outbreaks, though exceptional, it has occasionally been a special feature, whilst in some cases there has been deep coma. Occurring early in the disease so alarming a symptom as profound coma would seem to be much less serious than might be expected, recovery generally taking place, but later in the case it is of grave omen. I saw one case, a woman, aged 42, who was moribund, and who died two hours later. She had been ill only a week from influenza, there being tonsillitis at the commencement. Two or three days before her death the headache became much more severe, and thirty-six hours before the end drowsiness supervened, passing into deep coma. There was no vomiting, no convulsions, no paralysis, and no rigidity of neck or retraction. Dr. Close, with whom I had seen the case, asked me to the *post-mortem* examination, which revealed extensive meningitis, there being a good deal of lymph becoming purulent over the temporo-sphenoidal and parietal lobes on both sides, especially the left, and also some at the base, spreading on each side into the Sylvian fissure. The pia mater was very œdematous and much congested all over the hemispheres, and there was a considerable excess of serum. Dr. Brown mentions having met with three fatal cases of meningitis in the 1837 epidemic, and Dr. Parkes, in his article in *Reynolds's System*, in half a line remarks that "meningitis very rarely occurs." With these exceptions, I hardly find any reference to meningitis in the literature of influenza. I may add that Dr. Close had diagnosed the case as one of meningitis before I saw it, but knowing the extreme rarity of the complication I hesitated to express a decided opinion. The *post-mortem* examination proved that he had been perfectly right.

A much more common sequel is neuralgia, generally affecting the fifth nerve, and especially its first division, but also the intercostal nerves and those of the extremities. These neuralgias are often very obstinate. I may further mention that a long forgotten neuralgia is occasionally brought again to light by an attack of influenza. I have not met with chorea as a sequel, but some cases have been recorded. Great muscular weakness and prostration are exceedingly common, but distinct paralytic attacks appear rare. In some few cases the loss of power depends upon peripheral neuritis.

The depression of spirits which attends and generally follows influenza has already been referred to, but I cannot find that insanity, which is a sequel of great importance, has received even a passing notice in the textbooks. I have seen three cases during the recent outbreak, and several others have come under my notice, whilst in the newspapers from time to time a suicide has been recorded following upon an attack of influenza. Both mania and melancholia are met with, and in many cases there is a strong suicidal tendency. In the three cases I have seen the period elapsing between the commencement of influenza and the development of mental symptoms has varied from two to four weeks. In one of them the early symptoms were obviously hysterical; the patient talked foolishly and erratically, maintained she was hypnotised, and was very troublesome. She became more and more unmanageable later, and I hear it became necessary to place her under restraint. In the second case the symptoms for a few days took the form of monomania. She had recently returned from Canada, where she had seen the St. Lawrence frozen over. In her imagination her dearest friends were crossing, when the ice commenced to break up, and they seemed to her in the most imminent danger. For several days her mental anguish was extreme, her urgent plea being that we should all rush at once to their assistance. I saw this patient a month ago, and am glad to hear that it did not become necessary to place her under restraint, and she is now convalescing. In the third case, which I saw a week ago, mental symptoms came on four weeks after influenza, and had existed for one week when I saw her. The patient was low and depressed, difficult to manage, acting strangely, and on one occasion had gone out into the street in her nightdress. I fear removal to an asylum will be a necessity very shortly. All the three cases I have seen were women, and three others which have occurred in the practices of two of my friends were also women.

A good deal has been written about the eruptions occurring in influenza, but any rash at all is quite the exception. The commonest is herpes, of which I have seen several cases. It generally occurs on the lips, but may follow an intercostal nerve or appear elsewhere. It has no necessary connection with pneumonia; in fact, I have seen it more frequently in uncomplicated cases.

Erythema is met with usually in two forms: the one resembling the rash of scarlet fever, the other more like that of measles. I saw one remarkably like a scarlatina rash. The illness was ushered in by vomiting, the temperature rose to

102°, and the following morning a scarlet erythematous rash appeared on the chest, spreading over the neck and abdomen. There was a slight amount of angina, and the patient being a child of 4 I was in some doubt as to the diagnosis, but the next day settled this, for the rash had all vanished, the temperature had fallen, and several other cases of influenza rapidly occurred in the house. These erythematous eruptions are generally very shortlived. Dr. Hawkins reports seven cases in which the elbows and knees were almost solely affected. Urticaria, papular eruptions, and purpuric spots are reported as occurring, but I have not met with any of them.

It is important to remember that antipyrin, the salicylates, and quinine occasionally give rise to rashes, and to exclude this source of fallacy. I have myself had several boils as a sequel, but except in one Lincolnshire village I cannot find that they have occurred in the practice of others. Muscular cramp, especially in the calves, is common for a few weeks during convalescence, and in some cases the anterior abdominal muscles just along the costal arch are the parts affected. Now and then distinct swelling with effusion into the joints occurs resembling a subacute rheumatism, which is obstinate to treat. Glandular swellings are met with occasionally affecting the lymphatic glands, the parotid, or the testis, which sometimes go on to suppuration, and in some cases the salivary secretion has been suppressed even for a lengthened period.

Tonsillitis is pretty common as a complication, and is often severe, but suppuration does not often take place. Laryngitis, too, is frequent, but is hardly ever a serious complication except in young children, and seems rarely to produce great obstruction, or to need tracheotomy. Epistaxis in moderate amount is fairly frequent and of little importance, but now and then it is severe, and even alarming. Post-nasal catarrh is a sequel that causes much discomfort, owing to the thick tenacious character of the secretion, and is common, whilst ozæna, though occasionally met with, is rare. The former is a considerable trial to the patient, the latter to his friends, but in both instances ultimate recovery is fortunately the rule.

The affections of the ear are important. Slight deafness without pain, due to the trumpet-shaped end of the Eustachian tube becoming closed from the swollen condition of the mucous membrane of the pharynx, is frequently met with, and in a small proportion of cases the inflammation travels into the middle ear, causing intense pain, and generally followed by rupture of the membrane and a free discharge of pus. I have seen two or three cases which ultimately did well, leaving, however, a little deafness. One ear only or both may be affected. The eyes during the last two epidemics have been largely spared anything beyond some slight conjunctivitis, but in a few cases ulceration of the cornea has been met with. I have not seen any case in which suppuration occurred in the eyelids or tissues about the eyeball, but in some epidemics they were occasionally seen.

Relapses of influenza are, in my experience, distinctly exceptional, and a large number of those who suffered in the 1890 epidemic have escaped in the recent one, though no protection is said to be afforded by a previous attack. Recrudescences are common enough where the patient has ventured out too soon, but these must be distinctly separated from relapses.

After passing in review this alarming list of possible complications and sequelæ I have but little to add. I incline to the belief that influenza is not infectious but due to some impurity, probably chemical, in the air, which appears to affect the nervous system most powerfully. Many of the complications of influenza may possibly be caused through nerve agency, through the effect of this poison on the pneumogastric, abdominal sympathetic, and other nerves; but the whole question of the etiology of influenza and the mode in which it spreads is still a mystery, and we can only hope some light may ere long illumine the darkness that enshrouds it.

A CONVERSAZIONE will be given by the Royal Society on June 17th.

BEQUEST.—The Treasurers of the Devonshire Hospital and Buxton Bath Charity have received £500 from the executors of the late Mrs. Margaret Platt, of Stalybridge.

CASES OF INFLUENZA WITH SEVERE ABDOMINAL PAIN AND COLLAPSE.

By ROBERT M. SIMON, M.D.CANTAB.,
Physician to the General Hospital, Birmingham.

So much has been written about the present epidemic of influenza that it is possible that cases similar to those I wish very briefly to narrate have been overlooked by me, but as such have certainly not been generally recorded it would seem worth while to mention those I have had the opportunity of watching.

CASE I.—A medical man, who had been depressed by overwork and the almost sudden death of a friend from influenza, with cardiac failure, began on a Saturday in May to feel tired and ill. He was obliged to see some patients on Sunday morning, but was unable to enjoy a midday dinner, and spent the rest of the day on a sofa until he went to bed about 8 o'clock, feeling generally ill rather than complaining of any special pains or aches. His temperature at this time was 100°. He awoke at 6 A.M. with a severe pain in the abdomen, and hurried to the water-closet. There, after a copious motion, he so nearly fainted that he was obliged twice to lie down on the floor before he could complete his toilet and walk to his bedroom, where he lay for some time completely collapsed, sweating profusely, and almost pulseless. From this state of collapse he soon recovered, and was able to get up in the evening and out of the house next day, although for more than a fortnight he was exceedingly depressed in health and energy.

CASE II.—Another medical friend I have attended with almost similar history—a fainting fit in the water-closet preceded by abdominal pain and followed by very marked collapse. His illness was not, however, so transitory, for during several days he was kept in bed by fever—the temperature rising to 102.5°—and general catarrh of the lungs.

The other two cases, of which notes are appended, occurred in the hospital under my care, and were so alarming that the house-physician sent urgently for me to see them.

CASE III.—M. R., aged 42, was admitted on May 21st, 1891. She was married, and had five children. The day before admission she had a slight aching pain in the abdomen, for which she took two pills. On the morning of the day of admission, immediately after her bowels had been opened, she was seized suddenly with such severe abdominal pain that she fainted. The pain continued till the afternoon, when she was brought up to the hospital. There had then been no vomiting. On admission she was in a state of great collapse. Temperature, 96.4°. Face blanched; lips bluish-white; surface of body cold; pulse very small and feeble; breathing short and catchy. Complained of great pain in epigastric region, where there was muscular resistance and considerable tenderness. No distension of abdomen. Vomited once, soon after admission. Circulatory system normal. Some bronchitis, but no pleuritic friction. Haze of albumen in urine. Menstruation had ceased for five years. She was put to bed with hot bottles, and given brandy. A poultice was applied to the abdomen. The temperature rose during next two days to 100°, and then varied for two days between 99° and 101°. She remained in the hospital for a week, suffering from slight bronchial catarrh, and then left, feeling very weak.

CASE IV.—E. K., aged 15, a bicycle worker, was admitted on May 5th, 1891. He had not felt in good health for the previous three weeks. The day before admission he came up to the hospital, complaining of abdominal pain, for which he was given some medicine. The pain troubled him no more that day. The following morning, whilst at work, he noticed gradual return of the pain, and soon afterwards suddenly fainted. He was given some brandy, and brought at once to the hospital. On admission he was scarcely conscious, and so collapsed as to appear almost moribund. The temperature was 98°; the surface of the body was cold; the face of bluish tinge (but without sweating); the pulse was scarcely perceptible, and the respirations sighing and very infrequent—from 6 to 8 per minute—with pauses of five seconds or more between the end of expiration and the beginning of inspiration. With some difficulty it was made out that he had pain in the right side of the abdomen, mainly in the region of the

cæcum, and in this region there was well-marked tenderness. After being put to bed and treated with hot bottles, poultices, etc., he quickly recovered, but some tenderness over the cæcum remained for a day or two. There was no rise of temperature. He left the hospital in four days, well but very weak.

The two hospital cases were very alarming, and as collapsed as though they had been violently kicked over the solar plexus; but in all the abdominal pain was a marked precursor of the attack, and the collapse its principal feature; while the severe depression that followed was common to all the four cases, though only in two of them was there any evidence of the bronchial irritation from which so many of our influenza patients have suffered.

These cases do, I think, furnish additional evidence that, as Dr. Graves of Dublin and Dr. Blakiston of Birmingham affirmed long ago, influenza is an affection of the nervous system, with its concomitant derangements in the organs of digestion, circulation, etc., while the seat of incidence of the poison may be determined by at present unknown causes.

INFLUENZA IN NORTH LINCOLNSHIRE.

By T. B. FRANKLIN EMINSON, M.R.C.S.,
Scotter.

The prevailing epidemic is now on the wane in the northern parts of Lindsey. The villages in the extreme north were attacked at the end of March almost simultaneously with Yorkshire, and the epidemic rapidly spread southwards, attacking first isolated houses, particularly those in exposed situations, then entering the villages.

The rainfall in February was almost *nil*, and the winds during March, April, and May, have been north and east, rarely staying in any other quarter for more than a few hours. Early in the epidemic men rather than women were seized; children have suffered more generally than in the epidemic of 1890, and in them gastric symptoms have been a marked feature.

The severity and suddenness of incidence varied much in different villages. In two—Northorpe and Blyton—standing on the slope of high ground and exposed on the north or east, the epidemic came upon the people suddenly, a large proportion being attacked within a few days. This village (Scotter) on the other hand, lying in a sheltered valley, escaped almost entirely for several weeks, and the attack has been more gradual. The fatality has varied much, some villages having had many deaths, others none. Scotter village has suffered severely, notwithstanding that as a rule the uncomplicated attacks have been mild, while the outlying hamlets of the parish have had no fatal case. The parish contains by this year's census 1,099 inhabitants, about 700 in the village and 399 in surrounding hamlets and farms. In May there were 7 deaths in Scotter, equalling a death-rate of 120 per 1,000, while in the outlying hamlets there has been 1 death (phthisis), giving a death-rate of about 30 per 1,000. Five of these 7 deaths in Scotter have been from pneumonia secondary to influenza, a death-rate of 85.7 per 1,000 from this disease alone. There has been 1 recovery in May, a woman at the sixth or seventh month of pregnancy. She had acute pneumonia of the left apex, accompanying influenza; labour then came on, and crisis followed in four days, but this was succeeded by renewed fever and dry pleurisy. Pneumonia has thus been the ordinary fatal complication, accompanied usually by pleurisy. Many favourable cases of simple pleurisy have been seen. Slight bronchitis has been exceedingly common.

The relationship between influenza and pneumonia must be close. Many of my patients and others believe the present epidemic to be the same disease as the "pleuro-pneumonic fever," so fearfully fatal in this village last year, and reported on by Dr. Parsons. At present I neither accept nor reject this view, but cannot help noticing the remarkable likeness between the mild non-pneumonic attacks in children which accompanied the pleuro-pneumonic fever of last year and the gastric form of influenza commonly seen this year. In order to entertain the notion of the identity of influenza with this local pneumonia, it is necessary to suppose that under some circumstances the influenzal poison can change its habitat from the atmosphere to polluted soils and sewers, for it is now beyond reasonable doubt that the outbreak of pneumonia at Scotter in 1890 was chiefly due to sewer emanations. Yet this outbreak followed close upon the heels of the influenza of 1890, and with the present year's epidemic we have a pneumonia of the same appalling fatality.

CASES OF MEDICO-LEGAL INTEREST.[1]

By H. NELSON HARDY, F.R.C.S.Ed.,
Vice-President Metropolitan Police Surgeons' Association.

In recording these cases I have restricted myself to those which have come before me during the seven years that I have held office as divisional surgeon of the Metropolitan Police, though not altogether to those which have come before me in that capacity. My friend and colleague, Dr. Forsyth, having dealt exhaustively with the subject of drunkenness, I make no reference here to cases of that description, although it is a subject which engrosses a good deal of our attention when called to police stations.

Infanticide.

Infanticide is a crime which seems to me to be lamentably frequent, and—owing probably in part to the disinclination of coroners to pay for medical evidence at inquests upon these cases—one which is but rarely traced home to its perpetrator. During the whole seven years, out of a number of cases of infanticide to which I have been called at East and West Dulwich stations, I have only, I find, in one case made a *post-mortem* examination or given evidence at an inquest on a body of a newly-born infant, and my usual record of these cases is as follows: Sent for on such a date at such an hour to —— Police Station to see body of newly-born (male or female) child; cord had (or had not) been tied; wrapped up in paper (or other) parcel, with portion of linen or other garment (if present), and whether any initials or marks on them. As a rule I never hear anything more of the case.

In the solitary case in which a necropsy was ordered, which happened in April, 1885, the body of a female infant was found in a bag wrapped in a child's cape. From the navel having quite healed I came to the conclusion that the child had lived for at least a week, and, from the fact that decomposition had commenced—the weather being cold—that it had probably been dead three or four days. The body was found to be very badly nourished, weighing only 6 lbs. 2 ozs., though its length was 21 inches. There was a total absence of fat subcutaneously and around the internal organs; not a particle of food in the stomach or bowels. Bruises were found on the head and a clot of blood beneath the right temporal bone, which seemed to indicate that, not content with the slow process of starving, other means had been taken to hasten the child's death. An open verdict was returned and there the matter ended.

I have never happened to see the curious mummification of the cord which my friend, Mr. Lowndes,[2] police surgeon for Liverpool, has described, and of which he has only seen one example in twenty years. He regards it as positive evidence that the child has lived, differing in this from some well-known authorities.

Suicide.

Cases of suicidal tendency or attempted suicide require much watchful and active treatment, and it is seldom, I think, that we are able to record one which comes so near a cure as the following: In 1885 an officer in one of Her Majesty's services was present when a person attempted to cut his throat, and in wresting the knife out of the would-be suicide's hand he cut his own fingers, and thought that some of the other man's blood got into the cuts. A week later he came to me saying he felt very depressed, and that sometimes it seemed as if he too must cut his throat. I made him take

[1] Read before the Metropolitan Police Surgeons' Association.

[2] *Extraordinary Case of Infanticide: Mummification of the Umbilical Cord.* By Fredk. W. Lowndes, M.R.C.S., Surgeon to Liverpool Police. (Pamphlet).

a week's holiday, told him to go about and amuse himself and try to forget all about the blood, which I assured him would do him no harm even if it had got into his wound. At the end of the week he seemed all right, but a few days later came back worse than ever, and said he could not trust himself where there were knives or firearms for a single night—that he had even taken down a revolver from its place and thought of using it on himself. It was evidently unsafe to allow him to go on like this; but, hoping that a thorough change of air and scene might fully restore him to his *mens sana*, I certified for a month's leave of absence, which he spent in his native Kerry; he returned, and has since continued to be quite free from any suicidal tendency. I afterwards learned that another person, who had been called in to assist my patient in restraining the would-be suicide, became similarly affected with imitative suicidal tendency, and had in consequence to be removed to an asylum, where he was kept a few weeks and then discharged. The week after his return home he disappeared, and his body was found in a pond a few days later.

Towards the end of last year I was summoned one night to see a young married woman, who, having been out drinking all day, leaving her nearly blind infant without food or fire in the bitter weather which we had towards the close of the year, and having been carried home in the evening quite drunk, had, when she recovered a little, become so disgusted with herself that she proceeded to drink some eye lotion which she had obtained at an ophthalmic hospital for her child, and this proving ineffectual, tried a sip of strong liquid ammonia, such as is used for taking out stains, but is not often employed for suicidal purposes. This burned her mouth and throat so much that fortunately she did not take much of it, and as I found she had already been drenched with salt and warm water to make her vomit, when I saw her I contented myself with administering some ipecacuanha, and leaving her to sleep off the combined effects of poison, drink, and remedies. She was able to attend the police court two days afterwards, and was discharged with a caution.

In another case of supposed poisoning, in which benzine was the drug alleged to have been administered in tea to her mistress by a servant girl, I much to the disgust of the learned magistrate before whom the case was tried—refused to undertake the analysis of the suspected fluid, and it was referred to an analytical chemist to do so, who, after full and careful examination, found nothing!

When the suicide has been successful in his attempt, our chief object of course is to obtain materials for forming an opinion whether the deceased really met with his death by his own act, and this we sometimes have to do under very difficult circumstances.

In June, 1886, I was taken to a room in an unfinished house, which had not been entered for some weeks as far as was known, the builder having got into difficulties, and shown the dead body of a middle-aged woman, fully dressed, lying face downwards in the dried remains of a pool of blood, a common table knife lying about a foot from her head. The body was swarming with the products of decomposition, and the smell from it was so bad that the young police constable who had summoned me showed symptoms of being overcome, and I had to send for disinfectants and encourage the lighting of pipes in order to render the atmosphere of the room endurable. There were several large blood stains about the floor, but no appearance of anyone having stepped in them, nor sign of any struggle having taken place. Two rings on the third finger of the left hand had not been disturbed, and the handle of the table knife, as well as the blade, was stained with blood. At the necropsy two wounds were found on the front of the neck about 3 inches long, running parallel to one another at about an interval of 2 inches. The lower wound merely divided the skin and fat, but the upper severed the windpipe to about two-thirds of its extent, and also the principal vessels. The wounds were such as could have been been made with a knife like that found, and such as might have been inflicted by the person herself. No other wounds were found, nor any other cause of death. At the inquest it was proved that the deceased was given to drink, that she had some weeks previously purchased the knife at a stall in the street, and had not since been seen or heard of. A verdict of suicide was recorded.

A rather remarkable case of suicide came under my observation in 1888. A city clerk, who had not been a month married, coming home one evening in January at his usual hour, found his house in darkness, and his wife, its sole occupant, lying dead upstairs. He communicated with the police, who sent for me, and I found in the back kitchen on the ground floor a sink containing a quantity of blood clot, a small looking-glass and a razor, both blood stained. Upstairs, in the front bedroom, we found the body lying sideways on a chair, the head resting on the bed. A wound, 2 inches long, extended across the throat from left to right, partially severing the windpipe and dividing a number of blood vessels on each side. Her clothes about the neck and chest were saturated with blood. There were blood stains on the bed and some on the stairs and passages. It seemed wonderful that while alone in the house she could have walked without assistance from the sink downstairs up to the bedroom with such a wound in her throat. Rigor mortis not having set in, but the blood on her neck being quite dry, I supposed she must have been dead for some three or four hours. The wound was such as might have been self-inflicted, and at the inquest a verdict of suicide was recorded. I heard afterwards from one of her relatives that she had been much attached to a soldier, but was induced by her friends to accept her other suitor as being a better match, and that this was the only cause that could be suggested for her taking her own life.

Homicide.

Cases of murder and manslaughter do not come frequently before most of us, but when they do they bring with them great responsibility. One morning, four years ago, I was sent for to what proved to be a case of murder. The dead body of a young man of 20 or 21 years of age, who had apparently been killed while asleep, was lying on its right side, with blood on the pillows and sheet near his head. His face was discoloured and rigor mortis was present. His watch and chain were safe under his pillow. There was a small round wound behind his left ear, from which blood and brain substance had oozed, and a wound 1⅛ inch long in his right forehead, with bruised edges, which reached to the bone. No pistol or weapon of any kind was found near the body, but a pistol, cartridges, and an old hammer, stained with what appeared to be blood, were found concealed in a box in another room. A brother of the deceased, with whom there had been some slight quarrel, and who had lived in the same house with him, his mother, and another brother, had not been seen since the murder, but, after keeping out of the way for several days, was arrested near the scene of the murder, and some of his blood-stained clothes brought to me for examination. At the *post-mortem* examination, on reflecting the scalp, a large amount of extravasated blood was found extending from the wound on the forehead to the occiput, and fractures extending through the frontal, temporal, parietal, and occipital bones. A flattened bullet, which had entered the skull by the wound behind the left ear, had left its track through the posterior lobe of the brain and the cerebellum in small pieces of bone, and was found 1½ inch above and behind the right ear, where it had fractured the bone, but was lying within it. The conclusions at which I arrived were (*a*) that the pistol wound or the other injuries to the head were either of them sufficient to have caused death; (*b*) that the wounds could not have been self-inflicted; (*c*) that the pistol wound was the immediate cause of death. At the inquest a verdict of wilful murder against the brother was returned, but at the Old Bailey he was acquitted on the ground of insanity, and ordered to be detained during Her Majesty's pleasure. It was believed that he had battered the skull in with the hammer which was produced, and then shot him, and it appeared that he had meant to serve his other brother the same way. In cases like this it is a great advantage to have the assistance of an expert, as I fortunately had in the next case I am about to mention, in which our valued colleague, Mr. Bond, gave me the benefit of his experience from the time the Treasury took up the case. It was one of supposed manslaughter of a child whose bones were dug up by degrees from under the ground floor at the back of a small house, which, having been untenanted for months, had become again inhabited; the new tenants found a bad smell in

this one room, which led to the floor being taken up. By degrees we got the bones arranged in the following order:

Bones of Head and Face.—Occipital, two temporal, with light-brown hair attached. Frontal in two pieces, with brain substance converted into adipocere. Sphenoid (part of). Superior maxilla in two pieces, with molar tooth not erupted. Inferior maxilla with molar tooth unerupted on each side.

Upper Extremities.—Two scapulæ, two humeri, two ulnæ in four pieces, one radius, two clavicles, five phalanges.

Spine and Body.—Eight pieces of vertebræ, thirty-eight ribs and pieces of ribs.

Pelvis and Lower Extremity.—One ilium, two femurs, two tibiæ, two fibulæ.

Additional bones were afterwards dug up, and, as if on purpose to confuse us, some pieces of bone of a lower animal also appeared (probably ham bones), as well as two large iron nails, one with light brown hair adherent to it.

The points which we were able to make out were: (1) That we had here the greater part of the skeleton of a child which, from the unerupted teeth, we judged to have been about 2 years old. (2) That from the formation of that curious product of decomposition—adipocere—it had probably been buried for some months. (3) That there was no evidence to show how it came by its death. As the charge of manslaughter could not be sustained, the former tenant of the house, who had had a child corresponding in age to this one, was acquitted of that, and pleaded guilty to the minor offence of concealment of death.

Criminal Assaults.

Amongst the saddest cases with which we have to deal are those of criminal assaults upon young children. A child not quite 10 years old was brought to me by her mother to be examined. It appeared that for six months previously her brother, aged 14, had been in the habit of criminally assaulting her. Two days before I saw her, a neighbour, looking through a window, had seen them in the very act, and, when spoken to, neither of them had denied it. The child's external genitals were unusually well developed, the pubic hair partially grown, the hymen was absent, and there were no marks of violence or of recent rupture of the hymen. In another case, a child of 11, had for eighteen months permitted, and even apparently encouraged, the embraces of a boy of 16. She had been seen by the family doctor before the police were informed, and he and I subsequently examined the case together. We found, as in the other case, the genitals unusually well developed, the hymen absent, and the vulvar orifice enlarged. No evidence of disease. In this case the accused youth was offered the option of being examined by a surgeon chosen by himself; and, in accordance with the rules of the Metropolitan Police, I was present as divisional surgeon while he was so examined. In his case the result was simply negative, but I refer to it especially because the practice of giving prisoners accused of rape or criminal assault the option of being examined either by the divisional surgeon or by one chosen by themselves, though perfectly fair, as it seems to me, both to the prisoner and to his accuser, has been condemned by one learned judge, Mr. Justice Hawkins, and approved by another, the late Mr. Baron Huddleston. In the notorious case of Boulton and Park a learned judge told one of our colleagues that a prisoner would have a perfect right to knock him down for examining him; on the other hand, quite recently Baron Huddleston stated from the Bench that the police had as perfect a right to examine a man's person as his clothes. As Mr. Lowndes, of Liverpool, who has drawn my attention to this point, says, it is very remarkable that judges, both of them eminent, should disagree on a question of this kind.

When the charge is one of rape or criminal assault on women we have always to be on our guard against trusting too implicitly to statements made even in good faith.

In the last case I had of the kind a servant girl of good character rushed home one night, knocked excitedly at the door, and, when her mother opened it, fell fainting into her arms. On coming to, she told the following extraordinary story: She had been out walking with another girl, and had passed a man whom she could not describe. She and the other girl had separated at the end of the road, and she had then come back alone in the direction of where the man had been. When she reached a lonely part of the road she had been thrown down by him on her back, hurting it against a stone. A white scarf had been placed over her mouth to prevent her screaming, and the man, holding down her arms, had had forcible intercourse with her. In less than half an hour the police had searched the road, but no scarf had been found. She was brought to the station, and I found evidence on her dress and hat that she had been on the ground. I also found a red mark about the middle of her back, where she complained of pain, but, on examining for any evidence of the alleged rape, I found absolutely none; no stains on the clothes, no marks of violence, not even a scratch on her limbs; no rupture of the hymen, and no sign of any irritation about the genitals. I came to the conclusion that she had probably enough been thrown down and that, in her fright, she had imagined the rest.

Insanity.

With regard to cases of insanity, there has been of late years something like a panic in the profession, and some medical men have told me that they invariably refused to sign certificates in lunacy, and should continue to refuse while the law remained as it was. Whether they, or the relatives of lunatics, will be better off under the new law, which renders it necessary to take the person before a magistrate,[3] as if he had committed a crime, remains to be seen, but I have no doubt we are all fully impressed with the necessity of being extremely careful as to signing these certificates.

Sometimes the disease commences so insidiously that we can hardly persuade the person's relatives that it is a case for removal until something tragic happens. In January, 1887, I was attending an old lady for bronchitis, which she had caught while nursing her husband—a confirmed invalid—(to whom she was much attached) through a renal attack. The first alteration in her mental state that I noticed was that she began to complain of her husband giving her too much trouble and disturbing her at night. Next she accused her servant of robbing her, and, when a local nurse was got into help at night, she accused her of being drunk and ill-using her (the mistress). As such things do sometimes happen, I advised that a trained nurse should be obtained; but this one also was accused of ill-usage, blistering the lady's side, etc. (though of course no marks were visible). Next one of the lady's sons, who is a Catholic priest, the rest of the family being Protestants, came up from Dorsetshire to see her, but, in a few days, he and another son were accused of drinking, and also of acting cruelly towards her. Then she took to wandering about the house at all hours of the day and night only partially dressed, said poison was put into her food, and even into oysters before they were opened, took to screaming at night so as to attract the neighbours' attention, threatened to "do for" the trained nurse if she came near her, tried to bite one of her sons, and wrote to me as follows the day before she was removed to an asylum: "Dear Sir,—The secret is out. Come to us, we are being slowly poisoned by having some medicine tampered with. Oh! what a dreadful religion. W--- was her father confessor. I will explain all.—Yours truly. We have had a dreadful night. Cruelly, cruelly treated. I screamed as they tried to drench me. Come to my rescue soon. I have been very ill. This nurse would poison me if she could." Even when his mother was as bad as this I had some difficulty in persuading her son that it was necessary to have her taken care of in an asylum, and had it not been for the disturbances she caused at night, I doubt if I should have been successful for some time longer.

It is indeed extraordinary how slow those immediately about a person of unsound mind sometimes are in recognising what seem to us the plainest symptoms of insanity. Two years ago I was asked to go down to a popular watering place to see a young unmarried lady who had a few years before inherited a small competency, which her solicitors now thought she was spending rather too fast. They had applied to a cousin of hers (who was a patient of mine) to take steps to have her made a ward of Chancery, and at his request I went down to see her. I found that she had the reputation of being eccentric, lavish with her money, and suspicious; that she laboured under the delusion that she was always being

[3] As all magistrates are not authorised to sign the "reception orders," Dr. Sutherland's *Directory of Justices in Lunacy* (Bale and Sons, Great Titchfield Street) will be found a useful book of reference.

robbed (an idea, however, which even sane people sometimes get in favourite seaside resorts); that she was continually in the habit of abusing and assaulting the poor girl who waited on her, over whom she had poured the vials of her wrath in the shape of a can of milk, the contents of the chamber, or anything else that came handy. I ascertained that of twelve policemen who suffice to keep the peace in that happy valley, eleven had been called in at one time or another to stop rows caused by this lady; that she had a little pet dog which she carried about wherever she went, and for which she had four sheep's kidneys cooked for breakfast, rabbit for his lunch, and lamb for his dinner; that the remains of his meals were kept in her bedroom until they stank; that she herself had become quite careless about her personal appearance, quite unconscious of the filthy state of the rooms in which she lived, and, in short, quite unfit to take care of herself or her money.

On my return to town I reported my opinion to her relatives, and steps were at once taken to place her in an asylum, where she still remains. The strange part of it is that neither the people with whom she lodged, the doctor who had been attending her for months, nor the solicitors who were in correspondence with her, and one of whom had recently visited her, seemed to have any idea that she was *non compos mentis*. They thought she would ruin herself by her extravagance, and that was all.

AN UNUSUAL CAUSE OF DIFFICULTY AND DANGER IN TURNING.[1]

By T. ARTHUR HELME, M.D., F.R.S.E.,

Resident Obstetric Surgeon, St. Mary's Hospital, Manchester; formerly Honorary Physician to the Women's and Cowgate Dispensaries; and Assistant Lecturer on Midwifery and Diseases of Women and Children, Edinburgh.

VERSION, when performed upon a child presenting by its vertex or occiput, is rarely attended with difficulty, whether the fluid contents of the uterus are completely drained away or not; more rarely still is it attended with danger, unless the lower segment of the uterus has been greatly drawn out and thinned by delay; in such a condition the element of danger is on the part of the mother, that is, the pathological thinning of the uterine wall. If, however, instead of the normal vertex we have some abnormal presentation, for example, face, brow, or shoulder, a new source of difficulty and danger is introduced on the part of the child.

As the case now to be related was the first in which I had met with, or perhaps I should say recognised, this latter condition, I am tempted to communicate it. The patient was a primipara, aged 20, who had been in labour about six or eight hours when the membranes ruptured and the waters escaped. The nurse immediately sent for me, and on my arrival, about half an hour later, I found that I had to do with an arm presentation. The patient was a diminutive, ill-developed woman, with an ostium vaginæ so small that in the necessary manipulation the perineum was ruptured for about half its extent.

On examination the following condition presented itself: The right hand and forearm of the child were in the vagina; the back of the child's neck was lying against the front wall of the uterus, the neck stretched out considerably, and the head to the left side; the body, which lay against the mother's right side, was twisted on its longitudinal axis so that the buttocks were to the back and right. The cervix was fully dilated, the uterus somewhat contracted on the child, the lower segment thin, and Bandl's ring plainly felt above the shoulders; in fact, the condition was one of an early stage of spontaneous evolution, and had the pelvis been large enough, or the child small enough, no doubt the back and breech would have been driven down past the head, which was lying up above the pubes.

I decided that turning was the treatment indicated, and with this object I endeavoured to seize a foot, but was greatly hampered by the prolapsed arm, which, after being returned into the uterus with some difficulty, persisted in falling out again. I gave up further attempts to replace it, and passing my hand into the uterus seized a foot; but I could make no impression on the child's position, nor did external manipulation afford any help. After repeated attempts at this podalic version (cephalic was quite out of the question, as the head was worse to get hold of than the feet) my arms became so fatigued that I was about to give it up and resort to the objectionable practice of decapitation, when the reason of the difficulty occurred to me, namely, the fact that the shoulders were prevented from rotating by the contraction of Bandl's ring above them. When traction was made on the feet the breech was pulled over to the left, while the child's left

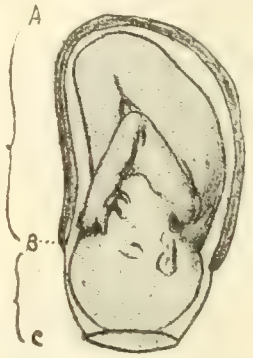


Fig. 1.—Vertex presentation. AB, upper active segment of uterus. BC, lower passive segment of uterus and cervix. B, Bandl's ring.

shoulder and arm were jammed against the firm Bandl's ring. The secret of the difficulty lay in this jamming of the shoulder against the ring of contraction. If the shoulder could be freed turning might be possible. In order to

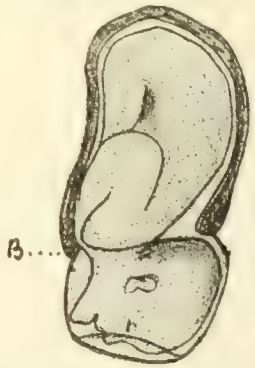


Fig. 2.—Face presentation.

facilitate the attempt the uterus was relaxed as much as possible by deeply anæsthetising the patient; then, keeping one hand in the vagina, I pulled on the prolapsed right arm with my other hand, and so got the right shoulder at a lower level than the left shoulder; at the same time, with my hand in the vagina, I pushed the child's left shoulder towards the middle line of the canal, and slightly upwards, and then pushed the child *en masse* a little way further into the cavity of the now relaxed uterus, suprapubic support to the uterus being given by the nurse. Both feet were seized and drawn down, the child rolled round with perfect ease, and delivery was effected without further difficulty.

Here then was what I imagine to be a somewhat rare cause of difficulty, and a possible cause of danger. As we well know, the body of the uterus during labour differentiates itself into two distinct portions:—

1. An upper portion playing an active part, that is, where the wall contracts and grows thicker during a pain.

2. A lower segment playing a passive part, that is, where the wall is drawn out and becomes thinner during a pain.

These two portions are separated by what is known as "Bandl's ring," a term which may be conveniently retained

[1] Read before the North of England Obstetrical and Gynæcological Society, at Leeds.

to denote merely the thick lower border of the upper active segment.

Rupture of the uterus always occurs or commences in the lower segment where it is abnormally thinned out, generally in unduly protracted labour.

Even under such unfavourable conditions, that is, when the lower uterine segment is considerably thinned, so long as the presentation is the ordinary vertex or occiput little danger need be anticipated during version, and this is so because of the shape of the body to be turned. In this condition the child, lying in normal attitude and position, vertex presenting (Diagram I will help to explain this), the back of the child and its occiput form almost a segment of a circle. Consequently, when we draw down a leg and the child revolves on its transverse axis, no resistance is offered by the prominent ring of Bandl to the upward movement of the head. In other presentations, however, the conditions are totally different; the outline of the dorsal surface of the child is no longer represented by the segment of a circle, and this fact constitutes a possible element of difficulty and danger; this is easily recognised by reference to Diagram II, which represents a face presentation, the head lying in the lower segment

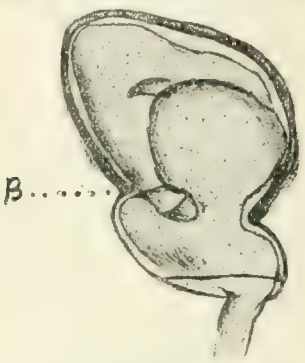


Fig. 3.—Arm presentation.

of the uterus and cervix; the back and head no longer form one continuous curve, but instead we find two curves, one formed by the back and one by the head of the child, with a markedly acute angle between them corresponding to the neck. The longitudinal axis of the body and the axis of the head meet at an angle. What happens now on drawing down a leg? Instead of the one continuous curve gliding over the projecting Bandl's ring, this projecting ring catches in the angle of the neck, the head becomes hitched and turning difficult or impossible. If traction be persisted in there will be danger that the lower segment will be stretched until its thin wall gives, and rupture takes place. The same state of affairs may occur in a shoulder presentation, when the lower segment is thinned and Bandl's ring well marked. Diagram III represents this condition the condition found in my case just narrated.

In this case the difficulty was not due simply to a firm contraction of the uterine body over that portion of the child contained within it; this condition I have met with on several occasions. When the whole uterus is in a state of tonic retraction there is great difficulty in introducing the hand and reaching the legs. In my first mentioned case no such obstacle was met with; the hand passed readily into the uterus when once the Bandl's ring was passed; above this there was room for easy manipulation.

I would point out that the cause of difficulty and danger to which I have here called attention is one of malpresentation of the child coupled with a pronounced differentiation of Bandl's ring; a condition not to be confused with a contraction, or as it ought to be called a rigidity, of the cervix, whether at the external opening or at the internal os. The treatment I found successful under such circumstances is first to deeply anæsthetise (chloroform) the patient, then to disengage the part hitched under the ring of contraction by drawing it downwards and towards the axis of the canal, and finally to push the child *en bloc* backwards into the cavity of the uterus; version is then easily performed.

CHLOROFORM OR ETHER?

By Surgeon-Major EDWARD LAWRIE, M.B.Edin.,
President of the Hyderabad Chloroform Commission.

The British Medical Journal has performed a signal service to the Hyderabad Commission in placing before the profession Dr. Julliard's views on chloroform and ether. The leading article in the Journal of April 25th, 1891, is incomplete, however, and ought to have included the London statistics so opportunely brought forward by Mr. Roger Williams in the *Lancet* of February 8th, 1890.

According to Dr. Julliard's statistics, deaths from chloroform amount to 1 in 3,258, and from ether to 1 in 14,987 administrations. According to Mr. Roger Williams, the statistics of the London hospitals show that deaths from chloroform amount to 1 in 1,236, and from ether to 1 in 2,754 administrations. On the other hand, the statistics of chloroform administered on Syme's principles form an unbroken record of inhalations from 1848 to 1891 without a death. The British Medical Journal regards Dr. Julliard's figures as "a most valuable statistical summary," but this summary would obviously be much more useful if it were accompanied by a description of the method of administration pursued in all the cases from which it is compiled. There are two distinct methods of chloroform administration in vogue. In one the pulse, as well as the respiration, is taken as a guide; in the other the pulse is never under any circumstances taken as a guide; and it is manifestly unreasonable to compare the risks of ether and chloroform without stating with regard to chloroform which of these methods is employed. The importance of this point lies in the fact that there is not one case of death from chloroform recorded, in which it is proved that the pulse was not taken as a guide; whereas, in Syme's practice and in my own, where the pulse has never been taken as a guide, no death from chloroform has ever occurred. It should be stated that in Syme's practice, as in my own, the anæsthetic was always administered by students and not by specialists. *If the pulse is affected under chloroform, it indicates chloroform poisoning either direct or through abnormal respiration. All the chloroformist has to produce is harmless anæsthesia, with regular breathing, and without poisoning, and of this the pulse can never be any test whatever; it is, therefore, positively dangerous and useless to take it as a guide.* The following table places the available figures in a most striking light:

Mortality Statistics of Chloroform and Ether.

Anæsthetic Employed.	Source of Statistics.	Period.	Number of Deaths to Administration.
Chloroform	Julliard	Not stated	1 to 3,258
Ether ...	Julliard	,,	,, 14,987
Chloroform	St. Bartholomew's Hospital (Roger Williams)	10 years. 1878 to 1887	,, 1,236
Ether ...	,, ,, ,,	,,	,, 2,754
Chloroform	Syme and Lawrie ...	43 years	No death.

If statistics are of any value, this table ought to carry conviction with it, because it shows clearly that chloroform administered on Syme's principles is even less dangerous than ether administered in accordance with the most approved methods. But the Hyderabad Commission has no desire to institute further comparisons between them. All we say is, let anybody use ether who chooses, but if chloroform is to be employed, let it be given in the right way. Surgery cannot yet do without chloroform, and the only way to give it with invariable safety is to be guided, as Syme was, not by the circulation, but entirely by the respiration. What Dr. Julliard says about ether I can say, *mutatis mutandis*, about chloroform. During fourteen out of the seventeen months[1] that have elapsed since the Hyderabad Commission demonstrated that the key to the safe administration of chloroform consists in regular breathing, I have given chloroform several

[1] For three months I was absent on leave.

times daily. Not only have I not had any deaths, but I have met with no accident of any kind. I have not once had to do artificial respiration or to pull forward the tongue. Neither have I had to interrupt an operation in order to ward off any accident due to chloroformisation. There is no element whatever either of luck or of chance about these results. Any surgeon can administer chloroform without risk who will take the trouble to assure himself that the patient's breathing is normal and regular throughout the administration, and to stop the inhalation in good time, that is, directly full anæsthesia is produced. Statistics such as those of Dr. Julliard and Mr. Roger Williams, which are intended to show the danger of chloroform, are, as my table proves, susceptible of a very different interpretation. If they help to prove anything, it is that no anæsthetic is absolutely safe except chloroform administered on Syme's principles, and the more proof we have of this kind the better.

NOTE ON MALTA FEVER.

By Surgeon DAVID BRUCE, M.S.,
Netley.

The British Medical Journal for May 16th, 1891, contains a paper by Staff-Surgeon Charles C. Godding entitled "Malta (Remittent) Fever," in which the conclusions arrived at are so opposed to those held by myself that I feel compelled to offer a few remarks in the way of criticism. In extenuation of my thus coming forward as a critic, I may state that I have had ample opportunity of studying this most interesting and important fever, as I was stationed for five years in the Military Hospital, Valletta, during which time more than 400 cases came under my notice. I am, therefore, interested in a very high degree in all that pertains to this fever, and am most desirous of procuring a proper recognition of what I consider to be its true nature at the hands of English medical men generally, and especially those of the army and navy. Although there are extremely few of the deductions given by Staff-Surgeon Godding as the result of his experience with which I perfectly agree, I shall limit myself to a consideration of his classification of the disease, as upon this the important questions regarding treatment, and the propriety of early removal from the infective area, evidently depend.

The disease, in his opinion, is "a paroxysmal fever with daily remissions." Turning up the word "paroxysmal" in Quain's *Dictionary of Medicine*, I find it is "used to indicate the periodic attacks or fits which characterise certain diseases, such as ague, gout, and asthma;" but there are no periodic attacks or fits in Malta fever, which, on the contrary, is one of the most monotonous of diseases, and therefore I take it that the word is not used here in the sense quoted. The word is also used commonly as synonymous with malarious, and this is, I presume, the meaning Staff-Surgeon Godding gives it; hence the definition may be read "a malarious fever with daily remissions." Now this is the point I wish to combat. In my opinion Malta fever is not a malarious fever; there is no tiniest thread of malaria running through it; it is a species of fever perfectly distinct from enteric or malarious fever, having its own definite parasitic cause, and is as worthy of specific recognition as diphtheria or tuberculosis. This is my position, assumed and held mainly by a belief in the following line of argument.

It is slowly creeping into the minds of English medical men—slowly chiefly on account of the impassable difficulties placed by legislation in the way of original research in England—that infectious diseases are caused by specific parasites. It is slowly but surely becoming established that enteric fever is not enteric fever without the presence of Eberth's bacillus, and that Asiatic cholera is not Asiatic cholera without Koch's cholera vibrio. In the same way malarious fever, in whatever part of the world it occurs, is coming to be associated with an amœba-like parasite found in the blood of those suffering from the disease. The demonstration of this parasite, supplemented clinically by the very specific action of quinine, constitutes the most rational and surest method of diagnosis. Now, if an amœba-like parasite could be demonstrated in the blood of those suffering from Malta fever, and if quinine could be shown to have its specific effect on the course of the disease, then I would be the first to admit that Malta fever is malarious. In this case the term remittent fever, in the officially recognised nomenclature of diseases would exactly describe the disease, and could be used instead of the very misleading term simple continued fever, under which heading it is at present principally returned. But in Malta fever no one has been able to find any such parasite in the blood, and it has been proved over and over again, and partly admitted by Staff-Surgeon Godding himself, to be absolutely and totally refractory to quinine. On the other hand, to prove the specificity of this disease, I undertake to demonstrate in every fatal case of true Malta fever a definite micro-organism which has not the slightest resemblance to that found in malaria. This parasite I have shown to be capable of giving the fever to certain animals, with all the symptoms met with in man. It can be cultivated with the greatest ease from the spleen and other organs of fatal cases of Malta fever, and has never been found in the organs of cases of malarious fever or any other disease. From these, and many other, considerations, I hold that Malta fever is not a malarious or a paroxysmal fever, and that Staff-Surgeon Godding's definition of the disease is utterly misleading and not altogether harmless, leading, as it is sure to do, to the indiscriminate use of large doses of quinine in the treatment of the fever.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

HYPERPYREXIA IN INFLUENZA.

Case I.—On May 26th I saw a man suffering from influenza. The temperature was 103.8° F. On May 28th the temperature was 99°. On May 29th it rose to 101°, and on the following morning it was 104.8°. Antifebrin gr.x were given, but in about an hour the temperature had reached 108.4°. He was then unconscious and dying. He was lifted into a slipper bath partly filled with lukewarm water; cold water was then added until quite cold. The temperature went rapidly down until it became subnormal. During the twenty-five minutes he was in the bath he gradually returned to consciousness. He was lifted out, clothes stripped off him and well rubbed down, put into blankets, and placed back in bed. He went on very well for three or four hours, taking plenty of nourishment. The temperature then rose again to 106.4°, when he was again placed in the bath; he was sensible and was able to take brandy during the bath, which lasted twenty minutes, when the temperature had fallen to 98°. He went on favourably until about 8 P.M., when the temperature rose again to 106.2°, and still continuing to rise; the bath was again suggested, but was not used. He soon became unconscious, and died about an hour after.

Case II.—On May 27th a young married woman, aged 21, was confined. On May 29th she was seized with influenza. The temperature was 103.6°. She went on pretty well until May 30th, when the temperature ceased to fall, and soon began to rise, reaching 104.8° F. Antipyrin, antifebrin, and quinine reduced this very little, the tendency being upwards. About 2 A.M. on May 31st the temperature rose quickly to 108°. She then became unconscious, and was evidently dying. She was given a bath of lukewarm water, and cold water was poured over her chest until the water became quite cold in the bath. She was kept in the bath until she came to and began to speak (probably 25 minutes) the temperature had fallen to 97.4. She was then lifted out and rubbed down, and put to bed. During the early morning she became maniacal, but suddenly became sensible again. She continued well until about 2.30 P.M. on May 31st, when the temperature again went up to 106.7°. The cold bath was again resorted to; this time she was able to ask for the bath, and told us to "be sharp" with it. My assistant again put her in, and this time kept her in fifty minutes; the temperature had then reached 97.4°. She conversed freely during the bath, and took support and stimulants. She was again taken out, rubbed down, and put to bed. The temperature one hour and a half after was normal, but about three hours after it again began to rise. Anti-

pyretics had no effect. About 10 P.M. on May 31st the temperature was 103°. One of the members of my ladies' ambulance class was left with her to take the temperature pretty often, and with instructions to send word when it reached 105°. About 11.30 P.M. the message came. She was seen in about a quarter of a hour; the temperature was still rising. She asked if the bath was ready, as she wanted to get in. When the temperature became normal (in 35 minutes) she was taken out, rubbed down, and put to bed. This was at 12.25 A.M., June 1st. The following temperatures will show how the case proceeded: 2 A.M., 100°; 3.30 A.M., 102.2°; 4.20 A.M., 102.8°; 6.15 A.M., 103.4°; 8.45 A.M., 103.9° (quinine, grs. x); 9.15 A.M., 103.1°; 10.15 A.M., 103.1 (quinine, grs. xx); 1 P.M., 104°. Slight shaking now beginning. 2 P.M., 105°. Shaking now given way to convulsions, which became very violent. Chloroform was administered, and she was kept gently under its influence until death took place at 4.30 P.M. Notwithstanding the influenza, high temperatures, cold baths, etc., the discharge continued and remained perfectly sweet until death. Temperature then registered 107.4°.

CASE III. A baby, aged 3½ months, took influenza probably from the mother, who was in bed with it. The temperature rose to 105° F., and the baby became insensible. The cold bath for fifteen minutes brought the temperature down in one hour to normal; the baby awakened up and became quite lively, and is now well.

[My other case of influenza with high temperature, treated with cold bath on May 24th (reported in the BRITISH MEDICAL JOURNAL of May 30th) has progressed favourably, and is now getting up daily.]

Greetland. JAMES GIBSON, M.D.

PHENACETIN IN INFLUENZA.

I DESIRE to draw the attention of the profession to the beneficial action of phenacetin during the first stage of influenza. Its action is prompt and striking, so that many patients declare they have derived more benefit from the "powders" than from anything else. It rapidly cures the headache which is such a distressing symptom at first, helps to reduce the temperature, and mitigates, but does not entirely remove, the aching of the limbs, a few doses of salicylate of sodium effecting its final removal. I give the phenacetin in 5-grain powders, repeated every four hours, till the headache and other pains cease. I have used phenacetin largely in a variety of conditions, and consider it is unrivalled as an analgesic. It seldom fails, it is comparatively cheap, tasteless, and, as far as I can see from a tolerably extended experience of it, is totally free from the unpleasant after-effects—depression of heart, etc.—sometimes caused by antipyrin and other drugs of its class. Insolubility is its sole drawback.

St. Mary Cray, Kent. JOHN P. HENRY, M.D., B.Ch.Dub.

ASSOCIATION OF ERYTHEMA WITH ASTHMA.

W. M., aged 36, a man previously in perfect health, developed suddenly the symptoms of a severe attack of asthma at 9 A.M., half an hour after taking breakfast. I saw him immediately at the onset of the attack; observed that his face was red, swollen, and presented numerous hard, red, raised patches, and on auscultating heard sibilant rhonchi over both lungs, with normal resonance. The dyspnœa began to subside at 9.20 A.M., and ceased at 9.45 A.M., when he vomited, the rhonchi ceasing concomitantly. The urticarial erythema first seen on the face soon appeared on the forearms, and gradually spread over the trunk and limbs, becoming finally universal. A moderate amount of itching was complained of. This rash disappeared in the inverse order of its appearance, the skin being quite clear shortly after noon. The attack was not accompanied or followed by any expectoration, and the axillary temperature was subnormal throughout. The patient slept after the dyspnœa ceased, and at 3 P.M. appeared and felt perfectly well.

The marked feature in the case was the instantaneous appearance of alarmingly severe dyspnœa in a perfectly healthy man while at rest. The onset so soon after a meal, and the vomiting, suggest that the disturbance was caused by diet, though others who ate of the same food were not affected in any deleterious manner; the meal consisted of Irish stew with coffee. The theory that asthma may be consequent to erythematous swelling of the bronchial mucous membrane may be applied to explain the case pathologically, and adapts itself better to the clinical features of the case than the alternative theory that the symptoms were primarily due to pulmonary anæmia.

Herne Bay. W. H. BOWES.

DISLOCATION OF ANKLE WITH DISPLACEMENT OF THE FOOT FORWARDS.

As this accident is stated by Erichsen to be so rare as seldom to have been witnessed, the following case may be of interest:

J. S., a riveter, while engaged in moving some scaffolding, slipped off the plank on which he was standing, owing to its tilting upwards, and fell a distance of 16 feet, striking his left foot against the edge of an iron tank so forcibly as to make a distinct groove on the edge of his boot. I saw the patient a few minutes after the accident before any swelling had taken place. There was no fracture of bone; the lower end of the tibia was displaced behind the astragalus, the smooth surface of which could be felt beneath the skin, on to the upper and posterior part of the os calcis, the foot being considerably lengthened, and the prominence of the heel absent and replaced by a slight depression.

Reduction was accomplished with some difficulty by flexing the leg upon the thigh and traction on the foot forwards and downwards, the leg being fixed.

MEADMORE CROCKER, M.R.C.S., L.R.C.P.Lond.

Bingley.

TRAUMATIC NEUROSAL PEMPHIGUS.[1]

R. F., aged 17, a well-nourished bright-looking girl, had suffered from fits of an epileptic nature, brought on by a fright at school, from childhood. In December, 1887, while cutting wood, she chopped off the distal phalanges of the index and ring fingers, and cut through the middle phalanx of the middle finger. She was taken into the Cottage Hospital at Sevenoaks, which she left in a month with the wounds unhealed; they remained open for three months. Shortly afterwards patches of redness followed by blebs appeared on the left wrist, hand, and arm. The eruption was peculiar from the rapid way in which it spread; sometimes in a quarter of an hour the whole hand and arm would be covered with large blebs, which would burst and give out a thin sticky watery discharge, which on drying would leave the surface of the skin of a purple or bluish tint. The circulation also seemed very feeble.

In February, 1889, she had a crop of these on the left leg. Up to that time she was rarely without a series of blebs or threatening of them for quite twelve months. Various remedies, principally arsenic and iron, with external applications, were tried without effect. I admitted her into the Norwood Cottage Hospital, and having found the puckered cicatrices of the ring and middle fingers, especially the latter, very tender, I amputated the stump just beyond the proximal joint of the middle phalanx.

In March, 1889, she had a much slighter return of vesicles, and in August of the same year a single vesicle after being at the seaside, since which she has had no return. At this time a small fragment of bone worked out of the dorsal surface of the wrist.

The vesicles in this case occurred in irregular patches upon both the front and dorsum of the forearm, in the area of distribution of both the median and the ulnar nerves. That the irritation was reflex is rendered probable by this scattering of its effects and the occurrence of the disease on the leg of the same side, as well as its cessation after removal of a source of irritation upon the median nerve alone.

A microscopic preparation of the scar on the amputated portion, kindly made by Mr. H. G. Plimmer, shows hypertrophied papillæ with new small cell inflammatory growth round vessels and nerves extending in all directions.

June 8th. Since the above was sent for publication, a slight return of vesicles has occurred and may probably require an operation upon the other finger. She has been quite free for eighteen months.

Upper Norwood. JOHN H. GALTON, M.D.Lond.

[1] Read before the East Surrey District of the South-Eastern Branch.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

BRISTOL GENERAL HOSPITAL.

THREE CASES OF INTRACRANIAL TUMOUR.

(By J. MICHELL CLARKE, M.A., M.B., M.R.C.P., Assistant Physician and Pathologist to the Bristol General Hospital, Assistant Lecturer on Physiology, Bristol Medical School.)

CASE I: *Tumour of Left Optic Thalamus.*—The patient was a girl, aged 6. The family history showed that her father had died of consumption after five years' illness; one sister died, aged 4, but the cause of death was uncertain. The patient herself had always enjoyed good health until a fall on the back of the head six months previously; there was no wound at the time of the accident, and no scar was discovered. Since that time her mother had noticed a gradually increasing weakness of the right arm and leg. For four days before admission she had suffered from constant vomiting. On admission, September 29th, 1890, she seemed very drowsy, and was often sick. The right leg was dragged a little in walking, and, after a few steps, was affected with tremor; there was occasionally a little tremor of the right arm. She lay for the most part on the left side, with head and eyes turned towards the left, and complained of some pain in the left side of the head. The urine and fæces were passed into the bed. She answered intelligently when spoken to. There was no discharge from the ears. After two days the vomiting ceased.

On October 9th the weakness of the right arm and leg was more decided, with marked tremor. This tremor occurred only occasionally when she was lying quiet in bed, but was at once brought out very distinctly by any movement; it was of an oscillating to-and-fro character, resembling that of disseminated sclerosis, but smaller in range; the left side was unaffected by it. She could stand and walk, but dragged the right leg, and the tremor was then much increased. As she lay in bed her head was turned to the left, the right forearm was kept flexed and pronated, lying across the chest with adduction of the elbow; the right leg was extended at all joints. The muscles of the right arm were somewhat rigid and contracted in the above-described position, but very little force overcame the rigidity. Any attempt to turn the head to the right was now resisted by spasm of the neck muscles; it was doubtful whether there was conjugate deviation of eyes to the left. She could move the right arm fairly well when urged to do so, and there was no ataxy of movement, nor, so far as could be ascertained, loss of the muscular sense. Reflexes, superficial and deep, normal. Sensation everywhere normal. No paralysis of any cranial nerve. Pupils equal, and acted well to light and accommodation; optic neuritis of slight intensity in both eyes. Slightly marked *tache cérébrale*. Pulse rate 54 to 60; respirations 20; temperature normal; urine normal (obtained by catheter); tongue much furred.

On October 15th the child had a convulsive seizure, beginning in the right arm and affecting the right arm and leg; it lasted for two to three minutes, and was followed by rigidity of these limbs for the same length of time. The pupils were widely dilated, and the conjunctivæ insensitive during the seizure. Since this fit there were attacks of spasm affecting the right arm only, and coming on at infrequent intervals. In them the forearm was pronated and flexed, with rigidity of flexor muscles, the fingers were widely separated from each other and extended, and the hand deviated to the ulnar side; after each attack flaccidity of the affected muscles followed. Some loss of sensation over the right leg only was now noted. Temperature subnormal; vomiting continued. The parietal eminence on the left side of the head was distinctly more prominent and less resonant than on the right side.

On October 17th and 18th the spasmodic movements still continued and came more often. Fresh symptoms were increased rigidity of the neck muscles, and attacks in which the head was drawn downwards and forwards, and turned to the left; these occurred with or without the spasmodic movements of the arm. There was left ptosis, dilatation of pupils with loss of reaction to light. The right arm and hand were pale, and very much colder to the touch than the left. She lay with her legs drawn up, was very drowsy, and complained of pains in the right side of the head. The evacuations were still passed under her.

On October 19th the vomiting ceased, the rigidity of the right upper extremity had increased, and the spasmodic movements were more violent and practically continuous. The right leg was rigid, and there was paralysis of the muscles of the right side of the mouth and lower part of the face. The head and eyes were now turned to the right, and the right arm, instead of being cold as before, was red and appeared to be swollen; it was hot and burning to the touch, and the child cried if it were moved or handled. She was sensible, though very drowsy. Pulse very weak, 110 to 120. Temperature subnormal. Respirations 20. The child was evidently dying, and it became a question as to whether anything could be done to save her. The symptoms pointed to a tumour of the left hemisphere, seated probably in its substance, and not at the surface, and giving rise to spasm and paralysis by pressing upon the internal capsule. The peculiar spasmodic movements taken in conjunction with the reports of other cases—might be due to a lesion of the optic thalamus. The distinct history of a fall on the head made it possible that there was an abscess and not a solid tumour, and in that case exit might be given to the pus by puncture. The chances of being able to relieve the patient were certainly faint, but we were unwilling to let her die without making an effort to save her; and after anxious consideration, an exploratory operation was decided upon, in the hope of finding an abscess or possibly a small tumour not so deeply seated as to preclude removal. Under chloroform the skull was trephined over the lower part of the prominent area on the left parietal eminence by my colleague, Mr. Pickering. The bone and dura mater were normal, the brain bulged into the cruciform incision made in the dura mater, and looked perfectly healthy. Mr. Pickering then inserted an exploring needle at two different spots in a direction downwards and inwards, without, however, any result. After the operation the respiration became very shallow and the pulse imperceptible at the wrist, but the patient rallied after a brandy enema and subsequent hypodermic injections of brandy. Next day the child was quite conscious, the movements in the right arm ceased and did not recur, the facial paralysis also disappeared, but the right leg remained somewhat rigid. There was no rise of temperature, she remained quiet and comfortable all day, but died quite suddenly at midnight.

The necropsy was made 14 hours after death: thoracic and abdominal organs normal, no tubercle found anywhere. On removing the skull cap the cerebro-spinal fluid was deficient in quantity, the membranes normal. The convolutions of the left hemisphere were flattened, and the whole hemisphere bulged out over the outer part of the convexity. On making transverse sections from before backwards a tumour the size of a very large walnut was found lying beneath the floor of the lateral ventricle on the left side, of largest size in the middle part of the optic thalamus, but stretching also into the anterior and posterior parts of this ganglion. The floor of the lateral ventricle was pushed upwards by it and the third ventricle pushed towards the middle line. The internal capsule was pushed downwards and outwards and had evidently suffered considerable pressure. Microscopical examination showed the growth to be a glioma with a large development of fibrous intercellular tissue. Several hæmorrhages had taken place into the centre of the tumour. The cerebral tissue at its periphery was softened and reddened, the growth itself of firm consistence.

The tumour, though a large one, was well defined and limited to the thalamus, and the case is therefore interesting from the point of view of the diagnosis of tumours of this body. In the first place the paralysis was nowhere absolute; the paralysis of the face was slightly marked, and there was no deviation of the tongue. There was rigidity, but no ankle-clonus nor exaggeration of reflexes; loss of control over bladder and rectum existed throughout. In these respects the group of symptoms correspond to those observed by

Bastian[1]. In addition there was left ptosis, dilated pupils, with loss of reaction to light, turning of the head first to the left and afterwards to the right side, with mobile spasm of the right arm and leg, and vasomotor phenomena of the right arm. According to Gowers vasomotor symptoms do not result from lesions of the thalamus[2], but they were very obvious in the limited distribution described in this case.

Meynert relates a case of tuberculous tumour of the right thalamus in a boy, who showed marked paralysis of the right third nerve, slight paralysis of the left facial nerve and of the left extremities; in addition the head was turned to the left, and there was, while at rest, flexion of the left and extension of the right arm, in support of the experiments of Schiff and Nothnagel. According to these experiments in unilateral lesions of the thalamus the head looks towards the healthy thalamus, while on the side of the healthy thalamus the flexors of the upper extremity, and on the side of the lesion the extensors of the upper extremity appear contracted.[3] In my case there was no extension of the upper extremity on the side of the lesion, the left side remaining throughout quite unaffected although the other paralytic symptoms correspond fairly closely in the latter stages of the illness; in the earlier stages the head looked towards the side of the lesion and was only subsequently directed towards the healthy side.

The positions of the right arm and leg, however, exactly corresponded to those commonly observed in ordinary cases of hemiplegia from hæmorrhage into the internal capsule, and might fairly be accounted for on the hypothesis that they were simply due to the pressure of the tumour on this structure. Moreover, during the short period that the patient lived after the operation the symptoms of paralysis and spasm disappeared in the face and arm, and almost entirely in the leg; any effect from the operation would be entirely in the way of relieving pressure, and therefore may be taken as corroborative evidence that pressure on the internal capsule was the essential agent in the production of paralysis and spasm.

(To be continued.)

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 9TH, 1891.

TIMOTHY HOLMES, M.A. Cantab., President, in the Chair.

Symptoms and Pathology of a Case of Acute Inflammation of the Mucous Membrane of the Ileum from Climatic Causes.—Drs. GEORGE THIN and FRANK J. WETHERED described, in this paper, the case of a patient who was for many years known to one of them as a man of strong constitution and in the enjoyment of excellent health. Whilst travelling in the north of China in the autumn he became, after a chill, subject to a moderate but obstinate diarrhœa. After several months, the tendency to diarrhœa increasing, he became subject to febrile attacks, and after three months of the combined moderate fever and diarrhœa he had lost 40 lbs. in weight, and was sent to Europe. The condition became aggravated on his way home, his journey being broken for six weeks on account of a very acute illness, of which the leading features were diarrhœa, retching, nausea, and fever, his condition for three weeks of that time being critical. After a comparatively rapid convalescence, during which time he regained his normal weight, he enjoyed three months of good health, and appeared perfectly well. A chill brought on another acute attack, the general symptoms of which were fever, nausea, abdominal uneasiness, thirst, entire loss of appetite, and complete incapacity to digest food. During the whole of his illness there was diarrhœa, the intestinal discharge consisting of a dark-coloured fluid with an apparent absence of any fæcal element. Death took place at the end of five weeks from the seizure. A necropsy was made by Dr. Sidney Martin. The mucous membrane of the ileum presented a worm-eaten appearance along its whole course. There were superficial ulcerations not extending deeper than the mucous membrane, and in some places there were discrete erosions of the size of a split pea. The ulceration increased as it descended the ileum, and the mucous membrane seemed somewhat thickened. At the entrance of the vermiform appendix into the cæcum the mucous membrane was thickened and slightly eroded. In the whole of the large intestine there were only about ten superficial ulcers, all of which were close to the cæcum, five being grouped together, this gut being otherwise healthy. The stomach and jejunum were unaffected, and there was nothing remarkable in the liver or spleen. Dr. Wethered prepared specimens of the viscera, and on microscopical examination the authors of the paper found the following morbid appearances in the ileum: No traces of the villi were observed. Lieberkühn's crypts in the least diseased parts were not affected at their deep ends, but were indistinct towards the free edge of the mucous membrane, and lost in a finely granular substance which covered the whole of that part of the gut. At some parts, whilst the epithelium of the crypts could be recognised as much altered at their deep ends, atrophy and destruction had occurrred at a short distance from their base, a mucoid-looking material distending the lower part of the crypt. In some parts the whole crypt was disintegrated, its position being indicated by the broken-down remnants of the epithelial cells. At the seat of the erosions the epithelium had entirely disappeared, the free surface being covered with a layer of granular material similar to that which covered the less affected parts of the gut, and below this substance there was a thick mass of small cell infiltration in the whole of the submucous layer. The muscular and subperitoneal coats were comparatively unaffected. The mucous membrane of the large intestine, as a whole, and all the upper parts of the intestinal canal, were normal. The authors had not been able to find any record of a case of acute inflammation of the mucous membrane of the intestine limited to the ileum and involving the whole of its surface. Clinically, it was shown in the paper in what respects the symptoms differed from typhoid fever and dysentery, the two diseases in regard to which questions of differential diagnosis could arise. Special attention was called to the apparent absence of fæcal elements in the intestinal discharge, and of the suspension of the digestive functions, notwithstanding that the stomach, duodenum, jejunum, and liver were comparatively healthy. Milk and raw egg, when not rejected by vomiting, passed in the motion entirely unaltered, and it was suggested that this suspension might at least partly have been due to a reflex effect from the inflamed mucous membrane of the ileum.—Dr. SCRIVEN thought the case was one of a very uncommon kind; he had seen a few similar cases in India. He asked if anything was known of the food or drink which was taken by the patient when he was in China.—Dr. JOHNSON had personally known the patient all the time he was in the East. He had been a man of very robust health, of active habits, and not over-indulgent in food or alcohol. Dr. Johnson had not seen him for a period of seven years, when he met him in this country, and was immediately struck with the alteration in his appearance. Whilst in China he had attended him years previously through two attacks of malaria, the second of which was so severe that he had sent him home on sick leave. The patient had not suffered from "psilosis," yet he almost undoubtedly had some changes in the mucous membranes of his intestines, particularly of the ileum. Dr. Johnson had seen several necropsies on cases of diseases of the bowel, but they had all run a chronic course. One remarkable point in the clinical history of this case was the want of power of assimilation of nourishment.—Dr. W. SQUIRE considered the case to be one of malarial disease. He had seen cases in the Eastern Soudan similar in symptoms, duration, and *post-mortem* appearances. Ulceration of the ileum was not uncommon in malarial diseases.—Dr. THIN, in reply, stated that the food and water taken by the patient was that ordinarily taken by Europeans in the North of China. He thought that the disease was not malarial, and he had the support of Dr. Manson and of Sir Richard Quain in that view. The changes in the intestinal mucous membrane seen by Dr. Squire in Africa were interesting and important. At the commencement of the final relapse the patient for some days had no fever whatever.

A Case of Pancreatic Cyst, Successfully Treated by Laparotomy and Drainage.—Dr. G. NEWTON PITT and Mr. W. H. A. JACOBSON read this paper. B. McG., aged 21, was kicked

[1] *Paralyses: Cerebral, Bulbar, and Spinal*, p. 316.
[2] *Diseases of the Nervous System*, vol. ii, p. 287.
[3] Meynert, *Psychiatry*, Sachs's Translation, vol. i, p. 164.

in the abdomen in 1886, since when he had been liable to attacks of abdominal pain. He was admitted in May, 1889, with jaundice and severe abdominal pain and vomiting. On examination a globular tumour was discovered in the epigastric region, over part of which the note on percussion was dull; but this area of dulness was variable. In June the tumour was aspirated, and half a pint of alkaline, opaque, greenish fluid, of sp. gr. 1015, and containing albumen, was drawn off. The jaundice diminished and the patient improved sufficiently to be able to go home. At the end of July the patient was readmitted, the pain, the jaundice, and the tumour having all recurred. The globular tumour now occupied the umbilical and epigastric regions, extending rather to the left of the middle line, moving with respiration, and lying behind the stomach, as shown by the varying note on percussion, and by the disappearance of the dulness when the stomach was distended artificially with gas. On August 17th the tumour was again aspirated, and eight ounces of alkaline fluid, sage green in colour, were removed. This contained eleven grammes of albumen per litre, a large amount of tyrosin crystals, no copper-reducing substance, and no bile. It was therefore clear that the tumour was a pancreatic cyst. The patient was very emaciated, the cyst rapidly refilled, and the patient's condition became so critical that Mr. Jacobson performed laparotomy on the 22nd. An incision three inches long was made over the tumour an inch and a half to the left of the middle line. The stomach was with some difficulty pushed up under cover of the liver, the greater portion of the omentum was pulled out and removed, and the rest was sutured round the edges of the wound. The two layers immediately below the stomach were scraped through, and a very thin tense cyst was exposed. Thirty-six hours later the patient's pulse was very rapid and feeble, and his condition most precarious, owing to hæmorrhage into the cyst, which made it so tense that it was necessary to lay it freely open. He steadily improved from this time, and was able to get up a month later, being discharged cured. With the exception of Annandale's case this was the first instance in Great Britain in which the correct diagnosis had been made previous to operation. The authors said that Senn's papers in 1886 and 1887 were the foundation of all knowledge about these cysts. The symptoms of these cases were discussed, some surgical points of interest were noted, and a summary was given of the cases published since Senn's papers.—Mr. Pearce Gould had had two cases of cyst of the pancreas which he had operated on. In the first case, in which the cyst was in the head of the pancreas, the opening never properly healed, and ultimately malignant growth set in around it. In the second case the cyst was in the tail of the pancreas. The pain was so severe that, although the patient had been but recently confined, an operation was considered imperative. After opening the abdomen, Mr. Gould turned up the transverse colon and the omentum, and then came down on the cyst, which was crossed by a large vein. He then aspirated the cyst, enlarged the puncture, and passed his finger into the cyst. He was then able to make his finger bulge the abdominal wall below the left twelfth rib, where a second opening was made, through which a large drainage tube was inserted. The patient made a good recovery, and he had brought her to the Society for the inspection of Fellows.—Mr. Jacobson, in reply, paid a warm tribute to the ability and originality of Dr. Senn.

The Causation and Mode of Production of Pes Cavus.—Dr. Alfred Parkin described this deformity, which was by no means uncommon, as consisting in an increased height of the plantar arch, corresponding convexity of the dorsum, and shortening in the length of the foot of from half an inch to an inch and a half. He said the associated conditions were: (1) Contraction of plantar fascia; (2) prominence of the balls of the toes; (3) deformity of the toes; (4) projection of the dorsal tendons; (5) contraction of the tendo Achillis, apparently a constant feature. The literature of the subject was sparse and of little value. The following had been the suggestions offered as to causation: (1) Paralysis of the interossei muscles (Duchenne); (2) weakness of the peronei muscles (Mr. Golding-Bird); (3) wearing of tight boots; (4) combined pull of tendo Achillis and extensor longus digitorum; (5) contraction of plantar fascia. These considered *seriatim* all showed a want of accuracy and did not explain the condition at all. Consideration of the normal foot when supporting the weight of the body led to the following conclusions: The weight of the body is supported by the arch of the foot in contact with the ground at the heel and at the metatarso-phalangeal joints, so that the weight of the body is split up into two oblique components, of which the posterior or heel portion is the greater. In cases of talipes equinus the weight of the body is transmitted along the anterior part of the arch only, and the posterior portion of the force is free to act, and is counteracted only by the tarsal ligaments, dorsal and interosseous, and adapted shape of the bones; hence a tendency to curving of the longitudinal pedal arch; the greater the talipes equinus the less the tendency to curvature of the arch, and conversely. Hence the mechanism is compensatory, tending to bring down the heel and restore equilibrium as soon as talipes equinus has developed. In a position of rest there is no tendency to production of cavus, only in active positions. Displacement of toes is due primarily to the position of talipes equinus; then when subluxation has taken place the interossei cannot act or act only in the reverse direction from displacement of their lines of action. The position is secured by alteration of joint surfaces and adaptation of muscles and ligaments. Contraction of tibials and plantar fascia is secondary to these changes—adaptive measures. The following statistics from the Guy's Surgical Reports support these views: Of 53 cases of talipes equino-varus with or without pes cavus, 38 were acquired, 15 were congenital. Congenital Cases: 11 of talipes equino-varus below 3 years of age, 3 of talipes equino-varus with pes cavus, aged 7, 12, 13 years: 1 of talipes equino-varus without pes cavus, aged 7, but here the presence of equinus was very doubtful indeed. Acquired Cases: 4 of talipes equino-varus below 4 years of age: 1 of extreme talipes equinus, hence no pes cavus; 2 of pes cavus simply, with special mention of contracted tendo Achillis in one; 16 of talipes equino-varus with pes cavus, the ages of which were: 4½ years, 2; 6 years, 2; 7 years, 1; 8 years, 3; 12 years, 2; 15 years, 2; above 15 years, 4. Conclusions: (1) Pes cavus is a secondary deformity engrafted upon talipes equinus or equino-varus. (2) Pes cavus is not congenital, though it may follow on congenital talipes equinus or equino-varus. (3) It is the direct result of transmission of body weight through a foot in the equine position. (4) The changes in the soft parts and toes are adaptive or consecutive.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, June 3rd, 1891.

J. Watt Black, M.D., President, in the Chair.

Specimens.—Dr. W. H. Kelson: Acardiac and Acephalous Monster.—Dr. Lewers: Polypoid Endometritis with Blighted Ovum.—Mr. Alban Doran: Water-colour Drawings of (1) case of Congenital Auricular Sinus: absence of external meatus on opposite side: cutaneous sinus over sacrum; (2) Cervical Auricle.—Dr. Peter Horrocks: (1) Multilocular Ovarian Cyst and Fibroma of the opposite Ovary; (2) Brain showing Thrombosis in Cerebral Veins and Hæmorrhage into Internal Capsule in a case of Ingravescent Hemiplegia during pregnancy and parturition.

On Visceral Hæmorrhages in Stillborn Children: an Analysis of 130 Necropsies: being a Contribution to the Study of the Causation of Stillbirth.—Dr. Herbert R. Spencer read a paper on this subject. He gave a detailed account of a consecutive series of 130 necropsies on fresh, mostly stillborn, fœtuses, in so far as congestion of, and hæmorrhage into, the viscera were concerned. Tables of the more important organs affected were appended. The main part of the paper consisted of a description of the naked-eye and microscopic appearances of the various viscera as regards congestion and hæmorrhage. The causation of the hæmorrhage was discussed, and the following practical conclusions were drawn: (1) In children stillborn, or dying shortly after birth, congestion or œdema, and hæmorrhages were usually found in various important viscera. (2) These hæmorrhages occurred in cases delivered naturally or by version or by forceps through normal and abnormal pelves; in primiparæ and multiparæ; with large and small children; in "easy" and difficult, rapid and prolonged labours. (3) The hæmorrhages were, however, most frequent and most severe in children subjected to much pressure by

the parturient canal or instruments or the hand of the attendant, especially when delivered by the lower extremity. (4) Cerebral hæmorrhage was more frequently found in still-born children delivered by the forceps than in those born by the breech, and in these latter more frequently than in those born naturally by the head. (5) Hæmorrhage into most of the other viscera was more frequently met with in pelvic than in cephalic presentations. (6) These hæmorrhages and the accompanying injuries were in many cases the cause of the stillbirth, and, when not immediately fatal, might be followed by the gravest consequences. (7) They were most likely to be avoided by preventing premature rupture of the membranes, by artificial dilatation of the parturient canal (when necessary), by restricting the employment of version and other artificial manipulations to urgent cases, and by preferring cephalic to podalic version in cases suitable for the former. (8) The use of the forceps should be absolutely limited to cases in which there existed some pressing danger to mother or child, and it should never be employed merely to shorten the time of labour. (9) In breech presentations, examination of the genital organs of the child should be carefully avoided during delivery. As soon as the child's limbs were born they should be wrapped in a thick layer of antiseptic wool (which kept the child warm, prevented the hand from slipping, and protected the limb from pressure). If traction were necessary, it should be made over wool wrapped around the child's limbs or pelvis; it should never be made by the hand around the child's waist. (10) In delivering the after-coming head, care should be taken that the sterno-mastoid muscles were not unduly stretched or pressed upon. When the after-coming head was in the pelvis, where there was even slight difficulty, recourse should be had to the forceps to deliver.—Dr. HERMAN said it was impossible to controvert Dr. Spencer's carefully observed and recorded facts, but he could not agree that the forceps should never be used to shorten labour. In cases in which there was no pelvic deformity, nor disproportion between the child's head and the pelvis, the os uteri was fully dilated, and delivery was slow simply because the pains were too weak to quickly overcome the resistance of the pelvic floor, he thought the use of the forceps to shorten labour would be good practice. He thought accoucheurs all over the country used the forceps for this condition more frequently than for any other, and that they did not find harm resulting to the child. He agreed in recommending the forceps for the delivery of the after-coming head. That injuries to the brain were more common in forceps-delivered children than in those born naturally was due, he thought, to the fact that the forceps was used in the worst cases, and so the conditions which rendered forceps necessary had produced the injuries.—After some remarks from Dr. GALABIN, Dr. PETER HORROCKS related three cases in which, after podalic version and delivery by traction, the children had made no attempt at respiration, although the heart was beating. In one of these an attempt was made to catheterise the trachea, but the catheter passed down the œsophagus, and the stomach was filled with air; so tracheotomy was performed, and the child's heart was kept beating for an hour and a half. No effort at respiration, however, was made, and a *post-mortem* examination showed hæmorrhage into the fourth ventricle of the brain. In the other two cases there was also hæmorrhage into the fourth ventricle, and in one on the surface of the brain also. He had considered the total absence of all efforts at respiration to be due to pressure on or damage to the respiratory centre in the medulla oblongata or bulb. He asked what was meant by œdema of the cord. Dr. DAKIN thought that many children who survived suffered from visceral hæmorrhages; some of them—as, for instance, into muscles and cellular tissue—not perhaps materially affected the child's welfare. He asked if these extravasations were, as thought by some, a cause of the milder cases of jaundice by the absorption of their blood pigment into the general circulation, and consequent staining of the tissues. He noticed that out of twelve or thirteen cases which survived over three days only two were jaundiced. He thought the intestinal and uterine hæmorrhages would explain many of those cases in which bleeding took place from the rectum in male and from the vagina in female children.—Mr. ALBAN DORAN thought that many children were born with visceral hæmorrhages which did not kill but which set up diseases. Large subcutaneous extravasations of blood caused by violent blows were sometimes followed by the development of a sarcoma. He related one or two instances.—Dr. LEWERS suggested that some morbid condition of the vessels might have caused the hæmorrhage in some of the cases. Considering the fact that so many children that afterwards throve had been delivered by forceps, he thought it seemed improbable that the forceps skilfully used would often cause visceral hæmorrhage in healthy fœtuses.—Dr. JOHN PHILLIPS alluded to parturition in hæmophilic women. He had never met with a case. He related two cases of visceral hæmorrhage in newly-born children—one a breech case with hæmorrhage into the liver, the other a normal labour with hæmorrhage from the stomach. He agreed that many so-called "asphyxia deaths" were really due to internal hæmorrhage.—Dr. HERBERT SPENCER, in reply, thought that the question of the use of forceps could not be decided by an appeal to practice nor by statistics of stillbirths. He thought that many slight muscular or mental disabilities in after-life might have their origin in these injuries. Careful observations of the after-histories of difficult forceps deliveries were very desirable. He thought many of the cases of head injury which he had recorded were clearly due to the forceps, and not to the conditions which had led to their use. He recommended the use of the forceps to the after-coming head when it was in the pelvis, and there was difficulty in extraction. He thought hæmorrhage on to the sterno-mastoid muscles was frequently overlooked. He had seen cases similar to those described by Dr. Horrocks, and had found hæmorrhages in the medulla but not in the respiratory centre. He did not approve of tracheotomy in Dr. Horrocks's case. He recommended catheterisation of the trachea, which he had often performed. He thought with Zweifel that the majority of jaundice cases were due to extravasated blood with subsequent change and absorption.

HARVEIAN SOCIETY.

THURSDAY, APRIL 2ND, 1891.

MONTAGU HANDFIELD-JONES, M.D., Vice-President, in the Chair.

Bradycardia, or the Slow Heart.—Dr. SEYMOUR TAYLOR read a paper on this subject. Bradycardia he defined as being that condition in which the heart beats did not exceed 40 per minute. A classification of clauses was difficult owing to the wide pathology and varied associations; hence he proposed to subdivide the cases into two headings: *A.* Occurring in Health; *B.* Occurring in Disease. *A.* As regards health. It frequently occurred in tall muscular men, who were, or had been, athletic in their habits. In them it was not inconsistent with prolonged life and great mental vigour. It was important to note that in such examples the bradycardia was not attended with dyspnœa. It was not infrequently an accompaniment of old age, but an age which might be attended with no other sign of decay or degeneration. There was also a group of cases which, for want of a better term, might be called "functional." They were usually an accompaniment of indigestion, or some other disorder of stomach or other organ. They were temporary only, and were not attended with any signs of heart lesion. *B.* Cases the Result of Disease. Here the assertion that disease tended to quicken rather than to lessen the heart's action was admitted. Yet there were some disorders which produced an opposite effect. For example, it was occasionally seen in (1) disease of the heart walls; (2) obstruction of coronary vessels; (3) as a sequel of certain fevers and blood diseases; (4) in relation with diseases of the respiratory beat and mechanism; (5) as a manifestation of grave neurotic changes (epilepsy, traumatism, etc.); (6) in abdominal injuries and operations; (7) as the result of certain drugs and poisons.—Mr. HENRY DAVIS mentioned the case of a well-known surgeon whose pulse had been 40 to the minute since the Crimea.—Mr. EASTES remarked on the fact of Napoleon's slow pulse. He had observed markedly slow pulses in diphtheria, phosphorus poisonings, and in habitual tea-drinkers. He had observed the case of a gentleman whose pulse never rose above 42, which slowed to 24 under excitement.—Dr. SYDNEY PHILLIPS alluded to the slow pulse and cardiac hypertrophy often observed in athletes, and showed three sphygmograms of slow

pulse in lead poisoning. It was common in scarlet fever, and often evident in measles, German measles, and typhoid as well as diphtheria, and was not necessarily commensurate with the severity of the fever.—Dr. EWART regarded the slowing of the pulse as a compensatory development for the maintenance of the balance of nutrition.—The VICE-PRESIDENT said a big fœtus *in utero* had usually a slower pulse than a small one. He related the case of a lady who passed into a state of stupor for some hours with marked slowing of the pulse, after excitement, and with the regain of consciousness the pulse returned to normal.—In reply, Dr. TAYLOR again insisted on the slow pulse of athletes generally, especially the wrestlers of Cumberland and amongst the quarrymen of Derbyshire.

Clonic Spasms and Ataxic Movements.—Dr. L. GUTHRIE related the case of a man, aged 21 (who was shown), suffering from clonic spasms and ataxic movements, affecting chiefly the left arm and leg, but which were also, to some extent, bilateral and universal. The gait was staggering, knee-jerks exaggerated, ankle-clonus marked, the protruded tongue deviated markedly to the right, the left eye was widely open, eyeball prominent, pupil fixedly dilated, external strabismus present; various ocular movements were defective; no ptosis or nystagmus, discs normal; secondary deviation of the right eye on looking to the right, and movements slightly impaired; speech hesitating and stammering; mental condition good—the symptoms dated from a fever at 3½ years of age, when a left transient hemiplegia occurred. The movements developed and gradually increased; they were varied wildly ataxic jerkings. The left humerus was rotated inwards and adducted, the forearm supinated, and the dorsum of the hand rested on the hip and was confined there by a strap. The left limb was similarly adducted, inwardly rotated; foot inverted. These positions were assumed to restrain movements. Dr. Guthrie contended that a single lesion in the right motor tract would account for the symptoms, including the lingual and ocular phenomena. The lesion itself might have been hæmorrhage, a paroxysm of pertussis, thrombosis from a "low fever," or possibly a polyo-encephalitis. The possibility of improving the patient's condition by excising the arm centre in the right motor cortex was suggested.—Dr. PHILLIPS considered that the symptoms indicated two lesions, and not one, which had probably resulted from a chronic meningitis, which had been most marked over the cortical area, but which had also constricted the third nerve at the base. This would explain the proptosis and partial hemiplegia with athetosis and divergent squint.

THURSDAY, APRIL 16TH, 1891.

H. CRIPPS LAWRENCE, M.R.C.S., L.R.C.P., President, in the Chair.

Treatment of Severe Vomiting of Pregnancy.—Dr. AMAND ROUTH read a paper on this subject. After alluding to the difference between the vomiting *of* pregnancy and the vomiting *in* pregnancy, he noted the anxiety occasioned by severe forms of this condition, and the advantage of having an easy and efficacious mode of treatment in itself free from risk. Although it was now generally held to be reflex, and due to some local irritation at or near the os uteri internum, great difference of opinion existed as to the exact pathology and as to how it was produced. The author did not think the vomiting was often secondary to displacement or incarceration, and showed that it occurred where no malposition existed, and that, even when vomiting occurred with misplacement, replacement did not cure it. The treatment by drugs, accessory measures, replacement, Copeman's dilatation, local applications of cocaine, counter-irritation, etc., was reviewed, and it was shown by several cases that painting the cervix and the end of its canal with iodine paint (equal parts of iodine, iodide of potassium, spirits of wine, and water) had, in the author's hands, never once failed in the last seven years at once to stop the sickness, which might, however, begin to return from the fifth to the fifteenth day, when it was almost certainly permanently arrested by a second application. A prompt use of this remedy in cases threatening to become urgent would prevent the occurrence of the so-called "uncontrollable" or pernicious vomiting, which differed only in degree, and not in kind, from the milder forms. Induction of abortion would still be required when the vomiting was due to the presence *in utero* of a foreign body, such as a dead fœtus or a hydatid or fleshy mole, but might otherwise, by this proposed remedy, be avoided.—The PRESIDENT, commenting on the many forms of treatment for severe vomiting in pregnancy, asked whether any of Dr. Routh's cases had albuminuria and eclampsia.—Dr. PHILLIPS remarked that the only objection to the injection of cocaine was that the speculum had to be used. Retroflexion and impaction were not, in his experience, causal of this form of vomiting; it was prevalent amongst the upper classes rather than amongst hospital patients. Vomiting from hepatic causes was often concurrent with pregnancy.—Mr. HUXLEY regarded the mechanical theory as insufficient to explain several of his own cases, which had been successfully treated by Hegar's method of dilatation.—Mr. ROUGHTON alluded to two cases in which artificial labour had to be induced.—Dr. ROUTH, in replying, repeated that the method he advocated had never failed in his hands during the last seven years.

Hepatic Abscess.—Mr. ROUGHTON read notes of a case of hepatic abscess implicating the pleura, lung, kidney, and colon, and terminating in recovery. The patient was a young American gentleman, who, whilst staying a few days in Ceylon, developed an abscess of the liver. This was opened and healed up; the inflammation, however, extended to the peritoneum, between the liver and the diaphragm, producing a large abscess which burst into the pleura. This was evacuated by resection of a portion of rib. Subsequently, the suppuration extended to the lung and opened into a bronchus. This collection was successfully attacked surgically, after which the patient progressed favourably for some time, when a sudden access of fever, followed by the appearance of pus in the urine and fæces, indicated that the abscess had burst into the kidney and the alimentary tract (probably the colon). In spite of these many and serious complications, the patient made an excellent recovery.—The PRESIDENT alluded to a somewhat similar instance in which surgical treatment had been successfully adopted, and remarked on the surgical persistence often necessary in these cases.—Mr. LOCKWOOD, whilst thinking that the infarct in the liver was the starting point of the large abscess, was puzzled to know what caused the infarct. Referring to the antiseptics employed, he regarded perchloride of mercury as far superior to carbolic solution in body abscesses.—Mr. D'ARCY POWER asked whether tropical dysentery might not afford a possible explanation of the abscess.—Dr. WILLIAM HILL elicited from Mr. ROUGHTON the reply that digital examination of the pleural and pulmonary abscesses had not caused much hæmorrhage, though exploration in the hepatic region had. The patient had not resided in India.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MAY 14TH, 1891.

W. CHAPMAN GRIGG, M.D., President, in the Chair.

Exhibits.—Dr. HEYWOOD SMITH showed specimens of ovaries with fibrotic degeneration—their removal had caused the complete disappearance of the neurotic symptoms from which the patient suffered; also two small dermoid cysts of the ovary, in which he called attention to the fact that the hair contained in them was white, whereas the patient's hair was black.—Dr. RASCH mentioned a case in which the patient, an extreme blonde, had a dermoid cyst which contained black hair.—Dr. INGLIS PARSONS showed an appliance for applying acid or corrosive liquids to the endometrium more thoroughly than by means of Playfair's probe.

Abdominal Operations.—Dr. HOLLAND read a paper on 25 consecutive and successful abdominal operations at the Hospital for Women. He considered that the success which seemed to attend the first application of Listerism in this direction was more directly associated with an increasing experience and with a sequence of less complicated cases than with rigid Listerism, and with this conviction he had discarded its use, and the result was so far satisfactory and gratifying that 25 operations, the majority of which were grave and complicated, were carried to a successful issue. The cases included 7 of removal of appendages, 15 of ovarian and broad ligament cyst, and 3 of hysterectomy.—Dr. ROBERT BARNES observed that there was an analogy between albuminuria of pregnancy and

that caused by cystic disease of the ovaries where the same pressure was brought about upon the kidneys or circulation. Up to a certain stage the albuminuria was merely functional, but if not remedied structural lesions resulted, and even if the tumour were then removed the condition of the kidneys could not be modified. Whenever, therefore, albuminuria was present they ought to remove the cause, as even in pregnancy, if the condition were not relieved, organic changes might take place in the kidneys.—Remarks were also made by Mr. TAYLOR (Birmingham), Mr. JESSETT, Dr. LYCETT, Dr. RASCH, the PRESIDENT, Dr. EDIS, and Dr. ROUTH.

THURSDAY, MAY 28TH, 1891.

W. CHAPMAN GRIGG, M.D., President, in the Chair.

Sir Spencer Wells and Mr. Lawson Tait.—After considerable discussion on a motion brought forward by Mr. F. B. JESSETT, the society resolved to rescind the resolution that a committee should inquire into the matter.

Specimens.—Mr. LAWSON TAIT showed: (1) An Example of Growth of the Placenta after the Death of the Fœtus in Tubal Pregnancy. It was a case of ruptured tubal pregnancy with recurrent hæmorrhages into the peritoneum. The patient made a good recovery. He found a fœtus not more than eight weeks old, long since dead, with a great mass of placenta, so that no doubt could remain as to the placenta having gone on growing long after the death of the fœtus. (2) With regard to the second specimen, he remarked that some time since he had published a case in which myomatous tumours had disappeared or very much diminished in size after the removal of the uterine appendages. After the completion of the absorption of the tumour a piece of it was extruded as a polypus, and this fact had been observed with such frequency that he had come to the conclusion that the polypoid portions of the tumour were not affected by removal of the appendages, probably owing to their not having the usual nerve and blood supply. Three weeks ago he had removed from a patient a very large tumour, blocking up the pelvis and causing hæmorrhage, in which the presence of the polypoid mass was clearly shown, and no doubt the hæmorrhage was entirely due to this mass. It had been stated over and over again that it was the proper course to dilate in all these cases of uterine myomata, but in this particular case it was impossible to dilate. The patient was a virgin, and the great mass of the tumour blocked up the pelvis. The cervix was a long way out of reach, probably on a level with the sacral promontory. Any question of dilatation was still further out of the question, in that the neck of the uterus was occupied by nodules of myoma which would have made any attempt at dilatation fail. The only thing to be done was to remove the uterus, and this he had done with the result that the patient had made a very satisfactory recovery.—After remarks from Drs. HEYWOOD SMITH and GRANVILLE BANTOCK, Dr. ROBERT BARNES said the placenta was a double organ, consisting of a maternal and a fœtal portion, and the question was which part went on growing. If the fœtus were removed it might be assumed that the fœtal portion would not go on growing. He remembered a case many years ago at Norwich, where delivery having taken place, the question arose whether a placenta found some time afterwards was the placenta of this pregnancy or the remains of an ovum of a subsequent conception destroyed by procuring abortion. The fresh placenta was shown, but the contention was that it was a placenta of old date. They would, of course, perceive the medico-legal importance of this point. If it could be determined that the growth was simply of the maternal element it would be of great interest.—Mr. REEVES and Dr. ROUTH also made remarks.—Dr. BANTOCK showed a specimen of Ovarian Tumour, with twisted pedicle, from a woman about 29 years of age. The pedicle was found universally adherent, and almost gangrenous, although the twisting was so recent that adhesions had not taken place in the twist itself. It was a left tumour, with the left side twisted forwards.—Mr. TAIT and DR. R. BARNES made remarks.

BEQUESTS.—Miss Hart, for many years sextoness of St. Bartholomew the Great, West Smithfield, has bequeathed under her will £100 to the City of London Hospital for Diseases of the Chest.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

MONDAY, MAY 25TH, 1891.

Sir WILLIAM TURNER, M.B., President, in the Chair.

Specimens.—Professor THANE showed Two Abnormal Muscles in the Leg.—Mr. LAWRENCE showed Abnormalities of the Aortic and Pulmonary Valves.—Mr. LOCKWOOD and Dr. ROLLESTON showed Specimens of Abnormal Vermiform Appendix, and read a statistical account of the position of the organ in a hundred consecutive cases in which no evidence existed of disease in that region, showing that while in most cases it lay to the left of the cæcum, it was found in others under, over, or to the right of this viscus, and with various degrees of freedom and attachment to it, and to the surrounding peritoneum.

Papers.—The PRESIDENT read a paper on the relations of the Dentary Arcades in the Crania of Australian Aborigines, pointing out that in these skulls the upper teeth, instead of overlapping the lower, fitted accurately upon them. This feature was the rule in the higher apes, but was not present in the higher races of man.—The SECRETARY, for Professor CLELAND, read a paper on the Value of Burial in Sand for Cleaning Bones of the Fat which Fills the Cancellous Tissue.—Dr. HERBERT SPENCER read a paper on Ossification in the Head of the Humerus at Birth, showing that this was not by any means so rare an occurrence as was generally thought, and that many different dates were ascribed by different anatomists to the appearance of this nucleus.—Dr. WARDROP GRIFFITH read a detailed account of a Case of Transposition of Viscera with many Abnormalities in the Heart and Great Vessels.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

PATHOLOGICAL AND CLINICAL SECTION.

FRIDAY, APRIL 24TH, 1891.

PRIESTLEY SMITH, M.R.C.S., in the Chair.

Successful Trephining for Cerebral Abscess.—Mr. E. N. NASON (Nuneaton) related this case and showed the patient. A lad, aged 18, fell on the pavement on January 8th, and in doing so struck the back of his head. He did not look upon the blow as a severe one, but suffered from headaches from that date. He had a rigor on January 23rd, and from that day gave up work. He was first seen on February 3rd, when he had a temperature of 103.4°, and was extremely ill, with symptoms much resembling typhoid in the second week. On February 5th and 6th the temperature rose to 104° and the pulse dropped to 56 per minute, and he became apathetic. On February 7th the left side of the face and the left arm became paralysed, and tactile sensation was lost over the paralysed area. There was increasing hebetude but no unconsciousness. There was double optic neuritis, more marked on the right side. On February 8th the temperature fell to 99.4°, but with no improvement in the general symptoms. On February 9th the patient had a rigor and subsequently a convulsive seizure, beginning in the left side of the face. On February 10th the patient was trephined over the lowest third of the fissure of Rolando, and an abscess situated beneath the cortex of the lower end of the ascending frontal convolution was opened. After the operation the surface temperature on the left side fell considerably, and much pain was felt in the muscles of the shoulder. After this improvement was rapid, power returning in the various groups of paralysed muscles in the following order—shoulder, upper arm, forearm, wrist, and hand, the thumb muscles being the last to recover. Recovery was preceded by pain. On February 22nd, when apparently quite well, the patient began to pass porter-coloured urine, which was found to be charged with blood and micrococci. This condition gradually passed off, and the urine was normal by February 26th. Since then the recovery had been uninterrupted and the patient had now gone back to work.

Iliac Colotomy: Abnormal Colon.—Mr. F. MARSH showed the specimens and related the history of this case. The patient, a man, aged 60, was admitted into the Queen's Hospital, Birmingham, on February 11th, 1891, with carcinoma of the lower three inches of the rectum, of at least eighteen months' duration. The growth completely sur-

rounded the bowel, was adherent anteriorly to the prostate; it involved the anal margin, and was of board-like hardness. The index finger was with difficulty passed through it, but apparently healthy bowel could be felt beyond. Iliac colotomy (modified Madelung) was performed on February 19th, as a preliminary to proctectomy, if the patient's subsequent condition permitted of it. On opening the peritoneal cavity by the usual iliac incision, coils of small intestine presented. The colon was not in its normal situation, and it was only after considerable search that it was found to the right of the middle line and brought across to the abdominal opening. Fortuately the colon was long enough to admit of the complete section of the bowel, the unfolding and suturing of the opening into the lower segment, and its approximation and fixation to the parietal peritoneum below the lower angle of the wound, and finally the suturing of the opening into the upper segment to the edges of the wound. The patient did well, and the wound healed by first intention, but on the tenth day he had a little troublesome vomiting, which recurred once or twice subsequently. He was up in the ward at the end of a fortnight. On the seventeenth day he made an extra and hearty meal of plum cake, conveyed to him by his friends. A few hours later epigastric pain and vomiting occurred, and he became partially collapsed, with irregular cardiac action. Although the pain and vomiting ceased in a few hours, he never thoroughly rallied, and died on the nineteenth day after the colotomy (March 10th.) His bowels had acted fairly regularly throughout. On *post-mortem* examination, the descending colon was found to cross over the top of the left kidney to the middle line, and to pass down into the pelvis, inclining a little to the right. A loop of small intestine (ileum) was found adherent to the edge of the peritoneal wound, causing partial obstruction, chiefly by preventing peristalsis. The stomach and intestine above this adhesion were distended; below it the intestine was almost empty. The carcinoma was limited to the lower three inches of the rectum; it partially involved the prostate, but there was no lymphatic or visceral implication. A microscopical examination made by Dr. Crooke, pathologist to the hospital, showed that it was of the adenoid form, with a large amount of fibrous tissue. The specimen demonstrated the excellent result obtained by this method of performing colotomy, the opening into the lower segment being firmly occluded and attached to the abdominal parietes. The interesting points in the case were: The abnormal colon rendering the iliac operation difficult, and a lumbar one impracticable; the adhesion of the loop of intestine to the edge of the peritoneal wound, thereby practically causing the death of the patient —although this complication had been observed in abdominal operations where a raw surface like the stump of a pedicle was present, Mr. Marsh had never seen it mentioned in connection with colotomy, nor had its possibility occurred to him; the long period of growth (definitely eighteen months) without any lymphatic affection, or generalisation; the confirmation of the view that carcinomatous growths originating in the rectum were always adenoid, though the clinical features might be those of scirrhus.

Exhibits.—Mr. Bennett May showed an Instrument which had been devised by Dr. Lambotte, of Brussels, for separately collecting the urine of the two kidneys.—Dr. Simon showed: (1) Hydatid of Liver after Operation, and (2) a Specimen of Ruptured Aortic Valve.—Dr. Crooke showed: (1) Colloid Carcinoma of Rectum, and (2) an Adeno-Carcinoma from the Suprascapular Region.—Mr. Martin showed (for Mr. Lawson Tait) a Specimen of Calculus Removed by Suprapubic Operation, from a man, aged 61 years. The stone weighed two ounces, and neither rectum nor bladder was distended before operation.

Medical Congress in Cuba.—A medical congress is to be held in Cuba in January, 1892. The Organising Committee has proposed the following among other subjects for discussion: (1) Topography and Medical Statistics of some one Locality in the Island of Cuba; (2) Etiology, Prophylaxis, and Treatment of Yellow Fever; (3) Pathology of the Liver in Hot Climates; (4) Is Malaria the Cause of the Malignity of Fevers in Havana? (5) Scheme for the Improvement of the Sanitary Condition of Havana, etc.

REVIEWS AND NOTICES.

A Report of an Investigation into the Causes of the Diseases known in Assam as Kála-Azár and Beri-beri. By Geo. M. Giles, M.B., F.R.C.S., etc. Shillong: 1890. 8vo, iii, and 159 pages; 4 plates.

Tea-Garden Sanitation: being a few Remarks on the Construction of Coolie Lines and the Sanitary Management of Coolies, with special reference to the preventing the disease known as Anæmia of Coolies, Beri-beri, and Anchylostomiasis. By Geo. M. Giles, M.B., F.R.C.S., etc., on special duty, Assam. Shillong: 1891, 8vo, 26 pages.

The former of these works is the scientific record, the latter the popular application, of a laborious and successful investigation. About the end of 1890, Dr. Giles was entrusted with the task of examining into the causes and possible remedies for an epidemic which was working great devastation in the tea-gardens of Assam, and was commonly called by the name "beri-beri"—a most unsatisfactory appellation, for, though devoid of vernacular significance in any language, it has been applied indiscriminately to several distinct maladies. A few necropsies on the scene of activity of the disease showed that it was really a helminthiasis, due to the presence of *Anchylostomam* (*Dochmius*) *duodenale*, and the eggs of this parasite were constantly discovered in the fæces of affected persons. The next problem was to work out the life-history of the parasite, and the mode of its invasion of the human subject. From the egg—the microscopic characters of which are fully described—issues in from one to six days, according to temperature, a small worm, which grows into a sexual rhabditis. Copulation takes place in the ground, and it is the progeny of this rhabditis that infects the human subject, the parasite being introduced, not in drinking water, but in portions of soil taken into the mouth along with food; and the author shows endless possibilities whereby this may happen, owing to the habits of the Assamese coolies. The diagnosis, pathology, and treatment of the disease are fully discussed; the most important symptoms being dyspepsia and anæmia. The concluding section of the larger work, and practically the whole of the smaller one, deal with modes of preventing the spread of the disorder. The general principle of these is obvious from what has been said above, and the details, being dependent upon a variety of local conditions, need not be discussed in this place. The style of writing is clear and concise, and the whole work is pervaded by a thoroughly scientific spirit.

The Constitutional Requirements for Tropical Climates, and Observations on the Sequel of Diseases Contracted in India. By Sir William Moore, K.C.I.E., Honorary Physician to the Queen, late Surgeon-General with the Government of Bombay. London: J. and A. Churchill. 1890.

Sir William Moore is well known as a voluminous writer on sanitary and medical matters connected with India. In the present volume he has recorded his views regarding the classes of persons who are so constituted as to be able to withstand, or who are most likely to succumb to, a tropical climates.

It is recorded of a Calcutta tradesman that, on being remonstrated with by a customer on the exorbitant character of his prices, he replied, "Well, sir, we don't come out to this bloomin' country for our 'elths;" and the tradesman's philosophy accounts very fairly for the presence in India of the great bulk of its European population. Beyond the handful of visitors engaged in "globe trotting," or who visit the country for sport, the European population of India—civil, military, and commercial—is bent on securing a present livelihood on conditions somewhat easier than in the mother country, and a provision, if possible, for declining years in which work is impracticable. Thus it is that the European population in India consists, for the most part, of young persons in the prime of life, and of children under 7 years of

age. An old man or an old woman is rarely to be found in an Indian station.

In the struggle for existence, under climatic conditions wholly unsuitable to the British race, a large percentage fall by the wayside; some by swift and fatal illness, others by a gradual impairment of health; but in whatever manner the ranks of the European population of India are thinned, the incentives to an Indian career are so powerful that for every vacant place there are ten candidates ready and willing to stop the gap; and if it were otherwise, we might have to consider seriously whether the Indian empire should not be blotted out of the map of British territory.

Every civil servant, military officer, and soldier who serves in India is examined prior to his admission as to his physical condition and fitness for active service. Rejections are frequent, and they would be more frequent still if Sir W. Moore's views as to temperaments and idiosyncracies prevailed.

In the British army the compulsory period of Indian service is very limited, and if officers and men exchange with the view of remaining in India, it is to be presumed that the climate and service are not disagreeable to those who volunteer to remain. In regard to the civil, medical, engineering, and other departments of the Indian Government, the European members of such services contract for the most part to give the working years of their life to State duties, securing for the same graduated scales of pay, furlough allowance, and pension. All executive officials are required to retire when they attain the age of 55, not 50, as Sir William Moore states, (page 20).

We quite agree with Sir W. Moore that it is inadvisable for growing youths to be sent to India, and that the model age for beginning an Indian career would be about 24; but as regards the army, which is a short service one, and supplied by voluntary enlistment, this is impracticable. If our army were constituted as are Continental armies, it would be feasible to re-enlist seasoned men of mature age for tropical service. As a rule, the few officers and men who remain in India after middle age are treated kindly by the climate. An instance occurs to us of a retired official of 75 years of age, who could stand the fatigue of a day's woodcock shooting in the *sholas* of the Neilgherry Hills better than most men half his age.

Sir W. Moore points out that persons showing signs of anæmia, scurvy, albuminuria, alcoholic craving, ague with spleen enlargement, epilepsy, etc., are not likely to do well in India, and this accords with general Indian experience. On the other hand, in some cases of phthisis the disease has been arrested and life prolonged by residence in a tropical climate. Whether a person of gouty tendency should reside in India is debatable. Sir W. Moore thinks not. But many subjects of inherited gout have lived long and enjoyed good health in India. The action of the skin under a high temperature carries off many morbid products. We are at one with Sir W. Moore in thinking that hysterical young women are ill suited for India, as, indeed, for the happiness or progress of any other country, or community.

In regard to "temperament," Sir W. Moore thinks "that the European who in type and temperament most closely resembles the condition to which climate and mode of life have converted the natives of India would be the best fitted to encounter the adverse influences of a tropical climate." We are inclined to think that it is a very difficult matter for a physician to prognosticate of any individual from considerations of temperament only, how an Indian life will suit him. We have often known such prognostications to fail. Some men rejected for the Civil Service on physical grounds have had good health in other pursuits in India, while others who passed all preliminary tests have broken down in a very short period of tropical life. The true test, we suspect, is that of experience.

The second part of the book relates to the remote consequences of disease contracted in India.

PROBLEMS IN CARDIAC PATHOLOGY: A THESIS FOR THE DEGREE OF M.D. IN THE OXFORD UNIVERSITY. By FRED. T. SMITH, M.B., M.R.C.P., F.R.C.S.

THE author of this essay gives first a short historical sketch, and then proceeds to discuss a series of problems of great interest in cardiac pathology. His conclusions are based on a statistical analysis of 956 cases which occurred in the London Hospital, in which the clinical and pathological details were carefully compared.

According to these statistics, as many as 47.43 per cent. of cases of heart disease die of some independent affection. Of cardiac murmurs, the combined double aortic and mitral systolic murmurs occur second in point of frequency, the double mitral murmur third, the single mitral systolic *bruit* being the most common.

The author discusses the question of how far *bruits* during life correspond with appearances found after death. The conclusion, based on 545 cases, is that out of every 100 hearts, in 36 the *bruits* will give exact information, in 10 they will lead the observer absolutely astray, and in 54 they will give information either in excess or defect of the truth. This conclusion, as it stands, is probably too general. True as it may be when applied to advanced cases of heart disease admitted into hospital within a measurable distance of death, it cannot be applied to all cases of compensated or uncompensated cardiac disease. Again, the *post-mortem* evidence as to the competency or not of a valve, especially in combined lesions, is not in every case so trustworthy that absolute reliance can be placed upon it.

Under the head of mitral stenosis, it is interesting to compare the statistics (in Tables V, VI, and VII) with certain recognised peculiarities of the presystolic murmur, namely, its variability, its frequent absence in advanced cases, or its replacement by a systolic (possibly tricuspid) murmur.

With regard to age the following observations are illustrated: That in children under 12 years the prognosis is most unfavourable; that in women, as the author puts it, there is apparently a greater tendency to die directly of heart disease than there is in men; and that in rheumatic cases death takes place at an earlier age than in the non-rheumatic.

The question of the remote prognosis of valvular disease deserves particular attention in the somewhat doubtful state of our knowledge. According to these statistics, mitral incompetency gives the worst prospect, and aortic incompetency the best. Aortic and mitral stenosis occupy an intermediate position, and their relative danger is more doubtful. Combined lesions are then touched upon, and the essay closes with the statement of the relative frequency of the several vascular affections.

This is an admirable endeavour to deal with a difficult subject, and the statistical method of investigating it promises to yield in the author's hands valuable results. There are few paragraphs in this thesis that do not provide much useful material for reflection, and that are not of great practical interest.

NOTES ON BOOKS.

Medical Education, Medical Colleges, and the Regulations of the Practice of Medicine in the United States and Canada, 1765-1891. By JOHN H. RAUCH, M.D., Secretary Illinois State Board of Health. (Springfield, Ill.: H. W. Rokker. 1891.)—This is in several respects an interesting book. It is interesting, in the first place, because it contains a great deal of valuable information which has probably never been brought together before under one cover. In particular, it contains a complete list of all the colleges and universities in the United States which give, or ever have given, or professed to give, medical education or medical degrees. It also contains a full account of the conditions governing the practice of medicine in the United Kingdom, and an account of the requirements of the various licensing bodies. The notes on graduation requirements and medical legislation in other countries are very brief, but on the whole they convey a great deal of information not easily procurable elsewhere. The volume is of interest in the second place, as showing that medical education is steadily progressing in the United States. Some of the larger universities in that country—namely, the University of Pennsylvania, Cornell, Yale, Princeton, Lake Forest, and North-Western, Johns Hopkins, and Wisconsin—now offer special courses preliminary to the study of medicine, while Harvard University has made arrangements by which those

intending to study medicine can take a special B.A. course. It would appear that the movement for four years' study and a three years' course of lectures is now an assured success. Several other State Boards besides the Illinois Board have already adopted regulations in this direction. Another respect in which the volume is interesting is the curious information which it gives with regard to the irregular granting of degrees. The notice of some of these "bogus universities" are very short, but at the same time they are thoroughly to the point; for instance, of one we read only the following description: "Organised in 1833, the first fraudulent medical school in the West; extinct." These three facts apparently comprise all the history of the university. Of another, the New York Reformed Medical College (Eclectic) but two facts are known: "Organised 1836, extinct 1838." Of yet another—the Auburn Medical School—even less is known; the historian can only write: "Extinct; date of organisation and extinction unknown."

The Physical Diagnosis of the Diseases of the Heart and Lungs. By D. M. Cammann, B.A.(Oxon.), M.D. (New York and London: G. P. Putnam's Sons. 1891.)—The author first deals in this little manual with the lungs. After describing the regions of the chest and the organs contained in it, Dr. Cammann considers the various physical signs both in health and disease, as well as their mode of origin. Among the stethoscopes the author's chest piece and bimanual hydrophone are described. The diseases of the lungs are given and their respective physical signs detailed. The second part of the book treats of the heart in health and disease, pericarditis, aneurysm, and the pulse. The sections dealing with the position of the heart, auscultatory-percussion, and cardiac irregularity and intermittency, are deserving of a more special mention. This book gives a good and accurate account of the subject under consideration, and the method of arrangement is excellent. There are some 20 beautifully executed illustrations.

Falmouth as a Health Resort. By Sir Edward H. Sieveking, M.D., F.R.C.P. (Truro: Heard and Son. 1891.)—Falmouth has been fortunate in finding so enthusiastic, so persevering, and so consistent an advocate as Sir E. Sieveking. He states that his acquaintance with Falmouth only dates from 1889, yet how many occasions has he found since then of urging its attractions! There is one question, however, which it would comfort us to hear Sir Edward's opinion on. He says (p. 12): "At present there is but little accommodation for invalids at Falmouth, and what there is must be secured some time beforehand. At present, too, there is an entire absence of any amusements suitable either for invalids or their attendant friends." Ought the invalids to precede the accommodation or the accommodation the invalids? Most invalids, we should think, would prefer the latter alternative. Admitted that Falmouth, or rather its vicinity—because we gather that it is not exactly the town of Falmouth itself that Sir E. Sieveking advocates but one of its suburbs—admitted that Falmouth possesses many climatic advantages over other south coast resorts, should we not wait until suitable accommodation is provided before we recommend invalids to go there?

The Physical Signs of Cardiac Disease. By Graham Steell, M.D.Edin., F.R.C.P. (Manchester: J. E. Cornish. 1891.)—In this little work the author deals with the subject in a very efficient and able manner. After a few necessary anatomical considerations, the various facts to be learnt by inspection, palpation, percussion, and auscultation respectively, are classified and then described. Abnormal pulsation in the vessels, including thoracic aneurysm, is particularly well dealt with. The importance of percussion in roughly estimating the size of the heart is dwelt upon, and a method of graphically expressing results given. Under the head of auscultation the causes of the heart sounds are briefly discussed and their modifications clearly described. Murmurs, both endo- and exo-cardial, as well as those arising in the vessels, are well treated. In an appendix, the pulse is considered in the same methodical and satisfactory manner. This little book seems to be a very excellent one, and admirably adapted to students.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JUNE 13th, 1891.

THE PROGRESS OF HYGIENIC LEGISLATION.

Some heavy fighting may be expected in the House of Commons on the report stage of the Factory and Workshops and on the Public Health (London) Amendment Bills. More especially will the battle rage over the age proposals of Mr. Sydney Buxton and Sir Wm. Houldsworth; and although keen discussion and a tight division may be confidently expected, the general belief is that some compromise will be effected in the end, and that eleven will finally be adopted as the last word on this important question. As in the committee room upstairs the argument will lie pretty much between certain classes of operatives on the one hand and educational and hygienic authorities on the other. Those who speak in the name of these artisans tell us that the contributions of their children form an essential part of the weekly wage, and that the proposed limitation of half-time work will mean a loss of nearly half a million of money, whilst those who have the real interest of the little ones at heart are able to reply that when factory work goes in education goes out; that the actual business of life strangles the interest formerly felt in rising standards of knowledge, and that the double strain makes formidable demands on nervous energy which are not at times satisfactorily met. It is to be hoped that we shall follow the recommendations of the Berlin Conference, and we rejoice to think that the completed convalescence of Mr. Mundella will allow him to take part in the discussion of a subject with which he has himself been so prominently and usefully identified. Then it is more than probable that the laundresses, following up their successful lobbying of last week, will have something to say through their champion Mr. Randall; and the same energetic representative of Wales has also undertaken to reinsert his amendment in favour of extending the protection of medical examination to workshops as well as factories. We have received from an experienced authority in the North ample proof of the necessity for such an extension of the existing law, and the narrow majority by which Mr. Randall's amendment was defeated in the Grand Committee leads us to hope that he will be more successful when he lays his proposals before the whole House on the report stage.

It is greatly to be regretted that Mr. Matthews could not see his way to carry out by legislation the strong conviction which he had previously expressed, that the benefits of medical inspection were much curtailed by not being continuous

and repeated at intervals during the whole industrial life of a child. Expense appeared to be the only reason for his sudden and unexpected change of front; but we think, on the whole, that the surgeons have been wise to let well alone, and to remain satisfied for the present with the privilege of being allowed to exist.

The Public Health (London) Amendment and Consolidated Bill has now emerged triumphantly from the ordeal of criticism in the Grand Committee, and has been reprinted in its amended form, with the alterations usefully noted in italics. The vestries died hard upstairs, and will probably retain enough vitality to renew the hopeless contest down below; but we feel sure that the House, like the Committee, will support Mr. Ritchie by insisting on uniformity of hygienic action by placing the framing of by-laws in the hands of the County Council, and giving them ample and penal powers to see them properly carried out.

We understand that Sir Guyer Hunter, to whom the inhabitants of London owe a deep debt of gratitude for his persistent and able labours on their behalf, will renew his opposition to the clause compelling medical officers of health to reside in their district, and will also put down his amendment to the effect that sanitary inspectors should be compelled to show some reasonable certificate of qualification previous to appointment. Evidence has been brought to our notice of the lax way in which these officials are sometimes introduced into the service, and we wish Sir Guyer Hunter every success in the protective clause which he has introduced.

Taken as a whole, this Bill makes distinctly for progress, and we congratulate Mr. Ritchie most cordially on the firmness and ability with which he has fought the hygienic battle against formidable opposition from his own side. But he has kept steadily in mind all through the importance of codification, unity, and central responsibility; and we believe that in the near future many of the most irritating of the minor miseries of London life will become things of the past.

OFFICIAL OBSTRUCTION.

The British Institute of Preventive Medicine aims at the establishment of a Central Bacteriological Institute like the Institut Pasteur in Paris, or the Hygienisches Institut in Berlin, and numbers of others already built and endowed by the Governments in every foreign capital and almost every principal foreign town. The United Kingdom has the unenviable distinction of being the last in this humane and philanthropic competition.

To enable the promoters to receive subscriptions and other assistance, it is legally necessary to obtain incorporation. Such incorporation may be effected (1) by Act of Parliament, a very tedious and expensive process; (2) by Royal Charter; (3) under the Companies Act the Board of Trade can register as incorporated without the word "limited" any association which can show the *bona fides* of its promoters that its objects are charitable and for the public utility, and not for commercial profit. The application for registration in this way was made in due form, but within the period for the deposition of objections there were sent to the Board of Trade Office a series of anti-vivisection petitions.

Sir Michael Hicks-Beach, without assigning any reason whatever, refused the request of the institute. It soon became only too clear that the President of the Board of Trade although he did not openly avow it, was resisting the formation in Great Britain of a central sanitary institute such as Ministers abroad in a similar position had felt it an honour and privilege to establish. In thus obstructing an important hygienic movement he was placing the opinion of the most eminent scientists of the day beneath that of a small and ignorant faction. Such action on the part of a highly educated and gifted statesman becomes absolutely inexplicable when we consider that, as a matter of fact, in thus acting the President of the Board of Trade was taking upon himself authority in a matter vested by Parliament in the Home Secretary.

To the question thus brought to a plain issue by the action of the Board of Trade the response from those sincerely interested in the advance of medicine was more thorough than even the most sanguine could have anticipated. At the deputation which had an interview with the President of the Board of Trade on June 5th (see p. 1300), all branches of science were represented by their foremost and most respected men, and as it included more than 150 members it was, as a fact, the most influential and powerful gathering that has for many years thus expressed an opinion on a scientific subject.

After the objects of the institute had been explained and the increasingly wide importance of bacteriology to general science, as well as to pathology and preventive medicine, been shown by Sir Joseph Lister and Professors Dewar and Ray Lankester, the task of summing up the facts of the case was entrusted to Sir James Crichton Browne, the deputation having been introduced in the first place by Sir Henry Roscoe.

In reply to the very powerful and impressive speeches addressed to him, Sir Michael Hicks-Beach read a written answer. In this he stated that he had refused the application on the ground that if he registered the institute he would be encroaching on the duties of the Home Office. He further suggested that there were other methods of incorporation possible; and mentioned not only those which have been alluded to, and already shown to be impracticable, but also the method of placing the money in the hands of trustees—at least equally impracticable. By entering into the question of experimental research at all, and by adjudicating upon its merits, he was, we apprehend, committing an error of the same kind as that which it was his ostensible desire to avoid; that is, he was acting *ultra vires*.

As to the suggestion that the granting of the licence of incorporation by the Board of Trade would give the institute a kind of imprimatur on its application to the Home Office for registration under the so-called Vivisection Act, a little further reflection will show that this is not the case. In the first place, the wording of the Companies Act does not favour any such construction; in the second place, the Home Office adjudicates solely on its own responsibility; and, in the third place, this registration asked for by the British Institute has already been granted by Sir Michael Hicks-Beach in two previous instances—namely, the Marine Biological Association and the College of State Medicine. In both these cases the institutes in question obtained the general registration of the Board of Trade, and then the special registration of the Home Office.

It will be noted that, although Sir Michael did not refer in his answer to the arguments laid before him, he expressed his willingness to receive documentary evidence why the alternative courses proposed by him are impracticable: and when he appreciates the cogency of these reasons, he will probably reconsider the somewhat unceremonious refusal with which the first application of the British Institute was received.

The establishment of such an institute in this country, and especially in the metropolis, would be of the utmost service to science at large and to sanitary or preventive medicine in particular. At the present time the principal medical schools have facilities for teaching bacteriology. At King's College there is even a special Chair of Bacteriology and a laboratory in which both instruction and original research can be carried on. For the latter purpose also there are the laboratories of the Conjoint Colleges on the Embankment, of the Brown Institution, and of University College. But in all these institutions the provision for bacteriology falls very far short of that which is afforded by foreign countries, and it becomes essential that a central institute should be set on foot which would provide original investigation into the whole subject from all points of view.

It is satisfactory to know that the executive committee of the proposed institute is receiving the support and advice, not only of those practically engaged in pursuing the study and teaching of bacteriology, but also of the leaders in other departments of science who recognise the full bearing of this new branch of knowledge.

In conclusion, we can only hope that at the great International Congress of Hygiene which is about to assemble in London our scientific hygienists and bacteriologists will not have the humiliating and mortifying confession to make to their foreign brethren that the Government of this country has gone out of its way to oppose and obstruct the provision of advantages which the Continent has enjoyed for years.

LONDON WATER BILLS.

It does not seem likely that the inquiry now being held before a Parliamentary Committee into the series of Bills proposing to deal with the London water supply will lead to anything very definite being done, at any rate this year. The Committee so far has passed one Bill—the Southwark and Vauxhall Water Bill—with certain amendments, and has put aside one Bill—the London Water Commission Bill. The last named Bill, which was promoted by the City of London, was the outcome, from the point of view of the Corporation, of the inquiry conducted under the presidency of Sir Guyer Hunter. The main point which the promoters of this Bill desired to make was that the question of the London water supply concerned not only the administrative county of London, but also the districts beyond this area, some of them pretty remote, from which the water supply of London is derived, directly or indirectly. They propose to vest the powers for dealing with the question of the London water supply in a Commission, to consist of one representative of the Local Government Board, one of the Board of Agriculture, five of the City of London, twenty of the County Council of London, and one representative from each of the counties of Middlesex, Surrey, Essex, Hertfordshire, Buckinghamshire, Berkshire, Oxfordshire, and of the boroughs of West Ham, Richmond, Kingston, Windsor, Reading, Abingdon, and Oxford, with power to add representatives from other counties which might subsequently be affected by any extension of the water collecting area. The consideration of this Bill was stopped at a very early stage by the Committee, which then passed to the consideration of the Metropolis Water Supply Bill. Before the conclusion of the evidence tendered by the London County Council in opposition, the Chairman announced that the Committee did not require further evidence in opposition to the trust, and did not propose to inquire into the quantity or quality of the present supply.

The Bill proposes to create a water trust representing the water consumers and inhabitants of the metropolis and adjoining districts and confer upon it the power to supply water within the metropolitan water area and to secure an equalisation of charges. It is proposed that the trust should consist of 39 members, elected by the county electors in the proportion of one member to each group of two parliamentary divisions, with special provision for the representation of the City of London. It also proposes to create a board of arbitration to fix the terms on which the water companies undertakings are to be acquired. Such board would consist of four members, nominated respectively by the President of the Local Government Board, the Chairman of the Institute of Bankers, the President of the Institution of Civil Engineers, and the President of the Institute of Surveyors. The Bill also proposes that the London County Council may, by a resolution of a majority of the whole number of their members, passed at a special meeting to be held between November 1st and December 31st, 1891, adopt the Bill and take the place of the water trust.

It is not difficult to see why it is that the County Council objects to this Bill. No doubt many reasons have weighed with it, but not the least has been the fact that the Bill would practically settle the question out of the hands of the Council, and then turn over to them for administration a scheme in the formation of which they had had no part. It is obvious that sooner or later we must have a water authority constituted in London, and in considering how this authority should be formed it must be remembered that water is a sanitary necessary, and that it is difficult to show any good reason for placing it under the control of any other body than that which already controls other departments of sanitary administration. An independent body for the management of the London water supply does not appear to be necessary, for it ought to be possible to constitute the London County Council the water authority for London. It is the only body which has authority over the whole of the County of London, and has a medical officer of health whose advice in all matters concerning water will be of the first importance. It is true that as long as the payments for water are based upon rateable value, the contributions from the City will be in excess of its representation upon the Council; the rateable value of the City being about one-eighth, while it has only four representatives. It has been suggested that this difficulty might be met by increasing the representation of the City; but there are, no doubt, objections to doing this unless the functions of the extra representatives were limited to water questions.

A difficulty is created, also, by the fact that most of the water companies supply areas outside the admininistrative

county of London. This, however, is a difficulty which has existed in the case of most towns which have purchased their own water supply; and it has, as a rule, been overcome by the simple expedient of providing that the municipality purchasing the waterworks shall supply outside authorities in bulk, leaving each authority to levy its own rates.

LEGISLATION FOR HABITUAL DRUNKARDS.

Repeated representations to the Government as to the inutility of the present penal procedure with habitual drunkards have been made by the Inebriates Legislative Committee of the Association, and by the Society for the Study of Inebriety. The Chairman of the Association Committee, who is also President of the Society, has always found the Home Secretary deeply interested in this important question, and we were indebted for the Inebriates Act Amendment Act of 1889 mainly to the cordial co-operation of Mr. Matthews and the Cabinet. These representations, which were also laid before the Legislature, prepared the way for the acceptance by the House of Lords on June 5th of a motion by Lord Herschell for an inquiry to ascertain whether some better method of dealing with such cases cannot be adopted. Lord Herschell called attention to the remarkable fact that, while only one-seventh of the convicted males were imprisoned ten times and upwards, the proportion of the females had been one-third. To this startling fact it must be added that 80 to 85 per cent. of the female commitments had been for drunkenness and allied offences. Many such offenders have spent most of their life in prison, not a few returning within a day of their release after a previous term of imprisonment. This inquiry cannot but do good. Our existing procedure is as injurious to the prisoner as it is inoperative in the cure or the prevention of intoxication. The brief detentions in prison under an abstinent *régime* practically only enable the narcomaniacal offender to pull himself together again, after the capacity for further intoxication has for the moment been lost.

In this way the power to indulge in excess is regained, and the inebriate is confirmed in his fatal habit. Our present judicial system is, therefore, a great training school of inebriety. To these considerations there ought to be added the difficult problem of inebriate criminal responsibility, which has led to such remarkably contradictory verdicts and sentences, even in trials involving the highest penalty of the law. Of recent years there has been, by all engaged in the administration of justice, an increasing recognition of the diseased condition of many individuals accused of offences committed either during or soon after an inebriate outbreak; and the frank acknowledgment of such a morbid state would be the key to a satisfactory solution of this intricate and important problem. Medical testimony has lately been strongly supported by Discharged Prisoners' Aid Societies, magistrates, and philanthropists interested in the the reformation of criminals. We may, therefore, hope that the objections to the compulsory detention of habitual drunkards, which have hitherto in both Houses of Parliament proved insurmountable, may, as the result of the forthcoming inquiry, be removed, and that such an amendment of the Inebriates Acts may be enacted as will render our legislation effectual in the cure of diseased inebriates, as well as in the reformation of inebriate criminals and in the marked diminution of inebriety.

THE ROYAL COLLEGE OF SURGEONS.

The return of the annual election for the Council of the Royal College of Surgeons again awakens the echoes of the internal strife from which that ancient corporation will continue to suffer until it undergoes some reasonable reformation. The Association of Fellows—a body which cannot be accused of being either unimportant or revolutionary—has recently issued a very temperate circular, which is printed in another column, and has asked Mr. Rivington and Mr. Lawson Tait to stand as the candidates of the Association. The constitutional method of obtaining redress by the election of those who can press a reasonable reform on the attention of the Council is a procedure of which no one can complain. The Fellows have it in their own hands to take a long step towards a settlement. The demands formulated in the circular are moderate enough to conciliate all reasonable men. They say—and who can deny it?—that it would conduce to the welfare of the College if the Fellows and Members had a larger share in its management. They insist that no change in the constitution or relations of the College should be effected without the consent of a meeting of the Fellows and Members convened for the purpose. Is it not obvious that it is most undesirable that such a scheme as that recently devised for the adjustment of relations between the College of Surgeons and the University of London should be absolutely accepted by the Council without consulting either its Fellows or its Members on the subject?

A similar grievance arose some years ago, when the Council, against the strong opinion of the great body of the College, insisted on shutting out the Apothecaries' Society from all connection with the joint scheme. The opinions of the Council may be, and they doubtless are, entitled to all respect; but it is ridiculous to say that they are morally entitled, whatever may be their legal right, to ignore the opinion of their own constituents on such vital points as these.

The third claim is that the annual meeting shall be made a reality, and shall be recognised as the occasion for the reception and adoption of the annual report. At present there is a meeting, and there is a report; but the Council maintains that the meeting is a mere social gathering held by favour, and destitute of any power either over the report or over anything else. The Members say that the annual meeting is a matter of ancient right; but even if it were not, it is surely a matter of modern expediency. No great body of educated professional men can be expected to remain nowadays in the state of permanent helplessness which the Council seems to consider the natural condition of those whose interests it exists to serve. Finally, the Fellows say that they should, at the meeting, be entitled to elect the President. This again the Members consider to be an ancient right. But the important point is that some sort of control should be allowed to the body of the Corporation over the small body of eminent gentlemen who now administer its funds and its affairs. It is somewhat surprising that the Privy Council allowed itself to be persuaded to stop the discussion of these much-needed changes at the time of the negotiations over the recent charter. The only ready way now open to promote them is by electing men who are in sympathy with reforms upon the Council itself. It is much to be desired that the large number of Fellows who take this view, and the large number who would be glad to see this irritating difference

drawn to a reasonable close, will feel bound to take the small amount of trouble necessary to record their votes.

A PAPER on the results of the recent Census, and on recent death-rates in the largest English towns, will be read at the Statistical Society, on June 16th, by Mr. Noel Humphreys, Secretary of the Census Office.

THE Berlin Municipal Council has decided to confer the freedom of the city on Professor Virchow on the occasion of his attaining his seventieth birthday. The great pathologist's portrait will also be hung in the Council Chamber.

THE vacancy in the office of surgeon at the General Hospital, Birmingham, caused by the death of the late Mr. T. H. Bartleet, has been filled by the election of Mr. Gilbert Barling to the post. For the post of assistant-surgeon thus left void only one candidate is announced, Mr. George Heaton, F.R.C.S., formerly resident surgical officer in the hospital. Dr. T. Sydney Short has been appointed assistant-physician in the place of Dr. Simon, now physician.

ST. BARTHOLOMEW'S HOSPITAL AND SCHOOL.

IN consequence of various rumours which have been circulated, we are asked to state that the hospital and medical school of St. Bartholomew's are working as usual, and that there is not likely to be any interruption in the ordinary routine. The number of beds closed during the necessary alterations is not greater than the number closed during the ordinary spring and summer cleaning.

GERMAN SCIENTIFIC GATHERINGS.

THE Association of German Alienists will meet this year at Weimar on September 18th and 19th. The following questions among others will be discussed: Responsibility and Criminality, Drunkenness in Relation to Responsibility, Prophylaxis of Tuberculosis in Lunatic Asylums, the Present Condition of the Aphasia Question, Therapeutic Employment of Hypnosis in Lunatic Asylums, Care of Epileptics.—The German Dermatological Society will hold its second congress at Leipzig from September 17th to 19th.

DEGREES FOR LONDON MEDICAL STUDENTS.

WE understand that the suggestion made by a correspondent in these columns, on May 16th, to the effect that the Senate of the University of London might, under the 19th Clause of the Medical Act of 1858, form a Conjoint Board with the Royal Colleges of Physicians and Surgeons, or one of them, has been seriously entertained by the Senate, and that steps are being taken to bring the matter forward formally. There would appear to be no doubt that the Senate are within their legal rights in taking action in this matter without consulting Convocation. Meanwhile, however, a case for University and King's Colleges, which will be represented by counsel before the Privy Council, is being prepared. The other bodies interested have been notified that any objection which they wish to make must be lodged before June 24th.

POPULATIONS OF LARGE TOWNS.

IT is abundantly evident on comparing the new populations of the large English towns, based upon the recent census in April last, with the estimates hitherto in use, that a more frequent enumeration is necessary to secure anything like a reliable estimate of population. The Registrar-General has from time to time pointed out that his estimates were more or less untrustworthy, so long an interval having elapsed since the preceding census in 1881; and now that the actual numbers are known it is evident that the caution was only too much needed, for whereas the population of Liverpool, which, having increased from 493,000 in 1871 to 553,000 in 1881, was estimated to be about 620,000 in 1891, it is now only 517,000, showing an actual decline of no less than 36,000 during the last 10 years. On the other hand Newcastle-upon-Tyne, which was estimated to contain a population of about 165,000, is found to have upwards of 187,000 persons within its boundaries. The population of Liverpool has therefore been over-estimated to the extent of 20 per cent., and that of Newcastle-upon-Tyne under-estimated 12 per cent. In the cases of Wolverhampton, Bolton, Manchester, Blackburn, Boston, Halifax, Leeds, and Sheffield, the estimated populations were found to be within 5 per cent. of the actual numbers; while the population of Leicester was over-estimated 11 per cent., Bradford 13, Oldham 15, Nottingham 19, and Salford no less than 26 per cent. Clearly we ought to have at least a quinquennial census of our large towns.

BACTERIOLOGY AT THE INTERNATIONAL CONGRESS OF HYGIENE.

IN the exhibition of apparatus and materials used in bacteriological research, which is being organised by the Section of Bacteriology of the International Congress of Hygiene, special prominence will be given to photography as applied to bacteriological research. Photo-micrographs and photo-micrographic apparatus, lantern slides, photographs of patients or parts affected with diseases due to micro-organisms, are especially asked for. Facilities will be given to exhibit lantern slides. Intending exhibitors are requested to give notice not later than June 15th to Mr. A. Pringle, Cromwell House, Bexley Heath, Kent.

THE KOCH INSTITUTE.

THE clinical section of the New Institute for Infectious Diseases at Berlin will, it is stated, be completed in the course of the present month. The buildings comprise seven pavilions, with accommodation for 108 patients, and two for the medical officers and attendants. There is also a small lecture room with seats for fifty. The internal arrangements of the scientific section are already so far advanced that it will be ready for use at no distant date. Dr. Richard Pfeiffer, formerly Professor Koch's first assistant, will have charge of the scientific section, and it is probable that Professor Ludwig Brieger will be appointed head of the clinical department. Professor Koch himself will receive a salary of 20,000 marks (£1,000) and Drs. Pfeiffer and Brieger 6,000 marks (£300) each.

LEGIBLE PRESCRIPTIONS.

THERE are advantages in living under a paternal government which even Mr. Herbert Spencer may be disposed to admit. The Austrian Minister of the Interior has recently issued an ordinance that the burgomasters of all communes must exercise strict supervision over the medical men practising within their jurisdiction in the matter of legibility of prescriptions. They are charged to see that every prescription is clearly and legibly written in all its parts, so that there may be no doubt as to the remedy, the dose, or the signature. If the average handwriting of Austrian medical practitioners is as cryptic in its character as that of many of their brethren in this country, it is to be feared that many worthy men in the upper, not less than in the lower, professional circles will have to go to school again till they have at least learnt to sign their own names so that they can be read without the aid of divination.

INFLUENZA.

THE fatality of influenza in London still continues to be excessive. The number of deaths directly referred to this disease, which had been 319 and 310 in the preceding two weeks, showed but a very slight decline, and were 303 during the week ending June 6th. In addition to these 303 deaths there were 52 cases in which influenza was certified to have occurred in the course of other diseases. There was again a

very marked excess in the mortality among elderly persons from influenza, no fewer then 132, or 43 per cent., of the total deaths from this cause being of persons upwards of 60. The deaths referred to diseases of the respiratory organs in London last week were 547, which although they showed a slight further decline from the numbers recorded in recent weeks, were considerably more than double the average number: these included 320 cases of bronchitis, the average number being only 126, and 176 of pneumonia, also more than double the average. The excess in the mortality from bronchitis appears to have been mainly among persons aged from 60 to 80 years, for the number of deaths at this age-period alone actually exceeded the average deaths from bronchitis at all ages. On the other hand, the excess in the mortality from pneumonia was especially marked among children under 5 years of age, the number of fatal cases at this age-period alone being almost equal to the average deaths at all ages from pneumonia. Probably many of these deaths, though primarily attributed to bronchitis and pneumonia, were due to influenza. In most of the large provincial towns there was a decline from the exceptionally high rates prevailing in recent weeks, although the mean rate in the twenty-seven largest provincial towns was as high as 29.4 per 1,000, and exceeded the average by nearly 50 per cent. The death-rate last week exceeded 35 per 1,000 in Birmingham, Blackburn, Liverpool, Manchester, Oldham, Salford, and Wolverhampton, in each of which towns the epidemic was exceptionally fatal.

THE ELECTIONS AT THE ROYAL COLLEGE OF SURGEONS.

Mr. Sydney Jones has determined not to seek re-election; Sir William Mac Cormac and Mr. Sibley, on the other hand, will contest the vacancies left by their retirement in rotation. The other candidates, arranged in order of their date of Fellowship, are Mr. Rivington (Fellow 1863, Member 1859), Mr. Jessop, of Leeds (Fellow 1868, Member 1859), and Mr. Lawson Tait (Fellow 1871, Member 1870). Mr. Jessop, of Leeds, is a very well known and able provincial surgeon. Mr. Rivington and Mr. Lawson Tait have been chosen by the Association of Fellows as representatives of reform, to which they have specially pledged themselves. Mr. Tait's zeal as a reformer is a matter of general knowledge, whilst Mr. Rivington has been for years an active member of the Association of Fellows which has ever endeavoured to raise the status of the diploma to a level with its equivalent in name only at the College of Physicians. If the Fellows do not help themselves by sound organisation, they will certainly never gain any such substantial benefits as the name of their diploma suggests. The claims of the candidates who seek re-election were mentioned in a previous issue.

LAUNDRIES AND LAUNDRESSES.

It is very much to be desired in the interests not only of persons employed in laundries, but also of the public health, that the provisions of the Factory and Workshops Acts should be extended to laundries and laundresses. There are a great many good reasons why they should, and we have yet to learn that there are any why they should not. The haphazard way in which we now "get our washing done" reflects very little credit upon the rulers of our domestic destinies, and it is certain that if these ladies would personally follow the bundles of soiled linen which are every Monday taken from their doors, legislators would very quickly be compelled to find a remedy. The sanitary conditions of many, perhaps the majority, of at least the smaller laundries are deplorably bad. The rooms in which the work is carried on have seldom been constructed for the purpose, and are consequently ill adapted to it; they are generally ill-ventilated and overcrowded. These evils may be remedied, but others are created in these so-called laundries in which the washing is actually done in uncovered back yards. In such ill-constructed places, anything like effective sanitary supervision is extremely difficult, and it is not surprising that infectious diseases, especially scarlet fever, attack the laundresses not infrequently. The possible consequences are so well known, so obvious indeed, that it is unnecessary to enlarge upon them, but the injurious effect of their insanitary surroundings on the health of the women is not so well known. It is, we believe, generally recognised by medical writers that ironers are peculiarly liable to consumption, this liability being due to their long hours of work in overcrowded, ill-ventilated rooms, in which the infective principle of the disease must always be present. Owing to the present custom of collecting all washing on Monday, instead of making a partial collection on Saturday, as is done by some large laundries the work is all crowded into three and a half days in each week, and the women engaged in the washing-room also—if a separate room is used for the purpose—are constantly exposed for continuous periods of 17 hours or more, in ill-ventilated rooms to a moist vitiated atmosphere, and too often, owing to the floor being badly laid and to the lack of drainage, they are actually standing in water: as a consequence they are the victims of rheumatism and neuralgia, and it is believed are peculiarly prone to miscarriages. The provision of sanitary appliances is commonly very deficient and sometimes altogether absent. As to the larger laundries, in which machinery is used, the visits of the inspectors are undoubtedly as much needed as in any factory. Recently the forewoman of a laundry was caught in a cogwheel and received injuries which necessitated the amputation of her arm. We can only conclude, as we began, by saying that it is entirely incomprehensible why laundresses should not receive the same measure of State protection against preventable diseases and accidents as is afforded to female operatives in other trades not more injurious to the health of the workers and certainly having fewer points of dangerous contact with the public health.

THE DINNER OF THE ARMY MEDICAL STAFF.

The annual dinner of the Army Medical Staff was held at the Hôtel Métropole on Monday last. In the absence of the Director-General, who has recently suffered from influenza, the chair was taken by Surgeon-General J. Sinclair, P.M.O., Dublin. After the usual loyal toasts, the Chairman gave that of "The Sister Services" (the medical departments of the Royal Navy and of India). Sir Joseph Fayrer, in reply, reiterated the regret already expressed by the Chairman, and which every officer present felt at the absence of Sir William Mackinnon. He referred to Mr. Stanhope's recent letter, and said that it appeared to him to be a step in the process of evolution to that higher state of things to which the medical officers had a right; meanwhile, he strongly advised that the officers of the army should possess their souls in patience. Sir Thomas Crawford proposed "The Health of the Guests," and dwelt especially upon the debt of gratitude which medical officers owed to the British Medical Association and the British Medical Journal, and to Sir Andrew Clark. The President of the College of Surgeons having replied, "The Health of the Chairman" was proposed by Sir William Mac Cormac. Surgeon-General Sinclair, in the course of his reply, said that the Medical Staff ought to congratulate itself upon the measure of success which had attended the efforts of the medical profession for the improvement of their position. In his opinion, the development of the medical service would be progressive, and the experience of each campaign would suggest improvements. He trusted the day was not far distant when, in recognition of its services to the army, it would become a Royal Medical Corps. In response to loud calls, Sir Andrew Clark then made an eloquent little speech. He said that the demand for substantive rank was not due to any desire to pose as major-generals or lieutenant-colonels, and not for any personal satisfaction, but because it was felt to be necessary for the benefit of the public services. It was not a question of

a class, but one of national importance and national safety. The President of the College of Physicians referred also to the services which the BRITISH MEDICAL JOURNAL had been able to render to the army medical officers during the recent prolonged contest, and he concluded by expressing his belief that the formation of a Royal Medical Corps was only a question of time.

INFECTIOUS DISEASE AND ELEMENTARY SCHOOLS.

AN amendment, proposed by Dr. Farquharson, to the Public Health (London) Law Consolidation Bill has for its object the notification to the head teachers of the various elementary schools of any cases of infectious disease occurring in the homes of the children. It is so well known that infectious disease is largely spread through the agency of schools that it is a matter of surprise that some such effective step as is foreshadowed in the amendment has not long since been taken. At a conference last year of the metropolitan medical officers of health, held at the School Board offices under the presidency of Professor William R. Smith, the medical officer to the Board, an agreement was arrived at by which such notifications should be voluntarily given, and we have reason to know that the School Board authorities are very desirous of giving every assistance to the local sanitary authorities and their officers in the matter. The amendment is of great importance in the health interests of the community at large, and it is confidently believed that Mr. Ritchie will give it his support.

RAILWAY CARRIAGES AND TUBERCLE BACILLI.

DR. PRAUSSNITZ has lately been investigating the question of the possibility of tubercle bacilli remaining in an active state in railway carriages which have been occupied by phthisical patients, and thus propagating the disease. He chose as the subject of his experiments the through carriages from Berlin to Meran, which are used by a very large number of consumptive persons going to the Tyrol in search of health. Ten compartments in four carriages were carefully examined, with the result that six *coupés* in three carriages were found to be free from bacilli. On the other hand, in the dust from each of the four *coupés* in the fourth carriage bacilli were found on two different examinations made on November 23rd and 29th respectively. The number present was, however, very small, and, judging from the negative results of inoculations, they did not seem to be very active. Dr. Praussnitz therefore concluded that the method of cleansing railway carriages which is ordinarily employed affords sufficient protection to the travelling public from the attacks of hungry microbes. It is comforting to find a sanitary enthusiast successfully resisting the temptation to add a new terror to our bacillus-ridden life.

THE UNIVERSITY OF PENNSYLVANIA.

DR. WILLIAM PEPPER, Provost of the University of Pennsylvania, has offered 50,000 dollars towards a permanent endowment fund of 250,000 dollars for the medical department of that university, and has promised 1,000 dollars a year for five years towards an annual guarantee fund of 20,000 dollars. These offers were made subject to the conditions that a four years' course of graded study should be made compulsory for the obtainment of a degree in medicine and that the endowment and guarantees should be fully subscribed before January 1st, 1893. The medical faculty has already pledged itself to the four years' curriculum, and the professors have subscribed 10,000 dollars a year towards the guarantee fund. There is, therefore, every prospect that the conditions will be fulfilled and that the University of Pennsylvania will reap the benefit of Dr. Pepper's splendid munificence. The eminent physician has certainly taken the most practical way of showing his zeal for the reform of medical education in his native country. The laboratory of hygiene, for which the university is indebted to the generosity of Mr. Henry C. Lea, is approaching completion, and will be opened in February, 1892. The laboratory, as already announced in the BRITISH MEDICAL JOURNAL, will be under the direction of Dr. John S. Billings, with the assistance of Dr. A. C. Abbott. The laboratories of chemistry, pathology, and histology are said to be unequalled in size and completeness of equipment. During the present summer a great central heating and lighting station will be constructed, and electric lighting, steam heating, and ventilation, according to the latest views, will be provided for the medical buildings.

BRITISH GYNÆCOLOGICAL CONGRESS AT NEWCASTLE.

WE may remind our readers that the Congress of the British Gynæcological Society will be opened on Thursday next, at Newcastle-on-Tyne, under the presidency of Dr. Robert Barnes. At the first meeting, which will take place at 4.30 P.M. in the College of Medicine, Mr. J. R. Morrison will open a discussion on "The Surgical Treatment of Diseased Uterine Appendages," and Dr. Engelman, of St. Louis, will follow with a paper on the treatment of these diseases in connection with mental and nervous disturbance. On the second day, after a morning, and possibly an afternoon, devoted to the reading of papers (as to which details will be found at page 1317), the honorary physicians and surgeons of the Royal Infirmary will receive the members of the Congress, and take them through the institution; afterwards, it is probable that some operations may be performed. The public dinner will be held at the Assembly Rooms, on June 18th, at 7.30. Notification of intention to attend should be addressed to Dr. R. C. Benington, 59, Osborne Road, Newcastle-on-Tyne.

ABUSE OF THE PROVIDENT PRINCIPLE.

ATTENTION has recently been directed in these columns to the growing abuse of the provident principle in this country, and correspondents have given some striking examples from recent experience. Although the evil has reached larger dimensions in this country, it exists and has begun to attract serious attention in the United States. Thus, in the May number of the *Occidental Medical Times* we read an address, largely devoted to the consideration of the evils of society practice, by Dr. W. R. Cluness, of Sacramento, President of the Medical Society of the State of California. His remarks were founded upon a statistical inquiry, and referred to towns scattered through most of the States of the Union, both east and west. In New Orleans, where the system appears to have reached the most extreme development, it only originated about twenty-five years ago. The societies, he states, are there numbered by hundreds, and the position of the medical practitioners who hold these appointments is further degraded by the necessity of making an annual canvass for these positions; in general they go to the lowest bidder, and the canvass, according to Dr. Cluness, is "quite as eager as in political office-seeking." Every evil feature of the system to which correspondents have called attention in this country appears to have grown up in the States; thus Dr. Cluness tells us that "in one of the prosperous Californian cities persons who enjoy an income of more than a thousand dollars a month are base enough to take such society benefits, thus pauperising themselves and impoverishing their doctor." In the task of finding a remedy for this "society-mongering" our transatlantic cousins do not appear so far to have been much more successful than ourselves; but at New Orleans an attempt was made to combine for mutual protection, but came to an ignominious end owing to the refusal of a very few to co-operate. These few made an abundant harvest of the "societies abandoned in the enthusiasm of reform." In New York a Medical Practitioners' Association has been formed with the object, among other things, of abolishing "medical clubs, lodges, and societies of any kind paying the medical attendant a stipulated fee per member or stipulated amount per annum by contract." The association, however, only numbers at present 75 members out of a total number of 3,000

practitioners. Whether it will be able in the future to achieve greater success than has hitherto awaited it it is impossible to foresee with any certainty, but we have before us the failures in Birmingham and in New Orleans. Dr. Cluness, at the end of all his study and thought, comes to the conclusion that relief is only to be had in a natural reaction among the class of people who compose these societies. The inevitable result of cheapening the medical service will be "deterioration in the quality of service rendered by 'society' doctors, until in time its value will approximate to its cost." The *New York Medical Record* takes a somewhat similar view; it deprecates (May 16th) "strikes or organised resistance; it is better to teach people the injustice they do and the harm it works upon themselves, and also to teach physicians that they had better leave a profession which offers no adequate recompense."

SANITARY REGISTRATION OF BUILDINGS.

Mr. W. Lee Beardmore, in a paper read before the Civil and Mechanical Engineers' Society, has once more raised the question of a specified minimum of sanitary requirements, to be enforced by compulsory registration. His proposition is that "all places where food is supplied or whence it is distributed, or such institutions as schools, colleges, hospitals and asylums, and hotels, boarding and lodging houses"—and also prisons, police stations, and hairdressers' saloons—should be brought by these means into reasonable sanitary condition. Mr. Beardmore does not include private dwellings in his scheme, and practically limits its scope to matters of drainage. A further deviation from the provisions of the unsuccessful Sanitary Registration of Buildings Bill of 1887 is found in the omission of the formidable army of persons qualified to certify as to sanitary efficiency; this matter and, indeed, the whole machinery of registration Mr. Beardmore wisely defers until the preliminaries are agreed upon. The not infrequent occurrence of grave defects of the kind indicated, and the danger to the public health caused thereby, must be conceded, and compulsory registration would materially assist the responsible sanitary authorities in dealing with them. The duty of inspection, certification, and registration properly belongs to the sanitary staff, and it would be far preferable to attain the desired end by strengthening the sanitary administration than by creating new and possibly conflicting authorities to carry out the duties which the "powers that be" have hitherto failed to fulfil.

THE WORKING OF THE NOTIFICATION ACT.

A most regrettable controversy has occurred between Dr. Jepson, medical officer of health to the Durham rural sanitary authority, and Dr. Anderson, of Spennymoor, respecting the diagnosis of certain cases notified by the latter, and subsequently examined by the former in pursuance of an informal request from the sanitary authorities. It must be clear to those who have impartially watched the development of the system of notification that there ought, in the vast majority of cases, to be no occasion for friction between medical officers of health and private practitioners—that is, if certain elementary principles are clearly understood and acted upon. The duty of notification is one which the practitioner has not sought, but which has been imposed upon him as a professional obligation. He is not called upon even to guarantee the accuracy of his diagnosis, but merely to notify promptly every case which, to the best of his judgment, comes within the scheduled list of infectious diseases. In visiting the household the medical officer of health will sometimes be unable to avoid seeing the patient, but, whatever local sanitary authorities may wish to decree to the contrary, the Local Government Board is undoubtedly right in holding that it is no part of his official duty to examine any patient (without the consent of the certifying practitioner) for the purpose of verifying the diagnosis, unless there is reason to suppose that the notification has not been made in good faith. Such a suspicion is, of course, a far graver matter than one of mere error in diagnosis, and ought not to be lightly entertained. At the same time, the position of the medical officer of health, as the responsible adviser of the sanitary authority, is often one of extreme difficulty, as, for example, in those instances—several of which have come to our knowledge—in which large batches of cases of erysipelas or diphtheria are reported to him, and he finds that the patients have not been told of the nature of their illness, or even directed to remain indoors. If, owing to erroneous notification, the patient and the household are needlessly subjected to a lengthened and irksome quarantine, the responsibility properly rests with the notifying practitioner and not with the medical officer of health. It has long been customary in many towns where notification is of older date than 1889 to invite the opinion of the medical officer of health in doubtful cases, but this most desirable practice in no way affects the general principle just enunciated.

SCOTLAND.

Dr. Harvey Littlejohn, assistant medical officer of health for the city of Edinburgh, has been appointed medical officer of health for Sheffield.

A report by the Sanitary Inspector of Scotland shows that, in twenty-three cases, calves, sheep, or pigs were found occupying the dwelling-house besides the human inmates. In the case of thirty crofters' abodes, it was found that there was direct or indirect communication between the dwelling-house and the byre.

COUNTY MEDICAL OFFICERS OF HEALTH.

At a special meeting of the County Council of Caithness, on June 6th, it was intimated that there were nineteen applications for the medical officership, vacated by the resignation of Dr. Brock. A special committee had reduced the applications to four, but after a long discussion the name of Dr. John Alexander Wick, who, it was stated, does not hold a diploma in Public Health, was added. The advertisement, however, limited the applications to holders of a sanitary science degree, but after another prolonged discussion a motion was carried that this limitation be departed from. The Council will advertise again, and will meet a month hence to make the appointment.

NEW FEVER HOSPITAL FOR GLASGOW.

The Glasgow Fever Hospital at Belvidere is situated at some distance from the extreme eastern portion of the city, and this has for years proved a great hardship to the dense working-class population in the north-west of the city. The Town Council has now unanimously resolved to take a step which will remove this hardship. For years negotiations have been going on at intervals to secure ground in the north-western district for a public park, and these negotiations have at length issued in definite arrangements for obtaining ground for such a purpose. A part of the ground is well suited for a site of a fever hospital, which could be so built as to secure sufficient isolation to prevent it being in any way obnoxious to the district. The unanimity with which the Council have sanctioned the proposed arrangements will secure that both the problem of providing breathing space for this part of the population and hospital accommodation for fever patients will be speedily solved.

SCOTTISH BRANCHES OF THE DENTAL ASSOCIATION.

The second joint annual meeting of the West of Scotland and the Scottish Branches of the British Dental Association was held at Aberdeen on June 5th and 6th. On Friday forenoon, under the guidance of the local committee (Dr. Williamson, Dr. Cromar, and Mr. Crombie) the members

journeyed through the town in waggonettes, visiting the sights and historical places in and about the "Granite City." In the afternoon the annual meetings of the two branches were held, when the secretaries' and treasurers' reports were read, showing that the branches were in a sound and healthy condition. The joint meeting was afterwards held under Dr. W. H. Williamson, Aberdeen, President of the Scottish Branch. Representatives were present from all parts of the country. In his opening address the President bade the members welcome to a northern latitude where no dental body had been before, and then proceeded to urge the policy of the Association in its efforts to promote dental and allied sciences, and the maintenance of the honour and interests of the Association, and specially advocated the study of the fine arts as a means of education. A discussion followed, when it was agreed to forward a resolution to the parent Association, disapproving of any endeavour being made at the present time to curtail the register of dentists in the British Dental Association. Specimens, models, and appliances relating to the profession were submitted and described by various members. In the evening the members dined together in the Imperial Hotel, Dr. Garden, President, and Dr. Edmond, Secretary of the Medico-Chirurgical Society, being invited guests. Dr. Williamson, Aberdeen, presided, and Mr. W. F. Martin, L.D.S., Glasgow, was croupier. On Saturday the members went by train to Stonehaven, and from there, on the invitation of the local committee, they drove to Dunnottar Castle and other places of interest in the district. Dinner was served in the afternoon. Mr. Crombie presided, and Dr. Williamson was croupier. Several toasts were pledged, including "The Local Committee," who were cordially thanked for arranging what was generally admitted to be one of the most enjoyable outings the Association had ever had. The members from the South returned by the afternoon train.

THE TYPHUS FEVER OUTBREAK IN MULL.

THE main facts regarding the outbreak of typhus fever in Mull in March were stated in the BRITISH MEDICAL JOURNAL of April 18th. The remarkable behaviour of the people and of some sanitary inspectors towards relatives of a patient who had died was discussed. The widow, a daughter, and a grandchild of the patient were compelled to walk thirty-two miles, being refused a conveyance and shelter on the way, and being also refused admission to a public inn, while a pedlar who had helped to coffin the dead man was similarly treated and died of exposure. The Board of Supervision, to whom the facts were reported, ordered an inquiry, the result of which has just been published. The report substantially corroborates the accounts already published, and remarks that countenance seems to have been given to the panic among the inhabitants by the conduct of those who by profession and education should have set a different example. No clergyman had been present, so far as the inspecting officer could learn, at several of the funerals at Bunessan, where also the refusal of the sanitary inspector to enter the room where one of the bodies lay would produce its effect. Again, the use of the hospital at Tobermory, erected for the purpose of isolation in cases of infectious disease, was refused to Dr. McNeill. The conduct of the people, the officer thinks, displayed a humiliating moral cowardice, while the three medical men concerned in the cases "exhibited the devotion to duty traditional in their noble profession," and while the county sanitary inspector had ably assisted them, the fear of infection exhibited by the other sanitary inspectors "unfits them for continuance in office. The latter are Mr. Alexander McGregor, sanitary inspector of Kilfinichen, and Mr. Macdougall, sanitary inspector of Torosay." Acting upon this report, the Board of Supervision have, it is stated, relieved McGregor from office, and, in respect of a medical certificate as to the state of his health, have consented to accept the resignation tendered by Macdougall.

IRELAND.

THE Medico-Psychological Association will hold a quarterly meeting at the Richmond Asylum, Dublin, at 12 o'clock noon, on June 18th. The following papers will be read: (1) A Note on Cocaine; (2) *Folie Communiquée:* Dr. Conolly Norman. A Case of Rupture of the Heart: Dr. Vincent Nash. Dr. Conolly Norman will exhibit various pathological specimens, gross and microscopic.

ROYAL COLLEGE OF SURGEONS.

IT is understood that Mr. Edward Hamilton will become a candidate for the presidency of the College in 1892, should Dr. Carte determine not to seek promotion from the vice-chair. Mr. Hamilton has already served as President. In our last issue the name of Mr. Thomas Myles was accidentally omitted from the list of members of the Council of the College, elected on June 1st.

THE REGIUS PROFESSORSHIP OF SURGERY.

THE Academic Council met on June 5th to elect a successor to Mr. William Colles, who has resigned the position of Regius Professorship of Surgery in the University of Dublin. The Council consists of eighteen members, and not one was absent. Applications for the appointment were sent in by Sir George Porter, Bart.; Sir William Stokes, Mr. Edward Hamilton, Dr. C. B. Ball, Mr. W. I. Wheeler, and Mr. J. K. Barton. A preliminary discussion took place as to the desirability of permitting the successful candidate to hold an extramural teaching professorship as well, and it was finally decided to postpone the election until June 22nd, in order to learn whether either of the gentlemen (Sir W. Stokes and Mr. Hamilton) holding such professorships now would be ready to resign his position in the event of his being chosen Regius Professor.

DISCUSSION ON HYPNOTISM IN DUBLIN.

DR. F. R. CRUISE, one of the consulting physicians to the Mater Misericordiæ Hospital, Dublin, who opened a discussion on hypnotism at the Royal Academy of Medicine in Ireland a short time ago,[1] very candidly confessed that a year ago he was quite undecided whether the usual statements of the chief French observers of hypnotism "were either astounding facts or most audacious falsehoods"; and, indeed, that if he had heard his own present opinions a year ago he would have been very sceptical about them. However, a visit to Nancy and Paris, and a short study of the *cliniques* of Liébeault, Bernheim, Luys, Auguste Voisin and Charcot, have convinced him "that hypnotism is a reality, and a great means towards cure, one which can never be crushed by ignorant and baseless criticism"; and "I believe," he continues, "that it is our duty, and our imperative duty, to do it justice, and rescue it from the hands of charlatans." He had been much impressed in Paris by seeing M. Auguste Voisin hypnotise an insane dipsomaniac girl whom, "by repeated hypnotism and suggestion M. Voisin cured not only of her mania, but also of her evil propensity"; and since his return from France, Dr. J. J. Murphy had been equally successful on a case of dipsomania under his care. Dr. G. C. Kingsbury followed with a clear speech explaining the methods and uses of hypnotism as practised at Nancy, some of which he had corroborated in England, and pleading that a fair trial should be given to the treatment. Of the twelve others who joined in the discussion, there were several who related cases of pain or morbid habits in which hypnotism had been followed by relief and improvement, and only one who objected to its employment.

[1] See BRITISH MEDICAL JOURNAL, May 9th, p. 1023; also *Dublin Journal of Medical Sciences*, where Dr. Cruise's paper is published in full.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

THE President of the Board of Trade received a very large deputation of medical and other scientific men at the Hotel Victoria, on June 5th, to urge that the Board should grant a licence to incorporate the British Institute of Preventive Medicine, omitting the word "Limited."

Among those present, in addition to the speakers, were a special deputation from the Royal Society, headed by Sir G. Stokes, a deputation from the Linnean Society, the Duke of Westminster, the Earl of Feversham, Sir William Houldsworth, M.P., Sir Frederick Bramwell, Sir Benjamin Baker, Sir Douglas Galton, Sir Archibald Geikie, Sir Robert Rawlinson, Sir Truman Wood, Professors Henry Sidgwick, Frankland, and Thiselton Dyer, Mr. Blundell Maple, M.P., Mr. R. Fielden, M.P., Mr. Seager Hunt, M.P., Mr. Francis Galton, and Mr. Romanes. Among the numerous members of the medical profession present were Sir G. M. Humphry, Sir Guyer Hunter, M.P., Sir Wm. Mac Cormac, Sir Joseph Fayrer, Dr. Farquharson, M.P., Professor Michael Foster, the Master of Downing College, Cambridge, and Dr. W. H. Gaskell; Drs. Samuel Wilks, Bastian, and T. Stevenson; Professors Halliburton and Meymott Tidy; Dr. Duffey (Dublin), Dr. Jacob (Leeds), Dr. Lindsay Steven (Glasgow); the British Medical Association was more particularly represented by Dr. Bridgwater, Mr. Macnamara, and Surgeon-General Cornish; the agricultural interests were represented by Sir Jacob Wilson and Mr. Ernest Clarke; and veterinary science by Sir A. Simpson and Professor Penberthy. The deputation numbered altogether about 150.

Sir HENRY ROSCOE, M.P., in introducing the deputation, said it represented the whole body of medical men in the country, as well as all scientific elements without exception, and a large number of other gentlemen who were interested, from a national point of view, in the establishment of such an institution. They asked to be enabled to found and to carry on a British Institute of Preventive Medicine, similar to the institutions already in existence in France, Germany, Russia, and many other countries. From an answer given in the House of Commons to a question of Major Rasch, they learned that the refusal to grant their request was based on objections received by the Board of Trade. What was asked was merely that the institution should be registered under the Limited Liability Act, with the omission of the word "Limited," to impress on the public the fact that the institution was not to be for gain, but for sanitary and scientific research. They had the opinion of counsel that the Board of Trade merely had to be satisfied that the promoters were persons whose position would be sufficient guarantee of the character of the proposed institute, and whose object was a charitable one.

Sir JOSEPH LISTER urged Sir Michael Hicks-Beach to reconsider his decision, as it was almost essential to the very existence of the institute that the licence should be issued. It was essential that they should be incorporated, that they might hold money in trust. Without the licence the institute would have a mercantile aspect, which would repel subscribers, who would also have the power at any time to wind up the concern, and divide the assets among themselves. If the licence were granted, however, they could appeal for subscriptions, and a condition could be inserted by the Board of Trade that such subscriptions should only be used for scientific and charitable objects, by which means the position would be secured. The only alternative would be to apply to Parliament for a special Act, which would be troublesome and expensive. The importance of the subject he need not dwell upon. Although preventive medicine based upon bacteriology was of comparatively recent experience, it had made gigantic strides, and almost every week new triumphs were being achieved in the discovery of the essential nature of, and the means of preventing, disease. As illustrating the value of such work, he might mention that done by M. Pasteur, who had been the means of saving 12,000 persons from a horrible death by rabies. During six years 403 British subjects had been treated, of whom only seven had died. When they considered the loss of time involved in going to Paris, and that the essence of the treatment was to anticipate the development of the disease, they might expect even a larger measure of success were such an institution established in this country. The discovery of the tubercle bacillus had been made in Germany, and to establish that that bacillus was really the essential cause of the disease, which in its diverse forms was so great a scourge of the human race, required such extended investigation as was only possible in such an institution as they desired to establish. The discoveries of M. Pasteur with respect to the prevention of anthrax also showed how valuable such an institute could be in the investigation of diseases of the lower animals, as also did the discoveries as to the disease known in this country as "quarter evil" by Arloing, Cornevin, and Thomas. Bacteriological laboratories had been established in the British islands, but they could not be in any way equal to a central institute such as they desired. The result was that the best workers were continually going to Berlin or Paris for the superior advantages to be obtained there. He believed the mass of educated opinion represented by the deputation was more deserving of attention than those who, with whatever excellent intentions, had petitioned against the scheme. The petitioners opposed the scheme because they objected to the performance of experiments on living animals, and not because they believed there was already sufficient opportunity for the work. If they only knew how very small was the suffering inflicted in an institute of this kind, and how great was the care taken that all unnecessary pain should be avoided, the great majority would not have raised the objections they had. He doubted whether the question of experimenting on living animals was one with which the Board of Trade was concerned, the licences for such purposes always having rested with the Home Secretary. He did not relinquish the hope that at some future date the Government would afford them some substantial aid, as such institutions on the Continent had received pecuniary support from their respective Governments. However that might be, he hoped that no Government department would oppose any unnecessary obstacle to a scheme which sought the welfare of humanity, the health of mankind and the lower animals, and the general progress of the public weal.

Dr. A. M. RUFFER (Honorary Secretary) read the following letters from Professor Huxley and Professor Tyndall.

Hodeslea, Eastbourne, June 2, 1891.

DEAR SIR JOSEPH LISTER,—I am very sorry that I am unable to join your deputation on June 5th.

If I could have been with you, I think I should have asked to be permitted to point out to the President of the Board of Trade that medical science is not exempted from the rule which holds good for other branches of natural knowledge, and that it can be advanced only by reasoning based upon observation and experiment, and constantly controlled by both, especially by the latter.

Further, that by working in this fashion a marvellous improvement of medical science has been effected during the last half-century, and that the harvest of what Bacon called "fruits," which is now waiting for the gatherer, might fully occupy half-a-dozen such institutes as that in which we are interested.

Starting from the unquestionable facts that the work we propose to undertake is of supreme public utility, and that the number and extent of the problems of pathology are enormously great in proportion to any existing means of dealing with them, I should have ventured to ask why we should be refused the only privilege we seek—namely, that official recognition by the Board of Trade which will afford the institute security against the possible misuse of its funds in future?

No doubt, however, all these points will be much more effectually put by yourself and other members of the deputation.—I am yours very faithfully, T. H. HUXLEY.

Sir Joseph Lister, Bart., F.R.S.

Hind Head, Haslemere, June 3rd, 1891.

MY DEAR SIR JOSEPH,—The battered remnant of four deadly assaults, I am still a prisoner in my bed. Were I a free man I should deem it a privilege to join your deputation to Sir Michael Hicks-Beach on June 5th. I entirely sympathise with the movement.

Let me here record a small experience of my own. Last summer, while crossing from Dover to Calais on my way to the Alps, I noticed, huddled up in the corner of the steamer, a poor English boy. He seemed lonely and depressed, and I spoke to him. "Where are you going, my boy?" I asked. "To Paris," was the reply. "And what are you going to do in Paris?" "Well, sir," said he, "I have been badly bitten by a mad dog, and I am now on my way to Mr. Pasteur, who I hope will save my life."

The case prompted sad and bitter musings. Here was wealthy England, with the amplest means at her disposal, with some of her ablest men ready to investigate and apply those means, insanely forbidding such investigation, and compelling her children to resort to a foreign country to have themselves rescued from the most horrible of deaths. As I spoke to the lad the virulent rabic virus was probably already in his blood, and his chance of life depended on the promptness with which Pasteur's vaccine could be introduced to combat and destroy that virus. Every hour lost in the collection of money for the boy's journey and in making arrangements with Pasteur for his reception—every hour lost in his

transport from England to France—was so much time given to the virulent virus to pursue its fatal work, and to ruin the chances of the boy's rescue. This is the state of things to which we in England are forced to submit, this is the condition to which we are reduced, through the deference paid by English statesmen to a noisy and an ignorant faction.

But while the investigation and treatment of hydrophobia confer immortal honour on Pasteur, this malady is but a small item in the array of disorders now demanding investigation. Suspected from time to time by men of genius in the past, the fact that all communicable diseases are due to micro-organisms, which increase and multiply after the manner of living things, has, in the opinion of our first authorities, been now reduced to demonstration. Your proposed institute is to be devoted to the investigation of such organisms—to the study, that is, of the science of bacteriology. In regard to questions of life and health, such an institution is the most pressing need of England at the present hour. A good deal of the weary time which I have been forced to spend in bed during the last six months has been devoted to making myself acquainted with what is being done by the staff of the Hygienic Institute of Berlin, an institute of which the German nation may well be proud. I have occupied myself in drawing up an account of the researches recently carried out in connection with the institute. In regard to our most fatal disorders, these researches will effect a revolution, not only in public knowledge, but also in the thoughts and practice of medical men. It would, in my opinion, be a lamentable mistake on the part of an English statesman to place himself in official antagonism to the eminent and illustrious men who on June 5th will advocate the founding of a similar institute in England.

It is, I think, fortunate that you have in Sir Michael Hicks-Beach a statesman not likely to fall into the extravagancies of sentimentalism. The overwhelming preponderance of English intellect will be represented by the deputation. He may rest assured of it that this preponderance will become more and more conspicuous, until finally the misguided opponents of a true philanthropy will cease to engage the attention, much less enlist the sympathy, of the English people.—Believe me, dear Sir Joseph, most faithfully yours, JOSEPH TYNDALL.

Sir Joseph Lister, Bart.

Sir LYON PLAYFAIR, M.P., said that it had repeatedly been decided by large majorities in Parliament that experiments upon living animals for the prevention of disease should be permitted under proper restrictions. It might be assumed, therefore, that public recognition had been given to it by the highest authority, and after full discussion. What it was now asked for permission to do by private enterprise was done in foreign countries by the State or by wealthy persons connected with the State. The deputation was simply requesting that an association for purposes recognised by Parliament should be permitted to be established under proper precautions, and that it might be registered as a company, not for the purpose of gain, but strictly for public purposes and the preventing of disease, and they were surprised that this was not granted as a matter of course.

Professor DEWAR, F.R.S., Jacksonian Professor in the University of Cambridge, claimed for chemistry a special interest in the subject, since the whole of our knowledge of bacteriology had grown up out of the chemical researches of a French chemical experimenter. Chemistry, in return, had benefited much by bacteriology. The whole chemistry of air, earth, and water, had been entirely altered by the study of bacteriology, and the modern chemical laboratory was not competent to deal with many of the complicated problems which were from day to day brought before chemists. The enormous strides made in regard to brewing and distilling were due to improved knowledge of minute organisms, and had been mainly effected abroad. The splendid researches of Lawes and Gilbert in this country into the manurial value of various materials, and into the mode of growth of grain and other crops, had been greatly developed and extended by bacteriological studies again carried on abroad, so that bacteriology was contributing to what the chemist would consider one of the most important preventives of disease, namely, the cheap and economical supply of food. There were so many new directions in which the study was extending that the chemist felt that a great central institute ought to be created for the study of these problems. All the most complex chemical products resulting from the action of bacteria must be studied in their physiological action, and it was a great and crying disgrace to this country, as could be shown from the results of applied chemistry, that a study so essentially necessary—the physiological examination of different chemical bodies—should have been hampered and practically destroyed.

Professor RAY LANKESTER, F.R.S., Professor of Comparative Anatomy, Oxford, said that Sir Joseph Lister had been too modest to allude to the practical outcome of experiments he commenced twenty-five years ago; they had resulted in preventing the death of many thousands of persons, and the suffering of many more thousands. He asked the President of the Board of Trade to consider what would be the judgment of future generations, if not of the public at large at once, if obstacles were placed in the way of such an enterprise. He spoke as a representative of the Marine Biological Association, an institution which had received the licence of the Board of Trade; in its laboratory experiments on animals were carried on.

Sir JAMES CRICHTON BROWNE urged that the tendency of the work of such an institute would be to diminish and not to increase experimental investigation. It was, he said, obvious that in such an institution inquiries would be carried out in a more organised and systematic manner, and therefore less suffering would be caused. He urged the absolute necessity for laboratories and delicate apparatus for the carrying out of the work of the nature contemplated by the institute, and pointed to the large number of deaths from preventable diseases as an argument in favour of its establishment. A large and increasing number of persons were dying annually from cancer, and he said that the man who dared to stand in the way of the prosecution of studies into the nature and possible prevention of such a horrible malady took upon himself a fearful responsibility. No more was asked for than this, that scientific workers should be allowed to work under the restrictions and with the facilities which the law enjoined.

Sir MICHAEL HICKS-BEACH, in reply, said he was sorry to have differed from so many gentlemen of such high eminence as those who had supported the movement, and to have found himself unable to grant the application for permission to register the Association without the word "Limited." It was only due to them that he should explain the reasons which had induced him to arrive at that decision. The section of the Act of 1867 under which they asked him to act laid down two preliminary requirements which must be proved to the satisfaction of the Board of Trade: First, that the Association should be formed for one of several purposes, such as, for instance, that of promoting science or some other useful object; and secondly, that the profits would be applied to promote the objects of the Association, and that the payment of dividends would be prohibited. He would assume they had complied with those requirements; but the proof of such compliance did not, in his opinion, compel the Board of Trade to act. Something had been said to the effect that the deputation had obtained counsel's opinion that it did compel the Board to act. He had taken another view—he admitted without legal advice. If they would place before him the opinion upon which this view was based he would very carefully consider it and obtain legal advice upon it, because he viewed it as an important point, as they would see from what he was going to say. He considered, as he had said, that the Act left it to the Board to decide whether the licence should be granted or no, and, if granted, whether any conditions or regulations should be inserted in the memorandum and articles of association. It therefore seemed to him that the Board of Trade could hardly grant such a licence without expressing approval, by the mere fact of the grant, of the Association to which it was granted. In this case he thought he had no right to express such approval, because, if he rightly interpreted Clause 3*a* of this memorandum, he understood—and he had also gathered from what had been said that day—"that experiments on living animals," to quote the words of the Act, were included among these subjects; in one word, that vivisection would be part of their work. Now, this was a subject which the Legislature, by the Cruelty to Animals Act of 1876, had placed under the control, not of the Board of Trade, but of the Home Office. By that Act, as they knew, vivisection was made illegal, except by licence from the Home Office, and under the most stringent regulations, including inspection by inspectors of the Home Office. He assumed that when they had established this institution, supposing the licence was granted, an application would be made to the Home Secretary for a licence or licences for vivisection on the premises of the institution for some one or more of its members. It seemed to him that the Home Secretary would have fair ground to complain of his action if in a matter of such admitted difficulty, rousing as it did the strongest feelings on both sides, he did anything which would enable them to go before the Home Secretary, to whom Parliament had entrusted that subject, with the stamp of approval, as it were, from another Government department which had nothing to do with the subject at all. He hoped he had put

that shortly and plainly. What were their alternatives? They had said something to him on that subject that day. They could, of course, if they chose, remove from their objects anything which would bring them within the Cruelty to Animals Act, 1876. If they did that his objections would be entirely removed. They could, if they chose, form themselves as a society, vesting their property in trustees, or associate themselves under the Companies Act as a limited company, inserting a proviso that they should pay no dividend. He should like to have before him the reasons in writing which had been urged that day why none of these courses would meet their views. He could only say in conclusion—and he had endeavoured to put to them the difficulty which he felt—that he would carefully consider what had been said, and that any documents which the promoters of the Association wished to place before him to enforce the views which had been expressed he should be glad to receive.

Sir JOHN LUBBOCK, in thanking Sir Michael Hicks-Beach, said that Sir Henry Roscoe had authorised him to say that the further information which had been asked for should be furnished. Vivisection was, after all, a small part of the scheme, unless the investigation could be to vivisect the bacteria. Although the Board of Trade might prevent them from destroying the bacteria they could not prevent the bacteria from destroying human beings. The bacteria were now experimenting upon them, and all that they asked was that they should be allowed to defend themselves against the bacteria.

Sir MICHAEL HICKS-BEACH said that, of course, any precedents which had been mentioned should be carefully placed before him.

Sir LYON PLAYFAIR: There is the College of State Medicine.

Professor LANKESTER: The Marine Biological Association, Plymouth.

Sir JOHN LUBBOCK: There are two distinct precedents, but you shall have full particulars.

The deputation then withdrew.

MEMORANDUM ON THE PUBLIC HEALTH (LONDON) BILL.

Prepared for the Use of the Parliamentary Bills Committee of the British Medical Association.

THIS Bill, as it leaves the Committee, contains amendments of the law in the following important particulars:

The words "dangerous to health" are included in the provisions relating to nuisance, so as to facilitate proceedings, and the definition of nuisances has been extended to include other subject matter, such as cistern, dung-pit, etc. Where the nuisance arises from the wilful act or gross default of any person, or where such person makes default in complying with any of the requisitions of the notice of a sanitary authority within the time specified, he becomes liable to a fine not exceeding £10. The notice of a sanitary authority need not specify any works to be executed, but the order of a court must specify the works if required by the person on whom it is made. Where a person appeals against a nuisance order, and the appeal is dismissed, he is liable to fine unless he can satisfy the court that he has substantial grounds for appealing. Pending the hearing of an appeal the court may, if there be necessity, order the works to be executed at once, the authority to pay the cost if the appeal is successful.

With a view to checking the destructive habits of some tenants, a penalty is provided for the damaging of water closets and water supply apparatus, and for the stopping up or rendering useless any drain or pipe when nuisance is caused thereby. In substitution for the existing provisions dealing with particular nuisances, the County Council is to make by-laws for this purpose. The provisions as to offensive trades remain unaltered, except that the rights of the sanitary authority to enter any slaughter-house or knacker's yard for the purpose of examining whether there is any contravention of the Act or any by-law are recognised; in the collection or deposit of house and street refuse the sanitary authority is held to be engaged in carrying on an offensive trade concerning which proceedings may be taken by the County Council if there is default; knacker's yards are to be dealt with as other slaughter-houses, and the rights of a sanitary authority to proceed where there is neglect in the method of carrying on certain offensive trades are now extended to all trades producing effluvia.

The duty of dealing with smoke nuisances is taken from the police and imposed upon sanitary authorities; special provision is made for maintaining workshops and bakehouses in wholesome condition by the insertion of clauses consequential to the amendment of the Factory and Workshops Acts.

The duty of maintaining footways in a cleanly condition is imposed upon the sanitary authorities, who are also required to remove house refuse, and, if they neglect to effect such removal after notice from a householder, they are liable to fine, and the servants of the authority or of any contractor are also liable to fine if they demand any fee or gratuity. For the purposes of removal of manure, a sanitary inspector may require this duty to be performed by the owner, but the authority may collect when he is in default, and charge him with the cost of the removal.

Concerning water-closet accommodation, sanitary authorities are empowered to require such provision in factories, workshops and workplaces in proportion to the number of persons, the accommodation to be separate for the two sexes. For other buildings, the County Council is required to make by-laws in respect to water-closets, earth-closets, privies, cesspools and receptacles for dung, and for the keeping of water-closets supplied with sufficient water for flushing. The by-laws are to be enforced by sanitary authorities. Where a sanitary authority provides and maintains public lavatories, ashpits, or sanitary conveniences, they may make regulations for their management, for the decent conduct of persons using them, for letting the same for a period not exceeding three years, and for charging fees for their use. Where these are provided by other persons, if accessible from any street, the consent of the sanitary authority must be obtained. Where sanitary conveniences are to be used in common by the occupiers of two or more separate dwelling houses, any person using them is liable to fine for injuring or improperly fouling them, and if they become a nuisance to any inhabitant of the district for want of proper cleansing, in the absence of proof as to the person in default, each is liable to a fine.

The provisions as to unsound food are extended to any animal intended for the food of man which is exposed for sale, etc., and any article, whether solid or liquid, intended for the food of man.

In an occupied house want of a proper and sufficient water supply is to be a nuisance rendering a dwelling house unfit for human habitation, and a house which, after the commencement of the Act, is newly erected or pulled down to or below the ground floor and rebuilt, is not to be occupied as a dwelling house until the sanitary authority have certified that it has a proper and sufficient supply of water. Appeal is provided for against the decision of the sanitary authority. Where a water company cut off a water supply to any inhabited dwelling house they are required under penalty to give notice to the sanitary authority. The pollution of a water supply by gas refuse, when resulting from negligence, is now made punishable, and any act or neglect leading to the pollution of the water of any well, fountain, or pump used or likely to be used for food is punishable. Water supplies can be closed which are likely to be so polluted as to be dangerous to health.

The infectious disease notification sections are amended by requiring the certificate to contain the full name and age and sex of the patient, and the full postal address of the house, and also the statement whether the case occurs in the private practice of the practitioner or in his practice as a medical officer of any public body or institution, and where the certificate refers to the inmate of a hospital it must specify the place from which, and the date at which, the inmate was brought to the hospital, and must be sent to the medical officer of health of the district in which the said place is situate; but in the case of a hospital of the Metropolitan Asylums managers the certificate need not be sent respecting any inmate concerning whom a copy of the certificate has been previously forwarded by the medical officer of health of the district to the managers. The County Council may require to be notified throughout

London other infectious diseases than those specified. Every sanitary authority is required to provide disinfecting apparatus and conveyances for the removal of infected articles, and may combine with each other for this purpose. A justice may order the retention in a hospital of any person in such hospital suffering from any infectious disease to which the Act applies, who would not, on leaving the hospital, be provided with lodging and accommodation in which proper precautions could be taken against the spreading of the disease by such person, the cost of maintenance to be defrayed by the managers of the Metropolitan Asylums district. No person is to be permitted to engage in milking, fruit-picking, or any occupation connected with food, who knows himself to be suffering from an infectious disease, and he may not carry on any trade or business in such a manner as to be likely to spread the infectious disease. The owner or driver of any public conveyance is prohibited from knowingly conveying, and it is illegal for any other person to knowingly place in any public conveyance, a person suffering from any infectious disease. The infectious diseases to which these prohibitions relate are specified in the Bill.

Persons admitted into the hospitals of the Metropolitan Asylums Board are in future not to be charged with the cost of maintenance. Where the London School Board send any child to an industrial school outside London, such child, for the purpose of the enactments of the Metropolitan Asylums managers, shall be deemed to continue to be an inhabitant of London, and if sent to any hospital of the managers, shall be deemed to have been sent from that place in London from which he was sent to the industrial school. If the part of London be outside the Metropolitan Asylum District, the board of guardians of the Poor-law union comprising that part shall pay for that child.

Every sanitary authority is required to provide a mortuary, and, if required by the County Council, shall provide a building for conducting *post-mortem* examinations. Sanitary authorities, with the approval of the County Council, may combine for this purpose. The County Council is required to provide and maintain proper accommodation for the holding of inquests, and, by agreement with the sanitary authority, may do so in connection with a mortuary or building for *post-mortem* examinations provided by the sanitary authority. The provisions relating to underground rooms separately occupied are entirely recast. For the first six months after the passing of the Act, they only apply to rooms not previously occupied before the Act is passed, but, after the expiration of that time, to all such underground rooms, but the sanitary authority, either by general regulations for classes of underground rooms, or, on the application of the owner of such rooms in any particular case, may dispense with or modify any of the requirements if they are of opinion they can do so with due regard to the fitness of the room for human habitation and to other circumstances. There is appeal from the decision of the sanitary authority to the Local Government Board. The duty of reporting underground rooms is now taken away from the district surveyor, and imposed upon the officers of the sanitary authority.

A sanitary authority may delegate its powers under this Act to a committee. The County Council may, when satisfied that a sanitary authority is in default, act in substitution for them in respect to the removal of any nuisance, the institution of any proceedings or the enforcement of any by-law, and if the sanitary authority be in default in executing or enforcing any provisions of the Act which it is their duty to execute or enforce, or of any by-law, the County Council may make complaint to the Local Government Board, and that Board may issue an order limiting a time for the performance of the duty by the sanitary authority. If such duty is not performed by the time limited in the order, the order may be enforced by writ of mandamus, or the Local Government Board may appoint the County Council to fulfil this duty. Provision is made for the recovery from the sanitary authority of the costs incurred thereby.

Power is given to the sanitary authorities to borrow money for various purposes in the Act.

The new provisions as to medical officers of health require every officer appointed after the Act, except in cases allowed by the Local Government Board, to reside in his district or within a mile of its boundary. Every sanitary authority is required to appoint an adequate number of sanitary inspectors, and if the Local Government Board is satisfied, on representation from the County Council, that any sanitary authority have failed to appoint a sufficient number, the Board may order the authority to appoint such number and at such remuneration as the order directs.

The power to appoint a district medical officer of a union to be a medical officer of health is repealed, but this provision does not apply to any person at the present time holding the two offices.

Security of tenure of office is ensured by the payment, out of the Exchequer contribution account, of half of the salary of every medical officer of health and sanitary inspector appointed in future, and by the exercise of the powers of the Local Government Board accordingly.

Where the County Council makes any by-laws which have to be observed or enforced by any sanitary authority, the representations of the sanitary authority must be considered by the Council, and a copy of the by-laws sent to every such authority two months before application is made to the Local Government Board for confirmation of the by-laws.

The provision enabling the County Council to act in substitution of a sanitary authority does not apply to the City, but the powers of the Local Government Board over the City are retained. The by-laws of the County Council do not apply to the City, and the County Council cannot require the Commissioners of Sewers to provide and maintain a building for *post-mortem* examinations.

Throughout the Bill in certain instances the penalties are increased.

The provisions, of which brief account is given above, are mainly those required to raise the London health law to the same standard as that relating to the rest of the country. The powers of the County Council are modified so as to enable it to make by-laws in respect to subject matter much of which is already under its administration. The powers of the sanitary authorities in important details are increased, and by the provision which enables the County Council to intervene when any such authority is in default, this power is no longer left in the hands of irresponsible persons. This is not, therefore, a new power, but a modification of an existing provision to meet the necessities of the present time. The fact that the hospitals of the Metropolitan Asylums Board are made free need not be expected materially to increase the cost of administration, for in many districts the expenses of maintenance are now only recovered by the guardians in exceptional cases.

The Bill is well deserving the support of members of all parties in Parliament, especially of the London members, seeing that it gives opportunity, for the first time, for a really useful health administration throughout the metropolis.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the last meeting of the Committee of the Association of Fellows of the Royal College of Surgeons of England, held on June 4th, the report of the Subcommittee appointed to draw up a circular embodying the policy of the Association in regard to the forthcoming election at the College was presented. After some modifications this report was adopted, and a copy of the circular, which we print below, was directed to be sent to every Fellow of the College in the United Kingdom. This circular, as will be seen, is an important document, dealing with those fundamental principles of reform in the constitution of the College in which all the Fellows, outside the Council, must be largely interested.

On the motion of Mr. Holmes, seconded by Mr. Alban Doran, it was unanimously decided—as was briefly announced last week—to ask Mr. Rivington and Mr. Lawson Tait to stand as the candidates of the Association. In furtherance of this object it was agreed to send a postcard conveying this announcement to all the members of the Association urging them to support these two candidates.

It was resolved to hold the annual meeting of the Association on June 25th, at 5 P.M., at 20, Hanover Square, London. The business of the annual meeting will be decided on at a meeting of the Committee at 5 P.M. on the previous day at 36, Grosvenor Street.

The following is a copy of the circular above alluded to, which will be sent to each Fellow of the College:—

"To the Fellows of the Royal College of Surgeons of England.

"In furtherance of the policy of the Association of Fellows of the Royal College of Surgeons for the reform of the institution, and particularly of its method of government, the Committee of the Association beg to remind you that the points of reform which were originally proposed are the four following:

"1. That it would materially conduce to the welfare of the College if the Fellows and Members were invested with a larger share of its management.

"2. That it is desirable that no alteration in the constitution or relations of the College shall be effected without the consent of the Fellows and Members convened to discuss such alteration.

"3. That there shall be an annual meeting of the Fellows and Members at which the annual report of the Council shall be received and adopted.

"4. That at such meetings the President for the ensuing year shall be elected by the majority of the Fellows present.

"These are still in the main inoperative, as is proved in the case of No. 2 by the revised scheme of the University of London not having been submitted to the corporate body until after it had been formally accepted by the Council in the name of the College.

"Our experience since the foundation of the Association has brought under consideration some additional subjects to which, in our opinion, the combined action of the Fellows should also be directed.

"(*a*) Since the schools of Liverpool, Leeds, Oxford, and Cambridge, Sheffield, Birmingham, Newcastle, Bristol, Manchester, yearly furnish a large and increasing proportion of candidates, and thus contribute considerably to the income of the College, the Committee are strongly of the opinion that there should be a fair proportion of provincial examiners appointed by the Council of the College of Surgeons.

"(*b*) The term for which a member of Council sits, now averaging about eight years, might with advantage be shortened.

"(*c*) Meetings of the Fellows ought to be summoned apart from the Members, as is now authoritatively declared to be legal, and a common room for the Fellows ought to be provided in the College. These points were urged lately upon the Council by a deputation of this Association. The consultation of the Fellows of the College by the Council is the most important of all the measures of reform, and would raise the present constitutional status of the Fellows to the level of that of the Fellows of the College of Physicians and other professional colleges. If the Fellows of the College are really desirous that such measures of reform should come into operation it is necessary that they should support those candidates for seats on the Council who will, if elected, use their best efforts to secure them.

"Signed on behalf of the Committee—

"George Pollock, President.
"T. Holmes, Vice-President.
"H. Percy Dunn, Hon. Sec.

"P.S.—Fellows of the College who do not already belong to the Association, and who are in sympathy with the objects set forth in this circular, are invited to communicate with the Honorary Secretary, Mr. H. Percy Dunn, 2, Henrietta Street, Cavendish Square, London, W., and to allow themselves to be proposed as members of the Association."

THE HOSPITALS COMMITTEE.

Workhouse Infirmaries.—Hospital Saturday Fund.—Moorfields Hospital. British Skin Hospital. Queen's Jubilee Hospital.

The Committee resumed its sittings on Monday, under the presidency of Lord Sandhurst.

Miss Louisa Twining said she represented the Workhouse Nursing Association. It was forty years since her first connection with nursing at the Strand Union Infirmary, Cleveland Street. The workhouse infirmary matrons were appointed by the guardians irrespective of nursing qualification. They were responsible to the medical superintendent, who was responsible to the guardians, but ultimately to the Local Government Board, who approved of every appointment. The matrons should have a more undivided authority over the nurses. She saw great evils in a medical officer being the supreme authority. In courtesy, they gave way to the matrons in many matters, but were not legally bound to do so. The present arrangements gave every opportunity of friction between the workhouse infirmary authorities, which would be removed if the matron were made supreme as regarded the nurses. She would like to see the probationers trained from the beginning in the workhouse infirmaries. There was at Kensington a system of training them for three years. At Liverpool there was a plan of trained probationers for general infirmaries and other outside institutions, but that plan had not been adopted at the metropolitan Poor-law infirmaries. Some guardians had raised objection to admitting students. When recommended at Kensington it was objected to by the Local Government Board; but since then a great advance had been made, and Paddington had adopted something of the kind. There was not the slightest objection on the part of the patients to students. It was a complete delusion to think there was such an objection. The poor considered themselves neglected, and would like to have occasional visits to relieve the monotony. There was at present far too much work for any medical men at the infirmaries. The system adopted at Birmingham of having a special officer entirely responsible for the management without having anything to do with the sick or the nursing arrangements was one which should be adopted in London. It would relieve the medical officer of an enormous amount of work he ought not to have to do. She would like to see further powers of detention in lying-in cases. It was a great and growing evil to give such facilities as were given for young women to avoid publicity. There was not much difficulty in getting nurses for workhouse infirmaries. Just now there was an immense run upon nurses of all kinds. There was a great demand for district nurses.

In answer to Lord Cathcart, the Witness said she laid great stress upon having a fully-trained matron at the head of the metropolitan workhouse infirmaries. At present there were such matrons at only eleven out of twenty-four workhouses. Such qualified matrons at the head of establishments for the sick were an absolute necessity. She was strongly of opinion that it would be the greatest possible help to have ladies on hospital committees. Women could make gentlemen think anything. A woman should have an opinion and voice in such decidedly domestic matters, especially when it was remembered that more than half the persons treated at hospitals were women and children. Since she drew special attention to the unsatisfactory food of the nurses five or six years ago, there had been considerable improvement. The infirmary nurses were not overworked. The medical superintendent should be the supreme head of the institution, but there should be a reasonable division of duty.

Mr. Reginald Acland, barrister-at-law, said he was the Chairman of the Hospital Saturday Fund. It was essentially a working man's movement, and there were only two or three of the Committee who did not belong to the working classes in some representative capacity. The fund was last year incorporated under the Companies Act as an association not for profit. The collections had increased from £200 to £5,096 in the street, and from £5,000 to £15,237 in workshops and other places. As to the source of the income, the Committee thought the fund was tapping a new source, namely, a class who had hitherto not subscribed very largely to the Hospital Sunday Fund. The subscriptions were very small from clubs, the largest being from printers' houses. For instance, persons employed at Messrs. Spottiswoode's subscribed £140 last year. As to the constitution of the fund, he said that at present the board of delegates was supreme. That board numbered 400. The actual number of firms subscribing was 4,301. The grants were distributed after a careful consideration of the particulars given in the form of return sent out to the different hospitals and dispensaries. The whole sum to be distributed was divided into three, namely, one-third for the amount of relief, and one-third each for economy and efficiency. The fund refused to give a grant to any institution which was not governed by a body of persons

elected by subscribers. As to the comparative cost of large and small hospitals, the Witness specified nine large and nine small institutions, and said that the former spent on management 7 per cent. of the cost of maintenance, and the latter 30 per cent. The subscriptions aimed at by the board were small regular weekly contributions. They preferred a penny, but were not above taking a halfpenny a week. The Witness then explained the connection of the Morley House Convalescent Home with the fund, and stated that the Home was to be extended. Last year the Committee disbursed £750 of the whole sum received in surgical appliances, and more than 2,000 patients were thus relieved. The working classes had unbounded confidence in the hospitals. The definite aim of of the fund was primarily to enable the working classes to contribute to the hospitals. The amount aimed at was £100,000, but that he hardly thought possible in London. However, he looked forward in a few years to raising at least £50,000 a year. The Committee also wished to obtain representation of the working classes on the hospital boards. He had satisfied himself that if they selected as they could from the board of delegates the right men as representatives, it would be of enormous advantage to the hospitals. The fund had had the effect of bringing into the workshops a knowledge of, and great interest in, the work of the different hospitals. The Committee hoped to exercise great influence on the management of the hospitals. Whilst not desiring to meddle with the internal management of the institutions, it was found to be of great advantage that there was a body subscribing to hospitals as the fund did to whom a complaint as to treatment could be made by any particular patient. The Hospital Sunday Fund was considered a permanent institution, but he hoped that the Saturday Fund would be as permanent. The general and financial secretaries of the fund received £250 each, and two assistant organising secretaries received £200 each. The duty of the latter was to go among all the workshops and advocate systematic collections, and, as far as possible, introduce the Hospital Saturday scheme.

Mr. ROBERT J. NEWSTEAD, secretary of the Royal London Ophthalmic Hospital, Moorfields, next examined, said it was founded in 1805. It was entirely for diseases of the eye. Exceptional cases were sent from other hospitals. It was governed by a board and managed by a committee. The governors met once a year and the committee met once a month. The expenditure last year was £6,349, and the income, £5,496, came from subscriptions, donations, legacies, and dividends. The dividends came from £20,000 consols and about £6,000 stock. The hospital was on freehold ground, but there was no house property. For the last six or seven years there had been a deficit and stock had to be sold. There was a very large out-patient department, there being 26,000 fresh cases in the year and about 300 attendances daily. The hospital was quite free, but there were letters for subscribers if they wished it. There were three sisters and six regular nurses, including two night nurses. No contracts were made for food, the matron being responsible for it. The medical staff consisted of nine surgeons, two resident house-surgeons, and one curator and librarian. Every member of the staff must be a F.R.C.S.Eng. The residents were paid and their appointments varied as to time. Although it was said that many patients were treated who could afford to pay, he considered that the number was greatly exaggerated.

Miss NICHOL, the lady superintendent of the same hospital, who stated that she was trained at Newcastle-on-Tyne, gave particulars as to the work of the nurses.

Mr. DANIEL, honorary secretary of the British Hospital for Skin Diseases, said it was founded by himself and other gentlemen. Its work was carried on at Great Marlborough Street and at Newington Butts. There were 3,472 out-patients and 2 in-patients last year. The total receipts last year were £1,180. A considerable sum was received from patients, but the very poor were received free. There were no nurses in the hospital. There was no resident medical officer.

Mr. FITZROY BENHAM, M.R.C.S., the founder of the Queen's Jubilee Hospital, Richmond Road, South Kensington, stated that the hospital was founded in 1887. There were ten beds. The total income in 1888 was £604 5s. 4d., and the expenditure £1,591. The committee had applied several times for grants to the Hospital Saturday and Sunday Funds, but without success. There were three medical men besides himself on the staff and a medical registrar. A number of cases had been successfully treated at that hospital which had not been successfully treated at others. The number of patients was annually increasing.

[There was no sitting of the Committee on Thursday. Several witnesses whom it was arranged should be examined were unable to attend, and, in consequence, it was resolved not to hold a sitting until Monday.]

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members, in commodious apartments, at the Offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 18th and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The annual meeting will be held at the residence of the President-elect, Mr. Charles Randolph, at Milverton, on Thursday, June 25th, at 2.45 P.M. Mr. C. Randolph will be happy to see gentlemen and offer them refreshments at his house before the business of the meeting commences. Dinner will be served at the White Hart, Milverton, at 5 o'clock. Members intending to be present, or having communications to bring before the meeting, are requested to send notice to Mr. C. RANDOLPH, or to the Honorary Secretary, W. M. KELLY, M.D.

SOUTHERN BRANCH.—The eighteenth annual meeting will take place at the Royal Hants County Hospital, Winchester, on Thursday, June 18th, 1891. (President, Dr. Joseph Groves; President-elect, Mr. T. C. Langdon, F.R.C.S.) The general meeting will be held at 12.30. In accordance with the by-laws, two gentlemen will be elected at this meeting as representatives of the Branch on the Council of the Association for the ensuing year. Members desirous of reading papers are requested to forward at once the titles to the Honorary Secretary. The subjects will be announced in the BRITISH MEDICAL JOURNAL of June 13th. No communication must exceed seven minutes in length, and no subsequent speech must exceed five minutes. The Address will be delivered by the President-elect at 2.30. During the afternoon, the members are invited to visit the Cathedral and several places of interest in the locality. The dinner will take place at the Royal Hotel at 5.30 P.M. Tickets 6s. each, excluding wine. The Committee request that those gentlemen who intend to be present at the dinner will send in their names to Mr. T. C. Langdon on or before Wednesday, June 17th.—J. WARD COUSINS, Honorary Secretary and Treasurer.

SOUTH MIDLAND BRANCH.—The annual meeting of this Branch will be held at Cambridge, in conjunction with the Cambs and Hunts and East Anglian Branches, on Thursday and Friday, June 18th and 19th. The President-Elect, Mr. Geo. H. Percival, will introduce for discussion the subject of Surgical Dressings. Dr. Alexander Hill, Master of Downing, President of the Cambs and Hunts Branch, will be glad of the earliest possible intimation of accommodation required, or he will have great difficulty in obtaining it.—C. J. EVANS, Honorary Secretary.

NORTH OF IRELAND BRANCH.—The annual meeting of this Branch will be held in the Belfast Royal Hospital, on Thursday, July 16th. Gentlemen wishing to read papers or to bring any other business before the meeting will kindly communicate, as early as convenient, with the Honorary Secretary, JOHN W. BYERS, M.D., Lower Crescent, Belfast.

MIDLAND BRANCH.—The annual meeting will be held at the Derby Infirmary on Thursday, June 18th, at 2 P.M. After the transaction of the usual business, the following special business in connection with the proposed annual meeting of the Association at Nottingham in 1892 will

be taken: To appoint a deputation to convey the invitation to the Council at the meeting at Bournemouth. To nominate a President-elect for the Association in case of such invitation being accepted. Papers: H. Handford, M.D.: Antiseptic Treatment of Diseases of the Stomach. E. Mansel Sympson, M.D.: A Case of Diabetes Mellitus, with Remarks on its Treatment by Salicylate of Soda. T. Henderson Pounds, F.R.C.S.: Aural Vertigo—Notes of a Case. Mr. E. Collier Green: The Old and the Proposed New Infirmary at Derby. Luncheon will be provided by the President-elect, at the Infirmary, at 1 P.M. The dinner will take place at the Midland Hotel, at 5 P.M.; tickets, 7s. 6d. each, exclusive of wine.—W. A. CARLINE, M.D., Honorary Secretary and Treasurer.

SHROPSHIRE AND MID-WALES BRANCH.—The annual general meeting of this Branch will be held on Friday, June 26th, 1891. Any member having a paper to read, or notes, or business to bring before the Branch, is requested to communicate the same to the Honorary Secretary, care of Mr. J. Gray, Belmont, Shrewsbury.—J. ALLEN BRATTON, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The fifty-fifth annual meeting of this Branch will be held in the Town Hall, Birkenhead, on Wednesday, July 1st, 1891, at 2.30 P.M. Agenda: Inaugural address by the President, Dr. Vacher. Report of Council and Financial Statement. Election of Office Bearers. Election of New Council. Choice of place for holding next annual meeting. Dr. Rentoul has given notice of the following motions: Proxy Voting. That the following additions be made to the Laws of the Lancashire and Cheshire Branch of the British Medical Association: Rule 7. "At any General or Special Meetings of the Branch, votes to be given either personally, or by proxy, who shall be appointed in writing under the hand of the appointer. No person shall be appointed a proxy who is not a member, and the instrument appointing him shall be deposited with the Branch Secretary, at his address, not less than forty-eight hours before the time of holding the meeting at which he proposes to vote." That in Rule 4 after the words "Annual Meeting" the words "by a majority of the members present" be omitted. That in Rule 7 after the words "the voting paper properly filled up shall be handed in" the next word "personally" be omitted. That in Rule 8 and in other rules, after the words "by a majority of three-fourths" the words "those present" be omitted. Branch Parliamentary Bills Committee: That a Branch Parliamentary Bills Committee be formed; that such Committee consist of the President, President-Elect, Branch Secretary and members of the Branch, such number of elected members of Committee to be in the proportion of one to every one hundred members of the Branch; that these be elected at the annual Branch meeting by a majority of votes, and that each candidate for election be nominated by five members of the Branch, the nomination paper, duly signed, being forwarded to the Branch Secretary on or before the 31st of May of each year. Publication of Notices of Motion: That 14 days' notice be given in the JOURNAL of the Association of all motions to be brought up for consideration at any general or special meeting of the Branch. Payment of Fares; Parliamentary Bills Committee: That this Branch recommends that, at the annual meeting of the Association a resolution providing for the payment of first-class railway fare to each member of the Parliamentary Bills Committee, thus following the Rule which provides for the payment of first-class railway fare to members of the Council of the Association, be passed. Addition to the Editorial Reference Committee: That this Branch recommends that, at the annual meeting of the Association a resolution providing for the appointing and payment of an additional member to the "Editorial Reference Committee of the Journal," such member to be, and to be distinctly representative of those, in general medical practice, be passed. Medical and Surgical Communications: Dr. Brooke will read a Paper on the Modern Conception of Eczema. Mr. Lee will read a Paper on Some Aural Sequelæ of Influenza. Surgeon-Major Blood will read a Paper on a Series of Cataract Extractions with a description of "Couching" as practised in India. Mr. Johnson Martin, on the Present Epidemic of Pneumonic Fever. Dr. Milligan will give an Analysis of 300 Cases of Suppurative Disease of the Middle Ear, with some remarks upon treatment. Luncheon: A light luncheon, kindly provided by the members of the Branch and profession resident in Birkenhead and district, will be served in the Large Committee Room, Town Hall, from 1 to 2.30 P.M. Dinner: Arrangements have been made for a dinner in Berry's Grand Restaurant, 75 and 77, Argyle Street, Birkenhead, at 5.30 P.M. Tickets, wine not included, 8s. each. Excursions: If fine, excursions will be arranged for to Messrs. Laird's Shipbuilding Yards, to an Atlantic liner, and to the Observatory at Bidston.—CHARLES E. GLASCOTT, Honorary Secretary, 23, St. John Street, Manchester.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—A joint meeting of the Northern Counties and Aberdeen, Banff, and Kincardine Branches will be held at the Gordon Arms Hotel, Elgin, on Saturday, June 27th, 1891, at 2.50 P.M. Business: (1) Minutes, etc. (2) General. A visit to Elgin Cathedral and Gray's Hospital will be made by those arriving by early train. An excursion has been arranged to visit Pluscarden Priory, starting from Gray's Hospital, Elgin, at 12.15 P.M., and returning to Gordon Arms Hotel, at 2.50 P.M. Fare for excursion and luncheon, 4s. 6d. per head. Dinner will be served in the Gordon Arms Hotel, Elgin, at 3 P.M. Price (exclusive of wine, but inclusive of attendance) 4s. per head. Train Arrangements: For the convenience of members a saloon carriage will be attached to the 6.50 A.M. train from Aberdeen, reaching Elgin at 9.44 A.M.; also, to the train leaving Elgin at 5.45, reaching Aberdeen at 9.40 P.M. Fares for the return journey, going *vid* Highland and returning *vid* Coast route, 14s. Members leaving Aberdeen by 9.30 A.M. train can take part in excursion and dinner. Members are invited to bring medical friends with them.—J. MCKENZIE BOOTH and C. THISELTON URQUHART, Honorary Secretaries.

BOMBAY BRANCH.

A GENERAL meeting of this Branch was held on April 10th, 1891.

Communications. Dr. DALGADA read a paper on the Treatment of Snake Bites in the Konkan, giving a botanical description of plants used by natives.—Dr. PECHEY PHIPSON showed the Photograph of a Case in which a Uterine Tumour had, by Continuous Growth, caused Inversion of the Uterus; the tumour was protruding from the vagina and presented a remarkable appearance. A slight groove indicated at one spot the separation between tumour and uterus. The posterior wall of the vagina had become adherent to the posterior surface of the tumour. An elastic ligature was applied and the greater part of the tumour came away. The tumour was of several years' standing, and the patient had continued at hard manual labour until recently.—Surgeon COLLIE showed (1) a Case of Extensive Destruction of the Palate and Nasal Bones from Hereditary Syphilitic Disease. (2) The Parts Removed by Excision of the Hip in a lad aged 17. The case was an extremely unpromising one from the beginning, but was now doing fairly well.

EAST YORK AND NORTH LINCOLN BRANCH.

THE thirty-fifth annual meeting was held at the Station Hotel, Hull, on June 3rd: Mr. E. P. HARDEY, President, in the chair.

Election of Branch Representative and Secretary.—Mr. R. H. B. Nicholson was elected Representative of the Branch, and Dr. H. W. Pigeon was re-elected Secretary.

Communications.—The PRESIDENT delivered an address on Recent Advances in Obstetrics.—Dr. J. F. NICHOLSON read a paper on the Complications of Influenza, which is published at page 1273.—Mr. R. H. B. NICHOLSON showed Three Cases of Lupus that had improved after injection of tuberculin; also a Man whose Tendo Achillis had been sutured fourteen days after a wound of the foot.

DORSET AND WEST HANTS BRANCH.

THE spring meeting of this Branch was held at Bournemouth on May 27th, Dr. WILLIAM VAWDREY LUSH, President, in the chair. Fifty-two members and visitors were present.

Luncheon.—The members and visitors were hospitably entertained at luncheon by the Bournemouth Medical Society.

Council and Representatives.—Branch Council: The following gentlemen were elected members of the Branch Council for the ensuing year: Dr. G. H. Batterbury, of Wimborne; Dr. C. Childs, of Weymouth; Mr. G. W. Daniell, of Blandford; Dr. J. C. Leach, of Sturminster Newton; Dr. P. W. MacDonald, of the Dorset County Asylum; Dr. A. McLean, of Portland; and Dr. W. V. Snow, of Bournemouth. Representative of the Branch on the Council of the Association: Mr. C. H. Watts Parkinson, of Wimborne, was re-elected for the ensuing year. Representative on the Parliamentary Bills Committee: Mr. C. H. Watts Parkinson was re-elected for the ensuing year.

Vote of Thanks.—A vote of thanks was unanimously accorded to the retiring President, Dr. E. M. Spooner, for his services during the past year.

New Members.—The following gentlemen were elected: Mr. J. E. Appleton, Dr. J. C. Bucknill, Mr. A. E. B. Love, Mr. N. MacGillycuddy, Mr. G. Schofield, and Mr. Francis Scott, of Bournemouth; Dr. J. A. Ewan, of the Dorset County Asylum; Mr. G. A. George, of Dorchester; Mr. A. C. Kemble, of Poole; Mr. F. D. Lys, and Mr. George Lys, of Bere Regis; Dr. John Moorhead, of Weymouth; Mr. Lawson Tait, of Lyndhurst Road; Mr. Maitland Thompson, of Puddletown; Mr. A. F. Van, of Cranborne; Mr. B. P. Viret, of the Dorset County Hospital; and Dr. William Watson, of Blandford.

Next Meeting.—It was resolved that the next meeting should be held in October at Wimborne.

Discussion.—A discussion on Embolism and Thrombosis was opened by the PRESIDENT, and taken part in by Dr. MOORHEAD, Mr. NUNN, Mr. GRAHAM, Mr. G. W. DANIELL, and Dr. MACDONALD.

Communications.—The following communications were presented: Mr. GARDNER: A Phimosis Dilator.—Dr. LAWTON: Notes on a Case of Hydrophobia.—Dr. GREVES: A Case of Acromegaly. Patient exhibited.—Dr. MACDONALD: Pathological and Microscopical Specimens of Diseases of the Brain.

Dinner. The members dined together at the Royal Bath and East Cliff Hotel.

SPECIAL CORRESPONDENCE.

PARIS.

The "Secret Médical" and Life Insurance.—French Association for the Advancement of Science.—Hygiene in the Provinces.—Notification of Infectious Disease by Teachers.—Cleanliness and Revaccination.—Medical Education and the Chamber of Deputies.—Assistance for Poor Women during Pregnancy.—Presentation to Dr. Liébault.—Epidemic of Measles.

THE Paris *Cour d'Appel* a few days ago pronounced judgment on a case which involved the question of the "*secret professionnel.*" This is the first instance of the kind. A life assurance society granted a policy for £800 to be paid to the widow of the client, who was examined and pronounced to be exempt from any affection inimical to his assurance. A few months subsequently the client died. On the request of the assurance company the widow applied to the doctor for a certificate of death stating the cause of death, which he refused on the grounds of professional secrecy. The company refused to pay. The widow brought an action before the Tribunal of Commerce, which decided that as the widow had applied for a certificate stating the cause of death, she had observed the statute, and was entitled to the assurance indemnity.

The French Association for the Advancement of Science will hold its annual congress at Marseilles, September 17th and 24th. One of the subjects discussed will be the sanitation of factories of chemical products.

The working of the Health Department of the Public Assistance in the provinces does not seem to be as good as in Paris. In some of the hospitals pregnant women, and women who have been recently confined, and women suffering from puerperal fever are all housed in one ward. One midwife has the charge of all three classes of patients.

The new notification service of cases of infectious and contagious disease by male and female teachers is now in working order. During the first quarter of 1891, in 47 arrondissements, governesses and teachers notified to the prefects and souprefects 934 cases. The Paris Municipal Council suggests that there should be attached to *lycées* and colleges a special ophthalmic service.

The Technical Health Committee has called the attention of the Minister of War to the fact that personal cleanliness is not scrupulously observed in the army. When the soldiers are revaccinated their arms are not washed nor their linen changed.

The Budget Commission of the Chamber of Deputies has examined the budget of Public Instruction. £280 are given to the histological laboratories and £600 for lighting and heating—a sum which is quite insufficient. The reporter is directed to notify that a revision of the classes of superior education is necessary. This revision may result in suppressing the useless lectures and creating useful ones.

The Paris Municipal Council has voted £800 to forward the Œuvre d'Assistance des Femmes Enceintes, organised by Mme. Béquet and attached to the Œuvre de l'Allaitement Maternel, of which she is the founder. The City of Paris has given to the charity a large building, which will be converted into a home for pregnant women who are unable to gain their livelihood from ill-health or other causes. They will be received at the seventh month. Those who are able to do light work will receive the sum they have earned when they leave the home to be confined at a maternity hospital. Dr. Pinard recently gave a lecture at the Sorbonne on "L'Assistance des Femmes Enceintes." He dwelt on the great want this philanthropic enterprise would satisfy.

Dr. Liébault, the founder of the Nancy hypnotic school, was presented a few days ago with an *objet d'art*, as a testimony of esteem for his talents. A number of foreign medical men are among the subscribers to this testimonial, some of whom were present at the banquet given to Dr. Liébault.

At a recent meeting of the Comité Consultatif d'Hygiène, M. Monod stated that an epidemic of measles has broken out at Pont Levoy. There are 2,500 inhabitants; the poor suffer severely from the epidemic.

SHEFFIELD.

Wake Convalescent Fund.—District Nursing.—Suicide by a Woman in Labour.—Mexborough Cottage Hospital.

IT has been decided to establish a convalescent fund at the public hospital and dispensary as a memorial to the late Mr. Bernard Wake. Besides the usefulness of such a fund, the idea is particularly appropriate, as Mr. Wake carried on entirely at his own expense a home at Sandygate, very largely for the benefit of the hospital.

The first report of the Sick Poor Nursing in connection with St. George's Home for District and Private Nursing has just been issued. It is of a most satisfactory character, and gives every encouragement for the future usefulness of the district nurses. It was started in September, 1888; during the next twelve months two nurses rendered their services to 296 cases, and 5,907 visits were paid. During the next year, ending September, 1890, 426 cases were nursed, and 8,210 visits were paid, and a third nurse was added. Help is now asked to extend the work.

An unusual case of suicide is reported. A woman, aged 39, the mother of seven children, was expecting to be again confined. On the night of June 4th, when in labour, she took the opportunity of the absence of the medical man, whom she had desired temporarily to leave the room, not to only cut her throat with the long blade of a pocket knife, but to inflict six stabs, four in the breast and the region of the breast, and two in the abdomen. The medical attendant was not called at the inquest, but the jury returned a verdict of suicide during a state of temporary insanity. There was evidence given of insanity in the family, but the woman apparently had not been frightened or alarmed at the expectation of the birth of another child.

It is not often that a hospital, at all events at its commencement, finds itself with a balance on the right side at the close of a year's work. The Mexborough Cottage Hospital is in this way fortunate. At the first annual meeting it was reported that the income had amounted to £537 17s. 10d., and the expenditure £318 1s. 7d., leaving a balance of £219 16s. 3d. The number of patients admitted during the year was 101.

CORRESPONDENCE.

PROVIDENT DISPENSARIES AND BENEFIT SOCIETIES.

SIR,—Under the above heading a number of medical men engaged in general practice here were called together last December. What they did may have some interest for "2d. a Month" and "Fleur-de-Lis."

The meeting was more or less private, but I am not betraying confidence in telling of some of the matters we discussed. We found that several medical men, occupying the highest positions in professional life in Dublin, were not above taking a small house in a slum and, under the guise of serving the poor at a cheap rate in the evening, were really attending those who could well afford to pay the fees which a general practitioner charges. It was calculated that they were netting £600 or £700 a year in this rather mean manner. Some of them already feel the result of the conclusions arrived at.

As to benefit societies, we dealt with them also in a manner which has given a great deal of satisfaction, since we agreed not to accept any society unless satisfactory reasons were given for the late medical officer's dismissal; if we agreed that there were valid and reasonable grounds for his removal, then it was allowed that those who sought to fill the vacancy might bring to bear any legitimate influence they could, but canvassing for societies not vacant was discountenanced in the strongest manner; indeed, one notorious "canvasser," for this very reason, was not asked to deliberate with us.

When every body is uniting for their own interests, it is high time that medical men should do the same. It was most amusing to see the face of one secretary (a regular "Warwick" he boasted to be) when he was told by four medical men to go and get a character of his society from the late medical officer, and that they would have nothing to say

to him until he could produce a statement that the members were neither impertinent or unreasonably troublesome.

I wish a movement of this kind would spread far and wide.—I am, etc.,

Dublin. ALEXANDER SMITH.

THE LORDS' HOSPITAL COMMITTEE.

SIR,—At the last sitting of the above Committee, Mr. Faulkner, Secretary to the Royal General Dispensary, said that a "man earning 30s. a week would be a proper person to use the dispensary." I do not know what Mr. Faulkner's definition of the term "man"—from a charity point—is. Does he include men, women, and children? Does he speak of the entire population, or of the industrial classes only? If he refers to the entire population, then there are too few charities; and if he includes the wage-paid classes, then there are few who are ineligible. Does he refer to the average weekly wage, or to the actual weekly wage? If to the former, more will be eligible for relief, as there are a large number of "season" trades, such as agricultural labourers, bricklayers, etc. Also what does he include in the term wage? Is it the total wage of the family or of the man? Is this wage also to include sick pay from clubs? In the former case, I know cases where the man makes nothing, but the wife and children bring in from £3 to £5 per week. If he includes sick pay, then I can further say that I know cases where the man obtains no wage, but where he draws 30s. per week from three clubs during sickness.

It has been stated that in 1886, out of a population of 36,000,000, 30,000,000 did not pay any income tax—that is, these said they were making under £150 a year, or 50s. per week. Taking it that each family in England consists, on an average, of 5 persons, this gives each a weekly income of 10s. *Ergo*, according to Mr. Faulkner, there are 30,000,000 of persons eligible for free medical relief at the voluntary charities. Does Mr. Faulkner include medical students, nurses, clerks, curates, governesses, etc.?

I hope their lordships will in the future address the following question to every witness: "What weekly income from all sources should render one of the wage-paid classes eligible for relief from a voluntary medical charity?"—I am, etc.,

Liverpool. ROBERT R. RENTOUL.

ALCOHOL AND LONGEVITY.

SIR,—The annual report of the United Kingdom Temperance and General Provident Institution, in which the expected and actual claims for the year 1890 are given, affords another opportunity of testing the comparative longevity and vitality of total abstainers and drinkers of alcoholic liquors. The weight and conclusiveness of this test increase with every year. The twenty-fifth return is as follows:—

	Expected Claims.	Actual Claims.
Temperance section	314 ...	225
General section	382 ...	389

This shows 71.6 per cent. in the Temperance section, and 100.2 per cent. in the General—a difference of 28.6 per cent. in favour of the abstainers. This is a little higher than the averages of the whole twenty-five years, which are 70.4 and 96.6 per cent respectively—a difference of 26.2 per cent.

The advantages of total abstinence is shown by the following five quinquennial returns:—

	Temperance Section.		General Section.	
	Expected Claims.	Actual Claims.	Expected Claims.	Actual Claims.
1866-70	549	374	1,008	944
1871-75	723	511	1,267	1,330
876-80	933	651	1,485	1,480
881-85	1,179	872	1,670	1,530
1886-90	1,472	1,015	1,846	1,750
	4,856	3,423	7,276	7,034

This shows that while in the General section the deaths have fallen short of the expected number by 242, in the Temperance section the deaths are 1,433 fewer. The fact that in the General section the deaths are below the healthy male average proves conclusively that the difference between the two sections is not due to excessive drinking on the part of any considerable number of the General section. The comparison, therefore, is fairly between abstainers and moderate drinkers, rather more moderate than the average middle-class picked lives, and shows conclusively that the use of alcoholic liquors accelerates the degeneration of the tissues and shortens life.—I am, etc., J. J. RIDGE, M.D.Lond.,

Honorary Secretary British Medical Temperance Association.

Enfield.

CHICKEN-POX OR SMALL-POX?

SIR,—I notice in the BRITISH MEDICAL JOURNAL a reference to a case that has attained some notoriety. The following are the particulars as known to me.

On April 17th last I was requested to visit a child, aged 8 months, residing in Church Row of this locality. I was informed that it had been ill about a fortnight previously, and that the doctor who attended it certified that the affection was small-pox, and had the patient removed to the hospital. On reaching same the mother, who accompanied her child (not a young woman living in the house), was told to take it home, as it was only a case of chicken-pox. In a few days the eruption had disappeared, the child remaining all right until the day previous to my seeing it, when another rash began to appear. I informed her that the child was certainly suffering from small-pox now, and I certified accordingly. A day or two afterwards, on April 20th, a lodger living on the floor above (a young woman of 24) was taken ill with the same affection. On May 4th another inmate of the same house was found also to have contracted the same symptoms. These, sir, briefly are the particulars of this unfortunate incident.—I am, etc., H. F. C. EAGLE.

Bethnal Green Road, E.

THE MANAGEMENT AND EDUCATION OF IDIOTS.

SIR,—I have read with much interest Dr. Russell's account of the management and education of idiots and epileptics at the Bicêtre, Paris, but I cannot allow the concluding sentence of his description of the management there pursued to pass without a protest. He says: "We cannot fail to admit that the system of instruction to which they owe their present condition must be a good one." There is no doubt of this, but he then goes on to say—"and worthy of adoption in idiot institutions." This system *is adopted* in all the idiot institution of the United Kingdom, America, and the Continent with which I am acquainted, and Dr. Bourneville, whose excellent institution I had the pleasure of visiting some two years ago, would be the first to acknowledge it.—I am, etc.,

FLETCHER BEACH.

Darenth Asylum for Imbecile Children.

HOME FOR THE DYING.

SIR,—We, the undersigned, beg leave to bring before the public, through the medium of your columns, the great and pressing need that exists for a home for the reception of dying persons in London, and would call attention to the following facts.

There are at all times amongst us many impoverished invalids who are suffering from mortal diseases, such as advanced consumption, cancer, and the like, and whose end is not far off. Their helpless condition has deprived them of whatever means of support they may have possessed. These people are very often not strictly suitable for admission to general hospitals, for those institutions are intended rather for alleviation and cure of disease than to afford a home or shelter to the hopelessly dying. Some exceptions exist to this rule; for example, the cancer wards of the Middlesex Hospital. On the other hand, the several homes for incurables appear to be designed for chronic cases of long duration. We are strongly impressed with the conviction that there is thus a great gap in the Christian charity of our metropolis, and that it only needs to be understood to be filled. The small efforts already being made in this direction fall cer-

tainly far short of reaching the need of the case, and the best proof that can be offered of this is seen in the fact that at "Friedenheim," a small and but little known private home for the dying, having only ten beds, which has been open for five years past, about 300 applications from cases of the kind described above have been received annually, only about 40 of whom could be accepted.

At the present juncture it is proposed to raise a sum of £10,000, which would be adequate for the purchase and fitting up of a suitable home for fifty beds. About £1,900 have already been guaranteed from private sources.

It is impossible in a short letter to enter into details, but all information will be gladly supplied by the Honorary Secretary, "Friedenheim," 133, Mildmay Road, London, N. As the Council of this Home, we earnestly commend its enlargement to the attention of the Christian public.—We are, etc.,

R. Phayre, K.C.B. (Chairman).
H. J. Tritton (Hon. Treasurer).
Thomas Barlow, M.D., F.R.C.P.
C. Y. Biss, M.D., F.R.C.P.
W. Mitchell Carruthers.
T. A. Denny.
John C. Fraser.
A. Pearce Gould, M.S., F.R.C.S.
T. Henry Green, M.D., F.R.C.P.
S. H. Habershon, M.D., F.R.C.P.
John Langton, F.R.C.S.
Hugh M. Matheson.
J. E. Mathieson.
J. L. Maxwell, M.D.
J. F. Morton, Colonel.
H. Sinclair Patterson, M.D.
A. T. Schofield, M.D., F.R.C.S.
Nevile Sherbrooke.
H. W. Webb-Peploe.

"PASSION OF YE HART."

Sir,—From your interesting notice of the recently-published *Arcana Fairfaxiana*, it is not clear whether the reviewer is inclined to adopt the poetical pathology annexed to the Tudor physician's sentimental diagnosis. Our nurses—*vide* Dickens and Leech *passim*—were more accurate if less elegant. "Water of Time for Passion of the Heart" is not a line by Marlowe or Rossetti, for example, but heads a recipe contained in "A Queen's Delighte: the Arte of Candying and Conserving: 1668," and denotes a compound infusion of thyme for the cure of stitch in the side due to—"wind on the stomach."—I am, etc.,

Hertford. C. E. Shelly, M.D.

MEDICO-LEGAL AND MEDICO-ETHICAL.

SENIOR PRACTITIONERS AND JUNIOR CONSULTANTS.

A.—We must make the same reply as that given in a similar case on June 6th, p. 1261.

NOTIFICATION OF CHANGE OF ADDRESS.

In response to a "Country Practitioner's" inquiry we would refer him to the following extract from the *Code of Medical Ethics*, chap. ii, sec. 1, rule 3:

"It is alike derogatory to the profession to solicit practice by advertisement, card, or printed circular, or to notify change of residence, the introduction and address of a partner, or the transfer of a practice, otherwise than *vivâ voce* or by an autograph or a *facsimile* thereof, and its circulation strictly limited to *bonâ fide* patients of the transmitter."

To which we think it well to add that in a simple village wherein, as a rule, everyone is generally more or less cognisant of their neighbours' proceedings, such a notification, even were it ethical, would not only be unnecessary but could scarcely fail to raise a smile of expressive significance.

HOSPITALS, BAZAARS, AND FOUNDERS.

At the recent public examination under the failure of Herbert Tibbitts, described as a physician of Wimpole Street, the debtor, according to the report in the *Times*, ascribed his insolvency mainly to obligations incurred in connection with a bazaar held in March last at the Albert Hall, under the title of "The Coming Race," for the joint benefit of the West End Hospital for Paralysis, of which he was the founder, and of the School of Massage and Electricity. The liabilities were returned in the statement of affairs at £3,385, with assets £100. According to his evidence, as reported, in 1886 he executed a deed of assignment for the benefit of his creditors. His debts then amounted to £5,000, amongst his creditors being his wife for £3,000, money advanced by her and which was still outstanding. One of his creditors received 5s. in the pound, but the others did not get anything. His income as a physician amounted to about £250 per annum. Some few years ago he founded the West End Hospital, the premises being taken in his own name, but they had since been transferred. He occupied the position of senior physician, but did not receive any salary. In 1889 an exhibition was held at the Albert Hall, which realised profits amounting to £2,000, of which £1,400 were paid into the hospital fund, and the remainder went in expenses. Recently, in conjunction with another medical man, he started the School of Massage and Electricity in connection with the hospital. A matron was employed, and she received one-fifth of the profits as a salary, he and his partner dividing the remaining four-fifths between them. He sold the establishment to his wife in May, 1888, and whatever had been received on behalf of the school was given to her. About March, 1890, another bazaar and *fête* was held at the Albert Hall, called "The Coming Race," in aid of the hospital and school, but this turned out a failure. The debtor stated that a number of the purses presented on that occasion were given by the stall-holders, who expected to receive the money back. He had held bazaars for two or three years past, and if his creditors had allowed him to hold another he would have paid them all in full. In reference to the debts contracted in connection with "The Coming Race," the debtor said he knew nothing about those which were incurred in his name. He had given a friend authority to contract debts within a reasonable amount, but they were in excess of what he anticipated. The other members of the executive committee refused to undertake any liability in respect to the bazaar, and he did not expect them to do so, and he undertook the sole responsibility. He had no assets at the time, and if the concern failed he had no expectation, beyond the assistance rendered to him by his wife, of being able to pay the debts.—Mr. Registrar Linklater, after some further evidence, ordered the examination to be concluded.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Fleet-Surgeon Alexander Blood Trousdell, M.D., has been placed on the retired list. His commissions were thus dated: Surgeon, February 16th, 1870; Staff-Surgeon, July 24th, 1880; and Fleet-Surgeon, September 13th, 1890.

The following appointments have been made at the Admiralty:—Richard J. Barry, Staff-Surgeon, to the *Australia*, June 4th; John J. Dinnis, M.D., Surgeon to the *Phaeton*, June 4th; Horace Elliott, M.D., Surgeon to Malta Hospital, June 4th; Edward J. Morley, Surgeon to the *Tyne*, June 4th; Ernest F. Gardiner, to be Surgeon and Agent at Ilfracombe, Croyde, Morthoe, and Combe Martin, June 3rd; Hugh W. Macnamara, Surgeon to the *Pembroke*, June 5th; Chatworth L. Nolan, M.B., Surgeon to the *Excellent*, June 5th.

THE MEDICAL STAFF.

Surgeon G. B. Russell, M.B., doing duty in the Secunderabad District, Madras command, is directed to report himself forthwith to the Principal Medical Officer, Burma Column, Manipore Field Force, for orders.

Surgeon W. B. Horrocks, M.B., who is serving in the Bengal command, has leave of absence for six months on medical certificate.

Surgeon-Major G. Laffan, M.D., and Surgeon C. R. Woods, M.D., Medical Staff, doing duty Rangoon District, Madras command, are directed to report themselves forthwith to Principal Medical Officer, Burma Column, Manipore Field Force, for duty with 23rd British Field Hospital.

Surgeons T. H. Corkery and L. Way, doing duty Rangoon and Madras Districts respectively, Madras command, are directed to report themselves forthwith to Principal Medical Officer, Burma Column, Manipore Field Force, for duty with General Hospital (British), Tammoo.

Surgeon H. J. Waller, M.B., doing duty Station Hospital, Bellary, Madras command, is directed to do duty Rangoon District.

Surgeon R. P. Hetherington, M.B., doing duty in the Rangoon District, Burma, is ordered to do duty in the General Hospital (British) at Myingyan.

Surgeon A. A. Sutton, recently arrived on fresh tour in Bombay, is placed on general duty in the Poona District.

Surgeon J. R. Mallins has been selected to be attached to the Grenadier Guards, *vice* Surgeon Mitchell, transferred to 2nd Life Guards.

INDIAN MEDICAL SERVICE.

Surgeon G. B. Irvine, Bengal Establishment, lately officiating as Medical Officer, 2nd Central India Horse and Goona Political Agency, is appointed to officiate in medical charge of the Meywar Bheel Corps.

Surgeon-Major J. Crofts, Bengal Establishment, Medical Officer Kotah and Jhalrapatan Agencies, is appointed to officiate as Medical Officer to the Maharajah of Gwalior, and as Residency Surgeon.

Surgeon R. Shore, M.D., Bengal Establishment, officiating Residency Surgeon and *ex officio* Assistant Resident in Nepaul, is appointed to officiate as Medical Officer Kotah and Jhalrapatan Agencies.

Surgeon-Major E. Levinge, Madras Establishment, is appointed Honorary Surgeon to the Kistna Volunteer Reserve.

Surgeon R. J. Baker, M.D., Bombay Establishment, on return from leave, is directed to act as Civil Surgeon of Rutnagherry.

Surgeon E. G. R. Whitcombe, F. E. Murray, M.D., and H. J. Younger, M.D., are brought on the strength of the Bombay Establishment, from April 26th, the date of their arrival at Bombay, and are posted on general duty, Surgeons Whitcombe and Younger to the Poona District, Surgeon Murray to the Bombay District.

Surgeon-Major J. Parker, M.D., Bombay Establishment, Medical Storekeeper at Bombay, is allowed furlough to Europe for six months on private affairs.

Surgeon-Major G. Bainbridge, Bombay Establishment, who joined the service as Assistant Surgeon April 1st, 1867, is promoted to be Brigade-Surgeon from April 30th.

Surgeon C. F. Willis, Bombay Establishment, in medical charge of the 9th Native Infantry, is ordered to officiate in medical charge of the 21st Bombay Infantry (Marine Battalion), *vice* Surgeon-Major G. E. E. Burroughs.

Surgeon-Major H. G. Hall, Madras Establishment, is permitted to retire from the service from May 1st. He joined as Assistant Surgeon, October 1st, 1869, becoming Surgeon-Major twelve years therefrom. He served with the Burmese Expedition in 1886-87, and has the medal with clasp for that campaign.

Surgeon P. Carr-White, Madras Establishment, is directed to report himself forthwith to the administrative medical officer, H.M.'s Forces, Rangoon District, for duty at Tammoo.

Surgeon-Major W. K. Hatch, M.B., Bombay Establishment, is appointed to act as Senior Medical Officer in charge of Jamsetjee Jejeebhoy Hospital, *vice* Surgeon-Major J. Arnott, M.D., pending Brigade-Surgeon W. Gray's return from leave, from which date he is allowed privileged leave for two months.

Surgeon W. H. Quicke is appointed to act as Obstetric Physician, Jam-

setjee Jejeebhoy Hospital, in addition to his other duties, until relieved by Surgeon H. P. Dimmock.

The services of Surgeon R. J. MACNAMARA, Bengal Establishment, are placed permanently at the disposal of the Bengal Government.

The services of Surgeon W. R. CLARK, Bengal Establishment, are placed temporarily at the disposal of the Bengal Government, for employment as officiating Professor of Anatomy in Lahore Medical College.

Surgeon D. M. DAVIDSON, Bengal Establishment, officiating civil surgeon, is reported to Sealkote, from April 25th.

Surgeon C. CAMERON, Bengal Establishment, civil surgeon of Gonda, is appointed to hold visiting medical charge of Baraitch district.

Surgeon-Major R. PEMBERTON, Madras Establishment, has been permitted to return to duty within the period of his leave.

Brigade-Surgeon S. B. HUNT, Madras Establishment, is granted an extension of leave for six months on medical certificate.

Surgeon-Major E. FERRAND, Madras Establishment, is directed to report himself forthwith to the Principal Medical Officer, Burmah Column, Manipore Field Force, for duty with the General Hospital at Tammoo.

Surgeon L. F. CHILDE, M.B., Bombay Establishment, is appointed Professor of Chemistry in the Grant Medical College and in the Elphinstone College, in addition to his own duties, during the absence of Surgeon T. D. C. Barry, on privilege leave.

Surgeon-Major S. L. DOBIE, Madras Establishment, is appointed Superintendent of Lunatic Asylum, Madras.

Surgeon F. G. MAIDMENT, Madras Establishment, is appointed to act as district surgeon and superintendent of gaol, Madura.

Surgeon F. C. REEVES, Madras Establishment, civil surgeon Tellicherry, and Acting-Surgeon 3rd district, Madras, is appointed to act as Surgeon 4th district, Madras, without prejudice to his own duties.

THE MILITIA.

SURGEON-MAJOR C. BROOK, 3rd Battalion Lincolnshire Regiment (formerly the Royal North Lincoln Militia) has resigned his commission, with permission to retain his rank and uniform.

THE VOLUNTEERS.

HONORARY ASSISTANT-SURGEON E. P. KING, 2nd Volunteer Battalion South Wales Borderers (late the 1st Monmouthshire), has resigned his commission, which was dated August 10th, 1880; he is permitted to retain his rank and uniform.

Mr. JAMES MALPAS is appointed Acting-Surgoon to the 3rd Volunteer Battalion Hampshire Regiment (late the 3rd Hampshire), June 6th.

THE PROPOSED TITLES.

BRIGADE-SURGEON writes: The officers of the Medical Staff are indeed pleased to learn through your columns that the long controversy relative to their military rank has at last been settled in a satisfactory manner, thanks to the valuable support rendered them by their brethren in civil life, and to the BRITISH MEDICAL JOURNAL. Before the promised warrant is issued, I trust a representation will be made to Mr. Stanhope relative to the proposed title for brigade-surgeons, which is very distasteful to them. One of the greatest objections raised against the compound titles was their length and unwieldiness, but if brigade-surgeon (from the first an unmeaning term) is to be prefixed to lieutenant-colonel, the title will be utterly unpronounceable, and obviously will never be used either by the individual holding it, or by anyone addressing him. With just as much reason should the two grades of surgeons-major be styled respectively surgeon-major lieutenant-colonel and surgeon-major major as brigade-surgeon lieutenant-colonel. The compound titles are given to show the military rank and the profession, not the departmental grade. The recommendation of Lord Camperdown's Committee was that "brigade-surgeons should be styled surgeon lieutenant-colonel in common with the other officers holding the relative rank of lieutenant-colonel, and that fifty at the top of the list of these officers should draw the pay and allowances of brigade-surgeons." To make them even more distinct they could be placed in the *Army List* under the heading of "Brigade-Surgeons." This would meet any difficulty there might be, and would be much more acceptable to the officers of that rank than the title brigade-surgeon lieutenant-colonel.

*** We fully agree with our correspondent that the blot in the proposed compound titles is the absurdly unwieldy one for brigade-surgeons. That departmental rank was originally instituted solely to redress the balance between the huge executive and small administrative grades, but did not carry increased relative rank. In considering the compound titles the Camperdown Commission saw the difficulty in dealing with the brigade-surgeons, and hence the recommendation as to the "senior fifty." But another way out of the difficulty was suggested in evidence before them—namely, to give the brigade-surgeons a step in rank and call them in common with the present deputies surgeon-colonel. A combined list of the kind would give the authorities a much larger field from which to select administrative medical officers under the rank of surgeon-major general, such selected officers to be called "on the staff," with increased emolument and retirement. We trust Mr. Stanhope, before issuing the promised warrant, will take into due consideration the whole question of the rank and title of the important body of brigade-surgeons.

ANNUAL DINNER OF THE MEDICAL STAFF.

THE following is a list of the officers who were present at the annual dinner of the Medical Staff, which was held in the Whitehall Room of the Hotel Metrôpole on June 8th, Surgeon-General J. Sinclair, in the much regretted absence of the Director-General through indisposition, presiding:—Director-General: Sir T. Crawford, K.C.B. Surgeons-General: R. Bowen, J. G. Faught, S. Fuller, C. D. Madden, H. H. Massey, C.B., W. H. Muschamp, J. B. C. Reade, C.B., J. Sinclair. Deputy Surgeons-General: S. Archer, Professor H. Caley, O. Codrington, W. G. Don, C. H. Giraud, G. L. Hinde, C.B., J. H. Jeffcoat, C. M. Jessop, E. MacGrath, W. Sly, H. R. L. Veale, F. Wade, and J. Watts. Brigade-Surgeons: J. A. Anderson, J. F. Beattie, M. Cogan, T. S. Cogan, E. Footner, G. C. Gribbon, J. Hector, J. B. Kelly, J. G. Leask, W. T. Martin, H. S. Muir, A. B. R. Myers, W. Nash, T. F. O'Dwyer, T. W. Patterson, D.S.O., A. F. Preston, W. B. Ramsbotham, S. K. Ray, W. F. Ruttledge, F. B. Scott, C.M.G., F. P. Staples, E. D. Tomlinson, W. W. Tomlinson, J. Wilson, W. J. Wilson, T. Wright, and T. W. Wright. Surgeons-Major: W. B. Allin, J. M. Beamish, W. A. Carte, S. H. Carter, J. Coats, W. Creyk, J. D. Edge, T. J. Gallwey, W. C. Gasteen, J. J. Greene, A. Hayes, D.S.O., W. Johnston, T. Ligertwood, N. MacCreerey, E. V. MacSwiney, E. A. Mapleton, Professor J. L. Notter, E. A. Roe, W. F. Stevenson, W. E. Webb. Surgeons: C. J. Addison, W. Babtie, W. H. Bean, W. G. A. Bedford, J. R. A. Clark, A. M. Davies, R. H. Firth, J. G. Harwood, J. P. S. Hayes, F. W. C. Jones, J. J. Lamprey, T. H. Parke, J. M. Reid, J. Riordan. Professor G. F. Dufley and Mr. F. Kyle.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, June 5th.

Legislation for Habitual Drunkards.—Lord HERSCHELL called attention to the punishment of habitual drunkards, and to move that it is expedient that an inquiry should be instituted to ascertain whether some better method of dealing with such cases cannot be substituted. In Great Britain and Ireland there were annually, in round numbers, 250,000 commitments. In England there were 160,000, in Scotland 47,500, and in Ireland 40,000. The proportion of commitments in the three countries differed very considerably. The ratio of commitments per 1,000 of population in England was: Males, 4.1; females, 1.5; Scotland, males, 6.8; females, 4.2; Ireland, males, 5.5; females, 3.3. In other words, in England there was one commitment to 190 of the population; in Scotland, 1 to 80; Ireland, 1 to 100. The 250,000 commitments were believed to represent about 145,000 individuals, namely, 112,000 men and 33,000 women. Of the 33,000 women, 11,000 had had ten imprisonments and upwards recorded against them; of the 112,000 men, 16,250 had a like number of imprisonments; so that it would be seen that the proportion of repeated recommitments was very much greater in the case of women than of men. Their lordships ought to know that the great majority of commitments of women was in respect of drunkenness. In fact, 50 per cent. were for drunkenness alone, and 80 to 85 per cent. for drunkenness and closely-allied offences, such as disorderly conduct. Many of these women returned to prison on the day they were released or the day after. At Millbank during the past year this was the experience. These women not infrequently became the mothers of children, and when it was remembered that, unfortunately, proclivity to alcohol was now believed to be to a considerable extent hereditary, it would be seen at once that the disaster to the country was not represented merely by the effect upon the unfortunate people immediately concerned. It had been suggested that the only chance of success for such offenders was to have a longer period of detention, in order that time might be given for the formation of better habits, and moral influences be brought to bear upon them. Of course, there would be difficulty about a considerable term of imprisonment, inasmuch as it might give rise to a feeling or sentiment, even in the case of an habitual offender, that there was a disproportion between the offence and the punishment; but he did not think the same sentiment would operate if it were frankly recognised that these people were to be detained really for their own good, and in the hope of curing them of an evil which was disastrous to themselves as well as to society. To a sentence of a somewhat lengthened period of detention in an institution for the cure of inebriates, or in a department of the prison to be allotted specially to the treatment of such cases, there would not be the same objection. That plan had been found successful in many cases.—Lord DE RAMSEY said it was a most difficult and complicated subject, and legislation had been rendered more difficult by the determination of Parliament a few years ago to allow no compulsion whatever in the treatment of inebriates. The Act of 1879 really only passed on the distinct understanding that nothing in the shape of compulsion should be in the Bill. It was therefore virtually a tentative measure, and to a certain extent it had not fulfilled the wishes of those who brought it in. The noble and learned lord had given some eloquent statistics about repeated convictions. The Act of 1879 gave no power to increase the penalties for continued offences under that Act. The great difficulty of the matter was that the inebriate voluntarily went to the home in one case, or was committed to it in another, and when there was taken away from his or her usual employment, and then, having been detained for a short time—at all events, a period not exceeding twelve months—was turned out probably without employment of any sort, or any sort of supervision. He agreed that the inquiry might do good. As lately as 1888 the Inebriates Act was passed, and it was interesting to know, on the authority of Mr. Hartland, that the new Act was working more smoothly than the old one did, and there was reason to believe that when it became more generally known and appreciated many would avail themselves of the advantages it afforded. With regard to the motion, he had to say that there was no objection whatever to the inquiry.—The motion was agreed to.

HOUSE OF COMMONS.—Thursday, June 4th.

Whipping of Juvenile Offenders.—In reply to Mr. SHIRESS WILL, the LORD ADVOCATE said he agreed with his predecessors in thinking that whipping might be inflicted on offenders in Scotland between the ages of 14 and 16, although not necessarily for all or every offence.

Sanitary Condition of British West African Colonies.—Baron H. DE WORMS, in reply to Mr. SUMMERS, said the Secretary of State was well aware that the sanitary conditions of many of the towns and stations in the British West African colonies are not by any means all that could be desired. Measures for their improvement were constantly being carried out, but they were limited by the amount of funds at the disposal of the

Colonial Governments, by the difficulties of supervision caused by the climate, and by the opposition frequently manifested by the natives themselves to sanitary improvements. Much, however, had been done.

Wednesday, June 10th.

Mr. E. Robertson obtained leave to introduce a Bill to amend the Local Government (Scotland) Act, 1889, and it was read a first time.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Lecturer in Midwifery.—W. S. A. Griffith, M.D., Downing College, Assistant Obstetric Physician at St. Bartholomew's Hospital, has been appointed to the University Lectureship in Midwifery, vacant by the resignation of Dr. Ingle. Dr. Griffith announces a course of lectures for the Long Vacation and Michaelmas Term.

Diploma in Public Health.—Candidates for this diploma are requested to send their names and certificates to the Registrary on or before September 28th. The examination begins on October 6th.

Long Vacation Lectures.—Twenty-three courses of lectures and practical classes in the subjects of the examination for medical and surgical degrees are announced for the Long Vacation. They begin on July 6th and extend to August 24th.

British Medical Association.—A joint meeting of the Eastern Counties and South Midland Branches of the Association will take place in Cambridge on June 18th and 19th, under the presidency of Dr. Hill, Master of Downing College. The University has placed the new Anatomical School and adjoining laboratories at the disposal of the meeting.

Degrees.—At the Congregation on June 4th the following degrees were conferred: *M.D.*: Frank Frederick Schacht, M.A., Trinity. *M.B.* and *B.C.*: C. H. Cayley, B.A., Pembroke (thesis, Tuberculous Meningitis).

UNIVERSITY OF ABERDEEN.

Medical Staff Corps—Marching Column.—On Monday forenoon the Ambulance Corps completed a four days' march to the country. The column was under the command of Surgeon Alex. Macgregor, M.D., and the other officers were Surgeon Scott-Riddell, Quartermaster M. D. Lessert, and Chaplain Rev. Mr. Smith. The column was furnished with everything necessary for their use in field service, such as litters, pack transport, ambulance waggon, etc., and there was a convoy train with provisions, tents, baggage, and kitchen. This being the only fully equipped volunteer corps in the North, more than ordinary attention is attracted by their occasional outings. Their fine military appearance was noted with evident appreciation by the crowd of spectators who watched them leave the city. The ultimate destination was Aboyne, the seat of the Lord Rector, the Marquis of Huntly, and the march was completed in three stages. The men were in high spirits, and their behaviour and marching was throughout most satisfactory. Military authorities assert that this is by far the best means of training, and the officers are to be congratulated on their admirable arrangements and the splendid condition of the corps, which, though by far the youngest, is certainly the most vigorous in local volunteering.

UNIVERSITY OF GLASGOW.

For the final examinations in Medicine at Glasgow University there are 152 candidates. The written examinations will be conducted on July 6th, 7th, and 8th, while the clinical examinations begin on June 15th and last till July 8th; and the oral portion of the examinations begins on the July 16th, and last till the 24th. The results will be announced on July 25th, and the graduation takes place at the end of the month.

BRISTOL MEDICAL SCHOOL.

Practical Instruction for Public Health Diplomas.—Dr. E. Markham Skerritt (Dean of the Faculty of the Bristol Medical School) writes: In the leader on this subject in the British Medical Journal of June 6th you suggest that "it would be interesting to know how far the new system of pupilage has been accepted by medical officers of health generally and by their sanitary authorities." I am able to inform you that the Faculty of the Bristol Medical School have just completed the arrangements for a post-graduate course of instruction in hygiene to meet the requirements of the General Medical Council for the diploma in Public Health. The course consists of the following sections: (1) Systematic lectures on hygiene; (2) lectures and demonstrations on sanitary appliances, on public health legislation, and on the powers and duties of sanitary authorities and their officers; (3) a laboratory course of lectures and demonstrations on hygienic chemistry and physics, and on bacteriology; (4) practical outdoor instruction under the medical officer of health for the city and county of Bristol, who has arranged with the Sanitary Committee of the Town Council for the admission of the students of this course to the practical sanitary work of the city in the capacity of pupil-assistants. In this department facilities will be afforded for the study of the diseases of the lower animals bearing upon public health.

Royal College of Surgeons of England.—The following gentlemen, having passed the necessary examinations, and having conformed to the by-laws and regulations, were, at an ordinary meeting of the Council on Thursday, June 11th, admitted Fellows of the College:

Name.	Qualification.	Residence.	Date of Membership.
Pronger, C. E.	L.R.C.P.Lond.	1, Barkston Mansions, South Kensington	Jan. 27, 1876.
Morley, E. J.	L.R.C.P.Lond.	8, The Terrace, Dockyard, Chatham	Jan. 21, 1879.
Nance, H. C.	L.R.C.P.Lond.	City Hospital, Norwich	May 18, 1880.
Turton, J.	L.S.A.	73, Preston Road, Brighton	July 29, 1880.
Wallis, F. C.	M.B.Cantab.	18, St. James Street, W.	Jan. 25, 1883.
Hughes, A. W.	L.R.C.P.Lond.	Woodside, Musselburgh, N.B.	July 23, 1885.
Rayner, H. E.	L.R.C.P.Lond.	103, Sutherland Avenue, Maida Vale	Oct. 23, 1885.
Herbert, H.	L.R.C.P.Lond.	Bombay Army	April 19, 1886.
Stocks, W. P.	L.S.A.	24, The Crescent, Salford	Nov. 10, 1887.
Heaton, G.	L.R.C.P.Lond.	33, Temple Row, Birmingham	Feb. 9, 1888.
Lucas, A.	L.R.C.P.Lond.	39, Lansdowne Road, Bedford	Feb, 9, 1888.
Teichelmann, E.	L.K.Q.C.P.I.	The Workhouse, Springhill, Birmingham	Feb. 9, 1888.
Roberts, J. L.	L.R.C.P.Lond.	The Asylum, Colchester	May 10, 1888.
Housman, B. W.	L.R.C.P.Lond.	Taunton and Somerset Hospital, Taunton	Aug. 2, 1888.
Campbell, J.	M.D., R.U.Ire.	5, Wellington Park Terrace, Belfast	Nov. 8, 1888.
Macgregor, J. J.	M.B.Lond.	Royal Orthopædic Hospital, W.	May 9, 1889.
Cobbett, L.	L.R.C.P.Lond.	Firfield, Weybridge	Feb. 13, 1890.
Blacker, G. F.	L.R.C.P.Lond.	97, Shooters Hill Road, Blackheath	July 28, 1890.
Johnstone, J.	M.B.Aberd.	Norman Road, Rusholme, Manchester	July 28, 1890.
Kellock, T. H.	L.R.C.P.Lond.	61, Lambeth Palace Rd.	Feb. 12, 1891.
Ross, D. McC.	—	54, Upper Berkeley St., W.	Not a Member.
Dyall, T. J.	M.B.Lond.	452, Hackney Road, N.E.	Not a Member.

Seven other candidates passed the examinations, but not yet having attained the legal age (25 years), will receive their diplomas at future meetings of the Council. Thirteen candidates were referred.

The following gentleman having passed the necessary examinations, and having conformed to the by-laws and regulations, was, at the same meeting, admitted a Member:

Bates, J. C., L.R.C.P.Lond., 8, Knight's Hill, West Norwood.

The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, were admitted Licentiates in Dental Surgery:

C. J. Allin, 11, College Street, St. Albans; C. F. Badcock, 108, Tottenham Court Road, W.; W. Birkett, 16, Crescent, Morecambe, Lancashire; C. J. Blaaberg, 2, Argyle Square, King's Cross; F. Breese, 3, Hillside, Crouch Hill, N.; T. A. Coysh, 47, Bramah Road, Brixton; H. A. Forsyth, 54, Claverton Street, S.W.; A. C. Gask, 53, Fairholme Road, West Kensington; R. M. C. Harrison, 245, Camden Road, N.; F. Haynes, 2, Orkney Terrace, Southsea; D. Headridge, 279, Oxford Road, Manchester; M. F. Hopson, 65, Northbrook Street, Newbury; D. R. Jones, 33, Mansell Street, Swansea; P. A. Longhurst, The Woodlands, Barnes Common; L. M. Stocken, M.R.C.S. Eng., Winchester House, Uxbridge Road, W.; F. V. Walker, 26, Hall Gate, Doncaster; G. W. Welham, 265, Brixton Road, W.

Seventeen candidates were referred to their professional studies for six months.

Erratum.—In the Pass List of the Royal College of Physicians and Surgeons of Edinburgh and Faculty of Physicians and Surgeons of Glasgow, published in the British Medical Journal of May 9th p. 1048, col. 2, line 14, for "Dodgson" read "Hodgson."

OBITUARY.

JAMES R. LANE, F.R.C.S.,

Consulting Surgeon to St. Mary's Hospital, London.

By the death of Mr. James R. Lane on June 6th, a once prominent member of the profession, whose reputation, although made at a comparatively early age, has left its mark on the records of surgery, has passed away. Mr. Lane was born in 1825, and was educated privately. In 1843 he entered the Grosvenor Place School of Medicine, an institution which at that time was held in high repute, and which was carried on under the direction of his uncle, Mr. Samuel Lane. By his diligence and zeal as a student, he shone out amongst his fellows, while at the same time he took an active part in what was then the popular form of athleticism with medical students, that is, boating, and was a prominent member of the St. George's Hospital Boat Club. He obtained in 1847 the diploma of M.R.C.S., and was appointed demonstrator of anatomy at the Grosvenor Place School; in 1850 he passed successfully the examination for the diploma of F.R.C.S., and was elected to the surgical staff of St. Mary's Hospital at its opening, and subsequently in the medical school attached to that institution held the posts successively of lecturer on anatomy, on physiology, on operative surgery, and surgery. He was also early appointed to the surgical staff of the Lock Hospital, where he obtained a thoroughly practical knowledge of venereal diseases—a subject in which he was always deeply interested, and of which he was one of the most skilful exponents of his day. In the year 1876, being invited to deliver the Harveian Lectures, he gave a series of lectures on Syphilis, subsequently published in book form, and acknowledged to be a concise and accurate summary of the contemporary knowledge of this disease. He was, with Mr. Berkeley Hill and other zealous workers, unremitting in his endeavours to ameliorate the condition of the unfortunate inmates of the Lock Hospital, and the practical outcome of their efforts was the passage of the Contagious Diseases Acts in 1864, the repeal of which in the year 1884 caused him the greatest regret. As surgeon to St. Mark's Hospital for Fistula he had a large experience in diseases of the rectum, and upon this subject he was a frequent contributor to medical literature. Upon his resignation of that post he was presented with a valuable testimonial by over 200 patients who had been under his care at that institution.

In the prime of his life, and when a career of prosperity appeared to be within his grasp, Mr. Lane was stricken with locomotor ataxy, which, though slow in its progress, was attended by agonies which at times rendered his condition almost unendurable; but, notwithstanding his bodily suffering, his mental activity remained until near the close of his life unimpaired, and until the year 1881 he continued his work as surgeon to St. Mary's Hospital. When finally compelled to sever his active connection with that institution, the esteem in which his valuable services were held was demonstrated by the presentation to him by a large number of his old pupils of a tangible proof of their affection, in the form of a massive silver épergne, together with an illuminated address.

Mr. Lane was one who, notwithstanding his sufferings and the disappointment occasioned by the enforced curtailment from ill-health of his private practice, nevertheless preserved a calm demeanour and equable temper till the close of his career. His lectures were marked by clearness and simplicity, but at the same time he showed the great grasp he had of his subject, while as a speaker he carried conviction by his earnestness. What he wrote was well considered and clearly expressed, and he had a profound objection to writing for writing's sake, an objection which led him to keep his literary labours within small limits—and, judging from his contributions, this is rather a matter for regret. He was a skilful diagnostician and a thoroughly sound surgeon, whilst his manipulative skill was remarkable; as an operator he was indeed possessed of extraordinary dexterity, especially shown in operations such as that for vesico-vaginal fistulæ.

His name will long be cherished and held in respect by his old colleagues and pupils at St. Mary's Hospital, to whom he endeared himself by his straightforwardness, his kindly demeanour, and singleness of purpose.

JOHN TIBBITS, M.D.St.And., M.R.C.S.Eng., L.S.A.

The death of Dr. Tibbits, on May 24th, at his residence, Warwick, has caused a wide-spread feeling of regret among the inhabitants of the borough, to whom, during a long and busy life, he had much endeared himself. Dr. Tibbits was born on March 29th 1826, and was consequently in his 65th year. His family had been long settled in Warwick, his grandfather being town clerk from 1801 to 1827, when he was elected mayor.

Dr. Tibbits was a King's schoolboy, receiving his early education under the Rev. George Innes. He received his medical training at St. Bartholomew's Hospital and St. Andrews. He took the degree of M.D. at St. Andrews in 1853, and qualified M.R.C.S.Eng. and L.S.A. in the same year. He was apprenticed to Dr. Rice, of Stratford-on-Avon, and afterwards practised for a time in the black country in association with Dr Moore, of Halesowen. Dr. Tibbits commenced his professional career in his native town with the appointment of medical officer to the Warwick Union, an office he held for about eight years. He took an energetic interest in local affairs and institutions. He entered the town council in 1864, and was four times elected mayor of the borough.

He was President of the Birmingham and Midland Counties Branch of the British Medical Association in 1877-8. Dr. Tibbits took an active part in the work of several of the meetings of the British Medical Association, and will be remembered by many for his courtesy and geniality on the occasion of the meeting of the Association at Birmingham in 1872 and 1890, and at Worcester in 1882.

He held the appointment of visiting medical officer to the private Lunatic Asylums of the county since 1883, and was a member of the Mid-Warwickshire Sanitary Authority. In 1879 he was sworn in as one of the borough magistrates. Dr. Tibbits was actively associated with the Volunteer movement, and was Surgeon-Major to the Warwick Company from 1873 to 1884. In the discharge of the duties of his varied offices Dr. Tibbits never failed to secure the goodwill and esteem of all with whom he was brought into contact. He leaves a wife and ten children. His funeral was largely attended by representatives of official bodies who desired to pay this last mark of respect to his memory.

WILLIAM HAINING, M.D., L.R.C.S.Edin.

Dr. William Haining, whose death occurred on May 12th at his residence in Chester, was born some forty-seven years ago in the district of Annan, Dumfriesshire. He received his early education at Annan Academy, a school famous for its association with the early days of Thomas Carlyle. He passed on to the University of Edinburgh, where he graduated M.D. in 1868, and L.R.C.S. in 1869. In the same year he went to Chester as house-surgeon to the General Infirmary, and five years later he commenced general practice in the city. Dr. Haining was a man of considerable culture, a good linguist, with a good deal of literary ability. He was a member of the General Council of the University of Edinburgh; Surgeon-Major of the 1st Cheshire and Carnarvon Artillery Volunteers; Honorary Medical Officer Chester City Mission and Female Home, and Public Vaccinator for the North-East District of the Union. He was a warm supporter of the Chester Caledonian Association, and was the second president of that society. Dr. Haining leaves a wife and family. His death has caused a feeling of great regret among his numerous friends, many of whom attended his funeral.

SAMUEL CROMPTON, M.D.St.And.

The death is announced of Dr. Samuel Crompton at his residence, Cranleigh, Surrey. The deceased, the grandson of Crompton, the inventor of the spinning mule, was born at Berry Fold House, Over Darwen, on March 1st, 1817. After receiving a liberal education, he was apprenticed at an early age to his uncle, Mr. Samuel Barton, who enjoyed considerable reputation as an ophthalmic surgeon in Manchester. He received his medical education partly at the Manchester School of Medicine in Pine Street, and partly at St. Bartholomew's Hospital. He became an M.R.C.S.Eng., and later, M.D.St.Andrews. Nearly fifty years ago he commenced practice in Manchester; he became surgeon to Henshaw's Blind

Asylum, Old Trafford. In 1849 he published a treatise entitled *Results of an Investigation into the Causes of Blindness, with Practical Suggestions for the Preservation of the Eyesight.*

Dr. Crompton was an expert photographer, a *connoisseur*, and a bibliophile of wide tastes. In November, 1881, on the occasion of his leaving Manchester, a complimentary dinner was given to him, which was followed by the presentation of an address in which reference was particularly made to the interest, professional and otherwise, which for a number of years he had taken in local charities, and especially those for the relief of the blind.

INDIA AND THE COLONIES.

INDIA.

CHOLERA AT ALLAHABAD. — We regret to hear that an outbreak of cholera of a most virulent type had attacked the troops at Allahabad a couple of days before the mail left. It appears that for some weeks cholera has been prevalent in the adjacent district of Pertabgurh, the deaths amounting to nearly 200 a day. The disease spread to the Allahabad District, and the population was being carried off at the rate of from 100 to 150 a day. About May 10th a few cases occurred among the men of the 2nd Battalion Native Infantry; 1 man died and 2 recovered. The European troops remained free up to the morning of the 18th, and as Allahabad City and regimental bazaars were also free, it was hoped the troops would escape; but every possible precaution was taken by the military authorities, on the advice of the medical officers. Without any warning in the shape of premonitory cases of diarrhœa, the men of the South Wales Borderers (24th) were suddenly attacked on the morning of May 18th, and within forty-eight hours we hear there were no fewer than 40 cases, with 16 fatal ones, several others being considered hopeless. The company first attacked were at once sent under canvas outside the barracks, and arrangements were made to camp them forty miles out on the East Indian Railway line. This was done next day, and the following day the remainder of the regiment was sent out to the same place. The Royal Artillery, who had remained free, were sent into camp as a precautionary measure, this being considered necessary by the administrative medical officer. We learn that medical aid, in the shape of medical officers and apothecaries, had to be obtained from the nearest districts, and in the event of the disease spreading there will be the utmost difficulty in obtaining sufficient assistance. The Black Mountain Expedition and the Manipur business has already drained all the available medical officers and subordinates from the different stations, and in some districts there is not at present a single medical officer or apothecary on leave. What would happen should war break out on an extended scale on the Afghan frontier—and this might be the case at any moment—we cannot imagine. The hospital assistant class is so reduced that barely half the authorised numbers are available, and these men have been kept so constantly on active service in Burmah, Chin-Lushai, Manipur, the Black Mountain, etc., that many of them have died, while a large proportion are on sick leave. The Government of India seems systematically to starve the medical service, and not only keeps it undermanned, but treats the officers with parsimony and neglect. Whether this is a wise policy or not the next big war on the frontier will prove only too sadly, we fear.

HOSPITAL AND DISPENSARY MANAGEMENT.

HOSPITAL FOR INFECTIOUS DISEASES AT CARDIFF.

THE county borough of Cardiff is about to undertake the erection of an infectious hospital from plans prepared by the borough engineer, Mr. W. Harpure, based upon the requirements of Dr. Walford, medical officer of health. The site, which extends to twelve acres, is within a mile and a half of the centre of the town, and within a convenient distance from the docks. The hospital will be built on the pavilion system in single stories; each pavilion will contain twenty-two beds, and there will be one isolation pavilion, containing six beds, for undeveloped cases. Each pavilion will contain two wards for males and females respectively, with ten beds in each ward, and each ward will have a small ward of one bed for special cases. Opening off each ward through a cross-ventilated lobby will be the ordinary sanitary conveniences. The nurses' room will be placed between the wards with inspection windows looking into all of them. On the south side of each pavilion is a covered balcony, and the wards will be heated by a central stove with steam coils at the sides. The isolation pavilion consists of a male and a female side, each consisting of two wards, one containing a single bed, and the other two beds, with nurse's bedroom between. Each portion has its own sanitary arrangements and movable baths. All the pavilions are connected with the administrative block by means of a covered footway. This block contains rooms for the medical officer, dispensary, rooms for visitors, matron's room, dining rooms, kitchens, etc., on the ground floor, and nineteen bedrooms on the first floor. The laundry will be provided with the most approved machinery, and there will also be special buildings for disinfection, stables, and mortuary. The plans are so arranged as to permit of future extension to accommodate five more main pavilions and one more isolation block. The administrative blocks will be constructed of sufficient size to accommodate the whole scheme when complete.

WOMEN AND CHILDREN'S HOSPITAL, CORK.

DURING the past year 358 patients were treated in the wards, while 1,320 attended the extern department. In 1889 the work of the hospital was much impeded by an epidemic of scarlet fever, and in 1890-91 the entire work of the institution was brought nearly to a standstill owing to this disease, but it has now been completely stamped out. The introduction of infectious disease being inevitable in a children's hospital, the staff urge that a small ward, to be used for the immediate isolation of any suspected infectious case, should be provided. A small isolation ward, entirely disconnected from the main building would be sufficient to meet all requirements, and by immediately transferring any suspicious case of fever to this ward, the tendency of infectious disease to spread would be greatly diminished.

BELFAST DISTRICT LUNATIC ASYLUM.

THE sixty-first annual report regarding this institution has just been issued by the resident medical superintendent, Dr. Alexander Merrick. On December 31st, 1889, the numbers in the asylum were 377 males and 276 females, total, 653. The admissions during 1890 were, males, 115; females, 85; total 200. Of these, 155 were cases of first attack, and 45 have been previously under treatment in asylums. Amongst the admissions, 13 cases are recorded as actively suicidal, and 32 cases as being complicated with physical disease. Of these, 4 cases were in an exhausted condition from voluntary abstinence which proved fatal in one case eight hours after admission. The discharges for the year numbered 161, being 83 males, and 78 females. Of these, 47 males and 43 females were discharged recovered, giving a percentage of 45.7 on the number admitted, and 10.2 on the total number under treatment. Sixty-four cases were discharged as improved; 4 of these were re-admitted, having relapsed; 3 cases, being quiet and harmless, though not improved, were taken home by their friends. Thirty-nine cases died during the year, being 4.5 per cent. on the total number under treatment. Of these, 16 died in the auxiliary asylum at Ballymena, from debility and chronic brain disease, and 23 died in the asylum: 7 from nervous exhaustion and debility, 4 maniacal exhaustion, 3 heart disease, 6 lung disease, 2 senile debility, and 1 from apoplexy. There was no infectious disease during the year, except 63 cases of influenza, all of whom made good recoveries. The question of providing increased accommodation for the insane poor of the district had been repeatedly before the Board of the asylum; as the result of communications entered into with the Belfast City Council and the grand jury of Co. Antrim, it has been decided to erect a separate asylum for the county district, reserving the present asylum for the insane poor of the City of Belfast. An estate of 100 acres has been secured for this purpose at Holywell, near Antrim. The gross outlay was £22 11s. 8½d. for each patient, for the year.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

SMALL-POX IN LONDON.

The Local Government Board have issued a circular to the vestries and district boards of the metropolis, calling attention to the fact that for some time past isolated cases of small-pox have been occurring in different parts of London, and urging the importance of special vigilance in this matter. The medical officers of health are requested, in all cases which may be notified to them or which may come to their knowledge, immediately to visit the houses where the disease has broken out, and at the earliest possible moment to take such measures as may be necessary to secure as far as practicable the isolation of the patients, the vaccination of any persons who may have been exposed to infection, and the disinfection of the premises, and any further action which the circumstances will admit of for the purpose of checking the extension of the disease.

INSANITARY HOUSES.

An interesting case has recently been decided in the Sheriffs' Court at Glasgow. A tenant sued his landlord for damages because of the insanitary condition of his house under the following circumstances. Nine months after the tenant had assumed occupancy his daughter became ill of typhoid fever, and died. Two days later complaint of bad smells in the house was made. The landlord communicated with the sanitary inspector, who, after examination, declared the house unfit for human habitation. But the landlord did not communicate this to the tenant, who, some three weeks later, had the house examined, and obtained a report of a very unfavourable nature. The landlord immediately after began operations to put the drains in proper order. The tenant, meanwhile, removed his family, and raised an action for £250 in name of damages and as solatium for the loss of his daughter. The Sheriffs decided that no claim for solatium could be sustained, since complaint was not made previous to the daughter's illness, and the house had been taken without guarantee that the drains were in good order. They also held, however, that the tenant was entitled to claim damages for any expense of removal, and any expense he had been put to in consequence of living elsewhere. It appears, therefore, that, provided a landlord attends to any complaint of bad drainage when it is made, a tenant has no claim against him for loss he may suffer through faulty drains, unless he has obtained a guarantee when taking the house that the drains are in good condition, and it can be shown that the fault has not arisen after the guarantee was given. Tenants would, therefore, do well to protect themselves by insisting on such a guarantee when agreeing to take a house.

THE IRISH CENSUS.

On April 5th last the population of Ireland numbered 4,706,162 inhabitants, of whom 2,317,076 were males and 2,389,086 females. This shows a decrease as contrasted with the previous census of 468,674, or 9.1 per cent. The decrease in the province of Munster was highest, reaching 162,121 persons, or 12.2 per cent.; in Connaught, 98,084, or 11.9 per cent.; in Ulster, 125,198, or 7.2 per cent.; and in Leinster, 83,271, or 6.5 per cent. In 1841 the population was over 8 millions, and in 1861 a little over five and a-half millions. Two cities show an increase, namely, Dublin and Belfast, that of the former shows an increase of 5,614, or 2.1 per cent.; while in Belfast the number shows an increase of 64,933, or 31.2 per cent. Dublin county and the county Armagh also show an increase, but Cork city has a decrease of 5,054, Limerick of 1,490, Waterford of 764. The Roman Catholics show a decrease of 411,035, or 10.4 per cent.; members of the Church of Ireland a decrease of 39,344 or 6.2 per cent.; Presbyterians 24,047, or 5.1 per cent.; while the Methodists have increased by 6,396, or 13.1 per cent.; and Jews have increased 280.9 per cent. There were 1,702 persons who refused to state that they belonged to any religious denomination. The total number of families returned is 940,092, being a decrease during the decade of 54,982, or 5.5 per cent. The number of families this year represents an average of 5 persons per family, in 1881 the average was 5.2.

TRANSPORT OF INFECTIOUS CASES IN VIENNA.

The chief magistrate of Vienna having had his attention called to the frequency with which cabs, omnibuses, and other public vehicles are used for the conveyance of persons suffering from infectious diseases, has issued a circular to medical practitioners reminding them that this is a distinct violation of the law. He points out that special ambulance waggons in which patients can be carried either lying down or in a sitting position are provided by the district authorities, and may always be obtained at the ambulance depôt of such district. The existing regulations will, he adds, be strictly enforced, and any contravention thereof will be severely punished.

IMPROVEMENTS IN STEAM DISINFECTING APPARATUS.

Now that disinfection has been placed upon a scientific basis, the demand for it increases rapidly every year. The Leeds Corporation, acting upon the advice of their medical officer of health, have recently found it necessary to procure a second steam disinfecting apparatus, and now possess examples of the two principal forms of high pressure apparatus in use in this country—those of Washington Lyons and Goddard, Massey, and Warner. The new disinfector is of the latter type, and Dr. Cameron and the makers have improved upon earlier models by furnishing additional means of drying the articles disinfected. An old hot air chamber will be available for this purpose, but provision is also made for passing hot dry air through the steam chamber itself by means of a tall cylinder containing a long coil of steam piping. This will be found useful in dealing with beds or other exceptionally bulky articles, but for ordinary articles, such as clothes or even blankets, special provision for drying is found in practice to be scarcely necessary whatever form of steam apparatus is used.

Northern Anti-Vaccinators. — The Parochial Board of Elgin, on June 2nd, remitted to the Finance Committee, with full powers, forty-eight cases of persons who had failed to have their children vaccinated.

THE EARL OF JERSEY *v.* THE UXBRIDGE RURAL SANITARY AUTHORITY.

In 1885 the Earl of Jersey obtained judgment, with costs, against the Uxbridge Rural Sanitary Authority upon a matter then in dispute, but the costs were, for some unexplained reason, not taxed until 1890. The taxed costs, amounting to £600, being still unpaid, an attempt was made by the plaintiff in August, 1890, to attach certain sums held by the defendants, consisting partly of the proceeds of a general rate recently levied by them, partly of the unexpended balance of a loan raised for the purpose of sewage works in the parish of Norwood; but it was ruled by Mr. Justice Vaughan Williams that neither of these sums were legally available for the payment of a debt contracted by the sanitary authority in 1885. Meanwhile in 1888 the plaintiff had sold to the defendants land for the purpose of the sewage works in question, and he next sought to seize this land in satisfaction of the old debt. The sanitary authority contended that as the whole costs of the works were special expenses, chargeable solely upon the districts served, the land was merely held by them in trust for those districts. A further complication arose from the fact that in March last the parish of Norwood became an independent urban sanitary authority. The case in its latest stage was heard by Mr. Justice Stirling, who gave his decision against the plaintiff, although expressing regret that he should encounter so many difficulties in obtaining payment of what was justly due to him. A contrary ruling would apparently have involved injustice to Norwood, and in any circumstances the seizure of public works is a precedent to be deprecated, but the whole case scarcely reflects credit upon the administration of the victorious rural sanitary authority.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, 6,698 births and 5,102 deaths were registered during the week ending Saturday, June 6th. The annual rate of mortality in these towns, which had been 30.5 and 30.9 per 1,000 in the preceding two weeks, declined again to 28.3 during the week under notice. The rates in the several towns ranged from 16.5 in Norwich, 17.4 in Bristol, 17.8 in Hull, and 18.0 in Brighton to 38.2 in Birmingham, 39.4 in Salford, 39.7 in Manchester, and 48.5 in Blackburn. The high rates in the last-mentioned towns were due to the fatal prevalence of influenza. In the twenty-seven provincial towns the mean death-rate was 29.4 per 1,000, and exceeded by 2.4 the rate recorded in London, which was 27.0 per 1,000. The 5,102 deaths registered during the week under notice in the twenty-eight towns included 359 which were referred to the principal zymotic diseases, against numbers declining from 461 to 357 in the preceding five weeks; of these, 152 resulted

from whooping-cough, 85 from measles, 38 from diarrhœa, 35 from diphtheria, 25 from "fever" (principally enteric), 23 from scarlet fever, and one from small-pox. These 359 deaths were equal to an annual rate of 2.0 per 1,000; in London the zymotic rate was 2.0, and corresponded with the mean rate in the twenty-seven provincial towns. No deaths resulted from any of the zymotic diseases in Wolverhampton or Derby; in the other towns the rates ranged from 0.4 in Sunderland and 0.5 in Norwich to 2.9 in Preston, 3.7 in Manchester, 3.8 in Huddersfield, and 4.0 in Liverpool. Measles caused the highest proportional fatality in Portsmouth and Bristol; scarlet fever in Huddersfield and Halifax; and whooping-cough in Oldham, Preston, Huddersfield, Manchester, and Liverpool. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. Of the 35 deaths from diphtheria in these towns, 24 occurred in London and 3 in Sheffield. A fatal case of small-pox was recorded in London, but not one in any of the twenty-seven provincial towns; 16 small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday, June 6th. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on the same date was 885, against 927 and 916 at the end of the preceding two weeks; 66 new cases were admitted during the week, against 66 and 88 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 6.8 per 1,000, and was more than double the average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, June 6th, 919 births and 651 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined in the preceding three weeks from 24.1 to 23.3 per 1,000, rose again to 25.3 during the week under notice, but was 3.0 per 1,000 below the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Leith and Perth, and the highest in Greenock and Paisley. The 651 deaths registered in these towns included 72 which were referred to the principal zymotic diseases, equal to an annual rate of 2.8 per 1,000, which exceeded by 0.8 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow, Dundee, and Paisley. The 304 deaths registered in Glasgow included 18 from measles, 13 from whooping-cough, and 2 from diphtheria. Five fatal cases of measles were recorded in Paisley, and 5 of whooping-cough in Dundee. The death-rate from diseases of the respiratory organs in these Scotch towns was equal to 5.5 per 1,000, against 6.8 in London.

HEALTH OF IRISH TOWNS.

In sixteen of the principal town districts of Ireland the deaths registered during the week ending Saturday, May 23rd, were equal to an annual rate of 21.6 per 1,000. The lowest rates were recorded in Wexford and Armagh, and the highest in Waterford and Galway. The death-rate from the principal zymotic diseases averaged 1.2 per 1,000. The 141 deaths registered in Dublin were equal to an annual rate of 20.8 per 1,000 (against 26.4 and 25.5 in the preceding two weeks), the rate for the same period being 27.5 in London and 23.3 in Edinburgh. The 141 deaths in Dublin included 4 which were referred to the principal zymotic diseases (equal to an annual rate of 0.6 per 1,000), of which 2 resulted from typhoid fever, and 2 from whooping-cough.

In sixteen of the principal town districts of Ireland the deaths registered during the week ending Saturday, May 30th, were equal to an annual rate of 21.2 per 1,000. The lowest rates were recorded in Kilkenny and Galway, and the highest in Belfast and Londonderry. The death-rate from the principal zymotic diseases averaged 0.8 per 1,000. The 127 deaths registered in Dublin were equal to an annual rate of 18.8 per 1,000, against 25.5 and 20.8 in the preceding two weeks, the rate for the same period being 28.9 in London and 19.1 in Edinburgh. The 127 deaths in Dublin included 1 which was referred to diarrhœa, but not one to any other of the principal zymotic diseases.

MEDICAL NEWS.

The annual meeting of Swiss alienists will be held at Münsterlingen and Kreuzlingen on June 18th and 19th.

The *conversazione* given by the President, Council, and teaching staff of University College, London, will be held this year on June 30th.

The prizes of the London School of Medicine for Women will be distributed by Lady Reay, C.I., on June 23rd, at 4.30 P.M.

Dr. F. C. Andrew, of Bolton, died from influenza on June 7th, after three days' illness. He was 28 years of age, and had only been in practice in Bolton for one year.

Dr. Henry Pentland, medical officer of Rynn Dispensary, has been presented with an address, accompanied by a writing table and purse of sovereigns as marks of the high esteem in which he is held by all classes of Rynn and surrounding district.

By a recent ordinance of the Bavarian Government patients in necessitous circumstances are granted a reduction of railway fare in going to or from hospitals or other public medical institutions. They are henceforth to be charged at the same rate as the special third-class fares allowed to soldiers.

A movement is on foot for the establishment of a Society of Hygiene in Havana. There can be no doubt that such a society will have ample scope for its energies in the capital of Cuba.

The Russian Government has presented Miss Fanny Fowke with a bronze medal for her paper on Industrial Schools in connection with Boarding-out, sent to the Fourth International Congress on Education, held recently in St. Petersburg.

Dr. H. Welch, the medical officer of health for the borough of Blackpool, has resigned his appointment, owing to continued ill health, and the Town Council have decided to appoint a successor, at a salary of £300 per annum, the successful applicant to devote the whole of his time to his duties.

Trinity College, Dublin, Tercentenary Dinner.—The graduates of the University of Dublin, resident in England, will dine together at the Middle Temple on Wednesday, June 17th, at 7 P.M., under the presidency of Lord Ashbourne. This is the tercentenary anniversary of the foundation of the University. Dr. Phineas Abraham, 2, Henrietta Street, and Mr. J. Gordon McCullagh, Goldsmith Building, Temple, are the Honorary Secretaries.

Nursing School at Kensington Infirmary.—A scheme for the training of probationers at the Kensington Infirmary has been accepted by the Local Government Board, which provides that at the expiration of three years each probationer, upon passing the prescribed examinations, will receive a certificate of nursing. They will be instructed in theoretical and practical nursing by the medical staff. It has been found that any period of training short of three years is unsatisfactory.

The Queen's Hospital, Birmingham, has decided to start an externe nursing department, a course which it is believed will be of advantage to the hospital and to the staff and other practitioners in Birmingham. One of the difficulties of provincial hospitals is to retain the bulk of their nurses, whose training is completed but for whom wards cannot be provided, and their employment as private nurses will certainly assist in this desirable purpose.

Medico-Psychological Association.—The next examination in England for the certificate in Psychological Medicine will be held at Bethlem Hospital, London, on July 16th, at 11 o'clock in the morning. The examination for the Gaskell Prize will take place on the following day at the same place. Examinations will be held in Scotland on July 14th at the Morningside Asylum, Edinburgh, on July 16th, at Gartnavel Asylum, Glasgow, and on July 25th at the Royal Asylum, Aberdeen. Candidates are requested to give fourteen days' notice to Dr. Urquhart, Murray's Asylum, Perth, if they wish to be examined in Scotland, and to Dr. Fletcher Beach, Darenth Asylum, Dartford, if they wish to be examined in England.

Liverpool Royal Infirmary: "Old Residents' Dinner."—The former house-surgeons and house-physicians of the "Old Royal Infirmary," Liverpool, dined together recently. This is the first occasion on which an attempt has been made to gather together those gentlemen who have resided at various times in the Old Infirmary, the difficulty being that they are scattered all over the country and colonies, and are settled in practice. The record of house-surgeons dates from 1833, and from that date to 1889 there have been 122 residents, of whom the oldest now alive is Dr. Nottingham, of Whitchurch, who held office from 1837 to 1840, and who sent a letter regretting his absence. Forty-six sat down to dinner, the senior "old resident" present being Dr. A. T. H. Waters, who held office from 1854 to 1856, and at the present time is honorary consulting physician to the infirmary. Mr. Reginald Harrison was in the chair, and proposed the toast of "The Royal Infirmary," to which Dr. Glynn responded. The toast of "The Old Residents" was given by Mr. Mitchell Banks in very happy terms, and replied to by Dr. Waters, who in the course of his remarks gave an interesting account of his first appointment to the infirmary and of the state of the institution at that time. Cordial votes of thanks were given to Mr. Harrison for presiding, and to Dr. Gemmell for inaugurating a meeting which had brought so many old friends together.

MEDICAL DEFENCE UNION.—A meeting of the East Anglian and Midland Division will be held at the New Theatre of Anatomy and Physiology, Cambridge, on Thursday, June 18th, at 2.30 P.M. Agenda: The President, Dr. E. Barnes, will deliver an address; the Secretary's report for 1890-91 will be, read and officers for the ensuing year elected; Dr. D. B. Balding, Royston, will propose, "That this meeting recommends that active measures be taken to complete the organisation of the division, and increase the number of members;" Mr. C. E. Abbott, Braintree, will propose, "That members of the division be requested in the event of any legal difficulty arising, to forward at once a statement of the facts either to the divisional president, a county president, or the divisional secretary, as most convenient to them, and are advised to take no steps personally, unless they have been advised thereon."

MEDICAL VACANCIES.

The following Vacancies are announced:

ARMAGH UNION.—Medical Officer for Workhouse. Salary, £100 per annum, and £20 yearly as Medical Superintendent Officer of Health. Election on June 16th.

BEDFORD GENERAL INFIRMARY AND FEVER HOSPITAL.—Resident Surgeon, double qualifications. Salary, £100 per annum, with apartments, board and washing. Applications to the Secretary, by July 1st.

BIRMINGHAM DENTAL HOSPITAL.—Honorary Dental Surgeon. Must be registered under the Dentists Act, and hold diploma in Dental Surgery. Applications to W. A. Addinsell, Honorary Secretary, 112, Edmund Street, Birmingham, by June 13th.

BRISTOL CITY LUNATIC ASYLUM.—Second Assistant Medical Officer; double qualifications; unmarried. Salary, £120 per annum, with furnished apartments, board, and washing. Applications to the Chairman of the Visiting Committee, Council House, Bristol, by June 13th.

COUNTY OF ABERDEEN.—Medical Officer for the County, whose services may also be made available as Chief Medical Officer of the eight Districts of the County; must hold no other appointment; must reside in Aberdeen. Salary as County Medical Officer, £100 per annum, and a further £100 if appointed Medical Officer for the eight Districts of the County. Applications (thirty in number and thirty copies of testimonials) to the County Clerk, County Buildings, Aberdeen, by June 15th.

DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House-Surgeon. Appointment for six months; board and washing provided, and £10 bonus. Applications to the House-Surgeon, by June 14th.

DORSET COUNTY ASYLUM.—Assistant Medical Officer for the second asylum. Salary, £120 per annum, with board and furnished apartments. Applications to the Medical Superintendent by June 18th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Board and lodging provided. Applications to Samuel Whitford, Secretary, by June 25th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Assistant Physician. Applications to Samuel Whitford, Secretary, by June 25th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Residence, board and washing provided, no salary; appointment for six months. Applications to Dr. J. D. M. Coghill, House Governor, by June 27th.

GENERAL HOSPITAL, Birmingham.—Assistant Surgeon. Appointment for three years, honorarium, £100 per annum. Applications to Dr. J. D. M. Coghill, House Governor, by June 27th.

GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—House-Surgeon; double qualifications. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by June 30th.

GENERAL INFIRMARY, Leeds.—Resident Medical Officer. Salary, £100 per annum, with board, washing and lodging. Applications to Mr. E. Ward, Secretary to the Faculty, by June 27th.

GENERAL INFIRMARY, Leeds.—Resident Casualty Officer. Salary, £100 per annum, with board, washing and lodging. Applications to Mr. E. Ward, Secretary to the Faculty, by June 27th.

GUY'S HOSPITAL, S.E.—Five additional Assistant Dental Surgeons; must be L.D.S.Eng. Applications to the Dean by July 1st.

HORTON INFIRMARY, Banbury.—House-Surgeon and Dispenser. Salary, £80 per annum, with board and lodging. Applications to T. H. Davis, Honorary Secretary, 27, Marlborough Road, Banbury, by June 20th.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon, double qualifications. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman of the Committee, by June 24th.

LUNATIC HOSPITAL, The Coppice, Nottingham.—Assistant Medical Officer, unmarried, and not more than 26 years of age. Salary, £100 per annum, with board, apartments, attendance and washing. Applications to Dr. Tate, Medical Superintendent, by June 30th.

MALTON UNION.—Medical Officer of Health for the Malton Rural Sanitary Authority. Salary, £100 per annum.

MOUNTMELLICK UNION, Clonaslee Dispensary.—Medical Officer. Salary, £120 per annum and fees. Applications to Mr. R. H. Corbett, Honorary Secretary, Ballykaneen. Election will take place on June 17th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant, double qualifications. Salary, £120 per annum. Applications to the Honorary Secretary, by June 23rd.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer; unmarried. Salary, £109 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Temporary Assistant Medical Officer. Board, lodging, and washing provided. Applications to the Medical Superintendent.

NORTH WEST LONDON HOSPITAL, Kentish Town Road, N.W.—Assistant Resident Medical Officer. Applications to Alfred Craske, Secretary, by June 30th.

PARISH OF ST. LEONARD, SHOREDITCH.—Clinical Assistant for Infirmary; double qualifications. Salary, £40 per annum, with rations, furnished apartments, and washing. Applications, endorsed "Clinical Assistant," to Robert Clay, Clerk's Office, 213, Kingsland Road, N.E.

QUEEN'S COLLEGE, Birmingham.—Medical Tutor and Demonstrator of Anatomy; must devote his whole time. Applications to Professor B. C. A. Windle, Dean of the Medical Faculty, by July 4th.

QUEEN'S COLLEGE, Birmingham.—Demonstrator of Anatomy. Applications to Professor B. A. C. Windle, Dean of the Medical Faculty, by July 4th.

ROYAL FREE HOSPITAL, Gray's Inn Road.—Junior Resident Medical Officer, double qualifications; board and residence provided, no salary. Applications to C. W. Thies, Secretary, by June 22nd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician; appointment for six months. Salary at the rate of £40 per annum, with board and lodging. Applications to John Harrold, Secretary, by June 13th.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant to the House-Surgeon. Board and lodging provided. Applications to T. A. Fisher Hall, Secretary, by June 20th.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL, St. George's Circus, S.E.—Honorary Assistant Surgeon. Applications to the Secretary by June 15th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand.—Clinical Assistants. Appointments for six months. Applications, to the Secretary, by June 27th.

SUSSEX COUNTY HOSPITAL, Brighton.—Surgeon. Must be Fellow or Member of the Royal College of Surgeons of England, Edinburgh, or Ireland. Applications to Lieutenant-General E. F. Bourchier, Secretary, by June 17th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant Surgeon. Must be Fellow or Member of the Royal College of Surgeons of England, Edinburgh, or Ireland. Applications to Lieutenant-General E. F. Bourchier, Secretary, by June 17th.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. Annual fee, £30. Twenty copies of printed applications and testimonials to the Secretary of the Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by June 30th.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Assistant Physician to the Out-patients; appointment for five years. Applications to the Secretary, by June 27th.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Physician to the In-patients. Applications to the Secretary, by June 27th.

VICTORIA UNIVERSITY.—Holt Professorship of Physiology. Salary, £375 per annum, *plus* share of students' fees. Applications to the Registrar, University College, Liverpool, by June 27th.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Second House-Surgeon, unmarried. Salary, £50 per annum, with board and residence. Applications by June 18th.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Physician. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WEST LONDON HOSPITAL, Hammersmith Road.—House Surgeon. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WOLVERHAMPTON EYE INFIRMARY.—House-Surgeon. Appointment for twelve months. Honorarium of £25, with rooms, board, and washing. Application to W. Blake Burke, Secretary, by June 15th.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £40 per annum, with board and residence. Applications to C. E. Pinfold, Secretary, by June 18th.

MEDICAL APPOINTMENTS.

ABRAM, J. Hill, M.D., L.R.C.P.Lond., appointed Pathologist to the Liverpool Royal Infirmary, *vice* A. Barron, M.B.Lond., M.R.C.S.Eng., resigned.

BARLING, Gilbert, F.R.C.S.Eng., appointed Honorary Surgeon to the General Hospital, Birmingham, *vice* T. H. Bartleet, deceased.

BICKERSTETH, R. A., M.B.Lond., M.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Royal Infirmary, Liverpool.

BRABAZON, A. B., M.D.Aberd., L.R.C.S.I., appointed Senior Physician to the Royal Bath Mineral Water Hospital.

BUTT, Francis John, M.B., C.M.Edin., appointed Vaccination Officer to the North Eastern District of the Chester Union, *vice* Dr. Haining, deceased.

CHAPMAN, Charles William, M.D.Durh., M.R.C.S.Lond., appointed Honorary Physician to the Farringdon General Dispensary.

COUPLAND, Mr. W. H., appointed Assistant House-Surgeon to the North Staffordshire Infirmary and Eye Hospital, Hartshill, *vice* J. T. Gillett.

CUNNINGHAM, C. L., L.R.C.S., L.M.Edin., reappointed Medical Officer for the Port of Newhaven.

DAVIS, Arthur N., L.R.C.P., etc., Resident Medical Officer in charge of Dorset County Asylum, Forstow, appointed Medical Superintendent to the New Asylum for the Borough of Plymouth.

DAWES, G. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of the Central District of the Sheffield Union, *vice* W. Collier, resigned.

DICKINSON, George, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Warneford Hospital, Leamington Spa, *vice* Philip Hicks, M.D.

DILLON, L. G., M.D., M.Ch.Irel., appointed Medical Officer for the Dawdon District of the Easington Union.

DOYLE, Henry Martin, M.R.C.P., L.R.C.S., L.S.A.Lond., appointed Medical Superintendent of the Newcastle (New South Wales) Hospital.

ELLIS, W. McDonogh, M.D.Brux., L.R.C.P.Lond., M.R.C.S., appointed Honorary Medical Officer to the Eastern Dispensary, Bath, *vice* Mr. W. S. Walker, deceased.

EVANS, J. Durance, L.R.C.P.Edin., M.R.C.S., appointed Surgeon to the Victoria Ironworks and Collieries, Ebbw Vale.

FORD, Frank Chubb, M.R.C.S., L.R.C.P., appointed House-Physician to the City of London Hospital for Diseases of the Chest, Victoria Park.

GANGE, F. A., M.D.St. And., M.R.C.S., reappointed Medical Officer of Health for the Faversham Rural Sanitary District.

GORDON, John, M.D., M.B., C.M.Aberd., reappointed Parochial Medical Officer, St. Nicholas Parish, Aberdeen.

GRANT, Frederick, L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer to the Market Harborough Union.

HOOD, James Jarvie, M.B., and C.M.Glas., appointed Honorary Medical Officer to the Albert Memorial Hospital, Wollongong, N.S.W.

LARKHAM, E. T., M.R.C.S.Eng., L.R.C.P., appointed Assistant Medical Officer to the Infirmary of the Salford Union, *vice* E. A. Shaw.

LITTLEJOHN, H. Harvey, M.A., M.B., C.M., B.Sc., F.R.C.S.Eng., appointed Medical Officer of Health for Sheffield, *vice* Dr. Theodore Thomson, resigned.

LOTHBURY, Charles John, L.R.C.P.Lond., L.R.C.P., L.R.C.S.Edin., appointed Resident Medical Officer to the Dunstable Friendly Benefit Societies' Medical Association.

MACLEOD, C. G., M.B., C.M., appointed House-Surgeon to the Royal Westminster Ophthalmic Hospital, King William Street, W.C., *vice* J. Urquhart Black, M.B., C.M.

MARRIOTT, Charles W., M.D., M.R.C.S., appointed Physician to the Royal Berks Hospital, Reading, *vice* Dr. Banham, resigned.

MEREDITH, John, M.D., L.R.C.S.Edin., appointed Medical Officer for the First District of the Wellington (Somerset) Union.

PIGOTT, Frederick K., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the St. Chad's District of the Atcham Union, *vice* Dr. Smith, deceased.

SAUNDERSON, Robert, M.D., C.M.Glas., appointed Medical Officer to the Royal Constabulary in Edenderry, Esker, and Cloncullogue.

SCROGGIE, John George, M.B., C.M.Aberd., reappointed Medical Officer St. Nicholas Parish, Aberdeen.

SHORT, Thomas Sydney, M.B.Lond., D.P.H.Camb., M.R.C.S., L.S.A., appointed Assistant Physician to the General Hospital, Birmingham.

SMITH, George, M.B., C.M.Edin., appointed Medical Officer for the Grey's District of the Henley Union.

STAUNTON, M. C., M.B., etc., Royal University of Ireland, reappointed House-Surgeon to the Mater Misericordiæ Hospital, Dublin.

STUBB, E. C., F.R.C.S., appointed Resident Assistant Surgeon to St. Thomas's Hospital, *vice* H. B. Robinson, M.D., M.S.Lond.

TOVEY, R. N., L.R.C.P.Edin., L.F.P.S.Glas., appointed Medical Officer for the Leigh District of the Martley Union.

TWIGG, F. G., L.S.A., appointed Deputy Medical Officer for the Mexborough District of the Doncaster Union, and also Medical Officer to the Local Branch of the Railway Servants' Mutual Provident Society, Mexborough.

WILSON, Mr., appointed Medical Officer of Health for Midsomer Norton.

YATES, Peter, M.D., appointed Surgeon to the Police of the County Borough of Bolton, *vice* Dr. Eaton, resigned.

DIARY FOR NEXT WEEK.

MONDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor Reginald Harrison: On Observations on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture. Lecture I.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. R. Marcus Gunn: Diseases of the Orbit. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Dr. Voelcker: Pathological Demonstration.

THE PUBLIC HEALTH MEDICAL SOCIETY, 101, Great Russell Street, W.C., 6 P.M.—Annual Meeting.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: General Paralysis of the Insane. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: The Treatment of Lupus.

ROYAL STATISTICAL SOCIETY, Museum of Practical Geology, 28, Jermyn Street, S.W., 7.45 P.M.—Mr. Noel A. Humphreys: Results of the Recent Census and Recent Death-rates in the Largest English Towns.

WEDNESDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor Reginald Harrison: On Observations on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture. Lecture II.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Hector Mackenzie: Alcoholic Phthisis, with Clinical Cases. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Q. Silcock: Retinal Affections.

ROYAL MICROSCOPICAL SOCIETY, 8 P.M.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Mr. R. Brudenell Carter: Ocular Symptoms in Nervous Disorders. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Mr. R. Marcus Gunn: The Common Eye Diseases of Children and their Treatment. London Throat Hospital, Great Portland Street, 8 P.M.—Mr. George Stoker: Laryngeal Growths.

BRITISH GYNÆCOLOGICAL SOCIETY at Newcastle-on-Tyne, 4.30 P.M.—Discussion on Surgical Treatment of Diseased Uterine Appendages, to be opened by Mr. Rutherford Morison, F.R.C.S.; Dr. Engelman (St. Louis) will discuss the treatment in connection with mental and nervous disturbance. Public Dinner at 7.30 P.M.

FRIDAY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor Reginald Harrison: On Observations on Stone in the Bladder, Enlarged Prostate, and Urethral Stricture. Lecture III.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Professor Crookshank: Lecture: Erysipelas and Inflammation. Practical Work: Streptococci. Hospital for Consumption, Brompton, 4 P.M.—Dr Hector Mackenzie: Clinical Demonstration: Graves's Disease. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Heart and Circulatory System.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION, 11, Chandos Street, W.

BRITISH GYNÆCOLOGICAL SOCIETY at Newcastle-on-Tyne, 10 A.M.—Reading and discussion of papers: Professor Auvard (Paris): Some Points in the Treatment of Endometritis. Professor Oliver (Newcastle) and Dr. W. C. Grigg: Puerperal Septicæmia. Dr. Smyly (Dublin): Cases of Fæcal Fistula. Other papers by local and metropolitan members. 5 P.M.—Visit to Royal Infirmary; Operations.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

COWEN.—On April 8th, at Bangalore, the wife of Surgeon W. A. Cowen, Army Medical Staff, of a daughter.

THOMPSON.—On June 3rd, at 9, Dover Street, Hull, the wife of Staff-Surgeon William Thompson, H.M.S. *Audacious*, of a daughter. Stillborn

MARRIAGES.

BRADSHAW—O'HARA.—On June 2nd, at St. Mark's, Dalston, London, by the Rev. Richard Solomon, M.A., Albert Bradshaw, L.R.C.P.E., L.R.C.S.E., and L.F.P.& S.G., of Gilsland, youngest son of Surgeon-Major Bradshaw, J.P., Carrick-on-Shannon, to Amy Parker, youngest daughter of the late R. C. O'Hara, of Edinburgh.

DAVIDSON—GRANT.—On June 10th, in Park Church, Glasgow, by the Rev. Donald McLeod, D.D., one of Her Majesty's chaplains, assisted by the Rev. Henry Grey Graham, minister of Hyndland Church, Alexander Gordon Davidson, M.A., M.D., Wartle, Aberdeenshire, to Jane Napier, youngest daughter of Richard R. Grant, Esq., 3, Hillside Gardens, Glasgow.

GOSTLING—RAY.—On June 3rd, 1891, at the parish Church of St. John the Baptist, Buckhurst Hill, by the Rev. Prebendary Gordon Calthrop, of St. Augustine's, Highbury New Park, assisted by the Rev. T. W. Peile, Rev. J. Lankester, and the Rev. Leonard Coulter, Thomas Preston Gostling, M.R.C.S., L.R.C.P., Worcester, to Margaret McCall, daughter of H. H. Ray, Esq., of Ilrox, Buckhurst Hill.

HIRD—TAYLOR.—On June 4th, at the Parish Church, Huddersfield, by the Rev. Canon Bardsley, Vicar of Huddersfield, Frederick Robert Hird, M.R.C.S. and L.R.C.P.Lond., of Esplanade Gardens, Scarborough, to Adeline, elder daughter of the late Frederick Nelson Taylor, of Newsome.

SNAPE—HALM.—On June 3rd, at Marylebone Church, Ernest A. Snape, L.R.C.P.Lond., of Welbeck Street, W., to Mary, only daughter of the late F. Halm, of Mexico, and of Mrs. Halm, York Terrace, Regent's Park.

DEATHS.

COOPER.—On May 21st, at 12, Albion Street, Hull, Henry Cooper, Knt. M.D., J.P., aged 84 years.

HAINING.—May 12th, at 82, Foregate Street, Chester, William Haining M.D., in his 47th year. (No cards.)

STRUTHERS.—At 39, Charlotte Street, Leith, on June 6th, James Struthers, M.D., F.R.C.P.E., aged 69 years. Friends will kindly accept this (the only) intimation.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Hours of Attendance.*—Daily. 2. *Operation Days.*—Tu. S., 2.

CENTRAL LONDON OPHTHALMIC. *Operation Days.*—Daily, 2.

CHARING CROSS. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M., 1.30; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operation Days.*—W. Th. F., 3.

CHELSEA HOSPITAL FOR WOMEN. *Hours of Attendance.*—Daily, 1.30. *Operation Days.*—M. Th., 2.30.

EAST LONDON HOSPITAL FOR CHILDREN. *Operation Day.*—F., 2.

GREAT NORTHERN CENTRAL. *Hours of Attendance.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, Tu. Th., 2.30; Ear, M. F., 2.30; Diseases of the Skin, W., 2.30; Diseases of the Throat, Th., 2.30; Dental Cases, W., 2. *Operation Day.*—W., 2.

GUY'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operation Days.*—(Ophthalmic), M. Th., 1.30; Tu. F., 1.30.

HOSPITAL FOR WOMEN, Soho. *Hours of Attendance.*—Daily, 10. *Operation Days.*—M. Th., 2.

KING'S COLLEGE. *Hours of Attendance.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department, W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operation Days.*—Tu. F. S., 2.

LONDON. *Hours of Attendance.*—Medical, daily, exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, S., 9.30; Skin, Th., 9, Dental, Tu., 9. *Operation Days.*—M. Tu. W. Th. S., 2.

LONDON TEMPERANCE HOSPITAL. *Hours of Attendance.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operation Days.*—M. Th., 4.30.

METROPOLITAN. *Hours of Attendance.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operation Day.*—F., 9.

MIDDLESEX. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 9, W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4, Th., 9.30; Dental, M. W. F., 9.30. *Operation Days.*—W., 1, S., 2; (Obstetrical), W., 2.

NATIONAL ORTHOPÆDIC. *Hours of Attendance.*—M. Tu. Th. F., 2. *Operation Day.*—W., 10.

NORTH-WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, Tu., 2; Dental, F., 9. *Operation Day.*—Th., 2.30.

ROYAL FREE. *Hours of Attendance.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Dental, Th., 9. *Operation Days.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Hours of Attendance.*—Daily, 9. *Operation Days.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Hours of Attendance.*—Daily, 1. *Operation Day.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Hours of Attendance.*—Daily, 1. *Operation Days.*—Daily.

ST. BARTHOLOMEW'S. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2, Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operation Days.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th., 2.

ST. GEORGE'S. *Hours of Attendance.*—Medical and Surgical, M. Tu. F. S., 12; Obstetric, Th., 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, Th., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operation Days.*—Th., 1; (Ophthalmic), F., 1.15.

ST. MARK'S. *Hours of Attendance.*—Fistula and Diseases of the Rectum, males, W., 8.45; females, Th., 8.45. *Operation Day.*—Tu., 2.

ST. MARY'S. *Hours of Attendance.* Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; Eye, Tu. F. S., 9; Ear, M. Th., 3; Orthopædic, W., 10; Throat, Tu. F., 1.30; Skin, M. Th., 9.30; Electro-therapeutics, Tu. F., 2; Dental, W. S., 9.30; Consultations, M., 2.30. *Operation Days.*—Tu., 1.30; (Orthopædic), W., 11; (Ophthalmic), F., 9.

ST. PETER'S. *Hours of Attendance.*—M., 2 and 5, Tu., 2, W., 2.30 and 5, Th., 2, F. (Women and Children), 2, S., 3.30. *Operation Day.*—W., 2.

ST. THOMAS'S. *Hours of Attendance.*—Medical and Surgical, daily, exc. W. and S., 2; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30; Dental, Tu. F., 10. *Operation Days.*—W. S., 1.30; (Ophthalmic), Tu., 4, F., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Hours of Attendance.*—Daily, 1.30. *Operation Day.*—W., 2.30.

THROAT, Golden Square. *Hours of Attendance.*—Daily, 1.30; Tu. and F., 8.30; *Operation Day.*—Th., 2.

UNIVERSITY COLLEGE. *Hours of Attendance.*—Medical and Surgical, daily, 1.30; Obstetrics, M. W. F., 1.30; Eye, M. Th., 2; Ear, M. Th., 9; Skin, W., 1.45, S., 9.15; Throat, M. Th., 9; Dental, W., 9.30; *Operation Days.*—W. Th., 1.30; S., 2.

WEST LONDON. *Hours of Attendance.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic; W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10, F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operation Days.* Tu. F., 2.30.

WESTMINSTER. *Hours of Attendance.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, M. Th., 2.30; Ear, M., 9; Skin, W., 1; Dental, W. S., 9.15. *Operation Days.*—Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

ANSWERS.

A. H. B.—We have no further information with regard to the "telephone stethoscope."

R. J. (Chesterfield): Application might be made to the National Orthopædic Hospital, 234, Great Portland Street, or to the Royal Orthopædic Hospital, 297, Oxford Street.

NOTES, LETTERS, Etc.

JUSTICE has omitted to enclose his card.

A NEW SPECIALITY.

THE tide of specialisation is ever flowing. The Kansas Medical College has established a Chair of "Railway Surgery."

NATIONAL HEALTH SOCIETY.

AT the request of the Marchioness of Waterford, a course of six lectures on "Home Nursing" will be delivered by one of the Society's trained nurses at 30, Charles Street, St. James's Square, S.W., commencing on Wednesday, June 10th, at 11.30 A.M.

THE LATE CHANCELLOR OF THE UNIVERSITY OF LONDON.

AN appeal for subscriptions for a statue of the late Lord Granville, to be erected within the precincts of the Houses of Parliament, has been issued by a strong Committee. It is believed that many graduates of the University of London will be glad to contribute. Subscriptions may be sent to either of the honorary secretaries—the Hon. R. Meade, Colonial Office, and Sir T. H. Sanderson, Foreign Office, or to Messrs. Barclay, Bevan, and Co., 1, Pall Mall East.

MEDICAL PRACTICE IN BRAZIL.

SINCE the beginning of the present year all European or other foreign medical men wishing to practise their profession in any part of Brazil are compelled to pass the Brazilian "State examination." Titular or honorary members of foreign learned bodies are, however, exempt from this formality. This saving clause would appear to open the door sufficiently wide for most respectable practitioners. It would be interesting, however, to know exactly what is included in the term "foreign learned body."

ADHERENT PLACENTAL MEMBRANES.

DR. H. T. BATCHELOR sends the following addendum to his note published in the BRITISH MEDICAL JOURNAL of April 4th, p. 786: As the placenta was being removed, it having been expelled naturally, it was felt that a portion of the membranes was tearing away and being left behind. With the fingers and thumb at the os traction was made, and a segment of the uterine wall was dragged down. The membranes now peeled off, and the uterus regained its shape. The adherent portion was carefully examined, and instead of being smooth and glistening on both surfaces, was rough and shaggy on one, over an area having a diameter of about one inch, proving the extent of the adhesion.

ILLEGAL PRACTICE OF MEDICINE ON A DEAD BODY.

A NICE point of law has lately been debated before a French Court. The question was whether an operation on a dead body by an unqualified person came within the meaning of the enactment forbidding the illegal practice of medicine. It appears that a pregnant woman had just died, the cause of death not being stated. The cure of the village, who had been with her in her last moments, induced a neighbour who was in the room to perform Cæsarean section on the corpse with the view of saving the child. The operation was successful; but the operator was haled before the magistrate, and fined 15 francs for having been guilty of illegal practice of medicine.

Dispensing Doctors and Prescribing Chemists.

R. G. L. writes: The suggestion has been made by an influential member of the British Medical Association that the subject of the dispensing of medicine by medical practitioners might with advantage be discussed at the meeting of the Association at Bournemouth.

There is much to be said for and against the practice. The real question to decide is whether it is for public advantage or not that the dispensing of remedies should be in the hands of the doctor or the chemist. Possibly, in large centres of population, the division of labour would be an advantage. There is one point to be noted at present, and that is that the chemist is doing more prescribing than he used to do. Whether this is for the public good is questionable. It is the result, however, of doctors not dispensing, and should be taken into account in discussing the question; for it is not probable that the pharmaceutical chemist will assist in having an Act of Parliament passed to deter him from doing prescribing business.

It might be possible to ascertain whether the subject would really interest members of the Association if it were discussed at the Bournemouth meeting; and the best way of doing this appears to me to be by a letter to the Editor of the Journal.

Bullet Wound of Face and Neck.

Mr. J. Houghton White, M.R.C.S. (Monte Caseros, Provincia Corrientes), writes: A Gaucho came to see me, and informed me that he had been shot in the head fifteen days previously with a bullet. On examining him I found he had been struck on the left superior maxillary bone in a line from the inner canthus to the ala nasi. The wound had completely healed without suppuration; he was otherwise in perfect health, and examination by nose and mouth revealed no trace of injury whatever. On the right side of his neck, between the mastoid and the angle of the jaw, and slightly below both, was a hard lump which he said was the bullet. He wanted it removed, and I did so without difficulty, finding it encysted close to the skin. Two days afterwards he went away completely cured. The bullet was about the size of a Martini-Henry, and was considerably flattened out by contact with bone. Query: How did its reach its resting place apparently without inflicting any injury whatever?

The Abuse of the Provident Principle.

Graduate No. 11 writes: We say that the men whose competition obliges us to take clubs at 2s. 6d. and 3s. 6d. are acting in a manner harmful to the profession. But they "must live." Are we not beginning at the wrong end? Who is responsible for the competition and overcrowding, and for the appalling number of names in the pass lists which you publish from time to time? Surely the examiners. Until they act in a different manner the root of the evil is not reached. Therefore, in consultations, I shall not send for consultants who are examiners of any body whose standard is below that of the Universities. One generally has the choice among many equally able men, so that the patient's interests need not suffer. How many more will do likewise? In this manner we can soon bring about a change, and "A Graduate's" pathetic letter makes one feel that such action would not be unfair. And, as for those rejected in examinations, surely it is better for them that their disappointment should come at first rather than at last.

Treatment of Pneumonia.

Dr. A. Hanbury Frere (Frizinghall) writes: In answer to Dr. Windle's letter in the British Medical Journal of May 15th, I would say a few words.

a. It is by no means proved that croupous pneumonia is due to a definite micro-organism, and, were this so, iron would rather be indicated than not.

b. Acetate of ammonia is a most valuable diaphoretic and refrigerant. As such, it is likely immensely to relieve the active engorgement of the early stages, thus diminishing, not increasing, the exudation in the lungs. When red hepatisation has been reached, what could assist resolution better than the keeping up of the strength and tone of the blood by iron? It is at this time that it is so important to prevent liquefaction of the blood and the great extravasation of leucocytes which characterises the state of the lung exudation when resolution has failed to take place. Thus I am unable to discover the see-saw action of which Dr. Windle speaks.

c. I think Dr. Windle has failed to grasp the meaning of depressant, as compared to stimulant, treatment. Compare a large crowd of people all trying to enter a doorway at once. We want, as far as possible, to avoid a block in the lung. Having exhibited acetate of ammonia as a *vis a fronte*, instead of the *vis a tergo*, of stimulant treatment, I much prefer the restraining influence of digitalis to moderate the rush of blood consequent on the determination to the lung.

d. I take the temperature mostly to satisfy the friends. I believe much more value attaches to the pulse in these cases, and it is my guide.

Dr. J. D. Windle (Southall) writes: (1) In his first letter Dr. Illingworth says: "Erysipelas is a specific febrile disorder; pneumonia a catarrhal one, and no more due to micro-organisms than bronchitis or any other inflammatory disorder;" *ergo*, if we accept Dr. Illingworth's pathology, no inflammatory disorders are due to micro-organisms—*reductio ad absurdum*. Further, I would refer Dr. Illingworth to Klein's researches in the Middlesbrough epidemic of 1888. He incontestably proved the specific nature of pneumonia. He inoculated lung juice from cases of pneumonia and cultivations of the bacillus into mice, and invariably produced an acute disease, the chief and constant lesion of which was pneumonia. The death-rate in this epidemic was only 21 per cent. out of 1,633 cases—results which compare favourably with Dr. Illingworth's statistics when one remembers the class of people who were attacked. (2) I believe that acetate of ammonia unloads the pulmonary capillaries by causing hypersecretion of the skin and respiratory mucous membrane. (3) Can I show a better record of twenty-two cases? Dr. Illingworth's were all markedly sthenic. I can safely say that I have never seen a fatal case of uncomplicated acute sthenic croupous pneumonia. I contend that these cases invariably get well without any special medicinal treatment; nothing more than rest, light diet, and careful nursing being required. But I think it incumbent on the medical attendant to take the temperature, which will warn him of any complications and be his safest guide to treatment. (4) Were Dr. Illingworth in the habit of taking temperatures I think he would often find, after he had brought down the pulse with digitalis, that the temperature would not have fallen commensurately. Digitalis in 10-minim doses may reduce the pulse rate, but I very much doubt whether it has any effect on the temperature except in poisonous doses. (5) Again I ask: Will Dr. Illingworth give his statistics of asthenic cases treated on the principle that all inflammatory disorders require "depressant, not stimulant, treatment?"

On Rapid Dilatation of The Cervix and Uterine Cavity by Hegar's Graduated Bougies.

Dr. Joseph Griffiths Swayne (Bristol) writes: In accordance with the good old rule that we ought to speak of persons and things as we find them, I wish to say a few words in defence of sponge tents. I have had a considerable experience of them in years past, and have used them as dilators of the os uteri in a variety of cases, and this experience leads me to the conclusion that they are just now receiving a most unmerited amount of blame. This idea occurred to me on reading the valuable paper by Dr. John Phillips on Hegar's graduated bougies, which was published in the British Medical Journal of May 23rd. The following sentence, however, occurs at the beginning of the paper:—"The disastrous effects, especially of a septic nature, often following the use of sponge tents, are well known to every practitioner." With this sweeping condemnation I, for one, can by no means agree. During twenty years of practice, from 1857 to 1877, I used them very frequently to dilate the os uteri, and sometimes in cases which we should now think very ill adapted for them. For instance, in this period of twenty years I used them no fewer than nineteen times for the induction of premature labour. All these cases terminated favourably as regards the mothers, and there was no case of septicæmia occasioned by the tents, and yet in the first case of this series the tents were not even carbolised. The only precaution I adopted was never to let the tent remain *in situ* more than twelve hours, and to well wash out the vagina after its removal. I used to begin the operation by the introduction of a tangle tent, and it was sometimes necessary to use two or even three sponge tents afterwards before the labour was completed. But labour thus induced was often very tedious, and it was often a long time before proper uterine action came on, and I became convinced that this delay was sometimes unfavourable to the child. I therefore, in 1877, discarded sponge tents in such cases, and employed Barnes's bags, which are not only more efficacious but more expeditious in their action, and have continued to use them up to the present time. There is, however, one purpose for which I find sponge tents answer better than anything else, that is, for plugging the os uteri in cases of incomplete abortion attended with profuse hæmorrhage. I take a carbolised sponge tent, of as large a size as the os uteri will admit, and having mounted it on a tent introducer, I dip it in glycerin. acid. carbolic. This serves to lubricate it, to render it more antiseptic and also more absorbent of fluids. If possible, I always introduce it through a full sized Ferguson's speculum, and plug the vagina with pledgets of salicylic wool by the same means.

The operation thus causes less pain and annoyance to the patient than when it is effected by means of the fingers only. The uterus is thus most effectually corked up like a bottle, and as the sponge absorbs moisture its surface becomes rough, and most effectually prevents any flow of blood by the side of the tent, which the smooth surface of an india-rubber bag or even a tangle tent does not. The tent is removed at the end of twelve hours, and the os uteri is then sufficiently dilated to allow the ovum to escape or carry secundines or clots which may have remained behind; or, if necessary, to admit the introduction of two fingers for the purpose of removing them.

This, then, is one of the most legitimate uses of the sponge tent, and my chief object in making these remarks is to do something towards diminishing a widespread prejudice against things which have often proved, in certain emergencies, to be of the greatest possible service.

"Traumatic Hæmatocele," etc.: Sequel.

Mr. Montague D. Makuna, M.R.C.S.Eng., L.R.C.P.Lond. (Treherbert) writes: You did me the favour of recording a case of hæmatocele in the British Medical Journal of April 25th, p. 944, as recovered after castration. Unfortunately the result has proved otherwise. The patient went to work on March 21st. A fortnight after a growth of the size of a nutmeg was noticed just within the scar at its lowest part, and the wound opened up. My suspicions were aroused by the reappearance of severe abdominal pains, from which the patient suffered before the first operation. In a few days it was evident the growth was malignant, as it advanced very rapidly, and the wound was enveloped in a fungating mass. On expressing a wish the patient was removed to Cardiff Infirmary on April 28th, and was operated on by Dr. Sheen. I am informed by him that the growth he removed was a sarcoma.

The patient returned home on May 13th, without the consent of the surgeon. He was much emaciated, and suffered from acute abdominal pains, irritable stomach, and constipated bowels. A lobular tumour (probably glands) was perceptible on palpation opposite the lower lumbar vertebræ. He died on May 20th.

Recent Rabbit Development.

An article in the *Hobart Mercury* of May 4th gives some very interesting and curious facts concerning the development of a new sort of nail in the rabbits of Australia in consequence of the animal's endeavour to climb over the wire netting used to impede their progress in travelling. The farmers have discovered that the rabbits can burrow under the netting unless it is buried some 6 or 8 inches under the soil. Moreover, they can climb, or evidently intend to do so, after a little training, and to this end they are developing a nail which will enable them to hold on while progress is made upwards. This nail development has been noticed before in Queensland when the bark just out of reach was desirable of attainment, but to effect hand-over-hand nautical climbing shows the rabbit in the act of elevating himself in the scale.

INFLUENZA AND DENGUE.

DR. F. F. SPARROW (Medical Officer of Health for the Urban and Rural Districts, Kells) writes: My attention was called recently to a paragraph in the *Irish Times* of June 6th, in which the doctor of the Kells Workhouse is described as having discovered that "a fever resembling dengue" has existed in the locality for years, during which time he has made it a special study. This is to me astounding, as I can emphatically state that there has been no fever in Kells for years past except a few cases of enteric fever caused by sewage contamination of the drinking water, and even cases of enteric fever will probably not occur in future, as the Town Commissioners are taking most active measures to supply the town with pure drinking water. I can safely say that, with the exception above mentioned, this town is one of the healthiest and most cleanly in Ireland, and the rural portion of my district is in an equally healthy state. True, we had influenza last year, and we have it in a more severe form this year.

THE EXAMINATIONS FOR THE DIPLOMA IN PUBLIC HEALTH OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF LONDON.

YORKSHIRE SHUT OUT writes: Last January, and I suppose prior to that also, the two examinations for the above named diploma were held in two separate weeks—the first part, Monday to Wednesday or Thursday of one week; the second part, Monday to Thursday of the following week. Now as most candidates take both parts together, and as most candidates are general practitioners, this I know proves a very highly inconvenient arrangement, especially to practitioners residing some distance from London, for it involves their being away from their practices nearly a fortnight right away, or making two long special return journeys to London. Can it not be arranged that both parts take place and conclude in one and the same week, as at Cambridge University, where the first part begins on Tuesday, and the second part continues and concludes not later than the Saturday of the same week? Such an arrangement is surely possible, and would certainly be much more convenient to all candidates. Present arrangements debar me, and others I know, from being candidates at all, because we cannot afford nearly a fortnight away from our practices. This is "hard lines," to say the least of it. I trust others thus inconvenienced will, Sirs, with your permission, support my complaint in these columns, and that more considerate and convenient arrangements will be made for the approaching July examinations.

LETTERS, COMMUNICATIONS, ETC., received from

(A) Mr. F. Adsett, Worthing; Professor M. Alivia, Viterbo; Mr. H. W. Allingham, London; Dr. P. S. Abraham, London; Dr. F. J. Allan, London; Anti-Humbug; Dr. Abercrombie, London; Mr. C. E. Abbott, Braintree. **(B)** Mr. J. B. Bailey, London; Mr. W. B. Burke, Wolverhampton; Dr. G. H. Brandt, Royat; Mr. J. H. Bryant, London; Dr. Balding, Royston; Mr. R. J. Bush, London; W. A. Bryant, M.B., Blackburn; Brigade-Surgeon; Dr. G. B. Beale, South Tottenham; Dr. R. C. Benington, Newcastle-upon-Tyne; Mr. J. W. Burgess, Nottingham; Dr. F. Beach, Dartford; Dr. A. B. Brabazon, Bath; Messrs. Blondeau et Cie, London; Mr. J. Berry, London. **(C)** Dr. Charpentier, Uxbridge; Rev. M. K. Cooper, Lancaster; Dr. Carline, Lincoln; Mr. A. L. Childe, Malvern; Sir Andrew Clark, London; Mr. F. H. Carlyon, Truro; Surgeon-General Cornish, London; Dr. C. W. Chapman, Hampstead. **(D)** Mr. W. H. Davies, Stoke-on-Trent; Mr. E. Dawes, Lindfield; Mr. H. P. Dunn, London; Mr. A. N. Davis, Dorchester; Mr. F. M. Davidson, London; Mr. Alban Doran, London; Mr. W. C. Denning, London; Dr. Denby, Bradford. **(E)** Excommunicate; Mr. H. F. C. Eagle, London; Enquirer; Miss J. Edmonds, London. **(F)** Dr. A. G. R. Foulerton, Chatham; Dr. K. Frazer, Eastbourne; Mr. J. Foulerton, London; Dr. G. Fleming, London; Mr. Adams Frost, London. **(G)** Dr. F. S. Gramshaw, Easingwold; Mr. J. E. Gemmell, Liverpool; G. C.; Mr. H. H. Graham, London; Dr. E. Ground, Maidstone; Dr. J. H. Galton, Upper Norwood; Dr. E. Gumpert, Manchester. **(H)** Dr. W. P. Herringham, London; Mr. W. E. Hoyle, Manchester; Mr. S. A. Haley, Leeds; Dr. A. T. Helme, Lancaster; Dr. J. B. Hellier, Leeds; Dr. Peter Horrocks, London; Mr. J. C. Hasler, Blackburn; Mr. T. Holmes, London; Mr. J. J. Hood, Wollongong, N.S.W.; Rev. T. N. Hart-Smith, Epsom; Dr. H. C. Hastings, East Dereham; Dr. J. P. Henry, St. Mary Cray; Mr. A. D. Hughes, Kenchester; Dr. Halliburton, London. **(I)** Dr. W. Ireland, Prestonpans. **(J)** Mr. A. E. Jackson, London; Justice; Mr. R. Jeffreys, Chesterfield; Dr. T. Jones, Eastbourne. **(K)** Dr. Norman Kerr, London. **(L)** L.R.C.P.; Messrs. Ledger, Smith, and Co., London; Mr. W. Lees, Chester; Rev. F. Lawrence, York; Dr. V. Lush, Weymouth; Mr. R. A. Lundie, Edinburgh; Mr. J. R. Lunn, London; Messrs. Lynch and Co., London; Surgeon-Major E. Lawrie, Hyderabad; Miss F. Lankester, London; Mr. J. E. Lane, London. **(M)** Dr. A. Maude, Westerham; Dr. J. D. McCarthy, Victoriaborg, Accra; Dr. D. Murphy, Cloyne; Mr. T. Marshall, South Shields; Mr. S. Melville, Wokingham; Dr. C. M. Moullin, London; Mr. F. H. Millington, Thetford; Dr. J. W. Moore, Dublin; Mr. W. Marriott, London; Mr. A. Macdonald, Portree. **(N)** Dr. F. Nicholson, Hull; Brigade-Surgeon W. Nash, London; A Naval P.M.O.; Dr. D. Newman, Glasgow. **(P)** Mr. W. R. Parker, Kendal; The President of the Royal Society, London; Persevere; Surgeon-Major J. C. H. Peacocke, Karachi; Mr. J. A. Phillips, Cardiff; Mr. J. H. B. Pinchard, Taunton; Dr. A. S. Percival, Newcastle-on-Tyne; Dr. H. W. Pigeon, Hull; Mr. G. E. L. Pearse, London; Mr. H. P. Potter, London; The of the West London Medico-Chirurgical Society, London. **(R)** The Registrar of the University College, Liverpool; Mr. H. A. Rawlins, London; Dr. A. Ruffer, London; Dr. E. Richard, Birmingham; Mr. M. H. Ruspini, Tulse Hill; Mr. E. H. Roe, London; Dr. Rentoul, Liverpool; Dr. J. J. Ridge, Enfield; Mr. H. Rix, London. **(S)** The Sanitas Company, London; Mr. Towers Smith, London; Dr. G. Strong, Ross; Messrs. Street and Co., London; The Secretary of the Chelsea Hospital for Women, London; Dr. C. E. Shelly, Hertford; Mr. A. Smith, Dublin; H. W. Seager, M.B., Hampton Court; The Secretary of the Royal Microscopical Society, London; Mr. W. M. Storrar, Southport; Surgeon I.M.S.; Dr. R. M. Simon, Birmingham; Mr. B. K. Scovell, Godalming; Mr. W. C. F. Smith, Halifax; Dr. Markham Skerritt, Clifton; Mr. P. L. Sclater, London; The Secretary of the London Hospital; The Secretary of the Royal Statistical Society. **(T)** Dr. Twyford, St. Helens; Mr. J. Taylor, Buxton; Mr. H. J. Tizard, Weymouth; Twenty-five Years a Member of the Association; Messrs. Tidman and Son, London. **(U)** Mr. J. Unsworth, Liverpool; Dr. Urquhart, Aberdeen. **(W)** Mr. F. C. Wood, Nottingham; Mr. J. Webster, Bootle-cum-Linacre; Dr. Willoughby, London; Dr. E. Walford, Cardiff; Mr. W. A. Winship, Wetheral; Dr. Whitelegge, Wakefield; Messrs. J. W. Wright and Co., Bristol. **(Y)** Dr. Peter Yates, Bolton; etc.

BOOKS, ETC., RECEIVED.

Lewis's Pocket Medical Vocabulary. Second edition. London: H. K. Lewis. 1891.

Intubation of the Larynx. By James B. Ball, M.D. London: H. K. Lewis. 1891.

Minor Surgery and Bandaging. By Edward Martin, A.M., M.D. London: H. K. Lewis. 1891.

Notes on the Additions made to the British Pharmacopœia, 1890. By Frederick T. Roberts, M.D., B.Sc., F.R.C.P. London: H. K. Lewis. 1891.

Plain Talks on Electricity and Batteries. By Horatio R. Bigelow, M.D. London: H. K. Lewis. 1891.

New Official Remedies (B.P.) 1890. By A. W. Gerrard. Price 1s. London: H. K. Lewis. 1891.

Massage, a Primer for Nurses. By Sarah E. Post, M.D. Second edition. New York: The Nightingale Publishing Co. 1891.

Transactions of the Twelfth Annual Meeting of the American Laryngological Association held in the City of Baltimore, May, 1890. New York: D. Appleton and Co. 1891.

Carlsbad, its Thermal Springs and Baths. By J. Kraus, M.D. Fourth edition. London: Kegan Paul, Trench, Trübner, and Co. 1891.

Botany Notes. By Alexander Johnstone, F.G.S. Edinburgh: E. and S. Livingstone. 1891.

Plumbing Practice. By J. Wright Clarke. Second edition. London: Engineering and Building Record. 1891.

Bacteria and their Products. By G. Sims Woodhead, M.D. London: Walter Scott. 1891.

The Medical Digest. By Richard Neale, M.D. Third edition. London: Ledger, Smith, and Co. 1891.

The Housing of the Poor. By F. H. Millington. London: Cassell and Co. 1891.

Our Unseen Foes, and How to Meet Them. By A. Wheeler. Bristol: John Wright and Co. 1891.

A Manual of Medical Jurisprudence. By A. Y. Narayaniah, L.M.S. Madras: Addison and Co. 1890.

On Stertor, Apoplexy, and the Management of the Apoplectic State. By Robert L. Bowles, M.D. London: Baillière, Tindall, and Cox. 1891.

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THE CAVENDISH LECTURE
ON
ELIMINATION & ITS USES IN PREVENTING AND CURING DISEASE.

Delivered before the West London Medico-Chirurgical Society.

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It seems to me that one of the most marvellous definitions ever given is that of dirt as "matter in the wrong place." The matter need not be in itself objectionable. It may be, on the contrary, exceedingly valuable and useful, provided it be in its proper place and fulfilling its proper function, and yet it becomes dirt at once when put in the wrong place. The pipeclay which is used to keep the soldier's belt clean becomes dirt when it gets upon his uniform, and the blacking which lends lustre to our boots and is used to keep them clean, as it is termed, at once assumes the character of dirt, and exceedingly objectionable dirt, if we put up those boots on a chintz-covered sofa, leaving a black smudge on the fair surface of the fabric.

The utility of things which most people would agree to call dirt is shown by the care employed in sifting cinders, and in separating rags and bones from the contents of our dustbins. But the dust contained in these bins is a most unmitigated nuisance to the unfortunate householder who cannot get it removed. I do not know any topic more calculated to excite a lively conversation amongst householders in London, at any rate, than that of dustbins and drains. The mere mention of either of these words has an effect quite different from that of the "apple of discord," for its effect is a most wondrous concord, everyone having the same tale to tell of the neglect of the dustmen and the iniquities of plumbers.

The dustbins are the receptacles for the solid refuse of our houses—the dust, the ashes, the cinders, the odds and ends of dry material—which accumulating in our rooms would render them dirty and disagreeable; but the drain pipes are the channel by which the soluble and liquid refuse of our houses is carried away, and any interference with them is still more serious than the non-removal of our dust.

It is only in highly complex communities that the difficulty of removing refuse, either solid or liquid, is felt to an extreme degree. A single individual travelling all by himself in the country has no difficulty whatever. In villages the difficulties are but slight, and even in large camps they may be overcome in a very simple manner, as is shown by that hygienic law of Moses: "Thou shalt have a paddle upon thy weapon; and it shall be when thou wilt ease thyself abroad thou shalt dig therewith and shalt turn back and cover that which cometh from thee."[1] But in cities like London, Paris, Berlin, or Vienna, the difficulty of eliminating the refuse is very great, and enormous expenditure is required to effect it. Each unit in the population contributes to the total amount, and as the population grows, the difficulty increases.

But in large towns the whole refuse of a house does not at once find its way into the dust-bin or the sink. The worn-out furniture, the cast-off clothes and disused utensils which are lumber and rubbish in the houses of the rich, find their way as useful articles into those of the poor, and after a further period of service, descend still lower in the scale of society, passing perhaps through many grades before they are thrown away as absolutely worthless. Even after their fragments have found their way into the dust heap they are again picked up by scavengers, conveyed to mills or factories and, after being there transformed into a different shape, are again employed for other purposes.

Now there is a wondrous unity in life and living beings, and the same process which we find going on in towns and villages occurs also in the living beings which compose their population. Nay more, it exists in the tissues and cells of which these living bodies are composed, and even in the unicellular organisms which constitute the simplest forms of life on the surface of this globe. These unicellular organisms are now attracting much attention, for they are the earth's scavengers who tear up the old clothes, crush up the old bones and burn off the ashes of the world which would otherwise accumulate and render life impossible. But these lowly organisms are not content with breaking up dead matter; they magnify their office and, by attacking living beings, they produce diseases which may lead to the death, dissolution, and ultimately to the complete disappearance of the man or beast they attack. Such unicellular organisms, as a rule, have no difficulty in getting rid of the products of waste which are formed by them as well as by the higher animals. As a rule they live and grow in some fluid, and their own movement through the fluid brings them into contact with fresh layers of it from which they obtain new nutriment and which also washes away their refuse. Should this refuse accumulate to too great an extent, as it does when the fluid is too crowded by the presence of an enormous number of microbes, the refuse products will kill these microbes, just as the unfortunate persons confined in the Black Hole of Calcutta were suffocated by the products of their own respiration.

But just as the broken victuals and old clothes of the rich, regarded by them as simple rubbish, can be utilised by their poorer neighbours, so the fluid in which one class of microbes can no longer grow forms a most suitable soil for others. Thus the liquid in which yeast can no longer grow forms a most suitable soil for the acetic bacillus, and when this in turn has ceased to grow, its place is taken by putrefactive bacilli, and these in their turn are succeeded by moulds.

When unicellular organisms become agglomerated together as in sponges, the difficulty which each organism has in getting rid of its waste material and in obtaining new nutriment is increased, and those cells which are unfavourably placed would probably die very quickly, either from lack of nutriment or from suffocation by their own waste, were it not that this untoward issue is provided against by a peculiar arrangement. Some of the cells become furnished with cilia, which keep up a constant current of water through the interstices of the sponge, and thus bring the fixed cells into a similarly favourable condition as their free swimming congeners, with this difference: that, in the case of the free swimming cell, it moves through the fluid in which it lives, while in the case of the fixed cell the fluid flows over it.

This latter arrangement is the one which exists in most of the cells of the higher organisms such as man. Although some cells, like the leucocytes of the blood, swim freely through the fluid which nourishes them, all the fixed cells of which the tissues are formed are nourished by the lymph which flows around them or between them. A constant current is kept up in this lymph by the mere pressure due to exudation from the capillaries on the one hand, and to absorption by the veins and lymphatics on the other, aided by pressure on the tissues caused by movements. Only in one place, the central canal of the spinal cord, where the delicacy of the tissues requires a constant flow of nutrient fluid, and yet demands an absence of pressure which might injure the nervous structures, is the current of lymph kept up by ciliary motion, as it is in sponges.

As Claude Bernard well puts it, the cells of which our bodies are composed do not live in air. They live in a liquid internal medium, which at the same time supplies nutriment and oxygen and removes waste products. So long as this nutritive medium continues to fulfil its functions, the cells of which our bodies are composed live and grow with perfect indifference to our external surroundings; and so long as a man holds his breath, so that the fluid medium is unaltered, it is a matter of indifference whether he has his head in a bag of oxygen or in a brewer's vat filled with carbonic acid.

But the fluid medium or lymph very quickly becomes altered by the living cells, which drain it of its oxygen and pour into it their waste products, and in the course of a few minutes it would become quite unable to support their life, were it not gaining supplies from without of oxygen and nutriment, and eliminating or destroying the waste products poured into it. I say destroying, because when the lymph passes into the blood the waste products appear, to a certain extent at least, to undergo oxidation, just as the sewage of villages high up the Thames becomes oxidised or destroyed

[1] Deuteronomy, xxiii, 13.

before it reaches the mouth of the river or the open sea. But various conditions may tend to interfere more or less with the discharge of the sewage from the cells, as well as with their supply of nutriment and oxygen, and it is with this discharge of sewage or elimination of waste products from the cells which compose our tissues into the blood and its excretion from the body as a whole that we have particularly to do to-day.

It is not merely the elimination of the natural waste products of our tissues that we have to consider, but the elimination of waste products formed within our bodies by disease germs which have entered them. These disease germs, consisting as they do chiefly of bacilli or micrococci, resemble the cells of our bodies in the fact that they also may be destroyed by their own waste products, but when they enter our bodies the substances they produce—harmful though they might be, if in excess, to the bacilli themselves—are usually still more harmful to the cells of the tissues, and so weaken them as to give the microbes a better chance of success in the struggle between them and the organism into which they have entered. Though opinions may differ as to the exact mode in which the organism destroys intruding microbes, or intruding microbes destroy the organism, there is no doubt about the fact that a struggle does exist between them, and the recent experiments which have been made on such a large scale with Koch's tuberculin have shown that this fluid, although sometimes useful and productive of benefit to patients, not infrequently has an opposite action, and appears to assist the development and growth of the tubercle bacilli already present in the lungs or elsewhere. The apparently contradictory results obtained by the use of tuberculin seem to be explained by the observations of Brieger and Fraenkel in regard to diphtheria. These observers have discovered that the diphtheritic bacilli produce two substances, one of which is toxic to an animal, and the other of which is protective. These substances differ in their power of resisting heat, the toxic substance being destroyed at a temperature of 55° C. to 60° C., while the protective resists a temperature not much below the boiling point. These substances appear closely allied, and it is just possible that one may be transformable into the other. What their relationship to one another is we do not at present know, but if we look at the vegetable kingdom we find that in numerous instances poisons closely allied chemically to one another are present in the same plant, but have an antagonistic action to one another. Thus in calabar bean we have physostigmine and calabarin, of which the latter stimulates and the former depresses the spinal cord; and jaborandi contains two alkaloids, pilocarpine and jaborine, having entirely different actions, and, indeed, jaborine antagonises the action of pilocarpine. Many alkaloids contained in the same plant seem to have a simple relation to one another; either the one contains the elements of water more or less than the other, or an atom of hydrogen in the one is replaced by a molecule of methyl in the other. Whether some such simple relationship as this exists also in the products of bacteria we do not yet know, but there is little doubt that further researches will soon throw much light on the chemical nature of bacterial poisons. One noticeable point in regard to the resistance of animals to such poisons is that an abundance of glycogen in the liver increases its power to destroy the action of such poisons as pass through it. This power diminishes as the glycogen disappears, and what is true for the liver is probably true for other parts of the body. At any rate, we know that when animals are starved the glycogen disappears both from the liver and the tissues, and starvation greatly increases the liability of an animal to succumb to infection. But, putting aside the question of neutralisation of bacterial poisons by the lymph or tissues, it is evident that if the toxic products of any bacillus can be washed out of the organism, that organism will have a better chance, and experience confirms the theoretical view that free elimination, both by the kidneys and the bowels, is useful treatment in infective diseases.

Turning again to the normal products of tissue change, we note that probably the most important parts of a cell are its nitrogenous components or proteids. The chief products of nitrogenous waste are urea and uric acid, and the relative quantity of each varies in different classes of animals. The urea forms the chief product of waste in the amphibia, but in the reptilia and in birds the waste appears almost entirely in the form of uric acid combined with bases. In man we have a mixed condition, as the waste occurs partly in the form of urea and partly in the form of uric acid, the proportion of acid to that of urea being about 1 to 33. It is usually supposed that there is a greater tendency in some persons to the formation of uric acid than in others, and that this tendency is associated with a gouty or rheumatic diathesis. In a number of exceedingly interesting and valuable papers Dr. Haig has shown that the excretion of uric acid is greatly influenced by the comparative alkalinity or acidity of the blood, and that the amount of acidity[2] may be made to vary within very considerable limits by the kind of food, by the process of digestion, and by the use of various drugs.

There are certain parts of the body more especially in which the uric acid, wherever it may be generated, has a tendency to get stored up, and this is especially the case in the spleen and the joints, which may be compared to dustbins. Whenever the blood becomes more strongly alkaline than usual it tends, like an active housemaid, to sweep up the uric acid dust out of these bins, with the result of causing great discomfort to the organism generally, for the uric acid, thus sent on its travels, attacks the nerve centres and the vessels, producing headache and depression of spirits, so that gouty people will frequently object to the use of alkalies because, as they say, they are very lowering. Acids, on the contrary, prevent the blood from taking up the uric acid, and lead to its being concentrated in the dustbins already referred to, so that acids relieve the depression, remove the headache, but, at the same time, tend to cause pain in the joints and accumulation of uric acid in the spleen. Here it lies without producing any inconvenience for the time, but it may possibly be stored up to such an extent as to cause great discomfort or even danger when this large dustbin comes to be cleared out.

A year or two ago I had a very striking case illustrative of Dr. Haig's views. A gentleman, who had suffered from chronic malaria, had an enormously enlarged spleen. That organ began to contract, and simultaneously the patient began to suffer from repeated attacks of renal colic, due to small uric acid calculi, at intervals of two or three weeks. So frequent were these attacks that I thought he must have had an accumulation of small stones in his kidney, for I did not fancy he could form the concretions sufficiently rapidly to cause such frequent recurrence of the renal colic. *Post-mortem* examination, however, showed that I was mistaken, for there was no calculus whatever in either kidney.

Retention of uric acid in the spleen, according to Dr. Haig, is accompanied by its absence from the blood, and consequently by a feeling of well-being and jollity, which may, however, pass into an entirely opposite condition when the uric acid, which has been stored up during this period of retention, again finds its way into the circulation. Thus while a glass or two of champagne, by increasing acidity, drives the uric acid out of the blood, and consequently gives rise to hilarity and happiness in the person who has taken it, it will give a gouty man twinges in his joints, by causing the uric acid to lodge in them, and may cause much subsequent headache and depression when its first stimulant effect has passed off and the imprisoned uric acid again enters the circulation.

Even more serious consequences than depression and discomfort may, according to Dr. Haig, be produced by the rapid removal of uric acid from its chief dustbin or storage place—namely, the spleen—into the circulating blood; for, instead of only affecting the mental faculties, it may attack the heart with fatal results. As an instance, he gives the death of the late Canon Liddon, who had recovered from an attack of gout in the head, and was feeling fairly well even after the fatigue of a railway journey, but suddenly fainted shortly after breakfast, and died. Dr. Haig's explanation of this is that, during the period of comparative well-being, the uric acid had been stored up, and when the blood became more alkaline, as it does during digestion, and dissolved a part of it out, the liberated uric acid contracted the arterioles, thus raising the tension so that the heart was unable to overcome it, and causing fatal syncope.

[2] The blood is never acid, but diminished alkalinity may, for the sake of convenience, be spoken of as comparative acidity.

Haig's theory of the storage of uric acid is, I believe, very much the same as that of Sir A. Garrod, namely, that this substance is formed in the kidneys out of waste products derived from the nitrogenous tissues generally or from the liver. Part of it is at once excreted, but part of it may return from the kidneys, and either circulate in the blood or get stored up in the spleen. If we return to our analogy of the dust in the house, it is as if the ashes, crumbs, and waste vegetables were thrown together into an ash bucket to be emptied, but, if this emptying were imperfectly done, the remnants would be thrown into a dustbin within the house, and could not be cleared out directly to the outside, like the ash bucket, but would require to be emptied by bringing it through the passages of the house, which would lead to much discomfort.

The alkaline constituents in the blood are the natural solvents of uric acid, and anything that increases their proportion in the blood renders the uric acid more soluble, so that it is more readily removed from its place of storage and brought into the general circulation, where it produces manifold discomforts. Thus it is that alkaline remedies in gouty patients are so apt to give rise at once to the complaint of their being lowering, not because they have a depressant action of their own, but because they withdraw the uric acid from its lurking place, and allow it to act upon the nervous system, thus producing depression.

The alkalinity of the blood is increased when the materials of gastric juice are withdrawn from it during digestion, and at this time not only is the urine frequently neutral or alkaline, but the gouty man may suffer from the discomfort due to the circulating uric acid, and fall asleep over his paper after breakfast, or feel stupid and drowsy after lunch when he ought to be attending to his business.

On the other hand, anything that diminishes the alkalinity of the blood—such as acids or wines, and condiments containing acid, nux vomica, opium, and iron—tends to drive the uric acid out of the blood into its storehouses, and so produces a feeling of well-being which may, however, be only temporary and illusory, as the uric acid is not eliminated from the body but only stored away within it, and when the blood becomes alkaline after another meal or after a dose of soda, all the uncomfortable feelings produced by uric acid may again torment the patient.

Again returning to our illustration. If the contents of our dustbin were carried through our passages, they would be flying about and great discomfort would ensue; but if we took care to wet each bucketful with a deodorising solution there would be neither flying dust nor disagreeable smell, and the clearing out would be done with a minimum of trouble. In the gouty man's body salicylic acid seems to have a similar effect to wetting the dust; it accelerates the elimination of uric acid while preventing its disagreeable action, and Dr. Haig advises a prolonged course of this drug as a means of permanent cure in gouty patients.

It is hard to say at present what the natural solvent of uric acid is in the body, for it is quite clear that people generally have not got salicylic acid regularly circulating in their blood. Sir William Roberts considers that the pigmentary substances which one finds in the urine probably have a solvent action, and it has occurred to me that possibly a pyrocatechin, which is almost constantly present in the urine, and is nearly related chemically to salicylic acid, may be one of the natural solvents, but I have not yet been able to test this idea experimentally.

I have entered thus fully into Dr. Haig's view of the pathology of gout and the elimination of uric acid because I regard his work as one of the most important contributions which have been made for many years to our knowledge of gout and rheumatism. I do not myself think we have yet got to the bottom of the question. In all probability we shall find that the proteid waste which yields the raw material for uric acid is quite as important, or more important, than the uric acid itself, but Dr. Haig has, at any rate, supplied us with a useful working hypothesis, which may enable us both to foretell the results of certain indiscretions in diet or regimen in gouty people, and to supply us with the means of alleviation or cure. Besides the salicylate of soda, upon which he lays so much stress, we find that gouty people are accustomed to trust to baths and watering-places of all sorts for relief, and no doubt a visit to Homburg, Aix-les-Bains, Carlsbad, Marienbad, Brides-les-Bains, Baden-Baden, Wiesbaden, Harrogate, Bath, or Strathpeffer will all greatly improve the health and often protect patients from gouty symptoms for many months, or even years, afterwards.

In visiting all these watering-places one is struck by the diversity of the constituents of all those world-famed springs and the constancy of one ingredient, namely, water. In watching the patients one sees that people who at home never touch a drop of water pure and simple from year's end to year's end, taking it only in the form of wine, beer, tea or coffee, will, at a spring, drink tumbler after tumbler of water containing common salt with minute traces of other things—as at Wiesbaden or Baden-Baden—or the same constituent with rather more lime-salts at Homburg, sulphate of soda and carbonate of soda at Carlsbad or Marienbad, or sulphuretted hydrogen—as in Aix-les-Bains, Harrogate, or Strathpeffer. I do not mean to say that the saline or gaseous ingredients of these springs are without effect upon the organism—far from it—but at the same time I feel quite convinced that very many people would never require to go to watering-places if they would drink more water at home.

Water is the most universal solvent in the world. It is not only useful to wash out our closets and flush our drains, it has a similar effect in our bodies and tends to wash away the waste products from the cells of which our organs are composed, to clear out the uric acid, urea and phosphates through our kidneys and thus prevent renal or vesical calculi, and also to wash out our liver and prevent gall stones, while it helps to keep the bowels in action. The liver especially is an organ which suffers much from want of water, and I never see a gall stone without asking the patient "How much water do you drink?" Almost invariably the answer is "I hardly ever touch water. I am not a thirsty person," and on one occasion a lady called for a particular teacup, which held little more than a thimbleful, in order to show me how much she drank. On reckoning how much water she took in the 24 hours it came, as nearly as I could calculate, to 16 fluid ounces. What wonder then that she had a gall stone. The poor liver had not a chance to make decently fluid bile, and naturally there was a deposit. By making such people drink a big tumbler of water, and especially hot water every morning with or without some Carlsbad salts added to it, and, if necessary, repeating the hot water once or twice more in the day, the renewed formation of gall stones may frequently be averted, and symptoms of biliary colic, to say nothing of so-called biliousness, may be prevented for many years or perhaps entirely. But some patients will not do this at home, and if you were to tell a fashionable lady to get up at 6 o'clock in the morning and walk round Grosvenor Square with a tumbler of hot water in her hand, taking a sip at it every three steps, to go on doing this for an hour together, then to buy at a confectioner's a penny roll and eat this without butter for her breakfast, with a small cup of coffee and nothing more, she would probably laugh in your face or apply to some one else for advice. But all this and more you secure by simply advising her to go to Carlsbad. There she finds everybody else doing the same thing, and instead of marching round and round all by herself or accompanied only by little boys who might point the finger of scorn at her, she finds herself in the company of all the fashionable visitors to the bath and marches to the music of a brass band. The company of others enables her to carry through the tiresome process and to comply with the troublesome restrictions, while the benefit she is sure to derive from it probably makes her feel so strong and happy that she swears by the place ever after, and returns to it again and again. For people who can afford it a visit to such places supplies the best means of cure, but for those who cannot an excellent substitute may be found in the daily consumption of hot water, if they will only have patience and perseverance in its use.

The process of washing out is not only useful in biliary calculus, it is of the utmost value in preventing renal gravel and calculi. The process may be carried on at home by means of hot water either alone or with the addition of a small quantity of some saline, such as bicarbonate or nitrate of potash. In cases where the patient dislikes hot water alone, a slice of lemon thrown on the top of it gives it a slightly agreeable taste, and may overcome the patient's repugnance.

The two watering places where patients with renal calculi

chiefly go are Wildungen and Contrexéville, with its neighbours Vittel and Martigny-les-Bains. What strikes one in the waters of these places is that, in addition to other salts, they contain a very minute trace of iron, which appears certainly to be beneficial to the patients. It is supposed to act by astringing the mucous membrane of the pelvis of the kidney, and so allowing calculi to slip down more easily.

There are several other methods of cure which I believe owe their virtues to the fact that they produce pretty complete elimination of waste products by causing the patient unconsciously to imbibe a large quantity of water. These methods are the grape cure, the whey cure, and the milk cure. For the grape cure the patient resorts to some warm, sunny place, where the grapes grow well, and there eats many pounds in the course of the day, while other articles of diet are correspondingly diminished. The ripe grapes contain an enormous proportion of water and very little solid matter, so that the grape cure really comes to be a combination of water drinking and semi-starvation, greatly resembling the Carlsbad cure, to which an additional likeness is given by the laxative effects of the alkaline tartrates contained in the grape juice. The whey cure is very much the same, with the exception that, instead of eating grapes, people drink whey, and that the climate where the cure is carried out is usually a high and bracing sub-alpine one, instead of being soft and sunny. The milk cure is one frequently used in this country with great advantage, more especially in cases of typhoid fever, in chronic diarrhœa occurring in persons who have come from tropical climates, in glycosuria, albuminuria, and some cases of heart disease. Its advantage in typhoid fever is so universally acknowledged that one need hardly say anything about it, but I think it is possible that its efficacy may not be due merely, as is usually supposed, to the milk supplying a bland and non-irritating diet, but may possibly be due also to the waste products of the organism being washed out by the large amount of water which is either contained in the milk itself or added in the form of lime water or soda water to it. The results of an exclusively milk diet in chronic diarrhœa are sometimes quite astonishing, and a few months ago I had a letter from a patient who had been suffering from it for ten years, had tried all sorts of medicine in vain, had just come back from Carlsbad worse than he went, and had nearly given up hope of cure. I saw him only once, and told him that the medicine I gave him might do him good or might not, but that if he did not get well his only hope was to put himself on milk and milk only. This treatment, as he informed me by letter months afterwards, cured him as if by a charm.

In diabetes the milk cure requires to be used with care, and the cases for its use must be selected, for some patients may be injured by the insufficient nutriment which it affords, while others are greatly benefited by it. The cases in which it answers best are, I think, not those of pure diabetes, but rather those of gouty glycosuria, more especially those in which glycosuria is attended by albuminuria, and where the low specific gravity of the urine, after fermentation, leads to a suspicion of contracted kidneys. In such cases, and also those of gouty kidney where the urine is free from sugar and has a low specific gravity with a trace of albumen, a diet in which milk forms the chief or only ingredient tends to ward off spasmodic dypsnœa or the uræmic condition which so frequently occurs from imperfect elimination in old gouty cases.

But we must turn now to another channel of elimination, namely, the bowels; and this channel is little, if at all, less important than the kidneys; and, indeed, in the popular mind, it is more important. There is a great deal of truth in the two rules of long life: "Keep your mind easy and your bowels open," and, indeed, easiness of mind depends very much upon the state of the bowels. I remember reading many years ago a story relating to this subject by Norman Macleod, in *Good Words*, but I have been unable to verify the reference. It was to the effect that a certain Lady Margaret sent a message down late one night to an old clergyman who lived in the manse not far from her castle, to say that she was in great distress about her soul. "And how are Lady Margaret's bowels?" asked the old gentleman. He learned that the bowels were remiss in their duty. "Here are two pills," said the old man to the messenger. "Let Lady Margaret take them to-night, and I will come and talk to her about her soul to-morrow morning." On going up next day the old man found that there was little for him to do, for the bowels had done their work, and, as far as Lady Margaret's feelings went, had restored health to her soul as well as to her body.

There is hardly a room in the house but will become dirtier if you cannot get your dustbin emptied, and there is hardly an organ in the body that does not suffer if the bowels become constipated. Not only the brain, but the heart, liver, lungs, stomach, and kidneys have their functions impaired when the bowels cease to do their duty. Napoleon's disaster at the battle of Leipzig is popularly set down to his having eaten a bun in a hurry and so brought on dyspepsia; but it would be a very curious page of history if we could learn how many wars, how much bloodshed, and how much cruelty have had their origin in imperfect action of the bowels. Washington Irving, in his *Lives of the Caliphs*, tells of a certain emir named Al Hejagi, who suffered for many years from dyspepsia, and this wretched man distinguished himself, perhaps above all other rulers who have ever lived, in the enormous number of people whom he sentenced to imprisonment and death. He is said to have caused the death of no fewer than 120,000 persons, besides those who fell in battle, and to have left 50,000 in prison when he died himself. How much of all this misery might possibly have been averted by the judicious use of mild aperients it is as impossible for anyone now to tell, as it is to estimate the debt of gratitude which Europe owes to the physician of Louis XIV for the care he took of the bowels of that august monarch.

In mitral disease and in dropsy, either cardiac or renal, the benefit derived from the free use of compound jalap powder is very great, and in his work on *Purgative Medicines* Dr. Hamilton describes most forcibly the advantages he obtained from purgatives—employed in such a way as merely to clear out the bowels but not to produce violent purging—in typhus, scarlet fever, marasmus, chlorosis, hæmatemesis, hysteria, chorea, and tetanus.

Like all good plans, that of purgation has been carried to great excesses, and its use has frequently degenerated into its abuse, so that it has fallen too much into neglect, and been replaced by the feeding-up system. This, too, is good in its way; but we must always remember that if we want a fire to burn brightly we must not only pile on the coals but also ply the poker to remove the ash. Neither the coals nor the poker alone will do—we must combine them; and neither the feeding-up system nor the purging system alone will do, but we must combine them in such measure as is necessary for the welfare of our patients. Now, Nature has herself provided a certain regulating mechanism to attain this end; for, as my friend Dr. Cash has shown, each time that food enters the stomach the bowels receive a certain impetus which is sufficient in healthy people to carry the refuse out and produce an evacuation once a day, the final impetus being usually given by the breakfast, which is sometimes followed by a cigar. In some people, however, the stimulus given by the food is not sufficient, and in these people it may be necessary to give a laxative daily. It is no doubt better to do without this, if possible, and by strict attention to regularity and soliciting Nature at a regular hour every day, whether there be any desire to defæcate or not, the bowels may at length become quite regular.

Exercise in many cases is an adjunct, and the mechanical compression which the intestines undergo from the action of the abdominal walls stimulates them to increased contraction. More especially is this the case if the exercise be of the nature of climbing or riding, for in both of these the abdominal muscles contract with considerable power, while in an ordinary constitutional walk along the level road the bowels receive hardly any compression whatever. Where exercise cannot be obtained, abdominal massage, either by rubbing with the hand or by rolling a cannon ball, covered with chamois leather, over the abdomen, may be useful. A draught of cold or hot water in the morning, or before going to bed at night, by supplying moisture to the contents of the intestines, may have the desired effect. The hard, indigestible residue of food supplies a healthy mechanical stimulus to the bowels, and I think that in our efforts to save the stomach we sometimes disregard this need of the bowels, and give food which is too soft, too mucilaginous, and too unirritating. Stewed prunes, or stewed

pears, by the indigestible cellulose which is present in them in the form of skins and gritty grains, figs either raw or stewed, raspberry or strawberry jam by the indigestible seeds which they contain, and marmalade by its orange peel, as well as brown or bran bread by its indigestible husks, all supply a mechanical stimulus to the bowels. But even these sometimes fail, or we find that the stomach objects to them, although the bowels may need them, and we must have recourse to the so-called aperients. Frequently when I prescribe a dinner pill, patients say to me: "But, doctor, it is not natural that I should take medicine every day." I say to that: "Quite true. Nor is it natural that you should keep a cook; and if your cook removes from your food everything that is stimulating to the intestines, you must take something to replace what your cook has taken away. If you will go back to the manners and customs of the ancient Britons, live in the green wood and eat acorns and pignuts, you will not want any dinner pills."

Now the dinner pill supplies a very useful stimulus, and I know a man who has taken one every day of his life for forty years, apparently with great benefit to himself. But there are some people who do not seem to thrive on dinner pills, and they either do not get any action at all, or they get too much. In such cases, instead of giving the intestines one great push once a day by the dinner pill, one may give them a series of gentle jogs by adding to each meal a minute quantity of a purgative; and I find one-tenth of a grain of aloin, given with each meal, sometimes succeeds when other measures fail, and even these small doses appear sometimes to be too much.

Now, our bodies are like houses in more than one respect, and it is usually found that although each house may be dusted out once a day, there is a regular cleaning up with extra sweeping once a week; and, in addition to this, there is the spring and autumn cleaning of the whole house. Dinner pills and stimulating diet are like the ordinary daily dusting, and while they may answer for some persons, others find that, in addition, they require a weekly clear out, and if this be not given to them by means of a cholagogue purgative, they have a regular sweep out about once a month by getting a violent migraine with bilious vomiting, and generally they are obliged to fast for at least one day during the continuance of the headache. Besides this, our forefathers used to have a regular clearing out in the spring and autumn not from the bowels but from the blood vessels directly, and they were accustomed, as they said, "to be let blood" in the spring and autumn.

The effect of a cholagogue purgative such as a mild mercurial, as, for example, a small dose of calomel, of blue pill or of grey powder, followed by some saline, is sometimes very remarkable. I have seen a quarter of a grain of calomel, with a seidlitz powder next morning, change as naughty a little girl as you wouldn't wish to see into a perfect little angel, and I well remember a little experience which I had some years ago at a friend's house. One morning at breakfast a little boy was very troublesome, and, instead of taking his oatmeal porridge as he ought to have done, he was nudging and bothering his little sister, who was sitting beside him. I said to my friend, "I think your boy's digestion is out of order." "Oh, no," he said, "it is only naughtiness"; but the naughtiness increased so much that the little boy had to be forcibly removed from the table. As soon as the expulsion was effected my friend said, "You are quite right; his breath does not smell right." In such cases as this I do not know any medicine that is better than some Gregory's powder, because it has both a moral effect and a physical action. Its nasty taste when administered as a punishment is wholesome morally, while its action upon the liver and digestion is most useful physically.

Not infrequently adults suffer from nervous irritability, depression, weakness, and inability to do anything, and this is put down on the part of their friends, and frequently of their doctors, to neurasthenia and hypochondriasis. They are treated with nervine tonics, nervine sedatives, change of scene, change of air, baths, waters, advice or scolding, and all to no good. Nervous and depressed they still remain. In some of these cases one may notice a large amount of mucus in the motions, and sometimes there appear to be actual casts of the intestines, long membranous looking shreds apparently tubular in their nature. This condition has been described by the late Sir James Simpson under the name of membranous enteritis, and it is not only usually said to be associated with hypochondriasis, but often it is looked upon as the consequence rather than the cause of the nervous condition, which is certainly its usual concomitant. But it is of no use here to treat the nerves. If you wish for any good result you must treat the bowels. In some, probably in many, cases it depends upon the partial constriction of the intestine near the junction of the sigmoid flexure with the rectum. The motions, lodging here, tend to cause an inflammatory condition of the mucous membrane and profuse secretion of mucus, which either simply coats the fæcal masses or forms a kind of false membrane. This condition may be due to actual constriction of the lumen of the gut or to a diminution in its calibre from pressure. In children prolapse of the rectum is a very common thing. In adults it is comparatively rare, but in them a tendency remains, not to prolapse of the rectum externally, but of the sigmoid flexure into the rectum, and this condition may give rise to great nervous disturbance, lasting for years and perhaps indefinitely, unless its existence be suspected and the proper treatment adopted.

One useful remedy—strongly recommended by Mr. Cripps—is the injection of 2 to 4 ounces of cold water immediately after a motion. This is to be retained, and has, as he expressed it, the tonic effect of a cold bath upon the intestine, increasing the contractile power and lessening the tendency to prolapse. I once saw a case of this sort at intervals for two or three years without ever suspecting its nature. It occurred in a man from New Zealand who had been accustomed to a great deal of horse exercise, frequently riding 40 miles a day. He began to suffer from neurasthenia, hypochondriasis, loss of appetite, failing strength, and emaciation. In fact, he presented almost the typical aspect of the hysterical girls who are so well treated by the Weir-Mitchell plan, and, in consequence of this, I advised him to undergo a course of massage. This he did two or three times with very little good, until, by my advice, he went to Dr. Eccles, who discovered the real cause of his illness, and, by the judicious application of massage to the intestines, completely restored him to health.

But it is not only in the upper part of the intestine and in the sigmoid flexure that hindrances to elimination exist. Even when the fæcal masses have reached the rectum there may be difficulties in the way of their expulsion. It is usually imagined that nothing can be simpler than to empty the rectum, and yet one of the most grateful letters I ever had in my life from a patient was for giving instructions in this matter. As the poor lady said, she had for many years had great difficulty in emptying the bowels, and no one had ever taken the trouble to instruct her as to the mode of overcoming it. The fact is, one often forgets that the pressure of the abdominal muscles acts in the same direction in defæcation as in parturition, tending to drive the fæcal mass towards the coccyx, and in order that it may be evacuated its course must be finally directed somewhat forward. This change in direction is effected by the muscles of the pelvic floor, but if those are lax, as frequently occurs in persons of sedentary habits, and more especially in women who have had large families, the fæces, instead of being expelled, may accumulate in and distend the rectum. This accumulation is greatly favoured by the construction of water-closets, as in sitting upon them the spine is usually at a right angle with the thighs, the legs are close together, and the pelvic floor is not put upon the stretch. When the body is inclined at an acute angle forward the pelvic floor becomes tighter, and this is still more the case when the crouching or squatting attitude is adopted, which is naturally assumed when emptying the bowels in the open air. In cases where defæcation is difficult this attitude is to be recommended, and a very low commode-pan or chamber-pot should be used in place of the ordinary closet. Should this be insufficient, pressure with the hand close under the tip of the coccyx will tend to force the fæcal mass forward and greatly facilitate its expulsion.

In relation to the complete evacuation of the bowels, I have received a very interesting communication from my friend Dr. Batten: "Mr. R. suffered from pruritus ani, with slight eczema and a small pile. On examining the rectum a small piece of fæces, the size of a flat bean, was found just inside the anal orifice, not only on one occasion, but whenever an

examination was made. If the fæces were removed before going to bed (the pruritus occurred more at night) the irritation did not occur. Remembering your plan of treatment with administration of small doses of aloes, I gave them, but without any success. On inquiry, I found that Mr. R.'s bowels were moved with great regularity every morning, and that the motion was not a formed one—at all events, not the last portion of it. Upon this I reasoned that Mr. R.'s failure to entirely empty the bowel was due to the want of solidity of the motion not giving the bowel anything to contract upon. I therefore ordered him occasional doses of lime water to be taken sufficiently often to cause a formed motion. The result was very satisfactory. The bowel contracted on and expelled the solid motion completely. I think, in our desire to keep the bowels regular, we overlook the disadvantages of fluid instead of a solid motion."

Before concluding this lecture, I will mention a plan which I have found of very great service either in cases of cardiac disease, in fevers, or in conditions of extreme weakness where the feebleness of the heart made it very advisable that the patient should use as little exertion as possible. It frequently happens that patients strongly object to use a bedpan, and assert, sometimes with a considerable amount of truth, that they are unable to empty the bowels satisfactorily in the recumbent posture. A great deal of the risk connected with the use of a commode arises from the fact that when they use it they generally have to get out of bed and into it again. In these cases I adopt a plan, which I suppose many others have used also, but which I have never seen described. It is to have a strong platform made of rough wood, of such a height that the commode, when placed upon it, is level with the bed. A large, strong packing box, sawn to the proper height, may answer, or, if this is not at hand, any carpenter can put together a rough but strong construction of the kind needed. If nothing else is at hand, the drawer of a wardrobe turned upside down will do, but it must be supported from below by books or pillows piled up within it, so as to prevent the bottom of it from breaking through, as usually it is not strong enough to support the weight. The commode being pushed close to the bedside, the patient has simply to slew himself round upon it. The body is raised, and the legs are allowed to hang down. After the bowels have been evacuated, he is rolled round on his side into bed. During the whole process no change is ever made in the level of the patient, the only alteration being in the relative position of the trunk and legs with reference to his pelvis. Perhaps some of the new devices for raising the patient bodily from the bed might do better than this, but generally they are not at hand, and the plan which I have mentioned can always be followed, as some kind of platform sufficiently strong to serve the purpose can be made with boards, boxes, or footstools in every house.

In this lecture I have not attempted to go over anything like the whole field which its title would cover, because I found this to be impossible in the time at my disposal. I have, therefore, attempted to deal only with such points as have more of a practical than a theoretical interest. In concluding it, I thank you most sincerely, Mr. President and gentlemen, for the great honour you have done me in asking me to deliver this lecture, and to beg you to forgive the deficiencies in it, of which no one is more conscious than myself.

The Four Years' Curriculum in America.—In addition to the University of Pennsylvania, which, as already mentioned, now stands pledged to a four years' curriculum, other American schools have adopted the same enlightened policy. The authorities of the Medical School of Harvard University have passed a resolution that, in the case of all students entering on or after September, 1892, the regular course necessary to obtain the M.D. degree shall be four years. The Kansas City Medical College has recently decided to make a four years' curriculum, "with three full courses at college," compulsory.

Lady Lucy Hicks-Beach opened, on June 10th, at South Grove, Highgate, a home for children in connection with the Santa Claus Society. The home is intended chiefly for cases of hip and spinal diseases, and for those children who, though otherwise well enough to go to a convalescent home, require slight surgical treatment and nursing.

LECTURES
ON
GOÎTRE: ITS PATHOLOGY, DIAGNOSIS, AND SURGICAL TREATMENT.

Delivered at the Royal College of Surgeons of England.

By JAMES BERRY, B.S., F.R.C.S.,

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Lecture II.

Parenchymatous Goitre, Treatment of.—Internal Remedies—External Applications—Injection, Dangers of—Seton—Ligature of Thyroid Arteries—Division of Isthmus—Extirpation Total; Partial—Methods of Performing Extirpation—Skin Incision—Treatment of Veins, Muscles, Capsule, Arteries, Isthmus—Aseptic Treatment of Wound—Importance of not Irrigating—Suture—After-treatment—Mikulicz's Resection—Kocher's Resection—Comparison of—Advantages of Each—Results—Resection of Isthmus.

[It was stated that this lecture would be devoted to the treatment of parenchymatous goître. After some remarks upon internal remedies and external applications suitable for this variety of goître, the subject of injection was discussed.]

The object which is aimed at in the injection of a parenchymatous goître is to cause sufficient inflammation to obliterate some of the minute vesicles of the gland. Possibly also there is some direct solvent action upon the colloid contents of the vesicles which may promote absorption. It is obvious therefore that parenchymatous and cystic goîtres are more readily amenable to treatment by injection than the harder and more solid forms.

The materials that have been used for injection are very numerous. That which occupies the foremost rank is undoubtedly iodine. Alcohol, arsenical solutions, and those of perchloride of iron, osmic acid, iodoform, and others, have been recommended, but probably none of them are superior to iodine. The best directions that I know of for the performance of the injection of iodine are those given by Dr. Felix Semon;[1] they are too well known to require further mention. That the directions given by him are excellent, there can I think be but little doubt, and anyone who wishes to treat a goître by injection of iodine cannot do better than follow them. It is certain that in a large proportion of cases a successful result ensues, but there is equally little doubt that very often the treatment is unsuccessful. A large number of cases have been recorded in which various complications, even death itself, have followed the operation. The injection may, and probably does, at first produce increased swelling of the gland; this may cause dyspnœa or aggravate any that may be already present. The injection may cause suppuration, which in its turn may lead to death. Many such cases have been reported to me; most of them have not been published. In those the evil results were due to inflammation and suppuration in the neck, and death occurred after several days, weeks, or months. A considerable number of cases have, however, been recorded in which death ensued much more speedily, before suppuration had had time to manifest itself.

Dr. Rose,[2] formerly of Zürich, says that he himself knows of not less than six instances in which surgeons have lost healthy patients from injecting iodine into a goître, death occurring either upon the operating table or within a few hours after the injection. Dr. Seitz,[3] in a monograph upon death from goître, mentions the following cases:

The first is that of a woman under the care of Dr. Schwalbe: the injection of ten drops of tincture of iodine into a small goître caused, after a few minutes, numbness, and then paralysis of the left arm and leg, partial loss of speech, slight

[1] Heath's *Dictionary of Surgery*, Art. Disease of Thyroid Gland.
[2] Der Kropftod und die Radicalcur der Kröpfe, *Arch. f. klin. Chir.* Bd. xxii.
[3] Der Kropftod durch Stimmbandlähmung, *Arch. f. klin. Chir.*, xxix, i.

facial paralysis, general convulsions, and death at the end of twenty hours.

Another case is that of a young woman whose goître, after an injection of iodine, rapidly became greatly swollen, and in three days she was dead. In the third case the patient, immediately after the injection, complained of pain in the right eye. In a few minutes the right upper and lower eyelids became œdematous, the patient began to sway about in her chair, then became unable to speak, lost consciousness, and died eight hours afterwards.

In 1884 Dr. Krieg[4] related to the Medical Society of Stuttgardt a case in which sudden death had followed the injection of two drops of tincture of iodine into a goître.

These cases show pretty clearly that injection of iodine is an operation by no means devoid of danger, even when performed carefully, and when only a small quantity of fluid is employed.

A method of treatment formerly much in vogue, but now happily becoming obsolete, is the introduction of a seton. This is passed through the substance of the gland, and left *in situ* for days or weeks. Usually the goître shrinks in size, and may become permanently cured. The method is obviously open to two objections. First, there is considerable danger of transfixing some large vein and causing serious or fatal hæmorrhage. Secondly, there is very serious risk of setting up inflammation in the goître and in the cellular tissues of the neck; this in its turn is very liable to lead to pyæmia. A case illustrating the latter objection has recently been communicated to me by a surgeon under whose care the patient was. A young man had a goître, probably parenchymatous in nature, into which a seton was inserted on account of the dyspnœa from which the patient was suffering. Suppuration in the mediastinum and neck quickly ensued; necrosis of several rings of the trachea took place, and the patient died. The seton is probably more efficacious in the case of a cystic goître than in that of a parenchymatous one. In the former case the fluid would drain away by the side of the seton. The method is, however, in my opinion, too dangerous to warrant its recommendation for any kind of goître.

Ligature of the thyroid arteries has been recommended and performed many times, in the hope that by cutting off the supply of blood the size of the goître might be diminished. [Some of the earlier advocates of the operation were here mentioned and reference made to the twenty-one cases collected by Günther.] Recently the operation has been revived by Wölfler, Billroth, and others, who recommend that not only the superior but also the inferior thyroid arteries should be tied. By this means the blood supply to the gland is cut off far more effectually than could possibly be the case after ligature of the superior alone, which are considerably smaller than the inferior.

Ligature of the superior thyroid arteries was recommended largely on the ground that it is a simple operation and tolerably easy to perform. The same argument can, however, hardly be urged in favour of ligature of the inferior thyroid arteries. From their deep situation—lying as they do upon the vertebral column at the back of the goître—and from their close proximity to the sympathetic nerve, it is evident that the operation is one of much difficulty, in fact it may be much more difficult than removal of a goître.

The most valuable information upon the subject of the simultaneous ligature of both superior and inferior thyroid is to be found in a recent paper by Rydygier, of Cracow.[5] He publishes sixteen cases in which he had performed the operation. In the first he tied the superior and inferior thyroid arteries on the right side of the body only. In all the other cases the four arteries were tied at one operation. All the wounds, with one exception, were treated without drainage. The results were excellent in all cases except two; one of these was that in which the arteries of the right side only had been tied; in this case only slight diminution occurred in the size of the goître, which was a parenchymatous one. The other case was one in which after operation one lobe only of the gland diminished in size, and it was then discovered that the opposite lobe contained a cyst. This was subsequently enucleated and the patient made a good recovery. In one case only did troublesome hæmorrhage occur, but the patient made a good recovery and the goître diminished considerably in size. Rydygier discusses the question whether it is enough to tie the arteries on one side of the gland only, and expresses himself strongly in favour of the simultaneous ligature of all four arteries. Whether the operation can lead to the subsequent occurrence of cachexia strumipriva is a point upon which a definite answer can scarcely as yet be given. The patients had not been watched for a sufficient length of time—most of them for a few months only after the operation.

The cases that are most suitable for this mode of treatment are undoubtedly the early cases of parenchymatous enlargement. Cases of cystic, fibrous, or fibro-adenomatous goître are obviously less likely to derive benefit from it. The so-called vascular variety, if it exist at all, is the one in which the best results might be expected from the operation.

[The subject of division of the thyroid isthmus[6] was next discussed. A short history of the operation was given, and twenty cases, mostly unpublished, that had been collected from various sources were mentioned. In four of these death had occurred; in eight the dyspnœa was more or less completely relieved; in some cases the swelling and the dyspnœa had returned a few months after the operation. The "atrophy" of the lateral lobes that often follows the operation was mentioned, and an explanation offered. Two questions—the mode in which the relief from the dyspnœa is effected, and the permanency or otherwise of the diminution in size of the goître, and with it the relief from the dyspnœa—were then discussed at some length. Finally, the conclusions were as follows: That division of the thyroid isthmus may relieve dyspnœa mechanically by allowing the two halves of the goître to separate, but that it more often does so by draining the gland of its colloid secretion. That the relief afforded may be permanent, but that frequently the goître reappears when the wound has healed, and the secretion is again pent up in the gland. That in many cases in which very urgent dyspnœa is present, a mere division of the isthmus will not relieve the dyspnœa sufficiently quickly, and it is necessary to do some further operation, either tracheotomy, or, much better, removal of some considerable portion of the goître.]

I come now to the last, but not the least, important method of treating parenchymatous goître, namely, extirpation of a portion of the gland. I propose to describe briefly the various operations that may be performed for the removal of parenchymatous goître, illustrating the subject by operations that I have myself performed, that I have seen performed by other surgeons, and that have been recorded in surgical literature. It must be remembered that I am now speaking of parenchymatous goîtres only, and not including cysts or solid tumours of the gland. But I have already pointed out that the various forms of goître run very much one into another. Small cysts and solid tumours are often found in otherwise parenchymatous goîtres; so it must be understood that in using this term I mean goîtres which are in the main parenchymatous, which consist of a fairly uniform, bilateral enlargement.

1. *Total Extirpation* is an operation which is not now to be recommended, on account of the grave after-results which have been shown to follow, and of which more will be said in the next lecture. Its performance differs in no way from the proceeding next to be described, except in that both halves of the gland are removed.

2. *Partial Extirpation.* A. *Extirpation of one Lobe.*—[The choice of an anæsthetic and the position of the patient during the operation were briefly discussed. Stress was laid upon the importance of ascertaining before the operation the position in which the patient can breathe most comfortably, and of having the head held in that position by an assistant throughout the operation in order to diminish the risk of the trachea, which is often greatly narrowed, becoming kinked and occluded. The great importance of having the skin thoroughly aseptic was mentioned].

Many varieties of skin incision have been employed. The choice depends largely upon the size and shape of the goître.

[4] *Med. Corr. Bl. d. Württ. aerztl. Landesver.*, Stuttg., 1884, liv, p. 115.

[5] *Wien. med. Wochenschr.*, 1888, xxxviii, 1633; and *Centralb. f. Chir.*, Leipzig, 1889, xvi, 241.

[6] This subject has already been more fully discussed in a paper read by me at Birmingham in February, 1890. See *Birmingham Med. Review*, June, 1890.

The four chief varieties are—1, the vertical; 2, the oblique; 3, the angular or curved; 4, the transverse. The last has recently been introduced by Kocher on the ground that it coincides with the natural folds of the skin, and thus renders the scar less conspicuous. It is not generally employed, as it renders the operation much more difficult, and the advantage of it is not great. I have practised all these incisions except the last. The vertical incision is most suitable for small goitres situated near the middle of the neck. The oblique is that which I have most often used, and consider the best for nearly all cases. I have only once employed the angular; it gives a little more room than the others, and may occasionally be required for very large goitres. But in two operations of my own in which large goitres, each weighing more than a pound, were removed, I found that the single oblique incision was sufficient.

The infra-hyoid muscles are often much thinned and spread out over the surface of the goitre, and on more than one occasion I have seen these mistaken for the proper capsule of the goitre. Care should be taken, whenever possible, to draw them outwards and not inwards, in order to avoid injuring the nerves which enter their outer borders. If these nerves be divided the muscles atrophy, and afterwards cause an unsightly hollow in the neck. For these reasons it has been recommended that the muscles should be divided when necessary at their upper ends near the hyoid bone, and thrown outwards; they can then afterwards be reunited without much harm having been done to them. Most of my own operations having been done upon large goitres or goitres producing much dyspnœa, I have not usually thought it prudent to spend time over a comparatively unimportant point like this, but have just cut the muscles where it was most convenient to do so.

[The capsule of the gland and the network of large veins immediately beneath it were next described, and the importance of keeping outside the capsule to avoid hæmorrhage was insisted upon. The position of the superior thyroid artery and the superior, middle, inferior, and accessory thyroid veins was explained, and it was recommended that all these vessels should be carefully isolated just outside the capsule, and tied before being divided. The advantage of tying the superior thyroid artery high up before it gives off a large branch often found running down the back of the gland was mentioned. In one of the lecturer's cases some difficulty had been experienced in securing this artery because the tumour was very large, reaching nearly to the lower jaw, and the patient's head could not be extended much for fear of increasing the dyspnœa; the artery had to be tied, therefore, at the bottom of a rather deep hollow.]

In dissecting towards the outer border of the goitre, great care should be taken to avoid wounding the internal jugular vein, which is frequently expanded over the side of the tumour, and may easily be wounded unless caution be used. It frequently lies in front of, or even internal to, the carotid artery, and the pulsation of this vessel is consequently, in these cases, not always a safe guide to the position of the vein.

The superior thyroid artery and all veins having now been tied, the tumour is if possible to be lifted out of its bed and turned over towards the opposite side. Search should then be made for the inferior thyroid artery, the largest artery supplying the gland. [The two chief methods of dealing with this artery, by tying the branches close to the gland, or by tying the main trunk at some little distance from it, were then discussed; the close relation of the artery to the recurrent laryngeal nerve and the danger of wounding the latter were mentioned, and evidence adduced to show that the exact position of the nerve was not constant; sometimes it lay in front of the artery, sometimes behind it, and often between its branches. The anatomical arrangement of the fascia at the back of the gland was described, and it was pointed out how this had often led, during operations for goitre, to an unexpected wound of the trachea. The treatment of the isthmus was then described, and it was recommended that this should be divided with knife or scissors, if possible after the rest of the lobe had been isolated. When the tumour, however, was fixed, it was considered better to divide the isthmus at an earlier stage of the operation. The use of one ligature for the whole isthmus was deprecated, and preference expressed for the practice of tying the vessels separately.] The goitre having been separated from all its connections is now removed. Any bleeding that is going on—and there is usually little or none—must be arrested by ligature or torsion.

With regard to irrigation of the wound, it cannot be too strongly urged that, except in rare cases, this should not be done. Upon this point Kocher, Niehans, and all who have obtained the very best results, express themselves strongly. It is aseptic and not antiseptic treatment that is desired in the removal of goitre. The wound produced by the operation is a perfectly clean one, and does not require any further cleansing beyond what is afforded by laying in it a clean sponge that has been wrung out of very weak sublimate solution. Washing out the wound with solutions of carbolic acid or other antiseptics does no good, and certainly may cause damage to the nerves and other delicate tissues exposed. I ought perhaps to explain that during the operation very little of the wound need be exposed at any one time. While the operator is working at one part of it, his assistant should take care to cover the rest of it with sponges. This not only keeps the wound clean, but also checks hæmorrhage. In my own operations I have never washed out the wound with any antiseptic lotion, and have never had any suppuration except in one case, in which a few drops of pus formed about ten days afterwards, when nearly all the wound had healed by first intention. In some of Niehans's earlier cases, in which he did irrigate the wound, he found that hoarseness was a symptom present for several days after the operation. This disappeared when he abandoned the practice of washing out the wound. This transient hoarseness was undoubtedly due to the deleterious effect of the solution upon the recurrent nerves. The wound having been wiped and dried by means of a sponge should now be sewn up. My own practice is to leave a sponge in the wound until all the deep sutures have been inserted, just as is usually done in ovariotomy. The sponge is withdrawn just before the sutures are tied, and then pressure is immediately made and kept up by the assistant by means of a sponge applied outside. I think this small point is worthy of mention, since it tends to prevent blood from accumulating within the wound, and so impeding primary union, which is all-important. The form of deep suture that I usually employ has been described elsewhere by me.[7]

[The question of drainage was then discussed, and it was stated that in fifty cases of excision of goitre performed by Niehans at Berne from May, 1887, to March, 1889, drainage was employed in two cases only. The dressing of the wound was then briefly described, and it was recommended that above the first layer of dressing one or more large sponges should be placed in order to keep up elastic pressure for the first day or two. The bandages should be applied so as to fix head, neck, and shoulders immovably, and the patient placed in bed in a nearly sitting position; this position favours drainage when necessary, and is also more comfortable for the patient. Further, stress was laid upon the advisability of impressing upon the patient, before the operation, the importance of his keeping absolutely still for the first three days afterwards.]

A certain amount of dysphagia is usually present for the first few days, but soon passes off. In some cases the dressings have been left undisturbed for three days, and then drainage tube, sponges, and stitches were removed all at once. In my later operations, however, I have preferred to change the dressings on the first day after the operation, taking away the drainage tube, the deep stitches, and some or all of the sponges. The superficial stitches I remove on the third or fourth day, when the wound is quite healed. I generally allow the patient to get up on to a sofa on the fourth or fifth day, and at the end of a week all dressings may usually be discontinued.

I shall now describe briefly a case in which one-half of a large bilateral goitre was removed by an operation performed conjointly by Dr. Edward Jessop and myself. The goitre was not a parenchymatous one, but as the operation was conducted in the same manner as that for removal of one lobe of a parenchymatous goitre, the description is not out of place here.

[7] See a paper by Dr. Edward Jessop and myself in vol. xxv of *St. Bartholomew's Hospital Reports*, 1889.

Case I.[3] *Large Bilateral Goitre, much Dyspnœa: Removal of Left Lobe: Healing by Primary Union: Complete Recovery.*—J. W., aged 27. He had had a goitre as long as he could remember, but it had not given him any trouble until seven years before he came under our observation. In the last year it had grown considerably, and for seven months he had been quite unable to do any work on account of the dyspnœa from which he suffered. This was so great that he was in constant dread of suffocation; he was unable to lie down, and had to sleep sitting nearly upright in bed. He had a good deal of dysphagia, and complained of pain in the neck, probably due to the size and weight of the tumour. (See Fig. 3.)



Fig. 3.—J. W. before operation.

On April 15th, 1888, the left half of the goitre was removed. A single oblique incision was made, the muscles were reflected, the superior thyroid artery and thyroid veins were isolated, tied, and then divided, care being taken not to open the capsule. The tumour was then turned over, and the branches of the inferior thyroid artery tied close to the tumour. Care was taken to avoid the recurrent nerve, which was not even seen. The isthmus was divided last of all. The wound was dressed in the manner already described. I did not myself see the patient again after the operation, the after-treatment being carried out by Dr. Jessop. The subsequent progress of the case was thoroughly satisfactory. On the morning after the operation the temperature was 100°, but subsequently it was never above normal. The drainage tube and stitches were removed on the third day, when the wound was practically healed. On the fourth day the patient got up, and after the eighth day all dressings were discontinued. The condition on the 12th day after operation is shown in Fig. 4. The relief from the symptoms was most marked. Since the operation he has been able to do hard manual labour without any trouble, and when I last heard of him, eighteen months after the operation, his health was excellent, and the relief from his symptoms had been permanent. The tumour after removal weighed 18 ounces.

I have entered at some length into the details of the operation of extirpation of goitre, and have described many points that may perhaps seem almost trivial. But I cannot help thinking that it is largely by attention to small details that success is to be attained. When watching the practice of Swiss surgeons, nothing struck me so much as the extreme attention paid by them to every minute detail of their operations, and I think it is to this that they owe the truly marvellous results which, as I shall point out in the next lecture, some of them have attained in their operations for goitre.

The second method of removing parenchymatous goitre that I shall now briefly describe is:

B. *Mikulicz's Resection.*—This name has been given to an operation which is particularly suitable for cases of parenchymatous goitre. The object of it is to remove the chief part of one or both lateral lobes and to avoid all risk of wounding the recurrent laryngeal nerves. At the same time enough thyroid tissue is left behind to carry on the function of the gland. The lateral lobe is first isolated as far as possible in the ordinary manner, the vessels being isolated, tied, and then divided. Then that portion of the tumour which is in contact with the front and sides of the trachea is freed by means of scissors, care being taken not to go too far back and thus injure the recurrent nerve. Eventually the whole tumour is attached only to the side of the trachea and œsophagus just where the inferior thyroid artery enters and where it is in contact with the nerve. Upon the pedicle thus obtained a row of catgut ligatures is put and the rest of the tumour then cut away. A lump of gland about as large as a chestnut is thus left behind, in the angle between the trachea and œsophagus. Union takes place by first intention and the patient is well in a few days.

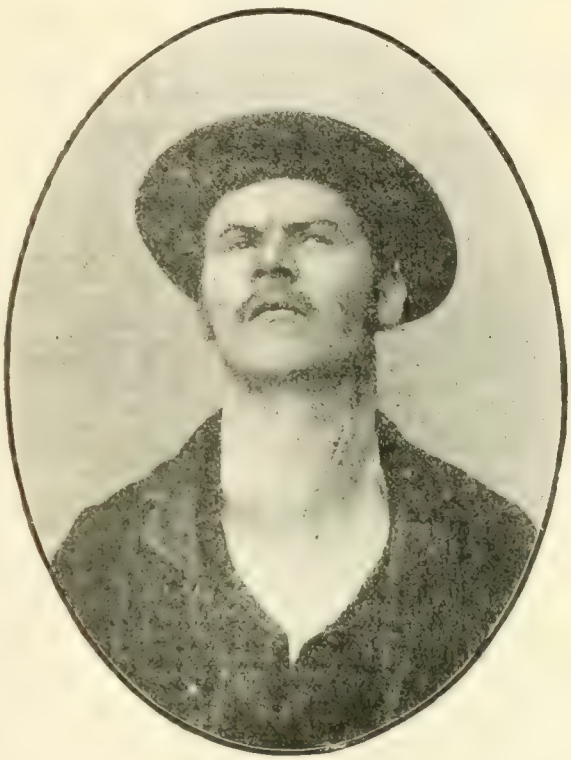


Fig. 4.—The same, twelve days after removal of the left half of the goitre.

Professor Kocher has described two operations similar to that of Mikulicz and to which he has given the names of resection-enucleation and resection-extirpation, or simply resection. Resection-enucleation is performed by Kocher as follows: He first isolates the lateral lobe in the usual manner, as in extirpation. Then the isthmus is cut through vertically and the vessels at its upper and lower borders are

[3] For further details of this case see *St. Bart. Hosp. Reports*, vol xxv.

tied. "Then with blunt instruments or with scissors and knife the glandular capsule is separated from the inner surface of the tumour until the posterior surface has been reached outside the region of the recurrent nerve. This spot must be measured accurately, since the nerve is sometimes drawn out of its normal groove between the trachea and œsophagus and is bent over the posterior surface of the tumour." [A specimen illustrating this point was shown.] "The glandular capsule is then again cut vertically. It is especially important that the section on the inner side should be made well above the level of the cricoid cartilage so as to avoid any possibility of wounding the recurrent nerve." The above description applies to the operation as performed for a more or less circumscribed tumour. In the next lecture I shall have more to say about such tumours and their treatment by enucleation. When there is no such tumour but the whole gland is more or less diseased, as in parenchymatous goitre, then no separation of the capsule is made, but the section is carried directly backwards through the gland. This is resection-extirpation.

Comparing Kocher's with Mikulicz's operation it will be seen that both agree in leaving intact that portion of the gland that is nearest to the recurrent nerve. But the former surgeon avoids separating the gland from the surface of the trachea, and especially refrains from tying up masses of thyroid tissue—a practice which he, quite rightly I think, strongly condemns. He says that, not only does it tend to prevent that primary union which is so important, but that the application of the ligatures is apt to endanger the safety of the nerve. This may occur even when the greatest care is taken. With reference to this point Kocher says that formerly, when he had had less experience in removing goitres, he had sometimes, when attempting to remove one, been obliged, on account of bleeding or dyspnœa, to tie the pedicle in one or more masses, in order to cut short the operation. But he had noticed tolerably often that hoarseness from paralysis of the vocal cord was produced at the moment of applying the ligature.

The chief advantages of resection are: (1) That it enables the operator to remove, when necessary, both lobes of a goitre and yet leave behind sufficient gland tissue to prevent the supervention of cachexia strumipriva. (2) By leaving untouched that portion of gland which covers the recurrent nerve it lessens the risk of injuring the latter. When compared with intraglandular enucleation it has the advantages that (3) it avoids the severe hæmorrhage that often occurs in the separation of the tumour from its capsule, and that (4) the capsule of functionally useless gland tissue is not left in the wound. Thus the very deep sutures necessary to bring the sides of this capsule into contact to secure primary union may be avoided.

Details of the results of Mikulicz's operation have been published in a recent paper by Trzebicky.[9] He records twenty-three cases. The patients were nearly all young subjects. In all cases dyspnœa was present; in many it was very severe. One case proved fatal from recurrent hæmorrhage; in one tracheotomy had to be performed, but union by second intention, nevertheless, took place without trouble; in one other case the wound healed in the same manner. In the remaining twenty cases, with the exception of two in which a little superficial suppuration took place, healing by first intention was perfect. [Further details of the cases and of the results obtained were then given.] The dyspnœa in all cases disappeared almost immediately after the operation, and, so far as is known, did not return. In no case was there any report of a return of the goitre in that part of the gland that was left behind, although many of the cases were examined personally, and in many others information upon this point was obtained from the local doctors. In no case did any impairment of general health (cachexia strumipriva or tetany) follow the operation. Of the fourteen patients on whom the operation was performed on both sides, twelve are known to have remained in good health.

The following case is one in which I performed a modification of Mikulicz's operation:

Case II. *Parenchymatous Goitre: Dyspnœa; Modified Mikulicz's Operation; Primary Union; Complete Recovery.*—A. H., aged 15, kindly sent to me by Dr. Lewis Jones. For four years she had had a parenchymatous goitre which produced considerable stridor and dyspnœa. After a prolonged but ineffectual course of medical treatment, an operation was performed similar to that of Mikulicz, but differing from it in that the isthmus was not divided, and that no portion of the gland was tied *en masse*. Practically the whole of the left lobe was removed with the exception of a small lump in the dangerous region near the larynx. The patient made a rapid recovery; the highest temperature after the operation was 99°. From the seventh day after the operation all dressings were discontinued, the wound having healed by first intention throughout. On the thirteenth day the patient went home quite well, and entirely relieved of her symptoms.

The last method of removing parenchymatous goitre is:

c. *Resection of the Isthmus.*—About this it is not, however, necessary to say much more, since the operation is very similar to division of the isthmus already described. Instead, however, of merely dividing the isthmus after the ligatures have been applied on either side, the intervening portion of the gland is cut away. I cannot say, however, that I have myself any great liking for the operation. In my opinion it does not usually remove enough of the goitre to relieve the dyspnœa permanently, and the operation is by no means devoid of risk. I have already pointed out some of the objections to mere division of the isthmus, and some of these hold good also for the larger operation of resection of the isthmus. In connection with this subject, I will describe the following case.

Case III. *Parenchymatous Goitre: Severe Dyspnœa; Removal of Isthmus and the Lower Part of each Lateral Lobe: Complete Recovery.*—P. T., aged 18. For eighteen months she had had a parenchymatous goitre which produced loud stridor and great dyspnœa, and quite prevented her from following any occupation. Medical treatment had been employed without any beneficial result. In September, 1889, I performed an operation in some respects like resection of the isthmus, but differing from it in that the lower half of each lateral lobe as well as the isthmus, were removed. No ligatures were applied to the gland *en masse*. On the tenth day the patient was allowed to get up, but convalescence was subsequently delayed for a few days by a slight amount of suppuration at one corner of the wound. She went home at the end of a month, completely relieved of all her symptoms, and has remained perfectly well and quite free from dyspnœa ever since. This is the only case in which I have had any suppuration after removal of a goitre, and in it the amount was very slight.

[9] R. Trzebicky, *Arch. f. klin. Chir.*, 1888, xxxvii, 495

PURE CULTIVATION OF THE LEPROSY BACILLUS.

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and
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In our previous article we expressed the hope that it might be possible to find out the conditions under which our bacillus, which we ventured to consider to be the true bacillus of leprosy, would acquire a resistance against acids, such as the bacillus of tuberculosis possesses. There seems to be no doubt that the characteristic reaction of the leprosy and the tubercle bacillus depends on certain chemical changes. The experience we had with our own cultivations only confirmed this idea. For here we have a bacillus which at one time reacts typically according to the Koch-Ehrlich method of staining, but on continuing to grow it on agar-agar it soon loses its resisting power against acids almost completely. If transferred to gelatine and bouillon it is found that bacilli taken from certain regions of the nutrient medium retain the fuchsin well after being passed through hydrochloric acid. It is also noticed that the bacilli which are taken from a "mucoid" layer of the bouillon or gelatine react best.

At the time we published our first communication we expressed a certain amount of disappointment, seeing that we were unable to obtain uniform results. For in the absence of animal experiments the staining reaction can be the only criterion. But now we have also succeeded in finding out the conditions under which our bacillus will resist the de-

colorising action of acids, and we may safely say that our bacillus in almost every detail corresponds to the leprosy bacillus in the body; and coupling this with the fact that in two out of three cases examined we got identical results, and that the method used was one which held out most hope for success, we do not hesitate to consider our artificially cultivated bacillus to be the true bacillus of leprosy.

We tried first of all eggs, which were prepared and inoculated in the manner laid down in Hueppe's work *Die Methoden der Bakterienforschung*—a method by which Professor Max Wolff, of Berlin, succeeded in cultivating the actinomyces. This gave us no result, as hardly any growth took place, most probably due to the deficiency of oxygen, for we had found that our bacillus is very aërobic. Acid gelatine and agar-agar likewise were of no avail.

On returning to our gelatine cultivations the following was observed. As described in our first communication, after inoculating a gelatine peptone tube the first thing noticed is the formation of a characteristic skin floating on the surface of the liquefied gelatine. The gelatine liquefies quite uniformly and slowly. The liquid gelatine under the pellicle is "stringy" and "mucoid." When the growth is two weeks old an opaque whitish sediment will be observed at the boundary line between the liquefied and non-liquefied gelatine. On removing material from this sediment it was found so mucoid as to be removed with difficulty. Heating the cover glasses carefully, and staining them according to Ziehl's method, we found that all bacilli retained the stain most beautifully. The same result was obtained with all the tubes examined, amounting to over twenty.

There can thus be no doubt that our bacillus also reacts like the leprosy bacillus, and in fact it only differs from it in this, that it takes up methyl-blue much more readily than the leprosy bacillus from tissues does. Staining the bacilli from the above sediment according to Gram's method, we have also obtained pictures showing the beaded appearance well, so that in this again our bacillus agrees with the leprosy bacillus.

A successful animal experiment would at once decide whether our claims are justified. So far, however, they continue to be in vain, and perhaps also but little result may be expected from them; for leprosy is so exclusively a human disease that one can hardly hope to produce the disease in animals. So far Melcher and Ortmann have been the only ones who succeeded in causing a dissemination of the leprosy bacillus after implanting a small nodule of leprous tissue into the anterior chamber of a rabbit. We must therefore, for the present, depend on morphological and tinctorial characters. Now as far as these are concerned, we have brought also the last proof that our artificially cultivated bacillus is identical with the leprosy bacillus.

Several questions naturally arise in connection with the life-history of this bacillus. First, the changes in the staining reactions tend to decrease the value of such methods as are generally used in the diagnosis of the tubercle or leprosy bacillus. However, this is a point of only secondary importance, as other means exist which will enable the bacteriologist to differentiate a doubtful microbe.

The second question is, how are we to explain these changes in staining during the lifetime of one bacillus? As far as our bacillus is concerned, we can hardly doubt that the cause of the increased resistance against acids must be sought in the mucoid process initiated by the bacillus. On making careful preparations, it may be easily ascertained that many of the bacilli are enveloped in a capsule. This lends great support to Ehrlich's view with regard to the staining of the tubercle bacilli. The capsule would protect the bacillus from the decolorising action of the acids. In fact, we have found that, if we wish to bring out the shape of the bacilli properly, we must at this stage of their development decolorise more vigorously.

We have so far called the changes "mucoid." Examining the liquified gelatine chemically, it has been found, as a matter of fact, to contain a considerable quantity of mucin body. This is all the more interesting, as, following the instructions of Hankin, we have succeeded in extracting a body from leper tissue, which, if not a mucin, is at least very closely allied to this class of organic compounds. On these points, however, we shall report at length at some future date. The object of this paper was to state the reasons which led us to believe that the bacillus cultivated by us is in reality the leprosy bacillus.

AINHUM ON THE WEST COAST OF AFRICA.

By CECIL DIGBY, M.D.,
Hednesford.

THE word "ainhum" signifies "to saw," and is applied by the Africans to a peculiar disease characterised by the formation of a constriction at the root of the small toe. The name of "sukha pakla," which means "dry suppuration," is applied to it by the Hindus. The disease has been observed in India among the Mahomedans and Hindus by Drs. Crombie and Wise; in Brazil among the negroes and creoles by Drs. Silva, Lima, and Seixas; and on the Gold Coast by Dr. Eyles among the Negroes.

The fifth toe is the one usually affected, but the disease has been once noticed in the fourth toe, and Dr. Eyles mentions a case in which the second finger was affected. It is mentioned as being symmetrical, but this is not usual, as out of twelve cases I have noted only two in which both feet were affected. The left foot seems to be more frequently attacked than the right, the disease occurring nine times out of twelve on this side. The race of negroes called Krumen who inhabit the coast about Cape Palmas, and who emigrate as workmen to the different stations along the coast from the Gambia to Fernando Po, seem to be particularly liable, as out of the twelve cases mentioned ten occurred in these people.

The disease has only been known to attack coloured races, and seems to occur solely in those who go about with their feet unprotected; it is worthy of note that the Krumen above mentioned have been wearing brass or copper rings on their fifth toes for generations. The nature of the soil inhabited by those affected may bear some relation to the disease, as the sandy districts of West Africa produce most of the cases. I have only noticed the disease in middle and advanced life, and it certainly occurs more frequently in men than in women, only three of the above cases occurring in the latter. Occupation I believe exerts a considerable influence in producing the disease; those men who are labourers and who are constantly employed carrying weights being most frequently affected. In fact, a combination of the above influences would materially assist in producing the constriction, irritation, and hypertrophy which characterise the disease. Dr. Seixas mentions that the disease occurs among those wearing boots as well as those who go barefooted; but I think this can be accounted for by the fact that natives who do wear boots or shoes get rid of them on every opportunity.

The disease begins by an extension in depth of the digito-plantar furrow, which at the same time extends round the sides of the toe, and ultimately joins on the dorsum, being accompanied by hypertrophy of the toe. Both these processes advance until nothing is left but a small fibrous pedicle attaching a ball of hypertrophied tissue to the foot. On section, the parts at the distal end of the toe may present a normal character, but on passing towards the furrow, the cuticle and true skin are seen to be hypertrophied, the fibrous tissue is increased, and eventually replaces the bone, which undergoes a process of rarefying osteitis.

Dr. Eyles has carefully investigated the histology of the disease, and accounts for the formation of the furrow as follows: there is a direct ingrowth of epithelium, with a corresponding depression of the surface due to very rapid hyperplasia, which pushes down and strangles the papillæ, thus cutting off the blood supply from the epithelial cells, and causing them to undergo a horny change, while the increased pressure sets up vascular changes which influence the hypertrophy of the more distant portion of the toe.

Accompanying the constriction is often observed a small ulcer in the bottom or side of the fold; it is not a constant phenomenon, and does not occur early in the disease, but arises from direct injury subsequent to the toe becoming unmanageable, and from dirt or sand lodging in the furrow. It is the pressure on this ulcer that gives rise to the great pain sometimes complained of.

Ainhum is a disease of some years' duration, and is seldom seen in hospital early in its history, as patients do not apply for treatment until inconvenienced by the toe; this inconvenience arises from the attenuated pedicle being unable to support the toe, which consequently bends when taken off the ground, and is caught under the foot in walking, occasioning considerable pain, particularly in those cases where the ulcer is present. The duration of the disease has been given at from one to fifteen years; the former time is probably much too short. The disease causes no constitutional disturbance, and is looked on by the natives as such a slight ailment, that they will themselves perform amputation if the toe troubles them. When total spontaneous amputation occurs, the small wound left heals rapidly and naturally, leaving no remarkable appearance in the cicatrix.

RESECTION OF CARCINOMATOUS BOWEL PER RECTUM.

By H. W. PIGEON, M.A., M.C.Cantab., F.R.C.S.Eng.,
Assistant Surgeon to the Hull Royal Infirmary.

Mrs. A., aged 44, was sent to me by Dr. Goodworth, of Winterton. For four days she had had acute abdominal pain, tympanites, vomiting, constipation, and tenesmus, with escape of blood and mucus. Two inches inside the anus the apex of an intussusception was felt, with a mass of epithelioma involving two-thirds of the circumference of the bowel, and extending upwards for nearly 2 inches. She was sent into the Hull Royal Infirmary, and after consultation with my colleagues I decided to remove the growth and reduce the intussusception. Previous to the operation there was hardness of the muscles over the left iliac fossa and a quick thready pulse.

Under ether the intussusception was found to be about 5 inches long. The long tube was passed into the lumen for about 6 inches without finding any obstruction. The mass of bowel and growth was readily extracted from the anus, and the left forefinger was passed into the lumen of the intussusception. With a curved needle nine silk sutures were passed through the two layers of bowel wall from the outer mucous lining into the lumen, then to the outside again in the direction of the circumference, each suture overlapping the previous one for $\frac{1}{4}$ inch. A ring was thus formed, causing firm apposition of the serous surfaces 1 inch above the margin of the growth. The mass was then removed $\frac{1}{2}$ inch below the ring of sutures. On being returned into the rectum the intussusception rapidly receded out of reach.

Twenty-six hours after the operation, as the symptoms had not been relieved and no flatus or motion had been passed, ether was again given, and the abdomen opened over the sigmoid flexure. Gas escaped on opening the peritoneum, and pus welled up from the iliac fossa. The small intestines were distended, matted together, and firmly adherent over the sigmoid flexure, which could not be exposed. The wound was irrigated with boric acid solution, a Keith's tube put into the iliac fossa, and an artificial anus was made in the most prominent coil of the small intestine. The patient did not rally, but died in twelve hours.

Post-mortem Examination.—At the site of the resection the peritoneal surfaces were in close contact and there was no sign of inflammation. The bowel above was plugged with solid faeces for 6 inches; there was a collection of pus in the left iliac fossa, and the adjacent bowel was covered with tough lymph. The small intestines were firmly matted. No perforation was discoverable in the region of the sigmoid flexure. The artificial anus was found to be about the middle of the small intestine.

Remarks.—The toughness of the adhesions and the amount of pus showed that the peritonitis was of at least three days' duration. The absence of inflammation at the site of resection negatives the idea of extravasation at the time of operation. If the peritonitis had not previously existed, I see no reason why this method of operating should not have been successful.

REPORTS
TO THE
SCIENTIFIC GRANTS COMMITTEE
OF THE
BRITISH MEDICAL ASSOCIATION.

REPORT ON THE ACTION OF PANCREATIC AND RENNET EXTRACTS ON CASEIN.

By J. SYDNEY EDKINS, B.A., M.B.Cantab.,
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It has been a matter of occasional observation that milk will undergo clotting under the influence of pancreatic extracts. Besides this change, visible to the naked eye, Roberts has pointed out that though no actual clotting may occur, yet the casein in milk may undergo such an alteration by the action of pancreatic extracts that boiling will cause a curdling of the milk. Roberts applied to the casein when it had undergone this change the term metacasein. The experiments I have made indicate more clearly, perhaps, what this change is.

The existence of the metacasein was shown by Roberts to be merely transient. After the digestion of the milk with pancreatic extracts had lasted for a certain time, boiling a sample of the digesting mixture resulted in the formation of a few flocculi of heat-coagulated material. Later, this formation of coagulum became more marked, and after reaching a maximum gradually lessened till, finally, boiling produced no apparent result.

My earlier experiments were directed at ascertaining whether this metacasein was to be regarded as simple casein precipitated by the combined effect of heat and free fatty acid formed by the fat-splitting ferment of pancreatic extracts. I was able, however, to obtain specimens of pancreatic extracts which had lost their piolytic properties (the ferment determining these properties being, as pointed out by Grützner, by no means durable), and milk when treated with this form of extract caused the characteristic change to occur. I was able to ascertain that neither before nor after boiling was there any alteration of reaction in milk, alkaline at the commencement of the experiment. Since, moreover, pancreatic extracts lost their power if subjected to heat, it appears that the result was due to some ferment of the pancreas. Certain influences affect this change in the casein, most important being the presence of neutral salts. A small quantity of sodium chloride added to milk will considerably hasten the appearance of the metacasein reaction. Free acids and alkalies appear to have very much the same effect upon the ferment determining this change as upon the proteolytic ferment.

I next attempted to ascertain what relation there was between this metacasein-forming ferment and the pancreatic rennet ferment that has been previously described. It was first necessary to obtain some more exact information upon this latter ferment. Not every specimen of pancreatic extract will produce clotting of milk, and it was first necessary to see what circumstances determined the action. I found first that, taking a specimen of pancreatic extract which caused clotting when added in definite proportion, if this were added in too large an amount, no clotting occurred. Such clots as do occur become later perfectly liquid. If the milk be but slightly diluted, the probabilities of a clot occurring are much decreased. It has been pointed out that brine extracts are very much more potent in causing a clotting than are most other forms. This is simply the effect of the concomitant addition, with the extract, of neutral salt. If to specimens of milk, not clotting by the action of extract, sodium chloride be added to bring the total percentage of the liquid up to 5 per cent., clotting will occur under the influence of the extract, unless this be extremely weak. This result cannot be explained by the supposition that really the proteolytic ferment is being retarded, and therefore the rennet ferment has freer scope, since up to this percentage sodium chloride has an accelerating power upon the proteolytic action of pan-

creatic extracts. If very large amounts of sodium chloride be added, however, the proteolytic ferment is eliminated as regards its action, and that before the rennet ferment. When by the influence of dilution clotting did not occur—in a sample of milk treated with pancreatic extract—still the metacasein reaction was evidenced.

If pure casein be prepared and dissolved in calcium phosphate, pancreatic extracts produce a very rapid clotting. If weakened by dilution, the process of clotting was lengthened, and during a precedent "cloudy" stage boiling caused a formation of flocculi of heat-coagulated material. If ordinary rennet be so weakened by dilution, or if milk be diluted with an equal volume of water, and the two added in definite proportion, no clotting of the milk may occur. Yet boiling a sample of such digesting milk may cause a considerable coagulum to form, quite comparable to that occurring under the action of pancreatic extracts. It seems, then, that the metacasein is to be regarded as casein changed by the action of a rennet ferment when subject to certain influences which prevented it assuming the clotting form. The most important influence in the case of pancreatic extracts is the concomitant action of the proteolytic ferment. Metacasein has other properties besides that of being coagulable by heat. It is precipitated in half-saturated solution of neutral salts and by a less percentage of free acid than is casein. These afford better methods of separating it from milk. The difficulties of ascertaining whether the whey proteid which appears simultaneously with the clotted casein when milk is subject to the action of rennet comes into existence at the same time as the metacasein are considerable. My experiments, however, indicate that it did. The nature of the reaction of metacasein, when separated and purified, suggests affinities to the insoluble form of casein or tyrein, as it has been called by Foster, rather than to unchanged casein.

(A fuller account of this work will appear shortly in the *Journal of Physiology*.)

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

DEATH DURING THE ADMINISTRATION OF CHLOROFORM[1].

J. C., aged 45, an assayer, a well-built, fairly strong-looking man, was admitted into the Swansea Hospital on June 9th, under the care of Mr. H. A. Latimer, for the purpose of having a sequestrum removed from his upper jaw.

On June 12th chloroform was administered on a Murray's inhaler by the chloroformist to the hospital, Mr. J. Kynaston Couch, who has asked me to report the details of the case, Mr. Latimer and the house-surgeon also being in the theatre during its administration. After taking the anæsthetic quietly for about five minutes, the patient began to struggle, and, becoming rather blue about the face, its administration was suspended till the colour improved.

On its resumption, the patient, after a few inspirations, commenced again to struggle, but not so violently as before. A little more chloroform was accordingly put on the inhaler; about two or three minutes later, during which the struggling still continued, the patient suddenly became rigid for a few seconds; then convulsive movements occurred in the limbs, the face became livid, the respiration shallow, and the pulse could not be felt at the wrist. The administration was at once stopped. Artificial respiration, with the head low down over the table and the tongue pulled well forward, was started; inhalations of nitrite of amyl and injections of ether were given. Artificial respiration was continued for three-quarters of an hour, during the first fifteen minutes of which the man gave an occasional gasp. The amount of chloroform given was between 50 and 60 minims. At the necropsy, I found the lungs moderately emphysematous, slight thickening of the segments of the mitral valve (no murmur during life), commencing atheroma at the base of the aorta, and the liver in the early stage of drinker's cirrhosis.

Swansea Hospital. T. CAMPBELL GREY, M.R.C.S., House-Surgeon.

[1] At an inquest held on June 13th, a verdict that deceased died during the administration of chloroform, according to the medical evidence, was returned, and the jury found no blame was to be attached to anyone.

INDURATION OF STERNO-MASTOID IN NEWBORN CHILDREN.[1]

Two cases of the above affection, which I have seen during the past few months, may be worth reporting on account of the infrequency of the complaint, its omission from the leading textbooks on obstetrics, and its liability to be mistaken for inflammation of the glands of the neck.

1. Mrs. X., primipara: breech presented dorso-anteriorly; female child delivered artificially, some force being necessary in extracting the head. Twenty-six days after birth the child was brought to me on account of a marked induration about the middle of the right sterno-mastoid, drawing the chin over to the left shoulder: both nurse and mother felt confident that it did not exist on the previous day. After a few weeks' gentle friction with some simple liniment, the abnormality was quite undiscoverable.

2. Mrs. Z., multipara, had given birth to the trunk of a breech-presenting male child on my arrival. Finding the cord still beating, I rapidly delivered the head, doubtless using considerable force in my anxiety to save the child's life. Twenty days afterwards I was asked to see the child on account of an induration of the right sterno-mastoid about its middle, pulling the skin over to the left shoulder. After five or six weeks of gentle rubbing with some liniment, the abnormality had quite disappeared.

In both these cases there was doubtless sufficient force used in delivery to tear some fibres of the sterno-mastoid, causing inflammatory effusion, and subsequently cicatricial contraction. In neither case was there the remotest suggestion of syphilis or other constitutional taint.

Kendal. W. RUSHTON PARKER, M.A., M.D.Cantab.

PUERPERAL FEVER: DEFECTIVE DRAINAGE.

MRS. P. was confined on November 10th. On November 14th the temperature was 102°, and she complained of sore throat; on November 17th she had a severe rigor, with great prostration, and a whitish patch was noticed on the right tonsil; on November 19th the throat was well, but another rigor occurred, and she became restless, tremulous, wandering, and her general condition alarming. There was no water closet in the house, but a drain in the basement, which when tested with smoke appeared to be properly trapped. The husband, two children, and the servant had suffered from sore throats about three weeks before. Believing from this that the drain was at fault, and that the patient would die if she remained in the house, I had her removed on a stretcher to a house on the opposite side of the street on the night of November 19th; on the following day the temperature had fallen to 102°, and her general condition had improved. On November 21st the temperature was normal, and she made a rapid and uninterrupted recovery. The landlord repaired the drain, but I was not able to inspect it when opened, as the work was done in a great hurry. After her recovery she returned to the house, but in a few days her throat became sore, with a distinctly diphtherial aspect, and she was sent out of the house again. A further examination of the drain showed that the trap was defective. I have no doubt that the patient owed her recovery to her removal from her insanitary surroundings, and that she would have died if she had remained in the house.

Maidstone. EDWD. GROUND, M.D.Cantab.

ON THE COMPLICATIONS OF MUMPS.

I HAVE just had under treatment a girl, aged 15, who took mumps from a younger brother, and who after having both parotids, and both submaxillary glands swollen, especially the left parotid, developed partial paralysis of the left side of the face. The mouth was distinctly drawn to the right, the loss of power was very obvious in smiling, etc., and the left orbicularis did not contract quite so firmly as the other one. Tongue central. The attack was transitory, clearing up in about three weeks. One might have expected that facial

[1] See SUPPLEMENT, May 30th, p. 172.

paralysis would be a common symptom in mumps, owing to the intimate relations of the portio dura and the parotid gland. It seems, however, that it is of very rare occurrence, most of our textbooks do not mention it at all, though Fagge and Eustace Smith, and some others refer to it. In fact the nerve appears to resist the extension of inflammation from the surrounding tissues, as nerve trunks elsewhere so often do.

In looking into the literature of the subject one finds abundant records of cases of orchitis, and of ear affections complicating or following mumps, together with a certain proportion of cerebral affections; but, on the other hand, there is a great dearth in recent literature of instances of metastasis in the female to breast, ovary, vulva, or uterus—any practitioner who should record a case of metastatic mastitis, ovaritis, vulvitis, or metritis, arising from mumps, would furnish material of great interest and value, especially in regard to the last three. The occurrence of parotitis after ovariotomy—*post et propter*—seems to be established.

JOHN BENJ. HELLIER, M.D.,
Lecturer on Diseases of Women and Children,
Yorkshire College, Victoria University.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

BRISTOL GENERAL HOSPITAL.

THREE CASES OF INTRACRANIAL TUMOUR.

(By J. MICHELL CLARKE, M.A., M.B., M.R.C.P., Assistant Physician and Pathologist to the Bristol General Hospital, Assistant Lecturer on Physiology, Bristol Medical School.)

[*Concluded from page 1284.*]

CASE II.—*Tumour of Right Hemisphere below the Island of Reil.*—The patient was a tanner, aged 43. During childhood he had one or two fits, but none subsequently. He was deaf and dumb, the result of disease of the ears during infancy. There was no history of any other illness. In May, 1890, he fell into a tanpit whilst walking across a plank—whether in a fit or not was uncertain. He was quickly got out of the water, and when taken out was unconscious. Previous to this accident he was in good health. He was admitted into the hospital with a scalp wound, two inches in length, on the right side of the head, two inches and a half above and half an inch behind the external auditory meatus. He made a good recovery; but whilst in the hospital his manner was noticed to be peculiar, and this was attributed to his being a deaf-mute. After he went out his friends noticed a great change in his character; his memory failed, and he wandered about the house at night in a state of nudity. He complained often of severe frontal headache. During the week before admission he vomited frequently, generally in the morning, and the pains in the head were most intense. He had always been a man of very regular and temperate habits, and all history of syphilis was denied.

On admission, August 28th, 1890, the patient appeared anæmic and emaciated. He was drowsy, complained much of headache, and vomited often, the attacks of vomiting having no relation to meals. The skull was rather flat over the vertex, and a scar, tender and with much thickening around it, was found in the position described above. He is a deaf-mute, but understands the deaf and dumb alphabet, and writes his replies on a slate. With the exception that he dragged his left leg in walking, there was no sign of paralysis. Sensation normal. Plantar reflexes exaggerated, right knee-jerk more brisk than the left, other reflexes normal. Slight optic neuritis in both eyes, and some small hæmorrhages on the periphery of the left optic disc. Pulse 60, regular. Respirations 12 to the minute, deep and regular. Urine, temperature, thoracic and abdominal organs normal. During the first few days his writing rapidly deteriorated, becoming almost illegible: he frequently wrote words he did not intend, and which made nonsense, without detecting his errors: and whereas he spelt extremely well at first, he now made frequent mistakes in spelling, and transposed letters, for example, "rgluar" for regular. On milk diet, with mercury and iodide of potash in large doses, he appeared to be doing well for the first fortnight: drowsiness and headache diminished, vomiting ceased, and spelling and writing improved.

From September 12th to 15th his condition grew worse. He was very drowsy, could with difficulty be roused, the headache was very severe, and the pain chiefly in the occipital region. He could not stand nor walk without support, dragged his left leg more than before, and staggered from side to side when walking with help; if he tried to stand alone he staggered and fell backwards. The left arm was now decidedly weaker than the right. He vomited constantly, had much pain in his eyes, the optic neuritis had become very intense, and sight correspondingly affected, so that he was unable to read. Although he could apparently see the movements of the fingers he could not understand at all the letters of the deaf and dumb alphabet. The left pupil was larger than the right, and reacted very feebly to light, the right pupil acting briskly, and reaction for accommodation being normal in both.

On the 19th all the above symptoms were more marked, his general condition worse, vomiting constantly. He now lost all power in his arms, so that he was quite unable to grasp or hold anything or feed himself. From his inability to see or to write we had great difficulty in communicating with him at all. There was no sign of paralysis of the oculo-motor muscles, of the tongue, or of the face. The left knee-jerk was almost absent, the other reflexes as before stated. Pulse 60, regular. Respiration rate 12. Temperature subnormal. During the last two days he had lost control over the bladder.

On September 23rd he was almost comatose, appeared to have lost all power of movement in his limbs, and refused to take any food. Pulse, respiration rate, and temperature as before. At 4 P.M. he was quite unconscious, and the coma deepened until his death, a few hours later. Throughout the illness there were no convulsions.

Post-mortem Examination Seventeen Hours after Death.—With the exception of deep congestion of the lower lobes of the lungs, and some hypertrophy of the left ventricle of the heart, the thoracic and abdominal organs were normal. The bones of the skull and the meninges were healthy. On removing the dura mater the veins of the pia were full, the cortex anæmic, and cerebro-spinal fluid absent. Over the position of the middle portion of the right ascending parietal, and over the right angular and supramarginal convolutions, there was bulging over an area of 2 inches in diameter, this area lying exactly under the scar upon the scalp. On making transverse sections from before backwards of the hardened brain, a large tumour, seated in the substance of the right hemisphere, came first into view in a section at the level of the corpora albicantia. The tumour was roughly kidney-shaped or bilobed, with the larger lobe downwards, pale and softer in the centre, darker and firmer at its margin, and surrounded by a zone of deep congestion. It appeared to have grown from the neighbourhood of the claustrum or external capsule, and in its growth to have pressed chiefly outwards, and thus unfolded and pushed outwards the convolutions of the island of Reil, so that these convolutions came to form the outer wall of the brain, the operculum being pushed upwards and the temporo-sphenoidal lobe downwards by the protrusion of the insula. The tumour extended backwards in much the same position, occupying most posteriorly the central white matter of the hinder upper portion of the temporo-sphenoidal lobe, and to a small extent of the anterior part of the occipital lobe and angular gyrus. The cortex was invaded at one point only, namely, at the lowest part of the tumour in the occipital lobe; in front the lenticular nucleus was partly destroyed by the pressure of the growth. The ventricles contained no fluid; the descending horn of the right lateral ventricle was almost obliterated. There was a large quantity of cerebro-spinal fluid under the tentorium. Microscopic examination showed that the tumour was a syphilitic growth. Its diameter varied from 1½ to 2 inches.

It is remarkable that such a large tumour could have existed without giving rise to more definite and extensive paralysis for a longer time before death than was the case;

but the pressure being most effective in the outward direction, the internal capsule escaped severe compression. From the position of the growth there were no distinct localising symptoms, and a diagnosis was made of a tumour of the right hemisphere seated probably in some part of the centrum ovale. The fact of the patient being deaf and dumb added to the difficulties of the case. Although it would be hazardous to draw any definite conclusions from a tumour of this size—which would interfere with the functions of the brain as a whole—one may note the occurrence of distinct agraphia fairly early in the case while intelligence was preserved, and then the partial disappearance of this symptom on the temporary general improvement that followed the administration of mercury and iodide of potash. We may connect the agraphia with the pressure upon the convolutions of the insula, which, from the pathological appearances, was the first pressure effect of the tumour, and it is curious that it was the insula of the right side. I could not, however, learn from the friends that he was left-handed, and the lesion was not sufficiently localised to make it certain that he was right-brained as regards writing and the comprehension of written or printed words and of the normal alphabet, though this appears probable.

In both these cases there was a very definite and precise history of a fall on the head having been the starting point of the illness; this was especially insisted upon in the account the mother gave of the little girl's illness. In the man the tumour was found lying directly under the scar; whether he had an attack of vertigo which caused the fall was doubtful, but it seemed likely on consideration of all the circumstances attending the accident. Such a history of injury is very often given in similar cases, but to establish an injury as the definite cause of an intracranial tumour, one would require a distinct period of freedom from symptoms for at any rate some time after the fall on the head, and it is generally impossible to say that such a fall may not have been the first symptom of the presence of the growth. Supposing that a syphilitic tumour existed and was quiescent or stationary, an injury to the head might very probably excite more active growth.

Case III.—*Tuberculous Tumours in Pons and Cerebellum.*—J. P., a carter, aged 38, living in Somersetshire, had always been healthy, and came of a healthy family. The illness began in April, 1890, with weakness of the right leg, giddiness and dimness of sight; after a month the right arm and left leg also grew weak. He complained of frontal and occipital headache, and of drowsiness. The weakness of the limbs steadily increased, and during the last month he had been unable to completely open the eyelids. No vomiting and no loss of control over bladder or rectum.

When first seen, in August, the patient lay on his back with a dull heavy expression, due to the partly closed eyelids; he answered questions intelligently, but in a slow, apathetic manner. His speech was blurred and indistinct, and he stated that this defect of articulation had come on since the beginning of the illness. His mouth was kept partly open, and saliva dribbled from it. The angle of the mouth was drawn to the left and he protruded his tongue to the right; the loss of movement of the right side of the mouth was especially noticeable on smiling. No difficulty in swallowing, no trembling of lips or tongue, or paralysis of palate.

There was double partial ptosis, most marked on the right side; he closes the left eye more firmly than the right. The left external rectus muscle is paralysed, so that the left eye deviates inwards, and there is nearly complete loss of the conjugate movement of both eyes to the left. The right eye moves well to the inner canthus when acting alone; no nystagmus; pupils equal and act well to light and accommodation. Slight concentric contraction of the right field of vision; fundus and optic discs normal in both eyes; hearing, taste, and smell normal.

Motor power in both legs and in the right arm deficient; the right leg and arm are especially weak. All simple movements of the right upper extremity can, however, be carried out, but only feebly; the finer movements of the hand and fingers are especially difficult. The grasp measured by the dynamometer gave 20 kilos. on the right and 50 on the left side. He cannot stand or walk without help, and when supported walks a few steps with great difficulty, dragging the feet along the floor; and he complains of great giddiness.

The muscles are flabby, but the electrical reactions normal. There is no tremor, no ataxy of movement, no spasm or rigidity of any muscles. The right knee-jerk is exaggerated; no ankle-clonus; other reflexes normal. He complained of numbness of the right hand and forearm, but no loss of sensation to touch, pain, or temperature could be made out. Sense of posture of limbs normal. Except for some tenderness over the sacrum, examination of the skull and spinal column detected no abnormality. Temperature rose to 100° F. in the evening occasionally. Pulse 110, weak, regular. Respirations normal. No loss of control over bladder or rectum.

At the end of August his condition was the same, except that the left pupil was now larger than the right, and the loss of the conjugate movement of the eyes to the left was complete, neither moving beyond the middle line. The paralysis of the right arm, leg, and right side of the face had increased, and some loss of sensation, especially marked to heat and cold, was detected over the fingers of the right hand. Dynamometer, right hand 15 kilos., left 60 kilos. There was some rigidity of the right leg, with ankle-clonus.

On September 5th he was decidedly worse. The drowsiness had increased until he lay in a semicomatose condition, taking no notice of his surroundings, and only imperfectly understanding what was said to him. There were now signs of bronchitis with œdema of the bases of the lungs. Respirations 39 to the minute. Paralysis of limbs almost complete. No optic neuritis. He died in coma on September 7th. On the day before his death, the temperature was: A.M., 99° F.; P.M., 100.2°; pulse rate, 84; respiration rate, 36.

At the necropsy made five hours after death, both pleural cavities were found to be obliterated by recent soft adhesions. The upper lobe of the right lung contained very numerous grey miliary tubercles scattered through it, one of which at the apex had undergone caseation; there were numerous but fewer tubercles in the lower lobe and in the left lung, and a few in the spleen.

On opening the skull, the cerebro-spinal fluid was excessive in amount; there was recent meningitis at the base of the brain, extending over the medulla and on the under surface of the cerebellum. The left sixth nerve was soft, and smaller than the right.

The left side of the pons appeared larger than the right, and on making a section at the junction of the pons and medulla a tumour was seen to occupy the whole of the left side above the deep transverse fibres. The growth began in the upper part of the pons, and extended downwards in the medulla to about the middle of the calamus scriptorius. At its largest part, at the junction of pons and medulla, it measured ⅝-inch in both vertical and transverse diameters. It thus occupied and replaced the normal tissues of the dorsal part of the pons on the left side, pushing the pyramidal tract downwards, and the middle peduncle of the cerebellum to one side, displacing the raphé, and in its lower extent pushing the floor of the fourth ventricle upwards, nearly obliterating its cavity. Two growths the size of a large pea were found in the middle lobe of the cerebellum, and a nodule the size of a hazel nut at about the centre of its left lobe. In the cerebrum there was a nodule about the size of a pea on the right border of the corpus callosum near its posterior extremity, just in front of the splenium, and another in the left hemisphere of about the same size situated in the superior part of the internal capsule, near its posterior extremity. The tumours consisted of caseating tuberculous material.

Bequests.—The following bequests are made under the will of the late Mr. P. S. Macliver, a newspaper proprietor of Bristol: £1,000 each to the Bristol Royal Infirmary, the Bristol General Hospital, and the Bristol Hospital for Sick Children and Women.

Opening of a Policlinic in Lisbon.—A policlinic, where poor patients can obtain medical advice gratuitously, has recently been established in Lisbon. The new institution owes its existence to the initiative of Dr. Antonio de Lencastre, with the co-operation of the professors of the Lisbon Medical School and some members of the staff of the San José Hospital.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THURSDAY, JUNE 11TH, 1891.

HENRY POWER, M.B., President, in the Chair.

The Treatment of Squint by Advancement of the Recti Muscles.—Dr. ADOLF BRONNER (Bradford) read notes of fifty cases of strabismus treated by advancement of a rectus muscle according to the method advocated by Schweigger. In this operation the muscle was thoroughly freed from its connection with the sclerotic and with Tenon's capsule, and then attached, in a new position, to the superficial layers of the sclera and the conjunctiva. Most of the cases were operated upon without general anæsthesia, cocaine only being used. Dr. Bronner drew attention to the large number of cases of convergent strabismus, in which the external rectus was thin and atrophic. He thought it was of the greatest importance that the size and condition of the muscle should be ascertained before the advancement was performed. In many cases tenotomy of the antagonistic muscle was necessary, and in some tenotomy or advancement of the muscles of the fellow eye had to be done. In all cases of divergent strabismus tenotomy of the external and advancement of the internal rectus were necessary, and the immediate effect of the operation should be slight convergence. In no case should the same muscle be tenotomised more than once. The author thought that advancement of the muscle should be performed in all cases in which the squinting eye was amblyopic, and in which the angle of the deviation measured more than 30°. The advantages of advancement of a muscle over an ordinary tenotomy were that the danger of a subsequent strabismus in the opposite direction was much less, and that the operation aimed at strengthening a weak muscle instead of weakening a muscle previously strong.—The PRESIDENT said that his experience of tenotomy had been satisfactory, and that he rather preferred the simpler operation in the majority of cases. He had seen but few undesirable results. The cases which he found most difficult to deal with were those of very slight squint with extremely troublesome diplopia.—Mr. JULER thought that the plan of tying in two sutures appeared likely to set up a good deal of irritation. He preferred an operation, which was a modification of Critchett's, and with which he had had good results. He thought advancement of muscles in cases of strabismus was a method of treatment not fully appreciated by many English surgeons.—Mr. EALES (Birmingham) described the method of operating which he adopted; he frequently performed advancement of the recti muscles in strabismus cases.—Mr. EDGAR BROWNE (Liverpool), after referring to the older methods of treatment employed in this country years ago, described the plan he himself adopted. He had found that the operation was simplified by introducing the stitches in the reverse way to that usually done, that is, to attach the thread to the conjunctiva or sclera at the point of fixation first, and subsequently to the tendon or muscle. He emphasised the importance of fully correcting any astigmatism in cases of strabismus. Mr. JESSOP had found that advancement of a rectus muscle without tenotomy of its opponent was of little value. He preferred to do the tenotomy by Landolt's method before advancing the weakened muscle.—Mr. COWELL said that in the operation described he recognised an old friend under a new name. It used to be known as readjustment. He had treated many cases of secondary divergent strabismus by this method, occasionally converging the eye during the first day or two after the operation by a suture passed through the skin of the bridge of the nose.—Mr. LANG pointed out that the terms readjustment and advancement of a muscle had different meanings. He thought it important in this treatment to endeavour to restore binocular vision at the time of the operation. Mr. DOYNE (Oxford) and Mr. STORY (Dublin) thought that binocular vision after operations for strabismus was an exceptional result, and one which few operators seriously sought to obtain.—Dr. BRONNER, in reply, affirmed that Schweigger's method of operating maintained the normal lateral movement of the globe. He had long given up thinking about the restoration of binocular vision in cases of strabismus.

Detachment of the Choroid.—Mr. STORY (Dublin) described a remarkable case of this rare affection in a man, aged 29, who has been for more than two years under his care. When a child, the patient was kicked by a horse on his right eyebrow and nose, and some years later was struck by a stone at the outer angle of the left orbit. These injuries seemed to have no connection with the loss of sight, which occurred rather gradually in his right eye at the age of 20, and in his left about a year before coming to hospital. During the two years he has been under observation, no important changes had occurred in the state of the eyes, slight variations have taken place in the extent of the detachment, and his vision had remained pretty constant at fingers at 2 metres in the right and fingers at 4 metres in the left eye. Tension normal or at times slightly subnormal; media clear except for a nebula on the left cornea, and opacities in both vitreous chambers: discs slightly hazy, and marked perivascular thickenings about all vessels. In the right eye there were two hemispherical detachments of the retina alone, one at the macula lutea about three times the diameter of the papilla, and one at the inferior nasal periphery of a larger size, and extending to the extreme periphery of the fundus. Except at these two places, the choroidal stroma was everywhere as distinctly visible as the retinal blood vessels, and everywhere required exactly the same glass to observe it by erect ophthalmoscopic examination. The refraction of different portions of the fundus was as follows in the right eye: Disc centre − 1, edge + 1. Retinal detachment at macula with irregularity of lamina limitans interna + 8. Choroid and retina at temporal end of horizontal meridian + 12 (a slight retinal detachment more peripherally + 13). At nasal end + 12, and large retinal detachment more peripherally + 18. Retina and choroid at both ends of vertical meridian + 8. Left eye disc + 0.5. Macula + 1.5. Retina and choroid at nasal end of horizontal meridian + 8, and on another occasion + 12, at temporal end + 12. At upper end of vertical meridian + 7 and again + 4, at lower end + 5. Mr. Story referred to the cases of detachment of the choroid already published, and showed in what a remarkable manner the present case differed from all those which have been previously observed.

Temporal Hemianopsia of Left Eye and absolute Blindness of Right.—Mr. STORY (Dublin) gave a further history of a case (not yet published) which he had brought before the Society in 1887. A girl, aged 19, came to him in 1885 with the right eye absolutely blind, and with complete hemianopsia of the left, the line of demarcation passing through the fixation point. The other symptoms were violent pains in the head, giddiness, vomiting, amenorrhœa, and tendency to corpulence. Since then these distressing symptoms had mostly subsided, but her field of vision remained unaltered, and central vision had considerably deteriorated. Vision which was in 1885 = $\frac{5}{7}\frac{5}{5}$ was now only = $\frac{5}{3}\frac{5}{6}$ (?). Careful examination had completely failed to exhibit the hemianopic pupillary reflex. Mr. Story suggested that the case might be one of a tuberculous growth in the region of the chiasma, which had now for some years ceased to increase. Charts of the field of vision, taken at various times during the last six years, were exhibited.

Card Specimens.—Mr. TATHAM THOMPSON (Cardiff): Emphysema of Conjunctiva.—Mr. STEPHENSON: Two cases of Peculiar Retinal Pigmentation.—Mr. TREACHER COLLINS: Epithelial Implantation Cyst.—Mr. COWELL: Congenital Fissure of Upper Eyelid.—Mr. DOYNE (Oxford): Coloboma of Iris and Choroid, with bulging of corresponding portion of circumference of the lens.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

WEDNESDAY, JUNE 3RD, 1891.

W. ALLAN JAMIESON, M.D., in the Chair.

Cases.—The CHAIRMAN showed four members of one family suffering from Favus in various stages, and detailed the treatment adopted.—Dr. ANDREW SMART showed an Alcoholic Woman, a patient in the Royal Infirmary, in whom urgent cerebral symptoms later became manifest. It was thought that these were due to some gross basal lesion in the region of the optic commissure. Professor Chiene trephined

as the patient was passing into a condition of stertor, and a complete recovery was made.

Relapse or Recrudescence in Scarlet Fever.—Dr. G. P. Boddie read a paper on this subject, and related two cases. The cases showed relapse on the thirty-seventh and twenty-seventh days respectively. In each case the relapse showed the more prominent symptoms of scarlet fever, and each was followed by a second desquamation. Dr. Boddie further indicated that while cases had been recorded in this country by West, Hillier, Jenner, Peacock, Smith, Richardson, Barrs, Farrar, and others, yet the whole subject had received but scant notice, and was scarcely referred to in any of the larger English books. The subject had received wider recognition from American writers. The best work had been done by German physicians, notably by Thomas, Körner, Trojanowsky, Henoch, Gumprecht, Fürbinger, and others. Cases had also been reported by Reimer, of St. Petersburg, and by Huettenbrenner, of Vienna; and French writers such as Jaccoud, Lefèvre, and Rilliet and Barthez had recognised the condition and noted examples.—In the discussion which followed, Dr. P. A. Young referred to relapses in the cases of two of his own children.—Dr. James Ritchie had seen cases which he conceived might be called relapses, but which he thought were rather cases of "auto-infection."—Dr. James and Dr. Smart were of opinion that they had certainly seen cases of relapse.—The Chairman stated that cases were sometimes seen in the Edinburgh City Hospital; the proportion was probably about 1 per cent. He thought some of the cases reported as relapses were rather to be looked on as cases of "auto-infection," or as second attacks.—Dr. Boddie, in reply, urged that if "auto-infection" indicated anything more than a relapse expressed in different phraseology, then it only meant introducing further theories more difficult of acceptance and explanation. He quoted Henoch's explanation to the effect that the scarlatinal virus had not been completely eliminated by the first attack, and that therefore a relapse was inevitable. It seemed difficult to admit that a true second attack could occur so early as five or six weeks after the first.

Pneumothorax and Pneumopericardium.—Dr. R. A. Lundie read a paper on a case of spontaneous pneumothorax and pneumopericardium occurring in a young man believed to be tuberculous. He detailed the symptoms from day to day, showing the mode of onset and the line of retrogression. The patient was shown and practically no physical signs were present.—Dr. James commented at length on Dr. Lundie's paper, and expressed his belief that these cases were in the main tuberculous.—Dr. Andrew Smart made some remarks on the character of the breathing in such cases.—Dr. Lundie briefly replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Friday, May 22nd, 1891.

J. Magee Finny, M.D., President, in the Chair.

Treatment of Chronic Eczema by Creolin.—Dr. Patteson said he had been led to adopt the use of creolin in chronic eczema from the well-known value of tarry preparations in certain forms of eczema and psoriasis, and from its cheapness, which rendered it suitable for out-patient practice. He briefly referred to two cases of pustular eczema of the scalp—one of eight and the other of three years' standing—in which marked improvement and cure followed its prolonged use. It was applied as a wash or lotion in the proportion of 1 drachm to 8 ounces of water. The value of such a powerful germicide in these cases seemed in favour of Unna's contention as to the parasitic nature of eczema.—Dr. Walter Smith expressed his concurrence with Dr. Patteson's views as to the utility of creolin as a germicide and stimulant.—Mr. Doyle could corroborate Dr. Patteson's remarks as regards the curative effect of creolin in subacute cases of pustular eczema, having used it by means of wet packs frequently repeated.—Remarks were also made by Mr. R. Montgomery and the President; and Dr. Patteson replied.

Etiology of Cheyne-Stokes Respiration.—Dr. M. A. Boyd read a paper on the etiology of Cheyne-Stokes respiration, in which he reviewed all the physiological explanations of this phenomenon offered by writers on the subject since Stokes's time to the present day. Having alluded to the marked rhythmical irregularities between the heart, pulse, and respiration in this affection, he drew attention to a point which, so far as he was aware, had not been previously alluded to—namely, that the latter portion of the forced respiratory phase of the Cheyne-Stokes cycle was chiefly an expiratory one, in contrast to the first portion of it, which was an inspiratory one; this forced expiration had a most important bearing on the weak ventricles of the heart, by helping them to squeeze the blood, on the one side into the pulmonary artery, and on the other into the dilated and inelastic aorta. In proof of this he exhibited sphygmographic tracings showing that it was only during this expiratory portion of the respiration that arterial tension was raised in the arteries, and that this tension continued through the apnœal period following, during which time the respiratory centre was fully supplied with arterial blood, and the weak and degenerated left ventricle resting. He regarded the apnœal period during which time respiration was suspended as only an effort on the part of the higher automatic centres to rest a heart the ventricle of which was either too feeble to charge an arterial system, the aorta of which might be dilated and inelastic, or the vasomotor control of which might be defective, and whose own blood supply might be rendered insufficient in consequence, and its nutrition enfeebled. After the intrinsic muscle of the heart had been fed by this increased arterial tension of the expiratory and apnœal periods, forced inspirations began again, and the heart contractions were stronger, but they failed to fill the dilated aorta until the forced expirations, by making pressure on the ventricles, came to their aid again. The most typical and pronounced forms of Cheyne-Stokes respiration were to be met with in alterations of the heart and aorta produced by degeneration and disease. The forms of it met with in cerebral disease or injury, and in apoplexy and uræmic coma, without any primary engagement of the heart, he regarded as due to direct interference with the respiratory centre in the medulla, either by pressure or poisoned blood, and the phases of it were never so well marked as in those cases of the affection depending primarily on alterations in the heart. As regards treatment, Dr. Boyd found so much improvement following the inhalation of oxygen in all the cases where disease or degeneration of the heart produced it, that he urged a trial of this remedy in all such cases, and ventured to suggest, from his experience of the remedy, it should be tried not alone in this affection, but in all cases where degeneration of the heart existed from any other cause.—Dr. Little thought Dr. Boyd's observation as to the difference between the length of inspiration and expiration during the two periods of the Cheyne-Stokes respiration was a novel one, and well worthy of further attention. If the inhalation of oxygen give relief, it would demolish the theory which he (Dr. Little) had formerly put forward as to the causation of ascending and descending respiration.—Dr. Cruise bore witness to the value of oxygen inhalation in the condition.—Remarks were also made by Dr. Wallace Beatty, Dr. Walter Smith, Dr. Falkiner, and Mr. Doyle; and Dr. Boyd replied.

REVIEWS AND NOTICES.

Fever, its Pathology and Treatment by Antipyretics (Boylston Prize Essay, 1890). By Hobart Amory Hare, M.D., B.Sc., Clinical Professor of Diseases of Children, and Demonstrator of Therapeutics in the University of Pennsylvania, etc. Philadelphia and London: F. A. Davis. 1891.

The Modern Antipyretics: their Action in Health and Disease. By Isaac Ott, M.D., Ex-Fellow in Biology, Johns Hopkins University, etc. Easton, Pennsylvania: E. D. Vogel. 1891.

Dr. Hare has already proved himself a diligent and successful writer of prize essays, and the present "concise summary of the conclusions of many of the best observers" on the modern antipyretic drugs—antipyrin, antifebrin, thallin, phenacetin, and salicylic acid—is quite up to the prize essay standard. The pathology of fever is so cursorily

dealt with that it might well have been left out of the title, for the essay is better designated by its original style—"The uses and values of antipyretics," than by its new one. In about 150 small pages a useful epitome is given of the manifold researches and observations of the last five or six years, classified under the headings of "experimental evidence," and "clinical evidence," and numerous tables of cases are added displaying the untoward effects that have been recorded as due to the several antipyretic drugs. One thing which strikes us as curious is that while Dr. Hare draws freely on American, French, German, or even Russian medical literature for his references, the work of British observers is but scantily alluded to; though it is scarcely doubtful that he is aware of its existence, and that he has been considerably influenced by it.

Dr. Hare's final conclusions occupy little more than a page. They are briefly that "antipyrin stands to-day foremost in the ranks of the antipyretics, with antifebrin next, while thallin and phenacetin follow, with perhaps a preference for the latter. Those conclusions are in regard to the reduction of fever. In pain the arrangement should be somewhat changed. Antipyrin still takes the lead, but phenacetin is quite as useful an analgesic as antifebrin, and seems more safe. Thallin possesses hardly any such power.....For widespread application, to be put into the hands of the inexperienced, to be efficacious and yet quite harmless, cold sponging is the antipyretic remedy *par excellence*; but even this must be used carefully and with intelligent ideas of its objects and results.....There can be no doubt but that antipyresis is an addition to our remedial measures of vast value, and the suffering which it relieves is one of the blessings which follow increased knowledge and the new era of therapeutical training." Apart from the curious English of the last sentence, we imagine that these temperate conclusions would be very generally accepted in this country.

The second pamphlet of 52 pages consists of five or six papers or quasi-chapters on Fever, Chemistry, Physiological and Pathological Action, Therapeutics, and the Value of Antithermics in Typhoid Fever. The chapters are somewhat loosely strung together, and the author's style in them is much less orderly and coherent than Dr. Hare's, but they contain abundant evidence of his anxiety to grapple with the problems of fever by direct experiment. He has constructed an elaborate and costly calorimeter, in which a man can be enclosed, and by which the thermal variations of the body may be accurately measured. The provisional results thus obtained, together with others cited in subsequent pages, go far to confirm the neurotic theory of fever as set forth by MacAlister. Dr. Ott freely uses his terminology and illustrations. The laborious work which the author has performed and published from time to time is worthy of all encouragement, though it issues rather in fragments of fact with which others may build than in a well-cemented and comprehensive pathological scheme.

Rhyming Mnemonic Key to Materia Medica (Conjoint Exam. Coll. Phys. and Coll. Surg.). By M.D. London: L. and J. Parnell. Pp. 48.

This little work is an excellent commentary upon modern methods of medical education and examination. As stated naively in the preface, "many candidates" [in the Conjoint Examination] "have no practical knowledge of drugs whatever"—a deficiency which, to the uninitiated, would seem an insuperable bar to satisfying any careful examiners, and should certainly be a sufficient disqualification for the active prescription of poisonous drugs to a confiding public—but, no! "Studied with anything like diligence, a student can, by this system [of rhymes and mnemonics] calculate upon committing permanently to memory the more difficult portions of his subjects in a few days."

Compare the sound practical knowledge of materia medica and therapeutics which an old-fashioned apprenticeship conferred upon the pupils of the past with the valuable information conveyed by such a work as this, which is apparently sufficient to satisfy the demands of modern examiners and examinees and to fit a student "in a few days" for dealing with the life and health of his fellow-men.

The fact that *Rhamni Purshiani Cortex* is "the dried bark of *Rhamnus Purshianus*"—a fact of importance to examiners—is inserted into the mind of the intelligent candidate for qualification by the committal to memory of the incoherent sentence: "Ram your purse." The valuable information that jalap is "the dried tubercules of *ipomœa purga*, otherwise called *exogonium purga*," is rendered more valuable when translated into such language as "I. po., ex. go." "Send cash" is the nail in the student's wooden brain whereon the fact that "senna is the dried leaflets of various species of *cassia*" is hung.

Excellent as is the mnemonic portion of this work, the poetical part comes far beyond it in elegance and scientific fulness of information supplied. Of vinum rhei, for instance, we read:

> While the *vinum rhei*, made with sherry and canella,
> When the liver's upset is first-rate for a fellah.

For simple examples of excellence in rhyme, rhythm, and sense the three following deserve to be noted:—

Of hyoscyamus we are told—

> Then comes hyosey'mus, its tincture et extractum,
> Only two preparations looks awfully rum.
> So they've added a third that they call the succus,
> And "suck us" they do, one's 'clined for to cus!

Of certain preparations of rhubarb—

> The extract and infusion are simple enough,
> But syrupus rhei contains some good stuff;
> There's coriander fruit, sugar, spirit, water.
> And one to four drachms is *B. P.* dose for a daughter.

Of phosphate of iron—

> Then there's iron phosphate, slate-coloured and hard,
> Its syrup being made from the sulphate—absurd!
> Be this as it may, after a most complex proc.,
> Each drachm of this syr. has one grain ferri phos.

The word-rhymes, which are supposed to jingle the prose information into feeble memories, are enough to set even the teeth of an Italian organ grinder on edge: "forty" rhymes to "hearty," "won't" to "cant." "rejected" to "injected," "tinct." to "stink," "scammony" to "variety" and to "aloë," "artem" to "duodecim." But difficulties of rhyme, when even in spite of such wide toleration they do sometimes occur, are easily got over by the invention of new words. Our vocabulary is enriched by such specimens as "gulpher," "cinnamol," "tep," "liqurius," "dilu," "lique," "loz," and many of the like elegance.

To show the practical value of this precious production, a few of the papers set at the first conjoint examination in Materia Medica and Pharmacy are appended. It must be gratifying to the examiners and reassuring to the public to find that these questions are quite capable of solution by candidates "having no practical knowledge of drugs whatever," who have merely devoted "a few days" to the study, not of their subject, but "of this system."

We commend to the consideration of our readers this glorious resultant of the nineteenth century's craze for examinations. The medical men of the future can boast that, in place of the fair botanical and practical therapeutical knowledge of their predecessors, they satisfied themselves and the strict examiners of the Conjoint Board with such sorry stuff as: "Ben, go in; your stye aches," "Go papa if not long off," and "Turn the cape, mister, there's soup upon it."

Surely if no better test of knowledge can be invented than one that can be satisfied so easily and foolishly as our present examinations apparently can, it would be better to remit the materia medica portion of the test to general practitioners, who, by taking a candidate into their dispensaries, asking him to recognise a few common drugs, to make some ordinary prescriptions, and to tell the method of preparation, dosage, and use of usual pharmaceutical preparations, would perceive at once if the man were duly educated and prepared, or if he were simply an ignorant pretender, filled only with mnemonical padding, like "I said tartar got gin for jalap," or with such delicious poetry as: "Liquorice, senna, figs, coriander, cassia pulp, prunes, and tamarinder."

We note one omission in the work—it is not dedicated by permission to the Conjoint Board of Examiners of the Royal Colleges, whose methods of examination have made such a work as this possible. We trust the omission may be rectified in subsequent editions.

The price of the production—three shillings for a forty-eight page pamphlet—seems to indicate an expected demand

at high prices for the work. Looked at from a literary standpoint, the sum appears excessive; when, however, we understand that a few days' careful study of its pages will represent in examination value some years of honest work, we cannot deem six sixpences an unreasonable reward to give in return for that sleight of hand which enables a person utterly ignorant of a given subject to pass a creditable examination in it which makes him able legally to deal in lethal substances of whose properties he is most profoundly ignorant.

NOTES ON BOOKS.

The Comparative Climatology of London and the Chief English Health Resorts. By BERTRAM THORNTON, M.R.C.S., & L.R.C.P., Surgeon to the Royal Sea-Bathing Infirmary for Scrofula, Margate. (London: H. K. Lewis. 1891.)—This small pamphlet calls attention by means of statistics collected from the reports of the Royal Meteorological Society to the fact that the variations of temperature between the various places regarded as health resorts in this country are confined within very narrow limits. This fact will not appear so much of a novelty to those who have studied the climate of the British Isles as it has seemed to the author. It is, however, just as well that medical men should be reminded, from time to time that the average winter temperature of a resort like Falmouth is only 2½° F. higher than that of London, while that of Hastings is positively rather lower than that of London! But it certainly is something of a surprise to hear that the winter temperature of Ramsgate, with its southern aspect, should be lower than that of Margate, with a north-easterly exposure. It may also surprise many to be told that the winter temperature of Ilfracombe is as high as that of Falmouth, while the daily range is only 8.4°, against 9.5° at Falmouth—circumstances which, taken alone, would represent the winter climate of Ilfracombe as more equable and as warm as Falmouth, with the advantage over the latter resort that its rainfall is only 31.53, against 43.49 inches, and its rainy days 191 against 204. It is for the medical practitioners in Ilfracombe to take note of this. The author expresses astonishment that Bath and Cheltenham are in winter very cold and very damp towns—Bath having the lowest winter temperature of the thirty-three health resorts investigated, as well as the highest degree of relative humidity. Why are such resorts as Brighton, Bournemouth, Leamington, Tenby, and Tunbridge Wells unnoted? The defect of climatological abstracts of this kind is that they present only a small portion of the facts necessary to form a judgment, and that they raise questions which they do little or nothing to solve. The advocates of Falmouth as the mildest and most equable of English winter resorts will scarcely, we suppose, be satisfied with the statement that the climate of Ilfracombe is as mild, and even more equable; and the dwellers in Ramsgate will, we are sure, be sceptical as to the fact that Margate has a higher winter temperature than they have. The admirers of Bath, also, will probably have something to say before they allow their town to be one of the coldest and dampest in England!

The Proclivity of Women to Cancerous Diseases and to certain Benign Tumours, with appendix on Heredity as a Cause of Cancer. By HERBERT SNOW, M.D.Lond., etc., Surgeon to the Cancer Hospital. (London: J. and A. Churchill, 1891.)—In the first and main portion of this work Dr. Snow discusses the causes of the well-known fact that by far the greater number of cancer cases are seen in women and in the breast or uterus. This, however, we soon find is but a subordinate part of a wide and very obscure subject. The author attempts to deal with the general proneness of civilised women to disease and suffering during the period of active life, and undertakes not only "to hint at the solution of this mysterious problem" but also to offer an explanation which will, he is convinced, "prove the master-key to many locks." It is to be regretted, we think, that this very important subject has not been dealt with more clearly, owing, perhaps, to the fact that the arguments are compressed within the limits of a single lecture. We find the work rather confusing and feel some difficulty in following the author. In its present form the expression of Dr. Snow's views seems likely to lead the reader to a conclusion that the "master-key to many locks" consists in an idea that in some way or other cancer in women is due to tight lacing, and that some forms of the disease which are prevalent in males are caused by the drinking of whisky. These, however, we are informed, are disposing rather than direct causes, cancer being attributed, in the great majority of instances, to the direct action of causes operating through the central nervous system. The conclusions given at the end of the lecture are not very clear, and for the most part are based either on surmise or on statistics of old date and restricted range.

Papers on the Mastoid Region of the Skull. By AMBROSE BIRMINGHAM, M.B. (Dublin: John Falconer).—Professor Birmingham's unpretentious monograph, which deals with the topographical anatomy of the mastoid region of the skull, gives in a short space much more useful information than may be gleaned from many larger works of a more ambitious kind. His directions for finding the site where the mastoid antrum may be safely tapped and his suggestions for trephining the skull in cases of temporo-sphenoidal or cerebellar abscess are brief and practical; his observations on the work of other anatomists and surgeons are happy and apposite. Professor Birmingham's conclusions are based on an examination of 100 skulls, and thus must have entailed a considerable expenditure of time. The results are of much value, and we can recommend the study of this work to all who are interested in the surgery of the brain.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CASE SHEETS.

DR. JAMES MACMUNN has devised some new case sheets—oblong slips of paper, each of which contains a number of printed headings with appropriate spaces for filling in the date and nature of the case, together with the patient's name, age, and other personal details. Then follows a column of other printed headings, each with its corresponding blank space, dealing with the onset and character of the present illness, the previous and the family history, and the condition of the several organs and systems of the body examined, with further room for notes as to treatment, diet, etc., and as to the progress of the case. The labour of case-taking in private practice is thus reduced to a minimum, and such slips, when filled in, should form valuable records of the practitioner's experience, while proving both useful and easy of reference. The papers could be stored in lettered pigeon-holes, or might be preserved in alphabetical order in any one of the numerous varieties of letter files. No system of medicine is so useful to a medical man as his own record of carefully observed cases, and these case sheets seem to afford a practical means of making such a compilation easy even to the busiest. If case sheets were provided with a clear inch or so of margin, they could easily be bound, and their final preservation and reference would thus perhaps be rendered even more convenient. The case sheets are published by H. Silverlock, 92, Blackfriars Road, London.

HYPODERMIC SYRINGES.

MESSRS. LYNCH and Co. write, with reference to a description of a hypodermic syringe published in the BRITISH MEDICAL JOURNAL of June 6th, p. 1237, to the effect that they have now in stock, and have had for the past twelve months, syringes the same in construction, only fitted with asbestos packings for the piston. They add that that mode of expanding the packing of the syringe was introduced by the well-known surgical instrument house of Messrs. Reynders and Sons, of Fourth Avenue, New York, and is to be found illustrated in their catalogue as far back as 1884.

SPAIN is determined not to be behind the age. A lady, Doña Concepcion Aleixandre, has recently been appointed to the staff of the Hospital de la Princesa at Madrid. She is the first lady doctor who has succeeded in obtaining a public appointment in Spain.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JUNE 20th, 1891.

THE GENERAL EDUCATION OF THE MEDICAL STUDENT.

The Report of the Education Committee of the General Medical Council (Appendix IV), recently issued, comprises some important recommendations, which should command general acceptance. The first of the three subjects referred to the Committee for consideration and report was a letter from the Secretary of State for War, complaining of the "manifest deficiency in orthography prevalent amongst the young medical officers of the army"—a deficiency, it is added, so marked as to have led to the introduction into the Regulations for Admission to the Army Medical Staff of a clause reserving to the Secretary of State "the power of making bad spelling a cause of rejection." This "persistent frequency of examples of bad spelling" is admittedly not a new thing in the knowledge of the Council, which, in June, 1890, drew the attention of the various examining bodies to the matter. Although such evidence of deficient general education amongst medical students, and notably amongst candidates for the Army Medical Service, should have a significance of its own for Mr. Stanhope, no one can demur to the Committee's statement that its existence "tends to lower the status of the medical profession, and, it may be added, lays the Council open to the reproach that it is failing in its duty." This latter clause is somewhat naïvely enforced by a reference to the fact that originally the Council declined to recognise as sufficient any examination in English which "did not fully test the ability of the candidates" to write a short English theme correct in spelling, pronunciation, and composition; to write correctly from dictation; to explain the grammatical construction of English sentences; to point out and explain grammatical errors; and to give the derivation and definition of a few English words in common use—but that the clause embodying these very reasonable requirements was struck out when the Council revised the subjects of Preliminary Examination in 1884. The Committee consider that the cause of this shortcoming is not far to seek. The various preliminary examinations in general education at present recognised by the Council do not all cover the same ground, or cover it with equal thoroughness; nor is it an invariable rule that this examination must be passed as a whole prior to the commencement of professional study.

In order to wipe out this reproach to English medical education, the Committee suggest (1) that the names of all candidates who exhibit manifest defects in spelling or in other items of general education be confidentially communicated to the Registrar of the Council in order that the Council may ascertain through which examining body such candidates obtained admission to the *Medical Students' Register*, so that the Council may be in a position to erase any such Preliminary Examination from its recognised list, "or otherwise to deal with the examining body thus proved to have failed in its duty"; and (2) "that no Preliminary Examination be recognised by the Council which does not include an examination in English classics, grammar, and spelling."

The second subject dealt with in the Committee's report is the list of the numerous examinations at present recognised as fulfilling the requirements of the Medical Council as regards preliminary education, as well as the whole conditions under which these examinations are conducted and the candidates passed. Although the regulations of the General Medical Council affirm that "no person shall be registered as a medical student unless he shall have previously passed a Preliminary Examination in general education as hereinafter provided," the power of granting exemption from this rule is conferred upon (and has been largely exercised by) the several Branch Councils, and by the Executive Committee. There may have been good reasons originally for the discretionary exercise of this dispensing power; but, now that this transition period is past, and that ample time has elapsed for allowing the regulations on the subject to become generally known abroad as well as in England, it is obvious that such dispensation should be reserved for rare and exceptional cases. Under existing conditions the power seems to be exercised irregularly and capriciously, and without any reference to a uniform standard, with the result that many students are permitted to take their Preliminary Examination piecemeal, almost subject by subject in succession in some cases, thus prolonging their fitful work for it far into the period allotted for strictly professional study, the commencement of which is thereby antedated.

This is one of the undesirable results which have followed the resolution permitting the subjects of the Preliminary Examination for medical students to be passed at one or more examinations, which was carried by a narrow majority in 1884. And it is more noteworthy than surprising to find that statistics compiled since that day prove that the percentage of passes amongst those who enter for the examination as a whole is more than half as large again compared with the passes of those who take it piecemeal. On every ground the Committee have good warrant for their recommendation that the whole of the subjects included in the Preliminary Examination shall be passed in at the same time.

The multiplicity of examinations, or of examining bodies, is a source of weakness; and while further time must elapse before it can be ascertained whether or no the regulations of the Indian, Colonial, and foreign universities and colleges conform to the standard of examination intimated to them in the letter sent by the Registrar of the Council in June, 1890, the Educational Committee have no hesitation in advising a stringent revision of the present list of examinations. The Council decided to recommend all the bodies in Group II—namely, the purely medical corporations to discontinue their preliminary examinations at present recognised by the Council; and that the

examinations enumerated in Group III be also omitted, with the following exceptions, namely, those conducted by the College of Preceptors (No. 48), by the Educational Institute of Scotland (No. 56), by the Scotch Education Department for the Leaving Certificate (No. 59), and by the Intermediate Examination Board of Ireland (Nos. 52, 53, and 54). Moreover, admitting that, for certain rare and quite exceptional cases, it may be expedient to have a dispensing power somewhere, and at the same time holding it necessary to guard against the exercise of that power being different in the three divisions of the United Kingdom, the Council decided that all applications for special exceptions to the Regulations of the Council in regard to preliminary examination in general education shall be addressed to the Registrar of the General Council, and shall be submitted for decision to a committee of three of its members appointed by the Council, and shall be reported to the Council; while applications for the recognition of preliminary examinations in addition to those already recognised by the Council shall be referred to the Education Committee for report to the Council. In all cases due notice of the suggested changes is to be sent to the several educational and examining bodies which would be affected by them.

Finally, the Committee emphatically—and we believe rightly—condemn the suggestion that a course of study in physics, and a satisfactory examination thereon, passed prior to registration, should relieve the student from the inclusion of this subject in his first year of medical study. Why should physics be thus separated from the closely correlated subjects of chemistry and biology? It is pointed out that the real object of bringing these subjects within the five-year course of study was to secure a real knowledge, by experimental and practical training, of subjects specially important in modern medicine, in place of the superficial school-boy knowledge more or less obtainable in the schools of general education or the mere book knowledge crammed up for a "preliminary" examination. The various resolutions embodied by the Council last year were directed to effecting a much-needed improvement in the Preliminary Examination prior to the commencement of professional study; to securing a first year for practical education in physics, chemistry, and biology; to providing for three years' attendance on professional classes and hospital; and for a final year to be devoted exclusively to clinical work. The Committee strongly deprecate any departure from this arrangement for a five-year course of study an arrangement which they point to as marking a great step in advance in medical education in the United Kingdom, and one which has been received with almost universal approval by the profession. The essential recommendations of the Education Committee have been adopted, with slight alteration, by the Council. If carried out with firmness and wisdom they will go far to consolidate and methodise the foundations of sound medical education, by securing improvement where improvement is admittedly much needed; while no fair critic can pretend that upon the student who is worthy of the profession to which he aspires they will impose any needless or unwarrantable burden.

A Hamburg merchant, Herr C. H. von Donner, has given 2,000,000 marks (£100,000) for the erection of a hospital for women's diseases, in acknowledgment of the saving of his wife's life by the skill of a Dresden surgeon.

THE TRUE POPULATIONS AND DEATH-RATES OF TOWNS.

It must be confessed that the paper on the results of the recent census and on estimates of the population of the largest English towns read by Mr. Noel Humphreys at the meeting of the Royal Statistical Society on June 16th was to some extent justly described by one of the speakers who took part in the discussion as tantalising. It hinted at the answers which will be given to questions which recur in every intercensual period, and it showed that fresh problems are rising which will need the most serious and painstaking investigation.

The most striking fact—and one as to which, according to Mr. Humphreys, there is very little room for doubt—is that the increasing aggregation of the population into the large towns has very markedly diminished. Upon the supposed continuance, or even increase, of this aggregation many very pretty theories, mostly of a pessimistic shade, have been built. It appears that in the twenty-eight largest towns (including London) taken together, the rate of increase in the first five census periods since the first census in 1801 ranged between 20.8 and 30.7 per cent., while it fell during the last three decennia with scarcely a break from 19.9 (in 1851-61) to 17.7 (in 1871-81) and 11.2 (in 1881-91).

A weighty argument in favour of the view that this apparent cessation of the process of aggregation is genuine is afforded by the fact that in a considerable proportion of towns the excess of the birth-rate over the death-rate accounts for the whole or the greater part of the increase. In Liverpool, Birmingham, Bristol, Salford, Nottingham, Sheffield, and Leicester, the natural increase (or excess of births over deaths) within the ten years exceeded the enumerated increase. In the case of Liverpool the excess of births over deaths was 51,635, and yet the decrease of population in the ten years was 34,557; it follows that a population of 86,192 persons overflowed its boundaries during the period 1881-91. It would be interesting to know how many of this migratory population really left the town, and how many merely settled in the surrounding districts. The loss by overflow in this manner was 29,526 in Birmingham, 11,720 in Bristol, 5,187 in Nottingham, 3,503 in Salford, 1,112 in Leicester, and 317 in Sheffield. In Leeds, Newcastle-on-Tyne, Oldham and Portsmouth, on the other hand, the enumerated increase of population considerably exceeded the excess of births over deaths.

From the public health point of view a very important result already obtained from the recent census is the demonstration that the estimates of population upon which death-rates have recently been calculated were in many towns seriously erroneous. The percentage of error in the hypothetical estimate ranged from an excess of 26.3 in Salford to a deficit of 11.9 in Newcastle, and the general error in all the 28 towns was an excess of 6.5. Mr. Humphreys gave a table showing the difference between the hypothetical estimate of the birth-rates and death-rates in Liverpool and Salford, and the estimate based upon the recent census numbers; thus in Liverpool the old estimate for 1890 gave a death-rate of 23.6, whereas the census shows that a truer estimate would be about 27.8; so in Salford the old estimate gave a rate of 22.4, whereas the new estimate shows a rate of 27.6 per 1,000.

Since our present method of estimating population is

liable to this serious error, and since it appears to be impossible to devise any method which shall certainly give more reliable results, the necessity for a more frequent enumeration appears to be very conclusively proved. The cost of the census of 1881 was £128,000, of which about £90,000 was paid to enumerators. It is therefore to be feared that the proposal to establish a system of quinquennial censuses, each alternate census to be a mere enumeration, would not effect any very important economy, for the number of enumerators would be the same in either case. At the same time the results to be gained by more frequent enumeration are so important that the Government may well be asked to face the increased expenditure, which after all would only be a matter of about £25,000 a year if spread over quinquennial periods; probably certain economies could be effected by maintaining a permanent staff who would be thoroughly trained to their duties.

The figures for London, so far as they have been worked out, show that the decrease in the population of the compact area of Central London[1] has not been compensated for by the increase in Greater London.

Speaking generally, London may be divided into three zones: the compact area, within which the decrease which has been going on since the decennium ending 1871 has during the last decennium gone on at an increased rate; a middle zone, constituting the remaining portion of registration or Inner London, within which there has been an increase, but at a considerably reduced rate—15.8 per cent. as against 27.7 per cent.; and an outer ring of suburban districts, in which the increase has been only fractionally less rapid than in previous decennia—49.5 per cent. as against 50.5 per cent. in 1871-81.

Since Greater London includes every parish of which any part is situated within twelve miles of Charing Cross, it undoubtedly includes the whole of what may fairly be called London, though no doubt a considerable number of persons residing outside this area form a regular part of the day population of London. When every allowance is made, however, for this source of error, there still appears to be no doubt that there has been a marked check in the rate of growth of even Greater London not to be accounted for by mere overflow into districts immediately beyond the twelve-mile radius, and Mr. Humphreys is probably right in thinking that the rate of increase in the Greater London population can never again rise to that which formerly prevailed; it seems certain that the population of the area now known as the County of London—which doubled itself in the forty years 1801-41, and again in the following forty years 1841-81—can not again double itself in the forty years of which the first ten ended in April last.

THE PRODUCTION OF MYOPIA IN SCHOOLS.

In a recent number of *Graefe's Archiv für Ophthalmologie*, Dr. Seggel makes a very important contribution to our knowledge of this subject, especially in reference to Stilling's theory, that the form of the orbit is a potent factor in producing myopia. From a considerable number of measurements made on living subjects, Stilling found that the height of the orbit was less in myopes than in non-myopes, and he advanced the theory that this formation of orbit was one of the chief factors in producing myopia, for it resulted from it that, other things being equal, the reflected tendon of the superior oblique would exert more pressure on the globe than if the orbit were high. When, as is not infrequently the case, this tendon has an approximately transverse direction, the combined pressure of the two obliques upon the plane of the equator, exercised during the period of growth, tends to produce elongation of the antero-posterior diameter.

Considering the inaccuracy of measurements made on the living subject owing to the varying thickness of the soft parts, as well as the fact that even with a low orbit harm would only result when the direction of the tendon was almost transverse, and bearing in mind the possible coexistence of other factors, we are entitled to demand very full statistical evidence before accepting this theory.

Dr. Seggel's paper, containing, as it does, records of the measurement of 1,900 orbits, the refraction having been estimated in each case, is valuable from a statistical point of view, and he has, moreover, paid considerable attention to the age and sex of his subjects, and to changes occurring in the course of years. We have only space to quote his main conclusions. He found that in children under 10 years of age there was a distinct association between myopia and a low orbit; but that the increase in the height of the orbit when myopia has once been produced is more rapid than in non-myopic subjects, consequently at the age of about 13 the orbit is no longer any lower than in emmetropia, while in adults the myopic orbit is the highest. Striking results were obtained by measuring the changes that occurred in a few years in the refraction. He found that of those who had low orbits, 44.72 per cent. became myopic, while of the others only 22 per cent. became so. It must be admitted that these figures tend strongly to confirm Stilling's view, that a low orbit has some influence in producing myopia; but Seggel himself admits that there must be other contributory causes, and probably use of the eyes upon near objects under unfavourable conditions is the most potent of these.

In connection with this part of the subject, our readers will do well to refer to the admirably practical papers read by Mr. Priestley Smith and Mr. Richardson Cross at the meeting of the Association at Birmingham, which are reported, together with the discussion on the subject, in the BRITISH MEDICAL JOURNAL, vol. ii. 1890, p. 723. Both authors agree that the most active cause in the producing myopia is prolonged convergence, a view that is quite consistent with Stilling's theory, since there must in addition to the exciting cause be some predisposing conditions to account for the fact that all children do not suffer although the conditions may be the same.

As regards the prevention of myopia, we are no doubt in many respects much better off than we were a few years ago. Our school buildings are better lighted, the desks and seats are better arranged, the books are better printed, and most teachers have some knowledge of the ill-effects of neglecting these precautions. On the other hand, the actual amount of work that we demand from our school children has enormously increased, and becomes greater every year. A large amount of home study is thus rendered necessary, and it may well be doubted whether in this way, at any rate among the poorer classes, the effect of the improved school hygiene may not be more than neutralised.

[1] Consisting of the following ten registration districts: St. George Hanover Square, Westminster, Marylebone, St. Giles, Strand, Holborn, London City, Shoreditch, Whitechapel, and St. George-in-the-East.

It would be a great gain if the children could be divided into classes more in accordance with their physical fitness for resisting the injurious effects of over-study, than with their capability of acquiring knowledge which, though it may satisfy an inspector, will be of much less use to them in after-life than a pair of healthy eyes and a sound constitution.

Dr. Broadbent has been re-elected physician to St. Mary's Hospital for a further term of five years.

On June 14th a memorial bust of Ferdinand von Hebra, the famous dermatologist, was placed in the Arcade of the University of Vienna. Professor Kaposi, von Hebra's son-in-law and successor in the Chair of Skin Diseases at Vienna, delivered an address on the occasion.

The minutes of the last session of the General Medical Council, and of the proceedings of its Executive and Dental Committees, and of the English Branch Council from January 1st to June 2nd, 1891, have been issued, and may be obtained from Messrs. Spottiswoode and Co. The volume—No. xxviii of the series—also contains appendices, showing the standing orders, the yearly accounts for 1890, the Education Committee reports on laboratory work for diplomas in State Medicine, and on preliminary examination in general education.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE SURGEONS OF ENGLAND.

We are asked to state that it has been arranged to hold the annual general meeting of the Association of Fellows of the Royal College of Surgeons of England at the Medical Society's rooms on Thursday, June 25th, at 5 P.M., instead of at 20, Hanover Square, as announced last week.

LEPROSY IN THE LEEWARD ISLANDS.

A petition praying for the compulsory segregation of lepers in the Leeward Islands was lately sent by the inhabitants of St. Kitts and Nevis to the Governor, Sir W. F. Haynes-Smith with the request that it might be forwarded to the Queen. It states that leprosy is "most prevalent in these islands, and that the number of persons afflicted with it is rapidly increasing." The petition is signed by eight medical men (including all the Government medical officers with two exceptions), by twelve ministers of religion, by the Inspector of Schools, and by nearly every merchant in St. Kitts.

MEDICAL EDUCATION IN JAPAN.

In an article on Mr. Hart's address to the medical practitioners at Osaka, on Medical Education in Japan, the *Hyogo News*, after endorsing the view that a compulsory standard of efficiency ought to be established in Japan, goes on to state that the Japanese student of medicine is seriously handicapped by the want of public hospitals. Our contemporary appears disposed to look to the Government for the establishment of such institutions, although it is prepared to hope much from spontaneous charity. However obtained it would appear that the establishment of such institutions is absolutely necessary in the interest, not only of medical education in Japan, but of the general improvement of the condition of the working classes of that country.

A TEMPERANCE CONGRESS.

The managers of the National Prohibition Park, of Staten Island, have issued invitations to medical men in the United States and the Dominion of Canada to meet there on July 15th and 16th, for the purpose of discussing questions connected with the prevention and treatment of inebriety. Among the subjects proposed for debate are the following: What are the Hereditary Effects of Drunkenness? Are there any Hereditary Effects that follow Moderate Drinking? To what Diseases are Inebriates more Especially Exposed? Is Alcohol a Poison? Is Alcohol in any Sense a Food? What are the Proper Uses of Alcohol as a Medicine? Is there Danger of Producing the Drink Habit from the Prescribing of Alcoholic Medicines? How Large a Percentage of Deaths may be Attributed Directly or Indirectly to the Use of Strong Drink? Should Alcoholic Liquors ever be Used except under the Direction of a Medical Adviser?

INFLUENZA.

There was a marked decline last week in the fatality of influenza in London. The deaths directly referred to this disease, which had been 319, 310, and 303 in the preceding three weeks, further declined to 249 during the week ending Saturday last, June 13th. In addition to these 249 deaths, there were 49 cases in which influenza was certified to have occurred in the course of other diseases. Of the 249 deaths directly referred to influenza last week, no fewer than 115, or nearly 50 per cent., were of persons aged upwards of 60 years. The deaths referred to disease of the respiratory organs in London, although they showed a further decline from recent weekly numbers, were nearly double the corrected average number; 255 deaths resulted from bronchitis, and 166 from pneumonia, against averages of 122 and 77 respectively. Many of these deaths, though primarily attributed to respiratory diseases, were due to influenza. In the provincial towns there was a general decline from the high death-rates prevailing in recent weeks, although the mean rate still considerably exceeded the average.

COMPROMISE IN OFFICIAL OBSTRUCTION.

Sir M. Hicks-Beach has now under consideration a compromise with reference to the British College of Preventive Medicine, which may get him out of the difficult position in which he has deliberately placed himself. It will be remembered that his only objection to the proposals of the deputation was that agreement on his part might imply so much sanction of the scope and objects of the institution as to hamper the Home Office when it is called on to play its part. Inadequate and even absurd though this reason for obstruction seemed to every one in the room except the Minister who gravely preached it to his congregation, it is evident that it must be met, and some kind of ladder provided for the inevitable climb down. It is therefore now proposed that words shall be inserted plainly setting forth that the Home Office shall be in no way compromised by the consent of the Board of Trade to dispense with the word "Limited," and that their entire freedom of action shall be secured to them when they are called on at a later stage to grant licences for experiment. Should Sir M. Hicks-Beach be so ill-advised as to yield to the influence which we understand is being brought to bear on him from the highest quarters to hamper the progress of scientific research, vigorous parliamentary action will be taken at the earliest opportunity, and the whole facts of the case placed plainly before the House by Sir L. Playfair and Sir H. Roscoe.

THE VENTILATION OF THE HOUSE OF COMMONS.

The ready acquiescence of Mr. Plunket in the request that he should reappoint the Committee on the drainage and ventilation of the House of Commons is only another instance of the sincere desire of this popular Minister to meet the comfort and convenience of members in every possible way. It will be remembered that this Committee was first appointed in 1886, and that, after a number of sittings under the chairmanship of Sir H. Roscoe, it made recommendations which resulted in the practical reconstruction of the drainage of the House. £10,000 of public money were never better spent than in cutting off the domestic sewers of the Palace of Westminster in the most effective way from the main system of the neighbourhood, and since the Shore system has been in complete working order not a single bubble of

sewer gas has found its way in from outside. When the dissolution took place the Committee shared the fate of its masters, but it had successfully accomplished the first half of its work, and the understanding was that it should be called together again to attack the second. The method of ventilation originally devised by Mr. Reid, and modified and adapted so practically by Dr. John Percy and Mr. Prim, is of a highly artificial character, but has worked well on the whole. Complaints are not infrequent of course, and indeed when we consider the varying peculiarities of constitution, mental and physical, of 650 men assembled under the same atmospheric conditions, the only wonder is that they are so few. Some people think the air too dry, others complain of heat, whilst a third section grumble at draughts, and sniff an occasional bad smell in an odd corner or two. But taking the arrangements as a whole we have always held that, in comparison with any other public building of the same size and irregular construction, and used under the same varying conditions, the chamber itself will do more than hold its own. It is probable, therefore, that attention will be directed in the first instance to the insanitary condition of the Committee rooms and corridors, and that some attempt will be made to remedy a state of affairs which causes complaint, and which is seriously prejudicial to the health of witnesses, counsel, and the general public, as well as of the honourable members' themselves. We hope that the Committee will press vigorously home one section of their report which met with little attention at the time, but which the lamented death of Dr. Percy has brought within practical possibility. As matters at present stand, responsibility for the sanitary wellbeing of the House is divided equally among four separate departments. The Committee advised that in future one distinct and specific authority should regulate everything connected with health and hygiene within the walls of Westminster, and should be directly answerable to Parliament for the success or failure of its work. This suggestion is so reasonable and moderate that we can hardly believe that its adoption will be much longer delayed.

DIRECT REPRESENTATIVES.

At its last meeting the General Medical Council settled the dates for the election of direct representatives. The final day for the receipt of nomination papers is November 23rd; the issue of voting papers will take place between November 24th and 28th, and the last day for the return will be December 5th; the declaration of the poll will be made on December 12th. The interest in the election is already being shown by various communications which reach us. At the annual meeting of the South-Eastern Branch, held at Canterbury on June 10th, the following resolution was adopted: "That this meeting desires to record its unqualified approval of the conduct of the elected representatives on the General Medical Council during their term of office, and its high appreciation of the valuable services which they have rendered to the profession. It begs to offer them very grateful thanks and the assurance of cordial support at the ensuing election in November." We publish elsewhere a letter from a correspondent who suggests the presentation of petitions to the Privy Council praying that the number of direct representative may be at once increased. The work done by those who have sat upon the Council during the last five years has been so excellent that it is only natural, perhaps, that this wish should find expression. Every impartial reader of the reports of the proceedings of the Council must admit that it has, in recent years, shown considerably increased readiness to deal with questions directly affecting medical practitioners. It has put its foot down about "covering;" it has resolved that the length of the medical curriculum ought to be increased, and it has, at its last meeting, made alterations which will tend to raise the standard of preliminary education. It would be going too far to attribute the whole of the increased activity of the Council to the influence of the direct representatives, but it cannot be denied that they have played an important part, not only in moulding the character of its proceedings, but in selecting the subjects to be treated.

POISONED BY GIN.

Anderghem and Boitsford, two small villages near Brussels, were not long ago the scene of a remarkable epidemic, which caused the greatest alarm among the inhabitants. Twenty-seven persons, only one of whom was a woman, died in twenty-three days. The victims were all between 40 and 50 years of age. The following were the principal symptoms noted: After a few days of vague illness, the patients were suddenly seized with acute pain unaccompanied by diarrhœa or vomiting, headache, impairment of vision going on to complete blindness, and finally symptoms of passive congestion and asphyxia. In two cases a *post-mortem* examination was made, but threw no light on the cause or nature of the disease. Besides the twenty-seven fatal cases, fifteen others occurred, mostly in patients younger than those who died. The cause of the "epidemic" was at last traced to gin. All the patients were known to be drunkards, and the disease came on as a rule from twelve to twenty-four hours after copious potations of gin. No information is given as to the composition of the incriminated fluid, further than that it was of "inferior quality," nor is it stated that a chemical analysis of it was made. The good people of Anderghem and Boitsford appear to have been quite satisfied with the clinical evidence; they gave up drinking gin and the "epidemic" suddenly ceased.

QUEEN VICTORIA NURSING INSTITUTION, WOLVERHAMPTON.

The second annual meeting of the supporters of the Queen Victoria Nursing Institution was held on June 10th, in the Town Hall, at Wolverhampton, under the presidency of Archdeacon Scott. The Honorary Secretary, Miss Lowe, read the annual report for 1890-1891, which mentioned that the Princess Christian had become a patroness of the institution, and that it had been promised a donation from Queen Victoria's Jubilee Institute for Nurses, to aid the work of nursing the sick poor at their own homes. There were now sixteen fully trained nurses on the staff, and during the year nurses had been supplied to 121 families, representing 434 weeks of nursing. The work done by the nurses had earned for themselves and the institution the highest praise from more than seventy medical practitioners, as well as the gratitude of the patients whom they tended and their friends. The applications for nurses were so numerous that many had to be refused, but steps were being taken materially to enlarge the staff. A commencement in the way of district nursing had been made, and Lady Dartmouth had started a special fund to help the work forward. The Mayor of Wolverhampton, in moving the adoption of the report, pointed out that during the year £606 had been received in fees for nursing, while the household expenses were only £102 6s. 8d. The institution could not, however, be made self-supporting, as so much of its work was done among the poor. The motion was seconded by Mr. T. Vincent Jackson, to whose initiative and untiring efforts the institution largely owes its existence and its present gratifying state of efficiency and prosperity. To that gentleman and his colleagues not only the town of Wolverhampton and its immediate neighbourhood, but the large area of the Midland Counties over which the work of the institution already extends, owe a deep debt of gratitude for their unselfish labours in the establishment and development of so useful an institution.

INFANTILE HYGIENE.

An International Exhibition of Infantile Hygiene and Education was opened at Milan on May 7th in the presence of the Italian Minister of Public Instruction, Professor P. Villari. The objects of the Exhibition were set forth by Pro-

fessor E. Porro, Director of the Milan Maternity School, in an eloquent speech. It is owing to Professor Porro that the exhibition developed from a mere display of toys for the benefit of some workmen thrown out of employment by the industrial crisis to an exhibition of everything connected with the hygiene and education of infancy. Among the exhibits are incubators for prematurely born or weakly babies, scales for weighing infants, all sorts of more or less complicated machines for the sterilisation of milk, a wonderful collection of articles of various kinds connected in some way with dentition, gymnastic apparatus, etc.

THE REHOUSING OF THE RURAL LABOURER.

At last a beginning has been made, or, at all events, an attempt at a beginning, under Part III of the Housing of the Working Classes Act, 1890. The *East Anglian Daily Times* of Tuesday last contains a report of a public inquiry held at Ixworth on the previous day by Lord Francis Hervey on behalf of the West Suffolk County Council. It appears that the medical officer of health to the Thingoe rural sanitary authority has had occasion to report upon the insanitary condition of certain labourers' cottages in the parish of Ixworth. The authority found that however necessary it might be to close these houses there was no available accommodation elsewhere for the evicted tenants, and therefore decided to adopt the course indicated by Part III of the Act of 1890—that is, to erect suitable dwellings as a first step. The approval of the County Council is necessary before such action can be taken by a rural authority, and hence the recent inquiry. In the course of the proceedings Dr. Kilner, the medical officer of health, mentioned several cases of overcrowding, dilapidation, and other unwholesome conditions of dwellings. It seems to have been admitted on all hands that at least ten or twelve more houses were absolutely necessary, and that there was no prospect of their being provided by private enterprise, especially as the population of the district was diminishing. The decision of the County Council will be given in due course, but as far as the report enables us to form an opinion the Thingoe rural sanitary authority have amply justified their action. They have set an example which should be widely imitated, and are to be congratulated upon being the first among rural sanitary authorities to realise their new responsibilities and powers. The need for energetic action of this kind is far from being limited to the eastern counties. A few weeks ago the *Newcastle Daily Leader* gave an account of a meeting of the Hexham rural sanitary authority, in the course of which it was stated that the condition of most of the labourers' dwellings in the district was a "disgrace to civilisation," but it does not appear to have occurred to any of the guardians present that the remedy lies in their own hands. They have now a precedent to go upon.

THE GERMAN GYNÆCOLOGICAL SOCIETY.

The German Gynæcological Society held its fourth General Congress at Bonn from May 21st to 23rd, under the presidency of Professor Gustav Veit. The meeting was opened by the President with an address on Menstruation, Ovulation, and Conception. An interesting paper was read by Professor Dohrn, of Königsberg, on Obstetric Practice among Private Patients. He said that though the introduction of antiseptics into midwifery practice had had good results, the full measure of benefit that might have been expected therefrom had not been attained. While the mortality of childbed had shown a notable increase in certain large districts of Germany, in others no such diminution had taken place. The statistics for Prussia from 1816 to 1886 showed a marked decrease in the death-rates among mothers, commencing in 1870. On the other hand, those for the Grand Duchy of Baden between 1873 and 1887 showed no marked improvement in recent years, and those for the kingdom of Saxony showed an actual increase of mortality among puerperæ in the last two years. This state of things Professor Dohrn attributed to the great increase in instrumental deliveries which greater facilities of communication and growing confidence in antiseptics had brought about in the last fifteen years. Operative interference was, according to him, to be deprecated, unless in a small minority of cases where it was absolutely necessary, and he appealed to medical practitioners to be less ready than they were at present (in Germany) in using the forceps in season and out of season. A further measure of great importance for the lowering of the puerperal death-rate was the betterment of midwives, in whose hands was the entire management of 95 per cent. of all confinements in Germany. "The interests of the lying-in woman," Professor Dohrn thinks, "are in the majority of cases best served if she is left in the hands of an intelligent midwife who takes her instructions from a medical man." Papers were also read by Dr. Ahlfeld, of Marburg, on the Difference in the Death and Sickness Rates of Lying-in Women in Special Institutions and in their own Homes; by Hofmeier, of Würzburg, and Leopold, of Dresden, on the Diagnosis of Carcinoma of the Body of the Uterus; by Bumm, of Würzburg, on Puerperal Endometritis, etc. The programme included forty-two papers and thirteen demonstrations. Breslau was selected as the place for the Congress of 1893, when Professor Fritsch will preside.

PROFESSOR DEROUBAIX.

On May 30th Professor Deroubaix, the eminent Belgian surgeon, was presented with his statue in bronze by his colleagues of the Faculty of Medicine of the University of Brussels on the occasion of the fiftieth anniversary of his appointment to the chair of surgery in that seat of learning. Among those present at this interesting ceremony were nearly all the medical and scientific notabilities of Belgium. The statue, which is the work of M. Vander Stappen, represents the professor in operating costume, standing scalpel in hand before a table on which lies a dissected arm. The taste and even the appropriateness of such a pose may strike some minds as a little doubtful, but the work is said to be an artistic masterpiece, and art, like charity, covers a multitude of sins. In addition to the statue, a superb case, containing a complete collection of the instruments invented by M. Deroubaix, was presented to him by his present pupils. The usual salvoes of oratorical artillery were discharged in his honour; and he may be congratulated on the unruffled serenity with which he endured eight or nine set speeches, to say nothing of several addresses from learned bodies, Belgian and foreign, and numerous congratulatory letters and telegrams, all of which were inflicted on him "without remorse or mitigation," as Malvolio says. This was followed by the inevitable dinner, and the proceedings were wound up with some uproarious festivities in the students' quarter. From one of the speeches delivered on this occasion we gather that M. Deroubaix was born in 1813, and studied at Louvain, where he took his Doctor's degree at the age of 23. He was appointed Extraordinary Professor of Anatomy in the University of Brussels in 1841, becoming Ordinary Professor four years later. Afterwards he was appointed Chief Surgeon to the Hôpital St. Jean, where he has taught clinical surgery with distinguished success ever since. In 1862 he was elected Rector of the University, to which by general acknowledgment he has rendered most valuable service. The King of Belgium would have been glad to have conferred on him a title of nobility, but M. Deroubaix declined the honour on the ground that he did not wish "to be taken out of the class of society in which he was born." His Majesty, however, insisted on his accepting the distinction of Grand Officer of the Order of Leopold.

PROFESSOR SCANZONI.

Dr. Friedrich W. Scanzoni von Lichtenfels, Privy Councillor of the Kingdom of Bavaria, and Emeritus Professor in the University of Würzburg, died on June 12th at Schloss Zinneberg, Upper Bavaria, after an illness which had lasted many years. He was 70 years old. He was a very active worker and

writer. His great treatise on *Midwifery* first appeared forty years ago, and since that date he has written a textbook on *Gynæcology*, which was translated into English (second hand from the French) by Dr. Augustus K. Gardner, of New York, in 1861. Since that date the late Professor wrote numerous monographs and contributions to medical journals and textbooks. For a time he was editor of the *Würzburger medicinische Zeitschrift*, which contains some of his best essays, too often quoted third or fourth hand in English works. In 1862 Professor Scanzoni was elected an Honorary Fellow of the Obstetrical Society of London.

SCOTLAND.

Dr. Forbes M. Moir has been appointed Chairman of the District Lunacy Board of Aberdeen for the current year.

At a conference of public bodies held in Edinburgh, it was stated that Sir Archibald Geikie has been nominated for the presidency of the meeting of the British Association in Edinburgh in the year 1892.

ROYAL SOCIETY OF EDINBURGH.

An ordinary meeting of the Royal Society was held in Edinburgh on June 15th, when papers were read by Drs. Johnson Symington and Dr. Alexis Thomson, by Dr. J. M. Macfarlane, and by Dr. Berry Haycraft.

SCOTTISH UNIVERSITIES COMMISSION.

The sixty-first meeting of the Scottish Universities Commission was held in Edinburgh on Friday, June 12th, when evidence was given by Dr. Argyll Robertson and Dr. Byrom Bramwell. The sixty-second meeting of the same Commission was held on Monday, June 15th, when evidence with regard to instruction in mental diseases was heard from Dr. Clouston, Lecturer on Mental Diseases in the University of Edinburgh, and from Dr. Yellowlees, Lecturer on Insanity in the University of Edinburgh. Further evidence with regard to a proposed Chair of Pathology in the University of Glasgow was heard from Dr. McKendrick, Professor of Physiology, and from Dr. Joseph Coats, Examiner in Pathology in that University.

EDINBURGH HOSPITALS.

For some time back negotiations have been going on between the managers of the Royal Infirmary, the directors of the Sick Children's Hospital, and the governors of the Trades Maiden Hospital, with the object of securing from the last-named body a site, on the south side of the meadows, for a new Sick Children's Hospital, so that the site of the former hospital could be handed over to the Royal Infirmary managers with a view to a further extension of that institution. Unfortunately the matter has been dropped by the infirmary managers, because the governors of the Trades Maiden Hospital asked a price (£17,500) which was considered too large by £2,000 or £3,000. It is deeply regretted by many that the managers of three charitable institutions of such importance should not be able to come to terms when the matters involved are of such urgent importance to the community at large.

INFLUENZA IN ABERDEEN.

At the meeting of the Aberdeen Town Council on June 15th the convener of the Health Committee drew attention to a paragraph in the report of the medical officer for the city. The report stated that 19 of the deaths that occurred in the city last month had been certified as having been due to influenza. The report concluded by stating that there was every reason to believe that the present epidemic was distinctly infectious, and that the public should be warned to take precautionary measures by isolating the patients as much as possible.

IRELAND.

At a meeting last week of the trustees of the Cork North Infirmary, Dr. R. Dalton was unanimously elected assistant-physician to the extern department of the hospital.

Dr. F. V. MacDowel died recently at his residence, St. Kevin's, Baltinglass. He was medical officer of Baltinglass Union, and had a good practice in the adjoining counties of Wicklow and Carlow.

The contest for the vacant coronership for the baronies of Dungannon, which lay between a solicitor and a medical practitioner, has terminated in favour of the former by a large majority.

ROYAL COLLEGE OF SURGEONS.

The opinion of a large section of the Fellows of the Royal College of Surgeons in Ireland in favour of the President holding office for two years, which resulted this year in the election of Mr. Croly for a second year, has found further expression in the proposal that a past President should at intervals be recalled to the Presidential chair. In response to the request of many friends and former pupils, Mr. Edward Hamilton has formally announced his intention of offering himself for election to the Presidency of the College in June, 1892, when, it is intimated, Dr. Carte, the present Vice-President, will not offer himself for the higher office. Mr. Hamilton is an ex-President. Mr. Theodore Stack has declared his candidature for the Vice-Presidency in 1892, when Dr. Carte's two years of service will have expired.

SUSPECTED HYDROPHOBIA.

A number of deer at Carlow have been destroyed because they were supposed to be suffering from hydrophobia. It is said that some of them were bitten by a rabid hound, and the symptoms which subsequently developed were attributed to rabies. It is, however, not certain that this was the case. Our contemporary, the *World*, which will not be accused of any undue attachment to abstract science, has the following apposite remarks with regard to this event:—"The sooner Lord Greville's scheme of extending Pasteur institutes to England and Ireland is adopted the better for suffering humanity. There is a dangerous delay in transporting patients from remote places to Paris, and Lord Doneraile's fate ought to be warning enough. Only the other day a rabid greyhound, after biting some children, attacked the deer in Mr. Bruen's park (Oak Park) near Carlow, biting several of them. The contagion spread rapidly, as the deer bit each other fiercely and frantically, and the herd has had to be destroyed."

THE LATE WILLIAM M. RAE, STAFF-SURGEON R.N

A mural tablet has been erected in memory of this officer, who was on board the ill-fated *Serpent* when she foundered. It is of polished white marble on a black ground, with anchor and chain at the base, and bears the following inscription: "In memory of William Masters Rae, Staff-Surgeon R.N., who, with 172 officers and men, was lost at the post of duty in the wreck of Her Majesty's ship *Serpent*, near Cape Villano, Spain, on November 10th, 1890, aged 36 years. This tablet was placed here as a token of love and esteem, and as an Irish memento of that sad disaster by his widow and friends."

GALWAY INFIRMARY.

The Galway Infirmary, it is stated, is to receive a grant from Parliament in order to keep it open as a general hospital. The governors, it will be remembered, received a mandamus from the Court of Queen's Bench, directing them to proceed to the election of a surgeon, the present officer having been

irregularly appointed. A great deal of bitter feeling was excited, and the gentleman who was appointed to succeed the late Dr. Browne still remains as surgeon. Some subscriptions have been given towards the maintenance of the hospital, but the people of the town hardly seem to realise that the closing of this hospital would mean the extinction of the medical school.

DEGREES FOR LONDON MEDICAL STUDENTS.

THE draft Charter of "the Albert University of London" has now become the substantive proposal before the Privy Council, and Lord Cranbrook has refused to enlarge the period during which objections may be lodged. This period ends on Monday next, and, as will be seen by reference to another column, Sir Walter Foster has given notice of a question in the House of Commons suggesting an extension of time, but the result of this will not be known until after the current number of the BRITISH MEDICAL JOURNAL has been printed. The present urgent position of the question has been considered by the Royal College of Physicians and by the Council of the Royal College of Surgeons, and these two Colleges have combined in seeking the extension of time above referred to.

Meanwhile conferences have taken place between representatives of University and King's Colleges and the medical schools in London, and the draft Charter of the "Albert University" has been modified in certain important particulars.

THE PROPOSED "ALBERT UNIVERSITY."

In its present form it proposes that the University should consist of a council or senate and of all the colleges in London; these colleges would be University and King's Colleges, and the medical schools recognised by bodies granting medical qualifications. The council would consist of a chancellor nominated by the Crown, six representatives nominated by the Crown, three of whom would, after an interval of ten years, be elected by convocation; twelve representatives elected by the faculties—namely, four each by the faculties of arts, science, and medicine; six representatives elected by University and King's Colleges; and ten representatives of the medical schools. The mode in which these ten representatives would be elected would depend upon the attitude finally taken by the Royal Colleges of Physicians and Surgeons. The University would have power to confer degrees in the faculties of arts, science, and medicine on persons who shall have pursued a regular course of study in a college or in a university—that is, in London itself. The medical schools would be counted as colleges. But the Charter proposes to provide that no ordinary medical degree shall be conferred on any person who shall not previously have obtained a registrable qualification under the Medical Acts. It will be noticed that this provision would place the Apothecaries' Hall upon the same footing as the Conjoint Board of the Colleges of Physicians and Surgeons; but it is proposed that the University should have power to accept the examinations and periods of residence of other Universities, provided that, before granting a degree, the student shall be required to pass though a course of study in London during the final portion of the period of study. It is understood that the period of study which would be required would probably be two years. The University also would have power to admit by special grace graduates of other Universities to similar and equal degrees in the University. The council would be the governing body of the University, and would have full power to make and alter statutes for regulating all matters concerning it. But in making regulations respecting the examinations or degrees of the faculty, the council will be required to proceed on a recommendation of the assembly of the faculty. The assembly of the faculty of medicine would consist of (*a*) such of the professors, physicians, surgeons, and lecturers of the medical schools in the University as may be designated by the governing body of each school; the number to be thus selected is not specified; (*b*) of such examiners of the University in subjects included in the faculty as the Council may appoint members of the assembly; (*c*) persons may engage in teaching, nominated by the assembly of the faculty and approved by council. The powers of the faculty would include the discussion of any matter relating to the University, but it would be empowered to delegate to boards of study the power to regulate studies and making reports to the Council. The boards of study would consist of members elected by the assembly and of such examiners as were members of the assembly.

THE UNIVERSITY OF LONDON AND THE ROYAL COLLEGES.

The Senate of the University of London recently addressed to the Royal Colleges and the medical schools a letter, in which it expressed its regret that the draft Charter had been set aside by the action of Convocation. The letter went on to say that the Senate was of opinion that under the Medical Acts the University had legal authority for combining with the Royal Colleges for the purpose of granting medical degrees, precisely as the Royal Colleges had combined with each other, and that the Senate would be ready to discuss this matter. The Royal Colleges replied to the effect that they would be glad to hear further details as to the proposed method of co-operation. On June 15th the Senate replied to this request to the effect that it believed that with the single exception of the provision for putting representatives of the Colleges on the Senate it could carry out all the arrangements agreed to under Clause 47 of the University's scheme, and in conclusion the Senate invited a conference in order that the details might be discussed.

THE UNIVERSITY OF LONDON AND "THE ALBERT UNIVERSITY."

Meanwhile the Senate has presented to the Privy Council a case with regard to the petition for the Albert University. The Senate, while retaining the objections to the creation of a new university, formally urged before the Royal Commission nevertheless, under existing circumstances, does not offer any further opposition to the Charter petitioned for, so far as it proposes to confer the power of granting degrees in arts and science to students who have pursued their entire academic curriculum in London colleges; but it does object to the powers which would enable the new university to confer degrees on other persons—a proposal which it thinks would create a needless and mischievous competition with the existing University. They further point out that the strictly teaching character of the proposed Albert University is departed from in the provision which gives powers to accept residence and examinations at other universities as a part of the curriculum qualifying for a degree. With regard to the metropolitan schools, the Senate urges that their association in the Albert University would falsify the teacher-examiner system, and would merely lead to a competition with the present University in the granting of medical degrees.

The University of London, it is pointed out, already accepts as candidates for its medical degrees only students who have studied in recognised medical institutions.

THE BRITISH MEDICAL ASSOCIATION AND "THE ALBERT UNIVERSITY."

The Special Committee of the British Medical Association appointed to watch any action in connection with the institution of a medical university in London has held two meetings. At the last certain resolutions were adopted, one declaring that the establishment of a university with power to grant degrees and licences in medicine and surgery to meet the requirements of the London Medical Schools is urgently needed. Another was to the effect that the new university should include as constituent bodies the medical schools as scheduled and recognised by the University of London, and that these schools should rank equally as colleges. A third resolution was adopted by the casting vote of the Chairman to the effect that candidates for degrees in medicine in the new university should reside in the metropolis during a certain part of the period of study; and, lastly, the Committee were of opinion that the name of the present University of London should be changed to "Imperial University" or "University of Britain," and that the new university should be called the University of London.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary comitia of the College was held on Tuesday, June 16th. Sir Andrew Clark, Bart., M.D., President, in the Chair.

The Censors' Board nominated Dr. Pye-Smith Lumleian Lecturer for the ensuing year, and Dr. Sidney Martin Goulstonian Lecturer. A communication was read from the Secretary of State for War promising the promulgation of a Royal Warrant in respect of the Army Medical Department, as already notified in our columns.—The President observed that it could not be said that the College was unable to exert any public influence, as since it had first moved in the matter every demand that had been put forward had been granted save one, and that was the formation of an Army Medical Corps, which, being very costly, would necessarily take some time.

On the motion of the Senior Censor, it was resolved that the Council of the College might confer with others than Fellows of the College on the question of the five-years curriculum, and the necessary rearrangement of studies entailed thereby.

Communications were received from the Secretary of the Royal College of Surgeons.

The rest of the meeting was occupied with a subject declared to be *secreta collegii*, and at 7 o'clock the further discussion was adjourned till Saturday (June 20th).

THE HOSPITALS COMMITTEE.

The Committee resumed their inquiry at the House of Lords, on Monday last, under the presidency of Lord Sandhurst.

Dr. Bridges, Local Government Board Inspector (Metropolitan District), stated that he had occupied that position since 1869. There were twenty-four separate infirmaries, in which were 12,445 beds. He did not think that quite sufficient for the population. Some of the parishes had no infirmaries, and, as in the case of Bethnal Green, the sick had to be sent to the workhouses. There were about 4,000 beds in the workhouses which were occupied by sick persons. He had called the attention of the Local Government Board to the fact that there were no infirmaries in certain parishes, and that, in consequence, the sick were treated in the workhouses. Whilst the indoor medical relief had increased during the last ten years, the outdoor relief had decreased. He rather thought the decrease was owing to the establishment of Poor-law infirmaries. The district medical officers of late had been in the habit of sending in all the severe cases they could to the Poor-law infirmaries. As to whether it was correct to say that a good many persons went to the charities who should be treated at the infirmaries he did not think he could form an opinion. Explaining the internal organisation of the infirmaries, the Witness said there was a principal superintending officer, whose business it was to govern and control all the business of the infirmary. Under him were a steward and a matron and other subordinate officers. The medical superintendent, matron, and steward were appointed by the Board of Guardians or District Board, but the superintendent could only be dismissed after an inquiry by the Local Government Board. As to whether the duties of the medical superintendents were more than a single person could carry out, he said that that depended almost entirely on the amount of assistance given him by the assistant medical staff. In the case of Marylebone, the assistance was insufficient—in fact, it was an exceedingly small staff. It would be a great advantage if the services of a honorary medical staff could be secured; but a great difficulty was that in most cases the infirmaries were a long distance from the residences of the principal consulting physicians and surgeons. He feared that it would be very difficult he did not say impossible—for the leading physicians and surgeons of London to travel to the infirmaries. Many of them could not come unless they had adequate fees. He would not increase the paid staff of the infirmaries unless another plan could be adopted of connecting the Poor-law infirmaries with the staff of some of the general hospitals. They might, perhaps, induce some of the senior medical students to hold posts, such as dressers and clerks. That would be a matter of organisation. He would very much like to see the infirmaries thrown open for instruction of students. It would be well if the clause in the Poor-law Act of 1869, which negatived a previous section of the Act of 1867, were done away with. In a number of cases the matrons of Poor-law infirmaries were not fully trained nurses; but he would like to see them fully trained in every case—in fact, that should be a *sine quâ non*. At some of the infirmaries the matrons were not trained nurses. In such cases many of the nurses knew more than the matron. Several of the infirmaries trained their own nurses. There were altogether 888 nurses employed in the infirmaries, there being 65 for the Marylebone Infirmary of 700 beds. He considered that number sufficient, for the class of cases admitted there was very different to those admitted to the hospitals. There had been a great improvement in the infirmaries during the last ten years. Were they not already saddled with the old officers, he had no doubt the guardians would like to have trained nurses as matrons. There was, practically, no power of detention of the patients in the infirmaries. Although venereal diseases were treated at the infirmaries, there was no power to detain the patient until cured. He could not say even if the power were possessed that it would be very often exercised, for the guardians were glad to get rid of the patients as soon as possible. The food and drugs for the infirmaries were supplied by the guardians. The contracts varied very much. That was because of the option of the guardians to accept or not the lowest tender.

In answer to Lord Cathcart, the Witness stated that there were a great many diseases which ran through their course in the infirmaries which were not seen by students at general hospitals. There was a strong feeling amongst the poor against being removed from their friends. The majority of the medical superintendents were satisfactory officers. Now and then, however, there was a complaint of neglect or want of skill in a particular case. On the whole, he had no hesitation in saying that the medical superintendents satisfactorily carried out their duties. He would be glad to see all the sick removed from workhouses. The idea that there was a prejudice on the part of the poor to being seen by medical students was an entire misconception.

Replying to Lord Zouche and other members of the Committee, Witness stated that, with the exception of the few charities for incurables, there was, for the persons sent away from hospitals, no institution for chronic incurable cases, and the only alternative was to go into the workhouse. He did not know of a remedy except by a greater amount of voluntary enterprise similar to the Cancer Hospital. The expenditure in 1888 of the 23 infirmaries and sick asylums was £336,205. The cost per head of the infirmaries was £35 17s. 4d. Wherever the dispensaries could be made available they should be used for teaching purposes. He had thought a good deal of the question of linking the dispensaries and Poor-law infirmaries with the general hospitals, and considered that every facility ought to be given for making attempts in that direction. He thought that where the infirmary was situated not far from the general hospital, as, for instance, in the cases of Whitechapel Infirmary and the London Hospital, which was nearly opposite, of St. George's Hospital and Chelsea Infirmary, and of St. Thomas's Hospital and Lambeth Infirmary—in such cases he thought it would be possible to have some arrangement by which assistant-physicians or assistant-surgeons of the staff of the hospital could go at certain definite times and consult with the medical superintendent as to the most serious cases, possibly bringing with them a number of senior students. Voluntary arrangements could be entered into between two boards of guardians to take, at a certain price, a number of patients from an overcrowded infirmary into one in which there was room. That, as a matter of fact, was done in some cases. He held a very strong opinion that midwives should be trained. He did not think that the general hospitals made up the deficiency of the beds of the infirmaries, because the tendency of the flow was from the hospitals to the infirmaries. Taking it all round, the medical relief of the metropolis was inadequate. There was, in fact, a considerable flow of patients from the hospitals to the infirmaries. No doubt the great activity of the out-patient departments of hospitals must be a great relief to the infirmaries.

Mr. Charles Gross, medical superintendent of the St. Saviour's Infirmary, stated that that was the largest infirmary

in London. It had 786 beds, but he had never known more than 702 of the beds full. He received £450 a year as salary, with house and gas. There was only one assistant. There ought to be a larger amount of medical assistance at the infirmaries. He was in favour of matrons being trained nurses. At St. Saviour's Infirmary there were 12 head nurses, 48 ward nurses, 6 assistants, and a superintendent of night nurses. Only very bad lock cases were taken at the infirmary; they were nursed by the female nurses. He should think male nurses would be more suitable for such cases.

Lord THRING: The effect of the infirmaries is greatly to tend to pauperise the people?

The WITNESS: Certainly. Legally a person becomes a pauper by going to an infirmary. The boards of guardians who made the appointments did not require a special qualification, F.R.C.S. or M.R.C.P., but a special qualification ought to be required. There was an immense amount of valuable material at the infirmaries which could be used for clinical studies. It would benefit the patients as well as the medical men. The poor would not object to it.

Mr. FRANK HORNE, secretary of the London Throat Hospital, Great Portland Street, stated that it was founded in 1886, and was promoted by Dr. W. McN. Whistler, Dr. E. Woakes, and Dr. George Stoker, who were formerly members of the staff of the Golden Square Hospital. Necessitous cases were treated free, but payment was expected by those who could afford it. There were two empty wards, but the hospital was out of debt. Last year the out-patients numbered 1,186. From both in- and out-patients £584 was received last year. The total receipts were £1,163 14s. 2d., which included donations, £256 1s. 6d.; annual subscriptions, £105 19s., students' fees, £14 9s. 10d.; cinderella dances, £64 3s.; dramatic performances, £103.

Mr. W. ABRAM, secretary of the Central London Ophthalmic Hospital, Gray's Inn Road, said he had held that post for five years. It was established in 1842, and was partly free. In consequence of the falling off of funds of late years a system of payment was instituted by tickets which gave the patients certain privileges. There were 13 beds, but there were half of them vacant. Careful inquiries were made as to the circumstances of the patients by himself. Within the last three years there had been only two cases of deception, one of which was that of a person who was the proprietor of two shops. Last year the expenditure was £923, and the total receipts £887. There were 8,475 new cases of out-patients, 17,000 attendances, and 108 in-patients last year. The hospital was managed by a committee. The institution of the system of payments did not cause a diminution in the number of patients.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members, in commodious apartments, at the Offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 8th day of July next, at 2 o'clock in the afternoon.

June, 1891. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 18th and September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

WEST SOMERSET BRANCH.—The annual meeting will be held at the residence of the President-elect, Mr. Charles Randolph, at Milverton, on Thursday, June 25th, at 2.45 P.M. Mr. C. Randolph will be happy to see gentlemen and offer them refreshments at his house before the business of the meeting commences. Dinner will be served at the White Hart, Milverton, at 5 o'clock. Members intending to be present, or having communications to bring before the meeting, are requested to send notice to Mr. C. RANDOLPH, or to the Honorary Secretary, W. M. KELLY, M.D.

NORTH OF IRELAND BRANCH.—The annual meeting of this Branch will be held in the Belfast Royal Hospital, on Thursday, July 16th. Gentlemen wishing to read papers or to bring any other business before the meeting will kindly communicate, as early as convenient, with the Honorary Secretary, JOHN W. BYERS, M.D., Lower Crescent, Belfast.

LANCASHIRE AND CHESHIRE BRANCH.—The fifty-fifth annual meeting of this Branch will be held in the Town Hall, Birkenhead, on Wednesday, July 1st, 1891, at 2.30 P.M. Agenda: Inaugural address by the President, Dr. Vacher on the Limitation of Epidemic Diseases in England and Wales during the last Twenty-four Years. Report of Council and Financial Statement. Election of Office Bearers. Election of New Council. Choice of place for holding next annual meeting. Dr. Rentoul has given notice of the following motions: Proxy Voting. That the following additions be made to the Laws of the Lancashire and Cheshire Branch of the British Medical Association: Rule 7. "At any General or Special Meetings of the Branch, votes to be given either personally, or by proxy, who shall be appointed in writing under the hand of the appointer. No person shall be appointed a proxy who is not a member, and the instrument appointing him shall be deposited with the Branch Secretary, at his address, not less than forty-eight hours before the time of holding the meeting at which he proposes to vote." That in Rule 4 after the words "Annual Meeting" the words "by a majority of the members present" be omitted. That in Rule 7 after the words "the voting paper properly filled up shall be handed in" the next word "personally" be omitted. That in Rule 8 and in other rules, after the words "by a majority of three-fourths" the words "those present" be omitted. Branch Parliamentary Bills Committee: That a Branch Parliamentary Bills Committee be formed; that such Committee consist of the President, President-Elect, Branch Secretary and members of the Branch, such number of elected members of Committee to be in the proportion of one to every one hundred members of the Branch; that these be elected at the annual Branch meeting by a majority of votes, and that each candidate for election be nominated by five members of the Branch, the nomination paper, duly signed, being forwarded to the Branch Secretary on or before the 31st of May of each year. Publication of Notices of Motion: That 14 days' notice be given in the JOURNAL of the Association of all motions to be brought up for consideration at any general or special meeting of the Branch. Payment of Fares; Parliamentary Bills Committee: That this Branch recommends that, at the annual meeting of the Association a resolution providing for the payment of first-class railway fare to each member of the Parliamentary Bills Committee, thus following the Rule which provides for the payment of first-class railway fare to members of the Council of the Association, be passed. Addition to the Editorial Reference Committee: That this Branch recommends that, at the annual meeting of the Association a resolution providing for the appointing and payment of an additional member to the "Editorial Reference Committee of the Journal," such member to be, and to be distinctly representative of those, in general medical practice, be passed. Additional Direct Representation: That this meeting of the Lancashire and Cheshire Branch of the British Medical Association beg to urge upon the Lord President and the Honourable Members of the Privy Council the urgent necessity of exercising the powers vested in the Privy Council, by Section 19 of the Medical Act 1886, by directing that the registered medical practitioners in each of the three divisions of the United Kingdom be given the power of returning an additional direct representative for each of the three divisions as provided for by Section 8, Sub-section 1, paragraph (c) of the above Act, and that such power be given before November, 1891, when the next quinquennial election of direct representatives takes place. That a copy of this resolution be forwarded by the Honorary Secretary to the Privy Council. Medical and Surgical Communications: Mr. M. Banks, on the Neglect of the Actual Cautery. Mr. Stanmore Bishop, on the Treatment of the Intestine in Strangulated Hernia. Dr. Brooke will read a Paper on the Modern Conception of Eczema. Mr. Lee will read a Paper on Some Aural Sequelæ of Influenza. Surgeon-Major Blood will read a Paper on a Series of Cataract Extractions with a description of "Couching" as practised in India. Mr. Johnson Martin, on the Present Epidemic of Pulmonic Fever. Dr. Milligan will give an Analysis of 300 Cases of Suppurative Disease of the Middle Ear, with some remarks upon treatment. Luncheon: A light luncheon, kindly provided by the members of the Branch and profession resident in Birkenhead and district, will be served in the Large Committee Room, Town Hall, from 1 to 2.30 P.M. Dinner: Arrangements have been made for a dinner in Berry's Grand Restaurant, 75 and

77, Argyle Street, Birkenhead, at 5.30 P.M. Tickets, wine not included, 8s. each. Excursions: If fine, excursions will be arranged for to Messrs. Laird's Shipbuilding Yards, to an Atlantic liner, and to the Observatory at Bidston.—CHARLES E. GLASCOTT, Honorary Secretary, 23, St. John Street, Manchester.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—A joint meeting of the Northern Counties and Aberdeen, Banff, and Kincardine Branches will be held at the Gordon Arms Hotel, Elgin, on Saturday, June 27th, 1891, at 2.50 P.M. Business: (1) Minutes, etc. (2) General. A visit to Elgin Cathedral and Gray's Hospital will be made by those arriving by early train. An excursion has been arranged to visit Pluscarden Priory, starting from Gray's Hospital, Elgin, at 12.15 P.M., and returning to Gordon Arms Hotel, at 2.50 P.M. Fare for excursion and luncheon, 4s. 6d. per head. Dinner will be served in the Gordon Arms Hotel, Elgin, at 3 P.M. Price (exclusive of wine, but inclusive of attendance) 4s. per head. Train Arrangements: For the convenience of members a saloon carriage will be attached to the 6.50 A.M. train from Aberdeen, reaching Elgin at 9.44 A.M.; also, to the train leaving Elgin at 5.45, reaching Aberdeen at 9.40 P.M. Fares for the return journey, going *viâ* Highland and returning *viâ* Coast route, 14s. Members leaving Aberdeen by 9.30 A.M. train can take part in excursion and dinner. Members are invited to bring medical friends with them.—J. MCKENZIE BOOTH and C. THISELTON URQUHART, Honorary Secretaries.

SHROPSHIRE AND MID-WALES BRANCH.—In consequence of the prevalence of influenza in this district, it is determined that the annual meeting on June 26th will be held for the transaction of official business only. There will be no dinner.—J. ALLEN BRATTON, Honorary Secretary, care of J. Gray, 2, Belmont, Shrewsbury.

BORDER COUNTIES BRANCH.—The annual meeting will be held at Maryport on the afternoon of Thursday, July 16th. The Presidential Address will be delivered by Dr. Crerar, "On Natural Analogy, considered in relation to Diseases produced by Micro-organisms, with special application to the Effectual and Speedy Cure of Influenza." Gentlemen desirous of reading papers, etc., are requested to communicate with JAMES ALTHAM, Honorary Secretary, Penrith.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The annual meeting of this Branch will be held at Bridge of Allan, on Tuesday, June 30th, and will be followed by the annual dinner. Further particulars will be announced by circular later.—C. J. LEWIS and J. PEAKE, Honorary Secretaries.

BATH AND BRISTOL BRANCH.—The annual meeting of the above Branch will be held on Wednesday, June 24th, at the Museum and Library, Bristol, at 4.30 P.M., when A. B. Brabazon, M.D., will resign the chair to Mr. F. P. Lansdown, President-elect. The business of the meeting will be to receive the report of the Council; to elect the officers of the Branch; to transact the necessary business; and to discuss such subjects connected with the interest of the Branch and of the profession as may be brought before it. Members having any communications for the meeting are requested to give notice of them to the secretaries not later than June 20th. The secretaries will feel obliged if members will send them notice of any alterations in their diplomas or addresses. There are four vacancies in the Local Council for the Bristol District, and four for the Bath District, the retiring members being ineligible for re-election for one year. The attention of the members is called to the mode of voting for the Local Council, whereby they will vote only for the vacancies in their own district. Each member is requested to write the names of those he wishes to ballot for on the paper, and to return the voting paper to the Secretary of his District on or before June 18th. Members who have not paid their subscriptions are requested to do so immediately to the Local Secretaries. The dinner will be held at the Clifton Down Hotel, Clifton, at 6.30 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. The wines will be served at moderate charge. The Bristol Secretary particularly requests that members will inform him, by Monday, June 22nd, whether it is their intention to be present at the dinner. By so doing they will greatly facilitate the satisfactory completion of the necessary arrangements.—E. MARKHAM SKERRITT, Honorary Secretary for the Bristol District, Thornton House, Richmond Hill, Clifton; R. J. H. SCOTT, Honorary Secretary for the Bath District, 28, Circus, Bath.

METROPOLITAN COUNTIES BRANCH.

THE thirty-ninth annual meeting of this Branch was held at the Holborn Restaurant on Tuesday, June 9th, at 5.30 P.M. The chair was taken by the retiring PRESIDENT (Sir William Mac Cormac), who afterwards resigned to his successor (Dr. Cleveland). The minutes of the previous meeting of the Branch were read and confirmed.

Report of Council.—The senior SECRETARY (Dr. Radcliffe Crocker) then read the report, which stated that during the past year 37 new members had been elected to the Branch, and 49 had been lost by death or resignation. Among the members who had died during the past year were: Drs. Humby, R. T. Daniel, G. Bishop, C. Pridham, C. Welch, George Fincham, John Millar, John Way, Morris Tonge, W. W. Day, Rogers Harrison, and F. Summers. Some of these gentlemen had served on the Council and in other ways done good service to the Branch. During the year several important questions affecting the medical profession in general and the metropolitan members of it in particular had engaged the attention of the Council. Of these, the House of Lords Committee on the Management of Hospitals, the Midwives Bill, and the Poisons Bill were especially mentioned. At the last annual meeting the question of the means which should be adopted to place authoritative evidence, from the practitioner's point of view, before the House of Lords Committee was referred to the President and Secretaries. The matter was then supposed to be urgent, as the Commission was about to rise. It was, however, subsequently ascertained that the Commission would resume its sittings in the next session, and the Committee were therefore able to approach the subject in a more deliberate and thorough manner. A careful analysis and digest was therefore prepared of all the allegations that had been made for several years past in the medical journals and elsewhere, and also the various remedial suggestions made in all quarters. It was found that all the allegations came under the following heads: (1) Indiscriminate admission, especially of out-patients; (2) abuses connected with special hospitals; (3) concentration of hospitals; (4) abuses connected with medical schools; (5) extravagance; (6) insufficient publication of accounts; (7) indequate payment to medical men; (8) subscribers' letters; (9) want of co-operation with infirmaries and dispensaries. It then devolved upon the Committee to select a general practitioner of large experience in general practice, of a kind likely to be affected by hospitals if the allegations against them were true, and at the same time the Committee felt he must be a man of impartial and critical judgment, and not one who simply wished to air his special ideas. After much deliberation they selected Mr. Frederick Wallace, as they were convinced that he combined the requisite experience and qualities. He accepted the responsibility, took great pains and interest in the matter, and accordingly gave evidence before the Commission of a valuable and practical character. The Council felt that the thanks of the Metropolitan Counties Branch were due to Mr. Wallace for the time and trouble he cheerfully gave, as well as for the value of his evidence. The Secretaries communicated with Lord Sandhurst and placed themselves at his disposal if he thought the Commission required further evidence from the hospital side, but he did not find it necessary to summon them. The Midwives Bill was also a subject of high importance to the whole profession, and feeling for and against it ran high both in and outside of the Branch. The Council thought that it was judicious to support legislation of some kind, as it seemed probable that if the profession offered an uncompromising negative to the principle of the Bill the promoters of it might be driven to take independent action and endeavour to pass a measure without the co-operation of the profession, and in which their interests would probably be completely ignored. A deputation of the Parliamentary Bills Committee found, however, that the Government, though convinced of the necessity for legislation, had their hands too full for them to undertake so controversial a subject this session. Without committing themselves definitely, they held out a hope that a committee of inquiry into the subject might be appointed before further legislation would be proceeded with, and the Bill had since been withdrawn. The Council would take care to watch carefully any action that might be taken and endeavour to secure that whatever measures should be contemplated the interests of the profession should be safeguarded. One of the last acts of the Council was to appoint a subcommittee to determine whether it was possible to entertain the medical portion of the International Congress of Hygiene, which was to meet in London in August. It was, however, found that the Congress was to be entertained on every day but Friday by civil authorities and medical corporations, on a lavish scale with which the limited funds of the Branch would not allow them to compete, and it was feared that the little that the Branch could do after they had already been almost surfeited by entertainments would meet with but scant appreciation, and the Branch would have sacrificed its usual biennial *conversazione* almost in vain. In conclusion, the Council would draw attention to what they trusted the Branch would consider an improvement in the mode of voting for its officers for the ensuing year, the object being to give every one an opportunity of expressing his wishes with the secrecy which the ballot should secure.—Dr. FARQUHARSON then moved and Mr. MORTON SMALE seconded that the report be received, adopted, and

entered on the minutes. After some discussion this was carried with only one dissentient.—Dr. WALTER SMITH asked if the Branch had invited the Association to London, and suggested that it would be well to do so.

Officers and Council.—The result of the ballot was then declared, namely, that all the officers nominated by the Council had been elected as follows: *President:* W. F. Cleveland, M.D. *President-elect:* Frederick W. Pavy, M.D., F.R.S. *Vice-Presidents:* Sir William Mac Cormac, William Orl, M.D., C. Brodie Sewell, M.D., Frederick Taylor, M.D. *Treasurer:* Septimus W. Sibley. *Secretaries:* H. Radcliffe Crocker, M.D., Andrew Clark. *Members of Council* (the names to which an asterisk is prefixed are those of members nominated in place of eight who retire): G. Buckston Browne, *H. H. Clutton, W. Howship Dickinson, M.D., *Frederick Durham, A. Forsyth, M.D., F. De Havilland Hall, M.D., *Reginald Harrison, *Joseph W. Hunt, M.D., *Clement Lucas, W. Cubitt Lucey, M.D., Brigade-Surgeon A. B. R. Myers, Thos. Vere Nicoll, *Isambard Owen, M.D., Joseph H. Philpott, M.D., R. Percy Smith, M.D., George H. Savage, M.D., *John C. Thorowgood, M.D., *C. H. Wise, M.D. *Representatives of the Branch on the Council of the Association* (ex-officio: H. Radcliffe Crocker, M.D.) (Nominated by the Council of the Branch): J. Syer Bristowe, M.D., George Eastes, M.B., Septimus W. Sibley, Noble Smith, Frederick Wallace.

Treasurer's Report.—Mr. SIBLEY (Treasurer) presented the financial report.—Mr. NOBLE SMITH moved, and Mr. ROGER WILLIAMS seconded, and it was carried unanimously, "That the Treasurer's report be received, adopted, and entered on the minutes, and that the best thanks of the Branch be given to Mr. Sibley for the able and efficient manner with which he has discharged the duties of Treasurer during the past year."—Mr. SIBLEY acknowledged the vote of thanks.

Motion to Alter By-law 13.—Dr. HUGH WOODS moved, and Mr. GEORGE BROWN seconded, that "In By-law 13 after the words—'and eighteen nominated by the Council'—to insert the words—'or by any six members of the Branch, notice of such nomination being given to the Secretary of the Branch at least three weeks before the annual meeting. Six at least of those so nominated shall retire, etc.'" After considerable discussion, the motion was put to the vote and lost by a large majority.

Motion to Alter By-law 14.—Dr. HUGH WOODS withdrew the motion, of which he had given notice.

Motion to Alter By-laws 14 and 23.—Dr. RADCLIFFE CROCKER moved, and Mr. ANDREW CLARK seconded, that "In Rule 14, instead of the words 'at least three weeks before each annual meeting,' it shall read 'at least six weeks before each annual meeting;' and in Rule 23, instead of 'at least ten days before the meeting,' it shall read 'at least four weeks before the meeting.'"—Mr. GEORGE EASTES moved, and Mr. NOBLE SMITH seconded as an amendment, that "In By-law 14, instead of 'at least six weeks before each annual meeting,' it should read 'before May 1st.'"—Dr. RADCLIFFE CROCKER accepted the amendment, and it was agreed to.—Mr. GEORGE EASTES moved as an amendment in Rule 23 to add, "Notice of any proposal to alter the constitution, rules, or regulations, or to enact or abrogate any rule, must be given in writing to the Secretaries of the Branch by any member (who is not a member of the Branch Council), proposing to make such alteration, four weeks at least before the general meeting at which the proposal is to be considered." This was also accepted by the Secretaries, and carried unanimously.

Motions by Dr. Hugh Woods.—The resolution proposed by Dr. HUGH WOODS, seconded by Dr. ALDERSON, "That the Council of the Branch be requested to summon three general meetings of the Branch in each year," was not carried.—Dr. HUGH WOODS then proposed his second resolution, "That the hearty thanks of the Metropolitan Branch of the Association be conveyed to Dr. Rentoul, of Liverpool, for his successful opposition to the 'Midwives Registration Bills.'"—This was seconded by Mr. GEORGE BROWN, but Dr. CROSBY, whilst acknowledging Dr. Rentoul's services, to prevent invidious discussion moved the previous question, which was seconded by Mr. SIBLEY, and carried.

Vote of Thanks to Retiring Officers.—The PRESIDENT, in resigning the chair, thanked the Secretaries, members of Council, and others for their cordial assistance and support during his year of office, and Dr. CLEVELAND then took the chair as the new President of the Branch.—Mr. MACNAMARA then proposed, and Brigade-Surgeon MYERS seconded, and it was carried by acclamation: "That the cordial thanks of the Branch be given to Sir William Mac Cormac for his efficient and courteous conduct as President during the year, and especially for his able and judicious guidance and assistance in the consideration of the numerous questions of professional importance which have been brought under the notice of the Branch."—A vote of thanks to the retiring Vice-Presidents and other officers of the Council was also carried unanimously, on the motion of Dr. DANFORD THOMAS, seconded by Dr. ALDERSON.

President's Address.—The PRESIDENT then said that, as the dinner hour had now arrived, he would not deliver the address which he had prepared.—Mr. TURNER alluded in graceful terms to the self-abnegation of the President, and a general wish was expressed that the address should be published in the BRITISH MEDICAL JOURNAL.—The meeting then adjourned.

SOUTH-EASTERN BRANCH.

THE forty-seventh annual meeting of this Branch was held in the Upper Hall, Eastbridge Hospital, Canterbury, on Wednesday, June 10th, Mr. G. RIGDEN presiding.

Vote of Thanks to Retiring Officers.—Mr. F. WACHER proposed, Mr. R. J. NISBET seconded, and it was carried unanimously, that their best thanks be given to Mr. C. J. Sells and Messrs. J. Morton and A. A. Napper for their valuable services as President and Vice-Presidents during the past year.

President's Address.—The PRESIDENT delivered an address, in which, after thanking them for the honour done him and welcoming them to Canterbury, he referred to the medical charities of the town. The City and County Hospital was one of the oldest provincial hospitals in England, having been established in 1793; the Lying-in Charity was established in 1801, and was entirely managed by a committee of ladies; the Dispensary was established in 1836; and a Nurses' Institute had been established some years. Reference was also made to the antiquities of Canterbury; to the water supply, which was drawn from a depth of 500 feet and deprived of its excessive hardness by Clark's process; and to the sewage farm, which was about to be extended. Among the celebrated men connected with Canterbury were: Linacre, the founder and first President of the Royal College of Physicians, who was born and educated there; William Harvey, who received his early education at the Canterbury Grammar School; George Newport, the physiologist, who was born and educated there; and many others. It was exactly thirty years since the Association last met in Canterbury, and great advances had been made in medicine since that date. Smallpox, that used to be very prevalent in his young days, was now but rarely met with, and there had not been a fatal case in Canterbury for several years. The President then referred to the triumphs of modern operative surgery and the growth and prosperity of the Association.

Vote of Thanks to the President.—Dr. BOWLES proposed, and Mr. J. W. HAYWARD seconded, a vote of thanks to the President, which was carried unanimously.

Report of Council.—The report stated that the number of members of the Branch was 495. During the past year 5 had resigned, 9 had died, while 24 new members had joined. The Council had supported the demand of the medical attendants of police in Kent for the East Sussex Code, and had urged the adoption of the proposed scale of fees instead of the reduced tariff for Kent, with the result that the obnoxious tariff was withdrawn. With regard to the Midwives Bill, they had declined to support the measure further than by expressing their approval generally of the principles involved in the Bill. Feeling, however, that the time had arrived when something definite should be done, they had expressed the opinion that the subject on the control and registration of midwives should be referred to a Select Committee of the House of Commons, the best means of arriving at the facts of the case. With respect to the subject of hospital and dispensary administration, which had been referred to the Charities Committee of the Association, the council was of opinion that it was inexpedient for them to express an opinion on the subject until they had seen the report of the Charities Committee. In referring to the retire-

ment of Dr. Tyson from the post of Honorary Secretary for East Kent, which he had held for six years, the Council expressed their sense of the great value of the services which he had rendered to the Branch. It was stated that there were 380 members of the Association residing within the area of the Branch who were not members of the latter, besides a goodly number who did not belong to the Association at all. An appeal was made to the zeal of the Secretaries to remedy this state of matters.—On the motion of Mr. E. R. MANSELL, seconded by Mr. C. HOLTTUM, the report was adopted.

Financial Report.—The financial report showed that the total expenses of the Branch during the year had amounted to £90 1s. 7d., and that there was a balance of £164 5s. 10½d. It was resolved to contribute 20 guineas to the Royal Benevolent College at Epsom, and 10 guineas to the British Medical Benevolent Fund.

Vote of Thanks to Council, etc.—A vote of thanks was accorded the Council, auditors, and scrutineers, on the motion of Mr. F. A. HUMPHRY, seconded by Mr. BRIAN RIGDEN.

Officers and Members of Council.—The following were elected to be office-bearers for 1891:—*President:* F. A. Humphry. *Vice-Presidents:* J. Ewart, M.D., and N. P. Blaker. *Members of Council:* Dr. Adeney, Dr. Bagshawe, Dr. Bowles, Dr. A. Buchanan, Dr. L. Buckell, C. W. Chaldecott, Dr. T. Eastes, E. H. Galton, A. H. B. Hallowes, F. B. Hallowes, Dr. Hayman, Dr. Johnson, Dr. C. E. Hoar, Dr. W. Moore, A. Napper, Dr. Oldman, Dr. B. Roberts, C. J. Sells, Dr. Stowers, Dr. Tyson, E. H. Thurston, J. S. Turner, Dr. Uhthoff, J. L. Worship, Dr. C. Holman. *Representatives on Council of Association:* Dr. J. H. Galton (Surrey), Mr. G. F. Hodgson (Sussex). *Honorary Secretary:* Dr. C. Parsons, by special request, consented to continue in office as Honorary Secretary for another year.

Next Meeting.—On the motion of Dr. WITHERS MOORE, seconded by Dr. TYSON, it was agreed to hold the next meeting at Brighton.

The Direct Representatives on the General Medical Council.—Mr. E. H. GALTON moved the following resolution, which, after some opposition (on the ground of the alleged inactivity of the General Medical Council in respect of unqualified practice), was agreed to: "That this meeting desires to record its unqualified approval of the conduct of the elected representatives on the General Medical Council during their term of office, and its high appreciation of the valuable services which they have rendered to the profession. It begs to offer them very grateful thanks, and the assurance of cordial support at the ensuing election in November."

Dinner.—In the evening a dinner was held at the Royal Fountain Hotel, Mr. G. RIGDEN, who was in the chair, being supported by the Dean of Canterbury and the Mayor of Canterbury.—The PRESIDENT proposed the usual loyal toasts.—Dr. GOGARTY proposed the "Archbishop and Clergy and Ministers of all Denominations," coupled with the name of the Dean.—The DEAN said the medical profession came nearest of all the professions to that of the clergy. It was said that in the time of illness medical men reaped their harvest, but that was not the view of the profession, which had done its best to guard the community against epidemic and other disease. The community owed to the profession that healthy life was so much longer than it used to be.—The PRESIDENT said it had been his good fortune to be associated with five or six most efficient secretaries of the Society, but no one had held office so long as Dr. Parsons, and none with greater energy, perseverance, and advantage to the Society. He coupled with the toast the name of Dr. Parsons.—Dr. PARSONS spoke of the growth and present prosperous condition of the Association. They had met that day under the presidency of one of the oldest members of the Branch. Mr. Rigden had been a member from the very commencement, and he was going to ask the company to be good enough to drink the health of the President. He had been a loyal friend, helping by contributing papers and original observations on the treatment of diseases, which were of the utmost use. He was very glad to see him enjoying so much health and vigour.—The PRESIDENT said he felt very much complimented by the way in which the toast had been proposed and received. He had felt the deepest interest in the Association, and when he told them he had been connected with it for the past fifty years they would understand he did so. He had four sons who were members of the Association.—Dr. BOWLES proposed "The Health of the Visitors," which was responded to by the MAYOR OF CANTERBURY.—Dr. WITHERS MOORE moved a vote of thanks to the Arrangement Committee, to which Mr. F. WACHER replied.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

THE annual meeting of this District was held at the Royal Pier Hotel, Sandown, on Thursday, April 23rd, the PRESIDENT (Dr. Hollis) in the chair.

Reports.—The report of the year's work was read by the PRESIDENT.—The Treasurer's report showed a balance to the credit of the district of £5 11s. 10d.

Election of Officers.—The following were elected office bearers for 1891: *President:* W. E. Green. *President-elect:* B. Barrow. *Vice-President:* W. J. Joliffe. *Secretary and Treasurer:* Dr. Robertson (re-elected). *Representative on Branch Council:* W. E. Green.

The late Dr. B. Hoffmeister.—A vote of condolence and sympathy with the relatives of the late Dr. Bernard Hoffmeister, who had been a member of the district, was unanimously agreed to.

President's Address.—The new PRESIDENT (Mr. Green) delivered his presidential address, selecting massage as his subject. He divided it into three heads: 1. Its history. 2. Its principles. 3. Its practice. The history was traced back to remote periods, and it was shown to have been a common practice among many nations, not in its present systematic and scientific form, but applied for the relief of over-fatigue, sprains and fractures, and for inducing sleep. It was used by the medicine men of savage tribes for the relief of disease. In modern times Dr. Weir Mitchell, of Philadelphia, had brought it into repute, combined with seclusion, rest, faradism, and feeding, in cases of nervous exhaustion—cases which had long been the opprobrium of medicine. It had been introduced into the country by Dr. Playfair, and had now been adopted with most satisfactory results in the treatment of many diseases. The various methods of procedure (*effleurage, frictions, pétrissage, tapotement*) were described, and it was shown for what purpose each was most useful. Instances of affections in which massage had been found of signal value were given in detail, including nerve prostration, obesity, neuralgia, both of the cranial and large trunk nerves, chronic headache, wryneck, facial and other forms of paralysis, and tic douloureux, the various forms of dropsy, myxœdema, Ménière's disease, Graves's disease, various blood affections, constipation, etc. It had been recommended by Dr. George Harley for the expulsion of gall stones and other affections of the liver, and it had been successfully used for the treatment of chronic dyspepsia, ovarian neuralgia, and dysmenorrhœa. Reference was made to a case of amenorrhœa of nine years' standing, combined with phlegmasia of some years' duration, which was quite cured by a course of massage and faradism.

Communications, etc.—Dr. SINCLAIR COGHILL read notes of a case of Facial Herpes. Dr. WHITEHEAD initiated a discussion upon Nursing, in which most of those present joined and which was adjourned for further consideration until the July meeting. Dr. WILLIAMSON described two cases of Myelitis which had come under his notice and which had recovered under treatment.

Dinner.—After the meeting the members dined together.

GLOUCESTERSHIRE BRANCH.

THE annual meeting of this Branch was held on Tuesday, May 19th, 1891, at the Queen's Hotel, Cheltenham, under the presidency of Dr. WATTERS.

Election of Officers.—The minutes of the last meeting having been read and confirmed, Mr. Bower and Dr. Soutar were re-elected scrutineers. Dr. F. Needham was re-elected unanimously as the representative of the Branch on the Council of the Association and on the Parliamentary Bills Committee. Dr. Wilson, F.R.C.P., Cheltenham, was elected President 1891-1892. Mr. Cardew was re-elected as honorary secretary, and the retiring members of the Council—Drs. Batten, Wilson, Bond, and Mr. Ellis—were re-elected.

Reform of Medical Charities.—A letter from the General Secretary was read accompanying the copies of motions proposed by Dr. Rentoul on the subject of hospital and dispensary management. The following resolution, proposed by Dr. WATTERS

and seconded by Mr. ELLIS, was carried: "That this Branch is of opinion that a discussion of the reforms in hospital administration proposed by Dr. Rentoul would be unlikely to lead to any practical solution of the questions raised."

Summer Meeting.—A letter from Mr. Fowler was read, inviting the Branch to hold a summer meeting at Cirencester. It was proposed by Dr. BATTEN, and seconded by Dr. CLARK, that the offer be accepted. Carried.

Ling System of Gymnastics.—By the invitation of the Council Mr. D. von BRAUN gave a very interesting demonstration on the Ling system of gymnastics as applied to the treatment of medical and surgical cases. Some discussion followed, and a vote of thanks was passed to him for the care and trouble he had taken.

Dinner.—About sixteen members attended the dinner, which was held after the meeting.

PERTHSHIRE BRANCH.

AN ordinary meeting of this Branch was held at Pitlochrie, on June 9th, 1891, Dr. R. W. IRVINE, President, in the chair.

The minutes of last meeting were read, approved, and signed.

New Member.—Dr. Peddie, Stanley, was elected a member of the Branch.

Appointment of Medical Officer of Health.—The SECRETARY reported that the County Council had given effect to the views of the Branch, in electing Dr. Graham Medical Officer of Health, under the proviso that he is debarred from private practice.

Branch Representative.—Dr. Urquhart, Secretary, was reappointed representative of the Branch and on the Parliamentary Bills Committee.

Meetings.—On the motion of the PRESIDENT, it was resolved to hold two ordinary meetings in the course of each year, one in summer and one in winter.

Subscription.—On the motion of the PRESIDENT, it was resolved to modify the subscription for local purposes—in future 2s. 6d. instead of 5s. to be charged.

Luncheon, etc.—The members then lunched, and afterwards drove to Blair Athole, having spent a very pleasant day.

BRITISH MEDICAL ASSOCIATION.

FIFTY-NINTH ANNUAL MEETING.

THE fifty-ninth Annual Meeting of the British Medical Association will be held at Bournemouth on Tuesday, Wednesday, Thursday, and Friday, July 28th, 29th, 30th, and 31st, 1891.

President: WILLOUGHBY FRANCIS WADE, B.A., M.B., F.R.C.P., J.P., Senior Physician, Birmingham General Hospital, 27 Temple Row, Birmingham.

President-elect: JOHN ROBERTS THOMSON, M.D., F.R.C.P., J.P., Consulting Physician, Royal Victoria Hospital, Bournemouth, Monkchester, Bournemouth.

President of the Council: WITHERS MOORE, M.D., F.R.C.P., Consulting Physician, Sussex County Hospital, Burgess Hill, Sussex.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital.

An Address in Medicine will be delivered by THOS. LAUDER BRUNTON, M.D., F.R.S., Lecturer on Materia Medica and Therapeutics at St. Bartholomew's Hospital, London.

An Address in Surgery will be delivered by JOHN CHIENE, M.D., F.R.C.S.Ed., Professor of Surgery at the University of Edinburgh.

An Address in Public Medicine will be delivered by EDWARD COX SEATON, M.D., Lecturer on Public Health at St. Thomas's Hospital, London.

The scientific business of the meeting will be conducted in nine Sections, as follows, namely:

A. MEDICINE.—*President:* P. H. PYE-SMITH, M.D., F.R.S. *Vice-Presidents:* WILLIAM GEORGE VAWDREY LUSH, M.D.; THOMAS BARLOW, M.D. *Honorary Secretaries:* WM. FRAZER, M.D., "Elmhurst," Madeira Road, Bournemouth; H. MONTAGUE MURRAY, M.D., 27, Savile Row, W.

The discussion on Wednesday, July 29th, on the Etiology and Prevention of Phthisis will be opened by the President. Speakers: Professor Gairdner; E. Symes Thompson, M.D.; Sir Walter Foster, M.D.; J. B. Yeo, M.D.; J. G. S. Coghill, M.D.; T. W. Blake, M.R.C.S.; R. Robertson, M.B.; M. A. Boyd, M.B.; T. A. Vesey, M.B.; J. Moorhead, M.D.; F. Markham Skerritt, M.D.; A. E. Sansom, M.D.; Mr. A. K. Morgan; James Cagney, M.D.; H. Handford, M.D.

The discussion on Thursday, July 30th, on Lupus will be opened by Dr. J. F. Payne. Speakers: T. Colcott Fox, M.B.; P. S. Abraham, M.D.; J. Moorhead, M.D.

The discussion on Friday, July 31st, on the Effects of Alcohol will be opened by Dr. Wilks, F.R.S. Speakers: Professor Gairdner; Dr. Ferrier, M.D., F.R.S.; E. Symes Thompson, M.D.; Sir Walter Foster, M.D.; E. Long Fox, M.D.; J. C. Bucknill, M.D., F.R.S.; I. Burney Yeo, M.D.; Isambard Owen, M.D.; E. M. Skerritt, M.D.; J. Moorhead, M.D.; J. Watts Parkinson, M.R.C.S.; A. E. Sansom, M.D.; Norman Kerr, M.D.

The following papers are announced:

BARRS, A. G., M.D. Clinical Observations upon the Cardiac *Bruits* of Chlorosis.
BLAKE, T. W., M.R.C.S. Cancer and Phthisis occurring in Different Members of the Same Family.
CAGNEY, James, M.D. Raynaud's Disease and Exophthalmic Goitre.
CARPENTER, Alfred, M.D. (1) Alcoholic and Non-alcoholic Treatment of some Forms of Hemiplegia; (2) The Treatment of Diphtheria with or without Alcohol.
COGHILL, J. G. S., M.D. Sphygmographic Observation sduring Tuberculin Inoculation.
HALL, F. de Havilland, M.D. Erysipelas of the Pharynx.
HOLDER, W., M.R.C.S. Epidemic Influenza, its Treatment, and its Allied Plagues.
KERR, Norman, M.D. Some Points in the Treatment of Influenza.
LANE, Hugh, M.R.C.S. Differentiation in Rheumatic Diseases.
ROBERTSON, R., M.B. On the Heart Sounds in Pulmonary Phthisis.
STEWART, James, M.D., of Montreal. The Association of Functional Hemianasthesia and Paresis with Organic Facial Paralysis.
THOROWGOOD, J. C., M.D. A few Remarks on the Use of Drugs in the Treatment of Early Phthisis.
TREVELYAN, E. F., M.D. Cerebro-spinal Meningitis with Cases illustrating its Relations, particularly to Acute Pneumonia and Infective Endocarditis.
VESEY, T. A., M.B. Hydrophobia.
YEO, I. Burney, M.D. Consumption; the Conditions of its Cure.

B. SURGERY.—*President:* JOHN WARD COUSINS, F.R.C.S. *Vice-Presidents:* J. D. G. DOUGLAS, M.D.; WM. WATSON CHEYNE, F.R.C.S. *Honorary Secretaries:* H. GUNTON TURNER, M.R.C.S., "Holmwood," Bournemouth; A. A. BOWLBY, F.R.C.S, 43, Queen Anne Street, W.

Arrangements have been made for the following important subjects to come under discussion: 1. The Value of Professor Koch's Method in the Treatment of External Tuberculosis, to be introduced by William Watson Cheyne, F.R.C.S.; Mr. C. B. Keetley will take part in this discussion. 2. Abdominal Surgery: (i) The Operative Treatment of Peritonitis; (ii) The Treatment of Strangulated Hernia by Median Abdominal Section, to be introduced by Lawson Tait, F.R.C.S. 3. The Present Position of Intranasal Surgery, to be introduced by W. J. Walsham, F.R.C.S.

The following papers are announced:

ALLINGHAM, Herbert W., F.R.C.S. Fifty Cases of Left Inguinal Colotomy with Remarks on their Points of Special Interest.
COOPER, Alfred, F.R.C.S. Cancer of the Rectum and its Surgical Treatment.
FENWICK, E. Hurry, F.R.C.S. Notes from an Experience of 100 Cases of Urinary Tuberculosis.
GOLDING-BIRD, C. H., F.R.C.S. The Limits to the Curability of Scoliosis—A Clinical Inquiry.
KEETLEY, C. B., F.R.C.S. On the Treatment of Peritonitis and of Hernia by Abdominal Section.
LOCKWOOD, C. B., F.R.C.S. On the Treatment of Peritonitis and of Hernia by Abdominal Section.
LUCAS, R. Clement, M.B., B.S. 1. The Relation of Movable Kidney to Hydronephrosis. 2. A New and Certain Way of Obliterating Hernial Sacs and Performing Radical Cure for Hydrocele.
MACDONALD, Greville, M.D. Intranasal Surgery in Relation to Sneezing and Hay Fever.
REEVES, H. A., F.R.C.S.Ed. On the Treatment of Peritonitis and of Hernia by Abdominal Section
SYMONDS, Charters J., M.S., F.R.C.S., and SPICER, Scanes, M.D. On the Present Position of Nasal Surgery.
WOAKES, E., M.D. On the Pathology, Diagnosis and Surgical Treatment of Necrosing Ethmoiditis.

C. OBSTETRIC MEDICINE AND GYNÆCOLOGY.—*President:* W. J. SMYLY, M.D. *Vice-Presidents:* ALLAN MCLEAN, M.D.; A. H. G. DORAN, F.R.C.S. *Honorary Secretaries:* H. A. LAWTON, M.R.C.S., 74, High Street, Poole, Dorset; MONTAGU HANDFIELD-JONES, M.D., 35, Cavendish Square, W.

The discussion on Puerperal Eclampsia will be opened by Dr. Galabin, and discussed by Dr. Braxton Hicks, Dr. Aust Lawrence, Professor Auvard (Paris), Dr. More Madden, Dr. J. W. Sinclair, and others will take part.

The discussion on Uterine Polypi will be opened by Dr. Murphy, and discussed by Dr. Robert Bell, Dr. More Madden, Dr. Godson, Dr. Murdoch Cameron, Professor Auvard, Dr. J. W. Sinclair, and others will take part.

A Demonstration on Frozen Sections of the Pregnant Cadaver will be given by Dr. Freeland Barbour.

The following papers are announced:

AUVARD, Professor (Paris). The Medical Treatment of Cervical Metritis.
BELL, Robert, M.D. The Treatment of Chronic Disease of the Uterine Adnexa.
CAMERON, Murdoch, M.D. will show an Improved Crutch for Operations.
DONOVAN, D. D., F.R.C.S. Eclampsia occurring in a Primipara, aged 15½ years.
GODSON, Clement, M.D. Two additional cases of Porro's Operation.
LAWRENCE, Aust, M.D. Early Incision and Drainage in cases of so-called Pelvic Abscess.
MADDEN, More, M.D. On the treatment of Puerperal Convulsions.
PARSONS, J. Inglis, M.D. A case of Epithelioma of the Perineum treated by Electricity.
PEARSE, T. Frederick, M.D., F.R.C.S. Our Means of Assisting Labour Apart from the Use of Instruments.
PURSLOW, C. E., M.D. On a Case of Pelvic Abscess (Suppurating Pelvic Peritonitis) Treated by Combined Abdominal and Vaginal Incision and Through Drainage.
RENTOUL, R. Reid, M.D. Midwives should be Ended not Mended, and the Public should be supplied with thoroughly Trained Obstetric Nurses.
SINCLAIR, W. J., M.D. Note on Uterine Dilators in Gynæcological Practice.
TRAVERS, William, M.D. A case of a Rapidly Recurring Uterine Polypus.

D. PUBLIC MEDICINE.—*President:* J. BURN RUSSELL, M.D. *Vice-Presidents:* H. F. PARSONS, M.D.; JOHN COMYNS LEACH, M.D. *Honorary Secretaries:* C. H. W. PARKINSON, M.R.C.S., Wimborne Minster; P. W. G. NUNN, L.R.C.P., "Maplestead," Christchurch Road, Bournemouth.

The following papers are announced:

BROWNE, H. W. Langley, F.R.C.S.Ed. Factory and Workshop Sanitary Inspection.
CAMERON, Spottiswoode, M.D. An Outbreak of Diphtheria at Leeds.
CARPENTER, Alf., M.D. Diphtheria: the Cause of its Increase and the Means to be adopted for its Prevention.
CITTLEJOHN, Harvey. The Notification of Diseases Act. Should Measles or other Diseases be added to the number of Compulsory Notifiable Diseases?
MANLEY, H., M.D. The Powers conferred on Sanitary Authorities with regard to Slaughterhouses, Bakehouses, and Milkshops.
MAY, H., L.R.C.P., and UNDERHILL, C. E., M.D. Vaccination. What Constitutes Efficient Vaccination?
MUMBY, B. H., M.D. The Duty of the Medical Officer of Health with reference to the Examination of Notified Cases of Infectious Disease and the Sanitary Inspection and Disinfection of Premises.
PARKES, Louis, M.D. The Discharge of Town Sewage into the Sea near Watering Places and Seaside Health Resorts.
PARSONS, Franklin, M.D., V.P. The Influenza Epidemic and its Distribution in the British Isles.
THRESH, J. C., M.D. (Chelmsford), and WILLOUGHBY, E. F., M.D. The Water Supply of Rural Communities where (*a*) Streams, (*b*) Ponds, or (*c*) Shallow Wells are relied on.
THURSFIELD, Wm., M.D. It is Imprudent and Inexpedient to treat Scarlet Fever and Diphtheria in the same Isolation Hospital.
WELLS, Sir T. Spencer, Bart., and LEACH, J. Comyns, M.D. The Disposal of the Dead.
WOODHEAD, G. Sims, M.D., and MCFADYEAN, Professor (Edinburgh). The Communicability of Tuberculous Diseases from Animals to Man.

E. PSYCHOLOGY.—*President:* P. MAURY DEAS, M.B. *Vice-Presidents:* HENRY JOHN MANNING, M.R.C.S.; D. NICOLSON, M.D. *Honorary Secretaries:* P. W. MACDONALD, M.D., Dorset County Asylum, Dorchester; WILLIAM HABGOOD, M.D., Belmont, Sutton, Surrey.

The President will give a short introductory Address on the Lunacy Act, 1890, to be followed by a discussion.

Dr. T. Clifford Allbutt, F.R.S., will open a discussion On the Proposed Hospitals for the Treatment of the Insane.

In conjunction with Dr. Allbutt's paper, Dr. F. H. Walmsley (Leavesden Asylum) will read a paper on the Desirableness of Throwing Open our Asylums for the Post-Graduate Study of Insanity.

Dr. T. Claye Shaw, F.R.C.P., will introduce a discussion on the Surgical Treatment of General Paralysis.

Dr. G. H. Savage, F.R.C.P., will initiate a discussion on the Influence of Surroundings on the Production of Insanity. A contribution on the Truth of the Idea of Heredity by Dr. Wm. Wallace (Glasgow) will form part of this discussion.

The following papers are announced:

BAKER, J., M.B. (H.M. Prison, Portsmouth). Weak-Minded Criminals; their Psychological and Anthropological Characteristics.
EWAN, J. A., M.B. (Dorset County Asylum). The Value of Sulphonal as a Mental and Motor Sedative.
HYSLOP, Theo. B., M.B. (Bethlem). Psychopathic Epidemics.
LITTLE, A., M.B. (Virginia Water). Some Unusual Forms of General Paralysis.
NICOLSON, D., M.D. The Criminal Acts of Criminal Lunatics.
SMYTH, S. T., M.D. (Bournemouth). Puerperal Insanity.
SNOW, H., M.D. (London). Cancer in its Relations to Insanity.
WARNER, Francis, M.D. (London). Association of Various Conditions of Development in Relation to Brain Power and Nutrition.

Should the Committee of Investigation on Hypnotism present a report, it is proposed that this report be considered and probably discussed on Thursday, July 30th.

In addition to those gentlemen who are to open discussions and read papers, the following will take part in the deliberations of the Section: Professor Gairdner, Sir J. Crichton Browne, Dr. Hughlings Jackson, Dr. Batty Tuke, Professor Ferrier, Dr. Macewen (Glasgow), Dr. Bateman (Norwich), Dr. Fletcher Beach, Dr. Mercier, Dr. Wiglesworth, Dr. Outterson Wood, Dr. Needham, Dr. Gayton, Dr. Strahan.

F. PATHOLOGY.—*President:* W. HOWSHIP DICKINSON, M.D. *Vice-Presidents:* KINGSTON FOWLER, M.D.; W. RUSSELL, M.D. *Honorary Secretaries:* W. G. SPENCER, M.B., 35, Brook Street, Grosvenor Square, W.; E. HYLA GREVES, M.D., Rodney House, Poole Road, Bournemouth.

Dr. J. K. Fowler will open a discussion on Arrested Pulmonary Tuberculosis.

Mr. F. G. Eve will open a discussion on Senile Changes in the Bones.

Dr. Phineas Abraham will give a demonstration on Microscopic Sections of Skin Diseases.

Dr. Carey Coombs will give a demonstration with Hæmoglobinometer and Two Cytometers.

The following papers are announced:

EDDOWES, Alfred, M.D. A short account of Herxheimer's Spirals in the Epidermis and Mucous Membranes, illustrated by microscopical sections of various skin affections.
HAWKINS, Francis, M.D. A series of specimens of Heart Diseases, with verbal demonstration.
JONES, E. Lloyd, M.B. Paper and specimens, The Specific Gravity of the Blood in Disease.
MAGUIRE, Robt., M.D., will show specimens and make a communication on Lymphadenoma of the Solar Plexus with Bronzed Skin.
RATCLIFFE, J. R., M.B., and WILSON, T. Stacey, M.B. A paper on the Accurate Measurements of the Cubic Contents of the several Chambers of the Heart.
SAVILLE, Thos., M.D. On the Real Anatomical Nature of so-called Arterio-Capillary Fibrosis, its Symptoms during Life, and its Relation to Granular Kidney (during Bright's disease).
SNOW, Herbert, M.D. Paper and specimens, The Insidious Bone Lesions of Mammary Carcinoma (second paper).
WILLIAMS, Roger, F.R.C.S. Paper and specimens, Gynæcomastia.

The following gentlemen have also promised papers:—Dr. Handford, Dr. Sims Woodhead, Dr. W. Russell, and Dr. McMunn.

G. OPHTHALMOLOGY. — *President:* N. C. MACNAMARA, F.R.C.S. *Vice-Presidents:* ROWLAND W. CARTER, M.D.; MALCOLM M. MCHARDY, F.R.C.S.Ed. *Honorary Secretaries:* J. B. LAWFORD, M.D., 55, Queen Anne Street, W.; BERNARD SCOTT, M.R.C.S., "Hartington," Poole Road, Bournemouth.

Two subjects have been set down for special discussion; 1. The Treatment of Infantile Cataract; 2. The Treatment of Lachrymal Disease.

The following papers are announced:

BEAUMONT, W. M., M.R.C.S. Vision Tests as Applied to Railway Servants.
BICKERTON, T. H., M.R.C.S. (Title of paper not received.)
BRAILEY, W. A., M.D. Some Cases of Retinal Detachment.
COLLINS, W. J., M.D., and WILDE, L., M.D. The Pathology of the Ophthalmoplegiæ.
DOYNE, R. W., M.R.C.S. (Title of paper not received.)
EDRIDGE-GREEN, F. W., M.D. A Review of the Tests for Colour Blindness.
GRIFFITH, A. Hill, M.D. Cases of Sarcoma of Choroid causing Death by Metastasis.
GROSSMANN, K., M.D. (Title of paper not received).
LEE, C. G., L.R.C.P. The Value of Electricity in Affections of the Optic Nerve and Retina.
MCHARDY, M. M., F.R.C.S.Ed. Control of Railway Servants' Eyesight.
PERCIVAL, A. S., M.B. The Action and Uses of Prismatic Combinations.
WRAY, C., F.R.C.S. Some Points in the Treatment of Lamellar Cataract.

H. DISEASES OF CHILDREN.—*President:* J. F. GOODHART, M.D. *Vice-Presidents:* T. W. TREND, M.D.; T. B. SCOTT, M.R.C.S. *Honorary Secretaries:* SIDNEY PHILLIPS, M.D., 62,

Upper Berkeley Street, W.; DENNIS C. EMBLETON, L.R.C.P., "St. Wilfred's," Michael's Road, Bournemouth.

The two following subjects have been set down for special discussion: 1. The Feeding of Infants up to the Completion of the first Dentition. To be opened by Dr. Henry Ashby, of Manchester; Dr. Cheadle, Professor Baginsky, of Berlin, Dr. Emil Pfeiffer, of Wiesbaden, Dr. Lewis Marshall, of Nottingham, and Dr. Angel Money will take part. 2. The Treatment of Pleurisy and Empyema in Children, and their value. To be opened by Mr. R. J. Godlee; Mr. W. H. A. Jacobson, Mr. Watson Cheyne, Professor Baginsky, of Berlin, Dr. Emil Pfeiffer, of Wiesbaden, Dr. Angel Money, Dr. G. A. Carpenter, and Dr. Lewis Marshall, of Nottingham, will take part.

The following paper is announced:

EWENS, John, L.R.C.P. Osteotomy Generally; with Special Reference to Tarsectomy in Advanced and Intractable Cases of Talipes Equino-Varus.

I. THERAPEUTICS.—*President:* WM. VICARY SNOW, M.D. *Vice-Presidents:* SIDNEY COUPLAND, M.D.; A. G. BARRS, M.D. *Honorary Secretaries:* CHRISTOPHER CHILDS, M.D., 2, Royal Terrace, Weymouth; JOHN ROSE BRADFORD, M.D., 52, Upper Berkeley Street, W.

A discussion on Koch's Treatment of Consumption, to be introduced by the President (Dr. Snow). The following gentlemen will take part in the discussion: Mr. Watson Cheyne, Dr. E. Markham Skerritt, Dr. Barrs, Mr. Fowler, and others.

A discussion on Anæsthetics will be introduced by Dr. Lauder Brunton. The following gentlemen will take part in the discussion: Dr. Dudley Buxton, Dr. Barrs, Mr. Hartley, Mr. Pridgin Teale and others.

The following papers are announced:

BARRS, —, M.D. On the Use of Digitalis in Aortic Disease.
BUXTON, Dudley, M.D. On Anæsthetics.
DENTON-CARDEW, H. W., M.R.C.S. On the Treatment of Exophthalmic Goitre.

Honorary Local Secretary: JAMES DAVISON, M.D., "Walderslow," Bournemouth. *Honorary Treasurer:* WILLIAM FRASER, M.D., Elmhurst, Bournemouth.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 28TH, 1891.
9.30 A.M.—Meeting of 1890-91 Council.
11.30 A.M.—First General Meeting. Report of Council. Reports of Committees: and other business.
4 P.M.—Sermon by the Right Rev. the Lord Bishop of Winchester.
8.30 P.M.—Adjourned General Meeting from 11.30 A.M. President's Address.

WEDNESDAY, JULY 29TH, 1891.
9.30 A.M.—Meeting of 1891-92 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Dr. T. LAUDER BRUNTON, F.R.S.

THURSDAY, JULY 30TH, 1891.
9.30 A.M. Meeting of the Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery by Professor J. CHIENE.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 31ST, 1891.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Public Medicine by Dr. EDWARD C. SEATON.

SATURDAY, AUGUST 1ST, 1891.
Excursions.

THE ANNUAL MUSEUM.

THE Museum in connection with the fifty-ninth annual meeting of the British Medical Association will be arranged in the following Sections:—

SECTION A.—Foods and Drugs, including Prepared Foods, Pharmaceutical and Chemical Preparations, Antiseptic Dressings, etc. (Honorary Secretary, Mr. MacGillicuddy, Pendennis, Bournemouth.)

SECTION B.—Pathology, comprising Casts, Models, Apparatus, Microscopical and Macroscopical Specimens, etc. (Honorary Secretary, Dr. Bright, Roccabruna, Bournemouth.)

SECTION C.—Anatomy and Physiology, comprising Specimens and Apparatus as above. (Honorary Secretary, Mr. G. Schofield, Durham House, Bournemouth.)

SECTION D.—Surgical Appliances and Books, comprising New Books, Atlases, Diagrams, Tables; Medical and Surgical Instruments and Appliances, Ambulances, etc. (Honorary Secretary, Dr. Grabham Lys, Hazlewood, Bournemouth.)

SECTION E.—Sanitary Appliances, comprising Apparatus and Appliances connected with Sanitation, Equipment of Houses, Public Institutions, Hospitals, etc.; Improvements in Drainage, Water Supply, Ventilation, Illumination, and Clothing. (Honorary Secretary, Mr. W. H. L. Marriner, Westbourne Tower, Bournemouth.)

The Secretary of the Museum will be glad to hear from members of the profession who are willing to send objects for exhibition in the Sections of Anatomy and Physiology and Pathology. There is no hospital museum in the neighbourhood. (Address, Mr. George Mahomed, Astolat, Bournemouth.)

The Museum will open on Monday evening and close on Thursday evening.

To Non-Professional Exhibitors.

Inventors and manufacturers wishing to exhibit in the annual Museum are invited to apply for space early to the Honorary Secretary of the Museum, Mr. George Mahomed, Astolat, Bournemouth.

The charge to exhibitors (other than members of the medical profession) will be 2s. per square foot of table space in Sections A, B, C, D, and 6d. per square foot of floor space in Section E, and in Section D for ambulance appliances.

In considering applications for space the Committee will give preference to *bonâ fide* inventions and improvements not previously exhibited.

A Catalogue will be printed, prepaid advertisements will be inserted in the Catalogue.

Regulations Regarding Exhibits.

1. Intending exhibitors must communicate with the Secretary of each Section in which they propose to exhibit.

2. Communications on general matters connected with the Museum should be addressed to Mr. G. Mahomed, Astolat, Bournemouth.

3. Intimation of proposed exhibits must be made to the Honorary Secretary before June 20th.

3*a*. A brief description of each exhibit must be forwarded to the Secretary of the Section concerned not later than June 30th.

4. All exhibits should be addressed to the "Secretary of the Museum, British Medical Association, Bournemouth," with the name of the Section for which they are intended. Packages should not be addressed to a firm's representative at the Museum.

5. Exhibits must be delivered between July 15th and 21st.

6. Every packet most bear a card showing the name and address of the exhibitor.

7. The Committee will exercise every care regarding the objects entrusted to them, but all risks and expenses must be borne by the exhibitor.

8. The arrangement of signs, placards, etc., will in every case be subject to the approval of the Committee.

9. No exhibits will be received except on the understanding that the above regulations will be complied with.

A. G. S. MAHOMED, M.R.C.S.,
Honorary Secretary Museum Committee,
Astolat, Bournemouth.

CORRESPONDENCE.

THE ELECTION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—With your permission I should like to say a few words in regard to my candidature for a seat in the Council of the Royal College of Surgeons of England.

If I had followed only my own feelings and judgment I should have abstained from coming forward this year, when only one absolute vacancy has occurred, and should have been more than content to leave Mr. Lawson Tait, who polled more votes than I did last year, to represent the Fellows who desire to see their constitutional position raised to a level with that of the Fellows of other professional colleges. As, however, it was the wish of those with whom I have been working for the attainment of this end that I should stand again I consented to do so, and I cannot but think that the moderate

proposals embodied in the temperate circular just issued will commend themselves to all Fellows who think and act independently and have the welfare of the College at heart.

Your remark that I have been for years an active member of the Association of Fellows is not strictly correct, as I did not take any part in its proceedings or join the Committee of the Association till June, 1889, and I am not responsible for its policy prior to that date. At the annual meeting of the Association in 1889 I accepted office as a member of the Committee because I felt that it was only by combined action that the desired improvements could be effected. With all that has been done by the Committee during the last two years I have been closely identified, working steadily with my colleagues to secure for the Fellows those privileges the concession of which would, in our opinion, materially conduce to the good of the institution and of the profession at large. I took part in the deputation of the Committee of the Association to the Council last year which commended itself to Sir Spencer Wells, and joined in urging upon the Committee of Council the expediency of occasional consultation of the Fellows of the College separately from the Members, granting to the Fellows a common room, modification of restrictive regulations in regard to the use of voting papers at the election of councillors, and submission of the proposed scheme of conjoint examination for the medical degrees of the University of London to the Fellows before its final ratification by the Council. This action of the Association was not without success, for an authoritative legal opinion has been obtained favourable to separate meetings of Fellows. A common room will doubtless be set apart for the Fellows in due time; our suggestions in regard to voting papers were only lost in the Council by the bare majority of one, and everyone admits that if the Fellows are to be consulted at all it is the best course to consult them before instead of after the final ratification of any new proposal.

If the Fellows of the College agree with me in thinking that it would be for the good of the College that they should be a more homogeneous, united, and influential body than they are at present, and think that if elected to the Council I could help to advance this object, I should esteem it an honour to have the opportunity of serving them to the best of my powers.—I am, etc.,

Finsbury Square, E.C. WALTER RIVINGTON.

DEGREES FOR LONDON MEDICAL STUDENTS.

SIR,—In connection with this subject and the recent trial of a member of the profession for having assumed a virtue when he had it not, I would give yet another illustration of the use of titles without the degree.

Supposing under existing circumstances a man goes to the extra trouble and expense of taking an M.D., he is but little better off in position, for any diplomate can call himself "Dr." on his plate and cards, so that to the public there is no difference between an easily-obtained diploma and a hardly-won M.D., and the man who alone has the right to call himself "Doctor"—that is, a Doctor of Medicine—is, of course, the sufferer. In its effect this is as bad as the case of the man who, with only a little more audacity, calmly adds an unearned M.D. to his name.

Another case is the question whether Bachelors of Medicine should call themselves "Doctor." The University of London expressly forbids it, yet in the town where I practise are two M.B.'s, who always call themselves "Doctor;" this one can forgive, but they have an assistant whom they on all occasions call "Dr.," in spite of his being L.R.C.P., M.R.C.S., and not having a degree.

Surely, before we "level down" in the true socialistic manner, we ought to decide as to who shall be called "Doctor," else is their labour vain who have worked harder in order to be rather than to seem. It is a great pity that we cannot have a *Staats-examen* for our portal, and insist on the universities keeping a higher standard than this, while London University should still keep its high position as the *facile princeps*.

We could with great advantage have a University of Westminster, higher in position than the *Staats-examen* title, and not so searching as London University. As to titles, "Harvey" might be confounded with Harvard, and surely we have enough memorials without having an "Albert" University, while Westminster has everything in its favour.—I am, etc., DOCTOR OF MEDICINE.

SIR,—Some of your readers have evidently drawn erroneous conclusions from the case recently tried at Birmingham. I have no doubt whatever that any person who holds a registrable qualification in medicine is a physician, and could not legally be prevented from calling himself doctor provided he did not put M.D. after his name, and that anyone holding a registrable qualification in surgery is a surgeon, therefore all L.S.A.'s registered previous to June 30th, 1887, are physicians only, and could not legally be prevented from calling themselves doctors; those registered after that date are legally both physicians and surgeons, and could, if necessary, assume the title of doctor so long as they did not presume to be, or use the title of, M.D. If a "Physician but not a Doctor" wishes to obtain the new L.S.A., for which he will now see there is no necessity, he will not only have to pass a searching examination in surgery, but one equally so in medicine and midwifery; there is no exemption whatever from any part of the final examination.—I am, etc.,

L.S.A., MEDICAL ACT, 1886.

CHLOROFORM OR ETHER?

SIR,—I must emphatically protest against Dr. Lawrie's statement in the BRITISH MEDICAL JOURNAL of June 13th that my statistics of anæsthetics "are intended to show the danger of chloroform." Nothing of the sort. These statistics are based upon the only reliable records of anæsthesia that have ever been kept on a large scale, and they were compiled by me solely for this reason, and for none other. They show a mortality of 1 in 1,236 for chloroform, and 1 in 4,860 for ether (not 1 in 2,754, as Dr. Lawrie erroneously states in his article). I think anyone who has impartially examined the subject must admit that these figures simply represent the truth about anæsthetics without any bias whatever.—I am, etc.,

Welbeck Street, W. W. ROGER WILLIAMS.

SIR,—Many will be disposed to agree with Surgeon-Major Lawrie that statistics bearing on the relative number of deaths from the above anæsthetics are chiefly valuable as showing the different results obtained with chloroform according to the method of administration followed. The fatalities which so frequently happen from this agent are all the more to be regretted if the secret of safe administration is really known to a certain section of the profession. But it appears to me that the question is more complicated than the Hyderabad Commission have represented it, and it is not wonderful if their conclusions have not been accepted as final. It seems to be a serious objection to their teaching that it does not adequately represent or vindicate that of Syme, although claiming to do so. The latter insisted that one element of success lay in giving "plenty" of the anæsthetic. I do not doubt for a moment the success which Surgeon-Major Lawrie claims for his own practice, but it may be questioned whether he knows wherein the secret of his success lies, and whether he has succeeded in communicating it to others. It is noteworthy, surely, that he does not in the very least ascribe it to "giving plenty of it," and herein differs remarkably from Syme. Nay, more; he assumes that in fatal cases the anæsthetist, by neglecting the respiration, goes straight on until he administers an overdose of chloroform, and so kills the patient. If this were indeed so—if in those numerous cases which have proved fatal in a few minutes, and from only a drachm or so of chloroform, the patients have really absorbed an overdose, then the doctrine that safety is to be found in giving plenty is effectually refuted. Not even the late Mr. Clover himself could have more emphatically condemned it.

It has generally been admitted that the results obtained by the Commission were altogether negative with respect to the occurrence of primary syncope. In making this admission critics seem to have strangely overlooked Experiment 40. In this remarkable case a dog was apparently dead some considerable time after an inhalation of "only a few seconds" had been left off. The supposition of the Commission that this animal must have absorbed an overdose from the vapour

which remained in the air cells after the inhalation was discontinued appears to me quite untenable. In my view of it this case was one of primary syncope caused by the reaction which ensued in the circulation when the inhalation was left off at this early stage, and was identical with similar catastrophes in the human subject.

Whatever may be thought of the view I have ventured to publish with regard to the etiology of primary syncope, it must be granted that it raises a new issue, and that, if well founded, it completely vindicates the doctrine that safety is to be secured by giving plenty of chloroform before stopping short.—I am, etc.,

Partick, Glasgow. ROBERT KIRK, M.D.

HOME FOR THE DYING.

SIR,—There can be no doubt that refuges for dying patients are sadly wanted, and I should have been content to rejoice that public attention is being drawn to this want and to wish success to the appeal in the BRITISH MEDICAL JOURNAL of June 13th, but that in that appeal it is implied, and in an article in the *Contemporary Review*, from the pen of Dr. Schofield, it was distinctly asserted that no such institution existed in London till "Freidenheim" was established some five years ago. I wrote to that gentleman on seeing the article to inform him that one had existed for many years, but as he has not thought it necessary to correct his, of course unintentional, misstatement I think it right to bring the fact to the knowledge of the public.

The Hospital of St. John and St. Elizabeth, 50, Great Ormond Street, was founded as long ago as 1856, for the very purpose of receiving patients suffering from incurable diseases that must end in death, and those nearest to death are the first selected for admission. Another class of patients are, indeed, also received, namely, those who have disease of so protracted a character that ordinary hospitals cannot keep them, but the dying have always been specially chosen. There are 50 beds, and fully half are usually occupied by the very class for whom the present appeal is being made. Of course 25 or 30 are few, but even so the amount of suffering relieved during these many years may well be imagined. There is a medical and surgical staff attached to the hospital, while the fact of the nursing being in the hands of sisters of mercy may be taken as a guarantee that all that kindness and gentleness can do is done. The sisters are Catholic sisters, but patients are received of any religion and with no interference whatever with their belief and practices.

The existence of this institution may be a starting point for the movement now proposed, at least it has the experience of many years, and I am sure the sisters will give any information that will assist in this charitable work.

As one of the surgeons and treasurer of the hospital I ask your insertion of this letter.—I am, etc.,

Jermyn Street, S.W. EDWD. TEGART.

PROPOSED INCREASE IN THE NUMBER OF DIRECT REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

SIR,—May I, through your columns, ask medical practitioners heartily to take up the petition to the Privy Council asking for an increase in the number of direct representatives of the medical practitioners in the United Kingdom from five to eight? We have, in accordance with the Act of Parliament, petitioned the General Medical Council last year to move in securing the above increase, but the Council has not moved. Our next step is to petition the Privy Council. If a sufficient number of petitions are sent in, there is little doubt but that our prayer will be granted. If we do not send sufficient in, then the cry will be raised that the profession is careless, and do not want any increase.

It will be remembered that although the Medical Act, 1858, provided for the formation of the Medical Council, yet no direct representation was granted until the Medical Act of 1886 was passed. Drs. Waters, Wheelhouse, Leech, and Wade were the chief workers in securing for us such representation. Further, it is evident that the draftsmen of the Act of 1886 clearly saw a time would come when the growth of the profession would be such as to require an increase of direct representatives. That time has come.

It seems very strange that, although the income of the Medical Council is chiefly obtained from the registration fees of medical practitioners, the said practitioners had, until 1886, been given no voice whatever on the Council. It seems even stranger that although twenty universities and medical corporations are represented on the Council, not one penny is given to the Medical Council by these bodies. This is still more palpable when it is further stated that we practitioners actually pay each university and corporation representative about £170 a year. The case stands thus: The university representatives are paid by us, but their universities do not contribute to the income; the medical practitioners pay for all, and are only allowed five representatives. Further, it certainly seems strange that, although the Privy Council is given the power to elect, and does elect, five representatives on the Council, that not one farthing is contributed by the Privy Council to the income of the Medical Council. Here, again, medical practitioners pay for those who do not represent them. In political life it is a maxim that if the Government is represented on a body, and is given part control over the actions of that body, then the Government must contribute. This is seen in educational, Poor-law, and sanitary legislation. Why not in ours? The Government has as great a right to make an annual grant for the part defraying of the expenses of the Medical Council as it has to make a grant to the Council of Education. The Medical Council is a body acting purely and simply in the interests of the public. It does not certainly act in the personal interests of the profession. Further than making a grant in aid, many of us hold that the Privy Council would do good service if it from time to time elected as one of its five representatives on the Medical Council two members who represented truly the great mass of the profession. All along the Privy Council has in reality nominated those who represent the universities and colleges.

Those who read the reports of the proceedings of the Medical Council must notice the genuine work performed by our direct representatives, more especially by the English. If we had these additional representatives, I believe our Medical Council would become a truly national institution, and cease to be a representative of diploma-granting bodies.

I would urge that the different medical and medico-ethical societies pass a resolution in favour of granting an increase in the number of direct representatives, and forward such resolution to the Privy Council. If, further, a deputation to the Lord President took place, it would greatly tend to ensure success.

It has been said that the twenty representatives of the universities and corporations represent the graduates of these bodies, but I find from replies that the councils of the universities and corporations, and not the mass of the graduates, elect the above twenty.—I am, etc.,

Liverpool. ROBERT REID RENTOUL.

TO THE RIGHT HONOURABLE VISCOUNT CRANBROOK, LORD PRESIDENT, AND THE RIGHT HONOURABLE THE MEMBERS OF HER MAJESTY'S PRIVY COUNCIL

THE Petition of the undersigned registered medical practical practitioners of and its vicinity

Humbly sheweth:—

1. That the Medical Act, 1886, Section 8, provides for the election of five direct representatives by the registered medical practitioners in the United Kingdom; while Section 10, Subsection 1, paragraph c, of the same Act, provides the power for returning by the registered medical practitioners additional direct representatives to the General Council.

2. That petitions have been presented to and received by the General Council on November, 1890, urging the General Council to represent to the Privy Council that such increase in the number of direct representatives be provided for, and that the President of the General Council stated the proposal was one which would have to be "actually judged and decided upon by an authority outside of and superior to the Council itself, to which authority, indeed, it would be more profitably addressed."

3. Your Petitioners further beg to state that the registered medical practitioners since 1859 have paid no less than £155,985 as registration fees, and that the universities and medical corporations represented on the General Council by twenty representatives do not contribute to the income of the said Council, although their representatives are paid for their services out of the above income.

4. That in 1875 the number of registered medical practitioners on the *Medical Register* was 22,715, while in 1890 the number had increased to 29,163, thus showing the necessity for an increase in the number of direct representatives.

5. Your Petitioners would call your Lordships' attention to the valuable help already given to medical education by the direct representatives on the General Council. Therefore your Petitioners humbly pray

that your Lordships will exercise the power vested in the Privy Council by Section 19 of the Medical Act of 1886, and direct that the registered medical practitioners in each of the three parts of the United Kingdom be given by your Lordships the power of returning an additional direct representative for each of the three divisions of the United Kingdom. And that effect will be given to the prayer of your petitioners before November, 1891, when the next quinquennial election of direct representatives takes place.

And your petitioners will ever pray.

Name. Qualification. Full address.

[*Explanation.*—As many petitions are rendered useless by their not being drawn up in due form, the following points should be attended to: (*a*) The petition must be written on foolscap, not printed; (*b*) the full name and qualifications and address of each person who signs must be stated; (*c*) no names should be gummed or stuck on; (*d*) at least one name must be on the page on which the petition is written; (*e*) the name of the town or city or district should be inserted; (*f*) no person should sign more than one petition; (*g*) no printed matter or other documents should be attached to the petition; (*h*) no erasures or interlineations must be made; (*i*) no signatures are counted unless the full address is given. Petitions should be forwarded to the Privy Council Office (under cover addressed to the Clerk of Council, Whitehall, London, W).]

ABUSE OF THE PROVIDENT PRINCIPLE.

SIR,—Being once an assistant surgeon for a few months to a large co-operative medical society, I have felt much interest in the various letters which have recently appeared under the above heading in the BRITISH MEDICAL JOURNAL.

That the so-called poorer classes should not only receive almost gratuitous advice, but at the same time, by means of co-operation, produce from these absurdly low fees a surplus, used for the benefit of some charitable offshoot of the original society, seems most unfair to our profession. Does it not come within the jurisdiction of the Medical Council to make and enforce a wage limit and a scale of reasonable charges (as suggested by Dr. Bampton) for these societies? Not only is the whole system prejudicial and, in many cases, degrading to the whole medical profession, but also hurtful to the health of the members belonging to these societies; for it seems unreasonable (as stated by "Quærens" in his letter), that one qualified man and his assistant can be responsible for the health of 11,000 individuals, even in comparatively healthy times, much less in seasons of epidemics.

This state of affairs, I think, is due to: 1. Increasing competition, which might partly be remedied by fixing the age of entry into the profession at 24 years of age. 2. To a disunited feeling the outcome of a supposed or real superiority of one degree or licence over another, which could be remedied either by a State examination or the enforcement of a more uniform examination at the various licensing and degree-granting bodies. 3. To a want of medical ethics, which should be fostered by professors and lecturers during student life, so that an *esprit de corps* more firm and lasting may be established amongst our numbers.—I am, etc.,

L.R.C.P.Lond., R.N.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

WANTED by a Surgeon due to go abroad early this autumn, an Exchange which will give him two years or more at home. Liberal terms.—Apply to Surgeon A. T. SLOGGETT, Medical Staff, Belstone Camp, Okehampton.

THE NAVY.

INSPECTOR-GENERAL JAMES NICHOLAS DICK, C.B., has been placed on the retired list, June 13th. His commissions are thus dated: Surgeon, August 17th, 1853; Staff-Surgeon, September 27th, 1861; Fleet-Surgeon, August 14th, 1868; Deputy Inspector-General, February 26th, 1880; and Inspector-General, February 27th, 1884. From the *Royal Navy List* we learn that he served as Assistant-Surgeon during the Russian war in 1854-55, in the *President*, flag of Rear-Admiral Price, and was present at the attacks on Petropaulovski, by the combined English and French squadrons, on August 31st and September 4th, 1854, when he was specially mentioned for his care of the large number of wounded; in September, 1854, he was also present at the capture of the Russian vessels *Silkir*, of 10 guns, and *Anadir* of 4 guns. In April, 1862, as Surgeon, he was present in the boats of the *Flying Fish*, at the capture of a slaver in Rio Nunez, West Coast of Africa. In July and August, 1868, when in the *Satellite*, he was Senior Medical Officer in charge of the naval forces and Indian troops. In the operations on shore against pirates in the Nicobar Islands, Bay of Bengal. Senior Naval Medical Officer during the Abyssinian war, 1867-68, and for his services was specially promoted to the rank of Fleet-Surgeon (Abyssinian Medal). During the civil war in Spain, when Fleet-Surgeon of the *Lord Warden* flag ship, in 1873, he proceeded into Cartagena during the bombardment as a volunteer, to assist the wounded. Received from the Admiralty an expression of their high estimation of the zeal, energy, and skill shown by him in performance of his duties in connection with the Royal Naval Hospital, Malta, of which he was the principal officer during the Egyptian campaign, 1882. Nominated C.B., June 21st, 1887, on the occasion of the celebration of the completion of the 50th year of Her Majesty's reign. He was appointed Director-General of the Medical Department of the Navy, February 25th, 1888.

Staff-Surgeon JOHN TYNDALL is promoted to be Fleet-Surgeon, May 8th. He was appointed Surgeon March 2nd, 1871; and Staff-Surgeon, March 2nd, 1883. He served at the Royal Naval Hospital, Jamaica, in 1876-79; volunteered in a great emergency to attend, and attended, in the Military Hospital, Port Royal, 1878, during an outbreak of yellow fever, there being no military officer available; he narrowly escaped from death, owing to his contracting the disease when employed on this service, and was recommended for promotion. He was senior Medical Officer in the Niger expedition, 1883, and was mentioned in despatches.

The following appointments have been made at the Admiralty: EDWARD CUFFEY, M.B., Surgeon to the *Starling*, June 18th; ANTHONY GORHAM, M.D., Fleet-Surgeon, to the *Rodney*, June 15th; HERBERT E. MARSH, Staff-Surgeon the *Impregnable*, June 15th; HERBERT CANTON, Surgeon, to the *Gannet*, June 15th; JOHN DOWSON, Surgeon to the Portsmouth Division Royal Marine Light Infantry, June 25th.

CHANGES OF STATION.

THE following changes of station among the officers of the Medical Staff of the Army have been officially notified as having taken place during the past month:

		From		To
Deputy Surgeon-General	W. Collis ...	Bengal ...	...	Cork.
Surgeon-Major	H. W. A. Mackinnon, D.S.O.	Aldershot	...	Dover.
,,	J. F. Supple... ...	Bengal ...	...	Portsmouth.
,,	O. G. Wood, M.D. ...	Dublin	...	Limerick.
,,	J. L. Peyton, M.B. ...	Bengal ...	...	Buttevant.
,,	W. A. Carte, M.B. ...	Coldstream Gds.	...	Grenadier Gds.
Surgeon	J. G. W. Crofts	Fort George	...	Dumfries.
,,	G. Coutts, M.B.	Salford ...	...	Bury.
,,	J. H. A. Rhodes	Dublin ...	...	Belfast.
,,	T. H. Parke	Home District.	...	Netley.
,,	W. Dick, M.B.	Bury ...	...	Altcar Camp.
,,	W. G. Macpherson, M.B. ...	Woolwich	...	Gibraltar.
,,	C. E. Faunce	Bengal ...	...	Woolwich.
,,	G. Wilson, M.B.	Piershill ...	...	Montrose.
,,	M. O'D. Braddell, M.B. ...	Bengal ...	...	York.
,,	H. N. Thompson, M.B. ...	Templemore	...	Dublin.
,,	S. Butterworth	Bengal ...	...	Portsmouth.
,,	G. E. Moffet, M.B. ...	Edinburgh	...	Glasgow.
,,	C. W. Johnson, M.B. ...	Carnarvon	...	Beaumaris.
,,	R. I. Power	Bengal ...	...	Cork.
,,	N. C. Ferguson, M.B. ...	,, ...	...	Dublin.
,,	J. H. Greenway	,, ...	...	,,
,,	W. H. Bell	,, ...	...	Chester.
,,	M. O'Halloran, M.D. ...	,, ...	...	Dover.
,,	H. Cocks, M.B.	Dover ...	...	Shorncliffe.
,,	C. W. R. Healey	Aldershot	...	Chester.
Quartermaster	R. Adams	— ...	...	Aldershot.
,,	J. Hirst	Aldershot	...	Gibraltar.

THE MEDICAL STAFF.

DEPUTY SURGEON-GENERAL T. WALSH, serving in the Bengal command, is appointed to the administrative medical charge of the Allahabad District, *vice* Deputy Surgeon-General T. Rudd, M.D., transferred to the Meerut District.

Brigade-Surgeon C. F. CHURCHILL, M.B., serving in the Bengal command, is appointed to the temporary administrative medical charge of the Quetta District, *vice* Deputy Surgeon-General S. A. Lithgow, M.D., C.B., D.S.O., proceeded on furlough.

The leave to England on private affairs for six months granted to Surgeon F. W. H. D. HARRIS, who is serving in the Madras command, is cancelled.

Surgeon-Major G. LAFFAN, M.D., and Surgeon T. H. CORKERY, on arrival from England, are directed to do duty in the Rangoon District, Madras command.

Surgeon-Major J. F. BRODIE, M.D., serving in the Madras command, has leave to England for 182 days on medical certificate.

The death is announced of Surgeon JOHN MCDOUGALL STEWART on April 26th last. His commission bore date February 3rd, 1883; he served with the Nile Expedition in 1884-85, and had received the Egyptian medal with clasp, and the Khedive's bronze star.

It is announced that an examination of candidates for fifteen commissions in the Medical Staff of Her Majesty's army will be held at the University of London on August 24th and following days.

Brigade-Surgeon WATKIN SANDOM WHYLOCK, late 38th South Staffordshire Regiment, died at Folkestone on the 12th instant. Entering the service as Assistant-Surgeon December 25th, 1852, he became Surgeon January 14th, 1862, and Surgeon-Major November 6th, 1872. He was granted retired pay with the honorary rank of Brigade-Surgeon January 3rd, 1881. He served with the 75th Regiment at the siege of Delhi and at the battle of Budleckeserai, where he killed two of the enemy, one in close combat, saving thereby the life of a European soldier (medal with clasp). Was Sanitary and Senior Medical Officer of the Derbund Field Force of the Hazara campaign of 1868. He served in the Afghan war of 1878-80; was Senior Medical Officer in Brigadier-General Biddulph's advance on Quetta, and was present at the surrender of Candahar, and was Principal Medical Officer under Lieutenant-General Hughes in the advance on Ghuzni, and afterwards to Major-General Hill's division; was present in the engagement at Ahmed Kheyl and some minor affairs (medal with clasp).

INDIAN MEDICAL SERVICE.

THE undermentioned promotions, already announced in the BRITISH MEDICAL JOURNAL, have received the approval of the Queen:—To be Surgeons-Major from March 31st: Surgeons F. F. PERRY, P. W. DALZELL, S. LITTLE, M.D., G. H. D. GIMLETTE, M.D., C. B. HUNTER, and J. C. C. SMITH, all being of the Bengal Establishment.

Brigade-Surgeon C. E. MCVITTIE, of the Madras Establishment, is promoted to be Deputy Surgeon-General from March 7th. He entered the service as Assistant-Surgeon March 31st, 1866; and rose to be Brigade-Surgeon October 12th, 1888. He was engaged in the Afghan war in 1879-80 (medal), and with the Burmese Expedition in 1886-88 (mentioned in despatches, medal with clasp).

Surgeon-Major H. J. HAZLETT, Madras Establishment, who was appointed Assistant-Surgeon April 1st, 1867, is now promoted to be Brigade-Surgeon from March 7th.

The Queen has approved of the restoration of Surgeon E. R. DA COSTA, of the Madras Establishment, from the half-pay to the effective list, an announcement of which has already been made in this JOURNAL.

The retirement from the service of Brigade-Surgeon W. S. FOX, of the Madras Establishment, which has also been stated in this JOURNAL, has likewise received the approval of Her Majesty.

Surgeon-Major MARK ROBINSON, Madras Establishment, has also retired from the service, which he joined as Assistant-Surgeon April 1st, 1873.

Yet another retirement is gazetted—that of Brigade-Surgeon A. N. HOJEL, of the Bombay Establishment. His commission as Assistant-Surgeon dates from July 27th, 1859; and that of Brigade-Surgeon from April 1st, 1887.

The undermentioned Surgeons, all of the Bengal Establishment, have been appointed to the officiating medical charge of the regiments named:—J. M. CRAWFORD, 2nd Bengal Lancers, *vice* Surgeon A. W. DAWSON, on field service with the Hazara Expedition; C. H. BEDFORD, 7th Bengal Cavalry, *vice* Surgeon-Major W. Finden, on field service with the Miranzai Expedition; H. E. DRAKE-BROCKMAN, 11th Bengal Lancers, *vice* Surgeon H. B. Luard; D. M. MOIR, 16th Bengal Cavalry, *vice* Surgeon H. C. Hudson, on field service with the Manipur Expedition; D. G. MARSHALL, 16th Bengal Infantry, *vice* Surgeon-Major H. Hamilton, on sick leave; H. B. LUARD, 15th Sikhs, *vice* Surgeon F. J. Drury, in temporary civil employment; C. C. CASSIDY, 18th Bengal Infantry, *vice* Surgeon T. M. Stiles, deceased; B. J. SINGH, 25th Punjab Infantry, *vice* Surgeon A. C. Yorman, on field service with the Hazara Expedition; H. R. C. BARBER, 40th Bengal Infantry, *vice* Surgeon W. Vost, on field service with the Miranzai Expedition.

Surgeons A. G. HENDLEY, J. C. WHITE, and H. W. ELERICK, all of the Bengal Establishment, have passed the examination in Hindustani by the lower standard.

The undermentioned gentlemen have leave of absence as specified:—Surgeon-Major R. JAMESON, M.D., Bengal Establishment, Deputy Sanitary Commissioner North-West Provinces and Oude, on private affairs till April 1st next; Surgeon W. H. M. INGHAM, Madras Establishment, for 182 days, from March 25th, in India, on medical certificate; Surgeon D. M. DAVIDSON, Bengal Establishment, officiating civil surgeon, Sealkote, privilege leave for three months, from April 27th; Surgeon-Major J. ANDERSON, M.B., civil surgeon, Bareilly, privilege leave for three months, from July 1st; Surgeon F. J. CRAWFORD, Madras Establishment, Second Surgeon, General Hospital, and Professor of Materia Medica in the Medical College, privilege leave for three months, from June 24th; Brigade-Surgeon R. BOWMAN, Bombay Establishment, Residency Surgeon Turkish Arabia, to Europe for one year on medical certificate; Surgeon Major S. M. SALAMAN, M.D., Bombay Establishment, Superintendent of Yerrowda Central Gaol, to Europe for five months on private affairs.

Surgeon E. R. W. C. CARROLL, Bengal Establishment, is appointed to the medical charge of the wing of the 31st Punjab Infantry.

Surgeon-Major H. HYDE, Madras Establishment, district surgeon of Tinnevelly, is appointed to act as district surgeon of Trichinopoly.

Surgeon W. H. QUICKE, Bombay Establishment, is directed to act as Professor of Midwifery, Grant Medical College, in addition to his other duties, until relieved by Surgeon H. P. Dimmock.

Surgeon-Major W. P. CARSON, M.B., Bombay Establishment, is ordered to act as Medical Storekeeper, Bombay, during the absence of Surgeon-Major J. Parker.

THE VOLUNTEERS.

MR. JOHN ALFRED FOX is appointed Acting-Surgeon to the 1st Cornwall Artillery (Duke of Cornwall's), June 13th.

Surgeon and Surgeon-Major ranking as Lieutenant-Colonel A. T. BRETT, M.D., 2nd Volunteer Battalion Bedfordshire Regiment late the 2nd Hertfordshire, has resigned his commission, with permission to retain his rank and uniform. His appointment as Surgeon dates from February 23rd, 1861; that of Surgeon-Major from February 1st, 1880.

Surgeon and Surgeon-Major ranking as Major J. L. W. WARD, 3rd Volunteer Battalion Welsh Regiment (late the 2nd Glamorgan), has also resigned his commission, with the like permission; he dated as Surgeon, Oct. 18th, 1879; as Surgeon-Major, February 1st, 1889.

Honorary Assistant-Surgeon W. G. GIMSON, M.D., 2nd Volunteer Battalion Essex Regiment (late the 2nd Essex), too, has resigned, with a similar permission. His appointment bore date July 28th, 1866.

MR. HORACE SANDERS is appointed Acting-Surgeon to the 17th (North) Middlesex, June 13th.

Captain G. T. BEATSON, M.D., from the 1st Lanark Artillery, is appointed Acting-Surgeon to the Glasgow Division of the Volunteer Medical Staff Corps, June 13th. Dr. Beatson joined the 1st Lanark as a Lieutenant June 26th, 1880, and was made Captain July 22nd, 1885.

Brigade-Surgeon J. W. MULLIGAN, from the Severn Infantry Volunteer Brigade, is appointed Brigade-Surgeon (ranking as Lieutenant-Colonel) to the South Wales Brigade of the Infantry Volunteers, June 13th.

A PLUCKY FEAT.

THE *Times* correspondent at Rangoon sends the following: During the recent cholera epidemic at Prome amongst the Indian hill coolies, a very plucky feat was performed by Surgeon Waller, of the Medical Staff. Owing to the intense heat several sick men tried to throw themselves from the hospital flat into the river. One patient succeeded in doing so, and was being rapidly carried away by the strong current of the Irrawaddy, when Surgeon Waller, who was in charge of the hospital, jumped into the river with his clothes on and succeeded in bringing the patient to shore in safety.

INDIAN PAY.

H. W. P. writes: A correspondent of the BRITISH MEDICAL JOURNAL states that the pay of a medical officer in the Indian army is barely sufficient in the junior ranks for comfortable subsistence. This is a most important question for those who have the Indian service in their eye as a career. Can you inform me of any guide book setting forth this matter?

*** Our correspondent will find full particulars connected with the Indian Medical Service in the *Guide* by W. W. Webb, Bengal Medical Service, published by W. Thacker and Co., 87, Newgate Street, London.

"HONOUR TO WHOM HONOUR IS DUE."

MEDICAL STAFF writes from India: In the *Army and Navy Gazette* of March 28th, last, page 245, column 3, the following appears:

"During 50 years the death-rate in the European part of the Indian army was 60 per 1,000 each year, that is to say, 17 years of soldiering killed every man; now the death-rate is 15.20 per 1,000, or nearly a fourth of the old mortality; thanks to the measures adopted by the Indian Government."

The above is an example of one of the many instances of slighting and withholding from the members of the Medical Staff (I here write members advisedly, as His Royal Highness the Commander-in-Chief has had it recorded that doctors are not officers, but only members of the Medical Staff) the credit due them and them only. In all justness, fairness and equity, I submit the paragraph as published in the *Army and Navy Gazette* is misleading, and should read as follows: Thanks to the measures adopted and recommended from time to time by the members of the Medical Staff which the Indian Government wisely carried out.

STATUS AT MESS.

"THE LONG-SUFFERING ONE" writes: In the BRITISH MEDICAL JOURNAL of May 24th, 1890, it is stated, in reply to a correspondent, "that it has been ruled by the Home authorities that a medical officer takes his status and position at all messes according to date of his commission," etc.

You would confer a great favour on hundreds of medical officers of the Indian army if you could publish the text of that official order, or enable it to be quoted.

*** Our correspondent will find, on reference, that it was not our assertion but that of a correspondent who referred the matter, and was informed that medical officers take position at mess, etc.

NEW TITLES.

PERSEVERE writes: With regard to the concession of substantive rank and compound titles granted by the War Minister, I should like to ask you to inform the medical officers of the army, How are they to be addressed in social life: whether by the military or medical portion attached to the rank; for in my opinion, unless a medical officer is called by the military title, the old familiar term "doctor" will be applied to all the medical officers whatever his "rank" may be. I am afraid the composite title will not be considered satisfactory.

*** Our correspondent propounds a question which we will not pretend to answer. The "substantive rank and compound titles" expressing it will doubtless command official recognition not hitherto regarded in respect to medical officers; social recognition must also in time follow. At all events, time will show what the all-round value of Mr. Stanhope's concessions are; we do not think it wise to discount them as worthless without trial.

MR. STANHOPE'S CONCESSIONS.

ANTI-HUMBUG writes: You congratulate Mr. Stanhope on his concessions: let me rather congratulate you on having carried the first parallel of the enemy. I am myself unable to feel grateful, except to you and Sir Andrew Clark and some others, for obtaining a partial concession. The proper mode of addressing medical officers will still be a dilemma. I hope you and your friends will, before it is too late, endeavour to obtain titles that can be utilised in daily life. The new titles will doubtless be a subject of rude mirth among combatant officers.

*** Perhaps at first; but in the end?

COMBATANT AND NON-COMBATANT.

SURGEON M. S. writes: In 1887 I was in medical charge of a military post in Upper Burmah when a very senior and well-known general officer passed through, making use of our station mess for the short time he was in the place. Shortly afterwards he passed back, inspected the station, and was taken by me over the hospital, in which were at least 100 sick men, the nature of whose diseases I personally explained to him. Being on this occasion in a position to return hospitality, he asked the officer commanding the post and a lieutenant, the only other combatant officer present, to dine with him, but the commissariat officer and myself, the only others in the station, were ignored. We both at the time felt rather sore, and could not but envy our luckier comrades this pleasant diversion in the monotonous existence led in our stockade. This is but another example of the distinctions made between combatant and non-combatant officers.

*** "The army knows no difference between combatants and non-combatants," *vide* speech of Lord Wolseley at Dublin lately!

MEDICO-LEGAL AND MEDICO-ETHICAL.

OLD ACCOUNTS.

XXV YEARS A MEMBER, writes: A. sells his practice to B., with twelve months' introduction; during the partnership the firm attends C., and a small bill is incurred of £2 5s. A. has for the last twenty years attended C., who is a widow, but has never pressed for payment, and an amount of £150 was owing to A. when he left the neighbourhood. He wrote to C., asking for some payment on account, and receives £20. B., on hearing this, and in paying over cashes in settlement of accounts, deducts £1 2s. 6d., half the amount of C.'s bill contracted during the partnership introduction. Is B. justified in so doing?

*** It is difficult to give a decisive opinion as we do not seem to be in possession of all the facts of the case; such contingencies should be provided for in the deed of partnership or transfer of practice, with the view to avoid the possibility of dispute. If C. paid the £20 on account to A., of the £150 she owed to him, clearly B. had no claim to a portion. If C. paid the £20 on account of her general indebtedness, then it must be ascertained what proportion £2 5s. bear to £150; the product to be divided between the two members of the firm.

FIDGETTY PATIENTS.

A. G. P. writes: I had attended a patient for a week or so, and having made my usual visit one day, went home; but next day a brother practitioner called to see me, and then stated he had called on other business at the house of the said patients, and, being an old friend of the family, asked how Mr. and Mrs. — were; to which their son said, "Pretty well: I will go and tell them that you are here," which he did, which eventually ended in his (the doctor's) going up to their bedroom to see them (they being in bed). While there, some conversation took place as to their condition, etc., ending in interrogations to the doctor as to his opinion of their case, which he very properly refused till he had seen me; which being done, I at once wrote to the people in question, saying that they had thrown a slight on me by their above conduct in asking his opinion without informing me of their wish for another opinion, and therefore I must refuse to attend them any more.

I may say that a very similar thing has happened before between us, when I pointed out the injustice to me that they were doing.

*** Before condemning patients for a breach of ethical duty to their medical attendant, it is more or less essential to ascertain their knowledge of the mutual obligations that are assumed to subsist between patient and practitioner, and also, as in the case in question, of the nature of the temptation to which they were subjected. Their intelligence and social position are, moreover, important factors to be considered; with regard to these, in the case of our correspondent we are left in doubt, but infer from the rural nature of the district in which he practises, and the tone of his communication, that they are farmers, or of that class. On the other hand, we note that the inculpated persons are alleged to have committed a like offence on a prior occasion, and were remonstrated with. Nevertheless, in the present apportionment of blame, regard should be had to the relative standard of their moral sensibility, and of the inciting influence of the interviewing practitioner. Be that as it may, we are of opinion that, under the circumstances related, A. G. P. was justified in ceasing his attendance.

OBITUARY.

HENRY GAWEN SUTTON, M.B.LOND., F.R.C.P.,

Physician and Lecturer on Pathology London Hospital.

WE announce with great regret the death of Dr. H. G. Sutton, of pneumonia after influenza, at the comparatively early age of 55. Dr. Sutton was the son of a Middlesbrough shipowner, and was intended for the sea. His scientific habit of mind doubtless determined his choice of the medical profession, a choice very happy for medical art and science.

He was a student at King's College, and graduated at the University of London, marrying before he was 20, while still a student. At first he was in general practice in the north of London, but after a few years (in 1863) he became a Member of the Royal College of Physicians and began to practise as a physician. He was at this time a most diligent student, following more especially the teaching of Drs. Gull and Wilks. He looked upon Guy's as his foster parent in medicine, and retained a life-long friendship with his former teachers. A great deal of what was most characteristic of Sutton was developed under the influence of the Guy's spirit of the time, the work of Bright and Addison being still worthily carried on by their successors.

He was elected assistant physician to the London Hospital in 1867, and full physician in 1876. The work he did at this institution was great, continuous, and of the highest scientific and practical value. For many years he was almost daily at work in the wards or in the *post-mortem* room. It was once remarked of him with pardonable exaggeration: "He was never out of the hospital." Hence very early he had not only acquired most extensive knowledge of, but a great familiarity with, disease. He was what is called "an all-round man," knowing thoroughly well, however, the technicalities of each department of medicine. He was in no sense whatever a specialist, for it is possible for what is called an "all-round man" to be a specialist in each department; it is possible for him to know many things about symptoms and cases and not much of patients; possible for him to consider cases of this or that disease as altogether separate and independent entities, just as the most narrow-minded specialist may do. In all medical subjects Dr. Sutton had a fervid interest. He was exceptionally strong in taking both a wide and precise view of a case of disease.

He had a very extensive knowledge both of morbid anatomy and of pathology. For years he worked almost daily and nightly in the *post-mortem* room and the museum, and many of the rising physicians in London remember with gratitude Sutton's Friday evenings at the London Hospital, where he was ever ready to assist any comer with his best knowledge. In this work his researches had very wide bearing, and we think their full value will have to be gauged by a later generation. His work with the late Sir W. Gull, not only on arterio-capillary fibrosis but on the natural history of rheumatic fever, is widely known and highly valued. His last book on medical pathology is very original. It was never intended to be a conventional textbook, and serves rather as a notebook of suggestions for men who have worked under Sutton. It is nevertheless widely useful and full of profound wisdom. It does not do the author justice as it is incomplete, and does not show the store of experience from which he drew. We believe there is still in manuscript a second series of lectures which we hope to see printed.

There are few diseased conditions and few medical questions about which he could not have written fully from his personal experience. We do not wish to throw a shadow of blame on this great physician when we say that it is to be lamented (a strange lamentation in these days) that he did not publish more. Students and colleagues urged him to give to the profession at large what he so liberally gave to those it was both his duty and his pleasure to teach. He was a man of the most extraordinary clinical acumen. He taught with a confidence justified by knowledge acquired by years of direct work at cases of disease, and of patient and laborious investigations in pathology. As a teacher, he will long be remembered. Although he gave so little directly to the world, yet by training numerous students to be fit for the work they were to engage in in the future—to be good men and helpful at the bedside—he has greatly benefited his profession. All over the world are men who are better practitioners of medicine through Sutton's training. Many will feel that, through the example of honest steadfast work, through witnessing the patient and thorough investigation of disease, case by case, and through well-considered and wide-reaching observations on general principles founded on pathology (never divorced from clinical medicine), they owe a deep debt to Sutton. He was of a most amiable disposition; he was both beloved and trusted; he had the candour, frankness, and directness of a strong and cultivated man. The youngest student and his oldest colleagues look on his death as a bitter calamity. The London Hospital has lost a good physician, the school has lost a great teacher who had its interests ever at heart, and men in all parts of the kingdom have lost a friend whose memory they will reverently cherish. It is vain to deal with mere laudation of such a man. We can close this part of our task by saying that he was as estimable for the nobility of his character as for his intellectual endowments and for his good work done. We now speak of his private life. There was much in the private life of the man which was noteworthy, but which we can only slightly refer to here. He was the kindest and the almost too generous helper of the afflicted; few who sought his help were turned away, however worn he might be himself, without good advice and in many cases material assistance. He was loved by the young and by the suffering. He felt the need for relaxation, and of late years had in succession followed fishing, music, and painting, and in his quaint way used to say he should soon get young

enough to dance again. He had a fund of humour, and no one enjoyed a joke more than he. He often astonished his patients by the directness and quaintness of his advice. Nothing can better convey the feeling of all at the hospital for him than the kindly messages sent during his illness and the feeling testimonies at his grave. "Men and women" thanked him for his helpful example, and the resident medical officers sent a laurel wreath with the words "He needs no rosary whose life is strung with beads of thought and love," and with this we leave him.

The following paragraphs have been received from Dr. S. Wilks, one of Dr. Sutton's oldest friends:

"I feel proud in being asked to add my mite to do honour to the memory of our late friend. The details of his life are best known to those with whom he came daily in contact, and his medical teaching can be best described by his numerous pupils. I trust there are those amongst them who, from notes of his lectures or from correspondence, will be able to give us some of his choicest thoughts. For my part, all that I can say or think of him is of the best kind. It is a maxim to speak only well of the dead, and to leave untouched all that is unpleasant concerning them, but of Sutton there is no other side but the good. Professionally, he was far in advance of the multitude by the profundity of his views, and personally he was the most charming, or, I might say, the sweetest of men, wearing, as he did, the white flower of a blameless life. He possessed an amiability and delicacy of character which was almost womanlike, and yet he was strong enough to maintain the right and abjure the wrong. His friendships were of the firmest, and past intimacies he never forgot. Whilst practising his profession for a livelihood, and with a purely scientific mind, he also felt he was working for humanity, and that he was striving to diminish the suffering of his fellow-creatures. Indeed, so interwoven were these highest instincts with his scientific aim and his daily practical life, that it were impossible to separate them; they were deeply rooted in his nature. His utterances were sometimes not understood; this was in part due to the profundity of his thoughts, and in part due to the quaintness of his language (Carlylesque). Circumstances of life of late too much sundered us, but he never forgot on each succeeding New Year's day to send me a remembrance of our friendship; and many of the letters he then wrote I now have by me which express with great candour the workings of his mind. A few extracts from these will, better than I can venture to do, afford to those who did not know Sutton some idea of what was in him, and what manner of man he was."

"'Need I hesitate to repeat my acknowledgments, for all experience tells us, as we wander onwards through many crossing paths, that it is helping to tell each other of the genuine streams that aid our thirst and support us. And in our profession there is much sadness beneath the actual demonstration, but in knowledge there is a beauty and sweetness which, as large-hearted Burns said, confounds rule and law and reconciles contradiction.'"

"'I wish we met as we used to do, and speak of pathological questions and subjects. It is very encouraging to see how new comes out of old, and that mighty order is prevailing. I find it very encouraging to increasingly observe that order comes through disorder, and whether we term it discord or disease the end by progress comes as the morning comes from the darkness of night. It is pathology which has helped me to see more physiology and to love life more and more.'"

"'It seems as if many poor creatures never have the opportunity of getting into the road to really see; they seemingly fail to perceive, and so drudge on in daily grooves. They are told to practise unselfishness; in other words, devotion to humanity, to love their neighbour as themselves, but they never did love themselves, and how can they love their neighbours? The greatest enemy I come across in my work is false teaching of persons to undervalue their own nature, and instead of teaching them to know it and appreciate how marvellously perfect the body is, they are urged to reform and be converted to a nasty business.'"

"'The study of pathology, acquaintance with human suffering and feeling with it, reveals how it is depressed, deadened, and encased until it longs to get away. The old tinker Bunyan was manifestly a pathologist. You notice that I wander on, and am more inclined to be disagreeable as well as agreeable. I wish for you and yours a happy new year, and trust that you will be spared to go on doing as you have been doing.'"

"'I was very pleased to have your two letters, and thank you much for the encouragement that you have given me. When I agreed that the lectures should be published, I was obliged to recognise that much that I said and more that I referred to would be slowly seen, only by degrees, and not seen at all unless the reader would go the road and keep his mind open. I knew what I had gone through and how I had suffered and been taught by contact, and I worked therefore simply to record as a traveller does, speaking to many minds on the road, blending feeling with feeling to know how to go easier, and by relieving needless suffering promote more work. The aim of medicine, we would argue, should be to guide persons to be able to do more needful work, to secure their own individual independence and the happiness in store for themselves. In looking round it is evident that the Supreme Mind is always working, beautifully and delightfully working, and many of us have experienced the greatest happiness in working. So the art of medicine guides persons how they may be supplied and filled with power to work out their own happiness.'"

"'On looking back, we cannot but see that medicine has made a great advance in our time, and, although it was the fashion to say that pathological teaching has done little for the treatment of disease, I have felt that such an assertion was due to an oversight it failed to perceive in removing ignorance. Pathological investigation had promoted treatment and introduced a confidence that has been a great relief.'"

"'I wish that we could begin again, start from our present position and long experience to take a deeper insight into human suffering. It would be a compilation of records of what we had journeyed through with our own fellow-creatures, and with a view of seeing how the suffering and misery are to be got rid of. There should be a rational therapeutics derivable from pathological teaching; but it cannot be gained by merely looking at lower agencies, which are disintegrating and crumbling to pieces, and which cannot develop into greater and higher usefulness. But see, rather, how we come to miss the greater constructive powers, and in missing them become conscious of failure and disappointment. In other words, a more practical pathological teaching is called for.'"

"In January of this year he wrote his last letter to me. In this he says: 'What a ceaseless struggle it is in human creatures—especially in our poor selves—to know how to take the past! Some seem to struggle to think well of it—a hopeless attempt; some would ignore it, which is impossible. There is a great deal to look back upon, to really reflect upon with pleasure and gratitude. It is a blessing to know that the love of knowledge is one of the sweetest enjoyments of this earth. How different should we now regard pathological questions, much more considering the hindrances and difficulties which are met with; and, seeing that the systems derived from narrow observations and hardened by fear, it would be valuable to feel our way as to how they should be counteracted.'"

"In a postscript he adds: 'The bacillus is telling a tale—but, as far as I see, only a *tail*, or not so much as that.'"

"I hope this short notice will tend to unbosom many more of his sayings and reflections, not only for the sake of adding to the lustre of his name, but for the benefit of our profession. When I think of him roaming about in the fields and along the lovely lanes of Sevenoaks, I am reminded of Wordsworth's *Wanderer*, as Sutton might have said with him:—

> On man, on Nature, and on human life,
> Musing in solitude, I oft perceive
> Fair trains of imagery before me rise,
> Accompanied by feelings of delight
> And dear remembrances, whose presence soothes
> Or elevates the mind, intent to weigh
> The good and evil of our mortal state."

An old pupil of Dr. Sutton's writes:

"It was impossible at times to recognise the means by which Dr. Sutton came to his conclusions. How accurate these conclusions were is known to thousands. On one occasion I ventured to say, 'Why do you place your hand upon your patient's epigastrium and let it remain there?' He said, with that gentle smile of his, 'I am feeling my way into the

patient.' Probably no man ever trusted the sense of touch so much in diagnosing disease. The first recollection which I have of Dr. Sutton was when he was lecturing on pathology at the London Hospital, and I can now picture that fine head, those clear, blue, beautiful eyes, those fine supra-orbital ridges, and I can recall how he commenced his lecture. Placing one thumb (his left) in his trousers pocket, he looked up, and slowly said: 'Gentlemen, I want you to *love* pathology, for pathology will teach you the morbid processes which govern the body as physiology does the normal, and you must be able to watch these morbid processes from beginning to end; if not, you cannot understand disease; if not, you will be like a sailor without a compass.' This sentence gives the keynote to his life; his medical knowledge was built upon the impregnable rock of pathology.

"There were so many sides to Dr. Sutton that in a short sketch it is impossible to convey any adequate idea of him. He was a profound pathologist, a practical physician, and a man who possessed in a manner I have never seen surpassed the clinical instinct. It probably was not so generally known that he was also a deep student of philosophy—Spinoza especially—and a great reader of the poets. He was a true lover of art, and beauty, and Nature; but no sketch of Dr. Sutton would be complete without alluding to his deeply religious feeling. I have a letter before me which was written on May 1st, 1891, which contains the following sadly prophetic words: 'I work on to promote the art of medicine; now I perceive what the Master meant when he said: "He who would gain his life shall lose it." Here comes the opportunity for the art of medicine.'"

Dr. Sutton was buried on Friday, June 12th, at St. Nicholas Church, Sevenoaks. Amongst those present to pay respect to the deceased physician were Dr. Wilks, of Guy's Hospital; Dr. Sharkey, of St. Thomas's; Dr. Savage, his son-in-law; and from amongst his colleagues were Dr. Hughlings Jackson, Senior Physician; Mr. Waren Tay, Senior Surgeon; Dr. Stephen Mackenzie, Dr. Turner, Dr. Herman, Dr. Lewers, Mr. Openshaw, Mr. A. Druce, of the House Committee; and and many of the resident staff.

SIR HENRY COOPER, M.D.Lond., F.R.C.P.

Sir Henry Cooper died at his residence, 12, Albion Street, Hull, on May 21st. He was born in 1807, the son of Mr. Samuel Cooper, a merchant interested in the whaling trade. His mother belonged to the Priestley family, from which was derived the famous chemist.

Henry Cooper was educated at private schools, and at the age of 16 became a pupil of Dr. Fielding, of Hull. He entered at University College (then the University of London) in its first session (1828), gained several class prizes during his attendance there, and obtained the diplomas of M.R.C.S. and L.S.A. in 1830. After a short time spent in Edinburgh and Paris, he entered into partnership with Mr. Lunn, of Hull. In 1840 he was appointed surgeon to the Hull Infirmary, and in the same year he took the degree of M.B. in the University of London. In the following year he took the degree of M.D., and after a further period spent in study at home and abroad, he again returned to Hull, and was elected physician to the infirmary in the room of Sir James Alderson. In 1848 he took a leading part in the sanitary survey of the town, and in the official inquiry which was subsequently held. In 1849 he published a pamphlet on the *Medical Topography and Vital Statistics of Hull*. In that year the cholera raged with great virulence in the town, and he acted as superintendent of the Sculcoats district.

In 1848, when the British Medical Association held its meeting in Hull, Dr. Henry Cooper was selected to read the address in medicine. In 1853 he acted as joint secretary to the British Association which met in Hull in that year.

From an early date he had taken an interest in municipal affairs. He was one of the first elected members of the reformed corporations. He was mayor in 1854-5, and received the honour of knighthood during the Queen's visit to Hull in the former year. He took a warm interest in the Literary and Philosophical Society, of which he was several times president, and took an active part in the management of the model dwellings. On the formation of the School Board he was elected chairman, a post which he held for six years. In 1874, on retiring from the active staff, he was elected consulting physician to the infirmary, and was chosen chairman of its Board of Management.

At a public meeting held at the Town Hall on December 21st, 1877, it was resolved that the public services rendered by Sir Henry should be recognised by the establishment of a scholarship, which was called the Sir Henry Cooper Scholarship. From that time Sir Henry ceased to take any share in public affairs. He went to London owing to his failing health, but a few months ago returned to Hull, and up to the time of his death he led a quiet and inactive life.

J. W. F. SMITH-SHAND, M.D.,

Regius Professor of Medicine, University of Aberdeen.

The profession throughout the country will learn with deep regret of the sudden death from cerebral hæmorrhage on June 12th of Dr. J. W. F. Smith-Shand, Professor of Practice of Medicine in the University, Senior Visiting Physician and Clinical Lecturer in the Royal Infirmary, Aberdeen.

James William Fraser Smith-Shand, who at the time of his death was 58 years of age, being the third oldest professor in the University, was born in India, where his father was a doctor in the service of the East India Company. His mother was a daughter of Bishop Torry, the Incumbent of St. Peter's, Peterhead, and Bishop of St. Andrews and Dunkeld. From her the deceased professor derived his ardent love for the Episcopal Church, in whose internal struggles his grandfather had taken a conspicuous and now historical part. Coming over to Scotland when he was about 3 or 4 years old, Professor Smith-Shand was placed under the care of his father's sister. In due course he was removed to Trinity College, Glenalmond, under the charge of Dr. Wordsworth, now Bishop of St. Andrews. He early developed a liking for literature, and especially for the subtleties of the Greek drama; and to the last he delighted to recite from memory some of the more striking Greek choruses. Before leaving the school he became Prefect of Trinity College. In 1855, he graduated in medicine at King's College—the Alma Mater of his father. He subsequently became a L.R.C.S. of Edinburgh, and proceeded to Paris, where he spent some time. From Paris he returned to London and spent some time in the hospitals in the metropolis, and after a tour of considerable duration in Germany and the Tyrol, he finally settled in practice at Broughty Ferry.

About 1868 he returned to Aberdeen, and gradually built up a practice in which his kindly, genial nature and unobtrusive disposition made him much respected. In 1875 he was appointed Professor of Medicine in the University, in succession to the late Dr. Macrobin. Prior to his election to the chair, Dr. Smith-Shand was appointed a clinical lecturer at the infirmary, where for several years he had been senior visiting physician.

Although never figuring very conspicuously in public affairs, he took a warm interest in the Episcopal Church, and contributed frequently to its literature. He was a director of one or two financial companies, and took a little interest in politics. With his medical brethren Dr. Smith-Shand always had the most friendly relations. For two periods in succession he was chosen president of the Medico-Chirurgical Society, and presided at the centenary dinner two years ago, when he delivered an interesting speech on the history of the Society. Though somewhat shy in the company of strangers, among his intimate friends he was much beloved for his quaint sense of humour and his admirable powers as a *raconteur*.

As a teacher and lecturer he was highly popular, though none strove less to acquire popularity. Though by no means an "easy," he was universally acknowledged to be a very fair examiner, his effort ever being to reassure the candidate, and to elicit knowledge rather than to expose ignorance. A thorough knowledge of his subject, a long and wide experience in its practice, and admirable facility in imparting information in clear, crisp, and graphic terms, caused his clinics and systematic lectures to be held in high esteem.

Dr. Smith-Shand was a thoroughly sound practical phy-

sician, and a man of honour in every respect. He was twice married. For his first wife he had Miss Barbara Shand, of Templand (assuming afterwards that surname), and by her his surviving family consists of five daughters and one son, who is now a student at Trinity College, Glenalmond. For his second wife he had Miss Stuart, who survives him, and with whom and his family there is felt sincere sympathy for the loss of one called away in the full maturity of his usefulness.

JAMES STRUTHERS, M.D., F.R.C.P., L.R.C.S.Edin.

Dr. James Struthers, of Leith, whose death occurred on June 6th, at the age of 69, was the eldest of three sons of Alexander Struthers, of Brucefield, near Dunfermline, all of whom entered the medical profession. After a course of general education under his father's roof, and a year given to physical and natural science at Edinburgh University, he entered on a successful course of medical studies. He graduated M.D. in 1848, receiving a gold medal for his thesis on the anatomy and physiology of the human skin. In the following year he was demonstrator of anatomy in the Edinburgh Extra-mural School along with his brother John, and assistant pathologist in the Royal Infirmary, where he gained that full knowledge of anatomy and pathology which he maintained through life. He had been favourite pupil of Professor Alison, and between the two in after years there was a warm attachment.

In 1849 he went to Leith temporarily to take charge of the practice of the late Dr. Bruce (whose death took place very soon afterwards). Dr. Struthers became attached to the place and the people, and could not afterwards be persuaded to return to Edinburgh, though urgently pressed by his friends to do so, as it was thought he would have taken a high position as a physician. For forty-two years Dr. Struthers had an extensive practice. In his relation to his patients he is described as being a man of few words, kindly and firm, and of commanding presence. He took a warm and active interest in local charities. He was long connected with the Leith Hospital, first as acting medical officer, then as consulting physician; finally, in 1890, he was appointed president. He was in warm sympathy with the proposal to make the hospital available for the medical education of women. Dr. Struthers was an active promoter of the Volunteer movement, and held, until advancing years compelled him to retire, the commission as Surgeon-Major to the First Midlothian Rifle Volunteers.

The *Scotsman*, to which we are indebted for the particulars given, adds: "His life, now closed, may well be described as one of devotion to duty and of self-sacrifice, the outcome of an upright and straightforward character, with great natural ability and love of work to go upon, guided by a remarkably sound judgment. That the work of such a man, for over forty years, should have brought him the universal esteem of the people among whom his life was spent, and, what is of still more value, the high respect of his professional brethren in Edinburgh and Leith, need be no surprise. Dr. Struthers was never married. The Crimean war cost him his youngest brother, Dr. Alexander Struthers, a young man of much promise, who died at Scutari in 1855, of fever caught in the discharge of his duties. His other brother is Dr. John Struthers, who lately retired from the Professorship of Anatomy in Aberdeen University."

WILLIAM EDWIN GRINDLEY PEARSE, M.R.C.S.Eng., L.R.C.P.Edin.

Dr. W. E. Grindley Pearse, of 24, Bessborough Gardens, S.W., died of pneumonia, following influenza, on May 28th, aged 72. He was the third son of the late Dr. George Pearse, of Martham Street, Westminster, surgeon to Lord Nelson on board the *San Josef*. He was educated at King's College, and afterwards pursued his medical studies at King's College Hospital.

He qualified in 1846, and was at once appointed surgeon to to the ship *Ganges*, which visited various parts of Australia, Java, Singapore, etc., the voyage lasting more than two years. On his return he took up the practice of his father, who had died during his absence, and met with much success. After the death of his wife, in 1870, he retired from general practice but continued to vaccinate, retaining the appointments of Vaccinator to the Local Government Board, and Teacher of Vaccination at Tottenham Court Chapel and the Western Dispensary, which at the time of his death he had held for nearly thirty years. Dr. Pearse was respected and esteemed by a large circle of friends and patients, and particularly by the St. Mary's Lodge of Freemasons, of which he was a past master.

The interment took place at Norwood Cemetery, the funeral being attended by several of his brother Masons and a number of relatives and friends.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Second Examination for the Degree of M.B.—The following gentlemen have passed in Anatomy and Physiology:

Ds. Appleyard, Emm.	Ds. Heaton, A. B., Trin.	Ds. Peck, Trin.
Ds. Atkinson, Clare	Ds. Henry, Joh.	Ds. Petyt, Christ's
Bowes, Caius	Hood, H. Cav.	Ds. Peters, Caius
Ds. Burrell, Caius	Hopkins, C. L., Caius	Sandall, Joh.
Ds. Cotter, Trin.	Menzies, Jesus	Ds. Seccombe, Joh.
Ds. Davis, H. G., Trin.	Ds. Mitchell, Queens'	Ds. Smith, H., Trin.
Ds. Delbruck, King's	Ds. Moysey, Caius	Todd, Clare
Ds. Ferguson, Caius	Ds. Nachbar, Clare	Trethewy, Caius
Ds. Harding, L. N., H. Selw.	Ds. Norris, Christ's	Ds. White, Sid.
Hayne, Caius	Ds. Ormerod, Trin.	Ds. Wrangham, Emm.

Acts for M.B.—The following have kept the Act and completed the course for the degree of Bachelor of Medicine:

C. S. Bennetts, B.A., Caius; R. S. Earl, M.A., Cavendish; W. H. Beaumont, B.A., Downing; J. H. Wilks, B.A., Caius; A. H. Smith, B.A., King's; J. Lea, B.A., Caius; W. R. Carter, B.A., Pembroke; H. W. Nix, B.A., Caius.

UNIVERSITY OF EDINBURGH.

Final Examination for the Degrees of M.B. and C.M.—The final written examinations in Surgery, Midwifery, Practice of Physic, Medical Jurisprudence, and Public Health took place on June 15th and 16th. The *viva voce* examinations in the same subjects began on June 17th. Over 300 candidates are appearing for these examinations this year.

University Court.—This Court met on Monday last. There were present: The Lord Provost, and afterwards Lord Stormonth Darling, in the chair; the Lord Justice-Clerk; Sheriff Æneas MacKay; Dr. Heron Watson; Dr. John Duncan; Professors Sir William Turner, Crum Brown, and Butcher; Mr. Colston, and Mr. McKie. The following draft ordinances were received from the Universities Commissioners: (1) General No. 6. Regulations for Degrees in Arts and for the Constitution of Boards of Studies; (2) General No. 7. Regulations for Degrees in Science. It was reported that the time for lodging objections, etc., to these draft ordinances would expire on October 26th next. They were remitted to the Draft Ordinances Committee. The additional Examiners in Medicine for 1890 were reappointed for the year from January 1st last. Consideration was resumed of a representation by the Students' Representative Council in favour of the Final Examination in Medicine being held twice a year. A minute of the Senatus approving of an opinion of the Medical Faculty on the subject was submitted in connection with the matter. It was resolved that, as recommended by the Medical Faculty, the matter should lie over till the Commissioners' Ordinance on Graduation in Medicine should be issued.

On consideration of minutes of Senatus and relative reports by the Medical Faculty, recognition for purposes of graduation in Medicine in the University was granted to the following persons: (1) Dr. Alexander Robertson, teacher of Practice of Physic, St. Mungo's College, Glasgow; (2) Mr. E. E. Prince, teacher of Zoology, St. Mungo's College, Glasgow; (3) Dr. F. W. N. Haultain, teacher of Midwifery, Edinburgh.

On consideration of a minute of Senatus, and relative to a report of their Science Degrees Committee, it was resolved to recognise the Public Health Laboratory of the Liverpool School of Science and Technology as one in which practical instruction is given in the methods of investigating subjects pertaining to public health qualifying for graduation in

Science in the University in the department of Public Health. The Court at the same time granted recognition to Mr. George Tate, Ph.D., as the teacher of Public Health Laboratory Work in the said laboratory.

ABERDEEN.

UNIVERSITY SPORTS.—The second annual sports were begun at the University Grounds on Friday, June 12th, when, in excellent weather and in presence of a good turn-out of spectators, upwards of fourteen of the events were competed for. Owing to the death of Dr. Smith-Shand and his position as one of the professors of the University, it was resolved to postpone several final heats and the remainder of the sports, which were to take place on the 13th, till after his funeral. The swimming competition is to be held on Friday, June 19th.

COMPLIMENTARY DINNER TO DR. W. L. MACKENZIE, M.A.—A large number of gentlemen, representing the medical, legal, teaching, and other professions, entertained Dr. W. L. Mackenzie to dinner in the Imperial Hotel on June 11th, on the occasion of his departure from Aberdeen, where he has had a very successful career, to undertake the duties of medical officer for the counties of Wigton and Kirkcudbright. Dr. Alexander Macgregor, assistant to the Professor of Medical Jurisprudence, presided, and Professor Minto, M.A., was croupier. The health of the guest was very cordially pledged, and the chairman, in proposing the toast, paid a warm tribute to Dr. Mackenzie's indomitable perseverance. Other toasts, interspersed with songs and recitations, followed. Dr. Mackenzie left Aberdeen on Monday, June 15th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following examiners have been elected for the ensuing collegiate year, namely:

First Professional Examination under the Scheme.—Elementary Anatomy: J. Stanley Boyd, Charing Cross; W. F. Haslam, Birmingham; J. Ernest Lane, St. Mary's; C. Barrett Lockwood, St. Bartholomew's; and Bilton Pollard, University College. Elementary Physiology: J. Rose Bradford, University College; and W. G. Spencer, Westminster.

Second Examination under the Scheme.—Anatomy: William Anderson, St. Thomas's; J. N. C. Davies-Colley, Guy's; Howard Marsh, St. Bartholomew's; and G. D. Thane, University College. Physiology: W. Dobinson Halliburton, King's College; Vincent D. Harris, St. Bartholomew's; B. Thompson Lowne, Middlesex.

Third Examination under the Scheme.—Midwifery: W. Spencer A. Griffith, St. Bartholomew's; G. Ernest Herman, London; Peter Horrocks, Guy's; and J. Baptiste Potter, Westminster.

First Professional Examination for the Fellowship.—Anatomy: W. H. Bennett, St. George's; W. Bruce Clarke, St. Bartholomew's; A. Pearce Gould, Middlesex; G. H. Makins, St. Thomas; and Frederick Treves, London. Physiology: John Barlow, Glasgow; C. W. Mansell Moullin, London; D'Arcy Power, St. Bartholomew's; Gerald Y. Yeo, King's College.

Diploma in Public Health.—Drs. Thomas Stevenson, Guy's; and R. Thorne Thorne, St. Bartholomew's.

The Council have adopted the recommendation of the Board of Examiners in Dental Surgery that the practical examination for the licence in dental surgery be held at Guy's Hospital Medical School so soon as the necessary arrangements are complete, and thenceforth in turn with other recognised dental schools. The further recommendation that Clause 8 of the regulations be altered so as to permit a student to obtain the necessary instruction in mechanical dentistry from a competent practitioner, or under the direction of the superintendent of the mechanical department of a recognised dental hospital, where the arrangements for teaching mechanical dentistry are satisfactory to the board of examiners in dental surgery, has also been adopted.

ERRATUM.—Mr. Alfred W. Hughes writes that the medical qualification which he holds is M.B.Edin., and not L.R.C.P.Lond., as described in the list of Fellows of the Royal College of Surgeons of England (BRITISH MEDICAL JOURNAL, June 13th).

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, June 11th.

Sanitation of the House of Commons.—Mr. PLUNKET stated, in reply to Mr. R. T. REID, that the Government had no objection to the appointment of a Committee similar to that which sat in 1885 to consider the drainage and ventilation of the House. He personally would be glad to have the advantage of the advice of such a committee.

Friday, June 12th.

Ether Drinking in Ireland.—Mr. A. J. BALFOUR, in reply to a question put by Mr. LEA, undertook that a copy of the Order in Council which prohibited the sale of ether other than as a poison should be posted on the notice board at each constabulary station in the districts concerned.

Combatant Titles.—Mr. E. STANHOPE, in reply to Major RASCH, said the extension of the combatant titles given to medical officers would necessarily be followed by their extension to the surgeons of the veterinary staff.

Monday, June 15th.

Vivisection.—Mr. MATTHEWS, in reply to a question put by Mr. S. SMITH, said there had certainly been an increase in the work of vivisection as shown by the inspector's reports, but it must be borne in mind that the object of the Act was to control and not to prevent legitimate inquiry. By the report of the inspector for 1889, it appeared that 44 per cent. of the experiments performed were painless, and in nearly 41 per cent. they were of the nature of simple hypodermic injections or inoculations, it being made a condition of the experiments that the animal should be killed if pain resulted. It was not the duty of the Government to interfere with the progress of scientific experimentation, provided always that the conditions and restrictions imposed by law were strictly and rigorously enforced.

Degrees for London Medical Students.—Sir WALTER FOSTER has given notice that on Friday, June 19th, he will ask the Vice-President of the Committee of Council the following question: Whether a representation has been sent from the Royal College of Physicians to the Privy Council respecting the proposed grant of a charter to the Albert University of London; whether the Privy Council has fixed the 22nd instant as the last day to receive objections to the said charter, and the 29th instant as the day for its consideration; and whether, having regard to the fact that the Convocation of London University rejected the scheme for remodelling their University so recently as the 12th ultimo, and that the Royal College of Surgeons has declined to be represented at the Privy Council on the 29th instant on account of the insufficiency of the time allowed, he will obtain a postponement of the time for receiving objections and hearing arguments with regard to a scheme of such great importance to the Royal Colleges of Physicians and Surgeons and to the medical profession generally.

INDIA AND THE COLONIES.

INDIA.

A PLAGUE OF LOCUSTS.—The following extract from a letter dated Rawal Pindi, May 25th, 1891, will be read with interest:—"The Punjab has this year had a terrible visitation of locusts, the worst there has been for many a year. An army about ten miles wide of unfledged locusts was passing through the station for five days. They have, of course, done much damage; but fortunately the crops were so nearly ripe that they were able to be cut in advance of the invasion. Unless some properly organised attack is made upon the eggs before next year a disastrous visitation is anticipated. Millions, I should say, of the unfledged insects have been destroyed in the station, so that in many places the smell from the dead bodies is very bad, and in the district a great many wells have been polluted by the numbers of locusts which have fallen into them. The trains have several times been delayed for some hours by the inability to make way over the greasy masses of locusts crushed on the rails. I believe the authorities are thoroughly alarmed, and steps are being taken, it is said, to organise throughout the province a methodically-planned raid on the eggs.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE PUBLIC HEALTH MEDICAL SOCIETY.

THE annual meeting of this Society was held on June 15th. The chair was taken by Professor W. R. Smith, in the absence of Sir Charles A. Cameron (President). The report, presented by Dr. Allan, was of a satisfactory character, showing a large increase in membership and a good financial position. Sir Charles A. Cameron was unanimously re-elected President, and Dr. Allan, Secretary and Treasurer. Surgeon-Major Compigné and Drs. Alexander, Goude, C. A. James, Maclearn, H. C. Tweedy, and Wightwick were added to the Committee, which has lost by death Drs. H. Smith, W. W. Day, and W. E. Steavenson. The annual dinner is fixed for August 12th.

Attention was called to a letter from the Local Government Board to London vestries, requiring them to appoint their

newly-elected medical officers for a period of twelve months only, unless they were prepared to devote their whole time to the duties of the office. It was the opinion of the members that it is more conducive to the independence of the medical officer that he should not be precluded from other work, except general practice, and that the insistance by the Local Government Board on this condition would have a tendency to make the officer a mere vestry official. A discussion ensued as to the meaning of the words "whole time" as interpreted by different boards. It was agreed to memorialise the President of the Local Government Board on the present unsatisfactory position.

CENSUS POPULATIONS OF LARGE ENGLISH TOWNS.

We are enabled to give in the accompanying table the populations of twenty-eight of the largest English towns as enumerated at the recent Census in April last. This information will be specially valuable to medical officers of health; and in order to show correctly the increase in the various towns since 1881, the figures for that period relate to the boundaries of the towns as constituted in 1891.

	Enumerated Population 1881.	Enumerated Population 1891.	Increase 1881-91.	Rate of Increase Per Cent.
28 towns	8,437,214	9,379,711	942,497	11.2
London	3,815,541	4,211,056	395,512	10.4
Brighton	107,516	115,402	7,886	7.3
Portsmouth	127,989	159,255	31,266	24.4
Norwich	87,842	100,964	13,122	14.9
Plymouth	73,794	84,179	10,385	14.1
Bristol	206,874	221,665	14,791	7.1
Wolverhampton ...	75,766	82,620	6,854	9.0
Birmingham	400,774	429,171	28,397	7.1
Leicester	122,376	142,051	19,675	16.1
Nottingham	185,575	211,984	25,409	13.6
Derby	81,168	94,146	12,978	16.0
Birkenhead	84,006	99,184	15,178	18.1
Liverpool	552,508	517,951	*	*
Bolton	105,414	115,002	9,588	9.1
Manchester	462,303	505,343	43,040	9.3
Salford	176,235	198,136	21,901	12.4
Oldham	111,343	131,463	20,120	18.1
Blackburn	104,014	120,064	16,050	15.4
Preston	96,537	107,573	11,036	11.4
Huddersfield	86,502	95,422	8,920	10.3
Halifax	73,630	82,864	9,234	12.5
Bradford	194,495	216,361	21,866	11.2
Leeds	309,119	367,506	58,387	18.9
Sheffield	284,508	324,243	39,735	14.0
Hull	165,690	199,991	34,301	20.7
Sunderland	116,542	130,921	14,379	12.3
Newcastle-on-Tyne ...	145,359	186,345	40,986	28.2
Cardiff	82,761	128,849	46,088	55.7

* A decrease of 34,557, or 6.3 per cent

TENURE OF OFFICE OF WORKHOUSE MEDICAL OFFICERS.

For many years past, in accordance with an order of the Local Government Board bearing date May 25th, 1857, all medical officers of workhouses in England and Wales duly qualified at the time of appointment have held office until death or resignation or some legal disqualification has determined the appointment. Our attention has just been drawn to a material change of this order—so far, at any rate, as Manchester is concerned—by a recent order of the Local Government Board published in the *London Gazette*, which notifies that in future the appointment of the medical officer of the Manchester Workhouse is to be in accordance with the foregoing order, but subject to the following provision, namely: That the guardians may, with the consent of the Local Government Board, determine the appointment of any such officer at any time before or at the expiration of the first year of his service by giving three months' notice in writing of such their intention.

At first sight we were inclined to look upon this alteration of the terms of the appointment as a serious and unfair innovation and as not being in accordance with the spirit of the general orders of the Local Government Board, but on more fully considering the question we are inclined to think that there can be no great objection to this most recent order, as it will give the Board of Guardians the opportunity of superseding an incapable or objectionable officer at any time within a year of his first appointment.

We do not consider it at all likely that the provision will have to be acted upon, but we think our readers interested in Poor-law matters will admit that any workhouse medical officer who fails to give such satisfaction to the Guardians during his first year of office as to lead them not to wish for his future services is better at once removed, as a further continuance in office without the confidence of the Board would undoubtedly bring about difficulties much to be regretted, and such we hope will be altogether avoided by the provision in question.

POOR-LAW MEDICAL OFFICERS AND SUPERANNUATION ALLOWANCE.

H. C. H., a district medical officer, 71 years of age, after forty-two years service, contemplates resigning his appointment. He states that his salary has been £45 per annum, and that with extras he has received £75 per annum. He wishes to ask if he can claim two-thirds of the latter amount as superannuation allowance, and whether the Local Government Board would, in the event of it being granted, pay any portion of it, or whether the whole would be paid from the local rates; and farther, whether the guardians have any discretionary power in the matter, and, if so, whether they are likely to refuse his request for a pension.

*** In the event of superannuation allowance being granted to any Poor-law medical officer, it can only be to the extent of two-thirds of the salary formerly paid; the amount received as extras cannot be reckoned for this purpose. We believe that the Local Government Board would not now pay any part of a pension which might be granted, but that it would be paid wholly or in part by the county council. The guardians have the power to recommend a pension or not in the case of H. C. H. as they please; they have no power to award him a gratuity The Local Government Board will no doubt sanction an annuity to H. C. H. if it is recommended by the guardians, but whether the board under whom H. C. H. has served so long will refuse their recommendation we cannot possibly form an opinion. On this point H. C. H. must be the better judge.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, including London, 6,391 births and 4,293 deaths were registered during the week ending Saturday, June 13th. The annual rate of mortality in these towns, which had been 30.9 and 28.3 per 1,000 in the preceding two weeks, further declined to 23.8 during the week under notice. The rates in the several towns ranged from 14.0 in Brighton, 16.0 in Plymouth, 17.1 in Derby, and 17.5 in Bradford to 30.9 in Preston, 31.4 in Liverpool, 32.0 in Halifax, and 37.6 in Blackburn. In the twenty-seven provincial towns the mean death-rate was 24.2 per 1,000, and exceeded by 0.9 the rate recorded in London, which was 23.3 per 1,000. The 4,293 deaths registered during the week under notice in the twenty-eight towns included 313 which were referred to the principal zymotic diseases, against 357 and 359 in the preceding two weeks; of these, 118 resulted from whooping-cough, 77 from measles, 35 from diarrhœa, 34 from diphtheria, 26 from "fever" (principally enteric), 22 from scarlet fever, and 1 from small-pox. These 313 deaths were equal to an annual rate of 1.7 per 1,000; in London the zymotic rate was 1.7, while in the twenty-seven provincial towns it averaged 1.8 per 1,000, and ranged from 0.0 in Bolton and in Huddersfield, and 0.5 in Brighton and in Norwich to 2.5 in Halifax, 2.6 in Liverpool and in Leicester, and 2.9 in Portsmouth. Measles caused the highest proportional fatality in Hull and Portsmouth; scarlet fever in Halifax; and whooping-cough in Manchester, Birmingham, Salford, Leicester, and Cardiff. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. Of the 34 deaths from diphtheria in these towns, 21 occurred in London, 3 in Manchester, 2 in Salford, 2 in Oldham, and 2 in Bristol. A fatal case of small-pox was recorded in London, but not one in any of the twenty-seven provincial towns; 7 small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, June 30th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on the same date was 859, against numbers declining from 927 to 885 at the end of the preceding two weeks; sixty-one new cases were admitted during the week, against 88 and 66 in the previous two weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.6 per 1,000 and was nearly double the corrected average.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, June 13th, 906 births and 623 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 23.3 and 25.3 per 1,000 in the preceding two weeks, declined again to 24.2 during the week under notice, but was 0.4 per 1,000 above the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Dundee, and the highest in Glasgow and Paisley. The 623 deaths registered in these towns included 79 which were referred to the principal zymotic diseases, equal to an annual rate of 3.1 per 1,000, which exceeded by 1.4 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Dundee, Glasgow, and Paisley. The 276 deaths registered in Glasgow included 16 from measles, 10 from scarlet fever, and 5 from whooping-cough. Seven fatal cases of

measles were recorded in Paisley; 6 deaths from whooping-cough occurred in Edinburgh, and 5 in Dundee. The death-rate from diseases of the respiratory organs in these towns was equal to 5.5 per 1,000, against 5.6 in London.

HEALTH OF IRISH TOWNS.

In sixteen of the principal town districts of Ireland, the deaths registered during the week ending Saturday, June 6th, were equal to an annual rate of 19.2 per 1,000. The lowest rates were recorded in Newry and Kilkenny, and the highest in Drogheda and Dundalk. The death-rate from the principal zymotic diseases averaged 0.7 per 1,000. The 136 deaths registered in Dublin were equal to an annual rate of 20.1 per 1,000 (against 20.8 and 18.8 in the preceding two weeks), the rate for the same period being 27.0 in London and 21.3 in Edinburgh. The 136 deaths in Dublin included 3 which were referred to the principal zymotic diseases (equal to an annual rate of 0.4 per 1,000), of which 2 resulted from whooping-cough and 1 from typhoid fever.

MEDICAL NEWS.

The Metropolitan Hospital Sunday Fund collection amounted on June 15th to £27,000.

Lord Carrington, G.C.M.G., will distribute the prizes to the students of the Charing Cross Hospital Medical School on July 1st, at 4 o'clock.

At the examination for local surveyors, held by the Sanitary Institute, at the Parkes Museum, on June 5th and 6th, 11 candidates presented themselves, and 8 passed.

The Paris Municipal Council has under consideration a proposal to establish a special medical service for eye diseases in the schools of Paris.

On the invitation of Professors Toldt, Zuckerkandl, and von Ebner, the German Anatomical Society has agreed to hold its annual meeting next year in Vienna.

The eleventh volume of the *Transactions* of the Sanitary Institute, consisting mainly of the proceedings of the Congress held at Brighton in 1890, has just been issued. The publisher is Mr. Edward Stanford.

A report of the discussion on Anæsthetics, held at the meetings of the Glasgow Medico-Chirurgical Society last October, has been issued in a volume, edited by Dr. J. Walker Downie; it is published by Macdougall, Glasgow.

The Council of the Royal College of Surgeons have decided that it is not within its province to take action in the matter of the case of William Kerr, as requested by Mr. H. A. Lediard.

Presentation.—Dr. Cran has been presented by the members of the Great Harwood Corps of the St. John Ambulance Association with a beautifully illuminated address, in appreciation of his gratuitous services.

The Prince and Princess of Wales will visit St. Mary's Hospital, Paddington, at the end of July, to lay the foundation stone of a block of buildings about to be erected in Praed Street, completing the hospital in accordance with the original plan. It is hoped that the Princess may distribute some of the prizes to the successful students.

The Austrian Government has introduced into the House of Deputies a Bill dealing with the sale of food. It provides among other things, for the establishment of laboratories where not only public authorities but private persons can have articles of food examined by skilled analysts.

Insanity among German Jews. It is stated that the number of Jewish patients in Prussian lunatic asylums has nearly quadrupled in 16 years. In the German Empire the proportion of insane persons among Jews is 389 in every 100,000, the corresponding ratio among Protestants being 241, and among Roman Catholics 237.

The Drink Question in Austria.—At a sitting of the Austrian House of Deputies on June 9th, a Bill for the prevention of drunkenness was introduced by the Government. A similar Bill was brought before the House of Deputies in 1887, and an official investigation as to the prevalence of drunkenness in Austria and the best means of checking it was held in 1889. It remains to be seen whether the present Bill will have a better fate than its predecessors.

The Committee appointed by the French Senate to examine the proposed new law regulating the practice of medicine in France has chosen Professor Cornil as its Chairman and M. Coste as Secretary. The Committee will take the opinion of representative medical bodies throughout France as to the desirability of abolishing the grade of "Officier de Santé."

Cremation in Argentina.—Cremation seems to have acquired a sure foothold in the Argentine Republic. Since 1886 the total number of cremations carried out there has been 6,789; in 1890 alone they amounted to 2,085. A law exists in Argentina to the effect that the bodies of all persons dying of infectious diseases and the fragments that remain of corpses that have been dissected must be burnt.

Medical Missions Aid Society of Ireland.—The annual meeting of this Society was held last week under the presidency of Mr. J. K. Barton, when it appeared that there was a balance to credit in bank of £230 16s. 9d. Dr. J. W. Moore moved the adoption of the report, and the names of two Irish doctors—Messrs. Eustace and Harper—were specially mentioned as active workers in the foreign mission field.

Forthcoming Medical Gatherings.—The German Dermatological Society will hold its annual meeting this year at Leipzig, on September 17th, 18th, and 19th. The French Association for the Advancement of Science will meet at Marseilles from September 17th to the 24th. The question proposed for discussion in the medical section is the Treatment of Tuberculosis. In the hygienic section the Hygiene of Chemical Manufactories will be debated.—The sixth congress of Polish Medical Practitioners and Naturalists will be held at Cracow towards the end of July. In connection with the Congress there will be an exhibition of Polish medical inventions.

Literary Intelligence.—Professor H. A. Hare has resigned the editorship of the Philadelphia *Medical News*, in which he is succeeded by Dr. George M. Gould.—A weekly journal devoted to sanitary matters has begun to appear in Havana; it is entitled *La Higiene*, and is edited by Dr. Manuel Delfin.—Dr. Villaret, of Berlin, has just published a *Dictionary of Universal Medicine*, in two volumes, somewhat on the plan of Quain's, but with special features of its own; one of these is the attention given to the etymology of words, and to the explanation of rare and out-of-the-way terms.—The *Annales d'Oculistique*, founded fifty-four years ago by Florent Cuvier, and since 1854 conducted by the late Dr. Warlomont, of Brussels, was on May 18th sold to Dr. Valude, of Paris, for 26,000 francs. Dr. Valude intends to transfer the journal from Brussels to Paris.

Gynæcology in Spain.—On February 23rd of the present year, the Spanish Gynæcological Society appointed a committee consisting of Drs. G. Alarcon, E. Gutiérrez, A. Cospedal, and F. de Cortejarena, to consider the advisability of establishing a gynæcological institute in Madrid. This committee has now reported that the creation of such an institution is urgently needed, not only in the capital, but in each of the provinces, as at present next to no provision is made in Spain for the treatment of women suffering from diseases peculiar to their sex. In the Madrid hospitals there are only a very few beds for such cases, and elsewhere things are even worse. The Committee recommend that a fully equipped gynæcological institute be forthwith established in Madrid with competent teachers and special courses of instruction, not only in gynæcology, but in the anatomy, physiology, and hygiene of the female sex, obstetric operations, gynæcological surgery, etc. The building should be constructed to accommodate not more than seventy or eighty beds: the obstetrical and gynæcological departments should be kept separate from each other, and all the arrangements should be in accordance with the most advanced hygienic principles. The institute should stand in an isolated position surrounded by gardens.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Francisco José Salustiano de Mesquitor, of Lisbon, formerly Secretary of the Sociedade das Sciencias Medicas, and a well known medico-legal expert, who had latterly fallen on evil days owing to advancing age (70) and failing sight—he had kept silence as to his straitened

circumstances, and calmly poisoned himself with a narcotic of some kind, having previously sent for a friend to attest his death; Dr. Marcellino Craveiro da Silva, Director of the Rilhafolles Lunatic Asylum at Lisbon, and a prominent figure in the medical profession in the Portuguese capital; Dr. Martins Costa, of Rio de Janeiro, founder of the Brazilian medical journal, *Progresso Medico*, and one of the founders of *O Brazil Medico*, and author of an important monograph on malaria, aged 40; Dr. Juan Rull y Xuriach, Professor of Midwifery, Dean of the Faculty of Medicine and Vice-Rector of the University of Barcelona; Dr. Seiche von Nordenheim, the oldest of the official physicians of the well-know health resort, Teplitz-Schönau, where he had had the late Emperor William under his care; Dr. Joseph P. Logan, editor of the Atlanta *Medical and Surgical Journal*, aged 69; Dr. W. S. Thompson, one of the most successful physicians of Maryland, aged 76; Dr. J. R. Newbrough, of Las Cruces, New Mexico, founder and ruler of the Shalam sect, and author of *Oaspe*, a "blend" of all known religious creeds, which he issued some eight years ago as an inspired "bible."

MEDICAL VACANCIES.

The following Vacancies are announced:

BALTINGLASS UNION.—Medical Officer for Workhouse and Fever Hospital. Salary, £120 per annum, and £15 yearly as Consulting Sanitary Office. Applications to Mr. I. R. Dagg, Clnrk of the Union. Election on June 27th.

BALTINGLASS UNION (Baltinglass Dispensary).—Medical Officer. Salary, £155 per annum, and fees. Applications to Mr. Peter Douglas, Honorary Secretary, Saundersville, Baltinglass. Election on July 3rd.

BEDFORD GENERAL INFIRMARY AND FEVER HOSPITAL.—Resident Surgeon, double qualifications. Salary, £100 per annum, with apartments, board and washing. Applications to the Secretary, by July 1st.

BOROUGH OF BLACKPOOL.—Medical Officer of Health. Salary, £300 per annum. Must devote his whole time to the duties. Applications, endorsed "Medical Officer," to T. Loftos, Town Clerk, by July 6th.

CARLOW UNION (Bagenalstown Dispensary).—Medical Officer. Salary, £140 per annum, and fees. Applications to Mr. P. J. Kehoe, Honorary Secretary. Election on June 24th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Anæsthetist. Applications, on forms to be obtained at the hospital, to A. C. Davis, Secretary, by June 30th.

COUNTY COUNCIL OF CAITHNESS. — Medical Officer of Health. Salary, £300 per annum, with £50 for travelling and other expenses; must devote his whole time to his duties, and reside in Wick. Applications to James Brims, County Clerk, Thurso, by July 1st.

COUNTY DONEGAL INFIRMARY. — House-Surgeon and Registrar. Salary, £60 per annum, with apartments and rations. Applications to the Rev. J. S. McClintock, Honorary Secretary, before June 30th.

DERBYSHIRE ROYAL INFIRMARY.— Resident Assistant House-Surgeon; appointment for six months. Salary, £40 for the first six months, and if re-elected £25 for second six months, with apartments, board, and washing provided. Applications to the House-Surgeon by June 27th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—House-Surgeon. Board and lodging provided. Applications to Samuel Whitford, Secretary, by June 25th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—Assistant Physician. Applications to Samuel Whitford, Secretary, by June 25th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Residence, board and washing provided, no salary; appointment for six months. Applications to Dr. J. D. M. Coghill, House Governor, by June 27th.

GENERAL HOSPITAL, Birmingham.—Assistant Surgeon. Appointment for three years, honorarium, £100 per annum. Applications to Dr. J. D. M. Coghill, House Governor, by June 27th.

GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—House-Surgeon; double qualifications. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by June 30th.

GENERAL INFIRMARY, Leeds.—Resident Medical Officer. Salary, £100 per annum, with board, washing and lodging. Applications to Mr. E. Ward, Secretary to the Faculty, by June 27th.

GENERAL INFIRMARY, Leeds.—Resident Casualty Officer. Salary, £100 per annum, with board, washing and lodging. Applications to Mr. E. Ward, Secretary to the Faculty, by June 27th.

GRIMSBY AND DISTRICT HOSPITAL.—Qualified *Locum Tenens* for the month of July. Salary, one guinea per week, with board, lodging, and washing, and railway fare. Applications to the House-Surgeon.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent Square, Westminster.—Physician. Applications to the Secretary by June 23rd.

GUY'S HOSPITAL, S.E.—Five additional Assistant Dental Surgeons; must be L.D.S.Eng. Applications to the Dean by July 1st.

HENDON UNION, Edgware.—Medical Officer for the Willesden No. 2 District. Salary, £85 per annum, with surgical operations and midwifery fees; must reside in the district. Applications, with diplomas and certificates of registry, to the Clerk, by June 24th.

HORTON INFIRMARY, Banbury.—House-Surgeon and Dispenser. Salary, £60 per annum, with board and lodging. Applications to T. H. Davis, Honorary Secretary, 27, Marlborough Road, Banbury, by June 20th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physicians. Applications to Henry Dobbin, Secretary, by July 2nd.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House-Surgeon; double qualifications. Salary, £50 per annum, with board, lodging, and washing. Applications to Dr. Martin, Honorary Secretary of the Medical Staff, 76, Brunswick Street, Sheffield, by June 24th.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon, double qualifications. Salary, £70 per annum, with residence and maintenance in the house. Applications to the Chairman of the Committee, by June 24th.

LUNATIC HOSPITAL, The Coppice, Nottingham.—Assistant Medical Officer, unmarried, and not more than 26 years of age. Salary, £100 per annum, with board, apartments, attendance and washing. Applications to Dr. Tate, Medical Superintendent, by June 30th.

METROPOLITAN DISPENSARY, Cripplegate.—Resident Medical Officer double qualifications. Salary, £150 per annum, with residence and an allowance for coals and gas. Applications to the Secretary, Quest House, 6, Fore Street, Cripplegate, by June 25th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant double qualifications. Salary, £120 per annum. Applications to the Honorary Secretary, by June 23rd.

NORTH WEST LONDON HOSPITAL, Kentish Town Road, N.W.—Assistant Resident Medical Officer. Applications to Alfred Craske, Secretary, by June 30th.

OLDHAM INFIRMARY.—House-Surgeon; doubly qualified. Salary, £80 per annum. Applications to Alexander Ure, Hon. Sec., 293, Park Road, Oldham, by June 25th.

QUEEN'S COLLEGE, Birmingham.—Medical Tutor and Demonstrator of Anatomy; must devote his whole time. Applications to Professor B. C. A. Windle, Dean of the Medical Faculty, by July 4th.

QUEEN'S COLLEGE, Birmingham.—Demonstrator of Anatomy. Applications to Professor B. A. C. Windle, Dean of the Medical Faculty, by July 4th.

ROYAL FREE HOSPITAL, Gray's Inn Road.—Junior Resident Medical Officer, double qualifications; board and residence provided, no salary. Applications to C. W. Thies, Secretary, by June 22nd.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant to the House-Surgeon. Board and lodging provided. Applications to T. A. Fisher Hall, Secretary, by June 20th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand.—Clinical Assistants. Appointments for six months. Applications, to the Secretary, by June 27th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square. Obstetric Physician. Applications to F. Stokes, Secretary, by July 1st.

SKYE DISTRICT OF INVERNESS-SHIRE. — Medical Officer. Salary, £50 per annum. Applications to Messrs. MacLachlan and Reid Solicitors, Portree, by July 6th.

TUNBRIDGE WELLS GENERAL HOSPITAL.—Resident House-Surgeon and Secretary; unmarried. Salary, £100 per annum, with board, furnished apartments, gas, firing, and attendance. Applications to E. W. Du Buisson, Secretary, by June 25th.

UNIVERSITY OF GLASGOW. — Assistant Examiner in Physiology. Annual fee, £30. Twenty copies of printed applications and testimonials to the Secretary of the Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by June 30th.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea. —Assistant Physician to the Out-patients; appointment for five years. Applications to the Secretary, by June 27th.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea. —Physician to the In-patients. Applications to the Secretary, by June 27th.

VICTORIA UNIVERSITY.—Holt Professorship of Physiology. Salary, £375 per annum, *plus* share of students' fees. Applications to the Registrar, University College, Liverpool, by June 27th.

WANDSWORTH AND CLAPHAM INFIRMARY, St. John's Hill, S.W.—Junior Assistant Medical Office.—Appointment for six months; board, lodging, and washing provided, and £25 at end of term. Applications to Medical Superintendent.

WEST LONDON HOSPITAL, Hammersmith Road.—House-Physician. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WEST LONDON HOSPITAL, Hammersmith Road. — House Surgeon. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by June 26th.

WREXHAM INFIRMARY AND DISPENSARY.—House-Surgeon. Salary £80 per annum, with furnished rooms, board, gas, coal, and attendance. Applications, upon forms to be obtained of the Secretary, to the Secretary, 9, Temple Row, Wrexham, by June 24th.

MEDICAL APPOINTMENTS.

ANDERTON, J. E., L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer of Health for the Newmills Urban District.

BLAKISTON, A. A., M.R.C.S., appointed Medical Officer of Health for the Borough of Glastonbury.

BRYANT, W. A., M.B., C.M.Edin., appointed Junior House-Surgeon to the Blackburn and East Lancashire Infirmary.

BUNTING, W. Harting, M.B., C.M.Edin., appointed Senior House-Surgeon to the Blackburn and East Lancashire Infirmary, *vice* Dr. Wheatley, resigned.

CAMERON, John, L.R.C.S.Edin., reappointed Medical Officer for the parish of Kintore, Aberdeenshire.

CHADWICK, G. R., M.R.C.S., L.S.A., appointed Honorary Surgeon to the West Norfolk and Lynn Hospital.

CHAPMAN, Charles William, M.D.Durh., M.R.C.P.Lond., appointed Honorary Physician to the Farringdon General Dispensary.

COLBY, James George Ernest, M.A.Oxon, M.B., B.S., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Malton Rural Sanitary Authority.

COONEY, John Edwin, L.R.C.P.Edin., L.F.P.S.Glas., D.P.H.Camb., appointed Medical Officer of Health for Fulham.

DAWES, George Harry, M.R.C.S., L.S.A., appointed Medical Officer to the Central District of the Sheffield Union, *vice* William Collier.

DEANE, Edwin, L.R.C.P.Edin., L.F.P.S., L.M.Glas., L.S.A., appointed Assistant Medical Officer to the Worcester Amalgamated Friendly Societies' Medical Association, *vice* E. H. Corder, L.R.C.P., L.R.C.S.Edin.

DENNING, J. V. C., L.K.Q.C.P., L.R.C.S.Irel., appointed Honorary Surgeon to the Royal South London Dispensary.

FORD, T. A. M., L.R.C.P., M.R.C.S., appointed Resident Clinical Assistant to the South-Western Fever Hospital.

FRANCE, William I., L.R.C.P., L.R.C.P.Edin., L.F.P.S.Glas., appointed Deputy Medical Officer for Bury, *vice* — Fletcher.

GORE, William Ringrose, M.B., B.Ch.Irel., appointed Medical Officer and Public Vaccinator for the Hanmer District of the Ellesmere Union, *vice* Dr. Wilkie, deceased.

GRAHAM, William, M.D., M.Ch.Irel., reappointed Medical Officer of Health for Middleton.

HALL, Arthur J., B.A., M.B.Cantab., L.R.C.P.Lond., appointed Joint Lecturer on Physiology, and Demonstrator of Practical Physiology, at the Sheffield School of Medicine, *vice* Dr. Thomson and Mr. F. Harrison, respectively resigned.

HARDYMAN, George, M.B., C.M.Edin., appointed Honorary Medical Officer to the Eastern Dispensary, Bath.

HARRISON, Edward, M.A., M.B.Cantab, F.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Hull Royal Infirmary.

HERRON, Robert T., L.R.C.S.Irel., L.R.C.P.Edin., appointed Medical Officer and Consulting Sanitary Officer to the Workhouse, Armagh Union, *vice* Dr. Frazer, deceased.

HOWLETT, E. H., F.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Assistant Surgeon to the Hull Royal Infirmary.

JONES, H. P., L.R.C.P.Irel., M.R.C.S., appointed Medical Officer of the Fifth District of the Mansfield Union.

KHAN, M. A., M.R.C.S., L.R.C.P., appointed House-Physician to the Royal Hospital for Diseases of the Chest, City Road, E.C., *vice* Mr. E. P. Daniell.

LAWSON, Joseph, M.B., L.R.C.S.Irel., reappointed Medical Officer for the Todmorden Rural Sanitary Districts.

LINDLEY, S., B.A., M.D.Aberd., appointed Medical Officer for the Brailes District of the Shipston-on-Stour Union, *vice* E. T. Thompson, L.R.C.P., L.R.C.S.Irel.

LOWSON, D., M.D.Aberd., M.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Hull Royal Infirmary.

MACDONNELL, Lucius, B.A., M.B., B.Ch., B.A.O., appointed Assistant House-Surgeon to the Halifax Infirmary and Dispensary, *vice* Mr. C. J. Girling, resigned.

MARRIOTT, Charles W., M.D., M.R.C.P.Lond., appointed Physician to the Royal Berks Hospital, Reading, *vice* Dr. Barham, resigned.

MARSDEN, R. Sydney, M.B., appointed Medical Officer of Health to the Malton Local Board, *vice* Dr. Young, deceased.

MORRIS, F. H., M.D.St.And., M.R.C.S., reappointed Medical Officer of Health for the Wellingborough Rural Sanitary District.

ORTON, John, M.B., L.R.C.S.Irel., appointed Medical Officer and Public Vaccinator for Beeston and Woolaton, Notts.

PIGEON, H. W., M.A., M.B., F.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Hull Royal Infirmary.

RIDDELL, J. Scott, M.B., C.M., M.A.Aberd., appointed Assistant Pathologist to the Aberdeen Royal Infirmary.

ROBERTSON, D.W., L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer for the Pickering Sanitary District.

ROBINSON, Alfred, M.D., M.R.C.S., L.S.A., appointed Medical Officer to the Workhouse of the Rotherham Union.

ROCKLIFFE, W. C., M.A., M.D., M.R.C.S.Eng., reappointed Honorary Ophthalmic Surgeon to the Hull Royal Infirmary.

ROWLAND, F. Mortimer, B.A., M.R.C.S., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Sussex County Hospital, Brighton, *vice* E. F. Maynard, M.B., resigned.

SHORT, Thomas S., M.B.Lond., M.R.C.S., appointed Honorary Assistant-Physician to the General Hospital, Birmingham, *vice* Dr. Simon.

SIEVEKING, Herbert, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Cape Government Railway from Kimberley to Vryburg, to have charge of and to reside at the Hospital, Vaal River Bridge, Fourteen Streams.

SMITH, Robert Arthur, appointed House-Surgeon to the Rotherham Hospital and Dispensary, *vice* H. G. L. Alford, resigned.

TAYLOR, James, M.D., C.M.Irel., appointed Medical Officer for the Second District of the Andover Union, *vice* - Elliott, deceased.

TAYLOR, Shephard Thomas, M.B., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for Cromer.

THURSFIELD, W. N., M.D.Edin., M.R.C.S., reappointed Medical Officer of Health for the Combined Rural Districts, Salop.

TWAMLEY, H. J., L.R.C.S.Irel., appointed *pro. tem.* Medical Officer for the Sible Hedingham Sanitary District, Essex.

WARD-HUMPHREYS, Herbert, L.R.C.P.Lond., M.R.C.S., appointed Surgeon to the Cheltenham Children's Hospital.

WEBB, Edward Lowe, M.R.C.P.Edin., L.R.C.S.Eng., L.S.A., appointed Vaccinator for the Westminster District of the St. George Hanover Square Union.

WYNNE, Edward Thomas, M.B., B.A.Cantab., M.R.C.S., L.R.C.P.Lond., appointed Resident Assistant Medical Officer to the Parish of St. Leonard, Shoreditch, *vice* Henry W. Stephens.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang, Strabismus. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Mr. Arbuthnot Lane: Inflammation of the Middle Ear and its Complications.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Theo. Hyslop: Legal Relations of Insanity. Examination Hall, Victoria Embankment, 5 P.M.—Mr. Jonathan Hutchinson: Elephantiasis and Allied Affections.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Hospital for Consumption, Brompton, 4 P.M.—Dr. Hector Mackenzie: Adherent Pericardium, with Clinical Cases. Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. J. B. Lawford: Paralysis of Ocular Muscles.

THURSDAY.

LONDON POST-GRADUATE COURSE, National Hospital for the Paralysed and the Epileptic, Queen Square, 2 P.M.—Mr. Victor Horsley: Surgery of the Nervous System. Hospital for Sick Children, Great Ormond Street, 4 P.M.—Mr. W. A. Lane: Inflammation of the Middle Ear and its Complications. London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Ed. Woakes: Mastoid Disease.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 11 A.M. to 1 P.M.—Professor Crookshank: Lecture: Rabies, Tetanus, Glanders, Swine Fever, Septicæmia of Mice, Rabbits and Birds. Practical Work: Sections of Septicæmia of Mice and Various Cultivations. Hospital for Consumption, Brompton, 4 P.M.—Dr. Hector Mackenzie: Thoracic Aneurysm, with Clinical Cases. Great Northern Central Hospital, 8 P.M.—Dr. Galloway: Demonstrations of Morbid Anatomy: Malignant Growths.

SATURDAY.

LONDON POST-GRADUATE COURSE.—Bethlem Royal Hospital, 11 A.M.—Dr. Theo. Hyslop: Clinical Demonstration.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTH.

RICE.—June 10th, at 36, Banbury Road, Oxford, the wife of Edward Rice, M.D.Lond., of a son.

MARRIAGES.

ACHARD—MELTZER.—On June 3rd, at St. Philip's, South Kensington, by the Rev. R. T. Gardner, M.A., of St. George's, Hanover Square, Alexander Louis Achard, M.D., of Blandford Street, W., to Carry, daughter of D. H. Meltzer, Esq., of South Kensington.

CHILDE—SMITH.—June 10th, at St. Mary Magdalen's, St. Leonards-on-Sea, by the Rev. C. P. Calvert, B.A., assisted by the Rev. G. S. de Sausmarez, M.A., Charles Plumley Childe, Esq., B.A., M.R.C.S., Southsea, eldest son of the Rev. G. F. Childe, M.A., St. Leonards, to Margaret, widow of the late Dr. A. J. Smith, of Kurseong, Bengal. Cape papers please copy.

DEATHS.

LAMBERT.—April 22nd, on board H.M.S. *Tamar*, the day before reaching Colombo, from congestion of the brain, John Lambert, Fleet-Surgeon, R.N.

MCCREERY.—At Hilsea, on 11th, Nathaniel H. M., son of Surgeon-Major Nathaniel McCreery, aged 6 months and 25 days.

SISSON.—May 3rd, at 39, Groombridge Road, S. Hackney, of diphtheria, Herbert, second son of William John Sisson, Borras Gresford, and student at the London Hospital, aged 28.

SMITH-SHAND.—At 17, Albyn Place, Aberdeen, on the 12th inst., James W. F. Smith-Shand, M.D., Regius Professor of Practice of Medicine, University of Aberdeen. Friends are requested to accept this intimation.

STRUTHERS.—At 39, Charlotte Street, Leith, on June 6th, James Struthers, M.D., F.R.C.P.E., aged 69 years. Friends will kindly accept this (the only) intimation.

SUTTON.—On June 9th, at Highlands, Sevenoaks, of influenza, Dr. Hy G Sutton, Physician to the London Hospital, aged 55.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

TREATMENT OF SCIATICA.

L.R.C.P. asks for suggestions as to the treatment of an obstinate case of sciatica. The patient, a gentleman, is much discouraged, morphine, pot. iodid., antipyrin, sulphur, iron, etc., having been tried in vain.

ANSWERS.

MR. H. LIONEL SMITH, L.R.C.S.I., etc. (Albany, King George's Sound, Western Australia) writes: In the BRITISH MEDICAL JOURNAL of March 14th, p. 618, "Qualified Assistant" asks about "a country where he could obtain employment, etc." If he will apply to Mr. J. C. Needes, he can hear of what I think will very likely suit him here. He can also apply for information to Dr. Duckworth, Donaghmore House, Ballybrophy, Queen's Co., Ireland.

GOWNS.

ENQUIRER.—There is no gown proper to Fellows of the Royal College of Physicians or Surgeons as such. On all occasions on which gowns are worn by the Fellows they are, we presume, those of their respective universities.

PILOCARPIN IN DEAFNESS.

DR. A. I. GARLAND (Honorary Surgeon, Oamaru Hospital, New Zealand) writes: In the BRITISH MEDICAL JOURNAL of December 20th, 1890, "M.D." inquires *re* pilocarpin in deafness. I had a patient suffering from Ménière's disease, to the extent of having to be taken home in a cab from falling down from vertigo. As he could not spare the time to rest after the pilocarpin injection, I prescribed tr. jaborandi, 3ss ter die, which completely removed the vertigo, but did not affect the deafness.

NOTES, LETTERS, Etc.

A WARNING.

SIR CHARLES A. CAMERON (Dublin) writes: A swindler and impostor has been calling upon medical men in London requesting loans. He represents himself at one time as my son, at other times as some other medical man's son. I have put the police upon his track.

HOMŒOPATHS IN GERMANY.

A COMMITTEE representing the three homœopathic societies of Berlin has addressed a petition to the Chief Magistrate and Municipality of the German capital praying that wards may be set apart in the municipal hospitals of the city where homœopathic methods of treatment may be tried, under the direction of homœopathic practitioners.

PUBLIC HEALTH EXAMINATIONS AT DURHAM.

L.S.Sc.DURHAM writes with reference to a reply to "B.A." in the BRITISH MEDICAL JOURNAL of May 16th, p. 1108, will you permit me as one who has recently passed the L.S.Sc.Dur. to beg to differ from you in your answer as above. You say, the candidate (for Health Diploma) is not specially examined in chemistry and physics; having had recent experience, I can testify that considerable importance is attached to the knowledge that a candidate has of the elementary facts of physics and chemistry as applied to sanitary science for the Durham licence. At Durham, the candidate is examined both by written papers, and *viva voce* in physics and chemistry, and in addition has three hours analytical work in the laboratory—a knowledge of these subjects is absolutely necessary to pass. The books which I found useful were, in physics, Ganot's, and Balfour Stewart's, *Elementary Physics*; Magnus, *Hydrostatics and Pneumatics* (London Science Series); Everett's edition, Deschanel's *Natural Philosophy* (vol. iv, Light and Heat): in chemistry, C. B. Fox, *Analysis of Air, Water, Food*; Wanklyn, *Analysis of Water*; Stev. Macadam, *Practical Chemistry*: in meteorology, Scott's *Elementary Meteorology*.

ON THE EARLY TREATMENT OF INFLUENZA.

DR. HY. ARMSTRONG RAWLINS, M.R.C.S. (Sutherland Avenue, W.) writes: The leading symptoms, almost without exception, are a sense of weight, pain and a feeling of constriction over the forehead, a loss of decision in walking, and giddiness, especially on resuming the erect posture. These facts all go to prove that there is congestion in the vessels of the brain, especially in the anterior lobes. By increasing the secretions from the two lachrymal glands, the four salivary, the fauces, and from surfaces of the nasal fossæ, this pressure must be diminished, secretions from these surfaces being excretions as well as secretions. They open portals for the exit of morbific agents from the immediate vicinity of the parts affected. A tendency to produce perspiration and secretion generally should first be created by drinking hot water very freely. This being done the patient should with his own hands bathe his face and forehead freely with hot water for five or even ten minutes, and repeat the same process every hour until the uneasiness of the forehead ceases. Keeping the hands in water thus tends to lower the temperature and allay thirst. The throat should next be gargled well with hot water. That this may be done effectually the patient should lie on his back, if possible, as practised in Germany. Should the above proceedings not give marked relief, then the nose on both sides should be gently syringed with hot water, previously boiled. The moment the appetite is lost and digestion ceases, putrefactive fermentation of the food is prone to commence. To prevent the poisonous products of this fermentation passing into the blood, the whole contents of the alimentary canal should be discharged as soon as possible.

DR. ALEX. HARKNESS (Stamford Hill, N.) writes: Having attended some 400 cases of influenza in the last epidemic, and seeing at the present time from ten to fifteen cases daily, I have had ample opportunities of trying different method of treatment. Of various combinations I have found the following most efficacious: R tr. aconiti 5ss; liq. morphinæ 5j; liq. ammoniæ fort. m viij; infus. quassiæ ad 5vj; 5j quartis horis in water. The patient is ordered to take from 10 to 12 ounces of whiskey in soda water and milk during the twenty-four hours, beef-tea being the only other article of diet I permit. Under this treatment the headache, backache, muscular and other pains disappear in from 24 to 36 hours, temperature falling to normal, and weakness only remaining. One symptom has, I think, been overlooked in this complaint, that is, loss of taste and smell, continuing even after the desire for solid food has returned.

TESTIMONIAL TO DR. R. R. RENTOUL.

DR. HUGH WOODS writes: In the list of subscriptions published on June 6th, the name "Dr. F. W. R. Winter, Bournemouth," should have been "Dr. F. Winson Ramsay, Winton, Bournemouth." The following recent subscriptions are acknowledged:—

	£	s.	d.
Dr. E. B. Ffennell, Kimberley	0	5	0
Dr. Robert Robertson, Liverpool	2	2	0
Surgeon-Major Samuel Smith, Bristol	0	10	6
Dr. T. Stretch Dowse, 14, Welbeck Street, W. ...	1	1	0
Dr. G. J. Schofield, Moseley	0	10	6
Dr. Louis M. M'Intosh, Blackpool	0	10	0
Dr. George Abbott, Preston (per Editor of *Hospital Gazette*)	0	10	0
The Editor of the *Medical Press and Circular* ...	1	1	0

Subscriptions should be forwarded to Dr. Hugh Woods, 11, Archway Road, Highgate, London, N.; and subscribers are requested to bring the matter under the notice of other members of the profession.

MEDICAL PRACTICE IN WEST AFRICA.

DR. J. DESMOND M'CARTHY (Chief Medical Officer, Gold Coast Colony) writes: A communication appeared in the BRITISH MEDICAL JOURNAL of February 21st from the native medical practitioners of Sierra Leone complaining of the manner in which the town is being overrun by a set of medical quacks whose crass ignorance is equalled only by their arrogant presumption and self-conceit. Sierra Leone, however, is not the only town in West Africa which is being infested by these quacks; the genus flourishes also in Accra, Cape Coast, Elmina, and other places on the Gold Coast, where it has in more than one instance helped to swell the death-rate.

I have no need to dwell further on the practices and habits of these practitioners, which have received ample comment in the communication above referred to. My aim in writing to you on the subject is simply to confirm or, rather, illustrate the opinion expressed by the Sierra Leone Medical Association of the inconceivable ignorance of these quacks by submitting for your inspection the enclosed communication I myself received some time ago from one of them, and which I should be much obliged if you would be good enough to publish in the BRITISH MEDICAL JOURNAL. Its publication will do good in more than one way, as it will help to stimulate our local authorities into immediate action for the suppression of this bands of dangerous quacks, as well as to illustrate to the public the species of ignoramus who is allowed to prescribe pharmacopœial remedies in the treatment (*sic*) of disease.

It may be thought that this unique specimen of literary skill is an exceptional illustration of the educational acquirements of this class of individuals. So far as my personal knowledge of them extends—and I have been fourteen years in practice on this coast—it is not so, for several even worse specimens have passed through my hands in that period.

"The Chief Medical Officer, Victoria Borg, Accra. 4, 11, 90.

"Sir,—I am very glad to write you this letter to ask you that by your kindness; But am here as native physicain for my families of this place to Curening those people of our coast here, at last year. But now i have no any business of medicals to do it. Therefore i thank you in all things, try as well as your merciful and help me the work to do.

"N.B.—I enclosed Diseases of List, Sickness its Cause with in this letter. These all I curening of African Medicals. I hope you in faithfully,—Yours truly and Co., I am your ob. servant, X. Y. Z., Native physicain.

"Sickness its Cause. or Diseases.

"Scrofula. or Scrofulous Sore Eyes. Hidden diseases. Diseases dry skins. Diseases of warm rings in Stomach. Warms sickness. Sick and nervous headache. The dry belly ache. Simple purulent ulcer. Scrofulous swelling. Lichen Ulcerated Scrofula. Scabies or itch. Tetter ringworms and shingles. Head ache. Teeth ache. Belly ache. Stumbling at road. Canker in the mouth and stomach. Fever of shaking. Yearning of bowels for a child. Cutaneous eruption on the Lips. Yawes. or. and in the any sickness of Diseases.
4. 11. 90."

A Source of Difficulty and Danger in Turning.

Dr. T. Arthur Helme (St. Mary's Hospital, Manchester) writes: Dr. Herman has been good enough to send me a copy of a paper published by him five years ago in the *Transactions of the Obstetrical Society of London*, vol. xxviii, in which he describes three cases very similar to that described by me in the British Medical Journal of June 6th. I hasten to assure Dr. Herman that had I known of his paper I should not have passed it over.

The difficulties met with by Dr. Herman were resolved by the line of action successful in my case, and consequently one would consider that the conditions were similar, if not identical; but, if so, surely Dr. Herman's explanation is wrong in two important particulars or else the cases differ.

1. The obstructing ring or ridge is not the upper margin of the cervix (os internum), but is most undoubtedly the lower margin of the upper active segment of the uterine body—that is, Bandl's ring, or, as my friend and former teacher, Dr. Barbour, has called it, "the retraction ring."

2. The position of the child cannnot have been that figured and described in the text by Dr. Herman. In that case the right shoulder is below the ridge but the left is above the ridge. What will prevent version if the uterus be relaxed by chloroform and traction be made upon the opposite foot—that is, the right one?

Diphtheria or Abscess of Tonsil.

Dr. John Haddon (Canonbie, N.B.) writes: Mr. Nicholls's case, related in the British Medical Journal of May 30th, is a very instructive one. In spite of his opinion, which no doubt should not be lightly set aside, seeing he attended the case throughout, many will be inclined to agree with the consultant in believing it to have been a case of diphtheria with consequent cardiac paralysis. In my *Notes from Private Practice on Sore Throat*, page 19, I relate a case where both tonsils suppurated during or following an attack of diphtheria, and such an occurrence is by no means uncommon. As to the cardiac condition, in the same *Notes*, page 34, writing of diphtheria, I find the following: "The first and most common sequela is an irregularity or intermittence of the cardiac action. This may accompany the acute stage of the disease or may come on as late as the twelfth day. It varies greatly in severity, and, in some cases, no other sequelæ may be observed." By the occurrence of this sequela we may be certain that a case about which there was some doubt had really been diphtheria. In this connection it is interesting to note a case, reported in the same issue, under "Hospital Reports," by Dr. Clifford Beale, where "liquor strychniæ" seemed to avert a fatal issue. In my *Notes*, page 11, is related a case where death seemed imminent from cardiac failure, in which digitalis and nux vomica were prescribed and followed by speedy improvement. I gave the digitalis most credit, but the nux vomica may have deserved the praise, if any was due to the prescription.

LETTERS, COMMUNICATIONS, Etc., received from

(**A**) Mr. T. Ager, Peterborough; Another Brigade-Surgeon; Dr. A. L. Achard, London. (**B**) Messrs. W. J. Bush and Co., London; Dr. R. C. Benington, Newcastle-upon-Tyne; Dr. F. Beach, London; Dr. Lauder Brunton, London; Mr. James Berry, London; Mr. R. B. Braithwaite, London; Messrs. Baillière, Tindall and Co., London; Mr. E. Birt, Wakefield; Mr. W. B. Benham, Oxford; Mr. C. F. Beadles, London; Dr. A. Bronner, Bradford; Dr. Balding, Royston; Dr. D. Buxton, London; Dr. J. W. Black, Inverness; Mr. A. H. Benson, Dublin. (**C**) Mr. G. H. Carrington, Robin Hood Bay; Mr. E. T. Collins, Cambridge; Mr. J. W. Cunningham, London; Mr. J. M. Cassidy, London; Mr. J. Couldrey, Doncaster; Dr. E. W. Collins, Sydenham; Dr. A. H. W. Clemow, London; Mr. A. Clarkson, Leeds; Dr. C. W. Chapman, Hampstead. (**D**) Mr. Alban Doran, London; Dr. V. Dickinson, London; Dr. C. R. Drysdale, London; Arthur Dalzell, M.B., Totland Bay; Dr. P. M. Deas, Exeter; Mr. J. V. C. Denning, London; Dr. J. T. R. Davison, Buenos Ayres; Mr. Percy Dunn, London. (**E**) E. G. P.; Mr. G. Eastes, London; Dr. Elevy, Biarritz. (**F**) Fifteen Years Service, R.N.; Dr. G. Ferdinands, Aberdeen; Sir Joseph Fayrer, London; Frame Food Company, London; F. E. H. (**G**) Mr. G. Geddes, Aberdeen; D. M. Greig, M.B., Dundee; Mr. A. I. Garland, Omaru; Mr. H. H. Graham, London; Mr. F. D. Grayson, Rayleigh; Dr. E. Gumpert, Manchester; Mr. J. Gibson, Greetland; Mr. T. C. Gray, Swansea; Mr. A. Greenwood, London. (**H**) Brigade-Surgeon J. Hector, London; Mr. E. L. Hussey, Oxford; Dr. A. H. Hassall, Lucerne; Mr. Holmes, Pontefract; E. Harrison, M.B., Hull; Mr. M. T. Hewetson, Clonmel; A. W. Hughes, M.B., Musselburgh; Surgeon G. E. Hale, Mandalay; A. J. Hall, M.B., Sheffield; Dr. T. A. Helme, Manchester; Mr. A. J. Horton, Tipton Green; Dr. J. B. Hellier, Leeds; Mr. James Haysman, London. (**I**) Dr. Ireland, Prestonpans; Dr. C. B. Illingworth, Accrington. (**J**) Messrs. Johnson and Johnson, London; Mr. F. B. Jessett, London. (**K**) Mr. A. A. Kanthack, Simla; Messrs. Keene and Ashwell, London; Dr. R. Kirk, Partick; L. W. Keiffenheim, M.B., Stockwell. (**L**) Mr. J. E. Lane, London; Dr. J. B. Lawford, London; Mr. G. L. L. Lawson, Egremont; R. A. Lundie, M.B., Edinburgh; Surgeon-Major E. Lawrie, Hyderabad; Dr. C. J. Lewis, Stirling; L.R.C.P.Lond., R.N.; Mr. H. Lucas, Huntingdon. (**M**) Messrs. Mackey, Mackey and Co., London; Dr. W. T. Mullally, Ballarat; Surgeon R. C. Macwatt, Camp Mastaon; M. G. Masson, Paris; Dr. T. Mattison, Brooklyn; Dr. C. W. Marriott, Leamington; Mrs. Munday, Bournemouth; Dr. Murphy, West Malvern. (**N**) Dr. C. Norman, Grangegorman; Mr. T. Norton, London; Dr. F. Nicholson, Hull; Dr. Nursimulu, Hyderabad; Dr. G. H. F. Nuttall, Baltimore. (**O**) Dr. J. Oliver, London. (**P**) Mr. J. R. Philpots, Parkstone; Dr. C. Porter, London; Dr. Leslie Phillips, Birmingham; Mr. J. B. Poutney, Thorpe; Dr. C. Parsons, Dover; Mr. A. A. Philip, Belfast; Mr. R. W. Parker, London; Mr. W. F. B. Pollard, Ramsgate; The President of the Royal Medical and Chirurgical Society, London; Puzzled; Mr. J. F. Pink, London; The President of the University College, London. (**R**) Dr. Rice, Oxford; Dr. A. Ransome, Bowdon; Surgeon-Major G. Ranking, Dilkusha; Dr. Rentoul, Liverpool; Dr. J. J. Ridge, Enfield; Mr. W. Rivington, London; Dr. J. Ringwood, Kells; Dr. T. Robinson, London; Mr. E. Rundle, Truro; J. S. Riddell, M.B., Aberdeen; Mr. G. Q. Roberts, London. (**S**) The Sanitas Company, London; Mr. J. B. Sutton, London; Dr. J. Lindsay Steven, Glasgow; Dr. Markham Skerritt, Clifton; Miss Shimpson, Oldham; Mr. R. A. Smith, Rotherham; Dr. Sykes, Gosport; Dr. Sousini, Pisa; The Secretary of the Public Health Medical Society, London; Mr. R. A. Shannon, Orpington; Dr. H. W. Seager, Hampton Court. (**T**) Surgeon C. R. Tyrrell, Warley; Dr. G. Thin, London; Mr. J. H. Targett, London; Dr. Thorne Thorne, London; Mr. E. Tegart, London; Dr. C. L. Tuckey, London; Dr. Thresh, Chelmsford. (**V**) Mr. C. Vost, Glasgow. (**W**) Dr. O. Wood, London; J. R. Whitwell, M.B., Menston; Mr. E. White Wallis, London; Mr. Roger Williams, London; Dr. A. Whitelegge, Wakefield; Mr. H. Ward-Humphrys, Cheltenham; Messrs. A. Wilkinson and Sons, Liverpool; Dr. H. Woods, London; Mr. G. S. Ware, Fakenham. (**Y**) Dr. B. Yeo, London, etc.

BOOKS, Etc., RECEIVED.

Traitement des Coliques Hépatiques par l'Huile d'Olive. par le Dr. E. Willemin. Paris: G. Steinheil. 1891.

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CLINICAL REMARKS
ON
SARCINÆ IN THE URINE FOR FIFTEEN YEARS, WITHOUT ACCIDENTS.

By JAMES FINLAYSON, M.D.,
Physician to the Glasgow Western Infirmary, and to the Royal Hospital for Sick Children, Glasgow.

The chief importance of the first case here given is in indicating the small degree of gravity attaching to the mere discovery of sarcinæ in the urine. When one comes across a rarity of this kind, the exact significance or cause of which is not as yet known, there is apt to be considerable anxiety as to what the future developments of the case may be. Although the records hitherto point to the occurrence of sarcinæ in the urine as being, in itself, free from danger, any extra security in this sense will be welcomed by those who may have to advise on the matter. The period which has now elapsed since the first detection of the sarcinæ in this case, without urinary accidents supervening, is greater, so far as I know, than any hitherto recorded.

A gentleman, aged about 57, who was well known to me, consulted me about some trivial ailment, but, in case of there being any latent disease, I thought it well to examine the urine for albumen and sugar, and I found both absent. The specific gravity was 1025. I noticed that the urine was turbid on being passed, and as it was acid in reaction, I was curious to know the cause. Much to my surprise, I found the whitish flocculent-looking sediment which had formed to consist of sarcinæ. A few triple phosphates were also present. The sarcinæ were smaller than those with which we are familiar in vomited matter, and they were free from the brown colour so often seen there. This was on October 9th, 1876. On October 13th, the freshly-passed urine was again found to be turbid, with minute shreds visible in the urine glass; even before it settled, the microscope revealed, in a drop of the urine, the same small sarcinæ as before; the minute shreds were found to consist of white cells and epithelium; the specific gravity was 1025; the reaction was acid as before. A fortnight later, this same specimen was found to contain sarcinæ, although the urine had become, of course, quite alkaline; triple phosphates were abundant. Specimens were shown as curiosities at a *conversazione* of the Glasgow Pathological and Clinical Society held about that time.

Curious to trace the history of the case, without alarming the gentleman, I took a casual opportunity of examining the urine in February, 1877; it was slightly turbid when passed, and sarcinæ were at once found without even waiting for a sediment to form. The reaction was again acid; and, as before, no albumen could be detected.

No opportunity occurred for ascertaining the continuance of the sarcinæ till I had a chance in March, 1891. The gentleman was then about 71 or 72 years old, but still very active. The urine was turbid, as before, on being passed in the afternoon. It was not examined till next morning, when a loose whitish sediment was seen; the reaction then was alkaline, and numerous triple phosphates were seen; enormous numbers of sarcinæ were found, small and pale as before; many were in simple groups of four, but some aggregations of many such groups were likewise seen. There were no pus cells visible, and no albumen or sugar could be detected in the urine.

A sample of this was given to Dr. R. M. Buchanan, at the Pathological Laboratory of the Western Infirmary, and he tried cultivations in various media, but failed to obtain any results. He measured the size of the growths, and made them to be 1 micro-millimetre or a little more.

On special inquiry as to any urinary symptoms, it seems that as a boy the patient had retained urine too long on one occasion, and he seems to have had some swelling at the external organs at that time. About 1851, he was troubled with some urinary irritation, with frequent micturition. Dr. S. Clark, in Glasgow, passed a catheter once at that time, the use of which was followed by the appearance of a little blood. Shortly afterwards he went to consult Professor Syme, in Edinburgh, who sounded him for stone, but none was found. These were the only occasions when instruments were passed into the bladder. The irritability of bladder continued for a year or two, but then ceased to be seriously troublesome, and there was absolutely no pain; a certain nervous anxiety about passing urine continued ever since, showing itself especially if he were in such a position, in a church or otherwise, where exit was difficult. With care in securing an easy retreat, the necessity seldom arose. He had usually to get up to micturate about 4 A.M.; during the day he might pass water every two hours or so. No blood had ever been passed, so far as known, except on the occasion of the catheter being used. His general health had been excellent all his life.

His report in March, 1891, when over 71 years old, was that his health was good, and that he was fit for much active exertion. The urinary symptoms, instead of getting worse with advancing years, had improved, and he could now sit through long services in the church without anxiety as to his bladder.

The only other case of sarcinæ in the urine which I have recognised in my private or hospital practice occurred lately. A married lady was found to have a small quantity of pus in her urine habitually; occasionally the urine became clear, but with an aggravation of her symptoms; there was some tenderness in the left loin, without tumour; all this suggested the presence of a slight pyelitis. I saw her first in September, 1890, and on examining the urinary sediment was surprised to find with the pus numerous sarcinæ in one or two specimens kept for me. They had not been detected before, although the urine had been repeatedly examined. Mixed up as they were with pus corpuscles, they had evidently been missed. When seen again, in March, 1891, the sarcinæ were still present, mixed with the pus as before. As in the other case, the size was small and the colour pale. Specimens given to Dr. R. M. Buchanan for cultivation experiments again failed to show any results.

The history in this case was that about three years ago, when 26 years old, she had her first baby, and about the first week afterwards suffered from retention of urine, with overdistension of the bladder, requiring the use of the catheter for a week. She had a rigor about the fourteenth day, and had then pain on micturition, and a pelvic abscess was feared. Pus appeared in the urine at that time, and has been present ever since, usually in very small quantity. The course of the symptoms made it almost certain that pyelitis and not pelvic abscess was the cause of the rigor. Throughout the case no blood has been seen, and no albumen could be recognised on testing. The urine is often acid, sometimes neutral; oxalates have been frequently seen.

Since her illness she has had a second baby without either aggravation or amelioration of her symptoms, which consist of pain in the back and a sense of exhaustion, varied occasionally by the occurrence of a febrile attack, with more severe pain. When seen by me in March, 1891, she was supposed to be again pregnant. Her appearance did not suggest any grave disease, and she was able to perform her household duties.

In this case the gravity of the condition clearly turns on the pus and on the pyelitis, and not on the sarcinæ.

In both cases, the fact of instruments having been passed into the bladder at one time is very suggestive of contamination from this cause, particularly in view of the considerable proportion of recorded cases of urinary sarcinæ having a similar history of catheterisation.[1]

[1] Falkenheim: "Ueber Sarcine," *Archiv f. experimentelle Pathol.*, Bd. 19, Leipzig, 1885.

DR. ROBERT T. HERRON has been elected, by a large majority, medical officer of Armagh Workhouse, and consulting sanitary officer in the room of the late Dr. Henry Frazer.

M. JULES JANET has been commissioned by the French Government to study the organisation and practical working of the clinics of urinary diseases in Austria and Switzerland.

PROFESSOR E. LUDWIG has been elected Dean of the Medical Faculty of the University of Vienna for the academical year 1891-92.

LECTURES
ON
GOÎTRE: ITS PATHOLOGY, DIAGNOSIS, AND SURGICAL TREATMENT.

Delivered at the Royal College of Surgeons of England.

By JAMES BERRY, B.S., F.R.C.S.,

Professor of Surgery and Pathology, Royal College of Surgeons; Surgeon to the Royal Free Hospital and to the Alexandra Hospital for Children with Hip Disease.

LECTURE III.

Cystic Goitre.—Varieties.—Treatment.—Tapping.—Injection.—Drainage.—Intraglandular Enucleation, Advantages of: Cases Suitable for.—Question of Recurrence.—Extirpation.—Fibro-adenomatous Goitre.—Malignant Goitre.—Exophthalmic Goitre.—Complications and Results of Removal of Non-malignant Goitre.—Hæmorrhage.—Injury to Recurrent Nerve, Sympathetic, Vagus, Trachea, Pleura.—Collapse of Trachea.—Sepsis.—Tetany.—Cachexia Strumipriva.—Symptoms.—Relation to Complete and Partial Removal.—Prognosis.—Treatment.

[The different varieties of cystic goitre were briefly described and illustrated by specimens. The treatment by simple tapping, by injection, and by drainage was discussed, and the dangers of each method were described.]

I come next to intraglandular enucleation, and in discussing this subject I propose to consider at the same time enucleation of solid tumours of the gland, since the same operation is in many cases suitable for them also. By enucleation is meant the removal of a cystic or a solid tumour from the interior of the thyroid gland, the surrounding glandular tissues being left intact. Enucleation of cysts appears to have been performed as long ago as 1840 by Porta, of Pavia.[1] Billroth, too, more than twenty years ago practised a similar operation. More recently it has been recommended and practised with success by Julliard, of Geneva, and Kottmann, of Soleure. Burckhardt, of Stuttgardt, and Müller, of Tübingen, have also written upon enucleation of cystic goitres. Solid tumours of the thyroid gland were, however, rarely treated in this way until Professor Socin, of Basle, some ten or fifteen years ago, began to practise enucleation upon these also. Dr. Keser, of Vevey, has contributed materially to our knowledge of the operation by the publication of an excellent monograph[2] upon the subject. He gives full details of 37 enucleations performed by Professor Socin; of these, 17 were for cystic and 20 for solid tumours. Dr. Garré[3] has also warmly advocated this proceeding.

The operation of enucleation depends for its feasibility upon the following anatomical facts. Many goitrous tumours consist, not of an enlargement of the whole of one or both lobes of the gland, but of a circumscribed tumour lying in more or less healthy gland tissue. Sometimes the tumour is a cyst, unilocular or multilocular; sometimes it is solid, of a fibro-adenomatous nature, like the corresponding tumours which are found in the breast and other organs. Of whatever nature, the tumour is surrounded by a well-marked capsule, composed of connective tissue and of thyroid tissue, altered and atrophied by pressure. It is owing to the existence of this capsule that enucleation can be performed, the tumour alone being shelled out without interference with the remainder of the gland. The nature of the capsule surrounding the goitrous tumour varies according to the size and position of the latter. If this be small and deep-seated it may be surrounded by what is obviously, to the naked eye, thyroid tissue. If, on the other hand, the tumour be large and project much, it may be covered on its superficial aspect by what appears at first sight to be merely connective tissue, but which is really a capsule, composed partly of connective and partly of thyroid tissue. Both Keser and Kocher insist strongly on this point that the capsule is composed everywhere of thyroid tissue, the presence of which can be demonstrated by means of the microscope.[4]

Keser gives the following directions for the performance of the operation. The incision should be made over that part of the tumour which seems most superficial, and where the capsule of gland tissue is thinnest. The proper wall of the tumour will generally be recognised by its bluish-grey colour, contrasting with the reddish brown of the gland. The hæmorrhage produced by incising this glandular tissue is seldom alarming, and, with intelligent assistance, can readily be controlled. As soon as the incision has reached the tumour the latter has to be extracted from its parenchymatous bed. In the majority of cases the tumour has only slight connections with its glandular covering, so that it can be dislodged and removed in the space of a few minutes, or even seconds, by the fingers alone, without the help of any cutting instrument and without serious hæmorrhage. If the tumour has previously been punctured or injected, then adhesions are apt to be found between the tumour and its covering. When there are several distinct tumours they may sometimes be removed through one incision in the gland, or it may be necessary to make two.

Keser lays great stress on the importance of thoroughly arresting all hæmorrhage before closing the wound. He recommends that catgut should be used to sew up separately the capsule, the muscles, and the skin.

Keser and Socin believe that enucleation may be practised in most cases of goitre. The exceptions, not suitable for enucleation, according to Keser, are:

1. Cases of diffuse hypertrophy, in which the whole gland is uniformly enlarged.
2. Malignant goitre (carcinoma and sarcoma).
3. Goitre in which, besides one or more large nodules which appear to call for surgical treatment, numerous small nodules are disseminated throughout the gland. In such cases it is highly probable that, after removal of the larger tumour, the smaller ones would continue to grow; while to remove all by enucleation would be impossible. Among the total number of 37 enucleations performed by Socin, and published by Keser, no death occurred. Zesas[5], writing in 1889, records 57 enucleations performed by Niehans at Berne, with only one death. Vignard[6] has recorded two successful enucleations performed by Terrillon. Mr. Charters Symonds[7] has recentiy published several cases of enucleation of thyroid cysts and adenomata. The wounds healed by first intention in all cases.

The advantages of enucleation claimed by Keser are:—

1. The operation is not followed by cachexia strumipriva or tetany.
2. Paralysis of the vocal cords from injury to the recurrent nerves cannot occur, since the nerves are in no way interfered with.
3. No large vessels are cut, and hæmorrhage, therefore, is never serious. Keser admits, however, that bleeding may be pretty free, although it can always be readily controlled.
4. As regards healing of the wound, the operation is not inferior to any other.
5. The operation can be performed rapidly.
6. The results from the æsthetic point of view are excellent, as there is not the unsightly hollow in the neck that is seen after extirpation.

Kocher[8] discusses fully the relative advantages and disadvantages of enucleation. He admits that it is an excellent operation for many cases, but does not think that it is so widely applicable as do Socin, Garré, and Keser. His chief objections to it are that he has often found the hæmorrhage troublesome, and that recurrence of the goitre is much more likely to follow. This question of recurrence of the goitre after operation is one of considerable importance. Of Socin's patients upon whom partial extirpation had been performed, Keser saw eleven subsequently; among them he found five

[1] *Delle Malattie et delle Operazioni della Ghiandola Tiroidea.* Luigi Porta, Milan, 1849.

[2] *L'Enucléation ou Extirpation Intraglandulaire du Goitre Parenchymateux.* Samuel Keser, Paris, 1887.

[3] Zur Frage der Kropfexstirpation mit Bemerkungen über Cachexia Strumipriva. C. Garré. *Corresp. Bl. f. Schw. Aerzte*, Basle, 1886, p. 592.

[4] It is important that this capsule of the tumour should not be confounded with the capsule of the gland itself.

[5] Weitere fünfzig Kropfexcisionen. *Arch. f. klin. Chir.* xxxix. p. 526.

[6] *Progrès Méd.*, Paris, 1888, 2. s. viii, p. 249.

[7] *Trans. Clin. Soc.*, 1890, p. 51.

[8] Bericht über weitere 250 Kropfexstirpationen, *Corr. Bl. f. Schw. Aerzte*, Basle, 1889, xix, 1, 33.

in whom there had been some return of goître. On the other hand, out of twenty-one cases of enucleation, in only three was any recurrence observed. But Keser admits, however, that in a certain number of these the operation had been performed only a short time before the publication of the report. He concludes that, as far as recurrence is concerned, enucleation is as good as partial extirpation. Kocher's opinion upon this point is more guarded; he says that sufficient time has not yet elapsed to enable us to judge of the comparative frequency of recurrence after enucleation. He goes on to say: "If one-half of a thyroid gland be removed, there is no question about a return of the disease on this side. If, however, enucleation be performed upon a growing goître—and it is mainly in such cases that operation is desirable—then it is only a question of how and when the recurrence will take place. It is only in exceptional cases that recurrence will not occur; these are cases of single, chiefly large, tumours which have ceased to grow or which increase in size owing to degenerative changes, such as the accumulation of blood or other fluids, or those which by their pressure have caused atrophy of the remaining glandular tissue."

The cases in which, according to Kocher—with whom I fully agree—enucleation should be performed, are:

1. Cystic goîtres in which most of the tumour is formed by a single cyst. When the cysts are scattered throughout the gland, extirpation is a more suitable operation. Isolated cysts of whatever size may, however, be enucleated; for some of the very large cysts resection is preferable. Whether the wall of the cyst be thick or thin, whether the contents be serous or composed of blood, whether inspissated, or liquid, are matters of no importance; enucleation may be performed in all these cases. Some cases of inflamed cyst may also be treated advantageously by enucleation, since in its early stages inflammation may loosen the cyst to a certain extent from its bed and facilitate enucleation.

2. Isolated large solid tumours which lie imbedded in comparatively healthy gland tissue. But in these cases enucleation is recommended only if the tumours are of sufficiently firm consistence and are loosely imbedded, so that they may be removed quickly and without severe hæmorrhage.

Case IV. *Large Unilateral Cystic Goître: Dyspnœa and Hoarseness: Enucleation: Complete Recovery.*—H. S., aged 64, came under my care in June, 1890. For many years he had had a large cyst in the left lobe of the thyroid gland; lately this had increased considerably in size, and caused so much dyspnœa and hoarseness that he had been unable to follow any occupation. An incision was made down to the cyst wall, which was easily recognised, and the tumour was enucleated in the course of a few minutes by means of a common flat hernia director. I took care to keep close to the cyst wall, and did not injure any of the surrounding thyroid tissue. There was so little bleeding that no ligatures were applied to the surface of the cavity from which the cyst had been removed. The wound was dressed in the usual manner described in my last lecture. The subsequent progress of the case was perfectly satisfactory. The temperature remained practically normal, only once reaching the height of 99.4°. On the fourth day after the operation the wound was soundly healed. On the fifth day the patient got up, and on the ninth he left the hospital in perfectly good health, and completely relieved of all his trouble. Since that time he has remained quite well, and has had no return of the goître. The scar is a fine linear one, and is now, seventeen months after the operation, hardly visible.

[The subject of extirpation of cysts, together with the whole or a part of one lobe of the gland, was then briefly discussed, and the following case cited.]

Case V. *Large, Chiefly Unilateral, Cystic Goître: Dyspnœa: Extirpation of the Right Lobe of the Gland: Complete Recovery.*—Mrs. C., aged 40, kindly sent to me by Dr. C. P. White, of Sloane Street. For twenty years she had had a goître; it had gradually increased in size, and had lately caused much trouble in breathing. The right lobe of the thyroid gland contained a globular cyst somewhat larger than an orange. On October 21st, 1890, an incision was made down to the cyst wall, and an attempt at first made to enucleate the cyst. But the connections with the rest of the gland were so intimate that the attempt was quickly abandoned, and extirpation of the whole right lobe was performed in the usual manner. The operation presented no especial difficulty. The subsequent progress of the case was perfectly satisfactory; the drainage tube and sutures were removed on the third day after the operation. On the sixth day the patient got up. When the dressings were removed on the eighth day the wound was soundly healed. The highest temperature after the operation was 99.4°. The patient left the hospital on the fourteenth day, perfectly well. I have seen her from time to time since, and she has remained quite free from trouble; the left lobe has grown somewhat larger, but has not caused any inconvenience.

Fibro-adenomatous Goître.—I come now to the third variety of goître. Under this heading I include all those kinds of goître in which fibrous tissue predominates. Sometimes the goître consists mainly of one or more distinct fibro-adenomatous tumours embedded in the gland; sometimes a whole lobe of the gland, or even the whole gland itself becomes more or less converted into a dense mass of fibrous tissue, in which one or more encapsuled solid tumours or cysts may or may not be imbedded. The treatment of these encapsuled tumours has already been described under enucleation. The subject of extirpation, too, has already been dealt with in Lecture II., so that there remains but little to add to what has been said before. It is evident that, from the solid nature of these goîtres, it is useless to expect that any treatment other than removal, either by enucleation or by extirpation, will be of any use. If one or more distinctly encapsuled tumours exist in a gland that is otherwise fairly healthy, then they will probably be treated with advantage by enucleation. If the whole lobe be affected, then extirpation is the best operation. The following case is one in which I extirpated a very large solid goître, the largest goître that it has yet fallen to my lot to remove.

Case VI.—*Large Dense Unilateral Fibro-adenomatous Goître: Dyspnœa: Extirpation: Complete Recovery.*—Miss K. C., aged 42, kindly sent to me by Mr. Thomas Smith. For many years she had had an enlargement of the right lobe of the thyroid gland; this had displaced and compressed the trachea to such an extent that the patient's condition was a very miserable one, and on more than one occasion attacks of dyspnœa had nearly proved fatal. The condition before operation is shown in Figures 5 and 6. On May 19th, 1890, the tumour, which comprised the whole of the right thyroid lobe, was extirpated in the manner fully described in my last lecture. On the fourth day the wound was soundly healed throughout, and the patient was allowed to get up. No complication of any kind occurred; the temperature was never higher than 99.4°. The patient returned to her home in the country in less than a fortnight after the operation, and has remained perfectly well ever since. The condition after the operation is shown in Fig. 7; the tumour after removal weighed nineteen ounces; it was solid throughout, and consisted largely of fibrous tissue.

[Malignant disease of the thyroid was next discussed. The different varieties were briefly described, and the opinion expressed that removal of the disease should very rarely be attempted. The lecturer had himself seen nine cases of malignant disease of this organ, but in none of them did he consider that any operation other than tracheotomy was justifiable. Reasons for this view were given. A short account of the operations that had been performed for exophthalmic goître was also given. The results that had been obtained by the removal of innocent goître were next discussed. Reference was made to the excellent results that had been obtained by Professor Kocher. His last published series of operations for the removal of goître comprised 250 consecutive cases, of which only 6 died—a mortality of 2.4 per cent.; but, if 25 cases of malignant disease and exophthalmic goître were excluded, only 2 deaths occurred among the remaining 225 cases—a mortality of 0.8 per cent. Results nearly as good had been obtained by Niehans and others. The complications of the operation and the after-results were then considered.]

Sudden death has often occurred during the operation, generally from dyspnœa, hæmorrhage, or shock. Sometimes death occurs at the very beginning of the operation, either just before or just after the first incision has been made. I have already published one such case which occurred to myself. The patient, an elderly woman, whose goître had caused many very severe paroxysms of dyspnœa, died suddenly im-

mediately after the first incision through the skin had been made.

Hæmorrhage has been a frequent source of death, although less often now than formerly. I have unfortunately to record, from my own practice, the two following cases in which I lost patients chiefly from this cause. These two deaths are, however, the only ones that have occurred to me during or after any operation for goitre with the exception of the case just mentioned.

CASE VII. *Bilateral Fibro-adenomatous Goitre: Much Dyspnœa: Extirpation of Right Lobe: Death from Hæmorrhage and Shock.*—M. W., aged 43. For five years she had had a goitre, which had grown steadily, and had lately caused much dyspnœa. Dysphonia and dysphagia had also recently supervened. The right lobe of the gland was about as large as a man's fist, very hard and very much more fixed than goitres usually are. Extirpation of the right lobe was performed. The operation was rendered very difficult by the fact that the tumour could not be lifted up and turned over in the usual way. The operation lasted an hour, and the patient lost a great deal



Fig. 5.—Miss K. C. before operation; the goitre involves the right lobe only.

of blood. She died on the following day from shock. The tumour consisted of dense fibrous tissue with small portions of gland tissue imbedded in it. I was fully aware before commencing this operation that it would probably be one of considerable difficulty on account of the fixity of the tumour, but the rapid increase of the tumour and the dyspnœa decided me to attempt removal.

CASE VIII. *Cystic Goitre: Removal: Death from Asphyxia caused by Recurrent Hæmorrhage into the Wound.*—K. L., aged 30. She had had a goitre for three years. In the last few months it had increased considerably in size, and she had had dyspnœa upon exertion. Both lobes were enlarged, the right consisting chiefly of a single cyst. An attempt was made to perform enucleation but had to be abandoned, as the cyst was not sufficiently definitely encapsuled; extirpation of the right lobe was performed. The operation presented no especial difficulty, and did not take long; very little bleeding occurred. When the tumour had been removed, a ragged piece of capsule was noticed hanging down into the wound. This I snipped off with scissors, but in doing so I made a great mistake. No bleeding occurred at the time, and the wound was wiped dry and then closed. A few hours later venous hæmorrhage took place into the wound, suddenly filling it with blood, and pressing upon the trachea so much that the patient died of suffocation before the house-surgeon could do anything to relieve her. *Post mortem* it was found that the scissors had made a small hole in one of the large inferior thyroid veins, but this hole had remained closed until some exertion on the part of the patient had caused it to open.

[Other complications of thyroidectomy were then mentioned, including injuries to various arteries and veins, to the recurrent laryngeal, sympathetic and vagus nerves, and to the trachea and pleura. The great importance of keeping the wound aseptic was insisted upon, and the frequently fatal results of suppuration in the wound were described.]

Tetany and tetano-epilepsy are serious complications that have occurred in a good many cases. Liebrecht mentions



Fig. 6.—Side view of the preceding.

seven cases that occurred in the practice of Albert, Billroth, and Schoenborn. Weiss,[9] Reverdin,[10] Kocher, Szumann, Schramm, and Hicguet[11] have all recorded cases. Most of them occurred in women after total extirpation. In some of the cases the symptoms appeared immediately after the operation, in others not until several days had elapsed.

Cachexia strumipriva is one of the most important remote results of thyroidectomy. By this term we mean a peculiar condition of body and sometimes of mind, which may be produced by removal of the thyroid gland. The attention of surgeons had not until 1883 been drawn to this remarkable affection, and its recognition has naturally had a great effect in modifying the views formerly held with regard to the operation of thyroidectomy. The symptoms are too well known to require any detailed description here.

[9] *Samml. klin. Vorträge*, No. 189.
[10] *Journal de la Suisse Romande*, 1883.
[11] *Bull. d. l'Acad. de Méd. Belg.*, xvii.

A large mass of facts relating to the disease has been collected by the committee appointed by the Clinical Society to investigate the subject of myxœdema. Sixty-nine cases of cachexia strumipriva have been recorded in the report published by this committee. To these may be added eight cases recorded by Zesas from the practice of Niehans. Two questions seem to me worthy of discussion: 1. Does total extirpation of a goitre always cause cachexia strumipriva? 2. Does partial extirpation ever cause this disease?

With regard to the first question, it is a little difficult to give a decided affirmative answer, because it is not easy to be certain in any given case whether total extirpation has or has not been performed. The committee of the Clinical Society have collected 277 cases in which total extirpation is reported to have been performed on account of innocent goitre. In 22 of these cases, some recurrence of the goitre occurred, showing either that a portion of the gland had been accidentally left behind, or that an accessory thyroid gland was present. Deducting these we get 255 cases, and of these patients 69 became affected with cachexia strumipriva, and 186 did not, that is, about 1 in 4 was affected. Now, if in



Fig. 7.—The same patient thirteen days after complete removal of the right lobe.

these 186 cases the whole thyroid gland was really removed and cachexia strumipriva did not occur, then the answer to the first question must clearly be No. But for myself, I fully agree with Dr. Felix Semon in expressing grave doubts as to the reality of the total excision in these 186 cases. It is so easy for a surgeon to imagine that he has completely removed a goitre and yet to find afterwards that he has left a portion behind. It is especially easy for a surgeon, inexperienced in these operations, to mistake a tumour of the thyroid gland for an enlargement of the whole gland.

Not long ago a case of removal of a large goitre was reported in a medical journal in this country; the surgeon, a good surgeon too, believed that he had removed the whole gland; but it was afterwards proved by recurrence of the disease that he had removed only one lobe, and that the whole of the other lobe had been left behind. If such a mistake can be made by a good surgeon, how much more likely that in other cases some small piece of gland may escape detection and be left behind? Very frequently re-enlargement of the remaining small portion of the gland takes place and proves that the extirpation was not complete. This was actually observed in 22 out of the 277 cases above mentioned. Probably in a considerable number of other cases the same occurrence took place, but was not looked for or observed. The following case bears out this point. About four years ago, a case was reported in a medical journal of "total extirpation" of a goitre, and it was stated that the patient was in good health two years afterwards, and that no cachexia strumipriva had occurred. Having obtained the address of this patient, I went to see her, and then learnt the following facts, which were unknown to the surgeon who had published the case. First, that since the patient left the hospital two years before, her neck had never been examined, and it was therefore somewhat rash to state definitely that there had been no return of goitre. As a matter of fact, a few weeks after the operation a small lump had appeared in the neck, and had continued to grow until at the end of two years, when I first



Fig. 8.—Middle-aged woman with well marked cachexia strumipriva eleven years after complete removal of a goitrous thyroid gland.

saw the patient, it had attained the size of a walnut. It was clearly either a portion of the original goitre which had undergone hypertrophy, or an enlarged accessory thyroid gland. Secondly, for many months after the operation the patient had suffered from symptoms of cachexia strumipriva; she had been extremely anæmic and apathetic, and unable to do any work. Eventually she regained her health completely. I ought to add that I have been informed that this case was at first reported to the committee of the Clinical Society as one in which total excision had not been followed by cachexia strumipriva. It is not so described in the report, a further communication having been made to the committee, stating the subsequent history of the case.

The enlargement of the portion left behind after partial removal of goitre is not always certain to occur, although it usually does. I will mention another case bearing upon this

point. A few years ago I saw a man whose thyroid gland had been, I was told, completely removed on account of goitre. He was in good health at the time, and I could find no trace of goitre in his neck. This case appears in the report of the committee as one of total extirpation without cachexia strumipriva. But I have seen a photograph of the patient before operation, and I have seen the tumour that was removed, and both point strongly towards the conclusion that the case was one of removal of a tumour of the thyroid, not of the whole organ.

Now, if I know of two cases like these, which have been published as examples of total extirpation without cachexia strumipriva, how many more similar ones may there not be of which I have no knowledge? To say definitely, then, without *post-mortem* evidence that a thyroid gland has been completely removed is, to my mind, well-nigh impossible. Even experienced operators (I mean experienced in operations upon goitre), such as Reverdin and Kocher, speak with a certain amount of hesitation as to the completeness of some of the removals performed by them. They say, however—at least, Reverdin does, and I think Kocher too—that they have had under their care many cases in which, at the time of operation, the whole gland has apparently been removed, that these cases subsequently never showed any sign of return of goitre, and that, notwithstanding, no cachexia strumipriva occurred.

The conclusion, then, at which we may arrive is that if the gland be completely removed there is a very great risk that cachexia strumipriva will supervene, although it is not absolutely certain that it will do so in all cases. The risk, however, is sufficiently great to warrant us in laying down the law that complete extirpation of a goitrous thyroid gland should never be performed.

Leaving, for the present, the subject of total excisions, let us turn now to the much more numerous cases in which a portion only of the organ has been removed. We have to consider the question whether cachexia strumipriva ever follows partial removal of the gland, and also the changes that occur in that portion of the gland that has been left behind. With regard to the first point, the answer to be given is unfortunately Yes; cachexia strumipriva has in some few cases followed partial removal. But the cases in which this has happened are exceedingly few in number, and in them the symptoms of the disease have usually been slight and temporary. The Committee of the Clinical Society state that out of more than 550 cases of partial thyroidectomy, only six presented symptoms of cachexia strumipriva. Zesas, in his last report, mentions two cases in which slight symptoms occurred after partial removal. Bircher has also recorded several, and I can add one unpublished case that I have myself seen, to which allusion has already been made. In some of these cases the symptoms gradually passed off after a few months; in others they persisted for several years; in one only, so far as I know, did death occur. In some of them, possibly in all, there was good reason to believe either that the portion of gland left behind was very small, or that it had undergone degeneration. Kocher's case I myself had the opportunity of seeing. In this, one-half of the thyroid gland had been removed, when it was noticed, too late, that the remaining half was atrophied. No compensatory hypertrophy occurred, and typical symptoms of cachexia strumipriva had set in when I saw the patient a year after the operation.

In discussing division of the isthmus I stated the fact that when a portion of the gland has been removed the remainder is often found to undergo a remarkable shrinking. This has led some surgeons to believe that an atrophy occurs. This diminution in size is in many cases merely temporary, and is due to the escape of the colloid contents from the goitre.[12] If the patient be kept under observation for some weeks or months after the operation, it will often be found that there occurs a gradual re-enlargement of the piece of gland that has remained—that is, if the cause that originally produced the goitre continues to act. And not only will this lobe or part of the gland regain its original size, but it will frequently do more than this—it will become hypertrophied. So common is this hypertrophy that it may often be considered as a test of complete or incomplete removal. For if any part of the gland have been left behind, it will, in young subjects at any rate, usually enlarge and form a tumour easily detected by palpation.

The next point to which we turn our attention is, Does it matter which part of the gland be left behind in order to avoid cachexia strumipriva? In other words, is there any part of the gland the removal of which is especially likely to cause the disease?

In many partial thyroidectomies the portion removed is a tumour of the gland; in these cases, probably very little of the actual thyroid tissue itself is removed. From whatever part of the gland such tumours are removed, no cachexia strumipriva follows. In cases in which the whole gland is diseased, it also does not seem to matter which part of the gland be removed. Thus, speaking only of the cases which have come under my own observation, in some the right half of the gland had been removed, in others the left; in one case the whole gland except the isthmus had been removed; others were the exact converse, the isthmus having been removed, and all other parts left; finally, in many other cases, the whole gland had been removed with the exception of a small piece in various situations, or an accessory thyroid gland alone had been removed. Yet in these cases cachexia strumipriva did not occur. From these facts we may conclude that it is immaterial which portion of the gland be left behind.

With regard to prognosis, Kocher seems to think that the disease always progresses towards a fatal termination. Horsley, from his experiments on dogs and monkeys, has arrived at a somewhat similar conclusion. Reverdin, on the other hand, takes a less gloomy view, believing that many cases recover completely, and that in others a marked improvement may occur. With regard to the disease as it is seen in man, it seems to me to be pretty clear that, although it is certainly very serious, and may in some cases end in death, yet in a considerable proportion of cases life may continue for many years, and complete recovery may occasionally occur. The latter event is especially likely to happen in those ill-marked cases which followed partial extirpation.

In the *Transactions of the Pathological Society* for 1890 I have published a photograph of an extreme case that I saw at Berne; it illustrates the last stage of the disease. The patient lay helplessly in bed, taking little or no notice of what was going on around her; she was quite unable to feed herself or make known her wants. Although the face still presented some swelling, yet every other part of the body was greatly emaciated. She eventually died about four years after the removal of the goitre. In other cases the course of the disease has, however, been different. Fig. 8 was taken from a woman whom I saw at East Linton, in Scotland. The thyroid gland had been completely extirpated eleven years previously. The patient was in fairly good health when I saw her, but she eventually died of cerebral hæmorrhage twelve years and a half after the operation.[13]

In another case that I saw at Geneva, five years after total extirpation of a goitre, the disease, although accompanied by serious anæmia and respiratory troubles, had not caused any diminution of intelligence. The patient's health was improving, and there was no evidence to show that life was likely to be much shortened. In other cases that have come under my observation several years after operation, the symptoms had improved to such an extent that the patients, so far from being in a state of complete imbecility, were able to follow outdoor and other occupations.

It remains only for me to say a few words concerning the treatment of cachexia strumipriva. This has been extremely unsatisfactory. The most important point seems to be to keep the patient warm. Horsley showed that he could keep his animals alive much longer if he kept them warm. Chilliness is a prominent feature in cachexia strumipriva, as in myxœdema. I would suggest, then, that great care should be taken to keep patients with cachexia strumipriva as warm as possible. Let them be dressed warmly with plenty of flannel. If they can afford to do so, let them be sent to some warm climate.

Pilocarpin, jaborandi, and nitro-glycerine seem to have

[12] See an excellent example reported by me in the *Transactions of the Pathological Society*, 1890.

[13] For an excellent account of this case, by Dr Jame Gordon, see *Lancet*, 1886, ii, 65.

proved of service in the treatment of myxœdema, and would probably also be of use in cachexia strumipriva.

It has been suggested that transplantation of thyroid tissue into the patient might do good. On January 19th, 1889, Dr. Bircher, of Aarau,[14] transplanted a portion of tolerably normal thyroid tissue into the abdominal cavity of a patient suffering from cachexia strumipriva. The patient was much benefited, and was able to return to work. Three months later it was evident that the transplanted piece of thyroid had atrophied, as the disease again showed itself and progressed. A second transplantation was made again, and again an improvement—and this time a greater—is said to have resulted, as the patient recovered for nine months. The symptoms then recurred slightly, but the beneficial effect of the operation was, according to Mr. Horsley, indubitably established. Professor Kocher informed Mr. Horsley that as long ago as 1883 he had attempted to obtain the same results by transplanting a small portion of the gland freshly excised from a goitre, but the piece of transplanted gland was soon absorbed.

In 1889 Professor Kocher took up the subject again by transplanting, in two cases, the half of a thyroid gland into the abdomen, fixing it to the wall by sutures. In both the gland was "aseptically exfoliated" after a time. In three cases he put the gland loose in the abdominal cavity. The results of these cases have, I believe, not yet been published, but it is said that one patient has already considerably improved since the operation. Mr. Horsley has suggested that similar operations should be attempted for idiopathic myxœdema. At least two attempts of this kind have been made in this country by Mr. Hurry Fenwick and Dr. W. J. Collins, who have transplanted sheep's thyroids under the breasts of patients suffering from myxœdema. Both these gentlemen have very kindly sent me notes of their cases. In Mr. Fenwick's case the operation was done under very disadvantageous circumstances, when the patient was in the very last stage of the disease. Although some temporary improvement seems to have occurred, yet the patient did not recover, but died two days afterwards. In Dr. Collins's case the whole of a sheep's thyroid, weighing some 6 or 8 ounces, was transplanted. The wound healed without any trouble, and the patient is now, nine weeks after the operation, alive and well, but Dr. Collins tells me he is doubtful whether any improvements that have been noticed in the condition of the patient are substantial or likely to be permanent.

The information that we have, therefore, on the subject of transplantation of thyroid tissue, although not very encouraging, is, I think, on the whole, sufficient to warrant us in giving the operation a further trial before concluding definitely that it is a failure.

[At the close of the lectures several patients were exhibited from whom goitres had been removed by the lecturer.]

THE SURGICAL TREATMENT OF CARCINOMA OF THE STOMACH AND INTESTINES.[1]

By FREDERIC BOWREMAN JESSETT, F.R.C.S.Eng.,
Surgeon to the Cancer Hospital, Brompton.

THE object of this paper is to give my views and experience of the best method of treating surgically carcinoma of the stomach and intestines.

Carcinoma of the Stomach.—The stomach may be attacked either at the cardiac end, the body, or the pyloric orifice by carcinoma, and different forms of operative treatment have been practised when the disease exists in each one of these situations. When the disease is situated at the cardiac end or body of the viscus, it is obvious that the only operation that is available to relieve the patient is either to remove the disease, if possible, and unite the cut edges, or to open the canal below the seat of the disease and establish a fistulous opening through which the patient can be fed. On the other hand, if the disease is situated at the pyloric outlet, it may be removed, or a communication may be established between the stomach and jejunum, thereby short-circuiting the passage of food and preventing it passing over and irritating the diseased surface, or these two operations may be continued.

The operations may be classified thus: 1, Gastrostomy; 2, jejunostomy; 3, excision of the disease; 4, Bernay's operation of curetting the disease; 5, pylorectomy; 6, combined pylorectomy and gastro-enterostomy; 7, gastro-enterostomy.

The preparation of the patient is much the same in all these operations; only such nourishment as can be readily assimilated should be given by the mouth, and if the disease is situated at the pyloric orifice the stomach should be kept washed out with some antiseptic solution; I use salicylate of soda and water, 20 per cent. The patient should in all cases be fed by nutritive enemata and suppositories. I always give an enema of brandy and beef-tea just before the operation, and I am in the habit of placing the patient on hot water cushions during the operation.

Abdominal Incision.—This again applies to all the operations under consideration. In Fig. 1 will be seen the different

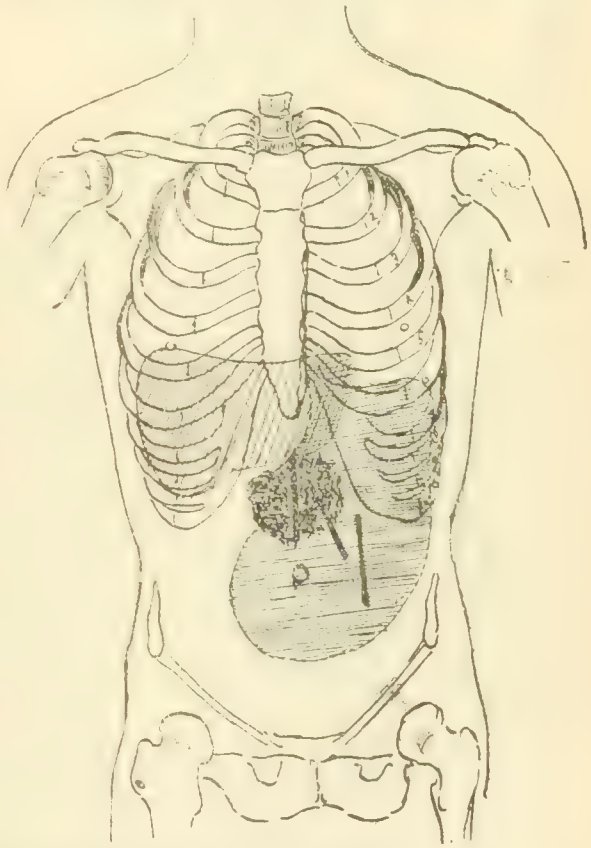


Fig. 1.—Showing different incisions adopted in pylorectomy and gastro-enterostomy.

situations in which the incision may be made. If the growth is small and the object of the surgeon is to excise the disease, or in cases of gastrostomy, jejunostomy, pylorectomy, and certain cases of gastro-enterostomy, the median incision is the most convenient. If the growth is at the pylorus, fixed, and so large as to extend over to the left of the middle line, as shown in the figure, the stomach being much dilated, then the operation of gastro-enterostomy is the only available operation, and the incision over the left linea semilunaris will be found to be the best. Billroth has recommended the third or oblique incision, but excepting for gastrostomy, I have no liking for it. The advantages of the incision in the left linea semilunaris are that the dilated stomach is more readily turned up and the origin of the jejunum is directly under the incision.

Gastrostomy and Jejunostomy.—In performing these opera-

[14] Horsley, BRITISH MEDICAL JOURNAL, 1890, ii, 201.

[1] Being a summary of a paper read at the meeting of the British Medical Association at Birmingham, July, 1890.

tions I have recently adopted a novel method of uniting the stomach or intestine to the parietal wound which is depicted in Fig. 2. The abdominal incision being made about

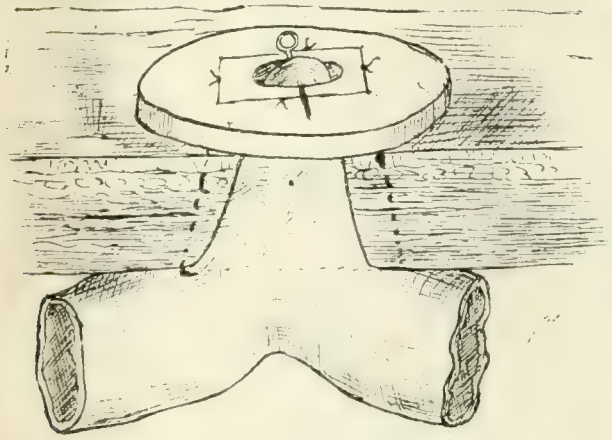


Fig. 2.—Showing method of performing gastrostomy and jejunostomy with bone plate on abdomen.

two or three inches long either in the middle line or parallel to the ribs, a portion of the stomach or a loop of the intestine is drawn through the wound. A long straight needle, armed with silkworm gut or chromicised catgut, is passed beneath the serous and muscular coats of the viscus in a longitudinal direction for about 1½ inch on one side, another suture is passed in a similar manner parallel to the first and about 1 inch from it; two other sutures are then passed from the points of exit of each of the longitudinal sutures on one side and brought out at the point of exit of the opposite longitudinal suture, thus forming a parallelogram between the four sutures, the sutures armed with needles are next passed through the whole abdominal parietes about half an inch from the cut edges, and passed through a bone or other plate with an opening in the centre and held in position by clamp forceps while a couple of sutures are inserted at each end of the incision through all the parietes and tied. A small portion of the viscus is next caught up, by passing a pair of clamp forceps through the opening in the plate, and drawn through it; a hare-lip pin is then passed through the coats of the viscus, which is thus fixed. In the course of two or three days the gut is readily opened by cutting down on the pin. It is well to pass a suture through the cut edges of the viscus on each side and fasten it to one of the sutures crossing the plate. A winged soft india-rubber catheter is passed through the opening into the viscus and the patient fed through it.

I have been well pleased with the result of the operation in the three cases in which I have tried it, as the opening resulting is very small, and there is little or no leakage of gastric or intestinal fluid. In the three cases in which I performed this operation the patients were able to feed themselves by means of a funnel attached to the india-rubber catheter. One man, who was suffering from extensive carcinoma of the stomach, lived in comparative comfort for nine months after the operation—another six months.

Excision of the Diseased Portion of the Stomach.—Should carcinoma exist in the anterior wall of the stomach and be diagnosed very early, there should be very little difficulty in removing it by excision, but the early symptoms of carcinoma of the stomach are so obscure, that unless a distinct growth is felt to exist, the surgeon would not be justified in advising operation. Should, however, a small growth be discovered, and on opening the abdomen it is found to be limited in extent, there would be no difficulty in removing it. For this purpose I would advise the median incision between the ensiform cartilage and the umbilicus. The portion of stomach in which the growth is situated should be drawn through the wound, and removed either with scissors (which I prefer) or the knife. Any bleeding point should be ligatured with fine catgut, and the wound in the stomach closed by a couple of rows of Lembert sutures of fine silk.

In this operation the stomach should be washed out on the morning, and again just before its performance, with a solution of salicylate of soda. For the twenty-four hours succeeding the operation, only a little warm water should be allowed to be taken by the mouth, after which time, if there is no vomiting, small quantities of peptonised milk at frequent intervals might be given.

Bernay's Operation.—I have had no experience of curetting the disease. It does not commend itself to me, but Dr. Bernay expresses himself as well satisfied with the result in some cases in which he has practised it.

Pylorectomy.—Since the year 1879, when M. Péan first performed this operation for pyloric carcinoma, it has been repeated from time to time by Billroth, Wölfler, and Czerny on the Continent with a small percentage of successes. In this country the operation has been performed a few times, and with only one successful result. The causes of this high rate of mortality are not far to seek, as patients rarely come under the care of the surgeon until their strength is so far reduced, that the shock alone in many instances has been responsible for the fatal result. This cause is more especially applicable to the operation as performed until Senn introduced the use of decalcified bone plates, thus doing away with the complicated system of sutures that had previously been employed, and reducing the time of its performance to from half to three-quarters of an hour. The different methods that have been practised of uniting the stomach to the duodenum after excision of the pylorus are well represented in Figs. 3, 4, and 5.

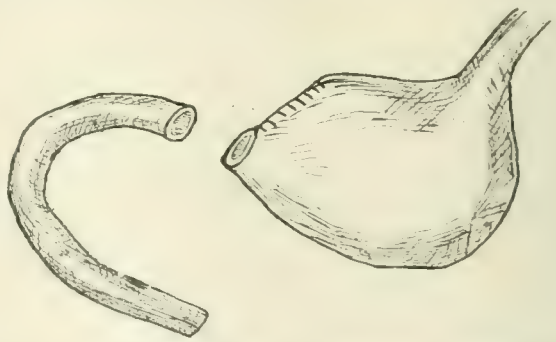


Fig. 3.—Stomach united obliquely from above the duodenum to be united at lower angle.

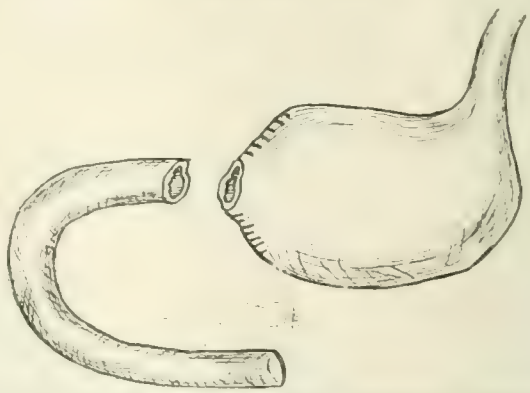


Fig. 4.—Stomach united above and below; opening for fixing duodenum in centre.

In Dr. Rawdon's (of Liverpool) successful case, the disease was limited and freely movable, and the patient was in a favourable condition for operation. The pylorus was excised, and the divided ends of the stomach and duodenum were united by (Fig. 6) decalcified bone plates. The operation was not nearly so protracted as would have been the case if it had been performed by the old method.

Another cause of failure in these operations can be traced to the very limited length of the duodenum, which is covered by peritoneum, so that if the disease is at all extensive, it is nearly impossible to leave a sufficiently long piece of duo-

denum so covered to unite to the stomach. In any case there must be a very considerable drag and fear of leakage.

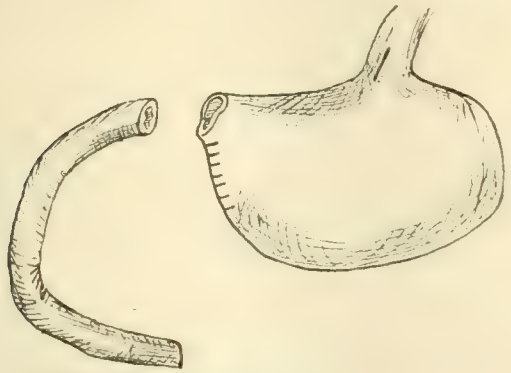


Fig. 5.—Stomach united from below the duodenum to be united at upper angle.

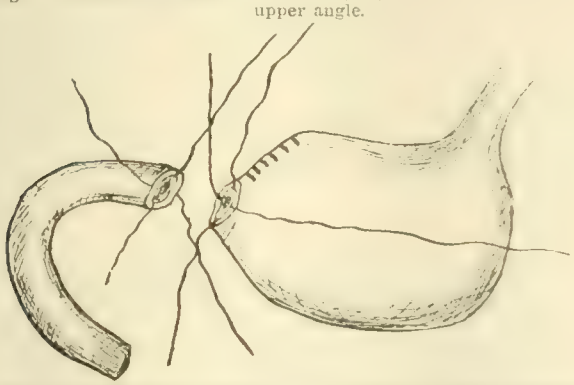


Fig. 6.—Pylorectomy. Stomach and duodenum united by decalcified bone plates.

Combined Pylorectomy and Gastro-Enterostomy. The high rate of mortality attending pylorectomies led surgeons to devise another operation. The combined operation has been performed by Billroth and N. T. Bull of New York, and had been suggested by myself quite independently, though I had not an opportunity of carrying it out. It is performed by excising the pylorus and closing the divided ends of the stomach and jejunum, and restoring the continuity of the canal by uniting the jejunum with the anterior part of the stomach by means of approximation discs (Fig. 7), thus combining pylorectomy with

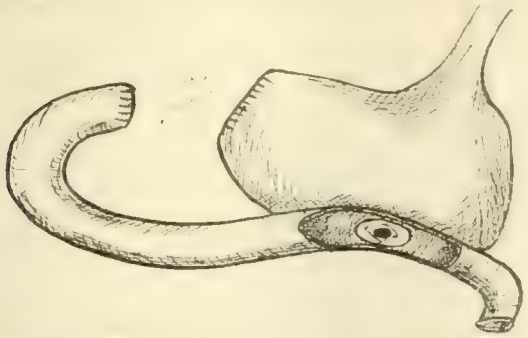


Fig. 7.—Combined pylorectomy and gastro-enterostomy.

gastro-enterostomy. Both the cases thus performed were so successful in their result, that in the future I should always practice it in preference to performing pylorectomy alone, even if the disease were ever so small and movable; as, by adopting this measure, the surgeon would be able to remove without extra risk a much larger portion of the stomach, and ensure being perfectly clear of the disease.

Gastro-Enterostomy.—Should the disease be so extensive that the pylorus and a considerable portion of the stomach wall are affected, or if the disease has fixed the pylorus to the neighbouring parts, it is useless to attempt its removal. Much can, however, be done to prolong life and to relieve suffering by gastro-enterostomy, which was introduced by Wölfler; the operation, as suggested by him, was attended with such a high mortality owing to the length of time occupied in performing it, that surgeons were slow to recommend patients to submit to it, and it was not until Senn had placed before the profession the result of his experiments, which I with considerable labour confirmed in this country, that the operation met with much favour.

Mr. A. E. Barker's[2] case is the first one which had been performed by the method of suturing the stomach and intestine together in this country. Mr. Barker made in his case a very considerable stride in lessening the risk of the operation by fixing one side with a double row of sutures before opening either viscus. I performed a similar operation successfully[3] so far as the union of the stomach and intestine was concerned, but the patient died on the seventh day from kinking of the gut.

Gastro-enterostomy by Senn's method (Figs. 8 and 9) is



Fig. 8.—Gastro-enterostomy; showing bone plates in position.



Fig. 9.—Gastro-enterostomy: operation completed.

now, however, a recognised operation. I have performed it five times with three successes. It has also been performed twice by Mr. Kilner Clarke, of Huddersfield; once by Mr. Stansfield, of Birkenhead; also by Messrs. Mayo Robson and Brown, Leeds; Beatson, Glasgow; Paul, Liverpool; and Bennett and Symonds, of London, as well as others.

The different steps of the operation have been so often described by me in these columns, that there is no need to repeat the description here. There are, however, one or two remarks which I consider of practical importance, namely:—

[2] British Medical Journal, vol. i, p. 294, 1886.
[3] British Medical Journal, vol. i, p. 962, 1888.

1. The incision through the parietes. If the pyloric growth is small and movable, or does not extend over to the left too far, I think the median incision between the ensiform cartilage and the umbilicus is handier. If, however, the stomach is much dilated and the growth large, the incision in the left linea semilunaris will be found by far the best. In catching up a loop of intestine the usual direction given to turn the great omentum over to the left is wrong. If this is turned up and over to the right and the index finger passed down to the right of the spinal column along the lower side of the transverse mesocolon, the notch in the peritoneum where the duodenum ends and jejunum commences will be readily felt, and it is easy to catch up a loop of the jejunum quite at its commencement. The importance of attaching the small intestine as near to its origin as possible cannot be over-estimated, and the practice of catching up the first portion of a small intestine that presents itself is highly to be condemned, as I have proved on the cadaver over and over again that by adopting this practice the surgeon may find to his mortification, that although the operation *per se* is successful, yet his patient dies of marasmus, and on a *post-mortem* examination it is discovered that he has fixed a portion of small intestine within a few feet of the ileo-cæcal valve to the stomach. Such cases have been recorded.

2. A danger that has been experienced certainly in one case of gastro-enterostomy is the closing of the opening between the stomach and intestine. To avoid this, it is important that the opening should be made sufficiently large (1¾ inch), and it may be well to stitch the mucous and serous membranes of each opening with a continuous catgut suture; this will serve the double purpose of preventing the opening from closing, and also the mucous membrane from bulging into the wound. This difficulty will be also overcome if care is taken to pass the lateral sutures quite closely to the cut edges; by this means the incision is kept well opened, and the fear of its closing is practically *nil*.

3. The sutures used for the plates should be of chromicised catgut, not silk, as recommended by Senn. My reason for insisting upon this is that in every case in which a *post-mortem* examination has been made, although many weeks or even months after the operation, the silk sutures have been found still hanging in the wound, and thus forming a fruitful source of future obstruction. After the plates are tied, it is advisable to introduce a few Lembert sutures over the end of them to prevent their tilting. It is not at all necessary to suture them all round, as lately suggested by Senn.

Carcinoma of Intestines.—In all cases of carcinoma of the small intestine, which as a primary disease is rarely met with, I should not hesitate to open the abdomen; and if the disease was not adherent to neighbouring viscera, excise the portion of intestine. The divided end should be inverted, and the serous surfaces secured by a continuous catgut or fine silk suture. The continuity of the canal should be provided for by inserting the bone plates (Figs. 10 and 11), as shown in the



Fig. 10.—Ileo-ileostomy; showing bone plates in position and ends of intestine invaginated.

diagram, being always careful to apply the two ends of intestine end on. This is important to bear in mind, as if they are applied with the ends directed in the same direction there would be a liability of obstruction on account of the acute angle in which the flow of fæces would have to take.

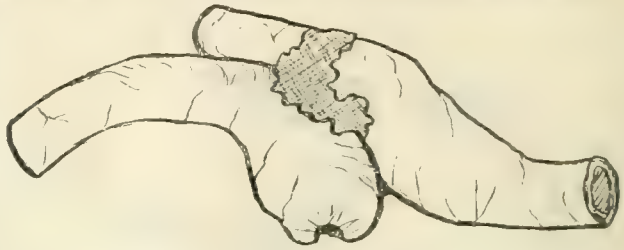


Fig. 11.—Ileo-ileostomy completed.

When carcinoma is present in the cæcum, abdominal section should be performed with a view of excising the diseased portion of intestine: if this is found to be impossible, on account of the extent of the growth or its fixity, then the ileum should be cut across, the divided distal end inverted, and closed with a continuous suture. The transverse colon should be divided, and, the cæcal end being washed out and emptied as far as possible, the divided end should be inverted, and the peritoneal surfaces united with Lembert sutures. The divided end of the transverse should be closed in a similar manner; and, finally, the proximal end of the divided ileum should be implanted into the transverse colon at the distal side of the cut end, in the manner depicted in Fig. 12.

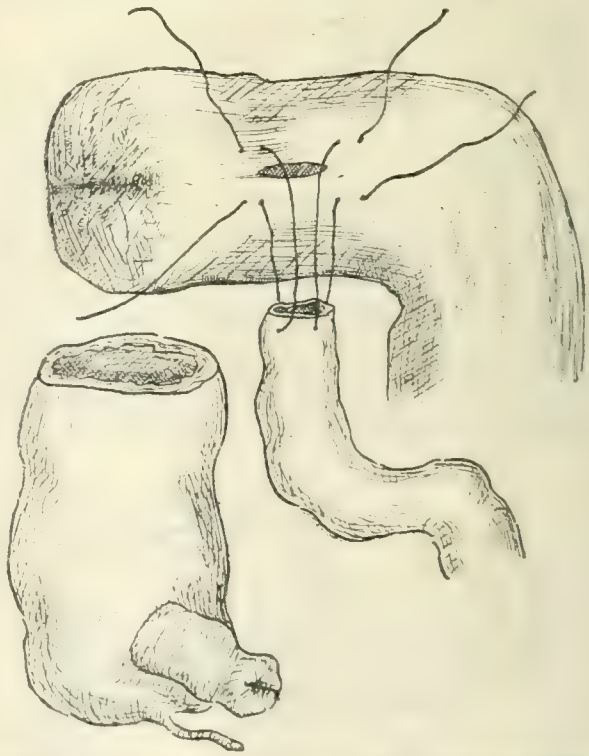


Fig. 12.—Ileo-colostomy; showing ileum with rubber ring in position for implantation.

This method of uniting the small with the large intestine is far better than using bone plates. I have performed this operation twice, and each time with success so far as the operation was concerned. The method is one that was described by Senn, and consists of lining the portion of small intestine with a thin india-rubber ring, fixing it to the divided end of the intestine with a continuous catgut suture, and then passing two long catgut sutures, armed at each end with an ordinary sewing needle; on being passed through the india-rubber ring at its inner-

most edge and all the coats of the intestine, one needle being passed through on one side of the mesentery and the other on the opposite side, the other thread is passed through the ring and intestine in a similar manner on each side of the convex surface of the intestine. The needles are next passed through the serous and muscular coats of the large intestine at each end of a longitudinal incision which has been made in the colon of sufficient length to allow of the passage of the small intestine, which is next pushed into the colon through it. The two pairs of threads are next firmly tied, not too tightly, and a couple of Lembert sutures passed on each side to unite the lateral portion of peritoneum of the colon with that of the small intestine. The results, as shown from a drawing from a specimen, are very perfect (Fig. 13).



Fig. 13.—Ileo-colostomy completed.

The same operation may be performed when the disease attacks any portion of the colon or upper part of the sigmoid flexure, as it is quite as easy to implant a portion of small intestine in the lower part of the sigmoid flexure as it is to implant it into the transverse colon.

PERNICIOUS ANÆMIA: RECOVERY.[1]

By H. HANDFORD, M.D., M.R.C.P.,

Physician to the General Hospital, Nottingham.

PERNICIOUS anæmia terminates fatally in such a large majority of instances that any other result is apt to excite a suspicion as to the correctness of the diagnosis. Nevertheless, a few cases of recovery have been recorded by good observers, and at present we know of no reason why recovery should be impossible. Possibly in the following case an attack of influenza started the process. But I think it may be of advantage to study, in connection with pernicious anæmia, such cases of purpura hæmorrhagica as the one of which I give a few details at the end of this paper, where a blood poison is evidently very actively at work.

The following case presented all the symptoms of pernicious anæmia to a most marked degree, and at one time the patient was in imminent danger of death. He has now been gaining his living as a hawker for the past eight months, and may fairly be said to have recovered. Whether he will relapse, as other cases have done, and die of the disease in the end remains for the future to determine.

J. H., aged 17, a farm labourer, was admitted into the Nottingham General Hospital on April 23rd, 1890, complaining of vomiting, extreme weakness, and frequent painful micturition. He had a light complexion with fair hair, and had always been pale. He had had no previous illness and had a good family history. His weight was 7 stone 5½lbs. He lived in an elevated district, on a light sandy soil, where malaria is unknown. He dated his illness from what appeared to have been an attack of influenza in January, 1890. Since that time he had been frequently sick after food, but had never vomited blood. He had a fair appetite, no pain at the stomach, and had not lost much weight. For some weeks he had had pain over the bladder and frequency of micturition, but this very soon ceased after he came into the hospital, and no cause for it was discovered except the irritating qualities of the urine.

On admission, he was extremely pale and very feeble. The skin was moist, unduly transparent, and lemon coloured. The sclerotics had a distinct yellow tinge. (His illness had been diagnosed as jaundice.) The spleen could be felt 2 inches below the ribs, and it afterwards became larger and harder, and the notch could be distinctly felt. The liver was enlarged, the dulness extending 4¾ inches downwards from the fifth rib to just below the costal margin. This is of some significance taken in connection with the well known accumulation of iron in the liver in pernicious anæmia. The heart's impulse was feeble and diffused and extended to the left as far as the nipple line in the fourth space. There was a systolic murmur at the apex and in the pulmonary area. There was also a rough superficial systolic murmur audible over the sternum between the two second costal cartilages. It was thought to be pericardial. The urine was always very high coloured—like brown sherry—generally of low specific gravity (1012 to 1016), and contained neither albumen nor bile, but always deposited a large quantity of bright-coloured urates (? purpurine).

On examining the blood, even to the naked eye, a drop appeared pale and watery. The coloured corpuscles were pale, and some of them almost colourless; they varied greatly in size, a few reaching $\frac{1}{3000}$ inch, and many being below the normal average. In a considerable number of cells the hæmoglobin was collected into one or more masses, and in some was in the process of being extruded, producing a budding appearance. The liquor sanguinis was distinctly coloured. The white corpuscles were increased in number relatively, being about 1 to 20 coloured; but as the coloured were diminished down to about 4 per cent. of the normal, the actual number of leucocytes was only equal to the average. The enumeration of the coloured corpuscles on three occasions during the first ten days gave per cubic millimetre 164,000, 213,570, and 154,655 instead of 5,000,000, or an average of 4 per cent. nearly. The hæmoglobin was 10 per cent. of the normal. Thus the corpuscular richness was diminished much in excess of the loss of hæmoglobin, so that, as is stated to be the rule in pernicious anæmia, the hæmoglobin value of each corpuscle, according to the usual calculation, had increased two and a half to three times. I doubt if this supposed increase in the hæmoglobin value of each corpuscle really exists, but believe the true explanation to be that much hæmoglobin has become extravasated into the serum, partly no doubt from the existing corpuscles, but largely from those already destroyed, and that this hæmoglobin in the serum is included in the calculation. By May 14th the hæmoglobin had risen to 35 per cent. and the corpuscles to 12 per cent.; by May 30th to 40 per cent. and 14 per cent.; by July 14th to 60 per cent. and 23 per cent.; by August 4th to 55 per cent. and 26 per cent.; by September 28th to 50 per cent. and 46 per cent. At this period (September 28th) the hæmoglobin corresponded with the corpuscular richness. The lemon-coloured, jaundiced appearance of the skin had disappeared, and also, as seen under the microscope, the blood serum had lost its yellow tinge. The spleen had diminished in size so that it could no longer be felt; and, in fact, the case had become one of simple anæmia.

During his illness the patient had two periods of high temperature, each lasting rather more than a fortnight, and with just one week's apyretic interval between them. The course of the temperature was irregular, with an average of 101° F., and an upper extreme of 103.2°. After May 29th the temperature never rose above 100.5°. Three days after admission the retina was examined, and found pale but otherwise normal. A fortnight later there were numerous hæmorrhages; six were counted in the left eye and eight in the right. Three weeks later they had become absorbed, leaving little trace. Vomiting was a very troublesome and urgent symptom, which continued more or less for many weeks. For the first fortnight he vomited from one to seven times daily. The rejected matter consisted sometimes of food and sometimes of greenish watery fluid. He had no epigastric pain, and the vomiting had no definite relation in time to the taking of food. For rather more than the first fortnight he was generally delirious at night.

[1] Read before the Midland Branch of the British Medical Association.

The treatment was mainly by arsenic, in doses varying from 5 minims of the liquor arsenicalis three times a day up to (on May 10th) 15 minims four times a day; or 1 drachm in the twenty-four hours. On May 1st, a few grains of the ammonio-citrate of iron were added to each dose. The irritable condition of the stomach prevented arsenic being taken in as large doses as would otherwise have been desirable. Small doses of morphine were for a time combined with the arsenic to facilitate tolerance. The vomiting was most urgent before the arsenic was commenced, and could not, therefore, be due to it. During the course of the treatment, a patch of herpes developed below the left clavicle, and there was eventually well-marked arsenical pigmentation. When made an out-patient on September 29th, 1890, he had gained 9 lbs. in weight.

Forming a contrast by its rapid course, but in other respects presenting a strong resemblance, the following case of purpura hæmorrhagica is worthy of record: A boy, aged 10, who had always been rather delicate, was taken ill on March 13th with headache, feverishness, and vomiting. He was seen by Dr. Travell on March 16th, and found to be suffering from a severe attack of purpura. On the afternoon of March 17th, as his condition seemed grave, I was asked to see him in consultation. He was very pale, had a large hæmorrhage into the lower lip, and was very apathetic. On the legs and the lower part of the trunk were numerous purpuric spots. The temperature was 101.2°, pulse 140, and he suffered much pain at the epigastrium, worse after food. In the past twelve hours there had been very profuse hæmaturia, and he also had melæna. There was distinct optic neuritis in the right eye, and some old choroiditis with pigmentation in the left. Seven-grain doses of gallic acid every six hours stopped the hæmaturia within two days. Before the hæmaturia came on he had been treated by 5-minim doses of turpentine, but had only taken 20 to 30 minims in all. Afterwards liquor arsenicalis was given in doses of 5 minims with iron; but in spite of treatment he died on March 21st, the total duration of illness being under nine days.

A CASE OF INFANTILE SPASTIC DIPLEGIA, WITH TREMORS OF THE "DISSEMINATED SCLEROSIS" TYPE.[1]

By T. C. RAILTON, M.D.Lond., M.R.C.P.,
Physician to the Manchester Clinical Hospital for Women and Children.

A. T., aged 9, was admitted into the Manchester Clinical Hospital in February, 1891. The parents are said to be healthy, although there is an account of five dead-born children out of a family of thirteen, the reason alleged being that the mother always bore big children, and was delivered with difficulty. There is, however, no appearance of congenital syphilis about the patient, nor about another of the children who was brought to the hospital for examination, nor does the early history of the patient point in that direction. She was born after a prolonged labour with breech presentation, but did not show any symptoms of asphyxia immediately afterwards. She was brought up at the breast, and cut her teeth early. It was soon remarked that she was unnaturally quiet, that she did not toss her limbs about like other infants at the same age, and she did not begin to "notice" until she was about 2 years old. It was also observed that her head seemed disproportionately large and that when she was lifted up it drooped as though too heavy for her. A medical man, consulted on the subject, said, however, that it was not "water on the brain." There has never been any attempt at walking; in fact, she can barely stand now, and only for a very short time when holding herself up with her hands clinging to the rail at the foot of her bed. When 2 years old she had a fit, and a year later two more attacks in the same day, but has had none since. A few months before the first fit her hands were noticed to shake when she used them.

At the present time her appearance is peculiar, and rather gives an impression of imbecility. She has an extremely large head (56½ centimetres in circumference), globular in shape (antero-posterior diameter, from root of the nose to occiput, 19 centimetres; transverse diameter, 17 centimetres). Both size and shape are suggestive of hydrocephalus, but no other evidence of that disease is now perceptible. The forehead, though normal according to age, is relatively narrow. There is internal strabismus which has existed from birth, but neither paralysis nor spasm of any of the muscles of the face. The fundi of the eyes are normal. There are no tremors of the head, tongue, nor lips; no nystagmus, no scanning nor drawling speech, and no vertigo. In intelligence she is backward, and can neither read nor spell, though able to answer simple questions sensibly enough, after the fashion of a child much younger. Part of her mental deficiency may be due to want of education, which has been entirely neglected, and this also may perhaps account to some extent for the uncontrollable temper she occasionally exhibits.

All the superficial reflexes are present and active. Her chest and abdomen are free from disease, and her limbs are well nourished, firm, and symmetrical, the muscles reacting normally to electricity. There are no signs of her having suffered from rickets. She is able to sit up without support. In the arms there is no rigidity perceptible on passive movement. When she raises them voluntarily they show a fine tremor, which persists so long as they remain unsupported, and when she attempts any action requiring precision the movement changes to a coarse oscillation, which gradually becomes extreme as she approaches attainment, in exactly the same manner as the tremor of disseminated sclerosis. Thus, she cannot convey a glass to her mouth without spilling its contents, and cannot feed herself. Her difficulties are increased by the fact that, in addition to the clonic spasms, there is considerable awkwardness (inco-ordination) in the way she grasps objects. The movements cease entirely as soon as the arms are at rest.

As is usual in birth palsies, the brunt of the mischief has fallen upon the lower extremities. As she lies down, these remain in a condition of nearly complete extension, with the exception of the left leg, which is slightly contracted at the knee. When raised from the bed the feet have a fine tremor. On passive moment there is distinct resistance. The knee-jerks are exaggerated, and ankle clonus is readily obtainable. When supported under the arms the patient is able to bring one foot alternately in front of the other, with the toes dragging on the ground, and during this exercise she complains that her feet "shake." There is well-marked rigidity of the legs when in action, but little or no spasm of the adductors of the thighs. When she attempts to stand, holding on to some support, her legs are habitually bent at the knees.

She is extremely sensitive to touch; the slightest prick of a pin anywhere about the limbs or body produces a universal involuntary twitching, extending even to the muscles of the face.

This case is interesting from its similarity to one of sclerosis in patches. The tremors, paresis of legs with contracture at the left knee, the retention of normal electrical reactions, the exaggerated knee-jerks, the ankle clonus, and finally the mental deficiency, all combine to impart a superficial resemblance to that disease which might well prove misleading at first. The distinction between the two diseases, however, becomes comparatively easy upon closer investigation. In the first place the history of the case very clearly points to an injury to the cerebral cortex from meningeal hæmorrhage at the time of birth, rather than to the gradual development of a progressive disease, the patient, one might almost say, having remained *in statu quo* from birth. This conclusion is further supported by the absence of any peculiarity in the speech (a drawling, "die-away" voice being an almost invariable concomitant of disseminated sclerosis), by the total absence of tremors of the head or vertigo, and still more by the presence of the remarkable sensitiveness of the skin to stimuli, which is not observed, so far as I am aware, in connection with sclerosis in patches, but has been previously reported in certain cases of infantile spastic paralysis. As regards the presence or absence of nystagmus—absent in this case—as it is equally met with in both diseases; its presence here would not have been of assistance in forming a diagnosis.

It seems very possible that there may have been some hy-

[1] Read before the Manchester Medical Society.

drocephalus prior to birth which predisposed to the injury to the brain during delivery, but of this there is no proof beyond the fact that the head is, and always has been, of abnormal size, and the injury itself, with subsequent arrest of development in the motor tracts, appears adequate to account for the various manifestations described above.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF INFLUENZA WITH CEREBRAL SYMPTOMS.

AMONG the many interesting varieties of influenza that have been described, the following peculiar form seems to be of sufficient interest to warrant publication, as it is only by the record of these anomalous forms that the history of the epidemics of 1890 and 1891 can be written with completeness.

On June 3rd S., a fine healthy lad of about 20 years of age, went to work in his garden as usual, but about 3 o'clock in the afternoon while stooping down he felt a violent pain in the head, became giddy, and vomited. After some time he was well enough to go home, and about 5 o'clock on the same day I saw him. He was lying in bed with his head rather drawn back, complaining of violent pain in the frontal region and at the back of the eyes, which were tender to pressure, with stiffness and pain in the neck. Pulse was 60, slow, but high tensioned; tongue large, flabby, and thickly furred; temperature 98.4°. He had been sick several times since the first onset, but he said that in that respect he felt better. The light was painful to him; pupils normal and reacted to light. The day was warm but not hot, and the sky overcast. I treated it as a case of influenza without any rise of temperature.

On the following day there was a good deal of mental confusion, and he seemed to have lost consciousness of events immediately following the attack in the garden. Temperature normal, pulse 70, face flushed and red; the bending back of the head with pain about the neck and frontal region continued. He was given quinine and the symptoms gradually improved, the pulse became softer, the pain in the neck less, but there was some double vision from time to time, and the frontal pain was the last to disappear. In about ten days he was well enough to go for a change of air.

The interesting features of the case are the absence of fever, and the peculiar cerebral symptoms resembling to some degree sunstroke. I suppose one might call it a case of meningitis of influenzal origin, though this seems to be a rare form of the disease.

Sevenoaks. JAMES E. BLOMFIELD, M.B.Oxon.

ON THE RELATION BETWEEN INFLUENZA AND PNEUMONIA.

THE recent epidemic of influenza has been so markedly associated with the occurrence of pneumonia as a sequela, and only too often a fatal sequela, that it should be a matter of the greatest importance to ascertain, if possible, the relationship between the two.

In common with most practitioners I have seen two varieties of the pneumonia of influenza—the splenic form of lobar pneumonia, localised in one lung, of greater or less extent, and a broncho-pneumonia, which appears to be due to an extension of inflammation from the bronchi into the alveoli, and is associated from the first with profound asthenia and a thin plum-coloured expectoration. This form of the disease occurs in patients who are at once greatly prostrated by influenza, which keeps them in bed until the case ends in recovery or death from asthenia. The temperature, as a rule, keeps pretty high, ranging from 100° to 103°, and seems to be a fairly definite ratio to the amount and extension of the pneumonia.

The other and more fatal variety occurs mostly in patients who have had a less sharp attack of influenza, and have insisted upon going out while still feeling weak. Such cases have merely complained of headache and pain in the back or limbs, but have not been troubled with cough or expectoration, while the temperature may not have been raised for more than twenty-four hours. At the same time, with, may be, a normal temperature, there will nearly always be heard at one or both bases of the lungs some very sticky crepitant *râles* on inspiration. These are exceedingly constant in the early stages of influenza, but from the absence of symptoms pointing to lung complications may easily be overlooked.

It is easily understandable that patients walking about with these *râles* and with the pulmonary condition causing them will be specially liable to get pneumonia if exposed to chill or fatigue, and this fact will go far to explain why it is that so many bad cases of pneumonia have occurred amongst men in the prime of life, who have as they have thought recovered from slight attacks of influenza.

The materials for the production of pneumonia are latent and need only the influence of cold and exposure to burst into the full disease, while the depressing influence of the influenza has too often diminished the powers of resistance and taken away all hopes of recovery.

ROBERT M. SIMON, M.D.,
Physician, General Hospital, Birmingham.

PHENACETIN IN INFLUENZA.

I AM enabled to give the fullest corroboration to the testimony borne by Dr. Henry to the excellent effects of phenacetin in epidemic influenza. During the present epidemic I have used it in the early stages of the illness almost to the entire exclusion of other drugs. I usually prescribe it in doses of from five to ten grains, given either in cachets or suspended in milk, with directions that it is to be repeated in an hour if the pains are not fully relieved, and then every four hours till the patient is seen again. As a result it has been my experience that the headache and pain in the eyeballs, back, and limbs have been relieved certainly after the second dose; a satisfactory condition of diaphoresis has been induced; and on my visit the next day the temperature is almost invariably normal, or thereabouts. I should also add that, as a rule, I give at the same time a dose of calomel, followed by a seidlitz powder three hours later. Comparing the results of treatment in the cases in which I have used phenacetin with those of the previous epidemic, in which I relied on antipyrin and salicin, I am fully convinced of the superiority of the former method. The greater rapidity with which the pains are relieved is very striking. I have seen no bad symptoms whatever as the result of the use of the drug, though I always exercise particular caution with regard to the dose in the case of elderly or debilitated patients. In my opinion, both for cases of influenza and as an analgesic in neuralgia and migraine, phenacetin should rank as one of the most valuable of our more recently acquired pharmaceutical preparations. ARTHUR H. WEISS CLEMOW, M.D.
West Kensington.

UNIVERSITY OF TEXAS.—A medical department will be opened at Galveston, in connection with the University of Texas, in the autumn of the present year. The buildings are fitted with all the necessary equipment for the teaching of medicine and surgery and the ancillary sciences. A three years' graded course of instruction will be given, each *annus academicus* to consist of eight months. There will be nine professors "to begin with," who will be paid on the average 3,000 dollars each for the session. "Comparatively young men, possessed of elements of success and capabilities of making reputation for the institution, would, in the main, be preferred." If there are any "comparatively young men" who would not mind exchanging the barren pavements of London for what Johnson would have called "the potentiality of growing rich beyond the dreams of avarice" in the Great West, they might think it worth while to apply to Dr. Thos. D. Woolen, of Austin, Texas, President of the Board of Regents of the University of Texas, who would, no doubt, give any information that might be required. It may be mentioned, as a matter not altogether irrelevant to the subject, that Galveston is a growing place, and is believed to have a great commercial future before it.

BEQUEST.—Under the will of the late Miss Nelson, of Wigton, the Cumberland Infirmary is entitled to a legacy of £1,000 free of duty.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

THE NEW VICTORIA INFIRMARY, GLASGOW.

A CASE OF ACUTE TRAUMATIC TETANUS CURED BY LARGE DOSES OF CHLORAL HYDRATE.

(Under the care of A. ERNEST MAYLARD, B.S., M.B.Lond., Senior Surgeon to the Infirmary.)

[Reported by Drs. ANDREW and STEVENSON.]

A MESSAGE boy, aged 14, was admitted to the infirmary on August 9th, 1890, with "lock-jaw" and general tetanus of trunk and lower extremities. His illness commenced twelve days before. He was running about bare-footed in his master's yard when he suddenly trod upon a rusty nail projecting from a plank of wood. The nail ran into his left foot on the plantar surface near the heel. The wound was poulticed the same night, and the following day he returned to his work. This he continued to do until seven days after his accident, when he commenced to feel severe pain in the calf of his leg. Three days later his mother noticed stiffness about his jaws, and that, in speaking, he did so through his teeth. Two days later he was brought to the infirmary.

Condition on Admission.—His face presents the typical risus sardonicus. Every five or ten minutes he is thrown into an opisthotonic position. When the back is thus arched he cries out that his abdomen may be pressed upon. This seems to give relief. On examination of the foot, there is no open wound, but a small scar indicating the original position of the puncture. No swelling exists, and manipulating the foot invokes a spasm, as does touching or moving him elsewhere. He is able to swallow. Three drachms of the syrup of chloral (30 grains) ordered to be taken every two hours until seen to have some effect, and as much nourishment as he can be got to take.

August 11th. The boy is profoundly under the influence of chloral. He has now taken in twenty-four hours 1¼ ounce (7½ ounces of the syrup). His spasms are less frequent and less severe. He will have his spasm and then fall back again into a deep slumber. Chloral to be reduced to 2 drachms of the syrup every two hours and watched. Calomel g. vj as an aperient.

August 12th. Spasms now only about one in the hour; can be got to swallow a fair amount of fluid nourishment. Has taken twelve doses of the chloral syrup in the last twenty-four hours (three-quarters of an ounce of chloral hydrate). A turpentine enema has failed to open the bowels. Calomel, 10 grains, ordered. Chloral to be continued as before.

August 13th. Spasms very much less, only eight in twenty-four hours. The bowels being still unmoved, 1 minim of croton oil administered, when a free movement took place. He is taking more nourishment; egg and port wine ordered. Chloral still to be continued as before.

August 22nd. Since the last note, the patient has slowly improved. He still has opisthotonic spasms, but of a very slight character as compared with the earlier ones. They are induced by the least exertion on the part of the patient. In his own words: "When I speak I goes up." There is a marked contrast between the conditions of the two legs. The left is somewhat swollen from the foot almost to the groin, and when touched becomes quite rigid, the right leg remaining comparatively flaccid. His body was covered with a typical chloral rash, which appeared on the 17th, but has now gone. Chloral has been administered intermittently, and increased or diminished according as the spasms showed increase or decrease in frequency.

September 8th. Since discontinuance of the chloral on the 6th, the patient has hardly, if at all, slept. This morning he had peculiar hallucinations, for example, balls of different colours were going to fall upon him. He shouted and yelled at the highest pitch of his voice. The fits on several occasions have had quite an epileptiform character. He had never before been subject to fits.

September 22nd. Since last note patient has much improved. No further fits nor hallucinations. He eats and sleeps well.

October 1st. He gets up and walks about now, but is unable to use his left foot properly. On examination, there is a slight swelling in the sole, painful on pressure.

October 15th. The swelling having much increased, Mr. Maylard made an incision into it, and discovered two small splinters of wood embedded in an abscess cavity containing inspissated pus. The abscess was about an inch and a quarter from the surface, and situated beneath the old scar of the nail puncture.

November 13th. The patient has now been perfectly well for some time, and left to-day for a convalescent home.

REMARKS BY MR. MAYLARD.—When I first saw this boy his condition seemed so desperate that I ventured to predict a speedy termination of his case. I felt that if he did not die directly from the disease, he would at least quickly succumb from the exhausting effect of the rapidly recurring spasms. My object in pushing chloral to the extent I did was, if not to affect the spasms, to at any rate give the patient rest in the intervals between them. It in reality effected both objects, for not only did the fits become less frequent and less severe, but the patient, immediately after his spasm, sank back again into a profound slumber. It might almost be said that the drug was pushed to a dangerous extent, but I believe it was the running of this risk that really saved the boy's life. The cessation of the chloral was almost at once followed by the recurrence both in frequency and severity of the fits; while its readministration was in a similarly marked manner accompanied by their abatement. Thus I have felt justified in speaking of the case as one cured by chloral hydrate.

A careful record was kept by the nurses in charge of the number of spasmodic fits the patient had and the amount of chloral administered. Within the first three days he had 215 spasms, the largest number in one day being 82. When the chloral was first administered he took in the course of twenty-four hours, 4½ ounces of the syrup, that is ¾ ounce of chloral hydrate. In the course of three days he took 1¾ ounce of chloral hydrate, and the total amount administered throughout his illness (exactly four weeks) was 5 ounces 5 drachms 20 grains.

The subsequent finding of two little splinters of wood in the sole of the foot was interesting. Although sought for, no evidence could be obtained of there being any local lesion in the foot when admitted to the infirmary. The leg of the affected foot had, however, always been the one to initiate the generalised spasm. The calf muscles would first contract into a round mass like a ball, and then he would be thrown into an opisthotonic position. Had a tender spot been detected in the foot, the latter would have been amputated, and the boy very possibly saved the long and dangerous illness. The case would then have been one to record of a cure effected by removal of the infecting centre.

LIVERPOOL STANLEY HOSPITAL.

CASE OF GRAVES'S DISEASE COMPLICATED BY HEMIPLEGIA AND UNILATERAL CHOREA.

(Under the care of T. R. BRADSHAW, M.D., B.A., M.R.C.P., Physician to the Hospital.)

F. E. N., aged 23, married, was admitted under my care on July 7th, 1890. She had never suffered from rheumatism, and though always considered delicate had had no serious illness before the present train of symptoms began. She dated the commencement of her troubles from one day, four years ago, when, after hurrying to catch a train, severe palpitation came on. Six months after this choreic movements began on the right side, and though they got better she thought they had never entirely left her. About the same time prominence of the eyeballs was first noticed. Two years ago she married, and six weeks later she fell on her right side when out walking, and shortly afterwards was found to be paralysed on the right side. A week after the fall she was seen by Dr. W. Martin, of Thorne, near Doncaster, who has kindly supplied me with the following particulars of her condition at that time. She was very anæmic, with protruding eyes, well-marked aphasia, but no paralysis of the face. The right arm was quite powerless, and the right leg could only be moved a

little. Sensation was not impaired. There were no choreic movements, and no apparent enlargement of the thyroid body. There was a systolic murmur over the heart. The leg improved rapidly, and she was soon able to walk about; but she never quite regained the use of the right hand, and had latterly begun to write with the left. Since her symptoms began four years ago, pulsation in the neck and enlargement in the region of the thyroid body had been observed from time to time. The choreic movements, for which chiefly she sought admission to hospital, had come on about a fortnight before I saw her.

On admission she was anæmic, fairly well nourished, without dropsy. Exophthalmos well marked, a wide margin of sclerotic visible above the cornea, delayed descent of the upper lid (Graefe's symptom). She was incessantly in violent motion, throwing herself about in the bed and jumping up and down. Her contortions, combined with the protrusion of the eyes, made her aspect very startling. The movements were strictly unilateral and affected the whole of the left side. She was quite unable to feed herself. The movements ceased during sleep. Voluntary movements of the right (hemiplegic) side were performed with considerable force, but there was a loss of the delicate movements of the fingers. She could not pick up a pin in the usual way with the thumb and forefinger, but grabbed at it with the whole hand. No impairment of sensation could be discovered. Examination of the reflexes showed that on the right side the plantar was absent, ankle-clonus was present, and the knee-jerk exaggerated. In the arm tendon-tap contractions were well marked. On the left side the plantar reflex was well marked, and there was no ankle-clonus.

The mental state was feeble. She was very emotional, and went into fits of laughter without adequate reason. Her speech was jerky and almost unintelligible. She hesitated sometimes for a word and sometimes seemed to use the wrong one, but named correctly all articles shown her.

The pulse was very small and thready, 132 per minute, with an occasional intermission. The heart was acting violently; the impulse was visible over a greatly extended area, and could be felt to the right of the middle line, but there was no evident increase in the extent of percussion dulness. Both the sounds were very loud and tumultuous; a short systolic murmur was heard at the base. There was no enlargement of the thyroid body, nor any abnormal pulsation in the neck. The urine was free from albumen; specific gravity 1027.

The treatment comprised rest in bed, as complete as could be obtained, milk diet, and the following mixture: Sodii brom. gr.xx, tinct. digitalis ♏x, sp. ammon. arom. ♏xxx, tinct. belladon. ♏xv, aq. menth. pip. ad ℥j *ter die*. The tincture of belladonna was increased on July 11th to ♏xx, on the 14th to ♏xxv, and on the 24th to ♏xxx.

On the 14th the choreic movements were not so violent, the heart was much steadier, the feeling of palpitation had almost subsided, and the pulse had fallen to 96. On the 21st the pulse was 80, and regular. The apex was felt beating an inch and a half external to the nipple line, and at this point there was now observed to be a prolonged low-pitched systolic murmur conducted towards the axilla. There was also visible pulsation in the neck, but the eyes were less prominent and the choreic movements had diminished. Improvement continued, but on the 28th the pupils were dilated and dryness of the throat was complained of; the belladonna was therefore omitted. On the 31st, although the other symptoms had improved, the pulse was 124; the belladonna was resumed in doses of ♏xv, but for the next week no change for the better was observed.

On August 7th the mixture was stopped, and she was ordered ferri et ammon. citr. gr. x and liq. arsenicalis ♏v three times a day. Improvement was henceforth rapid and without interruption. On the 18th she was able to feed herself for the first time. The pulse did not again rise much above 100, the exophthalmos became hardly noticeable while at rest, and she was discharged on September 14th much relieved, but with a slight degree of proptosis, the remains of her former hemiplegia, a pulse of 100, and a mitral systolic murmur with moderate hypertrophy. The choreic movements were no longer noticeable. Ophthalmoscopic examination showed nothing abnormal except pronounced myopia.

Remarks.—The case is interesting chiefly on account of the complication with chorea and hemiplegia and the good results of treatment. Although muscular tremor is frequently met with in exophthalmic goitre, choreic movements seem to be rare. Whether there was any relation between the two in this case must remain a matter of opinion. The sequence of events seems to have been excitement and over-exertion, giving rise to palpitation, which passed into Graves's disease. Then, independently or not, chorea came on, complicated at some time by endocarditis. The subsequent hemiplegia, undoubtedly depending on some organic brain lesion, was probably caused by embolism. The improvement under treatment was most striking, the condition on admission being such that a grave prognosis was entertained. The belladonna seemed to have a marked influence in controlling the heart's action, but the greatest improvement in the choreic movements followed almost immediately on the administration of arsenic and iron.

REVIEWS AND NOTICES.

John Kenneth Mackenzie, Medical Missionary to China. By Mrs. Bryson, London Mission, Tien-tsin. With portrait. P. 404. London: Hodder and Stoughton. 1891.

In this volume we have a most interesting and well written record of the life and noble work of Dr. John Kenneth Mackenzie (Physician to his Excellency the Viceroy of China), who on Easter-Day, 1888, in the prime of life, after thirteen years of active service in China, died at Tien-tsin from an attack of acute pneumonia.

Dr. Mackenzie was born in Yarmouth in 1850. He was of mixed Scotch and Welsh descent, his father, Mr. Alexander Mackenzie, of Ross-shire, having married Margaret, daughter of Mr. John Richards, of Christ College House, Brecknock. Mackenzie spent his boyhood and early youth in Bristol, to which city his parents removed when their son was an infant, and there his education was carried on at Dr. John Stone's school in King's Square.

When only 15 years of age he joined the Young Men's Christian Association, and two years later (1867) became a member of the Presbyterian Church at Bristol, and thus early showed a desire to follow in the footsteps of pious ancestry. He made the acquaintance of Colonel Duncan, of Bristol, who afterwards became his close friend, and it was chiefly due to his Christian influence that Mackenzie determined to consecrate his life to service in foreign fields as a medical missionary.

To this end he resolved to begin the study of medicine, and in October, 1870, he entered the Bristol Medical School. At the expiration of four years he became a M.R.C.S.Eng., and a L.R.C.P.Edin. Subsequently he studied ophthalmology in London, when, hearing that the London Missionary Society was in pressing need of a medical missionary to take charge of the hospital at Hankow, he volunteered his services, and in April, 1875, he sailed for China. At Hankow a hospital and dispensary had been erected some six or seven years previously, which had been under the care successively of Drs. Reid and Shearer.

Mackenzie at once commenced the study of Chinese, and ultimately became thoroughly conversant with the language. With energy and zeal he laboured at the hospital and at the mission. Visiting the native villages, he found that almost every sixth person had some form of ophthalmic disease; and turning his knowledge of eye diseases to good account, he became a remarkably skilful operator, attracting to the mission patients from most remote districts. He was gradually led into doing much for opium smokers, and in one year treated 700 such patients in the wards of the Hankow Hospital. He writes: "The habit of opium smoking prolonged for any length of time plays havoc with a man's natural energy, and few unaided can combat the craving for the drug. If the need is being felt in England for the further extension of houses for habitual drunkards, much more is the restraint needed for opium smokers in Eastern lands."

As time went on, the fame of the skilful Western surgeon spread more and more, and his hospital work became formidable.

He often had to perform major operations under difficulties rarely met with at home, and frequently had to give chloroform himself and operate, having at that time no assistants upon whom he could rely.

In December, 1876, Mackenzie was married at Shanghai to a lady to whom he was betrothed before he left England. For some two years longer he continued actively engaged in his hospital and evangelistic work at Hankow, but in March, 1879, he was transferred to the London mission at Tien-tsin, the port of the capital of China.

A dispensary had been in existence for some time, but when Dr. Mackenzie reached the station, he found the institution, which was under the care of a native dispenser, destitute of funds. Various means were tried to get funds for building a hospital, but without success; at last, however, the weary time of waiting for aid came to an end in a totally unexpected manner. One day in August, 1879, a member of the English Legation closeted with the Viceroy, Li Hung Chang, observed that he was very sad. On asking the reason, the reply was, "My wife is seriously ill—dying; my doctors have told me this morning she cannot live." "Well," said the Englishman, "why don't you get the help of the foreign doctors in Tien-tsin? They might be able to do something yet." The Viceroy, after raising many objections, at length agreed, and sent for Dr. Mackenzie and Dr. Irwin, of Tien-tsin. The doctors went at once to the yamen of the Viceroy, and were conducted into the inner apartment and there saw the sick lady. "This," writes Mackenzie, "to Western ideas would be considered a very natural and ordinary occurrence, but according to Chinese notions, it was a very extraordinary proceeding. Three years ago, while in Hankow, I was called in to attend a sick lady, the wife of a Chinese merchant, but was not allowed to see her face. A hole was made in a curtain through which her arm was protruded, that I might examine her pulse and so diagnose the disease, and no further interview or examination was permitted. But in this case we two foreign doctors had free permission to examine and question our patient."

They found Lady Li in a most critical condition, and at first were scarcely hopeful of a successful issue. "We were in close attendance, seeing our patient twice a day for six days," writes the doctor, "when, by the mercy of God, the lady was, humanly speaking, out of danger." After a while she recovered, and the Viceroy became one of Mackenzie's warmest supporters.

The halt, the blind, the deaf attended in crowds to be healed, and high officials sought introductions to the doctors through the Viceroy himself. "One day Dr. Irwin and I proposed that the Viceroy should himself see a surgical operation performed. Upon his consenting, we turned the courtyard in front of his audience chamber into an operation theatre. Li Hung Chang stood looking on, and surrounding him was a crowd of officials and attendants. In the centre of the court was a table, upon which lay our patient, with a large tumour the size of a child's head growing from the back of the neck. We administered chloroform and removed the tumour." Other cases were operated upon, and the effect upon the Viceroy and the officials was marked. All cases did well. This led the Viceroy to set apart a quadrangle of one of the finest temples in Tien-tsin for Dr. Mackenzie's dispensary work, and to put up a tablet over the entrance with his three titles inscribed upon it, and beneath them the words "Free Hospital." Mackenzie was officially appointed physician to the household of his Excellency; but as he would accept no remuneration, the Viceroy agreed to defray all the cost of the medical work at the temple. Later on, it was decided to erect in addition a hospital on a vacant space of the London Mission Compound.

The Viceroy authorised a public appeal to be made for funds; money was forthcoming, and the building was by this completed. About this time General Gordon visited the Viceroy, and Dr. Mackenzie gives in a letter an interesting account of that Christian soldier "of the rare old Puritan type."

On December 2nd, 1880, the new hospital was publicly opened by his Excellency the Viceroy. The building was erected in the best style of Chinese architecture. The wards were furnished with *kangs* instead of beds, as is the custom in North China. These *kangs* are built of bricks, with flues running underneath, so that in winter they can be heated; the bedding is spread upon a mat over the hot bricks.

Thus, in two years after Dr. Mackenzie's arrival in Tien-tsin he found himself in possession of exceptional advantages for the development of medical mission work. He also established a hospital reserve fund; to this account all savings from the allowance of the Viceroy were placed, also all sums received as gifts from grateful patients, fees that came to him from consultations with other physicians, and the like.

The nature and extent of Dr. Mackenzie's hospital work can only be duly estimated by a reference to the appendix to his biography, which is in fact a medical review of his surgical and medical work, written by Dr. F. C. Roberts, Mackenzie's successor at the Mission. In one year 598 important operations were performed, and with excellent results. The great preponderance of eye cases is noteworthy. Many cases of remittent and intermittent malarial fevers were treated in the hospital, but in the completed list for 1886 no mention is made of enteric fever. Writing to his cousin, Dr. Talfourd Jones, then of Brecon, now of Eastbourne, Dr. Mackenzie described the foul state of the poorer dwellings, the accumulations of animal sewage in the basement of houses, the freely permitted permeation into the dwelling rooms above, through so-called floors full of cracks and crevices of the sewage odour from below, and this to such an extent that he marvelled at the immunity from true enteric fever, and he asked "How do you account for it?" If typhoid fever could be generated *de novo* by decomposition of sewage, why under such favourable conditions was the disease absent? He was fain therefore to adopt Dr. Budd's view, and conclude that the poison, whatever its form, was specific in its nature. In 1881 his wife's health necessitated her return to England, and she took with her their only little girl. During this year, though so fully occupied, Dr. Mackenzie set to work to establish a medical school, and he induced the Viceroy to send him eight Chinese students to be completely under his care to study medicine and surgery. He taught them all branches of medicine and surgery, instituted examinations and granted certificates. Mackenzie's life was a busy one, and, as some one has said, "he was a whole medical faculty in himself." He rose early and took active exercise on horseback, and to this he attributed his good health and his ability to do much work.

In February, 1883, Mackenzie was, in consequence of the state of his wife's health, returned to leave Tien-tsin for England, where he stayed a few months, and then proceed to Tien-tsin, which he reached in September, 1883. In October, 1884, six of the first batch of his Chinese students passed their final examination, after three years' study, and received diplomas. Mrs. Bryson tells us how, "in recognition of the abundant services so freely rendered to the students of the Medical School, his Excellency the Viceroy having mentioned the matter in a memorial to the throne, the Emperor was pleased to confer upon Dr. Mackenzie an Imperial decoration, 'The Star of the Order of the Double Dragon,' with a Chinese Commission."

Dr. Mackenzie's diary contains many instances of Chinese customs which seem strange and cruel. Among others he notes that it was the custom, when all hope was given up, to dress the dying person at once in grave-clothes, and remove him to a board and trestles away from the ordinary bed, so that it should not be defiled. In 1886 the *Medical Missionary Journal* was started in China, and Dr. Mackenzie was chosen to edit the part of the magazine which was to be devoted to missionary interests. "The Evangelistic Side of a Medical Mission" and "Some Spiritual Results of Medical Mission Work" were the titles of two of his papers: and an editorial called "The Double Cure," which appeared within a few weeks of his death, and was his last contribution to the pages of the periodical, speaks with no uncertain sound of the aim which Dr. Kenneth Mackenzie kept in view in the prosecution of his medical work.

In 1887 he worked still harder, took less rest, and denied himself many necessary and innocent recreations. Early in the year 1888, some two months before his death, he sent his directors a full report of his work for 1887. From it we find that at the dispensary the number of attendances during the year was 13,799, and in the hospital the number of indoor patients was 591, and he had 9 students in the medical school.

In March of that year (1888) sickness was very prevalent at Tien-tsin, and Mackenzie's time was even more fully occupied than usual, and the only medical man then residing in the place—Dr. Irwin—had been summoned to Taku, at the mouth of the river, to attend some patients who were seriously ill with small-pox, so that Mackenzie had to look after his friend's patients as well as his own.

On Saturday, March 25th, he took a severe chill. Next day, though evidently suffering from cold, he attended as usual both Chinese and English services. On Monday, after a restless night, he rose and went to his dispensary, but was compelled to return. Dr. Irwin was sent for, and he rendered him every possible help, and his friends, Mr. and Mrs. King, nursed him, but he got rapidly worse and died on Easter Day, April 1st.

His loss was widely felt as a heavy blow by the whole native and foreign population. "Seldom," says Mrs. Bryson, "has anyone been called from one of our Eastern communities whose death has been so universally mourned as his who might well be called "the beloved physician."

The funeral took place on the afternoon of the day following his death. "Borne by Chinese dispensers and Christians, the coffin was carried from the doctor's home to the English church not far distant." Amidst innumerable wreaths and garlands and humbler floral offerings glittered the Emperor's gift of the Star and Ribbon of the Double Dragon. High officials represented Lady Li and the Viceroy. From the head of the cemetery road to the grave the bearers were twelve of Dr. Mackenzie's medical students, who, at their own special request, were allowed the privilege of rendering this last service to their departed teacher. Well might all mourn for the loss of one who with such zeal and enthusiasm laboured so successfully to practise and teach Christianity and western medicine and science in China.

Mrs. Bryson has done well to place on record in so pleasing a form so much that is valuable and instructive. No obituary notice was published at the time of Mackenzie's death in the English medical journals, and we have therefore felt it all the more incumbent upon us to give our readers a somewhat detailed account of the life of this most true man and Christian physician. Such men, it has been well said, "create an epidemic of nobleness."

Catechism Series—Part I: Anatomy, Head and Neck. Also Part IV: Abdomen. Edinburgh: E. and J. Livingstone. 1891.

This catechism on the anatomy of the human head and neck and abdomen belongs to a series which is being published in Edinburgh. No author's name is appended, and, perhaps, as seems to be the fashion now, more than one anatomist may have participated in its compilation. As the name implies, these books consist of a series of questions together with their appropriate answers. The object, we take it, is to aid students in the *viva voce*, and, possibly, in the written parts of their examinations. They may be of some slight service in these respects, inasmuch as they seem calculated to give an idea of the kind of questions which are likely to be asked. As our readers are aware, however, the styles of the various examinations vary so much that a student who has been crammed for one *secundum artem* may fail lamentably at another.

A skilled examiner is one who so frames his questions as to test the training which the candidate has had and also his wisdom and common sense. It would be impossible to delude such an one with answers crammed from a shilling catechism. Structures would have to be identified and their mutual relations understood. As a training in the art of observation nothing can surpass human anatomy if properly taught. But as no directions are given as to how these questions are to be used we fear they would not assist in this direction. If it was understood that each question was to be answered by observations made upon a dissected part little harm would accrue, and if by an actual process of dissection even good might be the result. The method, however, would be laborious, and much would of necessity be overlooked. Further, anyone who knows the ways of students is aware of the uses to which they naturally put aids of the kind of which we are speaking. Perhaps it may be thought that undue attention is being paid to a trivial affair, but this is but one of a series, and works of a similar kind have become common of late, usually emanating from the same place. We suppose that there is some reason for their multiplication, perhaps some peculiarity in the examination system.

If each student could be made to do an actual dissection of his own, and then be examined upon it, a great deal of cramming would be stopped. It is a matter for regret that this is not done in every case, and its omission is a grave flaw. It is successfully carried out at some of the better examinations, and must be an important aid to the selection of the right candidates. Also it may be guessed that many of these questions have been framed to meet the peculiarities of some "old-established" and "well-known" and stereotyped examiners.

Whoever the authors are, they could hardly have been ingenious or, we might add, foolish enough to concoct some of their questions or conundrums. The first is, "What is meant by the scalp?" The answer goes on to say "it consists of, etc.," mentioning also peculiarities which belong to it, to the palm of the hand and sole of the foot, "as well as some parts about the point of the nose." We leave our readers to guess what these peculiarities are, if they are sufficiently ingenious. Nor would most people think the answers sufficiently explicit, except in a few simple instances. The answer to the question which asks how the orbit is to be dissected, begins with the recondite reply, "From above," and ends at the stage at which the bone is "tilted forwards by a blow with a hammer." Surely the authors can never have had in their minds the idea of a student who had passed two winter sessions in the dissecting room when they wrote such stuff as this. It is not, of course, easy to define what is meant by the word "describe," but we feel sure that many of the answers which purport to be descriptions of structures would be considered inadequate and often misleading.

Such books as these—and they are not few in number—are signs of the times. That they should be thought necessary is a striking commentary upon the efficiency of the selective power of the examinations for which they are intended. We sincerely trust that no student will put his trust in them, but endeavour, by dissection and observation, to equip himself for his trials. Such a course may seem harder, but in pursuing it he will have acquired something which he will never forget, and without which he ought never to be allowed to enter the medical profession—namely, trained and cultivated powers of observation and reasoning. These are the ends towards which all good teaching and examining should tend, and both teachers and examiners ought to endeavour to obviate any necessity for such catechisms as this. Those who, by their aid, enter our ranks are but poor and indifferent recruits.

An Introduction to the Study of Botany, specially adapted for the Use of Candidates for the London Matriculation Examination and of Candidates for the Science and Art Department Examination in Botany, with 271 illustrations and a Glossary of over 600 words. By Edward Aveling, D.Sc. Small 8vo, pp. 363. London: Swan Sonnenschein and Co. 1891.

Botany: A Concise Manual for Students of Medicine and Science. By Alex. Johnstone, Lecturer on Botany, School of Medicine, Edinburgh. Small 8vo, pp. 260, with 164 illustrations and a series of floral diagrams. Edinburgh and London: Young J. Pentland. 1891.

The number of botanical textbooks issued in this country within the last ten years is out of all proportion to the number of students of botany, but that is a matter for publishers. So far as the advancement of botany is concerned, however, most of them might as well, or better, have remained unpublished, for they are either inaccurate translations of German works or uncritical compilations from a variety of sources. Of course it will be generally admitted that a comprehensive textbook on botany must, if the work of one person be, to a great extent, a compilation, and there can be no objection to using good illustrations over and over again in

different publications, but it is not too much to expect that a compiler should exercise care and call in the aid of others in branches imperfectly understood by himself. Ever since more attention has been paid to the study of anatomy and physiology there has been a falling off in knowledge of the morphology and classification of plants. Laboratory investigations are not sufficient to qualify a person to write a work on general botany. In both of the little books under consideration there is strong evidence of a want of that practical knowledge of plants necessary to make a perfect teacher, and this neutralises much that is good in them.

Dr. AVELING's book aims specially at teaching external morphology and classification, and the rudiments of histology and physiology; but very many of the figures are so rough and indistinct as to be quite inadequate as illustrations: moreover, we find figures of what ought to be quite familiar plants incorrectly named. A figure of the Chinese primrose (page 85), for instance, is referred to as the auricula, and many of the statements concerning the plants selected as types are inexact, if not absolutely incorrect.

The illustrations of Mr. JOHNSTONE's book are of a superior character, but when we come to the "floral diagrams," we find that little care has been bestowed on them. Thus, in the very poor diagram of *Reseda* the remarkable disc is not represented; *Dictamnus* would appear to be gamopetalous; the æstivation of the corolla of *Vinca* is false; the same is true of *Polemonium*; and in the diagram of *Polygonum* the very exceptional condition of five stamens is represented. Mr. Johnstone has opinions of his own, too, respecting the limitations of the natural orders, and says that it is absurd to separate the Acanthaceæ from the Scrophularineæ, and gives no diagram. If the existence of connecting links renders it absurd to retain these two natural orders, there is very much absurdity in the generally accepted classification of plants. As a matter of fact, an acanth is, in most cases, easily recognised, and the Scrophularineæ are much more closely allied to the Solanaceæ and the Gesneraceæ.

HYPNOTISM, OR PSYCHO-THERAPEUTICS. By R. W. FELKIN, M.D., F.R.S.E. Edinburgh and London: Young J. Pentland. 1890.

VARIOUS active minds who have felt the influence of Continental medicine have been surprised to notice how little the medical world of England has been affected, until recently, by the wave of interest both in the practice and theory of hypnotism that during the last ten or twelve years has spread over the length and breadth of Europe, from Sweden to Spain, from Paris to Moscow. Yet hypnotism owes its name to England, and during the last generation some serious attention was paid to it. More than forty years ago we find Sir Thomas Watson writing in his *Principles and Practice of Physic*: "I believe that sleep may be conciliated by the monotonous biddings of mesmerism where drugs might fail to procure it: and that such sleep may become in some diseases and at some times a mode and instrument of cure." Dr. FELKIN, after some Continental experience, has been satisfied that such "a mode and instrument of cure" deserves further study, and has busied himself to lay a good deal of information before us. His position as a lecturer in the Edinburgh School of Medicine gives some weight to his opinion, and he has taken some pains to acquaint himself with much of the voluminous modern Continental hypnotic literature.

He recounts, too, some interesting experiences of his own. He hypnotised (page 25) a woman, aged about 50, who could not speak English in her waking state, and had spoken none for at least twenty-five years; but as soon as she was hypnotised, she began talking English, and no other explanation could be found than that she had known it as a girl, and that, though it was habitually forgotten in normal life, the girlish memory was brought to the front again in a hypnotic sleep. In a very large number of cases the hypnotic memory is continuous with itself, and entirely separate from the normal memory, and there is increasing evidence to show that parts of past knowledge which have been dropped from the normal memory may occasionally be revived in hypnotism (Benedikt, Münsterberg, Ribot).

This is interesting psychologically, and may occasionally be of practical use, but what is of far greater practical importance is the persistent power of orders given to patients in hypnotism, a power which enables them sometimes to override the strongest bad habits, such as those of morphinomania and alcoholism. This is no light matter, as Dr. Felkin seems to realise (page 63) when he quotes Forel's case of the complete cure of alcoholism by this post-hypnotic suggestion in a man who had twice cut his throat in *delirium tremens*, and had been imprisoned for eight years as a hopeless drunkard; also in Dr. Auguste Voisin's cure by the same means of a woman who had got so deep into the habit of morphine as to inject herself with fifteen grains a day.

The evidence of the great efficacy in some cases of such means of control is now steadily accumulating from a much larger class of witnesses than merely the enthusiasts of the first French suggestionist school—from many keen critics extending nearly all over Europe, and not only from the Eastern, but also the Western States of America. The conditions under which it is practicable need as yet much quiet study and experiment, with a careful avoidance both of prejudice and of sensationalism. Dr. Felkin agrees with Bernheim, Forel, Moll and others that there is little or no danger in hypnotic suggestion used for therapeutic purposes in the hands of an experienced doctor; and, further, that the susceptibility to hypnotism is by no means limited to hysterical subjects, or even much more marked in them, as some of Charcot's school have insisted on without sufficiently varied experience. The practical usefulness of hypnotism as an anæsthetic is shown now and then by such cases as that recently related by Dr. Kingsbury, in which a dangerous confinement was got over in four hours in a hypnotic state in which there was no sign of consciousness except an ability to obey orders, and of which there was no recollection whatever.

It is to be regretted that Dr. Felkin has hardly given credit enough to the literature of his own country, for he says, writing in 1888: "During the last three years some four papers have been read on hypnotism in Great Britain, one lecture delivered on the subject in Aberdeen, and about fifteen references made to it in the current medical literature of the day" (p. 4). But if he had more carefully consulted that most excellent *Bibliographie des modernen Hypnotismus* which Max Dessoir published in 1888, he would have found the titles of fifteen English books and essays published on the subject, besides references to it in the current medical literature during those three years, some of them treating it from the standpoint of therapeutics and some from that of experimental psychology. Still, it is very true that they attracted little notice at the time, though now that the subject is becoming more popular it may be worth while to look back at them.

It is to be hoped that the book may reach a second edition, for there is much sound matter from various Continental sources that is very conveniently brought before the general reader, and also it will be satisfactory that some hundreds of small corrections of detail and orthography should be made, so that no passage may be left like the last fourteen lines of page 68, with an average of one mistake or misprint to every line.

NOTES ON BOOKS.

Textbook of Bacteriology. By CARL FRAENKEL, M.D. Third edition. Translated and edited by J. H. LINSLEY, M.D. (New York: Wood and Co. 1891.)—Of the making of textbooks on bacteriology there is no end. The most recent addition in our language is the translation by Dr. J. H. Linsley, of Fraenkel's *Grundriss der Bakterienkunde*, which is now published in no fewer than six different languages. This work, which has reached the third edition, is so well known in its original German garb, that it is unnecessary to give a long description of its contents. It is a good practical textbook, is well brought up to date, and in it evidence is afforded that the author is not relying on the descriptions of others, but is actually conversant with the methods and species that he describes. Those who have the opportunity of consulting it will find that it contains a better description of Koch's me-

thods probably than any other book written, and as such it is a work of considerable importance. The translation is well done and the volume is well printed.

Our Country's Flowers and How to Know Them: being a Complete Guide to the Flowers and Ferns of Britain. By W. J. GORDON, with an introduction by the Rev. GEORGE HENSLOW, M.A., F.L.S., F.G.S. Illustrated by John Allen with over 1,000 examples in colour and outline. (London: Day and Son; Simpkin, Marshall, and Co.)—This volume, which is undated, reaches us at an opportune time, since every man who has in him any love of the country at all must feel it especially strong in "leafy June." As an attempt to place before the unskilled reader an easy method of identifying British wild flowers, the defects of the volume would deserve to be regarded with a lenient eye, but on the whole it may be said that the appeal for exceptional treatment need not be made, and that the merits of the work outbalance its defects. The task attempted is difficult, owing to the natural complexity of the subject, but Mr. Gordon has attacked it in front, and insists that any person desiring to make use of the book shall master the principles of the natural classification. Anyone who will be at the pains to do so, will find it quite possible after a little practice to identify, or to come very near identifying, the species of any wild plant, for it ought to be said that the book is better than its title, and includes the ferns. An important feature is the lithographic plates, thirty-three in number, containing coloured reproductions of drawings of over 500 species selected to illustrate the genera. The reproductions vary in quality; some, as for instance the larger flowers in Plate II, are really excellent; others, as for instance silene maritima, on Plate V, are so defective as to be misleading. On the whole, the larger flowers are represented much better than the smaller. This was, perhaps, inevitable, as the lithographer's aim has been to illustrate a large number of specimens on the same stone; had this not been done, it would have been quite impossible to produce a work for the price at which this is issued. The description of the genera is illustrated by a large number of outline-drawings of characteristic parts of the inflorescence. Altogether the work affords evidence of a praiseworthy design well carried out by all concerned.

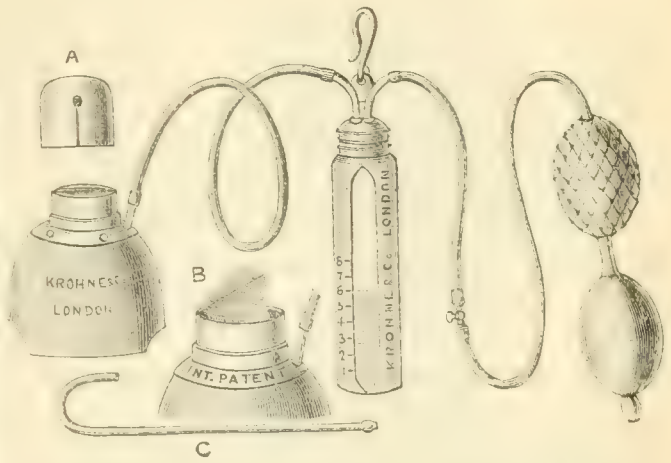
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

RESPIRATION INDICATOR AND REGULATING INHALER.

MESSRS. KROHNE AND SESEMANN, the original makers of Junker's inhaler, have added improvements which make that popular instrument more useful. The first modification is a graduated stopcock which is fitted on to the tubing between the bellows and the bottle holding the anæsthetic. The tap of this stopcock bears an indicator, and by turning it fully or partly on, the amount of the vapour can be regulated.

The second modification is the respiration-indicator (B) which shows, by its corresponding movements, the nature, frequency, and character, of the respiration. This indicator is a piece of feather, fixed on a hinge over the open mouth of the face-piece. A metallic cap (A) fits over the mouth of the face-piece so as to protect the feather when the instrument is not in use.

The importance of observing respiratory movements is widely recognised among anæsthetists; the feather in the instrument now described has already proved an excellent indicator. The advantages of Junker's inhaler are well known. More than eighteen years ago, Sir Spencer Wells, in his *Diseases of the Ovaries*, recommended this inhaler as the best for the administration of methylene, and noted that it sometimes used less than two drachms, and rarely more than six, when employed for his cases of ovariotomy. We are informed that the regulating inhaler has been used at the Samaritan Free Hospital during the past autumn and has proved highly satisfactory.



The curved tube (C) in the woodcut is contrived to replace the mask in operations on the mouth, nose and other parts of the face. The short end can be passed into the nostril in cases of cleft palate, etc., and into the mouth, where it serves to a certain extent as a retractor in surgical procedures on the nares. In either case, the long limb of the curved tube passes backwards lying against the side of the face, so the entire apparatus is kept well out of the way of the operator.

Messrs. Krohne and Sesemann have also adapted the respiration indicator to a cone, as recommended by Surgeon-Major E. Lawrie for the administration of chloroform. It



The Hyderabad inhaler.

consists of an open cone or cap made of wire gauze (A), provided on its apex with Krohne and Sesemann's respiration-indicator (C), protected when not in use by a cap (D). The cone is covered with red flannel, and a movable white flannel bag is placed inside the cone, on which the chloroform is put as required through an opening made in the wire frame at B.

We recognise that the respiration indicator is a valuable addition to every kind of anæsthetic inhaler. By watching its movements the administrator has an easier and better control over his patient's breathing, and it does away with the necessity of uncovering the patient's chest and abdomen, a decided advantage in cold and temperate climates.

Dr. Lauder Brunton referred to the indicator at the Royal Medical and Chirurgical Society of London, December 9th, 1890, where he said "That it was now settled that asphyxia was the great source of danger during the administration of chloroform." He then referred to a contrivance of Messrs. Krohne and Sesemann, in which a small feather was attached to the apparatus used, and its movement showed whether air was entering the lungs properly or not. It was well known that the movements of respiration might continue without this occurring, owing to some obstruction in the passages.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1891.

Subscriptions to the Association for 1891 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the West Central District Office, High Holborn.

British Medical Journal.

SATURDAY, JUNE 27TH, 1891.

LORD HERSCHELL AND THE LAW OF CHARITABLE USES.

We trust that we are not over-sanguine in supposing that the second reading of the Charitable Uses Bill which Lord Herschell has introduced in the House of Lords is the beginning of the end of a movement which promises great advantage to all the medical charities. Since attention was called to the matter by the Parliamentary Bills Committee there has been abundant evidence, some of which was summarised in Lord Herschell's admirable speech, that the restrictions imposed by the existing law on wills which assure any interest in land to any charitable use are simply absurd. No one seems to know why they were ever imposed or what were the terrors that beset the legislators of 1736, and misled them into passing the extraordinary statute which has ever since impoverished the most useful charities and enriched the legal profession. Even if there had been any reason for the original policy of the Act of George II. no one pretends that that reason now exists; and the matter has been so overlaid by a series of incomprehensible legal subtleties as to what is an "interest in land" and what is not, that even the eye of an ex-Lord Chancellor can see in them no use except "to afford food for lawyers." There was a general agreement, both among the legal and the lay members of the House of Lords, that the restrictions should be removed. Indeed, the only criticism came from those who thought that Lord Herschell's Bill did not go far enough.

Lord Colchester and some others who took part in the debate did not appear to recognise that the operation of the amending Act is confined to gifts by will, and that as regards all such matters as the provision of sites, the powers to assure land to a charity by deed which now exist are in no way curtailed. The mover of the Bill intimated, however, that he was very willing to widen the Bill further. There have, in fact, been several draft Bills prepared during the present session: one by the draftsman of the Parliamentary Bills Committee, another by Mr. Bristowe for the Hospitals Association, a third introduced by Mr. Cozens Hardy at their instance in the Commons, besides that which is introduced by Lord Herschell, and which now bids fair to become law, because its position—assuming it to pass with reasonable expedition through the Upper House—will give it a great advantage in the Commons unless the Government refuse facilities. The object of all these drafts was in the main the same. The only difference was as to the most politic way of removing the legislative nuisance with the least possible friction.

By the present Bill the whole edifice of case law as to "interest in land" will be swept away by amending the definition of "land" in the Governing Act of 1888, which certainly ought to have been amended at the time. The result would be that debentures, mortgages, or other bonds secured on lands, tolls, or other realty, could be given for charity by any form of gift without hindrance. "Land" proper could be given, under the restrictions of the Act of 1888 by deed, and by this Bill it could also be given by will, subject to the necessity of being compulsorily sold within a year. The Court would have power to enlarge the time, and if the time were past, the official charity trustee would sell the land and hand over the proceeds. As to money left to be laid out in land, it is proposed that the bequest should be good and the condition nugatory; though this will probably be amended by allowing a bequest to be validly devoted to the purchase of a site for the charity which it is intended to endow.

There can hardly be any opposition to the Bill, for it is not in anyone's interest that the present anomalous legislation should be maintained. The hospitals suffer, and through them the public, and no class or interest is the better. The real policy of the reform is to insist on freedom of testamentary disposition. Lord Selborne suggested that where the gift was foolish or mischievous a power might be given to the Attorney-General to renounce it. This may be desirable, though it seems to travel beyond the scope of the present Bill. But it is clear that where the object of a gift is a medical charity, it can hardly be altogether mischievous, and there is no reason why the testator's kin should be legally protected against such alienation. We have never in this country made it necessary by law that a testator should provide even for his own family. He may give his bounty to an utter stranger as freely as he chooses. The only recipients who are barred are the charities. It is, of course, notorious that the vast majority of charitable gifts by will are in no way unfair to the testator's relatives, but are merely reasonable contributions out of the bulk of his estate to such public purposes as he considers laudable. Lord Herschell deserves the thanks of the medical charities for his ready and effective response to the appeal which was made to him, and we trust that the principle now affirmed by the unanimous finding of the House of Lords may without further delay be passed into law.

THE FAILURE OF THE ALLOTMENTS ACTS.

The compulsory clauses of the Allotments Acts have at last been fairly tried, and found wanting. The decision in this case is an important one, and bears a moral of wide application. It will be remembered that the Allotments Act of 1887 gave power to sanitary authorities, rural as well as urban, to purchase or hire land to be divided into allotments for the use of the labouring class. In the event of failure to acquire suitable land on reasonable terms, the local authority were empowered to make application to the Local Government Board for a Provisional Order for compulsory purchase, subject to confirmation by Parliament in the usual way. The Allotments Act of 1890 authorised County Councils to supersede any local authority (not being a town council)

and take action in their stead, if satisfied that they had made default in this matter.

In 1888 formal representation was made to the St. Faith Rural Sanitary Authority, Norfolk, by several labourers, stating that they were unable to obtain gardens, and asking that the Act should be put into force. It appears that the parish of St. Faith contains 2,291 acres, of which the Countess de Rechberg owns 1,988, and two other landowners 32 and 117 acres respectively. The rural authority endeavoured to secure land by private treaty, but the Countess de Rechberg, whose property alone it was stated was suitable for the purpose, refused to sell or lease her land except in smaller quantity and at a higher price than the authority deemed reasonable. Here the matter rested until the passing of the Act of 1890. It seems to have been thought by the rural authority that the dispute had reached a stage which required the intervention of a more powerful body, and they therefore stood aside. The result shows the soundness of this view. The Norfolk County Council took the matter up, and a Provisional Order was made for the compulsory purchase of 18¼ acres, but the Countess de Rechberg opposed the Confirming Bill in Parliament, and a Select Committee of the House of Commons has been occupied for three days in hearing counsel and witnesses on each side. The decision of the Committee, given on June 17th, was that the desired powers should be granted, but in respect of fourteen acres instead of eighteen; the opposing landowner to pay her own costs and one-third of those of the County Council. It is estimated that this will leave some £600 to be paid by the victors.[1]

The case is the first of the kind, and is not unlikely to be the last. It has ended in favour of the promoters, but nevertheless the result shows that the compulsory clauses of the Acts in their present form are unworkable. Not even county councils can afford such costly victories, and no sanitary authority will feel justified in attempting to secure land for allotments at the cost of a fight before a Parliamentary Committee, even if success be morally certain. The machinery provided for the purpose of obtaining a few acres of land is the same as if an important railway Bill were in question. Until some simpler procedure is substituted by an amending Act the compulsory clauses will remain a dead letter. This does not, of course, necessarily mean that allotments will not continue to increase, for as a rule land will be obtainable without compulsion; but where, as at St. Faith's, there is a demand for labourers' gardens, and the authority are unable to hire or purchase land at a reasonable rate, nothing will be done. Parliament has imposed a certain duty upon sanitary authorities, and has at the same time made that duty impracticable. A difficulty of this kind ought to have been foreseen. It furnishes defaulting sanitary authorities with the plausible excuse that some at least of their nominal powers are unworkable, and it will tend to confirm them in their policy of inaction in matters even more important than allotments.

It is necessary, of course, that compulsory powers should be granted only by an impartial tribunal in order that landowners may not be exposed to the risk of arbitrary and unreasonable demands on the part of the sanitary authority; but it is neither necessary nor in accordance with common sense that every such case, however small, should be fought out at heavy cost before a Parliamentary Committee in London.

[1] The proceedings before the Committee were fully reported in the *East Anglian Daily Times* (published at Ipswich).

LIABILITY OF LANDLORDS FOR DEFECTIVE DRAINS.

THE judges of the High Court have recently tried several actions in which tenants of houses have sought to make their landlords liable for damages consequent on defects in the drainage of their houses. The law applicable to such cases is now pretty well ascertained, and the later cases do not seem to have added anything to what was known before; but the facts elicited in evidence are instructive. Mr. Justice Day tried two of these cases within a very short period, and in both the plaintiff—the tenant—was awarded substantial compensation by the jury. In the first the tenancy commenced in August, 1889, and the jury were satisfied that at the time of the letting the defendant's son and a man in his employ had assured the plaintiff that the house was in a thoroughly sanitary condition, and that the drains were quite safe. On the faith of these statements the house was taken, and presently it was discovered that the drains were improperly jointed and untrapped, and further that there was a dead drain under the house filled with a quantity of filth, which was periodically refreshed by the contents of the bath, the waste pipe of which emptied into it. It is not surprising that, under such circumstances, the plaintiff's family became ill. The wonder is that anyone could have lived in the house without suffering in health. The case for the defendant, however, was that he and his family had lived there for some years, and that, having no practical knowledge of drainage, he believed it to be quite safe. He also denied that he had given his agent any authority to make representations on his behalf about the drainage. This version, however, was not accepted by the jury, who, after a short consultation, gave a verdict for the plaintiff for £70 damages.

In the other case the plaintiff became tenant of the defendant's house in May, 1890, at a weekly rent of nine shillings. Before concluding the bargain it was alleged that the defendant himself assured the plaintiff's wife that "there was a good supply of pure water, and that the drains were in good condition, and had recently been put right." Soon after the tenancy commenced, however, offensive effluvia made their presence noticeable. The plaintiff's family became out of health, and in January this year a daughter died of diphtheria. The action was then brought for damages consequent on the breach of the defendant's warranty. He went into the witness box to deny uttering the words relied on as a warranty, and further asserted that the drains were in good condition, as they had been put right in October, 1889, when they were examined and repaired after a previous death. The workman who did this work had to admit that he examined the drain again in 1891, and then found a hole in the pipe covered by a piece of tile. The joints also were said to be defective, but this was denied; they had, however, after complaint been cemented. The judge told the jury that "the question for their consideration was whether or not the alleged warranty had been given. It was practically admitted that the death was caused by diphtheria due to the drains, and there was clear evidence that the drain was in fact defective. If, therefore, they considered that the defendant had warranted the drains to be in good order, he would be liable for the consequences of their not being so." Here, again, after a short deliberation the jury gave a verdict for the plaintiff.

In both these cases the plaintiff's claim was based on a representation or warranty made by the defendant or his agent that the drains were in good condition at the time of the bargain. The fact of such representation having been made was disputed, but the jury (we must assume rightly) found that issue in favour of the plaintiff. Without such a finding he could have had no legal claim against his landlord, however defective the drains were shown to be; for, as we have previously pointed out, it is the duty of the tenant or purchaser of a house to satisfy himself as to its suitability for occupation, and he cannot make the owner responsible for the existence of defects which he might have ascertained for himself, but which the owner is not obliged to mention unless asked. If, however, he is asked about the drainage or anything else and chooses to give an answer, that answer must be true in fact; the person to whom it is made is entitled to rely upon it, and can maintain an action for damages consequent on the representation being untrue. After the recent verdicts all careful incoming tenants or purchasers will inquire particularly of the owner or his agent (if possible of the owner himself) as to the condition of the drains, and will insist on getting a definite assurance. A prudent landlord will also be careful not to make any statements which he is not prepared to support, and if he is uncertain will tell his questioner to examine for himself. These rules of dealing are elementary, but as applied to the business of buying or hiring houses, they have not always been observed as strictly as is desirable.

THE UNIVERSITY QUESTION IN LONDON.

The determination of the Lord President of the Council to proceed without delay to consider the petition of University and King's Colleges for the formation of an Albert University in London has fluttered the official dovecots, and has been the source of no little individual inconvenience; at the same time, if it results in the early adjustment of the reasonable claims of London schools and London students to university privileges, this inconvenience will doubtless be cheerfully borne, and in any case we cannot pretend to regret that the medical corporations have been stimulated to carry through this important business with promptitude.

On Monday next the two Colleges above mentioned will be heard by counsel before the Lords of the Privy Council in favour of their petition for the granting of a charter to the Albert University, London. As to the name of the University, the proposed form is undoubtedly clumsy, but the suggestion made by the Special Committee of the British Medical Association would meet this difficulty by a very drastic remedy. There is every reason to believe that the bodies interested in promoting the present charter are extremely gratified by the suggestion that their new University should be called the University of London, and that the present University of London should take some other name.

It would seem that the Nemesis on Convocation of the University of London, for the short-sighted vote of last month, will not be long in overtaking the University.

As to the relation of the other medical schools to University and King's Colleges, we understand that the official view is that all the medical schools should be upon the same footing, and that University and King's Colleges should exist in the University not as colleges but as congeries of schools—the medical school, the art school, the science school, and so on. If the two Royal Colleges stand out of the proposed University, then we believe that the scheme will go on without them, although it is probable that the clause in the draft charter, by which it is proposed that the medical degree shall not confer a registrable licence to practise, will be adhered to before the Privy Council. The promoters of the scheme, however, do not conceal their intention, should the compromise proposed fail to work well, of proceeding at some future time to rescind this restriction.

It is, however, very unlikely that the Royal Colleges will stand out. Although at the time we go to press the matter is not absolutely decided, there is every reason to believe that they will express to the Privy Council their readiness to take part in the formation of the new University if they are constituted the Medical Faculty. This is, of course, not at all what the majority of the medical schools would prefer, though it is possible that some compromise may eventually be arrived at.

There can be no doubt, we apprehend, that whether the Royal Colleges come in or not, the agreement between the University and King's Colleges and the medical schools, if carried out with the sanction of the Privy Council in a charter, will result in the formation of a large and efficient university for and in London, including all the medical and other professional faculties.

At a meeting of the Commissioners of Sewers on June 23rd, a motion that it be referred to the Sanitary Committee to consider and report upon the desirability and cost of the erection of a crematorium at the cemetery at Ilford was carried unanimously.

At the recent meeting of the Metropolitan Asylums Board, Surgeon-General Bostock recommended that the South-Western Hospital should be added to the Eastern, South-Eastern, and Western Hospitals as those at which clinical students could be entered under the regulations sanctioned by the Local Government Board. The suggestion was adopted.

THE VENTILATION COMMITTEE.

The Ventilation Committee of the House of Commons, which holds its first meeting on Monday; after completing the formal stage of arranging its proceedings and electing its chairman, it is understood that the condition of the committee rooms and corridors and sanitary arrangements upstairs will be carefully considered, and evidence taken as to the best way of improving their hygienic condition.

CHOLERA IN SPAIN.

The *Correio Medico*, of Lisbon, says that rumours of cholera are again beginning to be heard from Spain. Telegrams received in Lisbon from Valencia state that some "sufficiently marked" cases have occurred in that province, and the authorities at Madrid have taken steps to check the spread of the disease. As usual, the official and "officious" press denies everything.

NURSING IN PORTUGUESE HOSPITALS.

The nursing question seems to be giving rise to a good deal of discussion in professional circles in Portugal just now. The principal bone of contention is, as usual in Catholic countries, whether the nursing of the sick in hospitals should be in the hands of Sisters of Charity or lay nurses. In some of the provincial hospitals, especially in the north of Portugal, the sisters are already in possession, but in Lisbon

apparently the lay element predominates. Dr. Lopes Vieira, in the *Coimbra Medica* of June 15th, gives these lay nurses a very indifferent character, and urges their replacement by sisters. Dr. Costa Simoes, on the other hand, is strongly opposed to such a step, on the ground not so much of the alleged proselytism and bigotry which make Dr. Bourneville and other French medical men object to nuns as nurses, as of the expense of their maintenance, the number of servants they require to help them, the amount of time they are obliged to give to religious exercises, and the undue influence which their spiritual directors are likely to have over them, to the impairment of the deference which they owe to the medical officers. To this Dr. Vieira retorts that, however long may be the sisters' prayers, they spend less time in that way than lay nurses do in gossip, flirtation, and laziness. The quarrel is a very pretty one as it stands, as Sir Lucius O'Trigger says.

SCIENTIFIC DIPLOMACY.

THOSE who are not accustomed to the ways of official life may not appreciate the full significance of Sir M. Hicks-Beach's reply to Sir H. Roscoe with reference to the British College of Preventive Medicine. It is quite evident that the President of the Board of Trade has gladly availed himself of the compromise to which we referred last week, and has been helped out of a false and difficult position by the dexterous diplomacy of his opponents. It is of course necessary, from his own point of view, that the machinery of these gymnastic operations should not be too clearly defined, and that the "climb down" should be made as easy and gradual as circumstances will permit. All this has been happily accomplished now, and we have the satisfaction of recording another instance of what science and medicine can do in their own defence by combination and agitation cautiously and dexterously used.

VICTORY FOR THE HALF-TIMERS.

MR. BUXTON and his friends had the best of the battle all along the line last week on the Factory and Workshops Bill, and Government sustained the defeat which a little timely concession might have averted. Sir William Houldsworth's masterly and convincing speech was both unanswerable and unanswered, and Sir John Gorst's cynical abandonment of his colleagues also contributed largely to the successful result. England having now in some measure taken her proper position with reference to the Berlin Conference, it was not thought desirable to press for anything more at present than the compromise of eleven, and Mr. Matthews frankly and promptly accepted the situation. Mr. Randell's gallant attempt to improve the position of his laundress clients was only defeated by a narrow majority, and in the interest of the Bill, he yielded to a strong appeal from the Home Secretary, and did not press his proposal for placing workshops as well as factories under the care of the certifying surgeon. The balance of argument was strongly in favour of such an arrangement being carried out, but it appears that the Home Office now have the power to interfere if necessary, and as Mr. Matthews nodded approval to the suggestion of Mr. Mundella that greater care should be taken in the future to see that workshops are in a decent sanitary state, and that children who have been rejected in the factories are not to be accepted by them wholesale, we may hope that some good has been done by the discussion.

JUBILEE OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE next annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be its jubilee meeting. It will be held at the City Asylum, Birmingham, on July 23rd, under the presidency of Dr. E. B. Whitcombe, who will deliver the presidential address. In the evening the annual dinner will be held at the Great Western Hotel, and on the following day an excursion to Stratford-on-Avon will probably be arranged. Dr. Robert Baker will be proposed as president-elect, Dr. Henry Rayner as one of the auditors, and Drs. Outterson Wood, F. C. Gayton, F. H. Walmsley, and H. T. Pringle as members of Council to fill the vacancies caused by retirement. Dr. G. Yellowlees will move a resolution with regard to the method of conducting the examination for the certificate in medico-psychology. The resolution proposes that the papers shall be set and valued by the examiners of the Association acting conjointly; that the written examinations shall be held on the same day throughout the country, the sealed questions being opened at the hour of examination; and that the clinical and oral examinations shall be held at any convenient time thereafter by the examiners for the respective countries, when they have examined and assessed the written papers.

TREATMENT OF MORPHINOMANIA.

Two steps in advance have recently been taken in the provision for the treatment, in an institution, of morphine and allied narcomaniacs. One is in England, the other in America. Under the Lunacy Act of 1890 morphine or other inebriates may be received as voluntary boarders into licensed houses for the insane, with the consent of two Commissioners of Lunacy or two justices, by simple application, without specifying the cause for which the applicants desire to be admitted. The American step is the opening of a home at Brooklyn for the reception of 12 *habitués* of morphine, cocaine, or chloral, of whom one-fourth are to be free patients, if an endowment ment fund of £12,000 can be raised for the latter purpose. The treatment pursued is preliminary sedation by sodium bromide, and a rapid reduction of the narcotic, the period of reduction averaging from 10 to 12 days.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE *conversazione* given by the Royal Medical and Chirurgical Society of London in its new home on Tuesday, June 23rd, was in every way most successful. There was a great crowd, which contained leaders of medicine and surgery in every department of professional activity, in many provincial towns as well as London; there was a large collection of beautiful and interesting objects, and there was excellent entertainment for the ear afforded by songs by Mr. O. Harley, by monologues by Mr. Charles Collette, and by the Carnival Band. Mr. Francis Galton was present, and explained his method of studying finger marks—a curious by-way of anthropometry into which he has recently strayed. Mr. Victor Horsley showed a trephine driven by electricity; Sir Somers Vine lent a collection of savage weapons, implements, and ornaments; Sir Richard Quain lent a silver loving cup and tankard bearing the Irish marks of 1739, and also a number of pictures—including Maclise's "Snap-apple Night" and several studies by Landseer—engravings, and etchings. Sir Henry Thompson lent four pictures by Mr. Alma Tadema, including "The Roman Garden," and his own portrait by Millais. Mr. Whistler lent a remarkable portrait of his mother, which was one of the first paintings to attract popular attention in this country to the work of the artist. Dr. Hermann Weber contributed a valuable group of small bronze antiques, including a fine and perfect specimen of the Egyptian Æsclepias. Dr. Braxton Hicks showed an extremely beautiful collection of Tassio's intaglios and medallion portraits. Mr. Clinton Dent lent a fine Greuze and a well-known Pettie. Surgeon-General Bostock was represented by some charming works. Mr. Bruce Joy sent busts of his father, Mr. Gladstone, Lord Salisbury, and Miss Mary Anderson. Mr. Seymour Haden sent an etching by himself, and Mr. Edwin Ward lent striking portraits of Mr. Burnand, Mr. Labouchere, and Mr John Tenniel. Among the other exhibitors were Sir James Paget, Dr. Hare, Mr. Alban Doran, Mr. Stephen Paget, Dr. George Harley. Mr. Tourrier, Mr. T. B. Kennington, Mr. Hawksley, and Messrs. Weiss. The arrangements were made by a committee con-

sisting of Mr. Holmes, Drs. Cheadle, Samuel West, and Frederick Taylor, and Messrs. Clinton Dent, Knowsley Thornton, R. W. Parker, and Warrington Haward, with the assistance of Mr. J. Y. W. MacAlister, the energetic Librarian of the Society, to whose indefatigable exertions the excellence of the artistic collection was largely due.

EGYPTIAN PRISONS.

Sir E. Baring, in his report to the Marquis of Salisbury on the administration and condition of Egypt and the progress of reforms, states that much has been done to improve the prison administration. Many of them are, he says, still greatly overcrowded; but although a great deal still remains to be done before this department can be said to be in a thoroughly satisfactory condition, there can be no doubt that the improvement in the condition of the prisoners is very marked, and that the progress already made reflects great credit on the present Director-General (Dr. Crookshank).

AN EPIDEMIC OF FEAR.

We recently had occasion to comment on the disgraceful cowardice displayed by the people of Mull during an outbreak of typhus fever. A still more shameful example of the heartless selfishness engendered by fear now reaches us from France. In the village of Bouilladisse, near Marseilles, an epidemic of small-pox broke out not long ago, and though the disease seems to have been of mild type since none of those attacked by it died, the presence of the scourge among them caused the greatest terror among the inhabitants. When the outbreak, thanks to the devotion of Dr. Dromart, the only medical man in the place, was subsiding, that gentleman himself fell a victim to the disease. Deserted by the other members of his family, M. Dromart was nursed by an uncle and two male attendants from Marseilles. The unfortunate sufferer and those who ministered to his wants were severely quarantined by the whole population of Bouilladisse, including the purveyors of food and other necessaries. Their bread and meat and even the water drawn for them from the well were placed on the pavement outside the door of the house. M. Dromart died, and a gravedigger was with some difficulty procured from a village some distance off, but it was impossible to get four men to carry the coffin, which had to be taken to the cemetery on a cart. Two gendarmes assisted the gravedigger in lowering the coffin into the grave. Two men had followed the little procession to the cemetery at a respectful distance, and one of these lost his work in consequence, the people for whom he was working being afraid to let him come near their house. The body was carried straight to the grave without passing through the church, the curé saying he was sure he would have had no congregation that day (it was a festival) if it had done so. As it was, the good priest said the people would be afraid to make their confessions to him, as he had been with M. Dromart in his last moments. The cynic will be disposed to think that if fear, which is by some considered to be more fatal than the plague, had removed the whole adult population of Bouilladisse from this sublunary sphere the world would not have been the poorer for their loss.

PUBLIC HEALTH (LONDON) BILL

At a conference held between the metropolitan Conservative members and Mr. Ritchie a compromise was arrived at with regard to the Public Health (London) Bill, which, it is hoped, may very much facilitate the passage of that measure. With regard to the clause empowering the County Council to make by-laws for the prevention of certain nuisances, it was arranged that the by-laws in question should be divided, those dealing with matters which affect the locality being made by the sanitary authority, and those dealing with London generally being made by the County Council. To meet other objections Mr. Ritchie intimated that the Government were willing to reduce the fine to which local authorities are to be made liable from £50 to £20; to insert a clause providing that before proceedings can be taken by the County Council against any local authority the consent of the Local Government Board must be obtained; and to insert another clause providing that the Local Government Board, when applied to for the dismissal of a medical officer of health and sanitary inspector, shall be bound to give full consideration to the representations of the local authority, that the dismissal is in the interests generally of the district. The notice paper still contains a long list of amendments, some of which are merely verbal, but others involve matters of principle which may lead to debate. Sir Guyer Hunter proposes to omit subsection 3 of Clause 104, which contains the unfortunate provision compelling medical officers of health to reside within their districts. Mr. Powell proposes to insert a new clause to provide that sanitary inspectors, appointed after January 1st, 1895, shall be holders of certificates of competency from an institution recognised by the Local Government Board, or have been for the three preceding years acting as sanitary inspectors. Both these proposals will, it is understood, be opposed by Mr. Ritchie, and in that case may not improbably be withdrawn. Mr. Morton proposes to insert a clause rendering it unlawful for anyone to occupy any dwelling-house erected after the passing of this Act until a certificate as to the sanitary condition has been issued by the sanitary authority. Mr. Morton intends to propose a clause giving any person aggrieved by the neglect of a sanitary authority to carry out the requirements of the Act the right of appeal to the London County Council. The Bill is down for discussion this day (Friday).

ARTIFICIAL PRODUCTION OF DENTAL CARIES.

At the last meeting of the Odontological Society Mr. Henry Sewill read an interesting paper on this subject. He said that the disintegration of enamel and dentine had for years been known to be mainly brought about by the action of acids, the products of fermentation of organic matter lodged upon or about the teeth. Next, Messrs. Underwood and Milles, in 1881, showed that the presence and action of micro-organisms were essential to the production and progress of caries. Professor Miller, of Berlin, had since succeeded in producing caries artificially by submitting teeth to external influences sufficiently like those existing within the mouth. He found that all the organisms present in caries, except leptothrix buccalis, could be cultivated together or isolated out of the mouth. From experiments made during the past year Mr. Sewill, assisted by Mr. Pound, found that the best organic substance for the purpose was bread (1 part) to saliva (about 8 parts). A mixture of meat and saliva remained alkaline, as did various other forms of albumen. Teeth immersed in the mixture of bread and saliva were kept in glass-stoppered bottles at a temperature of about 35° to 37° C. The teeth were examined once a day. If the mixture became putrid it showed an alkaline reaction. The teeth were then taken out, well washed, and the mixture renewed. Otherwise the mixture became acid, and remained so for from three to five weeks. The acids produced were acetic and lactic. The effects upon the teeth were in every respect the same as in natural caries. Teeth, wholly immersed, were attacked all over at once, but disintegration advanced more rapidly through mechanical or inherent flaws and fissures in the enamel. At such points the decay of the subjacent dentine, as in natural caries, progressed more rapidly in that tissue than in the enamel. The enamel became undermined, and extensive discoloration of the affected part commonly took place. The rapidity of this action in different teeth was found to be governed by the structural qualities of the tissues. Ill-made enamel yielded much more readily than well formed, and globular dentine than tissue of better structure. Cement resisted longer than enamel, but at length gave way and allowed the dentine beneath to be invaded.

With teeth already carious the decay continued, and if the cavity were previously excavated decay attacked first at that point, and advanced most rapidly through the exposed dentine. Carious dentine also stained readily, and doubtless is thus stained in the mouth when medicines or articles of food capable of staining are taken. The phenomena attending the invasion of organisms and their proliferation along the tubes differed in no respect from those of natural caries. The "zone" and "pipe-stem" microscopical appearances were present, as was also another appearance first described by Mr. Mummery, and lately figured by Dr. Miller, in which the dentinal tubes are dilated and filled with highly refractive cylindrical bodies, splitting up into fragments of varying length. All the organisms were capable of being stained, and the altered tissue could thus be easily differentiated. This artificial production of dental caries, according to Mr. Sewill, destroys the last shreds of doubt as to the essential character of the disease, which for years has been regarded by most authorities as due solely to the solvent action of acids generated by fermentation going on in the mouth. Several fine preparations of teeth, thus artificially rendered carious, which had been cut and stained by Mr. Pound, were exhibited.

VENTILATION OF SHIPS.

We have grown accustomed to read glowing accounts of the size, the speed, and the luxury of the upholstering of the saloons and state cabins of our great ocean-going steamers, but it is rather a new departure to find the owners of a monster liner putting forward as one of its strongest recommendations the special attention which has been given to matters of hygiene. It is claimed for the South African R. M. S. *Scot* (Union Line), which is to at call Madeira on her runs to and from the Cape, that she is the best ventilated mail steamer afloat. The cabins and passages on the main deck are to be ventilated by fans driven by dynamo-electric machines. A visit to the great ship (6,850 tons) in dock did not afford facilities for the formation of any other opinion than that some system of artificial ventilation is an urgent necessity in these floating palaces, which carry in a very limited space the population of a fair-sized village. A great deal of attention has been given in recent years to the ventilation of ships, a subject which becomes more pressing as the ships grow larger. The problems involved, though undoubtedly difficult of solution, will not, we believe, eventually prove beyond the resources of naval architects. The subject is down for discussion in the Section of Naval and Military Hygiene of the International Congress of Hygiene, and it is to be hoped that it will attract the attention it deserves.

THE SLUMS OF THE FUTURE.

The London County Council has recently been subjected to severe criticism by the *Times*, the principal point of attack being the heavy expenditure incurred or contemplated in dealing with insanitary areas under Part I of the Housing of the Working Classes Act. The policy adopted by the County Council in reference to the Bethnal Green area, according to the *Times*, "savours strongly either of jobbery or of gross mismanagement." This is a serious charge, and one which the reasons alleged entirely fail to justify. Practically the indictment against the County Council is that instead of dealing with the area house by house (at the cost of the owners) under Part II, they have elected to proceed under Part I, and have thus incurred enormous and unnecessary liabilities for compensation. The necessity for widening and rearranging streets is dismissed as a "pretext." The *Times* assumes further that each of the dwellings which at present cover the area could be condemned upon its merits as unfit for habitation; that the owners would be unable to patch them up into tolerable condition when served with the preliminary notices required by Part II; and that in the event of demolition and rebuilding the necessary provision for open space in front and rear could be enforced. The utter impracticability of dealing with such an area in the manner suggested is obvious. Part I of the Act is intended to meet this very difficulty, by enabling the County Council to carry out the reconstruction of the whole area, including, if necessary, every building upon it. Under Part II they would be able to deal only with dwellings, and their powers of demolition would be limited to such dwellings as were incurably unfit for habitation. Rebuilding would be controlled only by the imperfect building regulations now in force. It is not merely the individual dwellings which are at fault in the rookeries of great cities, but the narrow streets, blind alleys, and want of open space, light, and circulation of air around houses. Piecemeal reconstruction, house by house, even if practicable, would often leave them rookeries still. The suppression of slums and fever dens is, like other large measures of sanitation, a costly matter, but it must not be forgotten that neither under Part I nor Part II of the Housing of the Working Classes Act is any compensation given for dwellings unfit for habitation. Compensation under Part I is not paid, as the *Times* implies, for powers which can be had for nothing under Part II, but for additional and indispensable powers which Part II does not give at all. The great lesson still to be learned in London and in most provincial towns is to avoid building slums for the future. Back-to-back houses, with imperfect means of lighting and ventilation, with pervious basements, and fronting into narrow streets, are springing up even in 1891, and will furnish a difficult problem for the sanitarians of the next generation.

CULTIVATION OF THE LEPROSY BACILLUS IN SERUM.

Dr. Beaven Rake and Dr. G. A. Buckmaster, members of the Leprosy Commission, have during the last two months and a half been engaged in bacteriological work at Almora Leper Asylum and in the new laboratory which has been built at Simla by the Government of India for the use of the Commission. They have now succeeded in cultivating the leprosy bacillus in serum from a blister. The first series of experiments, begun on March 31st, proved negative. On April 14th a blister was raised over a tubercle on the face of a leper at Almora, and another over normal skin on the back of the same patient. Specimens of the fluid from these blisters were taken in a sterilised capillary tube, and allowed to mix. Previous examination of blister fluid over a tubercle in this patient had shown leprosy bacilli. The capillary tube was kept at a constant temperature of 98° F., and was taken to Simla, where microscopic examination on May 2nd showed some brightly stained leprosy bacilli and some turbidity of the liquid. On May 14th a tube of bouillon was inoculated from this tube of serum, and on May 26th there was an undoubted growth of leprosy bacilli on the surface of the bouillon. From this culture vigorous growths of leprosy bacilli were also obtained on gelatine and agar. Another capillary tube of serum prepared in the same way from another leper gave precisely similar results.

PUBLIC HEALTH IN MADRID.

Dr. Federico Rubio, President of the Committee of Public Health and Hygiene of the Municipality of Madrid, recently resigned that post, explaining the motives which led him to take that step in a letter to the President of the Corporation. In that letter he stated that he had been induced to accept the presidency of the Public Health Committee in the hope that it would have been able "to accomplish something of the great deal which the Madrid Municipality is under obligation to do for the improvement of the hygienic and sanitary condition of the people, whose appalling sickness and death-rates, much higher than those of the other European capitals, of themselves prove by the saddest evidence the criminal neglect with which everything that concerns the

public health is treated by the Corporation, whose duty it is to look after it." Dr. Rubio continues in the same outspoken manner: "All my efforts and those of my worthy colleagues of the medical profession have been fruitless, owing to the absolute want of means to which I have been subjected as well as to the interference of the Municipality repressing all initiative," etc. Dr. Rubio's resignation was accepted, but a fine of 125 pesetas (£5) was imposed on him for the want of proper respect with which he had addressed the Corporation. We have no doubt that many an ardent sanitary reformer in our own country would think the luxury of letting his authority know what he thought of them with the same freedom cheap at the price.

PURIFICATION OF CHLOROFORM.

According to a telegram in the *Times* of June 24th, which has a somewhat commercial smack, M. Raoul Retet is arranging with manufacturers of chloroform in Berlin for the purpose of purifying this anæsthetic by means of intense cold—freezing it, in fact. He produces it absolutely pure, it is said. By his process he is able to reduce its temperature to −130° C. The impurities can, it is stated, be separated at −23° C. (the melting point of chloroform is −70° C.). We doubt whether this purification will rid it of its inherent dangers as an anæsthetic. Good chloroform as now manufactured from pure acetone is probably as chemically pure as commerce can supply it. Absolute chloroform has hitherto proved very unstable.

THE KOCH INSTITUTE AND THE GERMAN GOVERNMENT.

On June 18th the new Koch Institute was the subject of a short debate in the Upper House (Herrenhaus) of the Prussian Diet. The subject was introduced by Herr v. Durant, who said that, in his opinion, tuberculin treatment should be combined with homœopathy: he asked that a homœopathic department might find a place in the new institute. The Cultus Minister, Graf v. Zedlitz (the successor of Herr v. Gossler), in replying, took occasion to state that he did not feel himself qualified to pronounce on the merits of the famous "Mittel," and that his judgment was based only on a careful study of the numerous reports and authorised publications. These seemed to prove that the scientific value of Koch's discovery was universally admitted to be beyond question. As regarded its therapeutic effect, there was the well-founded hope that much better results would be obtained if, as seemed now almost certain, Professor Koch succeeded in isolating the active principle of tuberculin. Koch had informed him a short time ago that he hoped to solve the problem completely within a few weeks, and that then every detail, both of the chemical constitution and of the mode of preparation of the remedy, would be published by him. When this time arrives, he added, we should better be able to answer the question, whether this important scientific discovery represents a great advance in therapeutics. Continuing, Herr v. Zedlitz quoted the following sentences from the schedule of regulations for the new institute: "The theory that infectious diseases may be cured by destroying the bacteria that cause infection inside the organism, has taken tangible shape. Koch's discovery of a specific against tuberculosis is only the first step on this road. Substances of the kind discovered by Koch, which exercise a specific action on a specified diseased tissue, were all but unknown until the present time. The small number of specifics known to medicine mercury, iodide of potassium, quinine, salicylic acid have not been found by carefully planned scientific research; whereas Koch's discovery opens up the possibility of searching out and initiating those therapeutic efforts of nature, which take place within the diseased organism." This, therefore, said the speaker, would be the object of the institute, to go deeper and deeper into infectious diseases on the lines indicated by Koch's discovery.

ETHER-DRINKING IN NORWAY.

The theory has been more than once advanced that the origin of ether-drinking in Ireland can be traced to the success of Father Mathew's crusade against drunkenness in its ordinary forms. Alcoholic nature, driven out by the pitchfork of his eloquence, returned in a new disguise, and the last state of the victims was as bad as the first. This theory has been called in question, but it receives accidental confirmation from what is at present happening in Norway. As English travellers know, the sale of ardent liquors is, in that happy country, encompassed about with more restrictions than that of the most deadly poisons is with us; temperance, in fact, is the law of the land in Norway, as Lord Eldon declared that Christianity was in England. But, alas! these people made sober by Act of Parliament have now discovered how to get drunk without violating the law. Ether-drinking, according to a Norwegian contemporary, is becoming quite common in certain districts. The farmers buy it in considerable quantities, especially at Christmas-time and on other festive occasions, and they treat each other and get drunk on ether, as they formerly did on potato or barley brandy. Ether is said to be drunk by young and old men and women, rich and poor, by society belles as a "pick-me-up" after a night's dancing, and by starving wretches, to make them, like Tam o' Shanter, "o'er a' the ills of life victorious." If this be true, it seems to point a moral which perhaps thorough-going temperance advocates have not taken sufficiently into account. Is there, after all, a grain of truth in Byron's thesis (which, by the way, found a scientific supporter in no less a person than Justus von Liebig) that "man being reasonable must get drunk," and can the moderate use of ordinary stimulants be suppressed only at the risk of the evil spirit, which has been cast out, coming back after the house has been swept and garnished, bringing with him seven devils worse than himself? The facts are disheartening.

SCOTLAND.

UNINHABITABLE HOUSES IN GLASGOW.

The Health Committee of Glasgow are actively continuing their crusade against the proprietors of uninhabitable houses, under the Glasgow Police Amendment Act, passed last year. In many cases the landlords have urged that the authorities should serve them with notices of the defects before resorting to their powers under the Act. But the Committee have wisely taken the view that the state of the houses ought to be known to the landlords, whose duty it was to keep their property in a habitable condition. In nearly all cases, orders for closing the houses till they were put into a proper state of repair were issued.

THE POLLUTION OF LOCH LONG.

Recently judgment was given in the Court of Session, Edinburgh, in the Loch Long pollution case. On the shores of this Clyde loch, which is twenty-four miles long, and a half to a mile and a half broad, are situated some of the most favoured of watering places. The Clyde Navigation Trustees have for many years deposited, at the mouth of the loch, the river dredgings, much to the injury of the "amenity" of the shores. The people of the various watering places have for years complained in vain, but at length the Crown authorities agreed to ask for interdict, on the ground that the deposit was a trespass on Crown rights, provided that the expenses of the action were met by those interested. The Clyde Navigation Trustees alleged that the Crown had no title to interfere with their operations, the Crown's rights being confined to a mere protectorate for the purposes of navigation and fishing, and that, provided no injury were proved to the interests of fishing and navigation, Loch Long was just as free to anybody as the middle of the Atlantic. The Court held, how-

ever, that the Crown rights over such inland seas as Loch Long were undoubted, and accordingly gave judgment against the Clyde Trustees.

TYPHUS FEVER IN MULL.

Dr. James Maxwell, of Tobermory, Mull, writes: It has just come to my knowledge that several families who intended to spend the season in Mull are under the impression that typhus fever is still prevalent in the island, especially in the Salen and Tobermory districts. These unfounded rumours have apparently arisen from a want of geographical knowledge of Mull. The nearest cases of typhus were about twelve miles from Salen, and twenty-two from Tobermory, and these occurred upwards of three months ago. There is now no typhus in Mull, and the houses in which the fever broke out have been carefully disinfected. There has been no case of typhus at either Salen or Tobermory within the memory of the oldest inhabitant; and both places and their surroundings are at present quite free from any infectious disease. Tobermory is well drained, and has an abundant supply of pure water.

IRELAND.

THE REGIUS PROFESSORSHIP OF SURGERY.

The Academic Council met at Trinity College on Monday to elect a successor to Mr. Colles as Regius Professor of Surgery, but again failed to make an appointment. After the several candidates had been proposed a vote was taken, with the following result: Dr. C. B. Ball, 6; Sir Wm. Stokes, 5; Sir George Porter, 4; and Mr. Wheeler, 2. In the ordinary course of elections the last man would have been dropped, and a new vote would have taken place, but Mr. Wheeler's supporters declined to withdraw him. In order, however, to test whether some other electors would transfer their support a new vote was now taken, but with the same result, and as the law provides that the person elected shall have an actual majority of those present and voting, no decision could be arrived at. The Council then adjourned, and the matter now stands thus: The election must be referred to the Chancellor (Lord Rosse), or the Council may meet again and make another attempt to elect. It is surprising that a number of gentlemen such as the members of the Council cannot settle this question without transferring their privilege to the Chancellor. Everywhere else the procedure in such cases is to go on excluding the weakest candidate until the round when the contest rests between two, and when one of them will have a majority of those present and voting. If the supporters of a candidate are to have the power of declining to withdraw him, the result must be that a small number of electors, even one, can create an absolute deadlock, as has been done in the present case. Should the Chancellor be asked to decide, no result can be arrived at for some months. The reasonable way out of the difficulty is to have another meeting of Council, at which the ordinary rules of procedure should be enforced.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

A quarterly meeting of the Medico-Psychological Association was held at the Richmond Asylum, Dublin, on June 18th. Dr. Yellowlees, of Glasgow, President of the Association was in the chair and opened the proceedings with a communication on Recovery in Melancholia, in which he gave details of two cases which had recovered after a very lengthy period of illness. One case had required artificial feeding constantly for no less a period than eight years and eight months. Drs. Finnegan and Molony mentioned somewhat similar cases. Dr. Nash read a very interesting paper on Rupture of the Heart occurring in a Case of Melancholia. Drs. Wade, Yellowlees, and Patton spoke. Dr. Conolly Norman read a Note on Cocainism, and also a short note on a Case of *Folie Communiquée*, after discussion on which he exhibited and described various gross and a large number of microscopic specimens, among the former a case of destructive adenoma of the stomach and a case of multiple abscesses of the liver consecutive to dysentery. Among the microscopic specimens were sections of tumours and morbid conditions of the abdominal viscera, including various stages of dysentery. All the specimens, both gross and microscopic, had been obtained in the Richmond Asylum and prepared in Dr. Conolly Norman's laboratory. He said that he exhibited them chiefly to show that a good deal of general pathological work could be done, and actually was being done, within asylums. It is important to emphasise this fact just at present, when such vigorous and unfair attacks are being made upon asylum officers, who are being held up as mere "specialists," wanting in knowledge of or interest in their profession generally. After the specimens had been examined and discussed the proceedings terminated. The members dined together the same evening at Jury's Hotel. Among the guests were the President of the Royal College of Physicians in Ireland; Professor Bennett; Professor Fraser, the Medical Commissioner of the Prisons Board; Dr. John W. Moore; Dr. Nugent, etc.

NOTIFICATION OF INFECTIOUS DISEASES. CORK.

The Infectious Diseases Notification Act was adopted by the corporation of Cork on April 1st, 1890. Previous to that the Public Health Committee had cognisance only of the cases that were reported from the dispensaries and fever hospitals, and so the benefit to be derived from notification applied only to the poorer classes or those who were treated at these institutions. The fears that were entertained of innumerable troubles and disasters which were expected to follow its adoption in Cork have not been realised, and there has not been a single case of complaint during the first year that it has been in operation. The sanitary authority summarise the advantages derived from its adoption as follows: (1) Early and complete knowledge of all the cases of notifiable disease, its prevalence, and distribution in the city; (2) power to exercise such supervision as may be deemed necessary over every case, and to enforce the provisions of the Public Health Act as regards isolation, disinfection, etc., which has a most important bearing in connection with outbreaks of scarlet fever and diphtheria in schools; and (3) opportunities of inspecting the sanitary condition of all households in which notifiable cases occur, with the power of excluding members of infected houses from attending schools or other places through which infection may be spread.

A Japanese *Pharmacopœia* will shortly be published. It is now under revision by the Central Sanitary Board of the Home Department.

His Highness the Maharajah of Bhownuggur, G.C.S.I., has subscribed £100 to the Congress of Hygiene and Demography. The Maharajah has also instructed the head of the State Medical Department, Dr. Burjorjee, to prepare a paper for the Congress on sanitary progress in His Highness's dominions.

Munificent Bequest.—Under the will of the late Mr. David Price, of 4, Queen Anne Street, Cavendish Square, the testator bequeaths a sum of £2,000 to each of the following medical charities: The Metropolitan Hospital (Kingsland Road), the London Fever Hospital (Liverpool Road, Islington), the Royal Free Hospital (Gray's Inn Road), the London Hospital (Whitechapel Road), the North London Consumption Hospital (Hampstead), the National Hospital for the Paralysed and Epileptic (Queen's Square, Bloomsbury), the City of London Hospital for Diseases of the Chest (Victoria Park), the Small-Pox and Vaccination Hospital (Highgate Hill), the Middlesex Hospital, the Hospital for Incurables (Putney Heath), the Free Cancer Hospital (Fulham Road, Brompton), University College Hospital, the Royal London Ophthalmic Hospital, The West End Hospital for Diseases of the Nervous System and Paralysis and Epilepsy (Welbeck Street), the Jews' Hospital and Orphan Asylum (Lower Norwood).

THE PROVINCIAL COLLEGES AND THE PROPOSED NEW UNIVERSITY IN LONDON.

A STATEMENT, signed by Mr. Lawson Tait, Chairman of the General Committee representing the Councils of Mason College and the Queen's College, Birmingham, has been forwarded to the Lord President of the Privy Council. The statement is to the effect that the Committee of these two Birmingham colleges, which are so shortly to be amalgamated, are of opinion that there is full evidence of the necessity for granting the desired charter to King's College and University College, London. Many of the disabilities and inconveniences, it is added, under which the teaching institutions, including the medical schools of London, are labouring press with equal force on the Birmingham schools, and are a great hindrance to their full development and prosperity. The Committee point out that if the Council of the new University will accept residence in another university or college throughout the whole period of study as qualifying students to enter the final examination and compete for degrees, very great inconveniences at present attached to medical provincial colleges, and especially medical schools, would be removed. A small proportion only of medical students attain the standard of a degree in the University of London, and consequently the bulk of them either have to be content with a medical qualification without a degree, or else, during the last one or two years of their period of study, they proceed to Edinburgh, Durham, or some other university, where a medical degree may be obtained on somewhat easier terms. (The University of Edinburgh requires two years' residence, the University of Durham one year.) This is a great misfortune, both for the schools and the students. The schools lose their students at the most interesting and critical period of their study, and, moreover, our students are removed from Birmingham, where there are opportunities for clinical instruction far superior to those existing in the Universities to which they proceed.

The difficulty is, in fact, the same as that which the metropolitan medical schools now feel most strongly, and the Birmingham colleges think that "if the new London Teaching University offer their medical degrees only on the condition of a final one or two years' residence in London, one more avenue will be opened whereby our students will leave us before the end of their period of study. If the Council of the new University were to insist that the students should attend a college or medical school in London during the whole of their period of study, the regulation would be much less prejudicial to the interests of other colleges and medical schools; but in its present form the clause offers a great and direct temptation to students already attached to these institutions to leave them and proceed to London to finish their training. The Committee will therefore be obliged (if this clause be retained), in the interests of self-preservation, to apply at no distant period to your Lordships, petitioning for the grant of a charter for a University of the Midlands."

THE LATE DR. MATTHEWS DUNCAN.

A MEETING of old friends and pupils of Dr. Matthews Duncan was held on June 18th in the hall of St. Bartholomew's Hospital to consider the propriety of raising some memorial to him. Amongst those present were Sir Sydney Waterlow (in the chair), Sir James Paget, Sir William Mackenzie, Sir Joseph Lister, and Mr. Lauderdale Duncan. Upwards of two hundred were present in all.

The CHAIRMAN said that his hearers knew far better than he did how great a man Dr. Matthews Duncan was. He could only speak of his kindly nature and of the true Scotch common sense which pervaded everything he did. The number present was the best testimony to the value of their departed friend. In addition to those who were present, Mr. Bruce Clarke and Dr. Griffith informed him that upwards of two hundred letters had been received sympathising with the object of their meeting, and promising substantial help. Among these names were those of Lord Herschell and Professor Huxley. He concluded by stating that it was proposed to found a scholarship or prize, as well as to perpetuate Dr. Matthews Duncan's memory by a bust, and it was calculated that from £1,200 to £1,400 would be required for this purpose.

Sir JAMES PAGET moved the first resolution: "That a gold medal or other prize for proficiency in obstetrics and gynæcology be founded at St. Bartholomew's Hospital to perpetuate the memory of Dr. Matthews Duncan, and that it be named the 'Matthews Duncan Medal' (or prize)." No words of his could enhance the reputation of Dr. Matthews Duncan. St. Bartholomew's Hospital even did not enhance it. He was a great man before he came there; but when he left his native Edinburgh to come to London, he entered upon a kind of work from which up to that time he had been comparatively shut out. From that time forward he was known not merely as a great obstetrician, but as a great teacher. He remodelled the teaching of this branch of his profession, and rendered a lasting service to medical science.

Dr. CHAMPNEYS seconded the resolution, stating that it gave him great pleasure, as Dr. Duncan's successor, to do so. Dr. Duncan was the greatest obstetrician of his age, and was asked for his advice and counsel by all the most leading men in his branch of the profession in other parts of the world. It would be a poor compliment indeed to his memory if a substantial memorial could not be raised to perpetuate his name, and to add to the success of that subject which he so dearly loved.

On the motion of Sir WILLIAM SAVORY, seconded by Sir DYCE DUCKWORTH, it was proposed "That a copy of the bust by Mr. Fainsmith, now in the possession of Mrs. Matthews Duncan, be obtained and placed in the library of the medical school."

It was then proposed by Dr. ANDREW, and seconded by Sir JOSEPH LISTER, "That a committee be selected from those present, with power to add to their number: and that Sir Sydney H. Waterlow be requested to act as Chairman, and Mr. Bruce Clarke and Dr. Griffith as Honorary Secretaries."

A vote of thanks to the Chairman terminated the proceedings.

MORTMAIN AND CHARITABLE USES AMENDMENT BILL.

THE following is the text of the Bill to amend the law relating to Mortmain and Charitable Uses which has been introduced into the House of Lords by Lord Herschell:—

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title.*—This Act may be cited as the Mortmain and Charitable Uses Act, 1891.

2. *Extent of Act.*—This Act shall not extent to Scotland or Ireland.

3. *Definition of "Land."*—"Land" in the Mortmain and Charitable Uses Act, 1888, and in this Act, shall include tenements and hereditaments, corporeal and incorporeal, of any tenure, but not money secured on land or other personal estate arising from or connected with land; and the definition of land contained in the Mortmain and Charitable Uses Act, 1888, is hereby repealed.

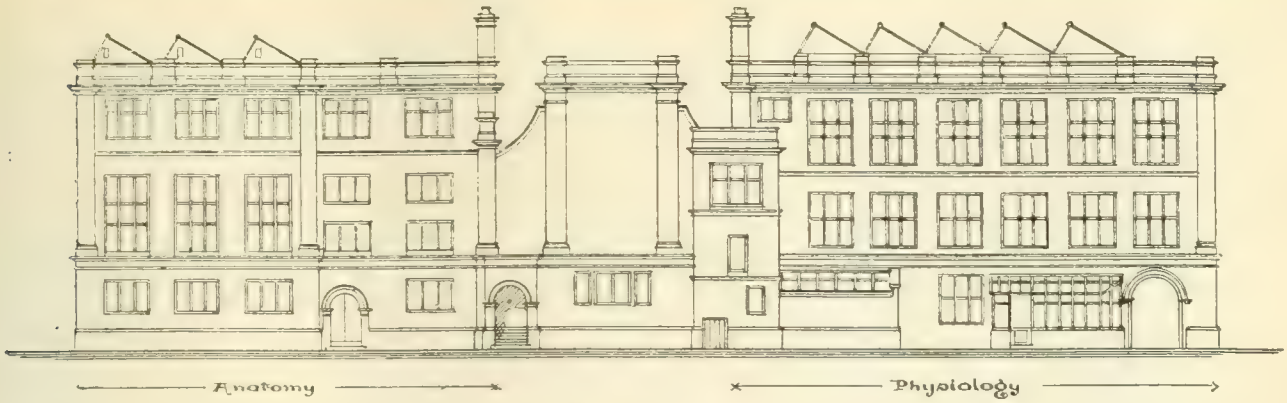
4. *Land assured by Will for a Charitable Purpose to be Sold.*—Land may be assured by will to or for the benefits of any charitable use, but such land shall, notwithstanding anything in the will contained to the contrary, be sold within one year from the death of the testator, or such extended period as may be determined by the Chancery Division, or any Judge thereof sitting at Chambers.

5. So soon as the time limited for the sale of any lands under any such disposition of land shall have expired without completion of the sale of the said lands or any part thereof, the lands unsold shall be deemed to be vested forthwith in the official charity trustee upon trust to sell or complete the sale thereof with all reasonable speed, and after deducting all costs and expenses incurred by him in or connected with such vesting or sale, to pay over the proceeds to the person entitled to give a discharge on behalf of the charitable uses to or for the benefit of which such disposition has been made for the purposes thereof.

6. *Personal Estate by Will directed to be laid out in Land not to be so laid out.*—Any personal estate by will directed to be laid out in the purchase of land to or for the benefit of any charitable uses shall be held to or for the benefit of the charitable uses as though there had been no such direction to lay it out in the purchase of land.

7. *Application of Act.*—This Act shall only apply to the will of a testator dying after the passing of this Act.

PRESENTATION.—Dr. A. N. Davis, for seven years resident medical officer at the Dorset County Asylum, Forston, has, on his appointment to the superintendentship of the Plymouth Borough Asylum, been the recipient of a handsome marble timepiece, subscribed for by the officers and staff of both the Charminster and Forston Asylums. Dr. MacDonald, in making the presentation, spoke of the loss which would be felt at the removal of Dr. and Mrs. Davis from their midst, and assured them that they carried with them the best wishes of all.



WEST ELEVATION

THE NEW BUILDINGS FOR HUMAN ANATOMY AND PHYSIOLOGY AT CAMBRIDGE.

During the present term the great and growing medical school at Cambridge has been enriched by the opening of the handsome and commodious buildings for the departments of human anatomy and physiology, of which we furnish an illustration.

The anatomical buildings are to the north side of the great lecture room, and abut on the Corn Exchange. To the left of the entrance hall is the door of the receiving room, where the subjects are taken in and prepared for injection. This room measures 36 feet by 24 feet, and is 12 feet high, with a concrete floor, and all modern appliances for preparation and injection. Out of this room opens the tank room, 36 by 18 feet, in which are slate tanks large enough to accommodate 40 bodies. In one corner of the tank room is the door admitting to the lift by which bodies are brought up to the dissecting room. To the east of the receiving room is the assistants' workroom, a large and well fitted room (42 feet by 24 feet), containing benches and tools for the rougher part of the work of mounting museum preparations, and for the storage of materials required by the department. To the right of the passage is the private room of the professor (Dr. Macalister), behind which is the prosector's room opening into the large lecture room. Below is a cellar for storage purposes.

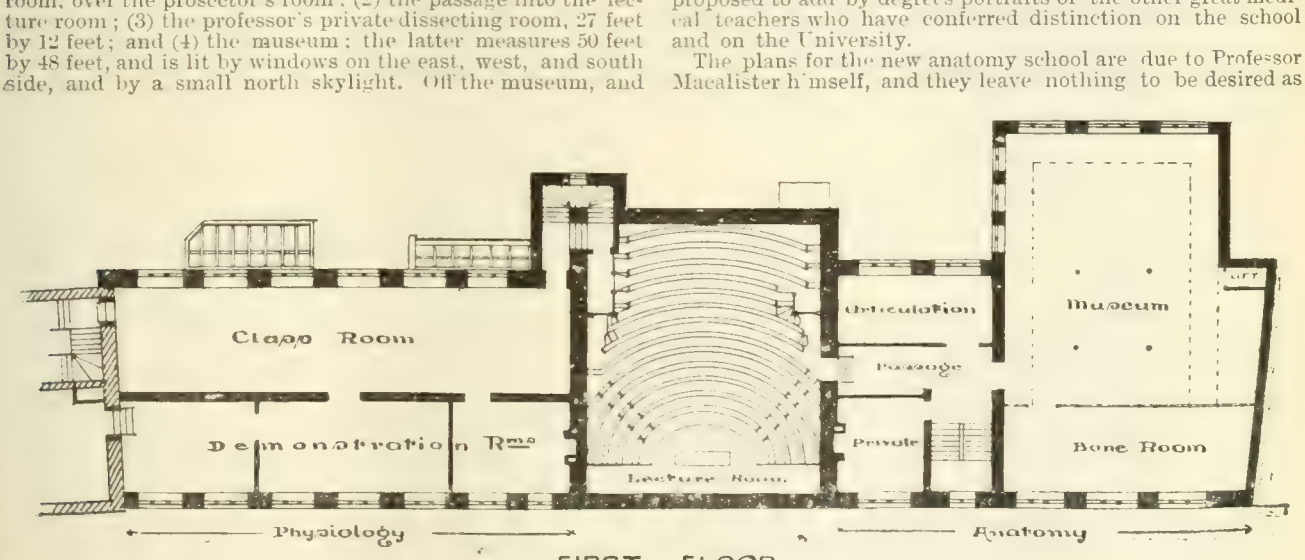
The first floor consists of (1) the senior demonstrator's class room, over the prosector's room; (2) the passage into the lecture room; (3) the professor's private dissecting room, 27 feet by 12 feet; and (4) the museum: the latter measures 50 feet by 48 feet, and is lit by windows on the east, west, and south side, and by a small north skylight. Off the museum, and separated from it by a glass partition, opens the reading room (48 by 18 feet), fitted with teaching preparations of soft parts for purposes of study.

The second floor consists of (1) the private room of the university lecturer in advanced anatomy (Dr. Hill, Master of Downing College); (2) the histology preparation room; (3) lavatories; and (4) the museum gallery, off which opens the bone room.

The top floor consists of the dissecting room (68 feet by 45 feet), in which there are 36 tables, and in which 250 students can work at the same time. Round the walls are small tanks for the reception of parts when not under dissection, and in an anteroom are the lavatories, lockers, and racks for coats, etc. The room is lit by windows on the north, west, and east sides, and for a short space by windows to the south, and the roof is composed of three long ridges running east and west. The north slopes of these are glass, the south slope being slate. The building is at present fitted with gas fittings, and it is expected that arrangements will be made for electric lighting before next Michaelmas Term. At the door of the dissecting room is the demonstrator's room for small classes.

The lecture room is a large amphitheatre, with seats rising so as to give the best possible view to each row of students. It is constructed to seat 300 men. The arrangements for ventilation and lighting have proved to be excellent, and the acoustic properties are singularly good. The theatre is by far the handsomest in the University; it is already adorned by the recently-presented portrait of Professor Newton, and it is proposed to add by degrees portraits of the other great medical teachers who have conferred distinction on the school and on the University.

The plans for the new anatomy school are due to Professor Macalister himself, and they leave nothing to be desired as



FIRST FLOOR

regards convenience of arrangement and adaptation to the needs of the department.

On the south side of the lecture theatre are the new buildings of the Physiological Laboratory. The block abuts directly on to the old laboratory, and is entered from it on all of the three floors, so that it forms an extension thereof, and not an independent building. On the ground floor there is a small room, an ante-lecture room, adjoining the lecture theatre, in which apparatus is arranged and dissections made prior to the demonstrations in the theatre. For demonstrations to a smaller number of students, there is a small theatre to seat eighty, which can be readily darkened for demonstrations with a lantern, or with a mirror galvanometer. The Cambridge Scientific Instrument Company's apparatus for artificial respiration, and apparatus necessary for various experiments on animals is provided. Adjoining the demonstration theatre is a well-lighted ante-room in which the experiments can be prepared, and from which the apparatus, ready arranged, can be wheeled in before the students. A small room, with floor of cement, intended for the reception of the mercury pumps used in research work on gases, and an unpacking room, complete the ground floor.

On the first floor is a long room, 77 feet by 18 feet, in which the students do their experimental work on muscle and nerve and on the heart. At the south end of the room is a shaft, driven by an Otto gas engine, situated in the basement, from which six endless cords proceed to isolated tables, supplying motive power to 12 drums. Twenty-four students can thus work at muscle-nerve experiments simultaneously. The north end of the room is curtained off and forms a dark chamber for work with galvanometers, of which two are provided. From the shaft an endless cord is conducted through the floor and supplies motive power in the demonstration theatre below and in the preparation room adjoining it.

Of the three other rooms on the first floor, one is reserved for experimental psychophysics. This also receives a rapid running cord from the shaft in the students' room. The other two rooms are fitted for histological work, one is chiefly for preparation of histological material for the elementary class, and the other for research work and preparation for the advanced classes. This last room opens directly into the large class room of the old buildings, which is devoted to advanced histology.

The second floor consists of one large room, 77 feet by 44 feet, for elementary histological work. The room, which has a gallery, is lighted on both sides and by five skylights, and has accommodation for at least 150 students. A microscope and a set of staining and other reagents for histological work is provided for each. From the gallery the students can enter directly into a room, 54 feet by 18 feet, on the second floor of the old building, which has now been adapted for chemical work. Five benches with racks for reagents, and with gas and water, divide the room into six recesses. The recess at the extreme south of the room is partitioned off and is used for the preparation of material for the students.

The class rooms of the new buildings are intended entirely for elementary students, and those in the old buildings are now used only for advanced work.

THE HOSPITALS COMMITTEE.

Workhouse Infirmaries: St. Marylebone, Bethnal Green, and Paddington.—Metropolitan Asylums Board.—Bethnal Green and Whitechapel Infirmaries.—Poplar Hospital.—Westminster Ophthalmic Hospital.

THE Committee resumed the inquiry on June 18th.—Mr. J. R. LUNN, F.R.C.S. (the Medical Superintendent of St. Marylebone Infirmary, Wormwood Scrubbs) stated that he had been ten years superintendent of the infirmary. It had 744 beds; more beds could be filled at times. Patients were admitted by an order given by the relieving officer. Many cases were sent from hospitals. There were two assistant medical officers. He was responsible for the medical treatment as as well as for the administration. Although the hours were long he did not think the work excessive. It was absolutely necessary for efficient administration that there should be only one person at the head, and he should be a medical man. At present he found two assistants were sufficient.

The CHAIRMAN: Is a hospital very much overstaffed with medical officers?—I should think so.

The WITNESS then stated the duties, salaries, food, and hours of work of the matron and the staff of nurses. The health of the nurses was excellent. He had heard that persons domiciled themselves in Marylebone in order to get into the infirmary, but he had no evidence to that effect. The question of allowing students to go to infirmaries for clinical instruction was a large one. He did not think there was enough work for them, and probably the students would not attend after the first few weeks.

In reply to other members of the Committee, the WITNESS expressed the opinion that infirmaries would not interfere with the provident medical clubs. There was a separate training school and home for nurses, and the training was quite equal to that at the hospitals. He thought that the medical authorities might do something to secure the attendance of students at the infirmaries for the study of some cases. He would see as many as 300 cases in one day. All the cases were under properly trained nurses, but he should methodically examine 20 or 30 cases. The drainage and the water supply of the infirmary were excellent. He received £500 a year and resided at the infirmary; his first assistant had £130 a year. With his two assistants he did all the operations. He did not, unless in exceptional cases, call in any assistance from outside, and that was why they did so well; they very seldom lost an operation case. The infirmaries were sometimes used by the hospital authorities as convalescent institutions. A number of malingerers came to the infirmary, but they were not kept in. A great many venereal cases came from time to time, and a number of prostitutes who were pregnant and were not admissible to the Lock Hospital were taken. There was no power of detention of persons with venereal disease. He and the Marylebone guardians drew up the nursing scheme in force at the infirmary. The cases were classified into medical and surgical; there was also a moral classification to some extent. Some of the poorest patients which were the most fit subjects for charitable treatment were not received at the general hospitals. Many of them were most loathsome and would not apply to the hospitals. If hospitals were to receive them they should be put in separate wards quite apart from the other cases. An absolute power of detention in infirmaries would be of great advantage.

Dr. KNOX (medical officer of the Bethnal Green Workhouse) stated that the workhouse had been built about fifty years, and there had for a number of years been an idea of building an infirmary. There were 495 separate beds for the sick. The beds were not sufficient; in the winter extra beds had to be provided. He had one assistant only, but there was work enough for another. There were eleven nurses and a matron.

In answer to Lord CATHCART, the WITNESS stated that at Bethnal Green they had the worst establishment of the kind structurally, and with regard to the system of pauper help, it was a crying evil. It was impossible to improve the building. There was a difficulty in securing a suitable site for a new infirmary.

Dr. THOMAS SAVILL (Medical Superintendent of the Paddington Infirmary, President of the Medical Superintendents' Association, and formerly Assistant-Physician to the West London Hospital) stated he had been six years superintendent of the infirmary. It had 284 beds—a number barely sufficient for the needs. The infirmary administration was perfect, with two exceptions, and the hospitals would do well to imitate it. At the Paddington Infirmary the matron was a hospital-trained nurse, but that was not the case in twelve out of the twenty-four London infirmaries. They should all be hospital-trained nurses. The other flaw was that the medical staff was not sufficient and needed amplification. The reason why the infirmary administration was so good was because there was a medical head of a medical institution. That made the infirmaries so greatly superior to the hospitals. It had been suggested that the infirmaries should be amalgamated with the neighbouring hospital, the staff of the hospital rendering assistance by coming and seeing the cases in the infirmaries. But that was not what was wanted. The objection to that was, first of all, the staff of the hospital had enough work of their own to do; there were many medical men disengaged and not connected with any institution; and besides that was not the kind of assistance required. What

was wanted was responsible assistants and those who would do the drudgery, so to speak, of taking notes and investigating cases. Afterwards, what was wanted was true consultants who would come when required to see difficult cases. As to the question of clinical instruction, the Witness stated that there were 12,170 beds, including the sick wards, in all the 24 metropolitan infirmaries. About 50,000 patients would pass through the beds every year; the whole of that was practically wasted, so far as medical education was concerned. The cases were just the kind met with in private practice, whereas hospital patients were not. The students might with very great advantage give their services during a part of the extra year which was now about to be enforced. At the Paddington Infirmary, the only infirmary of modern years wherein had been tried the experiment of clinical teaching, the patients did not object; the system would increase the interest of the medical staff; and would result in the improved treatment. The best scheme was that already adopted by the Metropolitan Asylums Board. There ought to be more medical assistance at the infirmary. The operations performed there were most successful, and the death-rate was only from 2 to 2½ per cent. Venereal cases were not taken in, the guardians paid 16s. a week to the Lock Hospital to receive such cases, and that arrangement answered well. All the sick should be transferred from the workhouse to the infirmary. Pauper nurses were almost inseparable from the workhouse. He desired to draw attention to the extravagance of hospitals in regard to alcohol as compared with the infirmaries.

Mr. HOPKINS, Medical Officer of the Central London Sick Asylum, also gave evidence as to the administration and nursing.

THE first witness called on June 22nd was Mr. T. D. MANN (Clerk to the Metropolitan Asylums Board), who, in answer to the CHAIRMAN, said that the Board was created in the year 1867, and consisted of 72 members. The institutions under the control of the Board were three imbecile asylums for harmless pauper imbeciles, five fever hospitals and one convalescent fever hospital, three small-pox ships in the river Thames at Long Reach, and a small-pox hospital on shore at Darenth, and there was also the training-ship *Ermouth*. In the fever hospitals there are 2,429 beds, and in the hospital ships 1,150 beds—all for small-pox. Measles and whooping-cough were not taken. If the friends of a patient wished to take him away, the Board had no power forcibly to detain him. The Board looked for payment to the local authorities, who had power to recover from the patients who were in a position to pay. Students came as individuals. There were as many as fifteen at the Eastern Hospital, chiefly from St. Bartholomew's. The teaching was done by the medical superintendents. The staff of the hospitals varied according to the number of patients. Generally speaking the average medical staff of each hospital consisted of a medical superintendent and two or three medical assistants. The medical superintendents received from £400 to £500 a year each with certain allowances. At times their hospitals were overcrowded, but they were able to provide temporary accommodation, mainly by erecting wooden huts in the grounds. The average daily cost of fever patients varied from 2s. 6d. at the Northern Convalescent Hospital to 4s. 4d. at the South-Western.

By Lord THRING: Each hospital was managed by a separate committee, who, as a rule, met fortnightly. The committee appointed the nurses, who were under the control of the matron. They did not train nurses, nor did they give certificates of efficiency.

Mr. WILLIAM TULLETT HOWARD, clerk to the Bethnal Green Guardians, said it was true that the infirmary was very much overcrowded, and the guardians had been considering the advisability of building a new place for the past six or seven years, but they had not succeeded in obtaining a suitable site.

Mr. WILLIAM VALLANCE, clerk to the Whitechapel Board of Guardians for twenty-four years, considered that the present system of Poor-law relief in London adequately met the case of the destitute sick poor. He understood from the relieving officer that the poor preferred the infirmary to the London Hospital, which was quite near, because they objected to being examined by students as well as by the actual doctors.

Mr. F. M. CORNER, M.R.C.S., said he had been resident in Poplar for thirty-four years, and had been surgeon to the Poplar Hospital for Accidents the whole of that period, and he was now senior surgeon to the institution. He had also held the post of medical officer of health for twelve years. Undoubtedly there was a feeling among medical practitioners that the out-patient departments were abused, but he did not think, in the East of London at any rate, that there was a tendency at the hospitals to encourage the attendance of patients suffering from only trivial ailments. As to the cheap dispensaries, they had multiplied very largely indeed during the last ten or fifteen years. He had no serious objection to such dispensaries; in fact, he thought they did a great deal of good, because prior to their establishment poor persons were in the habit of going to druggists for medicine. He did not think, however, that for the very small fees paid—6d. for consultation and medicine—the poor always got justice done to their cases. There had been a conference of medical men in the East End, and the opinion generally expressed was that if they would only unite and come to some common understanding they would be able to obtain higher fees. The hospital accommodation of the district was not sufficient to meet the requirements. At the Poplar Hospital there were forty beds, and no women's ward, but accommodation was about to be doubled, and a female ward would be provided. He thought there should be some controlling body with reference to the establishment of new hospitals. No students attended the Poplar Hospital, although there was a very large out-patient department. He believed, however, when the extensions contemplated were carried out, that students would be admitted.

Mr. T. BEATTIE CAMPBELL, Secretary of the Royal Westminster Ophthalmic Hospital, stated that the hospital was founded in 1816, and had thirty beds. It was not connected with Charing Cross Hospital, but the authorities there sent eye cases to them. The new out-patient cases last year were 9,172. They did not keep a register of attendances, but, taking an average, he should think the attendances last year numbered 56,000. The expenditure last year was £2,169, and income £2,272. The accounts were audited by chartered accountants. The institution was managed by a committee of twenty. The staff was honorary, and no letters were required from the patients. Patients were questioned as to their circumstances, and if found able to pay they were not treated, but it was a very rare thing to have to turn anyone away. There were four nurses and a matron who received £50 a year and board and lodging. Cases were received from all parts of England. The hospital was largely used by medical men in practice, by students, and also by medical officers of the army and navy. The number of students last year was 58.

The Committee then adjourned until Monday.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members, in commodious apartments, at the Offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 8th day of July next, at 2 o'clock in the afternoon.

June, 1891. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS FOR 1891. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 8th and October 21st, 1891. Candidates for election by the Council of the

Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, September 30th, 1891.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—The fifty-fifth annual meeting of this Branch will be held in the Town Hall, Birkenhead, on Wednesday, July 1st, 1891, at 2.30 P.M. Agenda: Inaugural address by the President, Dr. Vacher on the Limitation of Epidemic Diseases in England and Wales during the last Twenty-four Years. Report of Council and Financial Statement. Election of Office Bearers. Election of New Council. Choice of place for holding next annual meeting. Dr. Rentoul has given notice of the following motions: Proxy Voting. That the following additions be made to the Laws of the Lancashire and Cheshire Branch of the British Medical Association: Rule 7. "At any General or Special Meetings of the Branch, votes to be given either personally, or by proxy, who shall be appointed in writing under the hand of the appointer. No person shall be appointed a proxy who is not a member, and the instrument appointing him shall be deposited with the Branch Secretary, at his address, not less than forty-eight hours before the time of holding the meeting at which he proposes to vote." That in Rule 4 after the words "Annual Meeting" the words "by a majority of the members present" be omitted. That in Rule 7 after the words "the voting paper properly filled up shall be handed in" the next word "personally" be omitted. That in Rule 8 and in other rules, after the words "by a majority of three-fourths" the words "those present" be omitted. Branch Parliamentary Bills Committee: That a Branch Parliamentary Bills Committee be formed; that such Committee consist of the President, President-Elect, Branch Secretary and members of the Branch, such number of elected members of Committee to be in the proportion of one to every one hundred members of the Branch; that these be elected at the annual Branch meeting by a majority of votes, and that each candidate for election be nominated by five members of the Branch, the nomination paper, duly signed, being forwarded to the Branch Secretary on or before the 31st of May of each year. Publication of Notices of Motion: That 14 days' notice be given in the JOURNAL of the Association of all motions to be brought up for consideration at any general or special meeting of the Branch. Payment of Fares: Parliamentary Bills Committee: That this Branch recommends that, at the annual meeting of the Association a resolution providing for the payment of first-class railway fare to each member of the Parliamentary Bills Committee, thus following the Rule which provides for the payment of first-class railway fare to members of the Council of the Association, be passed. Addition to the Editorial Reference Committee: That this Branch recommends that, at the annual meeting of the Association a resolution providing for the appointing and payment of an additional member to the "Editorial Reference Committee of the Journal," such member to be, and to be distinctly representative of those, in general medical practice, be passed. Additional Direct Representation: That this meeting of the Lancashire and Cheshire Branch of the British Medical Association beg to urge upon the Lord President and the Honourable Members of the Privy Council the urgent necessity of exercising the powers vested in the Privy Council, by Section 19 of the Medical Act 1886, by directing that the registered medical practitioners in each of the three divisions of the United Kingdom be given the power of returning an additional direct representative for each of the three divisions as provided for by Section 8, Sub-section 1, paragraph (c) of the above Act, and that such power be given before November, 1891, when the next quinquennial election of direct representatives takes place. That a copy of this resolution be forwarded by the Honorary Secretary to the Privy Council. Medical and Surgical Communications: Mr. M. Banks, on the Neglect of the Actual Cautery. Mr. Stanmore Bishop, on the Treatment of the Intestine in Strangulated Hernia. Dr. Brooke will read a Paper on the Modern Conception of Eczema. Mr. Lee will read a Paper on Some Aural Sequelæ of Influenza. Surgeon-Major Blood will read a Paper on a Series of Cataract Extractions with a description of "Couching" as practised in India. Mr. Johnson Martin, on the Present Epidemic of Pulmonic Fever. Dr. Milligan will give an Analysis of 300 Cases of Suppurative Disease of the Middle Ear, with some remarks upon treatment. Luncheon: A light luncheon, kindly provided by the members of the Branch and profession resident in Birkenhead and district, will be served in the Large Committee Room, Town Hall, from 1 to 2.30 P.M. Dinner: Arrangements have been made for a dinner in Berry's Grand Restaurant, 75 and 77, Argyle Street, Birkenhead, at 5.30 P.M. Tickets, wine not included, 8s. each. Excursions: To R.M.S. *Majestic*, the latest Atlantic liner and armed cruiser, the tender *Magnetic* will leave the Birkenhead stage at 2.5 P.M., prompt; Bidston Observatory, carriages will leave the Town Hall at 3 P.M.; Messrs. Laird's Shipbuilding Yards, H.M.S. *Royal Oak*, in progress, visitors will leave the Town Hall at 3.30 P.M.—CHARLES E. GLASCOTT, Honorary Secretary, 23, St. John Street, Manchester.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—A joint meeting of the Northern Counties and Aberdeen, Banff, and Kincardine Branches will be held at the Gordon Arms Hotel, Elgin, on Saturday, June 27th, 1891, at 2.50 P.M. Business: (1) Minutes, etc. (2) General. A visit to Elgin Cathedral and Gray's Hospital will be made by those arriving by early train. An excursion has been arranged to visit Pluscarden Priory, starting from Gray's Hospital, Elgin, at 12.15 P.M., and returning to Gordon Arms Hotel, at 2.50 P.M. Fare for excursion and luncheon, 4s. 6d. per head. Dinner will be served in the Gordon Arms Hotel, Elgin, at 3 P.M. Price (exclusive of wine, but inclusive of attendance) 4s. per head. Train Arrangements: For the convenience of members a saloon carriage will be attached to the 6.50 A.M. train from Aberdeen, reaching Elgin at 9.44 A.M.; also, to the train leaving Elgin at 5.45, reaching Aberdeen at 9.40 P.M. Fares for the return journey, going *viâ* Highland and returning *viâ* Coast route, 14s. Members leaving Aberdeen by 9.30 A.M. train can take part in excursion and dinner. Members are invited to bring medical friends with them.—J. MCKENZIE BOOTH and C. THISELTON URQUHART, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual meeting will be held at Maryport on the afternoon of Thursday, July 16th. The Presidential Address will be delivered by Dr. Crerar, "On Natural Analogy, considered in relation to Diseases produced by Micro-organisms, with special application to the Effectual and Speedy Cure of Influenza." Gentlemen desirous of reading papers, etc., are requested to communicate with JAMES ALTHAM, Honorary Secretary, Penrith.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The annual meeting of this Branch will be held at Bridge of Allan, on Tuesday, June 30th, and will be followed by the annual dinner. Further particulars will be announced by circular later.—C. J. LEWIS and J. PEAKE, Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.—Notice is hereby given that the summer meeting of the above Branch will be held at Bridge of Allan on Wednesday, July 8th. It is proposed that the members of the Branch should be afforded an opportunity of visiting Dunblane and other places of interest in the neighbourhood under the leadership of Dr. Haldane, President of the Branch. Dinner will be served in the evening in the Royal Hotel, Bridge of Allan.—FREELAND FERGUS, Honorary Secretary Glasgow and West of Scotland Branch.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting will be held at the Worcester Infirmary on Friday, June 26th, at 3.30 P.M. Business of the meeting: 1. To elect officers and Council for the ensuing year; 2, the President's Address; 3, Dr. Rentoul's proposed Resolutions on Hospital-patients Reform. The annual dinner will be at the Star Hotel at 5.30 P.M.—GEO. W. CROWE, Honorary Secretary.

OXFORD AND DISTRICT BRANCH.—The annual meeting will be held at Witney, on Friday, July 31st. Gentlemen are requested to send notice to the Honorary Secretary of papers, etc., on or before July 17th.—W. LEWIS MORGAN, Honorary Secretary, 42, Broad Street, Oxford.

NORTH OF IRELAND BRANCH.—The annual meeting of this Branch will be held in the Belfast Royal Hospital, on Thursday, July 16th. Dr. Thompson (Omagh) will read Notes of a Successful Case of Abdominal Section for Intussusception, and will show the patient; and also Notes of the Removal of a Large Uterine Polypus Adherent to the Walls of the Vagina. Gentlemen wishing to read papers or to bring any other business before the meeting will kindly communicate, as early as convenient, with the Honorary Secretary, JOHN W. BYERS, M.D., Lower Crescent, Belfast.

CONJOINT MEETING OF THE EAST ANGLIAN, CAMBS AND HUNTS AND SOUTH MIDLAND BRANCHES.

GENERAL MEETING.

A CONJOINT annual meeting of the East Anglian, Cambs and Hunts and South Midland Branches was held at Cambridge in the New Museums, which were kindly placed at the disposal of the members by the University, under the presidency of Dr. ALEX HILL, Master of Downing, on June 18th and 19th, 1891. Among those present were Sir Geo. Paget, K.C.B., Sir Peter Eade, Sir Geo. M. Humphry, Dr. Beverley (Norwich), Mr. G. H. Percival (Northampton), Mr. Howard Marsh, Dr. Roberts Thomson (President-elect of the British Medical Association), Dr. Bridgwater (Harrow), Dr. Bradbury, Professor Gamgee, Dr. Gaskell, Professor Roy, and many others.

President's Address.—On the afternoon of June 18th the PRESIDENT gave his presidential address upon Imagined Disease in the new anatomical theatre, which will be published.—Sir GEO. PAGET, in returning thanks to the President for his very able and instructive address, related many examples seen by himself of such affections as the President had drawn attention to, and gave in addition one or two cases in which the "evil eye" had induced inhibitory disturbances of the central nervous system, which were difficult, if not impossible, to dispel from the mind of the patient.—Sir PETER EADE seconded the vote, which was unanimously, and amidst much applause, agreed to.

Skeleton of True Dwarf.—Professor Sir GEO. M. HUMPHRY gave an account of a dwarf's skeleton which he had procured in Paris, and which he believed to be the only specimen of a true dwarf in this country. The different parts of the skeleton were in due proportion to one another, and all the bones

of natural shape, the want of growth being uniform throughout the whole skeleton. Although in Africa a race of dwarfs existed, yet in no known instance had it been possible to propagate a race of dwarfs in Europe, the children of the dwarfs of Charles I being of average size. Sir George contrasted this skeleton with that of a rickety dwarf, and pointed out that the latter differed from the former in the disproportion existing between the limbs and trunks and limbs, and in the bending of the bones and in the spreading out of the bones at the epiphysial lines; these characters sufficed to distinguish between the true and false dwarfs. He also remarked upon the strength, intelligence, and determination of character, especially in depraved sentiments, usual to these rickety dwarfs.

Prognosis in Surgical Tuberculosis.—Mr. Howard Marsh discussed this subject. After a brief reference to the etiology of tubercle and the conditions necessary for the maintenance and healthy growth of the tubercle bacillus in the tissues, he pointed out the unfavourable prognosis now so frequently given in any case of local tuberculosis and the prevalence of the idea, which he maintained was not based on fact, that all cases of local tuberculous disease tended to get gradually worse, and ultimately affected the whole system, and thus caused death. On the contrary, his own experience had shown him that local tubercle, especially that occurring in children and in persons for a time below par yielded with satisfactory results to appropriate treatment, and that many a child who suffered from local tuberculosis at the age of 5 had, at the age of 10, completely recovered, and afterwards remained entirely free. He related several instances of spinal caries, strumous hip and knee joint, and although the disease was pronounced when brought under the influence of treatment, yet by complete and absolute fixation of the parts affected, or by rest in bed with fixation, aseptic evacuation of pus whenever it formed, and attention to the general health, the great majority of the cases yielded; and in the course of from 6 to 18 months the parts had usually completely recovered. No such result could be obtained by any other method where there was no removal of the parts affected.—Sir George Humphry said he was glad to find that Mr. Marsh had undertaken to dispel an idea so prevalent amongst medical men and especially medical students that tubercle was such a serious malady, and that it called for immediate and radical measures for its elimination.

Surgical Dressings.—Mr. G. H. Percival (Northampton) next introduced the subject of surgical dressings for discussion. He first dwelt upon the dangers that might and did arise from insanitary surroundings, and then rapidly reviewed the various forms of dressings now in vogue. The most satisfactory antiseptic substance that he had as yet procured was "salufer" (silico-fluoride of sodium), which combined all the good properties of an antiseptic without any of their obvious drawbacks. As an antiseptic powder he found "salol" to be the best. He related some experiments which he had conducted during the last few months on the relative value of antiseptic substances, and his results were confirmatory of the above statements.

Chlorosis, etc.—Dr. Burton-Fanning introduced a discussion on Chlorosis, basing his remarks on 100 cases which he had observed.—Dr. W. J. Burleigh-Robinson made a few remarks on the Diagnosis of some Uterine Tumours, after which the discussion closed.

Annual Dinner.—The annual dinner was held by the invitation of the President in Downing College Hall. Among the guests present were Dr. Roberts Thomson, Mr. J. W. Clarke, the Registrary, Mr. Howard Marsh, Dr. Bridgwater, Dr. Parker (Bristol), Mr. Langley (Cambridge), and many others.—After the usual loyal toasts, Mr. Hodson, of Bishop Stortford, proposed "The University," and the Registrary replied. The Chairman then proposed "The British Medical Association," and Dr. Roberts Thomson responded; and after giving an account of some of the work done by the Association, and after alluding to the very satisfactory state of the finances, he said that Bournemouth, at the coming meeting of the Association, would do all in its power to give a royal welcome to all the members.—Sir Geo. Humphry proposed "The East Anglian and South Midland Branches," and spoke of the advantages accruing from an occasional combined meeting of neighbouring Branches, and hoped that they would be encouraged.—Dr. Beverley responded, and expressed the pleasure it gave to the members of the Branches to meet in Cambridge.—Mr. Percival (Northampton) proposed "The Cambs and Hunts Branch," and the Chairman responded.—Sir Geo. Paget proposed "Our Guests," and Dr. Bridgwater replied.—Mr. Stear proposed "The Secretaries," and Mr. Evans replied on behalf of the Secretaries of the three Branches.

Demonstrations, etc.—The following clinical demonstrations were given in Addenbrooke's Hospital:—By Dr. Bradbury: (1) Pseudohypertrophic Muscular Paralysis; (2) Almost Complete Recovery from Myelitis; and other Cases. By Dr. Carver: Case of Talipes Equino-varus associated with Arrest of Development of the Tibia and of the Os Calcis; and other cases. By Dr. MacAlister: (1) A Case of Lupus treated with Tuberculin; (2) Cases of Intestinal Inflammation treated with β-naphthol: (3) Certain Cases of Difficult Diagnosis. By Mr. Laurence Humphry: (1) Locomotor Ataxy with Charcot's Joints; (2) Bulbar Paralysis of Sudden Onset; (3) Cortical Thrombosis in a Child. Mr. Wherry: (1) A Case of Hip Joint Disease in a Child, the Eyeball having been previously removed for Tubercle of the Retina; (2) Ligature of the Carotid for the Cure of Arterio-venous Communication in the Cavernous Sinus. By Dr. Joseph Griffiths: Cases Illustrating the Effects of Epidermis Grafting on Large Ulcers. The following specimens were exhibited in the Anatomy Schools:—By Professor Alexander Macalister, F.R.S.: Specimens illustrative of the Growth of Epiphyses. By Mr. Thomas H. Morse: Specimens from Cases of Abdominal Surgery—(1) The Vermiform Appendix; (2) Hæmatosalpinx; (3) Extrauterine Fœtation. By the President: Sections of Various Parts of the Central Nervous System Stained by a New Method. A demonstration was given in the Chemical Laboratory, by Henry Robinson, M.A., On Methods Recently Introduced for the Examination for Sanitary Purposes of Water and Air. The following demonstrations were given in the Pathological Laboratory:—By J. G. Adami, M.A., M.B.: The Action of the Medium of Growth in Modifying the Colour produced by the Bacillus of Blue Pus. By E. H. Hankin, B.A.: Protective Proteids. By E. Lloyd Jones, M.A., M.B.: Method of Taking the Specific Gravity of the Blood for Clinical Purposes. By George Wherry, M.A., M.B., M.C., F.R.C.S.: (1) A Kidney Removed by Laparotomy for Calculous Pyelitis; (2) Casts of Teeth in Congenital Syphilis to Show the Remarkable Bite. Demonstrations were given in the Physiological Laboratory:—By Dr. Gaskell, F.R.S., and Dr. Shore: The Physiological Action of Chloroform, with Experiments; and by J. N. Langley, M.A., F.R.S., and A. S. Grünbaum: Sections showing the Degeneration which follows Removal of Half the Brain in the Dog.

Festivities.—On Friday, June 19th, Professor Sir George M. Humphry invited all the members to lunch in the Hall of King's College. Covers were laid for over 200. Dr. Mann gave an organ recital in King's College Chapel after lunch.

Garden Party.—The President and Mrs. Hill entertained the members and their friends at a garden party in the Lodge of Downing College. For the entertainment of the members and their friends the services of Mr. Ben Greet's company had been procured. In the recess in the Fellows' Garden the company played "the garden scenes from *Twelfth Night*." The President and Mrs. Hill may be congratulated on the success of their hospitable efforts for the entertainment of their guests.

Cambs and Hunts Branch.

The annual meeting of this Branch was held in the Old Anatomical Museum, Cambridge, on June 18th, at 3 P.M., previous to a conjoint meeting of the East Anglian, South Midland, and Cambs and Hunts Branches; Dr. Beckett, President, in the chair.

Election of Officers.—Mr. Balding (Royston) was re-elected representative of the Branch on the Parliamentary Bills Committee of the Association. Dr. Joseph Griffiths was elected Honorary Secretary for the ensuing year. Dr. Anningson was elected member of the Council of the Branch. Mr. Stear (Saffron Walden) was elected representative of the Branch on the Council of the Association.

New Members.—The following gentlemen were admitted

members of the Branch: Mr. W. J. Middleton (Harston), Mr. F. L. Nicholls (Fulbourn), Mr. H. S. Shelmerdine (Waterbeach); and the following as members of the Association and Branch: Henry Gervis, M.A., M.B., M.C.Cantab., Arnold Ingle, M.A., M.B.Cantab., Howard Marsh, F.R.C.S., London.

South Midland Branch.

The annual meeting of the above Branch was held at Cambridge, in conjunction with the Cambridgeshire and Huntingdon and East Anglian Branches, on June 18th and 19th, under the presidency of Dr. Alex Hill, Master of Downing. Prior to the general combined meeting a short preliminary meeting of the South Midland Branch was held for the purpose of transacting the ordinary business. Dr. Bower (Bedford) vacated the chair in favour of Mr. Geo. H. Percival (Northampton), President-elect. Thirteen members were present. The minutes of the last committee meeting were read and confirmed.

Hon. Treasurer's Report.—The Hon. Treasurer presented his annual report, showing a balance in favour of the Branch of £23.

Hon. Secretary's Report.—The Hon. Secretary reported that one member had died, two had withdrawn, and six new ones had joined, namely, C. J. Deyns (Fenny Stratford), Robert H. Elliott (Bedford Infirmary), as members of the Association and Branch: J. S. Johnson (Sharnbrook), D. L. Hamilton (Great Missenden), Reginald Farrar (Stamford), and Rolf Creasy (Winslow), members of the Branch only.

Election of Officers.—The following were elected office-bearers: *President-elect for 1892-3:* Mr. T. S. Maguire (Stony Stratford). *Committee of Management:* Dr. Buszard, Mr. Moxon, Mr. Spurgin, Mr. Terry, Mr. Crew, Dr. Goldsmith, Mr. Kinsey, Mr. W. H. Bull. *Representative on General Council:* Mr. J. Hughes Hemming. *Representative on Parliamentary Bills Committee:* Mr. J. Hughes Hemming. The Hon. Treasurer and Hon. Secretary were re-elected.

Autumnal Meeting.—It was decided that this should be held at Northampton, as the annual meeting, due there in the ordinary course, was being held in Cambridge.

Annual Meeting, 1892-3.—It was resolved that the annual meeting, 1892-3, should be held somewhere in Buckinghamshire.

MIDLAND BRANCH.

The annual meeting of this Branch was held on Thursday, June 18th, at the Infirmary, Derby, under the presidency of Dr. Greaves.

Officers and Council.—Mr. Sympson and Dr. Handford were elected representatives of the Branch on the Council of the Association, and Dr. Charles Harrison on the Parliamentary Bills Committee. Mr. Hodges was elected Vice-President for Leicestershire, and Dr. Harrison Vice-President for Lincolnshire. On the Branch Council the following were elected:—Dr. Stewart and Dr. Cattle, Nottinghamshire; Dr. Benthall and Dr. Scriven, Derbyshire; Mr. Bond and Mr. Douglas, Leicestershire; Mr. Sutton and Dr. Mansel Sympson, Lincolnshire. Dr. L. W. Marshall (Nottingham) was chosen President-elect. The Honorary Secretaries and the Treasurer were re-elected, with the exception of Mr. Sharp, who resigned; Mr. J. A. Southern was appointed in his place.

A vote of thanks was passed to Mr. Sharp, who has acted as District Secretary for Derbyshire for ten years.

The Annual Meeting of the Association in 1892.—The following gentlemen were appointed to form a deputation to the Council at the meeting at Bournemouth to invite the Association to Nottingham in 1892:—Mr. G. H. Grimoldby (Grimsby), Dr. C. Harrison (Lincoln), Dr. Newman (Stamford), Mr. Shipman (Grantham), Mr. Thimbleby (Spilsby), Mr. Pilcher (Boston), Mr. Appleby (Newark), Dr. Mutch (Sneinton), Drs. Stewart, Ransom, and Hunter, and Mr. Powell (Nottingham), Messrs. Bond, Douglas, Franklin, Hodges, and Dr. Pope (Leicester), Mr. Willan (Melton Mowbray), Mr. Johnston (Belper), Drs. Greaves and Ogle, and Messrs. J. Wright Baker, Rice, and Sharp (Derby), with the President-elect, Dr. L. W. Marshall, and the Honorary Secretary and Treasurer, Dr. W. A. Carline. Dr. Marshall proposed and Dr. Stewart seconded the nomination of Mr. Joseph White, Consulting Surgeon to the General Hospital, Nottingham.—Mr. J. Wright Baker and Dr. Scriven supported the proposition, which was carried by acclamation.

President's Address.—Dr. Greaves gave an address, which took in the subject of the New Royal Infirmary at Derby, Koch's treatment for tuberculosis, a teaching university for London students, the new Factory and Workshops Bill, and the influenza.

Communications.—The following papers were presented: Dr. Handford: Antiseptic Treatment of Diseases of the Stomach.—Dr. Mansel Sympson: A cases of Diabetes Mellitus, with Remarks on its Treatment by Salicylate of Soda.—Mr. T. Henderson Pounds: Aural Vertigo: Notes of a Case.—Mr. E. Collier Green: The Old and the Proposed New Infirmary at Derby.

Luncheon and Dinner.—The President entertained the members at luncheon in the Infirmary, and, after the meeting, the dinner was held at the Midland Hotel.

New Members.—At the meeting of the Branch Council held on the same day, the admission of the following gentlemen—who were already members of the Association and had been admitted members of the Branch by the President and Secretary—was confirmed: Dr. T. H. Dickson, Mr. C. W. J. Bell, Dr. Palemon Best, Dr. J. H. Higgins; and Mr. J. Wright Baker was re-elected a member of the Branch.

SOUTH-WESTERN BRANCH.

The fifty-second annual meeting of the Branch was held on May 29th, 1891, at the Royal Albert Hospital, Devonport. Before the meeting the President-elect, Dr. John Rolston, entertained the members at luncheon at his residence, Clarendon House, Stoke. The general meeting was held at 2 P.M., and was attended by nearly seventy members and a few visitors. The chair was taken by Mr. W. Pearse, Vice-President.

Letter from the President.—The minutes of the last annual meeting at Ilfracombe, and of the intermediate meetings at Exeter and Newton Abbott, having been taken as read, the President called on the Honorary Secretary to read a letter from the President, Dr. Slade-King, wishing the members of the South-Western Branch to be told "that it is a reluctant obedience to medical advice which alone prevents me from attending this annual meeting, and which deprives me of the opportunity of tendering to them in person my grateful thanks for the constant and cordial manner in which they have supported me during my year of office as President."

Installation of New President.—The Chairman then formally introduced Dr. John Rolston, the President-elect, who, after taking the chair, moved that a cordial vote of thanks be accorded to Dr. Slade-King for his valuable services as President during the past year, coupled with the expression of sincere regret for his recent severe illness, and earnest hopes for his complete restoration to health; and that a copy of the resolution be forwarded to Dr. Slade-King. This resolution was seconded by Dr. Deas, and carried by acclamation.

President's Address.—The President then delivered an address dealing with various matters of interest connected with medical education, medical science and practice, and public health, concluding with an account of the medical institutions and sanitary arrangements of the town of Devonport. He remarked that twenty years had passed since the parent Association held its thirty-ninth annual meeting in the three towns, and that he was the only one left in actual practice of those who took an active part in that meeting.—Mr. Tosswill proposed a hearty vote of thanks to the President for his address. This was seconded by Mr. Pearse, and carried by acclamation.

Report of Council.—The Honorary Secretary then read the annual report of the Branch Council, which stated that the Branch now numbered 231 members, being an increase of 12 during the past year. Twenty-four new members had been enrolled, of whom 17 were already members of the parent Association; 4 had died, 6 had left the district, and 2 had resigned. Since the Branch last met in Devonport, eight years ago, the number of members had increased by one-fourth. Among the members who had died were two former Presidents, Dr. Thompson, of Bideford, and Dr. Lewis Shapter, of Exeter. The admirable way in which the latter presided over the meeting at Exeter in 1884, and his scholarly address

on that occasion would be fresh in the memory of members, and his early death was a great loss to the profession in the West and to the Branch. The annual meeting at Ilfracombe was very successful, the arrangements for the meeting and for the excursions being admirably planned. Two successful intermediate meetings were held on October 17th at Exeter and on March 4th at Newton Abbott. The Midwives Bill had been under the consideration of the Council. The general feeling was that, while a higher standard of knowledge among midwives, and means for registering those duly qualified, were very desirable, any legislation on the subject would have to be very carefully limited, so as to avoid the risk of forming a class of women who, under the name of registered midwives, might practically act as registered medical practitioners. The financial position of the Branch continued to be very satisfactory. The balance in hand was £52 2s. 7d., as compared with £39 14s. 7d. at the date of the last annual meeting. The annual meeting in 1892 would be held in Exeter, and the Council suggested for nomination as President-elect. Mr. Louis H. Tosswill, M.B., Exeter.—On the motion of Mr. SOMERS (Broadclyst), seconded by Dr. MORTIMER (Exeter), the report of the Council was approved and adopted.

Next Annual Meeting.—Mr. THOMPSON (Launceston) proposed that the next annual meeting be held in Exeter, and that Mr. L. H. Tosswill be the President-elect. This was seconded by Dr. ALEXANDER (Paignton), and unanimously agreed to.

Officers and Council.—On the motion of Dr. WOODMAN (Exeter), seconded by Mr. THOM (Devonport), Dr. John Rolston and Dr. P. Maury Deas were elected as representative members on the Council of the Association.—It was proposed by Mr. HARRIS (Exeter), seconded by Mr. M. H. BULTEEL (Stonehouse), and agreed to, that the following be elected to fill the vacancies on the Branch Council: A. De Winter Baker (Dawlish); H. Davy, M.D. (Exeter); A. W. Kempe, M.D. (Exeter); A. C. Roper (Exeter); L. H. Tosswill, M.B. (Exeter); C. H. Wade (Chudleigh).—On the motion of Mr. F. WEBB (Dawlish), seconded by Dr. WOODMAN, Dr. P. Maury Deas was re-elected Honorary Secretary, and also representative member on the Parliamentary Bills Committee of the Association.

Vaccination.—Mr. G. JACKSON (Plymouth), in accordance with notice given, moved: "That in the opinion of this meeting it is desirable that all vaccinations should be made in four places, statistics clearly showing the superiority of the protection obtained against small-pox by those who have four well-defined marks as compared with those who have only one or two such marks."—Dr. WOODMAN seconded the resolution, which was carried unanimously.

Communications.—Mr. J. M. ACKLAND (Exeter) showed a specimen of a large Buccal Concretion removed with two teeth.—The HONORARY SECRETARY showed and explained for Mr. M. H. BULTEEL (Stonehouse) a Tarnier's Couveuse, and read notes by Mr. Bulteel on the usefulness of the apparatus, and some improvement devised by himself.—Mr. J. D. HARRIS showed (with comments) a Papilloma removed from the vocal cord.—Mr. J. ELLIOT SQUARE (Plymouth) described the present greatly improved condition of a patient from whom he removed a Papilloma of the vocal cord, in December, 1889.—Mr. G. JACKSON (Plymouth) showed, with notes, an Exostosis removed from the ear.—Mr. F. EVERARD ROW (Devonport) showed (1) water-colour drawing of a case of Lymphosarcoma; (2) Vesical Calculus.—Mr. W. G. NASH (South Devon Hospital, Plymouth) exhibited the following specimens: (1) Renal Calculi removed by nephrolithotomy: (2) Vesical Calculi removed by suprapubic lithotomy: (3) very large Biliary Calculus with large number of smaller ones removed *post mortem*.

Excursion.—At the close of the meeting members, by invitation of the President, embarked on board a steamer and had an enjoyable cruise up Hamoaze, etc.

Annual Dinner.—The annual dinner was held in the evening at the Royal Hotel, Devonport, and was attended by about 50 members and some guests invited by the President, among whom were Lord St. Levan, Mayor of Devonport, Deputy-Surgeon-General Will, Fleet-Surgeon Ellis, R.N., etc. Letters of apology for non-attendance were read on behalf of his Royal Highness the Duke of Edinburgh, Vice-Admiral Sir W. H. Grubbe, Major-General Sir R. Harrison, Inspector-General Mortimer, etc.

SPECIAL CORRESPONDENCE.

PARIS.

Sanitary Improvement of Communes.—Students' Dinner.—Disinfection Service.—Medicine Chests for Schools.

THE Comité d'Hygiène et de Salubrité de la Seine has passed a resolution that when the faulty sanitary condition of a commune makes improvements imperative, or when it is not provided with a sufficient quantity of drinking water, the commune, after notice from the sanitary council of the department, shall be held responsible for the necessary work. If three months after the notice has been issued the improvements have not been carried out, the Government will have the work done at the sole charge of the commune.

The banquet of the Association Générale des Etudiants de Paris took place recently, under the presidency of the Minister of Public Instruction. Representatives of the political press were invited. The medical press were not treated with so much consideration; this omission has been much commented on.

The Paris Municipal Council have decided that notifications of the working of the disinfection service will be placarded on the walls. The prefect of the police and the prefect of the Seine work hand in hand to perfect this service. Misunderstandings between the two prefects were apprehended at the outset.

All the Paris communal schools are now provided with a medicine chest (*boîte à secours*); printed instructions how to use the contents will be distributed to every school.

CORRESPONDENCE.

"BARNES'S BOUNDARY LINE" OR "BANDL'S RING."

SIR,—In the BRITISH MEDICAL JOURNAL of June 20th is a letter from Dr. T. A. Helme in which he explains the difficulty in some cases of turning as arising from the contraction ring at the lower segment of the uterus. I believe he is right in his view; but when he calls this ring "Bandl's ring," it is right to remind him that I described this ring under the description of the "boundary line between the middle and lower zones of the uterus" in 1847-57; that it was afterwards called "Braune's os internum," 1872; Bandl's ring 1876, and more recently "Schroeder's contraction ring." By the right of priority it should be called "Barnes's ring." But I go further, and affirm that these and other writers, although recognising this fundamental fact of a "definite boundary line," and attaching their names to it, as if they had made the discovery, have failed to grasp its full significance.

All this is set forth in a memoir read and illustrated before the British Medical Association in 1887, and printed in the BRITISH MEDICAL JOURNAL in March, 1888. It is the old tale:—

Sic vos non vobis
Tulit alter honores.

—I am, etc., ROBERT BARNES.

PUBLIC HEALTH QUALIFICATIONS.

SIR,—In the BRITISH MEDICAL JOURNAL of July 19th, 1890, I ventured to suggest two questions which required to be answered; they were (1) What subjects should be included in Public Medicine? (2) Should every registrable medical qualification include a knowledge of Public Medicine?

With regard to the first question, I ventured to point out that it was a mistake to try to make the medical officer of health a sanitary engineer or an analytical chemist, which seemed to be the aim of the Universities. I suggested that if any profession should be intruded upon it was that of the veterinary, and at the last meeting of the Medical Council I observe that it recommends that the candidate for a Public Health diploma shall produce evidence "that he has had, and has availed himself of, the opportunity of seeing the chief groups of diseases affecting the lower animals, and capable of transmission to man." That is somewhat indefinite. What the medical officer of health requires is a knowledge of the causes, symptoms, and progress of the diseases of ani-

mals of all kinds and their morbid anatomy, so far as such knowledge can be obtained. So equipped, we might expect such medical officers of health to throw light on the causes of many of our diseases, which at present are shrouded in mystery.

As to the second question, if the General Medical Council is to decide, it will be answered in the negative, since it would appear to be responsible for the fact that such a qualification is registrable. It would surely be better to educate every intending practitioner in such a way that he may set out in practice, able not only to do all that can be done to cure disease, but also to prevent it, seeing that it is the general practitioner who is, after all, most powerful, either in the stamping out or in the spread of disease. To train up an army of so-called "specialists" and give them a diploma, as is at present being done, is doing harm instead of good. Such diplomas vary very much in value as a guarantee of any special fitness for such work, and they enable a young man who has never been in practice and knows nothing about infectious diseases to obtain a position for which he is entirely unfit, and for which he never would have become a candidate if he had not had such a diploma with which to conjure.

Surely, if we are to continue to have such a registrable diploma, it is not too much to ask our General Medical Council to endeavour that only one such diploma may be obtainable in each division of the kingdom, instead of all the Examining Boards vieing with each other in the sale of these diplomas, to the disgrace of one which in other respects has always been above suspicion. This question is one of such importance at the present time, that it might well form a subject of discussion in the Public Medicine Section at the approaching annual meeting of the Association, where experienced medical officers of health, the best authorities, congregate.—I am, etc.,

JOHN HADDON, M.D.

Canonbie, N.B.

TREATMENT OF CHLOROFORM-POISONING.

SIR,—In cases of anæsthetic narcosis, such as that reported in the BRITISH MEDICAL JOURNAL of June 20th by Mr. T. Campbell Grey, I would suggest the inhalation of oxygen gas. I mention it in my book *Anæsthetics, Ancient and Modern*, and a further experience of the therapeutic value of the gas convinces me that in oxygen we have the true physiological antidote to anæsthetic narcosis.

I would also recommend the inversion of the patient. Dr. Julian J. Chisholm's cases, which I report in full in the work quoted above, bear strong testimony to the value of the method. I am, etc.,

Dublin. GEORGE FOY, F.R.C.S.

UNCONTROLLABLE VOMITING IN PREGNANCY.

SIR,—In the BRITISH MEDICAL JOURNAL of May 30th I find my name quoted, along with that of the late Dr. Marion Sims, as recommending counter-irritation of the cervix in cases of uncontrollable vomiting in pregnancy. Allow me to say that the quotation is a mistake as regards myself, and probably as regards Dr. Marion Sims, who, I believe, merely endorsed my opinion which appeared as long ago as 1848 or 1852, in the second or third edition of my work on *Uterine Inflammation*. What I did assert, and again assert after forty years' additional experience, is that such uncontrollable sickness is often, not always, the result of inflammatory lesions, inflammation, granular conditions, ulceration of the cervix and its cavity, and will disappear in nearly all such cases if these local lesions were energetically and promptly healed and cured by appropriate local surgical treatment fearlessly carried out, astringent injections, lead, zinc, sulphate, alum. If such sickness does not disappear under medical treatment I have laid it down as an axiom of practice that the cervix should be carefully examined in a good light, lithotomy position, the pelvis elevated with a large, full, conical speculum, the larger the more the pregnancy is advanced. My conical bivalve speculum answers the purpose admirably for the more advanced stages of pregnancy. These inflammatory lesions often exist in young married women, and increase in extent and importance as the pregnancy advances, growing with the growth of the uterus and its cervix. They often account for many of the pathological conditions of pregnancy in all its stages. The granulations on the ulcerated cervical surface often become fungoid as pregnancy advances, giving rise to uncontrollable hæmorrhages, the cause of which is not recognised. If these lesions can be and are treated and cured in time, not only is the sickness removed or rendered bearable, but the pregnancy is saved. I have saved scores upon scores of pregnancies under these conditions.

I resume my views in a few words. If sickness in pregnancy should become uncontrollable by ordinary medicinal means, I consider that a thorough surgical examination with the speculum as above is imperative. The touch cannot be depended on. If inflammatory lesions are discovered they must be treated and cured. If they do not exist, I do not myself recommend any surgical treatment; nor should I have the slightest reliance on mere counter-irritation of the cervix. Surely in so severe a state of things, when extreme measures are debated, there can be no real objection to so simple a step as the ocular examination of the cervix, an examination which is, or ought to be, painless. The question is very simple. If there is disease it must be healed; if not, it is a satisfaction to know that the cervix and its canal are healthy, and the other remedies preconised can be tried one after the other.—I am, etc.,

Nice. J. HENRY BENNET, M.D.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF: EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office orders with the notice. The first post on Thursday mornings is the latest by which advertisements can be received.

A SURGEON-MAJOR, home in February, 1890, is willing to exchange to India during early part of coming trooping season on easy terms.—Apply to Bundela, c.o. Messrs. Holt and Co., 17, Whitehall Place, London.

THE NAVY.

THE following appointments have been made at the Admiralty: JAMES H. DAWE, Surgeon, to the *Gossamer*, June 30th; MATTHEW F. RYAN, Fleet-Surgeon, to the *Nile*, June 30th; ALEXANDER G. P. GIPPS, Staff-Surgeon, to the *Pallas*, June 30th; EVERARD H. SAUNDERS, Staff-Surgeon, to the *Boscawen*, June 30th; JOHN MACKIE, Staff-Surgeon, to the *Scrapis*, June 23rd; GEORGE M'SHANE, Surgeon, to the *Nile*, June 30th; HAMILTON MEIKLE, Surgeon, to the *Tartar*, June 30th; GEORGE H. FOOTE, M.D., Surgeon, to the *Indus*, June 30th; CHARLES B. D'E. CHAMBERLAIN, Surgeon, to the *Vernon*, June 30th.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR M. D. MORIARTY, M.B., Bengal Establishment, Civil Surgeon, Meerut, is appointed to be in charge of the duties of Chemical Examiner North-West Provinces and Oude and Central Provinces, in addition to his own duties, *vice* Brigade-Surgeon W. Moir, retired.

Surgeon J. MURRAY, Bengal Establishment, whose services have been placed at the disposal of the Government of the Punjab, assumed charge of the office of a Professor in the Lahore Medical College on April 30th.

Surgeon J. F. MACLAREN, Bengal Establishment, Civil Surgeon second class, is transferred from Ghazeepore to Bareilly, during the absence on leave of Surgeon-Major J. Anderson.

Surgeon J. J. PRATT, Bengal Establishment, second class Civil Surgeon, is transferred from Mirzapore to Seetapore.

Surgeon-Major F. C. CHATTERJIE, Bengal Establishment, second class Civil Surgeon, is transferred from Jorrapore to Mirzapore.

Surgeon-Major T. H. SWEENY, Bengal Establishment, is appointed Honorary Surgeon to the Mussoorie Rifle Volunteers.

Surgeon-Major W. P. CARSON, Bombay Establishment, 1st Bombay Grenadiers, is appointed to the medical charge of Baroda Residency, in addition to his own duties, and assumed charge on April 4th.

Surgeon-Major H. MCCALMAN, Bombay Establishment, received charge of Dhawar District Gaol on May 11th.

THE MILITIA.

SURGEON-MAJOR F. ARMSTRONG, M.D., 4th Battalion the Border Regiment (late the Westmorland Militia), has resigned his commission, with permission to retain his rank and uniform. He was appointed Surgeon, September 9th, 1865; and Surgeon-Major, March 1st, 1873.

THE VOLUNTEERS.

ACTING-SURGEON J. P. A. GABB, M.D., 2nd Volunteer Battalion West Surrey Regiment (late the 4th Surrey), has resigned his appointment, which was dated August 22nd, 1888.

Mr. LAWRENCE PATRICK JOSEPH FINEGAN is appointed Acting Surgeon to the 2nd (South) Middlesex, June 20th.

Surgeon L. H. JONES, M.D., 2nd Volunteer Battalion Manchester Regiment (late the 8th Lancashire), has resigned his commission, which bore date August 7th, 1886.

SURGEON G. E. HALE, M.S.

On the return of the Wuntho Expedition a parade of all troops was held at Bhamo, and a letter from the Secretary of the Government of India, Military Department, dated March 6th, referring to the conduct of Surgeon G. E. Hale, Medical Staff, was read. The letter is in the following terms:

"I am directed to acknowledge receipt of your letters quoted in the margin, on the subject of the operations carried out during the winter of 1889-90 against the Lwe-Laigne Tonhon Kachins, by a detachment under command of Major J. E. Blundell, of the 1st Battalion Hampshire Regiment, and to say for the information of the Commander-in-Chief that the Government of India concur in the opinions expressed by His Excellency and by His Excellency the Commander-in-Chief of the Madras army in regard to the good and gallant conduct of Surgeon G. E. Hale, Medical Staff. I am to request that an expression of the approval of the Government of India may be conveyed to that officer."

Brigade-General Wolseley, C.B., in a subsequent speech, mentioned that, on the occasion referred to, Surgeon Hale had been recommended for the distinction of the Victoria Cross, or of the Distinguished Service Order.

MR. JOHN FURLEY.

As a mark of appreciation of Mr. John Furley's distinguished services in ambulance work in peace and war, over a period of twenty-two years, a dinner is to be given to him at the Hotel Métropole on July 7th, when Lord Wantage, K.C.B., V.C., will take the chair. An album, containing photographs and autographs therein of all subscribers, will at the same time be presented. The subscription has been fixed at two guineas. The Honorary Secretaries are Colonel J. S. Young and Mr. Lees Hall, 53, Charing Cross.

COURT PRIVILEGES.

Observer says: Mr. Stanhope promised Sir Andrew Clark to communicate with the Lord Chamberlain on this subject. If he has done so it is as yet without effect. In the lists of the last State ball as given in the *Times* of June 4th among all branches of the service present army medical officers were conspicuous by their absence.

THE NEW TITLES: BRIGADE-SURGEONS.

Another Brigade-Surgeon writes: Mr. Stanhope has almost succeeded, and against overwhelming odds, in giving peace to the medical department; let us be grateful to him. The true rational way of dealing with brigade-surgeons is to give them a step in rank—brevet, if necessary—and placing them and the deputies on one list; the latter should be termed "on the staff." The three years' service towards pension has stopped the retirement of the senior ranks, and the average age of brigade-surgeons is 51 years, and service 28½ years. Surely they are worthy of a step in rank.

Lex urges that (in the interests of discipline) brigade-surgeons, who are often called upon to perform administrative duties, should be on the same list as deputies. If the financial question stands in the way, Mr. Stanhope can give them the step in rank but not to carry allowances; he will find the age of brigade-surgeons closely corresponds with that of combatants when they succeed to the rank of colonel. The one list is the true solution of the difficulty in title.

A correspondent says: Only two more things are necessary to give Mr. Stanhope's scheme a fair trial, namely: Brigade-Surgeons to be called Surgeons-Colonel, and Deputies to be called Surgeons-Colonel on the Staff. This would assimilate the position of the latter very closely to Commanding Royal Engineers, and bring them into direct position with General Officers Commanding.

A correspondent forwards a cutting from the *Globe* of June 10th, headed "Military Matters," in which the new medical titles are declared not likely to be taken into use "except in official correspondence," and the concession to be, therefore, "a very shadowy affair." If this is the way the opponents of the medical officers are to treat Mr. Stanhope's concessions, will matters be any "forarder"?

*** Medical officers may make up their minds that those to whom the concessions are distasteful will do their best to minimise them. But these persons will have to reckon with the press and the public of the country.

COMPOUND TITLES.

T. E. H. writes: The symmetry and compactness of these titles is destroyed by the proposed title of Brigade-Surgeon Lieutenant-Colonel. None of the proposals made to obviate this seem quite satisfactory. Why not classify the Surgeons Lieutenant-Colonel with 1st and 2nd class? Such a system is pursued in the Chaplain's and Veterinary Department. Mr. Stanhope has promised substantive, and therefore real, rank, not honorary or relative, and limited only in command. It is to be hoped that will be clearly affirmed in any warrant.

*** The Camperdown Commission recommended the senior fifty Surgeons Lieutenant-Colonel to be classified as Brigade-Surgeons.

The Local Government Board has given its sanction to the proposal of the Berkhamsted Guardians to grant an annual allowance of £50 to Mr. Edward Pope, late medical officer of the Aldbury district, who resigned his office in consequence of advanced age.

MEDICO-LEGAL AND MEDICO-ETHICAL.

CALLING.

H. F. P. writes: Will you kindly inform me whether according to the etiquette of the profession a medical man, who is not practising, on removing into a new neighbourhood should call first upon medical men already there or should wait until called upon by them?

*** Our correspondent will see from the subjoined note, extracted from the *Ethical Code*, chap. iv., rule 1, that it does not devolve upon him, as a medical officer not practising to call on the members of the profession practising in the locality selected for his residence:

"Note.—Intra-professional etiquette does *not* apply to one in the position of a retired non-practising army, navy, or other surgeon in whose case the etiquette of ordinary social life is strictly and solely applicable."

ATTENDANCE ON DENTISTS.

In a recent note the opinion was expressed that some limitation of the assumed claim by dentists of free attendance by the medical profession might be necessary. The *British Journal of Dental Science* makes the following remarks upon this subject. It is of opinion that custom does not "entitle medical men as a right to gratuitous dental attendance for themselves and families. We fancy that as a rule the dentist gets the worst of the bargains, whether 'self-determined' or otherwise, and we would only say that it seems to us far more just that both should pay a modified fee. We are sure it is far better to do so rather than to make a boast of never charging medical men, and then putting in amalgam where gold should be, 'because I could not afford the time.'"

LOCUM TENENTES AND SUBSTITUTES.

Puzzled would be obliged if the Editor could advise him on the following:—A. is B.'s patient. B. goes for a holiday, but A. will not have his *locum tenens's* services, at the same time, as well as on a previous occasion, stating distinctly she must have C. C. attends, and is told by A. that the present arrangement is made simply to dispense with B.'s services. Should C. attend on A. when B. returns?

*** The following is the medico-ethical rule pertaining to the case submitted by "Puzzled" until A. has in person or by note formally communicated to B. her intention to dispense with his professional attendance: "When a practitioner is ill or absent from home, and the patient wishes to have a medical man of his own choice rather than the officiating friend, partner, or *locum tenens*, the practitioner so elected should act in accordance with the following rule:—When a practitioner is called to an urgent case, either of sudden or other illness, accident, or injury in a family usually attended by another, he should (unless his further attendance in consultation be desired), when the emergency is provided for, or on the arrival of the attendant in ordinary, resign the case to the latter, but he is entitled to charge the family for his services."

Rustic.—The general principle which governs the fees paid to medical witnesses has frequently been stated. If there are any particular circumstances in this case it would be desirable to consult a solicitor.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, June 18th.

Mortmain and Charitable Uses Amendment Bill.—Lord Herschell, in moving the second reading of this Bill for the amendment of the law of 1736, which practically remained unaltered, said that although there had been various Bills brought in with this object, they had never passed into law. The matter was considered by Committees of the other House in 1844, and again in 1852, and the Committee of 1844 particularly urged very large alterations of the then existing law. The Committee of 1852 dealt with matters beyond the scope of the present Bill—namely, whether corporations should hold land. The present Bill dealt only with the question of mortmain so far as it related to the disposition of property for the benefit of charities. The Act of 1736 appeared to have had two objects: one to prevent the accumulation of land in the hands of corporations, and especially religious corporations; and the other to some extent to prevent the disinheriting of heirs. It was not easy to discover the exact circumstances which led to the Act of 1736. In 1844 the Chairman of the Committee, the present Duke of Rutland, then Lord John Manners, expressed himself unable to discover the exact purpose and object of the Act of 1736, or the circumstances which led to its being passed. The constant references in the speeches of that time to Queen Anne's Bounty seemed to suggest that a fear then existed, which had proved to be unfounded, lest Queen Anne's Bounty might absorb enormous gifts and benefactions, and ultimately become possessed of large quantities of land. The Act of 1736 not only dealt with charitable gifts of land, but also with charitable gifts of any interest in land, and the first amendment which the present Bill proposed to make was that, so far as that Act related to an interest in land, it should cease to have operation. The making of an interest in land subject to the Mortmain Act had led to an enormous amount of litigation, and to distinctions being drawn which he did not think anybody could call other than absurd, and which often rested on the mere accident of the mode or form of a security. For instance, it had been held that a mortgage of poor rates was an interest in land, and therefore within the Act, while, on the other hand, a mortgage of police rates and a charge on a general district rate were not. In later times the distinctions had become still more embarrassing. A testator might give to a charity bonds of the corporations

of Dewsbury and Wakefield, which were not interests in land, but not of the corporations of Salford and Oldham, which were interests in land. The Leicester Corporation's bonds could be given to charity, but their Three-and-a-Half per Cent. Redeemable Stock could not, because it was an interest in land. Except to afford food for lawyers, it was difficult to see the use of maintaining distinctions such as these. Whatever the reasons which led to the passing of the Act of 1736, they could not be served by keeping up restrictions of that kind, which now applied to what were simply methods of investing money. That proposed alteration in the law left open one or two questions, one of them of great importance, namely, whether it was expedient to maintain in any manner the provision which made void a gift of land to charity. Many people at the present day thought it inexpedient for charities to become large holders of land. As regarded the disposition of a testator, there did not seem any reason for limiting it as to land any more than as to any other form of property. There was no provision in our law compelling him to leave it to members of his family. The law of mortmain was peculiar to this country. There was no such law in Scotland, and he believed there was none in Ireland. The Act of 1736 related only to this part of the United Kingdom, and he had heard of no inconvenience arising from the want of a similar law in Scotland or Ireland. Some charities had obtained private Acts enabling them to hold land, and so a gift of land might be good if made to one charity and void if made to another. The Bill provided that a gift of land should be valid, but that that land must be sold within a year, or within such extended time as the Court might allow, otherwise it would be sold by the official trustee of charities, and the proceeds, after deducting the cost of sale, handed to the charity. There was one other case dealt with by the Bill, and that was where money was left to be expended in land. That also had been held void under the Mortmain Act. The Bill provided that the condition in such a case should not attach, but that the bequest should be valid. He was not sure whether it would not be advisable to introduce an amendment to that provision, because it would be reasonable to provide a site for a charity. Those were substantially the provisions of the Bill which he now asked their lordships to read a second time.—The Earl of SELBORNE expressed his entire concurrence with what had been said. Perhaps something might be done in Committee to enable the Attorney-General to renounce foolish and mischievous bequests.—Viscount CRANBROOK said that as the Bill stood it would be impossible for a testator to leave a site for the benefit of a particular charity.—Lord HERSCHELL said there might be some exceptions required to meet that case, and also the case of money left to be laid out in land.—Lord COLCHESTER said the effect of the Bill would be that land which was now conveyed by deed would be conveyed by the simpler form of a will, but it would have to be sold. There was now no such compulsion, and this might lead to charities being deprived of the benefit of increase in value. There was land which might rapidly double or treble its value, and this unearned increment might as well go to a charity as to a private individual. It might be provided that a sale should not be carried out unless the Charity Commissioners were of opinion that it would not be injurious to the charity concerned. The Bill ignored the present administrative machinery, made no allusion to the Charity Commissioners, and devolved responsibility on others who had not the same acquaintance with the subject.—Lord STANLEY of ALDERLEY suggested several amendments of the Bill, and said that it ought not to come into operation until six months after the date that it passed.—Lord HERSCHELL promised to consider these and any other suggestions.—Lord COLCHESTER seemed to somewhat misapprehend the object of insisting on the sale of land. There was a great objection in many quarters to any alteration of the law which prohibited the accumulation of large quantities of land in the hands of bodies such as these.—Lord SALISBURY was understood to say that perhaps a distinction might be made between land held as an investment and land held and used for the immediate purposes of a charity.—The Bill was then read a second time.

Monday, June 22nd.

Factories and Workshops Bill.—This Bill was brought up and read a first time.

HOUSE OF COMMONS.—Thursday, June 18th.

Royal British Nurses Association.—Sir M. HICKS-BEACH, in reply to a question by Mr. PAULTON in reference to the application of this association to the Board of Trade for permission to omit the word "Limited" if registered under the Companies Act, said, after careful consideration of the application, and also of the representations made to him in opposition to it by bodies and persons whose interest in hospital nursing was unquestionable and whose experience entitled them to speak with authority, he was unable to satisfy himself that the means which the association proposed to adopt were either adequate to carry out its objects satisfactorily or so free from objection as to warrant him in complying with the application made to the Board of Trade. He was not aware of any grounds for reconsidering the matter.

Factories and Workshops Bill.—Mr. BUXTON moved to insert after Clause 78 the following new clause: "On and after January 1st, 1893, no child under the age of 11 years shall be employed in a factory or workshop. Provided always that any child lawfully employed under the principal Act, or any Act relating to the employment of children, at the time that the provisions of this clause come into operation, shall be exempt from its provisions." Considering the importance of this question, he thought he was justified in appealing from the judgment of the Grand Committee to that of the House at large. If the House would not agree to raise the age to 12, they might accept this compromise. The total number of children whom his proposals would affect was about 80,000, of whom some 40,000 were in Lancashire and Yorkshire. If the conditions of work affected the health of adults, they were much more likely to affect the health of children. These children when they first went into a mill were picked children, having had to pass the ordeal of a certifying surgeon; the deterioration in the health of these children was serious, and the effect on the physique of future generations and the community at large was still more serious. He believed they were pledged at the Berlin Conference to this extension of the age of half-timers.—Sir W. HOULDSWORTH pointed out that out of the twelve countries participating in the Conference, exclusive of Great Britain, in eight the minimum age was higher than in this country. In two countries it was 14 years, in six it was 12 years, in three it was the same as in Great Britain, and in only one case was it lower.—Viscount CRANBORNE believing that certifying surgeons were the best judges of what was best for the health and happiness of the children, had written to a great number of them in his county, and one and all of them were against the proposed change, and declared that the children were well and happy under the existing system.—Mr. BYROM REED also adopted this view, but Mr. BROADHURST was of opinion that the interests of the workers would be quite served if the age were raised to 11 instead of 12.—Mr. W. SIDEBOTTOM was not prepared to believe that going to work was more detrimental to the health of children than going to school.—Mr. MATHER was convinced that it was absolutely necessary to raise the age from 10 to 11.—Sir J. GORST explained that at the Berlin Conference it was found that England was in advance of other nations in all matters included within the scope of the Conference, except in relation to the age at which children should be allowed to be employed, and the English representatives came unanimously to the conclusion, in order "to be in line" with other nations, that the limit of age should be fixed at 12, and they were instructed by Lord Salisbury to assent to this; but it was almost the universal opinion of the members of the Conference that the period of elementary education ought to be closed before the period of employment began. But, in spite of moral obligations incurred at Berlin, Parliament was free to arrive at that conclusion which might be best for the country.—Mr. MATTHEWS said the clause affected a very large number of children—over 175,000—and no argument had been advanced to justify so serious an interference with important interests. He read report after report of both certifying surgeons and factory inspectors, and their testimony was unanimous that the health of the half-timers was perfectly good. The question of health was not worth arguing. As to the Berlin Conference, its recommendations had not been carried out by any nation, and he denied that we were under any obligation to to them.—Mr. MUNDELLA, speaking in support of the clause, contrasted the speech of Sir J. Gorst with that of Mr. Matthews, and, after some remarks from Mr. LEES, a division was taken, when the clause was carried against the Government by 202 to 186.

Margarine.—Sir J. KENNAWAY asked the Secretary to the Treasury whether his attention had been called to recent prosecutions under the Margarine Act and Sale of Food and Drugs Act, under which it had been proved that a great deal of the article imported and sold to retail traders as pure butter was mixed with from 30 to 80 per cent. of foreign fat or margarine; and whether he would give instructions to the officers of the Customs or Inland Revenue, under Section 8 of the Margarine Act, to take a few samples per week for analysis of French, Dutch, Danish, or Belgian butter for the purpose of ascertaining to what extent offences under the Act were being committed.—Mr. JACKSON said under Section 8 of the Margarine Act the Customs had no power to take samples of goods entered as butter unless there was specific reason to believe that the entry was false.

The Influenza Epidemic.—Mr. RITCHIE, in reply to Mr. VINCENT, said the report on the influenza epidemic of last year had been laid on the table of the House, and the printing was being proceeded with.

Friday, June 19th.

Degrees for London Medical Students—Sir W. HART DYKE, in answer to Sir WALTER FOSTER, said a joint representation had been received from the Royal Colleges of Physicians and Surgeons asking for an extension of time for lodging their case in the matter of the petition of University College and King's College for the grant of a charter to establish a teaching university for London, and they had been informed that it was not desirable that any further delay should take place. The petition and draft charter had been before the Privy Council and the public for nearly four years, the whole question had been considered and reported on by a Royal Commission, and a month's notice was given to all parties to prepare their cases.—Mr. THOMAS ELLIS inquired whether an opportunity would be afforded to the provincial colleges to appear before the Privy Council, and Sir GUYER HUNTER asked whether a petition had not been received against the grant of this charter.—Sir W. HART DYKE asked that notice might be given of both questions.—Sir W. FOSTER wished to know whether there was any necessity to force this scheme on, seeing that it was one of the last alternatives suggested by the Royal Commission, and whether in the circumstances some delay could not be sanctioned.—Mr. THOMAS ELLIS pleaded for an extension of time for lodging objections.—Sir W. HART DYKE proposed a private conference with the members.

Factories and Workshops Bill.—Mr. MACARTNEY's amendment that Mr. Buxton's new clause prohibiting the employment of children under 11 years of age should not apply to Ireland was negatived. The clause in question was then added to the Bill.—Mr. BUXTON said he would not press at the present time his clause raising the prohibited age to 12. He then moved the following new clause: "On and after the 1st of July, 1892, no child under the age of 11 years shall be employed in a factory or workshop other than under the half-time system. Provided always that any child lawfully employed under the principal Act, or any Act relating to the employment of children at the time that the provisions of this section come into operation, should be exempt from its provisions."—Mr. MATTHEWS said that a child did not become a "young person" under the Factory Acts until the age of 14, with the exception that a child of 13 on attaining to the fourth standard became a "young person."—Mr. NEVILLE said he had seen a great deal of the factory hands, and knew that physical deterioration had taken place amongst them.—Sir WALTER FOSTER said he could confirm the statement as to the physical characteristics of the Lancashire operatives. They were stunted in their growth; they had narrow chests and other indications of physical decay, which were the results of the long hours of labour of their progenitors in the close, very often ill-ventilated, and always unhealthy factories in the textile industry. The returns of the Registrar-General showed that the deaths from chest disease were in the cotton trade more than double what they were among agricultural workers, and the figures proved that the factory population was exposed to degenerating causes which were characteristic of the industry in which they were engaged. He believed the House would adopt a retrograde policy if it did not support the amendment.

—After some further discussion, the clause was put to the vote, and lost by 25. A clause to bring all laundries except domestic laundries under the operation of the Bill, moved by Mr. RANDELL, was lost by 9 votes.—Mr. RANDELL moved also a new clause extending the application of Section 27 of the principal Act which relates to certificates of fitness to workshops in like manner as it applies to factories.—Dr. FARQUHARSON, in supporting the clause, mentioned that it was defeated in Grand Committee by only 1 vote. He had, he said, heard on all sides from factory surgeons that there was great necessity for such a provision. These workshops were often placed in localities of bad sanitary condition, and so constructed as to be unfit for ordinary occupation. He was informed that children with a large variety of disabling physical conditions, such as heart disease and diseases of the chest, after being deliberately rejected by factory surgeons, were passed on by their parents into workshops where there was no check of any kind, greatly lessening their prospects of health or longevity.—Mr. MATTHEWS said this matter was fully discussed in Committee. The distinction between a factory and a workshop was that in a factory there was necessarily a great deal of machinery, involving great strain on the attention, and the faculties of a child or young person were far more severely taxed there than in a workshop. Under the existing law relating to these matters the Secretary of State had the power to require medical certificates of the fitness of children for employment in workshops in cases in which it might be deemed necessary.—Mr. BUXTON thought that young persons employed in workshops really needed more protection in the way of medical inspection than those employed in factories.—Mr. MUNDELLA said he should like to hear of one instance in which the Home Secretary had applied the Factory Acts to a workshop. It was a notorious fact that children who had been medically rejected as unfit to work in factories had straightway been sent to labour in workshops, where the conditions in regard to health were frequently very bad. If the clause was not pressed, he hoped the Home Secretary would take a serious and comprehensive view of the matter, and would do something to protect the children in workshops, and to prevent the abuse to which he had referred.—The clause was by leave withdrawn.—On Clause 20, relating to the certificate of birth in case of children and young persons under 16, on the motion of Mr. MATTHEWS, words were agreed to providing that the certified copy of the entry of a birth should on request be supplied without charge by every superintendent registrar and registrar of births, deaths, and marriages.—The Bill was further discussed and amended, and ultimately read a third time.

Monday, June 22nd.

Ventilation of the House.—On the motion of Mr. PLUNKET, a Select Committee was appointed to inquire into the ventilation of the House. Dr. Farquharson, Sir Guyer Hunter, Mr. R. Power, Sir H. Roscoe, and Mr. Plunket were nominated members of the Committee.

The British Institute of Preventive Medicine.—Sir M. HICKS-BEACH, in reply to Sir H. ROSCOE, said the amendment of the proposed memorandum of association referred to by the hon. member—by which it was made clear that the grant of the licence now asked for would not in any way imply approval by the Board of Trade of experiments upon living animals, or of any application to the Home Secretary for a licence for that purpose—was no doubt an important change in the proposals of the institute, and would probably meet the objection stated to the deputation which lately waited upon him. There were, however, one or two other points requiring consideration, but he hoped shortly to be able to arrive at a decision on the subject.

The Vaccination Laws.—Replying to a question by Mr. MORTON, as to the case of the woman Cook, fined for objecting to the removal of vaccine lymph from her child's arm, the HOME SECRETARY said she was sentenced to pay a fine of 1s. and £1 3s. 6d. costs, to be levied by distress, and in default seven days' imprisonment, without hard labour. He would consider the report of the justices, and he would decide whether any action should and could be taken.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

SECOND EXAMINATION FOR MEDICAL AND SURGICAL DEGREES. EASTER TERM, 1891.—The following have passed in Pharmaceutical Chemistry:

Ds. Bond	Jackson, T. L., Joh.	Sedgwick, Clare
Bowring, Caius	Lance, King's	Ds. Seligman, Caius
Brown, W. L., Joh.	Leach	Sheppard, Christ's
Ds. Bumsted, Joh.	Lowe, Jesus	Smith, J., Jesus
Burnett, Joh.	Maturin, Caius	Stead, Caius
Mag. Cundy, Trin.	McCardie, Caius	Mag. Stewart, C. B., Chr.
Dashwood, Magd.	Ds. Moore, Joh.	Storrs, K. S., Emman.
Edwards, C. D., Joh.	Muriel, Down.	Thomson, Christ's
Evans, Trin.	Myers, Caius	Ds. Thornely, Clare
Godson, F. A., Joh.	Pearce, Trin.	Tyrrell, Clare
Hanson, R. J. E., Trin.	Renshaw, J. A. K., Trin.	Verdon, Jesus
Hey, Trin.	Robinson, Emman.	Watson, F. J., Trin.
Ds. Hutchinson, Trin. H.	Ds. Russell, Emman.	Ds. Williams, H. F. B., Cai.
Ds. Hyde, Clare	Salt, Caius	Wills, Caius

HONORARY DEGREES.—The following are the speeches delivered by the Public Orator in presenting to the Vice-Chancellor Lord Walsingham, F.R.S., Professor Flower, F.R.S., and Dr. Metchnikoff, of Paris, on whom honorary degrees were conferred on June 16th:

Dignissime domine, domine Procancellarie, et tota Academia:—

Multum in summo Seneschallo nostro nuper amisimus; qui duodetriginta annos amplissimo illo functus officio, aureo numismate carmini heroico Latino per annos complures donato, et insignem litterarum humaniorum amorem et eximiam erga Academiam benevolentiam testabatur. Carmen autem audietis hodie praemio illius ornatum, carmen Timoleontis in laudem conscriptum, qui olim Crimisi (ut meministis) ad ripam progressus militibus suis omine tristi attonitis egregie ostendit apii coronam non mortuorum modo sepuleris sed etiam ante omnia victorum frontibus esse idoneam. Ergo Seneschalli a nobis abrepti sepulcro corona nostra quantulacumque non sine reverentia imposita, hodie successorem eius illustrem, certaminum complurium victorem, libenter coronamus. Olim Etonae, postea Cantabrigiae, in ludo campestri spectandus, saepenumero erat (ut Graece dicam) εἰς τῶν ἑνδεκα. Suo igitur in foro iuventuti Academicae iudex nullus erit benignior, nullus gratiosior. Idem, avium ferarum venator acerrimus, quot in campis quantas strages edidit. Scientiarum amore instinctus, quot terras longinquas obivit. Etiam papilionum genera minutissima, microlepidoptera nominata, curiositate subtilissima perscrutatus est, rerum naturam in minimis quoque maximum esse arbitratus. Musea vera nostra rerum naturae illustrandae dedicata, quot et quantis muneribus ornavit. Nuper autem, cum id agebatur ut Academiae inter studia etiam agri culturae locus tribueretur, Academiae consiliis quanta cum dignitate, quanta cum comitate interfuit. Ergo scientia illa, senectutis inter voluptates a Tullio laudata, patriae totius ad communem fructum, etiam iuventutis nostrae inter studia fortasse aliquando numerabitur. Qua de re ut Tullii verbis utar, 'possum persequi permulta oblectamenta rerum rusticarum, sed ea ipsa quae dixi sentio fuisse longiora.' Duco ad vos Regiae societatis socium, virum praeclare de Academia et adhuc meritum et in posterum sine dubio meriturum, Baronem Walsingham.

Quod e sapientibus septum unus dixisse fertur, ἀρχὴ ἄνδρα δείξει, de hoc certe viro, per honorum cursum satis longum probato, verum esse constat. Regio Chirurgorum in Collegio, primum Museo conservando praepositus, deinde physiologiam et comparativam quae dicitur anatomiam professus, deinceps Musei Britannici aedificio novo rerum naturae studiis dedicato praefectus est. Idem societati et zoologicae, et anthropologicae, et Britannicae, maxima cum laude praefuit. In Museis autem ordinandis quam perspicax; in scientiarum studiis populo toti commendandis quam disertus; hominum in diversis generibus capitis mensura inter sese distinguendis quam subtilis; maris denique in monstris immensis describendis quam minutus. Ergo, velut alter Neptunus, intra regni sui fines etiam 'immania cete' suo sibi iure vindicat: idem, anthropologiae quoque in studiis versatus, ne barbaras quidem gentes contempsit, sed, velut alter Chremes, homo est; humani nil a se alienum putat. Duco ad vos Regiae societatis socium, virum honoribus plurimis merito cumulatum, Wilelmum Henricum Flower.

Sequitur deinceps vir, qui scientiarum in provinciis duabus, et in zoologia et in bacteriologia quae dicitur, famam insignem est adeptus. Primum Ponti Euxini in litore septentrionali zoologiam professus, multa de morphologia animalium, quae invertebrata nominantur, accuratissime disseruit. Deinde Parisiis rerum naturae investigatori celeberrimo adiutor datus, eis potissimum causis perscrutandis operam dedit, per quas genere ab humano morborum impetus hostiles possent propulsari. Nam, velut hominum in mentibus virtutes et vitia inter sese confligunt, non aliter animantium in corporibus contra pestium exercitus copiae quaedam sanitatis et salutis ministrae concertare perhibentur. Mentis quidem certamen olim in carmine heroico, Psychomachia nominato, Prudentius narravit. Inter eos autem qui corporis certamen experimentis exquisitis nuper explicaverunt, locum insignem sibi vindicat vir quidam summa morum modestia praeditus, qui, velut vates sacer, proelium illud sibi sumpsit celebrandum, in quo tot cellulae vagantes, quasi milites procursantes, morborum semina maligna corripiunt, correpta comprimunt, compressa extinguunt. Talium virorum auxilio febrium cohortes paulatim profligantur, et generis humani saluti novum indies affertur incrementum. Merito igitur titulo nostro hodie coronatur e salutis humanae ministris unus, Elias Metchnikoff.

DEGREES.—At the Congregation on June 18th the following medical and surgical degrees were conferred:

M.D.: L. Humphry, Trinity; W. A. Foxwell, St. John's; C. E. Dumbleton, Peterhouse; W. K. Sibley, Pembroke; G. F. A. England, Caius; W. H. Goddard, Caius; G. H. Milnes, Downing.

M.B. and B.C.: A. H. Smith Hallidie, King's; S. Lewis, St. John's; W. R. Carter, R. H. Hall, C. Latter, Pembroke; H. K. Anderson, C. S. Bennetts, G. Calthrop, H. T. Crosby, J. Lea, H. W. Nix, J. C. R. Richardson, E. E. N. Surridge, J. H. Wilks, Caius; A. Miller, Queen's; S. G. Felce, Jesus; G. Wilkinson, Emmanuel; W. L. W. Buss, Sidney; W. H. Beaumont, C. S. Pethick, A. F. Richards, Downing; R. S. Earl, I. Fisher, K. C. Gimson, C. G. Roberts, H. Savory.

M.B. only: E. H. R. Watts, St. John's.

UNIVERSITY OF ABERDEEN.

PRACTICE OF MEDICINE CHAIR.—For the Practice of Medicine Chair in the University of Aberdeen, vacant by the death of Dr. Smith-Shand, the patron of which is the Crown as represented by the Marquis of Lothian, K.T., Secretary of State for Scotland, the following have already been mentioned as candidates: Angus Fraser, M.A., M.D., Senior Physician and Clinical Lecturer, Royal Infirmary; Alex. Macgregor, M.D., Assistant to Professor of Medical Jurisprudence and Junior Physician Sick Children's Hospital; P. Blaikie Smith, M.D., Physician and Clinical Lecturer, Royal Infirmary; D. W. Finlay, M.D., Physician to the Middlesex Hospital; and Dr. G. S. Middleton, Assistant to Professor Gairdner of Glasgow.

DEATH OF MR. A. EDMOND.—Mr. Alexander Edmond, of Garthdee, Aberdeen, member of the University Court and holder of many public offices in Aberdeen, died at his residence on June 18th from an attack of influenza complicated by pneumonia.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having passed the necessary examinations, and having conformed to the by-laws and regulations, was, at an

extraordinary meeting of the Council on Thursday, June 25th, admitted a Member of the College, namely :—

Brown, F. J., L.S.A., Bradford Street, Bolton.

OBITUARY.

SIR PRESCOTT G. HEWETT, BART., F.R.S., F.R.C.S.,

Sergeant-Surgeon to Her Majesty; Surgeon-in-Ordinary to the Prince of Wales.

THE death of the great surgeon who was borne to his rest last Thursday leaves a gap in the ranks of the profession which cannot soon be filled up. It is true that he died full of years and honours, true that he had retired from the active pursuits of the profession, yet he had preserved his vitality so thoroughly, and when he did come amongst us worked, spoke, and moved so like his old self, that his friends till a few months ago used to quote him among the examples of vigorous old age in which the present time is so rich, and prophesied for him many more years of vigour.

Sir P. Hewett was a member of a good old family, and was in all respects—by education, habits and disposition—a gentleman of the old school. His connection with St. George's Hospital was no recent one, for an older member of the same family, Dr. Cornwallis Hewett, Downing Professor of Medicine at Cambridge, held the office of physician to that hospital from 1825 to 1833. The subject of this notice was born in 1812, and received a good education, which was completed at Paris, where he studied art, and acquired that exquisite talent, especially in water-colour drawing, which was afterwards to be a source of such refreshment to himself in the intervals of severe labour, and of so much delight to his friends. He soon, however, turned to the study of medicine, and was zealous in his attendance in the dissecting room, so that when he returned to London, though a junior student, he was a far more expert dissector and a far more competent anatomist than most of his teachers. He was originally destined for the Indian service, for his family had several members in the East and had influence there; and he was on the point of accepting an appointment in India, when overtures were made to him to connect himself, as demonstrator of anatomy, with the school of St. George's Hospital.

At this period the great prosperity which that school had attained under the personal superintendence of Sir B. Brodie, and by the help of his immense reputation, was dying out in the hands of less vigorous and capable successors, and also in consequence of the opposition of the school of medicine founded by Dr. J. A. Wilson and Mr. Samuel Lane, a school which carried on a rivalry with the one which Sir B. Brodie founded in Kinnerton Street until the foundation of St. Mary's Hospital provided the officers and students of "Lane's school" with a hospital to which they could attach themselves. The effects, however, of the rivalry between these two schools, and of the contests which took place between their respective officers for posts on the hospital staff, continued long to trouble the quiet of St. George's Hospital, and in these troubles Mr. Hewett, as a favourite pupil and an intimate friend of Sir B. Brodie, of course had to take his share, though the frankness of his nature and his innate kindness and moderation preserved him from the bitterness to which such antagonism led in men not endowed with the same inward spiritual grace. Nevertheless, it must be admitted that the board room of St. George's in those days was not a school of good manners, and that the officers of the hospital were far from exhibiting towards each other those offices of friendship and mutual esteem which colleagues should always display. It is a pleasant proof of the advance of our times in humanity and kindness that not at that hospital only, but at others where division and mutual exasperation were far more violent and more scandalous, all such scenes are now not only unknown, but would be regarded as intolerable, and only fit for an age of duelling and prizefighting. Through all these scenes, as we have said, Mr. Hewett bore himself like a gentleman who has indeed been forced to take part in a friend's quarrel, but who takes care so to act and speak as to earn the respect of both sides.

Meanwhile, his services to the school founded on his intimate knowledge of anatomy, and his clear and graphic exposition of its details to his pupils, were daily strengthening his hold on the support of his colleagues and the estimation of the governing body of the hospital. When Mr. H. C. Johnson and Mr. Tatum retired from the teaching of anatomy, Mr. Hewett undertook the lectureship, and his superintendence of the school was the occasion and the main cause of the revival of its popularity and efficiency. He also presided over the pathological museum and *post-mortem* room, and in his capacity of curator he organised a system of preserving the *post-mortem* records of the hospital which has remained in force during the whole of the intervening period (now more than forty-five years), and which has made that hospital a model for others to follow, and has endowed it with a collection of pathological experience perhaps unrivalled in the medical world.

As assistant-surgeon he worked with the same vigour which he brought into all that he undertook, and his talent for organisation was further displayed in the admirable arrangements which he devised for the hospital register—a department in which he was aided by the late Dr. Barclay—and which he further developed in after years by introducing tables for the preservation of the continuous experience of the hospital in amputations, operations for strangulated hernia, and compound fractures. The first set of tables especially have been found of the greatest value both in reference to hospital hygiene and surgical practice. Two papers dealing with 500 cases were published by Mr. Holmes in the *St. George's Hospital Reports*, and a third by Mr. Dent and Mr. Bull, carrying on the series to 900 cases, in the last (73rd) volume of the *Med.-Chir. Trans.*, resumes the whole subject.

Mr. Hewett was now on the high road to professional fame and success, but he did not find it an easy one. He had many years to wait for promotion to the full staff of the hospital, and had to exercise equal patience before his merits, distinguished as they were, were rewarded by an extensive private practice. Still his success, though slow, was evidently sure. He had many influential friends, for his admirable qualities as a surgeon were accompanied by a kindness of heart and an unwearied energy in the service of those under his charge which endeared him to all his patients, gentle or simple.

On the retirement of Mr. Cæsar Hawkins from hospital practice, in the year 1867, Mr. Hewett became full surgeon, but before this time he had won for himself a position in leading London practice only a little inferior to that of his friend Sir J. Paget, and henceforward his progress was rapid. He was introduced to the Royal family, and was appointed Surgeon-in-Ordinary to the Prince of Wales, then to the Queen, and on Sir W. Fergusson's death, Sergeant Surgeon-Extraordinary, and finally Sergeant-Surgeon, in the place of Mr. Cæsar Hawkins.

In 1882 he was made a baronet, and retired from London practice to Horsham, in Sussex, where, though he was still at the service of his old patients on emergencies and paid periodical visits to London for professional purposes, he gave up most of his time to country pursuits, which he loved, and to painting, which he loved still more. His life here was an eminently happy one. Few men of his age could match him in activity and vigour, nor would any one who met him then for the first time have suspected that he had already passed the limit of three score years and ten.

He delighted in the society of his family and of his old friends, and had everything about him that should attend an honoured and beloved old age. Shortly before his death, however, troubles came thick upon him. The illness of his only son was a grievous trial to him, and soon afterwards it became evident to those about him that his own end was approaching. He bore his sorrows, however, with the patience and the unfaltering courage which he had displayed in all the former trials of his life, and endured uncomplainingly the terrible agonies of a disease which he must have known to be mortal, though for the comfort of his family he professed to make light of them, and to refer them to a temporary cause.

We have sketched at some length the public career of Sir Prescott Hewett, since it conveys substantial encouragement

to other men struggling as he did, with want of means and lack of friends, but buoyed up by the consciousness of energy, talent, and singleness of purpose. Of his private character it is hardly necessary to speak. The writer of these lines was a pupil and an intimate friend of his, bound to him by all the kindly recollections which surround an old teacher, and by the memory of many acts of generous kindness, and many occasions in which he gave his time and his matured wisdom to help one who was then trying to follow in the upward path which he himself had trod so bravely. It would be impossible therefore for him to speak critically or dispassionately of the character of his old friend and master; but fortunately it is not necessary. Few men were better known in the professional or social world than Hewett, and none more widely respected and liked. The reason is that he was emphatically a gentleman—a man who would not merely scorn a base action, but with whom anything base would be inconceivable. He was a great surgeon, and knew his art as thoroughly as he knew his anatomy; but he was much more than that. He was one of the most ardent and generous of friends, one of the truest and most reliable of colleagues, a man of whom his school, his hospital, and his profession were justly proud.

It may be necessary to add a few words about his professional works. These were too few, for he shrunk with horror from anything in the nature of self-advertisement, and his taste was fastidious, especially in his own case. His intimate knowledge of the French language and his old connection with Paris naturally brought him a thorough acquaintance with French surgical literature; and, like so many of the great French surgeons, he was particularly drawn to the study of injuries and surgical affections of the head. His lectures as Professor at the College of Surgeons on this subject were unfortunately never published in their entirety, though portions of them formed the base of some valuable articles on encephalocele and kindred affections in the *St. George's Hospital Reports*. His article on Injuries of the Head in the *System of Surgery* edited by Holmes is also one of the standard authorities on that subject; and a valuable paper on Extravasations of Blood in the Sac of the Arachnoid, and another entitled "An Analysis of the Cases of Injuries of the Head examined after Death in St. George's Hospital, 1841-51" are to be found in the *Med.-Chir. Trans.* Another paper of his in the same *Transactions*, of great value and acumen, describes the "omental sacs" sometimes found in strangulated herniæ. Aneurysm, again, was a very favourite subject with him, and he took the keenest interest in the treatment by compression when this was comparatively novel. In pathology the work he did was most valuable and extensive. He was an original member of the Pathological Society, and deeply interested in its success. Amongst the numerous distinguished men who have presided over that Society few had done more service to it than Hewett, and to its younger sister—the Clinical—he also gave his great services as President, and inaugurated that remarkable discussion on "Pyæmia in Private Practice" which did so much to refute the exaggerated representations then in vogue as to the insalubrity of our hospitals.

This is no meagre catalogue of good and solid work. Still we must confess that his extensive experience and his admirable knowledge both of literature and practice might have given us more; and now that his living voice is silent we can only mourn that he has not left us still larger treasures of his ripe wisdom.

Another old pupil of Sir Prescott Hewett sends the following annotation:

"Prescott Hewett, after a thorough training in Paris, came to London seeking election on the staff of St. George's. He had to wait; but he could not be idle. Like other ambitious young men of the time, he found opportunity for work in what was called a private school. He became demonstrator of anatomy with Gregory Smith at the School of Anatomy in Little Windmill Street. He was a charming teacher. His remarkable skill as a draughtsman enabled him to illustrate his lectures in the most attractive manner. Few men could equal him as an expert dissector. But beyond these qualifications there was an earnestness of manner combined with unflagging kindliness which made it impossible for a student to be idle. Whatever he did, he did thoroughly and cheerfully, so that his example was irresistibly catching. Whilst waiting for his opportunity at St. George's, he still worked zealously as a student. He even acted as clinical clerk; and his old associates will remember his carrying the long case-book of Dr. Seymour round the wards. He worked *con amore* in the dead-house, and the unsurpassed neatness and precision with which he performed a necropsy made a deep impression upon the writer. To see him there was a lesson never to be forgotten. Some of this skill he had no doubt brought from Paris; but more was the fruit of that spirit of thoroughness which characterised all he did. The skill so exercised was conspicuous in his operations on the living.

"On Wednesday the Duke of Westminster presided over a large assembly of governors at St. George's, comprising most of the staff. A vote of condolence with his family was moved by Dr. Dickinson, and seconded by Mr. Charles Hawkins. Eloquent words, inspired by affection and conviction, expressed the thoughts of all present. His portrait will never cease to recall the presence of the most amiable and most worthy of the friends and teachers of the hospital for which he did so much."

GEORGE HOGGAN, M.B., C.M.EDIN.

DR. GEORGE HOGGAN, whose name was at one time pretty prominently before the public in connection with the anti-vivisection agitation, was born at Edinburgh in 1837 and died at Nice on May 18th. His body was cremated at Père-la-Chaise on his 54th birthday.

Dr. Hoggan was entirely a self-made man, and few members of the medical profession can have fought so hard a battle of life. He was taken from school at the age of 12, and, after being put to several different trades, he was, in his 16th year, apprenticed to an engineer. The hardships he underwent at this period of his career were very great. When he had served his apprenticeship he received an appointment as engineer in the Indian navy. He went out to India at the time of the Mutiny, and took part in the China war of 1860, and the Abyssinian campaign of 1868. He met Livingstone in 1865, when the great traveller was making preparations for his last expedition, from which he never returned, and volunteered to accompany him. Livingstone applied for leave to take Hoggan with him, but it was refused. In 1868 Hoggan left the navy on a small pension and, in the same year, entered the University of Edinburgh as a student of medicine. He graduated in 1872, and at once threw himself, with all the ardour of his nature, into the movement for the admission of women to the medical profession. He married in 1874 a lady who had taken a degree in medicine, and the next eleven years were spent in London in active professional life and in the prosecution of scientific research in conjunction with his wife. His health broke down, and in 1885 he was obliged to leave London. Since then he has lived in retirement on the Riviera. He had a severe fall from his tricycle on the day after Good Friday, but the actual cause of death was a cerebral tumour, which had led to deposits in various other parts.

Dr. Hoggan was a man of unflinching courage and devotion to what he believed to be the truth, and his many sterling and lovable qualities endeared him to a large circle of friends.

RICHARD GUNDRY, M.D.

DR. RICHARD GUNDRY was born at Hampstead Heath on October 14th, 1830, and when 13 years of age accompanied his father, a Baptist minister, to Canada. He began the study of medicine at Simcoe, Ontario, having previously pursued and discarded the study of law. He graduated at Harvard Medical School in 1851, bearing off the first prize. He practised in Rochester, N.Y., for a short time; but, becoming the recipient of a legacy on the condition that he would travel, he passed some time in Europe. He returned in 1853, during the cholera epidemic, and settled at Columbus, Ohio. In 1855 he was appointed second assistant physician in the Central Insane Asylum, now the Columbus Hospital for the Insane. At the same time he was Professor of Materia Medica and Mental Diseases in the Starling Medical College of Columbus.

In 1858 he was transferred to the Southern Ohio Insane Asylum, at Dayton, Ohio, as assistant physician, and in 1861 he was promoted to the superintendency, remaining there until 1872, when he was placed in charge of the completion and organisation of the insane asylum at Athens, Ohio. This

asylum was opened in 1874, and Dr. Gundry retained the management until 1877, when he resigned to assume the task of finishing the new asylum at Columbus. Political manipulation caused a severance of his connection with this institution, and on June 1st, 1878, he began work at Maryland Hospital for the Insane, Spring Grove, where he remained until his death.

Dr. Gundry was elected in 1882 Professor of Materia Medica and Mental Diseases in the College of Physicians and Surgeons. He was a prominent advocate of the system of "non-restraint" in the treatment of the insane.

THOMAS ALLEN, M.D., L.R.C.S.EDIN.

DR. THOMAS ALLEN, a veteran physician, died on June 3rd at his residence, Brighton. He was born in Ireland, but was a member of a well-known Somersetshire family residing near Taunton. He received his early education at Foyle College, Londonderry, where he was a contemporary of John Lawrence, afterwards Governor-General of India. He subsequently graduated in medicine at Edinburgh University, and settled in Brighton more than fifty years ago. Being of a retiring disposition, the amount of work he did was only known among his most intimate friends. Modest and unassuming he was a safe and skilful practitioner, combining a kindly disposition and cultivated mind with a full sense of professional duty, and all who knew him speak his name with esteem and respect. During the latter years of his practice he was relieved of many of his responsibilities by his son, Dr. Marcus Allen, who attended him through his long and painful illness.

JAMES TURNER DONALD, L.R.C.S.E.

DR. J. T. DONALD, of Paisley, died on June 20th. Dr. Donald, who was 59 years of age, had been suffering for a month from a bronchial affection complicated with heart disease. He was a native of Johnstone, studied at Glasgow University, qualified in 1857, and then began work in the Paisley Infirmary, of which he afterwards became surgeon, entering on general practice in the town. He was one of the most esteemed of the Paisley practitioners, and six years ago he added to his work that of medical officer of the burgh. In that capacity he had much hard work when the sanitary administration was not so well organised as it might have been. Among his last labours for the town was that of preparing plans for a new infirmary to be reserved for non-infectious cases; and he died just when the town was beginning to reap the fruit of sanitary reform begun during his term of office.

He leaves one son ready to succeed him in practice, and another well advanced in his medical studies. His townsmen have signified their esteem for him by the honour of a public funeral, in which the local volunteers, of whom he was Surgeon-Major, took part.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE PROGRESS OF NOTIFICATION.

AT the instance of Mr. Lees Knowles, a parliamentary return has been issued showing the number of sanitary authorities in England and Wales who had obtained notification powers up to March 31st, 1891. The Infectious Disease (Notification) Act of 1889 had then been adopted by 551 urban, 372 rural, and 19 port sanitary authorities. The 946 districts involved had in 1881 a population of 13,267,885. Adding to this the population of London and that of the 53 towns having notification under local Acts, the total is raised to 20,592,131, that is, to 79.3 per cent., or practically four-fifths of the whole population of England and Wales. Fifty-five authorities, with a population of 609,444, now require measles to be notified, but two of them have only included it temporarily. Five others, not included in the 55, have discontinued the notification of measles after adopting it for a time. Whooping-cough is notified in fourteen districts (population 136,551), rötheln in four (42,049), chicken-pox in two (21,969), hydrophobia at Barton Regis only (12,840), and erysipelas at Willesden (27,453). Six towns have adopted the 1889 Act, in substitution for notification powers conferred by local Acts of earlier date.

The populations stated above are those enumerated in 1881, but the substitution of the figures of the new census cannot materially alter the significance of the result. The verdict of the sanitary authorities of England and Wales appears thus to be overwhelmingly in favour of compulsory notification. The next step will probably be the extension of the system to the remaining districts. Those districts which have taken measures for their own protection consider not unnaturally that they have legitimate ground for complaint when they are exposed to risk by the inaction of their neighbours, and the sooner the Act is made obligatory the better. The same return shows also that up to the end of March last the Infectious Disease (Prevention) Act of 1890 had been adopted in whole or part by 354 sanitary authorities, 259 urban and 95 rural, with a total population (in 1881) of 6,908,123, or including London (where this Act, like the Notification Act, is in force without adoption), 10,724,611. Lastly, the Public Health Acts Amendment Act of 1890 had, up to the same date, been adopted wholly or partially in 312 urban and 79 rural districts, with an aggregate population (1881) of 7,693,552.

COUNTY COUNCILS AND PUBLIC HEALTH.

ESSEX is fortunate in its sanitary administration. The County Council find that there is so little sanitary work—executive, consultative, or supervisory—for them to take up, that the permanent services of a medical officer of health are unnecessary. An inconvenient clause of the Local Government Act has, however, brought down upon them a shower of reports from the health officers of the several sanitary districts in the county. Something had to be done with this mass of literature, and Dr. Thresh was entrusted with the task of tabulating and summarising the whole of the reports for the use of the County Council. We learn from the *Essex Herald* that Dr. Thresh's report has now been presented to the Executive Committee under the Contagious Diseases (Animals) Act, from which it would appear that no sanitary or public health committee can have been constituted. Having received the report, the Committee seem to have been at a loss to know what to do next. They could not weigh it, in the sense in which a report of such importance should be weighed, since it was still in manuscript; but they measured it, and ascertained that it extended to exactly 78 pages, which was considered too great a length to be read *verbatim*. Apparently only a few of the members had had an opportunity of reading it, and the discussion turned chiefly upon its length, and upon the abstract question whether it was desirable to appoint a county medical officer or not. Ultimately a sub-committee was instructed to condense and print the report. All this shows only too clearly that the Committee, and presumably the County Council, have completely failed to grasp the idea of county sanitary work, as distinguished from that of local authorities under the Public Health Act. The one wise step which they have taken is to secure the services of such an able expert as Dr. Thresh to advise them in the matter of the local reports. A report dealing adequately with the statistics and sanitary condition of a whole county cannot be brief. The attempt to consider it in manuscript is a palpable absurdity, and especially so if made by a committee mainly occupied with work of a totally different nature. It is true that the report is to receive further consideration at a later stage, but in a "condensed"—that is mutilated—form. The Committee are satisfied, upon *a priori* grounds, that Dr. Thresh must be mistaken in thinking that the local reports (which he has read and they have not) contain enough matter deserving their attention to cover 78 written pages. Similar trifling was not uncommon in the early days of sanitation even in large towns: in 1891 it is unworthy of an important body like the Essex County Council, and of the magnitude of the public interests at stake. Fortunately other county councils have taken a different view of their duties and responsibilities, and are preparing in earnest to prevent the pollution of their rivers, to exert pressure when necessary upon defaulting sanitary authorities, to investigate the incidence and causes of preventable diseases and mortality

within their area, and in a word to assume their proper position as a power intermediate between the small local authorities and the Local Government Board.

MEAT INSPECTION IN GLASGOW.

THE whole question of meat inspection in Glasgow, supposed to have been settled a year ago, has been again raised, owing to certain prosecutions for the possession of unsound meat intended for sale, the circumstances of which have seemed to suggest that Glasgow is considered the proper place to send diseased meat from all parts of the country, as it there runs a chance of escaping the eye of an inspector and being sold for public consumption. The arrangements for inspection are peculiar. The Corporation possesses a dead meat market, and it is understood that all meat consigned there is inspected before being exposed for sale. This being the understanding, cattle dealers may send in unsound carcasses without risk of prosecution. If the meat is found unsound it is simply condemned and destroyed. It is, however, plain that on this system much bad meat may escape detection by even an experienced inspector, and, there being no risk of prosecution, the temptation to dress up carcasses in the hope that they will escape detection must be considerable. That this is so is proved by the fact that within eight months 312 carcasses were condemned in the Corporation market, and no prosecution in accordance with the understanding followed. If risk of prosecution had existed probably much of that amount would never have been sent in. Meat may be consigned to private markets. Unsound meat exposed in them for sale is apt to be pounced upon by a sanitary inspector, and, in that case, a prosecution follows. If a dealer sends unsound meat to one of these it may escape detection, but if it does not he is sure of being prosecuted.

The proprietors of some private markets have asked the authorities to appoint an inspector, to whom they would be willing to submit all consignments before exposing them for sale. This the authorities have refused to do, on the ground that every meat salesman might prefer a similar request, which would necessitate a whole army of inspectors. An important suggestion was made at a recent prosecution by the presiding stipendiary magistrate, namely, that a clearing-house should be established, through which all dead meat entering the city should pass. In consequence a committee of magistrates and of markets commissioners has been appointed to go into the whole case. It is likely that, as a result of their conference, some satisfactory solution of the difficulty will be found.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns, including London, 5,859 births and 4,161 deaths were registered during the week ending Saturday, June 20th. The annual rate of mortality in these towns, which had declined from 30.9 to 23.8 per 1,000 in the preceding three weeks, further fell to 23.1 during the week under notice. The rates in the several towns ranged from 14.2 in Plymouth, 15.1 in Leeds, 15.3 in Brighton, and 16.0 in Derby to 27.7 in Blackburn, 29.3 in Liverpool, 30.8 in Bolton, and 30.9 in Wolverhampton. In the twenty-seven provincial towns the mean death-rate was 23.1 per 1,000, and slightly exceeded the rate recorded in London, which was 23.0 per 1,000. The 4,161 deaths registered during the week under notice in the twenty-eight towns included 325 which were referred to the principal zymotic diseases, against 359 and 313 in the preceding two weeks; of these, 111 resulted from whooping-cough, 59 from measles, 43 from diarrhœa, 38 from scarlet fever, 37 from "fever" (principally enteric), 36 from diphtheria, and 1 from small-pox. These 325 deaths were equal to an annual rate of 1.8 per 1,000; in London the zymotic rate was 1.8, and corresponded with the mean rate in the twenty-seven provincial towns, among which it ranged from 0.5 in Brighton, in Norwich, and in Birkenhead, and 0.7 in Bristol and in Nottingham to 2.4 in Salford, 2.5 in Manchester, 2.6 in Leicester, and 2.9 in Bradford and in Liverpool. Measles caused the highest proportional fatality in Portsmouth and Huddersfield; scarlet fever in Derby, Bradford, and Wolverhampton; and whooping-cough in Salford, Sheffield, Sunderland, Manchester, and Leicester. The mortality from "fever" showed no marked excess in any of the twenty-eight towns. Of the 36 deaths from diphtheria in these towns, 28 occurred in London and 2 in Portsmouth. One fatal case of small-pox was recorded in London, but not one in any of the twenty-seven provincial towns; 4 small-pox patients were under treatment in the Metropolitan Asylum Hospitals on Saturday, June 20th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital on the same date was 872, against numbers declining from 927 to 859 at the end of the preceding two weeks; 84 new cases were admitted during the week, against 88, 66, and 61 in the previous three weeks. The death-rate from diseases of the respiratory organs in London was equal to 5.4 per 1,000, and considerably exceeded the average.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, June 20th, 873 births and 597 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 25.3 and 24.2 per 1,000 in the preceding two weeks, further declined to 23.2 during the week under notice, and almost corresponded with the mean rate during the same period in the twenty-eight large English towns. Among these Scotch towns the lowest rates were recorded in Perth and Greenock, and the highest in Glasgow and Dundee. The 597 deaths registered in these towns included 67 which were referred to the principal zymotic diseases, equal to an annual rate of 2.6 per 1,000, which exceeded by 0.8 the mean zymotic death-rate during the same period in the large English towns. The highest zymotic death-rates were recorded in Glasgow and Paisley. The 275 deaths registered in Glasgow included 18 from measles, 9 from whooping-cough, and 4 from "fever." Three fatal cases of diphtheria were recorded in Edinburgh, and 4 of measles in Paisley. The death-rate from diseases of the respiratory organs in these towns was equal to 5.6 per 1,000, against 5.4 in London.

HEALTH OF IRISH TOWNS.

IN sixteen of the principal town districts of Ireland, the deaths registered during the week ending Saturday, June 20th, were equal to an annual rate of 24.1 per 1,000. The lowest rates were recorded in Wexford and Dundalk, and the highest rates in Sligo and Galway. The death-rate from the principal zymotic diseases averaged 1.4 per 1,000. The 183 deaths registered in Dublin were equal to an annual rate of 27.0 per 1,000 (against 18.8 and 20.1 in the preceding two weeks), the rate for the same period being 23.3 in London and 24.9 in Edinburgh. The 183 deaths in Dublin included 9 which were referred to the principal zymotic diseases (equal to an annual rate of 1.3 per 1,000), of which 4 resulted from diarrhœa, 3 from whooping-cough, and 2 from enteric fever.

MEDICAL NEWS.

MR. MORTON SMALE has been elected dental surgeon to St. Mary's Hospital.

THE Russian Government is said to be contemplating the taking over of all the pharmacies in the empire.

THE third Italian Chemico-Pharmaceutical Congress will be held at Venice on August 2nd to the 7th.

THE Emperor of Japan has named Dr. Hide Miyake, Professor in the Medical Faculty of the Imperial University of Tokyo, a Member of the House of Peers.

THE prizes and scholarships awarded during the present session of the Middlesex Hospital Medical School will be distributed on Tuesday next, at 3 P.M., by the Right Hon. Earl Spencer, K.G.

MR. A. A. KANTHACK, B.A., B.Sc.Lond., F.R.C.S.Eng., at present a member of the Leprosy Commission in India, has been appointed John Lucas Walker Student in Pathology in succession to Mr. J. G. Adami, elected Fellow of Jesus College, Cambridge.

PRESENTATIONS.—The members of the Halifax centre of the St. John Ambulance Association have shown their appreciation of Dr. Macaulay's services by presenting him—the ladies with a silver reading-lamp and two silver flower vases; and the gentlemen with a marble timepiece, both with suitable inscriptions.—Mr. Marshall has received from the lady pupils of the Hastings centre a pair of field glasses in recognition of his services.

HYPNOTISM IN FRANCE.—The Society of Hypnology will meet in Paris on July 20th, under the presidency of Dr. Dumontpallier. The business to be done will include the organisation of a second international congress of hypnotism to be held in 1892. Among the subjects proposed for discussion are the following: The Relations of Hysteria to Hypnotism; Criminal Suggestions and Penal Responsibility; the Reality of Maternal Impressions on the Fœtus. Notice of communications, etc., should be sent to Dr. Bérillon, 40 *bis*, Rue de Rivoli, Paris.

THE ninth annual dinner of the West London Medico-Chirurgical Society took place place at the Criterion restaurant on Wednesday, June 10th, the President, Mr. T. Gunton Alderton, being in the chair. There were fifty-three members and guests present, among the latter of whom were Sir Thomas Crawford, K.C.B., and the Presidents of the Obstetrical and Harveian Societies. The list of toasts was a short one. Dr. Andrew was to have proposed that of "The Society," but in his unavoidable absence at the last moment this duty was undertaken by Mr. Howard Marsh. Mr. Keetley,

in giving the health of "The Visitors," was both humorous and to the point. Dr. Thudichum proposed "The Officers of the Society," and the Treasurer, Dr. C. Wells, and the two Secretaries, Mr. Leonard Mark and Dr. S. Eccles, each replied. The success of the evening was contributed to by some very pleasant glee singing, which came alternately with the toasts.

The annual meeting of the Invalid Children's Aid Association was held last week under the presidency of the Earl of Aberdeen. This is a very excellent society, which is steadily increasing the area of its work. It attempts to fill in those deficiencies in our organisation for dealing with sick children which are not met by the hospitals or the convalescent homes. In many ways—by visiting children at their own homes, by assisting in their nursing, by providing instruments and helping to obtain holidays in the country—it is quietly accomplishing a very large amount of good.

London School of Medicine for Women.—Lord Reay presented on June 23rd the prizes and certificates to the students of the London School of Medicine for Women. The entrance scholarship for October, 1890, given by the executive council, value £30, was awarded to Miss Hull, the Stuart Mill scholarship to Miss Bentham, and the Helen Prideaux scholarship to Miss Adela M'Culloch Knight, M.B.Lond. Mrs. Garrett Anderson, M.D., gave an account of the successes gained by the students, which included two gold medals at the University of London, and the first place in the M.B. examination of the Royal University of Ireland.

The After-care Association.—Few, if any, societies enrolled for charitable purposes have a more worthy object in view than that which endeavours to provide for the after-care of the insane. The annual meeting of the Association was held a few a days ago, under the chairmanship of Mr. Dudley Fortescue, who was able to show a good record of work done during the preceding year. Dr. Henry Rayner read a short paper on the After-care of Men; and we cordially commend the work and aims of the Association—the only one, we believe, in the United Kingdom—as worthy of more extended support and patronage.

A Fatal Mistake. Another of those fatal misadventures which unfortunately are only too common is reported from the Dewsbury Workhouse, where an inmate died owing to carbolic acid having been given him in mistake for cough mixture. The jury made some recommendations with regard to the labelling of bottles containing poison, but it cannot be too distinctly stated that no amount of special labels will afford any real protection against accidents of this kind. The only safeguard is to have a specially shaped bottle to be used only for poisons; fluted bottles are often thus employed, but triangular bottles would probably afford the maximum of safety, and we should be glad to see the use of such bottles made compulsory under heavy penalties.

Public Mortuaries as they should not be.—At a recent inquest held at Worcester a strange description of the condition of the public mortuary was given by a medical witness, who had been directed by the coroner to make a *post-mortem* examination. The witness, Mr. Webb, stated that the mortuary was damp, the roof leaky, and the water supply out of order. There was no soap, and the only towel was too filthy for use. The only approach to the door was across grass. The slab upon which the body was laid was not properly constructed for the purpose, and more trestles were wanted. Mr. Webb's complaint was endorsed by the jury, and will doubtless receive attention from the corporation, but such a disgraceful state of matters ought never to have arisen.

A Revolutionary Writer.—Mr. J. B. Bailey, Librarian of the Royal College of Surgeons of England, is publishing by subscription with Messrs. Percival and Co., of King Street, Covent Garden, a reprint of two rare medical pamphlets written by the revolutionist Marat during his residence in London. The pamphlets are about as rare as pamphlets can be, since only one copy of each is known to exist. The one is an *Essay on Gleets*, in which an "effectual method of cure" is suggested. It was dedicated to "the Worshipful Company of Surgeons in London," and was published in 1775. The other, dated 1776, entitled *An Inquiry into the Nature, Cause, and Cure of a Singular Disease of the Eyes hitherto unknown, and yet common, produced by the use of certain Mercurial Preparations*, was dedicated to the Royal Society.

General Practitioners' Union.—A meeting of the Executive Committee of the above Society was held at the offices, 29, Threadneedle Street, E.C., on Wednesday, June 17th. Present: Mr. George Brown (Chairman), Messrs. Campbell Boyd, J. Dawson, M.D., W. E. Dawson, Hugh Woods, M.D., H. C. Shaw, F. H. Alderson, M.D., and W. Piercy Fox. The following registered medical practitioners were elected members of the Association: G. Abbott (Preston), R. H. Barkwell, J. Batteson, J. M. Carvell, T. Cary, J. L. Chambers, W. Cock, H. H. Eagle, J. Edwards (Liverpool), A. Great-Rex, J. Jackson, J. P. Llewelyn, A. S. Loftus, B. O'Regan, J. Parrott, W. J. Pook, S. Powell, H. M. Rainsford, A. H. Sandiland, J. Savage, E. Spratt, R. J. Swan, S. G. Vinter, W. D. Waterhouse, and A. P. Woodforde. The following gentlemen were elected District Secretaries: Claude A. P. Truman, L.R.C.S.I., etc., for Reading; James Edwards, M.R.C.S., etc., for Liverpool. Messrs. George Brown, W. E. Dawson, and Campbell Boyd were nominated as delegates from the Society to give evidence before the Lords' Committee on the Management, etc., of Metropolitan Medical Charities. It was resolved to hold a general meeting of members of the Union at Exeter Hall (Council Room) on Tuesday, July 7th, at 4 P.M., for the purpose of discussing the general question of hospital management, etc., especially in regard to the out-patient departments and the reforms which are called for in the interests of general practitioners. The meeting will be open to all general practitioners on presentation of visiting card.

North of England Obstetrical and Gynæcological Society.—The above Society met on June 20th at Hull, Dr. Braithwaite, President, in the chair. Professor Wallace (Liverpool) read a note on the Diagnosis of Kidney Tumours: Mr. Craven (Hull) and Professor Hare and Dr. Donald (Manchester) also spoke. Dr. Pigeon (Hull) read the notes of a case of Uterine Myoma unimproved by twenty applications of the battery after Apostoli's method; remarks were made by Professor Sinclair (Manchester), Dr. Braithwaite (Leeds), and Professor Wallace. Professor A. H. Young (Owens College) gave a demonstration on Recent Observations on the Development of the Placenta, illustrated by microscopic sections of the developing placenta in rodents by Dr. Robinson; he showed that in the deciduate placenta of rabbits only a single thin layer of endothelium exists between the blood of the fœtus and that of the mother. Dr. Lowson (Hull) read a paper on Inflammatory Disease of the Ovaries and Tubes, introducing a discussion on the question, Do the great majority of diseases of the uterine appendages get quite well without operation? He gave the details of several cases in which death had occurred owing to an operation not being performed, and others of a similar nature whose lives had been saved by operation; he exhibited numerous specimens of diseased appendages. Dr. Braithwaite, Mr. Craven, Dr. Wallace, and Dr. Sinclair joined in the discussion.

MEDICAL VACANCIES.

The following Vacancies are announced:

BALTINGLASS UNION.—Medical Officer for Workhouse and Fever Hospital. Salary, £120 per annum, and £15 yearly as Consulting Sanitary Office. Applications to Mr. I. R. Dagg, Clerk of the Union. Election on June 27th.

BALTINGLASS UNION (Baltinglass Dispensary).—Medical Officer. Salary, £155 per annum, and fees. Applications to Mr. Peter Douglas, Honorary Secretary, Saundersville, Baltinglass. Election on July 3rd.

BEDFORD GENERAL INFIRMARY AND FEVER HOSPITAL.—Resident Surgeon, double qualifications. Salary, £100 per annum, with apartments, board and washing. Applications to the Secretary, by July 1st.

BLOOMSBURY DISPENSARY, 22, Bloomsbury Street, W.C.—Dispenser: must hold a dispensing diploma. Salary, £100 per annum. Applications to the Chairman of the Medical Committee by July 8th.

BOROUGH OF BLACKPOOL.—Medical Officer of Health. Salary, £300 per annum. Must devote his whole time to the duties. Applications, endorsed "Medical Officer," to T. Loftos, Town Clerk, by July 6th.

CAMBRIDGE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary, £120 per annum. Applications to the Secretary, 20, Mawson Road, Cambridge.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Anæsthetist. Applications, on forms to be obtained at the hospital, to A. C. Davis, Secretary, by June 30th.

COUNTY COUNCIL OF CAITHNESS.—Medical Officer of Health. Salary, £300 per annum, with £50 for travelling and other expenses; must devote his whole time to his duties, and reside in Wick. Applications to James Brims, County Clerk, Thurso, by July 1st.

COUNTY DONEGAL INFIRMARY.—House-Surgeon and Registrar. Salary, £60 per annum, with apartments and rations. Applications to the Rev. J. S. McClintock, Honorary Secretary, before June 30th.

DERBYSHIRE ROYAL INFIRMARY.—Resident Assistant House-Surgeon; appointment for six months. Salary, £10 for the first six months, and if re-elected £25 for second six months, with apartments, board, and washing provided. Applications to the House-Surgeon by June 27th.

DORSET COUNTY ASYLUM.—Assistant Medical Officer for the Second Asylum. Salary, £120 per annum, with board, etc. Applications to the Medical Superintendent.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to V. K. Cooker, Honorary Secretary, by July 3rd.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Residence, board and washing provided, no salary; appointment for six months. Applications to Dr. J. D. M. Coghill, House Governor, by June 27th.

GENERAL HOSPITAL, Birmingham.—Assistant Surgeon. Appointment for three years, honorarium, £100 per annum. Applications to Dr. J. D. M. Coghill, House Governor, by June 27th.

GENERAL INFIRMARY AT GLOUCESTER AND GLOUCESTERSHIRE EYE INSTITUTION.—House-Surgeon: double qualifications. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by July 5th.

GENERAL INFIRMARY, Leeds.—Resident Medical Officer. Salary, £100 per annum, with board, washing and lodging. Applications to Mr. E. Ward, Secretary to the Faculty, by June 27th.

GENERAL INFIRMARY, Leeds.—Resident Casualty Officer. Salary, £100 per annum, with board, washing and lodging. Applications to Mr. E. Ward, Secretary to the Faculty, by June 27th.

GLASGOW MATERNITY HOSPITAL.—Out-door Physician for the South Eastern District. Applications (a copy of which must be sent to each of the Directors, a list of whom may be had on application) to Arthur Forbes, Secretary, by July 9th.

GUY'S HOSPITAL, S.E.—Five additional Assistant Dental Surgeons; must be L.D.S.Eng. Applications to the Dean by July 1st.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physicians. Applications to Henry Dobbin, Secretary, by July 2nd.

IRVINESTOWN UNION (Ederney Dispensary).—Medical Officer. Salary, £135 per annum and fees. Applications to Mr. Robert Phillips, Honorary Secretary. Election on July 16th.

LUNATIC HOSPITAL, The Coppice, Nottingham.—Assistant Medical Officer, unmarried. Salary, £100 per annum, with board, apartments, attendance and washing. Applications to Dr. Tate, Medical Superintendent, by June 30th.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—House-Surgeon and Secretary. Salary, £120 per annum, with board and lodging. Applications to the Chairman of the Committee by July 15th.

NORTH WEST LONDON HOSPITAL, Kentish Town Road, N.W.—Assistant Resident Medical Officer. Applications to Alfred Craske, Secretary, by June 30th.

QUEEN'S COLLEGE, Birmingham.—Medical Tutor and Demonstrator of Anatomy; must devote his whole time. Applications to Professor B. C. A. Windle, Dean of the Medical Faculty, by July 4th.

QUEEN'S COLLEGE, Birmingham.—Demonstrator of Anatomy. Applications to Professor B. A. C. Windle, Dean of the Medical Faculty, by July 4th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand.—Clinical Assistants. Appointments for six months. Applications, to the Secretary, by June 27th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square. Obstetric Physician. Applications to F. Stokes, Secretary, by July 1st.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Demonstrator of Physiology. Salary, £100. Applications to the Dean by July 13th.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Junior Assistant House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications to Honorary Secretary of Medical Staff by June 29th.

SKYE DISTRICT OF INVERNESS-SHIRE.—Medical Officer. Salary, £50 per annum. Applications to Messrs. MacLachlan and Reid Solicitors, Portree, by July 6th.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon and Secretary; doubly qualified; unmarried. Salary, £100 per annum, with board, furnished apartments, gas, firing, and attendance. Applications to E. W. Du Buisson, Secretary, by July 9th. Election on July 15th.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Physiology. Annual fee, £30. Twenty copies of printed applications and testimonials to the Secretary of the Court, Mr. A. E. Clapperton, 91, West Regent Street, Glasgow, by June 30th.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Assistant Physician to the Out-patients; appointment for five years. Applications to the Secretary, by June 27th.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea.—Physician to the In-patients. Applications to the Secretary, by June 27th.

VICTORIA UNIVERSITY.—Holt Professorship of Physiology. Salary, £375 per annum, *plus* share of students' fees. Applications to the Registrar, University College, Liverpool, by June 27th.

WANDSWORTH AND CLAPHAM UNION AND INFIRMARY, St. John's Hill.—Junior Assistant Medical Officer. Appointment for six months, board, lodging, and washing provided, and £25 at the end of term. Applications to the Medical Superintendent.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—Second House-Surgeon; unmarried. Salary, £50 per annum, with board, residence, and attendance. Applications to William Kimpton, Secretary, by July 4th.

MEDICAL APPOINTMENTS.

APPLEGATE, J. W., L.R.C.P.Lond., M.R.C.S., appointed House-Surgeon to the Dewsbury and District Infirmary.

BEHRENDT, M. R. J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Scunthorpe Urban Sanitary District of the Glandford Brigg Union.

BLAIKIE, A. B., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the First Sanitary District of the Oswestry Incorporation.

BRYANT, J. H., M.B., B.S.Lond., appointed House-Physician to Guy's Hospital.

BROWNING, B., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Melcombe Regis District of the Weymouth Union, *vice* Dr. Tizard, deceased.

CHADWICK, George R., M.R.C.S.Eng., L.S.A., appointed Senior Surgeon to the West Norfolk and Lynn Hospital, *vice* C. B. Plowright, M.D., resigned.

COOMBE, Russell, M.A.Cantab., F.R.C.S., appointed Surgeon to the West of England Institution for Deaf and Dumb Children, *vice* Louis H. Topwill, B.A., M.B.Cantab., resigned.

CROMBIE, John, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer and Public Vaccinator of the Blyth District of the Tynemouth Union.

DREW, Henry W., F.R.C.S., appointed Surgeon to the Croydon General Hospital.

FAWCITT, Thomas Joseph, M.R.C.S.Eng., L.S.A., appointed Medical Officer and Public Vaccinator of the Greatham District of the Hartlepool Union, *vice* W. D. Moore.

GAY, William, M.B., C.M.Edin., appointed Medical Officer for the Boxmoor Sanitary District of the Hemel Hempstead Union.

GEORGE, C. F., M.R.C.S., reappointed Medical Officer for the Blyborough District of the Gainsborough Union.

GIBBENS, Frank Edward, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health to the Barking Local Board, *vice* Mr. Lee, resigned.

GIBSON, Charles Philip, L.R.C.P., L.M.Edin., M.R.C.S.Eng., reappointed Medical Officer of the First District and Workhouse of the Wetherby Union.

GRINDROD, J. A., M.R.C.S., reappointed Medical Officer for Morden, Rochdale.

HOWDEN, James C., M.D.Edin., reappointed Medical Superintendent of the Royal Lunatic Asylum, Montrose.

JONES, W. R., M.D., C.M.Glas., reappointed Medical Officer for the Devynock District of the Brecon Union.

KARKEEK, P. Q., M.R.C.S., reappointed Medical Officer of Health for Torquay and St. Mary Church.

KEMBLE, A. C., L.R.C.P., L.R.C.S.Edin., appointed Certifying Surgeon for the Poole District, *vice* F. C. Compton, M.R.C.S., L.R.C.P., resigned.

KITCHING, C. McG., M.B., B.S.Lond., appointed House-Physician to Guy's Hospital.

LEA, A. W. W., M.B., B.S.Lond., appointed Junior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester, *vice* F. H. Westmacott, M.R.C.S., L.R.C.P.

LIVINGSTON, J. L., M.D., C.M.Irel., appointed Medical Officer for the Workhouse and Sanitary District of the Hursley District.

MCDOUGALL, H. A. H., L.R.C.P.Edin., M.R.C.S., appointed Medical Officer for the Wincanton District and the Workhouse of the Wincanton Union.

MACGILL, George, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for Wuerdle-and-Wardle.

MACGREGOR, Alexander, M.B., C.M.Aberd., appointed Medical Electrician at the Royal Infirmary, Aberdeen.

REES, D. V., L.R.C.P.Lond., M.R.C.S., reappointed District Medical Officer of the Brecon Union.

ROWLEY, C. O., M.R.C.S., reappointed Medical Officer for the Second Sanitary District of the Barnsley Union.

SARJANT, Josiah John, M.R.C.S.Eng., L.S.A., appointed Resident Medical Officer to the Leamington Amalgamated Friendly Societies' Medical Association, *vice* F. G. A. Rogers, M.R.C.S.Eng., L.R.C.P.Edin.

SCOTT, Walter, M.B., C.M.Edin., appointed Medical Officer for the Bewdley District of the Kidderminster Union, *vice* G. L. Webster, M.R.C.S., resigned.

SKARDON, C. C., L.S.A., appointed Medical Officer for the Evershot District of the Bedminster Union.

SMALE, Morton A., M.R.C.S., L.D.S., L.S.A., appointed Dental Surgeon to St. Mary's Hospital, Paddington, *vice* H. Howard Hayward.

SMYTH, W., M.B., C.M.Edin., appointed Medical Officer for Amble, Alnwick Union.

SOUTAR, Robert, M.B., C.M.Aberd., reappointed Medical Officer to the Royal Infirmary, Montrose.

STENHOUSE, Thomas, appointed Public Analyst for the Borough of Clitheroe.

STEPHENSON, S. H. A., M.B., F.R.C.S.Edin., reappointed Medical Officer in charge of ophthalmic cases at the Central London District School, Hanwell.

STEVENS, T. G., M.B., B.S.Lond., appointed House-Surgeon to Guy's Hospital.

STONE, Valentine, reappointed Medical Officer to the Royal Infirmary, Montrose.

SUCKLING, C. W., M.D.Lond., M.R.C.S., appointed Consulting Physician to the Children's Hospital, Birmingham.

THOMPSON, A., M.D.St.And., M.R.C.S., reappointed Medical Officer for the Grange-over-Sands Urban Districts.

WALSH, Robert W., M.R.C.S., L.S.A., appointed Honorary Surgeon to the Hulme Dispensary, Manchester.

WATKINS, Ernest Powell, M.R.C.S., L.R.C.P.Edin., appointed Resident Medical Officer to the Nottingham Friendly Societies, *vice* F. C. Wood, L.R.C.P., L.S.A.Lond., resigned.

WAYMAN, C. P. S., M.R.C.S., appointed Medical Officer of the Third District of the Aylsham Union.

WEIR, A. M., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Malvern Sanitary District

WELLFORD, F., M.B.Cantab, appointed House-Surgeon to Guy's Hospital.

WESTMACOTT, F. H., M.R.C.S., L.R.C.P., appointed Senior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester, *vice* R. O. Bowman, M.B.Lond., resigned.

WHITAKER, G. H., M.R.C.S., appointed Medical Officer for the Fourth District of the Loddon and Clavering Union, *vice* R. H. Johnston, M.A., M.D., resigned.

WHITE, Walter, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for the Darton Sanitary District of the Barnsley Union.

WHYTE, A., M.D., C.M.Aberd., reappointed District Medical Officer of the Brecon Union.

DIARY FOR NEXT WEEK.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Dr. Lewers, Dr. Herbert Page, Dr. Herbert Spencer, and others. Dr. Herman: Five more Cases of Puerperal Eclampsia, especially illustrating the Temperature and Urine in that Disease. Dr. Rutherfoord: Cysts of the Vagina, their Etiology, Pathology, and Treatment. Dr. John Phillips: The Influence of Purpura Hæmorrhagica upon Menstruation and Pregnancy.

FRIDAY.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 8.30 P.M.—Patients and Card Specimens at 8 P.M. Annual general meeting for the election of officers, etc. Mr. K. Scott (Cairo): Perchloride of Mercury in Conjunctival Disease. Mr. Jessop: (1) The Consensual Pupillary Reflex in cases exhibiting the Argyll-Robertson Pupil System in One Eye; (2) Two Cases of Complete Blindness, with Good Pupillary Light Reflex; (3) On the Symptoms following Section of the Optic Nerve. Mr. Sym (Edinburgh): Albinism: a Curious Family History. Mr. Stephenson: Peculiar Form of Retinal Pigmentation. Mr. Snell: (1) Nystagmus in Compositors; (2) Immediate Loss of Sight after Head Injury. Mr. Silcock: Living Specimen: Epithelioma of Upper Lid, Cheek, and Lip.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in Post Office Order or Stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

BIRTHS.

COCKEY.—On June 15th, at The Limes, Little Waltham, Chelmsford, Essex, the wife of Dr. Percival Cockey, of a son.

DINGLEY.—On June 21st, at 11, Upper Woburn Place, W.C., the wife of Allen Dingley, F.R.C.S., of a son.

HORSLEY.—On June 18th, at 33, Seymour Street, the wife of Victor Horsley, F.R.S., of a son.

MARRIAGES.

OASTLER—BEDDOES.—At St. James Church, New Brighton, June 23rd, by the Hon. and Rev. C. F. Cross, M.A., Vicar of Shotwick, assisted by the Rev. G. Sandars, M.A., of St. James, New Brighton, James Oastler, M.D.Glasgow, to Norah, only daughter of the late Rev. Thos. L. Beddoes, D.D., LL.D., St. Mary's, Manchester. No cards. At home Wednesdays after August 19th.

POGSON TAYLOR.—On June 20th, at St. Mary's Church, Birmingham, John William Buckley Pogson, M.D., of Aston, to Louisa Maria, daughter of Richard Taylor, Esq., Great Hampton Street, Birmingham.

SERVICE—LIGHTBODY.—At Greenhaugh, Helensburgh, Scotland, on June 17th, by Rev. Dr. Burns, Glasgow Cathedral, assisted by Rev. John Lindsay, Helensburgh, and Rev. J. B. Service, B.D., Bolton (brother of the bridegroom), Robert M. Service, M.B., C.M.Glas., to Margaret, daughter of the late James Lightbody, Glasgow.

DEATH.

ANDREWS.—On June 21st, 1891, at 11, Addison Terrace, Notting Hill, W., Louisa Augusta, wife of Henry Charles Andrews, M.D., and daughter of the late John Lord, Esq., of Calcutta and Hobart Town.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted, will be found under their respective headings.*

QUERIES.

BITTEN asks to be recommended an effectual way of destroying bugs in an old house.

M.R.C.S. asks where he can obtain any information as to the alleged connection between cancer and tomato eating.

A SUBSCRIBER FOR OVER THIRTY YEARS would be much obliged if any reader would convert the following French measures into English cubic inches of chloroform, vapour, and air: 10 grammes chloroform to 100 litres of air = cubic inches of vapour to cubic inches of air.

CHLOROFORM OR ETHER.

DR. J. ROBERSON DAY (Hampstead) writes: I should feel obliged if Dr. Ed. Lawrie would give a detailed description of Syme's principle of giving chloroform, which he terms "the right way." And also I should like to know the number of cases that were anæsthetised by this Syme's method in the forty-three years without a single death. From the table published in the BRITISH MEDICAL JOURNAL of June 13th, chloroform would appear to be the perfect anæsthetic if given on Syme's principles.

LIÉBAULT'S METHOD OF HYPNOTISING.

A MEMBER (N. Z.) writes: In the BRITISH MEDICAL JOURNAL for January 10th, I see there is an article on Dupuytren's contraction treated by hypnotism, in which the writer, Dr. Kingsbury, says he "hypnotised the patient readily by Liébault's method." Would you kindly explain that method?

*** Dr. Kingsbury sends the following answer:—Place the patient in an easy chair, with his back to the light. Hold up one or two fingers for him to look at, and suggest to him in a quiet tone that he is going to sleep. Presently, in a successful case, his pupils will be seen to dilate, his eyelids will begin to droop and flicker, and, after closing and opening sluggishly once or twice, they will close and remain shut.

ANSWERS.

MOLAR.—The particulars given are not sufficiently precise to enable us to form an opinion.

ANOTHER L.S.A.—The question has recently been discussed in these columns at some length.

NON QUID PRO QUO does not say whether he has asked the Berlin authorities for any explanation.

L.R.C.P.—All children's hospitals admit cases of rickets for temporary treatment, but we are not aware that there is any permanent home for such cases.

ENQUIRENS.—The following books may be recommended to a candidate for the final examination for the F.R.C.S.Eng.:—Bryant's, Erichsen's, or Holmes's textbooks on *Surgery*; Pepper's *Elements of Surgical Pathology.*

THE FIFTH YEAR.

A COUNTRY MEMBER.—The following are the terms of the resolution adopted by the General Medical Council on November 29th, 1890:

"That the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries, British or foreign, recognised by any of the medical authorities mentioned in Schedule A of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a registered practitioner possessing such opportunities for imparting practical knowledge as shall be satisfactory to the medical authorities."

Influenza.

Dr. Herbert W. Seager (Hampton Court) writes: I should be glad if other members of the British Medical Association would inform me (*a*) whether the epidemic of gout and rheumatism, which is now prevalent here, during and subsequent to the regular course of influenza, is peculiar to the Thames Valley or general? (*b*) What are the symptoms of influenza in dogs? An old black and tan English terrier which accompanies me on my rounds has been suffering for 9 days with fever—hot nose, dry, furred tongue, sunken eyes, staring coat, and incessant cough, choking and sneezing—the latter so marked that on the third day of his illness he could not drink for sneezing. The dog has now recovered his strength and spirits, but still coughs and sneezes, and has a slight discharge from the eyes. The treatment has been simply complete rest in a temperature of 70°F., and regular food.

NOTES, LETTERS, Etc.

Dr. John Murray Moore (Liverpool) asks us to state that in giving a testimonial to a food preparation called Bovinine he signed his name F.R.G.S. (Fellow of the Royal Geographical Society) and not F.R.C.S., as printed by the advertiser.

A New Cure of Tuberculosis.

The cry is still they come! The very latest cure for tuberculosis is one discovered by no less a person than Professor Lannelongue, who, it is stated, deposited the other day in the Archives of the Académie de Médecine a sealed document containing the description of a method of curing surgical tuberculosis.

Acute Sciatica treated by Acupuncture.

Mr. Charles Hirsch, L.S.A., etc., writes: Mr. R. J., aged 26, was suddenly seized by an acute attack of sciatica, the result, most likely, of exposure to cold while cycling. There was no history of either malaria, syphilis, or rheumatism. The usual remedies, such as local hot applications and morphine and pot. iod. internally not relieving the severe pain, I gave the patient a hypodermic injection of cocaine of gr. ½, at at the same time thrusting the needle well into the nerve, entering it just below a point midway between the tuberosity of the ischium and the great trochanter. This gave the patient instant relief.

On the following day, as there was a slight recurrence of the pain, the injection was repeated, but only one-eighth of a grain of cocaine was used. Since then he has had no further trouble.

The Late Dr. Sutton.

Dr. A. Shadwell, M.B., M.R.C.P. (Manor Park, Essex) writes: I should like to add my small tribute to the memory of Dr. Sutton. When already qualified I once spent three months studying medicine at the London Hospital, and shall never forget the impression which Dr. Sutton, of whom I then knew nothing, made upon me. His originality, wide mental grasp, and profound insight were alike astonishing. Surely no man ever better combined exact knowledge with wise reflection, or more happily applied both to practice. In the *post-mortem* room, the lecture theatre, and at the bedside almost every sentence he uttered was a revelation; and to follow the train of his thought was in itself an education. Nor were his extra-medical qualities—his sincerity, simplicity, and sweet equability—less striking. Though personally unacquainted with him I have always felt that if at my wit's end my thoughts would naturally turn to Dr. Sutton for counsel and enlightenment.

Water Supply of Filey.

Mr. C. G. Wheelhouse, F.R.C.S., and Dr. Hugh Orr, M.O.H. (Filey) write as follows: It is well known that last summer Filey, in common with many other places, suffered from an unfortunate dearth in its water supply; and, as this knowledge may prejudicially affect this beautiful watering place, unless the fact is made known that the defect has been completely remedied, we ask you kindly to give us your assistance by the insertion of this letter in your widely read columns. During the course of the past winter such steps have been taken that, henceforth, Filey will be able to boast of water supply unsurpassed by any watering place in England.

To meet the distress felt last summer, great additions had already been made by the directors of the waterworks company, but, beyond these, and in response to an appeal made to them by an important meeting of the ratepayers of the town, they have now added a large artesian boring, and from this an abundant supply of excellent water has been obtained, and will be, henceforward, at their disposal. The water produced is of unusual purity. An analysis which the directors have caused to be made, and which they have published, places it in the very highest rank of potable waters, and, coming as it does from the heart of the rock, at a depth of almost 400 feet, it is beyond the reach of taint by organic or other dangerous impurities.

The supply is practically unlimited, and no strain ever likely to be put upon it will ever again place the town in jeopardy.

Dengue and Influenza.

Dr. John Ringwood (Medical Officer Kells Union Hospitals and Consulting Sanitary Officer for the whole Kells Union) writes: As I am the Medical Officer of the Kells Workhouse and Fever Hospital to whom Dr. Sparrow, the Medical Officer of the Kells Dispensary District, alludes in his letter published in the British Medical Journal of June 13th, I must ask you to insert the enclosed in answer.

As to the period of my observations, I find by referring to my hospital books that in 1885 I have registered several cases of influenza. These cases appeared soon after an outbreak of bilious relapsing fever. Careful observation of similar cases soon convinced me that they were really cases of dengue or breakbone fever, and I then spoke openly of them as cases of breakbone fever, courted inquiry about them in every possible way, wrote frequently about them to the medical periodicals; read a paper in 1887 at the Dublin meeting of the British Medical Association on the outbreak of relapsing fever; referred in that paper to the cases resembling breakbone fever, and was only prevented by ill health from reading papers at the Leeds and Glasgow meetings of the Association on the subsequent history of the epidemic. In February, 1890, I read a paper before the Royal Academy of Medicine of Ireland on the subject of dengue fever. This paper was read at a meeting when influenza was the special subject under consideration. In that paper I stated my reasons for believing, after five years' careful observation, that the epidemic of influenza was really an outbreak of dengue or American breakbone fever, modified by our northern latitude. These conclusions were arrived at from observations made on cases under my care both in hospital and private practice since 1885.

I am the Medical Officer of the Kells Workhouse and Union Fever Hospitals, which hospitals, by the Poor-law regulations, can only receive patients from amongst those entitled to receive Poor-law relief, and who reside within the four dispensary districts which form the Kells Union. Kells Union contains 109,400 acres, with a population of 19,600; still there have been admitted since the beginning of 1886 into the Union Fever Hospital 570 patients. Anyone knowing the great reluctance the Irish peasantry evince towards entering a fever hospital, or allowing their relatives to do so when ill, will realise what an enormous amount of illness amongst the inhabitants of this union these figures imply. In 1887 fever was so prevalent in this union that the Local Government Board sent down an inspector, who held a special meeting of the board of guardians to consider the best means for arresting the spread of the epidemic, and to choose a house within the union as an auxiliary fever hospital. Failing to obtain a suitable house, the guardians built a large addition to the Fever Hospital, which at the time was crammed to overflowing. This addition was built within a few hundred yards of Dr. Sparrow's residence, and still he emphatically states that there has been no fever here for years. Dr. Sparrow allows that influenza has been prevalent here this year and last year. My sole offence is to consider cases of influenza modified cases of dengue fever.

The Treatment of Influenza.

Dr. C. R. Illingworth (Accrington), writes: I am desirous to know why Dr. Alex. Harkness gives both aconite and alcohol, seeing that the action of the one is antagonistic to that of the other? I should like to know what the mortality from such treatment was, because by giving iron, nitrous ether, ipecacuanha (and opium in small doses when cough was urgent), I got results which showed no fatalities in 150 cases, *without* alcohol in the early stages. When bronchial mischief, with dyspnœa, collapse, and cyanosis threatened, the administration of iron and belladonna answered admirably; and I found milk and whisky, given every three hours, an excellent nutrient and stimulant.

Dr. Jno. P. Aston (Eccleshill) writes: I can corroborate Dr. Henry's recommendation of phenacetin as useful in influenza. I had experience of it in the epidemic of last year as well as in this. In my opinion it is immensely superior to either antipyrin or antifebrin. But in this epidemic I have not used it as an antipyretic, as I have found minute doses of aconite to answer splendidly for cutting short the fever. I have, however, used phenacetin in 3 to 5 grain doses for sleeplessness with great advantage. For the headache I have found gelseminum, bryonia, and cimicifuga very useful, as also for the backache. For the bone pains eupatorium perfoliatum has in many cases acted magically. Rhus toxicodendron has, in cases with much restlessness, relieved promptly alike fever and the pains. For the bronchial complications I have found bichromate of potash in 1 per cent. strength act most beneficially, especially where the sputa were tough, glutinous, and stringy. I have saved several lives in my judgment with this remedy.

Pollock and Bellamy Memorial Fund.

Mr. Stanley Boyd has sent us an additional list of subscribers to this fund:—

	£	s.	d.		£	s.	d.
Miss Bellamy	1	1	0	Montagu Lubbock, M.D. ...	1	1	0
R. Baxter Booth	1	1	0	J. Biddulph Martin	5	5	0
James Cantlie, M.D. (Hong Kong)	1	1	0	Stephen Nockolds	1	1	0
James Donald	1	1	0	Porters (hospl. and school)	1	1	0
Arthur Farr	1	1	0	Alfred Sangster, M.B. ...	1	1	0
H. H. Folker	1	1	0	John W. Taylor	1	1	0
W. H. Folker	1	1	0	C. S. Watkins	1	1	0
W. J. Haddock ...	1	1	0	Smaller	2	5	0
Sir W. Guyer Hunter, M.P.	3	0	0	Total	26	4	0
T. Lavers	1	0	0				

Bringing the grand total up to £124 11s. 0d.

A Stethoscope Sound.

Mr. Felix Roth (St. Mary's Hospital) writes: I should like to call your attention to another modification of Sir Henry Thompson's sound, which he described in the British Medical Journal, June 6th, 1891, for finding small vesical calculi in the bladder.

Sir Henry Thompson's sound might be made hollow at the beak and very thin: a hollow, even tube could be run right through it, the flat part of the sound being made rather thicker to allow this to be done. The tube would have to be extended for half an inch beyond the flat end. To this projection a hollow india-rubber would be attached, long enough to allow every movement of manipulation with the sound to be made, the other end being fixed to a binaural stethoscope. With such a sound, even the smallest calculi might be detected.

Alcohol and Longevity.

Dr. C. R. Drysdale (London) writes: The latest statistics quoted by Dr. Ridge are very convincing to my mind, although I suspect that many authorities still think that it is not clear that total abstinence from alcohol is conducive to longevity. I notice that another insurance company—the Sceptre Life Association—which has had a temperance section since 1864, has recently published the following figures for the last seven years: Mortality experience, 1884-90, according to Institute of Actuaries' Healthy Male Table. In the General Section, 679 deaths were

expected, and 527 occurred, or 77.61 per cent. of the expectation. In the Temperance Section 306 deaths were expected, and 174 occurred, or 56.86 of the expectation. It appears, from an investigation made by Mr. Bingham, of the Sceptre Life Association, that the following insurance companies charge £1 per cent. additional to publicans insuring: Alliance, Atlas, City of Glasgow, Commercial Union, Economic, Edinburgh, English and Scottish Law, Equity and Law, General, North British, Norwich Union, Royal Exchange, Scottish Amicable, Scottish Equitable, Scottish Union and National Standard, Star, Union, Victoria, Westminster and General, and Whittington. The Hand-in-Hand states that "proposals are not accepted by us in the absence of specially favourable circumstances." The Crown says: "My directors decline, owing to the extreme risky nature of publicans' lives, to accept proposals on such lives." The Clerical, Medical and General, Friends' Provident, National Provident, Sceptre Life Association, Scottish Widows' Fund, and United Kingdom Temperance and General Provident also refuse them. Remembering that publicans are well fed, well lodged, and not overworked or subject to great exposure, I think this is good corroborative evidence of the danger of the habitual use of alcoholic fluids in health. This question is of much importance to the world at large, and even to the medical profession, many of whom have, in common with the public, been inclined to think that the inquiry made by a committee of the Association proved that total abstinence was dangerous to health. The fallacy in the statistics published by that Committee consisted in quoting the ages at death of 120 total abstainers, and, comparing these with those of about 4,000 non-abstainers, who were naturally much older when they had their lives insured. It was similar to that fallacy of comparing the age at death of school-boys with that of adults.

DR. J. J. RIDGE (Honorary Secretary of the British Medical Temperance Association) writes: Allow me to correct an error which has been made in the table given in my letter which appeared in the BRITISH MEDICAL JOURNAL of June 13th. The figures 872, Temperance Section, Actual Claims, 1881-85, should be 835, and the total therefore 3,386, instead of 3,423. The percentage will be 69.9, instead of 70.4; difference 26.9.

LETTERS, COMMUNICATIONS, ETC., received:

(A) Mr. H. W. Allingham, London; Dr. Arnison, Newcastle-on-Tyne; Mr. J. P. Aston, Eccleshill; Mr. W. H. Axford, Southsea; Messrs. Arnold and Sons, London; Dr. Abercrombie, London. **(B)** Mr. A. H. Benson, London; Mr. W. W. Black, Edinburgh; Mr. A. J. Barlow, Todmorden; Mr. N. T. Brewis, Edinburgh; J. E. Blomfield, M.B., Sevenoaks; Mr. J. Berry, London; Dr. J. H. Bennet, Nice; Dr. F. Beach, Dartford; Mr. W. J. T. Barker, Churchinford; Mr. Stanley Boyd, London; Mr. E. Birt, Wakefield; The J. P. Bush Manufacturing Company, London. **(C)** Sir C. A. Cameron, Dublin; Mr. G. R. Chadwick, King's Lynn; Dr. W. F. Cleveland, London; Dr. G. W. Crowe, Worcester; Common Sense; Miss M. H. Cane, London; Dr. Carline, Lincoln; Mr. G. H. Carphin, Edinburgh; Mr. R. Coombe, Exeter. **(D)** Mr. Alban Doran, London; Dr. J. R. Day, Hampstead; Mr. F. E. H. Daunt, London; Dr. Maury Deas, Exeter; Mr. A. Dalzell, Totland Bay; Mr. H. W. Drew, Croydon; Mr. S. B. De Butts, Chichester; Dr. A. Duke, Dublin. **(F)** Flitwick Chalybeate Company, London; Mr. G. Foy, Dublin; Mr. G. Fischer, Jena. **(G)** Mr. J. Gibson, Greetland; H. W. Godfrey, M.B., Ventnor; Dr. C. E. Glascott, Manchester. **(H)** Dr. G. E. Herman, London; Dr. E. Hamilton, Dublin; Mr. A. E. S. Hiley, London; Mr. W. W. Halsted, Chichester; Mr. A. Hartley, Malton; Mr. E. A. Hart, London; Mr. C. Hirsch, South Hampstead; Dr. Halliburton, London; Dr. R. Hills, Wanstead; Mr. V. Horsley, London; Dr. J. A. Hutton, Scarborough; Dr. J. Haddon, Canonbie; Dr. A. Hill, Cambridge; Mr. H. W. M. Hayes, Swindon; Mr. J. H. Harris, Dartmouth; Dr. W. E. Hadden, Portadown. **(I)** Dr. C. R. Illingworth, Accrington. **(J)** Justitia; Mr. F. B. Jessett, London. **(K)** Dr. G. C. Kingsbury, Blackpool; Messrs. Krohne and Sesemann, London; Dr. Norman Kerr, London; Mr. A. C. Kemble, Poole; Mr. A. Kinsey-Morgan, Bournemouth. **(L)** Lex; Mr. A. W. Lacey, London; Mr. C. B. Lockwood, London; Dr. T. Lallan, Cashel; Mr. F. E. Lewis, Tunbridge Wells; Mr. A. E. Lyster, Long Eaton; Mr. A. W. W. Lea, Congleton; The Liquor Carnis Co., London; Mr. R. R. Llewellyn, London; Dr. D. Lowne, Hull. **(M)** Dr. Mickle, London; Dr. F. W. Mott, London; Dr. J. M. Moore, Liverpool; Mr. G. H. Morley, Birmingham; M. S.; Dr. D. J. Macaulay, Halifax; Mr. L. Mark, London; Mr. J. Marshall, Hastings; Dr. J. Maxwell, Tobermory. **(N)** Mr. F. L. Nicholls, Fulbourn; W. H. A. Newnham, M.B., Clifton; Dr. C. Norman, Grangegorman. **(O)** Observer; Brigade Surgeon J. D. M. O'Farrell, Bombay; Mr. W. Odell, Torquay. **(P)** Dr. H. F. Parsons, South Norwood; Dr. J. R. Philpots, Parkstone; Professor Pisani, Malta; Dr. B. Pogson, Birmingham; Messrs. Paine and Co., St. Neots; Dr. T. Partridge, Stroud; Mr. H. P. Pike, Gloucester. **(R)** Mr. Edward Rayten, Ottawa; Dr. J. H. Rauch, Springfield; Dr. R. T. Richardson, Trowbridge; Mr. F. Roth, London; Rusticola; Mr. B. Rake, Simla; Dr. J. Ringwood, Kells; Surgeon-Major G. Ranking, Lucknow; R.N.; Dr. J. Roberts, Peckham. **(S)** Messrs. Slinger and Son, York; Dr. T. Savage, Birmingham; Mr. W. Stamford, Tunbridge Wells; Dr. Sykes, Gosport; Mr. L. M. Scott, London; The Secretary of the Zenana Medical College, London; Dr. H. W. Syers, London; Dr. Herbert Snow, London; Mr. W. Johnson Smith, London; Dr. S. W. Smith, Cheltenham; Mr. W. G. Spencer, London; A. Shadwell, M.B., Manor Park; The Secretary of the South Australian Branch of the British Medical Association, Adelaide; Mr. G. T. A. Staff, St. Ives; The Secretary of the General Practitioners' Association, London; Dr. Savage, London; Messrs. Swan Sonnenschein and Co., London; Mr. F. Stokes, London; Dr. R. M. Simon, Birmingham; Surgeon Volunteer; Mr. A. T. Somerville, Edinburgh. **(T)** Mr. C. H. Taylor, Derby; Mr. W. Towers-Smith, London; Mr. J. Tay, Bishopston; Dr. Trevelyan, Leeds; Mr. E. C. Taylor, Croydon; Dr. J. J. B. Taylor, Ulverston. **(W)** Dr. O. Wood, London; Mr. H. H. Whitely, Hull; Mr. F. H. Westmacott, Pendlebury; Mr. C. L. Worrall, Llanwrtyd; Dr. F. H. Walmsley, King's Langley; Dr. T. J. Woodhouse, Putney; Dr. A. Whitelegge, Wakefield; Dr. J. R. Whitwell, Menston; Mr. J. T. Welply, Bandon; Mr. V. G. Webb, London; Mr. C. Wood, Dover; Mr. G. B. M. White, London; Mr. C. H. Wells, London. **(Y)** Mr. G. H. Younge, Colchester; etc.

BOOKS, ETC., RECEIVED.

Glimpses of Nature. By Andrew Wilson, F.R.S.E., F.L.S. London: Chatto and Windus. 1891.

Illustrations of the Inductive Method in Medicine. By William Murray, M.D., F.R.C.P.Lond. London: H. K. Lewis. 1891.

Gefrierdurchschnitte zur Anatomie der Nasenhöhle. Von Professor Dr. B. Fränkel. Zweites Heft. Berlin; August Hirschwald. 1891.

Atlas der Krankheiten der Mund und Rachenhöhle. Von Professor Dr. J. Mikuliez und Dr. P. Michelson. Probe-heft. Berlin: August Hirschwald. 1891.

Subjective Noises in the Head and Ears. By H. Macnaughton Jones. London: H. K. Lewis. 1891.

Oysters and All About Them. By J. R. Philpots, L.R.C.P. and S.Edin. Parts I and II. London and Leicester: J. Richardson and Co. 1890.

Outlines on a Course of Lectures on Human Physiology. By Ernest Albert Parkyn, M.A. London: Allman and Son.

St. Thomas's Hospital Reports. Edited by Dr. Hadden and Mr. Anderson. Vol. xix. London: J. and A. Churchill. 1891.

Outlines of Medical Treatment. By Samuel Fenwick, M.D., and W. Soltau Fenwick, M.D., B.S.Lond. Third edition. London: J. and A. Churchill. 1891.

De l'Exercice chez les Adultes. Par le Dr. Fernand Lagrange. Paris: Félix Alcan. 1891.

Stellar Songs and other Poems. By Herbert A. Smith, M.R.C.S.Eng., L.R.C.P.Edin. London: Reeves and Turner. 1891.

Le Végétarisme et le Régime végétarien rationnel. Par le Dr. Bonnejoy, précédé d'une introduction par le Dr. Dujardin-Beaumetz. Paris: J. B. Baillière et Fils. 1891.

A Practical Textbook of the Diseases of Women. By A. H. N. Lewers, M.D., M.R.C.P.Lond. Third edition. London: H. K. Lewis. 1891.

Philadelphia Hospital Reports. Edited by Charles K. Mills, M.D. Vol. i. Philadelphia: Detre and Blackburn. 1890.

Neue Beiträge zur Frage des Impfschutzes. Zweite Beobachtungs-serie, 1887-88. Von Josef Körösi. Berlin: Puttkammer und Mühlbrecht. 1891.

Saturn's Kingdom. By Charles Moore Jessop. London: Kegan Paul, Trench, Trübner, and Co. 1891.

Norris's Nursing Notes. By Rachel Norris, R.R.C. No. 2. Nursing Record Series. Price 2s. London: Sampson Low, Marston, and Co. 1891.

A Manual of Practical Electro-Therapeutics. By Arthur Harries, M.D., and H. N. Lawrence, M.I.E.E. No. 3. Nursing Record Series. Price 1s. 6d. London: Sampson Low, Marston, and Co. 1891.

Massage for Beginners. By Lucy Fitch. No. 1. Nursing Record Series. Price 1s. London: Sampson Low, Marston and Co. 1891.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(1) Primary Acute Encephalitis.

STRÜMPELL (*Deutsches Archiv für klin. Med.* Bd. xlvii, H. 1 und 2), after alluding to the rarity of acute primary encephalitis, proceeds to describe this condition as it occurs in children. The usual age for the affection is from 1½ to 4 years. The patients are suddenly seized with vomiting, pain in the head, and fever. In some cases in a few hours, in others in a few days, convulsions and coma are developed. These symptoms pass off, the child appears as well as ever except for some permanent effects of the disease, such as paralysis of a limb, which may remain for the rest of the child's life. Strümpell discusses the possible causes of this condition, and comes to the conclusion, after excluding all chronic processes, that although no doubt embolism may sometimes be a cause, yet most cases must be due to acute encephalitis. He prefers the term acute encephalitis to that of acute polioencephalitis. He gives two cases of acute encephalitis of adults. One, a man aged 67, was suddenly taken ill with unmistakable cerebral symptoms, as coma and paralysis of all four extremities. His temperature was 103°, and rose to 106° before death. At the *post-mortem* examination there was a large area around the cerebral ganglia. The tissue was of a spotted yellowish-grey appearance, spongy, and with many punctiform ecchymoses. The microscopical examination showed signs of acute inflammation. The second case, that of a man aged 64, was very like the first.

(2) Astasia-Abasia in Exophthalmic Goitre.

EULENBERG (*Neurologisches Centralblatt*, December 1st, 1890) points out that the term "astasia-abasia" has been applied to a symptom which consists in an inability to stand or walk upright, although the muscular strength, the co-ordination, and the sensibility of the lower extremities are perfect, but that this symptom has been observed under the most different conditions, and has been described under very different names, it has, for example, when it is accompanied by pain, been called dysstasia-dysbasia. For the term astasia-abasia to be applied correctly it is essential that the movements while sitting and those of jumping, etc., should be free—in fact, the difficulty must only exist during walking or standing. Authors differ as to whether this symptom is confined to functional diseases or may exist with organic mischief of the nervous system. Eulenberg's patient was a girl, aged 18, who showed several vague nervous symptoms, and finally developed typical exophthalmic goitre with considerable anæmia and cardiac dilatation. She improved considerably, but when much better she complained that she was paralysed in both legs. As soon as she attempted to walk or stand the legs became quite helpless, and there was a pain in them, especially in the calves, consequently she was most comfortable when in bed. She attributed this paralysis to a chill. When Eulenberg examined her he found that she could not walk or stand, that the legs fell together, but that the other movements, when she was lying down, were normal. She had no other symptom. He looked upon it as due to a kind of autosuggestion, and he completely cured her by means of a strong electric current.

(3) Paralysis Agitans.

PETERSON (*New York Medical Journal*, October 11th, 1890) comes to the following conclusions from a clinical study of 47 cases of paralysis agitans. In 42, the patients were between 40 and 60 years old at the onset; 29 were males; very few, if any, had any decided hereditary taint; in 8 the disease seemed to be due to exposure to wet and cold; in a few cases it was set up by fright and other mental causes; and occasionally a traumatic influence was at work, and the tremor began in the part injured. In all 47 cases, tremor was present; it affected the head in 9 out of the whole number; occasionally the tremors were uncontrollable. The average rate of vibration of the tremor was 3.7 to 5.6 per second. In 41 cases there was rigidity; in four-fifths of them the characteristic posture was well marked; in 1 there was marked muscular wasting. Propulsion was observed in 12 cases, retropulsion in 3, and the two symptoms were combined in 9; lateropulsion was present in 1 case; in 9, the knee, wrist, and elbow jerks were exaggerated. In one case of eight years' standing, the electro-irritability was diminished. Thirteen showed a modification of the voice, probably due to imperfect action of the laryngeal muscles. Subjective sensations of heat were present in 7 cases, and subjective sensations of cold in 5 cases; a few had other paræsthesiæ. In 7 patients, restlessness was very troublesome; 1 had tachycardia, and 1 was mentally deficient. A pill containing codeine, half a grain to two grains, and hyoscine hydrobromide, one-hundredth of a grain, given twice or thrice daily, was found to be the best treatment.

(4) Gastric Crises of Locomotor Ataxy.

NOORDEN (*Charité Annalen*, 1890, p. 166) has carefully analysed the gastric juice of patients suffer-

ing from gastric crises in locomotor ataxy, both during and between the attacks. He arrived at no constant results, the composition varied so much in different cases; especially was there no correspondence between the amount of acidity and the intensity of the gastric crisis. In some instances the author observed hypersecretion and hyperacidity, both of which diminished after the crises had existed some time, and as a rule these two symptoms are the exception in locomotor ataxy.

(5) Etiology of Tabes Dorsalis.

Bernhardt (*Neurologisches Centralblatt*, December 1st, 1890) records a case of locomotor ataxy in a young woman, aged 28. She had not had syphilis. She became pregnant, and the pains were so severe that artificial labour was induced; this diminished the pain but not the difficulty of gait. The ataxy of her legs was very well shown when she lay down and tried to cross the limbs. The knee-jerks were absent. When the eyes were shut she could not tell the position of her limbs, but the cutaneous sensations were normal. The pupillary reflex was normal. The point of great interest about this woman is that for some years she has been working a pedal sewing machine from early morning till midnight. Bernhardt quotes two cases recorded by Guelliot, in which locomotor ataxy supervened upon working with a sewing machine.

SURGERY.

(6) Indications for Operation in Ulcer of the Stomach.

Nissen (*St. Petersburger medicinische Wochenschrift*, No. 41, October, 1890) discusses the question of operative interference in cases of circular ulcer of the stomach, and relates a case from the clinic of Professor Unverricht. The patient was a man, aged 46 years, who had had the usual signs of an ulcer of the stomach since July, 1887. His disease progressed with the usual symptoms of violent pain in the epigastrium, vomiting of blood, and progressive wasting, until September, 1889, when the symptoms pointed to perforation of the ulcer with commencing peritonitis. Professor Wahl thereupon opened the abdomen by an incision in the linea alba between the umbilicus and ensiform cartilage. There was no free gas in the peritoneal sac, and the stomach was easily made to present itself in the wound. Neither palpation nor inspection showed anything abnormal either in front or behind, and its serous coat was smooth and shining, although rather too vascular. There was no peritonitis, however, and nothing to bear out the clinical signs. The abdomen was closed, and the patient progressed fairly well for some days, but a month after the operation his temperature rose; there was pain in the abdomen, culminating in collapse, of which he died. The clinical diagnosis was that of a perforating ulcer of the stomach with consecutive peritonitis. An examination was made and the left lobe of the liver was ascertained to be adherent to the stomach, and when the adhesions were broken down, a small perforation was found in the front wall of the stomach. This hole had allowed the contents to escape into the peritoneal cavity. The stomach itself was hour-glass shaped, and had a large ulcer at its lesser curve and extending down the front where it had given way. In commenting upon this case Nissen points out that the indications for performing an operation, namely, perforation and commencing peritonitis, may not be fulfilled unless the lesser omentum be torn through and the hinder surface of the stomach explored with the finger. Nevertheless, should an ulcer be situated there, adhesions will often have been formed with the pancreas. A better means of diagnosing the position of ulcers seems essential to the successful performance of these operations.

(7) The Number of Sittings in Lithotrity.

Under this title Professor Guyon (*Annales des Malad. des Organes Génito-urinaires*, December, 1890) describes a class of cases in which he has found it advisable to empty the bladder in a series of sittings. He begins by explaining that he has adopted *in toto* Bigelow's views and the plan of treatment which is associated with his name for all ordinary cases where the bladder wall is healthy and the calculus a hard one, but he has found that those patients whose bladders contain phosphatic calculi do not yield such good results by Bigelow's plan as by a series of sittings oft repeated. There are several reasons for this. The bladder itself in these cases is very irritable, and resents the prolonged operation which is necessary for its complete evacuation, whilst its loculi and rugæ render the task of finding all the calculi a most difficult if not an impossible one. Added to this, such bladders are always of large capacity, and often non-contractile, or only contract with difficulty, so that the fragments are not readily washed out from all their various lurking places. It must, Guyon adds, be borne in mind—and he quotes some experiments to prove his statement—that the evacuator does not exercise much, if any, attraction for fragments more than an inch to an inch and a half from its eye, so that in these large bladders fragments are very likely to be left behind. In further support of his statements M. Guyon refers to the case of an old man in whom after the removal of considerable masses of calculous matter, he found a few days later at a second sitting another large calculus which he had left behind quite unsuspected on the first occasion. A case of this kind is the more perplexing, as the cystitis from which such patients suffer is always greatly ameliorated by the first operation, thus leading the patient and the surgeon, if he is unsuspecting, to imagine that a complete cure has been effected. This point, as Guyon remarks, has been referred to by many surgeons who have had great experience in these cases, and they have drawn attention to the fact that, in proportion as the bladder is emptied of its calculous contents, the severe symptoms grow less and less. Indeed, it was this very experience that led many surgeons to be at first loth to accept Bigelow's plan of treatment. In some instances which he quotes Guyon shows that the class of patients to which he refers even do better when treated as out-patients by frequent small crushings than when, with the additional security of bed and hospital treatment, the bladder is completely emptied at one sitting.

(8) Asepticism in Operative Surgery.

In a contribution to the *Revue Médicale de la Suisse Romande* of October 20th, Dr. E. Kummer, of Geneva, discusses the question as to what is really the best and most practicable method of operative asepsis. The operator, he points out,

has two conditions to fulfil: he must protect the fresh wound from the contact of microbes and, at the same time, scrupulously preserve the vitality of the tissues around the wound. The first object is to be attained by carefully sterilising everything likely to be brought near the open surface. The surgeon must sterilise the field of operation, his own fingers, his instruments, ligatures, and sutures, and all the articles of dressing. The access of air, it has now been proved, is not dangerous. In order to fulfil the second condition, he should avoid as far as possible the use of such physical or chemical agents as might compromise the vitality of the tissues, and carefully abstain from introducing into the wound caustic agents such as are most of the antiseptics. Dr. Kummer is much opposed to the general use of chemical antiseptics, and holds that the best way of sterilising surgical instruments and appliances is to subject them to heat. The temperature being the same, moist heat, he asserts, is far preferable to dry heat for purposes of sterilisation. The most efficacious form of moist heat for producing disinfection is compressed steam, but, as this cannot be obtained readily and at moderate cost, Dr. Kummer recommends boiling water as the next best form for general use. For disinfecting the hands of the surgeon and his assistants, it is recommended that these be first inserted into a weak solution of sublimate, and afterwards into recently boiled water. In concluding this paper, Dr. Kummer states that the disinfecting property of boiling water may be improved by adding a small quantity of common salt, so as to make a solution of about 1 per cent. It has been proved by M. Tavel, of Berne, that such a boiling saline solution will, in the course of five minutes, kill spores that would resist for two hours the action of simple boiling water.

MIDWIFERY AND DISEASES OF WOMEN.

(9) Albuminuria in Pregnancy.

Ehrhardt and Favre (*Nouvelles Archives d'Obstét. et de Gynéc.*, September, 1890) discuss this subject in relation to a mild attack of puerperal diphtheria in the Paris Maternité. They sum up past theories which have influenced treatment. Rayer traced the albuminuria to hydræmia, which exists during pregnancy. He noted that injection of water into the veins of an animal caused albuminuria, but this fact does not prove his theory. Claude Bernard traced albuminuria to a state of superalbuminosis in pregnancy. Injections of white of egg into the circulation caused albumen to appear in the urine. Gothwald and Monas held that the phenomenon was caused by increased blood pressure, the gravid uterus compressing the aorta below the renal arteries. Others believed that the uterus, by pressure on the ureters, caused renal disease. Lastly, some pathologists traced the albuminuria to nerve influences carried on by communications between the uterine and the renal plexuses. None of these theories, say Drs. Ehrhardt and Favre, explain why pregnant women suffer from albuminuria only in exceptional cases. They trace the complication to local disease. They examined 300 placentæ. Of these 20 were from cases of albuminuria. In 19 of these placentæ white infarcts were detected, and all the patients except two were subject to severe leucorrhœa when not gravid, and often to colicky pains during menstruation, symptomatic of endometritis. Colonies of bacteria were found in the infarcts, and when some germs, taken from infarcts in the placentæ of patients who had suffered from eclampsia as well as albuminuria, were injected into the veins of rabbits and guinea-pigs, parenchymatous nephritis was set up. Thus the morbid changes in the decidua which cause placental infarcts are induced by the same agency that induces the nephritis of pregnancy. This agency is the presence of germs in the placenta, which germs produce in non-pregnant patients leucorrhœa and other symptoms of chronic endometritis. The focus of infection being the uterine mucous membrane, that structure requires attention and treatment. When it is unhealthy the patient may repeatedly bear fœtuses which die before birth through disease of the placenta—that same disease which, in the opinion of Drs. Ehrhardt and Favre, causes the nephritis of pregnancy, with consequent albuminuria. They intend shortly to describe the precise nature of the disease in the kidneys in these cases. The moral they would draw is—Never neglect uterine discharges.

(10) Double Vaginal Thrombus in Pregnancy.

Dr. Loviot (*Arch. de Tocologie*, November, 1890) describes a case of this condition, fortunately uncommon at labour and very rare during pregnancy. The patient was a primipara; at the seventh month hæmorrhages set in, and placenta prævia was suspected. Dr. Loviot, however, noticed that blood escaped only during micturition and defæcation, or when the patient was at her toilet. There was no local evidence of abnormal attachment of the placenta. Two violaceous swellings were discovered at the vaginal orifice. One lay below the lacerated hymen on the left, whilst the hymen was inferior to the swelling on the right side. Each tumour measured about an inch in length, and was as thick as a man's little finger; they were irreducible, and did not pulsate; they felt like somewhat flaccid cysts. There was no orifice on the surface of either, no bleeding point, no discharge or moisture of the investing integument. Dr. Loviot believed that the hæmorrhage must have proceeded from one of these thrombi—indeed, there was a thin spot on the surface of the left swelling. He would not prescribe any local or general treatment. No fresh bleeding occurred; two months later the thrombi were smaller. Delivery took place without any trouble; the thrombi did not offer any impediment to labour, and, remarkable as it may seem, were not injured during delivery; they did not bleed nor did they increase in size before or after labour.

(11) Pneumonia in Pregnancy.

Dr. Fraigniaud (*Archives de Tocologie*, November, 1890) refers to the uncertain relations between pneumonia and the course of pregnancy in a patient attacked by that pulmonary disorder. Half the recorded cases aborted, and the later the disease occurs the more certain is the rapid expulsion of the fœtus, and the worse the prognosis for mother and child. Authorities are, however, divided as to the relative dangers of the continuance of pregnancy and premature labour. In eighteen cases, reported by Matton, where pregnancy had been interrupted by pneumonia, nine of the patients died; whilst in twenty, where the lung disease failed to occasion premature labour, only one died. Other writers are in favour of inducing labour when pneumonia sets in. Dr. Fraigniaud had recently under his care a very delicate married lady, aged 21, in her first preg-

nancy. About a week before the beginning of the ninth month she caught cold through standing at an open window in the night. An attack of acute pneumonia set in. Within a few days she felt very ill, when suddenly labour set in; it fortunately proved easy. The child was very small, weighing less than three pounds, living, but very emaciated. It was very carefully reared, being fed every two hours with a drachm of milk from a healthy nurse. When last seen, five weeks after birth, it weighed about five pounds, and took the breast well. Immediately after labour the mother improved, appetite returned, but the sputa remained dark. Milk fever, with tension of the breasts, occurred on the second day. When it ceased, a blister was applied to the back of the right lung, where there was dulness. Thenceforward the patient made definite progress, and soon recovered. The remedies employed before birth could not have excited the premature labour. That event proved fortunate for mother and child. Judging from the condition of the infant, it could hardly have tolerated many more days of intrauterine life. After birth it flourished, and the mother recovered.

(12) Pseudo-Membranous Puerperal Infection.

Dr. Souligoux, of the Maternité (*Bulletins de la Soc. Anatom. de Paris* Tome iv, 1890, pt. 15) describes two cases where symptoms of rheumatism, followed by the formation of false membranes, occurred after childbed. A woman, aged 33, was delivered in hospital of her first child on July 18th, the forceps being applied. The temperature before delivery had been normal. On the evening after, a very severe rigor occurred, and the temperature rose to over 105°. For two days she remained in the lying-in ward, where intrauterine injections were used. On July 21st she was sent into a medical ward with a note that there were "no pains in the belly, pains in all the joints." She complained of intense pain over the region of the liver, and was already delirious. The whole vulva, vagina and cervix were covered with tough, grey, and firmly adherent false membranes. The curette was freely applied to the uterine cavity. Sublimate injections were used, and the uterus and vagina dressed with ice and creasoted glycerine. The patient was so ill that little hopes of her recovery were entertained. The temperature fell for two days, the injections and dressings were continued, but the false membranes increased in extent, violent delirium set in, and the patient died on July 24th. The uterine and part of the vaginal mucosa was sloughy, the liver congested, the kidneys "soft." Another patient, aged 23, was treated in the same ward. She had been attacked with rheumatism before her confinement. She was sent into the ward after childbed (date of delivery not stated) as "rheumatic." A rigor, with perspiration, set in. On the next day Dr. Souligoux detected false membranes on the vulva around the fourchette. The curette was immediately applied to the uterine cavity, which (as well as the false membranes) was dressed with creasoted glycerine. No more rigors occurred, the false membranes were less strongly adherent on the second day, and they totally disappeared before the fourth. Samples of the membrane were examined by a competent authority, and streptococci were discovered. Within a few days all septic symptoms had vanished, and the effects of rheumatism began to disappear. The purely rheumatic character of the first case, even in its earliest stage is, of course, doubtful.

PHARMACOLOGY AND THERAPEUTICS.

(13) Koch's Treatment of Tuberculosis: A Summary of Results.

On December 21st Professor Cornil brought the series of lectures which he has been delivering on Koch's treatment at the Hôpital Laennec to a close. He summed up the results which he had so far obtained by the new method, and, reviewing the different forms of tuberculosis he pointed out those in which the treatment seemed to be indicated, and those in which it was contraindicated (*Semaine Médicale*, December 24th, 1890). Dealing first with tuberculosis of the skin, he said the effect of the injections was to produce an abundant serous exudation on the surface of the lesions; this serosity then solidified and formed crusts, which were sometimes very thick. Between these crusts and the superficial part of the underlying tissues could be seen a layer of white corpuscles, brought thither by diapedesis, and among these corpuscles there were numerous tubercle bacilli. M. Cornil, therefore, thinks that the congestion induced by the remedy, instead of destroying the bacilli (which, on the contrary, seem to be more numerous than before), drives them outside, together with the discharge which it sets up. *A priori*, therefore, it seems clear that there will only be improvement in proportion to the extent to which the products of increased secretion can be eliminated. In articular tuberculosis, where there is no fistula, the joint after the injections becomes tense and painful, the tension being so great that the slightest jolt causes pain. This swelling is produced anew after each injection, and after the remedy has been used several times there seems to be an aggravation of symptoms rather than an improvement. The results in these cases, therefore, are, according to M. Cornil, "more than problematical." When there are fistulæ which allow the serosity to escape, the results may be different. In tuberculosis of the epididymis the results are "not very encouraging." M. Cornil cites the case of a patient with tuberculous epididymitis on the left side, in whom, under the treatment, the diseased mass increased in size on the left side, whilst a nodule became developed on the right side, which had previously been perfectly healthy. In tuberculosis of the larynx "beneficial results may perhaps be obtained," but extreme caution is required so that local swelling may not endanger the patient's life. In this situation, however, surgical interference may be successful in facilitating the elimination of the swollen and softened tissues. With regard to the various forms of pulmonary tuberculosis, we must now, in M. Cornil's opinion, "abandon the greater part of the hopes which were at first entertained." Here he thinks the indications for the treatment are extremely limited; "in the majority of cases it may be very dangerous." It is useless to think of employing it in acute, galloping, or pneumonic phthisis. In advanced phthisis, where there are large cavities in the lungs, the injections, so far from being useful, are positively hurtful. Even in incipient phthisis M. Cornil is very doubtful as to their effect. He mentions the case of a boy of 14 whose cough dated from only about three weeks before he came under treatment. The disease was clearly tuberculosis, and Koch's remedy was tried. The

injections caused the development of an area of intense congestion at the apex, which went on almost to hepatisation; the congestion disappeared after a time, but always returned worse than before after each injection, so that the treatment had to be abandoned. In some cases the injections caused attacks of hæmoptysis; in others abundant pleuritic effusion. In certain cases of chronic phthisis, in which the disease is quiescent, or nearly so, the treatment would, M. Cornil thinks, be not unlikely to kindle it into fresh activity. In a limited class of cases in which there are cavities communicating freely with the bronchial tubes, with little or no fever and not much impairment of strength, the remedy may do good, if it does not cause too violent a reaction. Two patients of this kind, under M. Cornil's care, gained weight and "seemed to derive real benefit from the treatment."

(14) Koch's Treatment in Phthisis: Fatal Result.

Korányi reports (*Pest. med. chir. Presse*, No. 49, 1890) the results of Koch's treatment, which was tried by him in the First University Clinic of Buda-Pesth in ten cases of phthisis and two of lupus. One especially noteworthy case was that of a woman suffering from advanced phthisis complicated with diabetes mellitus. She had been in the hospital since the beginning of July, and the urine contained on the average from 120 to 250 grammes of sugar daily. At the time of her admission there had been commencing infiltration of the left apex; the excretion of sugar was not appreciably diminished either by Carlsbad water, opium, arsenic, or the strictest dieting. During her stay in hospital there had been no pyrexia, and no bacilli had been found in the sputum in spite of the fact that large cavities had formed in the lungs. Since the beginning of November the patient had lost four kilogrammes in weight. On November 25th, when the urine contained 4.5 per cent. of sugar, an injection of 1 milligramme of Koch's fluid was given; no reaction took place. On November 27th 2 milligrammes were injected, whereupon the temperature rose to 38.6° C., expectoration increased in amount, and on the following day for the first time bacilli were found in the sputum, the proportion of sugar falling at the same time suddenly to 0.4 per cent. On November 29th 1 milligramme was injected: the highest temperature reached was 38.4° C.; there was 0.47 per cent. of sugar. On November 30th 1 milligramme was again injected, but there was no reaction. On that day the sugar entirely disappeared. As, however, the patient was becoming weaker, and as there were signs of cardiac failure, no injection was given on December 1st. On that day the woman took food with moderate appetite at midday, but in the afternoon the temperature rose to 37.9° C., and at 5 P.M. she died of syncope. At the *post-mortem* examination, which was made on the following day, the whole body was markedly exsanguine, but both lungs were extensively œdematous. In the upper lobe of the left lung there was a cavity as large as a man's fist, which was filled by "a reddish sanguineo-mucopurulent mass;" the lung tissue forming the wall of this cavity was covered with dull red, hæmorrhagic, succulent granulations. There were also some smaller cavities which presented the same appearances. In several parts of the lung there were caseous nodules, varying in size from a pea to a nut, which could be seen dotted about like fine granules on the cut surface; they were soft and juicy, greyish-yellow in colour, and greasy to the touch. These nodules were for the most part surrounded with a bright red zone of congestion. The strikingly moist, softened condition of the tuberculous foci, together with the hyperæmic zone surrounding them, showed, according to Korányi, that a process analogous to that seen in the case of lupus nodules after the injection of Koch's fluid had in the present instance taken place in the lungs. In the Second Medical Clinic of the University of Buda-Pesth Koch's treatment was tried by Professor Kétli in seven patients, six of whom were certainly suffering from phthisis, whilst in the seventh the symptoms were very suspicious. The initial dose was 2 milligrammes, rising gradually to 1 centigramme; the largest dose given was 0.011 gramme. In only two patients was any reaction observed.

(15) Koch's Treatment in Lupus: Fatal Result.

Jarisch (*Wiener klin. Wochenschr.*, No. 50, 1890) gives the following details of the case of lupus in which death recently followed the injection of Koch's fluid at Innsbruck. The patient was a girl, aged 17, who had been under treatment in the Dermatological Clinic for a year and a half for lupus exulcerans of the face. The general state of nutrition was good. The skin of the face was for the most part transformed into a reticulated scar, isolated lupus nodules projecting in the meshes of the cicatricial network. The alæ nasi were completely eaten away, the nares narrowed so as barely to admit a quill, the mouth narrowed so that examination of its interior was impossible. There was ectropion on the left side; the cervical and submaxillary glands were enlarged. Examination of the thoracic and abdominal organs gave negative results; there was no albumen in the urine. On December 3rd, at 9.30 A.M., an injection of 2 milligrammes of carbolised Koch's fluid was given. Local reaction was very marked. During the rigor the lupus scars on the face became livid. About 3 P.M. the lower parts of the face at the edges of the cicatrices became swollen, the scars themselves being surrounded to the extent of a finger's breadth by a bright red inflammatory halo. The cheeks and nose showed no marked changes, but the upper lip was livid. About 5 P.M. all the cicatrised parts were swollen, tense, and surrounded with the intense red zone as before. The lupus nodules appeared more prominent and were bright red in colour, most of them being still isolated, but their inflammatory halos were confluent in some cases. At 9 A.M. on December 4th the swelling and redness were more diffused, the whole of the face being involved, especially in the lower parts. The bright red had given place to a livid colour. In addition to the other ordinary signs of local reaction, it was noticed that the ectropion was markedly diminished, and the conjunctiva, palpebral and ocular, of both eyes was intensely red and secreted copiously. On the day of injection the temperature rose to 39.6° C. at 2.30 P.M., and to 40.3° C. at 4.30 P.M. At 5.30 P.M. the patient began to vomit, and at 6 P.M. she became drowsy. At midnight the temperature was 41°, reaching its highest point—41.5°—at 3 A.M. on December 4th. At 9 A.M. on that day the pulse was very small and intermittent, and could not be counted; the respiration was 40. In spite of the free exhibition of stimulants the patient continued to sink, and died at 9.45 P.M. on December

4th. The *post-mortem* examination, which was made by Professor Pommer twelve hours after death, gave striking evidence of the energetic action of the remedy on all the tuberculous foci. There was swelling with redness in the scars and in the neighbourhood thereof, and also round the ulcers in the mouth, mucous membrane of the palate and epiglottis; and great swelling of the submaxillary and cervical lymphatic glands and of those along the trachea, and beneath the bifurcation of that tube and the roots of the lungs. These glands were caseous, and presented in their interior numerous typical tuberculous foci. There were extensive ulcerated areas in the large and small intestine. In both lungs there were numerous disseminated patches of pneumonic infiltration with œdema round about; there was also great œdema of the brain and spinal cord; acute swelling of the spleen, which was 14 centimètres in length, 9½ in breadth, and 4½ to 5 in thickness; and slight parenchymatous swelling of the liver and kidneys. There were capillary hæmorrhages in the pleuræ, the parietal layer of the pericardium, the thymus, and in several parts of the spinal cord. Among the chronic changes found in the body in addition to the lesions of lupus and tuberculous bronchitis there was callous atrophy of the superficial parts of the apices of both lungs; in these spots there was no sign of reaction. There was also slight stenosis of the left ostium atrio-ventriculare, eccentric hypertrophy of the right side of the heart, and hæmorrhagic pachymeningitis. There was neither stenosis nor œdema of the larynx, and there were no tuberculous formations in the lungs.

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(16) Koch's Treatment of Tuberculosis: Cicatrisation without Reaction.

LINDNER (*Deutsche med. Wochenschr.*, December 18th, 1890) reports two cases in which, although no reaction whatever followed the injections, the local condition was considerably improved. A man who had been operated on for disease of the elbow-joint, judged to be of tuberculous nature, still suffered from painful swelling in the joint, together with a fistula which could not be got to heal. After several injections of Koch's fluid, though no reaction had occurred, the fistula closed, the swelling disappeared, and the movement of the joint was restored. The other patient was a man who had a large number of fistulæ over the sternum, and considerable tuberculous lesions in the lungs. Injections even of doses of 3 centigrammes caused no reaction; nevertheless, at the end of a fortnight the greater number of the sternal fistulæ had healed, and the few that remained open scarcely admitted the end of a probe.

(17) Koch's Treatment in Surgical Tuberculous Affections.

RYDYGIER, of Cracow, says (*Wien. klin. Wochenschr.*, No. 50, 1890) he first tested the remedy as a diagnostic agent by injecting it in patients suffering from epithelioma and rhinoscleroma. No reaction took place in these cases. In tuberculous affections the reaction was marked. In almost all cases Rydygier observed enlargement of the spleen during the fever, and frequently a small quantity of albumen was found in the urine. In a girl suffering from lupus, in whom an injection of 1 centigramme produced very marked reaction, a second dose of the same strength, given eight days later, caused extreme and alarming collapse, which lasted many hours. In a girl, aged 8, with ulcers on the left forearm and two fistulæ over the metacarpus, but with perfectly healthy lungs, an injection of 6 milligrammes caused severe collapse with "colossal" local reaction. In this case, and in another of bone disease with fistulæ, the therapeutic effect of the treatment was very favourable. Rydygier thinks the method is especially suitable in bone and joint disease where there are open fistulæ. Acting on this belief he excised a wedge-shaped piece from a tuberculous ankle-joint whilst it was in a condition of active reaction, so as to make an open fistula. With regard to tuberculosis of the larynx, Rydygier states that in one case the power of swallowing, which had been lost, was recovered, whilst in another case marked improvement of the voice took place under the treatment.

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(18) Koch's Treatment of Tuberculosis: Its Diagnostic Value.

MAYDL, of Vienna, reports (*Intern. klin. Rundschau*) the results of experiments which he has made with Koch's fluid from the diagnostic point of view. They do not at all agree with the majority of those which have been recorded by other observers. In five cases of undoubted tuberculosis reaction took place, but in one of them (a boy aged 10 years) only after a fourth injection of 6 milligrammes. Of six perfectly healthy adults used as control subjects, three reacted, one intensely after 2, another after 5, and a third after 8 milligrammes. In two patients suffering from carcinoma marked reaction occurred, the temperature in one rising to 39.1°C after 2 milligrammes, and in the other to 38.7°C after 5 milligrammes. Maydl also refers to a case of very pronounced tuberculosis of the larynx and lungs under the care of Professor Schnitzler, in which the injection of 0.025 gramme caused no reaction. These facts have, he says, "seriously shaken" his faith in the new remedy as an indispensable aid to diagnosis.

(19) Koch's Treatment of Tuberculosis: Immediate Effects.

HELFERICH, of Greifswald, reports (*Deutsche med. Wochenschrift*, No. 50, 1890) the results of Koch's treatment in lupus and tuberculous disease of the hip- and knee-joints, bones, and lymphatic glands. In the four cases of lupus observed, the local and general reaction was of the usual type, and Helferich states that the improvement in the affected parts was such as had never been seen after any other mode of treatment. After the separation of the scabs a clean granulating surface was left, which quickly became covered with skin, the lupus patches undergoing cicatricial shrinking and losing their specific character. He compares the specific effect of the fluid on tubercle to that of mercury and iodide of potassium on syphilis. In four cases of hip-joint disease it was noticed that the local pain caused by reaction was less severe when the ordinary extension treatment was employed. With regard to the general reaction, Helferich observed that frequently the second and third injections of the same dose were followed by a higher degree of fever than the first; that the interval between the injection and the commmencement of reaction is longest after the first injection, and becomes gradually less as the treatment is continued; that the highest degree of temperature is most speedily reached after the second and third injections; and that the duration of fever after doses of the same

strength is shorter after several injections have been given than at first. In one case Helferich noticed a scarlatiniform, and in another a morbilliform rash; and herpes on the lips and eyelips was seen in about a third of the cases. No untoward effects were observed. On the whole, Helferich speaks very hopefully of the treatment the introduction of which, he says, he can only compare with that of antisepsis.

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(20) Double Salicylate of Theobromine and Sodium (Diuretin).

THEOBROMINE is the active principle of cacao beans, in which it is present to the extent of about 2 per cent. Chemically it is dimethylxanthine, caffeine being trimethylxanthine, and, therefore, these two alkaloids are very closely allied in constitution. In physiological action it closely resembles caffeine, but it does not stimulate the central nervous system to anything like the same extent, while it is also five or six times less poisonous; neither does it stimulate the vasomotor centre in the medulla so strongly as caffeine does. Schweder (*Arch. f. expt. Path.*, xxii, 1886) demonstrated that caffeine acted as a diuretic by direct stimulation of the renal epithelium, and subsequently (*Ibid.*, xxiv, 1887) showed that theobromine acted in the same way. He also pointed out that the latter could be given in four to five times larger dose than the former without causing any toxic effects, and that, when administered in suitably larger doses, it was a more powerful and lasting diuretic. Gram (*Therap. Monatshefte*, January, 1890) confirmed these results clinically. He found, however, that pure theobromine was not a convenient form for administration, as it is very insoluble, and tends to cause nausea. He, therefore, used a double salicylate of theobromine and sodium containing about 50 per cent. of theobromine. This salt has a bitter taste, and is a white powder, soluble in half its weight of hot water, and not depositing on cooling. It is well borne by the stomach, and is best given in simple watery solution, or in dill or peppermint water. When mixed with syrups, etc., the theobromine is apt to deposit, and, when prescribed as powder, decomposition takes place in a short time. He gave it in 15-grain doses five or six times daily. Hoffmann (*Archiv. f. expt. Path.*, Heft 1, xxviii, 1890) has continued Gram's investigations, giving usually about 75 grains of diuretin in twenty-four hours. He used it in seventeen cases—five pleurisy with effusion, one chronic pleurisy and peritonitis (tuberculous), two leukæmia with dilated heart, one cirrhosis of liver, one acute nephritis with œdema, two interstitial nephritis, one waxy kidney, and four valvular heart disease. Sometimes it caused slight diarrhœa, but otherwise he never observed any ill effects. In all cases except those undermentioned, its action was not of striking value. In the pleurisy cases during the acute inflammatory stage, no beneficial effects were evident, but after this had subsided it assisted in rapidly getting rid of the effusion. In one case of pleurisy after influenza the excretion of urine rose in one day from 500 to 1,800 cubic centimètres, and the effusion very rapidly disappeared. In acute nephritis the amount of urine was tripled. The four heart cases are given in great detail, and the results are extremely interesting. In all there were great diuresis, decrease of œdema, and strengthening of the pulse. The time of onset of the diuretic action varies somewhat, but it is usually manifest during the first twenty-four hours, and gradually rises to its maximum from the second to the sixth day. It falls rapidly (in one or two days) on stopping the drug, or after the disappearance of the dropsy. The amount of albumen in the urine was not much affected, but in the heart cases showed a distinct lessening. There was slight slowing of the pulse rate, the beat became stronger and more regular, and the systole of the heart was undoubtedly strengthened (sphygmographic tracings). This is probably due to a direct action on the heart muscle, but possibly is attributable to general improvement in the circulation and disappearance of the dropsy. No cumulative effects were ever observed, and the theobromine is rapidly excreted in the urine. Dyspnœa, bronchitis, appetite, and general condition were all improved. Sometimes slight diarrhœa was induced, but this is not usually a drawback in dropsical patients. Excitement and sleeplessness were never observed, but, on the contrary, as the condition of the circulation improved, the patients slept much better. In some cases where digitalis and strophanthus had failed to give relief, theobromine acted well, but as a rule it is not so generally useful. It may be combined with them, however, and probably assists in promoting more rapid and thorough diuresis. In Hoffmann's opinion it is much superior to caffeine. Over calomel and other mercurials it has the advantage of acting on the heart as well as on the kidney.

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(21) Pilocarpin in Skin Diseases.

DR. KLOTZ (*Journ. of Cut. and Genito-Urin. Dis.*, November, 1890) treated cases of eczema with daily hypodermic injections of ten to fifteen drops of 1 per cent. solution of muriate of pilocarpin. The first case was that of a man, aged 28, who had suffered for several years from eczema. The skin showed no great infiltration in any part of the body, but was dry, hard, resistent, and slightly scaling. After the first injections the reaction was very slight, moderate moisture appearing on some of the less affected portions, but it generally became more distinct, and after about twelve injections a general secretion of sweat was produced. The patient left the hospital after the seventeenth injection. The scales had almost entirely disappeared, the skin was much softer and more pliable, and showed "more natural turgor and elasticity," itching having become very insignificant. The second patient, aged 21, suffered from eczema squamosum and rimosum of both palms, which were covered with a very hard and thick horny skin divided by numerous cracks. Other treatment having failed, daily injections of pilocarpin were given, the patient at that time being unable to bend or close his fingers. After nineteen injections perspiration, which had previously appeared on the forearms, wrists, and backs of the hands, now appeared for the first time on the palms. On June 1st the horny condition of the surface of the palms had entirely disappeared, the skin looked natural, showed all the ridges and indentations of the surface, and was soft and pliable, and the patient could move and close the fingers without any pain or difficulty. A third patient suffered from a general papular eczema, which was attended with considerable thickening on the flexor aspects of both elbows. Over the chest and abdomen and in a milder degree on the extremities the skin was hard, dry, slightly scaling, dark brown in colour, with

numerous small hard papules of a somewhat lighter colour. The patient left the hospital after eight injections, at which time the skin had lost a great deal of the dryness and hardness, the papules had been greatly reduced in size, and the itching had almost disappeared. In the discussion at the meeting of the American Dermatological Association which followed the reading of this paper Dr. Hardaway stated that his experience of this treatment in ichthyosis, eczema, alopecia, and pruritus was not such as to lead him to continue it.

(22) The Absorption of Drugs from Ointments.

LUFF (*Brit. Journ. of Derm.*, June, 1890) summarises the results of his experiments on the absorption of drugs from ointments with the bladders of goats as follows: With vaseline and iodide of potassium exosmose commenced at the end of the first hour; with lard and iodide of potassium at the end of the ninth hour; with lanolin and iodide of potassium the result was *nil* up to the twenty-fourth hour. With vaseline and carbolic acid exosmose commenced at the end of two hours and three-quarters; with lard and carbolic acid at the end of seven hours; with lanolin and carbolic acid the result was *nil* at the twenty-fourth hour. With vaseline and resorcin exosmose commenced at the end of the tenth hour; with lard and resorcin at the end of the fifteenth hour; with lanolin and resorcin the result was *nil* at the twenty-fourth hour. Luff concludes that if it is desired to obtain the rapid absorption of medicaments in the circulation, it is better to use vaseline, and that for local therapeutic purposes pomades made with vaseline should be preferred. This latter substance causes the incorporated medicaments to keep for a much longer time.

BACTERIOLOGY.

(23) Recognition of Tubercle Bacillus in Sputum.

DR. E. CZAPLEWASKI (*Cent. f. Bakt.*, Nos. 22, 23, Bd. viii, 1890), after speaking of the various methods of staining tubercle bacilli, points out that there are certain disadvantages associated with the decolorisation of the tissues by acids. Of the mineral acids, he considers that nitric acid is the worst because seldom obtained without the nitrous acid; then comes hydrochloric acid, and, lastly, sulphuric. Unless great care is taken to wash out these acids the tubercle bacilli are soon bleached, and permanent preparations are not obtained. Of all staining reagents he considers that fuchsin, with carbolic acid, is probably the best. By the method which he recommends the whole process is completed in a very few minutes, and he maintains that he obtains equally good or better results than by the acid method; in addition to which the whole process takes only two or three minutes. After preparing his cover-glass in the ordinary manner, he stains with the Ziehl-Neelsen carbolic acid fuchsin by holding the cover-glass in a pair of forceps with the film upwards, and then dropping sufficient of the staining fluid to cover the surface of the cover-glass. This is held over a small flame until the fluid is thoroughly heated, but not long enough to cause drying at any point. The superfluous fluid is poured off, and the cover-glass is passed from six to ten times through a concentrated solution of yellow fluorescein, to which an excess of methylene-blue has been added. This fluid, filtered, removes the colour from everything but the tubercle bacilli. In order to obtain a good contrast stain the cover-glass is then passed from ten to twelve times through a concentrated alcoholic solution of methylene-blue, after which it is washed quickly in clean water, and may be examined at once or mounted in balsam in the ordinary manner. The whole process only takes some two or three minutes—a very important consideration when a large number of sputa have to be examined, as in clinical wards. One great advantage of this method is that all other bacteria are stained usually a dark blue on a light blue background. He considers that it is better not to add an alkali, as this gives a deeper blue, and the red bacilli do not show up so well as on a light blue ground. The author further recommends that where mineral acids are used for decolorising they should be very greatly diluted. He also recommends that, after staining and decolorising by this method, the sections, or cover-glasses, should be washed in 70 per cent. alcohol and not in water. In every case a specimen should first be examined in water, as the organisms then appear to be larger than when mounted in balsam, and more detail can be made out. He prefers methylene-blue to Kühne's picric acid as a contrast stain, and he insists most strongly on the general use of some staining method for the early detection of tubercle bacilli; and, as the method he describes is both easily and quickly carried out, he thinks there is no longer any excuse for even the busiest practitioner who does not examine the sputum of his patients in order to determine the presence of phthisis during its curable stages.

(24) Inoculation of Tubercle.

DR. FRANZ TANGL (*Centralbl. für allgemeine Pathologie u. pathologische Anatomie*, Band I, No. 25, December 1st, 1890), gives the results of a series of experiments on the inoculation of rabbits and guinea-pigs with tuberculous material. In the first series he placed small tubercle nodules from the lungs of tuberculous rabbits in a small patch of the dura mater, or injected an emulsion of tubercle in distilled water or pure cultivations of tubercle bacillus into the subdural space. In two cases this was followed by local disease, and, if the animals lived long enough, by general tuberculosis. The local disease was confined to a single point if the nodule of tubercle was used, but if a fluid emulsion was injected there was disseminated tuberculosis of the meninges, to which the virus had access primarily. In a second series pure cultivations of tubercle bacillus were dropped into the unbroken conjunctival sac. In rabbits the results were absolutely negative, whereas in guinea-pigs extensive tuberculosis of the mucous membrane of the nose was frequently the result. In a third series the nostrils of rabbits and guinea-pigs were painted by means of a very soft brush with an emulsion of tubercle bacillus. In some rabbits the results were negative, but in others, and in all the guinea-pigs, there appeared local tuberculosis of the mucous membrane of the nose, and if the animals lived long enough general tuberculosis made its appearance. The author concludes that he must agree with those who hold that primary disease of the lymph glands does not occur, that is, that tubercle bacilli cannot enter the tissues without causing tuberculous changes at the point of their entrance.

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OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(25) Actinomycosis of the Lung.

Two cases of actinomycosis of the lung are published by Dr. Eugene Hodenpyl in the course of his Joseph Mather Smith Prize Essay (*Medical Record*, New York, December 13th, 1890), the first being that of a young Swede who had been ailing for six months, with more acute symptoms during three weeks. Pain in the right side, dyspnœa, cough with fœtid sputa, fever, night sweats, pallor, and emaciation were the chief manifestations of illness, while the physical signs showed marked dulness in the middle of the right back and toward the axilla, becoming absolutely dull at the base. An abscess subsequently appeared over the dull area, and a pint of pus was evacuated. The *post-mortem* examination showed a condition of diffuse pneumonia most marked on the right side, with a collection of pus pent up at the right base and a sinus leading from it to the abscess in the back. Fœtor was excessive, but there was no appearance of gangrene. The microscope showed profound changes in the lung tissue, inflammation, dilatation, and hyperplasia. The smaller bronchi were converted into little abscesses in which actinomyces were visible, surrounded by a zone of necrosed cells. The second case was that of a school girl, aged 13, in whom abscesses appeared externally. Death took place in four months, and the microscopic appearances in the lungs were very similar to those in the other case. The author comments upon the symptoms as gathered from all cases published hitherto, remarking on the rarity of hæmoptysis, but on the similarity of the cases in other respects to those of tuberculous disease. The occurrence of fœtor without gangrene should always suggest a careful examination of sputum, the presence of the fungus in it being the only truly diagnostic sign to be relied on. The paper closes with a very full bibliography of all writings which have appeared upon the subject.

(26) Treatment of Exudative Pleuritis.

PROFESSOR S. LEWASCHEW contributes to the *Deutsche medicinische Wochenschrift*, No. 52, 1890, an interesting paper on the operative treatment of pleuritic effusions. Beginning with an historical retrospect of the various operative procedures that have been employed in the past, he points out that the habit of removing large quantities of fluid from the pleural cavity has very frequently been followed by alarming symptoms, all of which can be referred to the inevitable disturbance of the balance of intrathoracic pressure, if nothing be introduced to take the place of the fluid which is withdrawn. Some authorities have laid down positive rules with respect to the amount of fluid that may be withdrawn at one operation, but even in cases where that amount has been very small, the untoward results have not always been absent. It is a common experience in the course of large tappings that no pain is at first caused, but that after a certain amount of fluid has been withdrawn a cutting pain is complained of, and faintness often supervenes. Dr. Lewaschew advocates a method of procedure which he has practised with singular success both in serous and in purulent effusions, in cases where adhesions have not taken place. This method was first tried upon the lower animals, and perfection in its application arrived at by that means. It consists in withdrawing a small quantity of the fluid until some uneasiness is felt by the patient, and then injecting, by a reversed action of the aspirator or siphon, an almost equal amount of a carefully-sterilised solution of sodium chloride, of a strength of 0.7 per cent., in distilled water. This degree of strength was determined by careful experimentation, and a caution is given against the use of stronger saline solutions. The 0.7 per cent. solution does not materially affect the inflammatory processes, any little reaction observed being favourable rather than the reverse. Its action within the pleura is to restore the balance of pressure, and at the same time to dilute the rest of the fluid, which may be withdrawn and again diluted with the saline solution several times, until very little but the saline is left in the cavity. Absorption of this residue takes place quickly, but the patient's temperature often remains high during the process, even though improvement be taking place in other respects. Professor Lewaschew claims for this method that it does away with the effects of sudden changes of pressure within the pleura; that it is painless; that it stops further exudation, and aids rapid absorption; that it has proved successful in all cases of simple effusion, and in most cases of purulent effusion, where the lung has not been bound down by adhesions; and finally that success has been obtained in some very prolonged cases where no other treatment has been effective.

SURGERY.

(27) Remote Results of Syphilis.

DR. B. TARNOWSKY (*Der Kinderarzt*, October, 1890) gives, according to his experience, very

gloomy evidence as to the results of syphilis on succeeding generations. He makes out that 71 per cent. of women suffering from syphilis either give birth to dead children or bear children who die within a year. He records the terrible history of three families where the fathers had contracted syphilis six, five, and four years respectively before marriage. All these men appeared to be cured when they married, and all their children were born healthy; yet of these 22 children only 1 grew up to be a healthy man; 5 were premature, 3 died of meningitis before attaining their second year, 2 were imbecile, 1 an idiot, 1 a cretin, 1 had numerous signs of degeneration, 1 was weak in intellect, 1 sexual perversion, 2 hysteria, 1 epilepsy, 1 was born deaf, 2 had hydrocephalus. Of the 13 still alive when these statistics were taken, 8 were incapable of working for their living, the remaining 5 being sickly and nervous. All three families were of the respectable commercial class; none of the children were exposed to the hardships which in the case of peasants and artisans may cause infantile diseases falsely attributed to syphilis. Dr. Tarnowsky has collected other histories scarcely less dreadful. He concludes that syphilis in a parent may be the cause of a long series of the most serious diseases—scrofula, rickets, nerve disorders, etc.—and the offspring at the best are often weak, useless members of society. Carlblom, of Riga (*ibid.*), gives the history of a healthy couple who married. Their first child was healthy and long remained so. The second, born healthy, died of trismus at the end of a week. The third, born sickly, died of tetanus within a week. The couple were then medically examined. No trace of disease was found on the mother, but extensive mucous tubercles were discovered around the anus in the father. The couple were sent to Aix-la-Chapelle. The mother was treated mercurially during a subsequent pregnancy. She bore a healthy child, who remains in good health. Then the firstborn child, previously healthy, developed symptoms of hereditary syphilis, which were speedily cured by mercurial friction.

(28) Restoration of the Urethral Canal in the Female.

Polaillon (*Bull. et Mém. de la Soc. de Chir. de Paris*, T., xv, p. 708) describes two cases in which an operation for the restoration of the urethral canal in the female was required. In the first of these a stone had been removed from the bladder by the vaginal method in a girl, aged 19. A fistula resulted, which had resisted all attempts made to cure it. The edges of the wound were so hardened and thickened as to render any further attempts at ordinary plastic operations undesirable. Under these circumstances a piece of vaginal wall was grafted over the orifice of the fistula, and a catheter retained in the bladder, and union at length successfully ensued, partly by granulation. In the second instance there seemed to have been a congenital defect in a woman, aged 23. A new urethra was accordingly constructed from the labia minora, which were pared and united along their free edges, the posterior extremity of the canal being closed at a subsequent operation. A completely successful result ensued.

(29) Radical Cure of Hernia.

Haidenthaller (*Centralbl. f. Chir.*, 1890, No. 50, p. 973) gives some statistics of the results of operations for the radical cure of hernia in Billroth's practice. They comprise 136 cases of inguinal, femoral, and umbilical rupture in both sexes. In 93 cases an operation had been performed, whilst in 5 instances the patients were treated by injecting alcohol into the sac. The operation employed was Czerny's, and consisted in ligaturing and removing the neck of the sac, and uniting the deep and superficial parts of the wound with silk sutures. The mortality in the non-strangulated cases was between 6 and 7 per cent., and the causes of death when it occurred were entirely of septic origin. As to the final results, they were mostly true cases of radical cure, though occasionally the herniæ returned, in one instance six years after the first operation, and in three cases after a lapse of five years. The cases of alcoholic injection of the sac seemed at first to yield excellent results, but they were not permanent. The surgeons owed a great deal of the success of their operations to the thickness of the silk ligatures. The stouter ones seemed to hold the edges of the wound longer in apposition, hence the success which it seems to yield.

MIDWIFERY AND DISEASES OF WOMEN.

(30) Early Tubal Pregnancy.

Dr. Orthmann (*Zeitschrift f. Geburtsh. u. Gynäk.*, vol. xx, 1890, p. 143) has examined ten cases under the clinical observation of Dr. Martin, of Berlin. He concludes that if a solid organised blood clot be found in the interior of the tube, it is probably, if not certainly, an indication of tubal pregnancy. Intraperitoneal hæmatocele, in relation to tubal pregnancy, arises either from a rupture of the sac or from abortion of an ovum occupying the abdominal orifice of the tube. In order to diagnose, through examination of the parts, an early tubal pregnancy, the presence of decidua cells is not an absolute necessity; but in all cases of tubal pregnancy of the first month, tufts of chorionic villi are to be found. These researches help to distinguish true cases of very early tubal gestation from ruptured hæmatosalpinx due to other causes.

(31) Perineal Hernia in Women.

Professor Winckel (*Annales de Gynécologie*, August, 1890) read before the Berlin Congress, a monograph on what he termed perineal vaginolabial hernia. A series of drawings of cases were exhibited with statistics of their nature and treatment. In all cases the hernia issued from the pelvis out of the perineum and distended the labium majus. Winckel distinguished three varieties, which may be combined in the same subject. In the "anterior" form the sac protrudes between the sphincter vaginæ and the erector clitoridis. In the "median" form it bulges between the sphincter vaginæ and the deep transversalis perinei. In the "posterior" form the hernia passes before the levator ani and the glutæus maximus. The sac in all these varieties presents special characters of a nature only to be understood by the study of a good scientific demonstration. The abdominal orifice of the sac lies in front or behind the lateral true ligament of the bladder. According to Professor Winckel the best treatment for all forms of perineal hernia in women is a radical operation, which must be performed from the perineal aspect, the sac being exposed by an incision through the vulvar structures.

(32) Impaction of Small Ovarian Cyst in Douglas's Pouch.

Dr. Rendu, of Lyons (*Annales de Gynéc.*, December, 1890) describes two cases where long-standing pelvic pain was caused by the impaction of a small ovarian cyst in Douglas's pouch. A woman, aged 38, suffered for eighteen years from intense pains in the pelvic region, which lasted from a fortnight to three weeks every month. In order to get relief, she would throw herself on her knees on the floor, and lean on her elbows. Dr. Rendu felt a small cyst of the left ovary fixed between the sacrum and the uterus, which had undergone fibroid enlargement. The right ovary was also cystic. The cysts were removed. The cystic left ovary, the seat of pain, was found impacted in Douglas's pouch, firmly held down by the utero-sacral ligaments. A single lady suffered for eighteen years from intense pelvic pain; she had undergone all kinds of palliative treatment. A cystic body was felt impacted in Douglas's pouch behind a fibroid uterus. Another cyst rose as high as the right groin. Dr. Rendu operated, and found the same condition as in the previous case. The left ovary formed a cyst, firmly held down in Douglas's pouch by the utero-sacral ligaments, which were as tight as the vocal cords in cases of asphyxia where the stone of a fruit is impacted below them. The cyst burst during extraction, and a careful cleaning of the peritoneal cavity was rendered necessary. Two years after this operation, the patient stated that the pains had never returned. The fibroid enlargement of the uterus had sensibly diminished; hence severe chronic pains in the pelvis may signify impaction of a small ovarian cyst in Douglas's pouch. As in such a case the cyst moves intimately with the uterus, the condition may readily be diagnosed as impacted fibroid.

(33) Uterine Hæmorrhage a Week after Labour.

Dr. Mensinga (*Der Frauenarzt*, October, 1890) observes that Klotz has recently described two cases of intrauterine hæmorrhage where the vagina had been plugged; one ended fatally, whilst the other was saved with difficulty. Dr. Mensinga believes that this accident is more frequent than is supposed, some fatal cases being registered as death from some other cause, others being recognised but not recorded. He was called in last March to a robust woman who had given birth to a large male child a week previously. The placenta came away entire, and there had been no fever. The patient had suddenly been attacked with hæmorrhage. The uterus was of the size of a man's fist; the vagina contained masses of clot. The os admitted the finger; no fragments of placenta could be felt. The colpeurynter was introduced, and the flooding ceased for a few hours; then it came on again, and the patient became very feeble. The hand could be passed into the uterus; clots were turned out, and with his left hand Dr. Mensinga introduced the colpeurynter, using the right hand already in the uterus as a guide for its introduction. The instrument set up uterine contraction. Next morning it was removed, and a Sims's speculum was introduced. The uterus was drawn down by a volsella, and by means of speculum-forceps its cavity was plugged with a double strip of iodoform gauze, two inches and a half broad and a yard long. The forceps was apt to pull out the gauze when withdrawn for the introduction of more of that material. So, holding the uterus firmly by the volsella in the left hand, Dr. Mansinga let go the forceps, took up a sound in his right hand, and pushed it between the blades of the forceps, so as to disengage the gauze. The nurse held the speculum in one hand and the roll of gauze in the other whilst it was being gradually introduced. By the above arrangement the plugging was effected with facility. The vagina was also packed with gauze. The entire plug, uterine and vaginal, was removed at the end of forty-eight hours. No more bleeding ensued. The further course of the case is reported as aseptic; but mastitis occurred in the lower part of the left breast, and five small abscesses formed in succession and broke. Dr. Mensinga has seen two similar cases in his own practice. The first he saved, the second was not seen by him until she was moribund. The vagina had been plugged by the midwife, who had acted according to official regulations in *post-partum* hæmorrhage.

(34) Toxic Power of the Urine in Pregnancy.

Dr. Emile Blanc (*Annales de Gynécologie*, October, 1890) has experimented by injecting urine taken from healthy women during the last months of pregnancy into the veins of rabbits, in order to determine the truth of the theory propounded by M. Rivière, namely, that puerperal eclampsia depended on an autointoxication due to the formation of poisonous matters in greater quantities during pregnancy than in the non-gravid state. The result of thirteen experiments brought the author to adopt the conclusion that a pregnant woman under ordinary conditions of health does not form and does not eliminate more poisonous matters than the non-gravid female. Dr. Blanc has also made eight experiments to determine the toxic power of the urine in women recently delivered, that is, during the first five days of the puerperium. In this latter condition he found the toxic power of the urine somewhat increased beyond the normal standard (45 cubic centimètres per kilogramme), but not to any great extent. Such slight increase could, however, easily be accounted for by the special conditions which exist in women who have been recently delivered.

(35) Hospital Gangrene of the Vulva.

Dr. von Herff (*Deutsche med. Wochenschr.*, October 23rd, 1890) describes a case of hospital gangrene of the vulva in a woman aged 43. The neighbourhood of the genitals had been for some time subject to intertrigo, which caused her to scratch the parts. A large ulcer, with sharp-cut undermined edges, formed on the outer side of the right labium majus. A small artery was soon laid open by the ulcerative process and bled freely. Another ulcer formed externally to the first, on the inner aspect of the thigh; both had a sloughy base and smelt fœtid. All the other characteristics of hospital gangrene were present, and the ulcers spread rapidly and increased in depth. Free applications of carbolic acid solutions were tried without effect, the ulceration still spreading. The bases of the ulcers were then freely swabbed with a 10 per cent. alcoholic solution of salicylic acid, repeated every hour; in the meantime, dressings soaked in a 3 per cent. carbolic solution were applied. After five hours of this treatment, it was found that the ulcers had ceased to extend and the fœtor was less. As the swabbing gave the patient pain it was discontinued, and mull compresses soaked in a 2 per cent. solution of salicyl in glycerine were applied to the ulcers and renewed hourly. Under this treatment the

sloughs began to separate and the ulcers to heal. Salicyl powder was freely strewed over the parts. The advent of menstruation caused some slight complication; an incipient ulcer formed near the clitoris and gave trouble. It was well swabbed with the alcoholic solution, and dressed with the glycerine solution of salicyl. At the end of six days, as the ulcers were healing well and the salicyl caused irritation, iodoform was substituted. The author has tried salicyl in cases of phagedæna elsewhere. In many instances carbolic acid and sublimate, or even the old remedy, camphor wine, checked the extension of the ulceration. Pure alcohol, pure glycerine, liquefied crystals of carbolic acid, applied to the ulcer after it had been treated with cocaine, as a rule did no good. Dr. von Herff was ultimately compelled to treat the ulceration with salicyl in the manner just described, and found that recovery commenced immediately after that agent was applied. It is necessary to renew the applications of the glycerine solutions very frequently, and to watch the ulcers closely, trimming away the sloughs.

(36) Recurrent Vomiting of Pregnancy.

Dr. Caubet (*Archives de Tocologie*, November, 1890) was consulted on December 26th by a lady, aged 24, who had suffered for ten days from uncontrollable vomiting. Her father died of some tuberculous disease, and she had spat blood two years before consultation. Dr. Caubet found no sign of pulmonary disease. She was subject to attacks of syncope and vomiting. The period had ceased on October 20th, 1889; pregnancy was evident. Dr. Caubet tried ice, milk diet, bromides, opium, pepsin, cocaine, menthol, chloral enemata, etc., all in vain. At length he succeeded in completely stopping the vomiting for a time by washing out the stomach with a solution of bicarbonate of soda (about 1 drachm to the quart), and introducing through the stomach-pump 1 ounce of powdered meat in a wineglass of milk. The patient took 9 ounces of meat daily. Vomiting ceased on the first day, and on the fourth she could take eggs, chocolate, etc., by the mouth. For several months the patient was practically well; the fœtal movements were first noticed in the middle of the fourth month. In the middle of the seventh month the vomiting recommenced after some cause of worry. At the end of a fortnight the patient was much exhausted. Labour was induced on June 17th, 1890, by the introduction into the uterus of a sound, carefully antisepticised. Pains set in within a few hours, and the patient was delivered on the evening of the first day. A healthy living female child was born; there was a slight degree of hydramnios. Dr. Caubet notes that directly the os began to dilate the patient was able to drink and retain a few spoonfuls of spirits and water. On the day after the delivery she had an appetite, and no more vomiting nor even nausea was observed. Recovery from childbed was speedy.

DISEASES OF CHILDREN.

(37) Lactic Acid in Infantile Diarrhœa.

About two years ago Lesage published a paper in the *Revue de Médecine* recommending lactic acid as an effectual remedy in a form of infantile diarrhœa characterised by frequent green stools containing scraps of undigested food. Dr. Thomas, in the *Rev. Méd. de la Suisse Romande* (1890, No. 11, p. 677), confirms Lesage's statement as to the efficacy of the remedy in this form of green diarrhœa, believed to depend on a bacillary infection, but he states, also, that it is of use in cases of gastric or gastro-intestinal dyspepsia without fever, characterised by vomiting and flatulence, and by diarrhœa of non-slimy, fœtid, yellowish or greenish stools containing undigested curds. The prescription used was a solution prepared as follows:—Lactic acid, 2 parts; simple syrup, 15 parts; water, 85 parts. One teaspoonful should be given from a quarter to half-an-hour after each meal; if given sooner the acid is liable to cause rapid coagulation of the milk in large solid curds. In mild cases he found five or six doses a day sufficient, but in acute cases he gave it much more frequently.

(38) Prophylaxis of Diphtheria.

In a report presented to the Comité Consultatif d'Hygiène Publique de France, and adopted by that body (*Rev. d'Hygiène*, December 20th, 1890), Dr. Grancher argues against the view that the infection of diphtheria is prone to be carried by the air, and contends that in nearly all cases it is conveyed by contaminated clothes or articles of furniture. He believes that there is evidence that the disease may arise spontaneously in children whose health has been depressed, especially by measles. He would explain this by supposing that the non-pathogenic pseudo-diphtherial bacillus of Löffler, which is often present in the mouth in health, may, under conditions favouring its development, take on pathogenic properties. Apart from these exceptional events, he shows that the spread of diphtheria may be prevented by ordinary precautions directed to effect disinfection of articles used by the patient. He illustrates this by the experience of one of the wards set apart for diphtheria in Paris; among the 1,741 children admitted, it was subsequently discovered that 153 were not suffering from diphtheria, yet not one of these 153 children contracted diphtheria. Experiment has shown that the Klebs-Löffler bacillus is killed at a temperature of 60° C. in a moist atmosphere, but in a dry stove will survive a temperature of 98° C. Grancher has found it possible to prevent the spread of diphtheria in children's wards by simple antiseptic precautions. The bed is surrounded by a metal screen; all articles used by the patients, such as spoons, forks, napkins, etc., are immediately disinfected by being placed in boiling water containing carbonate of soda in the proportion of 50g. to a litre of water (about ℥j to Oj). All linen, clothes, etc., are disinfected by heat, and the floor, bed, and walls are washed with corrosive sublimate solution. Finally, the medical attendants and nurses are required to wear over their clothes blouses which are stoved daily, and are recommended to wash their hands with minute care in acid corrosive sublimate solution or in carbolic acid 5 per cent. The report is strongly in favour of special wards for cases in which the diagnosis is doubtful.

PHARMACOLOGY AND THERAPEUTICS.

(39) Koch's Treatment of Tuberculosis.

Dr. Kinnicutt, of New York, has injected fifteen patients suffering from various forms of tuberculous disease in St. Luke's Hospital (*New York Medical Record*, December 20th, 1890). The cases included two of lupus of the hand, accompanied by tuberculous infiltration of a limited

portion of one lung; two of tuberculous cervical glands; three of hip-joint disease with intermittently discharging sinuses; one of tuberculous disease of the tibia and fibula with open sinus; one of tuberculous disease of the prostate; four of pulmonary phthisis in the first stage, and limited in area; and one in which the diagnosis lay between lupus and tertiary syphilis of the throat. Decided reaction was produced in all the cases except the doubtful one referred to; the longest duration of the febrile symptoms being forty-six hours, and the highest temperature recorded, 104° F. The reaction followed the course described by most other observers. No symptoms which could occasion apprehension were observed in any of the cases. Preliminary reports of other cases are given by Drs. A. Jacobi and H. H. Heineman, of Mount Sinai Hospital *(ibid.)*, Dr. A. Jacobi and Dr. W. Meyer, of the German Hospital *(ibid.)*, Dr. A. Jacobi, of the New York Foundling Asylum *(ibid.)*, and Dr. Heineman, of the Policlinic Hospital. The effects have so far been the same as those observed elsewhere.

(40) Koch's Treatment: Immediate Effects.

Fürbringer (*Deutsche med. Wochenschr.*, No 52, 1890) reports the results of treatment by Koch's method in 63 patients in the Friedrichshain Hospital at Berlin. He compares the "classical" reaction to an attack of influenza; according to him its characteristic features are (1) rise of temperature, "with characteristic Matterhorn peak;" (2) circulatory and respiratory disturbances; (3) general symptoms, such as prostration, pains in the head and limbs; (4) changes in the local appearances; and (5) corresponding subjective symptoms, such as local pain, etc. The following are occasional phenomena: Cutaneous eruption, jaundice, sweating, diarrhœa, and albuminuria. Of the above-mentioned five characteristic features one or more may often be wanting; even fever may be absent. In some cases reaction shows itself under the form of asthmatic symptoms without fever; in other cases the temperature actually falls. Fürbringer compares these departures from the ordinary type with the anomalous course sometimes seen in infectious fevers. He found the remedy useful as a diagnostic agent in many cases, but in 5 it proved unreliable. Of 41 phthisical patients who underwent continuous treatment by Koch's method, 10 were benefited in a striking manner, the improvement being such as Fürbringer had never seen among thousands of cases in the hospital before, though these had been treated under exactly the same conditions of nursing, food, medicines, etc. In all the cases the good effects were produced in the course of four weeks, the improvement showing itself in the modification or disappearance of physical signs, the diminution of expectoration, absence of bacilli in the sputum, increase of weight (in one case amounting to 14 pounds), etc. In other cases also the patients derived considerable benefit from the treatment.

Dr. Alejandro San Martin, while promising a fuller report of the cases in which he has tried the Koch treatment later on, gives (*Siglo Medico*, December 28th, 1890) a few notes as to the effects which he has observed so far. The general condition of the patients is, up to the present, satisfactory. In a case of tuberculosis of the kidney, however, the first two injections (of 0.001 g. and 0.002 g. respectively) caused exacerbation of the nephritic pain, increase in albumen to the amount of one gramme, with general loss of strength, and so much constitutional disturbance that the treatment had to be discontinued for some days. In the pulmonary cases the improvement for the most part was subjective, without any appreciable change in the physical signs. In a case in which the leg was amputated for tubercle some time ago, and in which there are now some tuberculous foci in the lungs, the result of six injections (up to 5 milligrammes), is summed up as follows: Congestion at the left apex, evident hepatisation, breaking down, cavitation, and return to the normal condition at the circumference of the resulting vomica. This "astounding local exacerbation" of the tuberculous process was not accompanied by expectoration, high temperature, or lasting dyspnœa; the only symptom now is a slight dry cough. Another patient in whom the disease was of recent origin, but in whom there was an undoubted focus in the infrascapular region, with cough (of such severity that six centigrammes of morphine were required to induce sleep), night sweats, and an aspect suggestive of an advanced stage of the disease, one single injection of 0.001 g. produced in a few days, after the subsidence of violent local and general reaction, such an amelioration of all the symptoms, that the man felt quite well and considered himself completely cured. Dr. San Martin adds: "Whether this is the case, and if so, how far the surprising result can be attributed to the new remedy, are points which cannot be decided offhand." He also cites the case of a man who a short time ago was exhibited at a meeting of medical men as a "bacillary museum," and who after seven injections was so greatly improved (notably in respect of the discharge from a number of suppurating glands), that he celebrates the virtues of the *linfa maravillosa* and the glory of its "immortal and illustrious" discoverer in a dithyrambic ode addressed to Dr. San Martin. In a case of hip-joint disease considered to be probably too far advanced for operation, the improvement, both local and general, was also very marked. Except in the case of renal affection above cited no bad effects have been observed; in all the cases hitherto under Dr. San Martin's observation, the results have been either good or negative.

(41) Koch's Treatment: Cases of Cure.

Dr. Paul Guttmann, in a clinical lecture delivered on December 9th, said (*Berlin. klin. Wochenschr.*, December 15th, 1890), that of the 250 cases of phthisis in the Moabit Hospital at Berlin 66 had been subjected to Koch's treatment. The patients selected belonged to the following categories:—(1) apyretic cases in which the disease was not far advanced; (2) cases more advanced but still apyretic; and (3) very advanced febrile cases. The temperature was in every case taken in the rectum every two hours, and the amount of expectoration discharged in the twenty-four hours was carefully measured, the number of bacilli being counted by Gaffky's method every three or four days; the patient was weighed every week, and the urine was examined before and after each injection. In the apyretic cases an injection of 1 milligramme was usually sufficient to cause a rise of temperature; in the other cases a larger dose was required. According to Guttmann, "idiosyncrasy" is the only explanation that can be

given of the difference of reaction in apparently similar cases. The urine was normal in appearance, and in no case contained more albumen than is ordinarily found in many cases of fever. As regards any modification in the number of bacilli, the time had been too short to allow of any definite conclusions being come to; in one case bacilli were found in the sputum during reaction where the most careful search had failed to detect them previously. As regards increase of weight, Guttmann also declines to make any final statement; in one case, however, the patient gained 2½ kilogrammes in a week. He particularly mentions two young girls in whom unmistakable symptoms of tuberculosis had completely disappeared under the treatment. One of them, aged 17, had had eight attacks of hæmoptysis in December, 1889, and another in January, 1890, when the physical signs of infiltration of both apices also became developed. Bacilli were repeatedly found in the sputum. On September 30th the injections were begun; at the date of the report there was very little cough, scanty mucous expectoration containing no bacilli, the percussion note was normal, there was no pyrexia, and the patient's appearance was blooming. The second case was that of a girl, aged 25, who had been ill for two years; the infiltration of the left apex extended to the level of the third rib, and there were bacilli in the sputum. The treatment was begun on October 1st, and at the date of report no abnormalities could be found on physical examination; the temperature was normal, and the expectoration slight in amount and altogether free from bacilli. Both these patients might be looked upon as cured.

(42) Koch's Treatment in Children.

At a meeting of the Belgian Academy of Medicine, on December 27th, M. Casse reported (*Semaine Médicale*, December 31st, 1890) on the results of the injections of Koch's fluid in 34 children, of whom 4 were the subjects of lupus, 12 of hip-joint disease, 7 of Pott's disease, 8 of osteo-arthritis of various kinds, 1 of adenitis, and 2 of scrofula. The doses given ranged between 1 and 5 milligrammes. The general reaction presented the usual features, both as regards the temperature and the other symptoms; albuminuria occurred in some cases, but not hæmaturia. The local reaction sometimes led to the formation of large abscesses. Where fistulæ existed, especially in hip-joint disease, the discharge became more serous and occasionally ceased. Skin wounds became cleaner, and were quickly covered with bright red granulations and gradually healed. Of the cases of Pott's disease, in 4 of which there were fistulæ, there was definite improvement in 3, but the lymph should be used cautiously in this affection. Of the hip-joint cases, in 9 of which resection had previously been performed, all were improved, and 3 were cured—"at least for the moment." In the case of adenitis the enlargement of the glands almost entirely disappeared. Of the cases of osteo-arthritis, 4 showed improvement. Of the cases of lupus, 1 seemed to be cured and 2 were much improved; in the fourth case—that of a woman aged 45, with lupus erythematosus of the face and arm—there was intense local reaction, but nothing is said as to any modification in the morbid process. In the 2 cases of scrofulosis the results were remarkable, affections of the eye (ulcers of cornea, kerato-conjunctivitis, photophobia, lachrymation) from which the patient suffered having completely disappeared. M. Casse sums up by saying that on the whole he is satisfied with the results, and he thinks that, if the remedy is not a perfect cure for tuberculosis, it is "of incontestable utility" in the treatment of that disease.

(43) Koch's Treatment at Görbersdorf.

Dr. Wolff, director of the well known sanatorium for phthisical patients at Görbersdorf, reports (*Wien. klin. Wochenschr.*, No. 51, 1890) on the results of treatment by Koch's method in 68 cases. The total number of injections given was 300. Dr. Wolff states that in patients in the acute stage and seriously ill, reaction took place after the smallest doses, and in slighter cases after "ordinary" doses. In the majority of those who had been for some time under the open air treatment the injections caused very slight fever and few local phenomena. Dr. Wolff thinks it important that the dose should be gradually increased, but he thinks the treatment inadvisable in the case of phthisical patients who feel well, and do not complain of acute suffering, as it may quicken old encapsuled tubercles into fresh activity, and cause the development of pneumonia.

(44) Koch's Treatment condemned.

At a meeting of the Belgian Academy of Medicine on December 27th, M. Crocq (*Semaine Médicale*, December 31st, 1890) denied "absolutely" that Koch's fluid is of any value in the diagnosis of tubercle. He had made injections in a patient suffering from phthisis, and in another the subject of acute pleurisy, "without a trace of tuberculous character;" in both, intense reaction took place. In other cases of "manifest" tuberculosis, the injections were followed by no reaction, while in other cases patients suffering from non-tuberculous affections reacted strongly. With regard to its alleged curative action, M. Crocq has seen nothing of it; in his experience the remedy has done nothing but aggravate the evil. The lymph is, according to him, simply a pyrogenic agent, and he "denies utterly" that it has any specific effect on tubercle. "It produces a febrile movement, of variable duration, which causes an effervescence of the organism, various congestions in the skin and internal organs which have no relation to any tuberculous lesion; this congestion is more easily set up in diseased organs which have previously been attacked by an inflammatory lesion of any kind, and form the *pars minoris resistentiæ* of every organism. If the patient is attacked by cutaneous or pulmonary tuberculosis, the inflammatory process will take place in the affected organs, skin, or lungs." This pyrogenic action may be useful in certain cases in which "substitutive inflammation" (such as is seen, for example, in the effect of nitrate of silver on a chronic ulcer) is beneficial. This, according to M. Crocq, is the whole secret of the action of Koch's remedy. If the "substitutive inflammation" may possibly have a favourable effect in some cases, it may do harm in others, a new inflammation being added to the pre-existing one, with fatal results if the affected organ is the larynx or the lung. In short, M. Crocq says, Koch's statements as to the diagnostic and curative value of his remedy resolve themselves into simple gratuitous affirmations, unsupported by any proof.

(45) Brown-Sequard's Fluid in Tuberculosis.

Dr. D. Uspenski, in a lecture recently delivered before the Russian Society of Public Hygiene (*Deutsche Medizinal-Zeitung*, December 29th, 1890), gave an account of some clinical experiments which he had made with Brown-Séquard's "emulsion" in the treatment of tuberculosis. He had tried this preparation in eighteen patients in different stages of the disease. Two of them had been quite given up. In one of these the patient was a lad of 18 who had long suffered from mitral insufficiency, and who became the subject of acute phthisis in the beginning of May, 1890. After all other means of treatment had been tried in vain Uspenski had recourse to injections of Brown-Séquard's fluid. After the first three the general condition and the appetite were greatly improved, and after six injections the patient was able to leave his bed and walk about the room. The treatment was continued with the result that the strength and weight increased, while the temperature gradually fell, and the night sweats diminished. After ten injections the latter ceased altogether, and the patient had so far recovered his strength as to be able to take a long walk in the open air. On June 15th the last injection (the fifteenth) was given, and the patient continued, through the summer, to improve in health and to gain weight (from 122½ lbs. to 148¼ lbs.). The tuberculous process in the lungs was at a standstill. In the other case the patient was a man, aged 28, who developed phthisis after influenza. There was considerable fever, with profuse night sweats. There was infiltration of the right and, to a less extent, of the left apex, and tubercle bacilli were present in the sputum. At the beginning of May injections of Brown-Séquard's fluid were commenced; after the sixth the appetite increased, and after the twelfth the patient's condition was so much improved that he was able to leave his bed. After the eighteenth injection the temperature became normal. There has been no increase of weight, nor is there any perceptible amelioration in the condition of the lung. The patient, however, feels much better. In chronic cases the injections act more rapidly. In twelve such patients there was marked general improvement, with reduction of temperature and diminution of night sweats after from two to four injections. Nine, or, at most twelve, injections usually suffice. Even amid the unfavourable surroundings of a prison infirmary Uspenski obtained good results by this treatment in seven cases. He considers that Brown-Séquard's fluid has a markedly strengthening effect, and is beneficial in all cases of phthisis without exception, whether the patients have any additional treatment or not, and whether they live under favourable conditions or the reverse. The tubercle bacilli do not disappear entirely, even in the most successful cases, but diminish in number in proportion to the extent to which the diseased process recedes. Uspenski says the remedy does not kill the bacilli, but weakens their pathogenic power.

(46) Treatment of Chilblains.

M. Brocq (*Bull. Méd.*, November 9th, 1890, and *Lyon Médical*, December 14th, 1890) recommends the following method, originally described by E. Besnier, for the treatment of chilblains. Bathe the hands in a decoction of walnut leaves; dry, rub with a solution of camphor in alcohol; powder with a powder composed of salicylate of bismuth 1 part, starch 9 parts. When the itching at night is very troublesome rub with a mixture of equal parts of glycerine and rose water containing approximately half a grain of tannin to the ounce, and powder with the above-mentioned powder. If the chilblains are ulcerated dress them with walnut leaves soaked in warm water.

(47) The Active Principle of Castor-oil.

The active principle of castor-oil has never been satisfactorily determined in spite of many researches on the subject. Buchheim stated long ago that it was ricinoleic acid. This acid exists in the oil combined with glycerine, and in its combined condition is perfectly bland and unirritating. Buchheim was of opinion that the fat was saponified in the alkaline duodenum; the ricinoleic acid was set free, and then acted as an irritant and caused purgation. This theory has, however, often been disputed. Professor Hans Meyer comes now to its support (*Archiv f. expt. Path.*, xxviii, 1890). He isolated pure ricinoleic acid, and he also formed ricinoleate of glycerine, a neutral fat. Experiments made with these on cats and men showed them to be as active as castor-oil. Ricinoleic acid is rapidly absorbed from the intestinal canal, hence it only acts for a short time, and hence repeated small doses have not a cumulative action as in the case of other unabsorbable purgatives. This is also the reason why castor-oil is so safe and mild a purgative, and why it can be used in small amount (as it is in China) as a cooking and table oil. Buchheim also experimented with a derivative of ricinoleic acid, which he termed ricinelaidic acid. He found it to be inactive. Meyer, however, shows that its inactivity depends on its high melting point (122° F.), and on its coherence, which prevent it being broken up and saponified. When he gave it in fine emulsion it acted as powerfully as castor-oil.

(48) Action of Crystalline Podophyllotoxin.

Podwyssotzki (*Archiv f. expt. Path.*, xiii) has already shown that the active principle of resin of podophyllum is a substance which he named podophyllotoxin. Recently this body has been isolated in a pure crystalline state, and experiments have been made with it by Neuberger (*Archiv f. expt. Path.*, xxviii, Heft 1, 1890) in the Leipzig Pharmacological Institute. It is in snow-white, well-formed prismatic crystals, little soluble in water, very soluble in alcohol, its solutions having an intensely bitter taste. Frogs were but slightly affected by it. After administration of 1 centigramme (about ⅛ grain) in gum emulsion, there was a certain degree of muscular stiffness, and death in three or four days. Sometimes the intestines were found hyperæmic. Rabbits also were very resistant to its action. Given subcutaneously, it only caused local irritation, and *per os* had but a trifling and very uncertain effect. The author attributes this to the constant fulness of the rabbit's stomach. Cats were extremely sensitive. The subcutaneous injection of 1 milligramme (1/65 grain) killed a cat in three days. In two to four hours after administration there occurred violent and repeated vomiting, first of food, then of bile and mucus and entozoa, and severe diarrhœa. If the stomach were empty, the diarrhœa and vomiting were usually so severe that death ensued. Towards the end the animal became apathetic and paretic, and the temperature fell. Dogs, pigeons, and hens were affected in the same way. The *post-mortem* appearances

were as follows: There was great irritation or even abscess at the point of injection. The stomach was either unaffected or slightly hyperæmic. The duodenal mucous membrane showed extreme general hyperæmia at its upper part, especially at the entrance of the common bile duct: its lower part was coated with brown masses of epithelium, mixed with detritus of various kinds and mucus. The lower part of the small, and the large intestine were very hyperæmic in patches, and in some places covered with an exudative membrane. The adenoid tissues of the bowel were much inflamed. The submucous and muscular coats were intact. The liver was hyperæmic, and the gall bladder very full and swollen. The kidneys were also enlarged and hyperæmic. There was marked glomerulo-nephritis and commencing tubular nephritis. The fulness of the gall bladder and the extreme redness at the opening of the common bile duct suggested the idea that the podophyllotoxin might be excreted from the blood into the intestinal canal through the liver. Accordingly the author tied the common bile duct in three dogs, and gave podophyllotoxin subcutaneously. The results, however, were exactly the same as in the normal animal. Given intravenously, its action was the same. There was no effect on the circulation, respiration, or nervous system until death was approaching. The author concludes, therefore, that podophyllotoxin is simply an irritant. When given by the mouth it irritates the intestinal canal, and thus produces its purgative effects; when given subcutaneously or intravenously it is excreted from the blood by the alimentary canal and by the kidneys, and during its elimination irritates them as above described.

BACTERIOLOGY.

(49) Phosphorescent Bacilli.

Beyerinck (*Transactions of the Dutch Academy of Science*, Amsterdam, 1890) describes six species of phosphorescent bacilli. The first group, photobacterium Pflugeri (a), photobacterium phosphorescens (b), which liquefy gelatine rapidly, are derived from fish. (a) Is perhaps the most phosphorescent of all the forms: it is larger than (b), and grows in sea water. Both (a) and (b) ferment lævulose and glucose, giving off CO_2 and hydrogen. (b) Also grows vigorously on, and converts maltose, but (a) does not. Another pair of phosphorescent organisms, found in the Baltic, are the photobacterium Fischeri (c), which liquefies gelatine pretty rapidly, and photobacterium Balticum (d), which liquefies gelatine more slowly. The former (c) lives in a medium to which a small quantity of raw sugar has been added, and the light under these circumstances is increased to a remarkable extent. A large quantity—3 to 5 per cent.—interferes with the phosphorescent activity, even stopping it altogether. (d) Is not nearly so sensitive to the action of sugar, but it can live in a medium containing from 3 to 5 per cent. of that material. The light in this instance is dependent on the presence of peptone, but it does not require the presence of glycerine. Both these forms are closely related to (a) and (b) in many features, but they have no ferment action. All of them are best cultivated in fish broth, made with sea water, to which have been added 1 per cent. of glycerine, ½ per cent. of asparagin, and 8 per cent. of gelatine. The third group consists of photobacterium Indicum (e), which is found in the West Indies, and photobacterium luminosum (f) in the North Sea. These liquefy gelatine very rapidly, and appear very like ordinary putrefactive organisms. (e) Gives off most light at a temperature of 30° to 35° C., but the light varies inversely as the luxuriance of growth. It may be kept constant for at least four years. (f) Gives off most light at a temperature of about 15° C. Both these are extremely sensitive to the presence of sugar—1 per cent. prevents the phosphorescence, 3 to 5 per cent. prevents liquefaction of the gelatine, and eventually kills the bacteria, though in the case of (e), if a small amount of asparagin be added, the light may continue to be given off. The author finds that the production of light bears no direct relation to either respiration or to growth. By varying the nutrient elements added to the media on which he was cultivating the organisms, he was able to determine which were necessary for the formation of light and which for growth, and how these were related to the oxidation that occurred in the phosphorescent bacteria. He says the fermentation of the sugar takes place only in presence of peptone and oxygen, in the case of (a) and (b), and that the latter may be found in a combined condition in the bacteria. The fermentation, and with it the light development, ceases completely when all the oxygen is consumed, but the growth of the colonies may go on perfectly well without oxygen. The second part of the paper elaborates many points above mentioned, and is well worthy of careful study, especially the latter part, which deals with the use of these organisms as agents for the detection of the diastatic, the inverting, and the tryptic enzymes; the biological importance of the formation of light in the presence of certain nutrient media being also most thoroughly worked out.

PHYSIOLOGY.

(50) Quantitative Investigations upon the Absorption and Excretion of Mercury when Administered in the Form of Salicylate.

L. Böhm (Hoppe-Seyler's *Zeitschr. f. physiol. Chemie*, November, 1890) gives copious references to the very large amount of work done by different investigators upon the quantitative estimation of mercury in animal excretions and organs. The dry distillation plan has been adopted by many inquirers; by others the mercury-holding tissues have been decomposed by means of hydrochloric acid and potassic chlorate, the mercury in solution precipitated with hydric sulphide, and the precipitate, after having been treated several times with the latter reagents, collected and weighed; others again have amalgamated the mercury, obtained by the action of hydrochloric acid and potassic chlorate, with zinc, copper, or brass, and have then separated the mercury by means of heat from the amalgam obtained. Hydrochloric acid and potassic chlorate were the means employed by the author to decompose his organic substances, and the mercury was separated from the filtrate by amalgamation. As the result of his experiments he finds that the absorption of mercuric salicylate is incomplete, but that this absorption is more marked, and probably greater than that of calomel in non-poisonous doses.

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MEDICINE.

(51) A Case of Chylothorax.

An interesting case of chylothorax is reported (*St. Petersburger medicinische Wochenschrift*, No. 51, 1890) by Dr. Neuenkirchen, from the wards of Dr. P. Hampeln, in the Allgemeine Krankenhaus, at Riga. Very few cases of the kind are on record, but all those hitherto observed have tended to prove that the disease is generally brought about by direct injury, and that the condition is rapidly fatal in its results. Chylous ascites is more common, and is generally produced by pressure upon some part of the thoracic duct causing rupture of it or some afferent lymphatic vessel which has become dilated. In the case recorded, that of a single lady, aged 45, the patient's previous history threw no light upon the causation of the disease, and the only symptom produced was that of dyspnœa, at first only on exertion, but afterwards continuous when in absolute rest. This appeared in 1884, and fluid, described as "milky," was at that time removed from the left pleura to the amount of about a litre, giving complete relief to the dyspnœa. The patient remained free from dyspnœa, or any other trouble, till December, 1888, when the breathing again became embarrassed, but no other symptoms showed themselves until six months later, when gradual loss of strength was complained of, and slight œdema of the feet was noticed. It was then found that the left side of the chest was nearly normal as regards its physical signs, but that fluid had collected in the right pleura. With this exception the most searching clinical examination failed to show any other abnormality. The right pleura was tapped with an ordinary trochar and siphon tube, and the lung expanded as the fluid was withdrawn; some degree of pain and collapse being caused, which soon subsided under stimulants. The fluid, as before, had a milky appearance and, on standing, became covered with a layer of creamy consistence. Microscopically it consisted of molecular granules, scattered round cells, and a few blood corpuscles, but no actual fat cells. By chemical examination it was found to be alkaline, specific gravity 1017, and to contain water, traces of casein, albumen, fat, sugar of milk, and salts. The exact quantitative proportions of each are given in detail. The patient was tapped several times, until it was found that reaccumulation seemed to be aided by the frequent tapping, and it was thought that the reduction of pressure within the pleura might be having the effect of drawing out the chylous fluid from its natural channels. It was therefore left to itself. The patient in the mean time is enjoying good health, the only new feature in the case being cessation of menses, which has been present since the first tapping in 1889. The various possibilities as to the pathological changes in the thoracic lymph channels in this case are very fully discussed by Dr. Neuenkirchen, advantage being taken of the opinions expressed by other writers, but no conclusion is arrived at, owing to the complete absence of any clinical indications. He classes the case as one of hydrops chylosus.

(52) Two New Hæmatozoa.

Dr. Patrick Manson has found in certain negroes of the West Coast of Africa two species of filarial hæmatozoa which he believes to be new. He proposes (*Lancet*, January 3rd, 1891) to apply to them the names filaria sanguinis hominis major and minor respectively. The former very closely resembles the Indo-Chinese filaria sanguinis hominis (Lewis), the differences being only that it has a more delicate investing sheath, more marked oral movements, and has not the granular aggregation frequently seen about the middle of the body in the other species. Like Lewis's species, the new species appears in the blood only at a certain period during the twenty-four hours, but this period is the day, while in Lewis's species it is the night. Dr. Manson admits that this filaria sanguinis hominis major, which he has found in two cases, may turn out to be an abnormal Lewis's filaria, but he does not think this probable. There seems to be even less doubt as to the specific distinction of the other filarial embryo; it was found in four out of five negroes examined (two from the Congo and three from Old Calabar). In two cases it was associated with filaria sanguinis hominis major. Filaria sanguinis hominis minor is roughly about one-third smaller than the larger species (f. major and Lewis's filaria measure $\frac{1}{50}$ in. $\times \frac{1}{33\cdot3\cdot3}$ in., f. minor $\frac{1}{125}$ in. $\times \frac{1}{33\cdot3\cdot3}$). The smaller species has no sheath; the caudal end is truncated, the cephalic end is alternately conical and truncated, the change from one to the other being by rapid jerks. A minute tongue-like organ is from time to time protruded and withdrawn at the cephalic extremity, and the filaria minor has a very distinct locomotive power. Finally, the appearance of this embryo in the blood is not periodic, but continuous. The observation of the nocturnal periodicity of the Lewis filaria led to the suggestion that the intermediate host was a night-flying

insect, and Dr. Manson has shown that the mosquito is the host. He now suggests that the intermediate host of filaria sanguinis hominis major is a diurnal insect, probably limited in distribution to particular districts of West Africa. The parent worm was not found in the only case in which a *post-mortem* examination has been made, so that its location is a matter of conjecture only. As to two of the cases in which filaria sanguinis hominis minor was found, one was the case of negro-lethargy exhibited at the Clinical Society by Dr. Stephen Mackenzie on November 14th, 1890 (British Medical Journal, November 22nd, 1890), the other was another Congo negro under restraint on account of noisy insanity—possibly a maniacal variety of negro-lethargy. Dr. Manson is disposed to suggest a possible connection between the parasite and negro-lethargy on the following grounds:—Craw-craw, a papulo-vesicular disease found in negroes is associated with the presence of filarial embryos hitherto assumed without careful examination to belong to Lewis's species; a similar eruption is stated by some authorities to occur frequently in negro-lethargy; craw-craw and negro-lethargy have the same endemic area. The theory would perhaps account for the onset of negro-lethargy long after the sufferer has left the endemic area, since the filaria persists for years in the blood; in one of the cases examined by Dr. Manson the patient had been absent from Africa for 6½ years.

(53) Trophic Changes in the Nails in Multiple Neuritis.

Bielschowsky (*Neurologisches Centralblatt*, December 15th, 1890, p. 741) describes a man, aged 40, who presented the symptoms of peripheral neuritis. In the course of the illness several white spots appeared at the lower part of the finger nails. They rapidly grew, and in two or three weeks there were milk-white patches stretching across the nail. There were no similar changes in the nails of the toes. Except for these alterations, there were no other changes in the nails. There was not the loss of smoothness which has been described. The streaks across the nail remained milk white in the middle, but became reddish towards the ends. The borders of the depressed streaks were straight. When these streaks had grown near enough to the end of the nail they were cut off. The microscopical examination did not show anything of importance.

SURGERY.

(54) Vesical Calculus in Women.

Dr. Phocas (*Annales de Gynéc.*, November, 1890) has collected numerous cases of spontaneous expulsion of vesical calculus in women, and notes that authorities admit that the female urethra may be dilated to a considerable extent without consequent incontinence of urine. Simon, of Heidelberg, was a great advocate of dilatation in cases of calculus. Heydenreich, reviewing the question as late as 1887, gave the preference to dilatation over other operations in all cases where the diameter of the calculus did not exceed 3 centimètres (1.17 inch). Dr. Phocas dwells on the fact that calculi are often expelled spontaneously. A woman, aged 80, passed 500 small calculi in three years. At first incontinence of urine was complete; it diminished after a time. A woman, aged 70, after suffering for several months from dysuria, spontaneously expelled by the urethra an oval calculus "the size of an almond," and nearly a quarter of an ounce in weight; no incontinence of urine ensued. A woman, aged 54, expelled, according to Barbieri, a calculus "the size of a hen's egg." On the other hand, Bergioni relates that a little girl, aged 4, expelled several calculi spontaneously; and similar cases have been recorded. Again, the expulsion of calculi during labour has frequently occurred. Thus calculi are most frequently expelled spontaneously in very young or in very old patients, or during labour, and incontinence of urine may result, especially if the calculus exceeds an inch in diameter. The muscular fibres around the neck of the bladder are weak in childhood and old age, and thus allow more readily of the passage of calculi. The calculus is either expelled rapidly after an attack of retention of urine, the fluid and the vesical contractions together aiding in the process, or is pressed slowly out by a gradual dilatation of the urethra lasting several days. In the first case the urethra may be seriously damaged; in the second, the process resembles slow dilatation, such as surgeons effect by aid of laminaria tents. The stone may be forced through the vesico-vaginal septum. Dr. Phocas concludes from the above observations that the process of spontaneous expulsion must be regulated or imitated by the operator. Dilatation of the urethra effects this object, and the process can be controlled, which is not the case if matters be left to Nature.

MIDWIFERY AND DISEASES OF WOMEN.

(55) Puerperal Convulsions.

Dr. Alexander Pilliet (*Nouvelles Arch. d'Obstét.*, November, 1890) lays great stress upon the hæmorrhagic foci which are found in the livers of women after death from puerperal eclampsia. He implies that the hepatic lesion is primary, and that this pathological discovery must modify our opinions and our treatment of one of the gravest complications of childbed. Twelve necropsies have been made by this obstetrician, and in all the characteristic changes in the liver were detected. This series does not include any case of cholemic eclampsia or hepatic anæmia of pregnancy and the puerperium; and in the twelve, icterus, where it occurred, was slight, and appeared after the other distinct symptoms. The hæmorrhagic focus in the tissue of the liver is no mere product of simple engorgement of a vessel followed by rupture. It is associated with complicated local pathological changes, minutely described by Dr. Pilliet. In certain respects these foci resemble similar appearances observed in the kidney in scarlatinal and erysipelatous nephritis. The most careful search, however, has failed to detect any bacteria in the foci in Dr. Pilliet's twelve cases. He maintains that since a distinct and severe lesion of the liver was found in every one of the twelve cases of death from puerperal convulsions, it is reasonable to suppose that the lesion is pathognomonic of the complication in question. Lastly, it must here be noted that in the cases in Dr. Pilliet's series where the condition of the kidney is recorded, that organ is described as though not in a perfectly normal condition. He also detected pulmonary and cerebral hæmorrhages in more than one of the twelve necropsies.

(36) Therapeutic Dilatation of the Uterus.

Dr. Vulliet, of Geneva (*Annales de Gynécol.*, October, 1890) exhibited at the Berlin Congress a series of casts of the uterine cavity taken from the living subject after dilatation. The practice of dilating the uterine cavity is useful for treatment and for diagnosis. It can be performed so that the uterine cavity may be inspected by the naked eye. Dr. Vulliet's process permits the dilatation to be maintained as long as necessary, so that any one point in the uterine wall may be observed for a time when immediate diagnosis is impracticable. As to therapeutics, dilatation allows the plugging of the uterine cavity, which provides for drainage, and is worthy of trial in chronic inflammatory conditions. The endometrium is rendered accessible to local treatment, such as injections, application of powdered compounds on gauze, scraping, and cauterisation. Free dilatation of the uterine cavity facilitates the incision of intraparietal fibroids, and assists their expulsion or removal through the natural passages. The tampon applied after dilatation may serve to rectify displacements. By introducing the fingers into the dilated cavity, external uterine adhesions may be broken down after Schultze's method. Lastly, the tampon introduced into the dilated uterine cavity can act as a hæmostatic, either in cases of bleeding fibroids or after labour.

(37) Bromides in Vomiting of Pregnancy.

Dr. Wertheimer, of Freiburg (*Centralbl. f. Gynäk.*, December 20th, 1890), describes the case of a woman, aged 33, who had borne eight children, and who had required artificial abortion at the third and fourth month respectively in two labours, on account of uncontrollable vomiting. She once more became pregnant, and violent sickness set in only fourteen days after conception. No nourishment could be taken, and she soon became dangerously exhausted. Belladonna and morphine failed to influence the sickness. Bromide of potassium checked it slightly. Dr. Wertheimer then gave, every two hours, half an ounce of a mixture consisting of three parts of bicarbonate of soda, two of bromide of potassium, two of bromide of sodium, and one of bromide of ammonium, disolved in thirty parts of syrup of orange peel, and one hundred and twenty of distilled water. The vomiting ceased, the patient's strength increased, and, at the time of the report, the patient had passed the fifth month of pregnancy without any return of the sickness.

(38) Atresia: Hæmatometra: Castration.

Dr. Mattersdorf (*Centralbl. f. Gynäk.*, December 6th, 1890), describes a case of atresia of the lower part of the vagina, with the usual effects of retention of menses, where, ultimately, removal of the ovaries was deemed necessary. A girl, aged 20, had never menstruated; she was subject to severe pains in the hypogastrium. A tumour reached the umbilicus, a smaller growth lay beside it, and the uterus projected. The lower part of the vagina was absent. The vagina was carefully opened, and a quart of thick blood removed. After four years the patient returned with distinct hæmatometra. It was emptied by an incision made from the vagina. Then the ovaries were removed. The patient never menstruated after the operation. Hegar and Kaltenbach have already insisted that castration is necessary in certain congenital conditions where the ovaries are present and exercise their functions so as to give pain, and more particularly when deficient development of the uterus and vagina prevents the escape of menstrual blood. Ten cases have been recorded by different observers, but only one resembled the example noted by Dr. Mattersdorf, of Breslau. The operator was Kaltenbach, and the patient died after the removal of her ovaries.

(39) Treatment of Placenta Prævia.

Drs. W. J. Kolff and Treub (*Nouvelles Archiv. d'Obstet.*, September, 1890) record the results of this malpresentation, as observed by them at Leyden. Between 1856 and 1879 26 cases of placenta prævia were noted by Dr. Kolff, with a mortality of 42 per cent. On the other hand, between 1887 and 1889 Professor Treub has observed 13 cases. In all of this series he performed combined version, losing only 1 patient. The fatal case cannot fairly be attributed to the method of delivery, for the woman died of pyæmic phlebitis, set up by a dirty sponge which the midwife introduced into the vagina to check the hæmorrhage before version was performed. Hence the mortality did not amount to 8 per cent. Of the children, 8 (or 61 per cent.) died, but 4 must be subtracted, as the heart sounds could not be heard before version; thus the precise mortality was 30 per cent. During childbed bad results were observed only in cases that had been previously examined by midwives, except in one instance, where the vagina had been plugged with sterilised absorbent gauze instead of iodoform gauze. The great principle of practice at Leyden is to separate version from extraction. The former is undertaken in order to save the mother. It is only in cases of subsequent hæmorrhage that extraction by the feet is carefully undertaken. Dr. Kolff praises that practice, as it renders interference practicable very early in the labour, before the mother is exhausted by hæmorrhage, saves her from the risks of prolonged plugging, and allows the later part of labour to continue slowly and yet without danger. The risk of *post-partum* hæmorrhage is thus greatly lessened. The risk to the child is theoretically great, yet the above statistics prove that the infantile mortality is not very high.

DISEASES OF CHILDREN.

(60) Purpura Fulminans.

Dr. Henry Jackson, of Boston, has reported (*Archives of Pediatrics*, December, 1890) a fatal case of acute purpura apparently belonging to the class of cases to which Henoch has applied the term purpura fulminans, but differing in certain respects. Henoch's cases were characterised by (1) sudden onset; (2) pains in one or more limbs; (3) often purple œdematous swelling of lower, or more rarely upper, limbs; (4) absence of hæmorrhage from mucous membranes; (5) death in one, two, three, or four days. In Dr. Jackson's case there were no pains in the limbs, and there was extensive hæmorrhage from mucous surfaces, epistaxis, vomiting of blood, and passage of blood from bladder and bowels. The patient was a boy, aged 5 years, who about a month after a mild attack of measles, and while apparently in good health, had been indisposed for a couple of days; on the next day a few hæmorrhagic spots were first noticed; on the next day the child was first seen by Dr. Jackson; he was able to run about, and the only noticeable abnormalities were hæmorrhagic spots on the legs and back (several

half an inch in diameter) and a small hæmorrhagic bulla on the lower lip. The temperature rose to 100° F. at night, and the severe mucous hæmorrhages mentioned above began on the third day: on the fourth the hæmorrhages continued, the temperature was subnormal, the pulse hardly perceptible, and the patient appeared moribund. He died the next day, but before death the hæmorrhagic spots had increased in number, and on the legs had formed large patches by confluence. Dr. Jackson concludes that the disease is due to some lesion of the vasomotor nerves, probably produced by micro-organisms. In this connection he refers to the investigations of de Guimard (*Thèse de Paris*, 1889), who in cases of purpura, mild as well as severe, found micrococci in the blood and submucous and subcutaneous tissues, obtained cultures of the cocci, and reproduced purpura in rabbits by inoculating them with these cultures. In the discussion which followed the reading of Dr. Jackson's paper at the American Pediatric Society, all the speakers confessed that treatment had never been of any avail in these severe cases of purpura.

(61) Antipyrin in Chorea.

In a paper recently read before the Société Médicale des Hôpitaux de Paris (*Bull. et Mém.*, December 25th, 1890), Dr. Charles Legroux states the results of the treatment of chorea by antipyrin in sixty cases observed throughout their course. He found that antipyrin had a beneficial effect in two-thirds of the cases, rapidly diminishing the intensity of the disease, and shortening its duration; recurrence, however, took place in three-fifths of the cases. In the cases in which the drug failed this was found to be due in some instances to intolerance (vomiting, diarrhœa, etc.), or to cutaneous eruptions: in a few cases the drug appeared to have no effect on the disease. He found it necessary to give large doses, and to reach the maximum dose in a short time. Between the ages of 6 and 15 doses as high as 3 to 6 grammes (about ʒiss to ʒiij) a day were well tolerated for several weeks. Serious symptoms of poisoning were never observed, and in some cases in which an eruption or vomiting was at first noticed, when the use of the drug was resumed after a short interval these symptoms did not recur. None of the cases treated had any rheumatic symptoms, but none were of a serious character.

(62) Treatment of Foreign Bodies in the Larynx and Œsophagus.

In a lecture on foreign bodies in the larynx and in the trachea in children (*Rev. Mens. des Mal. de l'Enfance*, January, 1891) M. Jules Simon expresses the opinion that if the diagnosis is certain, and if the surgeon cannot remain in attendance, the proper treatment is to perform tracheotomy. Further, he holds that the operation ought not to be deferred if the foreign body is of irregular shape (fish bones, nails) or liable to swell (peas, beans, etc.). The trachea should be freely opened, and at a rather lower level than usual; before introducing the tube the child should be placed in various positions while the wound is held open, in the hope that the foreign body may be immediately expelled. Even when this occurs he recommends that the tube should be worn for several days at least, as it checks hæmorrhage and tends to prevent subcutaneous emphysema. The diagnostic symptoms of foreign body in the larynx he considers to be: sudden onset, dyspnœa without alteration of the voice, and the absence of angina. He gives the above advice as to tracheotomy after reporting and discussing a case in which a boy aged 6 spontaneously expelled, during the act of vomiting, a portion of the antenna of a lobster which had entered the larynx during an attack of coughing three or four weeks earlier. Such a termination is, however, he holds so rare that it ought not to affect the judgment. In the same number of this periodical is a short note by Dr. B. Polikier, of Warsaw, on a simple manœuvre by which he succeeded in two cases in obtaining the immediate expulsion of a coin—in each case about the size of a halfpenny—which had become impacted in the œsophagus, and had given rise to dyspnœa. In both cases it was easy to feel the coin externally by pressing the finger gently into the groove between the sterno-mastoid muscle and the trachea. Gentle rubbing and kneading over the coin, the fingers making gentle pressure upwards and a little backwards, was followed in a few seconds by an act of vomiting, during which the coin was expelled. In the first case the uvula was tickled at the same time, but the second case showed that this was unnecessary.

(63) The Capacity of the Stomach in Nursing Infants.

A paper upon the capacity of the stomach in infancy has been published in the *Archives of Pediatrics* (December, 1890) by Dr. L. Emmett Holt. The observations upon which the paper is founded were made *post mortem*. One orifice of the stomach, usually the pyloric, was closed by a ligature, and water introduced into the other opening by means of a piece of rubber tubing attached to a faucet, at the other end of which was a glass nozzle, which was passed into the stomach, the cardiac orifice being pinched tightly around this by the fingers. After the contents had been evacuated the water was allowed to flow very slowly, and the stomach distended up to the point of obliterating the rugæ of the fundus and body of the organ. The walls in infants are so thin that it was found not difficult to determine when the proper degree was reached by looking through the stomach at a strong light. Owing to the very various conditions in which the stomach was found after death, it was found that it would be misleading to make use in every case of the same hydrostatic pressure, and in cases in which the organ was very much relaxed it was allowed to remain for a day or two in 50 per cent. alcohol. If this precaution were not taken the bagging from the weight of water gave results which were obviously incorrect. The number of cases in which the measurement was made was 142, but Dr. Holt excludes 30 cases in which the method was untrustworthy, and, of the remaining 112, 95 were infants under 14 months old. The conclusions of the paper are founded on 91 of these cases, 4 being excluded on the ground that their unusual capacity almost certainly indicated pathological dilatation, and the object of the research being to discover the average capacity in health. Though the cause of death and the general state of nutrition in the children were very different in various cases, it was easy to detect a general correspondence between the age and the capacity of the stomach, and the general conclusions were as follows: (1) Starting at birth with a capacity of about one ounce, the stomach increases in size at the rate of one ounce a month during the first three months, reaching at this

time about one-half the capacity found at one year. (2) From three to eight months its growth is much slower, being, on the average, about half an ounce a month. (3) From eight to fourteen months the rate of growth is still less, being, on the average, about one-third of an ounce a month. Approximately, at the ages of one, three, six, and fourteen months the average capacity is respectively one, four and a half, six, and nine ounces. No correspondence could be traced between the weight of the child and the capacity of the stomach. Dr. Holt pointed out the remarkable agreement between his results as to the capacity of the stomach and Dr. Rotch's observations (*Keating's Cyclopædia*) as to the quantity of food for a single feeding at different ages, although the two sets of results were arrived at by entirely different methods.

PHARMACOLOGY AND THERAPEUTICS.

(64) Combination of Operative Treatment with Koch's Remedy in Phthisis.

Professor Sonnenburg has published (*Deutsche med. Wochenschr.*, January 1st, 1891) a preliminary report on the results of the combination of operative interference with injections of Koch's fluid in four cases of pulmonary phthisis. The operations were performed in the presence of Koch himself in the Moabit Hospital at Berlin between December 12th and 17th, 1890. The object was to test the practicability of treating cavities of the lungs by making an opening from the outside through which necrosed tissues might be eliminated, and then applying Koch's method in the usual way. In three of the cases there was a cavity in one apex, in the fourth the vomica was lower down but very superficial. In the former the anterior wall of the cavity was firmly adherent over a large surface to the costal pleura, so that the cavity could be opened without any risk of pneumothorax. The following is the mode of procedure adopted:—Chloroform having been administered, an incision is made beginning at the sternum and extending outwards from 10 to 12 centimètres, in a direction parallel to, but from 1½ to 2 centimètres below, the clavicle. The pectoralis major is next divided, and, the soft parts being held aside with retractors, the lower edge of the first rib is laid bare. The periosteum is then detached from the anterior and posterior surfaces of the first ribs with blunt instruments so as to avoid wounding the intercostal artery. A broad retractor is then passed between the posterior layer of periosteum and the pleura so as to protect the latter from injury, and an arched segment is cut out of the lower border of the rib with cutting forceps. By this means the intercostal space is enlarged, and the pleura is next exposed by careful separation of the muscular fibres. An exploratory puncture is then made into the lung with a small syringe, which usually enters the cavity, as is shown by the escape of a certain amount of pus. The opening made by the syringe is next carefully enlarged with a fine pointed thermocautery, red hot, which is pushed slowly along the track of the exploring needle into the vomica. When the cavity is reached a little thick muco-pus generally wells up in the bottom of the wound. The opening having been somewhat enlarged with the thermocautery, both the cavity and the wound are stuffed with sterilised cotton. Sonnenburg at first used iodoform wool for this purpose, but discontinued its use so that the effect of Koch's fluid might be ascertained apart from that of the iodoform. The three patients with cavities at the apex bore the operation well, and the subcutaneous injections of Koch's fluid were soon afterwards proceeded with. It is too early to judge of the results, but, so far, they do not appear to be very striking. In the fourth case, the lung was not adherent to the pleura, and the opening into the cavity was followed by the development of pneumothorax. The patient however recovered from this and the lung is now fixed to the chest wall by pleuritic adhesions.

(65) Koch's Treatment in Tuberculosis of the Female Genitals.

At a meeting of the Royal Academy of Medicine of Turin, Professor Bossi communicated some observations made by him in the obstetric clinic at Genoa (*Il Policlinico*, December 23rd, 1890). He was led to try Koch's method in cases of tuberculous affections of the female genitals (including the uterus and Fallopian tubes), as the necrotic tissues could easily be thrown off or removed from these parts. He also thought it possible that by inoculating a pregnant woman with Koch's lymph immunity against tubercle might be conferred on the fœtus in the same way as he (Bossi) had found, by experiments made last year, that vaccine lymph which caused pustules in pregnant women produced no effect when inoculated in the child after birth. The following is a summary of the cases in which Bossi employed the new treatment: Case i, woman, aged 27, with a history of fourteen pregnancies and thirteen miscarriages. Tuberculous disease of the uterus was suspected, but no bacilli could be detected. On December 5th, 3 milligrammes of Koch's fluid were injected, and reaction followed in the usual way, the local symptoms being particularly severe (intense pains in the loins shooting first to the lower part of the abdomen, then down the thighs to the feet). The injection was repeated next day with a like result: this time there was a profuse discharge from the uterus of pus containing numerous tubercle bacilli. The temperature remained somewhat high for five or six days afterwards, though no further injections were given; the violent pain in the abdomen and meteorism from which she suffered seemed to point to the existence of peritonitis: finally, however, the uterus diminished in size to a marked extent. Case ii, woman, aged 39; twelve pregnancies and seven abortions. She was treated for hyperplastic endometritis, but after having obtained relief from curetting and cauterisation of the uterus with chloride of zinc (50 per cent.), she returned in as bad a condition as before. As there was a tuberculous focus in the left lung, 1 milligramme of Koch's fluid was injected; little or no result followed. The next day an injection of 3 milligrammes gave rise to marked general and local reaction, the latter consisting of sacro-lumbar pains exactly like those of dysmenorrhœa. The tubercle bacillus, which was at first absent, was found in large numbers in the uterine discharge as well as in the sputum. After a third injection of 5, and a fourth of 7 milligrammes, the cavity of the uterus diminished in size by 1½ centimètre, and the ulceration of the cervical canal had almost entirely disappeared. Case iii, woman, aged 66, with an ulcerated tumour of the vagina, diagnosed as epithelioma of the labium majus, although the disease had lasted

eighteen months, and there were no enlarged glands. By way of experiment, an injection of 5 milligrammes was given, and was followed by violent reaction; the tumour became swollen, and assumed an intense livid red hue: round it was a wide inflammatory halo, and the part became the seat of such acute pain that it was feared the case was about to take a very unfavourable turn. The symptoms, however, subsided within twelve hours. A second injection was followed by equally intense reaction, accompanied by abundant fœtid discharge from the ulcerated surface; in this, numerous tubercle bacilli were found. Further injections of 5 and 7 milligrammes were given, and after 34 milligrammes in all had been used, the tumour was found to have diminished in size by two-thirds. Case iv, girl, aged 17, with extensive ulcerated lupus of left cheek; four months pregnant. Injection of 3 milligrammes; slight reaction. Further injections up to 23 milligrammes in all were given, with the result that the ulcers were completely cicatrised. The treatment did not seem to affect the uterus or its contents in any way. Nos. v and vi were control cases. One patient was the subject of chronic metritis, the other a pregnant woman suffering from syphilis. In neither did any reaction follow the injection. Bossi thinks the fluid will prove "most useful in gynæcology as a means of diagnosing tuberculous lesions of the uterus:" and from his experience, it seems to give good therapeutic results without interfering with pregnancy or injuring the embryo.

(66) Post-mortem Appearances after Koch's Treatment.

Professor Chiari, of Prague, gives (*Prag. med. Wochenschr.*, No. 52, 1890) the results of *post-mortem* examinations made by him in three cases of phthisis in which Koch's treatment had been employed. In all the tuberculous foci in the lungs there was great accumulation of leucocytes, with considerable fibrinous exudation round about. In the affected parts of the lungs, and in tuberculous ulcers in the intestine, there was marked hyperæmia, and in some instances signs of hæmorrhage. There were large masses of tubercle bacilli in the bronchial tubes, and on the bases of the intestinal ulcers. In short, the appearances indicated abnormal exudative inflammation around the tuberculous foci, and (perhaps in connection with this process) a tendency to the expulsion of tubercle bacilli in the lungs and intestine. Chiari's observations on the whole agree with those of Cornil as to the effects of Koch's treatment in lupus. They seem to show that reactive changes such as hyperæmia, occasionally causing hæmorrhage, infiltration of leucocytes, and exudation take place in the tuberculous foci in the lungs in the same way, though not to the same degree, as they do in the skin. Further observations over an extensive field, and in particular careful comparison of the *post-mortem* appearances found in cases subjected to Koch's treatment with those in other cases are, according to Chiari, necessary before any general conclusions as to the exact effect of the remedy can be drawn.

At a meeting of the Berlin Society of Internal Medicine, on December 14th, Dr. Jürgens (*Wien. med. Wochenschr.*, January 3rd, 1891) presented a report on the results of *post-mortem* examinations in two cases of tuberculosis in which Koch's treatment had been used. Both patients were under the care of Professor Leyden, and in both the disease was so far advanced that there was no prospect of cure. In the first (a man suffering from extensive pulmonary phthisis with severe pleurisy) several injections, from 1 up to 6 milligrammes had been given, always with the result of producing very marked, though not alarming, reaction; the expectoration became gradually more and more bloodstained, and contained numbers of bacilli. In the second case, a woman suffering from very advanced phthisis with dropsy and albuminuria had been injected eight times, the doses ranging from 1 milligramme to 4 centigrammes. In both cases the changes in the lungs were so widespread that only very small portions of those organs remained permeable to air. The tuberculous foci themselves presented no naked-eye appearances which could be attributed to the specific action of the remedy; this, however, was due, according to Jürgens, to the fact that the greater part of the lung tissue was destroyed by the disease. On the walls of the cavities he saw signs of hæmorrhagic hyperæmia, but no trace of caseous substance. The pleurisy was of recent origin, and there was much sero-sanguinolent exudation. The tuberculous ulcers in the alimentary canal presented a remarkable appearance. In place of a greyish base with red and swollen edges, they showed a surface covered with recent and very vascular granulations. The tuberculous ulcers in the larynx also differed much from the ordinary type. In short, the tuberculous ulcers generally had lost their specific character, and had become transformed into simple ulcers. Where the ulcers had attacked cartilage, as for instance in the tracheal rings, a similar process had also been set up, the necrosed cartilage had come away, and the ulcer had healed. In the stomach, small and great intestine, and rectum, the tuberculous ulcers, though exhibiting numerous individual differences in detail, presented this common feature that in all of them the specific neoplasm had been eliminated and replaced by ulceration of benign character. In one of the patients who had tuberculosis of the kidney, that organ on section presented a caseous focus surrounded by a zone of intense hyperæmia. On microscopic examination, granulation tissue was found, but no tubercle, no giant cell, only an infiltration of pus cells around the caseous centre. Jürgens thinks it possible that the caseous mass might have been expelled naturally by the urinary passages, and the case might thus (had no other organ but the kidney been diseased) have been cured. In the liver there were the signs of fatty infiltration with retention of bile. Here and there were recent and old patches of hæmorrhage. In a few isolated points there were true tubercles with giant cells, and the whole organ was the seat of slight leukæmic infiltration. In the bones the medulla had to a large extent undergone diffuse hæmorrhagic softening: microscopic examination showed many giant cells but no bacilli. In a few places true tubercles were seen undergoing caseous degeneration. In the spleen and in the peribronchial and mesenteric glands, modifications of the tuberculous process similar to those described in the kidney and elsewhere were found.

(67) Koch's Treatment in Phthisis.

Professor Masius, of Liége, gives an account (*Annales de la Soc. Méd. Chir. de Liége*, De-

cember, 1890), of his experience with Koch's remedy in phthisis, tuberculous adenitis, and lupus. As the report only embodies the results of three weeks' treatment, it may be looked upon as merely preliminary. All the cases were treated in the Medical Clinic of the University of Liége. Professor Masius's conclusion is that "pulmonary phthisis in the first stage, glandular tuberculosis, and cutaneous tuberculosis are to a certain extent favourably modified." The general and local reaction was not always in proportion to the severity and extent of the lesions. In some cases in which tuberculosis was "scarcely appreciable, even doubtful," violent reaction followed the injection of 1 milligramme, whilst the same dose produced no effect in patients with "manifest tuberculous changes." In one such case a dose of 9 milligrammes was required to cause reaction. In the case of a patient suffering from pulmonary phthisis and nephritis, hæmaturia occurred after each injection. In one case the injections were always followed by increase of albuminuria from 0.75g. to 2 or 3g. per litre, though there was no rise of temperature. In some cases reaction showed itself in increase of cough and expectoration without any rise of temperature. In several cases the sputa became blood-stained: in others they became more mucous in character, and gradually less in amount, and the bacilli underwent "manifest modifications." Some patients gained, others lost, weight. But even when weight was gained, there was sometimes no change in the physical signs. In some cases the treatment seemed to cause increasing weakness and generally to exacerbate the disease. Masius sums up his results *en bloc* as follows:—Among 14 cases (which include 10 of phthisis, 3 of lupus, and 1 of tuberculous cervical glands), there has been "amelioration" in 5; "aggravation of symptoms" in 2; "no notable change" in 7. The latter, however, have not been sufficiently long under treatment for any definite statement to be made. In the case of a woman three months' pregnant, who was suffering from lupus, an injection of 1 centigramme was given on December 2nd at 10 A.M., and was followed by considerable local and general reaction. On the morning of December 9th an injection of 9 milligrammes was given; intense reaction took place, lasting twenty-four hours, and recurring the next day. There was an extensive scarlatiniform eruption, especially marked over the abdomen. At 5 A.M. on December 10th abortion took place, and the woman became so collapsed as to be in imminent danger of death. The patient recovered with some difficulty from the reaction and its consequences, but the result of the treatment on her disease could not be ascertained, as on the morning of December 13th she was "taken away by her family against the advice of the doctors."

(68) Koch's Treatment: Immediate Effects.

At a meeting of the Royal Academy of Medicine of Turin, on December 19th, Professor Bozzolo reported on the results obtained so far in his clinic with Koch's fluid (*Il Policlinico*, Dec. 23rd, 1890). It was tried in 7 cases, including 2 of moderately extensive pulmonary phthisis, 1 of doubtful tuberculosis, 1 of tuberculosis of the pleura, 1 of hip-joint disease, and 2 of lupus. The doses used were from $\frac{1}{2}$ to 5 milligrammes; undoubted reaction took place in the cases of lupus and in that of doubtful tuberculosis, but it was less marked in the phthisis cases. In 1 case it was not till twenty-four hours after the injection that reaction showed itself: Bozzolo thinks such delay may possibly explain the fatal accidents that have occurred, the remedy accumulating in the system while further injections are made in order to bring on the reaction which is "hanging fire." Rigors occurred in only 3 cases, and in 3 there was an extensive scarlatiniform eruption. There was generally marked swelling of the spleen, and in all the cases there was at first loss of weight, in one instance to the amount of nearly 5 kilogrammes: the more intense the reaction the greater was the loss of weight. As concomitant symptoms, albuminuria, acetonuria, epistaxis, and pain in the chest were observed. In a patient who had previously had a testicle removed for tuberculous disease the injection caused cough and hæmoptysis, though no pulmonary lesion had been detected nor any bacilli found; acute pain was also felt in the scrotal scar, which broke down, giving issue to pus containing bacilli. As regards the further therapeutic results of the treatment, Bozzolo can only say that one of the lupus cases shows notable improvement.

At the same meeting Professor Forlanini (*ibid.*) reported on the results of the treatment as observed in seven patients. One of these was in a most advanced stage of phthisis of both lungs: the disease had lasted nearly sixteen years. Five injections (from 1 up to 5 milligrammes) were given, but "up to the present with absolutely no effect of any kind whatever." Another was a young man, aged 22, with incipient phthisis of the right lung. The injections were begun with a dose of 1 milligramme, and were gradually increased in strength up to 5 milligrammes. Epistaxis occurred several times during the reaction. Locally, after the first injections, there was only an exaggeration of the catarrhal phenomena; after the 5-milligramme dose the infiltration, which was in the right supraclavicular region, seemed to diffuse itself so as to occupy almost the whole front part of the chest, there being at the same time dulness over the whole of the back. The auscultatory signs did not correspond with those yielded by percussion; the respiratory murmur was everywhere much diminished, but only here and there could bubbling or dry *râles* be heard. These conditions disappeared on the subsidence of the reaction. Forlanini is at a loss how to explain the physical signs, except on the supposition of a diffuse swelling of almost the whole parenchyma of the affected lung and bronchial tubes, without any collection of liquid in the latter. When the reaction ceased the greater part of the lung returned to its former condition, but the physical signs seemed to Forlanini to indicate "slight but definite improvement." The third case was that of a girl with extensive, but not advanced, phthisis of one lung, and tuberculous disease of the intestine; the latter condition was established by the presence of tubercle bacilli in the fæces. Seven injections (from 1 up to 7 milligrammes) caused no general reaction, nor was there any sign of reaction in the lungs, but there was severe abdominal pain, with profuse diarrhœa. Precisely similar effects were seen in the case of a woman with phthisis of both apices. Another case was that of a boy, aged 16, who had suffered from hip-joint disease since the age of 3, and in whom resection had been performed at the age of 6; he is now the subject of tuberculosis of the left testicle. Injections of Koch's fluid (from 1

up to 6 milligrammes) caused local reaction, not in the resected right hip, but in the glands of the left groin, of both axillæ, and of the neck, in which no disease had previously been suspected to exist. Forlanini points out that whereas before the treatment was commenced only very limited and deep fluctuation could be felt in the epididymis, after the injections were begun the purulent collection increased so rapidly that it had to be opened.

(69) Transfusion of Defibrinated Blood and Common Salt Solutions.

Dr. J. Marshall (Hoppe-Seyler's *Zeitschr. f. phys. Chem.*, November, 1890) says Bergmann has recommended the employment of a 0.6 per cent. solution of sodic chloride for transfusion; but it is not easy to understand what other purpose this can fulfil than the mechanical filling of the blood vessels, as the respiratory elements are wanting in the fluid. Landerer, on the other hand, employed blood for this purpose, its tendency to coagulate being hindered by the addition to it of a 0.6 per cent. sodic chloride solution saturated with carbonic acid. In this way, in spite of the risk due to the carbonic acid, very successful results were obtained. Landerer's experiments further showed that it is not necessary to introduce into the system the original number of the lost corpuscles in order to attain the wished-for result. Thus, according to him, the loss of two litres of blood could be rendered harmless by transfusing into the circulation a mixture of 400 cubic centimètres of blood and 1,600 cubic centimètres of a weak sodic chloride solution. In Dr. Marshall's experiments the general method employed was to bleed a rabbit that had been anæsthetised with ether until convulsions set in as the result of the loss of blood, and then to transfuse into it an equal volume of fluid consisting of one part of the defibrinated and filtered blood of the same rabbit, and nine parts of a 0.6 per cent. sodic chloride solution. The percentage of the hæmoglobin, as well as the number of red corpuscles in a cubic millimètre of blood, were estimated before and after the operation, and for several days subsequently. One only of these experiments will be here detailed, as the results varied very slightly in the rest. Rabbit: weight before operation, 2,270 grammes; blood removed, 38 cubic centimètres. Into the jugular vein 38 cubic centimètres of the mixture of defibrinated blood and sodic chloride solution were transfused in five minutes. Before the operation about 4,500,000 corpuscles were present in 1 cubic centimètre, and 13.4 grammes oxyhæmoglobin in 100 cubic centimètres of blood. After the operation the numbers were respectively 3,900,000 and 10.5 grammes. At the end of a week the number of the corpuscles was completely restored, while it was not until after twenty-three days that the hæmoglobin was raised to the same percentage as before the operation.

PHYSIOLOGY.

(70) Action of Methylene Blue on Living Nerve Fibres and Cells.

Since Ehrlich, in 1886, introduced methylene blue as a reagent for staining nerve fibres and nerve cells *in vivo* several researches on this subject have appeared. The following are the most recent: A. S. Dogiel, *Archiv f. mik. Anatomie*, xxxv, p. 305; Smirnow, *Archiv f. mik. Anat.*, xxxv, p. 407; Feist, *Archiv f. Anat. und Physiol.* Heft 1 and 2, 1890. The original method of Ehrlich was to inject the solution of methylene blue into the blood vessels of the animal. After a time it was found that the nerves and their terminations were stained blue. It suffices, however, to tease a part of an organ in a very dilute solution of the staining reagent ($\frac{1}{15}$ to $\frac{1}{25}$ per cent.), and in less than twenty minutes the axis cylinders of nerve fibres, the terminal nerve fibrils, and the nerve cells, should these be present, are stained. The blue colour appears when the tissue is freely exposed to the air, so that if the blue be injected into the lymph sac of a frog, the nerves, after an hour or two hours, may, when first exposed, not be blue, but after they are exposed to the air they assume a deep blue colour. The blue colour remains only a comparatively short time, but it may be "fixed" by placing the tissue in Hoyer's picro-carmine, or in a saturated solution of iodine in iodide of potassium, or in picrate of ammonia. Dogiel's research deals with the terminations of nerves in the muscles of amphibia and reptiles. So excellent is the method that the end-plates in the latter animals and the subsarcolemmal characters of the terminations of the nerve fibres are far more readily stained than by any of the gold chloride methods. Every muscular fibre possesses two or three nervous apparatuses, but, although there be several endings, these are usually supplied by one nerve fibre. Dogiel confirms the observation of Kühne that the hypolemmal terminations of the nerve fibre are only in contact with the sarcous substance. Smirnow deals with the nerve cells of the sympathetic ganglia in amphibia. It has long been contended that the pyriform sympathetic nerve cells of the frog possess a straight and a spiral process. Methylene blue affords a ready means of demonstrating the existence of the spiral process, whose existence has been denied by some observers. It arises by a number of pericellular fibres under the sheath of the cell; these unite to form a thicker fibre, which forms several turns round the straight fibre, and then the two fibres pursue opposite courses. The spiral fibre alone is tinged by the blue. All the spiral fibres in any nerve run in one direction, and the straight fibres in the opposite direction. It appears that the spiral fibres run in a peripheral direction. These peripheral fibres either unite with peripheral fibres from adjoining cells or they pass to muscles or to blood vessels, and it may be that some of the fibrils from one cell do all three.

(71) Cholesterin.

K. Obermüller (Hoppe-Seyler's *Zeitsch. f. physiol. Chem.*, November, 1890) says that of the homologues and isomers of cholesterin present in the animal and vegetable kingdom isocholesterin is the only one that has been accurately investigated and sharply distinguished from cholesterin itself. The evidence as yet is not decisive as to the adoption of the formula $C_{26}H_{44}O$, or $C_{27}H_{46}O$. The author's analyses of a series of salts of cholesterin gave the following: The potash salt corresponded more closely to the formula $C_{27}H_{45}OK$ than to $C_{26}H_{43}OK$; that of cholesterin propionate to $C_{27}H_{45}COOC_2H_5$; that of the benzoate to $C_{27}H_{45}C_7HO_2$; and that of the bromocholesterin propionate to $C_{27}H_{45}Br.C_3H_5O_2$.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(72) Muscular Atrophy Secondary to Joint Disease. MM. S. Duplay and M. Cazin (*Archives Générales de Médecine*, January, 1891) first review the various theories of mechanical stretching, functional inactivity, propagation of the inflammation to the muscles, and vasomotor change put forward to account for this condition all of which are unsatisfactory. Most have accepted the reflex theory of Vulpian, namely, that the irritation of the ends of the articular nerves tells back on the spinal centres, and thence upon the centres of origin of the muscular nerves. This accounts well for the rapid development of the atrophy, the absence of the reaction of degeneration, and the simple atrophy found in the muscles. In one case M. Klippel found degenerative atrophy in the muscles and changes in the corresponding anterior horn, but this is altogether exceptional. One may believe with Charcot that there are two kinds of this muscular atrophy—one functional, with simple atrophy; the other more serious, with organic lesions in the cord and degenerative atrophy in the muscles. The authors then recount their experiments on dogs and rabbits. The inflammation was set up by injecting nitrate of silver or tincture of iodine into the joint or by the actual cautery. The muscles weighed always showed a loss in one or two instances as much as 40 per cent.—usually in proportion to the duration of life (4 to 51 days). In Experiment 10, the inflammation was set up by wrenching the joint and the animal was allowed to live for a year. Histological examination showed a simple atrophy in the muscles, and the nerves were all healthy except the articular branches. Here there was a diminished number of nerve fibres, a few of which were degenerate, the axis cylinders having disappeared. The perineurium showed inflammatory change, but the endoneurium was unaffected. In Experiment 10, however, the muscular branches were also diseased. The roots of the nerves were healthy, and no change was found in the spinal cord. The microscopic examination was most thorough and exhaustive, similar parts from the healthy and diseased sides being compared; thus, the only lesion was that in the articular nerves. This agrees thoroughly with the doctrine of Vulpian. The predominance of the change in the extensor muscles may be explained by the relation of the articular nerves to the nerves supplying these muscles. This cannot be said to take place without the intervention of the cord—and, indeed, a connection between the centres of the articular and muscular nerves in the cord may be assumed. The following conclusions may be drawn: (1) the atrophy of the muscle fibres is a simple atrophy; and (2) this atrophy can only be explained by a simple reflex, set up by the irritation of the terminal filaments of the articular nerves. The pathogeny clearly pointed out by Vulpian has thus been minutely demonstrated by the facts of morbid anatomy.

(73) Infective Jaundice. M. Girode (*Archives Générales de Médecine*, January, 1891) says that the idea of icterus gravis being an infective disease is based on clinical and pathological analogies, such, for instance, as the fever, typhoid state, change in certain organs and the condition of the blood. That it is not necessarily of microbic origin is evident from cases of acute phosphorus poisoning. To establish the infective theory, the organism must be found and its behaviour and specificity ascertained. Only a few investigations have been made, and among others those of MM. Boinet and Boy-Teissier, who examined the blood from a patient, and found micro-organisms single, double, and in chains. These organisms were also present in the organs after death. M. Girode then relates the following case: A woman, aged 32, four months pregnant, was seized with shivering, fever, vomiting, and diarrhœa. On the third day she aborted; on the 4th she was jaundiced and semi-unconscious. The stools were yellow ochrey, and the urine contained albumen. Temperature 40.3° C. On the fifth there was hæmatemesis and epistaxis. No special uterine symptoms. On the sixth petechial eruption with bullæ; on the seventh deep coma and death. The diagnosis of icterus gravis could not be doubted, but what was its nature? The blood examined during life showed an increase in white cells, and numerous micrococci, single, double, and in masses. Cultivation produced colonies of the staphylococcus aureus. Thus the blood was infected with a pyogenic organism. The same results were obtained by careful experiments with the urine and with fluid from the bullæ. Guinea-pigs and rabbits inoculated died rapidly, with signs of general infection, and their blood contained staphylococci. The chief pathological changes in the above-mentioned case were: (1) many miliary abscesses in the heart, lungs, and kidneys, and also in the walls of the uterus; (2) enlargement of the spleen; the liver was also enlarged and its structure indistinct; (3) colonies of staphylococci in the infiltrations of leucocytes, in the miliary abscesses, and in the walls

of the vessels. The interior of the uterus showed no noteworthy change. The two chief facts in the case were the symptoms of icterus gravis and the infection with the staphylococcus. M. Girode does not think it was a case of pyæmia with jaundice. The clinical picture was certainly not that of pyæmia. There was nothing in the uterus to set up pyæmia. If this be granted, the doctrine of infection, disentangled from narrow anatomical terms, such as acute yellow atrophy and disintegration of the hepatic cells, explains many observations, at first sight very unlike each other.

(74) Insanity as a Symptom of Bright's Disease.

Dr. Alice Bennett (*Alienist and Neurologist*, October, 1890) draws attention to the fact that renal disease is much more common in the insane than is generally supposed. Her experience has led her so far as to pronounce that uræmic poisoning is one of the most frequent causes of insanity, and that the most prominent and constant symptom of the toxic action on the cerebral cortex is some form of mental pain, ranging from simple depression, through all grades and varieties of melancholia, to acute delirious mania. Further, the motor centres are specially liable to be affected, as shown by the constant restlessness, less often by convulsions, or choreic or cataleptoidal states. In fifty-nine patients under her care at the Morristown Lunatic Hospital, she found albumen or casts in the urine, or *post-mortem* evidence of kidney disease. Short records of these cases are included in her paper.

(75) Visceral Neuritis.

Dr. J. Ferguson contributes brief notes (*Alienist and Neurologist*, October, 1890) of a case in which this affection developed during convalescence from *la grippe*. Paroxysms of agonising pain (locality not stated) were the chief symptoms; they were most frequent and severe in the morning, and were wholly beyond relief. Death occurred after ten weeks of great suffering. The nerves and ganglia throughout the abdomen were found to be in a highly inflamed condition; marked degeneration in some of the nerve tissue was also seen.

(76) Tumour of the Optic Thalamus.

Dercum (*Journal of Nervous and Mental Disease*, 1890, xv, p. 506) reports the case of a gliosarcoma growing in the left thalamus of a man aged 39. His symptoms, which lasted two years, began with giddiness and headache; then followed motor and sensory right-sided paralysis, without any affection of the face. There was also a peculiar athetotic kind of movement of the right arm and increase of the patellar reflex on the right side. There was right-sided lateral hemianopsia; the left eye had a considerably greater diminution of the field of vision than the right, and an evident Wernicke's pupil reaction, that is to say, there was inactivity of that half of the pupil on the same side as the hemianopsia.

(77) A Case of Sporadic Cretinism.

Dr. Thomson (*Edin. Med. Journ.*, September, 1890) showed at a meeting of the Royal Medico-Chirurgical Society of Edinburgh a female child, aged 19 months, in whom cretinism was developed. The most striking feature was the œdematous, almost myxœdematous, state of the whole of the right side of the patient's body. The face, on the contrary, was somewhat œdematous on the left side. The abdomen of the child was large and prominent. The thyroid gland could not be felt, and there was great increase in the amount of adipose tissue in the axillary and subclavicular spaces, the mental condition being weak and strange.

SURGERY.

(78) Ligature of the Saphena Vein in Cases of Varicose Veins.

Professor Trendelenburg, of Bonn, in a contribution to the last number of the *Beiträge zur klinischen Chirurgie* (Tübingen) advocates double ligature and division of the large saphena vein in the treatment of varicosity of the lower limb involving both the trunk and branches of this vessel. In some remarks on the pathological anatomy of varicose veins it is pointed out that the most prominent and dilated portions of the affected vessel are found below, and not, as is generally supposed, above the valves. The walls of the vein, being weaker here than at other point, yield most readily to the pressure of the blood when the valves cease to act. According to Trendelenburg, most of the blood which fills the dilated trunk and branches of a varicose saphena vein is derived from above, and has descended from the iliac veins and the vena cava, and but a small portion of it comes from the capillaries of the foot and leg. When the subject of varicose veins exchanges the horizontal for the vertical position a large quantity of blood at once descends from the large veins of the abdomen into the dilated veins of the lower extremity. It is this free downward flow of blood along large and dilated vessels deprived of valves that causes the profuse and dangerous hæmorrhage so frequently produced by a breach of the surface of the leg when in a condition of varicosity. The conclusion that the troubles and dangers of those suffering from varicose veins of the lower limb are due for the most part to the fact that the varicose branches of the great saphena, in consequence of associated dilatation of the trunk of this vein, are no longer separated from the vena cava by valves, has led Trendelenburg to treat varicosity by permanently obstructing the saphenous trunk at one point with the view of preventing the descent of blood from the abdomen, and thus relieving the veins of the leg and foot from the abnormal pressure. After obstruction of the flow of blood through the main trunk of the great saphena, the venous circulation will be maintained by communicating branches between the superficial and deep veins. Reference is made to a series of cases in which good results followed such treatment, which consists in exposure of the vein near the saphenous opening, in the application of two catgut ligatures, and in the division between these of the vessel. It is acknowledged in this paper that occlusion of the great saphena is by no means a novel plan of treatment in cases of varicosity of the lower extremity. It was practised by Paulus Ægineta, and advocated by Ambroise Paré, and at the end of the last century Sir Everard Home performed this operation in twelve cases with very unfavourable results.

(79) Jejuno-Ileostomy.

In the *New York Medical Journal* of December 20th, 1890, Dr. Thomas H. Russell, of Yale Uni-

versity, reports a case of complete and permanent recovery by jejuno-ileostomy with Senn's bone plates in intestinal obstruction, due to intussusception and sloughing of the intussusceptum. The patient was a boy aged 15, who, after an attack of acute obstruction, had been confined to bed for ten months with increasing debility and emaciation, and recurring violent and painful peristalsis. Soon after the primary attack of obstruction a soft fleshy mass had been noticed in one of the stools. Dr. Russell performed laparotomy on August 17th, 1889, and found the obstruction near the junction of the upper and middle thirds of the small intestine. Here the intestine was so extremely contracted that its diameter was not more than a quarter of an inch, and it was firmly bound down by a strong band of old adhesion to the wall of an adjacent loop of intestine. As the obstruction was evidently an old one, and it was impossible to restore the calibre of the gut at that point, an intestinal anastomosis, as suggested by Dr. Senn, was established. The recovery was rapid, perfect, and permanent. A large normal stool was passed on the fifth day, and the bowels were afterwards moved regularly. Fifteen months after the operation the boy was in good health, and was strong and able to do work. This, Dr. Russell believes, is the most successful case of the kind that has hitherto been recorded. The commencement of the disease, he believes, was an intussusception. The soft fleshy mass passed in one of the stools about a month afterwards was very probably the intussusceptum, which had sloughed away, and the subsequent stenosis and adhesions may be regarded as results of this process.

(80) Resection of the Head of the Femur in Irreducible Luxation.

A CASE has recently been reported by M. Ricard to the Société de Chirurgie of Paris, in which the following operation was performed for the relief of the pain and lameness caused by an irreducible dislocation, of eight months' standing, of the head of the femur on the dorsum ilii. The head of the femur, having been exposed by a posterior incision, was excised, and then, after the acetabulum had been cleared by dissection of cicatricial and fibrous structures, the neck of the bone was laid in this cavity. The patient made a good recovery, and at the time of his discharge was able to walk well. In a report on this case, M. Nélaton expressed himself as being very well satisfied with the results of this treatment, which, in his opinion, is superior to simple arthrotomy.

MIDWIFERY AND DISEASES OF WOMEN.

(81) Danger of Vaginal Injections.

DR. ROULIN (*Journal de Médecine de Paris*, December 14th, 1890) describes three cases where women suffered from severe symptoms after the use of vaginal injections, administered by themselves when in a sitting position. The first used the douche can, fixing it rather high on the wall. Immediately after the injection violent hypogastric and lumbar pains set in, followed by vertigo and vomiting. The abdomen was not sensitive on pressure, though pain was intense. Metrorrhagia followed and lasted for two or three days, but the pain ceased in twenty-four hours. The second case was almost precisely similar, excepting that the patient had used a hand syringe, and the symptoms were less severe. The third case also used a hand syringe. She felt a pain like a blow across the belly, but continued the injection; when it was ended lumbar and abdominal pains came on severely, with rigors and chattering of the teeth, but no vomiting. The symptoms recurred on the next day when the patient got up, but on the third day she felt well and free from pain. Dr. Roulin employs laudanum enemata for these cases. The cause of the pain is obscure. The fluid rushing into the uterine cavity may act as a foreign body and set up conditions sometimes provoked by catheterism. The admission of air into the uterine sinuses has been, according to Depaul, the cause of sudden death during douching of the cervix to produce abortion. Dr. Roulin believes that water may have entered in his cases. He insists that patients must be taught how to administer vaginal injections to themselves. The patient must lie on her back and only introduce the nozzle for a short distance; nor must she play too strong a jet of fluid into the vagina.

(82) Arsenite of Copper for After-Pains.

DR. BOARDMAN REID (*N.Y. Times and Register*, December 6th, 1890) has employed cupric arsenite for relief of the pains following labour. A woman, aged 32, had persistent and severe after-pains during her fifth confinement, which entirely resisted all the usual remedies. The trouble had gone on some five days, and was seriously menacing the patient by interfering with her rest and nutrition. Dr. Reid remembered that, in his hands, arsenite of copper in minute doses had proved valuable as an antispasmodic in cholera morbus and colic. Deeming, therefore, that the salt might be of service in the spasms of uterine muscular tissue which caused the after-pains, he ordered it in doses of one-thousandth of a grain every half hour. Relief was rapid and complete. In a second case relief was even more rapid; morphine had, as in the first, been administered with unsatisfactory results. Two tablets containing one two-hundredth of a grain each were dissolved in a small half-tumbler of water, and one teaspoonful was given every half hour. In a third case, where the salt was given pure in a dose of the same strength as in the first case, relief was also prompt; in this instance opiates were contraindicated owing to the condition of the patient's kidneys. Another case, under the care of Dr. W. B. Stewart, was cured of after-pains by doses of the pure salt. Two other cases, however, received no benefit from arsenite of copper. The first was completely relieved by morphine, the second by chlorodyne. In these cases, Dr. Reid observes, the tablets of the arsenite administered to the patient were new samples, not from the manufacturer who supplied the salt in the other cases. It was found almost impossible to make them dissolve, and this might have accounted for the failure of the remedy in these cases.

(83) Congenital Hydrocele in Women.

SMITAL, of Gray (*Centralbl. f. Gynäk.*, Dec. 20th, 1890), has collected 41 cases of this rare affection, and noted them in the *Wiener klin. Wochenschr.*, Nos. 42, 44, 1889. He now adds another instance under his own observation. A female servant aged 36, had noticed for six years that when hard worked a small swelling developed in the right groin; it gradually attained the size of a walnut. No inflammatory complications ever occurred, but all attempts at reduction failed. In February, 1889, she was normally delivered of her first

child; the growth thenceforward increased rapidly till it became as big as a goose's egg. On June 28th, 1889, after hard work, a swelling appeared in the left groin, followed by symptoms of strangulation. The hernia—as it proved to be—was reduced in hospital. Dr. Smital then examined the swelling on the right side. A large elastic tumour occupied the upper part of the right labium majus. It was broader below than above; its long axis was continuous with that of the right inguinal canal. It was irreducible, and there was no resonance on percussion nor impulse on coughing. The cyst—as it proved to be—was exposed by an incision in its long axis. It was dissected away from its relations; posteriorly and internally it was connected with the round ligament. The pedicle of the cyst entered the inguinal canal; it was tied and the cyst was cut away. Then Dr. Smital found that a cæcal prolongation of the peritoneum, like the finger of a glove, extended into the pedicle of the cyst. The wound was drained with strips of iodoform gauze, and its edges united by a continuous suture. It healed by first intention. The collapsed cyst was two inches and a half long. In its lower part its inner wall was smooth. Several trabeculæ passed across its cavity, which was completely cut off from the peritoneal process by a thin membrane. The fluid from the cyst amounted to about 6 ounces; it was clear, serous, and neutral in reaction, its specific gravity 1015, and it contained 3.5 per cent. albumen. Had there been inflammation of the congenital hydrocele as well as strangulated hernia on the left side, Dr. Smital considers that the hydrocele might have been diagnosed by its shape, for it was nearly always broadest below and conspicuously narrower at the external ring, and also by the right canal being empty, although local peritonitis might be present. According to current surgical principles, Dr. Smital contends that a congenital hernia should always be dissected away, and only when its walls are intimately adherent to surrounding structures should it be merely incised and its cavity packed with dressing.

(84) The Induction of Premature Labour.

Professor Balandin (*Annales de Gynécol.*, October, 1890) read at the Berlin Congress a thesis on forty-three induced labours, undertaken by himself with the sole assistance of an experienced midwife. Strict antiseptic precautions were enforced, and the two methods habitually employed for inducing labour were the introduction of the bougie and puncture of the membranes. As auxiliary measures, electricity and douching were practised. Injections were thrown up between the uterus and the ovum, either 2 per cent. boric acid solutions being used, or else sterilised water at a temperature of about 100° F. The bougie often acted but slowly, after several days or weeks, or even not at all. Its efficacy appeared to diminish with the rigour of the antiseptic precautions. On the other hand, it never set up febrile reaction, nor caused any other complications. After puncture of the membranes, uterine contractions did not invariably set in. This was mostly the case when the uterus was but slightly excitable, and had relaxed parietes. In one case, intermittent flow of the waters continued for eight days after puncture, without contractions setting in. In an instance of this kind, more radical courses were needed. Dr. Balandin usually dilated the cervix with his finger, turned by the combined external and internal method, drew down a foot, and slowly extracted the fœtus. Not a single mother was lost. No reaction even followed the turning cases. In the last series of twenty cases, nineteen children were saved.

(85) Prolonged Lactation: Long Interval between Pregnancies.

M. Loviot (*Archives de Tocol.*, November, 1890) read before the Obstetrical Society of Paris notes of a case where a woman, aged 39, had borne her first child when 23 years of age and suckled it for thirty months. During that long space of time no period occurred. Recently, sixteen years after the birth of the first child, she was safely delivered of her second, which she was able to suckle.

PHARMACOLOGY AND THERAPEUTICS.

(86) Koch's Treatment: General Results.

In a supplement to the December number of the *Bristol Medico-Chirurgical Journal*, Drs. Markham Skerritt and Barclay Baron give an account of their observations of Koch's treatment during a recent visit to Berlin. They reached the German capital on December 5th, and stayed there until December 13th. They saw a very large number of cases presenting the results of treatment under the most varied conditions: at the Charité, under Leyden, Fräntzel, and Gerhardt: at the Lazarus Hospital, under Langenbuch: and in the clinics of von Bergmann, B. Fraenkel, Cornet, and Levy. They also had an opportunity of seeing Koch's original cases at a demonstration given to the Hufeland Society, by Professor Paul Guttmann, at the Moabit Hospital. A full description of the method of procedure, and of the immediate effects of the injections in different forms of tuberculous disease is given. The types of reaction are classified as follows: (1) Typical, marked reaction to small early dose, diminishing reaction to the same or even to increasing doses. (2) Increased reaction to the same or a diminished dose. (3) Prolonged or deferred reaction. (4) Effect of reaction on hectic; (*a*) *favourable*, when there is a tendency to the substitution of the reaction type for the hectic type, and (*b*) *negative*, when the hectic persists unaffected by reaction. (5) Fever originated by injection. These various types are illustrated by cases and charts, and the cause of the diversity of action of the remedy in different cases is discussed. With regard to the results of the treatment in tuberculous disease of bones and joints, Drs. Skerritt and Baron say that the surgeons informed them that they had never seen, under any treatment, any approach to the rapidity with which improvement took place under the injections. They themselves saw cases where sinuses in connection with diseased bones and joints, which had long remained open in spite of all previous treatment, rapidly and completely closed. With regard to glands it is pointed out that the usual local change is swelling and tenderness during reaction, followed by gradual diminution in size. Suppuration does not commonly occur. In the larynx the local reaction may produce increase of pain in swallowing, increase of cough and expectoration, a feeling of dryness and constriction, greater hoarseness, perhaps aphonia, and sometimes local pain. Contrary to what the authors anticipated, they found that, as a rule, no serious obstruction to

breathing was produced, and in many cases none at all. With regard to the lung, they state that little can be said as to improvement in physical signs; "in some cases *râles* and dulness are said to have diminished, and bronchial breathing to have been replaced by vesicular, but as yet time is too short to allow of decided evidence on this point." They add that Koch claims to have completely cured two phthisical patients, with one of whom they had the opportunity of speaking. They also saw a patient in whom, during three weeks' treatment, the disease markedly extended in both lungs, and a cavity formed; dyspnœa, absent before, made its appearance; bacilli, previously few in number, became numerous, and the sputum was increased in amount. One of the cases seen by them, in which there was most marked lung reaction, had been examined again and again without the detection of a single suspicious sign. They also saw many patients in whom the injection revealed in very varied parts previously unsuspected tubercle. In no case, therefore, even the least suspicious, should an injection be made without the most careful and thorough preliminary examination, and the greatest caution should be observed as to dosage. In tuberculosis of the lungs and larynx the initial dose should be one milligramme, which is gradually increased, one or more "fever free" days being allowed between the injections. For purposes of diagnosis absolute reliance cannot be placed upon the result of a single injection. Skerritt and Baron saw a case of established phthisis, with bacilli, in which no reaction occurred until the dose had reached one centigramme, and they were informed that this was by no means a solitary instance. On the other hand reaction occurred in patients who otherwise presented no evidence whatever of tuberculosis; as, for instance, in a girl with post-scarlatinal nephritis. They sum up as follows:—"The evidence at present at our disposal warrants the conclusion that the beneficial effects of the remedy is undoubted in tuberculosis of the skin, bones, joints, glands, and throat. With regard to pulmonary phthisis, whilst there is good reason to hope that in suitable cases a most satisfactory result may be obtained from this treatment, sufficient time has not as yet elapsed to allow of the formation of any accurate estimate of its value."

(87) Koch's Remedy in Surgical Tuberculosis.

Dr. Eugen Hahn reports (*Deutsche med. Wochen.*, January 1st, 1891) 59 cases in which Koch's treatment was tried in the Friedrichshain Hospital at Berlin, from November 21st up to December 23rd. The injections given amounted in all to 500. Hahn found Koch's statements as to the action of the remedy confirmed. The cases treated embraced various forms of surgical tuberculosis, especially bone and joint disease, glandular affections, and lupus. Excluding 27 cases which had been too short a time under treatment, or were otherwise unsuitable to form the basis of a critical estimate of the value of the remedy, the results in the remaining 32 were as follows: 16 were considerably, and 12 appreciably, benefited; in 4 no change was perceptible. In cases of tuberculous disease of the bones and joints the results were better when sinuses existed than in others in which there was neither sinus nor surgical opening. In one case, in which the knee-joint was resected, reaction, which had been very powerful before the operation, entirely ceased after it. In a case of sarcoma of the larynx, very marked local and general reaction followed the injection. Dr. H. Schmid reports (*ibid.*) the effects observed in 60 patients in the Bethany Hospital at Stettin. Four hundred injections in all were given, and the results so far are said to be satisfactory, and to justify the best hopes for the future. Professor Socin of Basel (*Schweiz. Corresp. Bl.*, No. 1., 1891) says that having tried the method in 20 cases, his general impression at present is one of doubt whether Koch's fluid, in spite of the wonderful precision of its physiological action, is really to be regarded as a remedy. He especially desiderates accurate reports of experiments with the fluid on animals, as by means of these alone can the necessary information as to the internal effects of the treatment be obtained. He believes that in most cases of surgical tuberculosis the knife will still, as heretofore, be the *ultima ratio* of the practitioner, but at the same time he thinks there can be no doubt that the new method will enable surgeons to operate with greater certainty and with more satisfactory results.

(88) Koch's Treatment in Skin Disease.

On January 8th, M. E. Vidal presented to the Société de Dermatologie, in the name of the committee appointed to investigate the subject, a preliminary report on the results of Koch's treatment as observed in the Hôpital Saint Louis (*Sem. Méd.*, January 14th, 1891). The number of patients under treatment is thirty-two. The first injections were made on November 20th. In most of the cases the number of injections given has been from four to six, an interval of from four to eight days being allowed between them. In the present communication M. Vidal confines his attention to three points, namely, the irregularity of the general reaction, its dangers, and the precautions necessary to prevent or minimise these dangers. With regard to the first point, he said the reactions as seen by them were far from having the regularity of type described by Koch. There was no constant relation between the local and the general reaction. In several patients they saw intense reaction follow a dose of half a milligramme, even after several injections. The duration of febrile reaction was also very irregular. As a rule, defervescence occurred within twenty-four hours, but it was quite common to see the temperature go up again in the afternoon of the following day, sometimes reaching a maximum degree higher than that of the first day. In some cases this afternoon rise took place on the third and fourth days also. With regard to the dangers of the treatment, M. Vidal points out that the fluid is a very energetic pyrogenic agent, which sets up congestion and inflammation in the whole economy. This effect, however, is so unequally distributed that it is difficult to foresee what organs will be attacked and what intensity of reaction will be displayed. Not only are the effects different in different patients, but in the same patients at different times. Organs previously diseased in any way, even though free from all trace of tubercle, are particularly liable to become the seat of congestion, and even viscera to all appearance perfectly healthy may be greatly engorged. Congestion of the bronchial tubes and of the bases of the lungs is frequent during the first two days. Several times the members of the committee found symptoms of myocarditis and endocarditis, enlargement of the spleen, albuminuria, and in

three cases hæmaturia which lasted three or four days. Twice they observed a swelling like erysipelas attack the cheek, the forehead, and a portion of the scalp in women suffering from lupus, who had already had erysipelas. The condition lasted six days in one case and five days in the other. No streptococci were found in the blood, and attempts at cultivation proved fruitless. With regard to the precautions to be observed in carrying out the treatment, the committee gradually diminished the initial doses, and lengthened the interval between the injections. They begin with half a milligramme, increasing the dose by half a milligramme at a time, until they get a reaction in which the temperature rises to 39° C. They keep to the same dose as long as that temperature is reached. M. Vidal promises a full report from each member of the committee for the next meeting of the Society.

(89) Koch's Treatment: Experiments on Cattle.

Professor Bollinger, of Munich, gives (*Münch. med. Wochenschr.*, January 13th, 1891) a summary of some experiments with Koch's fluid made in the Veterinary Institute at Dorpat by W. Gutmann on three tuberculous cows. The disease was diagnosed partly by physical examination, partly by the presence of tubercle bacilli in the bronchial mucus and in the milk, and partly by changes in the lymphatic glands. Relatively large doses were employed, 0.1 g. being injected into one animal, 0.2 g. into a second, and 0.3 g. into a third. The injections were made behind the shoulder-blade. The temperature was taken every hour on the day of the injection and the following day and night. In all three animals the temperature began to rise about eleven hours after the injection. The reaction corresponded to the amount of the remedy exhibited, the maximum attained in the first animal being 40° C., in the second 40.8°, and in the third 41.7°. The duration of the fever in the three cases was four, nine, and ten hours respectively. In the first cow another injection of 0.3 g. was given four days after the first; reaction came on in from eleven to twelve hours and lasted four hours. In all three animals during the febrile period there was some difficulty of breathing and loss of appetite, but the next day they took their food well and rumination was active as usual. No rise of temperature followed the injection of 0.3 g. in two healthy bulls which were used as "control" subjects. Twenty-four hours after the injection they were slaughtered and all the organs were found to be perfectly normal. Gutmann, therefore, concludes that Koch's remedy is a most valuable aid to diagnosis in the case of cattle suspected of tubercle. In this view Professor Bollinger agrees with him.

PHYSIOLOGY.

(90) The Alkalinity of the Blood when concentrated by the Action of Large Doses of Sodic Sulphate.

J. Swiatecki (Hoppe-Seyler's *Zeitschr. f. physiol. Chem.*, November, 1890) discusses this question. In 1850 C. Schmidt made the observation that in the algid stage of cholera the blood loses its alkalinity so markedly that in many instances it may even redden blue litmus paper—an observation that has often since been confirmed, as, for example, by the French Commission during the cholera in Egypt in 1883. Mya and Tassinari, who have investigated the different diseased processes which affect the alkalinity of the blood, have also studied its behaviour under the influence of certain purgatives, such as infusion of senna, magnesia, and sodic sulphate, but without obtaining any positive results. The author accordingly pursued in the University of Warsaw a series of researches upon dogs with Glauber's salts, and as the result of them he concludes that the alkalinity of the blood increases when its specific gravity is raised by means of large doses of these salts; that this rise can be explained by the increased transudation of acids, as well as alkalies, from the blood into the intestine in accordance with the laws of osmose; and that the attempt to explain the increased alkalinity after the use of mineral waters exclusively through the passage of basic salts out of the intestine into the blood is not satisfactory.

(91) Electromotive Phenomena produced by the Respiratory Movements.

That the heart shows a diphasic variation of its electro-motive force during systole has been substantiated by numerous observers. Hamburger, of Utrecht (*Centralblatt f. Physiol.*, Band iv, p. 129, 1890) on applying electrodes at the base and apex of the heart respectively, found that with a capillary electrometer he obtained not only the variation of the electromotivity from the contracting heart, but that with every artificial inflation of the lungs the meniscus of mercury of the electrometer showed an increase of negativity. This varied with the respiration, and could be obtained when one of the electrodes was placed on other parts of the body. On raising the heart so as to prevent the friction between it and the lungs, the oscillations vanished. When the heart ceased to beat, artificial respiration gave relatively large excursions of the electrometer. It was shown that the lungs also exhibit electrical phenomena by being rubbed against the heart. If the heart and lungs be excised, and both allowed to die, on placing one electrode on a lung and the other on the heart and performing artificial respiration there were marked variations of the electrometer. It is evident, therefore, that besides these well known electromotive phenomena connected with the heart, there are variations of electromotivity due to purely mechanical causes, namely, the friction between the lungs and the heart or the pericardium.

ANATOMY.

(92) Innervation of the Thenar Eminence.

In the *Bulletins de la Société Anatomique de Paris* Dr. Lejars gives an account of the nerve supply of the thenar eminence. After remarking upon the anomalies of nerve supply disclosed by accidental divisions of nerves, and especially that after section of the median the thenar eminence retains its sensibility, and the thumb retains its power of abduction, he goes on to quote the current accounts of the nerve supply of the eminence. This is usually considered to come from the terminal branch of the musculo-cutaneous, the radial only supplying the dorsum of the thumb and fingers. However, if the anterior branch of the radial be exposed at the point where it crosses the tendons of the "anatomist's snuff box" it will be found at the level of the base of the first metacarpal bone to divide into three branches; the most internal goes to the

contiguous sides of the thumb and index finger, the middle one to the radial side of the dorsum of the thumb, and the third to the thenar eminence, as far as the metacarpo-phalangeal joint. Upon the eminence this branch makes a regular plexus, which communicates above with the musculo-cutaneous nerve. The next anomaly which is observed after section of the median—namely, continuance of the power of abduction—is due to the fact that the abductor receives several twigs from the anterior branch of the radial. The main one arises from the radial just above the thenar branch, and at once plunges into the abductor at its superior border; it also sends a branch to the radio-carpal joint. In addition, the thenar branch of the radial, after supplying the abductor pollicis, sends branches into the subjacent muscle. Thus the muscles of the eminence are supplied both by the median and by the radial.

(93) Subserous Connective Tissue.

Messrs. William Anderson and G. H. Makins (*Journal of Anatomy and Physiology*, October, 1890), discussing "The Planes of Subperitoneal and Subpleural Connective Tissue, with their Extensions," conclude that in these endothoracic and intra-abdominal fasciæ we have a tissue which forms sustentacular sheaths for the vessels and nerves and various organs within the trunk, and which follows them into the intermuscular spaces of the trunk, neck, and extremities. This tissue binds down the invested structures in such a manner as to maintain their due relations to each other and to the walls of the containing cavities, fills up the irregular spaces between them, and conveys to them their vascular and nervous supply. It affords a medium of communication between visceral and parietal vessels and between the vessels of different organs. It has important suspensory functions in connection with the membranous and solid viscera, especially in the abdomen, and it serves as a storehouse for fat. Surgically, according to these authors, it explains the presence of mysterious deep fascial layers, the identity of which has often exercised the minds of operators in the course of the incisions for colotomy and nephrotomy. The relations of these endothoracic and intra-abdominal fasciæ to certain structures outside the thorax and abdomen may account for pleural complications after axillary abscess or ligature of the subclavian artery, and for peritonitis following castration. The laminated structure of the tissue which forms these fasciæ exercises an important influence upon the course of pathological exudations, especially in the mediastina and pelvis. Undue laxity of the tissue may favour displacements of certain organs, as in movable kidney, and also in hernia, as Mr. Lockwood has pointed out. The extrusion of the tissue through normal or adventitious apertures in the thoracic and abdominal walls may open the way for hernial protrusions, or may itself constitute a kind of hernia, as in the linea alba and elsewhere. A hernia may be reduced *en masse* between its layers. The tissue may serve as a nidus for fatty tumours and other morbid growths. This memoir contains much food for reflection; much knowledge which the physician and surgeon may utilise. The communication between visceral and parietal vessels, by means of this tissue, is of special interest. It serves to account for the sympathy between the integument and immediately subjacent organs in many diseases, and may explain, to a great extent, the value of poultices in the treatment of inflammation of deep viscera.

BACTERIOLOGY.

(94) Typhoid and Pseudo-Typhoid Bacilli in River Water.

Dr. Cassedebat (*Annales de l'Institut Pasteur*, No. 10, October, 1890), following up Rietsch's work on the river waters of Marseilles, gives the result of an examination of seventy specimens of water from which 250 cultivations were made, with the view of determining whether the Eberth bacillus is to be found in the waters of the Durance which supply a part of the city where typhoid fever is endemic and often epidemic. In no case was he successful in finding the Eberth bacillus, but he was able to separate three bacilli—"pseudo-typhoid bacilli"—which resemble the typhoid bacilli in many respects; like it, they can all withstand the action of pretty strong carbolic acid. They all present clear spaces or deeply-stained masses, which might readily be taken for spores; but they and the true typhoid bacillus containing these bodies are all killed at a temperature of a little over 45° C. They stain equally badly by Gram's method. They have a lateral and oscillatory motion as well as the forward motion. The plate cultivations are so much alike that unless all four can be seen together it is difficult to distinguish one from the other. On potatoes, in broth, and in milk, they are alike, except that they develop with different degrees of rapidity and vary somewhat as regards the alkalinity and acidity of their products at the end of about thirty days, and also as to the degree and time of appearance of the turbidity produced in broth. There are differences, however, to be observed in these organisms grown in broth or milk to which small quantities of the various aniline staining reagents have been added. The ordinary cultivation methods are sufficient to distinguish these four forms from ten others (a list of which is given in the paper) for which the typhoid bacillus has at times been mistaken. None of the pseudo-forms are quite so toxic to white mice as the true form, and one of them is quite innocuous. Although Cassedebat was not able to find the true form in water taken from the water supply which was most open to contamination, he found that this was not because bacilli could not live in water, as in distilled water, to which a cultivation had been purposely added, he could easily distinguish its presence at the end of forty-four days, and when added along with half-a-dozen other forms he could find them at the end of seventeen days. He comes to the conclusion, therefore, that the true typhoid bacillus does not occur in water so frequently as is sometimes represented, and that one or other of the forms of pseudo-typhoid bacilli has in certain cases been mistaken for it.

(95) Micro-Organisms of Diphtheria.

Dr. Franz Tangl (*Centralbl. für allgemeine Pathologie u. pathologische Anatomie*, Band i, No. 25, December 1st, 1890) gives a preliminary communication on 18 cases of diphtheria that he examined, in all of which he found the Klebs-Löffler bacillus, 10 after death and 8 during life. He found that cultivated in glycerine agar there was a luxuriant growth, but the bacillus soon lost its virulence. In almost all cases there were found, along with the characteristic bacillus, streptococci, these latter being found especially

in the broncho-pneumonic patches; whilst the bacilli were more frequently found in the branches of the bronchi, even in the very minute ones. Inoculated on the slightly abraded mucous membrane of rabbits and pigeons, the organism gave rise to the formation of false membranes from which the bacilli could again be cultivated. Paralysis made its appearance after both intra-tracheal and subcutaneous injections of broth cultivations, either filtered or unfiltered, and in one case, where the membrane was very profuse in the pharynx, and even in the smaller bronchi, the toxine could be actually demonstrated as present in the fibrinous mass, by macerating pieces of the false membrane for twenty-four hours in distilled water in an ice cupboard. This fluid, filtered through porcelain and injected into rabbits and pigeons, induced either death or paralysis, indicating the presence of toxine in the injected fluid, as there were no bacilli present. From the presence of a stalk of grass in the pharynx of one of the animals that had been inoculated, the author comes to the conclusion that in this case, at any rate, there was paralysis of the glosso-pharyngeal area. In one case albumen was found in the urine. A number of control observations were made in other diseases, but always with negative results as regards the Klebs-Löffler bacillus. The author believes that in these diphtheritic membranes the degenerated epithelium always forms a very large part of the glittering ridges and scales in the mass of fibrinous exudation; that where epithelium is absent there are no hyaline trabeculæ, but merely a fibrinous network, and that the clearer the exudation the more important is the part played by the coagulated fibrin in the false membrane.

(95) Virulence of Tubercle Bacillus.

Professor A. Maffucci, in a preliminary communication (*Centralbl. für allgemeine Pathologie u. pathologische Anatomie*, Band i, No. 26, December 15th, 1890) concludes that all Hammerschlag's experiments with the alcoholic extracts of pure cultivations of tubercle bacillus cannot, in face of the clinical nature of tuberculous disease in the human subject, be looked upon as conclusive. There is, however, he considers, some poison developed by the tubercle bacillus, especially in older growths, which by its action produces marasmus, apparently by interfering with the nutrition of the cellular elements of the body. What relation the bacilli and their products bear to inflammation, fever, marasmus, and degeneration he is not prepared to state; but the experiments that he has recently made confirm those that he published in 1879, in which he found that the tubercle bacillus from a mammalian, when injected into a laying fowl, caused the embryos from the eggs to die with all the characteristic features of a marasmus. He has observed the same thing in the hens themselves when they have been inoculated with "perlsucht" and even with active cultivations of the tubercle bacillus from mammalian animals; whilst, from clinical observation, he is also of opinion that the caseous masses in tuberculous individuals are the exciting cause of the marasmus that is so frequently met with in patients affected with tuberculous glands, bones, or joints, and in cases of tuberculous phthisis. He has now carried on a series of experiments on guinea-pigs with pure cultivations of tubercle bacillus (from mammalian animals) which had been allowed to grow for one, two, three, or six months on consolidated blood serum to which glycerine had been added, or on fluid blood serum alone. The culture was then sterilised at a temperature of 65° to 70° C., continued for one or two hours, or by intermittent sterilisation. Cultures of more than six months' standing were found to be already sterile, and were therefore not specially treated. Any of these sterilised cultures introduced into guinea-pigs induced, in from fourteen days to six months, marked wasting, but no tubercle bacilli could be found by histological examination or by cultivation. There was usually congestion of the lung and of the kidney, the splenic follicles were wasted, the pulp was also atrophied, but was usually somewhat congested, and considerable quantities of pigment might be observed in the pulp cells, and even lying free outside them. The atrophy, however, was almost invariably well marked, and the liver cells were usually considerably wasted. He concludes that this toxic substance is not destroyed in the body of an animal which dies from marasmus, and he holds that these observations must have a very important bearing on the ultimate success or failure of Koch's treatment.

DERMATOLOGY.

(97) Etiology and Pathology of Rhinoscleroma.

Pawlowsky (*Centralblatt f. allgemeine Pathologie u. pathologische Anatomie*, vol. i, September, 1890) has had occasion to examine three cases of rhinoscleroma, and obtained typical cultures of the bacillus of Frisch, by which he was able to prove that the bacillus is non-motile. On potato the bacilli showed various forms of evolution. They grow rapidly, and become stained on the nutritive medium when it is coloured by aniline. They do not form spores, but sometimes small granules. The bacilli of rhinoscleroma are pathogenic for animals, and in the animal tissues are found the phenomena of phagocytosis and a chronic process of granulation with production of large epithelioid cells and vacuoles. Lastly, there is found in all animals what in rhinoscleroma is characteristic the formation of hyaline bodies. From his researches the author concludes that the hyaline matter in rhinoscleroma is a product caused by the bacilli, which consists of degenerated bacilli and of modified protoplasm. Perhaps the hyaline material is formed in the same manner in other infectious processes.

(98) The Fungus of Favus.

Dr. F. Kral, of Prague (*Brit. Journ. of Derm.*, September, 1890), related, at the Berlin meeting of the International Medical Congress, that in order to procure pure cultivations of the fungus of favus he rubbed the favus crusts with sterilised sand, thus finely dividing them. Cultures on plates were made, and the fungus isolated. The author's conclusions are: (1) The favus fungus is always one and the same fungus. (2) This fungus is morphologically and physiologically (in cultures) different from the fungus heretofore regarded as the fungus of favus. (3) Its pathogenicity for man is established through successful inoculations. (4) With the fungus from the scalp typical favus of the body was produced. (5) In the experimentally produced favus the fungus described was always the only fungus present.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(99) Changes in Bones in the Course of Chronic Lung and Heart Disease.

DR. E. BAMBERGER, Clinical Asssistant to Professor Nothnagel, in Vienna, publishes in the last volume of the *Zeitschrift für klinische Medicin*, Bd. 18, Hft. 3 and 4, some interesting cases of chronic changes brought about in certain of the bones of the distal ends of the extremities, in association with clubbed fingers and the chronic diseases of heart and lung in which they are liable to be met with. Seven cases of bronchiectasis are recorded, in which, in addition to the well known clubbing of the fingers, there was well-marked thickening of the long bones, especially the lower ends of the radius and ulna, and the tibia and fibula. Four cases of chronic heart disease are detailed, in which similar observations were made, and to some of these cases the records of full *post-mortem* examinations are appended. The clinical and pathological details are too elaborate for close analysis, but the main points of interest are the limitation of the change to the distal ends of the bones of the hands and feet, the upper arm and femur being attacked only in one or two cases; the skull, spine, and the bones of the shoulder and pelvic girdle were not attacked at all. The changes were the same in character, both in the lung and in the heart cases. The only symptoms noticed by the patients were aching or shooting pain on exertion or on violent coughing at or about the seat of the thickening. Tenderness on pressure was more frequently met with than the spontaneous pain, and persisted much longer. Both forms of pain were most marked in the lung cases, and some of the latter patients believed that the onset of the disease corresponded with the beginning of fœtor of the sputa. The ages of the patients were various, from a child with chronic heart disease to old men with long-standing bronchiectasis. The important distinctive sign with regard to the enlargement of the bones was the absence of any swelling beyond a very slight œdema in some cases of the soft parts around. Dr. Bamberger states that he has sought very carefully for more cases than those which he records, but has not succeeded in finding them. The change in the bones consisted of an ossifying periostitis, which in most cases had spread much beyond the limits recognised during life, with no alteration of the soft parts around except a slight degree of venous congestion. The periosteum could easily be separated from the bone, which was found to be covered with a vascular osteogenic membrane, yielding easily to the knife, and with its surface in part lamellar and in part rough and wartlike. In one case the spongy tissue of the bone itself was thickened and indurated. This was regarded as a later stage of the disease, which in many cases was never reached. In discussing the causation of these chronic changes, Dr. E. Bamberger suggests the possibility that they may be due to the reabsorption of altered secretions from the lungs, and recalls the fact that phosphorus and arsenic have been shown to set up similar changes in the long bones of fowls. Some experiments of his own upon rabbits, however, failed to set up any such changes. The views of other pathologists are duly quoted and discussed, but the conclusion is arrived at that no explanation has as yet been furnished which can be regarded as satisfactory from all points of view.

(100) Œdema of Lung following Thoracocentesis: Curschmann's Spirals found in the Sputum.

DR. F. KOVÁCS reports a case from Professor Kahler's clinic in Vienna (*Wien. klin. Wochenschr.*, No. 3, 1891) of acute œdema of the lung following thoracocentesis for pleuritic effusion, in a woman aged 58, who had suffered for the previous two months from marked œdema of the lower extremities with increasing dyspnœa. The patient was somewhat cyanotic. Fluid had accumulated in the peritoneum and in both pleural cavities, chiefly on the left side. The heart's action was feeble and slightly irregular: the liver was a little enlarged, and the urine slightly albuminous. Removal of 800 cubic centimètres of clear serum from the left pleura was followed by relief for a few minutes, but was rapidly succeeded by excessive cough, expectoration of large quantities of serous fluid, closely resembling that removed from the pleura, extreme dyspnœa, collapse, and other indications of impending death. Improvement took place after free resort to stimulant measures, but the cough continued, and large quantities of highly albuminous fluid lightly tinged with blood were brought up from time to time. The urine was found to contain more albumen, and to throw down a deposit of hyaline and epithelial casts and leucocytes, with a few scattered blood corpuscles. Three days later some typical Curschmann's spirals were found in the sputum. Gradual improvement took place; slight jaundice showed itself for three days, but afterwards disappeared; the urine only contained a trace of albumen, and no casts; and the most careful search failed to detect any more of the spirals. Dr. Kovács offers many explana-

tions of the possible cause of the sudden œdema, but passes very lightly over the question of wounding of the lung in the operation of tapping. Many authorities are cited who have observed the occurrence of similar phenomena, but by none of them is the presence of Curschmann's spirals recorded. These are regarded, in the present case, as possible evidence of some deep-seated pneumonic change. The affections of the liver and the kidney are variously explained as due to absorption from the lung of the albuminous fluid or to alteration of the blood pressure from the cardiac weakness in the presence of the sudden removal of fluid from the pleura. This possibility forms an explanation also for the occurrence of the œdema in the first instance. Another case is quoted in which a similar flooding of the lung took place after tapping, which was shown by *post-mortem* examination to be associated with hæmorrhagic infarcts in the lung, with fatty heart and adherent pericardium. No spirals were found in this case.

SURGERY.

(101) Excision of the Appendix Vermiformis in Recurrent Appendicitis.

In the *Journal de Médecine*, January 18th, 1891, is a paper, by M. Dennis, on the indications for excision of the vermiform appendix in the intervals between attacks of recurrent appendicitis. He begins by describing four different varieties of the disease: typhlitis, perityphlitis, appendicitis, and periappendicitis. By the term "typhlitis" is meant that condition in which an inflammation of a catarrhal or ulcerative nature invades one or more of the coverings of the cæcum. Such a condition is a consequence of retention of fæcal matter within the bowel, which in its turn gives rise to a septic diarrhœa, which is the direct result of the poisonous exudations of the fæces. In perityphlitis the inflammation begins at any rate in the surrounding tissues. It terminates occasionally in suppuration, and has been known to supervene upon a strain caused by some violent gymnastic exercise. Appendicitis and periappendicitis differ only from the foregoing in their situation and in the gravity of the symptoms to which they often give rise. Practically it is only in these latter cases that the question of surgical interference should be considered. According to the statistics which Dr. Dennis brings forward, it appears that only 4 per cent. of the cases are recurrent, and but few of these are fatal or likely to be so. Even if perforation ensues, a fatal result by no means necessarily follows, but may be avoided by laparotomy. The other arguments which make the author anxious to avoid laparotomy between the attacks are, first, the gravity of the operation in such cases; and, secondly, the great difficulty of isolating and removing the appendix owing to the changes that have been set up by the previous attacks of inflammation. He catalogues also a large number of cases—apparently gathered rather from literature than from his own experience—from which he seeks to show that the diagnosis even of such cases is by no means easy. They may, he says, for example, be mistaken for tubal pregnancy, renal or biliary colic, abscess of the liver, etc. Lastly, he asks what evidence is there that the cure in these cases is a permanent one? Are the patients liable, if not to attacks of appendicitis, at least of some neighbouring part of the digestive tract? What evidence there is goes to show, he thinks, that such cases, if treated at all by surgical means, should only be operated on when an attack is present so as to let out pus, as the removal of the appendix is, to say the least, of doubtful value.

(102) Repair of Defects in the Mucous Membrane.

Professor Witzel calls attention in the *Centralblatt für Chirurgie*, No. 45, 1890, to the possibility of closing gaps in the mucous membranes with portions of the skin. In ordinary plastic operations attention is chiefly directed to the restoration of form, but in the case of mucous tracts function has also to be considered. Flaps of mucous membrane would be obviously the best for restoring defects in mucous membrane, but there is always a danger in making such an attempt of causing a fresh lesion. Nevertheless, the mucous membrane of the gum has been successfully used to cover the wound left after excision of half the tongue, and defects in the cheek have been repaired in the same way. Flaps of skin have also been inserted for the last purpose, and it is particularly important only to use such as are hairless, or, at the most, covered with lanugo. These flaps have the usual tendency towards concentric contraction, which is partly obviated by using quilted sutures. A case is mentioned in which quite half the upper and lower lips were restored with an upper and lower flap, and with the assistance of a flap the base of which corresponded with the border of the jaw, and its apex with the sterno-clavicular articulation. Details are also given of the case of a patient from whom half the larynx and a number of infected glands were removed for carcinoma, after a preliminary tracheotomy. The gap in the larynx was afterwards closed by a flap which was made from the skin of the neck at the side of the wound. This flap was inserted and sutured to the edge of the mucous membrane of the larynx and pharynx, its upper edge being bent and fastened to correspond with the aryteno-epiglottidean fold. The external wound was closed as far as possible, and a feeding tube adjusted and left in the nostril. The case did well, and at the end of the first week food could be swallowed without difficulty. On the tenth day a fenestrated cannula was adjusted, and it was found that the voice had regained some of its tone. After the patient had been up four days a laryngoscopic examination was made. The part of the flap which corresponded to the aryteno-epiglottidean fold was paler than the skin outside and was necrosed, and afterwards a fistula formed. The rest of the flap lived, and no disadvantage seemed to ensue from the death of its upper part, but in future operations more care should be given to the formation of the latter. The author concluded by saying that similar procedures are suitable for defects of the trachea, œsophagus, urethra, or rectum.

(103) Diaphragmatic Hernia in the Newborn.

Dr. J. A. Gauthier (*Bull. de la Soc. Anatom. de Paris*, December, 1890) describes such a case where the infant lived one hour. Madame Henry, head midwife to the Maternité, had already observed five cases of congenital diaphragmatic hernia, and in four she had accurately diagnosed the malformation before death. In Dr. Gauthier's case there was deficiency in the left half of the diaphragm. The greater part of the small intestine, the stomach, spleen, and pancreas lay in the left half of the thoracic cavity. The left lung

was not only unexpanded, but its development had been checked by the pressure of the displaced organs, and it was no larger than a bean. The heart and pericardium were pushed to the right, together with the thymus; they had prevented thorough expansion of the right lung. In all the cases noted by Madame Henry the deficiency of the diaphragm has been on the left side. That same observer states that the symptoms are constant. The child at birth does not utter the characteristic full cry; it makes unsuccessful efforts at full inspiration; it soon becomes cyanotic. The heart is found beating to the right, far out of its place. When insufflation is tried there is a sensation of resistance, as in blowing into a tube stopped up at the opposite end; or if air passes in, the right side of the thorax alone expands. In Dr. Gauthier's case there was resonance all over the left side of the thorax, due to the presence of the intestines. The heart, the thymus, and the liver, which were pressed upwards, caused dulness over the right side. This distribution of the percussion sounds and the beating of the heart far to the right of its normal position distinguish congenital diaphragmatic hernia from pericarditis, pleurisy, and stenosis of the trachea in the newborn, disorders where obstacles to insufflation are also observed.

(104) The Use of Chloroform in Tracheotomy.

M. GEFFRIER, of Orleans, has recently published (*Revue de Chirurgie*, December, 1890) a paper on chloroform in tracheotomy. The views of this author, which are based on a study of eighty-seven cases, are summed up in the following conclusions: (1) Chloroform is of unquestionable service in tracheotomy on children; (2) its use is not attended with any special danger in this operation, provided that attention be paid to certain contraindications; (3) the following precautions ought to be taken: (*a*) everything that might be required in the course of the operation should be placed close at hand; (*b*) the administrator, who ought to be experienced in the use of chloroform, should carefully watch the respiration, and, if it be required, excite the respiration by speaking to the patient or by irritating the skin; (*c*) if the state of the respiration become alarming, the inhalation of chloroform should be discontinued at once, and the operation be performed without delay. Extreme asphyxia and prostration from diphtheritic poisoning are regarded as absolute contraindications. Marked cyanosis without, and slight cyanosis with impeded expiration are both regarded as contraindications, though not so stringent as the conditions previously mentioned. Slight cyanosis without obstructed expiration and a very early age are not regarded as contraindications. In the author's opinion, if the operation be not contraindicated by the age of the infant, neither will the inhalation of chloroform be contraindicated.

(105) The Relation of Bacteria to Antiseptic Surgery.

IN his Address in Surgery delivered before the Medical Society of the State of Pennsylvania, Professor Roberts (*Times and Register*, Philadelphia, vol. ii. p. 3) gives a summary of current beliefs as to the part played by bacteria in surgical diseases. He assumes as a well-known fact that inflammatory fever, symptomatic fever, traumatic fever, and hectic fever are all due to the invasion of wounds by microscopic plants, and that they also cause suppuration. The destruction of bacteria by means of heat and antiseptics is the essence of modern surgery. The resisting powers of the tissues are also to be taken into account; when their vitality is low, either from general or local causes, bacterial invasion is not prevented, and local or general invasion may occur. Mechanical irritations produce a very temporary and slight inflammation, which rapidly subsides. The doctrine of present surgical pathology is that suppuration will not take place if pus-forming bacteria are kept out of the wound, and that if this be achieved, healing will occur without inflammation and without inflammatory fever. Access of germs can be prevented only by absolute bacteriological cleanliness. It is best not to rely solely on absolute cleanliness, which is almost unattainable, but to secure further protection by the use of heat and antiseptic solutions; chemical antiseptics would be needless if absolute freedom from germs was easily obtained. A good deal of unsatisfactory work is done under the names of antiseptic and aseptic surgery, because the simplest facts of bacteriology are not known to the operator. In the Women's Hospital at Philadelphia these principles are fully carried out, and the rules which are laid down for the nurses and assistants are given at the end of Professor Roberts's communication. The instruments are sterilised with heat and solution of beta-naphthol 1 in 2500. Sponges are kept in beta-naphthol or corrosive sublimate during the operation, as are also the sutures and ligatures. The trailing of the ends of ligatures was a fruitful source of error.

MIDWIFERY AND DISEASES OF WOMEN.

(106) Bad Cases of Adherent Placenta.

DR. PAJOT (*Annales de Gynéc.*, November, 1890, p. 386) read before the Obstetrical Society of Paris an extreme and fatal case of adherent placenta. The case occurred in the practice of Dr. Clopatowsky, of Bogota. He was called in after a lingering labour which had been mismanaged. Great quantities of ergot had been given, and after the birth of the child the umbilical cord had been torn off in attempts to extract the placenta. Dr. Clopatowsky found the uterus in a state of tetanic contraction excepting at one point, probably the site of the placental attachment. Anodyne injections to check the uterine spasm, and two attempts to detach the placenta manually proved failures, and some placental tissue was left behind. Rigorous antiseptic treatment was carried out; nevertheless rigors, high fever, tympanites, and prostration set in, and the patient died on the third day. Dr. Clopatowsky asked if, in an extreme case like the above, where the risks from leaving irremovable portions of placenta were so great, it would not be justifiable to perform Porro's operation, the only way of getting rid of foci of infection. In the discussion which followed the reading of this case, Dr. Pajot considered that the proposition was justifiable. Skutsch, of Jena, had once carried it into effect. Dr. Budin recommended the careful kneading of adherent placental tissue with the fingers; by this method the adherent structures could be removed as far as the true uterine wall. Antisepsis could afterwards be carried out with facility. Dr. Charpentier insisted that the curette could be safely used in cases of total as well as partial adhesion of

the placenta. The obstetrician could tell when the curette touched uterine tissue by the peculiar sound then produced. Dr. Pajot, on the other hand, declared that Dr. Charpentier's advice was perilous. In retention after abortion the curette was useful, but it was hardly safe in a case of complete and intimate adhesion of the whole placenta, as in the instance under discussion. There is no "peculiar sound" when the soft tissue of the uterus at term is scraped. So absolutely inseparable was the placenta in some patients (as he had verified by examinations in the dead house) that no treatment short of amputation of the uterus appeared justifiable. Dr. Bonnaire also quoted a case where the curette completely failed. The patient died, and it was afterwards found that the placental tissue was absolutely inseparable from the uterine wall.

(107) The Polyuria of Pregnancy.

Dr. Voituriez (*Arch. de Tocol.*, December, 1890) concludes, after a study of this subject, that, in the course of gestation, polyuria of a type entirely confined to pregnancy is sometimes observed. In such cases the urine is clear, slightly acid, and of normal composition, excepting that the proportion of water is greatly increased, so that the specific gravity is low. Sugar and albumen are alike absent, and no cystitis is present in cases of this affection. Polyuria of pregnancy is probably more common than is generally believed. The only way of authenticating a case is carefully to collect all the urine passed every twenty-four hours. The disorder is not usually detected until the middle of the pregnancy. It rapidly disappears after delivery. In nature it is exceedingly mild, and it appears to endanger neither the mother nor the child. Dr. Voituriez describes a case where a pregnant woman was compelled to make water over twenty-four times in twenty-four hours, passing over 7 pints of urine daily. She suffered from slight thirst. Yet she was safely delivered of a living (first) child, which weighed 9 lbs. Tarnier's forceps had to be used. Directly after delivery polyuria ceased, and never recurred. The secretion of milk was normal. Bromides and belladonna had been administered, but proved useless.

(108) Placenta Prævia: Uterus Bicornis Unicollis.

Dr. Schwarz, of Fünfkirchen (*Der Frauenarzt*, Part I, January, 1891), attended a case where this formidable complication occurred in a malformed uterus. The patient was 24, married two years and a half; the periods became irregular and profuse after marriage. Until the eighth month of pregnancy all went well, when flooding set in. The family physician was called in, and found a detached piece of placenta presenting. He then discovered that the child's head lay, in the second position, in the right horn of a double uterus. Pains were strong, and the os was dilated to the size of a crown piece. A tampon pressed into the site of detachment checked the hæmorrhage. The child was not delivered till forty-eight hours later; its membranes were entire when it reached the vulvar orifice. It was a female, and born alive. One hour later the placenta remained undelivered, and flooding was severe; it was detached with great difficulty and not entire. Dr. Schwarz was called in, and found that the uterus was imperfectly divided by a septum which formed a band over two inches long, beginning one inch above the os externum. A ridge, projecting one inch downwards from the fundus, divided the cornua and formed the upper part of the incomplete septum. The placenta was attached to the entire fundus, and extended into the right cornu, where the fœtus had developed, and also stretched as far as the extremity of the thin left cornu. The greater part of the placenta originally hung downwards; the part first detached seemed to have developed on the left side of the lower piece of the septum. The extraction of the portion of the placenta still strongly adherent to the fundus proved very difficult. The arm had to be passed into the genital canal, almost as high as the elbow, and the placenta was peeled off by the fore and middle finger. When the placenta came away, the uterus contracted freely. Puerperal fever followed, and on the third day the patient was placed under chloroform, and the cornua were drained by iodoform gauze, which was introduced into them. Fragments of decidua and clots came away. The patient was better for a few hours, but a day later she was seized with violent vomiting, and died rather suddenly. The source of sepsis seemed to be in ulcers which formed at the introitus. It also appeared that the midwife was careless. The bicornute form of the uterus was readily detected by palpation of the abdomen.

(109) Fibromyoma of the Fallopian Tube.

Dr. Schwartz (*Revue d'Obstétr. et de Gynéc.*, 1890) describes a case of "fibroid" disease of the tube, or, at least, of a fibromyoma developed in the broad ligament investing the tube. The patient was 54 years old. She had suffered for a twelvemonth from severe pains, and every fortnight free flooding appeared and lasted several days; before it began the patient suffered from epileptic convulsions. The tumour was of the size of an egg, and was attached to the tube by a pedicle one inch long, and as thick as a man's finger. The tumour was simply removed, as the tube and ovary were healthy, and were, therefore, left alone. A fortnight after the operation there was flooding for two days but no fits.

PHARMACOLOGY AND THERAPEUTICS.

(110) Koch's Treatment in Lupus.

Mr. Jonathan Hutchinson (*Archives of Surgery*, January, 1891) gives an account of two cases of lupus under his own care, in which Koch's fluid was used by Dr. Heron. In both cases the disease presented some peculiarities. One of the patients was a little boy, in whom the lupus, which was of the vulgaris form, was too extensive for any other method of cure. Very weak injections were given at first, but their strength was afterwards increased, and they were repeated eight times, with good reaction on all occasions except the last two. No great benefit has accrued, the only perceptible effect on the lupus patches having been that some of them suppurated more freely, while others looked rather more red and shed scales more abundantly than they did before. Many of them have shown no change whatever. The other patient was a lady, aged 55, with lupus erythematosus on the face, scalp, forehead, and upper part of the chest. Five injections in all were given, on the later occasions in full strength. She reacted in the ordinary way, but no very obvious effect was produced on the patches. Mr. Hutchinson, however, points out that as the presence of a bacillus in lupus

erythematosus has not been proved, there was no reason to expect that the Koch treatment would cure it. It should be added that in a postscript to the report Mr. Hutchinson says that since it was written the patches of erythema on the cheeks of the second patient have to a large extent disappeared. The improvement occurred suddenly ten days after the injections had been given up as useless. The patches on the cheeks still remain. Mr. Hutchinson adds: "It is too early to venture any opinion as to whether the improvement will be permanent, or whether it is in any way connected with the treatment."

In order to test the still unsettled question as to the tuberculous nature of lupus erythematodes, Arning (*Deutsche med. Wochenschr.*, No. 50, 1890) tried the effect of Koch's remedy in two women suffering from that disease. In one an injection of 2 milligrammes was given: the other received three of 2, 4, and 6 milligrammes respectively. Both reacted strongly to 2 milligrammes, one with rigors, high fever lasting two days, and albuminuria; the other with headache, laryngeal irritation, general prostration, and an extraordinarily vivid erythematous blush (which came out after each injection), but without elevation of temperature. In neither case was there any reaction in the parts affected by the lupus erythematodes.

(111) Koch's Remedy in Leprosy.

Arning (*Deutsche med. Wochenschr.*, No. 50, 1890) tried the effect of Koch's fluid in leprosy. Two men, suffering from the macular form of anæsthetic leprosy were chosen. In one of the cases 0.002, 0.004, 0.008, and 0.01g. was injected on four consecutive days, and in the other injections of 0.002 and 0.006g. were given. Neither of the patients showed the least sign of systemic disturbance beyond some elevation of temperature. The injections were made partly into the healthy skin, partly into the middle, and partly into the outer edge of the anæsthetic zones. There was absolutely no reaction, either general or local. In a case of tubercular leprosy in which Koch's treatment was tried there was general but no local reaction. With regard to this case, Arning points out that, setting aside the possible existence of tuberculosis of the internal organs—a not infrequent complication in leprosy—the fact must be borne in mind that lepers, especially if the disease is in an advanced stage, have a marked tendency to severe febrile reaction in response to very slight disturbing influences, such as cold, wet, indigestion, etc.

Babes and Kalindéro, of Bucharest, report (*Semaine Médicale*, January 16th, 1891) the results of some clinical experiments which they have made with Koch's fluid in seven cases of leprosy, "known and studied long beforehand." In all these cases they noticed a general reaction, which, however, differed essentially from that which occurs in tuberculosis. They do not agree with Arning in thinking that this reaction is due to latent tuberculosis; it is, in their opinion, peculiar to leprosy. All the seven patients whom they have treated live under excellent conditions, and in none of them is there the slightest clinical or bacteriological evidence of tubercle. They sum up the differences in the reaction in the two diseases as follows: (1) In tuberculosis the general reaction begins about six hours after inoculation, in leprosy it usually comes on twenty-four, less often twelve, hours after inoculation; in one case, however, of anæsthetic leprosy with pemphigoid eruption, reaction set in two hours after injection. (2) The duration and concomitant symptoms of the fever in leprosy vary as much as in tuberculosis, but they usually last longer than in the latter. (3) After a first reaction a second one shows itself on the following day, and often another on the third day after inoculation; in tuberculosis these repetitions are exceptional. (4) Contrary to what occurs in tuberculosis, a cumulative action is seen in leprosy if the injections are repeated daily; thus by the repetition of the inoculation on two days consecutively (doses of 0.002 and 0.003g. being given) an intense reaction was produced which continued for five days. (5) Whilst in tubercle there is usually marked local as well as general reaction, the former is usually wanting in leprosy; in some, however, it shows itself later when larger doses are used. (6) Whilst in tuberculosis local reaction is usually followed by free elimination of tuberculous products with subsequent improvement, in leprosy of the tubercular variety the local reaction (which consists in marked congestion of the affected parts) is followed by the slow formation of small scabs and by a slight desiccation of the leprous products. There is an improvement in the general condition, although, as in tuberculosis, there is sometimes considerable weakness. In one case of leprosy of the larynx in which the voice was altogether lost, "reaction was followed by a complete return of the emission of sounds." (7) In nerve leprosy the authors were only once able to recognise a local reaction consisting in the production of hyperæsthesia in place of anæsthesia, and in the appearance of red patches. After the occurrence of several general reactions, however, they noticed an improvement in the general condition and in the intellectual faculties, together with increase both in the sensibility and in the motor power of the affected limbs. Babes and Kalindéro consider that these results prove that though leprosy is allied to tuberculosis, the two diseases are altogether distinct, and that Koch's fluid serves to decide (*a*) whether in a given case the affection is leprous or tuberculous; (*b*) whether leprosy is at some particular time associated with tuberculosis; and (*c*) whether a suspicious trophoneurosis is of leprotic nature or not.

Dr. Julius Goldschmidt, of Madeira, gives an account (*Berl. klin. Wochenschr.*, January 12th, 1891) of his experiments with Koch's fluid in five cases of leprosy, four of which were of the tubercular and one of the anæsthetico-paralytic type. In four of them the disease had lasted more than twelve months, in one it was of quite recent origin. Injections of less than 1 milligramme produced no appreciable effect. The administration of doses of 1 milligramme caused in three cases a general reaction, which came on more than twenty-four hours after the injection; in two of these some local reaction also took place. Stronger doses (never, however, reaching 1 centigramme) caused fever in all the cases with one exception; in one of the patients intense and prolonged local reaction was also noticed. The liquid, if placed in immediate contact with the diseased parts, seemed to cause powerful irritation. Goldschmidt considers that his experiments prove that Koch's remedy causes both general and local reaction in leprosy, a fact which he thinks must detract from its value as an aid to diagnosis in tubercle.

(112) Koch's Treatment in Phthisis: Fatal Results.

In the *Semaine Médicale* of January 21st, 1891, Dr. Grasset, of Lyons, reports a case of "apyretic pleuro-pulmonary tuberculosis," in which the injection of 1 milligramme of Koch's fluid was followed by acute exacerbation of the disease, ending in death. The patient, a man, aged 21, is described as robust in appearance, with a good family and personal history. His illness had begun with bronchitis six months before he came under Dr. Grasset's care. Since then cough and expectoration had persisted, and the man had become weaker, without, however, losing flesh. The physical signs indicated tuberculous formation, with probably a small cavity, in the right lung, the left being apparently unaffected. There were numerous bacilli in the sputum. The patient's general condition was satisfactory. On December 19th 1 milligramme of Koch's fluid was injected; reaction was marked, but not excessive either in intensity or in duration. There was some slight improvement for a day or two, but on December 22nd hæmoptysis occurred for the first time, and the temperature went up to 39.2° C. On the 25th the man had two fresh attacks of hæmoptysis, one at 5 A.M., the other some four hours later. Fever persisted without remission, and the patient was very weak and fatigued. On the 27th hæmoptysis again occurred twice, the onset of the bleeding coinciding with high thermometric readings. On the 28th there was more bleeding, and on the 29th, after an attack in the night, there was another at 2 P.M., and lastly, at 6 P.M., a sudden gush of blood brought the patient's sufferings to a close. Professor Grasset sums up the course of events as follows: The pleuro-pulmonary tuberculosis limited to the right apex, and up till then of apyretic type, became generalised throughout the right lung after the injection; the process extended rapidly to the left lung, and the disease took on the form of "galloping consumption." The first hæmoptysis occurred three days after the injection at the time when the pyrexia reached its highest point. The physical signs showed rapid enlargement of the cavity in the right apex, the production of recent foci of hepatisation in the middle and lower parts of the right lung, and a fresh crop of miliary tubercles disseminated through the left lung. The necropsy, which was made by Professor Boinet and Dr. Jeannel, revealed induration of the apex of the right lung, which contained an excavation with fibrous walls. This cavity was empty, and did not appear to have been the source of the bleeding. In the centre of the middle part of the lung there was a fair-sized patch of caseous hepatisation of recent origin, which presented exactly the appearances described by Virchow (BRITISH MEDICAL JOURNAL, January 17th, p. 127). Evidence of catarrhal pneumonia, or Virchow's "injection pneumonia," was also found. There were, in the middle and lower parts of the right lung, five patches of red hepatisation, two of them as large as apples, the others about the size of hen's eggs. The pulmonary tissue presented the appearance of red hepatisation. On incising these foci, a central cavity was found, of recent formation, and containing a reddish-brown sanious liquid. The walls, formed of pulmonary *débris*, showed no trace of organisation. These excavations, due (Professor Grasset says) to the rapid destruction of the pulmonary parenchyma, were as large as a walnut. The erosion of the vessels by this rapid process of disintegration had clearly caused the hæmoptysis. In some places there was hæmorrhagic infiltration of the walls of the cavities. The base of the right lung was also infiltrated with submiliary tubercles, which had the appearance of having developed subsequently to the injections. The left lung did not contain any foci of red or caseous hepatisation; but, on section, there was seen a number of small submiliary tubercles similar to those in the base of the right lung, but less confluent.

(113) Peptonuria following Koch's Treatment.

Dr. LUIGI DEVOTO, assistant to Professor E. Maragliano in the Medical Clinic at Genoa, reports (*Riforma Medica*, January 2nd, 1891) a case in which peptonuria was apparently caused by the use of Koch's fluid. The patient, a man, aged 33, was of marked tuberculous diathesis. At the age of 6, he had suffered from disease of the bones of the left leg, and four years later he was attacked with similar disease in the left femur. In both cases surgical interference was necessary. At the age of 21 he was treated for fibrinous pneumonia of the right lung, and at 27 the old disease in the left thigh woke up into fresh activity, and a further operation was required. On the present occasion, he complained of cough and a pain in the left side, which was intensified by deep inspiration. There was diminished resonance with harsh breathing and prolonged expiration in the right supraspinous, supraclavicular, and clavicular regions on the right side. The expectoration, which was scanty, was muco-purulent in character, and did not contain bacilli. The pulse was 70 to 78, the respirations 18 to 22, the temperature normal. On December 13th, 1 milligramme of Koch's fluid was injected, but caused no reaction. On the 14th, an injection of 2 milligrammes was given, and considerable reaction, general and local (in the cicatrices in the left lower extremity) followed. The disturbance lasted for two days, but there was no modification of the physical signs in the chest, and no bacilli were found in the sputum. The urine contained neither albumen nor peptones. On the 18th, at 8 A.M., an injection of 3 milligrammes was given, and was followed by intense reaction, with severe rigors, but still there was no change in the physical signs. During this last reaction period, which lasted from midnight on the 18th till the morning of the 20th, distinct evidence of peptonuria was obtained. There was also some acetonuria (38 milligrammes per litre). Devoto tested for albumoses, but without success. On December 20th the peptonuria had ceased, and the acetonuria diminished. Basing his conclusions on the researches of Hofmeister, v. Jaksch, Grocco, and others, which, he says, have shown that wherever there is extravasation of white corpuscles, with subsequent changes in these bodies, peptonuria is likely to be caused, Devoto thinks that the peptonuria in this case was "the expression of the local reaction caused by Koch's fluid." In a clinical lecture delivered at Padua by Professor de Giovanni, Director of the Medical Clinic of that University (*Riforma Medica*, January 12th, 1891), it is stated that in the cases in which he had tried the remedy, while albuminuria occurred only in one, "there was a constant appearance of peptones in the urine; this had been present in only one case before the treatment."

(114) Poisoning by Antipyrin.

HERMANN BIGGS (*New York Med. Journ.*, January 10th, 1891) reports a case of antipyrin poisoning

which is interesting chiefly on account of the predominance of renal symptoms. A moderately robust man, aged 35, accustomed to take antipyrin for headache, was seized with chill, followed by headache, backache, and fever, and took 10 grains of antipyrin twice, with an interval of about four hours. Dr. Biggs saw him after the second dose, when he was suffering from fever, with pain in head and back and follicular tonsillitis. The pain was still severe, though mitigated by the antipyrin. He was ordered to continue the drug in the same doses and at the same interval for three or four doses till the pain should be relieved. At the end of about thirty hours, when he had taken in all 60 grains, the drug was discontinued, although no unusual symptoms had been produced. A few hours later the patient noticed that his urine was of a very dark colour, and on examination it was found to contain some albumen, and, under the microscope, blood corpuscles and small hyaline casts were seen. The dark colour, blood corpuscles, and casts persisted for about forty-eight hours, and then gradually disappeared in the course of two or three days. It seems certain that prior to this illness there was no renal disease, and the urine became perfectly normal a few days afterwards. Several writers have uttered a warning note against the use of antipyrin where kidney disease exists. This case should serve to emphasise that warning.

PATHOLOGY.

(115) Cyst of the Labium of Peritoneal Origin in a Child.

Dr. Monnier (*Bulletins de la Soc. Anatom. de Paris*, October-November, 1890, Part 18) describes a case under his care in the Hopital St. Joseph last October. The patient was a girl, aged 6. When she was six months old her parents noticed a tumour of the size of a hazel nut in the right labium. A practitioner took it for a hernia, and applied a truss, which was worn for over four years without any effect. Dr. Monnier found a fluctuating tumour, about as big as a chestnut, in the anterior part of the labium, pointing outwards; in fact, not far from the position of a cyst of Cowper's duct. The skin over the swelling was healthy and non-adherent. The tumour fluctuated and was irreducible, although it could be pushed against the external abdominal ring. There was no impulse on coughing. An incision was made along the long axis of the tumour, the different layers of the labium were divided, and a transparent serous structure was exposed, which proved to be the wall of the tumour. The enucleation of the growth was perfectly simple. It was no longer continuous with the peritoneum; below and externally was a kind of pedicle; this was ligatured. The wound was drained, sutures applied, and antiseptic dressings placed over the seat of operation. The healing process was rapid. The cyst had a slight hour-glass contraction in its middle part, such as is seen in cysts of the vaginal process in the male, the homologue of the canal of Nuck. As there was no actual communication between the cyst and the general peritoneal cavity, there could be no reason to believe that it was a congenital hernial pouch, cut off from the peritoneum by the pressure of the truss.

(116) Horseshoe Kidney entirely on the Right Side.

Dr. Marius Poulaillon (*Bullet. de la Soc. Anatom. de Paris*, vol. iv, 1890, Pt. 15) describes an abnormality of great interest to surgeons. The subject, a man aged 40, died of phthisis in Dr. Dieulafoy's wards at the Hopital Necker. No sign of kidney disease and no lumbar abnormality was detected during life. At the necropsy a tumour was detected which nearly reached the crest of the right ilium and projected forwards. No kidney was found in the left lumbar region. The corresponding anatomical district on the right side was occupied by a large horseshoe kidney, with its long axis vertical. It measured six inches and one-fifth in that axis and three inches in breadth and thickness near its extremities, being shorter in the middle. Two perfect kidneys made up the whole mass, each having a distinct pelvis and ureter. The ureters entered the bladder, one to the right, the other to the left, in the normal fashion. Fusion of true glandular substance was complete posteriorly, incomplete in front: the lower kidney was multilobulated. The upper pelvis received six or seven calices from the upper and three or four from the lower kidney. The inferior pelvis only received four or five calices, all from the lower kidney. Between the pelves some of the calices from each pelvis communicated directly with each other. Besides the two normal renal arteries and veins a third pair of vessels ran into the outer border of the compound kidney, somewhat inferiorly. The origin of these anomalous vessels was not traced. This specimen was clearly an instance of displacement of the left kidney with fusion of both glands.

(117) Anomalies of Brain and Skull in Criminals.

Professor M. Benedikt having commenced to study anthropologically the "great criminals" of Vienna, has communicated some results of his examination of the brain and skull of Hugo Schenk, a notorious murderer of women, to the *Wiener medizinische Blätter*, January 1st, 1891. The brain presents much that is interesting. In each hemisphere the internal parieto-occipital fissure shows no direct adjunction to a common stem with the calcarine, but enters the latter by an irregular lateral offset. The calcarine sulcus communicates with the fissure (termed "limbic" by the author) separating the gyrus hippocampi from the temporal convolutions. This limbic sulcus further joins the collateral, and by its rectilinear form evidences aplasia of the gyrus hippocampi, as has frequently been observed in epileptics. The separation of the gyrus hippocampi from the lobulus lingualis by a fissure, instead of conjunction by a wide bridge, is entirely opposed to the type of gyrencephalous animals and of normal man; it always points to a great disturbance in the balance of the constructive force. The confluence of the calcarine fissure with the limbic must also be regarded as a stigma of high grade. On the mesial surface of the left hemisphere aplasia of the quadrate lobule is noticeable through opereulation. In the right hemisphere a branch of the collateral fissure courses around the lower outer margin and joins the first temporal sulcus. On the outer surface of this hemisphere the anterior central and the angular are the best developed gyri. The outer aspect of the left hemisphere reveals arrested growth of the frontal lobe, with high development of the two central gyri. A double connection of the central fissure with the first frontal sulcus insulates the lower part of the upper half of the anterior central convolution. The parietal lobe and two external annectants are markedly hypo-

plastic. In strong contrast therewith is the bulky development of the occipital lobe and adjacent parts of the second temporal convolution. This very unequal development of the various brain segments indicates defective cerebral equilibrium. Taking into account the extraordinary development of the sexual passion in this murderer, it was specially interesting to discover what parts of the brain showed a preponderance of growth, and to consider whether those parts could be associated with the cortical sexual life. In this case it would appear that the most important seat of the cortical sexual existence is in the left occipito-temporal lobe. The cranium bears as strong evidence of degeneracy as the brain; it is grossly asymmetric—the right fronto-parietal and fronto-temporal and left occipito-parietal and occipito-temporal regions being prominent, and the whole base of the occiput, particularly on the left side, bulging downwards. Internally and externally the cranial sutures are almost obliterated.

PHYSIOLOGY.

(118) Formation of Urea.

THE direct experiments of Schröder, Minkowski, and others, reasoning from what is known to take place in other organs of the body, have led to the theory that urea is largely and chiefly formed in the liver. It has been known, since the time of Frerichs, that the liver and other organs of the rays and hag-fish—even the muscles, which are usually devoid of urea or contain only traces of it—contain very large quantities of urea. Anyone who has approached a putrefying skate must have instantly become aware of the large amount of ammonia resulting from its decomposition, and this too in the early stages of decomposition. Schröder, continuing his well-known experiments on the formation of urea in the liver, experimented on the Scyllium catulus (*Zeitsch. f. phys. Chemie*, xiv, p. 576, 1890), and he finds that, on an average, the blood contains 2.61, the muscles 1.95, and the liver 1.36 per cent. of urea, so that the blood of these fish contains more than fifty times the amount of urea present in dog's blood. After excision of the liver the animals may live seventy hours or thereabouts. In dehepatised animals the amount of urea in the muscles was found to be 1.86 per cent., that is, slightly less than normal (1.95), so that excision of the liver had little or no effect on the urea present in the muscles. This experiment speaks neither for nor against the formation of urea in the liver, and the author is inclined to attribute the large percentage of urea in these animals to the insensibility of the kidneys towards urea.

(119) Absorption of Food Stuffs after Extirpation of the Pancreas.

SOME important observations have recently been made in Minkowski's laboratory in Dorpat on the above subjects, and some of them are published in an inaugural dissertation by one of Minkowski's pupils, M. Abelmann (Ueber die Ausnützung d. Nahrstoffe nach Pancreasextirpation, etc., Inaug. Diss., Dorpat, 1890). The experiments were made on animals—dogs—from which the pancreas was totally removed, either in one or in two operations, or in which the greatest part of the organ was excised. The most important results are the following: (1) In dogs without a pancreas, 44 per cent. of the products of the digestion of proteids is still absorbed, while in dogs with a small part of their pancreas, about 54 per cent. is absorbed. If, however, pig's pancreas be mixed with the proteid food, (horseflesh) a still larger amount of proteid is absorbed. (2) Carbohydrates are for the most part absorbed in dogs without a pancreas; still 20 to 40 per cent. of the amylaceous food (bread) is not absorbed. (3) After total extirpation of the pancreas, all the fat of the food appears in the fæces. This seems to be due directly to the want of the pancreas and the absence of the pancreatic juice in the intestine; for on giving pig's pancreas along with the fats, the latter were absorbed. In this case the fats were given as neutral fats, but the same is true of fats emulsionised artificially before they were administered to the dogs. In the case of natural fatty emulsions, however, for example, milk, the case is different, about 53 per cent. of the fats being absorbed. (4) In spite of the absence of the pancreas, the fats are decomposed, an observation which confirms the well-known observations of Ogata and Cash, who showed that neutral fats were in small amount split up in the stomach. (5) When a part of the pancreas is left, a part of the fat is absorbed, and relatively more fat is absorbed when small quantities of fat are given than when a large quantity is given. Of milk, 80 per cent. of the fat is absorbed. In a second communication by Minkowski himself (Zur Lehre der Fettresorption, *Berlin. klin. Wochensch.*, No. 15, 1890), it is pointed out that the absorption of fats depends on the form in which they are administered. A natural fatty emulsion like milk, and the emulsion normally produced by pancreatic juice, have certain characters in common, and differ from simple soap emulsions produced by alkaline carbonates. Simple alkaline soap emulsions are at once destroyed by the addition of an acid, while the fatty emulsion of milk as well as that of the pancreatic juice resist the action of acids. The importance of the pancreatic juice for the absorption of fats may depend on its power of forming an emulsion of this sort.

ANATOMY.

(120) Herxheimer's Spirals in the Epidermis.

DR. EDDOWES (*Brit. Journ. of Derm.*, October, 1890) has investigated in Dr. Unna's laboratory at Hamburg the appearances described by Herxheimer as peculiar fibres in the human epidermis and the epithelium of certain mucous membranes, and has come to the conclusion that the fibrinous nature of these so-called spirals is proved. The appearance, he believes, is mostly seen in the lower layers of the epidermis, because the cells here are more active and exude more fibrinoplastic substance. They are found between the cells, in the lymph spaces of the epidermis, because this is the necessary seat of the fibrin, and the substance is found in the form of fibres because the lymph spaces of the epidermis, especially the largest, are round channels in the epidermis, and in the spiral form because this is the form assumed by a flexible rod when it becomes even a little too long for its envelope. They are more numerous in many inflammatory conditions, because in these cases there are wider lymph channels, and often more destruction of cells and more formation of fibrin. There is continuity of the spirals with the fibrin of the cutis, with which they have equal digestive properties.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(121) Disinfection of Tuberculous Sputum.

IN the *Centralblatt für Bakteriologie*, Nos. 1 and 2, 1891, Dr. Martin Kirchner points out that the general consensus of opinion has come to regard the sputum of tuberculous patients as the ordinary means by which tuberculous disease spreads from one individual to another. In many of the large military establishments in Germany it has been shown that tuberculous disease has been very wide-spread amongst the nurses and attendants upon the sick, and stringent rules are already in force in many such places to prevent the indiscriminate disposal of sputum. Tubercle bacilli are more resistant than some other micro-organisms to the action of some antiseptic fluids, but are very easily destroyed by others. Four per cent. carbolic acid with the addition of 2 per cent. of hydrochloric acid: 2 per cent. and 5 per cent. of sulpho-carbolic acid, or 10 per cent. of creolin, will suffice to render tubercle bacilli innocuous in a very short time. Caustic soda and potash on the other hand, and 5 per cent. of permanganate of potash have no effect, nor is a solution of 1 in 1,000 of corrosive sublimate sufficient, owing to the highly albuminous character of the sputum in which the bacilli are contained. It has now been proved that tuberculous sputum may retain its infective properties for ten months even after decomposition or drying up. It must, therefore, be equally active as it lies in the various receptacles which have been devised for its reception. The methods by which these vessels are cleaned becomes a matter of considerable importance. Boiling water is used in some places, but it is open to the chance of the water becoming cool before it can be used, and does not do away with the necessity for the wiping of the adherent sputum from the sides of the vessel by the hands of the attendant. A temperature of 70° C., has been shown to be insufficient to render tuberculous sputum innocuous, and the author of the paper believes that absolute disinfection is only to be obtained by means of steam. This plan was advocated by Grancher and de Gennes in 1888, but the apparatus devised for the purpose was cumbrous and costly. Now that there is a general disposition to treat tuberculous cases on much the same lines as leprosy cases, by collecting them together, it should be an absolute law that all the sputum proceeding from such cases should be rendered harmless before it is disposed of in the common drains. With this object, Dr. Kirchner has caused a form of disinfecting kettle to be constructed, consisting of a round metal box about 10 inches high and 16 inches in diameter, its floor forming a shallow tank to hold the water to be vaporised, the whole being covered with a lid perforated at one point for the passage of a thermometer. In this box are placed two or more trays perforated to permit of the free circulation of steam, and so arranged as to carry five spitting cups of the special pattern which he uses. These cups are placed for half an hour within this apparatus, heat being maintained so that the temperature of the steam never falls below 100° C. A strong protest is made against the use of the ordinary spittoon, whether filled with sawdust or some antiseptic fluid. The spittoon is of necessity too far removed from the patient's mouth to ensure that all the expectorated matters are collected by it. The state of the floor round and about any spittoon in a public place is appealed to as sufficient evidence of the truth of this statement. Small cups made of glass with wide lips and easily cleaned, should be used in preference to the spittoon, but must be placed within reach of the patient's hand, and be clearly labelled. These cups must be placed in the disinfecting box for half an hour before they are emptied, and their contents may then with safety be treated by simple washing.

(122) The Relation of Urea Elimination to Fever.

PROFESSORS WOOD and MARSHALL (*Journal of Nervous and Mental Diseases*, January, 1891) have investigated the urea excretion in a very severe and protracted case of hepatic fever, with almost complete, or total, occlusion of the common duct. The patient, a male, aged 60, had suffered repeatedly from gallstones. During the period of research the diet was almost exclusively milk, and was nearly uniform, a little less nitrogen being taken on the days when the pyrexia was highest. The results showed that, although the total urea elimination was less than the normal, the amount excreted during twenty-four hours' periods of highest fever exceeded the elimination of any twenty-four hours in which the temperature was not much raised. The association of increased body heat and urea excretion was still more plainly shown by examining five consecutive periods of twelve hours; for example, with an average temperature (for the twelve hours) of 100.1° urea = 6.66 g.; average temperature 98.6°, urea = 3.65 g. From experiments made by the authors they conclude that the hitherto undecided question whether great increase of heat production can exist without increased urea discharge must be answered in the affirmative. They

reduced the food urea as far as possible by starving the animals (dogs) for twenty-four hours; then for twelve hours measured the urea elimination; then divided the medulla at its junction with the pons in such a way as to avoid injury to the vasomotor centre; as soon as fever developed the amount of urea excreted was estimated. In Experiment I the urea for twelve hours prior to operation = 10.482; during the remaining eight hours of life the temperature ran up to 108.3°, and urea = 0.964. Experiment II: Urea for twelve hours before operation = 8.345; for the six hours and a half after the amount was 2.107, and temperature rose to 110.3°. No urea could be found in the blood of either dog after section of medulla.

SURGERY.

(123) Successful Resection of the Liver.

A successful case of resection of the liver is reported by Dr. G. Fogliani (*Gazetta degli Ospitali*, January 21st, 1891) from the practice of Professor I. Tansini, of Modena. The patient, a woman, aged 25, was admitted on November 26th, 1890, suffering from a tumour of the epigastric region as large as a fœtal head, with shooting pains in the abdomen and occasional vomiting. She had first noticed the swelling some three years before. Her health in other respects was excellent. On December 8th laparotomy was performed by Professor Tansini. The tumour was firmly adherent to the great omentum, and in separating it therefrom many ligatures had to be used. On drawing forward the mass so as to get at the deeper part of it, the left lobe of the liver was brought out, and it was seen that the tumour was completely buried in its substance. Professor Tansini, seeing that the tumour was a hydatid cyst, proceeded to dissect it out from the liver substance, commencing on the left side at some distance from the cyst so as to avoid wounding its walls. Partly by enucleation and partly by careful incision of the liver substance he succeeded in getting away the whole of the cyst. The hæmorrhage, which was considerable, was checked by ligature of the more important vessels and temporary plugging of the "vast hepatic wound," so as to stop the oozing from the cut surface. The wound in the liver was then carefully closed by two series of sutures of catgut No. 0 and Lister's silk No. 1, alternately, one passed on the convex and the other on the concave surface of the organ; in all, sixteen sutures were applied. The abdominal wound was closed by deep and superficial stitches. There was no rise of temperature, and on December 25th, seventeen days after the operation, the patient was discharged completely cured.

(124) Removal of a Portion of the Liver with the Elastic Ligature.

At a meeting of the Académie de Médecine of Paris on January 7th, M. Simon Duplay reported on a case in which M. Terrillon had removed by means of an elastic tube a portion of the liver containing numerous hydatid cysts of small size. The patient (a woman, aged 53) had for six years suffered from frequently repeated attacks of sharp pain in the right side, and had noticed for some time a slowly increasing tumour in the region of the liver. On August 1st, 1889, laparotomy was performed by an incision about 6 inches in length parallel to the lower border of the false ribs on the right side. On subsequent enlargement of this wound and free exposure of the liver, a portion of the right lobe, about the size of two fists put together, was found to be studded with numerous small cysts. There was a very sharp line of demarcation between the healthy and diseased portions of the hepatic tissue. After an unsuccessful attempt to remove the diseased portion of liver by the thermo-cautery, the use of which was followed by much bleeding, M. Terrillon constricted the base of the growth by a rubber tube. The strangulated portion of the liver, which was fixed outside the wound in the abdominal wall, gradually mortified, and, after the removal of the ligature on the seventh day, was cut away. The large open surface that was left soon healed, and ultimately the patient made a complete recovery. In his remarks on this case, M. Duplay stated that several instances had been recorded of removal of a more or less considerable portion of the liver, such treatment having been practised in accordance with one or the other of two very different indications. The surgeon has had in some cases to deal with a hernia of this organ through a penetrating wound of the abdominal wall, and to remove by the knife the protruded portion; and in other cases removal has been performed after laparotomy, with the object of extirpating a hepatic tumour. Of the former class of cases, about ten instances have been recorded, in the majority of which, notwithstanding an absence of antiseptic precautions, the patients recovered. Very few cases, however, probably not more than three, have been published in which removal of a new growth had been attempted. In each of these the operation was attended by alarming and, indeed, in one instance, fatal hæmorrhage. As an ordinary and non-elastic ligature usually tears through the friable hepatic tissue, the application of an elastic ligature, as suggested and practised by M. Terrillon, constitutes, M. Duplay holds, a decided progress in the *technique* of resection of the liver. This method of hæmostasis is applicable not only to pedunculated but also to sessile tumours, in which latter the elastic ligature fulfils a double object: one of producing, through constriction of the tissue of the liver, a kind of artificial pedicle, which permits exact circumscription of the diseased part, and facilitates its subsequent removal by the knife; the other of very effectually securing the patient against the risks of hæmorrhage.

(125) Transplantation of Muscle.

Some time ago the announcement was made by Gluck (*Deutsch med. Woch.*, November 17th, 1890) that comparatively large portions of muscle could be transplanted from one animal to another without loss of vitality. Some considerable doubt was then expressed by other writers on this point, and later on some experiments were made by Magnus (*Münch. med. Woch.*, Jahrgang xxxvii, p. 30), with a view to test the truth of the statements. He finds, however, as a result of his experiments, that if the wound remains perfectly aseptic the transplanted portion undoubtedly remains perfect in every respect and assumes physiological activity in its new situation. In an animal which he killed two months after a piece of muscle had been transplanted into one of its muscles, no difference could be detected in the reactions or in the minute structure between the indigenous and the transplanted portions. He states, however, that if an examination of the parts be made at varying

intervals within two months after implantation, it will be found that the transplanted tissue undergoes degeneration, and is then invaded by new tissue from the indigenous muscle, so that, in fact, the transplanted portion merely forms a nidus for the growth of muscular fibres from the neighbouring parts. In some instances, where but little of the original muscle remained, this regenerative power seemed incapable of being called into action, so that clearly there is a limit to any useful muscle implantation. In such cases a fibrous cord instead of a muscle was the invariable result after a time.

(126) Gunshot Wound of the Abdomen.

THE *Medical News* of December 27th contains a report from Dr. A. B. Miles, of New Orleans, of a case which not only adds one more to the growing list of successful enterorrhaphies for gunshot wounds, but also presents a remarkable feature in the unusual number of peritoneal and intestinal lesions. The patient, a young man, aged 24, had accidentally shot himself in the median line of the abdomen at a point midway between the umbilicus and the symphysis pubis. On abdominal section, which was performed within half an hour from the time of the injury, three wounds were found in the mesentery, and no fewer than sixteen perforations of the coats of the small intestine. Each of these intestinal wounds was closed by Lembert's sutures. The operation, which lasted for a little longer than two hours, was followed by a speedy and complete recovery.

(127) Osteochondrosarcoma of the Ribs.

DR. SEYDEL, of Munich, reports (*Centralblatt für Chirurgie*, No. 51, 1890) a case of sarcoma of the ribs, in which structures, so far as can be made out from surgical literature, this disease very rarely occurs. The patient was a young man, aged 22, who near the end of June, 1889, first fell on his right side, and, some days later, received a blow on almost the same spot. These slight injuries were followed by persistent tenderness and a swelling which gradually extended from the eighth rib to the ribs above and below this. By the middle of August the swelling had extended far in every direction, and the patient was much emaciated. Six weeks later he presented on the right side of the chest a large rounded tumour, reaching from the seventh to the tenth rib, and from the middle axillary to the mammary line. The superficial part of the tumour, together with the involved ribs, was removed by Dr. Seydel, but it was found impossible to remove the whole of the growth, as it had extended to the liver. The disease soon returned in the cicatrix, and at the same time several secondary growths appeared in the higher ribs on the right side. On February 21st, 1890, when the patient died, the new growths had formed one large tumour, which reached from the sternum to the scapular line, and from the nipple to the crest of the ilium. At the necropsy metastatic deposits were found in the upper lobes of both lungs, and it was seen that the large growth in the chest wall had contracted firm adhesions both to the liver and the lower lobe of the right lung. On microscopical examination this large primary growth presented on its peripheral and softer parts sarcomatous tissue, and its central and firmer parts were found to be composed of newly-formed cartilage and bone. The secondary growths in the lungs and liver were pure osteochondromata without any mixture of sarcomatous elements.

MIDWIFERY AND DISEASES OF WOMEN.

(128) Pedunculated Thrombus of the Vagina in the Eighth Month of Pregnancy.

DR. CONDER (*Archives de Tocologie*, November, 1890) relates a case observed in the wards of Drs. Budin and Auvard. The patient was 28 years of age; her father had varicose veins and hernia; her mother hæmorrhoids and prolapsus uteri. The patient had no menstrual disorder. During her first pregnancy, in 1889, numerous varices of the vulva and lower extremities appeared, and piles gave her great trouble. She was delivered at term; the perineum was slightly lacerated. During her second pregnancy, in 1890, the varices gave great trouble. A swelling on the vulva discharged freely. On October 22nd, when she was standing up, she felt some moisture running from the parts, and a mass projected from the vulvar orifice. She was sent into hospital, and it was naturally believed that labour was impending. A dark-red mass, the size of a walnut, projected beyond the labia; it was soft, fluctuating, not tense, and covered with an ulcerated, bleeding mucosa; it was attached to the posterior wall of the vagina by a vertically elongated pedicle, which began a quarter of an inch above the vulvar cleft, and reached to a level of about one inch below the cervix. The rectal mucous membrane was not involved in the swelling. The anterior tubercle of the vagina was over-developed, the vulva infested with varices. Sublimate injections were made, and the patient kept in bed. On October 23rd the tumour had become very hard. Two days later the mucous investment had sloughed off, and a firm black clot was exposed; this came away on the next day. A few days later the wound left by the breaking down of the swelling had cicatrised completely. This kind of thrombus is rare. The long, thin, vertical pedicle is said to explain its formation. The anterior vaginal column was well marked in this case; the posterior was probably well developed also. These columns are the relics of the septa between the two ducts of Müller. The tissues of the posterior column become varicose, some vein bursts, and hence the thrombus which projected forwards and downwards, its pedicle being attached to the seat of its origin.

(129) Diseases of the Vaginal Mucous Membrane.

DR. J. NEUMANN (*Deutsche med. Wochenschr.*, No. 37, 1890) classifies the subvarieties of colpitis or vaginitis under seven heads: colpitis acuta diffusa, c. chronica diffusa, c. acuta papulosa, c. chronica papulosa, c. aphthosa, c. vesiculosa, and c. atrophica. He denies that the papulous form, which is not rare, arises from the follicles of the vaginal wall so that some have termed the affection colpitis follicularis. He finds that the very existence of follicles is doubtful; the few follicular structures which have occasionally been detected were probably abnormalities. On the other hand, the appearance of little elevations, the chief symptom of colpitis papulosa, is frequent. The elevations are, in short, not follicles, but diseased papillæ; it has for long been admitted that papillæ naturally exist in the vaginal mucous membrane. Atrophic colpitis appears in two forms: the first is seen in multiparæ and women who have cohabited for many years, the second is essentially senile. In the first variety the papillæ become levelled down, the epithelium thickened, its superficial squamous

cells disappearing, and the rete atrophies. In senile atrophic colpitis the epithelium undergoes the same changes, but the tissue of the corium, the smooth muscle fibres, and the vessels are all involved in the general atrophy of the part. Dr. Neumann refutes the usual doctrine that cavernous tissue is confined to the rugæ. Cavernous spaces are well diffused over the mucosa, especially after repeated pregnancies or chronic inflammation of the vagina.

(130) Tubercle of the Cervix.

Dr. Haidenthaller (*Wien. klin. Wochenschr.*, No. 34, 1890) describes a case where this rare complication was observed in a patient, aged 29. Her family history was tuberculous, and she herself was affected with very diffused tubercle, which involved the lungs, kidneys, ureters, bladder, intestines, Fallopian tubes, and endometrium. A large ulcer was situated on the anterior lip of the os, and extended to the anterior and lateral fornices. The ulcer had eroded the tissues considerably, so that its nature seemed doubtful on superficial examination. Professor Chrobak, however, examined it, and after microscopic and bacteriological investigation, proved that it was not cancerous but tuberculous. The origin of the ulcer was attributed to the disease in the tubes, secretion escaping out of the uterus and infecting the cervix, but the uterus was retroverted and held back by perimetritic bands, and there does not appear to be evidence that much secretion escaped. As the mucosa of the cervix was infested with tuberculous deposit, the ulcer was most probably the result of the breaking down of some of these local deposits.

DISEASES OF CHILDREN.

(131) Drainage of the Ventricles in Hydrocephalus.

M. A. Broca reports (*Rev. de Chir.*, No. 1, 1891) a case of hydrocephalus in which he practised drainage of the ventricles with some amelioration of the symptoms, and with complete success so far as the operation was concerned. The patient was a boy aged 3 years. Symptoms of nervous disorder were first noticed at the age of about 7 months, when he had convulsions, and at about that age the mother noted that the head began to enlarge. When about 2 years old he had another severe attack of convulsions, affecting the right side, followed by temporary partial right hemiplegia with contracture of the right upper limb. After a few weeks the contracture passed away, and the child, who had never walked or talked, began to "feel its feet." But, when nearly 3 years old, he had a series of severe convulsions of the left limbs, followed by hemiplegia and contracture of the left side. The child came under M. Broca's treatment about two months later. The aspect of the head was characteristic; the fontanelles were closed and the sutures united. The child was dull, could not speak, uttered inarticulate cries, and presented convulsive movements of the upper limbs. It could not stand, even when assisted, and with difficulty sat up. The left upper limb was flexed in contracture. While in this condition, on September 19th, 1890, it was submitted to operation. The scalp having been shaved, washed, and disinfected with sublimate solution, M. Broca made a crucial incision, the centre of which was 3 centimetres ($1\frac{1}{8}$ inch) above and 3 centimetres behind the right external auditory meatus. A trephine, having a diameter of 1.5 centimetre (about $\frac{5}{8}$ inch), was used to commence the removal of a circle of bone. This was completed with a gouge and mallet. Into the opening thus made the dura mater projected: it was divided by a crucial incision. The brain then projected into the wound; it did not pulsate. A large aspirating trochar was pushed freely into the brain in the direction of the auditory meatus of the opposite side. At a depth of about 4 centimetres (about $1\frac{1}{2}$ inch) resistance was felt to diminish, and, on withdrawing the trochar, a liqueur-glass full of clear liquid escaped. The cannula was then detached from the aspirator, but a gentle flow of liquid continued. A drainage tube was introduced along the cannula into the lateral ventricle. Altogether about ℥iij or more of liquid escaped during the operation. At its conclusion the brain ceased to project into the opening in the bone, and the normal pulsations were observable. The dura mater was replaced, but not sutured; the skin was sutured around the drainage tube, which was cut flush with the skin. An iodoform dressing was applied; it was soaked through on the following morning. The next two dressings remained two days before they were soaked through. The sutures were removed on September 26th, the dressing was renewed on November 3rd, and the drainage tube removed. Little or no fluid had escaped during the previous eight or nine days. The last dressing was applied on November 10th, on which day the child left the hospital considerably improved. It appeared more intelligent, slept well, and the contracture had disappeared, the convulsive movements of the upper limbs had diminished, it did not utter inarticulate cries, and, when supported, attempted to stand. M. Broca adds the notes of a fatal case, communicated to him by Dr. Thiriar, of Brussels. He also gives a translation of the paper read to the International Congress at Berlin by Dr. W. Keen, of Philadelphia. (Compare the case, to which Dr. Keen makes reference, recorded by Mr. Mayo Robson in the British Medical Journal, December 6th, 1890, p. 1292.)

(132) Purpura and Bright's Disease.

In a communication to the *Revue des Maladies de l'Enfance* (February 1891), Dr. André Moussous, of Bordeaux, records two cases in support of the contention that severe nephritis resembling certain forms of subacute Bright's disease may develop at the same time as purpura rheumatica. The cases were characterised by pain in the joints, hæmorrhages (hæmatemesis, melæna, petechiæ), gastro-intestinal disturbance as commonly observed in this form of purpura, with continuous albuminuria (hyaline and epithelial casts in one case), intermittent hæmaturia, lumbar pain, and subcutaneous œdema. One child, aged 13, died of asthenia: there was chronic endocarditis chiefly affecting the mitral valve, possibly dating from a rheumatoid attack seven months earlier. The kidneys were yellowish-white, and had the general appearance of large white kidneys, but did not appear to be much enlarged. Microscopical examination showed general diffuse nephritis; the glomeruli were unequally affected, but the inflammation of the periglomerular tissue was as a rule well marked. Dr. Moussous discusses the relationship of this condition—subacute Bright's disease after purpura rheumatica—to acute rheumatism, and arrives at the conclusion that the point cannot yet be settled, since it is doubtful whether

purpura rheumatica is a rheumatic affection. The rheumatic symptoms are not always well marked; there may, for instance, be no swelling or redness, but only some pain in the joints, and even where there is a history of rheumatism at an earlier date, that may merely have prepared the ground by favouring the action of the fresh pathogenic causes (infectious or toxic?) which directly lead to the purpura and nephritis.

(133) Congenital Hemi-hypertrophy.

A REMARKABLE case of congenital hypertrophy of the muscles of one side has been recorded by Professor Demme, of Bern (*Wiener medicinische Blätter*, No. 2, 1891). The excessive size of the left side of the body was noticed by the parents and midwife at birth: the child, a female, was brought to the hospital when two months old. The left side of the cheek was bigger than the right; the left half of the tongue was twice the size of the right, and the organ was never withdrawn within the mouth. The following are the circumferential measurements stated in centimetres of the several parts named:

Observed during life.	Right.	Left.
Head, horizontal	21	18
,, vertical	21	22
Thorax, nipple line	18	21.5
Abdomen, 2 cm. above navel	23	24.5
,, navel line	20	24
Arm (middle of biceps)	11.5	13
Forearm	11	14
Thigh	20	25
Knee	15	17
Leg	12.5	15.5
Observed *post mortem*.		
Skull:		
Frontal to coronal suture	6.4	6.0
Coronal suture to middle line (over occipital tubercle)	12.8	12.0
Brain:		
Cerebral hemispheres, horizontal section	5.8	5.0
Cerebellum	3.5	3.5
Weight	280 g.	274 g.

Injections of "Lugol's solution" (solution of iodine in iodide of potassium) were made into the left half of the tongue on two occasions, and the tongue could be withdrawn within the mouth, and was thought to be diminishing. Ten days after the last injection, however, the child was found suffocated in bed, apparently by its tongue. The necropsy showed that the asymmetry involved the skull, but not any other bones. The uterus was symmetrical. Microscopical examination of the muscles showed on the affected side increased diameter of muscle fibres, absence of cross striping, granular degeneration, decrease of interfibrillar tissue, increase in the nuclei of the sarcolemma, and embryonic cells in the connective tissue between the muscle bundles. Stellate bodies resembling those described in typhus were also observed. Neither the nerve endings nor the peripheral nerves appeared to be affected; it was thought that there was an increased number of ganglion cells in the anterior horns on the left side and in the nucleus of the hypoglossus. Professor Demme points out certain resemblances between the microscopical appearances and those found in Thomsen's disease on the one hand, and pseudo-hypertrophy on the other, but considers that the case must be placed in a separate category.

PHARMACOLOGY AND THERAPEUTICS.

(134) Koch's Treatment of Tuberculosis: General Results.

AT a meeting of the Berlin Medical Society, on January 21st (*Berlin. klin. Wochenschr.*, January 26th, 1891), Professor Ewald stated that 114 patients had been injected in the Augusta Hospital, and that six flasks and a half of the Koch fluid had been used. In not a single case had there been any secondary reaction at the point of injection; there had been no inflammation of the cellular tissue, or abscess formation, and but little pain. Of these patients 5 had died, and 36 had been discharged. Two cases that had succumbed were absolutely hopeless to begin with, but in two others there seemed to be some connection between the injection and death. In 1 of these there was amyloid nephritis, but the patient had been comparatively well after injection with 1 milligramme. Although the characteristic reaction was slight, the temperature went up the day after the reaction and remained high, hæmoptysis came on, and the patient became collapsed and died the same day. In another of these fatal cases, an American, in whom there was slight affection of the apex of the lung, and whose condition was closely examined into by an English doctor, the doses had been raised to 10 milligrammes, and the patient appeared to be comparatively well, when suddenly profuse hæmoptysis occurred, and at the same time a cavity was found on the opposite side, the hæmoptysis continued on the next day, and miliary tuberculosis developed in the pleura, as found after death. This, however, was not necessarily the result of the injection, though it certainly appeared in some way to be associated with it. Of the 36 discharged cases, 7 went out before the full dose of 100 milligrammes had been arrived at; some because they were doubtful as to whether they were improving at all, others because they were not improving quickly enough, and some on Ewald's advice, as their cases were hopeless from the beginning. Two of these have since died, 2 are probably doomed, and 2 appear in the meantime to be a little better. Twelve cases were dismissed because the reaction had ceased, but before the full dose of 100 milligrammes had been arrived at, 7 were considerably improved, and were in good condition, and 5 were in moderately good condition. Ewald had heard from 9 of them since they had left hospital; in 2 the answers were unfavourable, in all the others favourable. A characteristic case is described of those giving favourable answers. The cough, the sputum, and night sweats had all disappeared, the weight had increased from 138 to 148 lbs., and the general condition was stated to be good. Fifteen cases had received the full 100-milligramme dose, and the fever and reaction in all these cases had ceased to follow injection: 14 had since written to say that their condition still continued favourable; the fifteenth, however, had again been received into the hospital. Although the subjective symptoms were improved in these cases, and although the auscultation sounds were of a more favourable character, percussion had not confirmed all such favourable changes. In no case was there the slightest evidence of change as regards the percussion note, except in those cases where pleuritic exudations had been resolved—the resolution taking place in a remarkably short time. Ewald insists that it is necessary to bear in mind that dulness may be the result (1) of exudation into the vesicles, or (2) of growth of interstitial tubercle in the walls of the air vessels; the former, of course, it is quite possible, and even probable, may be resolved, and, as the sputa and bacilli gradually diminish in quantity and number, one would naturally expect to find the

dulness clearing up. In the case of the interstitial tubercle, however, the clearing up process cannot go on so rapidly, but it does not follow, because there is clearing up of the first, that the interstitial tubercle has disappeared. He then points out the nature of the process of healing by the formation of fibrous tissue, and shows how dulness may still continue although the condition of the patient is improved, and on the other hand, how there may be slight clearing up without any permanent change for the better in the state of the patient. He, however, states definitely "I have never seen a case that I could say was cured, and I do not think that, at the end of three or four weeks even, my opinion can be materially altered." As regards bacilli, it must be remembered, in considering the results of treatment by the Koch injection, that even in the normal course of phthisis their appearance is exceedingly irregular, and he gives, as an example, a case in which the sputum was examined regularly for forty-five days without any bacilli being found, whilst at the end of that period large masses were suddenly found. He concludes that it is difficult to say that any case of tuberculosis is "simple" and that the disease is slight in character. Some of those that appeared to be suitable for the application of the treatment were found not to be so, so that no general rule can be laid down as regards the suitability of the treatment from the apparent condition of the patient, although a certain amount of guidance may be obtained. He insists that a patient must be warned, just as one who is about to undergo a severe surgical operation, and must be made to understand that although the chances of a good result are certainly in his favour, and that rapid improvement frequently occurs—more rapid, indeed, than under any other system of treatment hitherto tried—unfavourable conditions may occur, and that the patient must take his chance as to any accidents that may happen, and that he must have a voice in and take a share in the responsibility of deciding whether such treatment shall be carried out or not. Ewald also contends that other methods of treatment should be tried in a certain number of cases, as in some at least, as good results have been obtained as with the use of Koch fluid, although the period of treatment in such cases extends over a somewhat longer period.

Dr. Alessandro Borgherini gives an account (*Lo Sperimentale*, January 15th, 1891) of the results of Koch's treatment in fourteen cases of tuberculosis of the internal organs and two cases of lupus in the Medical Clinic at Padua. Of the former, five were affected with pulmonary phthisis, seven with both pulmonary and laryngeal tubercle, while two suffered from tuberculous disease of the intestines and bones as well as of the lungs and larynx. In all the cases, careful observations were made of the patient's general condition before, during, and after the treatment. Every day the sputum, the urine, and the blood were carefully examined. The injections were, as a rule, made every second day, the initial dose being from 0.001 to 0.002g., and the amount being gradully increased by 1 or 2 milligrammes at a time. The largest dose given was 0.009g. The reaction had the same general characters which are now familiar, but in two cases in which pyrexia had not previously been present, the fever, which was of intermittent type, still persisted at the date of the report (eight days after the last injection). In two cases the urine showed traces of albumen, which soon disappeared. In the larynx the local process became more acute after the first injections, this effect gradually diminishing till it ceased altogether; the local condition was very considerably modified, while the subjective symptoms were greatly relieved, and in some cases entirely removed. In the lung, the reaction consisted in a series of symptoms at the seat of the primary focus of disease, recalling pneumonic hepatisation. The resolution of the hepatised tissue was sometimes speedy, sometimes slow. When it took place rapidly, resonance, which was before diminished, became exaggerated, but there always remained certain local signs, such as *râles*, harsh breathing, prolonged expiration. In only one case did the physical signs entirely disappear. With the modification in the physical signs, the symptoms were correspondingly mitigated; the cough became easier, the expectoration scantier, and the appetite keener. In some cases it was noticed that the local reaction in the lung was accompanied by vasomotor disturbance in the cheek of the same side. In nearly all cases diminution of the hæmoglobin in the blood was noted in the early part of the treatment, but this loss was speedily made good, and in three cases there was after a time increase of hæmoglobin. The injections caused slight hæmoptysis in patients who had previously had attacks of bleeding from the lung. As a rule, the bacilli did not diminish in number, but changes in form were sometimes observed. Borgherini sums up his results as follows: In four cases in which the disease was very mild there was "some slight favourable change in the physical conditions of the lung and in the general condition." Other factors, such as careful hygiene, good nourishment, etc., may, however, have contributed to this. In the other cases the morbid process was not modified in any way by the treatment. With regard to the lupus cases, in one (a girl, aged 8), after treatment for about a month, the local condition was somewhat improved, but the nodules could still be seen as numerous as they were before the injections were begun, only a little paler. In the other (a woman in whom the disease was of fifteen years' standing) the injections did some good, but the reactions were so severe that the treatment could not be carried out to the extent necessary to produce any marked effect. In Borgherini's hands, so far, the injections have not been attended with any untoward result.

Dr. E. Kurz reports (*Gazzetta degli Ospitali*, January 14th, 1891) the results of Koch's treatment in some cases under his care in the Poliambulanza of Florence. In a case of incipient phthisis in a young man, after eleven injections (from 0.001 to 0.01 gramme), "the pale colour of the face was changed to a rosy hue, the appetite increased, cough and night sweats ceased, and the patient felt much better than he did before the injections." The physical signs were almost normal. In another case in which the disease was more advanced, and in which there were numerous bacilli in the sputum, after twelve injections (from 1 to 7 milligrammes) the expectoration became more mucous in character, and no bacilli could be found in it. The night sweats had ceased, the appetite had improved, and he had gained somewhat in weight. This patient's right knee was ankylosed in consequence of "white swelling" from which he had suffered in his youth; the

injections, while causing reaction in the ordinary way, had no effect on the joint. In another case of advanced phthisis in which there were cavities with old pleurisy, and abundance of bacilli in the sputum, 1 milligramme caused such alarming dyspnœa and cough that the treatment had to be discontinued. Another case was that of a boy, aged 8, with a suppurating gland in the axilla, the incision of which some months before had left a long sinus. A second tuberculous gland in the vicinity was opened, and the remains of it were left without scraping or other surgical treatment in order that the effect of the injections might be observed. The child was weak and pale and had no appetite. A series of injections (from $\frac{1}{2}$ milligramme to 1 centigramme) was given, with the result that the sinus of the first abscess closed up, and the opening of the other after a time ceased to discharge, and was almost healed at the time of the report, the remains of the glands being apparently absorbed. The little patient's appearance and appetite greatly improved, and he was much livelier than before the injections were begun. Another case—which was the first in which Koch's treatment was tried in Florence—was that of a man who for two years had suffered from tuberculous disease of the front part of the sacrum, and also of one rib, with deep and wide sinuses full of tuberculous granulations. The patient had been eight times under the surgeon's knife, having undergone "vast incisions with scraping," with only temporary benefit. Before the injections were begun the ulcer on the buttock measured 10 centimetres in breadth and extended to a depth of 15 centimetres, while the one over the diseased rib was 5 centimetres wide and 10 deep. Some twenty-four injections were given (from 1 milligramme up to 2 centigrammes). At first intense heat in the affected parts was complained of; the secretion became more purulent and bloody, and the granulations lost their greyish-yellow colour and became bright red. The ulcers became smaller from day to day, till at the date of the report a probe could not be introduced. "By Koch's injections much more was achieved in three weeks than by operations and constant local treatment during two years." At the same time the man's general health improved to a remarkable degree. In a case of lupus of fifteen years' standing in a woman whose nose was eaten away, the nostrils almost closed up, and the cheeks covered with thick crusts, after nineteen injections (from 1 milligramme to 2 centigrammes) great amelioration took place under the treatment, and Dr. Kurz seems inclined to claim the case as one of complete cure. With regard to the urine during reaction, he says albuminuria was not observed in any of the cases; sometimes there was an increase of urates. All the patients stated that they felt a notable increase of appetite during the treatment. No untoward effects of any kind occurred.

(135) Koch's Treatment in Surgical Tuberculosis.

M. Verneuil (*Union Médicale*, January 22nd and 24th, 1891) has published a clinical lecture criticising the value of Dr. Koch's remedy in tuberculosis. An authentic and permanent cure after its use has, he holds, yet to be recorded; temporary benefit has been observed in a few cases; serious complications arising in healthy organs have been frequent, and a very considerable number of deaths owing to aggravation of the local condition, to lesions of healthy organs, or to fresh infection by the lymph, have been reported. M. Verneuil proceeded to criticise at length the assertions as to the diagnostic value of the lymph; he maintained that it had not been proved that non-tuberculous tissues did not react, or that tuberculous tissue invariably reacted. The diagnostic value of the lymph was, in his opinion, small, on account of its uncertain and irregular action; the local reaction, when it occurred, was of the nature of an aggravation of the pre-existing local lesions in the same way as various infectious diseases attack points of least resistance. Owing to the danger which attends the local reaction, the degree of which cannot be foreseen, it would, he thinks, be desirable to make use of the remedy as a diagnostic agent only if it were actually indispensable for diagnosis, which, he contends, is not the case. In the immense majority of cases, with the clinical and bacteriological resources at our disposal, diagnosis is easy, and in the rare cases of doubt it would, he holds, be better to abstain from the use of the fluid, the uncertainty and danger not being counterbalanced by the advantages—"in such a case, an incomplete diagnosis is worth more to the patient than a precise diagnosis which does not give either a clear indication or an efficacious help in treatment."

(136) Koch's Treatment in Children.

Dr. E. C. Wendt reports (*Philadelphia Medical News*, January 17th, 1891), on the effects of Koch's fluid in sixteen children of various ages from 19 months to 16 years. No patients with "readily demonstrable" phthisis were selected, but "suspicious" cases—that is, strumous children strongly tainted by inheritance and predisposed by early environment, were chosen, because such cases should serve to prove whether Koch's fluid is a sure test for tuberculosis of all kinds, and also because they should be more amenable to treatment than cases in which the disease is more advanced. Dr. Wendt found that during the period of febrile reaction the children were certainly ill, but even with a temperature of nearly 106° F., and a correspondingly rapid pulse and respiration, they seemed more alert, less profoundly affected than in any morbid state accompanied by similar constitutional disturbances. Though the pulse is at times very feeble, he has not seen anything approaching dangerous collapse. Children bear the injections well, and recover from the prostration incident to reaction in a surprisingly short time. Dr. Wendt gives 0.00025g. as a first dose, even in children more than 10 years old. This is increased to 0.0005g., or even 0.001g., according to the intensity of reaction. The febrile reaction may be delayed for twelve or even eighteen hours, and may last for two entire days. Some details of the cases are given, but as they were mostly either of doubtful nature or in the incipient stage of the disease, the account consists almost exclusively of a careful record of reactive phenomena of the familiar kind. In one case of a child with tuberculous cervical and submaxillary glands and scrofulous affection of the eyelids and nose, the injections caused the development of moist crepitant *râles* over one side, which is stated to be a new symptom. The girl was very much emaciated before the treatment, but at the time of report was gaining flesh. In a case of incipient phthisis in a little girl, Dr. Wendt says: "This child has certainly not been made worse by the inoculations. Her general condition remains entirely changed." Nothing

is said as to the results of the treatment in the other cases.

(137) Koch's Fluid in Tuberculosis of the Eye.

At the meeting of the Berlin Medical Society on January 21st, Dr. Albrand (*Berlin. klin. Wochenschr.*, January 26th, 1891) gave a demonstration of the effect of the action of the Koch fluid in a case of conjunctival tuberculosis in which the disease was very well localised. The glands near the ear and the jaw were somewhat swollen, and small nodules were found in the conjunctiva of the outer sections of the lids. There was no tuberculosis of the lungs. At the age of 17, these small growths had first made their appearance; they were grey, from 2 to 5 millimetres in diameter, but at one point there was a small yellow ulcer. In one of these nodules that had been excised, tubercle bacilli were found, and a small piece of the excised tissue placed in the anterior chamber of the eye of a rabbit gave rise to a tuberculous iritis. The patient was treated by galvanocautery early in 1890, and was dismissed. In December the tuberculosis had again made its appearance around the scar, and the patient was injected by Dr. Hertel, of the Charité; there was only slight dulness at the right apex of the lung, but after the injection dyspnœa and cough were very marked symptoms; but as these occur even in healthy people, not much notice was taken of them. There was moderate reaction when a centigramme of the fluid had been injected; after injections of from 0.015 g. to 0.04 g., swelling and puffiness of the conjunctiva and general reaction occurred, and the yellow and grey points increased in both size and number, gradually becoming confluent. After the injection of doses of 0.15 g., local and general reaction became less marked, and finally disappeared entirely. The conjunctiva became pale, and very suddenly the grey and yellow points disappeared. In the same way the swelling and redness of the glands at the angle of the jaw and near the ear became greater as the doses were increased, but after the extreme dose had been given the reaction diminished, and the glands remained moderately swollen. Near the scar there developed a purulent and spongy granulation tissue, which was removed with the spoon. The glands were treated in a similar fashion, and in both portions of the removed tissue tubercle bacilli were found.

O. Königshöfer and E. Maschke (*Deutsche med. Wochenschr.*, January 8th, 1891) report eight cases of various affections of the eye supposed to be of tuberculous nature in which Koch's remedy was employed in the Ophthalmic Institute at Stuttgart. The cases included one of serous iritis, one of multiple nodosities of the eyelids resembling chalazion; one of pseudo-granular conjunctivitis of two years' standing, complicated with pannus and superficial ulceration of the cornea; one of interstitial keratitis; and four of ulcerated cornea in strumous children. In all these patients, except the one suffering from pseudo-granular conjunctivitis, injections of from $\frac{1}{5}$ to 1 milligramme were followed by well-marked general and local reactions, the latter coming on, as a rule, after the onset of the former. In the cases of ulcerated cornea the local phenomena presented a close analogy to those seen in lupus. The purulent secretion and hyperæmia of the conjunctiva were notably increased, and phlyctenulæ appeared in places which previously seemed to be quite healthy; the ulcers then became clean, and healed rapidly. At the date of the report the four cases of ulcerated cornea were almost completely cured, and the other cases were considerably improved. By way of control the fluid was injected into two patients suffering from syphilitic iritis, with an absolutely negative result. The authors point out that Professor Sigel, of Stuttgart, was the first to employ injections of Koch's fluid in the corneal ulcers in strumous children. By one injection of half a milligramme without any other treatment, he quickly cured an ulcer of the cornea in a child with enlarged glands.

(138) Koch's Treatment: Necropsy.

At a meeting of the Medico-Chirurgical Society of Modena on January 9th, Dr. G. Bassi reported the results in Koch's treatment in four cases of phthisis under the care of Professor Galvagni (*Gazzetta degli Ospitali*, January 28th, 1891). Cases were purposely chosen in which the disease was somewhat advanced, apparently because it was considered that to patients in such a condition a little extra risk was of no consequence. In all the cases there were bacilli in the sputum, and in three of them there was clear evidence of excavation. In three of the cases the result was in the author's own words "some change, perhaps for the better, in the local conditions," but he declines to express any opinion as to the utility of the remedy. In the case in which there were no signs of cavity formation marked reaction followed each injection; in the others it did not occur at all, or only very slightly. The fourth patient was injected for the first time on December 26th (1 milligramme), and again on the following day (1½ milligramme). No reaction whatever followed on either occasion, and on December 31st the man died, the fatal result being "evidently due to the patient's extreme emaciation rather than to the effect of the remedy." On *post-mortem* examination the right lung was found partly adherent to the chest wall; the two upper lobes were indurated, and were the seat of changes due to a process of chronic caseous peribronchitis. There were two cavities, each as large as a hazel nut, at the apex, and two large ones in the posterior part of the lung about midway between apex and base. The lower lobe was red and in a condition of splenisation, but in two places there were patches, apparently recent, of red hepatisation, which on section were seen to be studded with numerous submiliary nodules. Microscopic examination showed that in these foci the changes consisted essentially in caseous broncho-pneumonia and peribronchitis. The spleen was somewhat enlarged, and presented punctiform ecchymoses beneath the capsule and also in the parenchyma. The kidneys were somewhat hyperæmic, with opacity and swelling of the cortical substance.

PHYSIOLOGY.

(139) Results of Section of the Corpus Callosum.

Korányi (*Pflüger's Arch.*, xlvii, p. 35), in Goltz's laboratory in Strasburg, has divided the corpus callosum in a number of dogs, and finds that, provided other parts of the brain be not injured, especially the cerebral hemispheres, there are no symptoms whatever resulting from the lesion. Both halves of the body appear to retain their normal motor and sensory functions, and appear to act in unison together. If, however, the cerebral hemispheres are injured, the well-known symptoms resulting from their injury follow.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(140) Syphilis of the Lung.

DR. E. LANCEREAUX (*Union Médicale*, No. 13, 1891) has a paper on syphilitic disease of the lung and pleura. Such lesions are rarely met with, but when seen pathologically the anatomical changes are sufficient to identify them. They occur in the form of indurations and gummata. Syphilitic sclerosis differs from tuberculous induration of the lung in many ways. It is met with, as a rule, in the lower or middle lobes rather than at the apices, and in the form of bands and fibrous tracts which are not welded together into a compact mass, but may enclose islets of lung tissue, generally more or less emphysematous. The fibrous tissue is not pigmented. The bronchi in relation with these indurations are often flattened, and the alveoli are filled with exudative fluid containing leucocytes and desquamated endothelial cells. The pleura is often thickened and adherent about such diseased areas, and the surface of the lung is puckered and furrowed in much the same manner as the surface of a cirrhosed liver. Syphilis and tubercle may be combined in the same organ, but the appearance of the sclerosed tissue is distinct in each. Cavities and the presence of fresh tubercle in other parts will aid the diagnosis. It is probable that many cases of chronic tuberculous disease have been classed in literature as syphilitic. Chronic pneumonia gives a firm compact indurated mass, soft and glossy to the feel, and not puckered on the surface. Leprosy of the lung is very rarely seen, and the characteristic bacilli would serve to distinguish it. Gumma of the lung is met with rather more frequently than syphilitic induration, but is still very uncommon, and no case should be accepted as such without absolute proof. The details of a case are quoted, and from the microscopic structure of the gummatous masses, Dr. Lancereaux believes that they are formed by peripheral increase from a starting point of peri-arteritis. Fatty degeneration takes place in the centre of the mass, but the remains of alveolar walls and flattened epithelium can often be recognised. The parts around may be thickened by proliferation of lymphoid cells and congestion, and around the whole mass, which is indicated under the term "gumma," there is always a zone of indurated tissue more or less firm and vascular. The fatty degeneration of the centres of the masses may lead to liquefaction, and the evacuation of the fluid thus produced causes considerable irritation of bronchi. Cicatrices are often found in the neighbourhood of the gummata, and a dry pleurisy is usually set up which results in dense adhesions. Syphilis never causes a purely serous exudation in the pleura. The diagnosis by physical signs is exceedingly difficult, and the symptoms are apt to be very misleading. Cough, haemoptysis, and muco-purulent sputum may all be present, but the absence of the bacilli from the latter will form an important element in the diagnosis. Wasting, as a rule, only occurs when the liver or spleen is attacked by the disease, and it may thus happen that wasting will be progressive while the condition of the lung is improving. The latter tends to become stationary after a while, and if other organs are not affected the prognosis is good. The suspicion of syphilis should always attach to lesions beginning in the lower parts of the lung, and slowly progressing without the production of fever.

(141) "Dental Obsession."

DR. V. GALIPPE reports (*Archives de Neurologie*, January, 1891) three cases of the affection designated by Professor Charcot "*obsession dentaire*" that is, the state in which a patient is possessed by some morbid fixed idea in connection with the teeth. CASE I.—A woman, aged 36, of neurotic descent, was prostrated with grief for many weeks following the death of her husband, vertigo, headache, and insomnia being present. These symptoms disappeared after five weeks' change of residence. An incident then occurred which proved to be the starting point of the obsession. The patient, while having a carious tooth prepared for filling, experienced acute pain in the pulp. From that moment her mind became possessed by thoughts about the tooth; insomnia and emotional depression returned. Of the numerous dentists whom the patient consulted, none found any local disease or gave relief by the topical measures they employed. The patient by degrees became convinced that her teeth grew out of position, that the lower jaw projected on one side, etc. With a mirror in her hand she daily spent hours in scrutinising the imaginary abnormalities. Eventually the patient rapidly improved and lost her morbid notions, under treatment prescribed by M. Charcot. CASE II.—A cultivated American, at the time of consulting M. Galippe, was travelling in Europe, accompanied by a dentist whose particular function was to protect his patient from operative treatment on the part of other dentists. The obsession took its rise from the operation of stopping a bicuspid. Great pain set in and lasted intermittently until extraction was

performed. The patient then became tormented by the ever-present idea that further operations would be attempted and great injury would ensue. Although the many dentists who examined him were unanimous in assuring him that there was nothing in the condition of his teeth to justify his fears, he remained constantly harassed by painful sensations in his teeth or gums. Occasionally pain would shoot along the shoulder or up to the ear. Touching the lower jaw appeared to evoke pain. Much improvement was effected by hydro- and psycho-therapeutical treatment; the obsession and pains almost disappeared. CASE III.—A lady who had reigned in the society of a large capital for many years experienced keenest chagrin when the time came for her to abdicate. Among other signs of age, she perceived that her teeth were apparently elongated and irregularly placed. Symptoms of alveolar pyorrhœa developed, which further engrossed her thoughts. She spent a large portion of her time seeing dentists, frequently visiting one twice or thrice in one day. By insensible degrees she became compelled to compress her jaws forcibly on the plates she wore. This impulse increased to such a degree as to cause her to pace about her room ejaculating and thrusting her fingers or some foreign body between the dental arches to impede their coming in contact. This aim then became the patient's obsession: she renewed and extended her searches for professional relief, ever requiring some new apparatus to be made. The involuntary contraction of the masseters and temporals merely increased, and set in whenever anything was introduced into the mouth. Through the advice of a distinguished physician all her remaining teeth were extracted. Aggravation of her condition resulted, and she finally drifted into profound melancholia with suicidal propensity. All these patients were predisposed to insanity. Each case shows that local treatment is futile if not baneful. Obsessions in relation to the tongue have within the last few years been noted by certain observers. The features common to these patients have been the existence of neuropathic taint, the dread of cancer developing in the organ, with absence of objective lesion.

(142) Diphtheria and Gangrene.

DR. GIRODE discusses in the *Revue de Médecine*, No. 1, 1891, the relation between diphtheria and gangrene. He recalls the fact that cases of diphtherial angina were formerly classed with gangrenous angina, and that the leader of the reaction against this view was Bretonneau. Having described the occasional concurrence of diphtherial and gangrenous angina, he quoted a case of this description, in which the false membrane occupied the throat, larynx, trachea, and bronchi, while the tonsils and uvula were gangrenous and sloughing. Death was brought about suddenly by detachment of the laryngeal false membrane and occlusion of the glottis. On examination after death, which occurred about forty-eight hours after the first complaint of sore throat, it was found that on the right side the sloughing of the tonsil and of the adjacent tissues was more advanced than on the left. The right internal carotid had become involved in the inflammatory process; its coats were thickened, brown, and softened, and its lumen was filled by a consistent adherent thrombus of blackish colour. This clot occupied the vessel for four centimetres. Dr. Girode also described the case of a sewer-cleaner, in whom gangrene of the skin of the calf was followed by diphtheria of the wound. The patient subsequently suffered from well-marked diphtherial palsy of ataxic type. In discussing the question whether in cases in which gangrene follows or accompanies diphtheria, the combination is more than accidental, Dr. Girode relates some hitherto unpublished observations of M. E. Roux, made during the course of experiments on animals with the Klebs-Löffler bacillus. He found that colonies of this microbe might develop in the deeper parts in great numbers, and invade the tissues subjacent to the false membrane. These colonies produced intense cellular irritation and thrombosis, leading either to molecular destruction or to sphacelus of the invaded tissue. A sphacelus thus produced by the intensity of the diphtherial poison may become the nidus for putrefactive organisms, and gangrene thus started may extend to adjacent parts. The general purport of Dr. Girode's paper, then, is to prove that while diphtheria is essentially a superficial and pseudo-membranous affection, the specific process may invade the deeper tissues, and may then either produce molecular destruction or so enfeeble the vitality of considerable tracts that they become the seat of gangrene. There is, he holds, "an affinity between the two processes, although in their intimate nature they are separated by the great distance which, considered from the point of view of microbial biology, exists between parasites and saprophytes."

SURGERY.

(143) Statistics of Extirpation of the Larynx.

THE *Centralblatt für Chirurgie*, No. 51, 1890, contains abstracts of two contributions dealing with the results of extirpation of the larynx—one a published thesis by M. A. Pinçonnat, of Paris, the other a paper by Dr. Kraus, in the *Policlinico*, No. 4, 1890. The first mentioned author has collected from different sources 220 cases; 171 of total and 49 of partial removal of the larynx. Of the operations in which the whole of the organ was removed, 154 were performed for carcinoma, 9 for sarcoma, and 8 for other forms of disease. From causes of death common to this and other grave operations, such as hæmorrhage and shock, 22 of these cases ended fatally within the period of the first eight days after the removal of the larynx. Thirty-eight patients died in the course of the first three months from affections of the respiratory organs, in most of these instances from pneumonia. One patient died through septic poisoning, another from exhaustion, and two patients sank through inanition. Of the 171 cases of total extirpation, 69 had a fatal ending. Of the 154 cases in which the whole of the larynx was removed for carcinoma, in 83 the patients survived over one month, and in 26 they survived over two months. Seventeen patients were living and well after intervals of more than twelve months. No return of the disease had occurred between the second and third years in 3 cases, and none between the third and fourth years in 4 cases, and in 3 other cases the patients were quite free from recurrence at the end of the fourth year. After total extirpation for sarcoma, 8 out of 9 patients recovered from the direct effects of the operation. The disease returned in 3 of these cases. One patient was quite well at the end of two, and another at the end of three

years. Of the 49 cases of partial removal, 17 were fatal. In 4 of these fatal cases death was the immediate result of the operation, and in 8 cases the patients were carried off in the course of the first five weeks by pneumonia. In 43 of the 49 cases of partial removal of the larynx the operation was performed for carcinoma. Of the patients who recovered, 7 were well at the end of twelve months, 1 was well after an interval of four, and another after an interval of seven years. The list of cases formed by Kraus includes 160 of total, and 80 of partial removal of the larynx. In 142 of the former cases the operation was performed for carcinoma. Of these, 10 cases were excluded as being too recent; in 57 of the remaining cases the patients died within the first two months. Twenty-five patients had survived the operation in good health for at least twelve months, 13 patients for two years, and 1 was alive and well at the end of an interval of nine years. Of the 80 cases in which only part of the larynx was removed, 66 were cases of carcinoma. In 23 of the 55 cases of which subsequent histories could be obtained, the patients died from the effects of the operation within the first two months. In 16 cases the patients were alive and free from recurrence after intervals of at least twelve months. Of these, 8 had survived for more than two years, and 1 for eight years. Kraus holds that the removal of the larynx should be performed only in cases in which carcinoma is restricted to this organ, and to the first ring of the trachea. In the cases in which the disease had not extended beyond these limits, the proportion of recoveries was 21 per cent. after total extirpation, and 40 per cent. after partial removal.

(144) The Rotary Element in Lateral Curvature of the Spine.

Dr. A. B. Judson, of New York (*Medical Record*, November 1st, 1890), says that he has seen no reason to change his opinion as to the cause of rotation in lateral curvature of the spine promulgated by him some fifteen years ago. He believes that rotation takes place because the anterior part of the column, the bodies, are free to move laterally in the cavity of the chest and abdomen, whilst the posterior part, the processes, are prevented from the same degree of lateral displacement by being entangled in the posterior parietes, composed of ribs, muscles, and fasciæ. He gives diagrams of mechanical arrangements of the vertebræ, showing how, when the spinous processes are fixed by elastic wires, pressure on the top of the column causes a rotary lateral curve. When a single vertebra is seen in rotation, the body makes a wider excursion than the spinous process. The vertebra does not rotate on a central axis nor on a peripheral axis, but on an eccentric axis, remote from the periphery and still further remote from the centre. Rotation, he says, is physiological as well as pathological, a function of the normal spine. Lateral curving cannot occur without it, and can be well seen when a thin person inclines to one or other side. For detecting early rotation he palpates the chest between the two palms. This will reveal a difference in the diagonal diameters of the chest when the curvature is overlooked in the line of the spinous processes. Thus, in rotation to the right in the dorsal region the diameter of the chest from the angles of the right ribs to the left mammary line will exceed the diameter from the angles of the left ribs to the right mammary line. In treatment Dr. Judson seeks to "produce lordosis of the dorsal and lumbar regions, on the theory that the patient is thus led to remove the imposed weight, or a part of it, from the bodies of the vertebræ, which deviate widely from the median line to the articular processes, which by virtue of rotation remain comparatively near the median line." This is done by suspension on the curved backboard, and by using an air-pillow (10×18) placed under the back when the patient is supine, so that the shoulders may lie between the air-pillow and the pillow for the head, and the pelvis may hang over the lower edge of the air-pillow. He also makes use of posture, exercises, and recumbency in the treatment of these cases.

(145) A New Indication for Osteoplastic Resection of the Foot.

The *Archiv für klinische Chirurgie* for December, 1890, contains a report of a short communication from Professor Rydygier, of Cracow, to the last Congress of the German Surgical Society, in which is suggested a new indication for the performance of what is known on the Continent as the Wladimirow-Mikulicz operation. This procedure, which consists in removing the heel and ankle-joint, and in bringing the anterior part of the foot in a straight line with the leg, has been advocated and brought under the notice of surgeons in this country by Sir William MacCormac. The following had previously been laid down as indications for this operation: caries of the bones of the foot restricted to the os calcis, the astragalus, and the lower ends of the tibia and fibula; injuries, particularly gunshot wounds, involving and destroying the heel and adjacent parts; cancerous growths of the heel; distortion of the foot caused by badly united fracture of the malleoli. To these Professor Rydygier would add extreme shortening and distortion of the lower limb following excision of the knee. A case is reported in which the osteoplastic operation was performed for the relief of a condition of this kind, and the results, it is stated, answered every expectation, the patient being able to bear the weight of his body on the straightened foot, and to take long walks.

(146) Tuberculous Ostitis of the Occipito-atlantoid Joint.

The *Centralblatt für Chirurgie*, No. 51, 1890, contains an interesting abstract of a lecture on disease of the occipito-atlantoid joint, delivered by Professor von Bergmann and published in the series formerly known as *Volkmann's Sammlung klin. Vorträge*. This lecture, which was preceded by a demonstration of three instructive preparations of tuberculous inflammation of the articular apparatus between the head and spine, deals fully and very clearly with the pathology, symptoms, and prognosis of this affection. In the course of the lecture von Bergmann describes the secondary changes produced by vertebral tuberculosis in the corresponding portion of the cord, and refers to the results of some recent experimental researches which were made to account for the fact that in acute traumatic, as well as in chronic narrowing of the vertebral canal, paralysis of the limbs may occur without any appreciable change in the structure of the cord. According to the investigations of Kahler and Schmaus, the following pathological processes are presented in such cases: In consequence of

pressure on the spinal meninges the return of lymph from the cord is arrested, and a stasis of this fluid thus caused, which seriously impairs the vitality of the nerve fibres, resulting in degeneration and total disappearance of the axis cylinders, and finally in inflammatory reaction in the interstitial tissues. If, as very probably occurs in many cases, such œdema be the sole cause of paralysis and anæsthesia, then, on cessation and disappearance of this œdema, we might expect a restoration of the normal functions of the affected portion of the cord. In such cases the surgeon has to deal, not with a crushing or tightly constricting lesion, nor even with a progressive tuberculous myelitis, but exclusively with a collateral œdema, surrounding, in a broad zone, the primary tuberculous centre in the diseased bone, and, though involving the cord or medulla oblongata, yet leaving for a time the nerve fibres intact. Such a pathological condition would account for the fact that the symptoms of spinal tuberculosis vary much from time to time, and that the course of the disease is marked by acute exacerbations of short duration, by transient irritative attacks, and by long-continued, but finally cured, paralysis.

MIDWIFERY AND DISEASES OF WOMEN.

(147) Recto-vaginal Fistula.

Dr. G. Félizet (*Annales de Gynéc.*, January, 1891) dwells upon the difficulty of curing this miserable infirmity by plastic operations. It is not so much the passage of fæces, as the escape of gas into the minute spaces left between the opposed surfaces that delays or prevents sound union. Several surgeons advocate the free division of the perineum by the knife, holding that perineorrhaphy is easier and far more likely to prove successful than any paring and suturing of the edges of the fistula. Dr. Félizet has performed an operation based upon this principle, but not open to certain objections which might apply to complete perineorrhaphy. He splits up the perineum along a plane looking antero-posteriorly, to above the level of the fistula, so as to convert the recto-vaginal fistula into two fistulæ, one vagino-perineal, the other recto-perineal. The patient was 35 years old, and the fistula was caused by a prolonged second stage of labour two years previously. The fistula had very indurated walls; it commenced four-fifths of an inch above the fourchette, and ran upwards and backwards, opening into the rectum nearly 2 inches above the anal orifice; flatus passed freely through it. The patient was placed in the lithotomy position; the operator's left forefinger was passed into the rectum, and the thumb pressed against the margin of the anus, so as to keep the perineum slightly on the stretch. Dr. Félizet then made a semicircular incision, as in bilateral lithotomy, through the perineal tissues. The knife thus dissected up the recto-vaginal septum, until it entered the groove of a director which lay in the fistula, being held in position by an assistant. When the septum was thus split up to the entire lower border of the fistulous canal, the grooved director was withdrawn, and the septum divided through the upper border of the fistula, the knife passing for about one-eighth of an inch upwards above the hardened tissue bordering the fistula. The rectal and vaginal sides of the wound were then pushed apart by the right forefinger. The second stage of the operation now commenced. The director was passed, behind the vaginal side of the split septum, into the rectum through the fistula (the vagino-perineal part of the fistula being thus excluded), which was next laid open like an ordinary fistula *in ano*. The entire operation lasted about ten minutes. The flatus henceforth passed over the wound made by splitting up the recto-perineal part of the fistula; this wound was dressed with iodoform and boracic vaseline. The vaginal orifice of the fistula, no longer irritated by flatus or liquid fæces, was almost closed spontaneously by the tenth day. It was then touched with nitrate of silver, and it closed entirely six days later. The ano-perineal wound did not heal entirely till at the end of a calendar month. Eight months later the parts were found, on examination, to be in a healthy state, and the patient was in perfect health.

(148) Sarcoma of the Uterus.

M. Terrillon (*Gazette des Hôpitaux*, November 29th, 1890) has collected fourteen cases of this disease; he classifies them as four of sarcoma of the endometrium, two of gigantic sarcoma of the fundus, three of pedunculated sarcoma, and four of cystic sarcoma. Histologically he divides them into sarcoma of the mucous membrane, interstitial, and cystic sarcoma. In sarcoma of the mucous membrane the new growth may form a bud or may ulcerate. The cervix remains stationary in length, the uterine cavity elongates. These tumours most frequently develop in women between the ages of 30 and 50; many of the patients hitherto observed were childless. The local disease makes rapid progress; general emaciation, however, appears to come on later than in cancer. The patients seldom live over two years. Death is usually due to pressure effects. The disease nearly always recurs after removal; this recurrence is often rapid, and ranges, according to existing records, from five months to two years. The recurrent growth usually forms on the stump of the uterus, less frequently in a part far from that organ. In one of M. Terrillon's cases it developed in the lung. The chief symptom of sarcoma of the uterus is a constant bloody discharge with steady enlargement of the body of the uterus. Operation is the only remedy. When a bud-like sarcomatous tumour develops on the endometrium, it may be treated by scraping with the curette, and by subsequent repeated cauterisations with chloride of zinc. M. Terrillon wisely cautions operators as to the use of such a remedy, and observes that the temperature often rises to 104° F. after the scraping and caustics. As he has never seen such a complication when the same remedy has been used for metritis, M. Terrillon suspects that some auto-infection or special form of septicæmia occurs in these cases.

(149) Ovariotomy on a Hermaphrodite.

Dr. Florian Krug, of New York, describes this interesting case in the *American Journal of Obstetrics* for January. The patient was a Pole, aged 19. When 10 years old a copious growth of hair appeared all over the body, especially the face. At 16, abdominal pains, with epistaxis, occurred monthly, but there was never any show. A swelling appeared a few months before she entered hospital. It was diagnosed as hæmatometra and hæmatocolpos. Krug noted the masculine appearance of the patient. Nothing womanly existed save her long tresses. The whiskers and moustache were well developed, and she shaved daily. The skeleton, especially the pelvis, was massive. The external genitals at first sight were

like those of a male; the clitoris was two inches long. Two folds, resembling a scrotum when they lay together, concealed a narrow vaginal orifice. The urethra opened immediately under and behind the penis-like clitoris. The vagina contained no rugæ. The portio vaginalis of the cervix was minute; its os, a pinhole orifice, admitted a fine sound for about two inches. The tumour descended into the pelvis, and appeared as though connected with the uterus: it caused extreme distension of the abdomen. Bronchitis and kidney disease complicated the case. A large sarcoma of the right ovary was removed; its base had to be shelled out of the right broad ligament. The left ovary formed a smaller sarcomatous tumour, also sessile; it was removed. The patient died of bronchitis on the tenth day. The stumps on either side of the small uterus where the ligatures had been employed were normal.

PHARMACOLOGY AND THERAPEUTICS.

(150) Intrabronchial Injections in Pulmonary Phthisis.

Dr. Giulio Masini has made experiments (*Gazzetta degli Ospitali*, January 7th, 1891) as to the possibility of injecting medicinal substances directly into the bronchi, and has satisfied himself that it can be done. He uses for the purpose the barrel of an ordinary syringe to the distal end of which is fixed a catheter, with the usual laryngeal curve, which can be pushed out or drawn in as may be required. The liquid used was a 20 per cent. solution of olive oil, filtered and sterilised, and creasote. This is injected into the trachea or into one or other bronchus by passing the catheter through the glottis from the mouth. Auscultation by an assistant, while the liquid is being injected, enables the operator to know whether the medicament is reaching its destination. The experiments were made in Professor Maragliano's clinic, at Genoa, on five men and one woman suffering from various degrees of pulmonary disease—from catarrhal bronchitis with doubtful signs of tuberculosis to the gravest form of phthisis, with infiltration of both lungs, cavities, etc. In two of the cases in which on admission there were signs of disease at the apex, with night sweats and wasting, the effect of the treatment was very remarkable. After injections of the solution every day for a month (increasing gradually in amount from 1 to 4 cubic centimetres) the physical signs disappeared "completely" in one case, and "all but completely" in the other. Both of them gained considerably in weight. In one of the remaining cases the treatment had to be discontinued almost immediately, on account of the extreme sensibility of the larynx and the indocility of the patient. In the three others, daily injections (of 4, 5, 8, up to 10 cubic centimetres) were given during three months and a half; in two of them a "notable result" was obtained, the expectoration ceasing almost entirely, the diseased area in the lungs becoming much smaller and the patients gaining weight and feeling better. In the fourth case the disease remained stationary, but the daily amount of expectoration diminished by 80 grammes, and there was a slight gain in weight. Dr. Masini thinks these results sufficiently encouraging to warrant further trial of the method.

(151) Koch's Treatment in Lupus.

A summary of several papers published in Germany dealing with the question is published in the *Monatshefte f. prakt. Derm.*, No. 2, 1891. Abstracts of most of them have already appeared in the Supplement. Among the others is one by Dr. Koehler, published in the *Deutsch. med. Wochenschr.*, 1890, No. 48. Koehler asks the question, What becomes of the dead tissue containing the living bacilli? He considers it possible that where the lupus is superficial the dead tissue containing the bacilli may be thrown to the surface of the body and a permanent cure take place. If the lupus is deeply situated, the cutis tissue prevents this throwing off of the dead tissue. Unless the cutis were to die throughout its whole thickness, there would be no elimination from without. Such total gangrene of the skin has not been observed by the author. After discussing various possibilities from a theoretical standpoint, he infers that in any deep-seated lupus we must interfere surgically in order to get rid of the necrosed tissue, and he believes that that ought to be done when the remedy in large doses produces neither general nor local reaction. He recommends the use of the sharp spoon, believing that even if all the lupus tissue is not removed by it, Nature will throw off the rest; in other cases the spoon or other surgical treatment may be used first and the remedy injected afterwards. He refers to a case in which the cartilage of the nose was affected with ulcerating lupus. After one injection the ulcerated parts healed, and they remained healed, whilst parts that were not ulcerated cannot yet be considered as quite free from lupus. He further refers to a case which proves that in superficial lupus the injection alone can completely cure the disease. Where there were formerly numerous islands of lupus tissue in the skin, not only are there now present the excretory ducts of the glands, but even lanugo hairs. So far this is the most successful case reported. Maes (*ibid.*) reports on five cases of lupus, and calls special attention to the fact that in all these cases the local reaction preceded the general reaction by a quarter of an hour to an hour. He found no reaction in a case of acute pleurisy in which phthisis was suspected. There was no reaction in two cases of syphilis. In a case of tubercular leprosy, evidently the one reported by by Arning (Supplement, January 31st, p. 37), the febrile condition lasted four days, attended with diarrhœa for two days, and there was no local reaction in the leprous tubercles.

(152) Elective Effect of Koch's Fluid.

Professor Pick (*Prager med. Wochenschr.*, 1890, Nos. 51, 52) used Koch's fluid in a case of Addison's disease in which the chief symptom was pigment hypertrophy in an otherwise normal skin. The dose was 0.01 g. The first injection produced no reaction, but a second injection was followed by violent reaction, during which the patient complained of severe pains in the loins, which were increased by pressure. The absence of reaction after the first injection was not considered decisive, because Koch had stated that in old caseous tuberculous foci reaction is late in appearing. Pick considers that in this case a tuberculous affection of the suprarenal bodies was shown to be very probable. In a case of syphilis in a girl, aged 17, an affection of the forearms was present since she was 12 years old, diagnosed by

Pick as tuberculosis cutis verrucosa. On the arm of the same side there was a white scar, resulting from the healing of a suppurating gland. On December 9th, 10 milligrammes were injected, and in six hours afterwards severe general reaction occurred, whilst on the parts affected by syphilis, namely, ulcerating condylomata on the labia and the common syphilitic affections of the mucous membrane of the mouth and throat with the usual general glandular affection, no change was observable. Four hours after the injection, the tuberculous swelling on the forearm was tumid, red, and painful. On the scar on the arm, which was also red and swollen, a painful swelling as large as a hazel nut developed. Pick considers the result in this case to prove the specific antituberculous effect of Koch's fluid. He summarises the results of twenty-five cases inoculated within twenty-five days with Koch's fluid, by expressing a confident belief that in Koch's lymph we have a remedy of the highest scientific signification, of precious diagnostic value, and a real remedy against tuberculosis. The details of the symptoms which followed the injections are similar to those which have been already published by other observers.

(153) Koch's Treatment of Tuberculosis: General Results.

At a recent meeting of the Lisbon Sociedade das Sciencias Medicas, Dr. Sousa Martins presented a report (*Correio Medico de Lisbon*, February 1st, 1891) on the results so far obtained from Koch's treatment by the Committee appointed by the Society to investigate its action. The patients selected for the purpose were eleven in number (seven men and four women), and cases in which there were very extensive pulmonary lesions, or in which cerebral or abdominal complications were present were excluded. The treatment was begun in all the cases on December 12th. The amount given in the first injection was always 1 milligramme, and the dose never exceeded 3 milligrammes. The pulse, respiration, urine, sputum, and body weight were carefully tested before, during, and after the treatment. The general result is summed up by Dr. Sousa Martins in the statement that "all the patients became worse under the treatment." One man with tubercle in both lungs, a cavity in the left, and hæmoptysis, was injected five times, the mean temperature during reaction being from 38.5° to 39° C. Before the treatment, the number of bacilli in the sputum was estimated at 19 per linear centimetre; after the first injection the number rose to 420, subsequently falling to 4. The expectoration before injection averaged 90 grammes a day; after the treatment was commenced this amount rose to 140, falling afterwards to 40. After the fifth injection, acute pleurisy, with considerable pyrexia, came on, and the treatment was discontinued. The patient died on December 21st, and at the *post-mortem* examination tubercles were found in the lungs, peritoneum, and mesenteric glands. In the upper part of the left lung the lesions were evidently old, but in its lower part the tuberculous process was of a more acutely inflammatory nature, and of recent date, "perhaps posterior to the treatment." Another man with anal fistula and old standing tuberculous disease of the leg and knee, for which he had been operated on several times, received four injections. Reaction, both general and local, occurred in the usual way, but after the fourth injection the treatment had to be discontinued on account of two attacks of intestinal hæmorrhage, which Sousa Martins suspected to be attributable "to the development of a new tuberculous focus, or to the reawakening of a latent one." In a man with a cavity in the right lung, the local symptoms and general condition became so much aggravated that after the third injection he declined further treatment, and left the hospital. In a negro with cavities in both apices, tuberculosis of the skin and caries of the sternum, after the fifth injection there was slight febrile reaction. The injections caused "insignificant improvement" in the bone disease, but produced no effect whatever on the pulmonary lesions. The treatment was discontinued because it caused pain in the abdomen, and hæmorrhage from the bowel was apprehended. Another case was that of a man of alcoholic antecedents, with diminished resonance over a considerable part of the chest. He had spat blood from 1862 to 1869, and his expectoration before treatment was begun was "bloody, without bacilli." After five injections there was some improvement in the pulmonary symptoms, and the man looked better, but he had lost 3 kilogrammes in weight. In a man with enlarged submaxillary glands after four injections not the slightest local reaction was obtained, though there was some rise of temperature. In the case of a drinker with not very extensive tuberculosis of one lung and hæmoptysis, the second injection was followed by intense headache, trembling of the limbs, and amblyopia with irregularity and complete paralysis of the pupils. There was also some inflammation of the affected lung. In the case of two women with lupus the injections (three in number) were followed by the familiar results, "granulations of a healthy kind" being left after the separation of the scabs. In another woman with tuberculosis of the skin, palatine arch, pharynx, and lung, no reaction, general or local, followed the injections. In a woman suffering from tubercular leprosy, to whom four injections were given, general reaction occurred, but not the slightest local effect could be seen.

At a meeting of the Royal Medico-Chirurgical Academy of Naples on January 25th, Professor De Renzi stated (*Riforma Medica*, January 28th, 1891) that up to that time he had tried Koch's treatment in 44 cases (22 men and 22 women). Of these, 37 (21 men and 16 women) suffered from pulmonary consumption, 2 from "non-bacillary chronic broncho-pneumonia of one apex," 2 from lupus of the nose and face, 1 from tubercle of skin and glands, 1 from osseous and glandular tuberculosis undergoing cure but with remains of disease in the cicatrices, and 1 from a cold periarticular abscess of the right hip. Of the phthisical cases, 11 were "very severe," 13 "severe," 10 "of medium intensity," and 3 "incipient." In 4 cases the initial dose was four-tenths of a milligramme, in 34 half a milligramme, and in 6 one milligramme. The largest dose used for one injection was 60 milligrammes. Of the 37 phthisical cases, 5 had been only a short time under treatment; of the remaining 32, 2, or 6.02 per cent., died. Of the others, 4 (13.3 per cent.) were "remarkably improved," 5 (16.2 per cent.) "slightly improved;" in 8 (26.6 per cent.) there was "no appreciable change," 13 (43.3 per cent.) were "made worse." In 2 cases of lupus, 1 of cold abscess, and 2 of tuberculosis of the skin or bones, the beneficial results were "most manifest." Of these, 2 were "cured,"

while the others showed "rapid and progressive improvement, which inspires a hope of cure in a short time." In one patient, with laryngeal tuberculosis, there was at first remarkable amelioration, but, on substituting gradually decreasing for gradually increasing doses, the local lesions became worse. In the two cases of death, *post-mortem* examination showed in one the appearance of active ulceration in the cavities, and in the other intense hyperæmia and œdema of the lung. De Renzi points out, however, that in the former case only three injections had been given, while in the latter they had been discontinued a week before death. He concludes from his own experience so far that Koch's fluid has a great, though not an absolute, value as a diagnostic agent, and that, in the present state of science, the injections do not constitute a reliable remedy for pulmonary phthisis. He admits, however, that a step forward has been made in the treatment of that disease. Comparing the results of Koch's treatment with those of other therapeutic methods, De Renzi states that as a general rule the cases which proved refractory to the injections also resisted ordinary treatment. In other cases again, in which ordinary treatment had ceased to do good, Koch's fluid had proved beneficial. As a rule, the injections should be given on alternate days and in progressive doses. On the whole, though at present the method is not "promptly and radically effective" against tuberculosis, we are justified in expecting that it may be perfected so as to become so.

At the same meeting Professor Cantani (*ibid.*) stated that he had tried Koch's treatment in 26 cases, namely, 20 of pulmonary phthisis, 1 of glandular tuberculosis, 1 of tuberculous joint disease, and 4 of lupus. Of the phthisis cases, 7 were "incipient," 9 "advanced, with more or less extensive infiltration of the lungs," and in 4 there were large cavities. Of the 7 cases of incipient phthisis, 5 were also suffering from tubercle of the larynx. Among other effects of the injections notable diminution of night sweats in all cases was observed; in some cases they ceased altogether. The evening rise of temperature or constant pyrexia of the febrile cases also disappeared, the temperature becoming normal except during reaction, and remaining so even then if care were taken to use very small doses. In only one case did hæmoptysis occur, and that patient had spat blood for some years. The blood was examined during reaction twenty times, but no "circulating bacilli" were seen; and when injected into guinea-pigs it did not communicate the disease. In only one case was there a trace of albumen during reaction; in none did peptonuria occur. Cantani says: "The observations as a whole confirm Koch's statements as to the action of his lymph; and the exceptions which are met with only confirm the rule." The effects described by Virchow may occur in phthisical patients who have not undergone Koch's treatment; in any case they are extremely rare, and are easily avoidable with a little prudence and foresight. Judging from the "astonishing improvement" seen in cases of lupus, Cantani thinks it "possible" that the fluid may cure tuberculosis. In disease of the lung, there are greater difficulties to be overcome, but "in two of the cases of incipient tuberculosis an objective improvement was observed." Cantani believes that, by adapting the treatment to the individual case, in particular by aiming at inducing only local with as little general reaction as possible, and combining other therapeutic aids—diet, open air, etc.—therewith, "real cures will be obtained more easily by means of the fluid than has hitherto been the case without it." In cases of lupus he begins with large doses, which are rapidly increased; but in phthisis it is best to give very small doses at rather long intervals. Thus, he injects at first from one to two milligrammes, gradually increasing the dose, if there is no febrile reaction, by two milligrammes: if there is slight reaction by one milligramme. If there is great reaction the dose is not increased. In lupus, after injecting from five to twenty milligrammes between the shoulders, Cantani tried injections near the seat of disease. In this way he found that, whereas only slight reaction had followed a twenty-milligramme interscapular injection, a very marked local effect was produced by two milligrammes injected close to the affected part.

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(134) Camphoric Acid in the Sweating of Phthisis, etc.

Bohland (*Deutsch. Archiv f. klin. Med.*, Bd. xlvii, 289) contributes a paper on camphoric acid in excessive sweating. The observations were made in the Medical Clinic at Bonn, and only on patients in whom the sweating was pronounced and occurred every night. After camphoric acid had been given two or three days in succession the sweating ceased for a few days, or even for a fortnight or more. In some cases it entirely ceased, but only where the general condition of the patient showed marked improvement, as evidenced by increase of weight and decrease of cough and fever. It was administered to thirteen patients on forty-eight separate occasions; in forty of these the sweating ceased, in eight it did not. The author thinks the results would have been better if he had given somewhat larger doses to begin with, and had administered it at more suitable times. He found in some patients who were accustomed to perspire most profusely about 3 A.M., that the administration of 15 grains at 9 P.M. postponed the sweating till 5 or 6 A.M. but did not diminish it, and that after an increase of the dose to 30 or 45 grains the same state of matters remained, but if 15 grains were given about 2 A.M., the sweating was satisfactorily checked. In most cases 15 grains were given at 9 or 10 P.M., and sometimes an increase to 30 or 45 grains was made. It is best to give a single dose at night, rather than a number of smaller doses during the day. No vomiting or other bad results were ever seen; in one case a scarlet-fever-like rash appeared, but antipyrin was being given at the same time. There is no fall of temperature and no effect on the specific course of the disease. The patients sleep much better, but this seems due entirely to the stoppage of perspiration. Camphorate of sodium is more soluble, and has a neutral reaction. It was used fifty-eight times on eleven phthisical patients with the same results practically as camphoric acid. In non-tuberculous cases of excessive sweating, the action of camphoric acid is by no means reliable, and it very frequently fails. Bohland is of opinion that it has no specific action on the bacilli or their products, but acts by depressing the sweat centres and the secretory nerves. It acted well in two cases of tuberculous diarrhœa which had resisted other treatment. It is a powerful anti-

fermentative and germicide, and probably would be suitable in all cases of diarrhœa from fermentative and similar processes. In cystitis 15 grains thrice daily for two days restored ammoniacal urine to its normal acid reaction. The urine, if kept for several days in summer, does not decompose, and remains acid. As soon as the urine regained its normal reaction, the other symptoms disappeared. In five cases of spinal disease with cystitis, the cure was complete, in others there was great improvement, in others the result was *nil*. Bohland also made observations on the excretion of camphoric acid in the urine. When taken early in the morning before food, excretion began in two hours, and was finished in five hours. Taken after supper, excretion began in about six hours, and was finished in about twelve hours. Only a portion of the ingested camphoric acid could be recovered, the remainder probably forming insoluble compounds in the bowel, or being excreted by other channels, or possibly oxidised in the body. It should be given two to four hours before the usual time of sweating.

Professor Combemale, of Lille (*Bull. Gén. de Thérapeutique*, January 15th, 1891), used camphoric acid in 30-grain doses, dissolved in flavoured alcoholic syrups. He always gave it at 7 P.M, and observed its effects in seven cases, five of pulmonary phthisis, one of pulmonary syphilis, and one of convalescence from typhoid fever, in all of which there was profuse sweating. He concludes (1) that camphoric acid has a certain action in the night sweating of tuberculosis; it may entirely suppress or greatly diminish it, and is rarely without effect. (2) Thirty-grain doses per diem is a sufficient dose, but the best plan is to give 30 grains in a single dose at night. (3) It has no unpleasant subordinate effects. Combemale believes it acts by its antiseptic powers and by destroying the bacillary soluble products. He gives no proof of this, however. Camphoric acid has the formula $C_8H_{14}(CO\,OH)_2$, and is prepared by heating camphor with nitric acid. There are five such isomeric bodies, of which the one which turns the plane of polarised light to the right was used by Combemale. It is in colourless transparent crystals, acid in reaction, with a bitter taste, little soluble in cold or hot water, soluble in alcoholic solution. It is best given in *cachets* or dissolved in spirituous solutions; the latter, however, are bitter and acid. It was first used clinically by Fürbringer (*Berlin. klin. Wochenschr.*, 1888), but Bertagnini (*Annales de Chim. et Pharmacie*, xcvii) had previously taken 180 grains in two days without experiencing any effects whatever. Fürbringer used it in cystitis, diarrhœa, and phthisical sweating with good results. Reichert (*Deutsch. med. Wochenschr.*, 1888) and Niesel (*Berlin. klin. Wochenschr.*, 1888) used camphoric acid locally in catarrhal inflammations with moderately good effect. Its antihydrotic action has been carefully investigated by Len (*Charité Annalen.*, Bd. xiv), who found that it acted well in phthisical and rheumatic sweating, and by Dreesmann (*Inaug. Diss.* Bonn, 1889.)

PHYSIOLOGY.

(155) Elimination of Iron by the Bile.

That iron is present in the bile has been known for a long time, but the exact quantity eliminated by this channel and its significance have perhaps been exaggerated by some physiologists. Hamburger's researches, although ten years old, are still of great importance, for he established the fact that the largest part of the iron introduced into the body, either naturally in the food, or given in the form of preparations of iron, is eliminated in the fæces, a very minute trace by the urine, and excessively little by the bile. Thus a dog, in the course of thirteen days, received 180 milligrammes of iron, and in the same time 136.3 milligrammes were eliminated by the fæces, 38.4 milligrammes by the urine, and 1.8 milligramme by the bile. He also showed that the iron eliminated by the bile is but little influenced by variations in the amount of iron introduced by the mouth, so that the iron in the bile must be regarded as an index of the hæmatopoietic or hæmatolytic action of the liver. Dastre (*Archives de Physiol.*, No. 1, January, 1891, p. 136) subjected a large dog, with a biliary fistula, to a strict dietary, and collected most carefully the bile excreted daily. He finds that the proportion of iron in the bile excreted is very variable. As a mean, it is 0.94 per cent. of the dry residue, although there are very considerable variations even in a regular and exactly similar diet, so that Dastre also finds that the hepatic iron depends more on the blood formation or blood destruction in the liver than on the alimentary conditions. The quantities of iron excreted in the bile of a dog weighing 25 kilos (55 lbs.) vary from 2.34 to 0.09 milligrammes per day per kilo weight of the animal.

OTOLOGY.

(156) Progressive Deafness in Chronic Non-suppurative Median Otitis.

Gradenigo (*Annales des Mal. de l'Oreille*, December, 1890) holds that since pathology has shown that the great majority of cases coming under this description are the result of extension into the tympanic cavity through the Eustachian tube of morbid processes which have their seat in the naso-pharynx, the subtle distinctions between the different clinical forms assumed by the affection have lost much of their importance from the therapeutic point of view. He distinguishes forms in which the phenomena attributable to changes in the tympanum and Eustachian tube predominate (good "bone-conduction," retracted membrane, improvement on inflation, etc.); others in which the lesions are more localised in the region of the stapedio-vestibular joint; others, again, in which lesions of the internal ear predominate. The first group present changes which are to a great extent remediable, but, if neglected, pass into more advanced stages, constituting the second and third groups. He employs treatment chiefly directed towards the naso-pharynx (galvano-cautery, nitrate of silver, iodine, etc.), associating with it "massage" of the membrana tympani by means of Delstanche's "masseur," and, if they are indicated, the air-douche, catheterism, introduction of Eustachian bougies, etc. Patients subjected for a long time unsuccessfully to direct treatment of the ears and intratympanic injections derived great advantage from naso-pharyngeal medication.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(157) Landry's Paralysis.

In recent times the view, mainly based upon Westphal's researches, that Landry's paralysis is the result of toxic processes caused by micro-organisms has in general been maintained. The disease has been seen to occur in very diverse infective diseases—for example, typhus, variola, and splenic fever. In other cases no etiological factor has been discovered. Professor Klebs now advances some new observations (*Deutsche med. Wochenschr.*, January 15th, 1891) on the subject. He considers that hyaline thrombosis in the territory of the central arteries of the spinal cord is probably the pathologico-anatomical basis of the functional disturbances present in the disease in question. In a former paper he had shown that the formation of hyaline thrombi takes place especially in cases where coagulation excitants are free in the blood stream, for example, from dissolution of cells. Anticipating that such a process would be present in Landry's disease, Professor Klebs submitted the central and peripheral nervous system of a case to an exhaustive research, with the result that the hyaline thrombosis was found absolutely limited to the central arteries of the spinal cord, the thrombosed region being in the central grey tube. On each side of the central canal, transverse or longitudinal sections of plugged vessels, directed towards the anterior cornua, were seen. The objection that the condition was a *post-mortem* change, or due to the mercuric perchloride now so much used for fixing, is nullified by the facts that in all the blood vessels, save those mentioned above, the contents were uncoagulated, and the red and white corpuscles were well preserved. Further, the secondary disturbances connected with these thrombi are conclusive. In the region of the blocked vessels fresh hæmorrhages (usually only visible with the microscope) were found, in which the blood cells were well fixed and stained. Another evidence of vascular lesion was discovered by high amplification (Zeiss num. ap. 1.4, oc. 4). The greatly widened pericellular spaces were filled with a retiform coagulated substance, in which were embedded a few spheroidal cells possessing a single large nucleus. In attempting to explain the clinical phenomena by the existence of these thrombi, it is necessary to recollect that the anterior cornua are nourished by an exceedingly close network of capillaries which intimately surround the ganglion cells, and here and there can be seen to supply a twig to an individual cell. This very rich intercellular capillary plexus is fed from two sources, namely, the central and the radial arteries. The first, arising from the anterior spinal artery, are only in remote connection with the aorta. The radial arteries, on the other hand, are somewhat smaller than the central, but amongst them are vessels of considerable size, which are distributed at pretty regular distances to the cervical, thoracic, and lumbar portions of the cord. In the thorax these arteries arise by a short trunk from the posterior division of the intercostal arteries, close to the vertebral column; their connection with the aorta, therefore, is very close. Similar vessels arise from the lumbar arteries. A long slender artery with highly developed muscularis, such as the anterior spinal, is susceptible of greater functional disturbances than are the short radial arteries—a point of much significance in connection with the pathology of the spinal cord. When occlusion of the central arteries takes place blood pressure is raised in the "concurrent" arteries of the radial system, giving rise to the slight hæmorrhages and pericellular exudation before noted. As to the origin of the thrombosis in Professor Klebs's patient, tuberculous pericarditis, originating from perforation of the pericardium by a small caseous bronchial gland, was the antecedent infective process. Flaccid paralysis of the lower limbs set in, rapidly extended upwards, and was quickly fatal. Cornil and Yersin have proved that thrombosis results from injecting tubercle bacilli into the blood stream of animals, but in their experiments the clot was always white. In Klebs's case the thrombi were hyaline, and no tubercle bacilli were detected in the blood, consequently he is disposed to attribute the thrombosis to the action of an enzyme produced by micro-organisms.

(158) Tic Douloureux.

DR. C. L. DANA (*Journal of Nervous and Mental Disease*, No. 1, 1891), while admitting that inveterate trigeminal neuralgias are usually caused by local disease, such as exostosis, aneurysm, syphilitic growth, contends that the ordinary cases of tic douloureux occurring after middle life, and affecting chiefly the second branch of the trigeminus, have no such etiology. The absence of permanent anæsthesia convinces him that neuritis and nerve degeneration must be excluded. On the other hand, in cases of progressive trigeminal anæsthesia, due to degenerative neuritis, there is but little pain. The following facts lead him to the belief that in many cases an obliterating arteritis of the nutrient vessels of the nerve is the cause of the disease in question:

1. The disease occurs only at the time of life when arterial degeneration commences. 2. It affects primarily and chiefly one of the terminal branches of the internal maxillary. 3. If it extend, or recur, it involves the inferior dental. Rarely is the supraorbital nerve, which is nourished by a branch from the internal carotid, seriously affected; hence it follows a certain fixed vascular distribution. 4. Examination by him of four superior maxillary nerves removed in typical cases of tic douloureux showed absence of noteworthy change in the nerves. In three of them striking evidence of arterial disease was found. In the fourth case no blood vessel was present in the specimen. 5. Therapeutical experiences favour the theory. Nitroglycerine sometimes relieves pain instantly, and for a prolonged period. Aconite, which is so useful in this disease, also lowers blood tension. 6. There is unquestionable evidence that removal of the peripheral nerves sometimes cures tic, consequently the disease is peripheral, and due to some local peripheral irritation. 7. By a new method of injection certain authors have discovered a closer and more extensive relationship between the nerve trunks and blood vessels than was hitherto known, suggesting that disturbance in blood supply may be an important factor in the causation of neuralgia. Even in old and typical cases Dr. Dana found the trigeminus, with its roots and nuclei, free from disease. In all cases where the blood vessels were examined they were obviously diseased. His argument is defective in that he has not examined the infraorbital arteries of healthy persons from 40 to 60 years of age, but he considers it safe to assume that most of the typical cases of tic occurring after middle life are due to arteritis obliterans of the infraorbital or inferior dental artery—terminal branches of the external carotid.

(159) Filarial Disease in North America.

Dr. Rudolph Matas, in recording (*New Orleans Medical and Surgical Journal*, January, 1891) a case of chylocele associated with filaria sanguinis hominis, indicates the present distribution of the parasite in the southern states. The area borders upon the South Atlantic and Gulf of Mexico. He points out that Charleston, in which more cases of filarial disease are known to exist than in any other city of the United States, depends for its drinking water upon tanks, and that the water supply of New Orleans, where as yet the disease is rare, is of the same character. The case Dr. Matas records was a young man, a native of Cuba, who had contracted the disease before leaving that island.

SURGERY.

(160) The Action of Antiseptics on the Peritoneum.

Drs. Delbet, Grand'Maison, and Brenet (*Annales de Gynécol.*, January, 1891) announce the result of a series of experiments performed to ascertain the action of antiseptics upon the peritoneum. They admit that there are certain disadvantages in the use of antiseptics. In the resistance of a healthy system to micro-organisms, cells play an active part. All antiseptics are poisons to bacilli, and if poisonous to these simple unicellular organisms, they are also poisonous to the highly complicated multicellular tissues in the human body. If then, any antiseptic kills bacilli, it must also destroy some of the cells belonging to the patient's body which it touches. The destruction of these cells diminishes the resisting power of the subjacent tissues, and should the antiseptic have failed to kill all the bacilli in the neighbourhood, some of the surviving germs may enter the unprotected tissues. In the case of superficial wounds dressed with antiseptics, the good done by germ destruction must greatly exceed the harm caused by damage to connective tissue cells, which have feeble resisting powers against bacilli; on the other hand, the peritoneal endothelium is now known to resist the incursion of germs with great vigour as long as it is healthy and uninjured. Larnelle never succeeded in finding a single bacillus within the substance of a peritoneal endothelial cell. Possibly these cells secrete a substance which poisons bacilli. When the endothelium of an area of the peritoneum is damaged or destroyed, the resisting power of that serous membrane is greatly impaired. The common connective tissue cannot offer adequate protection to the system. May not antiseptics destroy the endothelium, or, at least set up grave changes, impairing its resisting powers? To settle this question Drs. Delbet and his colleagues have undertaken the experiments which they now describe. Their method consists in carefully touching up a tract of mesentery in a dog with an antiseptic, and then flushing the peritoneum. Another tract is treated in the same way, and the peritoneal cavity is once more washed out. At the end of a stated time the animal is killed. With manifold precautions pieces of the mesentery treated with the antiseptic are removed and compared with other portions not so treated. The endothelium was stained with nitrate of silver. The nuclei seemed unaffected, but the protoplasm underwent great changes. The first modification was a retraction of the endothelial cells at their pointed prominences. Hence little black spots appeared where the meshes of the well-known network pattern, formed by contiguous endothelial cells, crossed each other. This "angular retraction" passed into "angulo-marginal retraction." Black points appeared at first along each mesh, indicating partial separation of the margins of contiguous cells. When the separation was complete the meshes looked unusually thick. The next stage is "fragmentation," the protoplasm becoming granular and breaking up. Partial, and lastly complete, desquamation follows. The above stages are produced more rapidly or slowly according to the power and nature of the antiseptic, some agents causing desquamation at once. In any case the endothelium, a bulwark against sepsis, is distinctly damaged.

(161) Two Cases of Gunshot Wound of Abdomen.

Two cases of gunshot wound of the abdomen, with injury of intestines, reported in the *Occidental Medical Times* (December, 1890), present an interesting contrast. (1) A rancher, aged 43, was shot while engaged in an altercation. Five hours after the injury he was found in great pain, but otherwise in good condition. The external wound was found three inches below the left iliac crest and four behind the anterior superior spine. The ball could be felt beneath the skin half an inch above and one inch to the right of the umbilicus. Dr. T. W. Huntington performed laparotomy. The abdomen was opened by a median incision; perforations were found (1) in the anterior wall of the stomach (2) about half way down the small intestine (3) a double perforation eighteen inches lower,

and (4) another double perforation six inches lower. Each wound was closed immediately upon its discovery by a continuous catgut suture of the muscular and mucous coats, and an interrupted Lembert suture for the peritoneal coat. The supply of catgut having become exhausted, the lowest intestinal wound was closed with iron-dyed silk; silver wire was used for the abdominal wound. The operation lasted two hours and a quarter. The patient never afterwards had a bad symptom of any kind, and on the twenty-fifth day was able to walk out. The bowels had acted spontaneously several times during the first week and regularly thereafter. (11) The other case was a man, aged 41, wounded at the same time as the first. The wound of entry was in the median line of the abdomen, midway between the symphysis pubis and the umbilicus. The ball appeared to have passed through the abdominal cavity to the right, through the right ilium, and was found in the gluteal muscles. The patient suffered no pain, and objected to operation, which was not urged. He was removed to a hospital. Violent peritonitis developed. Owing to pain in the vicinity of the bullet an incision was made in the gluteal region, evacuating fœtid gas and pus with the bullet; loose fragments of bone were removed and a drainage tube introduced. The patient began slowly to improve, but was still under treatment two months after the injury. Dr. G. A. White, who reports this case, discusses the question whether the intestines were wounded in this case without arriving at a positive decision, though thinking it highly probable that they were. He comments on the interesting contrast presented by the other case in which laparotomy was performed, with the result that the patient had no peritonitis, no pain, no fever, and was well in less than four weeks.

(162) Removal of Cyst from a Kidney.

Slajmer (*Centralbl. f. Chir.*, No. 5, p. 164) reports a case of movable kidney, which contained cysts. The patient, who was a woman, aged 50, had previously been perfectly healthy. The tumour, which was of a doubtful nature, was situated on the left side of the belly. She had been confined, in all, three times, and her periods had ceased three months previously. The growth was close up under the ribs, and accompanied by no pain or urinary trouble, excepting that the water had not been so plentiful within the last few months. On opening the abdomen there were clearly detected two swellings, the upper one more or less kidney-shaped, and the lower evidently cystic in character and covered with a shining layer of peritoneum. Under these circumstances a second incision was made at right angles to the first, so that the swelling could be reached on its retro-peritoneal surface. It was then discovered that there were two cysts, one about the size of a small apple, and the other about equal in bulk to a large orange. The cysts were emptied and part of their walls cut away, the edges being brought together with stitches; the peritoneum was carefully closed up, and the kidney sutured into its place posteriorly, with an excellent result.

(163) Removal of a Fibrolipoma from the Kidney Capsule.

V. Eiselsberg (*Centralbl. f. Chir.*, No. 5, p. 102) gives the following account of a case in which a tumour about the size of a child's head was discovered in the left lumbar region. There were no symptoms present referable to the kidney, and it was at first supposed to be in connection with the ovary. On opening the abdomen it was found to be adherent to the small intestine, and the peritoneum over it was divided. It was then found to be closely adherent to the kidney, so that the two could not be separated. When it had been removed the abdomen was closed in the usual manner, and on microscopic examination the true nature of the tumour was determined.

MIDWIFERY AND DISEASES OF WOMEN.

(164) Twin Pregnancy: Abortion: Delayed Birth of Second Twin.

Dr. Habit (*Wiener med. Presse*, 1890, No. 40) attended a multipara, aged 30, who, at the fifth month of pregnancy, suddenly felt the waters escape. After a few days' rest she got up, and not until six days later, after repeated dribbling away of the liquor amnii, did pains commence. On the next day a fœtus was expelled. As no placenta followed, Dr. Habit explored the parts, and found that a second child lay in the uterus. The os hardly admitted a finger; the placenta of the first child could not be felt; the remaining twin was yet alive. The patient was recommended to rest, but she did not strictly follow the advice. After seven days' relative quiet, flooding set in. The os was opened, the membranes rupturned, and a foot brought down. The fœtus was extracted during the next pain. It was a male, and much larger than the first (which was a female). It showed signs of life for a short time. A few minutes after the birth of the second child two placentæ, choria, and amnia were delivered. The course of the childbed was perfectly normal.

(165) Labour Delayed by Syphilitic Disease of Cervix.

Dr. Mesnard, of Bordeaux (*Arch. de Tocol. et de Gynéc.*, January, 1891), publishes details of a kind of case which is decidedly rare in proportion to the frequency of syphilis amongst women. A lady, aged 32, married three years, had become pregnant ten months after marriage. Abortion occurred at the second month, and was followed by secondary syphilis of the severest type. The site of the primary sore could not be discovered. A papular rash, with mucous tubercles on the fauces and vulva, proved obstinate to treatment. The husband had suffered from syphilis of an equally obstinate type, commencing ten years before the wife was attacked with secondary symptoms. At the end of eighteen months of anti-syphilitic treatment the wife again became pregnant, and labour pains set in at term. All external signs of syphilis had disappeared. The pains were strong and frequent, the presentation normal, the pelvis free from contraction; but for thirty-three hours the os remained undilated, and barely admitted the tip of the forefinger: its border felt like a chaplet of beads, owing to a circle of very hard elliptical masses of deposit. The inferior segment of the uterus was so thinned by pressure of the fœtal head that the sutures and fontanelle could be distinctly felt through its walls. The membranes ruptured thirty-one hours after the beginning of labour and meconium escaped, the fœtal heart sounds became very rapid, the pains were as strong and frequent as ever; the patient herself was a big powerful woman. Dr. Mesnard made four incisions into the cervix with long scissors: four more were soon found necessary, then the forceps was applied. Two

more incisions had to be made through the edge of the os, which held back the occiput. In extraction of the fœtus a long rent was made in the vagina, extending downwards into the right labium minus. The fourchette, but not the perineum, was torn. The child, a male, was born apparently dead, but recovered. The placenta was very big, and showed signs of degeneration at two or three points. One hour after delivery severe internal hæmorrhage set in, and Dr. Mesnard was obliged to introduce his hand into the wounded vagina and uterus, detaching masses of clot. Perchloride of iron and hot water were injected, and the patient was saved. Within a few hours she was again in extreme danger from septicæmia. Free and frequent sublimate solutions were thrown into the uterus. On the third and sixth days there was maniacal delirium. The cervix suppurated and discharged freely. The injections were continued for twenty-eight days, salivation occurred, and the alternate use of carbolic acid discoloured the urine. Phlebitis occurred on the thirtieth day, and a second attack followed about a week later. The woman finally recovered at the end of three months. The hard deposits in the cervix had disappeared.

(166) Hæmatosalpinx in Pregnancy.

Dr. Lodewijks (*Nederl. Tijdschr. v. Verlosk. en Gynäk.*, 1890, ii) examined a woman, aged 25, on account of severe pains in the hypogastrium. She was two months pregnant. The uterus was found retroflexed; it was replaced, but the pains continued. A few weeks later a distinct tumour was detected close to the soft, enlarged uterus. Extrauterine pregnancy was suspected, and laparotomy performed. The uterus was found to be normally pregnant; on its right was a hæmatosalpinx with a small ovarian cystoma. The coagulum within the dilated tube adhered firmly to its walls, and traces of tissue were found in the clot and believed to represent relics of a chorion. The intrauterine pregnancy ended normally at term, six months after the operation.

DISEASES OF CHILDREN.

(167) Infantile Pleurisies and their Treatment.

Dr. A. F. Plicque (*Progrès Médical*, January 31st, 1891) summarises his observations on the subject of infantile pleurisies and their treatment in the wards of Dr. J. Simon in the Hôpital des Enfants Malades, Paris. Pleurisy in infants is almost always secondary to some inflammatory or zymotic disease. Effusions have a marked tendency to become purulent, and in the case of children under 4 years pus is the rule rather than the exception. These collections of fluid are very prone to become encysted, and hence may be met with at any part of the chest, and not always at the most dependent portion. They are liable to burst internally, and the general prognosis is good, provided that the pus has free exit either through the chest wall or through the lung. Such forms of effusion are, therefore, very different from the similar conditions in the adult. Owing to the almost constant complication with some other morbid condition in the chest, the diagnosis is frequently difficult. Progressive dulness, with absence of respiratory sounds over the same area, are the only trustworthy signs. The gradual progress of the altered physical signs must be closely watched for a time before a certain diagnosis can be made. In the early treatment of infantile pleurisy the use of calomel and digitalis is recommended and a protest recorded against the abolition of the poultice, which is believed to aid absorption and to prevent the progress of the disease to the purulent stage. Tapping should always be done at first with the aspirator, an antiseptic solution being used to wash out the cavity. Fluid should always be withdrawn slowly and gently, and the introduction of the antiseptic solution—lukewarm boracic lotion is the best for the purpose—performed with equal care and deliberation. No fear need be felt in using large quantities of fluid to flush out the pleura; as much as 5 or 6 litres have been employed. If tapping fails to prevent the re-formation of purulent fluid, an incision must be made and irrigation carried out in the same way. The best point for incision in case of a general effusion is somewhat farther forward than in the case of an adult, the anterior axillary line being selected instead of the posterior line. In case of encysted fluid the incision must be directly over the point of localisation. Frequent and cautious washing out of the cavity is advised in after-treatment. Estländer's operation is rarely necessary in the case of infants.

(168) Influenza in Infancy.

The case of a child apparently born while suffering from influenza has been recorded by Dr. C. W. Townsend, of Boston (*Archives for Pediatrics*, January, 1891). The mother had a mild attack of influenza, beginning on January 2nd, 1890, and lasting three days. The child was born on January 9th; it sneezed violently, and the same day its respirations were 100. On the second day the temperature was 104° F., the pulse at least 200, and the respirations 120 to 160; it could not suck owing to the dyspnœa, and was restless. Nothing abnormal was found on examination of the chest or abdomen. The temperature began to fall next day, but remained at about 102° for five days more. The pulse declined steadily from the second, the respirations from the fourth day of life. Dr. Townsend discussed the diagnosis, which was based on the absence of physical signs in the chest and the recent attack in the mother. He quoted in support of his view the case reported by Dr. J. Kingston Barber (British Medical Journal, March 1st, 1890, p. 477.) In the discussion which followed the reading of this paper at the American Pediatric Society, Dr. Northrup said that at the New York Foundling Asylum there was not a case of recognised influenza in a child under 2 years during the epidemic; of the children 5 to 6 years old, 15 per cent. suffered; while of the young healthy adults, servants, etc., about 80 per cent. were attacked. In private practice he had seen one doubtful case in a child 10 months old. Dr. Holt stated that he had seen one positive case in a child 9 months old. The President mentioned a case, which was apparently very clear, in a child aged 4 months; and Dr. Fruitnight an attack in a child aged 6 weeks.

(169) Intrameningeal Hæmorrhage in Newborn Children.

Kundrat (*Wiener klin. Wochenschrift*, 1890, No. 46) says that this condition is found in two forms. In the commonest the hæmorrhage is subarachnoidal, and in the tissue of the pia mater on the convexity of the cerebrum, and diminishing in intensity from the median line outwards, generally bilaterally. In the second form there

is an effusion between the dura mater and arachnoid. The children are either born dead or they die suddenly soon after birth. The lungs are in a condition of atelectasis. Although this condition is most common in those in whom the labour has been difficult, it may occur after an ordinary confinement; in either case it is due to compression of the superior longitudinal sinus and its veins, from dislocation of the bones of the skull. That this is the cause can be proved by dissection, and also by injection after death.

(170) Intubation of the Larynx.

A PAPER by Dr. Dillon Brown, of New York, on the construction of O'Dwyer's tubes, read at the meeting of the American Pediatric Society, is published in the *Archives for Pediatrics* (January, 1891). The author stated that many of the tubes in use were badly constructed, and that the failure of the operation was often due to such defects. Minute instructions for the guidance of the surgical instrument maker were contained in the paper, but the desirability of having a good pattern to work by was also mentioned. Three sets of tubes were described—for children (six tubes), for adults (ten tubes, of which three only are required for acute stenosis), and for the treatment of foreign bodies or loose membrane (seven tubes). The first two sets are of the same pattern, and are made of brass heavily plated with gold. The tubes for foreign bodies or membrane are made of very thin German silver. These tubes are short ($1\frac{1}{8}$ inch), cylindrical, but tapering a little towards the lower end, and the head is smaller than in the ordinary tubes. The tube, it was stated, was intended to fill the larynx to its full subglottic capacity, and was held in position by the pressure. It was believed that any foreign body which could enter the larynx, provided it were not of a nature to swell by imbibition, might be expelled through such a tube. In the ordinary tubes an artificial epiglottis introduced fresh sources of danger, and was not necessary since experience showed that swallowing was not difficult if, during the act, the head were placed in such a position that the pharynx was lower than the larynx. Dr. Brown added a table, increasing the total number of cases treated by him to 350; he reported altogether 100 recoveries, or 28.5 per cent. It appears from the table that in his last 50 cases Dr. Brown had 13 recoveries, or 26 per cent., and that 4 of these cases were not suffering from diphtheria. Of the 37 cases which died, 5 only were not suffering from diphtheria. As to the danger of sudden asphyxia from pushing the membrane down in front of the tube, Dr. Brown stated that in over 600 cases in which intubation had been performed by himself or Dr. O'Dwyer this accident had not occurred once.

PHARMACOLOGY AND THERAPEUTICS.

(171) Koch's Treatment of Tuberculosis: General Results.

DR. J. AMANN, of Davos, says (*Centralbl. f. Bakteriologie u. Parasitenk.*, No. 1, Band ix, January, 1891) that since November 17th there have been in Davos 400 cases of phthisis treated by Koch's method. Of 288 patients whose sputum he examined, 198 have been so treated. He examined the sputum of these latter sometimes once a day, sometimes once every two, three, or six days. He comes to the conclusion that the treatment has a most marked effect on the tuberculous tissues of the lung, and gives the following points of evidence in favour of this statement. The quantity of expectoration after the inoculation reaction is, as a rule, increased, in one case from 30 cubic centimetres to 140 cubic centimetres per diem. The number of tubercle bacilli in the sputum is also increased, in some cases the bacilli becoming very numerous where before it had been almost impossible to find them. In about 70 per cent (134 out of 198) this increase was observed. There was only slight diminution in a very small number of cases. He also considers that the bacilli are considerably altered in form, the rods are broken down into micrococci, and abnormal forms are pretty frequently met with; the tubercle bacilli under these conditions lose to a certain extent their power of retaining the staining fluid in the presence of acids. The quantity of elastic tissue found in the sputum was considerably increased in about 40 per cent. of the inoculated cases. All these changes he attributes to the action of the tuberculin on the young tuberculous tissue, which leads to its rapid breaking down.

AT the fourth general meeting of Russian medical men at Moscow, Dr. Nikolai S. Kishkin (*Vratch*, No. 2, 1891, p. 49) read a report of 7 cases of pulmonary phthisis treated after Koch's method in Professor M. P. Tcherinoff's clinic, in Moscow. The observations lasted in 4 cases five weeks; in 2, four weeks; and in 1, three weeks. In all the cases the symptoms were "quite distinct, but not very severe," the general state being more or less satisfactory. In 5 no fever existed, while in 2 there was slight pyrexia. The effects of the injections were as follows: (1) The percussion phenomena remained unaltered. (2) The auscultatory signs in 2 did not undergo any changes; in 2 the *râles* somewhat diminished; in 1 they disappeared almost completely; in 1 they disappeared entirely; and in 1 they disappeared from their former situation, to appear in another. (3) Cough, expectoration, and the number of bacilli in the sputum showed no alterations in 2 cases, while in the remaining 5 they decreased. (4) The weight in 4 cases increased, but in 3 fell somewhat. On the whole, of the 7 cases, 4 slightly improved, the amelioration being both local and general, and apparently due to the injections alone. The reaction, though invariably present, varied greatly both in the time of its appearance (developing in some cases in five, and in others in twenty-four, hours after the injection) and in its intensity (oscillating between a very slight elevation of the temperature with trifling general weakness, and severe prostration accompanied by a rise of temperature to 41° C.). The local reaction was different in different cases. Dr. Kishkin feels sure that such differences were dependent solely upon individual peculiarities, having no relation whatever to the dose of the lymph or the extension of the tuberculous process.

DR. FEDOR I. LOMINSKY, of Kieff (*Vratch*, No. 1, 1891, p. 23), reports ten cases of phthisis in which he tried Koch's treatment, injecting from 0.001 to 0.006 gramme every other day. In one of the cases, large cavities were present in the lungs, the remainder presenting either incipient symptoms or only slight destruction of the pulmonary tissue. The lungs, respiration, pulse, and temperature were carefully examined every three hours. The following are the principal results of

the observations: (1) After 0.001 g. doses, the reaction was, as a rule (nine cases), either absent altogether, or limited to a trifling rise of temperature (which, after all, might have occurred quite independently of the lymph). A considerable rise was observed only in the patients with large excavations. (2) In incipient cases no reaction could be noticed even after 0.002 g. or 0.003 g. doses (in one even after 0.006 g.). In more advanced cases, however, these doses were followed by a slow febrile rise. The latter began from four to twelve hours after the injection, and reached its maximum in from six to fourteen hours, keeping at that level for three hours, after which it gradually fell to normal. In all but one case, on the following day the temperature either remained normal or rose but slightly. In the severe case, however, a secondary elevation occurred, which was still more considerable than the primary one. (3) In some of the febrile patients the injections modified the type of the fever. (4) The reaction, when present, was accompanied by oppression about the chest, increased dyspnœa and cough, and sometimes hæmoptysis, the symptoms being in some so intense that the patients declined further treatment. Simultaneously, the expectoration became more abundant, and the sputa thinner, the number of bacilli sometimes decreasing. In one patient albuminuria also supervened. Dr. Lominsky describes a case of faucial, laryngeal, and pulmonary tuberculosis, in which the following "interesting reaction" was observed. Before the treatment the faucial changes were limited to considerable congestion of the pillars, with two white patches on the left one. Four injections were given in the course of a week, the dose being on the first occasion 0.001 g., and on the subsequent three 0.002 g. Shortly after the first injection the congestion increased and the tissues became infiltrated, while there gradually appeared numberless greyish nodules which rapidly coalesced, broke down, and formed ulcers, until the whole fauces and sides of the pharynx were transformed into a single extensive ulcerated surface, covered with a yellowish-grey coat. At the same time, the faucial and laryngeal pain became aggravated to such a degree that the patient "almost ceased to take food," while his subjective state grew worse. Though no rise of the temperature occurred, the patient lost 3 lbs. during the treatment.

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(172) Koch's Treatment in Tuberculosis of the Integuments.

At a meeting of the Paris Société de Dermatologie et de Syphiligraphie on February 12th (*Semaine Médicale*, February 14th, 1891) M. Besnier, as the senior member of the Committee appointed to study the effect of Koch's treatment at the Hôpital St. Louis, presented the first of the separate reports promised by the members of the Committee (see SUPPLEMENT to the BRITISH MEDICAL JOURNAL, January 24th, 1891, p. 29). The other members of the Committee are MM. Vidal, Fournier, Hallopeau, Quinquaud, and Lailler. In order to make the observations as complete and accurate as possible, arrangements were made to have the patients watched day and night by *internes* and *externes*, and the results were fully noted in a form specially prepared for the purpose. Each patient was examined before the treatment was commenced by the Committee, which throughout regulated all the details. All the injections were prepared for use by M. Quinquaud, and the most rigorous aseptic measures were taken. The total number of patients in whom the treatment was tried was 50, but M. Besnier leaves 12 of these out of account as having been too short a time under treatment or as being cases of leprosy. In 36 cases of lupus the result of the treatment was absolutely *nil* in 8, almost *nil* in 5; in 14 some slight improvement was noticed, in 7 there was distinct amelioration but nothing approaching to cure, in 1 the treatment had to be abandoned on account of the violence of the general reaction and the insignificance of the local effect, and in 1 partial improvement was followed by rapid extension of the disease after discontinuance of the injections. In 1 case of "tuberculous polyadenopathy," the result was *nil*, and in 1 of "tuberculous lymphangiectasis" there was slight improvement. No death occurred during the treatment. M. Besnier points out that the two chief facts "governing the therapeutic history of the tuberculous lymph applied to tegumentary tuberculoses" are: 1, the inadequacy of the local effect; and, 2, the severity of the general reaction. The lupus tubercle is not attacked by the fluid. "Not only," says M. Besnier, "have we found in the patients inoculated by us all the tubercles which they previously had, but besides these a series of new ones, which have developed during the inoculations, and which, when these have been stopped, multiply under the favouring influence of the renewed vitality which their discontinuance causes throughout the whole economy." The phenomena, both general and local, which follow the injections are attributed by M. Besnier to the action of the "bacillary toxin" on the nerve centres. The doses given were small, and care was taken to interpose a sufficient interval between the injections. In spite of these precautions, the effect of the remedy was exhausted as a rule before any definite result could be obtained. The inherent drawback of the treatment, according to M. Besnier, is that tolerance is established before a cure can be effected. While admitting that under the influence of the "inoculation fever" lupus sometimes undergoes an inhibitory or suspensive action due to circulatory and vascular changes in the tuberculous neoplasms, he points out that these are incomplete and inadequate, whatever dose is used and however frequently the injections are repeated. He says, "In not one of the patients inoculated by us have we obtained a result superior, or even equal, to that which we should have got by our ordinary methods of treatment in the same space of time." The pain of these methods is, according to him, trivial when compared to the suffering caused by Koch's treatment. M. Besnier concludes that "in tegumentary tuberculoses in general, and in particular in all the species, forms, and varieties of lupus tuberculosis, the inoculation of the glycerine extract of dry and pure cultures of Koch's bacillus produces an action, the most immediate effect of which is a temporary reduction of bulk, a momentary diminution of the tuberculised tissues." This action, however, he declares to be insufficient to effect a cure in the immense majority of cases. Koch's remedy, moreover, cannot produce its effect without causing systemic disturbance, which may be dangerous, or even fatal. It may further quicken into mischievous activity tuberculous foci which till then were latent, and might but for it have remained so. Under these circumstances M. Besnier does not think medical men

are justified in inoculating "extracts of the toxins of tuberculosis" in man.

(173) The Physiological Action of Cocaine.

Mosso (*Pflüger's Arch.*, Bd. xlvii, H. 11 and 12) concludes that cocaine paralyses motor nerves and acts definitely on the ganglion cells of the spinal cord. The idea of looking upon cocaine as a sort of sensory curare is untenable. This is further shown by the fact that when cocaine is applied to a mixed nerve the motor function is abolished at the same time as the sensory. It appears that sensibility is impaired through the action of the drug on the spinal cord, and that motion is destroyed before sensibility. After large doses the patellar reflex may be lost. A small dose by the mouth will increase the muscular power, but the same dose injected into the muscle is sufficient to diminish it. Cocaine in small doses is consequently a stimulus to tired muscles.

PHYSIOLOGY.

(174) Recent Researches on the Cerebellum by Means of Golgi's Method.

THE remarkable results of Golgi's investigations seem to be but little known in this country, although they have been confirmed by Ramón y Cayal and Kölliker. We have already referred to Kölliker's confirmation of Cayal's results on the embryo spinal cord (SUPPLEMENT, November 22nd, 1890, article 246), and now we have to give a brief account of Kölliker's researches on the cerebellum carried out by Golgi's quick hardening method, and confirmatory of the results of Golgi and Ramón y Cayal (Das Kleingehirn, *Zeitsch. f. wiss. Zool.*, xlix, Heft 4, p. 668, with three plates). The small nerve cells of the granular layer in the cat possess short protoplasmic processes and a long nervous or axis-cylinder process. The nervous process passes outwards with a somewhat curved course into the molecular layer, and there it divides in a T-shaped manner into two processes, which run longitudinally in opposite directions and parallel to the surface of the cerebellar cortex. Golgi found large branched nerve cells in the granular layers, and Kölliker also finds them, but not in such numbers as figured by Golgi. The protoplasmic processes branch and ramify partly in the molecular and partly in the granular layer. The molecular layer has no multipolar nerve cells in its outer layers, but at its inner part are large nerve cells. The axis-cylinder process of these cells runs transversely and parallel to the limitation between the molecular and granular layers, and gives off inwards at right angles processes which send out numerous fine processes, and form a kind of basket or network of processes around the bodies of the cells of Purkinje. The processes of several cells may unite to form such a basketwork. Weigert has described a somewhat similar network in this position, but he ascribes it to glia fibrils. Numerous protoplasmic processes pass outwards. As to Purkinje's cells, the most remarkable point, apart from their excessively numerous processes—which do not anastomose—is that the axis-cylinder process gives off lateral processes as it runs to the central white matter. The medullated nerve fibres form a network in the granular layer, and arches under the layer of Purkinje's cells, and from this medullated fibres pass between Purkinje's cells into the molecular layer, where they branch and run, some longitudinally and others vertically. They are most numerous in the innermost third of the molecular layer—a fact confirmed also by staining with Weigert's method. Many of the white fibres in the central white matter divide. A network of fibres does not seem to exist in the grey matter, nor has any connection been found to exist between the branches of the protoplasmic processes of the nerve cells and the origins or terminations of nerve fibrils. Kölliker regards all free nerve fibres and those without myelin as conducting centripetally, and all medullated nerve fibres springing from nerve cells as centrifugal conducting structures. It is evident that these researches must very considerably modify our conceptions, not only of the structure but also of the functions of the central nervous system.

(175) Localisation of Cerebral and Spinal Functions by Means of Electrical Phenomena.

HORSLEY and GOTCH showed some time ago that if the spinal cord of an animal were connected with a galvanometer the electrical current of rest underwent a change when certain areas of the cerebral cortex were stimulated electrically, that is, there was what is called a "negative variation" of the cord current produced, or, in other words, "action currents" were manifested by the cord. This being interpreted means that when the surface of the brain—at least, certain parts of it—are stimulated electrically the propagation of an impulse along the cord is accompanied by an electrical variation, just as is the case in nerves generally when they are thrown into action. A new development has been carried out in a somewhat different direction, but on the same lines, by Beck (*Centralb. f. Physiol.*, Bd. iv, No. 16, November, 1890). His experiments are arranged in two series: first, those on the central nervous system of the frog. If the current from the cord of a frog be led off by electrodes to a galvanometer, then on stimulating the central end of the sciatic nerve characteristic variations of the current in the galvanometer were observed. The second series, however, is the more interesting, as it is an attempt to localise cerebral centres by means of the electrical variations that occur in these centres when certain afferent nerves are stimulated. In the second series the cortex is laid bare in curarised dogs and other animals, and when non-polarisable electrodes are applied to any two points on the surface it is found that there are more or less regular variations in the galvanometer current, which are not connected with the rhythm of the pulse or respiration. They are independent variations, and on stimulating centripetal nerves, as well as in deep chloroform narcosis, they disappear. Beck regards these oscillations as the expression of continual changes which accompany an active condition of the cortex. This condition of activity is suppressed by stimulation of afferent nerves, and completely set aside during narcosis. On stimulation of afferent nerves, not only do the independent oscillations disappear, but there is such a modification of the primary oscillation as leads one to conclude that a particular centre is set in activity when its corresponding afferent nerve is stimulated. Thus, stimulation of the eye by means of magnesium light causes an electro-negative variation of potential in the occipital lobe of the opposite side. The limits of the visual area were mapped out in dogs, while in rabbits they were found to be distributed over the whole posterior part of the hemispheres—re-

sults which accord with those of Munk, obtained by stimulation and excision experiments. The results were not so precise when the ear was stimulated by sound waves. Fleischl, in a later number of the same journal (*Centralblatt*, No. 18), points out that several years ago he found similar phenomena, but instead of publishing his results he recorded them and deposited the record in a sealed packet with the secretary of the Vienna Academy of Science, and now, on the publication of Beck's results, Fleischl has had the sealed packet opened to show that he has a claim to priority in the matter—a claim which naturally Beck does not admit, as the latter knew nothing and could not know anything of Fleischl's "sealed" observations.

PATHOLOGY.

(176) Phloridzin Diabetes.

Moritz and Prausnitz (*Zeits. f. Biol.*, xxvii, p. 81, 1890) have shown in v. Voit's laboratory the action of this remarkable body in detail. Phloridzin is a glucoside obtained from the roots of the apple tree and some other trees, and v. Mering found that it caused diabetes. The special interest which attaches to this form of glycosuria is that it can be produced in animals whose livers are free from glycogen, and this suggests, therefore, that the source of the sugar in the urine in this case cannot be the carbohydrates, but that one must look to the proteids as its source. The animals—strictly dieted—received 2.5 to 3 grammes (38 to 45 grains) of phloridzin daily, and none was found in the fæces. The glycosuria lasted for three days. Phloretin—not a glucoside—also causes glycosuria, but the other decomposition products, phloretinic acid and phloroglucin, do not do so. Phloridzin glycosuria seems to be analogous to diabetes mellitus as it occurs in man, for it takes place on an albuminous or a carbohydrate diet, and also during starvation, and even on a purely fatty diet, and in these cases the urine may contain 6 to 13.5 per cent. of sugar; and it is somewhat remarkable that relatively more sugar appears in the urine on a flesh diet than on a diet of carbohydrates. During hunger and on a fatty diet the excretion of sugar is very considerable, and the relative loss of sugar in both cases much greater than on a carbohydate or flesh diet.

(177) Hæmatozoa of Malaria.

Dr. Laveran (*Journal des Connaissances Médicales*, January 8th, 1891) gives a very clear account of his methods of examination of the blood in cases of malaria. He points out that such examination is exceedingly necessary in hot countries, where typhoid fever or sunstroke may be mistaken for malaria, or *vice versâ*. An examination of the blood always puts the matter beyond doubt. He recommends that the examination should be made just at the beginning of a febrile attack, and before quinine has been administered, as during the period of apyrexia the organisms are seldom found in the peripheral circulation, but appear to be collected in the internal organs, and especially in the spleen. For the examination of the fresh blood, the skin should be cleansed with soap and water, rinsed with alcohol and carefully dried, then, everything being ready, the finger is pricked with a pin that has been heated to redness, and allowed to cool, the little round globule of blood that appears is touched with a clean slide; a cover glass is lowered down on to the blood, which is pressed out until the film assumes a transparent yellow colour; the film is then not too thick, and should be examined at once. The clot that is formed at the margin prevents the drying of the film; but, in order to keep the film thin, it is better to wipe away the blood that is pressed from under the cover glass, and then to surround with paraffin. Daylight and no substage condenser should be used for examination, or the organisms are rendered too transparent. The movements of the flagella and the amœboid movements can all be made out. If the organisms are pigmented they are readily enough seen, but a most careful search may have to be made for those non-pigmented organisms that sometimes adhere to the red blood corpuscles. If the specimen is to be preserved for further examination the film should be prepared by compressing between two cover glasses, which are carefully separated, allowed to dry, and passed two or three times through a clear flame; each film is mounted unstained and dry, with a paraffin rim to keep out the air, and to retain the cover glasses in position. When it is wished to stain the organisms in order to bring them into special prominence, the films, after being heated on the cover glass, are put into a mixture of alcohol and ether; they are then allowed to dry, after which they are stained with a concentrated aqueous solution of methylene blue for thirty seconds; they are then rinsed in water and mounted dry, the cover glass being surrounded with paraffin. The leucocytes are coloured deep blue, the free spherical organisms and those adhering to the red blood corpuscles pale blue, whilst other forms are scarcely tinged. A contrast stain may be obtained by using eosin. With these stained preparations artificial light may of course be used. In all cases where possible both methods of preparation should be resorted to, as each has its advantages.

DERMATOLOGY.

(178) Adenoma of the Sweat Glands.

E. C. Perry (*Monats. f. prakt. Derm.*, vol. xi, No. 10) describes the case of a woman, aged 31, who had suffered since her tenth year from adenoma of the sweat glands. The condition had for a year become very much aggravated as regards the number and size of the small swellings. There was no seborrhœa. The secretion of sweat from the face and head had decreased. On the forehead, the root of the nose, in the naso-labial folds, and on the chin there were groups of white, firm papules, from the size of a millet seed to that of a pea, which were painless and never ulcerated. There were no comedones and no telangiectases. On pricking, some serum came away. In several of the papules, black points could be perceived under the skin. The microscopical examination showed that the superficial epidermis was thinned, and there was enormous enlargement and increase in the ramifications of the sweat glands. Many of the cells of the glands contained an abundance of pigment which microscopical examination showed to be similar to the black points under the papules. There were no signs of inflammation. The swellings were pricked with a needle, and were then removed with the scissors or scalpel. A complete cure resulted.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(179) A Single Radial Pulse produced by Double Cardiac Contractions.

DR. K. DEHIO, of Dorpat, relates in the *Deutsches Archiv für klinische Medicin* (Band xlvii, Heft 3 and 4) a remarkable case of double contractions of the heart producing a single pulse at the wrist. The patient was a baker, aged 29, who had suffered for two years from more or less palpitation and dyspnœa. These symptoms had rapidly increased, œdema of legs and other tissues had set in, and pleuritic effusion on both sides; emphysema and general congestion had brought about a constant condition of orthopnœa. The heart's impulse was found to be diffused, there was marked distension and pulsation of the superficial veins of the neck, but the systemic arteries were moderately filled and showed no sign of disease. There was a soft systolic murmur audible at the apex and at the lower part of the sternum. The patient's condition at first improved under digitalis, but afterwards became worse. The pulse was then noticed to be altered, two pulsations following one another in quick succession, the second being the weaker of the two, then a long pause, followed by the recurrence of the twin pulsations and another pause; eighty-four such pulsations could be counted in the minute. This continued for several days, sometimes giving place to a normal pulse or to a regular succession of double pulses. Digitalis was again used, but without result, and the patient gradually got worse. A new feature then presented itself. The radial pulse could only be felt with the first of the twin contractions, although a double pulsation could be plainly seen in the vessels of the neck. Sphygmographic tracings showed that a very slight wave took place in the radial artery sufficient to raise the needle, although not perceptible to the finger. The double radial pulse occasionally returned for a time, and could be felt shortly before death, when the heart's contractions rose to 120, but disappeared again during the last hours, although the double pulsation was still plainly visible in the carotid arteries and in the veins of the neck. The principal cardiac lesion discovered *post mortem* was hypertrophy and dilatation of the right side of the heart. Dr. Dehio discusses at considerable length the various explanations that have been given of this phenomenon of double cardiac contraction with single radial pulse. The theory of Leyden—that a double contraction of the whole heart was closely followed by a contraction of the right side only is untenable in face of the fact that the sphygmograph detects the presence of a second pulsation at the wrist, too small in volume for recognition by the finger. The view that the contractions take place too quickly after one another for any blood to have entered the ventricles for transmission to the vessels by the second contraction is regarded as more probable. Dr. Dehio believes that in the present case the second pulsation was produced by contraction of both sides of the heart, as proved by careful sphygmographic tracings and the presence of the murmur with both contractions, but that the second of the two was abortive.

(180) Phthisis amongst Indians in Northern California.

DR. CHARLES E. WOODRUFF, Medical Department United States Army, relates some interesting observations upon what may be termed the diseases of civilisation amongst the Indian tribes of Northern California (*Med. Record*, January 24th, 1891). Phthisis has of late years become exceedingly prevalent and fatal, especially amongst young people. In eighteen months Dr. Woodruff states that he has seen "whole families swept out of existence" by the disease, which is most rife amongst the half-breeds. A healthy and robust white father and a healthy Indian mother produce families to all appearance healthy, until they are attacked with consumption, when the mother and children seem to succumb immediately, the father often remaining in good health. Two cases are mentioned where perfectly healthy girls of 17 have been attacked and have died in six months. To what extent the disease was prevalent before the advent of white men and habits of civilisation it is difficult to say, owing to the absolute untrustworthiness of Indian statements on the subject; but no doubt can be entertained of the rapid increase of late years. The ordinary life of the Indian was formerly passed almost exclusively out of doors; clothing was reduced to a minimum, and the food was restricted to forest produce and was of a thoroughly mixed character. With the introduction of civilised habits the Indian has learnt to huddle himself and his family into ill-ventilated huts; he wears clothes, but does not understand the necessity for changing them when they are wet through; while his diet has become more limited and largely consists of bacon. Added to these changes, he has suffered in a variety of ways from the introduction of venereal diseases. All forms of tuberculous disease are met with amongst these people, but

tuberculosis of the lungs appears to be the most fatal. A few cases become chronic, but they form the exception rather than the rule.

(181) Infectious Pneumonia followed by Peripheral Neuritis.

LEECH (*Medical Chronicle*, January and February, 1891) gives an account of a case of pneumonia which shows very well the occasional infective nature of this malady. A map accompanies the paper, and from it we learn that a number of persons in adjacent houses were all affected with pneumonia within a short time of each other. Dr. Leech's patient subsequently developed, four or five days after the crisis had occurred, loss of motor power in the lower extremities; it came on very gradually, and was preceded by loss of sensation. These symptoms progressed in the lower extremities, and subsequently the upper extremities became involved to a slight extent. The knee-jerk was abolished, and there was slight foot-drop; the muscles of the calf and arm were tender. A careful examination of the symptoms convinced Dr. Leech that these symptoms were due to peripheral neuritis. He points out that this is a very rare complication, and he concludes his paper by a very complete account of the previously published cases, in which peripheral neuritis has followed pneumonia.

(182) Generalised Vaccinia.

GAUCHER (*Annales de Derm. et de Syph.*, January, 1891) brought before the Paris Dermatological Society on January 8th, 1891, the case of a child that had been vaccinated with calf lymph. Eight days after the vaccination there were three good vaccine pustules on each arm. On that day the pustules became excoriated, the fever became severe, and the infant refused to suck. On the ninth day numerous pimples appeared resembling vaccine pustules. On the eleventh day a general eruption was present on nearly the whole body, occurring in places where auto-inoculation by rubbing was not possible. Some of these pustules advanced to umbilication, others became arrested in their evolution. Whilst the eruption progressed the general state grew worse, the lungs became engorged, and the child died with symptoms of asphyxia. *Post-mortem* examination showed intense congestion of both lungs, without hepatisation, spleen enlarged, and softening of the congested kidneys. In the liver scattered yellowish islands of fatty degeneration were found.

(183) Attitude of the Body in Parkinson's Disease.

BIDON (*Revue de Médecine*, January, 1891) points out that hitherto only two distinct types of attitude in this disease have been described, namely - one in which the body is flexed, and one in which it is extended. He is able to supply a third type, in which the body and extremities are extended but the head and neck are flexed; for he had a patient, of whom he gives figures, who ultimately took up this attitude after having passed through the common flexion type of position.

SURGERY.

(184) Pancreatic Cyst Treated by Laparotomy.

DR. MAURICE H. RICHARDSON has recorded (*Boston Med. and Surg. Jour.*, January 29th, 1891), a case in which a cyst of the pancreas was treated by laparotomy and drainage. The patient was a large powerful man, aged 50, who dated his illness from a period about five years earlier, when he felt something give way in the epigastric region while lifting a heavy weight; shortly afterwards he had a severe fall. Three or four months after this he began to suffer from attacks of pain in the epigastrium; after the pain passed off he often had diarrhœa. After nine weeks the attacks grew less frequent. Nine months before he came under treatment he had a very bad attack, and was jaundiced; since then the bowels had been loose, and he had lost nearly 4 stone in weight. In the epigastrium there was a slightly elastic tumour, the size of "a four-year-old child's head." It extended under the margin of the ribs, down to the umbilicus, was deep-seated, slightly movable, and moved about 4 inches on deep inspiration. No fat was found in the stools. The patient having been purged, the colon was filled with water, and was ascertained by palpation to be in front of the tumour; the stomach, being filled with air, was likewise found to be in front of the tumour, which was then diagnosed to be a pancreatic cyst. Laparotomy was performed; the incision, 4 inches long, was made in the middle line, 3 inches below the ensiform cartilage. The omentum was torn through, and the round fluctuating cyst brought into view; it was entirely adherent to the posterior wall of the stomach, above and in front, and to the transverse colon below. A fine aspirating needle was inserted, and a quantity of clear straw-coloured fluid drawn off; the opening was then enlarged, and a glass drainage tube inserted. No calculus or foreign body was detected. The edges of the opening were stitched to the abdominal wall. The edges of the wound were brought together with wire and superficial silk sutures. Siphonage was so arranged as to prevent any leakage of fluid. A dry dressing was applied. The patient recovered well from the operation. A good deal of fluid having the characteristics of pancreatic fluid was discharged from the cyst. The patient was discharged from the hospital a month after the operation with a small sinus, and when last heard of two months later was "quite smart," but there was still some discharge from the sinus.

(185) Craniectomy for Microcephalus.

BEFORE giving the details of a craniectomy performed by himself last November, Dr. Keen (*Medical News*, November 29th, 1890) mentions the only cases (2) of the operation done in Europe up to that date, and the case of a boy from whom he removed the cortical hand centre in December, 1889, for epilepsy. Eleven months after the latter operation the boy's condition had much improved; fits were less severe and frequent; disposition was considerably more docile; the child could play with others and possessed a fair vocabulary; the hand was slightly paretic. The European craniectomies for microcephalus were performed by Lannelongue, of Paris, with the view of annulling or diminishing cranial resistance to brain growth. His first case was a microcephalic idiot 4 years old, unable to stand until 3 years of age; it could only take liquids, babbled and slavered unceasingly, was always restless and inattentive, and constantly uttered cries. The head was very narrow with prominent vertex. In May, 1890, a strip of bone, 9 centimetres long and 6 millimetres wide, was removed from a little to the left of the sagittal suture,

without opening the dura. The habit of incessant crying ceased the day after the operation; in five weeks the child was calmer, tried to talk, and took notice of its surroundings. It has since grown able to walk and no longer drivels. The second case was an idiot of lower grade. Operated upon in June of last year, the time is alleged to be too short to judge of results. Dr. Keen's patient is a girl, 4½ years old, with small prognathic head; she never could walk, was constantly moving, wringing her hands, and slavering. Six inches and a quarter of the cranial vault, ¼ inch wide, were removed from a little to the right of the sagittal suture. Recovery from the operation was complete in five days. A further report as to results is promised.

MIDWIFERY AND DISEASES OF WOMEN.

(186) The Uterine Curette and Anæsthetics.

Dr. Geijl (*Nouvelles Archives d'Obstét. et de Gynécol.*, December 25th, 1890) does not consider that chloroform is necessary or even advisable, for the operation of scraping the endometrium in cases of endometritis. He maintains that the proceeding is absolutely safe provided that the manipulations be skilful, and adequate precautions against sepsis be taken. Cicatrices and atresia of the cervix need never occur, and hæmorrhage should cease directly the operation is performed. Dr. Geijl dilates the cervix with a tupelo tent. Within thirty-six hours the patient will be ready for the curette. The use of that instrument causes but little pain, and the little which it does cause is necessary for the detection of the most diseased spots on the endometrium. The patient is placed in the correct position and the tender spots are marked out by the touch of the sound. Then a 20 per cent. solution of hydrochlorate of cocaine is applied to the most tender parts, whilst the remainder of the uterine cavity is painted with a 10 per cent. solution of the same compound. The anterior lip of the os is then seized by means of a volsella, and held by an assistant, so as to keep the uterus fixed and well drawn down during the operation. The endometrium is dried with wool and then carefully scraped, especially at the tender points. The characteristic grating sound (*cri utérin*) should be heard over every part subjected to the curette, as it indicates that the diseased material has been thoroughly scraped away. Lastly, the uterus is washed out with a 0.05 per cent. sublimate solution. This washing is better than swabbing (*écouvillonage*). The after-treatment consists in the administration of antiseptic vaginal injections, and in the introduction of iodoform-glycerine tampons. With the above precautions the curette may be safely used in cases of pure endometritis.

(187) Head Presentation: Labour Delayed by Coccygeal Tumour.

Dr. Bar (*Annales de Gynéc. et d'Obstét.*, January, 1891) has exhibited before the Obstetrical Society of Paris a fœtus which during labour presented normally; the head was born without difficulty, and the body expelled easily as far as the umbilicus. The remainder of the fœtus resisted all natural efforts at delivery. Dr. Bar suspected a tumour of some part of the trunk, and confirmed his suspicion by careful palpation. He therefore cut through the body of the fœtus and pushed up the breech. The lower extremities were readily brought down by this manœuvre and the lower half of the fœtus delivered. The malformation which arrested the birth of the fœtus was a congenital coccygeal tumour of the usual type, held to represent an amorphous parasitic fœtus—a "teratoma." In the discussion on Dr. Bar's paper, Dr. Pajot stated that he had observed cases of delayed delivery of the lower part of the trunk; this condition usually signified either ascites or teratoma. Dr. Guéniot approved of the obstetric manœuvre adopted by Dr. Bar. It was based on the same principle as another operation in midwifery, where, the head having been delivered with the aid of the cephalotribe, decapitation was performed with the object of allowing room for the obstetrician's hand to draw down the fœtal arms, so as to permit the extraction of the body arrested by the breadth of the shoulders.

(188) Hernia of Gravid Uterus in Distended Cæsarean Section Cicatrix.

Dr. Sperling (*Arch. für Gynäk.*, vol. xxxvii, Part 2, 1890) relates a case where a woman in her third pregnancy suffered from hernia of the gravid uterus. The pelvis was flat and narrow in all dimensions (conjugata vera 2⅜ inches). At the second labour the head had been avulsed in attempts to extract the child; in order to get it away the physician performed Cæsarean section. The cicatrix of the abdominal wound became distended. In the course of the third pregnancy the uterus pressed forwards into the great ventral hernia caused by the yielding of the cicatrix, and at length hung downwards, completely covering the pudenda. As the walls were abnormally thin palpation was exceedingly easy, and permitted of precise diagnosis. At the beginning of the seventh month premature labour took place; a living male child, hardly exceeding two pounds, was born without the aid of art. It lived only twenty hours.

(189) Normal Parturition in Last Stage of Phthisis.

Dr. Tarnier (*Journ. des Sages-Femmes*, February 16th, 1891) had under his care in January a parturient woman who was in the last stage of phthisis and rapidly sinking from the pulmonary disorder. Dilatation was almost complete on admission, and delivery at term absolutely normal, nor was there any evidence that childbed hastened the ravages of phthisis. It was certain that, on the other hand, the lung disease had no evil effects on the puerperium, no hæmorrhages, foul discharges, or other well-known complication of the puerperium occurring. A few days after delivery the patient was moribund. Dr. Tarnier then made the above note of her case. He added that it would be strictly included in his statistics. He insisted that every death in his lying-in wards should be included, whatever the cause might be. In this instance the two conditions were pure coincidences. The disease had nothing whatever to do with the pregnancy. It would be right to add, in statistical tables, "death from phthisis without puerperal affection." About the same time another woman was admitted, and was delivered normally. On the next day she was seized with acute pleuro-pneumonia, which proved rapidly fatal, without any septic or other complication locally. At the necropsy it was found that acute pleurisy predominated over the evidences of pneumonia. Dr. Tarnier declared that delivery had nothing to do with the death of the patient.

DISEASES OF CHILDREN.

(190) Antipyretics in Diseases of Infancy. Professor Demme, in the annual report of the Berne Hospital (*Concours Médical*, January 24th, 1891), relates his experience of the new antipyretics in children. In the first place, however, he holds that their employment is unnecessary in moderate pyrexia (101° to 103° F.); he prefers the application of cold damp cloths renewed every two hours; or when there is much nervous excitement or insomnia, lukewarm baths (79° to 82.5°), lasting five or ten minutes, and repeated once or twice a day. The propriety of using antipyretic drugs should be considered in cases in which there is a continuous temperature of about 104° F., and in adopting the treatment the cause of the pyrexia and the power of resistance possessed by the patient must be taken into account. These drugs are of value in enteric fever, acute rheumatism, and broncho-pneumonia; they should be used with great caution in fibrinous pneumonia, diphtheria, and the acute exanthems (measles, scarlet fever, etc.). In acute rheumatism, if there is a dislike to salicylate of soda or a tendency to diarrhœa and vomiting, he replaces it by salol. Quantity to be given daily in divided doses: salicylate of soda, 2 to 4 years, 8 to 15 grains; 5 to 10 years, 15 to 30 grains; 11 to 15 years, 38 to 45 grains; salol (in powder), 2 to 4 years, 12 to 16 grains, in three doses; 5 to 10 years, 22 to 33 or 44 grains, in three or four doses; 11 to 15 years, 33 to 45 or 60 grains, in three or four doses. In enteric fever, Demme has had good results with sulphate of thallin; he gives it in powder every two hours, each dose being for a child of 3 to 4 years, ½ to ¼ grain; 5 to 10 years, ½ grain; 11 to 15 years, ½ to ¾ grain. In broncho-pneumonia, in which there is a liability to a long continuance of a high temperature and to relapses, Demme prefers antipyrin to all other antipyretics; he gives it dissolved in water with a little sugar and a few drops of cognac. He employs it also in the acute exanthemata and in serious diphtheria if the temperature becomes so high as to appear to call for an antipyretic. He gives it hourly in the following doses: 2 to 4 years, 3 to 6 grains; 5 to 10 years, 8 to 11½ grains; 11 to 15 years, 12½ to 15 grains. In the later stages of broncho-pneumonia, where the fever is of the hectic type, the antipyretics belonging to the aromatic series have little effect. Sulphate of quinine, on the contrary, not only hastens recovery, but actually "jugulates" the disease. He gives it in the following doses: 2 to 4 years, 3 to 6 grains; 5 to 10 years, 8 grains; 11 to 15 years, 11½ to 15 grains.

(191) Treatment of Asphyxia in Newborn Children. In a paper on life-saving methods in stillbirths (*American Journal of the Medical Sciences*, February, 1891), Dr. William T. Lusk briefly discusses the cause of the first respiratory movements of the child, and expresses the opinion that it is doubtful whether Engstrom's experiments for Preyer proved that inspiratory acts could be produced by peripheral stimuli, so long as the placental circulation was completely undisturbed. That the increased venosity produced by suspension of the placental circulation is capable of exciting the respiratory centre without the aid of peripheral stimuli, and that the latter were capable of exciting the respiratory act before the internal stimuli (increased venosity) had increased sufficiently to do so, were points proved by Engstrom's experiments, which thus give a partial explanation of the well-known fact that external stimuli may be able to excite respiratory movements, when the venous condition of the blood alone fails to do so. Dr. Lusk distinguishes two degrees of asphyxia at birth; in the milder, muscular tonus is preserved, and the head does not droop, the skin is dusky red or cyanotic, the conjunctivæ injected, the umbilical vessels congested, the heart acts slowly but forcibly, and reflex movements are easily produced by surface irritation: in such cases spontaneous respiratory movements often occur. In the severer cases muscular tonus is lost, so that the head and limbs droop; the skin is pale and cold, the eyes are glazed, reflex movements cannot be induced, the heart beats are slow and infrequent, and the umbilical vessels nearly empty. The indications for treatment are to clear out the air passages, to restore the irritability of the medulla, to increase the force of the heart's contractions, and to relieve the plethora of the heart and thoracic vessels. In the severer cases the child should be laid on a table and warmly covered, the fauces cleared with the finger, and, using it as a guide, a No. 8 gum elastic catheter should be passed into the trachea, and matters aspirated into the lungs during the ineffectual attempts at respiration removed by suction; for this purpose it may be necessary to introduce the catheter several times. Through the catheter insufflations should also be made, and after each insufflation the chest should be compressed with the hand. When occasional spontaneous respiratory movements begin to be noticed Sylvester's method may be employed, the tongue being pulled well forward. As soon as the heart movements become plainly perceptible the child should be placed in warm water, and the face sprinkled with cold water. The swinging method of Schulze should be employed to complete the establishment of the normal circulation. Schulze's method of artificial respiration, which Dr. Lusk recommends also in the milder cases from the beginning, is thus performed:—The child is grasped in such a manner that the operator's thumbs rest upon the anterior thoracic wall, the index fingers are in the axilla, and the three others are placed diagonally across the back; the operator then allows the child to hang down face upward at arm's length between his knees. In this position the capacity of the chest is at its maximum (inspiratory position), for the pectoral muscles draw the upper ribs upwards, the abdominal muscles draw the lower ribs down, and the weight of the liver pulls down the diaphragm. The child is next swung upward until the operator's arms are nearly horizontal. The swing is then stopped, the head falls downwards, the lumbar spine also is flexed, and the lower limbs fall towards the operator until the whole weight of the child rests on his thumbs. In this way the chest and abdomen are compressed, the diaphragm is forced upwards and an efficient expiration results. Further, a certain favourable effect is also produced on the circulation, for during the upward swing the blood is pressed from the left ventricle into the aorta and from the right auricle into the right ventricle; the surplus blood from the right ventricle finds its way through the ductus arteriosus into the aorta. At the same time the emptying of the left ventricle favours the flow of blood from the left auricle and permits the return current from the

pulmonary veins. With the downward inspiratory swing blood is aspirated into the thorax from the great veins (reflux from the aorta being of course prevented by the semilunar valves). By alternating the downward and upward swings, not only is respiration, but also the pump action of the heart, artificially imitated, and the feeble systole is reinforced.

(192) Systemic Infection in Secondary Pneumonia.

In three cases of whooping-cough complicated by pneumonia, Dr. P. Haushalter (*Rev. Méd. de l'Est*, February 1st, 1891) inoculated nutrient gelatine with the blood obtained from the finger. In all three cases he obtained cultivations of the staphylococcus pyogenes aureus. He discusses the question whether the systemic infection with this microbe was primary or whether it was secondary to the pneumonia, and arrives at the conclusion that the latter is the more probable hypothesis. He supposes that the sequence of events is that the bronchial catarrh and the altered nutrition due to the functional disturbance of the pneumogastric (which he assumes to be present in whooping-cough) permit of the free development of the staphylococcus, probably always present in the air passages. This microbial growth leads to epithelial desquamation and inflammatory exudation; the staphylococcus then penetrates into the interlobular tissue, from thence into the lymphatics, and finally into the blood. He would explain by this systemic infection the occasional occurrence, in the secondary pneumonias of whooping-cough, measles, and other acute infectious diseases, of tumefaction of the spleen, acute nephritis, endocarditis, and adynamia. He found that cultivations of the staphylococcus injected into the trachea of rabbits were capable of producing lobular pneumonia.

PHARMACOLOGY AND THERAPEUTICS.

(193) Effect of Koch's Tuberculin on Healthy Guinea-pigs.

At a meeting of the Académie de Médecine on February 10th M. Jaccoud (*Semaine Médicale*, February 11th, 1891) gave an account of an experiment he had performed with the view of testing Koch's statement that repeated injections of tuberculin in healthy guinea-pigs render these animals insusceptible of tuberculosis when inoculated. A very robust Angora guinea-pig, of the exceptional weight of 580 grammes, was chosen as the subject of the experiment. Injections of a 1 in 100 solution of the fluid were given every day or every second day. In two series of injections separated by an interval of eight days (from December 8th to 18th, 1890, and from December 27th, 1890, to January 4th, 1891), a total amount of pure "lymph," equivalent to 50 centigrammes (25 centigrammes in each series) was given. The sole appreciable effect was slight wasting; at the end of the second series of injections, on January 4th, the animal was found to have lost 26 grammes in weight. On the following day the half of a gland taken from a tuberculous guinea-pig was inoculated subcutaneously at the level of the right shoulder of the "subject." Exactly a month later—that is to say, on February 5th—the animal died, weighing only 450 grammes, or 130 grammes less than its original weight. *Post-mortem* examination revealed tuberculous glands in both axillæ, confluent grey granulations in both lungs, a patch of hæmorrhagic hepatisation at the apex of the right lung, and masses of caseous tubercles in the liver and spleen. M. Jaccoud sums up the case as exemplifying the minimum of survival in guinea-pigs after the inoculation of tuberculosis and the maximum of lesion which can be produced by such inoculation. "Therefore," he concludes, "previous impregnation of the organism with Koch's liquid had, in this case, no preventive action." By way of control a small healthy guinea-pig, weighing 485 grammes, was also inoculated on January 5th with the other half of the tuberculous gland used for the first one. It duly developed the disease, as was shown by the condition of the axillary glands, and by wasting. At the time of the report it had lost 88 grammes in weight, but was still alive; that is to say, it had already outlived by six days the other guinea-pig, which was supposed to have been "protected." At the same meeting M. Dujardin-Beaumetz stated that he had made some experiments on guinea-pigs with results similar to those reported by M. Jaccoud. He first treated animals in an advanced stage of experimental tuberculosis, but "death could not be warded off in these animals." Others he first inoculated with Koch's "lymph" and then with tubercle; in others again he reversed the process, first inoculating them with tubercle and afterwards with tuberculin. In both series the "subjects" and "controls" alike died after progressive loss of weight.

(194) Koch's Treatment of Tuberculosis: General Results.

The "Tuberculosis Commission" of the University of Pennsylvania, who have been watching the Koch treatment in the hospital, have published a preliminary report (*University Medical Magazine*, February, 1891). In the medical wards, the patients, about fifteen in number, who have been regularly receiving inoculations for tubercle of the lungs or larynx, are said in general terms to be "doing better." They have presented fewer unfavourable symptoms than could be noted in a similar series of cases during winter under any other treatment. In one case particularly good results followed—cessation of cough and expectoration, diminution of the *râles*, and gain of five pounds in weight. On the other hand, several cases, in spite of repeated inoculations followed by characteristic reaction, showed no improvement. One case under the treatment died, "although the injections were followed by the most moderate reaction." This patient (a man) was exceedingly weak on admission. Another case, with advanced lesions, was slightly improved. In the surgical wards the results are summed up as follows: "In general the surgical cases treated by the Koch injection have shown a gain in weight, an improvement in condition, and where the lesion was tuberculous some evidences of retrograde metamorphosis in the affected areas." With regard to the reaction, in all the cases where continued tests were made the percentage of hæmoglobin was found to diminish, the average loss being 10 per cent. The cases which improved gradually regained the original percentage. In twelve out of twenty-one cases there was development of albuminuria, probably due to leucocytes. Red blood corpuscles were found in seven, or one-third of the cases. Hyaline and granular casts were noted in four, or about one-fifth of the cases. In two albumen and casts were observed before the injections were begun.

At the Santa Cruz Hospital of Barcelona, Koch's treatment was begun on January 9th, a committee consisting of Drs. Alvaro Esquerdo, Durán, and Bofill, being appointed to watch the cases and report on the results. Their preliminary report on 23 cases is given in great detail in the *Revista de Ciencias Medicas de Barcelona*, January 25th and February 10th, 1891. In one of these cases (destructive ulceration of the external ear, etc.) the disease was probably malignant and no reaction followed the injections; in another (cystitis with vesico-vaginal fistula) the tuberculin was used for diagnostic purposes, and the result was negative. Of the remaining cases, 12 were examples of tuberculous disease of bones and joints, complicated in two cases with pulmonary mischief, and in one with tubercle of the epididymis; 4 were cases of phthisis, complicated in one case by tuberculosis of the bladder (colpocystotomy had been performed some time before with much relief so far as the bladder symptoms were concerned), and in another by tuberculous disease of the larynx and palate; 1 was a case of tuberculous cystitis; and 4 were cases of lupus (2 of the exedens and 2 of the erythematosus variety). The reaction in all these cases is minutely described, but little is said as to the immediate local effects of the remedy, and nothing at all as to any curative result. In one case of "tuberculous osteo-arthritis of the ankle," in a child of 10, it is stated that after several injections "the local lesions underwent further development, the masses of fungosities increasing, but without the phenomena of acute inflammation." In a case of tuberculous cystitis the injections caused increase of hæmaturia. In a case of phthisis in the second stage, though there was no diminution in the amount of expectoration or in the number of bacilli, there was some modification in the physical signs, and the air entered more freely in several parts of the lung; in one or two cases of joint disease the discharge from sinuses diminished and became serous in character, and in one, in which the knee was affected, the movements of the joint became more easy, and the limb could be more completely extended than before. In a girl, aged 7, suffering from tuberculous disease of both knees together with incipient phthisis, the injections caused albuminuria (20 per 1,000) and such prostration that the treatment had to be discontinued. "The three distinct localisations of tubercle which she presents have not become modified either much or little." In a case of lupus exedens of the temporal region with destruction of the eyeball, the treatment was given up, as it produced no effect whatever on the affected part. In another of lupus exedens of the supramaxillary region the injections were discontinued for the same reason. In the two cases of lupus erythematosus the usual reactive phenomena were observed, but from the report it cannot be gathered that cure or even marked amelioration was obtained in either of them.

At a meeting of the Medico-Chirurgical Academy of Naples on January 25th (*Riforma Medica*, No. 22, 1891), Dr. Gallozzi, speaking of Koch's treatment in surgical cases, admitted its diagnostic value in the fullest manner. He said that in glandular tuberculosis the reaction, though distinct, was not so marked as in disease of bones and synovial membranes. Children bore the treatment well, and derived the greatest benefit therefrom. He had seen extraordinary therapeutic results in a boy with tubercle of the testis. He had also seen good results in lupus, but he would prefer to wait before giving a decided opinion on the treatment as a whole. Professor Massei, speaking of the treatment in laryngeal tuberculosis, while admitting the "elective action" of the remedy in such cases, also reserved his opinion. At the end of the discussion the Academy unanimously passed a resolution to the effect that the experiments hitherto made with Koch's fluid, so far from inducing practitioners to desist from using it, should encourage them to persevere in studying its curative effects.

Dr. W. D. Smith reports (*Montreal Medical Journal*, February, 1891) three cases of pulmonary phthisis treated by Koch's method in Dr. MacDonnell's wards in the Montreal General Hospital. The patients were all, apparently, favourable subjects for treatment; but though the usual reactions, to a more or less marked degree, followed the injections, the therapeutic results seem to have been practically *nil*. In none of the cases was any change noted in the cough or the expectoration, and in one of them it is stated that the most important change observed up to the date of report was "a decided loss of weight." Dr. R. E. McKechnie (*ibid*) reports the results of the treatment, in surgical cases, under the care of Drs. Roddick, Shepherd, and Bell, in the Montreal General Hospital. Full particulars as to the reaction are given, which, on the whole, are similar to those observed elsewhere, but little is said as to any definite therapeutic result.

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(195) Diuretic Action of Mercurials.

Jendrássik (*Deutsch. Archiv f. klin. Med.*, xlvii, pp. 226-288) contributes a long article on this subject as a sequel to his earlier observations (*Deutsch. Archiv f. klin. Med.*, xxxviii, 1885). The latter excited very considerable attention on the Continent, where the diuretic action of mercurials does not seem to have been generally recognised or applied in practice, although in this country the combination of blue pill with digitalis has long been a classic prescription in the treatment of severe cardiac œdema. In Jendrássik's paper the later literature is given fully. By the use of calomel he has seen the urine rise from a few ounces to usually about 250 ounces in the twenty-four hours, the maximum reported being 370 ounces. All the mercurial preparations exercise the diuretic action, but he finds calomel on the whole most convenient. In a case of aortic disease with great œdema, and small amount of urine containing albumen, tube casts, and blood, he gave it with the following results: On October 18th, urine 13 oz.; 19th, urine 30 oz., 3 gr. calomel 4 times; 20th, urine 30 oz., 3 gr. calomel 5 times, which caused severe diarrhœa in spite of opium being given; 21st, urine 25 oz., 3 gr. calomel 4 times, diarrhœa continued; 22nd, urine 63 oz., calomel stopped; 23rd, urine 113 oz.; 24th, urine 86 oz., œdema and breathlessness gone; 25th and 26th, urine 40 oz. Smaller doses often suffice without causing any diarrhœa. The indications for the use of mercury as a diuretic are as yet by no means clear or fixed, but it acts very much better in cardiac than in other cases. In hepatic ascites and in pleural effusion its action is generally *nil*, although in a few cases it undoubtedly exerts a diuretic effect. In renal dropsies most observers find that it does not act well, although a few have reported successes, and

Jendrássik gives in his paper some successful cases. He also tried its effect on healthy young men, but got absolutely no increase of diuresis, and concludes that with a normal condition of the circulation any diuretic effect must be slight, and is extremely doubtful. The cause of the diuresis has never been satisfactorily determined, although many theories have been promulgated. Jendrássik examines these in great detail. It is agreed that mercury does not act by raising the blood pressure or by stimulating the heart. Weinstein is of opinion that the cathartic and sialogogue effects withdraw fluid from the blood, thicken it, and thus induce an inflow of the exuded serum. Such a theory is untenable, as the diuresis is obtained often with doses too small to cause diarrhœa, and also when the latter is prevented by opium. Spiller Locke, Talfourd Jones, and others, hold that the mercurials increase the amount of urea in the blood, and that the latter has a diuretic action. The amount of urea, however, is never sufficient to account for the great increase of urinary water, and, further, other substances, such as salicylate of sodium, which greatly increase the urea do not act so powerfully as the mercurials; in Bright's disease also, where urea is in excess in the blood, no diuresis results. A third theory is that the kidney epithelium is directly stimulated, and this is the one most generally held. Jendrássik, however, points out that in the healthy no diuresis occurs, and further criticises the experiments on which the opinion is based. Several other explanations of its action are similarly shown to be thought untenable. Jendrássik himself seeks the explanation in the condition of the blood. In cardiac disease with dropsy the blood, he says, is denser than normal. In addition the mercury forms with its albumen a combination which increases the tendency of fluids to dialyse into it. Experiments with dialyses are given in proof of this. Hence when mercury is given the exuded serum tends to diffuse readily into the capillaries again, and the watery part of it is excreted by the kidneys. In ascites and pleurisy with effusion the exudation is extremely dense, much more so than dropsical fluid, and hence will not diffuse readily. This is the reason why calomel fails to act in such cases. In Bright's disease, on the other hand, the blood is so watery that diffusion of the exuded serum will not take place into the capillaries. For particulars the original paper should be consulted.

(196) The Action of Caffeine on Tissue Metamorphoses and Heat Phenomena.

Reichert (*New York Med. Journ.*, 1890, p. 456) points out that the previous observations are most discordant, some observers finding an increase in the excretion of urea and carbonic acid, others a diminution. Reichert, therefore, has tried to get an answer to the question by means of the calorimeter, and he finds that caffeine increases heat production, and, as a corollary, increases destructive tissue metamorphosis. To explain the efficiency of coffee in supporting the system and enabling more work to be performed upon restricted diet it cannot be supposed that it is a lessened heat dissipation, the quantity of heat thus conserved becoming apparent in work, for the calorimeter shows that caffeine increases both heat production and heat dissipation. There seems to be no other explanation than that the virtues of coffee in the wear and tear of active life are entirely subjective and depend upon a general excitation of the higher tissues and chiefly upon its powerful exhilarant action on the mental processes.

DERMATOLOGY.

(197) Histological and Bacteriological Research on Leprosy.

Gianturco (*Giornale della Associazione Napoletana di Medici e Naturalisti*, 1890, Fasc. 4, p. 403) obtained fragments of cutaneous lepromas from the body of a man who had been affected with mixed leprosy. Histological examination showed these lepromas to contain a great number of bacilli. According to Gianturco, the localisation of the bacilli lepræ and their relations to the cellular elements vary during the period of the morbid process. In the most recent nodules the bacilli are almost all present in the cellular elements, and the rounded zoogloea mass which is formed later is not then produced. At a more advanced stage the bacilli multiply, forming a globular mass, rarefying the cellular protoplasm in which vacuoles form. The nucleus is in turn invaded, is badly coloured, atrophies, and then, probably in consequence of the destruction of the cell, the masses of bacilli become free in the lymphatic channels. Gianturco has confirmed the existence of the same lesions in the lepromas of the larynx. In the liver he found an increase of the interstitial tissue under the form of embryonic cells, and in places true nodules continuous at their periphery with the interacinous connective tissue. The hepatic cells are in a general way intact, especially those of the centre of the lobule, yet those of the periphery of the lobule may present adipose infiltration and granulations of biliary pigment; their nuclei, swollen at the commencement, afterwards present vacuoles. The lymphatic glands contained, both in the medullary and cortical substance, leprous nodules showing a giant cell at their centre. With the juice of a cutaneous (not ulcerated) leprous nodule, Gianturco made inoculations on blood serum and on glycerine agar, the tubes being kept at a temperature of 37° C. Cultures developed in all the tubes, one of which presented at the end of seven days an isolated colony of the size of a hemp seed, somewhat projecting from the surface of the agar, of a greyish colour, and perfectly similar to the colonies of bacilli lepræ described by Bordone-Uffreduzzi. The bacilli of this colony were of variable length, with clear spaces, and some colouring strongly, and possessing a terminal swelling. Inoculations made with these bacilli on glycerine agar give rise at the end of two days to colonies which develop somewhat rapidly on the surface of the agar. On glycerine serum they develop rather quickly, but on agar alone the development was very slow, and the colonies much smaller than on glycerine agar. They did not develop on other media. The colonies were rounded, with finely serrated borders, scarcely projecting from the surface of glycerine agar, a little more prominent on glycerine serum. They were of a greyish colour, appearing a little yellow on the serum, and resembling small leaves of trefoil when developed along the line of inoculation. They developed well at 37°, but the growth was arrested at 20° to 25°, the faculty of development being preserved for a long time. The above bacteriological researches

support the statements made by Bordone-Uffreduzzi, but it most not be forgotten that other observers, and especially Campana, who has devoted much time to the matter, have never succeeded in cultivating the bacilli lepræ.

(198) Skin Eruptions in Blenorrhagia.

M. Perrin (*Annales de Derm. et de Syph.*, November, 1890) is of opinion that in the greatest number of cases blenorrhagia is of a parasitic nature. Orchitis, cystitis, prostatitis, rheumatism, eruptions, etc., may be produced. Cutaneous determinations are either polymorphous, scarlatiniform, or rubeoliform. These eruptions possess no exclusive objective features by which they are rendered distinct from erythemas produced by other external or internal influences. The pathogenesis of erythemas which occur during blenorrhagia is complicated. The causes of the eruptions may be common, or may be found in blenorrhagia or in balsams. The author considers that these erythemas may be due to gonohæmia. They are usually angio-neurotic erythemas caused by blenorrhagia acting on the vasomotor system. Gastro-intestinal disturbances often result from balsams, and especially copaiba, and their action may give rise to erythematous rashes, the tendency to which seems to be increased by the presence of blenorrhagia.

BACTERIOLOGY.

(199) Microbe of Leukæmia.

MM. Kelsch and Vaillard (*Annales de l'Institut Pasteur*, Tome iv, No. 5, May 25th, 1890) give the result of careful observations on a case of acute leukæmia with numerous lymphomatous growths in the subcutaneous connective tissue and in the bones, with enormous hypertrophy of the glands at the hilum of the liver. The patient was a soldier, aged 24, who died with the characteristic symptoms of the disease—extreme weakness, tumours, enlargement of the organs, and hæmorrhage. Even during life a few short bacilli were found in the blood, and a drop of blood inoculated into broth and incubated gave pure cultivations of the same bacillus. A second examination gave negative results. All the organs and glands were enormously enlarged; there were small hæmorrhages in the intestine and in the lungs; the humerus of one side was fractured and the red marrow was enormously increased; some of the ribs were also fractured. From the blood and from one of the tumours bacilli identical with those found during life were obtained by cultivating in broth, which became turbid in forty-eight hours. The blood and the juice of the tumours, when examined under the microscope, exhibited similar non-motile bacilli, short, thick, round at the extremities, a little longer than broad—sometimes, however, drawn out into a longer rod, in which case the diameter was always diminished, being about half as great as the length—sometimes isolated, sometimes two or four were placed end to end. They were easily stained with alkaline solutions of methylene blue, or with weak alcoholic solutions of gentian violet and of methyl violet and fuchsin, but they were scarcely tinged by Gram's method; the central part remained uncoloured, whatever stain was used. Similar organisms were also found in sections of the tumour. They developed rapidly in beef broth at a temperature of 35° C. First a delicate flocculent precipitate appeared, which gradually increased in density; the organism in such cultivations forms chains; it grows more slowly in broth at the temperature of the room; but on gelatine it grows rapidly without liquefying it on the surface; it has a peculiar pearly lustre, is translucent and iridescent; the margins of the thin plate growth are irregular or sinuous. As the growth gradually increases in thickness it becomes more opalescent. On potatoes it also grows at a temperature of 35° C., appearing as a moist, glistening, mucous-looking layer, at first pale yellow and gradually becoming yellowish-brown. It grows both in contact with air and *in vacuo*. A cultivation injected under the skin of a white mouse kills it in twenty-four hours, the bacillus being found in the blood of all the organs. Injected into rabbits, similar results are obtained in twenty-four to thirty-six hours; in neither case is there any appreciable change in the organs themselves. The authors, after giving an account of the histology of the disease, acknowledge that their results must be looked upon as tentative and incomplete until further corroboration is obtained.

(200) Etiology of Grouse Disease.

Prof. E. Klein (*Centralbl. f. Bakteriologie u. Parasitenk.*, No. 2, Band ix, January, 1891) adds some notes to his observations already published on the etiology of grouse disease. He finds that the bacillus of the grouse disease as it occurs in autumn is not nearly so virulent as that obtained from the disease during the spring months, the bacilli being obtained from the heart blood in the autumn and from the lungs in the spring. Only two out of ten mice that were inoculated died; all the eight that remained alive were refractory to the action of the spring grouse bacillus. The control mice inoculated with the same spring culture all died in from twenty to forty hours. The one attack of the milder autumn disease rendered the animals immune to the more virulent spring disease.

OPHTHALMOLOGY.

(201) Surgical Treatment of Granular Conjunctivitis.

Darier (*Recueil d'Ophtalmologie*, December, 1890) says that most of the methods employed to cure granular conjunctivitis are ultimately successful, but the time occupied in the cure is usually very long, and in many cases the cure is only temporary. This method of treatment is based upon the opinion that the *trachomcoccus*, which has been found and described by Sattler and Michel, is the pathogenic agent in granular conjunctivitis. This *trachomcoccus* should be entirely removed, and this can only be done effectually by surgical methods. He divides the operation into six steps: (1) Anæsthesia by chloroform. (2) Enlargement of the palpebral fissure. (3) Complete eversion of the eyelids, so that the whole of the conjunctival surface may be exposed. (4) Scarification of the conjunctiva, the cuts being deep, and in parallel lines to the edge of the eyelid. (5) Scraping with a Volkmann's spoon. (6) Thorough brushing and washing with a solution of perchloride of mercury (1 in 500), the whole of the scarified surface being brushed with a hard brush. He has found this method very effectual, most of the cases treated being cured in about eight days, without the supervention of keratitis or ulcers in the cornea.

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MEDICINE.

(202) Nephritis in Consumptives.

IN the *Centralblatt für allgemeine Pathologie*, No. 3, 1891, Dr. C. V. Kahlden, of Freiburg, describes certain changes which he has observed in the kidneys of phthisical patients, apart from those brought about by actual tuberculous disease or amyloid degeneration. The whole organ is either not at all, or only very slightly, enlarged, the capsule is easily separated from the yellowish-white surface, the cortex is but little narrowed, but invariably shows a slight yellowish discoloration; the medullary tissue is usually pale and anæmic. A case of chronic phthisis is related, and full details given of the microscopic appearances corresponding to the yellow changes in the cortex. The clinical evidence of these changes is very limited. Albuminuria may be altogether absent, or only present at irregular intervals in minute quantity. There is, as a rule, no hypertrophy of the heart and very little œdema of extremities. The actual changes within the kidney consist for the most part of an irregular aggregation of small round cells within the capsule of the glomeruli, the cells themselves showing minute fatty changes. The endothelial cells lining the tubules show a certain amount of fatty change, and small granular cells are scattered in the intertubular tissue also: but the distinctive difference claimed for this form of degeneration over others that are recognised as occurring in chronic phthisis is the occasional limitation of the degenerative process to the endothelium of the tubules, the interstitial tissue being but little altered. The changes are looked upon as essentially degenerative in nature and as prone to affect the parenchyma of the organ in the first instance. The author discusses the arguments for and against this view at considerable length, and concludes that such parenchymatous changes in the kidney in cases of long-standing chronic phthisis are the rule rather than the exception.

(203) Primary Sarcoma of Lung.

A PAPER on this subject appears in the *Deutsches Archiv für klin. Med.*, Band xlvii, Heft 3 and 4, from the pen of Professor Schech, of Munich. The condition is one of considerable rarity, only about twenty cases being on record. The disease is generally secondary when it attacks the lung, and often occurs in association with a similar growth in the bony tissues. Primary carcinoma, on the other hand, is by no means so uncommonly met with in the lung. Of the cases of primary sarcoma, most of the patients have been males, and more have occurred before the age of 40 than after it, but it is met with even in quite young children. It is rare for both lungs to be attacked at the same time. The duration of the disease has generally ranged from two to ten months. The diagnosis is extremely difficult, and the writer justifies the use of the harpoon for removal of shreds of the growth during life for diagnostic purposes. Enlargement of glands is not constant. The details of a case are given in which the symptoms preceded the fatal result for exactly three years. The patient, a man, aged 57, suffered at first from recurrent hæmoptysis, for which no physical cause could be found for a long time, until a patch of dulness appeared, close to the spine, in the right lung. By slow degrees the disease spread to the spinal column, and produced complete paraplegia and death.

(204) Pyrexia.

DR. HALE WHITE (*International Journal of Medical Sciences*, November, 1890) says that lately much importance has been attached to the part played by the nervous system in the production of pyrexia. A rise of temperature has been brought about in animals by injuries to the nervous system, and recently some cases of fever have been reported which are best explained on the supposition of a functional disturbance of the heat-regulating mechanism. In the Goulstonian Lectures of 1887 Dr. MacAlister pointed out that this mechanism consists of three parts: (1) thermolytic, by which heat is lost; (2) thermogenetic, by which heat is produced; and (3) thermotaxic, by which the balance between the other two factors is adjusted. He showed that their order of evolution, as of their organisation, is thermolytic, thermogenetic, and thermotaxic, and that fever is a dissolution of these factors in an inverse order. Dr. White brings the following facts to support this theory: (1) That cold-blooded animals are lower in the scale than warm-blooded; (2) that the corpus striatum—presumably the thermogenetic centre—is apparently larger in the warm-blooded animals; (3) that the thermotaxic centre is better developed in man than in animals, as Dr. White has himself shown by experiment: (4) that the later developed thermogenetic and thermotaxic centres are more easily affected by antipyretic drugs, such as antipyrin and quinine; and, lastly, that young children lose heat rapidly if artificial warmth be withheld. The chief centres for the vessels of the skin, for the sweat glands, and for the respiratory muscles, lie in the medulla oblongata, and therefore this part presides over the

thermolytic mechanism. As regards the thermogenetic mechanism, the association of fever of long duration with wasting, as in enteric fever and tuberculosis, suggests the idea of the wasting being the result of the thermogenesis taking place in the muscles, but that the motor and thermogenetic functions of muscle are not the same is seen by *post-mortem* rises of temperature. Damage to the corpus striatum (and perhaps to the optic thalamus) increases heat production, and the rise of temperature is due to irritation. Developmentally the corpus striatum may be looked upon as a part of the cortex, and, like it, may be supposed to possess a localised function —namely, that of presiding over heat production. As to the thermotaxic mechanism, there is reason to believe that in hysterical pyrexia it is disturbed, as also in rheumatic hyperpyrexia. The situation of the thermotaxic centre is doubtful; it is probably in the cortex, for it has a higher function than the other two, hence the rise of temperature sometimes seen after injury to the cortex. Dr. White thinks it not improbable that the irritation caused by the inflamed meninges in a case which he reports disorganised the cortical thermotaxic centre.

(205) Stuporose Insanity following Hypnotism.

Mr. Nolan reports a case (*Journal of Mental Science*, January, 1891) refuting the notion that hypnotism can be induced indiscriminately without danger. The patient was a soldier, with neurotic taint, who, on being promoted to the rank of lance-corporal, felt unequal to his new duties, and abandoned himself to sexual and alcoholic excesses. While in a state of consequent nervous instability he voluntarily submitted to being hypnotised by an 'experimenter. Profound hypnosis was rapidly induced by gazing at a bright object. From this state the patient did not completely emerge until the lapse of nearly four months. When brought to the Richmond Asylum he was in a stuporose condition, with eyelids blinking, nostrils expanded, lips pursed and tremulous, hands rhythmically striking the thighs, etc. Neuro-muscular hyperexcitability was subsequently noted, and still later Erlenmeyer's "contracture by antagonistic distension" developed. Throughout the period of stupor the patient was disturbed by a recurring visual hallucination—an old hag with "cruel and awful" features, and "bright and white" clothes, seemed to rush towards him and then stop at a little distance from him. This hallucination arose during the condition between sleeping and waking, and persisted for some time after associated delusions had subsided. Sleeplessness was successfully treated by the prolonged use of sulphonal. Recovery was complete at the end of five months.

(206) Pneumothorax from Simple Rupture of Pleura without Inflammation.

Professor F. Wilh. Zahn contributes a paper to *Virchow's Archiv*, Bd. cxxiii, Hft. 2, on the subject of the occurrence of pneumothorax from simple rupture of pleura without any inflammatory changes at the seat of the lesion. He records six cases, and states that he has searched in vain for the record of more than six others. In one of his cases an emphysematous vesicle on the surface was burst by violent coughing, the patient being the subject of long standing bronchitis and emphysema. Such an occurrence, although alluded to in most textbooks as possible, is apparently of extreme rarity. Another form of emphysema which may at times give way at one or more points, and so produce a pneumothorax, is the interstitial form, in which the rupture first takes place into the interstitial tissue in the lung itself, the air being gradually forced to the surface, where it may appear in the form of clusters or strings of tiny bubbles beneath the pleura. Dr. Zahn believes this to be the most common form of pneumothorax from simple rupture. One of his cases of marked distension of one pleural cavity with air forms an illustration of the fact that œdema of superficial tissues may be set up under such circumstances, probably from pressure upon the superficial veins and lymphatics of the part. Simple rupture of lung may also take place at or about an old pleuritic adhesion, and the writer makes mention of another class of cases more obscure in respect to their pathology, in which a gradual rupture and slow leakage may occur, presumably due to defective nutrition of the pleura, the result, perhaps, of long continued increase of pressure upon it. The forms of pneumothorax dependent upon simple rupture may recover without giving rise to pleuritis, probably because the air escaping from the lung contains none of the inflammatory micro-organisms. Removal of the air with the aspirator is only necessary in extreme cases where the intrapleural pressure is excessive.

SURGERY.

(207) Removal of the Left Lobe of the Liver for Cancer.

To the two recently reported cases in which hepatic tumours were removed—by Terrillon, of Paris, and Tansini, of Modena (Supplement, February 7th)—may be added one in which, in November last, Professor Lücke excised, together with the morbid growth, a considerable portion of the liver (*Centralblatt für Chirurgie*, vi, 1891). The patient was a pale and emaciated woman, aged 31 years, who, when first treated in the spring of 1890, presented an abdominal tumour in the epigastrium, and complained of severe dyspeptic symptoms, and also of severe lancinating pains in the region of the swelling. On exposure of the liver by laparotomy a cancerous growth was found in the left lobe. The inner margin of this growth was adherent to the omentum, which structure presented two enlarged glands. The right lobe of the liver seemed to be quite free from disease. The cancerous lobe, which on account of its loose connection with the right lobe was freely movable, was brought through the wound in the abdominal wall and fixed by sutures, and strips of iodoform gauze were passed around the attached portion in order to afford protection to the peritoneum. A drainage tube having been fastened around the exposed portion of liver, the seat of operation was covered with antiseptic dressings. This operation was not followed by any general disturbance. On the fourth day a stronger elastic tube was substituted for that used at the time of the operation, and on the eighth day, when it was found that the edges of the external wound had contracted firm adhesions to the contiguous portions of the diseased hepatic lobe, a third and still stronger tube was applied in order to cut off the protruded portion of liver. Three days later complete separation was effected by the application of the thermo-cautery. The granulating wound on the surface of the abdominal wall healed slowly, but was quite closed at the end of the fourth week, when

the patient was able to leave the hospital. This method of drawing out and fixing the cancerous left lobe, and of gradually constricting its connection with the sound portion of the liver is held to be, when practicable, superior to any plan of rapid separation, as it serves to guard the patient against the danger of both primary and secondary hæmorrhage.

(208) Extirpation of Popliteal Aneurysm.

Dr. S. Kimura, of the Japanese navy, has lately published (*Sei-I-Kwai Medical Journal*, December 27th, 1890) a case of popliteal aneurysm treated by extirpation. The patient was a Japanese labourer aged 37. The swelling, which occupied the popliteal space on the right side, was a large one, and the leg was œdematous and its surface cold and dusky. Dr. Kimura was of opinion that neither ligature nor digital compression would be likely to do good under such circumstances, and so decided on performing extirpation of the aneurysmal sac. The affected limb having been rendered bloodless, an incision, nearly 5 inches in length, was made in the middle line of the popliteal region down to the wall of the sac. After the popliteal nerves had been drawn to one side the cavity of the sac, which was about the size of the fist, was laid open and emptied of clot. Ligatures were then applied to the popliteal artery above the tumour and to the anterior and posterior tibial arteries below, and the wall of the sac was then carefully dissected away. This dissection was attended with some difficulty, as the anterior surface of the sac was closely adherent to the posterior surface of the knee-joint. The operation was completed within the hour. The patient made a good recovery. Dr. Kimura, basing his conclusions on the small lists of cases of extirpation published by Delbet and Souba, holds that extirpation, performed under antiseptic precautions, is preferable to the ligature, the mortality from the latter operation being much higher.

(209) Nephrorrhaphy for Movable Kidney.

Max Sulzer (*Deutsch. Zeit. f. Chir.*, 1891, Heft 5 and 6, p. 506) gives a long account of this affection, with a very full statement of our present knowledge on the subject and abundant references; he refers to no fewer than eighty cases of nephrorrhaphy, and to thirty-seven instances in which movable kidneys have been removed. As a result of the study of these cases, he is of opinion that no operation is justifiable until bandages and the like have been tried, whilst he also relates numerous instances in which, though both the kidneys were movable, they caused no inconvenience whatever to their possessors. As to nephrorrhaphy, it is best undertaken through the loin, and the stitches should always be made to pass through the capsule proper of the kidney, and may even transfix the kidney substance without any resulting harm. The best results, he thinks, have been obtained when the patient has been kept in bed for at least six weeks, and the wound has been made to heal by granulation. Occasionally one operation does not suffice, and if this is the case there is no harm in undertaking a second, and fixing the kidney more soundly than on the first occasion. Intraperitoneal fixation should only be undertaken when the diagnosis is an uncertain one, as, for instance, when it is a matter of uncertainty whether the tumour is a floating kidney or not. Occasionally (as, for instance, when the kidney has become adherent to some of the abdominal viscera) the operation is contraindicated, and if this is found to be the case during the course of an operation, no attempt should be made to exercise too much traction upon the kidney, otherwise it may result in increased pain or stretching of the ureter, so that the kidney is rendered incapable of secreting at all. Only as a last resource, when the pain and discomfort of the condition are unendurable, and when nephrorrhaphy has failed, should removal of the organ be undertaken.

MIDWIFERY AND DISEASES OF WOMEN.

(210) Pyosalpinx with Perforation of the Bladder.

Professor A. Reverdin (*Revue Médicale de la Suisse Romande*, November, 1890) had under his care in 1882 a patient who suffered from acute gonorrhœa. In 1888 she again came under his notice; a tumour bulged up into the left iliac fossa. On passing a speculum and pressing on the tumour much green pus ran from the os externum. There was strong reason to believe that the gonorrhœa had never been thoroughly cured. A trocar was plunged into the centre of the tumour, and fœtid pus escaped. A counter-opening was made behind the cervix, where the tumour projected inferiorly. On the sixth day, as the patient was feverish, Dr. Reverdin enlarged the vaginal puncture with a knife, and violent hæmorrhage followed. He was compelled to leave a pressure forceps on the bleeding vessel in the wall of the suppurating cavity. On the evening of the next day no urine came away by the catheter, although a large amount had been drawn off from the bladder in the morning. A day later, as the patient was very ill, an exploratory operation was undertaken; a long incision was made parallel to Poupart's ligament. A cavity full of fœtid pus and gas was thus laid open. An indistinct feeling of fluctuation was felt deep in the abdomen. On pressing it something suddenly appeared to give way. A dirty yellow fluid with a faint odour rushed out. A catheter was passed into the bladder, and a precisely similar fluid was drawn off; the end of the catheter passed out of a wide orifice at the upper part of the bladder to the left. This represented a communication with the pus cavity, which was a suppurating dilated tube. A median incision had to be made through the abdominal walls in order to get at the opening in the bladder. Then sutures were passed through the borders of the incision. The tissues were too soft to allow of closing the opening by sutures and replacing the wounded part of the bladder in the abdominal cavity. The sutures were therefore passed through the edges of the first wound, above Poupart's ligament. Two drainage tubes were passed deeply into the abdominal cavity through the inguinal wound, another through the median incision; a fourth drainage tube was passed into the opening in the bladder and out of the urethra. The whole area of operation was washed out with boric lotion. The patient narrowly escaped with her life; in the course of convalescence all the fistulous openings into the bladder, vagina, and peritoneal cavity closed. The communication between the bladder and suppurating tube had evidently formed through adhesion of the tubal and vesical walls and subsequent softening and breaking down of the adherent parts; it lay quite out of the line of the trocar punctures. Dr. Reverdin frankly admits that this case should have been treated

radically from the first. Pushing trocars into obscure pelvic and iliac tumours is far more dangerous than exploratory incision. The author honestly reports the case in order that he may teach not what should be done, but what should be avoided.

(211) Puerperal Tetanus: Septic Infection.

Dr. J. Markus (*Prager med. Wochenschrift*, 1890, No. 21), describes a case where a woman, aged 38, the mother of two children, was delivered of twins in a room where her husband, a rag dealer, kept his unsavoury wares. On the ninth day she sickened, and was brought into hospital with trismus, salivation, dysphagia, fœtid uterine discharge, and deficient involution of the uterus. The parametrium was free from deposit, the sensorium unaffected, the temperature low, and the pupils acted freely to light. The urine contained a trace of albumen. Fever, dyspnœa, and tetanic contractions of the muscles of the back of the neck set in, and the patient died on the second day after admission. Professor Chiari performed a necropsy, and noted icterus, septicæmia, necrotic endometritis, recent thrombosis of the right ovarian plexus, and enlarged spleen. An emulsion of the substance of the patient's medulla injected into a guinea-pig caused no spasms. Dr. Markus believes that the endometritis was the beginning of all the morbid phenomena in this case. The diseased endometrium formed a stratum for the development of products of decomposition which led to the formation of ptomaines. Leisberg, basing his opinion on researches by Brieger, believes that puerperal tetanus is due to the absorption of ptomaines.

(212) Death caused by Uterine Dilator and Sponge Tent.

Dr. Howard A. Kelly (*Amer. Journ. Obstet.*, January, 1891) was called in to see a patient where a practitioner had attempted to dilate the uterus with a two-bladed instrument, strongly curved near the points, which were narrow and sharp. A sponge tent was afterwards placed in the dilated track. Dr. Kelly found the patient with a high temperature and pulse, dry tongue, anxious expression, and a fœtid vaginal discharge. On exposing the parts the tent was detected, black and rotten. There was a rent half an inch above the os externum, in the posterior wall of the uterus; it passed into the peritoneal cavity, whence a piece of the rotten sponge was removed. The uterine body above was slightly enlarged from a pregnancy interrupted in the third month. The dilator had perforated the uterine wall, and a larger instrument had been employed to increase the rent, then the sponge tent had been inserted. Dr. Kelly recommended abdominal section at once, but it was deferred against his advice for five days. Then, on opening the abdominal cavity, about a quart of fœtid serum was removed. The peritoneum was drained. The patient never rallied, but died four days later. Dr. Kelly notes that "the lesson taught by this awful tragedy is plain."

DISEASES OF CHILDREN.

(213) Treatment of Fever in Newborn Children.

Dr. Julius Eross has published (*Jahrb. f. Kinderheilkunde*, Bd. xxxii, Hft. 1 and 2, p. 68) a careful study of the value of antipyrin, chinin, and lukewarm baths in the treatment of pyrexia in newborn children. In the obstetric and gynæcological department of the University of Buda-Pesth he found that of 956 children 431 suffered from pyrexia during the first ten days of life, a percentage of 45.08. In 145 the fever was of very short duration, in 102 the children were feverish for several days, but the temperature was very irregular, and there were intervals during which it was normal; in 184 the fever was continuous, ending in some cases after several days in the death of the patient. The fever in these 184 cases depended upon a variety of causes. In 44.5 per cent. it was due to gastro-intestinal derangements, and in 34.2 per cent. to inflammation originating in connection with separation of the umbilical cord. Antipyrin was given in doses of 5, 10, or 15 centigrammes (¾ to 2¼ grains), repeated in an hour if the first dose did not produce the desired antipyretic effect. The full antipyretic effect was, as a rule, produced in from one to two hours, and the temperature remained reduced for four or five hours altogether. The lowest temperature observed in the 52 cases thus treated was 97.1° F. The drug also markedly lessened the rapidity of the pulse and respiration, and its diaphoretic action was also well marked. The degree and duration of the fall of temperature were less when the pyrexia was due to septicæmia than in other cases. The action of chinin given in doses of 5 or 10 centigrammes, or in severe cases, 15 centigrammes, resembled that of antipyrin with this difference that the temperature began to fall somewhat later and remained depressed rather longer. Lukewarm baths were found to give much more satisfactory results. In a previous communication to the *Jahrbuch* (1886), Dr. Eröss showed that a bath at 27° to 30° C. for ten minutes caused a very marked reduction in the temperature of healthy newborn children. In children of the same age suffering from fever, a bath at 27° to 28° R. (93° to 95° F.) was found to produce very considerable lowering of temperature; the fall was very rapid, amounting on the average to 3.1° C. (5.6° F. nearly). At the end of the bath, which lasted ten minutes, the fall continued for half an hour or an hour longer. The smallest fall noticed was 2.1° C. (3.8° F. nearly), the largest was 5.0° C. (9° F.). The case in which this large fall occurred was suffering from septicæmia; the temperature before the bath was 41.3 C. (106.3° F.), in one hour after the bath it was 36.3° C. (97.3° F.), but in four hours more it was 40.0° C. (104° F.), and went higher later. Dr. Eröss did not observe symptoms of collapse in any of his cases, but, in order to avoid such an occurrence, he recommends that the bath should last only five minutes instead of ten if the child is much reduced or of weakly constitution, or if the fever is not very high (not over 104° F.). The difference in the action on septic and non-septic fevers was less marked than with antipyrin and chinin, and in some instances the converse held. The effect of the baths on the general condition was very satisfactory. Restlessness, whining, sleeplessness, the symptoms of depression, somnolence, apathy, and indisposition to suck disappeared; the pulse and respiration fell, the child slept for an hour or two, and on awaking took the breast well, or at least better than before. As to the general results of systematic antipyretic treatment in newborn infants, Dr. Eröss believes them to be favourable. The treatment exercises a favourable influence on nutrition, in that during the apyrexial periods the child sucks better, and

in that during these intervals the waste of the tissue is in some degree checked. Dr. Eröss points out the special value of the bath in cases where the temperature is found to be very high, or even hyperpyrexial, at the first visit: the rapid action of the bath is then most desirable.

PHARMACOLOGY AND THERAPEUTICS.

(214) Koch's Treatment in Tuberculosis of the Genito-urinary Tract.

Professor Guyon (*Ann. des Mal. des Organes Gén.-urin.*, February, 1891, p. 65) gives an account of the results of injection in five cases, but in not any one of them does any favourable result appear to have occurred, and it is indeed questionable whether they were in any way benefited. I. A prostatic abscess, with enlargement of both testicles and vesiculæ seminales, as well as old lung mischief. The patient was aged 29 years, and underwent in all three injections. During the progress of the treatment his urine increased slightly in amount, but he suffered to a considerable extent from vesical irritability, and had frequently to get up in the night to pass his water. II. Tuberculous cystitis and pyonephrosis on the right side, but no pulmonary trouble. Was injected three times in all. His frequency of micturition and general bladder trouble diminished considerably for about ten days or a fortnight, but no permanent amelioration took place. III. Cystitis, probably tuberculous; no other lesions obvious. Had three injections; no fever. Frequency of micturition aggravated. The urine, which had previously been acid, became suddenly alkaline, and a certain amount of albumen appeared, which attained its maximum on the second day after each injection. A few red corpuscles and crystals of ammoniaco-magnesium phosphate appeared in the urine. When the patient left the hospital a few days later he was exactly in the same condition as when he entered it. IV. Tuberculosis of the bladder with pyonephrosis, but no pulmonary lesions. Patient aged 22. The pain after micturition was much increased in severity. V. Lupus; no pulmonary lesion; urinary trouble doubtful. The patient was 14 years of age. The injections caused great variations in the amount of the urine, and gave rise also to passage of albumen with it, but no effect was produced on the lupus.

(215) Direct Application of Tuberculin to Pulmonary Cavities.

In a lecture delivered at Halle on February 18th, and published in the *Münchener medicinische Wochenschrift*, No. 8, 1891, Dr. Edmund Leser gives full details of two interesting cases in which he cut down upon, and laid open and emptied, large pulmonary cavities of tuberculous origin, with the object of treating the diseased portion of lung by the direct application of Koch's fluid. In each case the cavity was near the apex of the lung. Both the patients were adults. The results of the operation itself proved very satisfactory, and up to the date of the delivery of the lecture, the patients, it is stated, had improved very much. In the first case, a 1 per cent. solution of Koch's fluid was applied to the inner wall of the exposed cavity by means of a brush. In the second case, solutions of increasing strength were injected three times into the cavity. In both instances the application of the fluid was followed by well-marked febrile reaction, together with dyspnœa, pain in the affected region of the lung, and aggravation of the cough. There was also considerable increase in the amount of fluid secreted from the walls of the cavities. Dr. Leser holds that, in cases of advanced pulmonary tuberculosis, and when cavities have been formed in the diseased lung, Koch's treatment ought not to be employed until a free outlet has been established for the secretion, which is as a rule rapidly and abundantly poured out under its influence. In other parts of this important lecture Dr. Leser discusses the indications for incision of a pulmonary cavity, and describes the steps of the operation, pointing out the many difficulties and dangers the surgeon has to encounter when he finds it necessary, in exposing the apex of the diseased lung, to remove a portion of the first rib.

(216) Action of Koch's Remedy on Tubercles.

Kromayer (*Deutsch. med. Wochenschr.*, No. 8, 1891), sums up his conclusions as to the action of Koch's remedy on tubercle as follows: (1) Tuberculin acts energetically only on tubercles in which peripheral vascularisation is well established; (2) Very young and very old tubercles are but slightly, or not at all, affected by tuberculin, the former because they are not yet peripherally vascularised, the latter because they are no longer so; (3) The curative effect of tuberculin consists in the kindling round the tubercle of a zone of inflammation tending to cicatrisation. The process is analogous to the natural cure of tuberculosis; (4) By this cicatrising process, however, the further action of tuberculin is limited; (5) Whether the cure is complete or temporary only time can show.

(217) Urobilinuria Caused by Tuberculin.

Dr. G. Cavallero reports (*Gazetta Medica di Torino*, February 5th, 1891) the occurrence of urobilinuria in three cases treated by Koch's method in the clinic of Professor Forlanini at Turin. Urobilin, with traces of albumen in two of the cases, was found in the urine during the fever of reaction; in one of them these substances appeared at the time when reaction was due after an injection, though no other reactive phenomena were observed. Urobilinuria persisted, though only to a very slight extent, on the day following the injection. Cavallero thinks the excretion of urobilin is an effect of an alteration of the liver similar to that observed by Hayem in the course of acute infective diseases, and by him attributed to the passage through that organ of toxic substances circulating in the blood during such disorders. The hæmoglobin in the blood is transformed into urobilin, as happens in malarial infection according to Mya. Tuberculin, therefore, acts like an acute infective fever, producing changes in the liver (degeneration of the hepatic cells?) and in the red corpuscles.

(218) Koch's Treatment in Tuberculous Disease of the Eye.

Uhthoff, of Marburg, has tried Koch's treatment in ten cases of scrofulous inflammation of the cornea (*Berlin. klin. Wochenschr.*, February 16th, 1891). In eight cases general febrile reaction occurred, but in only three of these was there any appearance of local reaction. The latter consisted in an increase of the irritative symptoms with some intensification of the morbid process, and the development of new grey infiltrations. In all the cases, however, rapid healing

took place in the affected parts. Cohn, of Breslau (*ibid.*), who has also tried the treatment in cases of eye disease, thinks tuberculin is an irritant rather than a therapeutic agent. He would never venture to inject it into scrofulous children whose eyes are still healthy for fear of bringing tubercle bacilli into these organs. For keratitis when it is already present he prefers time-honoured remedies like atropine and mercurial preparations.

(219) Quinine Amaurosis.

Dr. de Schweinitz has recently instituted a series of experiments with a view to determine the lesion in cases of quinine amaurosis; the results were set forth in a paper read before the College of Physicians of Philadelphia, and published in the *Ophthalmic Review* for February. His experiments were made on dogs, blindness being induced by the hypodermic injection of muriate of quinine combined with carbamide of urea. The ophthalmoscopic appearances were similar to those observed in man; after a varying length of time, the animals were sacrificed, and the eyes, optic tracts, chiasma, and occipital lobes examined microscopically after suitable hardening. With one exception, no very definite lesions were found in the transverse sections of the nerves, in the optic nerve entrances, or in the retinæ; in the single exception, the central vein was plugged with a clot. Even in dogs that had been blind for more than a month there was no atrophy of the nerve fibres, nor was there any appearance in the earliest stages of the blindness of neuritis. He believes that the real cause of the blindness is a species of œdema taking place in the nerve between the chiasma and the eyeball.

(220) Tissue-Conserving Drugs.

Reichert (*University of Pennsylvania Medical Magazine*, October, 1890) discusses fully in this article the action of alcohol, tea, coffee, cocoa, coca maté, kola, guarana, hemp, tobacco, and opium, and he concludes that the only one which is a food in any way is alcohol. All this class have three chief actions, namely, the production of mental exhilaration, the excitation of the energy-yielding processes, and the ability to furnish energy through their own decomposition. The paramount influence varies in different drugs; for example, opium and tobacco act chiefly mentally, while the chief action of cocaine or caffeine is to excite the energy-yielding processes. From the result of experiments on dogs, he concludes that caffeine enormously increases the production of heat. So rapidly is heat formed that the system is unable to throw it off; it thus accumulates in the body, and the animal's temperature may rise as much as 4° C.

(221) The Dietetic Employment of Fats.

Amongst all the constituents of our food the fats are the most concentrated. The amount of energy stored up in equal amounts of fats, proteids, and carbohydrates is, as is well known, in the ratio of 2.4, 1.8, 1.0. Moreover, fats are digested with the expenditure of a small amount of energy, as is shown by the fact that, after a meal rich in fats, the amount of oxygen consumed by an animal is but slightly increased, while carbohydrates, and, in a still higher degree, proteids, cause a very considerable increase in the consumption of oxygen, which lasts for several hours. Professor N. Zuntz (*Therapeut. Monatshefte*, October, 1890) has recently experimented on himself, and also on animals, relative to the dietetic value of the fats of chocolate. Professor von Mering has been able to obtain the fat of chocolate without affecting its taste, and such fat is found to emulsionise very readily. Zuntz made many experiments on dogs, and also on himself, and he finds that very large quantities of chocolate can be taken without deranging the digestive organs, and that in chocolate fats the physician has a form of fat which can be given in large doses with much benefit to his patients, as the fats are assimilated with great ease.

(222) Hypodermic Injections of Carbolic Acid in Tetanus.

Dr. Francesco Pirroni relates (*Riforma Medica*, February 5th, 1891) a case of severe traumatic tetanus which he cured by means of hypodermic injections of carbolic acid combined with the internal administration of acetanilide. The patient, a lad aged 17, took to his bed one day complaining of pain in the right arm and right side of the neck, together with some difficulty in opening his mouth. As he was feverish, salicylate of quinine was exhibited. On the following day there was decided trismus, and the day after rigidity of the nape of the neck and "a markedly tetanic expression of countenance." After a minute examination of the whole body in search of a lesion of some kind, a small wound was found on the right thumb, from which Dr. Pirroni extracted a splinter of wood rather more than half a centimetre in length; it was dirty with earth mixed with manure. No bleeding followed the extraction, nor was there any appearance of commencing suppuration. Dr. Pirroni enlarged and thoroughly disinfected the wound. It was ascertained that the injury had been received five days previous to the commencement of the illness, while the lad was planting some shrubs in a garden. Tetanic rigidity showed itself first, as already stated, in the muscles of the nuchal region, next in those of the dorso-lumbar region, then in the thoracic and abdominal muscles, and lastly, in those of the upper and lower limbs. Opisthotonos was induced by the slightest noise. Treatment by bromide of potassium and chloral internally, with hypodermic injections of morphine, having proved futile, Baccelli's method of subcutaneous injections of carbolic acid was tried. From six to ten Pravaz-syringefuls of a 1 in 20 solution were injected daily, and carbolic acid was also given internally "until the urine became black, nor was the treatment discontinued on that account." The patient improved somewhat under the treatment. The internal administration of acetanilide was then tried, together with the carbolic acid, each method being used for periods of two days alternately. No other medicine was given, and the patient was made to drink large quantities of milk. The effect of the acetanilide was marked from the very first doses, which were of 25 to 40 centigrammes every three or four hours. Pirroni noted that, on the acetanilide days, the tetanic attacks were less frequent and less severe, and the patient could separate his jaws further. He steadily improved, and four weeks after the onset of the disease he could sit up in bed, and could even walk a few steps if supported. The rigid contraction of the muscles had, however, produced serious kyphosis and lordosis with depression of the ribs and undue prominence of the

sternum. Under the influence of massage, baths, and gymnastic exercises, these deformities are gradually disappearing.

PHYSIOLOGY.

(223) Recent Experiments on the Cervical Sympathetic and Sympathetic Ganglia.

THE existence of vasomotor fibres, fibres for the iris, and certain secretory fibres for the salivary glands in the cervical sympathetic nerve is well known. Luchsinger several years ago found that the cervical sympathetic also contains secretory fibres for the glands in the muzzle of the ox. Arloing (*Archives de Physiologie*, ii, 1890, p. 1) confirms the existence of these fibres; but he finds that inhibitory secretory fibres are also present in the same nerves. Ten minutes or so after section of the vago-sympathetic nerve in the ox the muzzle of that side becomes dry. Twenty to forty days after section of the cervical sympathetic, or rather the vago-sympathetic, nerve, stimulation of it is without effect; but if pilocarpin be injected there is active secretion in the glands on both sides of the muzzle, but the secretion is more pronounced on the side on which the nerve is divided. According to Arloing, the result is not due to vasomotor effects, but is to be explained by the inhibitory influences of the inhibitory secretory fibres disappearing with the degeneration of the inhibitory nerve fibres. An increased secretion of tears and also of the secretion of the Meibomian glands occurs after section of the cervical sympathetic, and the secretion is further increased by pilocarpin. Arloing regards these glands as receiving more inhibitory than secretion-exciting fibres. Hirschmann some years ago showed that after nicotine was given to an animal the cervical sympathetic lost its effect on the pupil. Langley and Dickinson (On the Local Paralysis of Peripheral Ganglia, etc., *Proc. Roy. Soc.*, vol. xlvi, p. 423) find, however, that in the rabbit stimulation of the nerve above the superior cervical ganglia causes dilatation of the pupil. What, however, constitutes the chief interest in their observations is the local action of nicotine. If a 1 per cent. solution of this drug be pencilled on the superior cervical ganglion, stimulation of the nerve below the ganglion or of the ganglion is without effect on the iris. Nicotine, however, when applied locally to the nerve above the ganglion, has no effect on the nerve. Nicotine applied locally to the ganglion prevents stimulation below the ganglion from having its usual vasomotor effect on the blood vessels of the ear, and in addition the secretory action on the salivary gland is also arrested. The authors conclude that the sympathetic fibres for the blood vessels of the ear, the fibres for the iris, and the secretory fibres for the salivary glands, end in the nerve cells of the superior cervical ganglion, and from these nerve cells fibres proceed to their regions of distribution. Similar results were obtained by experiments on the solar plexus, that is, the local application of nicotine prevented the inhibitory effect of the splanchnic nerve on the movements of the intestine and stomach. Beyond the ganglion the fibres were active. The authors conclude that the inhibitory fibres of the splanchnic for the stomach end in the nerve cells of the coeliac ganglion, and those for the intestine in the superior mesenteric ganglion. Even when both plexuses are eliminated by the local action of nicotine, stimulation of the vagus still causes movements of the stomach and intestine, so that it is concluded that the vagus does not form connections with the nerve cells of these two plexuses. The vasomotor fibres, however, appear to end in or form connections with the nerve cells in these plexuses. In a later research (*Archives de Physiol.*, No. 1, January, 1891, p. 160) Arloing gives an account of the continuation of his researches on the cervical sympathetic nerve, and in this paper he cites experiments which lead him to believe that trophic nerve fibres are also present in this nerve. The experiments were made on the ox and dog. In the muzzle of the ox marked histological changes in the papillæ and stratum granulosum follow upon section of this nerve. In the dog after section of the vago-sympathetic nerve, the humidity on the muzzle is not altered, nor does galvanic stimulation of the nerve or injection of pilocarpin increase the moisture, these results being due to the absence of glands in the more hairy part of the dog's nose, while such glands are abundant in the muzzle of the ox. After two months or so, however, there are marked changes in the nose of the dog, the skin becomes papillated and dry, while there is great hypertrophy of the corneous layer. Arloing concludes from his experiments that the cervical sympathetic nerve in the ox and dog contains trophic fibres for the glands and epithelium in the former, and for the epithelium in the latter; and that their action is independent of the vasomotor and glandular nerve fibres.

(224) Testing for Iron in Organs.

ZALESKI (Die Vereinfachung von makro- und mikrochem. Eisenreaction, *Zeitsch. f. phys. Chemie*, xiv., p. 274, 1890) gives a simple method for detecting histologically the presence of iron in organs. Small pieces of the organ are hardened first in 65 per cent. alcohol, and then in 90 per cent. alcohol, to which a few drops of yellow ammonium sulphide are added. In twenty-four hours, if iron be present, the tissue has a greenish appearance, and on making a section the exact distribution of the particles of iron sulphide is readily detected by the colour reaction.

DERMATOLOGY.

(225) Psorospermosis Follicularis.

LUSTGARTEN (*Journ. of Cutan. and Genito-urin. Dis.*, January, 1891) states that in a man, aged 49, suffering from psorospermosis follicularis, the face presents a peculiar aspect on account of its greasy appearance, pigmentation, and the large size of its pores. The follicles are dilated, and filled with a yellowish brown, fatty, brittle substance, in some places translucent, which usually rises but slightly above the level of the skin. The appearance presented by the rather bald scalp is somewhat similar, except that the region around each follicle shows an inflammatory reddening, and the contents of the follicle project several millimetres above the level of the skin, or spread as a thin, dry, greasy crust over the surrounding surface. Many small, irregular, white atrophies of the skin are present between the efflorescences. On the body the lesions present a marked papillary character, and are mostly discrete, but in some parts are near together, becoming confluent and forming small groups, or constituting a large oval patch healed in the centre. If the plug of

a follicle is squeezed out, a structure is seen which refracts light more strongly than the human cell, and is slightly yellow, round or oval, sharply defined, and at times presents a capsule-like double contour. These cells, almost without exception, show a distinct nucleus, which consists in a round granular mass, at times eccentrically situated. The protoplasm of these cells contains some granules, and adherent to the capsule are seen hyalin drops. A portion of the cells lies in small groups, apparently free, while a considerable number lie within the epithelial cells. The nucleus of the epithelial cell is in this case displaced, and the central portion of the cell is occupied by one psorospermium, or rarely by two. The author has tried to discover something with certainty as to the propagation of the psorospermiæ (division, conjugation, formation of pseudo-navicellæ or spores), but has had no greater success than Darier. This is, he states, undeniably a great gap. The only point which struck the author was the presence of a strongly-refracting curved body in the nucleus in a few of the psorospermiæ, but he was unable to discover its significance or its relation to propagation.

(226) "Flushing" as a Cause of Morbid Change.

Mr. Hutchinson (*Brit. Journ. of Derm.*, January, 1891), calls attention to the skin in the middle of the cheeks, which is liable to congestion or lividity from various causes, and the connection of simple flushing with skin diseases which are know specially to attack that part of the face. He proposes to designate this region as the "flush patch." He points out how in some cases eating makes this part flush as much as taking stimulants. In one of the cases which he describes, the flushing produced by drinking two glasses of port wine daily with bitter ale at meals led to permanent flushing, a condition which Mr. Hutchinson describes as "acne rosacea without acne." He relates a case in illustration of the relationship of certain forms of acne rosacea with lupus erythematosus, which he considers might have been "claimed as one of chilblains, of acne rosacea, of eczema, or of lupus erythematosus, the truth being, as Mr. Hutchinson conceives, that it was one and all at the same time." The man was liable to chilblains from childhood, and the affection of the face began with a proneness to flushing after meals.

OTOLOGY.

(227) Otitis and Facial Paralysis.

Gellé (*Annales des Maladies de l'Oreille*, etc., November, 1890) discusses the relation of facial paralysis to acute otitis. He observed 31 cases of facial paralysis, and out of them 1 was the result of injury, 1 of lightning stroke, 1 of cerebral tumour, 5 of chronic otorrhœa, leaving 23, in 18 of which the paralysis was associated with undoubted acute otitis; in 2 only of these 23 was there suppuration. The vulnerable point of the nerve is the portion of the Fallopian canal which hugs the inner wall of the tympanum, and the nature of the pathological condition is an œdematous inflammatory infiltration of the periosteum of the canal which compresses but "respects" the nervous tissue, as proved by the complete return to the normal state. In the influenza epidemic most of the facial palsies were preceded by acute pains; these pains were in part due to the compression of the facial nerve, "which is known to be sensitive at its exit from the stylo-mastoid foramen." The seat of the pain has been localised as in the mastoid region in a large number of cases. Gellé insists that it is only necessary to ignore the aural symptoms to have the typical "painful facial paralysis," adding that the otitis and the pain pass away with relative rapidity, while the paralysis remains prominently before the eye, and is recognised by all, whereas many overlook the former elements. The deafness was generally marked. In most cases there were palpable changes in the membrana tympani, and those cases in which such changes were not present came under observation at so late a stage that there was time for them to have disappeared. Hyperacusis—painful hearing (*ouïe douloureuse*)—was present in only 3 out of the 28 cases, though frequent in cases of otitis without facial palsy. In the cases under consideration he attributes it to the overaction of the tensor tympani (supplied by the fifth nerve), its antagonist, the stapedius (supplied by the seventh), being inactive. In support of this view he adduces as evidence of the overaction of the tensor the symptom that the tuning fork in contact with the vertex was heard louder in the ear of the affected side. At the same time, he considers this inactivity of the stapedius as due to an inflammatory relaxation of the tendon of the muscle rather than to a paralysis of the nerve, as the condition was absent in a case of paralysis of the facial from pressure by an intracranial tumour. Noises in the ear were present as frequently as deafness. Vertigo was noted 14 times in 21 cases. The course of the paralysis is not always parallel with that of the otitis. Sometimes the otitis disappears and the paralysis remains, and sometimes the converse takes place: the one acts on the other, but they are not essentially dependent on each other, and may differ entirely in relative severity. In general the affection is more quickly recovered from in proportion as the otitis is less severe, and treatment should be directed towards the cure of the middle-ear trouble. It should be antiphlogistic in the first place, paracentesis of the membrane being of well-proved value.

PATHOLOGY.

(228) The Micro-organisms of Cancer.

Dr. Schutz (*Centralbl. f. Chir.*, January 24th, 1891), whilst fully recognising the appearances which have been described by several authors as occurring in cancer, does not, however, regard the bodies in question as living organisms, but thinks it far more probable that they are formed (in part, at least) of red blood corpuscles which, both in carcinoma and sarcoma, find their way freely into the tissues and assume various disguises, so that their origin is not easily determined. Another source of the so-called organisms depends, he asserts, on the alteration of the cells of the various tissues which take upon themselves amœboid movement, and congregate oftentimes in masses; and it is by the alteration of these masses that the so-called sporocysts are formed. So far, he is of opinion we are as far as ever from finding the true organism which produces cancer, even supposing that it exists.

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A WEEKLY EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(229) Transmission of Tuberculosis by Cow's Milk. At a meeting of the Académie de Médecine on February 24th (*Bull. de l'Acad. de Méd.*, 3me Série, t. xxv, No. 8), M. Auguste Ollivier presented a communication on the transmission of tuberculosis by cow's milk. Two months previously he had been called in to a girl, aged 20, at Chartres, who was suffering from acute tuberculous meningitis. Her parents were both very robust, and she herself had had no previous illness to speak of, and lived under excellent hygienic conditions. On December 14th, 1890, she complained of headache, which gradually became worse in spite of antipyrin; on the 25th she was restless during sleep; on the morning of the 26th coma supervened. There was then paralysis of the limbs, with squinting in both eyes upwards and to the right. There was also profuse perspiration, with almost incessant convulsive movements of the face and limbs. The coma gradually deepened till death, which occurred at 9 o'clock the same evening. The girl had been educated at a convent in Chartres, where, within a few years, tuberculosis had attacked twelve pupils, five of whom had died. It appeared that on November 26th, 1889, the veterinary inspector had condemned the flesh of a cow between 9 and 10 years old which had been slaughtered that morning in the Chartres abattoir. The animal seemed to be in good condition, but there were tubercles in the lungs, the peritoneum, and the paunch, while the udder was "completely stuffed with them." This cow had belonged to the convent where the patient had been educated, and its milk had for nine years been consumed by the pupils and others in the house. Between October, 1887, and the date of the slaughter of the cow, one of the pupils died of tuberculous peritonitis, one of general tuberculosis commencing in the mesenteric glands, and three of pulmonary phthisis. Another pupil developed tuberculous disease of the elbow, and six others showed evident signs of tubercle of the lungs, but on being removed from the school, and kept for considerable periods in the country, recovered. In none of these cases was there any family history of tubercle. The patient whose case M. Ollivier reports had left the school four years before the onset of her fatal illness, but he is nevertheless disposed to trace the infection to the milk of the diseased cow which she had drunk during her stay in the convent. The moral he draws from the whole story is that, in the words of the opinion formulated by the Académie de Médecine itself last year, "it is prudent to use milk only after it has been boiled." In the discussion which followed, M. Nocard stated that some eighteen months previously a large cattle breeder had sent him the viscera of a fine calf, 4 months old, which had died suddenly. He found the mesenteric glands hypertrophied, caseous in the centre, stuffed with tuberculous granulations, and swarming with Koch's bacilli. As the calf had never had any milk but its mother's, M. Nocard declared that the latter must be tuberculous, the udder being probably affected. The animal, however, was a splendid specimen of her breed, had gained several prizes, and presented every appearance of the most perfect health. Nevertheless, it was found on *post-mortem* examination that the lungs were tuberculous, and the udder was infiltrated with extremely fine, almost microscopic, tuberculous nodules. Cases of this kind are, according to M. Nocard, by no means infrequent.

(230) Primary Tuberculous Infection in Bronchial Lymph Nodes. In a paper contributed to the *New York Medical Journal*, February 21st, 1891, Dr. W. P. Northrup insists upon the truth of the theory, which has not obtained universal acceptance, that the primary infection in tuberculous disease takes place into the small lymph nodes about the root of the lungs. He records an interesting case of a child who died of tuberculous meningitis, and in whose body the history of the tuberculous disease could be clearly traced. With chalky deposits in the bronchial glands were associated tuberculous disease of the lung of a more recent date, disease of the hip-joint of a still later period, culminating in acute disease in the meninges, most recent of all. Of 125 of his own cases of tuberculous disease, Dr. Northrup puts aside those in which the tuberculous disease was too advanced to allow of deductions being made, and of the remainder he records that 20 showed cheesy or chalky changes in the bronchial glands, with tuberculous disease in other organs. In 42 the only cheesy change was in these glands, and in 9 cases the tuberculous lesion was limited to lungs and bronchial glands, those in the latter being the more advanced. In 13 cases there was tuberculosis of the glands only; of these 13 cases 7 had had diphtheria, culminating in fatal pneumonia. Some cases quoted from other writers bring the total number of observations up to 134, in 97 of which there was evidence of primary affection of the bronchial glands. As to the mode in which the glands become infected, he believes that the bacilli may be inhaled, may pass

through the mucous membrane, and, being taken up by the lymph stream, may be conveyed to the nearest gland and there arrested, their subsequent spread and development depending upon the individual susceptibility of the patient. The paper is accompanied by some remarkably good illustrations of tuberculous glands at the root of the lung.

(231) Acromegaly.

M. C. Luzet (*Archives Générales de Médecine*, February, 1891) gives a critical review of acromegaly, based on the thesis of M. Souza-Leite which appeared last year. The symptoms are considered under the following heads:—(1) Objective symptoms: (*a*) Fundamental—the hands are increased in breadth and thickness, not in length; the fingers are as large at the end as at the base; the functions of the hand are preserved; the feet are affected in much the same way; the face is elongated; the nose is much increased in size in all its parts; the lips thickened and the tongue enlarged; the chin is large and projecting; the antero-posterior diameter of the head is increased; there is kyphosis in the cervico-dorsal region of the vertebral column and a compensatory curve lower down; the clavicles are thickened. (*b*) Accessory—the thyroid body is usually lessened in size, the external generative organs are hypertrophied, the uterus and testes atrophied; there is sterility; in advanced cases muscular force is diminished; tendon reflexes are never increased. (2) Subjective symptoms: (*a*) Fundamental—headache is a prominent symptom; pain in the limbs, suppression of the menses in women; impaired vision in all its degrees; increased appetite and thirst. (*b*) Accessory—blunted hearing and loss of smell are sometimes noted.' (3) General and mental symptoms—depression is sometimes observed, sleep is disturbed, the intelligence is preserved, the patient may be suicidal. The onset of acromegaly is indefinite and the course slow. Little by little the changes in the bones take place, and at length the patient cannot be recognised. The disease lasts ten, twenty, or thirty years. Death may take place from a real cachexia, sometimes by syncope or with signs of cerebral compression, or it may be due to intercurrent disease. Acromegaly begins between 19 and 26 years of age; the sexes are equally affected. Little is known about its causation; it is neither hereditary nor congenital. After death, besides the change in the bones, the pituitary body is found enlarged with a true hypertrophy. It may press upon adjacent parts like the optic nerve. The great sympathetic has been found hypertrophied, the thymus persistent, and the thyroid body altered in size. Also changes in the organs of generation and of phonation have been observed. Marie says that in the skeleton the hypertrophy shows itself in the bones of the extremities and the extremities of bones. There are three theories as to the pathogeny, namely, that of (1) Klebs—an angiomatosis connected with a persistent thymus; (2) Freund—an inversion in the evolution of the reproductive life; and (3) Marie—a dystrophy allied to myxœdema, and affecting some organ (as yet unknown, but possibly the pituitary body) of trophic function, whose relations are to acromegaly as those of the thyroid gland are to myxœdema. Bearing in mind the symptoms of acromegaly as given above, the diagnosis is easy. Myxœdema, osteitis deformans, certain forms of chronic rheumatism, and some other rare diseases have been mistaken for it. The prognosis of acromegaly is not serious so far as life is concerned, but there is no tendency towards recovery. The possibility of suicide must be borne in mind. Treatment at present can only be symptomatic. Antipyrin is useful for the headaches. The iodides, salicylates, and arsenic have been tried.

SURGERY.

(232) Plastic Operation for Repair of the Pharynx and Œsophagus.

Dr. von Hacker, of Vienna (*Centralbl. f. Chir.*, February 14th, 1891), referring to a recently reported case in which Dr. K. Poulsen performed a plastic operation for the repair of a defect of the mucous membrane of the pharynx and upper part of the œsophagus, states that he reported in 1887 a case in which a similar operation had been carried out. This operation he was led to perform by the results of a series of experiments he had practised on hairless animals, which proved that it was possible after removal of all but the posterior wall of the pharynx, or of a short extent of the œsophagus, to make good the defect by first taking two square flaps, one from each side of the neck, and by fixing the inner borders of these to the corresponding borders of the posterior wall of the pharynx and œsophagus; and afterwards, in a second operation, by closing the gap by further dissection and displacement of skin. The details of these experimental operations do not seem to be very clear, and there is some difficulty in making out, both from the written description and the illustrative sketches, how the trachea was dealt with. Dr. Poulsen's operation was performed after extirpation of the larynx. The patient died from pneumonia after an interval of seven weeks. The results of the operation, however, were so far satisfactory as to prove that in the human subject the skin of the neck is suitable for plastic and reparatory operations on the pharynx and œsophagus. The patient was able to swallow soon after the operation. This result Dr. von Hacker would have anticipated from the results of his experiments, and from his conviction that the upper part of the œsophagus does not take part in any peristaltic action. It is pointed out by von Hacker that skin, when displaced so as to occupy the situation of destroyed or excised mucous membrane, does not lose its special characters and acquire those of the latter structure. Two cases are quoted in which, after plastic operations on the cheek by skin flaps taken from the lower part of the face, a constant growth of hair occurred on the inner and oral surface.

(233) Intracranial Abscess.

Dr. Edgar Grubert, a surgeon attached to the Military Hospital at Wilna, publishes two cases of intracranial abscess (*St. Petersb. med. Wochenschr.*, No. 5, 1891). The first was one of abscess in the cortical layer of the left cerebellar hemisphere following acute inflammation of the middle ear on the left side. The patient was a recruit, aged 22, who came under the author's treatment for intense and extensive inflammatory destruction of the middle ear, supposed to have been produced through the introduction of some caustic fluid by the patient himself, with the object of escaping military service. In consequence of profuse and repeated bleeding from the affected ear, it was found necessary to apply a ligature to the left common carotid. Fifteen days

later renewal of the bleeding from the ear necessitated deligation of the corresponding vessel on the right side. In the interval between these two operations Dr. Grubert was led by certain somewhat obscure symptoms, such as febrile exacerbations and very severe and persistent headache above and behind the left ear, to diagnose cerebral abscess, and trephined over and explored with a hollow needle the temporo-sphenoidal lobe. No pus could be found, and the operation failed to afford any relief. The patient became very weak after ligature of the right carotid, and died comatose on the sixteenth day from the date of the third operation. At the *post-mortem* examination an abscess of about the size of an almond, and containing thick greenish pus, was discovered in the white substance of the left lobe of the cerebellum, just behind the petrous portion of the temporal bone. In his remarks on this case Dr. Grubert discusses the association of cerebellar abscess with disease of the middle ear, and the symptoms and diagnosis of the former affection. It is pointed out that death in this case was directly due to cerebral œdema and internal hydrocephalus. The occurrence of this condition after ligature of both common carotids can be attributed only to a tendency in the cerebro-spinal fluid to flow to and accumulate within the skull, due to the failure of the normal *vis a tergo*. As the volume of the cerebral mass is constant, and a vacuum in the intracranial cavity is inconceivable, a deficiency in the supply of blood must inevitably result in the presence of an increased quantity of cerebro-spinal fluid. The patient therefore, Dr. Grubert thinks, died from the effects, not of cerebral abscess, but of deligation of the carotid artery on both sides. The second case reported by Dr. Grubert is one in which an abscess in the white substance of the right temporo-sphenoidal lobe, following a compound fracture of the cranium, caused death through its rupture into the lateral ventricle. This case, it is pointed out, is in several respects a very remarkable one. Compound fracture of the skull was followed not, as usually occurs in instances of suppuration, by a cortical or subdural abscess, but by an extensive collection of pus on the whole substance of the brain, the surface of the brain having been very slightly injured. This deep-seated abscess had been developed very early, and took a rapid course. The patient, a man aged 26, remained in good health and quite free from any head symptoms for five days after the receipt of injury, and died on the tenth day.

MIDWIFERY AND DISEASES OF WOMEN.

(234) Perforation of a Myomatous Uterus by the Sound and Curette.

Dr. Winter (*Centralbl. f. Gynäk.*, January 3rd, 1891) demonstrated, before the Berlin Obstetrical Society, a patient from whom he had been forced to remove an interstitial myoma as big as a man's head under the following circumstances. The woman entered hospital, and a pelvic examination was made in the usual manner. The uterus was strongly anteflexed, and, in consequence, was perforated. The curette was at once employed; it entered the perforation, detached some of the posterior peritoneal investment of the uterus, wounded a big vein, and then perforated the peritoneum. Two hours later the patient appeared very pale, and there was physical evidence of blood above the level of the groins. Half an hour later she was in a state of collapse, so that an abdominal section was performed. Much coagulated and fluid blood was removed from the peritoneal cavity. Close above the internal os, in the part of the uterine wall which formed the posterior and inferior portion of the capsule of the myoma, was the laceration, about two inches wide and very ragged. To sew it up seemed inadvisable, so the myoma was amputated. As the peritoneum had been much detached and the laceration lay low down, a regular pedicle could not be formed. The stump of the uterus was fixed by a continuous catgut suture in the lower angle of the wound. Convalescence was retarded by localised pulmonary embolisms.

(235) Delivery of Anencephalous Monsters.

Dr. Pauthier, of Senlis (*Revue Obstét. et Gynéc.*, January, 1891) describes two cases which occurred in country practice. A young peasant girl gave birth to a monster with an enormous meningocele. The froglike appearance of the face was characteristic. The trunk was normal, both the hands and feet clubbed, with complete palmation of the digits. Labour seems to have been normal. Strange to say, the infant lived several hours, and seems to have been killed by neglect. The family were horrified at its appearance; when born it uttered loud hoarse shrieks, and its appearance was naturally terrifying. Dr. Pauthier was asked to kill it. In the second case labour was difficult. The midwife rightly diagnosed death of the fœtus before delivery. Strong pains continued for several hours; two feet, a hand, and a tuberous mass, taken for the breech, presented. The membranes ruptured three hours later, but the fœtus did not advance. An hour later the midwife drew the legs down to the vulva, but on the firmest traction the child could not be delivered. Something like a mouth was felt on the tuberous mass, the feet were pushed up, and then what felt like another mouth was detected. After some more pains something came down to the vulva; it felt like a breech as it descended, but when it reached the vulva a large open eye was seen on its surface. The midwife, fancying that there might be twins and that an obstetrical operation was needed, sent for Dr. Pauthier. The complete change in presentation had confused her, and she could not feel certain that two heads were not in the uterus. Before Dr. Pauthier could arrive, Nature and a little firm traction by the midwife terminated the labour. The monster was dead and already beginning to macerate. It was a male anencephalus, with a large well-formed body and double talipes varo-equinus. There was a large tuft of hair on the left side of the thorax, passing backwards from the precordial region almost as far as the gaping vertebral arches.

(236) Arrested Breech Presentation.

Dr. Mensinga, of Flensburg (*Der Frauenarzt*, February, 1891), was called in to a case of puerperal convulsions in a robust primipara, aged 22. He found her rather confused, but she could answer questions. She had been six times attacked with convulsions in two hours; a strange-looking blue mass projected from the vulva. On close examination in a good light, Dr. Mensinga found that the mass was a sloughy, greatly swollen scrotum, with the penis. The integument was coming off. On attempting to reach the nearest thigh of the child the vulva was found

so constricted that manipulations were difficult, so the blunt hook was placed over the thigh. Though but moderate traction was made, the femur broke in the vagina. The rest of the body was gradually delivered; the chin was depressed by means of the introduction of the finger into the mouth. As the forehead swept over the perineum that structure was torn. The child was born asphyxiated and could not be revived. After the delivery of the placenta, the perineum was sewn up; it was well healed on the fourth day, when Dr. Mensinga again saw the patient. She did not recognise him, and had no notion of anything that had happened during her labour. He did not attempt to account for the sloughing of the fœtal scrotum, nor could he satisfy himself how the femur was broken. A slight abrasion on the skin of the thigh proved that the hook had been applied and pulled in the right direction.

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(237) Acute Intestinal Obstruction caused by Dermoid Cyst of Ovary.

M. Ricard (*Gaz. des Hôpitaux*, January 1st, 1891) describes a most instructive case where acute symptoms of obstruction came on in a waitress at a restaurant, aged 24. Intense pain in the right side of the abdomen set in when she was at work. She had to go home; furious vomiting occurred, and, at the end of the second day, it became fæcal. Three days later she was sent to hospital in a state of collapse, with all the symtoms of acute peritonitis. The abdomen was opened and a dermoid ovarian cyst was found in the right iliac fossa, covered with adherent, inflamed, and distended intestines. These were detached, and then two pedicle-like structures were found. The inner and upper proved to be formed by 4 inches of small intestine, perfectly empty and intimately adherent to the cyst, whence it had to be carefully dissected. The lower was a true pedicle, twisted, thick, and fleshy. It was transfixed close to the uterus, and, some grumous matter oozing from its cut surface (possibly pus in the tube), the thermo-cautery was employed. The peritoneum was not flushed, but simply cleaned with pads of tarletan. No drainage was employed. On the third day the bowels acted spontaneously. The pain and vomiting had ceased immediately after the operation. Recovery was perfect. The close adhesion of the intestine to the cyst was evidently the cause of the obstruction. Before the attack of pain, which seized the patient quite suddenly, she had never been ill, never felt abdominal pain, and never noticed any tumour in the hypogastrium. The menstrual periods had been normal. Notwithstanding these negative symptoms, a small ovarian tumour existed and caused acute obstruction.

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(238) Anatomical Rigidity of the Cervix during Labour.

Dr. Guéniot (*Revue Obstétricale et Gynécologique*, February, 1891) discusses two questions raised by Dr. Loviot. In anatomical rigidity of the cervix during labour, is the obstetrician justified in making incisions? If he be justified, what is the best method of practice? Dr. Guéniot answers the first in the affirmative, provided that waiting and gentler measures have failed. In the case of a simple effaced cervix that remains rigid, the edges should be very gently snipped in several places to the right and left, by means of long-handled scissors. When strict antisepsis is enforced this practice is free from danger. The difficulty and danger are great when the cervix retains its normal length down to term, especially when the upper part remains rigid. There is great risk of wounding large vessels. Dr. Guéniot proceeds in these cases just as in cancer of the cervix. Not long ago he had to incise a cervix deeply involved in malignant disease, in two labours at term, where version was necessary. In order to widen the contracted os, he had to cut into cancerous tissue. He passed up a strong pair of scissors, guarding the blades between two fingers, and made numerous minute incisions from the sharp edge of the external, upwards as far as the internal, os. He stretched the canal frequently with the fingers, so as to make prominent numerous bands which were the chief obstacles to dilatation. These bands were then nicked with scissors. The cervix was, in both cases, widened sufficiently in this manner to allow of turning. But little blood was lost. Dr. Guéniot, having to deal with a labour retarded by anatomical rigidity of the upper two-thirds of a long cervix, adopted the same procedure as in the two cases of cancer; chloroform was given. Instead of the scissors, a probe-pointed bistoury was used. Many sharp bands were put on the stretch by the manœuvre described above. The os internum was the narrowest part of all, and required seven or eight superficial radiating nicks with the bistoury. Three fingers could then be introduced into the uterine cavity with ease, all rigidity had vanished and labour was left to Nature. On the above lines of practice, any resistent cervix may safely be dilated. The incisions should be many and shallow.

DISEASES OF CHILDREN.

(239) Hæmoptysis in Young Children.

The *Revue Mensuelle des Maladies de l'Enfance*, February, 1891, contains a report on two fatal cases of hæmoptysis observed by M. A. Aldibert, *interne* in the wards of Dr. Cadet de Gassicourt. In the first case a boy aged 4 came under treatment about four months after the commencement of an attack of whooping-cough complicated by broncho-pneumonia, with symptoms and physical signs which appeared to point to tuberculous consolidation of the right apex. A few days afterwards the expectoration became tinged with blood; on the following day red, frothy, almost pure blood was expectorated, and on the next day a sudden copious hæmoptysis proved fatal. The necropsy revealed a pyramidal mass of caseous softening glands enveloping the trachea, bronchi, large vessels, and nerves, and resting by its base upon the pericardium, to which the lungs were adherent. This pyramidal mass contained towards its base a cavity bounded above by the bronchi and below by large branches of the pulmonary artery; the right bronchus and the branch of the pulmonary artery going to the upper lobe were both perforated, and the blood had found its way from the latter to the former through the abscess cavity. The artery was not aneurysmal, but its walls were softened. In the second case, a boy aged 3 was admitted with signs of chronic consolidation of the right lung. The general condition of the child was gr wing slowly worse, when, about a month after admission, it was suddenly seized with rapidly fatal hæmoptysis. The necropsy showed caseous enlargement of the glands at the root of

the right lung, and a cavity in one in relation with the first divisions of the bronchus. The cavity was traversed by three branches of the pulmonary artery; one of these presented a fusiform enlargement and a small perforation; the walls of all three branches were softened. The large division of the bronchus going to the middle and inferior lobes was also perforated and the cavity was full of clots. In both cases the perforation of the pulmonary artery was due to tuberculous arteritis. M. A. Aldibert comments on the impossibility of foreseeing such attacks of fatal hæmoptysis, but points out that the history of the first case shows that a very guarded prognosis should be given in the case of even slight hæmoptysis in children probably suffering from tuberculosis of the intrathoracic glands. He discusses other causes of hæmoptysis in children, pointing out that primary hæmoptysis is extremely rare and very obscure in origin, and that the causes of secondary hæmoptysis are pulmonary gangrene, chronic phthisis, and enlargement of the tracheo-bronchial glands. Sudden severe hæmoptysis is a rare occurrence in children from any cause, the least infrequent being that due to the last of the above named three causes, while that due to the first is the rarest.

PHARMACOLOGY AND THERAPEUTICS.

(240) Cantharidinate of Potash in Tuberculosis.

At the meeting of the Berlin Medical Society, on February 25th, after Professor Oscar Liebreich had presented his communication on his new remedy for tuberculosis (see BRITISH MEDICAL JOURNAL, February 28th, p. 475, and March 7th, p. 550), reports on cases treated by the method were submitted by Drs. Paul Heymann and G. Guttmann, and Professor B. Fraenkel (*Berlin. klin. Wochenschr.*, March 2nd, 1891). Dr. Paul Heymann has used cantharidinate of potash in 27 cases, in 10 of which the treatment had only just been begun at the date of the report. Of the remaining 17, 11 were suffering from tuberculous lesions of the larynx of a more or less serious nature. In all these cases the lungs were also affected, and in all except one there were bacilli in the sputum. They were all treated at the Poliklinik as out-patients, and made no change in their ordinary mode of life. The dose injected was from 1 to 4 decimilligrammes; only once did the injection cause redness, but never suppuration. The injections were as a rule given in the back, but in two cases the patients were so thin that the nates were chosen. Sometimes the injections were followed by headache and giddiness, and occasionally there was slight diarrhœa, which ceased of itself. In some cases smarting in passing water was complained of, and one patient said he noticed blood in his urine after an injection of 4 decimilligrammes. The following were the results of the treatment (which was in no instance supplemented by any other): After three or four injections the voice improved steadily, till hoarseness almost entirely disappeared. The patients felt much better. The bacilli, however, showed no change. In the chest the physical signs cleared up, and even disappeared in some cases; the expectoration became smaller in quantity, more mucous and less frequent; cough subsided, and in 4 cases ceased altogether; night sweats diminished, and in some cases disappeared. In one case hectic fever ceased after the fourth injection, but this result was unique. In tuberculous disease of the tongue the granulations became flatter and paler, and the ulcers became cleaner and began to heal, as is seen in syphilitic affections under the use of iodide of potassium. In one patient, who was almost voiceless and who was the subject of tuberculous ulceration of the larynx, after nine injections the ulcer had disappeared, and after three more the only abnormality in the larynx was a scarcely visible infiltration of the left vocal cord, whilst the physical signs in the chest had entirely cleared up. Another patient with catarrhal ulcers in the larynx was cured after ten injections; in three others suffering from similar conditions the infiltration and redness of the cords began to diminish as soon as the injections were commenced. Dr. G. Guttmann related the case of a patient whom he had been treating for typical trachoma in the right, and recent granulation of the left, eye. The man developed laryngitis, and was treated by Liebreich's method. When Guttmann saw him again there was no trace of inflammation in the left eye, while there was only a trifling swelling in the right. Professor Fraenkel said he had treated 15 patients suffering from laryngeal tuberculosis by the new method; 5 of these he presented to the Society. Under the treatment the redness and infiltration of the cords had steadily diminished, pain in swallowing had disappeared, œdema of the epiglottis and ary-epiglottic folds had subsided, while ulcers had gradually become smaller, and in some places had entirely healed. In one patient there was no longer any trace of ulceration. In the cases in which the voice had been lost, it had been restored. In one patient Dr. Fraenkel had noticed the appearance of submiliary nodules which became yellow, broke down, and finally disappeared, leaving a scar in their place. In another patient there was at the date of the report a serous exudation at the level of the larynx, a fact which seemed to him to confirm Liebreich's explanation of the mode of action of his remedy. When this patient coughed he brought up serous fluid from his larynx. The pain of the injection lasts some time, and in one case there was some difficulty in micturition after an injection of 1 decimilligramme. Fraenkel thinks he has noticed a slight diminution in the number of bacilli, and the microbes seemed to have lost their reaction to colouring matters; they had to be kept in the staining solution for twenty-four hours before they were sufficiently stained. The rapid improvement seen in patients submitted to the treatment was due to a direct action of the remedy on the bacilli. None of the cases could be said to be cured, but Fraenkel thinks that the most brilliant results may be hoped for from the method.

(241) Hypodermic Injections of Guaiacol in Phthisis.

PROFESSOR PICOT, of Bordeaux (*Semaine Médicale*, March 4th, 1891) reports the results of therapeutic experiments made during a period of two months in the Hôpital S. André in the treatment of pulmonary tuberculosis and pleurisy of tuberculous origin. He prefaces his report with a declaration that he does not pretend to cure tuberculosis, but only records certain results which he has in certain cases seen follow the use of a solution of guaiacol and iodoform in perfectly sterilised olive oil and vaseline. Each cubic centimetre of the fluid, which is perfectly pure and transparent, contains 1 cen-

tigramme of iodoform and 5 centigrammes of guaiacol. The supraspinous fossæ were chosen as the seat of injection, as there is not much movement in that region, and it does not bear the weight of the body when the patient lies on his back. The initial dose was 1 cubic centimetre which was gradually increased to 3; no swelling or other local reaction was ever observed at the site of puncture. In about one case in twenty a certain amount of numbness was felt in the shoulder of the same side after an injection, but this always disappeared in from five to six hours. That the substance injected is absorbed was proved by the fact that iodide of potassium was eliminated in the urine. A small quantity of iodide of potassium was also found in the lungs of a patient who died during treatment. The only sign of general reaction is profuse perspiration, especially of the face and chest, which comes on, as a rule, from twenty to thirty minutes after the injection. The cessation of the sweating is followed, as a rule, by a fall of temperature from five-tenths of a degree to one degree C. The injections did not affect the digestion, but in some cases, when the treatment had been carried out for a week or ten days, slight colic and diarrhœa were complained of; these symptoms ceased on discontinuing the injections. No effect on the urine was observed. With the view of determining whether the remedy could give rise to fresh crops of tubercles, Dr. Picot used the injections "in three phthisical subjects in whom the considerable lesions could not be checked in their progress, and who were likely at an early date to allow of the wished-for anatomo-pathological examination." One of these, a man, aged 55, with cavities at both apices, received thirteen injections between January 28th and February 10th. He died on February 11th, and at the necropsy "it was easy to see that neither in the lung nor in the intestine were there recent crops of tubercles nor any submiliary granulation." Another patient, aged 19, both of whose lungs were riddled with cavities, underwent a series of injections from January 16th to 31st. He died on February 21st, and no recent granulations or submiliary tubercles were found. The third case gave similar results. These *post-mortem* examinations proved that the injections do not set up congestion around old tuberculous foci nor in the interior of cavities, and hence that there is no danger of their causing inflammation of the pulmonary tissue or hæmoptysis. The total number of patients treated has been twenty-five (fifteen men and ten women). Of these, as already said, three died "from the natural consequences of pulmonary phthisis which had reached the last stage." Even in these, however, some little objective improvement was noted, especially in the quantity of expectoration. It was remarked at the *post-mortem* examination on these cases that the cavities contained neither caseous material nor pus. In one of the cases in which there were tuberculous ulcers in the intestine, these showed signs of commencing cicatrisation. In the remaining twenty-two cases the existence of phthisis was absolutely proved, both by the physical signs and by the presence of bacilli in the sputum. In 2 cases "with manifest cavities" and other signs of advanced phthisis, the treatment was followed by almost immediate improvement; expectoration and cough ceased, the temperature became normal, night sweats disappeared, appetite returned, and weight was gained. In one of these cases the physical signs were so modified as to indicate that the excavations were much diminished in size. The bacilli were much fewer in one case; in the other, as there was no expectoration, nothing could be said as to this point. In six other cases of phthisis in the second stage, the results were still more remarkable. These and the other cases treated will be published by Professor Picot in full detail. During the thirteen years he has been teaching at Bordeaux, he has never before obtained such results from any kind of treatment. The cases of pleurisy treated in the same way were eight in number; five of these are still under treatment, and show marked improvement; three have been discharged "cured." Professor Picot sums up the effects of his remedy as follows: The injections improve the general condition, and lessen cough and expectoration. In certain cases they dry up cavities and favour their cicatrisation. In the second stage of phthisis they may make cough and expectoration disappear, whilst causing the cessation of fever and night sweats. They also diminish the number of bacilli in the sputum. Whether this is "cure" or not time and clinical experience alone can show. Dr. Picot thinks a tuberculous patient should be watched for five or six—perhaps even ten—years before he is pronounced to be cured.

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(242) Effect of High Temperature on Disinfectants. Dr. Adolph Heider (*Centralbl. f. Bakt. u. Parasitenk.*, Bd. ix, No. 7, February 21st, 1891) gives an account of his experiments on the effect of a high temperature in increasing the power of disinfectants. Anthrax spores subjected to 5 per cent. carbolic acid at the ordinary temperature of the room were not destroyed in thirty-six days, whilst when the temperature was raised to 55° C. a similar carbolic acid solution killed these spores in from one to two hours. With 5 per cent. of sulpho-carbolic acid half an hour was sufficient, with 3 per cent. one hour, with a 5 per cent. emulsion of creasote two hours. Weaker solutions of these substances were not very effective in killing the spores until a temperature of about 75° C. was reached, in which case 5 per cent. carbolic acid killed the spores in three minutes, 3 per cent. in fifteen minutes, 1 per cent. in two to two and a half hours, 5 per cent. of sulpho-carbolic acid in one minute, 3 per cent. in ten minutes, 5 per cent. creasote emulsion in five minutes, 3 per cent. in fifteen minutes. Strong acids and alkalies had also their germicidal properties increased by the higher temperature, but the actions of creolin, pyoktanin, and lime water were all considerably interfered with by the higher temperature.

BACTERIOLOGY.

(243) New Micro-organism Found in Water. Dr. Giuseppe Sanarelli (*Centralbl. f. Bakt. u. Parasitenk.*, Bd. ix., Nos. 6 and 7, 1891) in the course of experiments on the behaviour of anthrax in the lymph sacs of the frog, found, in a certain spring, an organism, the bacillus hydrophilus fuscus, that was pathogenic for both cold and warm blooded animals. When cultivated from the blood or lymph of the frog on agar plates numerous round, smooth, greyish white colonies make their appearance in from twelve to twenty-four hours: these had a somewhat blueish translucent margin. Grown in agar tubes there is a

blueish fluorescence along the needle track, and gas bubbles are sometimes developed. At the end of three or four days the fluorescence disappears, the growths become brown in place of white. The rodlets examined from such a cultivation are small but motile; length 0.001 to 0.003 millimetres. Some are short and egg-shaped; the longer ones have usually a delicate transverse mark, as though of commencing division. The organism liquefies gelatine very rapidly, the liquefied gelatine being cloudy and funnel-shaped. In three or four days this liquefaction is complete, and there is a profuse white deposit or precipitate. The organism contains more long threadlike forms, some of them reaching 0.02 millimetre in length; it liquefies serum, causes cloudiness in broth, which is followed by the formation of a white film on the surface. On potatoes it grows after about twelve hours as a straw-coloured film, which then becomes yellow, and later brown, very like the glanders growth on potatoes. It can be distinguished from glanders and pyocyaneus growth on potatoes by the addition of a twenty per cent. solution of bichloride of mercury by the following reactions: Glanders, yellowish; pyocyaneus, greenish blue; fuscus, milky, somewhat reddish in the middle. The organism is equally infectious on whatever substance it is grown. It was found twice in waters taken from twenty-six sources. When injected into the parenchymatous tissue of frogs, toads, salamanders, lizards, barbel, and fresh water eels, it is distinctly pathogenic, usually killing them with signs of great local inflammation and congestion of the various internal organs, and hyaline and granular degeneration of the muscles. The organism is easily stained with a saturated solution of methylene blue in a one per cent. solution of osmic acid. It will not stain by Gram's method. The bacilli were found in groups, and within large leucocytes. It was noted that the stronger the local reaction was the later death set in; in eels this was very marked, large gangrenous swellings being formed in animals that survived some thirty-six to forty-eight hours. Guinea-pigs are very susceptible to the action of a small quantity of the virus; they are killed in about twelve hours. In one case a rabbit died three hours after subcutaneous injection. Puppies die in from twelve to thirty-six hours after inoculation, but old dogs are apparently unaffected. Kittens are readily affected, but full-grown cats, although there are marked local symptoms, may recover from the disease. White mice die in from seven to eight hours, bats in from five to six hours, hedgehogs in eighteen to thirty-six hours; fowls and pigeons can only be infected directly through the blood, when they die in from five to seven hours. In animals that die of this disease the bacilli are found in great numbers in both the organs and in the blood, and especially in the subcutaneous œdematous point. They may be in twos or threes, or in chains. This organism is remarkable from the fact that it affects so many species and such very different animals as the warm and cold blooded. Its action is, apparently, not due to any toxine that can be separated by filtration. In contra-distinction to Ernest's observations on a somewhat similar organism, Sanarelli finds (1) that the bacillus fuscus flourishes luxuriantly and retains its infective properties at over 30° C.; (2) that it develops quickly in warm-blooded animals; (3) that filtered but not boiled cultures cause no symptoms of poisoning when they are injected in ordinary doses.

(244) Bacteriology of Tetanus.

MM. L. Vaillard and H. Vincent make a contribution to the study of tetanus (*Annales de l'Institut Pasteur*, January, 1891), in which they bring out a number of most important points. Using a modification of Kitasato's method, they were able to obtain pure cultures of the tetanus bacillus, the colonies of which, growing in gelatine *in vacuo*, appear on the fourth or sixth day as small cloudy spheres, each of which has a whitish point in the centre, the peripheral cloud being formed of white rays. Bubbles of gas appear near these colonies, and in ten to fifteen days liquefaction of the gelatine occurs. Under the microscope the characteristic "drumstick" shaped organisms, rods without heads, or long filaments were seen. They found that these organisms, though originally anaërobic, may by a gradual transition be rendered capable of growing, and even of remaining, pathogenic in the presence of a small quantity of free oxygen. The bacillus requires some time to develop its typical poison, especially if the temperature be not quite favourable, growths of the bacillus not being toxic until about the tenth day when the temperature is kept at 20° to 25° C., but eighteen-hour cultures are toxic when the growth is carried on at from 38° to 39° C. Here also, however, the growth becomes more virulent up to the tenth day. The artificially-prepared media are better for the culture of the bacillus than such substances as aqueous humour and fluid blood serum. Until the growths form spores, give rise to liquefaction of the gelatine, and the characteristic smell is given off, they are non-pathogenic; but as soon as these make their appearance the pathogenic activity also steps in. The organisms are slightly motile until the terminal enlargement is formed. Old cultures may remain alive for six months, the spores withstanding 80° C. for six hours, 90° C. for two hours, and 100° C. for three or four minutes. Light and air acting on dried organisms kill them off comparatively rapidly. Mice and guinea-pigs are very easily affected, but the poisonous dose for rabbits is about two hundred and fifty times as large as that required to kill these other animals, in addition to which the course of the disease is much slower. The poison appears to act directly on groups of muscles near the point of inoculation. Although the organism can grow in pus and in the earth, pure cultures are very rapidly destroyed at the seat of inoculation, as after twelve hours not a single bacillus could be found. The poison diffuses itself very rapidly through the body; glucose and maltose added to the fluid media increase the rapidity of the growth of the organisms, but cause a diminution in their pathogenic power. A fluid culture passed through a Chamberland filter gives a clear filtrate in which the tetanus bacillus can still grow and form a stronger solution of the poison. If this second fluid be again filtered and 20 cubic centimetres of broth be added to 350 of the filtrate, a third growth takes place, and an extremely toxic fluid is the result, one hundred-thousandth of a cubic centimetre being sufficient to kill a mouse. It appears, however, that the organism keeps the poison stored up in its own protoplasm in the dry condition, and only gives it up to fluids. The authors consider that it is somewhat of the nature of a diastase, that it peptonises gelatine, and that in peptonising the gelatine it loses some of its toxic power, according to the amount of gelatine upon which it acts.

It has, however, certain affinities with the venomous groups of poison, in that it acts in extremely small doses. So impressed were they with the extreme toxicity of the fluid that they hold that, in the case of pure cultures, the bacillus is so rapidly destroyed in the body that it is the poison which accompanies them that causes the death of the animal, and they conclude that this is the reason so many negative results have been obtained, the inoculations of young cultivations being made before the poison had had time to develop, as they found that by heating virulent cultures to 62° C. (when, of course, the organisms were not destroyed), animals inoculated did not die, but cultures made from the same material afterwards produced a quantity of poison that might cause the death of the animal. Similarly, if spores were thoroughly washed with distilled water so as to remove the whole of the accompanying poison, they no longer gave rise to tetanus when injected into an animal. If, however, lactic acid or trimethylamine be previously injected, or if the tissues be bruised, or if an inoculation of micro-bacillus prodigiosus be first made, and then even a smaller dose of the tetanus spores be inoculated, the animal almost inevitably dies of the disease, so that, just as in symtomatic anthrax, the organism, though not capable of developing alone, is, in the presence of this other factor, capable of developing and giving rise to its specific poison, and so of killing the animal. The authors have made a number of experiments, from which they conclude that the spores, when deprived of their poison, readily fall a prey to the leucocytes, the bacilli also being taken up in much the same way, and in from eighteen to twenty hours every trace of these organisms has disappeared. If, however, the leucocytes are paralysed by the presence of the poison or by the presence of any of the other devitalising influences above mentioned, the bacillus gets an opportunity of forming its poison, and so death from tetanus is the result. It is quite possible that lactic acid, like the tetanus poison, may prevent the coming up of the leucocytes to do the work at the point of injection, giving the bacilli an opportunity of developing, just as in ordinary culture media.

PATHOLOGY.

(245) Myeloma of Tendon Sheaths.

M. Heurtaux (*Archives Générales de Médecine*, February, 1891), after giving details of five cases, makes the following remarks: This myeloma has always been found about the flexor tendons of the right hand, though there is no reason why it should not occur in other situations. The tumour when removed is seen to be rounded and lobulated. It is soft, but less friable than sarcoma. It springs from the sheath of the tendon, and this sheath, as well as its synovial membrane, is completely invaded. The other tissues are pushed aside, but never involved in the growth, and thus the benign nature of this tumour is shown. When examined with the microscope, some bands of fibrous tissue—the remains of the sheath—are still visible, and the intervals are filled up with embryonic cells, round and spindle-shaped, as well as myeloplaxes. The vessels vary in numbers, and their walls are thickened—a fact not observed in sarcoma. The clinical characters are as follows: There is a tumour upon the palmar surface of the metacarpo-phalangeal joint or of a phalanx of the size of a hazel nut, or even a walnut. The skin is unaffected, and the movements of the finger unimpaired except in so far as the tumour itself prevents flexion. There is no pain in it, and its course is slow, lasting from five to ten years, as in the cases reported. It does not ulcerate, or but rarely, and then very late. It must be distinguished from (1) serous synovitis—a rare disease, where a cylindrical and fluctuating swelling occupies the whole length of the synovial sheath; (2) fungous synovitis, which also tends to involve the whole length of the sheath; but here the movements of the fingers are limited; and later, when the skin reddens and ulcerates, the signs are distinctive; (3) from fibroid nodules in the tendon sheaths in rheumatic subjects—they are stationary; (4) from sarcoma—here the course is rapid, the pain great, and the movement of the finger limited. Treatment consists in dissecting out the growth completely. Esmarch's bandage should be used. The tendon may die if bared to too great an extent, or adhesions may form to parts around. But these cases mostly recover completely notwithstanding, and there is no recurrence.

(246) Hæmatoporphyrin in the Urine.

A number of cases have recently been recorded in which the iron-free derivative of hæmoglobin, called hæmatoporphyrin, has been described in the urine. The first recorded observations of this occurrence were made by MacMunn in June last, and the most recent, by Salkowski, are published in the *Centralb. f. d. med. Wiss.*, 1891, No. 8, p. 129. The three cases mentioned by Salkowski were in women, and one case ended fatally. The cause of the occurrence of this abnormal substance in the urine is supposed by Salkowski to be the administration of sulphonal. This is, however, an abnormal action of the drug, and would therefore appear to be due to individual idiosyncrasy.

PHYSIOLOGY.

(247) Powers of Perception of Children.

Binet (*Revue Philosophique*, December, 1890) has made a series of very interesting observations on the powers of perception of children. He experimented upon two little sisters, and found that the first colour to be recognised was invariably red. When between 1 and 2 years old they could easily recognise the entire figure drawn on paper in outline of some common object, as a man, but it was several years before they could with certainty recognise an outline drawing of some individual part—as an ear or a finger. Binet also investigated how far the ideas of children are spontaneous, and how far they are recollections of dreams, but he found it difficult to come to any conclusion. He points out that at first children always regard themselves in the third person, and he gives several interesting conversations which show that their ideas about all objects are utilitarian; for example, they look upon a knife as a thing to cut with, bread as something to be eaten, and so on.

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OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(248) Acute Transitory Œdema of Lung during the Pneumonic Crisis.

DR. MAX KAHANE, of Vienna, records two remarkable cases of acute transitory œdema of the lung occurring just at the commencement of crisis in the course of acute pneumonia (*Centralblatt für klinische Medicin*, No. 10, 1891). Two labourers were under observation at the same time, all points of the two cases closely resembling one another. The patients had both been more or less addicted to alcohol, and had both reached the point of crisis from ordinary acute pneumonia, the temperature having just begun to fall. When seen at this period they were found to be extremely collapsed, with very weak heart action, covered with cold sweat and cyanotic. The chests were examined, and in both cases all the physical signs of œdema of the lung were present over the greater part of both lungs. Restoratives being promptly applied, a marked change was almost immediately observed, and on further examination it was found that the signs of œdema were rapidly clearing up, and in a very short time had disappeared entirely. The normal course of "crisis" followed, and the patients made a good recovery. There was no excessive expectoration of watery fluid from the lungs after the subsidence of the œdema. Œdema of the lungs is not by any means rare after acute pneumonia, but it is almost always fatal. The sudden onset in cases where the heart's action had become so greatly depressed, just at the moment when the great change of crisis had begun, is remarkable, but not easily explainable.

(249) Results of Treatment of Purulent Pleuritic Effusion.

PROFESSOR KÖNIG, of Göttingen, places on record (*Berl. klin. Wochenschrift*, No. 10, 1891) the results obtained by him in the treatment of 76 cases of purulent pleuritic effusion during the last twelve years. Of the 76 cases, 10 ended fatally, but these were for the most part advanced cases from the beginning of treatment, some pyæmic, others with advanced tuberculous disease of the lung, etc.; 36 of the successful cases were simple empyema, 16 were complicated by fistulous openings already formed, 6 with putrid pus pent up, and 3 with openings into a bronchus; 9 cases were due to direct injury—gunshots, stabs, or other wounds. Of 66 cases, 59 could be regarded as cured, or, put in a different way, 71 per cent. of the cases treated were well and fit for work within two months. Details are given of the steps of the usual operation adopted. The opening was generally made at the level of the fifth or sixth rib and about the area of the anterior axillary line. Resection of a portion of rib is advised in most cases. If evacuation by simple opening is not complete it may be advisable to wash all thick shreds away with a stream of warm water, but antiseptic fluids are not necessary, nor is any further irrigation as a rule required if a good opening is maintained. The injection of carbolic acid solutions is condemned as unnecessary and harmful. A double incision is not required. The bandages should be made to include the arm on the affected side, and the patient should be encouraged to lie on that side, and for the first few days his body should be tilted three or four times a day, either by himself or by an attendant, so that the opening in the chest wall becomes the most dependent part. This is to ensure drainage from all parts of the pleural cavity in turn, but does not necessitate a change of the dressing after each change of position. The temperature must be taken as the guide to indicate whether the pus is being freely drained, and on any rise the wound should be dressed and any obstruction to the flow of fluid removed.

(250) Transmission of Tuberculosis by Cow's Milk.

AT a meeting of the Paris Académie de Médecine on March 3rd, Dr. A. Ollivier (*Bull. d. l'Acad. de Méd.*, 3me Sér., t. xxv, No. 9) corrected some errors which had crept into his previous communication on the transmission of tuberculosis by cow's milk (SUPPLEMENT, March 14th, 1891). The cow which was said to have supplied milk to the pupils at the convent had been there *three* not nine years, having been purchased in May, 1886; as the girl who formed the subject of M. Ollivier's communication left the school in the previous April, it was impossible that she could have derived the infection from that cow. Again, the milk furnished by the cow was, it is stated, consumed chiefly by the teachers and the servants, and only quite exceptionally by the pupils, and then it was always boiled. There had been no case of tuberculous disease except among the children. M. Ollivier, however, while giving up the case of tuberculous meningitis which he reported, still thinks the occurrence of twelve cases of tuberculosis in the same boarding school within four years something more than a mere coincidence.

(251) Recovery after Severe Injury to Brain.

DRS. DEWEY and RIESE (*American Journal of Insanity*, January 1891) report the case of a butcher,

aged 32, who was attacked by a lunatic, receiving a blow from a butcher's cleaver on the head about three-fourths of an inch above the occipital protuberance, a piece of bone three inches by two and a half being chopped off; the lower border of the bone was broken off, and remained hanging attached by the soft parts; the dura mater was intact. Momentarily stunned, he soon recovered, and went out, starting to walk home; but when he had gone about a hundred yards he became dizzy, and had to be assisted the remainder of the distance. The patient was seen by Dr. Dewey almost immediately, and beyond being somewhat faint presented no bad symptoms; the parts were carefully freed from dirt and hair, and replaced with antiseptic precautions, and the scalp stitched up. The patient made an excellent recovery, and was able to return to his work in two months' time. He had no motor or sensory symptoms at any time, and eight months later was still in good health, and showing no ill effects from the injury.

SURGERY.

(252) Occlusion of the Intestine following Laparotomy.

Dr. Maurice Collas (*Thèse de Paris*. No. 267, 1891) has collected a series of twenty-three cases of this nature. Of these, eighteen were operations for ovariotomy, and the remaining five followed other operations on the pelvic organs. Fifteen of the cases had their true nature revealed only at the *post-mortem* examination, whilst operations were performed in the remaining cases, and in four instances were completely successful. Most frequently the symptoms of intestinal occlusion appeared within ten days after the operation, but they were delayed in one case as long as six years. In most instances the bowel was occluded by inflammatory adhesions or subsequent cicatrical contractions. In more than one instance volvulus occurred, but it seems doubtful how far this could be ascribed to the results of the previous operation. When the symptoms did come on they were in all cases rapid in their onset, and it would appear that in such cases there is but little hope to be placed in any other treatment but laparotomy.

(253) Fæcal Tumour in Abdomen.

Cases of impaction of fæces in the rectum are frequent, but it is not so common to find a true abdominal tumour made up of accumulated fæces. Such a case has been recorded by Dr. Samuel Abbot in the *Boston Medical and Surgical Journal*, January 29th. The patient was a nervous, undersized, single woman, aged 30. She had been constipated from infancy, owing to a congenital diaphragm which stretched across the lower part of the rectum. She took, when arrived at maturity, all sorts of laxatives. At length, characteristic diarrhœa set in, and for the first time she missed a monthly period. A large pyriform tumour filled the abdomen; it extended from the pubes nearly to the ensiform cartilage, and from one ilium to the other. The surface was somewhat irregular, as hard as wood, yet of somewhat unequal density on firm pressure, with slight depressions in different regions, suggesting spaces between folds of intestine. There was tenderness on pressure in the left iliac fossa. The tumour was very prominent between the epigastrium and umbilicus, so that the patient had for some time been unable to wear stays. The congenital diaphragm could be detected on digital exploration; the tip of the finger was passed through its opening and touched a mass of firm fæces. The malformation did not allow of the use of the scoop. Saline purgatives were given freely, producing watery motions, which succeeded in breaking down the mass by degrees. Within a few days frequent evacuations caused tenesmus, relieved by opiates. On the thirteenth day the discharges were very free and less watery than before. The abdomen was tympanitic, and no masses could be detected except in the left iliac fossa, which was now hardly tender. On the twenty-fifth day a formed motion passed. The catamenia reappeared, the appetite returned, and the patient once more became healthy, after ailing for years.

(254) Intubation of the Larynx.

Ranke (*Centralbl. f. Chir.*, March 7th, 1891, p. 195) gives some interesting statistics on intubation He has collected 364 cases of primary diphtheria in which intubation was performed, of which 132 recovered, giving a percentage of just over 36 per cent. of recoveries. In 849 cases of tracheotomy, the percentage of recovery was 39 per cent. From these statistics it appears that there is but little difference between the recoveries after the two operations. A further examination of the statistics, however, reveals that in the earlier years of life, in which tracheotomy is so fatal, intubation is far more successful, and in the intubated cases the proportion of pneumonia cases is much less.

(255) Surgical Anatomy of Appendix Vermiformis.

The following observations on the anatomy of the appendix vermiformis recently published by Dr. John Ferguson, of Toronto (*Int. Jour. Med. Sci.*, January, 1891) are of interest from their bearing on the surgical treatment of perforative appendicitis. The author has during the past eight years made 200 dissections for the purpose of elucidating certain points regarding the appendix. In 123 instances this organ was supplied with a mesentery of its own, and so placed that a perforation of its wall would have opened directly into the peritoneal cavity. In the remaining 77 cases the appendix was so placed and covered by peritoneum that a perforation would have opened into the subperitoneal tissue and there established diffuse cellulitis. In 7 of the 200 cases there was evidence of old-standing lesions and perforations. This last fact Dr. Ferguson regards as an important one, as it indicates the possibility of recovery after such a lesion of the appendix. Foreign bodies were found in the appendix in 15 instances.

(256) A New Operation for Spasmodic Wry-neck.

Dr. W. W. Keen has lately published (*Annals of Surgery*, January) a paper read before the Philadelphia Neurological Society on a new operation for spasmodic wry-neck. This consists in division or exsection of the nerves supplying the posterior rotator muscles of the head. After having made a number of dissections, the author formulated the steps of an operation which he has repeatedly done on the cadaver, and once on the living subject. The nerves to be resected in this operation are the posterior divisions of the first three cervical nerves, by which the chief posterior rotators of the head, namely, the splenius capitis, the rectus capitis posticus major, and the obliquus inferior, are supplied. The external incision is a transverse one about 2½ or 3

inches long, made about half an inch below the level of the lobule of the ear, from the middle line of the neck posteriorly. The trapezius is divided transversely, and afterwards the complexus, care being taken to spare the great occipital nerve. The posterior division of the second cervical nerve is then divided or exsected. The suboccipital nerve is next looked for in the suboccipital triangle, and traced down to the spine and divided. The external trunk of the posterior division of the third cervical nerve is then exposed below the great occipital, and divided close to the bifurcation of the nerve trunk. The only difficulty in Dr. Keen's case was the depth of the wound, which made it troublesome to get a good light, and rendered the mechanical steps of the operation rather difficult. The hæmorrhage, though free, could be easily controlled.

MIDWIFERY AND DISEASES OF WOMEN.

(257) Fœtid Milk in Human Mammary Glands.

Dr. Jorissenne (*Archiv. de Tocol. et de Gynéc.*, February, 1891) had under his care in 1874 a patient of slightly tuberculous aspect, though now, in 1891, she is in good health. On October 5th, 1874, she was delivered by forceps. She suckled her child freely till December 7th, when she was absent from it for seven hours and a half. This space of time included a drive one hour long, five hours and a half walking, and one hour's rest for refreshment. Immediately on her return home she gave her child the breast. The milk was horribly fœtid—like rotten eggs. It made her feel ill, and her relatives could not stay in the same room with her. Yet the infant sucked with avidity; however, it was violently sick. Next day the milk was sweet, and the child and also the mother quite well. The breasts showed no sign of hardness, engorgement, etc. The nipples were healthy. The patient told Dr. Jorissenne that on several previous occasions she had noticed that when she delayed giving the child the breast at the usual times the milk became fœtid. Dr. Jorissenne had no further opportunity of observing this putrefaction of milk, as it did not recur. The patient was red-haired; but he has carefully examined the milk of many red-haired women since 1874, and failed to find that it showed any special tendency to putrefy or even to turn sour, in the open air or in a close room, more quickly than milk from a black or fair-haired woman. The avidity with which the infant imbibed the putrid milk was remarkable; its stomach was more sensitive than its nose and tongue. Evidence as to the acuteness of taste in the infant is imperfect. During the first few days of extrauterine life the sense seems undeveloped. The child will take solutions of raw salines without syrup, though a few weeks later it will reject the same compounds nicely flavoured. The sense of sweetness is early developed. At the end of a few weeks an infant likes sugar, and dislikes cow's milk unless sweetened artificially. Children six months old, or older, will lick ill-tasting colours off their toys. The fact remains that, in Dr. Jorissenne's case, the child liked a milk that smelt intensely fœtid and must have tasted nasty, according to an adult's idea of taste.

(258) Recurrence of Ovarian Cysts.

Dr. Schwartz (*Annales de Gynéc.*, January, 1891) recently read before the Société de Chirurgie de Paris a communication by M. Michaux on a patient, aged 63, from whom an ovarian cyst was removed by M. Labbé four years ago. The tumour was unilocular, thin walled, and bore no solid growths. Three years and a half later a new growth developed in the scar, and at the end of six months it was found to bear all the characters of a cancer, with infection of the inguinal glands. It might have been a graft from the ovarian tumour, but M. Michaux admitted that primary cancer of the cicatrix was an equally probable explanation. M. Routier, a few weeks previously, removed from a woman, aged 54, a well pedunculated ovarian sarcoma, with no sign of peritoneal infection. At the end of a fortnight, when the patient was convalescent, two nodules developed in the abdominal cicatrix, and microscopic examination proved that they were sarcomatous. Cauterisation of the wound, however, was followed by the development of a healthy, not sarcomatous, scar. There was evidence of dissemination of the growth in the abdominal cavity. M. Terrillon had operated for ruptured cyst, in one case a fortnight, and in a second three weeks, after the rupture. The abdomen was full of gelatinous material; in one instance an adenomatous mass had developed in the intestine; it was removed and did not form again. At the end of a few months, however, a tumour developed in both cases, and in both the new growth lay in the omentum. The secondary tumour was removed from the first case eighteen months ago, and the patient was then (December, 1890) free from any sign of recurrence. The second patient underwent operation three weeks before. M. Lucas-Championnière had found that the general aspect of a malignant ovarian cyst was, as a rule, easy to recognise, but in some cases the tumour appeared to the naked eye perfectly innocent. M. Bouilly, at the beginning of 1889, removed some pedunculated uterine fibroids, one of which had undergone cystic degeneration; at the same time he freely excised a warty mass from the umbilicus. In January, 1890, the patient died with signs of cancer of the omentum and ascites. The primary source of the cancer was here uncertain. M. Quenu stated that recurrence of ovarian cysts was now rare, as the pedicle was properly treated, yet when secondary growths developed, peritoneal granulations might have been overlooked during the operation. Neoplastic and inflammatory granulations were at first indistinguishable. M. Lucas-Championnière maintained, contrary to M. Quenu, that there might be a histological difference between ovarian cysts which looked innocent and did not recur after removal and cysts which looked innocent and did recur. Pathologists had not found out the difference, but that did not prove that none existed.

(259) Tumours caused by Included Fœtus.

It sometimes happens that, instead of a second embryo becoming impacted in the visceral arches of another, it becomes enclosed within its abdominal cavity, so as to form a tumour. A case of this kind ("fœtus in fœtu") was recorded by Dr. Kolisko in the *Wiener med. Wochenschr.*, No. 20, 1890. An infant was born healthy in appearance, but the abdomen was distended, especially on the right side. Fluctuation was detected, and cyst of the right kidney diagnosed. On tapping, a pint of a brownish fluid escaped. The child died, when five weeks old, of bronchitis, with pemphigus and fever. A cyst was discovered in the abdominal cavity, reaching from the liver to the pelvis and invested anteriorly by peritoneum. It arose

from behind the right kidney. Two prominences arose from its inner wall. One was of the size of a plum and covered with epithelium; it bore an appendage like a rudimentary limb, and was connected with the opposite side of the cyst by a fibrous band. This band was probably the imperfect funis described in other cases of included fœtation. The second prominence included unmistakable rudiments of a face; not only teeth and lower jaw, but a tongue was also detected. In the case described by Nathaniel Highmore (second of that name, and not the Highmore associated with the antrum) in 1814, the fœtal cyst was intimately connected with the duodenum and jejunum, and its cavity was so vascular that the patient, a boy aged 15, died of hæmorrhage. In G. W. Young's case, the cyst apparently arose from between the mesocolon and mesentery; the patient lived nearly ten months. The parts from Young's and Highmore's cases are preserved in the Museum of the Royal College of Surgeons.

(260) Chronic Endometritis: Uncontrollable Vomiting.

Dr. Géhé (*Archiv. de Tocol. et de Gynéc.*, January, 1891), had under his care last spring a married woman, aged 28. She had had one child ten years previously, and her confinement was followed by lumbar and hypogastric pains. As time passed on the pains became permanent. Free leucorrhœa existed. Fits of violent vomiting set in, and were always preceded by intense pain in the epigastrium, radiating to the loins and shoulders. After the sickness the pain disappeared. As time passed on the patient became greatly debilitated—a chronic invalid in fact. Morphine, milk diet, etc., proved useless. On examination, Dr. Géhé "detected the signs of chronic endometritis, with eversion of the cervical mucosa; the appendages were free from disease." The uterine cavity was cauterised with Paquelin's instrument, the parts being washed with an antiseptic solution before and after the cauterisation. No more vomiting occurred, but the abdominal pain persisted. A fortnight later the cervix and its canal were touched with nitrate of silver. This procedure was repeated once a week for about five weeks, the vagina being washed out with antiseptics night and morning. At the end of that period the epigastric pains had definitively ceased. The patient had a good appetite, and rapidly recovered.

(261) Hermaphroditism: Sex not Identified till Twenty-first Year.

Dr. G. Tully Vaughan (*New York Med. Journ.*, January 31st, 1891) describes a case where a black, aged 21, applied at a hospital on account of pains, which were afterwards diagnosed as dysmenorrhœa. The patient, who proved to be a female, was 4 feet 11 inches in height, beardless, and of feminine appearance like a lad of 14. The mammæ were developed. A penis nearly 1 inch long existed; the corpora cavernosa, corpus spongiosum, glans, and corona were perfect; the prepuce well developed and capable of retraction. The urethra, however, did not run through the penis. The frænum ran downwards into a scrotum-like structure for over 1 inch, and then divided, running into a pair of internal labia, embracing a meatus urinarius of the female type. The scrotum really consisted of the labia majora; that on the right side was the better developed, and contained two glands of equal size, one a little above the other. The lower gland felt like a small testicle; from it a cord could readily be traced to the inguinal canal. The upper gland was very tender on pressure, and became swollen and painful about once a month, and so the patient wished it removed. After the pains had subsided (in the course of treatment a distinct menstrual "show" occurred) the patient was examined by recto-abdominal palpation. A uterus, with two swellings on each side, was detected. The right swelling was hard, the left softer, feeling like a prolapsed ovary or enlarged tube. The urethra led into the bladder, but on removing the director and passing it through the meatus in a more backward direction it entered a channel between the bladder and rectum, and touched the uterus-like body. The director returned covered with blood. The patient stated that her desire was for men, and that she had more than once had connection with women without any pleasure. This patient might have raised a question as to right of suffrage, as in the case of Levi Suydam (*Amer. Journal Med. Sciences*, July, 1847), quoted by Taylor and by Tidy, in their textbooks on medical jurisprudence.

(262) The Fœtus in Cases of Battledore Placenta.

Dr. T. B. Hansen (*Hospital Tidende*, No. 31, 1890) noted some time since that in a case of placenta marginata the child was very ill-developed considering the duration of pregnancy. In order to ascertain whether there are sufficient grounds for believing that this placental anomaly really influences the fœtus, he made a series of researches in the Copenhagen Lying-in Hospital. In 300 labours he found no fewer than 29 instances of placenta marginata. In 18 the anomaly was moderately marked, in 11 strongly marked. In the first group the fœtus was little if at all affected; indeed, some of the children were remarkably big and healthy. On the other hand, in the "strongly marked" series, the fœtus was often born prematurely, and nearly always short and light, in proportion to the normal standard at the corresponding stage of pregnancy. In 2 out of the 29 cases severe flooding took place at the beginning of labour: in none was the placenta deeply placed. Dr. Hansen investigated other placental anomalies. A fœtus, clearly born at term, bore all the appearances of a premature child. The portion of the placenta which lay nearest the orifice was completely atrophied. Three years previously the cervix had been amputated for some "inflammation." Atrophy of the lower uterine segment probably resulted, and this affected the development of the placenta, and hence, the nourishment of the child. There appears to be some relation between placenta marginata and previous bad labours and chronic disease of the thoracic viscera.

(263) False "Rigidity of the Cervix" in Labour.

Dr. Auvard (*Archives de Tocologie*, January, 1891) dwells upon the details of a case of delayed first stage of labour, where rigidity of the cervix was simulated by the ill-effects which follow when that part of the uterus is inclined in a different direction to the body. A patient, aged 30, and married in 1881, had a lingering labour in 1883, and a second, where the membranes broke two days before delivery, in 1888. In 1890 she became pregnant for the third time. Pains began, at term, on December 4th, 1890. For five hours and a half next day they ceased: then they returned and became very strong; the waters came away at 5 A.M. on December 6th. When examined by Dr.

Auvard two hours later the os was found but slightly dilated; the membranes had refilled. The presentation was right occipito-posterior; the head bore on the lower segment of the uterus, which was strongly bent to the right, whilst the os looked to the left backwards. Thus the fœtus was being pressed in a faulty axis. The cervix felt like leather soaked in grease. The patient was exhausted; pains recurred every three or four minutes. Dr. Auvard made another examination half an hour later, and the different axes of the cervix and body struck him as significant. He then pressed his hand on the fundus, and pushed it from the right to the middle line, hooking the forefinger of his other hand, which was already in the vagina, into the os, so as to aid in the reduction of the uterus. A violent pain followed, when Dr. Auvard noted that the fœtal head, for the first time, bore well down on the os, which dilated considerably at once. He held the uterus in position, and a series of strong pains completed the dilatation in twenty minutes. Ten minutes later a living female child was born. The patient made a good recovery.

(264) Presentation of Sternum and Hands: Lactation induced by Massage.

Dr. Mensinga, of Flensburg (*Der Frauenarzt*, February, 1891) conducted last September a labour where this rare presentation occurred. The patient was a 4-para, the abdomen beginning to be pendulous. Dr. Mensinga was called in on account of great delay in the labour, and a hand had prolapsed. The bag of membranes was lax; he could feel first one hand, then the other, somewhat further back. He burst the membranes, and tried to reach the trunk. The thorax presented. Further to the left, his finger reached the child's mouth. The head was extremely extended, hence the protrusion of the thorax. He could do nothing with the case as long as the patient lay on her side or back, but on placing her on her belly he succeeded in getting hold of the right knee, turning and delivering. The child had occupied a transverse position, with its limbs and trunk placed as in a quadruped advancing with its head thrown back. The breech lay to the right, with the legs and thighs flexed beneath it; the throat and chin lay most to the left; the back of the head almost touched the breech, owing to the extreme extension of the head and the concavity of the spinal curve which lodged the occiput. This approximation of the head to the breech was diagnosed by abdominal palpation before the end of the labour; it naturally puzzled the obstetrician. The patient had never been able to suckle her children properly. On this occasion, the breasts were quite undeveloped; the practice of allowing the child to suck the dry nipples caused the mother great nervous irritation. Massage was practised, the breasts steadily increased, and on the seventh day the child was suckled. Early this February the mother was still suckling her child, and both were doing well.

DISEASES OF CHILDREN.

(265) The Cause and Prevention of Broncho-Pneumonia.

Dr. Ernest Mosny has contributed to the *Revue Mensuelle des Maladies de l'Enfance* (February and March) an interesting study of the lesions, causes, and prophylaxis of broncho-pneumonia. He distinguishes two types, and two types only, of broncho-pneumonia, and would apparently class under one or other head all examples of pneumonia in childhood. (1) True lobular pneumonia, which is nearly always secondary (to measles, whooping-cough, etc.), and in which the initial lesion is catarrhal bronchitis affecting the smaller tubes. (2) The form to which the term pseudo-lobar has been applied; it is, in Dr. Mosny's opinion a form of acute lobar pneumonia peculiar to children. The primary bronchitis, or, rather, bronchiolitis, of the first form is soon complicated by the extension of inflammation to the connective tissue surrounding the bronchioles and the companion arterioles, and to the adjacent alveoli. In the inflammation of the alveoli Dr. Mosny distinguishes three stages: (1) Splenification, the stage of rapid epithelial proliferation and desquamation; (2) red hepatisation, the stage of exudation of fibrin, red blood corpuscles, and a few leucocytes; (3) grey hepatisation, the stage of extensive diapedesis of leucocytes which replace the fibrinous exudation as that had replaced the epithelial cells. The process may go on to the formation of abscesses, or may end in resolution, with, however, in some cases, fibroid degeneration of the bronchial and alveolar walls. He considers not only emphysema, but also atelectasis, to be secondary lesions brought about mechanically. Bacteriological investigations were made in 16 cases, 13 secondary (measles 9, diphtheria 3, scarlatina 1) and 3 primary. The general conclusion is that secondary broncho-pneumonia is due not to the pathogenic organism of the disease in the course of which the broncho-pneumonia has occurred, but to one of two micro-organisms. As a rule the microbe is the streptococcus pyogenes; in rare cases it is the pneumococcus lanceolatus (Talamon-Fränkel). The last-named organism is that constantly found in the pseudo-lobar form. Both these microbes are frequently found among those present in the mouth and pharynx even during health. The lungs of a patient suffering from measles, or some other diseased condition lowering the general vitality, may become infected from this source, but, more commonly probably from want of cleanliness and antiseptics in the surroundings. This view appears to be confirmed by the experience of the results of the isolation wards in Paris; in these large numbers of children suffering from the same infectious disease were treated together and in rapid succession. Under these conditions the death-rate increased, and M. Grancher was driven to the conclusion that if by "isolation" was to be understood the accumulation in one place of numerous cases of the same disease, then this method led to an increase in the "secondary infections" or complications of the disease, and thus to an increased mortality. The remedy for this is to be found in antisepsis: that is, in disinfection of the wards, of the excreta of the patients, and of the clothes worn and the instruments used by attendants; remembering the possibility of auto-infection, the desirability of antiseptic applications to the nasopharynx is obvious.

(266) Transitory Blindness in Whooping Cough.

A few cases of blindness suddenly coming on during whooping cough are on record, and in a large proportion the patient died. Dr. George W. Jacoby adds two new cases both ending in

rapid recovery (*N. Y. Med. Jour.*, February 28th, 1891). In the first case, a girl, aged 6, sudden total blindness occurred several weeks after the commencement of a mild attack of whooping cough; the pupils were widely dilated, and immobile to light or accommodation, and there was double optic neuritis. Two days later the right eye could recognise large objects, and the pupil reacted to light: after two days more the left pupil also reacted, and large objects could be perceived with both eyes. Six weeks later vision was normal and the ophthalmoscopic examination was negative. In the second case, a boy, aged 8, in the fifth or sixth week of whooping-cough had severe headache and vomiting, lasting two days: on the fourth day when taken out of the dark room in which he had been for the previous three days he was found to be quite blind. When examined on the eighth day he was quite blind, but the pupils were of medium size, reacted well to light, and the fundus was normal. Two days later rapid improvement set in; for 24 hours he had right hemianopsia, but within four days of the commencement of the improvement vision was normal for the entire field. Dr. Jacoby quotes two cases, reported by Alexander, of which one resembled the second of his two cases, but ended in death preceded by coma. The other resembled his first case, but optic atrophy ensued. He also quotes some other cases less clearly described. He adopts Ebert's suggestion that the blindness is due to acute œdema of cerebral centres. The condition of the pupil in the two cases reported by Jacoby appears to be typical of two classes. If the pupillary reflex is retained the lesion must be, as von Graefe has pointed out, above the corpora quadrigemina and between them and the occipital lobes; if the reflex is lost, the lesion must be below the corpora quadrigemina. In the former prognosis as to vision, should the patient survive, is good, in the latter there may be permanent loss of sight.

PHARMACOLOGY AND THERAPEUTICS.

(267) The Open Treatment of Pulmonary Cavities. Professor Sonnenburg reports five cases in which he opened pulmonary cavities from the outside as a preliminary to treatment by injections of tuberculin (*Die Wirksamkeit des Koch-'schen Heilmittels gegen Tuberculose. Amtliche Berichte, etc.*, p. 837, *et seq.*). His method of procedure and the immediate results of the operation in the first four cases have already been described (Supplement, January 17th, 1891, p. 21). As soon as the slight reaction following the incision has subsided the injections are begun, and Sonnenburg says their effect can be followed as readily as on the skin and mucous membrane. The action of the remedy was well displayed in the case last operated on in which a cavity in the right apex was laid open. For a fortnight after the operation Koch's treatment was not employed. In strong contrast to what occurred in the other cases, the cavity remained greasy and discoloured, did not become clean, and showed no tendency to heal. As soon as the injections were begun the cavity was transformed into a healthy granulating wound. In all the cases a considerable amount of necrotic lung tissue was expelled, after which the cavities began to shrink; and, with regard to three of the patients, "one can already speak of almost complete cure." The result of the combinations of the injections with incision of pulmonary cavities has been to convince Sonnenburg that the treatment presents no danger, and offers good hopes of cure. In the three successful cases the general condition has improved; there are fewer tubercle bacilli in the sputum, and the patients have gained weight. Sonnenburg adds that further experience is required before trustworthy rules can be laid down for the guidance of the practitioner in the selection of suitable cases for the surgical treatment of pulmonary cavities. Much also has still to be learnt as to the right method of using tuberculin, particularly as to individualising the treatment.

Professor Caselli, of Genoa, has operated on two cases under the care of Professor Maragliano. The first patient was a man, aged 31, with a cavity in the left lung, at the level of the second intercostal space (*Gazzetta degli Ospitali*, February 15th, 1891). On February 2nd, chloroform having been administered, a portion of the second rib 8 centimetres in length was resected. The pleura was found firmly adherent to the chest wall. After two or three exploratory punctures with a Pravaz's syringe, the cavity was "struck;" an opening 5 centimetres long was then made into it with a Paquelin's cautery. The wound in the lung was 7 millimetres deep. There was no hæmorrhage. A moderate quantity of caseous material and sero-purulent fluid was cleared out of the cavity; both were found to contain very numerous bacilli. On exploring the cavity with the index finger, it was found to be ovoid in form, with irregular rough walls. A graduated probe passed from below upwards for 9¼, from before backwards 5½, and transversely for 6 centimetres. The field of operation was carefully disinfected, and the edges of the wound in the lung were stitched with nine points of silk suture to the wound in the chest wall. The cavity was stuffed with gauze and a dressing of cotton-wool applied. For the first twenty-four hours there was abundant expectoration of muco-pus and blood, after which there was no further hæmorrhage. There was a moderate amount of sero-purulent discharge from the wound, which was dressed twice a day. The temperature never exceeded 38.1° C. Caselli states that, if there had been no adhesions, he had intended to touch the surrounding pleura with Paquelin's cautery and then stitch it to the chest wall. In this way firm adhesions would have been established in from fifteen to twenty-four hours. The second patient was a woman aged 30, with a cavity at the base of the left lung, extending from the sixth to the ninth rib, between the scapular and mid-spinal lines. On February 23rd an incision was made along the ninth rib from the spine for a distance of 12 centimetres; a piece 8½ centimetres in length was resected from the ninth rib. The pleura was somewhat thickened and tense, but it was easy to see that the pleural sac was not obliterated; on puncture with a Pravaz's syringe, sero-fibrinous fluid was withdrawn. The parietal pleura was then incised, whereupon about 100 cubic centimetres of fluid of the same character escaped and pneumothorax was established. On digital exploration, it was found that there were loose adhesions between the two folds of the pleura, below, in front, and behind. The needle of the syringe was then pushed through the lung obliquely, from below upwards, to a depth of 5 millimetres, when a cavity was found containing dense pus mixed with caseous matter,

The cavity was next freely opened with Paquelin's cautery, when a large quantity of pus and *débris* escaped; it was completely emptied, partly by coughing and partly by irrigation with a 2 per cent. solution of boric acid. The pneumothorax gave little or no trouble. The size of the cavity was 10 centimetres in its long, by 4 in its short, diameter. The visceral and parietal layers of the pleura were stitched together with catgut, the cavity stuffed with gauze, and the wound dressed as in the first case. The operation lasted thirty-two minutes. On the following day the dressing was changed; the pneumothorax had disappeared and the cavity was discharging freely. It was again washed out with boric acid solution and a large drainage tube was inserted; the temperature, which had been 39.5° C., fell to 38.7° C. Both patients are doing well, but no further particulars as to the result of the operations are given. It does not appear that up to the present Koch's method has been used in combination with the surgical treatment, although the second patient had undergone two series of injections before the cavity was opened.

(268) Exanthem Produced by Rhubarb.

M. Litten (*Therapeut. Monatshefte*, December, 1890) records a case of severe skin eruption caused by rhubarb. The patient, a workman aged 45, presented himself at the Policlinic. His face was very much swollen and covered with scabs, mixed with abundant sanguineous and purulent exudation. The scalp, beard, eyelids, and lips were all involved. On further examination, the whole body was found to be covered with a polymorphous eruption, which, however, presented two special types, namely, hæmorrhagic eruptions and pustules. The hæmorrhages were scattered all over the body, and varied from the size of a bean to that of a small plate, the colour being of all shades between bright blood-red and brown. The pustules were also scattered plentifully over the whole body, and resembled those of pemphigus. In some places the individual pustules had become confluent and covered large areas. On the dorsum of the hands the blebs were filled with clear fluid, which had not gone on to pus formation. Removal of the scabs left shallow dirty-looking ulcers. The lymphatic glands were swollen and painful. Similar eruptions were present on the mucous membrane of the eyes, nose, lips, mouth, and throat, accompanied with great swelling. The tongue was also much affected, and this, together with the general condition of the mouth, prevented proper articulation. Blood was frequently passed from the urethra, but sometimes the urine was wholly free from it. The temperature was 103.3° F. The patient felt strong and well, and complained only of the eruption. The urine contained neither albumen nor sugar, but was of a deep brownish-yellow colour, and, on adding solution of caustic soda, became deep purple-red. The other systems were quite normal. The patient attributed the eruption to the following prescription which he had been ordered for constipation: ℞ sod. bicarb., gr. 120, infus. rhei. rad. ℥vi. He knew that rhubarb did not agree with him, as he had previously had slight skin eruptions after its use. He took half the above mixture at one draught in the morning, and shortly after suffered from rigors and pains in his limbs. During the evening his face, lips, and tongue began to swell, and next morning the eruption was fully developed as described above. When the patient had recovered, Litten administered to him another dose of rhubarb with the same result. Chrysophanic acid had no effect. Litten states that no other similar case has been recorded, but Goldenberg (*New York Med. Jour.*, December, 1889) described a similar, but less severe, instance of the same idiosyncrasy to rhubarb. The patient, a man of middle age, had been taking a mixture of rhubarb powder and soda for constipation, and had consumed in all 120 grs. of pulv. rhei. rad. He awoke one morning with a burning sensation in his face, and found it covered with blisters and pustules. When Goldenberg saw him during the day, the face was covered with brownish-red irregular pustules (a woodcut is given) about the size of a pea to that of a bean, and deeply infiltrated at the bases. There were a good many crusts, on removing which a moist, bleeding, fungoid surface was left. It was also present on both surfaces of the hands. The whole disappeared in a few weeks without treatment, leaving bluish pigmentation, but no cicatrices. It closely resembles pemphigus. There was no fever, and the general health was excellent. Goldenberg administered rhubarb to the man on two subsequent occasions, and each time a similar eruption appeared.

(269) Two Cases of Carbolic Acid Poisoning followed by Pneumonia.

Dr. T. Cuming Askin (*Liverpool Medico-Chirurgical Journal*) reports the following: A man aged 36, who had been drinking heavily, took an unascertainable quantity of carbolic acid with suicidal intent. When seen he was perfectly livid, pupils contracted, conjunctivæ anæsthetic; brownish staining of skin on face, cheek, chin, and around mouth; mucous membrane of mouth and lips whitened; odour of carbolic acid from breath; breathing stertorous; skin cold and clammy, pulse very feeble, temperature subnormal. The stomach was washed out with warm water and a saturated solution of soda sulphate, some of which was left in it. Hot cloths were applied to the heart and changed every five minutes; sinapisms to calves and soles of feet. Atropinæ sulph. (gr. $\frac{1}{30}$) was injected hypodermically, and repeated in a quarter of an hour. The pupils soon became dilated; consciousness gradually returned, but was not completely recovered for some hours. Two days later delirium tremens was well marked, and dulness at the base of both lungs was discovered, with numerous crepitant *râles* at both bases, and some fever. He eventually made a good recovery. In the other case the patient, a woman aged 47, took a tablespoonful of carbolic acid by mistake. Her symptoms were very similar to those just described, except that there was no staining of the skin and that the coma was deeper. The same treatment was adopted, and with success; but the day after admission signs of double pneumonia were detected, of which she died five days later.

PHYSIOLOGY.

(270) Electrolysis of Animal Tissues.

Dr. G. N. Stewart has published in the first volume of the *Studies from the Physiological Laboratory of the Owens College*, Manchester, a long original memoir on the subject of electrolysis of animal tissues. He finds that practically the whole of the conduction in animal tissues is electrolytic, and the electrolytes are principally the

mineral salts. Changes which occur in the proteids are produced by secondary electrolytic actions. In simple proteid solutions the effects vary to some extent with the current density. Alkali albumins formed at the cathode, and acid albumins at the anode, while in solutions of coagulable proteids there was also coagulation at the latter pole. With a strong current the proportion of coagulated proteid to acid albumin was greater than with a weak current. Blood, serum, defibrinated blood, solutions of hæmoglobin, bile, and urine were also used in the experiments. There was no indication that hæmoglobin, or any of its derivatives, plays the part of an ion. Acid hæmatin is formed at the anode; this remains partly in solution and is partly precipitated; when the current is strong the hæmatin is further decomposed, and is decolorised by the nascent oxygen or chlorine liberated. With certain strengths of current methæmoglobin is also formed at this pole, either preceding or accompanying the formation of acid hæmatin. Alkaline hæmatin is formed at the cathode rather later than acid hæmatin is at the anode. In blood the changes that occur are noticeable both in the pigment and the proteids, similar to those already mentioned. Among solid tissues, muscle was chiefly examined. The nuclei become prominent and the sarcous substance granular near the anode, while at the cathode the substance becomes more homogeneous, the striation being impaired. The chief chemical changes in the proteids are an increase in the neutralisation precipitate of the aqueous extract, and a corresponding decrease in the globulin at the cathode. At the anode the neutralisation precipitate is increased, but not so much as at the cathode, but the amount of globulin is more than correspondingly diminished, because part of the proteid is coagulated. The effects of electrolysis on the salts of muscle were studied by estimating the ash. Striking changes were found which, if produced within the body, would modify nutrition profoundly. The antiseptic action of the current was studied in the case of putrefactive organisms, and it was shown that it chiefly, if not entirely, takes place around the anode. An attempt is made to connect this knowledge with the applications of electrolysis in surgery and gynæcology, and a future communication on the physiological aspect of the question is promised.

(271) On the Decomposition and Absorption of Fats. In the SUPPLEMENT of December 6th, 1890, the remarkable case of lymphatic fistula used by I. Munk to study the fate of the fats absorbed from the intestine was referred to. Munk has continued his researches (*Arch. f. Physiol.*, Phys. Abth., Heft 5 and 6, December, 1890, p. 581), but this time he used a fat with a high melting point. Seventeen hours after the last meal containing fat the patient took 20 grains of spermaceti, which melts at 53° C. In this fat palmitic acid, instead of being combined with glycerine, is combined with cetylalcohol. After three hours the fat in the lymph increased. The amount of fat in the lymph collected in thirteen hours was 3.93 grains, or 2.8 grains more than in the fasting condition, and representing 14 per cent. of the fat taken by the mouth. The fat of the chyle melted at 36° C., and did not contain spermaceti, nor was cetylalcohol obtained from it when it was decomposed. The chyle contained palmitin. This shows that apparently the spermaceti was split up in the intestine into palmitic acid and cetylalcohol. The former was absorbed and united with glycerine somewhere to form the palmitin which was present in the chyle. Dogs absorbed 51 to 59 per cent. of the spermaceti. Ph. v. Walther, working in Ludwig's laboratory at Leipzig (*Arch. f. Physiol.*, Phys. Abth., p. 329, 1890), confirms the observation of Munk that in animals fed on fatty acids the corresponding neutral fats occur in large amount in the chyle. Starving dogs were fed on albumin, starch, and 100 grains of fatty acids. Between five and seven hours after a meal a cannula was placed in the thoracic duct and the chyle collected. Confirming Munk's results, v. Walther found a large quantity of neutral fats in the chyle (reaching sometimes 2.13 per cent.); of fatty acids only $\frac{1}{30}$ to $\frac{1}{6}$ of the fatty food, and of soaps only 0.01 to 0.13 per cent. The synthesis of neutral fats from fatty acids must therefore be regarded as proved. It appears, however, from v. Walther's researches, that the fatty acids are transformed into neutral fats in the small intestine; at least, in dogs fed on fatty acids, eight to ten hours afterwards, neutral fats are found in the small intestine, and in the most favourable cases there was an equal amount, or relatively more, than the quantity of fatty acids present, but very little soaps. As, however, the amount of the fatty bodies found in the stomach and intestine after death, *plus* the amount excreted in the fæces, together with that collected in the chyle, does not account for all the fatty acids administered to the animal, it is evident that a part of the fatty acids, or the neutral fats synthetically formed from them, must pass away by some channels other than the chyle vessels, but so far it is not known how they disappear. The quantity of lecithin is increased both in the intestine and the chyle, but perhaps this is derived from the intestinal epithelium.

OPHTHALMOLOGY.

(272) The Influence of Rest on the Sensibility of the Retina to Light and Colour.

BASEVI (*Ann. di ottalm.*, vol. xviii. 6, p. 475) has made careful investigations upon himself and others as to the adaptability of the retina for white and coloured light. His results are very similar to those of Aubert, Peschel, and Treitel. The eyes of the person upon whom the experiments were about to be performed were rested in a partially darkened room for about fifteen or twenty minutes. The room was darkened with heavy curtains. The author found that after this period of rest the visual acuity had been increased threefold as measured by Snellen's types. The sense of light, measured by Treitel's tests was found to be increased eighteen-fold. After the eyes had been rested and light was gradually admitted, the colours were recognised in the following order: red, yellow, green, and lastly blue. When colour fatigue for any particular colour was produced with a glass of that colour, it took a position last in the series. The visual field, both for light and colours was found to be enlarged, but the period of rest required to be longer and the darkness greater. The author concludes, from his experiments, that night blindness is a disturbance in the adaptability of the eye.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(273) Recovery from Cerebro-Spinal Meningitis.
DR HALE WHITE relates (*Brain*, Winter Number, 1890) the following very interesting case, occurring in a man aged 19. The illness began with giddiness, and later there was vomiting. On the third day the neck was rigid, and the head slightly retracted. He had pain and tenderness over the upper cervical spines. Pulse irregular, and varying in rapidity. Temperature 102° F. No paralysis, no hyper- or anæsthesia. Pupils equal, and reacting normally. Discs red and blurred. On the fourth day herpes to the left of the mouth. After some slight improvement he became worse, so that on the eighth day he was delirious, with vomiting, slow pulse, and incontinence of urine and fæces. Temperature normal. On the ninth day left external strabismus. There was again improvement, to be again followed (on the sixteenth day) by unconsciousness. For five days it was thought he could not live. On the twenty-third day he was better, but remarkably wasted. He steadily improved, and was discharged well, except for the strabismus, in September, 1889, three months after the commencement of his illness. He remained well, with the exception of pain in the back, until December, when he began to lose power in his right side. In January, 1890, all four extremities were found weak, especially the right arm and leg. There was slight right facial palsy and impaired sensation on the right side. The knee-jerks were absent, the gait unsteady, and the patient emotional. By November, 1890, he had greatly improved.

(274) Typhoid Fever and Raynaud's Gangrene.
WEDENSKY describes some interesting cases of this nature (*Wien. med. Presse*, February 22nd, 1891, p. 317). A full account of his cases was presented to the Russian Congress of Surgeons, January, 1891. One of the cases which he very fully describes was that of a lad, aged 17, who, two years previously, had suffered from typhoid fever, and his peripheral nerve fibres, which were found to be diseased, were supposed by the author to have been either directly infected by the typhoid bacillus or by the ptomaines produced by it. A very careful microscopic examination, both of the peripheral vessels and central nervous system, revealed no trace whatever of disease; it was only the peripheral nerves that were affected, and they had undergone extensive degenerative changes. In the discussion which followed cases were mentioned of various nerve lesions which had been followed by gangrene. In one instance gangrene had begun in one of the fingers, and spread up as far as the elbow after an injury to the vertex of the skull. In another instance it had followed on opium poisoning, and in this case the gangrene was symmetrical, whilst in a third case the exciting cause had been fracture of the cervical spine, which was followed three weeks later by symmetrical gangrene of the lower extremities.

(275) The "Virile Reflex."
THE above title has been given by Dr. C. H. Hughes (*Alienist and Neurologist*, January, 1891) to a phenomenon which he has found present in all healthy men whom he has examined. His manner of proceeding is to place the individual in a supine horizontal posture; the skin of the penis is then made tense by clasping the prepuce near the frænum with the left thumb and index finger, and drawing it firmly towards the umbilicus, the remaining digits of that hand being placed low down on the dorsum of the organ for perceptive purposes. The side or dorsum of the penis near the perineal extremity is then sharply percussed, which, in the normal state, causes a quick and very perceptible retraction of the bulbo-cavernous portion. This "penis percussion reflex" is feeble or absent in children under the age of puberty; it becomes impaired or abolished after prolonged excessive venery. It is not impaired in masturbation when the habit has not destroyed the sexual power, but excessive onanism, long continued and accompanied by neurasthenia, diminishes the reflex. In old men who have lost virility the sign is absent. It does not always run *pari passu* with the other reflexes in disease of the lumbo-dorsal cord, though in a case of transverse dorsal myelitis, with double ankle clonus, the author could elicit "a kind of erector penis clonus," as long as the foot clonus was obtainable. From his experience of the matter, the author judges that it appears worthy to rank with any of the hitherto recognised diagnostic reflexes.

(276) Topography of Splenic Lesions in Commencing Tabes.
RAYMOND (*Revue de Médecine*, January, 1891) has a full and important paper on this subject. The patient, a man who had not had syphilis, showed very little motor inco-ordination; he had diplopia, violent pains, abolition of knee-jerk, and very severe gastric crises, from which he died two years after the first symptoms came on. The meninges were perfectly normal, so was the lumbar part of the spinal cord, but beginning in the lower dor-

sal region and extending upwards to the cervical region there was a sclerosis in both of Burdach's columns, near to Goll's columns, and sparing the root zone and Lissauer's tract. The intensity of the lesion increased from below upwards. The posterior nerve roots and all the peripheral nerves examined were perfectly normal; no explanation of the diplopia and the abolition of the knee-jerks was discovered. The second part of the paper consists of a summary of all the cases of tabes dorsalis of which a necropsy has been published during the last few years, and which died early in the illness. Then there follows an account of Flechsig's views on the development of the spinal cord, and from all this the author concludes (1) that the spinal lesions of true tabes dorsalis may exist independently of changes in the meninges, posterior roots, and peripheral nerves, (2) the topography of the spinal lesions is very uniform, (3) true tabes dorsalis is a systematic affection of the nervous centres.

(277) Exophthalmic Goitre.

THE *Neurologisches Centralblatt*, No. 4, 1891, contains a series of interesting abstracts of papers on this subject. The first is by Dr. G. Gauthier (*Revue de Médecine*, May, 1890, p. 409), who maintains that the disease is a vasomotor disturbance of the medulla oblongata. This, he considers, explains the symptoms, and also the circumstance that various functional mental conditions are often associated with exophthalmic goitre. Budde (*Ugeskr. f. Läger.*, 1890, 4 R. xxii, 4 u. 5) records two cases in women, one aged 53 and the other 24, in whom this disease was associated with diabetes mellitus. He also is inclined to think that the seat of the disease is in the medulla. Russell Reynolds (*Lancet*, May 17th, 1890) has collected forty-nine cases, and in many of them there were present various nervous symptoms, the most important being sensory disturbances and mental aberration, especially a "chorea of ideas." Sometimes motor symptoms, chiefly choreiform movements, were present; eclampsia was sometimes observed. Schafnenger (*Med. Monatsschr.*, 1890, Bd. 11, H. 6) records a case of traumatic exophthalmos ending in recovery. The patient was 7 years old, and the illness was attributed to a blow on the right temple. Finlayson (*Brain*, 1890, Autumn No.) describes a patient in whom exophthalmic goitre was complicated by paralysis of the third nerve. The last pathological case abstracted is that published by Hale White (BRITISH MEDICAL JOURNAL, March 30th, 1889, p. 699). From a study of this and other cases he contends that the disease is a functional disturbance of the medulla, especially certain parts of the floor. His patient, a woman, died of acute pneumonia, and the small recent hæmorrhages so frequently seen in the brain of those dying of acute diseases were extraordinarily well marked. The other cases abstracted thus support his view. The remaining papers are one by Eulenburg (*Berl. klin. Wochenschr.*, 1889, No. 1). He discusses the relative frequency of the well known and the rarer symptoms; he advises clinical treatment and electric baths. Dauscher (*Wiener med. Presse*, 1889, No. 7) records a case interesting on account of its severity; and lastly, an abstract is given of two cases recorded by Lemke (*Deutsche med. Wochenschr.*, 1891, No. 2). One patient was aged 17 and the other 47; in both, half the enlarged gland was excised. Following upon this there was a diminution in the size of the remaining half, and the exophthalmos and the palpitation decreased. Seven months after the operation the improvement was maintained.

SURGERY.

(278) Transplantation of Bone from Dog to Man.

DR. A. M. PHELPS, of New York, reports (*New York Medical Record*, February 21st, 1891) a case in which a piece of living bone was transplanted from a dog to a boy for the cure of an ununited fracture of the leg. The fracture, which was in the lower third of the leg, was the result of an operation to remedy an anterior curvature of the tibia, which had slowly increased from early childhood till the patient was obliged to use crutches. A few months after the osteotomy Dr. Phelps cut down on the fracture and wired it, but failed to get union. A few months later he again operated, with no better success. A third operation was performed, all cicatricial tissue being removed, the ends of the bone being freshened, and decalcified bone chips being engrafted according to Senn's method, but this also proved futile, the chips coming away from the wound a few weeks afterwards. Thomas's method of hammering, damming, and adjusting an appliance for the boy to walk upon was tried, but still no union was obtained. Another surgeon then operated twice but was equally unsuccessful. At the urgent entreaty of the patient that something should be done to save the limb from amputation Dr. Phelps determined to try transplantation of living bone. A dog, aged 2 years, was procured, and carefully cleansed with soap and water and made aseptic with a solution of bichloride of mercury. While the patient was being anæsthetised the dog was etherised and then enveloped in a thick layer of absorbent cotton to the thickness of several inches while placed in the natural sitting posture. Over this soft covering a few turns of a plaster-of-paris bandage were made to hold the dressing in place. The animal's right foreleg, which protruded through the dressings, was next carefully shaved and again made aseptic with bichloride of mercury, and finally with iodoform and ether. The operation on the patient was then begun by making two elliptical incisions, 4 inches long, down to the fracture; the old cicatrix and cicatricial tissue about the ununited ends of bone, together with an elliptical piece of the soft parts, was removed, and the ends of the bones freshened with the saw, an interval of about an inch being left between them. The limb was then enveloped in a plaster-of-paris bandage, commencing 6 inches above the incision, and extending to the upper third of the thigh. The foot and ankle were also encased in a plaster-of-paris bandage. An incision was next made in the dog's foreleg; the elbow was excised, the radius and ulna were severed half an inch in front of the elbow-joint, and the humerus 3 inches above it, and removed, all the soft parts being left. The extremity near the paw was amputated, leaving a piece of bone 1 inch in length attached to a branch of the brachial artery among the soft parts. The biceps tendon was detached from the bone, and all loose muscular tissue removed. Cutting the bone in the manner indicated saved the nutrient artery—which in the dog enters the bone an inch in front of the elbow-joint—from injury. The dog was placed by the side of the patient's leg, its head towards him, and the piece of bone with an aluminium dowel

pin passed through the medullary cavity in its long axis and inserted between the ununited fragments. The bones were pressed together, the dowel pin entering the bones of the patient above and below. The graft was firmly fixed by means of a silver wire passed round it and securely tied. Muscle was stitched to muscle and skin to skin, the parts being evenly coaptated. Band iron was bent and adjusted over the wound from the upper plaster cast to the lower one of the boy's foot, leaving room for dressing. A large drainage tube was inserted, and the wound dressed antiseptically. Both "patients" were put to bed, where they rapidly recovered from the anæsthetic. Small doses of morphine were given to both to allay the uneasiness of the forced confinement. On the sixth day the wound was dressed, and was found perfectly healed by first intention without a drop of pus. At the end of eleven days, however, there was an apparent shrinkage of the dog in the dressings: this allowed of motion, and as it was clear that the graft would be pulled from its attachment in a few days, Dr. Phelps severed the bond of union. As the graft was trimmed down to the parts still attached, free oozing of blood took place through it, which showed "that union had taken place, and that circulation had been established between the patient and the dog." Both "patients" rapidly convalesced. At the end of five weeks it was discovered that the bone showed no sign of uniting, and it was removed. The ends of the fragments were then placed firmly together in the hope that union might follow the stimulation produced by the graft. The graft was found irregularly covered with a new growth of bone, thus proving that an effort at union had been made. The operation had, according to Dr. Phelps, a twofold object: (1) To establish the fact that large masses of soft parts could be transplanted from an animal to man; and (2) To heal an ununited fracture by a graft from a dog. He thinks the first point has been established, and that the "partial failure" as regards the second was due entirely to a defect in the dressings. He thinks the principle of transplantation will be found useful in many cases which now defy surgical skill.

(279) Trephining in Cortical Epilepsy.

Professor Azzio Caselli, of Genoa, reports (*Riforma Medica*, January 27th, 1891) a case of cortical epilepsy which he cured by trephining. The patient was a lad, aged 17, who at the age of 7, after a severe injury of the right parietal region, began to suffer from epileptiform convulsions, the seizures occurring every eight days. When admitted into the Medical Clinic under Professor Maragliano on December 17th, 1890, he presented the symptoms of epilepsy from injury to the cortex, localised over all the right motor zone, and especially at the base of the ascending frontal convolution. There was hemiparesis of the muscles of the left half of the face. There were also signs of moral degeneration. On the right parietal region were two parallel linear cicatrices, running obliquely from behind forwards and outwards; over these scars was a depression 6 centimetres in length, the upper and posterior extremity of which was 1¾ centimetre distant from the sagittal suture. On December 21st Caselli applied a trephine having a crown 4 centimetres in diameter at a point corresponding to the junction of the middle with the lower third of the right Rolandic line and immediately in front of it. The disc of bone was raised with its periosteum attached; on its cranial surface was found a linear fissure 1½ centimetre long, the mark of an old fracture, with two small ridges of bone projecting from 5 to 6 millimetres. The underlying dura mater was slightly more vascular than usual, but otherwise normal. The internal surface of the disc was smoothed down, and immersed in a 1 per 1,000 solution of corrosive sublimate kept at a constant temperature of 38° C. On further examining the internal surface of the cranial bones through the trephine hole, two bony prominences could be felt, which seemed to be continuations of the little ridges on the raised disc. The upper of these corresponded to the lower part of the ascending frontal convolution. With Hoffmann's bone forceps eleven tiny discs were removed, till the internal surface was found to be perfectly smooth. The large disc was then replaced, its periosteum sutured with catgut to the surrounding periosteum, and the skin wound stitched up with silk. On December 23rd, the dressing was removed, when an area of pulsation was seen, the centre of which corresponded to the replaced disc. On December 27th there was much less pulsation; and on the 30th the disc was firmly united to the bone around. Up to January 20th (the date of report) no fits had occurred since the operation, and the patient seemed a different being.

(280) Tuberculous Peritonitis and Abdominal Section.

Clinical evidence appears to have established the fact that simply opening the peritoneal cavity has a beneficial effect on tuberculous disease of the peritoneum. Dr. König brought forward very strong proofs of this theory at the Berlin Congress, relying on a long series of cases where the after-histories were reliable. Dr. Parker Syms has, since the Congress, made further investigations into the subject, and based his work on a case in which he operated a year since, the result being, up to the present date, satisfactory. His researches are to be found in a memoir published in the *New York Medical Journal* of February 7th. The death-rate in over 130 cases was but 3 per cent. Sepsis is, it is urged, less likely to occur than in abdominal sections, where the serous membrane is healthy, on account of the pathological changes which have taken place in the membrane. Tuberculous infection of the wound does not occur. Disinfectants are useless, and it is best not to drain, lest a permanent fistula be left. Established (not advanced) pulmonary tuberculosis is an indication for, and not against, the operation, for the improvement thus gained enables the patient to resist the lung disease all the better, and, if the phthisis be incipient, cure may take place. In short, abdominal section exerts a most beneficent influence on tuberculous peritonitis, resulting in cure in a large proportion of cases, and in a marked improvement in nearly all.

(281) Surgical Treatment of Basedow's Disease.

In the *Deutsche medicinische Wochenschrift*, January 8th, 1891, p. 47, Dr. F. Lemke, of Hamburg, gives two cases of surgical interference in Basedow's disease. He begins by remarking that, during the last fifty years, our knowledge of the pathology of this disease has made little progress, and that therapeutic treatment has given little result. Lately, however, some progress has been made, and the alterations in the field of vision suggest disease of the cerebral cortex.

Cases of the disease end most unfavourably, but in the following benefit ensued. The first was that of a lad, aged 17. Two years ago he began to suffer from palpitation of the heart and from shortness of breath. He had had to give up his occupation as a painter's apprentice, because he could not climb ladders and scaffolds, or bear the draughts of the workrooms. Later on he developed a bronchocele and exophthalmos, his voice became hoarse and rough, and dyspnœa became pronounced. As tracheotomy seemed desirable, an attempt was made to perform the low operation, but it failed because the trachea could not be felt on account of the bronchocele, which reached from the cricoid cartilage to beneath the sternum. The incision was enlarged upwards, when the patient became asphyxiated, and it became necessary to split the tumour and do laryngotomy. Koenig's long cannula was put into the trachea, and after a few long inspirations the tremendous hæmorrhage ceased spontaneously. The patient progressed favourably, and eight days later it was determined to remove the enlarged left lobe of the thyroid. The wound was opened, and the tumour shelled out with the finger and thumb. The middle lobe ran down 2 centimetres behind the sternum, and was taken away. The separation from the trachea was difficult, but the recurrent laryngeal nerve was not seen. The wound was stuffed with iodoform gauze, and after two days was nearly all closed with secondary sutures, and healed without any mischance. Eight days later, breathing was quite free and normal without a cannula. The left half of the larynx was slightly paralysed. It was noticed after the operation that the exophthalmos had quite disappeared. Seven months after the operation the patient presented the appearance of a healthy and robust young man. The right half of the bronchocele, which had been left behind, had disappeared, the pulse was regular and normal, the eyes no longer protruded, the voice was strong and clear, and each side of the larynx performed its functions. This successful result prompted Dr. Lemke to operate upon another case which he had had under observation for more than a year, and which had had all kinds of treatment. The patient was a shoemaker, aged 47, who had been ill many years, and had for the previous six months been in hospital. His vision was normal, but both eyes very projecting, and the thyroid greatly enlarged, with a strong aneurysmal pulsation and a *bruit*. The heart's beat was also arhythmic, and so rapid as to be uncontrollable. Both lower limbs were markedly swollen, and the patient was very depressed in his mind. It was determined to operate, but anxiety was felt about the anæsthetic because of the condition of the heart; the pulse, however, became much better during the administration of chloroform. The right half of the goitre was removed, after which a tumour about the size of a small fist appeared. This bled profusely, and had to be rapidly removed, after which the bleeding ceased. The wound was filled with iodoform gauze, and on the second day secondary suture was practised. Recovery was rapid and uncomplicated. On the second day the eyes projected less, and after six months their position was normal, the left half of the goitre had dwindled, the œdema was gone, the heart's action was normal, and the man has returned to his work and is able to walk considerable distances. Dr. Lemke, in his concluding remarks, expresses his belief that the operation he performed will afford relief in a similar class of cases, and thinks it ought to be performed as soon as the disease has been diagnosed. The compression of the trachea, from which many cases die, is prevented by the excision of half the gland, and in future Basedow's disease must be considered within the province of the surgeon.

MIDWIFERY AND DISEASES OF WOMEN.

(282) Partial Inversion of the Uterus from Trifling Causes.

Dr. S. Remy (*Arch. de Tocol. et de Gynéc.*, February, 1891), describes two cases of inversion, the one from slight force in extracting the placenta, the second from a more passive cause. A woman, aged 32, aborted early in her first pregnancy. Hypogastric pains followed, and she soon became pregnant again. Labour occurred at term, it was rather lingering, but was left to Nature. Ten minutes after the birth of a rather heavy female child, the midwife placed her hand on the fundus and pulled gently on the cord; the placenta came away. Then the midwife found that the uterus could no longer be felt above the pubes. A large tumour filled the vagina. Dr. Remy was summoned, and came a few minutes after the accident. The patient felt queer, but there was no shock and little hæmorrhage. He could feel a part of the uterus, deeply cupped, above the pubes. By steadying this part with one hand and pressing with the back of the fingers with the other on the vaginal tumour he succeeded in reducing the inversion, which did not recur. Inertia or weakness of the muscular tissue at the placental site had caused failure of retraction when the placenta separated, and intra-abdominal pressure forced that part of the uterus downwards into the space left by the retreating placenta. In uterine inertia clots caused by hæmorrhage no doubt check the tendency to inversion in many cases. In the second case the patient was an anæmic young lady. Several floodings followed her first labour. At the end of a month, after free dosing with ergotine, very severe hæmorrhage took place. The abdomen was flat, the uterus could not be felt above the pubes. The os was patulous and blocked by a soft presenting body covered with fœtid blood. Careful bimanual palpation proved that there was partial inversion with retained fragments of placenta. The inverted surface was dressed with antiseptics. Two plugs of wool, covered with iodoform gauze, were placed against it to control the hæmorrhage. This dressing was renewed daily. Two days later two pieces of placental tissue came away. No more bleeding occurred. On the seventh day the patient was much better, the cervix was closed, the inversion had reduced itself. Fourteen months later the patient was in stronger health than she had ever enjoyed before in her life. Leucorrhœa, constant down to the end of the pregnancy, had ceased altogether. The period was regular but very scanty. The retained placental fragments had caused great congestion of the region of the uterus to which they were attached. Hence there was softening of that part of the uterine wall, the contractions causing it to be gradually drawn downwards. Such is Dr. Remy's explanation.

(283) Warty Growths of Vulva and Vagina during Pregnancy.

M. Couder (*Archiv. de Tocologie*, November, 1890

describes a case which occurred in Drs. Budin and Auvard's wards, where a mass of warts, infesting the vagina as well as the vulva, gave great trouble during pregnancy. A laundress, aged 18, applied to the obstetric out-patient department at the Charité on August 7th, 1890. Her last period had been in January; three months later an abundant leucorrhœal (*sic*) discharge appeared, and shortly afterwards masses of warts were detected on the vulva. At last she could not walk or work, but neither defæcation nor micturition was affected. Pregnancy was diagnosed on examination; the fœtus was alive. A warty mass, the size of a fist, grew from the vulva and perineum; it discharged an abundant fœtid fluid. Vaginal exploration was painful; it proved the existence of smaller warty growths all over the vagina and the surface of the cervix. No evidence of syphilis could be detected; there was prurigo of the legs due to the patient's dirtiness; this rash was cured by a few baths. The warts were diagnosed as "simple vegetations of pregnancy." Sublimate washes, alum and boric acid insufflations, and cauterisation with acid nitrate of mercury, proved only palliative. The cauterisation was very painful, notwithstanding the previous application of cocaine. On August 28th, the vulvar growths were partly scraped away with a cutting curette, partly torn off. The thermo-cautery was needed to stop the free hæmorrhage which ensued. Premature labour threatened, but the symptoms passed away. By September 3rd the wound had healed. The patient was discharged on September 7th, and afterwards used injections of borax; the leucorrhœal discharge diminished greatly. She was perfectly able to work. On October 7th, she was delivered at term of a male child. On October 28th she was examined at the hospital. The external organs were found unhurt; delivery left no trace except a laceration of the vulvar integument about one-fifth of an inch long. The vagina was examined with the speculum; the warts on its surface and on the cervix had all disappeared, although they had not been subjected to direct medication. The child was free from ophthalmia. The above treatment was necessary to maintain the patient's health during pregnancy, to prevent very probable laceration of the diseased perineum during labour, to protect the child's eyes, and to remove a certain source of infection during childbed.

(284) Parturient Uterus torn from its Cervix by its own Contraction.

Drs. Guéniot and Thévard (*Annales de Gynéc.*, November, 1890) read before the Paris Académie de Médecine a case in the experience of the latter physician at Savigny. The patient was rickety, with a contracted pelvis; the conjugate diameter was 3 inches. She had already borne two children. A few hours after the commencement of labour a very severe pain occurred, slight hæmorrhage and hiccough followed, but the general condition did not appear grave. Labour pains ceased entirely. On examination, a depression or solution of continuity could be felt along the lowest part of the anterior wall of the uterus. The placenta lay at the pelvic inlet; no other part of the ovum was accessible, and the fœtal heart sounds could not be heard. It was not till the next day that any attempt was made to extract the fœtus, but only the trunk could be extracted through the vagina. Decapitation having been first performed, the abdominal cavity was opened, and the fœtal head removed. The body of the uterus was found high up, its fundus lying under the liver. On the raw surface of the uterus below was a crown of ragged flaps, taken at the time for the vaginal attachments of the cervix. The uterus was placed in its natural position, the bleeding surfaces were washed with brandy ("the only antiseptic at hand"), and the abdominal wound was closed. The patient recovered. The patient was carefully examined afterwards by Drs. Tarnier, Guéniot, Charpentier, and Budin, and it was agreed that the cervix and vagina were in a healthy condition. The uterus had torn itself at the junction of the cervix and the body, below Bandl's ring.

(285) Repeated Extrauterine Pregnancy in the same Patient.

Dr. Leopold Meyer, of Copenhagen (*Hospitals Tidende*, 1890, 3 R., vol. viii, No. 27), operated in December, 1887, for rupture of a tubo-abdominal cyst. The patient was 27, and had passed through one normal pregnancy. The left tube and ovary were removed (*Hospitals Tidende*, 1888, Nos. 30, 31). In May, 1888, and at the end of the same summer, severe hypogastric pains set in, especially during exertion. On September 6th a similar attack of pain occurred, and on the next day (ten days before the period was due, and hitherto the catamenia had been regular) dark blood ran from the vagina, and continued to run for three or four days. On September 19th the vagina was explored. The stump of the left appendages felt tender but was not swollen. The right tube formed a lump of the size of a walnut. On October 25th, dark blood flowed from the vulva, with vomiting, hypogastric pains, great tenderness to the right of the hypogastrium, and swelling of the abdomen. There were also symptoms of internal hæmorrhage. Rest, ice, and opium improved the patient's condition. On the night of October 28th, a complete decidua was discharged; it showed typical decidua cells. On November 11th the hæmorrhage ceased, and two days later an extensive doughy exudation could be felt behind and to the right of the uterus. This effusion was gradually reabsorbed. Dr. Meyer did not personally visit or examine the patient after September 19th, otherwise he might have opened the abdomen before the rupture of the sac. The first operation might have set up changes in the right tube which led to the second extrauterine pregnancy, but some congenital malformation of the tubes might have existed. About ten cases of repeated extrauterine pregnancy have been reported in recent medical literature; in only three of this series was the diagnosis authentic.

DISEASES OF CHILDREN.

(286) Action of Tuberculin in Children.

Dr. A. Jacobi reports (*Arch. of Ped.*, March, 1891) observations made on eight children all believed to be suffering from tuberculosis; their ages ranged from 19½ months to 5 years and 8 months. In only two phthisis and tuberculous peritonitis was the characteristic reaction well marked. In three cases—tuberculous abscess of thigh, angular curvature, and psoas abscess—there was slight reaction after the first dose or first two doses of ½ or 1 milligramme; subsequently the reaction was ill-defined or absent, even though doses as high as 10 milligrammes were used. In

three cases—tuberculous meningitis (advanced), tuberculous disease of knee and cervical glands, and tuberculous disease of hip—the injections did not produce any effect which could be certainly recognised, even though in the last two cases the dose reached 10 milligrammes. No improvement distinctly traceable to the lymph was observed in any of the cases, but most of them were very unfavourable, and the observations only extended over a period of less than four weeks. As to the diagnostic value of the method, Dr. Jacobi finds that it leaves much to be desired. In the majority of the cases the reaction was very ill-defined, and in one which was certainly tuberculous no reaction at all occurred. The dose required and tolerated by the children was very large compared with those tolerated by adults.

(287) Chronic Cervical Adenitis in Children.

Dr. A. Jacobi, in a paper read before the New York Academy of Medicine on this subject (*New York Med. Journ.*, March 7th, 1891), after reviewing the anatomical relations of the three great lymphatic trunks—the jugular, the subclavian, and the broncho-mediastinal—pointed out that the frequency of morbid changes in the lymphatics was explained by the large amount of cells which formed the bulk of their structure. They were similar to the embryonic cells, increasing and proliferating as rapidly; tumefactions were therefore brought about very readily. When the blood was the cause of disease the whole system of lymphatics was likely to be affected simultaneously. More often only groups of lymphatics or single lymph bodies were affected, and the cause must then be sought in the circulating lymph. Foreign bodies floating in the lymph or changes in its chemical composition should be looked for. These were almost always the result of, or complicated with, hyperæmia and inflammation. Chronicity might be shown in three ways—the gland might be more or less converted into fibrous tissue, or suppuration followed by shrinking and cicatrisation might ensue, or the gland might become caseous. The majority of cases of adenitis owed their origin to a local source, and the best protection against adenitis was the preservation of good general health, for any condition interfering with the healthy state of the mucous membranes might give rise to it.

PHARMACOLOGY AND THERAPEUTICS.

(288) Resorcin in Rodent Ulcer.

Boeck (*Monats. f. prakt. Derm.*, No. 4, February, 1891) has obtained unusually good results by treating rodent ulcer with Unna's resorcin plaster, and selects two cases as examples. In one there was an ulcer an inch and a half square, which had lasted ten years. The surface was everywhere open, moist, and suppurating. The resorcin plaster was applied and changed daily. After a few days considerable improvement was observed, and after two months the whole ulcerated surface was healed over, only here and there being a minute oozing point. In the second case, the ulcer had lasted for six months, and was about a centimetre square, with raised infiltrated borders. Excision was declined (the patient was about 82 years old), and resorcin plaster was applied. In seven weeks, when the patient was accidentally met, the ulcer was found to have been long healed, and treatment given up. A shallow, slightly reddened cicatrix remained. Unna (*ibid.*) reports a similar case.

(289) Ichthyol Varnish.

Dr. Unna (*Monats. f. prakt. Derm.*, 1891, No. 2) considers that for certain purposes a waterless ichthyol varnish possesses advantages over the usual preparations, and gives the following formula for its preparation: Ichthyol 40 parts, starch 40, solution of albumin 1 to 1½, water to 100. The starch is first moistened with the water, then the ichthyol well rubbed up with it, and lastly, the solution of albumin is added. For surgical purposes he suggests another formula: Ichthyol 25 parts, carbolic acid 2.5, starch 50, water 22.5. The ichthyol and the carbolic acid are dissolved in warm water. Out of the solution when cool, the carbolic acid is not precipitated, although it is only soluble to the extent of 6 to 7 per cent. in distilled water. To this solution starch is then gradually added. He finds that this waterless ichthyol varnish combines all the advantages of the ordinary composite ichthyol preparations in the treatment of localised affections of the skin, and that it is better borne.

(290) Methyl-violet in Malignant Disease.

Professor von Mosetig-Moorhof's "dyeing method" of treating malignant growths which are unsuitable for operation has already been described in the British Medical Journal (February 7th, 1891, p. 300). At a meeting of the Vienna Medical Society on March 13th, he presented a further communication on the same subject, and showed several patients (*All. Wien. med. Zeit.*, March 17th, 1891), among whom were some of those shown on the occasion of his first report on January 31st. In the case of the woman with a sarcoma of the lower jaw, the tumour has now, after 50 injections, representing 120 grammes of a 1 in 500 solution of methyl-violet, become so much smaller that it may almost be said to be cured. In the man with a cysto-sarcoma in the neighbourhood of the left sternoclavicular joint, only some remains of the growth were still visible, and these von Mosetig-Moorhof looked upon as formed of connective tissue. The patient with sarcoma of the pelvis is so much better that he has gone on a journey "to the south"; the tumour has shrunk to a fourth of its size. Among the new cases shown was one of cancer of the tongue and floor of the mouth; the patient had been quite unable to swallow. On February 14th injections of methyl-violet were begun, and after a total quantity of 26 grammes the foul smell had disappeared. The tongue was more movable, the ulcers were smaller, and the pain had entirely ceased. In a woman, aged 47, with an epithelioma of the face of ten years' standing which had destroyed the nose and infiltrated the cheek, extending up the left lower eyelid, after 9 injections (equivalent to 20 grammes), given during a period of 34 days, the whole diseased part was greatly improved, the new growth had in some places been replaced by normal granulations, and the patient was better in health. A woman, aged 60, with vesical cancer and profuse hæmaturia, had had 20 grammes of a 1 in 2,000 solution injected into her bladder; the bleeding had now ceased, and the patient was so much better that she could attend to her affairs. Since the first report, 16 cases of carcinoma (tongue, portio vaginalis uteri, etc.) and sarcoma (neck, etc.) have been treated in the same way. In all these cases subjective improvement was

quickly produced, and the objective result was also satisfactory. Two patients died, one from compression of the trachea by a large sarcoma, the other from venous hæmorrhage from a sarcoma of the parotid region, which, after becoming softer under the injections, suddenly increased in size and began to bleed. Von Mosetig-Moorhof now employs a 1 in 500 solution, which is filtered through asbestos before use. Of this he injects from 3 to 6 grammes, the injection being directed from healthy to diseased tissue. In two cases of cancer of the cervix uteri scraping was first performed, and the injections were afterwards made into firm tissue with Braun's needle. No unpleasant secondary effects have been observed; occasionally redness of the skin or even œdematous swelling has followed the puncture, but this disappears without fever or other inconvenience. No accident has occurred from entrance of the methyl-violet into the blood stream. Von Mosetig-Moorhof sums up the effects of the injections as follows: They cause complete cessation of neuralgic pains and slow and gradual shrinkage of the tumours—by elimination in ulcerated growths; by softening, fatty degeneration, and absorption in masses covered with healthy skin. Professor Billroth, in discussing the subject, said that while the cases exhibited had been materially benefited he could not allow that any one of them was cured. He had tried the plan in some 25 or 30 cases. In 3 cases of sarcoma some softening of the tumour was noticed but no absorption. In the cases of cancer he had seen no effect, not even as regards the smell. On the whole, he thought that equally good results could be obtained by injecting distilled water. In that way large goitres had sometimes been diminished, but the method was dangerous.

(291) Methyl-violet in Pulmonary Disease.

Dr. G. Masini, of Genoa, reports (*Gazzetta degli Ospitali*, March 11th, 1891) the results of some experiments as to the effect of methyl-violet in diseases of the lungs. He begins by referring to Professor Maragliano's observations as to its action in laryngeal tuberculosis (*Boll. per le Malattie degli Orecchi, Naso e Gola*, No. 6, 1890). Masini's experiments date from July and August, 1890. He began with very weak solutions (1 in 5,000), gradually increasing the strength up to 2 in 1,000. These solutions were injected into rabbits and guinea-pigs on which tracheotomy had first been performed. They were well borne up to a strength of 1 in 1,000; in stronger doses they seemed to be very injurious. The largest dose injected was 3 cubic centimetres of a 1 in 1,000 solution in rabbits, and 1 cubic centimetre of the same solution in guinea-pigs. Not having at hand pure cultures of Koch's bacillus, Masini injected tuberculous sputum, which the microscope showed to be swarming with tubercle bacilli. In some of the animals he injected the methyl-violet solution at the same time and on the two following days; in other cases three or four weeks were allowed to elapse before that was done. In the animals belonging to the former category no change whatever was observed either during life or after they had been killed; in particular no alteration of the lung tissue was noticed except in one case. On the other hand, of the animals belonging to the second series, some died from four to ten days after the injection of tuberculous sputum of "septic inflammation of the parenchyma of the lungs." Of those which survived, half were killed from thirty to forty days after the inoculation, and the rest received injections of methyl-violet every second day from the twenty-fifth to the fortieth day, when they also were killed. Neither in the one case nor in the other was any lesion found in the lungs. Masini admits that his experiments prove little or nothing as to the curative power of methyl-violet in pulmonary tuberculosis, but he hopes they may serve "as a guide to future investigation." With regard to absorption, he mentions that, after a few injections, the lung tissue assumed an intense violet colour, which persisted for some days after their discontinuance, disappearing first from the parenchyma, then from the bronchioles.

(292) Methyl-violet and Safranin as Antiseptics.

At a meeting of the Société de Biologie, on March 2nd (*Rev. de Thér. Méd. Chir.*, March 15th, 1891) MM. Hugounenc and Eraud reported the results of some experiments on the antiseptic power of methyl-violet and safranin. By testing these substances with cultures of staphylococci and gonococci they found the virulence of these organisms was attenuated when they were left in contact with them for a short time in a diluted solution. If the contact was prolonged and a more concentrated solution was used the vitality of the microbes was impaired and possibly destroyed. In order to produce a therapeutic effect, therefore, it is necessary that strong solutions of methyl-violet and safranin should be employed and that they should be left sufficiently long in contact with infected surfaces. In the treatment of whitlow, anthrax, and soft chancre, both substances act better in proportion to the frequency of the applications. In gonorrhœa excellent results are obtained by the injection of 1 in 100 and 1 in 150 solutions from 10 to 15 times a day. If only three or four injections are given in the day neither the character nor the duration of the discharge is influenced in any way.

(293) Syzygium Jambolanum in Diabetes.

Professor S. Lewaschew, of Kasan, has used syzygium jambolanum during the last two years in the treatment of diabetes mellitus, and reports (*Berlin klin. Wochenschr.*, February 23rd, 1891) very favourably of its effect. He has used the drug in 8 cases, one of which is given in detail as a type of the rest. The patient was a man, aged 62, who had suffered from symptoms of diabetes for five years. When admitted to the Kasan University Clinic he was much emaciated and very weak, and suffered greatly from thirst. The quantity of urine passed in the twenty-four hours was 8,380 cubic centimetres, its specific gravity was 1028, and it contained sugar to the amount of 688 grammes (8.3 per cent.). The body weight was 112 lbs. Syzygium jambolanum was given in the form of powder, the daily dose being 4 grammes; the seeds used for the purpose were old and mouldy. No other treatment was employed, and the patient was allowed to take his ordinary diet, which included abundance of sugar with bread and other amylaceous substances. The dose was gradually increased to 30 grammes a day, and after a fortnight the medicament was given in the form of a fluid extract from the same seeds. As no effect whatever was produced the treatment was discontinued. Some time afterwards a supply of fresh seeds was obtained, and powder made from them was exhibited in daily doses of 20 grammes. This time "an immediate very marked effect" was observed. Four days before the commencement of the treatment

with the fresh syzygium was begun the daily excretion of urine was 11 litres, the amount of sugar being 777 grammes; on the day following the first administration both the urine and the sugar were less, and in three days the diminution was very considerable. The body weight rose to 116½ lbs., and the man gained strength. For twelve days he took 20 grammes of the powder, then for three days 25, and finally 30 grammes for eight days. At this time the amount of urine had fallen to 3,800 grammes, and that of the sugar to 261½ grammes; the weight was 118 lbs. The treatment was then discontinued for a time, when at once the disease began to make headway again, the urine increasing to 10½ litres and the sugar to 840 grammes, while the weight fell to 115½ lbs. A further course of the powder (25 grammes a day for eight days) speedily enabled the patient to recover the ground he had lost. When discharged the amount of urine was 3,100 grammes, containing 211 grammes of sugar. When seen again a month later, during which time the treatment had been discontinued, the amount of urine was found to vary from 6,080 to 7,050, and that of the sugar from 455 to 547.5 grammes a day. In all the other cases similar effects were noticed, so that Lewaschew feels himself justified in concluding that when syzygium jambolanum is used in sufficient doses (from 20 to 40 grammes a day) in diabetes mellitus, diminution in the amount of the urine and sugar, and marked improvement of the symptoms, take place. The amelioration lasts for a longer or shorter period of time after the discontinuance of the treatment. He has not yet seen complete disappearance of the sugar in any case. No untoward secondary effects were observed.

OTOLOGY.

(294) The Use of Collodion in Relaxation of the Tympanic Membrane.

Lannois (*Ann. des Mal. de l'Oreille*, January, 1891) recommends the mode of treatment advocated by McKeown (British Medical Journal, December, 1879) as being not merely a means of maintaining the membrane temporarily in its place, but as curative of the condition. It has none of the objections to which the various other methods are open—astringent and stimulating instillations, paracentesis, multiple incisions, excision of flap, galvano-cautery—and it is related in principle to the cotton-wool pellet, which is sometimes efficaciously employed. He finds, with Keller (*Monats. für Ohrenheil.*, No. 1, 1890), that after removal of the collodion, the membrane is thicker and less mobile. He simply pours a few drops of a very liquid collodion into the ear, and dries up the excess with absorbent wool, having previously used the Eustachian catheter. He then again uses the catheter before the collodion gets quite set. The process causes no pain, and, in his experience (like McKeown's), has never caused contraction enough to tear the membrane, as feared by Katz (*Deutsch. med. Woch.*, No. 28, 1889).

(295) Audition and Facial Paralysis: Innervation of the Tympanic Muscles.

Gellé (*Annales des Mal. de l'Oreille, etc.*, November, 1890), in analysing the aural signs in a case of right-sided facial paralysis due to the pressure of an intracranial tumour, found the hearing for conversation normal on both sides. The tuning-fork on the vertex was heard best on the affected side, showing that the tensor tympani was not paralysed. The stapedius also was not completely paralysed, for the following reason: When the patient yawned energetically the sound of the tuning-fork opposite the meatus was diminished, whereas that of the tuning-fork on the vertex did not change, showing that the stapedius was still able to counteract the in-driving action of the tensor tympani (which takes place during the action of yawning). In this particular case Gellé's test for binaural accommodation gave a negative result on both sides: that is to say, that compressing the air in one meatus did not lead to enfeeblement of the sound of a tuning-fork held opposite the other meatus. From this he deduces that the reflex centre in the medulla controlling this co-ordination was affected.

(296) Experimental Avulsion of the Stapes in Animals.

Dr. Ricardo Botey, of Barcelona, read a communication on this subject before the International Medical Congress at Berlin in August, 1890 (*Annales des Mal. de l'Oreille*, January, 1891). In a patient with a large perforation he had twice performed the operation of mobilising the stapes with temporary benefit. While he was doing it for the third time the patient made a sudden movement and the stapes got broken, the larger part of the bone coming right out so as to hang by the tendon of the stapedius loose in the tympanum. The patient was next day quite free from his previous noises, and could hear considerably better. Botey experimented upon animals, chiefly fowls, extracting the stapes in some, and causing proliferation of bone round the stapes in others (artificial ankylosis of the stapes). The following are his conclusions: (1) avulsion of the stapes (in the animals experimented on) is a perfectly safe operation; (2) whether the membranes of the round and oval fenestræ are torn or not, and whether or not labyrinthine fluid escapes, a new membrane always forms over the fenestra thicker than before; (3) the animals hear well, though at a less distance than before; (4) animals from which the stapes, other ossicles, and membrana tympani have been removed hear better than those in which the stapes is ankylosed; (5) animals deprived of membrana tympani and other ossicles hear better without the stapes than with it; (6) if incomplete inflammation is set up (as by repeated pricking with a fine needle) around the fenestra ovalis, the plate of the columella ossifies and adheres to the walls of the fenestra, and at a greater depth than before; (7) the operation of avulsion would probably be equally safe on the human subject with a properly methodised *technique* and antiseptic precautions; (8) in support of this view he adduces the case related above; (9) the ossicles and tympanic membrane are not essential to hearing, but increase its range; (10) further experiment is necessary before the operation is performed on human beings, one difficulty being the degree to which, in many subjects, the stapes is hidden from view. From Helmholtz's calculation that the tympanic membrane is 15 to 20 times larger than the fenestra ovalis, he deduces that (normal hearing distance for medium voice being 20 to 22 metres) if the membrane and ossicles did not exist, the hearing distance would be 1 metre. This amount of hearing power is still useful, and would to many deaf patients be most satisfactory.

SUPPLEMENT
TO THE
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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(297) Pathogeny of Diabetes.

BOUCHARD has stated that there are no fewer than twenty-seven theories of the cause of diabetes. None are entirely satisfactory. The most important fact discovered in recent years is that diabetes follows extirpation of the pancreas in animals (v. Mering and Minkowski), and numerous clinical observers have since then noted pancreatic disease in conjunction with glycosuria. V. Mering and Minkowski, with most praiseworthy scientific reserve, have abstained from formulating any theory to explain the undoubted fact they have put on record, and Lépine (*Rev. Scientifique*, February 28th, 1891) has discovered an additional fact in relation to pancreatic extirpation and diabetes, which must be taken into account when the true explanation of these phenomena is forthcoming. Healthy blood possesses what he terms glycolytic powers. Fresh blood contains a certain percentage of sugar; if the same blood be allowed to stand at the body temperature for an hour before it is examined, a very considerable portion (20 to 40 per cent.) of this sugar has disappeared. This number (20 to 40) may be taken as the glycolytic power of healthy blood. It is considered that this sugar-destroying power is due to a ferment present in the corpuscles, but especially in the white corpuscles, as the glycolytic power of the chyle is as great as that of the blood, and the portions of the blood richest in leucocytes are richest in the ferment, which may be dissolved out from them by salt solution. In cases of diabetes the glycolytic power of the blood falls to 5, 2, or even 1. In animals without a pancreas there is a similar drop. The pancreas thus appears to be the chief source of the ferment. Lépine believes that the activity of a pancreatic cell is bipolar; by its internal extremity it pours the pancreatic juice into the ducts of the organ, and by its basal extremity it pours into the venous blood and lymph the glycolytic ferment. The absence or diminution of the sugar-destroying power of the blood dependent on pancreatic extirpation or disease is thus a factor, and perhaps an important one, in the causation of an over-abundance of sugar in the blood, and will certainly have to be reckoned with before the true pathogeny of diabetes is understood.

(298) Disease of Corpora Quadrigemina and Conjugate Deviation.

DR. GEE (*St. Barth. Hosp. Rep.*, vol. xxvi) records a case which seems to support Nothnagel's views as to the connection between disease of the corpora quadrigemina and conjugate deviation. His patient was a child who had had head symptoms for some time, and was admitted with, amongst other things, conjugate deviation of the eyes upwards. The right eye turned a little outwards also. There was constant vertical nystagmus. After death a pulpy gelatinous mass of a yellow-pink colour was seen at the base of the brain, extending over the surface of the cerebellum above and behind the medulla, and some lobular offshoots of the same growth seemed to involve portions of the cortex of the cerebellum at the sides of the medulla and pons. Further inward, between the crura cerebri, there bulged out a large bleblike sac, distended with fluid, as large as a pigeon's egg, and this was somewhat tightly constricted in front by the optic commissure. On opening the brain, the lateral and third ventricles were found to be considerably distended with fluid, and their ependyma was tough and fibrous. On passing backwards, and removing the structures above the transverse fissure, the corpora quadrigemina were seen to be flattened and distended over a mass of gelatinous pink new growth, which formed the anterior projecting extremity of a mass of similar new growth filling the whole cerebellum. The growth was a sarcoma.

(299) Interlobar Pleurisy.

PROFESSOR POTAIN contributes a paper to the *Union Médicale*, No. 27, 1891, dealing with the subject of interlobar pleuritic effusions. A typical case is recorded where pus is periodically evacuated through the bronchi, and in which there are evident signs of fluid effusion in front of the upper lobe of the left lung, but not in the general pleural cavity, the fluid being probably localised by firm adhesions. The diagnosis of such cases is always difficult, and a localised collection of fluid may frequently be mistaken for a solid mass unless due precautions are taken. They commonly occur as interlobar effusions or as effusions between the lung and the diaphragm. In either case they are almost always purulent. The occurrence of frequent rigors and a dry cough, if not due to congestion or accompanied by signs of a general pleurisy, should always suggest the possibility of interlobar effusion. Physical signs may not at first be present, but show themselves as the fluid approaches the surface. It is usually evacuated through the bronchi, setting up a certain amount of irritative bronchitis in the process. The opening into the lung is usually small and irregular, and it is rare for air to escape from

the lung into the abscess cavity. In cases where such escape does take place it generally happens that putrefactive changes are set up in the fluid which remains behind, and this necessitates an operation to evacuate and disinfect the cavity. In cases such as the one related, where there is no evidence of change taking place in the pent-up fluid, no operative measures are proposed. Unlike a general empyema, the interlobar form shows a marked tendency to spontaneous cure.

(300) Abnormal Intrathoracic Air Pressures and their Treatment.

Dr. Denison discusses this subject (*Sanitarian*, November, 1890) under the following heads: (1). In the fibroid process. In certain chronic lung diseases fibrous tissue is developed, and by its subsequent contraction not only the vesicular portion of the lung but also the bronchial tract is encroached upon, unless this latter be counterbalanced by increased pressure in the tubes. In high altitudes the deficiency of oxygen in the atmosphere increases the depth and rapidity of the respiratory movements, and therefore also the volume of air breathed. This fact, added to the absorbing and expanding influence of the dry cold air, shows a positive increase in the intrathoracic pressure. The beneficial effect of this upon the circulation must not be forgotten. A certain amount of daily exercise, regulated according to the individual, is necessary if the altitude be not too great, in order to bring into use both the complemental and reserve as well as the tidal air. (2). In collapse of the lung, as is seen in pleuritic effusion, etc. It would appear from experiment that air is rapidly absorbed from the pleural cavity, but it is not so evident how the previously collapsed lung re-expands. The author suggests that the elastic power of the lung is weakened by disuse, and that even less than the ordinary atmospheric pressures will cause air to enter the collapsed lung, hence the even greater value of high altitude treatment. In the absence of this the author recommends the pneumatic chamber, in which the patient, seated in a rarefied atmosphere, breathes air from outside; or, in a case of empyema, he uses a drainage tube with a platinum valve, which permits air and fluid to come out but nothing to enter. (3) and (4). Asthma and emphysema. The author says that simple or primary cases of asthma derive very decided benefit from high altitudes; that when complicated with emphysema the chances are favourable, and it is worth the trial, except when the accompanying emphysema is marked or valvular disease is present. With emphysema alone the conditions are very different. The intrathoracic pressure is already beyond the control of the walls of the air cells, and the increased pressure may crowd into the already emphysematous parts. It is really a denser air that is needed in emphysema. Dr. Denison concludes by describing an apparatus for the treatment of emphysema. Its object is the rhythmical and forcible compression of the chest in consonance with expiration.

(301) Homonymous Hemiopic Hallucinations.

In the *Journal of Nervous and Mental Disease*, No. 1, 1891, mention is made of a case of paranoia, or chronic delusional insanity, which had been observed by Dr. F. Peterson, in which the visual hallucinations always appeared in the right field. There was no hemianopsia. Dr. Peterson has been furnished with notes of a case in which hallucinations appeared in the dark fields of hemianopsia. A week after the latter had developed the patient began to see, in the dark fields, cats and dogs, and children arranging themselves in rows and forming processions. After the fourth week the hallucinations suddenly and permanently disappeared; hemiopia persisted.

(302) Eruptions in Dengue.

Dr. Rouvier, of Beyrout (*Journ. des Malad. Cut. et Syph.*, February, 1891) says the eruptions of dengue fever are not constant, he himself having noticed their absence in certain epidemics in more than half the patients. A rash occurs in the order of frequency (1) on the dorsal and palmar surfaces of the hands, wrists, and forearms, (2) on the face and neck, (3) on the chest, (4) on the feet and lower limbs. It is multiform in its types, resembling the eruptions of scarlatina, measles, roseola, papular affections, urticaria, petechiæ, and a number of mixed types. It may appear from the first to the fifth day, in the great majority of cases coinciding with defervescence. The development of the rash is often attended with itching. Desquamation is not constant.

SURGERY.

(303) The Influence of Laparotomy upon Tuberculosis of the Peritoneum.

At the end of last November, Dr. Parker Syms brought before the New York Surgical Society the case of a man, aged 25, who had been brought under his notice for the first time about twelve months previously. He was then suffering from what seemed to be an obscure disease, which on the performance of exploratory laparotomy was discovered to be tuberculosis of the mesentery and peritoneum. As the condition of the patient was regarded as hopeless, the incision was then closed. It healed primarily, and, to the surprise of Dr. Syms, the man began to improve from the day of the operation, and finally appeared to be quite cured of his trouble. In his comments on this case (*New York Medical Journal*, February 7th, 1891), Dr. Syms expressed his conviction that the improvement which had taken place in this man was the direct result of the operation. He bases this belief on the clinical history of the case, and also on the written testimony of others concerning the beneficial effect of laparotomy in instances of peritoneal tuberculosis. No theory has yet been found, Dr. Syms thinks, to offer a satisfactory explanation of the good results of laparotomy in such cases. From a careful study of the reports of laparotomy in tuberculosis of the peritoneum, particularly those contained in the almost complete collection of cases published by König, Dr. Syms has come to the following conclusions: (1) that the danger of the operation is very slight; (2) that sepsis is not so likely to occur after operations on a diseased peritoneum as after those on a peritoneum that is quite healthy, on account of the pathological changes that have taken place in the former; (3) that tuberculous infection of the external wound does not occur; (4) that disinfectants are useless, and that drainage, as it is likely to result in a permanent sinus, should not be practised; (5) that in unsuccessful cases the operation at least does no harm; (6) that established—not advanced—pulmonary tuberculosis is an indication for, and not against, the operation; as by the improvement thus gained, the patient can better resist the

phthisis, and, if this latter disease be but incipient, may recover; (7) laparotomy is the proper treatment for cases of peritoneal tuberculosis, as in some unknown way it exerts a most beneficial influence upon the disease, which results in a large proportion of cases in cure, and in nearly all in marked improvement.

(304) Primary Cancer of the Trachea.

In the *Wien. med. Woch.*, 1891, No. 4, will be found an account, by Dr. Pick, of an extremely rare condition, so rare, indeed, that by many pathologists it has been stated not to exist at all. The patient, who was suffering from cancer of the trachea, was a man, aged 57, who complained of severe dyspnœa. The laryngoscope revealed reddening and swelling of the lower part of the laryngeal mucous membrane. On August 26th, 1890, tracheotomy was performed low down. Even then but little relief was afforded by an ordinary tracheotomy tube, and it was not until a long catheter was passed some distance down the trachea that complete relief was obtained. On October 13th, 1890, as the breathing was fairly comfortable and no further symptoms supervened the catheter was removed. Two days later another attack of dyspnœa rendered reintroduction of the tube necessary, but before it could be passed in the patient died. The necropsy revealed the fact that the trachea was completely imbedded in a cancerous mass, which stretched back to the vertebral column and was invading the œsophagus, though it had not yet ulcerated through into it. The larynx was quite free above and the lungs below. The growth appeared to have begun in the deeper parts of the mucous membrane of the trachea, and, after causing it to swell, ulcerated and blocked the trachea, spreading to the surrounding parts as above described.

(305) Gastro-Enterostomy.

On December 8th, 1890, Dr. Wyeth presented to the New York Academy of Medicine a patient, aged 41, upon whom he had performed about a year previously gastro-enterostomy, for the relief of a supposed fibrous stricture of the pylorus. The patient made a rapid recovery, but had for two months suffered from a recurrence of the vomiting. This return of one of the old symptoms could not, Dr. Wyeth holds, be attributed to any contraction of the opening established between the stomach and small intestine, as at the operation he had taken care to make the openings very large. The patient digested his food well, and the vomited material was simply mucus. He had been treated by lavage for dilatation of the stomach, and was improving under this plan. By a critical analysis of the comparative mortality from gastro-enterostomy and resection of the pylorus, Dr. Wyeth has been led to the conclusion that the latter operation had been performed a sufficient number of times, and that, whilst attended with fearful fatality, it had done very little to prolong lives not directly lost by the operation.

(306) Rupture of the Small Intestine.

Dr. Nelson (*St. Louis Courier of Medicine*, vol. iii., No. 5) reports the case of a young man who was crushed in a railway accident. He vomited shortly afterwards, the vomited matters not containing any blood, complained of great abdominal pain, and died in about three-quarters of an hour. On *post-mortem* examination about two quarts of blood were found in the peritoneal cavity and about 12 feet from the ileo-cæcal valve the small intestine was found to be torn; 3 feet from the pylorus there was another tear. It was noteworthy that none of the other viscera were ruptured, though at the time of the accident both the stomach and bladder were full.

(307) Catheterismus Posterior.

Under this title Dr. Goldmann (*Beitr. z. klin. Chir.*, 1891, p. 460) gives an account of a case in which no instrument could be passed up the penis into the bladder, but in which, after a suprapubic opening had been made into the bladder, a catheter was passed down into the perineum from the bladder and the stricture excised, with an excellent result. The man had suffered some years previously from gonorrhœa, and though he had had trouble with his stricture from time to time, had not suffered from permanent stoppage until some few months before he came under Dr. Goldmann's care. Another surgeon had performed suprapubic puncture, and so relieved for a time the urgent symptoms, but a severe cystitis ensued after a while, causing great pain both in the perineum and in the lower part of the abdomen, as well as some erysipelatous kind of swelling of the lower abdominal wall. Under these circumstances, as soon as he came into hospital a fairly stiff elastic catheter was introduced through the abdominal puncture, which was by this time large enough to admit the little finger. It was, after some little trouble, manipulated along the prostatic urethra as far as the stricture, and another instrument was passed down along the urethra to meet it. The intervening stricture was then excised, and the cut ends of the urethra united by catgut. The swelling above the pubes speedily disappeared, and in about three weeks the patient was able to leave the hospital. The plan, as the author remarks, is no new one, but instances in which it is applicable are but few. The manœuvre is somewhat aided by pulling on the penis, and if possible hooking up the anterior wall of the bladder, as by this means the prostatic opening of the urethra is rendered more funnel-shaped, and is consequently more easily traversed by the catheter. References are given to some analogous cases, together with a full account of the different conditions to which this method is applicable, as well as the reasons which render it more likely to be attended with success now than formerly.

(308) Paranephric Cysts.

A paper under the above title was read last year by Dr. Robert Abbe before the New York Surgical Society, and has now been published by him in separate form. In it there is an account of two cases of this nature successfully treated by operation; one occurred in the male and the other in the female; both were apparently in relation with the kidneys, though sufficient doubt was felt to render it advisable to open the abdomen in order to obtain an accurate idea of the surroundings. In the first instance, a lumbar opening was made at the time of exploration, and the cyst drained from behind, the abdominal incision being at once closed: but in the second case the cyst, which was in close contact with the under surface of the liver, burst and speedily emptied itself, though its contents did not get into the peritoneum. Its edges were stitched to the abdominal incision, and a speedy recovery ensued.

(309) Nephrorrhaphy.

Under this title Dr. Keen has published in separate form with additions a paper which appeared last year in the *Annals of Surgery* for December, 1890. It embraces the account and results of some seventy to eighty cases of this kind. In it he endeavours, and with considerable success, to prove that the symptoms which such patients present are in reality due to the mobility of the kidney, and are not, as is so often stated, the result of mental worry and hysteria. He deprecates operation until the ordinary methods of treatment have failed, and urges the need for securing the kidney at both ends, and not merely by one stitch applied haphazard. Such a mode of operating too often leaves the kidney able to wander to some extent, and quite sufficiently to give rise to twisting of its pedicle. It possibly accounts for some of the recorded failures.

MIDWIFERY AND DISEASES OF WOMEN.

(310) Retained Placenta: Double Vagina.

Dr. Thévard (*Nouvelles Archives d'Obstét. et de Gynéc.*, December 25th, 1890) describes a case where retention of the placenta occurred in a poverty-stricken prolific woman, aged 34, at her seventh labour. The first labour was a breech case, with premature rupture of the membranes; the remainder were normal till the sixth, where the placenta was retained nine days, and severe flooding followed soon after delivery. The doctors and midwives who had attended her had overlooked the malformation. At the seventh labour she bore a healthy male child destitute of any prepuce. On examining her Dr. Thévard observed that the vulva was healthy. The vagina was divided into an anterior and posterior division. The posterior, alone employed functionally, was open and led to a cervix uteri. The anterior was closed by a hymen with two apertures; the septum between the divisions of the vagina was complete. Dr. Thévard concluded that the womb was divided in the same manner. The midwife had dragged upon the cord; the placenta did not come away; Dr. Thévard found, when he pulled it, that the fundus was cupped. Ergot was given, as there had been bad flooding at the previous labour, and the cord was again pulled, but it broke. A 1 per cent. solution of carbolic acid was thrown up. On the third day a piece of placenta was removed by two fingers, but the cervix rapidly contracted, so that the tip of the forefinger could not be passed into the uterine cavity. Carbolised injections were thrown up every six hours. On the ninth and following days rigors occurred. By the sixteenth day she was better. A fœtid discharge followed. A month later rigors recurred, the legs and the right arm became œdematous, pulmonary œdema set in, but there was no albuminuria. The placenta came away piecemeal, but not thoroughly till the fiftieth day. Dr. Thévard boldly insists that in cases of retention of placenta without hæmorrhage patience is the correct treatment. The case which he describes appears to corroborate the assertion of previous observers that women with double uterus and vagina may be prolific. The malformation is also, he points out, likely to entail great difficulties in the delivery of the placenta (Glospool, Heilly) through hour-glass contraction or retraction of the cervix, both being results of the bifidity of the uterus. Polaillon further notes that faulty insertion of the placenta and breech presentations (as in Dr. Thévard's case, first labour) may be due to this malformation. Dr. Thévard's patient was in a squalid abode, and was of defective intellect, yet she survived her seven labours (three very dangerous), which all took place, it appears, in her uncleanly home, and five children survived and lived in the same room.

(311) Successful Extirpation of Cancerous Uterus in Childbed.

Dr. H. Löhlein (*Centralbl. f. Gynäk.*, March 7th, 1891) describes a case where the uterus was affected with cancer in a pregnant woman. A firm mass occupied the posterior part of the cervix. The patient was 43 years old, and was sent to hospital on November 15th, 1890, about a month before the completion of term. Preparations for Porro's operation were made, in case the cervix might prove undilatable. But pains came on and the fœtal head was found bearing well down. The forceps was applied, and the patient easily delivered of a living child on November 20th, no flooding followed. On December 5th the cancerous mass was scraped away as much as possible. On December 18th the uterus was entirely removed. First, the cervical canal was well washed out with a 5 per cent. solution of carbolic acid, and plugged with iodoform gauze. The os was sewn up with three sutures. A very large number of vessels required ligature, and the uterine tissue was exceedingly brittle, so that its entire removal proved difficult. The wound in the vaginal wall was united on both sides by a suture and drained by a loose roll of gauze. There was high temperature on the second and third day, but no other serious symptom. On December 31st, the patient left the hospital in good health. On January 11th, 1891, she was well and strong, the cicatrix was healthy, and there were on both sides of the pelvis traces of para- and perimetritic exudation. Dr. Löhlein comments on the case and compares it with Spencer Wells's and Zweifel's operations for the removal of the cancerous uterus in mid-pregnancy.

(312) Flooding or Metrorrhagia: Should Thirst be Quenched?

Dr. G. Jorissenne (*Archives de Tocologie*, January, 1891) combats the principle of allowing plenty of drinking water to patients exhausted by flooding, whether after labour or in fibroid disease. The practice is advocated on physical and therapeutic grounds. Yet its defenders admit that there is diminution of the plasticity of the blood in these cases, and administer steel and other remedies in order to increase that plasticity. The absorption of quantities of water into the circulation must have the opposite effect. Dr. Jorissenne maintains that the patient should not be permitted to drink freely. Slices of sugared lemon or acidulated drops should be administered in order to quench thirst. The patient, he adds, should be kept in the recumbent posture, with the arms raised; from time to time ammonia may be inhaled. This treatment is especially advisable in women subject to deficiency of coloured blood corpuscles. Eighteen years ago Dr. Jorissenne tried his line of treatment on a woman of 53, who was dying from hæmorrhage after abortion at the third month. She was a stout, anæmic multipara, of violent temper. There was difficulty in removing the placenta, and both plugging and astringent intra-

uterine injections failed to check the bleeding. The patient fell into a desperate condition. Dr. Jorissenne noticed that she was continually drinking tumblersful of cold water. Considering that the source of hæmorrhage was being fed, he strictly forbade all drinks, raised the arms, rubbed the lips with vinegar and lime-juice, gave the patient ammonia to inhale, and plugged the uterus again. No drink was allowed for three hours. The patient then rallied and recovered, and is now alive, a healthy old woman. He was successful in two other cases of flooding; one after abortion between the second and third month, the second after a lingering labour mismanaged by an ignorant midwife. These cases were less serious than that above described, but Dr. Jorissenne was able to commence his treatment much earlier. He admits that in very plethoric patients this dry treatment of flooding might be harmful if too rigidly enforced.

(313) Undetected Absence of Internal Organs.

Dr. Liebmann (*Centralbl. f. Gynäk.*, December 20th, 1890), describes a curious instance of extreme arrest of development in a married woman, which remained undetected on account of one circumstance, and was suddenly discovered through another. A woman, aged 45, came under Dr. Liebmann's care for a tumour in the left groin. It was elastic, of the size of a man's fist, and not tender, but gave rise to pains which radiated down the thigh. It proved to be a lipoma, although at first it was taken for a hernia. When 27 years old she had married a widower, aged 60, and when Dr. Liebmann examined her she had no idea that she was in any way malformed. In exploring the relations of the fatty tumour, however, Dr. Liebmann discovered that though the mammæ were well formed and the external genitals present, though ill-developed, the vaginal orifice was absent. There was no indication of any vagina. On careful rectal exploration no trace of any uterus or vagina could be detected. The patient had never menstruated, nor felt anything like the menstrual molimina. In other respects it appears that she was strong and healthy.

PHARMACOLOGY AND THERAPEUTICS.

(314) Carbolic Acid Spray in Lymphangitis.

Dr. E. Schwartz reports (*Rev. Gén. de Clin. et de Thér.*, March 4th, 1891) two cases of very severe lymphangitis with diffuse cellulitis of the lower limbs, which he treated successfully by Verneuil's method of keeping the parts under prolonged and frequently repeated applications of carbolic spray. The following is the mode of procedure: the limb is placed on some impermeable material in such a manner that the spray can run easily off the part; the rest of the body and the bed are protected with mackintosh. One or two spray producers filled with a watery solution of carbolic acid from 1 in 40 to 1 in 80, are then placed at a distance of about a yard from the part to be acted on, and allowed to play on it for an hour or an hour and a half two or three times a day. Signs of carbolic poisoning must be carefully looked for, and in any case the strength of the solution and the length and frequency of the applications must be diminished as the inflammation subsides. This treatment should be combined with free incision and with wet antiseptic dressings. The patient's strength must, of course, be supported by proper constitutional treatment. Used in this way, M. Schwartz says the method has an excellent effect, rapidly checking and modifying serious septic processes. He compares the action of the spray to that of a prolonged antiseptic bath, and he thinks it indicated in all cases in which continued local immersion is impracticable.

(315) Therapeutic Effect of Metabolic Products of Tubercle Bacilli.

H. Scholl (*Wiener klin. Woch.*, 1891, No. 10), gives the results of his analysis of tuberculin, from which he comes to the conclusion that it contains peptone, hemi-albumose, glycerine, and common salt, but that it contains no sugar. Working on the results obtained by these analyses, he prepared cultures of the tubercle bacillus in a fluid containing 10 per cent. peptone, 5 per cent. of glycerine, 5 per cent. of common salt, and 1 per cent. of extract of meat. With this he inoculated an animal, and then he separated the metabolic products by means of porcelain filters, and injected them into animals that had, and had not, been inoculated with tubercle bacillus cultures. As a result of his experiments with these metabolic products prepared from peptone-glycerine cultivations of tubercle bacilli, and then reduced to a fourth of the original bulk by evaporation, he found that in very small doses they give rise to very decided reaction in cases of advanced tuberculosis in animals, as evidenced by the marked alterations in temperature. Even in the earlier stages of the tuberculous affection a similar but less intense reaction is obtained with this substance, whilst in perfectly healthy animals the reaction is absent or only very slight. Localised tuberculous nodules take on a similar reaction, and may then disappear entirely. The general condition of tuberculous animals begins to improve very rapidly after the injection of these metabolic products. The number of experiments made was not very large.

(316) Effects of Tuberculin on Monkeys.

M. Henocque (*Rev. de Thér. Méd. Chir.*, March 15th, 1891) has recently tried the effect of tuberculin in a monkey which presented no symptom of pulmonary phthisis. Two days after the first injection the animal, which had exhibited the characteristic reaction, presented dulness and a few *râles* at the right apex. After the third injection the dulness was more marked on the right side, and began to be perceptible at the left apex. Soon all the symptoms of acute phthisis manifested themselves with intense fever, the animal dying ten days after the last injection after losing a tenth of its weight during that time. The total amount used was 6 milligrammes of the diluted fluid. On *post-mortem* examination, four tuberculous nodules of the size of a pea were found in the right lung, and caseous pneumonia involving two-thirds of the organ in the left. In both cases the tuberculous lesions were surrounded by a zone of very intense red hepatisation. Pieces of the caseous tissues were injected into two guinea-pigs, in one after mixture with sterilised water, in the other with diluted tuberculin. Both animals showed signs of cutaneous and glandular tuberculosis.

M. Capitan has also (*ibid.*) experimented on two monkeys with tuberculin. One which was already tuberculous received in the course of ten days three injections of 1 milligramme. No reaction occurred, and it died on the tenth day. On *post-*

mortem examination, the abdomen was found to be the seat of severe tuberculosis; the lungs were healthy except at the anterior edge of the left one, where there were some grey granulations surrounded by a zone of hepatisation. Another monkey, supposed to be tuberculous, received injections up to 4 milligrammes without showing the slightest reaction.

(317) A Rare Antipyrin Rash.

Veiel (*Archiv f. Derm. und Syphilis*, 1891, Heft. 1) describes a case of a patient in whom antipyrin always produced a peculiar skin rash. Soon after the dose was taken there was severe itching of the palms of the hands, the lips, the soles of the feet, and of the glans penis. The lips became œdematous, and large bullæ formed on them; two bullæ also formed on the hard palate and between the toes. On the soles and palms there were deep red urticaria-like spots with sharp contours, which itched severely but did not form bullæ. The itch lasted three to four days; the bullæ on the lips dried in four to five days, those in the toes in about eight days; the spots on the palms, soles, and glans penis desquamated in large scales after about ten days, and had vanished in about three weeks.

(318) Combination of Paraffin with Lanolin.

Paschkis (*Arch. f. Derm. u. Syph.*, 1891, Hft. 1) has found that the special advantages of lanolin are increased when diluted with paraffin. The formula which he found best for a basis is lanolin 66, liquid paraffin 6, ceresin 1, distilled water 65.

(319) A New Method of Using Static Electricity.

Dr. W. J. Morton (*Journal of Nervous and Mental Disease*, No. 1, 1891) has devised a circuit breaker, consisting of a pair of metallic ball electrodes, introduced at any point of the circuit, having a narrow air space between the balls. The circuit "makes" when a spark overcomes the resistance of the intervening air. This circuit breaker also removes the site of spark formation from the patient's body; it affords time, infinitely brief, to the prime conductors, and condensers if used, to change; it regulates the frequency of the discharge, and, with the greatest delicacy, the strength of the current. The Franklinic interrupted current thus created, when applied to a motor point or nerve, produces tetanus with a minimum of pain. If a large group of muscles be thus put in action, a peculiar sensation of lightness and buoyancy is felt in the member. The author also claims that its effects upon the independent muscular excitability are associated with one upon the lymphatics, shown clinically by the relief of muscular and articular rheumatism, neuralgia, etc.

(320) Tellurate of Sodium in Sweating of Phthisis.

Professor Combemale (*Bull. Gén. de Thérap.*, January 15th, 1891) has used tellurate of sodium, $Na_2TeO_4.5H_2O$, in phthisical and other sweating. It was first recommended by Neusser (*Wien. klin. Wochenschr.*, 1890), who gave one-third or two-thirds of a grain in pill once daily. Combemale gave it up to nearly one grain per dose, and tried its effects in eleven cases. His conclusions are: (1) It is a powerful anti-sudorific; (2) a dose of nearly one grain gives the best results; (3) it gives rise to digestive troubles, and especially to a strong garlic odour in the breath. All the compounds of tellurium cause a very disagreeable odour in the breath, and this must always be a bar to their employment, as it is very persistent and disagreeable.

PHYSIOLOGY.

(321) Localisation of Function in the Nervous System.

Professor Victor Horsley and Mr. Gotch (*Croonian Lecture to the Royal Society*, 1891) give a further account of their researches upon the localisation of functions in the mammalian nervous system, as determined by an electrical method. Their experimental procedure has been to expose a particular region of the nervous system (for example, brain cortex) of an etherised cat or monkey for excitation by electrical, chemical, or mechanical stimuli: and to lay bare another part (for example, spinal cord) in which the electromotive changes evoked by the stimulation were recorded by aid of a Thomson's high-resistance reflecting galvanometer or a Lippmann's capillary electrometer. When necessary, any given conduction path was eliminated by section. Amongst the results obtained from observing the electrical changes in the cord induced by excitation of the cortex or corona radiata are: (1) the localisation of cortical areas of representation in relation to the various regions of the cord; (2) bilaterality of representation in the central nervous system, as shown by the electrical changes in the two halves of the cord, consequent upon excitation of the brain or cord. By quantitative comparison of the electrical changes (and so indirectly of the nerve impulses) in the spinal cord transmitted as a result of minimal stimuli applied to its fibres, after severance of the cord from the encephalon, the proportionate existence of direct conduction paths in the various columns of the cord was ascertained. The diffusion of the nervous impulses to collateral paths, and probably to centres, produced by increase of the stimulus, was investigated. The high degree in which unilaterality of representation exists in the spinal cord, and the spread of impulses from one posterior column to the other, and from one posterior column to its neighbouring lateral column through centres, are some of the general conclusions derived from this part of the research. From estimation of the electrical variations in the cord evoked by minimal excitation of a mixed nerve or its roots (combined with the elimination method mentioned above) the following results were shown: (1) complete failure of centripetal impulses to reach the cord by the central end of the anterior root; (2) the mode of conduction, direct and indirect, in the cord of centripetal impulses passing up the posterior root; (3) the localisation of the direct path of afferent impulses in the posterior column of the same side as that of the nerve or root excited; (4) localisation of the indirect path of afferent impulses in both the posterior columns and the lateral column of the same side as that of the nerve excited; (5) the proportionate development of both systems of paths in the two sides of the cord. Expressed in percentages of the total transmission, the proportion was found to be: Posterior column of same side as excited nerve, 60 per cent.; lateral column of same side, 20 per cent.; posterior column of opposite side, 15 per cent.; lateral column of opposite side, 5 per cent. The electrical changes in a mixed nerve, or its

roots, caused by excitation of the spinal cord showed: (1) marked quantitative diminution of impulses emerging from the cord by the anterior roots, whether those impulses originated in the cortex, corona radiata, or lateral column; (2) localisation of direct transmission of impulses in the posterior column, and passing out of the impulses into the posterior roots of the same side; (3) the proportionate development of the direct and indirect paths in the individual columns of the cord which pass out into the mixed nerve of the one side; (4) kinæsthesis in the posterior roots when the spinal motor centres are excited by strychnine or electricity. The chief general principles evolved from their researches are stated by the lecturers in the following terms: (1) unilateral character of the representation of function in the paths of the central nervous system; (2) the physiological characteristics of the regions of a nerve centre: (*a*) the kinæsthetic activity of the afferent region of the centre; (*b*) the obstruction offered by the afferent region, including the field of conjunction, to the transmission of impulses through the centre.

(322) Absorption of Iron.

C. A. Socin (Hoppe-Seyler's *Zeitschr. f. physiol. Chemie*, Bd. xv, Hft. 2) says the absorption of iron is known to occur in the alimentary canal, some believing that the iron enters by the lymphatic vessels, and that its secretion occurs at the kidneys in the urine. The methods employed in the determination of the iron are given in detail, as also a series of experiments upon dogs and mice. With the mice the experiments were conducted with great care, five different varieties of food being given: (1) food absolutely free from iron; (2) the same iron-free food with hæmoglobin added; (3) the same food, but with hæmatogen added; (4) the same food, but with the addition of ferric chloride; and (5) ordinary hard-boiled yolk of egg, together with iron-free starch, cellulose, and water. Of his series of experiments, these are the results: (1) the organic iron combinations of yolk of egg are absorbable; (2) filtered urine, when ordinary diet is taken, contains no proportion of iron quantitatively estimable; (3) serum albumin prepared from hæmoglobin-free serum is devoid of iron; (4) it is as yet impossible to prepare an artificial diet containing all the food stuffs essential to life; (5) simple comparisons of the quantity of iron in the food and the excreta respectively leave as yet the question as to the relative absorbability of iron combinations undecided.

(323) A Modification of the Phloroglucin Decalcification Method.

Phloroglucin, an isomeride of pyrogallic acid, has been used for various histological purposes, but a mixture of this substance with mineral acids has been comparatively little used as a decalcifying mixture, as the results obtained are stated to be uncertain. Dr. Haug points out, however, that this may be obviated by dissolving the phloroglucin in the acid and then diluting with water, instead of first dissolving in water—in which the substance is only sparingly soluble—and then adding the acid (*Centralblatt f. allg. Pathologie u. pathol. Anat.*, Bd. ii, p. 193). One gramme of phloroglucin is dissolved in 10 grammes of pure nitric acid, with the aid of heat; 50 cubic centimetres of distilled water are then added. The mixture thus contains 20 per cent. of acid; for very hard bones the proportion of acid must be increased to 35 per cent. Hydrochloric acid may be used instead of nitric acid, but it is not so good, and more of the acid—30 to 45 per cent.—is necessary. Such mixtures decalcify bones in the course of a few hours, teeth in one or two days. The decalcified structures may be then embedded in paraffin or celloidin and sections prepared in the usual way.

BACTERIOLOGY.

(324) Bacillus Pyocyaneus.

M. G. Gessard (*Annales de l'Institut Pasteur*, Tome v, No. 2, 1891) gives the result of some interesting experiments on the bacillus pyocyaneus. He started with the idea that the colour fermentation might depend upon much the same or similar conditions as alcohol fermentations as given by Pasteur. He cultivated the bacillus pyocyaneus in various media, and was able to obtain considerable differences as regards the formation of colour. Cultivating what he calls his normal bacillus pyocyaneus in bouillon, he obtained pyocyanin and green fluorescence, this latter alone appearing in cultures on egg albumen, whilst in peptone gelatine media the fluorescence is excluded, pyocyanin predominates, and is accompanied by the formation of a greenish pigment. The addition of glucose to this latter medium prevents the growth of the pyocyanin even, and allows only of the development of the greenish pigment. He found that by suitable methods of cultivation he could obtain more or less permanent varieties of the bacillus, one of which will give pyocyanin alone, another which gives fluorescence alone, and a third which gives neither fluorescence nor pyocyanin. Some of these results were obtained by the use of antiseptics, as in Wasserzug's experiments, whilst he also found that heat exerts a similar action, though not in such a specific manner as do the changes of media, the fluorescence resisting the action of heat to a greater degree than the pyocyanin. He was able to obtain the following varieties from his first type: a fluorescent variety by the action of heat upon the "race" type, a similar variety by passing it through a rabbit, a pyocyanic variety by cultivation of the original type on albumen, a variety without pigment by spontaneous degradation of the pyocyanic variety, by the action of heat on this same variety, by the passage of the pyocyanic variety through a rabbit, and by the action of heat upon the fluorescent variety. He arrives at the following conclusion: the pyocyanic bacillus has two chromogenic functions which he has studied, and a third the study of which he has not yet completed. The first, the pyocyanic, is characteristic of this organism, whilst the second, the fluorescent, is common to this and to several other microbes. Both these colours may be formed when the organism is grown in broth; peptone is more favourable to the pyocyanic, but interferes with the fluorescent function. Albumen is favourable to the fluorescent, but interferes with the pyocyanic, function. By continuing the growth on one or other of these media, the pyocyanic or the fluorescent function may be gradually eliminated or confirmed as a variety character. The author insists on the importance of these observations in connection with the modification of the virulence of those organisms, of which it is hoped that protective vaccines may ultimately be prepared.

(325) Musk and Malignant Œdema.

Dr. J. van Cott, jun., (*Centralbl. f. Bakt. u. Parasitenk.*, Bd. ix, No. 9, 1891), in view of the fact that certain patients are recorded to have died with symptoms of malignant œdema from the subcutaneous injection of tincture of musk, was led to search for the bacillus of malignant œdema in the various tinctures of that material supplied by the apothecaries, and from the musk sacs of the musk rat itself. He succeeded in two cases in obtaining the œdema bacillus in infusions of the musk sacs that had been removed with a proportion of skin attached, and where, in consequence, dirt, dust, and hair might easily have obtained access to the infusion; numerous other organisms were also separated. From the samples of musk obtained from the apothecaries, the malignant œdema bacillus was never cultivated.

(326) Examination of Water for Typhoid Bacillus.

Dr. Finkelnburg (*Centralbl. f. Bakt. u. Parasitenk.*, Bd. ix, No. 9, 1891) points out that in examining water for typhoid bacillus the sediment should always be used as well as the water itself. In a certain village, N——, there was an outbreak of typhoid fever amongst the boys of the school, following a similar outbreak in a neighbouring group of houses. There was found to be a dangerous proximity of the spring from which the water was derived to the closets in the schoolyard. Examining the water by the ordinary gelatine plate method, the author was unable to find any traces of the Eberth-Gaffky bacillus in any of his cultivations; but on allowing the water to stand and making cultivations from the sediment, there appeared, among others, characteristic colonies, the bacilli of which, in staining and microscopic appearances, could not be distinguished from those of the typhoid bacillus. The author considers that this examination of deposited matter should never be omitted, as he thinks that it is probable that many of the germs must be held mechanically suspended with the solid constituents in the water rather than free in the water itself, as these organisms are almost invariably introduced along with solid sewage or other organic matter. He thinks such examination is specially necessary wherever a search is made for pathogenic micro-organisms.

DERMATOLOGY.

(327) Lupus Erythematosus.

Leloir (*Journ. des Mal. Cut. et Syph.*, vol. ii, p. 129) says the anatomical changes in lupus erythematosus are of a secondary nature, the chief seat of the disease being in the cutis, which is diffusely infiltrated with embryonic cells, particularly in its upper layers. The cells are more especially grouped along the vessels. Part of them undergo fatty and colloid degeneration, the elastic and connective tissue undergoing a similar change. The upper layer of the cutis, however, becomes atrophic and disappears. In the vessels obliterating endoarteritis develops; many capillaries are considerably dilated and filled with red corpuscles, which partly escape through the vascular wall, and mix with the embryonic cells. The sebaceous glands undergo fatty degeneration, and in some cases entirely disappear. A similar process takes place in the sweat ducts. In the interior of the nerve fibres, embryonic cells are sometimes found. The changes in the epidermis cause it to atrophy. Leloir has never seen any transition between lupus erythematosus and lupus vulgaris, and has never succeeded in discovering tubercle bacilli under the microscope, or in inoculating tubercle with affected skin.

PATHOLOGY.

(328) Inoculation of Cutaneous Tuberculosis.

Dubreuilh and Auché (*Archives de Méd. Exp. et d'Anat. Path.*, 1890, p. 601) report a very instructive example of tuberculosis produced by direct inoculation. A woman, aged 23, who was nursing a person dying of phthisis, was in the habit of washing the handkerchiefs of the patient, which were saturated with expectoration, by rubbing them on the backs of the flexed fingers of the right hand. Two days after the death of the patient, a small red swelling was noticed over the phalangeal articulation of the third and fourth fingers of that hand. The swelling burst, giving exit to serous pus. Six days later there was pain in the axilla, and the beginning of glandular inflammation which ended in the glands suppurating, the abscess opening of itself at the end of three weeks. Two months from the beginning of the affection two nodules formed on the outer surface of the forearm and front of the shoulder, which, after becoming as large as a small nut, opened and discharged serous pus, and gave rise to fistulæ. Five months later, on the dorsal surface of the first and second joints of the forefinger there was a red surface, the centre of which was covered with hard white thick scales, and a similar lesion on the corresponding joints of the ring finger. On the metacarpo-phalangeal joint of the ring finger were two small nodules as large as a hemp seed, hard and movable under the skin. Three other nodules were felt on the dorsal surface of the metacarpus, following the direction of the extensor tendon of the ring finger, another nodule as large as a pea on the dorsal surface of the wrist, on the outer edge of the forearm a reddish violet *plaque*, with loosening of the skin and a fistulous orifice in the centre. On its anterior surface there were nodules arranged in two lines in the radial and ulnar borders formed by subcutaneous nodules as large as a grain of wheat movable under the skin. On the internal border of the biceps there was a fluctuating tumour as large as an almond, adherent to the reddened skin. In the armpit there was a glandular fistula. Over the anterior border of the deltoid there was an ulcerated tuberculous gumma. The rest of the surface of the skin was healthy. The vesicular murmur at the left apex in front was slightly roughened, and there was dulness over the right base behind. The two *plaques* on the finger were excised, and all the nodules of the forearm and arm were excised or scraped, and nearly all the axillary glands were removed. Histological examination showed the lesions of papilloma in the warty *plaques* of the fingers without tuberculous nodules in the deep layer of the cutis, but with a mass of epitheliomatous cells surrounding a giant cell in the middle layer, and granulation tissue and numerous tubercles in a cutaneous nodule. Tuberculous nodules were found in the axillary glands, and rare tubercle bacilli in the pus from the abscess in the substance scraped from the ulcerated gumma in the axillary glands, and fewer still in the sections of the papilloma of the fingers. Inoculation of the pus from one of the softened gummata of the forearm under the skin of two guinea-pigs produced tuberculous lesions, which were successfully reinoculated in a series.

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OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(297) Transmission of Tuberculosis from Animals.
GALTIER (*Lyon Médical*, No. 10, t. lxvi, 1891) has come to the conclusion that the muscle juice of tuberculous animals may contain the virus even in those cases in which it is impossible to demonstrate its presence by inoculation; for he has found that, in the attempts to produce tuberculosis with the juice from such flesh, he has only twice in a large number of experiments succeeded in rendering the guinea-pigs tuberculous by employing doses of 4 cubic centimetres; but that although it might not produce the disease when injected in a dose of 4 cubic centimetres, it would produce it when 12 cubic centimetres or more was injected. He also finds that if, instead of the juice, he inoculates fragments of the meat itself, tuberculosis may be set up, the virus apparently being distributed unequally in the different groups of muscles. From the fact that such large quantities of the juice had to be used to produce tuberculosis, and from the fact that animals fed on this tuberculous meat seldom or never developed tuberculosis, he comes to the conclusion that the number of bacilli in the muscles is exceedingly small, and that it is only in advanced cases of tuberculosis that any very great danger is run from the consumption of meat from tuberculous animals. In the same paper Galtier gives a series of experiments which appear to show that tuberculosis as a hereditary disease is extremely rare, though it does occur; but that even where the animals born of tuberculous parents are tuberculous at birth, they have received the virus during their intrauterine life. Of nineteen experiments, only four were successful; of these he gives a short account. Two female rabbits were injected with tuberculous material into the veins; they were then placed with a male rabbit, and one of them became pregnant, the other did not; the pregnant animal was killed at the end of six weeks, and was found to have twelve fœtuses, all of which were tuberculous. Of two female rabbits and six guinea-pigs similarly treated, three guinea-pigs became pregnant, but in only two were the fœtuses affected. Of three other rabbits, only one became pregnant, the offspring here also being tuberculous; in a fourth couple, only one became pregnant, and its offspring were tuberculous. The presence of the tubercle bacillus in each case was determined by inoculating a number of guinea-pigs with the juices taken from these animals. The results were in every case positive.

DR. GALLAVARDIN, on the other hand (*Lyon Médical*, No. 10, t. lxvi, 1891), gives some facts that have a certain interest concerning people who used the milk of a tuberculous cow (20 years of age). For ten years it had supplied milk for Dr. Gallavardin and his household of from fifteen to eighteen people. During the later years of that period the quantity of milk fell off, and eventually it had a very bad taste; the animal was condemned, and sent to the slaughter house, where on examination after death tubercle of the peritoneum, liver, spleen, lungs, and pleura was found. The milk from this cow had been used almost to the very last, and one patient, a little girl, aged 6, who was affected with pulmonary phthisis, consumed a very considerable quantity, and improved on the diet. The tuberculous condition of the cow was not suspected before it was killed, and the udders were apparently not affected. Dr. Gallavardin also gives statistics to show that death from phthisis is as frequent in Lyons at the present day as it was before the meat from tuberculous animals was confiscated.

(298) Pulmonary Tuberculosis and the Uric Acid Diathesis.
AN interesting paper by Dr. Alfred Sokolowski, of Warsaw, appears in the *Deutsches Archiv für klinische Medicin*, Bd. 47, Hft. 5 and 6, on the connection between pulmonary tuberculosis and the uric acid diathesis, a subject which, as the writer observes, has been left untouched for many years. The reason assigned for this neglect is the fact that illustrative cases do not occur in hospital practice but only come under observation during several years of private attendance on the patients. Three cases are quoted in detail, showing how the manifestations of the uric acid diathesis are apt to ensue in cases of very chronic phthisis and even in some cases where the disease is only threatened. In a longer series of cases the writer found that the course of the tuberculous disease in association with gout was markedly different from its uncomplicated course. Even in some of the cases of advanced changes in the lungs there was no rise of temperature throughout. Hæmoptysis occurred frequently, but respiratory symptoms were conspicuous by their absence, except in some of the very advanced cases. The physical signs indicated progressive induration, generally on one side only, without any marked disintegration. The suggestion is thrown out that the presence of the uric acid diathesis may be the determining cause why in any given case induration takes place instead of disintegration, a fact of which no acceptable explanation has as

yet been offered. The diagnosis of such cases is easy when disease is established, but the condition of the lung should be carefully looked to in any case of gouty nature where continued wasting has been noted. Prognosis is good. Treatment must be directed essentially to the diathetic condition. It is known that urolithiasis may become developed in the course of chronic phthisis, and several causes have been suggested in explanation, amongst others the diminution in the oxygenating surface, which might prevent the complete removal of effete products. But this theory holds equally good for other forms of lung disease in which the uric acid manifestations do not appear, and is therefore untenable. The writer believes that it is due to a combination of circumstances which are common to cases of chronic phthisis, namely, the want of sufficient exercise, the excessive consumption of nitrogenous food, and especially of milk, producing disturbance of digestion and obstruction to the hepatic function. In one class of case the urolithiasis is attended with dyspepsia, obstinate constipation, passage of excessive amounts of uric acid or even the occurrence of renal colic, local œdema and pain about joints, etc., without any exacerbation of the chest disease. In another class these symptoms are accompanied by chronic bronchial catarrh, usually without any degree of fever. The treatment recommended is chiefly dietetic, and the writer counsels the avoidance of fatty and starchy foods, not of meat or albuminous foods. The ordinary diet for phthisis is just that which is most likely to produce gouty changes. In the gouty cases, milk, cream, butter, eggs, cheese, farinaceous foods, and those to which much sugar have been added are directly harmful. Meat of all kinds, well baked bread, fish, vegetables, including fresh peas or beans, a limited amount of potato, apples, and some of the less sugary fruits are permissible. Neither spirits nor beer should be allowed. Plain water or slightly alkaline natural waters form the best drinks. Exercise is a most important factor in treatment, and for that reason a residence amongst mountains is advisable. Massage and the due regulation of bowels are of great importance. Baths, other than vapour baths, are useful. Special symptoms, such as renal colic, etc., must be met by special treatment.

(299) Echinococcus of Lung: Spontaneous Evacuation: Closure of Cavity.

Professor L. Revilliod reports a case (*Rev. Méd. de la Suisse Romande*, February 20th, 1891) of echinococcus in the upper lobe of the right lung of a girl, aged 16, with a very strong family history of phthisis, both parents having died under the age of 26, as well as other members of the family. The girl had always been delicate; had had pleurisy at the age of 3, and whooping-cough 5 years later, after which a patch of dulness over the upper lobe of the right lung was recognised and diagnosed as tuberculous. Notwithstanding the greatest care, residence at suitable health resorts, etc., the dulness spread as time went on, and amphoric breathing appeared over the whole of the dull area in front and behind. In the month of June, when feeling otherwise in fair health, the patient was seized with sudden feelings of suffocation and uncontrollable cough, followed by expectoration of large quantities of white viscid fluid, which continued for three-quarters of an hour, and was then succeeded by violent vomiting. The patient during the attack was very ill. The face and extremities were cold and blue, and after recovery from the first collapse the temperature rose, and the pulse increased to 130. The expectoration continued at intervals, and there was so much nausea that food could not be retained in the stomach, and rectal alimentation had to be resorted to. Two days later rigors and excessive fœtor of the expectorated matters set in, with much cold sweating. The physical signs of a cavity were very marked over the previously dull area, *râles* and crepitation being added to the amphoric breath sounds. Still the patient had not the facial aspect of a phthisical person, and the smell of the sputum—that of sulphuretted hydrogen—was uncommon. Microscopic examination of the sputum at once revealed the presence of hooklets, but no tubercle bacilli could be found. The nature of the case was thus made clear, and in due course the expectoration ceased, and the patient made a good recovery, all signs of disease of the apex of the lung disappearing. The only treatment adopted was the administration of deodorants, and the careful regulation of the patient's position so as to ensure the emptying of every part of the cavity. The presence of the echinococcus was explained by the close association when a child with pet dogs known to be suffering from tænia. Up to the present time no phthisis has appeared in the case, notwithstanding the strong family history.

(300) Malformations of the External Ear in the Sane, and in Imbeciles and Idiots.

In order to determine whether abnormal formation of the pinna actually possesses such value as an indication of degeneracy as is attributed to it by many writers—notably alienists—Dr. Váli (*Allgem. Wien. med. Zeitung*, March 17th, 1891) examined 500 healthy men, an equal number of healthy women, and several hundred imbeciles and idiots. Of the healthy persons, 26 per cent. males and 15 per cent. females had malformed pinnæ. Only 50 per cent. of the idiots and imbeciles had normal pinnæ. Amongst the numerous variations observed, Dr. Váli found that prolongation and pointing of the tip of the ear were twice as common in the mentally defective class as in the sane; shortening, elongation, or bridging of the scaphoid fossa followed the same rule. Projection of the antihelix above the level of the helix was especially frequent in imbeciles; in idiots it occurred about three times more frequently than in sane persons. Partial or complete fusion of the helix with the antihelix existed twice or three times as often in imbeciles and idiots as in sane individuals. His observations further showed that in most cases the anomaly is bilateral; if confined to one side, that side usually is the left. It is rare for more than one species of deformity to exist in the same pinna.

(301) Recovery from Lightning Stroke.

Dr. L. M. Palmer describes the following case of recovery from lightning stroke (*Boston Med. and Surg. Journ.*, March 5th, 1891). The patient, a man, aged 36, was seated on a two-horse mowing machine at the moment he was struck; the off horse was instantly killed at the same time. The man did not fall from his machine, but his head tipped backward. He was seen in a quarter of an hour. His pulse was 100, weak, regular; respirations 40, stertorous; mouth and throat full of mucus; pupils widely dilated, eyes fixed, staring, insensible to touch; general muscular rigidity;

thumb of left hand turned in; body warm but extremities cold; no involuntary discharges. Injections of brandy and aromatic spirits of ammonia were given subcutaneously at intervals, and he was briskly rubbed. Gradually the pulse became slower, the breathing less stertorous, and in half an hour he began to move, first his hands, then his arms, feet, and legs, until he was writhing and twisting his body into all sorts of postures, and opening his mouth very wide. At the end of another half hour, after a dose of one drachm of bromide of potassium, he was quieter, and was then taken home. On arrival he vomited, and continued to do so at intervals through the night, and was otherwise restless; towards morning he was able to recognise his friends. Examination next day showed a gash 1 inch long in the occipital region, going down to the bone; the hair was burnt or singed around, and the skin blistered over his right scapula, and burned down the arm as far as the elbow, below which the mark of burning was lost in the fleshy part of the forearm. The electric fluid had probably divided, passing down the right arm to the wet reins, and so to the horse, which was instantly killed; the other portion must have passed down his spine and left leg, for there was a deep slough in the external portion of the calf of the left leg, with pain, tenderness, and weakness in the lumbar region and genital organs. His pulse, respirations, and temperature were normal, and he was able to answer questions intelligently. He made a slow recovery some three months later, his right hand and arm remaining weak, though he could use them. He had also great loss of memory and loss of sexual vigour.

(302) Abnormal Cardiac Action as a Result of Disturbed Innervation.

Dr. Groedel (*Berliner klinische Wochenschrift*, 1890, No. 21) treats this subject under the following heads:—(1) Nervous palpitation no organic cardiac disease being present. It is seen in chlorosis. It may also be brought about reflexly through disturbed digestion, etc. It may be due to excessive indulgence in tobacco, tea, or coffee, to gout (Fothergill), or to severe mental depression (Fraenkel). Theoretically a slight irritation of the accelerating nerves or a functional paresis of the inhibitory nerves of the heart could produce this condition, or, indeed, the influence of the vasomotor centres upon the arterial system could bring it about. Dr. Groedel thinks, however, that an unstable equilibrium of the innervation factors, together with impossibility of a rapid readjustment, is the most important element in the production of this nervous palpitation. (2) Tachycardia. Here there is considerable and long-lasting increase in the cardiac rate without there being necessarily any subjective sensation of palpitation, and the attack is not dependent on mental impressions. Tachycardia may be permanent or paroxysmal. The heart is generally healthy. Most cases, as Gerhardt has pointed out, are to be referred to paralysis of the vagus nerve, combined, if the heart-rate be very rapid, with irritation of the sympathetic. A few slighter forms may be attributed to the latter cause alone. (3) Bradycardia or infrequency of the pulse. This may be physiological or symptomatic, as in arterial sclerosis, etc. It may certainly exist without cardiac disease. Angina pectoris is now attributed to disease of the coronary arteries, as against the theory of its being due to a neuritis of the cardiac plexus. Huchard recognises a form of purely nervous origin, which he calls pseudo-angina. He also admits certain nervous influences in the production of true angina, and even refers one form to spasm of the coronary arteries. He thinks that not only the heart muscle, but also the nerves, degenerate in cases of atheroma of the coronary artery.

(303) System Sclerosis of the Spinal Cord.

Putnam (*Journal of Nervous and Mental Disease*, February, 1891) has put upon record eight fatal cases of spinal cord disease, in four of which there was a necropsy. In all there was found to be chronic sclerosis in the posterior and lateral centripetal and centrifugal long tracts, partly diffuse and partly systematic acute and recent degenerative changes in adjacent areas, a diffuse degeneration of varying severity, and uncertain degeneration in the grey matter of the cord, and probably in the intervertebral ganglia, and moderate degeneration in the nerve roots and peripheral nerves. The author is inclined to regard the sclerosis in the long tracts as the primary condition. He comments upon the practical importance of the recognition of these mixed and irregular types of spinal cord disease; he refers to authors who have previously described them, and he points out that the clinical symptoms must vary with the position of the sclerosis and degeneration. The possible causation is discussed, but the author does not come to any satisfactory conclusion.

SURGERY.

(304) Loose Cartilage in Joints.

Professor Riedel, of Jena (*Centralblatt für Chirurgie*, No. 12, 1891) brings forward strong evidence in favour of the view he holds that the presence of so-called loose cartilage in a joint is due in most instances to a primary separation of a fragment of cartilage or bone from the articular extremity of one of the long bones, and that such primary separation is usually caused by injury of a relatively slight character. It has been frequently asserted that such separation can result only from the application of undue violence, a view certainly favoured by the anatomical conditions of healthy joints, and the results of experiments on the dead body. In cases in which there is no history of very severe injury to the affected joint, the presence of the floating articular body is attributed by many surgeons to a secondary and retarded separation of a portion of injured bone or cartilage caused by a slow inflammatory process. The author holds that the question whether small circumscribed fragments can or cannot be detached from the articular extremities of long bones by the application of merely slight force is not to be settled by experiments on the dead subject, and in the production of such injuries muscular action is likely to play an important part. The results of clinical investigation have, however, it is held, removed all doubt on this point, as several cases have been reported of direct separation, through slight traumatism, of fragments of osseous and cartilaginous structure from the articular extremities of long bones. In an instance recorded by Poulsen, a small loose body composed of bone and cartilage, which fitted exactly into an abnormal depression on the outer condyle of the femur, was removed from the left knee-joint, within twenty-four hours of a slight injury to the lower

extremity caused by a blow from a football. Similar bodies were removed from the elbow and knee by Schüssler and Teale, in one case on the eighth and in the other on the seventeenth day. To these cases the author adds a recent one treated by himself, in which he removed a floating body composed of cartilage from the left knee, which had been swollen and very painful during an interval of eighteen days after a sudden twist of the joint. The author, whilst allowing that a contused portion of bone or cartilage may be slowly detached by chronic inflammation and shed into an articular cavity, holds that this mode is much less frequent than that in which the separation occurs as a direct result of injury. He is of opinion that many reported cases of supposed secondary demarcation and slow detachment of fragments of bone and cartilage will, on careful study, be found to be really instances of primary separation. The latter condition, it is supposed, has as a rule occurred in cases in which sharp pain and considerable intra-articular effusion follow the injury, whilst, on the other hand, mild symptoms, followed after an interval by the usual indications of the presence within the joint of a loose body, would point to secondary separation as a result of osteochondritis. It is pointed out, however, that a portion of bone or cartilage, even when completely detached, may remain *in situ* for a time, and so fail to give rise to any marked symptoms.

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(305) Indications for Trephining the Mastoid Process.

Dr. Schwarze (*Deutsche militärärztl. Zeitschrift*, Heft vii, 1890) gives the following indications for opening up the cells of the mastoid process: (1) In recent inflammation of this process with retention of pus in its cells, when the local application of ice and superficial incision have failed to reduce the swelling, pain and fever. (2) In cases of secondary inflammation of the mastoid process, the external meatus should in the first place be emptied of any retained pus. If in adult patients this treatment, together with the application of ice, fail after a week's trial, recourse should be taken to operative treatment. (3) The mastoid process should be trephined in cases of chronic suppuration with repeated swelling, superficial abscess, or fistula, and spreading of the pus to the neck, external meatus, or pharynx, even when there are no apparent symptoms indicative of immediate danger. (4) The mastoid process, even when healthy at its surface, should be opened up in cases of retained pus and cholesteatoma, on the first appearance of symptoms pointing to dangerous complications in the middle ear. (5) The operation should be performed for the prevention of fatal consequences in cases of incurable foul suppuration in the middle ear, although no other symptom may present itself save a persistent ill odour.

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(306) Traumatic Neurosis.

To the new series of *Volkmann's Sammlung klin. Vorträg.* has recently been added an interesting scheme by Professor F. Schultze, of Bonn, of traumatic neuroses and neuro-psychoses, in which the views of Oppenheim and Strümpell are criticised and opposed. Schultze, whilst acknowledging that psychoses and neuroses in varied forms may be brought about through injury, holds that there is no single and sharply defined morbid condition which can be designated as traumatic neurosis, and that it is better to call each affection by its own name than to apply to all this common title. The symptoms of concentric restriction of the field of vision, and of anæsthesia, are not presented in many cases of functional disease following injury, and are not characteristic of traumatic cases. Affections regarded as "traumatic neuroses" are not infrequently, especially in cases of slight peripheral injury, merely the products of simulation and exaggeration. The present need of some objective criteria for distinguishing simulation from re ality in cases of asserted traumatic neurosis can, it is believed, be compensated only by a thorough investigation of the collective morbid manifestations, and by a careful critical estimate of the credibility of the statements made by the patients.

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(307) Old Age as a Factor in Surgery.

Dr. N. F. Graham, of Washington (*Medical News*, February 7th, 1891), reports eight cases observed by himself, and refers to others published in this country, which show wonderful recuperative powers in very old men and women. With regard to advanced age being a contra-indication to surgical operation, it is held that if the patient be in fair general health, with an hereditary tendency to long life, mere old age is not a good reason for withholding treatment, either with the view of prolonging life, or for the relief of acute suffering. As a rule, old people, Dr. Graham states, tolerate pain better than the young, but with them shock is more severe and not so quickly rallied from. In shock lies the greatest danger to the aged, and if the patient rallies, the prognosis, so far as repair is concerned, may be considered good. They endure operations for pathological conditions, such as new growths, remarkably well. Their recovery from accidental wounds is not so rapid.

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(308) Anæsthesia by a Combination of Chloroform and Ether.

Prof. Kocher (*Korrespondenzblatt für Schweizer Aerzte*, No. 18, 1890) discusses combined chloroform and ether narcosis, and holds that the mixture of ether, chloroform, and alcohol is uncertain as an anæsthetic, and objects to the exclusive use of ether on the grounds of the inflammability of this agent, its tendency to aggravate any pre-existent disease of the respiratory organs, and the necessity in many instances of cutting off, for the sake of effective administration, the supply of atmospheric air, and thus of causing more or less asphyxia. The best mode of producing anæsthesia, Kocher holds, is to administer chloroform first and afterwards ether. Chloroform is given at first because in most cases narcosis is produced much more readily and comfortably by this agent than by ether. The inhalation of chloroform should invariably be followed by that of ether in cases of prolonged operation, when there is no absolute contra-indication against the use of the latter agent. Kocher warns against a subsequent use of chloroform, or frequent changes from one agent to the other, as by ether, not less than by chloroform, the heart is rendered more sensitive to further doses of the latter anæsthetic. Kocher sums up his views on the administration of anæsthetics in the following conclusions: (1) As a rule, no attempt to produce general anæsthesia should be

made without close examination and thorough preparation of the patient; (2) it is advisable, and in many cases necessary, before administering an anæsthetic, to arouse the action of the heart by giving alcohol or some other stimulant; (3) the patient should always be laid in the horizontal position: (4) chloroform should never be given in cases in which the patient has not been sufficiently prepared; in tooth extraction, reduction of dislocation, and, indeed, most minor surgical operations, ether should always be substituted for chloroform; (5) in cases of cardiac disease and of disturbance of the heart's action, not associated with respiratory disturbances, ether should be given and not chloroform; (6) in patients suffering from diseases of the respiratory organs, associated with hyperæmia of the tracheal and bronchial mucous membrane, ether should be rejected and chloroform administered in its place; (7) in cases of prolonged surgical operation chloroform should be carefully administered at first, the state of anæsthesia being subsequently maintained by the continuous inhalation of small quantities of ether; (8) the inspired air should never be allowed to become saturated with the vapour of chloroform; (9) when, in any case in which the operation is likely to be a long one, the administration of ether is contra-indicated and chloroform must consequently be used, a previous injection of morphine should be practised in order that anæsthesia may be produced by a smaller quantity of this agent.

MIDWIFERY AND DISEASES OF WOMEN.

(309) Early Tubal Pregnancy and Rupture.

Dr. E. Gussner (*Central. f. allgem. Pathol.*, March 15th, 1891) bases upon a case of tubal pregnancy an instructive scientific monograph on the relations between the villi of the chorion and the maternal tissues. The clinical history of the case is briefly recorded. The patient, aged 30, was suddenly seized with crampy pains, when her period, previously regular, was ten days overdue. A doctor was sent for, but before he arrived she was dead. Hæmorrhage from rupture of a gravid tube was discovered at the necropsy. The patient had been married four years, and had borne three children without difficulty; the youngest was three-quarters of a year old. The uterus was over three and a half inches in length; its mucous membrane was transformed into a true decidua; a uniform round swelling bulged from the left Fallopian tube, beginning four-fifths of an inch from its uterine end. The swelling was seven-tenths of an inch in length, and three fifths of an inch measured transversely. A small ragged hole was found on its upper aspect. In the interior of the tubal sac there was found an ovum which bore villi in considerable numbers. The embryo could not be found, though the clots and fluid blood in the peritoneal cavity were very carefully searched. The left ovary contained a large corpus luteum. The right tube and ovary were healthy.

(310) Successful Cæsarean Section in Case of Tumour of Bony Pelvis.

Dr. von Swiecicki, of Posen (*Der Frauenarzt*, December, 1890) describes a case where normal labour, in a woman, aged 32, was rendered impossible through the presence of a pelvic tumour, presumably an enchondroma, as it had existed over ten years. It sprang from the right sacro-iliac synchondrosis. Ten years previously the patient had borne a child, labour was difficult, and the child's cranium was flattened on one side. The second pregnancy, which began after more than nine years' interval, was associated with severe sacral pain. It continued till term. Labour pains were regular. The os was found pushed against the symphysis, the tense membranes protruding like a coil of intestine. A hard tumour, the size of a fœtal head, filled the rest of the pelvis. As the pains were violent, threatening rupture of the uterus, the operation was at once performed. A sterilised napkin was passed behind the uterus as it was pulled out of the abdominal wound. The elastic ligature was applied, but not tightly, lest it should cause subsequent atony of the uterus through damage to the muscular tissue. The uterine incision wounded the placenta, which lay against the anterior wall. Dr. von Swiecicki separated it carefully and extracted the child in the unruptured membranes. The midwife took charge of the child and divided the funis; it was half asphyxiated but recovered and survived. The uterus at once contracted and, without any washing or dusting with antiseptics, it was sewn up with sterilised silk. The sutures were passed through the entire thickness of the uterine wall, within the space of two-fifths of an inch twelve deep and twelve superficial sutures were inserted, so that the total number of sutures was considerable. The operator, exploring the pelvis, satisfied himself that the tumour was irremovable; indeed it was very difficult of access. Its long duration counterindicated malignancy. The uterus was reduced, after the elastic ligature had been removed, and the abdominal wound was sewn up. Very little blood was lost and the operation was completed in thirty minutes. The operator took care to avoid mechanical irritation as far as possible. Instead of sponges, sterilised absorbent gauze pads were used to soak up blood. The operation was performed antiseptically. The patient was able to leave her bed on the twentieth day. In medical literature 12 cases are recorded where enchondroma of the pelvis so seriously impeded labour as to demand Cæsarean section. Only in 5 were both mother and child saved, according to Dr. von Swiecicki; but strictly speaking the number is 6, as Dr. Mestenhauser operated twice on the same patient, and saved her and the child on both occasions.

(311) Cocaine in Labour.

Dr. Bousquet, of Marseilles, has published (*Arch. de Tocol.*, December, 1890) a series of cases of labour treated with cocaine. In 1885 Dr. Doléris first noted in public the analgesic action of cocaine on the genital tract. He, as well as Dubois and Jeannel, had good results in cases where the cervix of women in labour was rubbed with a 4 per cent. cocaine ointment. Hartzhorne, in 1887, found that a mixture of 6 parts cocaine, 24 vaseline, and 20 of glycerine acted very well if syringed over the cervix. Dr. Bousquet maintains that cocaine is not thoroughly satisfactory as a local analgesic unless injected hypodermically. He has therefore adopted the practice of injecting half a Pravaz's syringeful of a 1 in 20 solution of cocaine into each labium majus from 5 to 10 minutes before the spontaneous delivery of the head is expected to occur, or the same time before any artificial intervention to expedite labour. His experience extends to 32 cases. Of

these 22 were normal labours and 10 required the forceps, turning, or the basiotribe. The results were most satisfactory, especially in the artificial labours. In some of the cases a plug soaked in the cocaine solution was also placed against the cervix. Dr. Bousquet has little fear of any bad effects from the application of cocaine in labour. The small doses which he employed were not such as have ever proved poisonous in any kind of patient; anæmic subjects, and persons subjected to the influence of cocaine when sitting upright, have suffered from alarming symptoms. The patients in lying-in cases are constantly recumbent.

(312) Mammary Abscess, Suppurating Umbilicus, and Inflamed Fingers.

Professor Tarnier (*Journal des Sages Femmes*, February 16th, 1891) shows how a year's statistics were spoilt in his lying-in wards. He found long ago that compresses soaked in weak sublimate lotion, and applied to the mammæ of lying-in women, proved very efficacious in preventing inflammation of the breast. He instituted the routine application of these compresses in his hospital a year ago, and just as the twelvemonth was drawing to a close, without a single mammary abscess, two cases occurred. Both were cured without incision. Professor Tarnier attributed the first case to a dirty compress. The patient's child had suppuration of the umbilicus, and it seemed as though it had infected its mother, or *vice versâ*. The head midwife, however, found that the nurse had a sore finger, and the child had also sore fingers. The mother suckled the child. In a neighbouring ward, a child, eight days old, lay ill with infiltration and suppuration of the stump of the cord. It was then found that the nurse had an inflamed finger. Hence, in two adjacent wards, there were two nurses with bad fingers and two children with suppurating navels, sufficient causes for further trouble, such as occurred in this instance. Hence, in lying-in hospitals, not only must routine practice be rigidly enforced, but nurses' hands should be carefully inspected.

DISEASES OF CHILDREN.

(313) Early Diagnosis of Tuberculosis.

Dr. M. Mirinescu, in the *Revue Mensuelle des Maladies de l'Enfance* (March), points out that the existence of enlarged lymphatic glands in various regions of the body (axilla, groins, etc.)—"peripheral polyadenitis"—may afford considerable assistance in doubtful cases in making the diagnosis of tuberculosis in children. If the child is in an emaciated debilitated condition, and if there are no superficial lesions to account for the glandular enlargements, he considers the evidence in favour of tuberculosis very strong. In 15 out of the 16 cases of this nature examined, the glands were proved by experimental inoculations to be tuberculous. This peripheral polyadenitis may be observed in children as young as 14 or 15 months.

PHARMACOLOGY AND THERAPEUTICS.

(314) Koch's Treatment in Phthisis.

The official reports contributed from four of the chief clinical practices in Berlin, those of Drs. Gerhardt, Leyden, Senator, and Fraentzel (*Die Wirksamkeit des Koch'schen Heilmittels gegen Tuberculose*, Berlin, 1891), deal for the most part with cases of phthisis, which number 204 in all, in various stages of the disease. On comparison of these reports it will be found that in the use of Koch's fluid a remarkable irregularity was observed, both as regards the amount of fluid which would produce reaction in similar cases, and as regards the rapidity with which the patient became tolerant of it. In some there was no reaction until a comparatively large dose was reached, while in others the reaction became more violent with each repetition of the same dose, so that in a considerable proportion of cases the amount had rather to be diminished than increased as the treatment was proceeded with. The ordinary amount used at the first injection was 0.002 cubic centimetre, but even this amount had sometimes to be reduced. A positive opinion is expressed by Professor Gerhardt that it is impossible to tell beforehand to what extent any given patient will respond to treatment, and Professor Leyden makes it equally clear that the amount of disease present in the case is no criterion of the degree of reaction which may be expected. As a general rule the febrile reactions followed in from eight to twelve hours, but the exceptions to this were numerous, some being delayed for as long as forty-eight hours. In many cases where the reaction had been rapid at first, tolerance was soon established, and very little response to subsequent injections was noted. It would seem as if the patients rapidly became tolerant of the fluid, notwithstanding the fact that the amount of bacilli in the sputum remained unaltered. In some cases the fever appeared to be increased by the treatment, remaining high even during the intervals between the injections. In other cases, where the temperature was already of a high range, the injections seemed to produce but little effect upon it. In the majority of cases the temperature returned to normal or subnormal after the period of reaction was over. In one or two of Professor Senator's cases the type of case was altered from quiescent to florid, with high and persistent fever. As a rule, if no marked disturbance of temperature took place, there was very little variation of pulse and respiration, but in other cases the increase of the rate in both was found to keep pace with the rise and fall of the temperature except in some of Professor Leyden's cases, where there was increase of pulse and respiration without much increase of fever. Alteration of the heart's action was frequently noted, depression being very marked in some instances, with hyperdicrotic pulse. Professor Senator considers that the heart's action is the most trustworthy guide to the regulation of the time and quantity of the dose. The general symptoms produced by the injections were lassitude, frontal headache, and pains in limbs, the latter being sometimes present without any rise of temperature. In a few cases excessive sweating was noted, and in some others a passing attack of jaundice. Rashes on the skin were but rarely seen; they usually presented a scarlatinoid appearance. Herpes labialis appeared several times. The digestion was sometimes disturbed, and vomiting was of more frequent occurrence. Tightness of the chest was a very common symptom, and increase of sputum was, as a rule, observed after injection. The character of the sputum became altered in the successful cases, the muco-purulent giving place to the simply mucous expectoration. Hæmoptysis

was rarely observed. Enlargement of the spleen was only noted in very few cases. Enlargement of lymphatic glands occurred frequently, sometimes after each injection. No marked change was observed in the urine, except as regards quantity, which varied considerably. Transient albumen appeared in one or two cases where chronic renal disease was present. Evidence of local changes in the lungs and pleura was not infrequently found. Localised pain, "stitch" in the side, and definite physical signs of local increase, are recorded, the physical signs in many cases remaining permanently. Of the results obtained after a course of treatment lasting four weeks and a half, the general opinion of the four observers is favourable as far as general improvement of early cases is concerned. Cough was frequently diminished, sputum became less, sweating ceased, and weight was gained. In some cases the gain of weight was continuous, in others it was only marked during the intervals between the injections. None of the observers record an absolute disappearance of bacilli. In many instances their number was very small throughout, and occasionally none could be found; but sooner or later they made their appearance again. The physical signs of disease in the lungs have generally improved, except in the unsuccessful cases. Signs of catarrh have cleared up, but no positive change has been noted in the more permanent physical signs, and in no single case have such signs cleared up altogether. Where increase of physical signs has taken place the increase has generally been permanent. Gerhardt's conclusions are to the effect that as an aid to diagnosis the injections have a relative value, but cannot be looked upon as absolutely positive. The prognosis of the treatment is good when the higher doses of the fluid can be reached without very marked reaction, and when there is progressive gain of weight, with diminution of bacilli in the sputum. The prognosis is bad in those cases which become permanently febrile under the treatment, and in which there is great lassitude, heart failure, with frequent vomiting and loss of appetite and body weight. In such cases the dose should be kept within very low limits, or the treatment altogether abandoned. Professor Leyden records a long series of control cases, sixty-seven in all, in thirty-one of which a decided reaction took place. Of these there were some which gave evidence of unsuspected tubercle after the injections, others in which only a family history of tuberculous disease could be traced, but in the rest there was no indication whatever to suggest the presence either of actual tuberculous disease or of any tendency to it. He concludes that the fluid has an undoubted specific action, since the greater number of the tuberculous cases reacted to it, while the greater number of non-tuberculous cases did not so react. Thus its action may "materially assist" the diagnosis of tubercle. The fluid is not dangerous if its administration be properly graduated, but it may be attended with marked depression of general health and extension of local manifestations of disease.

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(315) Treatment of Diphtheria.

LOEFFLER (*Deutsch. med. Wochen.*, March 5th, 1891), reviewing the results of the various methods of the treatment of diphtheria, points out that hitherto it has been impossible to give the standard by which the therapeutic action of remedies on diphtheria could be measured, but he considers that now the characteristic bacillus has been recognised, it will be an easier matter to determine the action upon it of these different remedies. His experiments on the bacillus were carried out on those grown at a temperature of 37.5° C. on his mixture of 4 parts ox blood serum and 1 part neutralised bouillon, to which 1 per cent. of peptone, 1 per cent. grape sugar, and 5 per cent. of common salt had been added. A small portion of the diphtheria bacillus was added to the condensed moisture present in a tube of this material, the needle was passed down into this and then over the oblique surface of the serum, when the usual growths occurred as early as eight hours after the inoculation. On such a culture the fluid to be tested was poured until it rose to the upper margin of the serum, and was left for times varying from ten to thirty seconds—the time that a gargle can usually be applied. He used young and old cultures, and found that remedies which immediately destroy the fresh-sown cultures prove totally inactive against the thick cultivation layers, even when left in contact with them for a long time. After trying all the remedies that have from time to time been recommended, such as corrosive sublimate, nitrate of silver, chlorine, iodine, the volatile oils, and a number of other organic preparations, Loeffler found the following to be amongst the most efficacious (though he considers that there is still much to be done in connection with this question of the destruction of the diphtheria bacillus). Mercuric sublimate is valuable, and its use has been followed by the best results, as has also a 3 per cent. solution of carbolic acid in 30 per cent. alcohol. With this treatment carried on for a few days, the bacilli in the membrane were rendered incapable of growing when introduced into Loeffler's artificial medium, and the general condition of the patient was considerably improved. Equal parts of alcohol and oil of turpentine to which 2 per cent. of carbolic acid has been added gives similar, but not quite so good, results. A 3 per cent. carbolic acid solution is also useful for gargling in the angina of scarlet fever, and Loeffler says that with a moderate amount of care there is no danger of any renal complication resulting from its use in such cases. He also recommends the painting of the membrane with an even stronger (5 per cent.) solution of carbolic acid, 2 per cent. of bromine, 1 per cent. of chlorine, or a watery solution of creosol, especially of the O and P creosol. Another substance experimented with was the cyanide of mercury, which, though giving good results from the clinical side in the hands of Selldén, was not efficacious in killing diphtheria bacilli in the tube.

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(316) Poisoning by Wild Ginger.

DR. MITCHELL (*Med. News*, March 7th, 1891) reports the following:—A married woman took a decoction of what she believed to be wild ginger (Asarum Canadense) to relieve amenorrhœa. She complained of pain in the mouth, throat, stomach, and bowels of a continuous and burning character. In the face, hands, and lower third of the forearms there was a pricking sensation, and there was burning about the wrists; the hands and fingers were much swollen. The skin and subcutaneous tissues of the face were much swollen, so that the eyes were nearly closed; the eruption resembled erysipelas, the skin was thickly covered with pimples and vesicles, and scattered amongst these were several blisters; the eruption

was also present about the popliteal spaces. She had rigors, some fever, and a frequent pulse; there was nausea and vomiting. She subsequently had considerable swelling, pain, and heat about the anus and vulva, with swelling of the labia, nymphæ, and vagina, and a constant desire to urinate, micturition being difficult and painful. The patient recovered in about three weeks. Her little girl, who had taken a smaller dose, suffered from similar symptoms but in milder degree. The roots were from two to four inches long, of about the diameter of rye-straws, crooked and knotty, very brittle, and gave a pleasant aromatic taste when chewed, closely resembling that of cardamoms.

(317) Poisoning by Rhus Venenata.

Mr. Arthur W. Prichard records the following in the *Bristol Medico-Chirurgical Journal* for March, 1891. A curate, aged 25, finding his study window obstructed by a fine specimen of rhus venenata, determined to cut it down. His gardener, who aided him, was obliged to desist after the first day, owing to an attack of erysipelas. He worked at it for a short period every day for a week, when the tree came down. He noticed that the sap, which was very profuse, made his hands black, and subsequently he wore gloves. One day—October 23rd—some of the juice touched his face, and he wiped it off with his gloved hand; on the following day he had three lines of redness on his cheek, which in the next two or three days developed into an attack of facial erysipelas, which got steadily worse. On October 30th he took to his bed; the arms, genitals, and thighs were attacked by a red rash; then bullæ appeared, suppurated, and burst, leading to the formation of large crusts, with profuse exudation from under them. The bowels were obstinate, the urine scanty, there was some fever, the pulse never exceeded 112. He took his food well. On November 5th, when Mr. Prichard saw him, the whole of his face, throat, and neck was a mass of black scabs, partly loosened by copious purulent exudation from beneath them; he was unable to see on account of the stiffness of his closed lids, and unable to masticate from a similar condition of his cheeks. He could protrude the tip of his tongue, which was moist; he could swallow, and he could speak. The conjunctivæ were swollen, and discharged pus, but the corneæ were healthy. The forearms and hands, the front and inside of the thighs, and the lower part of the abdomen were in the same condition as his face, covered with large crusts surrounded by a pink rash, but the crusts were not so black as on his face. The genitals were much swollen. The effluvium emitted by the patient was foul and peculiar. He complained of the itching of his eyes and burning of his skin, but was able to sleep. The crusts gradually softened and came off, and the conjunctivitis subsided; his face and arms peeled, and there was no pitting; he was convalescent in about three weeks. A good supply of nourishment and stimulants was kept up, and he took large doses of perchloride of iron. The local treatment consisted of eucalyptol, iodoform and oil, and poultices to the scabs; the eyes were treated with boracic acid lotion. The reputation of the tree for its poisonous effects was such that no one could be found to remove it, and it was consequently at the time of publication of the case still lying on the lawn. There were others who assisted in cutting it down besides the gardener, but they did not suffer in any way.

DERMATOLOGY.

(318) Treatment of Scleroma by Electrolysis.

Dr. L. Brocq (*Journ. of Cutan. and Genito-Urin. Dis.*, No. 102, March, 1891) presented to the French Society of Dermatology and Syphilography, December 11th, 1890, a patient affected with a band of scleroderma extending from the upper third of the right arm to the thumb, forming a *plaque* 3 to 6 centimetres in width, and of great thickness. The patient, a cutter, could use his scissors only with great pain. Treated by Dr. Besnier in several ways without result, he was referred to Dr. Brocq in June, 1890, who up to December 1st gave him fourteen sittings of electrolysis, each treatment comprising twelve to sixteen punctures, principally in the lower portion of the *plaque*, but sometimes in the median portion. The affection was arrested and has not since increased. The arm moves more freely and the *plaque* has diminished one-half. Treatment was interrupted through August and September, but the affection did not increase, thus proving that it is not necessary to make the sittings close together.

(319) Multiple Pigmented Sarcoma of of the Skin and its Treatment by Arsenic.

Dr. Fordyce (*Jour. of Cutan. and Genito-Urin. Dis.*, January, 1891), relates the particulars of a case of multiple pigmented sarcoma of the skin occurring in an Italian sailor, which the patient attributed to a mental shock. The tumours were confined to the extremities, the face, neck, and trunk being free from them. The case was under close observation for four months, during which time arsenic was administered both hypodermically and internally, without any special action of the drug on the disease being noted. No additional tumours have developed, and the patient's general condition has remained unchanged.

(320) Rash caused by Alcohol.

Kaempffe (*Therap. Monatsh.*, September, 1890) describes an erythema which began almost immediately after alcohol was taken. It was first observed in the face, then on the ears and mucous membranes, and finally extended symmetrically downwards over the body. Wheals were formed in some places. It began to pale within half an hour. By injection of morphine or application of ice bladders the appearance of the exanthem was prevented.

(321) Arsenicosis.

Mansurow (*Archiv f. Derm. u. Syph.*, Heft. 2, 1891) says it is well known that in certain cases the continuous use of arsenic darkens the skin and nails analogously to the argyrosis produced by the continued administration of silver. The author considers that the comparative rarity of this effect in arsenic is due to its volatility. He describes the case of a man who, on account of eczema, took Fowler's solution for nine months; at the end of this time all the nails were dark stained; on discontinuing the arsenic this colour disappeared. Microscopical examination showed that there was a yellow discoloration in the superficial layer of cells. This discoloration may take place without any symptoms of arsenical poison.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(322) Influence of Acute Febrile Disease on the Course of Chronic Phthisis.

DR. A. CHELMOUSKI reports a case (*Deutsche medicinische Wochenschrift*, No. 14, 1891) from the wards of Professor Stolnikow, of Warsaw, in which an acute attack of erysipelas, occurring in a patient who was suffering from chronic phthisis, gave rise at first to exacerbation of the tuberculous affection, but subsequently to apparent recovery. The patient was a woman, aged 38, who had suffered for a long time from symptoms of chronic disease at the apex of the right lung, bacilli being present in the sputum. Added to this there was very extended ulceration and tuberculous infiltration of the mouth and fauces. A sharp attack of erysipelas, presumably acquired from a patient in a neighbouring bed, was followed by a decided increase in the symptoms of the pulmonary disease. With the subsidence of the erysipelas a marked improvement took place in the visible tuberculous disease in the mouth. The ulcerated patches became cleaner and smaller, and the points of infiltration gradually subsided and disappeared. Tubercle bacilli were no longer to be found, and by slow degrees the symptoms of the lung mischief passed away, until the patient in about six weeks was able to leave the hospital feeling perfectly well. Several observers have recorded the subsidence of syphilis and lupus after erysipelas, and a few instances of arrest of tubercle have been noted. An attack of typhoid fever may sometimes be followed by recovery from tubercle. An interesting example of this, in the person of a professional colleague, is recorded. The patient not only lost all his previous tuberculous symptoms, but gained weight in a remarkable manner during the convalescence from the fever, the cough being reduced to a minimum. Without offering any special explanation of this striking improvement in the onward course of the tuberculous disease, the writer quotes the opinion of Gamaleïa, von Fodor, and others, to prove that high temperature should not be regarded as a harmful thing in itself, but rather as an evidence of the destructive process that is going on in the blood to bring about the annihilation of the tuberculous virus. Presuming that a febrile state of blood is inimical to the spread of the tuberculous poison, the occurrence of an excessive febrile condition such as is produced during the course of erysipelas or typhoid might account for the cessation of the tuberculous process, and its rapid cure after the subsidence of the fever. In cases of long-standing disease, where the heart's action is enfeebled or its muscular structure degenerated, the result of the secondary fever may have no such salutary effect, but may simply increase the local disease and diminish the general recuperative power.

(323) Cerebral Tumour with Localising Ocular Signs.

DR. C. A. OLIVER (*Archives of Ophthalmology*, No. 1, 1891) describes the case of a man, aged 39, who for two years had suffered from vertigo, headache, and attacks of momentary blindness. A year after the onset of the symptoms the patient felt that his right foot was stiff, numb, and weak, and, in the act of walking, the toes of this foot very frequently caught against objects. Four months later attacks of toxic spasm, lasting for a minute or two, developed in the right upper limb. In these attacks the arm became adducted, the forearm flexed, the hand flexed at the wrist, while the fingers remained extended. These spasms ultimately recurred every few minutes, and spread in such a manner as to cause extension of the right leg. At the time of coming under observation the right leg was found to be spastic, its knee-jerk was much increased, and clonus could be obtained in the knee and ankle. Temperature, pressure, and muscular sense were diminished on the right side. Right grip was feeble. Right lateral hemianopsia, much more marked in the left eye, was present. Direct vision for form was reduced to $\frac{1}{5}$ in each eye. Direct vision for red and green was lowered, especially in the left eye. Feebly negative scotomata in the green colour areas, more pronounced in the left eye, indicated that the major amount of irritation existed on the left side. Each pupil measured 4 millimetres when exposed to equal light. Wernicke's hemianopsic papillary inaction sign (present in each eye) and the left iris being less prompt in responding to light stimulus, taken in conjunction with the hemianopsia, showed implication of the left optic tract, anterior to the corpora quadrigemina and posterior to the chiasma. The arteries and veins of the right retina were enlarged and tortuous; a broad superficial hæmorrhage extended over the lower outer quadrant of the right disc. Slight insufficiency of the interni was the only abnormality in the extraocular muscles. The diagnosis of gross lesion exerting pressure mainly in the region of the left pulvinar, and on the left optic tract as before described, was verified by finding a glioma in the external portion of the left optic thalamus and posterior two-thirds of the corpus striatum.

The left optic tract was flattened as far as the chiasma.

(324) Sensory Aphasia.

In the *American Journal of the Medical Sciences* for March, 1891, Professor Osler describes a case illustrating the association of word blindness and paraphasia with disease in the parieto-temporal region, and the occurrence of hemianopsia from lesion of the optic radiation without disease of the occipital lobe. The patient was a healthy-looking man, aged 72. Inability to read a newspaper was the first symptom noted; this word blindness was typical in form. Power of intelligent hearing was retained, but in speaking the patient occasionally misplaced words and sentences. Right homonymous hemianopsia was present. These symptoms persisted until death occurred a few months later, paralysis of the right limbs setting in towards the close. Softening was found in the left supra-marginal and angular gyri, also in the posterior part of the first and second left temporal, and in the two annectant gyri, uniting the former to the parietal lobe. The medullary substance between these convolutions and the lateral ventricle was completely interrupted by a tract of softening. Both cortex and medulla of the occipital lobe were uninvolved.

(325) Morvan's Disease.

Joffroy and Achard (*Arch. de Méd. Expérim. et d'Anatomie Patholog.*, 1890, No. 4) describe a case of Morvan's disease in which a *post-mortem* examination was made. The patient, who was aged 75, came into the hospital for bronchopneumonia, and gave a history that at the age of 30 he had had some affection of his fingers; otherwise he had always been strong and healthy. He showed the characteristics of Morvan's disease. There was atrophy of the nails and the ends of the fingers, together with scarring, thickening of the epidermis, and necrosis of the phalanges. There was diminution of sensibility in the fingers, hands, and forearm. There was no muscular atrophy, but movement was impaired. There was kyphosis in the middle dorsal region. *Post mortem* the spinal meninges were found thickened and adherent in the cervical region. The cord in the lumbar and dorsal regions was normal. In the cervical region it was abnormally small. The cord was hardened in chromic acid, and then it was found that while the front part of the grey and white matter was visible, the posterior part of the cord was occupied by a wide space, which extended up to the lower part of the medulla oblongata, and gave rise to ascending degeneration; it reached down to the upper part of the dorsal cord, where the hole was replaced by a quantity of new-formed tissue apparently like gliomatous tissue. Judging from this case, the authors are inclined to think that syringomyelia or any similar destruction of the cord will produce the symptoms of Morvan's disease, which ought not, therefore, to be regarded as a distinct malady.

Bernhardt (*Deutsche med. Wochenschr.*, 1891, No. 8) discusses what he styles the "so-called Morvan's disease." His patient was aged 48. For many years past she had had symptoms similar to those described in the last case accompanied by scoliosis of the vertebral column. The patient in this case is still alive, but the case gives the author the opportunity of discussing the relationship of Morvan's disease to allied conditions, especially syringomyelia, and he comes to the conclusion that it is by no means certain that the demarcation of Morvan's disease is distinct enough to separate it either clinically or pathologically from allied maladies.

SURGERY.

(326) Perforation of the Vermiform Appendix and its Treatment.

Dr. A. Fraenkel (*Deutsche med. Wochensch.*, January 22nd, 1891) treats of perforation of the vermiform appendix. The commonest causes are small concretions of hardened fæces, which inflame and ulcerate the mucous membrane and finally perforate all the walls. Foreign bodies, fruit stones, bits of bone, etc., are of rarer occurrence. It is possible that their more frequent entrance is prevented by the half-moon shaped fold of mucous membrane which guards the mouth of the appendix. As a rule, perforation is preceded by localised adhesion, so that large fæcal masses hardly ever escape into the peritoneal cavity. When that happens, acute suppurative peritonitis always occurs. The question then arises whether the induration which follows, and which can be felt in the cæcal region, is or is not a collection of pus. Fraenkel is of opinion that, in the majority of cases, there is no important collection of pus. What is usually thought to be exudation is adhesion of loops of intestine with stagnated contents. The walls of these adherent loops are covered with fibrinous exudation, which increases the size and hardness of the tumour. The question arises whether there should be surgical interference in the earlier stages of circumscribed perforative peritonitis. This is answered by the fact that there is no collection of pus, although there may be a minute quantity deep down at the perforation, but quite shut off by the adhesions. But often the progress is not so favourable, and the patient suffers great pain, and is treated with purgatives under the idea that he is suffering from colic or obstruction —a most fatal mistake. Sometimes peristalsis is spontaneously increased, with frequent diarrhœa, which often leads to the same dangers as does purging. The dangers and consequences are of two kinds (1) a sudden and very acute exacerbation; (2) or, in the course of some days or weeks, a gradual increase and development of symptoms. The first, which occurs in the earlier stages of the disease, is due to the sudden spread of the localised peritonitis, which has become diffuse. It is accompanied by disturbance of the adhesions and effusion of intestinal contents into the peritoneal sac. In the greater number of cases this accident is fatal. The second is due to the formation of an abscess out of the previous adhesive inflammation. This abscess may reach the size of a child's head, and, after becoming encapsuled, may empty itself into the intestine, bladder, or vagina, or may point externally, and there burst or be opened. Often the injudicious use of purgatives, or the disregard of medical orders, or excess in diet mark the beginning of the disease. Sometimes, after a patient has recovered from typhlitis, some accident causes a separation of the adhesions, producing a fresh inflammation. In three recent cases a localised suppuration was caused by perforation of the vermiform appendix, and all of these recurred after operation. In these cases the diagnosis is easy when the pus has

a tendency to approach the front, and when the tumour extends towards the flank and towards the hypogastric region, and is felt immediately beneath the finger; and, lastly, when the fever takes the suppurative type. In such cases Dr. Fraenkel considers an exploratory puncture an important aid to diagnosis. However, all cases are not so easy as the above, and when the pus collects deep in the abdomen or in the pelvis other methods must be used. Digital exploration of the rectum or vagina, combined with palpation of the abdomen, may determine the site of the abscess; but, in most cases, the peculiar fever, the pain, the distension of the abdomen, and the pressure signs will have pointed to the presence of an abscess. Mistakes easily occur when the disease is not about the cæcum but at some distance from it. The length of the vermiform appendix varies, and it may happen that, owing to its length, its free end may lie upon the right or left side of the bladder. When, under these circumstances, perforation occurs the exudation is not in its usual place—the right iliac fossa—but in the left hypogastric region, or in the middle line above the bladder. This was so in three cases. A man aged 60 was seized with pain in the umbilical region, which was thought to be colic and which was unaccompanied by fever or exudation. At first lead colic was diagnosed. Later an induration appeared above the pubes and extended to the umbilicus and into the left hypogastric region. Coincidently with this suppurative fever began, and a puncture gave issue to fæculent pus. The abscess was opened, and, after discharging fæcal matter, ultimately closed. Sometimes the pus finds its way behind the peritoneum and surrounds the right kidney and spreads outwards, or upwards towards the diaphragm. Here it may perforate and find its way into the pleura or lung. After giving illustrative cases, Dr. Fraenkel remarks upon the danger of too early operative interference, and says that in the greater number of cases of perforation of the vermiform appendix there is no particular formation of pus, and that they recover with greater certainty under medical treatment. The indications are otherwise in that unfortunate class of cases in which perforation is followed by diffuse septicæmic peritonitis. In most of these cases the patients succumb; only now and then are they saved by abdominal section, washing out, and drainage. It is most important to do this at once, and before the onset of collapse. In relapsing peritonitis adhesions form which lead to stenosis, or the foreign body, which is its cause, may have escaped into the peritoneal sac. In this group of cases the vermiform appendix ought to be extirpated.

(327) Supra-Acromial Dislocation of the Clavicle.

MM. P. Poirier and H. Rieffel (*Archives Générales de Médecine*, April, 1891) state that experiments on the dead body have convinced them that supra-acromial dislocation of the outer extremity of the clavicle is caused through violence acting obliquely from before backwards, or in the reverse direction, on the region of the deltoid muscle. If force be applied to the outer surface of the shoulder, fracture of the clavicle is more likely to be produced. The authors believe that the acromio-clavicular ligaments in all cases, together with the trapezoid ligament occasionally, are torn through in incomplete dislocation at the acromio-clavicular joint, whilst for the production of complete separation of the two bones rupture of the conoid ligament is indispensable. Allusion is made to the difficulty that is almost always experienced in cases of this injury in keeping the outer end of the clavicle in its proper position. The luxation as a rule remains imperfectly reduced, and there is always some persistent deformity. Although in many instances this deformity does not cause any serious inconvenience, and the injury has not resulted in any appreciable impairment of the movements of the upper limb, it occasionally happens that a labourer who has been the subject of supra-acromial dislocation is unable to do much work in consequence of pain and difficulty in moving the shoulder, and of inability to raise the arm beyond a right angle. The occurrence of cases of this kind has led the authors to advocate, in the treatment of recent supra-acromial dislocation of the outer end of the clavicle, an operation in which the seat of the injury is exposed by incision, and the separated bones are fixed together in their normal relations by sutures of silver wire. Two cases are recorded in which this operation has been performed with good results, in one by M. Poirier twenty-four hours after the receipt of injury, in the other by M. Rieffel after an interval of seventy-two hours.

(328) Tubercle of Hernial Sac.

Jonnesco (*Revue de Chirurgie*, March 10th, 1891) describes several cases in which hernia was complicated by tubercle of the sac walls or of the contents of the sac. The affection seems to have attracted little attention, but cases are quoted from the writings of Cruveilhier, Hayem, Lejars, and Guinon. Jonnesco's first case was that of a young man aged 20 years, strong and robust, who had suffered for a few months from double inguinal hernia. The left hernia seemed stationary, but the right was painful and increasing in size, in spite of the wearing of a truss. The pain increased and the patient became unable to work, and a radical operation was therefore performed on the right side. Before the operation a clearly-defined indurated mass could be felt at the bottom of the hernial sac, but independent of the contents, which were intestine and omentum. In addition to these, the sac contained a quantity of yellow fluid, and more could be pressed from the abdomen. The wound healed by first intention, and a year later there was no hernia on the right side, that on the left being stationary. The mass at the bottom of the sac was an indurated, greyish, oval plate, which had the typical histological characters of tubercle developing in the lymphatic network. Jonnesco next quotes several cases of tubercle of the contents of the hernial sac from the writings of Puech, Largeau, and Berger, and others of tubercle of both the sac and contents. He deduces from these that the tubercle may be either circumscribed or diffuse, and that it may extend to the mesentery.

MIDWIFERY AND DISEASES OF WOMEN.

(329) Antiseptic Scraping of the Uterus in Puerperal Endometritis.

Dr. Braun von Fernwald (*Arch. f. Gynäk.*, vol. xxxvii, 1890, pt. 3) states that this practice was adopted for sapræmic endometritis in childbed in 101 cases out of 7,600 lying-in patients in the Vienna special department; 96 of the patients

were cured, and 5 died, but 3 out of the 5 had already symptoms of general septic infection, a fourth died of purulent peritonitis attributed to escape of pus out of the ostia of the tubes, and the fifth sank from hæmorrhage with septic symptoms ten days after the scraping. In over two-thirds of the 101 cases the labour had proceeded normally, and there had been no visible evidence of any damage to the placenta, yet the curette never failed to bring away necrosed and putrid tissues, which, on microscopic examination, proved to be fragments of placenta or decidua. The procedure is only to be undertaken in cases of rise of temperature in childbed, due to endometritis. This complication can be recognised by distinct arrest of involution of the uterus, fœtor of the lochia, and fever coming on early in childbed without signs of pelvic inflammation outside the uterus. When signs of such extension of the inflammatory process are present, and, above all, where general infection is evident, scraping is contraindicated. A rise of temperature sometimes occurs during the first week after the use of the curette, but Braun von Fernwald has never seen any parametritic exudation in his series. The blunt curette is employed, the patient being placed on her side, as in imperfect expulsion of the ovum in abortion. The uterus is washed out with a 1 in 1,000 solution of thymol before and after the scraping. A stout iodoform point is passed into the uterine cavity. Any abrasions of the vaginal mucous membrane are painted with pure tincture of iodine. The cervix and vagina are plugged, for twenty-four hours, with iodoform gauze.

(330) Iodoform Gauze in Post-Partum Hæmorrhage.

Dr. Velitz, of Buda-Pesth (*Orvosi hetilap*, 1890, Nos. 10 to 12) describes thirteen cases where he employed plugs of iodoform gauze for flooding, during and after delivery, and (in two cases) in the course of the puerperium. He finds that iodoform gauze is a perfectly aseptic medium in obstetries. It is of permanent value as a hæmostatic in flooding from atony of the uterus. Only a small amount of the gauze should be packed in the uterus, so that retraction of that organ may not be hindered. Iodoform gauze is useless, and indeed dangerous, in uterine hæmorrhages due to abnormal condition of the blood. Being hygrometric it promotes hæmorrhage. In this form of flooding weak solutions of perchloride of iron act best. Hæmorrhage from high laceration of the cervix can only be safely checked by aid of the suture. When bleeding occurs after delivery or late in childbed, through the presence of a fibroid, the only effectual check is a thorough plugging of the uterine cavity with iodoform gauze; the cavity must be well stuffed with that material.

(331) Tubal Abortion.

Professor J. Veit (*Centralbl. f. Gynäk*, March 28th, 1891) recently exhibited before a society at Berlin a typical form of tubal abortion. The patient had violent pains, evidence of hæmorrhage and local signs indicating tubal gestation. On abdominal section the peritoneum was found full of clot and liquid blood. The tube and ovary were removed; it was noted that there was a characteristic dilatation in the middle of the tube, whilst the ostium was dilated to the width of a shilling, and the ovum, covered with recent clot, protruded from it. There was no trace of any laceration of the tube. This case of intra-peritoneal hæmorrhage from the tube, without rupture, and expulsion of the ovum from the tubal sac, is very important. It is essentially a tubal abortion and is clearly a cause of true hæmatocele, which may calm down, in favourable cases, without killing the patient. It may explain abdominal pregnancies, as the expelled ovum and membranes may contract fresh adhesions, and develop instead of perishing. Dobbert has described a "primary" abdominal pregnancy in Douglas's pouch. The fœtus (fifth month) lay in a suppurating cavity which communicated with the rectum. But one tube opened freely into the cavity. Hence Dr. Veit insists that the gestation was originally tubal. To prove primary "abdominal" pregnancy it must be shown that both tubes and both ovaries are absolutely unconnected with the fœtal sac.

(332) How to Remove Sutures in Gynæcological and other Operations.

Dr. Howard Kelly (*Amer. Journ. Med. Sciences*, January, 1891) lays great stress upon the minutest matters of detail in a paper entitled "Antisepsis and Asepsis before and after Major Gynæcological Operations." His directions in respect to the removal of sutures apply to all operations where they are used, although Dr. Kelly specially refers to abdominal sections. Care must be taken, he says, in their removal not to convert this simple step into a source of irritation or infection of the wound. There is usually a little cake of encrusted lymph and powder at the point where the suture emerges from the skin. In removing the suture the loop must not be cut above that point on one side of the wound; for if that mistake be made, when the suture is extracted by traction on the opposite side of the wound, the crust of lymph will be dragged through the whole track of the suture, including, in the case of an abdominal section, the peritoneum. The suture must be cut below the crust, where it is moist and pliable. The free ends of the suture should, in the first place, be caught by a dressing forceps so that the loop may be raised; then the loop is carefully clipped in the moist part, below its point of exit. Lastly, the suture is extracted by pulling it towards the side on which it has been cut. If traction be made in the opposite direction the freshly united surfaces may be dragged apart.

(333) Incontinence of Urine from Malposition of the Ureter.

Dr. F. H. Davenport (*Archives of Gynæcol.*, December, 1890) reports a case in which a woman, aged 29, suffered all her life from incontinence of urine. On examination it was found that one ureter, instead of opening as usual into the bladder, was continued along in the septum between the bladder and vagina, and emptied itself through a special opening near the meatus. An operation was performed to establish a proper opening into the bladder. The vesical end of the ureter retracted, and a second operation was found necessary; it proved successful. Dr. W. Jaggard, in commenting on the case, said that injuries to the ureters were very common during pregnancy, and that those existing before pregnancy might become intensified. They were, on the other hand, not common during labour, as at that time the bladder was drawn up into the abdominal cavity, and the ureters were out of the way of pressure from the head of the child. The ureters were rarely injured by dilatation of the cervix or the application of the forceps before the engage-

ment of the head. Compression or dilatation of the ureters was one of the reputed causes of eclampsia. Dr. Jaggard had seen a case where compression probably caused the fits. Frozen sections tended to prove that the bladder was an abdominal, not a pelvic, organ early and late in the puerperium, especially in difficult labours. The chief causes operative in producing injury of the ureters during pregnancy were increased abdominal tension and the presence of small urethral calculi. He had seen two cases in which calculi were probably the cause of a dilated ureter. He believed that palpation of the ureters during the puerperium was extremely hazardous, productive of no good, and entirely a work of supererogation.

DISEASES OF CHILDREN.

(334) Indicanuria in Infants and Children.

Dr. Hochsinger, of Vienna (*Deutsche med. Woch.*, No. 12, 1891) has studied the occurrence of indican in the urine of infants and young children. The urine of three newborn infants was quite free from indican; in infants, either at the breast or bottle, who had no intestinal disturbances, indican was only found in three cases, and then only as a trace. In infants with intestinal disorders indican was present in very considerable quantities in acute diarrhœa, while the reaction was little marked in moderate diarrhœa, and was almost absent in simple dyspepsia. In other diseases the results were various: in tuberculosis a "colossal" amount of indican was found constantly in the urine; this was the case not only when the tuberculosis affected the intestinal tract, but also when it had involved other organs. Hochsinger is of opinion that indicanuria in infants is due to decomposition of milk albumen in the intestinal tract.

(335) Nephrectomy in an Infant.

Schmidt, of Stettin, has reported (*Deutsche med. Woch.*, No. 12, 1891) a case of nephrectomy in a child 6 months old. The tumour had been diagnosed as splenic, but careful examination showed it to be renal. It was removed by laparotomy; it was sarcomatous, and the size of a child's head. The patient recovered in three weeks. Hochsinger, in discussing the case (*Versamm. D. Naturforscher u. A.*), observed that the urine might present no abnormality in renal sarcoma, and that the chief clinical distinction between splenic and renal tumours was the great mobility of the former. A renal tumour was very little movable, and only from before backwards.

(336) "Tic Convulsif," Coprolalia, Echolalia.

The term *maladie des tics convulsifs* has been applied by Charcot and his followers to a symptom-group characterised by irregular spasmodic movements, the utterance of involuntary explosive sounds or words, and mental defects of various sorts. The affection comes on in childhood, and has no relation to the condition to which the term "convulsive tic" is applied in English. Professor Osler, of Baltimore, describes (*Medical News*, No. 936) the case of a girl who, from the age of 5 years, had been subject to involuntary jerking movements of the arms and head. When about 12 years old she began to make curious noises, to exclaim "hah" very frequently, to bark like a dog, and to repeat a new name or a new word. When first seen at the age of 13 she was an intelligent well-educated child, but was nervous; the right arm occasionally twitched, the head jerked, and every now and then she suddenly uttered inappropriate words or exclamations or a barking noise. About two months later she began to use foul words (coprolalia), became obstinate and disobedient. She was admitted into the hospital, placed in a room by herself and kept in bed; under this treatment she improved to some extent. Repetition of words (echolalia) and mimicry of movements (echokinesis) were not marked in this case. The prognosis as to ultimate mental recovery is bad.

(337) Statistics and Treatment of Diphtheria.

Statistics as to the cases of diphtheria and croup treated in the Children's Hospital of Pesth are given by Dr. Johann Bokai (*Wien. med. Woch.*, No. 10, 1891) for the years 1889-90. There were 447 cases of diphtheria, and 32 of "primary laryngeal croup." Post-diphtherial palsy was noted in 10 per cent. of the cases. The mortality among the 447 cases of diphtheria, of whom one quarter were under three years old, was 234 (54 per cent.); in 170 cases the larynx was not affected, and the death-rate in this class was only 23 per cent. Laryngeal croup occurred as a complication of faucial diphtheria in 237 cases; 53 cases recovered, 32 without, and 21 after, tracheotomy, which was performed 159 times. In the group of 32 cases of uncomplicated laryngeal croup, 16 cases recovered; 7 without, and 9 after, tracheotomy, which was performed 23 times. The treatment adopted in pharyngeal diphtheria was the internal administration of chlorate of potassium, gargling with lime water, and painting two or three times a day with a 5 per cent. solution of perchloride of iron in glycerine, which Bokai believes prevents the occurrence of laryngeal complications. After tracheotomy steam inhalations were continuously used, and perchloride of mercury internally. Sulphate of copper was used as an emetic, and was of great value in the early stages of laryngeal croup, but the prolonged use of emetics was dangerous. Tracheotomy was resorted to when suffocation was imminent; the operation, in Bokai's opinion is contra-indicated in septic cases, and in those in which the symptoms point to involvement of the bronchi. In the discussion which followed the reading of Bokai's paper at the Buda-Pesth Society, Professor Gerlóczy stated that 157 cases of diphtheria had been treated in the Rochus Hospital with a death-rate of 43.9 per cent. Dr. Glass spoke favourably of treatment by Löri's method; this consists in burning about three-quarters of a pound of sulphur in a room, at the end of four hours ventilating the room for five minutes, and then placing the patient in it; an adjoining room is then prepared for the patient in the same way.

(338) Intubation of the Larynx in Diphtheria.

Dr. J. Mount Bleyer, of New York (*Archives of Pediatrics*, March, 1891), gives the results of 512 cases of intubation of the larynx for croup and diphtheria operated on between 1886 and 1890; of these cases, 37 per cent. recovered. The 512 cases included 294 males and 228 females. The ages varied from 6 months to 21 years; 251 cases were under 3 years of age, with 73 recoveries; 260 were over 3 years of age, with 115 recoveries. Of 4 cases, 6 months of age, all died; of 7 cases, 9 months old, 4 died; of 3 cases, 10 months old, 2 died; of 14 cases, 12 months old, all died; of

48 cases, 2½ years old, all died. In cases of recovery the tube was removed on the first day in 5 cases; second day in 29 cases; third day in 37 cases; three days and a half in 14 cases; fourth day in 43 cases; fifth day in 22 cases; sixth day in 10 cases; seventh day in 13 cases; ninth day in 6 cases; tenth day in 4 cases; eleventh day in 3 cases; fifteenth day in 2 cases; twentieth day in 2 cases. Among the causes of death in the 322 fatal cases, extension of the false membranes occurred in 67 cases; bronchitis in 45 cases; pneumonia in 41 cases; broncho-pneumonia in 40 cases; sepsis in 39 cases; asphyxia, due to closure of the tube by membrane, in 2 cases. The author strongly emphasises the necessity of making a forced or a normal laryngoscopic examination before operating, as the differentiation and diagnostication of other laryngeal diseases may be made out, and the extent of the diphtherial or croupous lesion seen. The tube is to be extracted daily for the purpose of removing any accumulation of loose membranes, tenacious mucus, pus, etc. "When the tube has been extracted, irrigate the posterior nares, pharynx, larynx, and entire surface with a mild solution of bicarbonate of sodium." Much of the success depends upon the judgment of the operator in selecting a suitable tube. When loose membranes exist in a case, a tube of thinner metal and larger calibre is recommended, and is left *in situ* for six hours or more. The tube once in place, the most vital portion of the treatment must be next carried out, namely, irrigation of the affected parts. A No. 8 soft rubber catheter, attached to a fountain-bag syringe, is passed into the nostrils alternately, and a solution of the peroxide of hydrogen (6 ounces of a 15 volume solution, chemically pure, in 12 ounces of water) is passed through: after this has been done, the next step is to wash out the mouth, pharynx, and larynx. If necessary, a gag must be used; the patient is held well forward over a basin for the reception of the returning fluid. For purposes of comparison, the recorded results of tracheotomy operations are given as follows: German authors have obtained 31 per cent. recoveries in 5,795 cases; German hospitals record, 30 per cent. recoveries in 3,063 cases. French surgeons have tabulated 9,242 cases, with 24 per cent. recoveries. In the Boston City Hospital between 1884 and 1887, 327 operations yielded 29 per cent. of recoveries. Out of 21,853 cases collected from all sources by Dr. Lovett, of Boston, 29½ per cent. of recoveries were obtained.

PHARMACOLOGY AND THERAPEUTICS.

(339) Anodal Diffusion as a Therapeutic Agent.

Dr. Fred. Peterson (*New York Med. Record*, January 31st, 1891) summarises his experience of the therapeutic value of anodal diffusion. By this term is meant "the ability of a galvanic current, in flowing from the positive to the negative pole, to seemingly carry substances with it through a membrane or through the skin." The very scanty literature of the subject, dating from 1859, is given, the greater part of it being quite recent. The results of his own and previous experiments show (1) that the current alone does not produce anæsthesia at either pole, although the anode has a transitory soothing effect over painful foci; (2) that a watery solution of cocaine, or an alcoholic solution of aconitine or chloroform, when merely applied to the skin, does not produce anæsthesia, except, perhaps, after an indefinitely long period; (3) that solutions of cocaine, aconitine, strychnine, potassium iodide, and tincture of iodine, chloroform, and other substances are diffused through the skin and subcutaneous tissue by the anode, but not by the cathode; (4) that the anæsthesia produced by a 10 to 20 per cent. solution of cocaine on the anode is sufficient for small operations, and affords distinct relief for from four to eleven hours in cases of severe neuralgia in superficial nerves. Accuracy of dosage was formerly not obtainable, but Peterson now employs the following method. It is necessary to use a flat metal electrode made, preferably but not necessarily, of platinum or tin. It may be of any convenient size and shape. A piece of filtering paper or linen is cut to fit over the metal surface; this is soaked with a definite quantity of the solution to be used, and the electrode is then applied to the skin. A narrow soft rubber rim at the edge of the electrode prevents any loss by evaporation. In order to have drugs ready for use at any time, discs of paper to fit the electrode may be charged with aqueous or alcoholic solutions and then allowed to dry, a drop or two of menstruum being added when they are to be used. The strength of current is regulated largely by the patient's feelings, but from 5 to 20 milliampères, or from 10 to 30 cells may be used for five to fifteen minutes. The stronger the current, the shorter the duration of the sitting. The indications are: (1) To produce local anæsthesia for neuralgia, superficial pains, and cutaneous operations. A 10 to 20 per cent. solution of cocaine is used. Aconitine produces a deep analgesia, but it is accompanied by severe smarting round the edges of the anæsthetised area. Three or four drops of a 1 per cent. solution of helleborin cause a deeper and more lasting anæsthesia than cocaine without producing constitutional effects. Both ouabaïn and strophanthin, in doses of $\frac{1}{250}$ grain or more, are strong local anæsthetics. One or two drops of chloroform bring about a deep analgesia in a short time, but this is followed later by vesication. A mild solution of carbolic acid may also be employed as a local anæsthetic and analgesic. (2) For topical medication in various local lesions, such as tumours, rheumatic, gouty, and other swellings, various skin diseases, syphilides, etc. In these cases iodine preparations, lithium, and mercuric salts may be used. (3) To induce absorption of medicines from baths. (4) For diagnostic purposes. Thus, if a pain were complained of in the region supplied by the trigeminus nerve, it should disappear under this treatment. If it did not, the lesion could be localised further back, or it might lead to the conclusion that it was a hysterical pain. [For a less favourable view of this method of medication see a paper by Dr. Cagney in the British Medical Journal of November 16th, 1889.]

(340) Koch's Treatment in Phthisis: General Effect upon Symptoms.

A general review of the results obtained in the different clinics is shown in the official report (*Die Wirksamkeit des Koch'schen Heilmittels, etc.*) by a series of tables dealing with the cases of incipient disease, moderately advanced disease, and advanced disease respectively. Of the former, from the wards of 21 observers, there have been 51 cases completed, whilst 182 remain under treatment. Of the completed cases, 9 are returned as being "cured," 29 have been more or less improved, and 13 have not been improved.

Of the 182 cases under treatment, 102 have been more or less improved, whilst 75 have remained unchanged, 5 others having been made worse. Of the moderately advanced cases, 113 have been completed, and of these 1 is stated to have been cured, 47 have been improved in greater or less degree, and 65 have not obtained any advantage. Of 302 cases under treatment, the number of those who have obtained no benefit reaches the total of 213, as against 99 more or less improved. In the record of advanced cases, only 14 of the completed cases claim to have been improved, whilst 40 remain unchanged. Of the cases under treatment the difference is still more marked, the unchanged cases numbering 122, the improved cases only 24. *Gain of weight* was observed in most of the cases after the first three weeks of treatment, but the amount varied considerably. In some instances the variations were too slight to permit of any deductions being made from them, and in others the range of temperature hardly varied at all throughout the treatment. *Sputum.*—The quantity of the sputum was, as a general rule, increased at first, and in a fair proportion of cases its quality was altered, becoming thinner and more purely mucoid. There are, however, a long series of cases in which no perceptible alteration, either of quantity or quality of the expectorated matters, could be recorded. The presence of bacilli was almost constant, and in only one or two cases have they been absent for a sufficiently long period to warrant the belief that the disease has come to an end. In many there was considerable variation from time to time, and even complete absence for one or two days in succession, but in almost all the cases the bacilli ultimately appeared again. Some of them showed the changes in form which have hitherto been regarded as evidences of degeneration, but these changes were not by any means frequently observed. Hæmoptysis was very rarely noted. *Physical signs* of the disease were for the most part unaltered during the period of treatment, but a few cases are reported by Drs. Gerhardt, Senator, Fraenkel, and Guttmann, in which a very marked change for the better took place. In a few others the signs of disease became more marked than before. *Night sweating* was in most cases relieved. Upon the value of the treatment in this particular all the observers are unanimous. *General condition* was improved in a large number of cases. Many patients expressed themselves as feeling quite well, and were even anxious to return to their ordinary modes of life. In others there was a good deal of lassitude complained of, and no general improvement was noted although the symptoms had shown a marked change for the better.

(341) Injections of Camphorated Naphthol in Glandular Tuberculosis.

At a meeting of the Paris Société de Chirurgie, on March 25th, a communication from M. Reboul was read on the effect of interstitial injections of camphorated naphthol in tuberculous disease of lymphatic glands (*Semaine Médicale*, April 1st, 1891). The treatment was adopted in 27 cases in which the glands were in the stage of softening or actually suppurating. In 21 of the cases a cure was effected; in the remainder there was only improvement or the effect was *nil*. The following is the mode of procedure: After clearing out the abscess (if suppuration exists), seven or eight drops of camphorated naphthol are injected with antiseptic precautions into the gland. The injection is repeated every other day, and a cure is effected in from one to two or three months. M. Nélaton (who read the paper on behalf of M. Reboul) said that he had seen, under the influence of a tampon of naphthol placed in contact with a caseous gland laid bare by ulceration of the skin, that not only the gland itself but the neighbouring ones disappeared. Pharmaceutical research had shown that the systemic effect of naphthol was prolonged, and that it could be detected in the urine twenty-four hours after the injection.

(342) Effect of Tuberculin in Lupus Erythematosus.

Schwimmer (*Monats. f. prakt. Derm.*, No. 5, 1891) treated two cases of lupus erythematosus by injections of Koch's fluid. In one case, only fever and general symptoms of prostration were produced. There was no local reaction; the patient refused the second injection. In another case four injections were used without producing any local reaction. Schwimmer also injected Koch's fluid in two cases of universal psoriasis. Although fever was produced in both cases, there was an entire absence of local reaction at the seat of eruption.

OPHTHALMOLOGY.

(343) Resection of the Optic Nerve.

Dr. Webster Fox (*Philadelphia Medical and Surgical Reporter*) recommends resection of the optic nerve in order to overcome the necessity for enucleation. The details of the operation for resection are as follows: The eyelids being separated, a vertical incision is made through the conjunctiva over the insertion of the external rectus muscle. The conjunctiva is then dissected as far back as the external canthus will permit. This exposes the muscle completely. Two silk threads are then passed through the muscle near its tendinous insertion. These threads are required in a subsequent step of the operation to unite the detached muscle to the eyeball. The muscle is then cut and drawn to the temporal side. This exposes the globe. All tissue is then separated from the eyeball with curved scissors. The optic nerve is found by passing a hook, which is nothing more than a strabismus hook bent at a right angle. This hook brings the nerve forward, and then the retractor is passed downwards until it meets the nerve, and is then passed downwards and outwards, keeping the adipose tissue out of the way. A second bent hook is inserted under the optic nerve, and also passed backward. A certain portion of the nerve becomes exposed, and this is grasped and held firmly with a delicate pair of flat forceps. This is to prevent hæmorrhage from the ophthalmic vein and artery after the cut with the scissors. The eyeball is rotated forwards so that the now severed nerve becomes exposed, and a small piece is cut off its bulbar end. By keeping pressure on the orbital end of the nerve for a few minutes all danger of hæmorrhage is obviated. The eyeball is then rotated into place, and the external rectus muscle is readjusted. Over this the conjunctiva is replaced, and it is held in position with black silk, which may be removed in three days. Antiphlogistic dressings are applied day and night for several days. Very little reaction follows, and in a week or ten days the eye has assumed its normal appearance, with no disfigurement, and the action of the muscle is complete.

DERMATOLOGY.

(344) The Parasite of Erythrasma.

Dr. Pasquale de Michele (*Giornale internazionale delle Scienze Mediche*, November 15th, 1890) says the fungus of the affection of the skin which is called erythrasma is described by Bärensprung as "microsporon minutissimum" and by other observers as "leptothrix epidermidis." De Michele finds that there are two organisms present in the scales in this affection, the leptothrix epidermidis, which is not found exclusively in erythrasma, but is also found between the toes, under the mamma in stout people, and probably elsewhere; the other form, which he believes he has observed and described for the first time, alone deserves, he considers, the name of microsporon minutissimum. The parasite to which the latter term has been previously applied is, he believes, either leptothrix or some other parasite accidentally present in the lesion. He cultivated both the parasites on artificial media, and found that they grew with different characters. The form which he believes to be pathogenic, and described by himself for the first time, developed most luxuriantly at an elevated temperature, required moisture, and grew best in the dark—conditions which he considers are found in the inguino-scrotal region. He succeeded in producing erythrasma by inoculating an individual in the inguino-scrotal region with cultivations of his microsporon minutissimum, whilst cultivations of leptothrix failed to produce the affection. On account of the transparent, twisted, ramified filaments, and the close juxtaposition of the spheres, he considers that the parasite belongs to the genus microsporon, and merits the name microsporon minutissimum, which has, with little justification, been given to the fungus hitherto known under that name.

(345) Lymphangioma Circumscriptum.

Dr. Török, in continuation of a paper on lymphangioma circumscriptum (*Brit. Journ. of Derm.*, January, 1891), considers that there are to be distinguished in the skin in a narrow sense three forms of capillary lymphangiomata: the varicose lymphangioma, the tuberous (fibromatous) lymphangioma, and the cavernous lymphangioma. The two latter forms occupy, in contradistinction to the first, which, in the cases that have been hitherto published, concerned only the uppermost layers of the corium, the whole width of the corium, and spare only the most superficial layers of it. The author considers that the causes of this local disposition are congenital, but that we are ignorant of their exact nature.

(346) Multiple Myomata of the Skin.

Jadassohn (*Archiv f. Derm. und Syph.*, 1891, Heft 2, p. 294) describes two cases of multiple myomata in the skin, one in a woman of 29, and the other in a woman of 37. In one the disease began in early childhood, in the other it had developed during the previous ten years. In both numerous nodules of a reddish appearance, from a pin's head to a hazel nut, had developed on the extensor surface of the arms. In one of the cases the pain was severe; in the other some of the tumours had absorbed. Microscopical examination of the excised nodules showed that the tumours were limited to the cutis, and were composed of unstriped muscle, surrounded with abundant elastic fibres, and in their interior contained sweat and sebaceous glands. They contained no nerve fibres. In one of the cases the connection of the tumours with the hair follicles could be plainly seen by the naked eye, as each tumour contained a stump of hair in its centre.

(347) The Pigment of the Skin.

Kaposi (*Archiv f. Derm. und Syph.*, 1891, Heft. 2) considers that, in many cases of pigmentation of the skin, the source of the pigment is in the hæmoglobin, but there are many cases in which this explanation does not suffice, and for such cases he considers a pigment-forming function must be attributed to other protoplasmic bodies, particularly to the undermost layer of the rete mucosum.

PATHOLOGY.

(348) The Course of the Fibres in the Optic Nerve.

Hebold (*Neurologisches Centralblatt*, March 15th, 1891) gives an account of the examination of the optic nerves and tracts of a general paralytic who was blind in the left eye, and had a narrowing of the field of vision in the right. The left optic disc was atrophied, the right was normal. At the necropsy the left optic nerve was atrophied, and both tracts were diminished in size. Microscopical examination showed in the left much atrophy, while in the right there were two bundles of atrophied fibres, one in the centre the other at the periphery. As the chiasma was approached the latter kept well to the right, whilst the former, the central bundle, tended more and more to the left, so that ultimately in the left optic tract the degenerated fibres found had crossed over from the centre of the right optic nerve, while in the right tract the degenerated fibres had come from the side of the right optic tract. The uncrossed bundle in the right tract ultimately came to lie to the outer side of the right tract, whilst the crossed bundle in the left tract, which in the optic nerve was central, was central in the opposite tract.

(349) Tubercle Bacilli at the Point of Infection.

By inoculation on guinea-pigs and rabbits, Tangl has established (*Monatsh f. prakt. Derm.*, No. 4. February, 1891) the fact that tubercle bacilli cannot penetrate the body without producing tuberculous changes at the point of entry. He infers, therefore, that in primary tuberculosis of the lymphatic glands, or of the bones, if after even a considerable time there is no tuberculous change externally, the tuberculosis could not have been produced by external infection.

BACTERIOLOGY.

(350) Bacteria in Erythema Multiforme.

Luzzato (*Archiv f. Derm. und Syph.*, 1891), speaking of the presence of cocci in erythema multiforme, says that a woman, 72 years of age, died of erythema multiforme. A few hours after her death a small quantity of blood was taken from the left cephalic vein, and in the blood cocci were found isolated and in groups. Cultivation on agar developed a white colony, which consisted of cocci similar to those found in the blood, and yellow colonies of organism like sarcoma. Both organisms were inoculable on animals, being afterwards found in the blood.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(351) Bilateral Pneumothorax.

DR. OTTO LASIUS, of Osnabrück, reports an interesting case of double pneumothorax (*Deutsche med. Wochenschrift*, No. 15, 1891) in the person of a woman, aged 27, who had suffered from obstinate cough for a year and a half previously, signs of limited disease being present at the apex of the right lung. In the middle of the sixth month of pregnancy she was suddenly seized with extreme dyspnœa, the physical signs indicating pneumothorax of the upper part of the right chest, the left side being unaffected. On the following day she was delivered of a seven months' infant, which died within a few hours, but was not found to present any evidence of tuberculous disease. Three days later, with only slight increase in the dyspnœa, and with no other indicative symptoms, she was found to be the subject of a double pneumothorax, the whole of the left pleural cavity being apparently filled with air, although the percussion note varied in tone at different points. Percussion over the second intercostal space on the right side gave the impression of fluid mixed with air. Death took place in ten days from the first occurrence of pneumothorax, and the *post-mortem* examination confirmed the clinical diagnosis. On the right side the pneumothorax was limited by previous pleural adhesions, forming two cavities with a narrow connecting channel between them, both cavities containing fluid as well as air. In addition to these there was a third cavity in the lung itself, due to the primary disease. In his commentary upon this case, Dr. Lasius discusses at great length the possible causes of the varied notes obtained on percussion, and calls attention to the very slight influence which the occurrence of the second pneumothorax appeared to have had upon the case, the rapidity of respiration having only been increased from 50 to 57 in the minute. No point of rupture could be discovered in the visceral pleura on either side.

(352) Transmission of Purpura from Mother to Fœtus.

HANOT and LUZET (*Annal. de Derm. et de Syph.*, February, 1891) record a case in which a pregnant woman suddenly became the subject of purpura attended with coma, and gave birth to a dead fœtus slightly macerated. The woman died in four days from the appearance of the malady The fœtus did not present traces of purpura on the skin, but the serous cavities contained a reddish fluid. There were discrete hæmorrhagic patches in the thymus; the visceral pericardium was covered with black ecchymosed spots; the surface of the lung contained similar disseminated spots, as well as the mediastinal and costal pleuræ. Microscopical examination and cultivations showed the presence of a streptococcus in the different viscera and fluids, both of the mother and the fœtus.

(353) The Ocular Symptoms in General Paralysis of the Insane.

DR. C. A. OLIVER contributes (*Medical News*, September 20th, 1890) some observations upon the ocular anomalies present in the third stage of general paralysis. In such cases as permitted accurate testing, vision for colour and form was invariably subnormal. The extent of the visual fields could not be ascertained. More or less cycloplegia apparently was present in every case that admitted of examination by retinoscopy. The pupils were usually larger than normal; often unequal and irregular. The irides as a rule were extremely sluggish in response to strong light stimulus, or were absolutely immobile thereto, though fairly active during efforts for convergence or accommodation. Strong solution of atropine—sufficient to cause full mydriasis in health—produced irregular and incomplete dilatation of the pupils. Insufficiency of the internal recti was noted in several cases. Partial atrophy of the optic disc—more pronounced on the temporal side—was often present, with marked reduction in the optic nerve and retinal circulation.

SURGERY.

(354) Wounds of the Ureter in Laparotomy.

IN a paper read on April 4th, at a sitting of the recent French Congress of Surgery, M. Pozzi stated that the ureter is not infrequently wounded in the course of laparotomy for the removal of an abdominal tumour, especially if this be a large recto-peritoneal cyst. (*Progrès Méd.*, April 11th, 1891). If the wound be a small one, and the tube be not severed, it will suffice to bring the edges together by sutures. On the other hand, if the ureter be completely divided, or if much of it be torn away, then some other plan of treatment must be adopted. A case is recorded by M. Pozzi, in which the ureter was cut through near the bladder during the removal of a large cystic tumour, which was found to be closely adherent to the surrounding structures. There was some difficulty in making out which ureter had been divided, but after free displace-

ment of the intestines it was found to correspond to the right kidney. The upper portion of the divided tube was then dissected out almost as far as the right kidney, and then carried to the surface of the body through a wound made in the lumbar region. The lower end near the bladder was then secured by a ligature. Three months later nephrectomy was performed on the right side, in order to relieve the patient of the renal fistula which had been established by the former operation. The removal of the right kidney was followed by a good and speedy recovery, the left kidney secreting a full and proper quantity of urine on the eighth day.

(355) Traumatic Juxta-epiphysial Detachment of Upper Extremity of the Humerus.

M. E. Rollet (*Lyon Médical*, March 29th, 1891), reports two cases of detachment of the head of the humerus that came under the care of Professor Poncet, of Lyons, towards the end of last year —one patient was aged 17, and the other 15 years. In each case the deformity at the seat of injury and the impairment of the function of the limb were relieved by resection of the upper extremity of the lower fragment. In some remarks on these two cases M. Rollet states that the title of "juxta-epiphysial detachment" is the best one for the injury usually known as epiphysial detachment. It is the diaphysis of the humerus, and not the epiphysis, that is separated from the intervening cartilage. In youth and during the period of growth a direct injury of the shoulder is, it is held, more likely to result in juxta-epiphysial detachment than in fracture of the surgical neck of the humerus. According to Poncet, the chief points in the diagnosis of this lesion are the youth of the patient, the elevated situation of the injury in the upper part of the shaft of the humerus and very near to the shoulder joint, and the displacement forwards and inwards of the lower fragment. In cases in which this displacement cannot be reduced, and where the upper end of the lower fragment has either perforated the skin, or, after having torn through the fibres of the deltoid, forms a very prominent subcutaneous projection, it is necessary, M. Rollet holds, to resect the extremity of the displaced lower fragment of bone. By such operation alone, which being an extra-articular one presents very little if any danger, can deformity be removed and the functions of the injured limb completely restored.

(356) The Importance of Thorough Examination in Suspected Pott's Disease.

At a recent meeting of the Orthopædic Section of the New York Academy of Medicine (*New York Medical Journal*, April 4th, 1891), Dr. R. H. Sayre pointed out that, although in childhood the signs of Pott's disease of the spine were usually so well marked as not to be likely to be confounded with those of other troubles, in adults—especially in women—there were times when the diagnosis was not so clear. In some cases of uterine displacement and ovarian disease the reflex pains, the posture, and the gait might simulate the symptoms of spinal disease so closely as to be mistaken for them by good observers. Three cases that had fallen under Dr. Sayre's notice were reported, in order to show that in cases of supposed Pott's disease reflex pains from pelvic irritation might easily lead one astray, and that such mistakes in diagnosis had been made by men of large experience.

(357) Operation for Opening the Posterior Mediastinum.

In a recent communication to the Société de Chirurgie of Paris M. Quenu described an operation he has lately devised, in association with M. Hartmann, for gaining access to the posterior mediastinum (*Revue de Chirurgie*, No. 3, 1891). A vertical skin incision is made midway between the spinal border of the scapula and the vertebral column. After division of the exposed portions of the trapezius and rhomboid muscles, and displacement inwards of the outer border of the sacro-lumbalis, a portion of the entire thickness of each bone and about three-quarters of an inch in length is taken from the third and each of the two following ribs. An opening is thus formed nearly 5 inches in length, and extending from the first rib to the upper border of the sixth. Quenu states that by separating the sides of this wound one can see very clearly the whole of the posterior mediastinum and all the organs it contains. This operation, it is pointed out, is attended with more difficulty and danger on the right than on the left side, because, as was first shown by Braune, the pleura, which on the left side passes directly from behind forwards, insinuates itself on the right side between the œsophagus and the vertebral column in order to reach the aorta. Operative penetration into the posterior mediastinum might, it is thought, be indicated in disease of any organ contained in this part of the thoracic cavity, but is most likely to be needed in cases of impacted foreign body in the lower part of the œsophagus. The anatomical conditions in this operation are not favourable to removal of malignant disease of the gullet unless the growth is of very limited extent.

(358) Webbed Fingers.

The last issue of the *Beiträge zur klinischen Chirurgie* contains an interesting paper by Dr. E. E. Goldmann, of Freiburg, on the production of some varieties of malformation of the extremities occasionally brought under the notice of the surgeon. This paper, which is illustrated by cases taken from Professor Kraske's clinic, deals with arrested growth of certain metacarpal and metatarsal bones, with congenital defects of the bones of the forearm and leg, and of the carpus, and with absence of some of the fingers and toes. It is pointed out that the question of malformations in the human subject has lately acquired much importance from the fact that many conditions of this kind hitherto regarded as merely casual, or as the results of strictly pathological processes, can now be readily explained by reference to our present knowledge of the subjects of development and inheritance. On the other hand, many gaps in our stock of information concerning development in man may be filled up through careful observation of cases of malformation such as are here described. Dr. Goldmann, in his remarks on syndactylism, which is perhaps, the most frequent malformation of the hand, states that this condition may be rightly regarded as an arrest of development, since in certain stages of fœtal existence, the fingers are bound together by webs of varying extent. It very rarely occurs, but three cases of the kind have been recorded, that all the fingers together with the thumb are thus included. The thumb almost always remains free, and in most instances two fingers only; usually the third and fourth are joined together. These facts can be at once ex-

plained by referring to what takes place in the development of the hand. As it is known that the thumb becomes detached from the fingers about the seventy-fifth day of fœtal life, whilst the four fingers remain bound together for a longer time, it will be seen that the unknown disturbing influence which arrests the normal process of separation acts most frequently at the period when the separation of the thumb from the other elements of the hand has already been effected. The subsequent separation of the fingers does not take place at the same time. It is known from researches on the larvæ of the triton and proteus that the elements constituting the ulnar portion of the hand are not co-ordinated. The forefinger, whilst distinct from the thumb, sends off as a main branch the index finger, from which the two last fingers are sent off as secondary branches. The influence which causes syndactylism may act on the ulnar portion of the hand at any stage of development, and it depends upon the period at which this influence comes into play whether all four fingers, or three, or only two, may remain in a webbed condition.

(359) Foreign Bodies in the Air Passages.

Dr. Sprengel, of Dresden (*Centralblatt für Chirurgie*, April 4th), affirms that the question as to which of the bronchi is the seat of a foreign body impacted in the air passages can in many cases be readily and positively settled by the aid of auscultation. It is usually assumed that, if the air does not pass into one lung, the corresponding bronchus is completely closed by the foreign body, and that if the obstruction of the bronchus be incomplete, there will be a sibilant sound on inspiration at the seat of impaction, whilst the respiratory sounds on the opposite side will remain normal. Under certain circumstances, however, the determination of the precise situation of the foreign body may be attended with some difficulty. As a proof of this a case is recorded by Dr. Sprengel of a little girl who came under his care suffering from much dyspnœa in consequence of the presence of a foreign body in the air passage. There was a sibilant inspiratory sound over the right bronchus, while on the left side the respiratory sounds were almost inaudible. Tracheotomy was performed below the isthmus of the thyroid body, and the foreign body was seen occupying the whole lumen of the trachea, just above its bifurcation. The auscultatory signs in this case are to be explained, the author states, by the nature of the foreign body, which was a large hollow bead, oval in form and open at each end. This, it is conjectured, was fixed at one end into the upper part of the right bronchus, and stretched across the lower end of the trachea, completely occluding by its distal portion the orifice of the bronchus on the left side. Thus the air was prevented from entering into the left lung, whilst it passed into the right lung through the tube formed by the large hollow bead, the narrowness of which, and perhaps an occasional occlusion by mucus, was the cause of the severe dyspnœa and of the sibilant sound during inspiration. This case, it is pointed out, shows that a hollow or tubular foreign body fixed at the lower part of the trachea may, by the signs which it produces, lead one to assume that it is fixed in one of the bronchi, since the air enters one lung and is excluded from the other. The absence of respiratory sounds on one side of the chest, or a sharp whistling sound heard over one bronchus, cannot be regarded as absolutely diagnostic of the presence of a foreign body in a bronchus unless we know that such body is a solid and not a tubular one.

(360) Abdominal Abscess.

Dr. M. Weisz (*Orvosi hetilap*, 1890, No. 32) attended a nurse, aged about 32, who suffered from hypogastric pains and fever. A wide fluctuating area was detected in the ileo-cæcal region. It was painful, and the integuments were of a dusky red colour. It was diagnosed as abscess of the abdominal wall. On incision a great quantity of bloody pus came away; a probe, passed deeply, caused the escape of fæcal-smelling matter, thought at the time to be contents of intestine. Hence Dr. Weisz diagnosed anus præternaturalis arising from inflammation in the neighbourhood of the cæcum. In two days, however, the abscess cavity contracted greatly and healthy odourless pus escaped. Recovery was rapid. There were no morbid conditions in relation to the fæces or action of the bowels. Hence it would appear that the abscess was not of perityphlitic origin, but simply a collection of pus limited from the first to the abdominal wall. The fæcal odour was simply due to diffusion of gases, originating in the intestine, through the abscess wall.

MIDWIFERY AND DISEASES OF WOMEN.

(361) Intrauterine Putrefaction during the Life of a Fœtus.

Dr. Schuhl (*Arch. de Toc. et de Gyn.*, March, 1891) observes that when signs of putrefaction are manifested in pregnancy or labour before the expulsion of the fœtus, the seat of decomposition is nearly always in the fœtus. Exceptionally the child has been born alive when fœtid discharge, septic symptoms, or even physometra were present. In one case of this kind the fœtus was the cause of the bad symptoms, as there was a slough on its scalp; as a rule, however, in these exceptional cases, the putridity is not due to the fœtus. Dr. Schuhl describes two cases in his own experience where the fœtus showed no signs of putridity, although there was physometra, and the patient was in a septic condition. After delivery of the child a fœtid white mass was detached from the uterine walls, and, thanks to sublimate injections, the patient recovered. The child was born dead. In the second case abortion took place at the fourth month. The fœtus showed no signs of putridity, but there was a mass of fœtid clot in the placenta, close to the site of the rupture of the membranes. Four days before delivery rigors occurred; the next day there was metrorrhagia. The decomposition of the blood was probably due to entrance of air into the uterine cavity. The patient recovered after free injections of carbolised water. As long ago as in 1680 Mauriceau attended a case where there was feverishness at term. A child was born which lived four hours, but part of the placenta was decomposed. The mother recovered after suffering from a large abscess on the nates. In another case, described by Dr. Jenks, in 1877, a rachitic patient had been in labour for seven days. Much putrid discharge escaped from the vagina. Dr. Jenks performed Cæsarean section. The child had died only recently before birth; it presented no sign of putrefaction. The putrid discharge proceeded from decomposing clot. The mother recovered completely. Thus, Dr. Schuhl

observes, there may be thorough putridity within the pregnant uterus not due to death of the fœtus. Active measures, even so extreme as Cæsarean section, may save the mother, but the child must almost necessarily perish.

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(362) Triplet Labour.

Dr. Poitou-Duplessy (*Révue Obstét. et Gynéc.*, January, 1891) was called in the autumn of 1890, to a secundipara, aged 31, in labour. The abdomen was greatly distended, and the pains were feeble. A fœtal head presented, the bag of waters was ruptured, and a child delivered by aid of forceps. Another vertex presentation was detected, a second bag of membranes forming. The forceps was again applied, and after the delivery of the second child a third head presented, covered by a distinct bag of membranes, and was delivered by forceps. A few minutes later furious hæmorrhage occurred, though none of the three cords had been dragged upon. The hand was introduced into the uterus, and an enormous placenta, over 3 pounds in weight and 10 inches in diameter, was extracted. An antiseptic injection of water at 120° was thrown into the uterine cavity, and as the bleeding did not cease a hypodermic injection of ergotine was given. Dr. Poitou-Duplessy at the same time depressed the abdominal walls, and compressed the aorta for ten minutes against the vertebral column. At the end of that period not a drop of blood escaped when the pressure was taken off; the ergot had taken effect. The uterus had firmly contracted. There were no after-pains; one further hypodermic injection of ergotine was administered. On the third day slight milk fever occurred; the mother suckled the triplets, giving the breast to each two or three times in the twenty-four hours, but a bottle was also needed for them. They were all males; the largest weighed 5 pounds 10 ounces, the two others being but slightly lighter. Each had a distinct amnion. Dr. Poitou-Duplessy maintains that the placenta in this case is the largest ever recorded. Three loculi, formed by fusion of the walls of three amnia, proved that it was made up of three smaller placentæ originally distinct.

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(363) "Prostatism" in Women.

M. E. Chevalier (*Annales des Maladies des Organes Génito-urinaires*, January, 1891, p. 49) attempts to demonstrate that there exists in women a morbid condition of the bladder related to arterio-sclerosis, and absolutely homologous with that known, when occurring in the male, as prostatism. This theory appears reasonable, since M. Guyon has proved that complications observed in typical prostatic disease by no means solely depend upon the hypertrophy of the prostate and its effect upon the muscular apparatus of the bladder and the escape of urine. They are to a great extent due to a series of morbid changes which involve the entire urinary tract, and depend upon arterio-sclerosis.

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(364) Habitual Death of Fœtus.

Dr. Leopold Meyer (*Centralblatt f. Gynäk.*, April 11th, 1891) dwells upon Fehling's theory which associates death of the fœtus and white infarcts in the placenta with kidney disease manifested by albuminuria. He insists, however, that three clinical facts must not be overlooked. (1) Renal albuminuria in pregnancy, without death of the fœtus or placental disease, is frequent. (2) Habitual death of the fœtus (exclusive of all syphilitic cases) may occur with or without white infarcts. (3) White infarcts have been observed in cases where there was no albuminuria, with or without death of the fœtus. Dr. Meyer therefore doubts whether it can be absolutely laid down as a law that morbid changes in the kidney are the cause of death of the fœtus and placental disease. Certain cases lead him to think that, as in the eclampsia of labour, kidney disease is not so much the cause as some other influence which is favoured by impairment of the renal function.

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(365) Labour in a Patient under 13.

Dr. J. W. McLane (*American Journ. of Obstet.*, April, 1891), in an article on "The Sloane Maternity Hospital," New York, describes the case of a girl who had hip-joint disease when 5 years old, and had always been sickly, staying three years in hospital. Menstruation began in her eleventh year, and she continued to be regular. Nine months before admission she became pregnant by her brother. On admission into hospital she appeared anæmic, there was partial ankylosis of both hip-joints, the pelvis was normal, the labia majora very small, the labia minora large, and the vulvar orifice diminutive. The labour, which took place at term, the mother being 12 years and 10 months old, was natural. The presentation was vertex, first position. The cervix dilated slowly. The first stage of labour lasted nearly twenty-six hours, the second twenty-five minutes. The child was a male, weighing 7 lbs. 2 ounces. The placenta weighed over a pound. Laceration of the cervix, perineum, and labia minora were detected after delivery. The perineum was sutured. The patient suckled the child and made a good recovery.

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(366) Case of Hermaphroditism.

M. Polaillon (*Bulletin de l'Acad. de Médecine*, April 7th, 1891) examined in 1887, a person aged 27, believed to be a woman, with soft skin and no beard; the voice, sexual instincts, and general tastes were all of the female type. The breasts were well formed. No trace of anything like menstruation had ever been noted. The vulva was perfectly normal, the clitoris and meatus urinarius free from any unusual development. The vagina was a depression, not four-fifths of an inch deep when pressed inwards. No trace of a uterus could be felt on recto-abdominal palpation. Each inguinal canal held a tender, firm body; the left, which was the smaller, was completely reducible. This person afterwards led an irregular life. Constant attempts at coitus greatly deepened the rudimentary vagina. In October, 1890, the patient entered hospital, destitute and sinking from albuminuria. The vagina was as long as the forefinger, and its integument bore the characters of mucous membrane. After the patient's death, the organs were carefully dissected. A recto-vesical peritoneal pouch of the male type was discovered. Below its reflection, and just in front of the blind end of the vagina, in the median line, was a mass of plain muscular tissue of the form of a haricot bean, and bearing none of the elements which distinguish the uterus or prostate. Two cords proceeded from this mass to the bodies in the inguinal canals, which proved to be true testicles. They were covered by a true tunica albuginea; the tunica vaginalis was perfect on the right side, but ill-formed (yet quite cut off from the peritoneal cavity) on the left. Both glands bore all the in-

ternal characters of testicles, but the epithelium lining the tubuli seminiferi was atrophic. Thus in this hermaphrodite true testicles existed, yet in all other respects (save that there were no uterus and tubes, and no catamenial phenomena) the subject was a female.

DISEASES OF CHILDREN.

(367) Intubation in Laryngeal Diphtheria.

THE *Deutsche medicinische Wochenschrift* of April 2nd, 1891, contains a paper on this subject by Dr. Julius Schwalbe, of Berlin. Reference is first made to the "dreadfully small" percentage of successes after tracheotomy in children with laryngeal diphtheria, and to the difficulties and dangers of the operation, even in the most skilful hands. The need of simpler and more successful methods of treatment is noted. The history of intubation, and a description of O'Dwyer's instruments, are given. Tubage of the larynx was tried in thirteen cases, but, for various reasons, three cases had to be excluded from further consideration. Of these ten cases, all suffering from primary diphtheria, nine died and only one recovered. Of the nine fatal cases, one was benefited, viz., a child 3½ years old, who, in the act of vomiting, expelled the tube, after wearing it twenty-four hours. She died subsequently, but did not suffer from further dyspnœa. Of the remaining eight fatal cases one child was under one year, four children under 2 years, and three over 2 years. Death occurred twice on the second day, once on the third day, twice on the fourth day, once on the seventh day, once on the ninth day, once on the tenth day, and once on the fifteenth day. The cause of death was pneumonia in five cases, purulent bronchitis in two cases; one death was due to fibrinous bronchitis and one to capillary bronchitis (*post-mortem* refused). The only case which survived was a boy aged 8 years; in this case tubage was undertaken earlier than tracheotomy is usually performed. As tested by the results of these cases, the author thinks that intubation is not likely to improve the statistics of diphtheria. The number of successful tracheotomies averages from 30 to 35 per cent. per annum. Whether better results would have been obtained by tracheotomising the foregoing cases seems doubtful, especially when the ages are taken into consideration—five of the children being under two years; the average results of tracheotomy at that age yield not more than 10 per cent. of recoveries. Among other disadvantages the author refers to the possibility of the tube being brought up, either in consequence of vomiting or of a severe cough; if no one capable of replacing the tube or of performing tracheotomy is present, fatal consequences may rapidly follow. In one case he found a large quantity of membrane in the trachea that could not possibly have been expectorated through the tube. Reference is made to the displacement of membrane while the tube is being introduced, and to the dangers of this, Dr. Urban, of Leipzig, having recorded twelve cases. A further danger consists in pressure sores. In nine cases examined *post mortem* there were five instances of pressure sores, partly in the trachea, partly in the larynx. Other authors have recorded a similar experience. Thus Widerhofer found sores in nine cases out of thirteen, in four of which the tube had not been worn more than twenty-four hours. Schwalbe thinks the difficulties and the dangers of intubation outweigh the advantages, and agrees with Urban, of Leipzig, that it is better to trust to tracheotomy.

(368) Buccal Infection in Broncho-pneumonia.

MM. MÉRY and BOULLOCHE report (*Rev. Mens. des Mal. de l'Enf.*, April, 1891) the result of the bacteriological examination of saliva in 48 consecutive cases of measles in children. The pathogenic organisms found were the pneumococcus lanceolatus of Fränkel (14 cases) and the streptococcus pyogenes (11 times). Thus one of these microbes was found in 52 per cent. The author's observations on the saliva in 20 children suffering from chronic diseases, or acute diseases other than respiratory, showed that one or other of these microbes was present in 15 per cent. only; this is a somewhat lower percentage than that (for adults) by other observers. The further practical point is brought out that the secondary bronchial and pulmonary affections of measles occur, with few (if any) exceptions, only when the saliva contains the pneumococcus or the streptococcus; they observe as a corollary that it is desirable to give minute attention to rendering the mouth antiseptic during measles.

(369) Leucocythæmia in Childhood.

DRS. J. THOMSON and ROBERT MUIR, of Edinburgh, have published (*Amer. Jl. Med. Sciences*, April, 1891) a case of leucocythæmia in a child who died at the age of 8 years and 1 month after five months' illness. The authors observe that this rapid course is characteristic of the disease in early life; treatment by arsenic or iron could not be borne, owing to irritability of the alimentary tract. Enlargement of the liver and spleen, a tumour in the left loin below the spleen, and reaching down beyond the anterior superior iliac spine, and a mediastinal tumour were noted during life, in addition to enlargement of all accessible lymphatic glands, and marked anæmia. The mediastinal tumour had in all probability arisen in the remains of the thymus gland; it had displaced the aorta and great vessels backward, and was adherent to the pericardium. The tumour in the left loin was the kidney; the right kidney was also enlarged. The urine did not contain albumen. The blood was examined systematically during the last six weeks of life; during that period the number of red corpuscles and of blood plates rapidly diminished; the number of uninucleated leucocytes rapidly increased; the multinucleated, usually the most numerous, became less numerous. Death was due to an attack of dyspnœa. At first some general improvement had seemed to follow faradism of the abdomen. The application did not appear to have any constant effect on the number of leucocytes in the blood. The bone marrow was found after death to be pale, and its proper cell elements were replaced to a great extent by uninucleated corpuscles similar to those in the blood; it contained few red corpuscles. The enlargement of the kidneys was due to interstitial infiltration with lymph corpuscles. The ordinary connective tissue of the body contained an abnormal number of lymph corpuscles, and the enlargement of the lymph glands was due to the dense packing of these corpuscles in their cortex. This is quoted in support of the contention that the affection of the lymph glands is secondary. Dr. Muir failed to find the micro-organism described by Fermi, and Kelsch and Vaillard, but observes that "the theory that a micro-organism is the cause of the proliferation of the leucocytes would be in ac-

cordance with the facts, and would be rather favoured by the course of temperature in this case" (irregular but, as a rule, morning remissions and evening exacerbations).

PHARMACOLOGY AND THERAPEUTICS.

(370) Action of Opium and Morphine on the Bowel.

Spitzer has published (*Virchow's Archiv*, cxxiii, Heft 3, 1891) an experimental investigation of the action of opium and morphine on the intestinal canal. His experiments were carried out on frogs, rabbits, and men; his objects were to increase our very defective knowledge of the action of opium on the intestine, and to determine whether, as is generally assumed, opium is superior to morphine as an anti-diarrhœic and anodyne in intestinal affections. In frogs the bowel was exposed and kept moist with saline solution. Very small doses of watery extract of opium given subcutaneously sufficed to diminish the sensitiveness of the bowel to painful stimuli, while leaving intact the sensitiveness to stimuli which simply call forth peristalsis, the skin sensitiveness being also unaffected, and there being no general narcosis. In this condition the action of the opium may conceivably be exerted on the brain, or the spinal cord, or on nerve centres in the wall of the bowel. The author concludes it cannot be on the brain, as the same result is obtained with decapitated frogs; he also thinks it cannot be on the cord, as its functions are otherwise left intact. The action must, therefore, be on the bowel locally, and this opinion is supported by the fact that even smaller doses given *per os* have an equal effect. That opium acts locally as an anodyne on the intestinal canal, apart from its general action, he further proves by giving a frog strychnine, and then tying the bowel midway between the stomach and anus. Stimulation applied to either half of the bowel equally called forth tetanic convulsions, but when a solution of opium was injected into the lower half, its sensibility was found to be greatly lessened in comparison with the upper half. Spitzer holds that the opium does not paralyse the ends of the sensory nerve in the bowel, but sensory ganglia which, he assumes, lie in the course of the sensory nerves in the wall of the canal. These get an undue share of the opium as the alkaloids are excreted from the blood into the intestine, are absorbed into the blood again, and again excreted into the intestine, so that there is a constant circulation of them in the blood vessels of the intestinal wall. The motor ganglia are also probably affected in the same way as the sensory, but either not so powerfully, or the action is not so readily demonstrable. Larger doses are required to diminish peristalsis than to diminish sensibility in the bowel. The diminution of peristalsis may be due to paralysis of motor ganglia in the bowel, or to a stimulation of the inhibitory centres in the cord from which the splanchnic nerves arise. Paralysis of the sensory nerve terminations in the wall of the intestine does not occur, because after very large doses of morphine the peristaltic movements of the bowel become very marked, and experiments pointed to the conclusion that the diminution in peristalsis was very largely due to an action of the opium in paralysing the motor ganglia in the walls of the intestinal canal. Large doses caused great increase of bowel peristalsis before general spinal tetanus was induced. The author thinks this is due to paralysis of the spinal cord, and consequent paralysis of the inhibitory action exerted by the splanchnic nerves. In this condition, however, the sensitiveness of the intestine to painful stimuli is much diminished. Morphine has the same action in every way, and quantitatively the activity of the opium is proportional to the amount of morphine it contains. The other alkaloids of opium have very little action on the bowel. On rabbits observations were made after exposing the bowel while the animal lay in a warm bath of saline solution. Spitzer confirms the well known experiments of Nothnagel, in which he found that irritation of the bowel with sodium chloride is not nearly so effectual in increasing peristalsis after the administration of opium or morphine. If a portion of bowel be completely isolated and the same experiment repeated, then peristalsis is not interfered with; this result is regarded as proving that in this case the opium acts on the spinal cord, and diminishes the inhibitory action of the splanchnic nerves. Spitzer, however, points out that irritation of the bowel from without with sodium chloride scarcely corresponds to physiological peristalsis or increased peristalsis after purgatives or irritation from within of the mucous membrane, as the peristalsis takes place towards the pylorus, and is very inconstant in amount. He therefore irritated the bowel by injecting into it a 15 per cent. salt solution, coloured with indigo-carmine. The rate at which this solution progressed down the intestine was observed in normal animals, and was found to be two or three times slower after opium or morphine, the peristalsis being also much more gentle and regular in the latter case. Even after complete isolation of a portion of the intestinal canal from its mesenteric nerves, opium greatly diminishes the peristalsis. Opium given subcutaneously acts exactly to the same extent, and no better, than morphine subcutaneously, its activity being proportional to the amount of morphine it contains. In healthy men opium by the mouth acts somewhat more powerfully on the bowel than when given subcutaneously. The reason, probably, is that the morphine is only slowly abstracted from the opium, and thus acts gently along the whole length of the bowel; it is not so quickly absorbed as pure morphine is, and in consequence does not produce so marked a general action. In diarrhœa, opium *per os* is the most powerful—more so than opium extract or morphine subcutaneously, or morphine by the mouth. In slight intestinal pain opium by the mouth is the best treatment, as we get the desired analgesia with small doses and without constitutional effect, the local action on the bowel being probably sufficient; in very severe pain hypodermic injection of morphine is most effectual. [The author does not discuss diminution of intestinal secretion as a factor in the astringent action of opium.]

(371) Relation between Iodine and Salicyl.

Dr. W. Weintrand (*Berliner klin. Wochenschr.*, March 30th, 1891) says that Rosenbach and Pohl have asserted that there is a radical difference between the action of iodine and that of salicyl, namely, that the latter, however administered, permeates all the juices of the body, whereas iodine, given by the mouth in the usual doses, only passes into transudations, never into normal or inflamed joints or exudations in cavities (great

erous spaces). But while at first Rosenbach distinguished between an inflammatory "exudation" and a passive "transudation," in later papers he has denied that any sharp distinction can be made, because no exudation can occur without some accompanying transudation. Leuch has also published cases which do not bear out Rosenbach's theory, and now Dr. Weintrand brings forward seventeen cases in which analyses of various fluids of the body were made, and which also contradict that theory. These cases show, in fact, that the presumed antagonism does not exist, the only difference between the two drugs (as regards analysis of body fluids) is that iodine is excreted in the saliva (probably the reason of its asserted appearance in the stomach after clysters or external application), whereas salicylic acid cannot be shown to be present in the stomach, even when large quantities have been injected *per rectum*.

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(372) Action of Aloin.

Professor Meyer has chemically and physiologically examined aloin obtained from Barbadoes, Curaçoa, and Natal aloes (*Archiv. f. expt. Path.*, xxviii, Heft 3 and 4, 1891). Barbadoes and Curaçoa aloes yield an identical aloin, the former containing about 10 per cent., the latter about 16 per cent. It has the formula $C_{16}H_{16}O_7$, is in yellowish white acicular crystals, soluble in hot water and alcohol, much less so in acetic ether, and only in traces in chloroform, ether, and benzol. Natal aloes yield about 14 per cent. of a different aloin, having the formula $C_{21}H_{22}O_{10}$, scarcely soluble even in hot water, soluble in 70 parts of boiling alcohol, very soluble in caustic soda, from which it is precipitated unchanged by acids. In experiments on animals and man the aloin was given *per os* and subcutaneously. For subcutaneous administration a solution in formamide was used—water may also be used for Barbadoes aloin, but the solution is more liable to decompose; the solution has a neutral reaction, and after injection causes burning pain for a few minutes but otherwise has no evil effects. The aloin can be detected in the fæces and urine by tests which are given at length and which are extremely delicate. The experiments showed that aloin from Barbadoes and Curaçoa aloes acted with certainty as a purgative, whether given by the mouth or subcutaneously. The dose in both cases is about the same, which is explained by the fact that aloin, when given hypodermically, is excreted from the blood chiefly into the bowel, only a mere trace or none being found in the urine. In man, dogs, and cats there is no albuminuria after subcutaneous injection, but in rabbits—in which animals aloes does not cause purgation—subcutaneous administration is always followed by inflammation of the kidneys, albuminuria, and death. Its purgative action is as slow when it is given hypodermically as it is *per os*. The resin left after extraction of the aloin from aloes is also purgative. Natal aloin was active in dogs and cats only after very large doses; but if an alkali were added to it—so as presumably to decompose it—its activity was greatly increased. By subcutaneous injection it was always active. In man on an ordinary mixed diet, given alone or with an alkali, it had very little purgative effect, but in man fed on an exclusively animal diet it was much more active. The reason probably is that in the latter case the putrefactive processes in the intestine are much more marked, and the aloin is decomposed into a more active substance. All the experiments seem to point to the conclusion that aloin itself is not an active purgative, but that it becomes gradually decomposed in the intestine into a more active body, and hence the slowness of its action.

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(373) The Excretion of Iron Salts after Injection into the Blood.

Jacobi has furnished (*Archiv f. expt. Path.*, xxviii, Heft 3 and 4, 1891) an interesting contribution to our knowledge of what becomes of iron salts after injection into the circulation of dogs and rabbits. He used a double salt of iron which does not coagulate albumin, and injected solutions of it directly into the vessels. Hamburger had previously shown that after giving iron salts to dogs by the mouth, the greater part of the iron can be recovered from the fæces, and only the merest trace is excreted in the urine. From this he and others have drawn the conclusion that iron salts given by the stomach are not absorbed. Jacobi remarks on this, however, that the experiment is not conclusive, because iron might be absorbed from the intestine into the blood, and then excreted wholly into the intestine again, and need not therefore be excreted by the kidneys except very partially. He finds, in fact, that not more than 5 per cent. of the iron injected into the blood is excreted in the urine; he finds also that only about from 6 to 15 per cent. can be recovered from the intestinal contents and walls, of which only about $1\frac{1}{2}$ to $2\frac{1}{2}$ per cent. is found actually inside the intestine, the rest being in the blood vessels and in the wall of the intestinal canal. Excretion of iron salts from the blood into the intestine is, therefore, small in amount, and goes on slowly. In the bile only a mere trace of iron is excreted. As so little iron, therefore, is eliminated by the intestine, and the merest traces by the kidneys and liver, Jacobi is of opinion that Hamburger was correct in concluding that only a very small amount of iron can be absorbed by the bowel when iron salts are given by the mouth. Further, after injecting iron salts into the blood, Jacobi found that the iron could be detected in the urine only for two or three hours afterwards. It must, therefore, be stored up in the organism; and as the result of further experiments on rabbits, he found that after injection of iron salts into a vein, about 10 per cent. of the iron is excreted by the bowel, liver, and kidneys together, about 50 per cent. is deposited in the liver, and the rest is deposited in the spleen, kidneys, intestinal walls, and other organs. It is all removed from the blood within two or three hours after administration.

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(374) Active Principles of Aconite Root.

Messrs. Richards and Rogers have conducted a further research on aconitine (*Chemist and Druggist*, February 7th and 14th, 1891). They give an improved process for the preparation of crystalline aconitine from the root, the alkaloid thus obtained having the formula $C_{33}H_{43}N_2O_{12}$. From their results they believe that there are two modifications of crystalline aconitine, which they call "alpha" and "beta" respectively. Both are obtainable in crystals of the same form and size, and both have the same chemical formula, but the melting point of α-aconitine is 182° to 184° C., and of β-aconitine 178° to 180° C., while the toxicity of α-aconitine is only one-sixth that of β-aconitine. The amorphous commercial

aconitine is much less active, and varies greatly in strength. An examination of different roots showed that the best one to use for the preparation of aconitine is that of the fresh aconitum napellus, the percentage of alkaloid being 0.71 per cent.

(375) The Diagnostic Value of Tuberculin in Internal Tuberculosis.

THE experience gained in the different universities of Germany with regard to the diagnostic value of Koch's method are somewhat varied (*Die Wirksamkeit des Koch'schen Heilmittels etc*). Six of the professors of medicine—namely, Leyden, Gerhardt, Biermer, Ebstein, Weber, and Quincke—are of opinion that the absence or presence of reaction after the use of tuberculin must not be regarded as absolute proof of the absence or presence of tuberculous disease in each case. Some of them record cases of undoubted tuberculous disease of the lungs, in which the bacilli could easily be found in the sputum, but in which neither the large nor the small doses of the fluid produced any evidence of reaction. On the other hand are ranged the names of Schultze, Lichtheim, Finkler, Schreiber, Rumpf, and Guttmann, all of whom are disposed to establish the method as an absolute means of recognising the presence of tuberculous disease in internal organs. Even the presence of such cases as those already referred to, where other evidences proved the presence of tuberculous disease without any doubt, are not held to shake the diagnostic position of tuberculin, even though no reaction follow its use, as the same occasional inertness in particular individuals may be recognised with other drugs also. It is in the early cases of phthisis especially that its value as a means of diagnosis is most clearly shown, since it is capable of producing reaction in a stage of the disease which may not have been sufficiently advanced to give rise to physical signs. In cases of external tuberculosis also, a considerable difference of opinion is to be noted, less so, however, than in the case of disease of internal parts. Bardeleben and Köhler of Berlin report considerable variations in the degree of reaction, etc., and are rather reserved in their verdict as to the diagnostic value of the method. Professor von Bergmann praises its utility as a ready means of distinguishing between tubercle, syphilis, and carcinoma. Professor Trendelenburg, of Bonn, found it trustworthy in all cases except those of tuberculous disease of the testicle. Mikulicz, of Breslau, and von Bramann, of Halle, regard the presence or absence of reaction as trustworthy; whilst others, such as König and Hildebrand, of Göttingen, are of opinion that such reaction may occur in cases similar in clinical appearance to tubercle, but in which tubercle plays no part. Von Esmarch, of Kiel, speaks well of its diagnostic value as especially manifest in early stages of tuberculous surgical affections where the diagnosis is most difficult by other means. Other observers record the results of their experience to much the same effect, some laying great stress upon the manner in which attention may be called by local reaction to unsuspected centres of disease, whilst others have reason to believe that such forms of local reaction are sometimes to be met with without actual tuberculosis of the part affected.

(376) Koch's Treatment in Laryngeal Disease.

THE changes observed by the German laryngologists (*Die Wirksamkeit des Koch'schen Heilmittels gegen Tuberculose*) in cases of tuberculous disease of the larynx, as a result of the injection of Koch's fluid, present almost as many varieties in different cases as do the evidences of the systematic reaction. Fifteen cases are reported from Professor B. Fränkel's clinic in Berlin. In most of these a greater or less degree of redness and swelling of the larynx was produced, but this was not always in proportion to the amount of general febrile disturbance. This observation is corroborated by evidence from the reports of Professors Gerhardt, Weber, Barth, and others. In cases where no evidence of tuberculous disease had been present in the larynx this redness and swelling sometimes appeared after injection, either affecting the whole organ or being limited to individual parts, and especially the posterior wall and arytenoid cartilages. Of the tissues already reddened and swelled by the existent disease, very little change was noted in the simply œdematous swellings, but in the parts infiltrated with tuberculous material a very decided swelling took place, which, as a rule, rose and fell with the rise and fall of the temperature, shrinking after each tumefaction to a somewhat smaller size than before and never causing sufficient narrowing of the glottis to give rise to stridor or dyspnœa. It is to be noted, however, that Professor Fränkel's cases were treated by small doses, very cautiously increased. Some of the other observers expressly state that they have refrained from treating cases where any additional swelling might cause stenosis of the larynx, but in one such case tracheotomy had to be performed "as a prophylactic measure." With regard to ulceration, most observers record that the ulcerated surfaces were, as a rule, at first covered with a greyish layer, but afterwards became clean and healthy, some of them actually healing. In some instances ulcers formed where none had been seen before, and in other cases disintegration and healing might be seen taking place side by side. Professor Fränkel describes the changes in ulcers as similar to those seen after local treatment but more rapid in their development. He records one case which he regards as absolutely cured both in lung and larynx, but none of the other physicians or surgeons lay claim to more than the production of temporary improvement. As to the after-effects in the infiltrated parts there is considerable difference of experience. With the subsidence of the swelling induced by the treatment a certain amount of disintegration has been observed, small sloughs forming upon the surface, leaving granulating wounds beneath which showed every disposition to heal. Other forms of infiltration are described which become smaller without any breach of surface, whilst a third variety is recorded in which the superficial covering of the swelling sloughed off, leaving behind it small masses of caseating cells, which were subsequently thrown off in their turn. In some of the cases of laryngeal disease there were marked lesions in the intestine also, and, in a few instances, the treatment was followed by diminution of diarrhœa. In one of the few fatal cases it was found (by Professor Fränkel) that the fluid had caused necrosis of the tuberculous tissue without annihilating the bacilli. In the intestine the tissue was so much destroyed that the serous membrane was laid bare.

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A WEEKLY EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(377) Siphon Drainage in Tuberculous Empyema. A PAPER and an illustrative case on the subject of rapid and successful healing of tuberculous empyema were brought forward by Dr. A. Fraenkel at the recent sitting of the Verein für Innere Medicin (*Deutsche med. Wochenschrift*, No. 17, 1891). The patient, a young man, aged 23, suffered from phthisis of the right apex, with slight signs at the left also. Effusion ensued in the right pleura, the fluid being somewhat blood-stained, and containing tubercle bacilli. No bacilli could at that time be found in the sputum. The pleuritic fluid became purulent, and was removed by Bülau's method (a long indiarubber drainage tube passed through the cannula, after withdrawal of the trocar, the tube being made to act as a siphon, discharging into a vessel filled with antiseptic fluid). After subsidence of the fever, injections of Koch's tuberculin were begun and were well borne. In twenty days the secretion from the pleura ceased, and a few days later, after withdrawal of the tube, the wound was completely healed. The patient gained two stone in weight, and is at present doing well, although tubercle bacilli are now present in the sputum. Comparing the results of this case, and others similar to it, with such experience as that lately published by Professor König (see SUPPLEMENT, March 21st, 1891), Dr. Fraenkel expresses astonishment at the strong evidence in favour of the siphon treatment. He believes that tuberculous empyema will soon come to be regarded from a new standpoint, and that the good results which have recently been obtained by operative treatment in the case of tuberculous peritonitis may, perhaps, be obtained in the similar affection of the pleura when the disease in the lung is not too far advanced. He commends the siphon method in all such cases except where the pus is offensive, and for these he regards free evacuation through a wide opening as the most satisfactory treatment.

(378) The Cold Bath Treatment of Typhoid Fever. IN the *Practitioner* (March, 1891), Dr. Hare, of Brisbane, rigorously analyses two series of cases of typhoid fever—the one including 1,828 cases and treated expectantly, the other comprising 1,173 cases and treated with the cold bath. Dr. Hare deals most effectually with possible objections to his statistics. He shows that the treatment has no effect upon the occurrence of perforation and hæmorrhage, beyond rendering the latter less dangerous; that the death-rate from exhaustion and from pulmonary and cerebral causes is diminished, especially in cases of early admission; and that the prognosis becomes even better in women, since they are less liable to perforation and hæmorrhage than men. The lethal influence of the intestinal lesion is lessened under this treatment, by moderating the diarrhœa and by sustaining the strength of the patient. Brand's rule should be strictly adhered to, namely, a cold bath at 68° F. given every three hours (if the rectal temperature reach 102.2° F.), and lasting about fifteen minutes—attention, of course, being paid to certain well-known contra-indications. Dr. Hare incidentally remarks that quinine is of much service as a heart stimulant in simple pyrexial cardiac failure. The author concludes by saying that hospital mortality may be greatly reduced—upwards of 50 per cent.—by the cold bath treatment, but that it can hardly fall below 5 per cent., since the death-rate from perforation and hæmorrhage amounts fairly constantly to 4¼ per cent.

SURGERY.

(379) Results of Excision of Chancres. DR. JULLIEN (*Annales des Maladies des Organes Génito-urinaires*, April, 1891, p. 274) records the result of this operation in eighteen cases, and contends that his results are such as to lead him to continue the plan. In itself the operation is simple enough, and the wound usually heals by first intention. Only on four occasions in his eighteen cases has the induration returned, and in no single case has it been attended with ulceration. In two cases the chancres completely reappeared. In a considerable number of instances no constitutional symptoms followed, and Dr. Jullien considers that when the induration is quite recent, and when there is no affection of the glands or of the lymphatics, the operation should be undertaken, and will in a fair number of cases yield a satisfactory result.

(380) Primary Resection of Gangrenous Intestine in Herniotomy. IN the *Beiträge zur klinischen Chirurgie*, Bd. 7, IIft. i, Dr. F. Krumm, of Heidelberg, discusses the indications and contra-indications of primary resection with apposition of the divided portions of intestine by circular suture in cases of gangrenous hernia. The question has been much discussed since the adoption of antiseptic methods into practical surgery, and with many German surgeons of great authority it is still a disputed point whether such treatment be justifiable or

not. The views expressed in this paper are based on a study of fifteen cases of gangrenous hernia, which were treated in Professor Czerny's clinic in the course of a period of nearly twelve years. In nine of these cases an artificial anus was established, and in four the gangrenous intestine was cut away and the divided portions of the intestinal canal were brought together by circular rows of sutures. The first mentioned plan of treatment resulted in complete recovery in five cases, and was attended by fatal results in the other four. Of the cases of primary resection, three were successful, and in the fourth case death, which occurred on the operating table, was due to asphyxia. Dr. Krumm points out that the surgeon, in dealing with gangrenous hernia, has to decide between one or other of these two operations. The fact that in fifteen cases of gangrene of intestine in connection with strangulated hernia Czerny, who is an advocate of primary resection and circular suture, had recourse to the formation of artificial anus affords a proof that in many instances of this complication there can be no room for choice between the two methods. The latter operation alone is indicated under the following circumstances: Gangrene involving not only the strangulated intestine, but also the sac and the surrounding structures; when the patient is in a condition of extreme collapse; when the strangulation has been much prolonged and has caused severe symptoms and a large accumulation of fæcal matter in the intestinal canal. With regard to primary resection, Dr. Krumm holds that recourse to this method is justifiable in recent cases of strangulated hernia, especially cases of so-called elastic strangulation of intestine, in which the tendency to gangrene is due to congestion of the blood vessels of the strangulated loop, and not to accumulation of fæcal matter, provided also the mesentery be not too much and too extensively constricted. Cases of fæcal strangulation are not altogether excluded, but here, it is held, much judgment is required and a careful selection must be made. In such cases primary resection is not to be taken into consideration unless the strangulation has been of brief duration and the symptoms of intestinal obstruction are not very severe. Exhaustion and collapse, and also well-marked symptoms of peritonitis, are decisive contra-indications to such treatment. It is also contra-indicated in cases of advanced phlegmon of the structures surrounding the hernial sac and of the anterior wall of the abdomen. In such cases an artificial anus is already in process of development, and firm adhesions are probably already well established between the intestine and the hernial rings. Moreover, in such instances perfect asepsis cannot be attained. On the other hand, partial gangrene of the normal sac is not a contra-indication, since by removal of all the gangrenous parts and by energetic disinfection after provisional occlusion of the abdominal cavity a fairly aseptic field of operation may be produced. As primary section demands, as conditions of its successful performance, not only an experienced operator but also skilled assistance and a very strict attention to all the details of the antiseptic method, it ought as a rule, Dr. Krumm suggests, to be restricted to hospital practice. Notwithstanding the many contra-indications which are carefully and candidly discussed in this paper, there still exists, it is stated, a certain class of cases of gangrenous hernia in which primary resection of intestine and circular suture may be regarded as the proper method of treatment. With regard to the comparative mortality of the two methods of dealing with gangrenous hernia, it is pointed out by Dr. Krumm that the most recent and complete statistics show that the percentage of deaths is rather smaller after primary resection than after the formation of an artificial anus.

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(381) Extirpation of Syphilitic Stricture of the Rectum.

M. Quenu has put on record (*Bulletin de la Société de Chirurgie de Paris*, No. 3, 1891) a case of very tight syphilitic stricture of the rectum in a woman aged 36 years, in which by the posterior median incision he excised the lower extremity of the gut, together with the surrounding indurated tissues. The patient made a good recovery, and when last seen—seven months from the date of the operation—was quite well, and presented no signs of relapse. Simple dilatation in cases of old syphilitic disease of the rectum Quenu believes to be often ineffectual, usually very painful in practice, and not always free from risk. Posterior linear rectotomy sometimes gives better results, but is merely a palliative operation, and is sometimes followed by long-continued and exhausting suppuration. It is held that if this form of disease of the rectum does not yield to specific medicinal treatment, it should be regarded and dealt with as a new growth. If the stricture involve the lower portion of the rectum, excision should be performed by the perineum, and if it be situated above this region, the sacral method advocated by Kraske would be indicated.

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(382) The Blood-clot in the Treatment of Wounds.

Dr. W. S. Halstead (*Johns Hopkins Hospital Reports*, vol. ii, No. 5, March 1891), after briefly referring to the views and principles held by past and present authorities on the healing of wounds, gives a short account of a number of selected cases (122) which have passed under his care during the last eighteen months, and which illustrate in the main the method now adopted by him in the treatment of primary and secondary wounds. In these he brings out pretty clearly the value of the aseptic blood-clot in filling up gaps of small and large size in primary wounds, or, in case of abscess cavities of long-standing; and once again the vascularisation and organisation of the aseptic blood-clot are demonstrated. After endeavouring for some time to procure accurate apposition of the surfaces of a wound by "approximation sutures," and thus obliterate all spaces which he calls "dead" spaces, he came to the conclusion that it is almost impossible to attain this with any degree of certainty and, what is more important, that it is unnecessary; for such spaces become filled with blood-clot which undergoes in turn the changes of vascularisation and organisation. Moreover, such "dead" spaces, whether large or small, may well be left to become filled with blood which, in due time, under antiseptic precautions becomes completely organised, and thus disappears without giving rise to any disturbance in the healing process. Accordingly, he now dispenses with the use of the drainage tube in any shape or form, and obtains equally good results both in primary and secondary wounds. While conducting these clinical observations he made several experiments on dogs which seem to prove that the staphylococcus pyogenes, when injected in the form of virulent cultures, pro-

duces either in the peritoneal cavity or in the interior of muscle nothing more than a passing congestion accompanied by an equally transient œdema of the part itself and the surrounding tissues. By another series of culture experiments, he demonstrated that it is practically impossible to cleanse the skin of the hands of the operator or that of the part to be operated upon with such thoroughness as to render it quite free of micro-organisms; and he found that wounds healed primarily, though their surfaces or those of the dressing next the wound were contaminated with pyogenic micro-organisms. In all wounds ordinary skin sutures are replaced by "buried skin sutures," of which the knot only comes away; and the substance used for such and other purposes is fine sterilised silk. In conclusion, he gives a full account of the surgical *technique* now in use at the hospital.

(383) Gastrostomy in Cancer of the Œsophagus.

In some clinical comments on five original records of gastrostomy performed in cases of cancer of the œsophagus (*Revue de Chirurgie*, April, 1891), MM. Terrier and Louis, of the Hôpital Bichat, Paris, advocate this plan of treatment, the frequently fatal results of which, it is held, are due more to the enfeebled condition of the patient than to any risks attending the operation itself. The authors consider how certain inconvenient results which have been observed in cases of recovery may be prevented by improved methods of operating, and sum up their views in the following conclusions:—(1) Gastrostomy in cases of cancer of the œsophagus is decidedly a justifiable palliative operation, and ought to be proposed to the patient; (2) its performance is very simple, and the immediate results are not attended with much gravity; (3) the ulterior evils due to the presence of a gastro-cutaneous fistula may be avoided by opening the stomach as near as possible to the superior curvature, by making only a small orifice, and by dispensing with the subsequent use of occluding agents; (4) then simple dressings only will be needed, and these should consist of inert powders, or of such (carbonate of magnesia, for instance) as are capable of neutralising any drops of gastric fluid that might be discharged during any forcible effort made by the patient; (5) the results of gastrostomy with regard to the survival of the patient are influenced by the duration of the disease and the extent to which the stomach is involved. Certainly in France intervention, as a rule, is too late, and the chances of survival are consequently much diminished.

(384) Trephining of the Spine for Fracture.

Mr. D. N. Knox has recently reported (*Glasgow Medical Journal*, April, 1891) a case in which he trephined the spine for fracture and dislocation in the dorsal region. The patient, a pitboy, aged 13, was admitted into the Glasgow Royal Infirmary with a severe injury to the back, caused by the fall of a shaft cage. There was much bruising of the back, and an abnormal projection, due to backward displacement of the spine of the eleventh dorsal vertebra, could be felt at the lower part of the back. On the following day there was complete loss of power and sensation in both lower limbs, but the patient had control of his bladder. The spine was trephined thirty-six hours after the receipt of the injury. The tip of the tenth spinous process was found to be detached. The body of the eleventh vertebra was broken across in a direction obliquely downwards and forwards; the upper alveolar processes were also fractured and displaced behind the lower articular processes of the vertebra above. The lower vertebra was displaced backwards fully three-fourths of an inch, and its spinous process was rotated to the right side. The laminæ of the tenth vertebra were sawn through, some portions of the articular processes were nipped off, and the displaced vertebra was then pushed back into its normal position. The spinal theca was not opened. The patient made satisfactory but very slow progress after the operation. On the next day sensation was found to be perfect in both lower limbs, but it was not until after an interval of three days that the boy was able to move his toes. This was the sole movement he could perform for nearly two months after the operation. At the end of the twelfth month he could stand erect and walk a few steps without support. The chief difficulty in standing and walking was due to weakness of the feet and limited range of movement in the ankle and the tarsal joints. The muscles of the lower extremity had, however, increased in size and acquired much strength at the time of the preparation of this report. Mr. Knox believes that before long the training of the muscles will be perfect, and that the patient will have normal control over all the movements of the lower extremities.

(385) Operation for Naso-pharyngeal Polypi.

Baracz (*Centralbl. f. Chir.*, April 18th, 1891) describes a method for which he claims the following advantages, namely, that it avoids much bleeding and enables the operator to get the growth completely away. The plan has, as he states, been employed previously by others, but has not met with the general acceptance which it deserves. It is principally applicable to those growths which cannot be removed by the forceps through the nostril. Chloroform is not administered, but the part affected, together with the surface of the lips and nose, which has to be incised, is rendered insensible by means of cocaine. An incision is made through the lip just to one side of the middle line, and the incision is carried up through the fleshy part of the nose on one side of the septum as far as the nasal bones. Should the growth be very large the nasal bone may be cut and turned aside, along with the flap of skin, to the corresponding side of the face. This flap is grasped by an assistant, and the nasal aperture enlarged slightly by bone forceps if necessary, though it is very rarely needful to do so. One finger can then be introduced into the nostril and another behind the soft palate, and the polypi enucleated with the finger nail. In children an anæsthetic must be employed. Baracz states that the whole nasal cavity, as far as the base of the skull, can thus be got at. If the cavity is well irrigated out afterwards the bleeding is not great. The edges of the wound are then accurately adjusted, and only a linear scar remains. Baracz claims that by this comparatively simple incision quite as much can be effected as by the larger-planned operations of Langenbeck and others.

(386) Enterorrhaphy for Localised Tuberculous Disease of the Small Intestine.

Dr. Frank (*Präger. med. Wochenschrift*, 1890, No. 23) describes the case of a woman, aged 26, with consolidation at the apex of one lung. Two years previously she had aborted, and since then

she had suffered from feverish attacks, leucorrhœa, hypogastric pain, nausea, and diarrhœa. Abdominal section was undertaken for double salpingitis and oöphoritis. Tuberous projections were noticed on the surface of the ileum a hand's breadth above the ileo-cæcal valve and some 7 inches higher. Elsewhere, after careful search, the intestine was found to be free from tubercle. Resection was therefore undertaken. No less than 29¼ inches (75 centimetres) of ileum were removed, including a mass of caseous lymphatics. Gussenbauer's clamps and Lembert's sutures were employed. The tuberous masses proved to be tuberculous formations, corresponding to ulcers on the mucous membrane. Incipient stricture of the bowel was detected, though there had been no clinical symptoms. Only five previous cases of resection of intestine for tuberculosis have been recorded. Ten months after the operation this patient was in excellent health.

MIDWIFERY AND DISEASES OF WOMEN.

(387) Papilloma of the Fallopian Tube.

Dr. Doleris (*Bull. de la Soc. Obstét. et Gynéc. de Paris*, January, 1891) relates a case where this condition coexisted with hydrops tubæ profluens. The patient was a singer, aged 28, of rather irregular habits. She had been subject to leucorrhœa, and in March, 1888, fell from a height on her left hip during a period. Symptoms of peritonitis followed for a few days. Two months later she was in Paris, where she gave way to excessive sexual indulgence. A quantity of serosanguineous fluid escaped suddenly when she was straining at stool. In the course of the next week several quarts of the fluid escaped. The discharge ceased during the next period, and then recommenced. A tumour of the size of an egg lay to the right of the cervix, extending downwards into Douglas's pouch. On the left side was a much larger swelling. Fungosities were scraped away from the uterine walls by the curette in June, 1888. Parametritis on the left side followed. In September almost continuous hydrops tubæ set in. The fluid was no longer sanious, as before the scraping, but pale yellow and syrupy. A sudden movement, as when rising or sitting, caused a flood of the fluid to escape and soil the clothes. Between the intervals of these watery floodings there was a regular oozing, about a wineglassful escaping daily in this fashion. The fluid stiffened linen like starch. On July 2nd, 1889, M. Doléris operated. Both appendages were removed. The left consisted of tube and ovary, both cystic from chronic inflammatory changes, and universally adherent. The right tube formed a cyst of the size of a small nutmeg, and its outer surface was pearly white. It contained a pale yellow syrupy fluid, like that which had so freely discharged from the vagina. There was no free fluid in the peritoneum. Great masses of papillomatous growths sprang from the inner wall of the cystic right tube. The patient was able to get up five weeks afterwards, and, a week later, left Paris for the South of France. M. Doléris believes that this is the first case of papilloma of the tube which has been noted in France. The uterine end of the tubal canal was very narrow, but M. Doléris explained that by physical laws the fluid could easily have issued from it in great quantities, under favourable conditions. The papillomatous growths may have been identical with the cauliflower masses seen on the vulva in cases of chronic venereal discharges, but there was no absolute evidence that the growths were either venereal or malignant.

(388) The Influence of Stays on the Abdominal Viscera.

At a meeting of the Dresden Gynæcological Society in January, 1891, Dr. Meinert read a paper embodying the results of 63 *post-mortem* examinations of patients in whom the thorax was compressed by stays. The normal relations were invariably disturbed. The liver and stomach were usually pushed downwards, more rarely upwards, and in the majority of cases enlarged. The stomach mostly lay with its long axis vertical, and often fitted into a corresponding depression on the surface of the liver. Depression of the great intestine was almost constant, the hepatic flexure being most involved. The transverse colon was often distorted in the most remarkable manner, hanging down in some cases so that its middle part almost reached the pelvic cavity. In these displacements the stomach had, as a fixed point, its cardiac end, the large intestine its splenic flexure. Equally precise determination of the displacements of the female organs was not possible, owing to senile changes in many of the bodies. The right kidney was frequently movable, as many recent authors have already noted. Dr. Meinert believes that, in living women, retroflexion is the most frequent displacement of the uterus. A case of nephrorrhaphy for floating kidney was also noted; three-quarters of a year after the operation the kidney again became displaced. Bergmann has observed similar failures; it is certain that women who have undergone nephrorrhaphy should not wear stays. The median displacement of the stomach and the pushing down of the colon was best diagnosed during life by forcing air into those parts of the alimentary canal. The displacement and distension were to be remedied by small meals, taken frequently, and by avoiding fluids in bulk which injured the stomach. The diet must be substantial and of a nature to stimulate peristalsis; hence a kind of whole-meal bread was recommended. Indeed, Dr. Meinert advocated the swallowing of small quantities of sand for "internal massage" of the stomach. External massage was good, especially on a full stomach. It may be remembered that at the International Medical Congress, London meeting, 1881, there was some discussion as to whether the long axis of the stomach was not normally vertical. Dr. Leopold stated, in reply to Dr. Meinert, that he had seen the stomach so placed in cases where there was no constriction of the thorax from stays. Some of the changes in the hollow viscera might be due to defective nutrition.

(389) Sarcoma of the Cervix Uteri.

Dr. Kleinschmidt (*Archiv f. Gynäk.*, vol. xxxix, Part 1, 1890) has collected the recorded cases of primary sarcoma of the cervix, and added an unpublished case, from Professor Winckel's practice. The tumour grew from the posterior lip of the cervix and adjacent part of the posterior vaginal fornix. It was lobulated, soft, and very easily broke down when touched. In structure, it was a spindle-celled sarcoma. The tumour was three times removed by operation. After the first, the patient remained in good local and general health for a year; within that space of time she became pregnant, and was delivered at term without instruments. At length the growth

returned, but after the second operation recurrence took place at the end of two months. Total extirpation of the uterus was out of the question, as there was a hard deposit in the left parametrium. At each operation, the tumour was simply removed by the knife, the wounded surface being scraped with the sharp spoon and burned with the thermo-cautery. In hitherto published cases, as in Winckel's, recurrence usually took place at the site of the primary growth. Metastatic deposits were frequently detected. The prognosis is highly unfavourable, relatively as well as generally; in short, sarcoma of the cervix is quite as bad as the more frequent malignant disease of that part—carcinoma.

(390) Hæmorrhage in Pregnancy and Artificial Abortion.

Dr. Gräfe (*Centralbl. f. Gynäk.*, April 11th, 1891) criticises, to a certain extent, Professor Schröder's doctrine that in hæmorrhages during pregnancy artificial abortion should never be induced, as even if the bleeding does not cease of itself it is easily controlled and not dangerous, whilst when it becomes excessive abortion is certain to follow, and then the hæmorrhage will stop. Dr. Gräfe notes that bleeding often entails severe chronic anæmia, which renders the patient quite unfit to face the dangers of labour, especially *post-partum* hæmorrhage, and is itself hard to cure long after all loss of blood ceases. Experience further shows that spontaneous abortion is not always the rule in these cases, even after death of the fœtus. Dr. Gräfe therefore considers that abortion ought to be induced in cases of hæmorrhage during pregnancy, whenever the loss of blood is constant or at very short intervals, so that, at least, a troublesome condition of chronic anæmia is to be feared. The same course is yet more justifiable when the fœtus has already died, the hæmorrhage continuing without any symptom of spontaneous abortion. Dr. Gräfe uses laminaria for the purpose of dilating the os and inducing abortion in these cases.

(391) Dermoid Cyst in Breast of an Old Woman.

Dr. K. Herrmann (*Prager med. Wochenschrift*, 1890, No. 44) brought an example of this very rare condition before a society at Prague last autumn. The cyst was spherical, "bigger than a man's fist," and situated in the lower half of the right breast. A small circular ulceration on its surface had perforated its wall, and on pressure (after the patient's death) a dry, yellowish, friable substance escaped from the interior, mixed with a large number of pieces of a tissue resembling epidermis. The patient, whose age was 66, had died of pulmonary emphysema; the tumour had apparently given her but little inconvenience. No accurate history as to how long the cyst had existed or when the ulcer had developed could be procured. Dr. Herrmann believed that a cyst of this kind in the breast was developed by an involution of the ectoderm. In the discussion on this specimen Professor Gussenbauer stated that he had already seen several similar cases. He did not believe that their primary seat was the mammary gland at all; they arose in the subcutaneous connective tissue and invaded the glandular tissue. Albers has described a dermoid cyst of the breast containing hair; but, according to S. W. Gross, certain supposed dermoid or sebaceous cysts spoken of by various writers were probably inspissated lacteal cysts.

DISEASES OF CHILDREN.

(392) Polypoid Granuloma of the Trachea after Tracheotomy.

In the *Revue Médicale de la Suisse Romande* (March, 1891) Dr. Revilliod records a case of polypoid granuloma of the trachea, secondary to tracheotomy for croup, necessitating a second operation. The patient, a boy aged $2\frac{1}{2}$ years, was tracheotomised on account of dyspnœa, due to false membrane, complete relief being afforded. The boy made a good recovery. The tube was permanently removed on the seventh day after operation, and the child was shortly afterwards sent home with nothing but a slight superficial point of the external wound uncicatrised. He remained quite well for some weeks, then slight dyspnœa began to be experienced; this gradually increased, notwithstanding the treatment adopted in the hospital after his readmission, and becoming urgent a second tracheotomy had to be performed about two months after the first one. A polypus with a long thin pedicle was found at the upper angle of the incision; it was as large as a medium sized pea, and was removed by means of a curette. The tube was worn for three days, was removed without difficulty, and the child was discharged quite cured in a month. In commenting on the case, the author specially refers to the absence of all complications or difficulties, it having been asserted by some writers that such granulomata are due to some fault or other in the operative procedures. In this instance, however, neither the multiplicity of the tracheal incisions, nor their defective position, nor their exaggerated length, nor incision into the cricoid could be blamed; for the operation was simple and easy. Nor could a prolonged need of the cannula be blamed, for this was removed on the seventh day. The first operation was done without chloroform. Chloroform was given at the second one, and the child nearly died. Some doubt is expressed as to whether the chloroform was at fault, or whether the polypus had accidentally got into the larynx and so occluded it. Dr. Revilliod condemns the use of chloroform in tracheotomy, notwithstanding that the weight of cited evidence is strongly against him. His own experience amounts to 110 operations; "he has never repented leaving it aside, but has rarely adopted it without inconvenience." He briefly refers to the histological characters of the growth—"a voluminous granulation extremely vascular." Bibliographical references to similar cases are appended.

PHARMACOLOGY AND THERAPEUTICS.

(393) A New Antipyretic and Antirheumatic.

Dr. Hertel (*Deut. med. Wochenschr.*, April 9th, 1891) describes observations made in Gerhardt's clinic with a new antipyretic. The substance is named hydrochlorate of phenocoll. It is closely allied chemically to phenacetin

$$\left(C_6H_4{<}^{OC_2H_5}_{NH(C_2H_3O)}\right),$$

and is phenacetin in which one of the hydrogen atoms has been replaced by amidogen (NH_2), its formula being

$$\left(C_6H_4{<}^{OC_2H_5}_{NH(C_2H_2O.NH_2)}\right).$$

Hydrochlorate of phenocoll is a white powder in small crystals, with a bitter taste, and soluble in about sixteen parts of water at 62° F., the base being

precipitated by the addition of alkalies. According to Kobert it is not poisonous to animals, and has no deleterious effects on the blood, while von Mering found that 22 grains produced no symptoms in a rabbit, and that in pneumonia and typhus 15 grains acted as a trustworthy antipyretic, reducing temperature about 20° C., and never causing collapse or cyanosis. The amount of sweating was about the same as after large doses of antipyrin. Of phenocoll, a dose of 15 grains equals in its antipyretic action 23 to 30 grains of antipyrin, and 12 to 15 grains of phenacetin. Doses of 7 to 15 grains acted well as an antineuralgic. Hertel gave it in doses of 7 to 15 grains in cases of phthisis and rheumatism. The following is a summary of his results: In phthisis, single doses of 7 grains lower the temperature about ½° C. for a short time. Doses of 7 grains given hourly for three hours reduce the temperature about 1° C., but not with certainty: the reduction lasts only a short time. Doses of 15 grains cause reduction of temperature, 1° to 1½° C. in a few hours, the reduction generally lasting about two hours. Seventy-five grains given during twenty-four hours generally keep the temperature normal. The subsequent rise of temperature is regular, and unaccompanied by rigors or sweating. In acute rheumatism the same dose keeps the patient free from pain, but scarcely reduces the temperature, which only falls when the joint affections improve. It has no effect in gonorrhœal rheumatism. The urine, after about 75 grains have been taken, becomes brownish red or dark brown in colour, becoming deeper coloured on exposure to the air. On adding solution of perchloride of iron, a dark colour is produced, which clears up somewhat with strong sulphuric acid, but does not disappear entirely, and by transmitted light shows a peculiar greenish colour. Phenocoll is excreted very quickly, as this reaction is not obtained for more than about twelve hours after the last dose. No disturbance of the heart, respiration, or digestion was ever observed. It should not be kept in watery solution, as it decomposes slowly. Hertel states that he was very favourably impressed with the general results of its use, and advises further observations.

(394) Treatment of Phthisis by Artificial Atmospheres under Pressure.

A PAPER by M. Germain Sée on the subject of the treatment of phthisis by continued inhalation of medicated air under pressure, appears in the *Bulletin de l'Académie de Médecine*, No. 15, 1891. The drugs used were creasote and eucalyptol, their origin and action being fully referred to in the paper. The patients were placed in a closed chamber into which air was forced to an increased pressure of about half an atmosphere, after passing through a solution of the drugs. The pressure was increased gradually, and the sittings were prolonged to two, three, or more hours according to the patient's feelings. They took place every day, and the effect upon the general health was beneficial rather than the reverse, whilst a very marked improvement was noted in the symptoms of the disease. Cases of phthisis in early as well as advanced stages were treated with satisfactory results. In two cases of fœtid bronchorrhœa of two years' duration, a complete recovery was brought about in the course of five weeks. M. Germain Sée claims for this method of prolonged inhalation under pressure that the actual absorption of the antiseptic drug is more complete, and approaches more nearly to the point at which it is assumed that morbific organisms may be annihilated. It is harmless in itself, and gives rise to no unpleasant consequences such as may follow the continued introduction of creasote subcutaneously or by the stomach. Inhalation of creasote vapour at ordinary atmospheric pressure has long since been proved to be insufficient for the purpose of checking the progress of tubercle. Improvement of appetite, gain of weight, diminution of cough and expectoration, and subsidence of fever would appear to be the most striking of the changes brought about by the treatment.

(395) Absorption and Distribution of Chloroform in the Body.

POHL (*Archiv für expt. Path.*, xxviii, Heft 3 and 4, 1891) discusses in a short introduction to his paper the various views which have been held as to the mode of action of chloroform and other anæsthetics. He then describes at length his method of estimating chloroform quantitatively in animal fluids. A current of air is passed through the mixture for many hours; it takes up the chloroform, and the mixture of air and chloroform being led through a heated tube filled with pure magnesia, the chloroform is decomposed and can be estimated quantitatively by the amount of chlorine which it yields to the magnesia. Preliminary experiments with known quantities of chloroform convinced him that the method gives almost absolutely exact results. The experiments were made on dogs deeply under the influence of chloroform. In the blood drawn from such an animal there was got from 0.01 to 0.06 per cent. chloroform, the average amount being 0.035 per cent., being much less than the solvent power of blood for chloroform. The latter must therefore be present in chemical combination. The red corpuscles contained about two and a half times more than the serum. The greater part of the chloroform is therefore combined with the red corpuscles. Further experiments showed that it is not combined with the hæmoglobin, but with the lecithin and cholesterin of the corpuscles. Pohl thinks these bodies have an attraction for chloroform, as they are readily soluble in it. The combination is a loose one. The amount of chloroform in the brain, liver, urine, and fat relatively to the amount in the blood was also estimated. In a dog in which the blood contained 0.015 per cent., the brain (after death by bleeding) contained 0.0418 per cent. Pohl thinks the chloroform is retained by the cholesterin, lecithin, cerebrin, and other substances very soluble in chloroform. In another dog where the blood contained 0.062 per cent., the liver contained 0.044 per cent. Only traces were got in the urine. The fat contained less chloroform than the blood, but the author attributes this to its very small blood supply. The organs rich in substances which are soluble in chloroform seem to take it up in relatively large amount and quickly. After cessation of administration the blood reabsorbs it again and it is excreted by the lungs, the excretion going on for forty minutes at least. Pohl thinks that the solvent action of chloroform on certain constituents of the brain substance does not necessarily explain its narcotic action, as bromides and certain alkaloids also induce narcosis, and for these it has never been shown that they exert any solvent effect. Claude Bernard and Binz have supported the theory that a slight

degree of coagulation of the brain substance is produced; but this has never been demonstrated, although it is not outside the bounds of probability. In cases where death occurred the amount of chloroform in the blood was only very slightly higher than in the others. The danger is all the greater, as the blood is never saturated and can readily take up more chloroform.

(396) Iodoform in the Treatment of Burns.

ROTTENBERG (*Therap. Monatshefte*, March, 1891) advocates the following method of treating burns. He is surgeon to large ironworks, and sees many cases of all degrees of severity. The blisters, if present, are pricked, and a silk thread soaked in corrosive sublimate solution run through them, and allowed to remain. The whole surface, no matter what the degree of burning, is coated thoroughly with a thick layer of vaseline containing 10 per cent. iodoform, and then covered with gutta-percha. The ointment is renewed daily. The pain is always very speedily lessened, and healing takes place in an eminently satisfactory manner, and quickly.

(397) Influence of Acute Mercurial Poisoning on the Elimination of Phosphoric Acid and of Calcium.

IT has been observed that one of the effects of fatal mercurial poisoning in man is an incrustation of the renal epithelium with lime salts. In severe cases the straight tubules have been even found blocked by large calcareous deposits. Dr. Paul Binet (*Rev. Méd. de la Suisse Romande*, March 20th, 1891) has endeavoured to reproduce the above phenomena in animals, and to study what alteration in the excretion of lime salts and of phosphoric acid takes place in acute mercurial poisoning. Prévost, in a memoir published in 1883, suggested that the calcification of the kidneys ran parallel with a decalcification of the bones. He saw this evidenced in several instances by an abnormal fragility of the bones, and in some animals even by separation of the epiphyses; at the same time, analysis showed a relative diminution of the percentage of lime salts present. Single observations, made by other observers, have yielded only contradictory results, and it was with a view of settling the question that the present experiments were undertaken. In his experiments Binet made use of rabbits, administering mercury in the form of peptonate by hypodermic injection, and making careful daily observations of the amount of urine passed, and the average amounts of phosphoric acid and of calcium present. In this way he has been able to formulate the following conclusions: (1) Mercurial poisoning does not produce an increase of phosphoric acid or of calcium in the urine; on the contrary, a diminution is more often observed. (2) The quantity of urine is increased by slight poisoning, diminished in severe forms, with ultimate anuria. (3) Albuminuria is usually produced early in the poisoning; a transitory glycosuria is also frequent. (4) The percentage proportion of calcium contained in the fæces undergoes no noteworthy alteration. (5) The diminution of lime salts in the urine is not counterbalanced by their retention in the renal substance, for analysis of the kidneys after death showed no considerable calcification. (6) No appreciable decalcification of the bones could be demonstrated in any of the seven experiments performed. Without, therefore, denying that under certain conditions there may occur a decalcification of the bones, this cannot be considered as a constant phenomenon of mercurial poisoning. It may be, as stated by MM. Prévost and Frutiger, that this change is more accentuated in proportion as the kidneys are loaded with calcareous deposits, but no great incrustation was observed in any of M. Binet's experiments. The problem cannot, therefore, be yet regarded as solved.

(398) Does the Injection of Cantharidinates cause Fever?

PROFESSOR ROSENBACH (*Deutsch. med. Wochenschr.*, April 9th, 1891), discusses the question as to whether the subcutaneous injection of cantharidinate of sodium or potassium, as recommended by Liebreich in laryngeal tuberculosis, causes fever. He holds that a very large number of substances when injected under the skin will do so, especially if they be local irritants. From observations made mostly on healthy patients with minute doses (½ milligramme = $\frac{1}{120}$ grain) of cantharidinate of sodium, he concludes that a rise of temperature is always caused. The fever runs the same course as after injections of tuberculin (Koch), but is not nearly so high. Rosenbach is of opinion, however, that larger doses would have a much more marked effect. There was always great local pain, and frequently albuminuria. He has never seen any improvement in the local conditions in laryngeal phthisis. A more detailed criticism is promised after further observations.

OPHTHALMOLOGY.

(399) The Prescribing of Spectacles after Cataract Extraction.

DR. F. DIMMER (*Klin. Monatsbl. f. Augenheil.*, April, 1891) endeavours to explain the fact, familiar to most surgeons, that the spectacles ordered after cataract extraction do not give as good vision as those adapted from the trial cases, although careful testing of the lenses show that they accord with the prescription. The discrepancy is greatest in the cases in which it is necessary to combine a cylinder with the spherical lens. The explanation given is simple and complete. The lenses in the trial case are biconvex, and the cylinder is usually placed in front. In the glasses made for the patient the spherical glass is necessarily plano-convex, as the cylinder has to be ground upon the plane surface. The convex surface, being consequently very prominent, must be turned away from the eye, so that the cylinder lies next the eye. In lenses of moderate thickness the error thus produced is unimportant, but in glasses of the thickness of 8.0 D. and over there is an appreciable change in the position of the optical centre of the lens. Several methods of obviating the difficulty are considered: (1) The cylindrical effect may be produced by rotating the spherical lens round one of its diameters. There are, however, practical difficulties in the way of doing this which will always prevent it being much employed, and it is only suitable for slight degrees of astigmatism. (2) Loring has combined with the cylinder a spherical lens of small diameter, and consequently of only slight thickness, but the diminution of the field is an objection. (3) In prescribing the lenses allowance may be made for the difference in the position of the glass, in accordance with calculations and tables given by the writer. (4) The vision might be tested with

plano-convex lenses, the cylinder being placed nearest the eye. There is another plan, which would probably be better than any of these, when the expense is not an obstacle, namely, to use a bi-spherical lens and to grind one surface into the necessary sphero-cylindrical curve.

PATHOLOGY.

(400) Isolation of a Cholera Toxine.

Hermann Scholl (*Berlin. klin. Woch.*, October 13th, 1890) communicates an interesting paper giving the results of some experiments with a poisonous body isolated from cultivations of the cholera bacillus. He thinks it curious that in all previous investigations on the nature of the cholera toxine cultivations should have been used which had been grown in the presence of air, whereas, in his opinion, in order to imitate the conditions under which the cholera bacillus grows in the human intestine, the most essential point is that the culture be grown in the absence of air. In this assumption he follows Hueppe and Cartwright Wood, who, he considers, have satisfactorily shown that the cholera bacilli grow in the small intestine in the absence of oxygen, and that their extreme virulence or rapidity of poison production depends chiefly on this anaërobic growth. Other observers, among whom Petri may be cited, think that this point requires more rigorous proof than has yet been afforded. To obtain this anaërobic growth the author used the method introduced by Hueppe of growing the bacilli in raw eggs, by which means he holds that oxygen is completely excluded. The inoculated eggs were kept for eighteen days at a temperature of 36° C. When opened the contents were found to give off a very powerful smell of sulphuretted hydrogen, differing in this from cultures grown in air. He describes the white of the egg at this period as being fluid and watery, the yolk firmer in consistence and black in colour. In order to test the toxicity of the egg contents 5 cubic centimetres of the fluid part were injected into the peritoneal cavity of a guinea-pig. The animal at first showed signs of paralysis, then convulsive movements, and died at the end of forty minutes. This proved that the fluid egg albumen was very poisonous. The author then proceeds to describe his method of isolating the poison. Shortly, it is as follows: The fluid part of the egg contents, which amounted to 150 cubic centimetres, was dropped into ten times its volume of absolute alcohol. The white precipitate thrown down was collected and digested with 200 cubic centimetres of water at 40° C. The effect of this was to dissolve only a very small quantity of the precipitate, which was then removed by filtration. Eight cubic centimetres of the transparent filtrate were then injected into the peritoneal cavity of a guinea-pig, and caused death in one minute and a half. This fluid entirely lost its poisonous properties on being boiled in the steam steriliser for half an hour, whilst a short heating to 75° C. had no such effect. On the other hand, when placed at 40° C. *in vacuo*, over chloride of lime, the fluid was found next day to be completely inert. The author then subjected the poison to the usual chemical tests, and came to the conclusion that it was no ptomaine, but a peptone, differing, however, from the toxo-peptone isolated by Petri from aërobically grown cultivations. This peptone could be obtained in a solid form by dropping the watery solution into 8 to 10 times its volume of a mixture of ether and alcohol, rendered faintly acid by acetic acid. The resulting precipitate was found to be insoluble in pure water, but soluble on the addition of an alkali. After repeating this precipitation and re-solution several times, pure ether was substituted for the mixture of ether and alcohol, and the peptone obtained after evaporation as a white bulky substance. A very small quantity of this dissolved in water was then injected into the peritoneal cavity of a guinea-pig. The animal at once became totally paralysed. After half an hour convulsive movements of the head and extremities set in, and, at the end of five hours the guinea-pig died. The author concludes, as the result of his experiments: (1) That the poisonous peptone, elaborated by the cholera bacilli under conditions of anaërobiosis from the albumen of the egg, is different from the toxo-peptone of Petri, since the latter was not decomposed on boiling, while the former was. (2) That this cholera pepto-toxine is much more poisonous than the toxines found by Brieger and Petri in cultures grown under aërobic conditions, since the poison obtainable from a single egg was capable of killing ten guinea-pigs in the space of ten minutes. (3) That these experiments are in favour of the contention of Hueppe and Wood that the cholera bacilli, when grown anaërobically, form a greater quantity of, and a more powerful, poison than when grown aërobically.

(401) Transplantation of Fibro-sarcoma.

Von Eiselsberg (*Monats. f. Derm. prakt.*, No. 5, March, 1891) states that portions of a fibro-sarcoma from the back of a rat were transplanted into the peritoneum of another rat. A large sarcomatous tumour developed as a result of the inoculation.

BACTERIOLOGY.

(402) Pathogenic Properties of the Micro-Organisms present in Blue Pus.

The *Centralblatt für Chirurgie*, of February 28th, 1891, contains an abstract of a paper on blue pus, published by M. Kusnezow, of Charkow, in November (*Chirurgitscheski Westnick*). According to the author, the organisms, to the presence of which the peculiar staining of blue pus is due, are by no means so harmless as most surgeons have hitherto supposed them to be. These organisms (of which there are two forms, the bacillus pyocyaneus and the bacillus pyofluorescens), when injected under the skin of animals, set up inflammatory infiltration and suppuration, and also, when present in abundance, cause serious general disturbances such as debility, collapse, and high fever. Pure cultivations when injected into the abdominal cavity will, it is stated, excite a fibrinous and hæmorrhagic form of peritonitis, and so cause death. The human subject is susceptible, though in much less degree, to the pyogenic and phlogistic action of both these microbes, which are apt to spread from one wound to another, and cannot be readily destroyed.

Erratum.—Dr. Unna, of Hamburg, writes to point out that his ichthyol varnish is not "waterless," as described in the Supplement to the British Medical Journal of March 28th, but "soluble in water."

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LONDON: MAY 9TH, 1891.

A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(403) Temperature in Epilepsy.

M. BOURNEVILLE (*Revue de Médecine*, April, 1891) considers the subject of temperature in epilepsy under the following heads:—(1) During the epileptic attack isolated epileptic fits cause the temperature to rise from $\frac{1}{10}^{\circ}$ to $1\frac{1}{2}^{\circ}$ C.; (2) in a series of fits with intervals more or less long, during which consciousness always returns, the temperature behaves as in the first group—between this class of case and the status epilepticus there are intermediate conditions; (3) during the status epilepticus, characterised as it is by (*a*) an incessant repetition of the fits, so that often one fit begins before the other ends; (*b*) a stupor varying in degree, but which may end in absolute coma with no return of consciousness; (*c*) a hemiplegia more or less complete and transient; (*d*) frequency of the pulse and respiration, and especially by (*e*) a considerable rise of temperature persisting between the fits. M. Bourneville divides the epileptic state into two periods (1) convulsive, (2) meningitic (*période méningitique*). After the temperature has risen considerably, corresponding to the convulsive stage, matters improve and the temperature falls. Then appears this meningitic stage, which may terminate in death or recovery. The status epilepticus does not always establish itself at once, and this is especially the case in partial epilepsy. The internal or central temperature (for example, in the rectum) was taken in all these cases. M. Bourneville gives many examples illustrating these views.

(404) Tuberculosis of the Suprarenal Capsules.

MM. ALEZAIS and ARNAUD (*Revue de Médecine*, April, 1891) discuss this subject in relation to Addison's disease, under the following headings: (1) Pathological anatomy. These organs in Addison's disease are generally increased, rarely diminished, in size, of a greyish white colour, most often indurated, but sometimes soft and even fluctuating in parts; they have been known to have been converted into a bag of pus. They are adherent to adjacent organs. On section there is no distinction between cortex and medulla. They may be wholly converted into a translucid material, or caseating foci may be present. The lesion is tuberculous; the bacillus of tubercle has been repeatedly demonstrated in it. It is made up more of a general infiltration than of single grey granulations. Fibro-caseous or calcareous change takes place; rarely ulceration. It may begin in the cortex or medulla, less often in the fibro-vascular zone surrounding the capsule. This zone may be involved secondarily. Changes may also be found in the sympathetic or a development of solitary glands in the small, more rarely the large, intestine (Pott's disease; phthisis) or alteration (even ecchymoses) in the mucous membrane of the stomach. Tubercle has been found in the suprarenal bodies in cases of phthisis without and with symptoms of Addison's disease. The authors then record seven cases of tuberculous disease of the suprarenal bodies, three being without symptoms of Addison's disease. No tubercle was found in the fibro-vascular zone or outer fibrous envelope in the three last cases. (2) Pathological physiology. All diseases of the suprarenal capsules do not cause Addison's disease. Again, a lesion in these capsules—nearly always tuberculous in nature—is almost constantly found in cases of Addison's disease. There are two theories to explain Addison's disease: the one which may be called capsular insufficiency, the other attributing the disease to a nervous origin. The latter is the more reasonable. It has at any rate been shown that the sympathetic ganglia and plexus may be involved in the same morbid process as has already destroyed the capsule. But such changes are not constant enough to base a theory on. The authors have found ganglia in the pericapsular tissue, and most abundantly on the posterior aspect of the gland. These glands are themselves surrounded by a capsule. MM. Alezais and Arnaud believe that the real cause of Addison's disease lies in these ganglia. The tuberculous infiltration leads to their destruction. The authors then specially refer to three of the seven cases. In one, tuberculous infiltration was well marked round about the pericapsular ganglia, they themselves, however, remaining intact; there were no symptoms of Addison's disease. In a second the pericapsular as well as the left semilunar ganglia and branches of the solar plexus were involved. In a third the pericapsular ganglia alone were affected, the rest of the sympathetic being intact. In both these cases there were symptoms of Addison's disease. As is well known, peripheral nerves resist invasion by suppuration, inflammation, or tumour of parts about. Hence the almost invariable absence of symptoms of Addison's disease in other than tuberculous lesions of the suprarenal capsules. These views best explain (1) the association, in one way or another, of Addison's disease with a lesion in the suprarenal bodies, providing that lesion has extended into the periphery of the organ; (2) the absence of Addison's disease when there is a lesion in the capsule; (3) the almost constant tuberculous nature of the lesion.

(405) Subcutaneous Emphysema following Broncho-pneumonia.

Professor Damsch, of Göttingen, contributes a paper to the *Deutsche medicinishe Wochenschrift*, No. 18, 1891, on the subject of subcutaneous emphysema, and gives details of a case in which the condition was set up in the course of broncho-pneumonia. He points out that its occurrence in association with disease of internal organs is extremely rare. It is generally produced during some act of respiratory effort, such as straining, prolonged crying, violent vomiting, etc., but is commonly found to be limited within the alveolar or subpleural tissue of the lung itself—the so-called interlobular emphysema. This condition is not always productive of diagnostic signs, unless it spreads to the mediastinal tissues. Children are on all hands admitted to be more liable to rupture of the pulmonary alveoli than adults, but almost all writers agree that simple whooping-cough, unless accompanied by tuberculous or inflammatory disease, is hardly ever productive of subcutaneous emphysema. The latter has been produced by phthisis, especially where tuberculous ulcers are present in trachea or bronchi, and by other forms of disease tending to weaken the bronchial walls. The air, as a rule, passes from the mediastinum to the surface along the course of the great vessels. A case is recorded in which a gradually progressive condition of subcutaneous emphysema affecting the left half of the head, face, and body, showed itself in an infant aged 15 months in the course of broncho-pneumonia of both bases. The emphysema attained a degree described as "monstrous," but the child did not appear to suffer from it, becoming quietly somnolent until its death. On examination, it was found that extensive interstitial emphysema was present over the upper lobes of both lungs, forming several rows of tiny subpleural bubbles, some of them as large as a bean. The rest of the lungs, except where consolidated by the broncho-pneumonia, were somewhat dry and anæmic. The tissues of the mediastinum were emphysematous, but the pericardium was free, and the air was found to have reached the surface by the usual route.

(406) Chronic Glanders in Man.

MM. Hallopeau and Jeanselme (*Annales de Derm. et de Syph.*, April, 1891, p. 1) have had under their care in the Hôpital St. Louis a carman who had received the infection of glanders from one of his horses, and died after suffering from the disease for six years. They remark on the length of time which the disease may exist (six years), and the length of time during which in its course the symptoms may remain stationary (in this case three years). They consider that glanders may be suspected when, after a long series of abscesses, subcutaneous or in the muscles, ulcerations form in the nasal fossæ, the buccal mucous membrane, or on the velum palati, with painful swelling of one lachrymal gland, coinciding with purulent discharge from the nostrils. The abscesses may, after being discharged, heal spontaneously, although this is rare. Inoculations show that the pus which they secrete rapidly loses its virulence, whilst that of the abscesses which become fistulous preserves indefinitely the property of transmitting the disease. The case which they describe appears to be the first recorded in which the ulcers attacked and destroyed the lips. The ulceration is characterised by the absence of swelling of the glands, by the formation of deep sloughs with rapid destruction of the tissues, and by a pustular eruption which may be confined to the skin of the nose. Acute glanders (usually very short) may last more than forty days. Whilst the pus from the ulcerations was virulent, the urine collected during the acute stage gave negative results when inoculated in animals. In the pus obtained from abscesses which had not been opened, the bacillus was found either pure or associated with staphylococcus. To establish the diagnosis rapidly two means are available: cultures on potato, which in a few days acquire the characteristic reddish-brown colour; and inoculations into the peritoneum of guinea-pigs, which are followed within forty-eight hours by inflammation of the tunica vaginalis, with characteristic caseous suppuration. The ulcers of glanders have the following characteristics: The edges are irregular, sinuous at certain points, jagged at others. They are everywhere remarkably clean cut, and undermined by ulcerous excavations. At some points the borders, thus become freed from the subjacent tissues, are retracted and rolled over, as is sometimes found in epithelioma, but they retain their mobility, and do not have the characteristic wooden induration of cancer. From the bottom of the ulcer, winding, vegetating, ulcerating tracts proceed in various directions, particularly under the edges of the ulcer. The surface of the ulceration is continually moistened by a shining discharge, from which there project hemispherical yellowish papules, which might be taken at first sight for pustules.

M. Besnier (*ibid.*) describes another case of chronic glanders, the patient having died four or five years after having contracted the malady. The first symptom in this case was a chronic pulmonary affection, of which the symptoms were incessant cough, night sweats, abundant expectoration, loss of appetite, emaciation, and debility. It was only after eighteen months or two years that the ordinary symptoms of glanders appeared by the development of the disease in the left forearm and in the nose.

SURGERY.

(407) Cholecystectomy for Gall Stone.

M. A. Le Dentu (*Bulletin de l'Académie de Médecine*, December 30th, 1890) describes two cases of incision of the gall bladder for the extraction of a single calculus in one case and of multiple calculi in the other. The first was a woman aged 39, robust, but very nervous. She had suffered from biliary colic since infancy, and within the last two years had been confined to bed for four months by her sufferings. In the right side of the epigastric region a rounded body as big as a nut, which projected about 4 centimetres beyond the anterior edge of the liver, in the situation of the gall bladder, could be clearly felt. There was no doubt that it was the gall bladder. It was firm to the touch, and easily pushed beneath the edge of the liver. The right kidney was also displaced, and was clearly felt in the highest part of the iliac fossa. Both the kidney and the gall bladder were exceedingly tender, but when they were pushed apart the latter was by far the worst. The vomiting and pain necessitated interference, and, as the motions were coloured with bile, an occlusion of the cystic duct was diagnosed. An incision was made into

the abdomen through the right linea semilunaris, and the distended gall bladder drawn into the wound and punctured, A quantity of thin clear fluid, without any resemblance to bile, escaped, and when the puncture had been enlarged a large and solitary calculus was found impacted in the cystic duct. Its extraction was very difficult, because it was adherent to the walls, which were not thickened. However, it was levered out with a small director, and its displacement was followed by a flow of bile, which was so abundant that it was supposed that the manipulations had excited the liver to secrete. The operation was finished by cutting away a part of the gall bladder and by suturing it to the abdominal wall, and a drain was introduced. The latter seemed a useless proceeding, because the bile duct was patent; but, on the fifth day, there was spasm of the bile duct with slight hepatic colic, and with absolutely colourless motions. The drain was removed on the twelfth day, and the wound closed about the twentieth. When the patient left the hospital the liver was no longer tender, but the right kidney was still painful. A second operation on the kidney was not done and the renal pain afterwards ceased, but not entirely. The excised portion of the gall bladder was examined, and was found to possess no mucous membrane, and its walls were chronically inflamed. The second case was one of gall stones coexisting with cancer of the bile ducts. The diagnosis was obscure, and an exploratory operation was done and multiple gall stones extracted, but the patient died of collapse. The patient was a woman, aged 41, who had enjoyed good health until six months previously. Her illness began with a violent hepatic colic, with pain in the right hypochondrium and vomiting, which lasted five or six days. She had no jaundice, but the urine was full of bile. There was a large tumour in the right hypochondrium, which seemed to consist of a part immediately beneath the false ribs, and of a part deep in the abdomen. The latter was painful, but its limits could be defined, and the signs seemed to point to the existence of stones in the gall bladder and, perhaps, cancer of the liver. An incision was made into the abdomen, and the liver was found enlarged and of a purplish colour. A number of adhesions had to be torn through to reach the lower tumour, which was the gall bladder full of small calculi. It was drawn into the wound and punctured, and then incised. An enormous number of calculi escaped, after which it was found that its interior had been partitioned into a series of sacs by inflammatory adhesions. No bile escaped during the operation, from which it was inferred that there was complete occlusion of the biliary passages. The gall bladder was then partially sutured to the lips of the abdominal wound, but this could not be accomplished below because its walls were too friable, and therefore a pad of iodiform gauze was packed beneath it. There was constant vomiting after the operation, and the patient died of collapse on the third day. No peritonitis was found at the necropsy, and adhesions had already formed. The walls of the gall bladder were thickened, and the cystic duct was completely effaced. The liver was enlarged and contained nodular masses of cancer, which were easily seen on its surface, except at the part in the neighbourhood of the wound. In the third case the patient was a man aged 66, who had profound jaundice with extreme emaciation. The absence of pain, the rapid emaciation, and the colourless motions afforded a strong presumption of cancer of the pancreas or of the bile ducts, and therefore no operation was performed. After his death a nodule of cancer was found in the head of the pancreas completely obliterating the common bile duct.

(408) Ischiatic Hernia.

M. Alex. Wassilieff (*Revue de Chirurgie*, March, 1891) describes a case of this rare form of rupture. The patient, a man aged 54, was seized with pain in the left buttock when straining during defæcation. Symptoms of acute strangulation set in. After careful exploration ischiatic hernia was diagnosed. The rupture was very tender. Taxis was undertaken, after preparations for an operation, and the mass went back. Relief was almost immediate. In the night, after a free escape of flatus, the symptoms recurred during an attempt to defæcate. Taxis again effected reduction, and a stout pad was fixed, by means of a bandage, over the region of the great sciatic notch. M. Wassilieff divides ischiatic hernia into a supra-pyramidalis variety, where the intestine escapes between the border of the great sciatic notch and the upper margin of the pyramidalis. This is the commonest form, and if an operation be attempted the stricture should be divided towards the notch. The subpyramidalis variety includes a form where the gut escapes between the lower border of the pyramidalis and the lesser sacro-sciatic ligament (supraspinous), and a form where it passes out between the lesser and the greater ligament (subspinous), but it is doubtful whether subspinous ischiatic hernia has ever occurred. Diagnosis is always difficult. The seat of the tumour and the pain, which appears to be severe owing to the hardness of surrounding structures, as well as the general symptoms of hernia, are the chief guides to diagnosis. The hernia may contain omentum, large intestine, small intestine, bladder, or ovary. In operation, the skin incision must be parallel to the line of ligature of the gluteal artery.

(409) External Urethrotomy in Retention of Urine due to Stricture of the Urethra.

Mr. Southam (*Medical Chronicle*, April, 1891) advocates an extension of Cock's operation, which was devised for cases of impermeable stricture complicated by urinary fistula and induration of the perineal tissues, to certain cases of retention of urine due to stricture of the urethra. This operation, it is held, is a very valuable one in such cases when attempts at catheterism and the ordinary treatment by opium and the warm bath have failed, and when the following conditions are also present: (1) Where the urine is purulent, and in a foul and offensive condition; (2) where suprapubic aspiration, held to be always preferable to puncture through the rectum, has been followed only by temporary relief.

MIDWIFERY AND DISEASES OF WOMEN.

(410) Removal of Ovaries for Mollities Ossium in Non-puerperal Women.

Dr. M. Hofmeier (*Centralbl. f. Gynäk.*, March 21st, 1891) admits that oöphorectomy for mollities is still, at the best, an empirical practice. The disease may be caused by the influence of ovarian irritation on the nutrition of the bones, but this theory is very uncertain. Nevertheless, Cæsarean section has been followed by arrest of the bone disease in many cases where the ovaries

have been removed, and simple oöphorectomy has produced the same satisfactory results. Dr. Hofmeier further notes that Truzzi has shown that mollities always becomes much worse during pregnancy and the puerperium. Dr. Hofmeier, after due deliberation, operated on November 6th, 1890, on a virgin aged 30. She had been subject for three years to mollities, which began by attacks of pain in the feet and hips. The disease became very marked, especially in the pelvic region, where the deformity was most characteristic, and it was advancing in spite of all medical treatment; menstruation was regular, the genitals were normal. The patient made a rapid recovery. On January 31st, 1891, she was in very good health. The disease seemed to be arrested, as the pains in the bones had entirely disappeared and locomotion was unattended with any difficulty, though previously the gait was awkward. There was suspicion, however, that the left leg was slightly shorter than before the operation, although that point does not appear to have been settled by measurement. The ovaries were atrophic, as in a healthy woman at the menopause.

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(411) Rectal Fistula after Pyosalpinx.

Dr. Ozenne (*Revue Obstét. et Gynécolog.*, March, 1891) recently had under treatment a patient, aged 30, suffering from chronic pelvic disease. Eight years previously salpingitis followed a forceps labour. The pus escaped into the rectum, and after three months' rest no more purulent material came away from the bowel. Six years later severe pelvic pains again set in, with symptoms of metritis and pyosalpinx. After many months of ill health the pus once more escaped into the rectum, this occurrence being followed by great temporary relief. At length the patient fell ill again. On examination a swelling could be felt in the left iliac fossa. The orifice of the fistulous track was detected about 3½ inches above the anus. Dr. Ozenne believed that, seeing how long the pelvic disease had existed, abdominal section would entail great difficulties and dangers. He treated the patient by rest in bed and by vaginal injections of a 1 in 4,000 sublimate solution night and morning, whilst at the same time the rectum was washed out with about five quarts of a warm boracic solution, thrown up slowly so that it might be retained for some time. Every morning a boracic solution was thrown into the abscess, a double-channelled gutta-percha sound being passed into the fistula. Laxatives and tonics were given. At the end of a fortnight the patient was able to get up and lie on a sofa; the injections into the abscess were left off. For a month longer the enemata and vaginal injections were continued. The general health was completely restored, and the walls of the pelvic abscess had contracted. Eight months later the patient was still in good health, without any sign of recurrence of her pelvic troubles.

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(412) Absence of Uterus and Vagina.

M. Loviot (*Bulletins et Mémoires de la Soc. Obstét. de Paris*, March, 1891) examined a single woman, aged 21, who had suffered for several years from attacks of severe abdominal pains, which occurred at irregular intervals. The labia were normal. On separating the nymphæ a structure like a hymen with a central perforation was detected; the orifice admitted the tip of the little finger. The clitoris was of normal size. On introducing a sound into the orifice urine came away, the instrument evidently entering the bladder. On rectal examination nothing besides a recto-vesical septum could be felt between the finger and the sound. The neurotic symptoms probably indicated the existence of ovaries. M. Doléris, in discussing M. Loviot's case, described another, where the mammæ and clitoris were very large, and the hymen intact. A rudimentary vagina admitted the finger. A small tubercle, like a cervix, could be felt, but on careful recto-vesical examination, as in M. Loviot's patient, no trace of internal organs could be detected. The catamenia were absent, but abdominal pains recurred. The patient was married and sterile. In a second case a rudimentary uterus, about one inch and a half long, existed. The patient suffered from abdominal pains. M. Polaillon had recently examined a woman, aged 40, in whom the vulva was normal, but a single wide orifice led both to the bladder and to the uterus. Urine and menstrual fluid naturally flowed out of this orifice. The uterus, tubes, and ovaries were probably normal. In another case there was a vulva, a urinary meatus, and a simple depression behind it. This case was watched for a long time, and it was found that repeated coitus had caused the development of a rudimentary vagina.

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(413) Uterus Bicornis; Hæmorrhage from Incarceration of Placenta after Breech Presentation.

M. Hirigoyen (*Bulletins et Mémoires de la Soc. Obstét. et Gynéc. de Paris*, February, 1891) attended a breech case in a primipara, aged 20, in September, 1889. The labour was long, and much hæmorrhage followed the expulsion of the fœtus, so that the placenta had to be extracted by introduction of the hand into the uterus. No anomaly was then observed. The child was saved. The second confinement was on October 19th, 1890. The breech presented, the arms slipped upwards, and the child was born dead. At the end of half an hour the placenta was not delivered, and flooding set in. M. Hirigoyen introduced his hand into the uterine cavity, but could find no placenta. After passing his hand higher, so that part of the forearm entered the vagina, he found that the placenta lay in the uppermost part of a distinct right cornu. This cornu formed a pouch, separate from the rest of the uterus but communicating with its cavity by a prominent and very resistant muscular fold, across which the cord passed. He could not detach the placenta. Several grave attacks of flooding followed: the usual remedies were tried; repeated efforts to detach the placenta failed. Six hours after delivery antiseptic injections were thrown up, and ergotine was twice administered hypodermically. About eleven hours after the birth of the child violent pains set in, and the placenta was expelled into the uterine cavity, and thence outwards. There was no more flooding. Much feverishness occurred during childbed, but this was partly due to previous malarial infection. At the end of a fortnight sharp pain, with a sensation of cold and numbness, was felt in the right loin and thigh as far as the knee. This was attributed to pressure on the nerve trunks during delivery of the head and manipulations of the uterus. The troublesome symptoms soon passed off. During involution, the prominence of the right cornu could be distinctly defined at first. It gradually grew smaller till, by the time the uterus lay entirely in the true pelvis, it had entirely disappeared. At the end of January,

1891, the patient was quite well, and none the worse for the great loss of blood.

(414) The Vaginal Operation in Extrauterine Pregnancy.

Professor Fenger (*Amer. Jour. of Obst.*, April, 1891) is entirely opposed to this operation when the fœtal cavity is still aseptic or the child alive. Hæmorrhage from the placenta cannot be controlled, and delivery of the child at term is very difficult and dangerous to it and to the mother, whilst in abdominal section all these difficulties and dangers can be more readily counteracted. On the other hand, when suppuration has set in, the fœtal sac presenting low down in the pelvis, the placental circulation having ceased, the vaginal operation may be taken into consideration as a justifiable measure, perhaps preferable to abdominal section. Professor Fenger insists that the vaginal operation is strongly indicated in old suppurating fœtal sacs with disintegrated fœtus presenting in the vagina.

DISEASES OF CHILDREN.

(415) Choreic Endocarditis.

An interesting note on the endocarditis of chorea has been contributed to the *Revue Mensuelle des Maladies de l'Enfance* (May, 1891) by M. E. Leredde. The note refers to a case of chorea in a boy aged 4½ years. The temperature became elevated about the beginning of the third week. After about ten days of irregular pyrexia a systolic *bruit* developed at the apex; subsequently a thrill became perceptible at this point, and a little later a double aortic murmur. There was albuminuria for a short time, but the patient ultimately made a good recovery after about three weeks of acute illness; he left the hospital with the physical signs of mitral and aortic insufficiency. There was no affection of the joints at any time during the illness. At the suggestion of Dr. Hutinel, M. Leredde made cultivations from the blood obtained from the finger. These cultivations showed that from the third day (at which date they were begun) after the endocarditis was first observed until the fever ceased the blood always contained the staphylococcus albus, and, on one occasion at least, the s. aureus also.

(416) Intubation of the Larynx.

During a discussion on this subject at the Berlin Medical Society on April 15th, 1891 (*Deutsche Medizinal-Zeitung*, April 27th), Dr. A. Baginsky said he had treated fifteen consecutive cases of diphtheria at the Royal Frederic Children's Hospital. After a rapid and easy introduction of the tube children with severe dyspnœa get wonderful relief within a few minutes; the breathing becomes quiet, and one appears to have produced a very favourable effect. But in the majority of cases the good effect is not of long duration, and the dyspnœa shortly recurs. In five of the fifteen cases intubation alone was tried, with one recovery. The intubation was performed as soon as the children were admitted. The child who recovered was 3 years old, and suffered from mild diphtheria with a moderate amount of stenosis; the tube was worn five days, being changed several times during the interval. In seven other cases tracheotomy had to be performed after the intubation; all the cases proved fatal. It would seem, thus, as if intubated children showed less recuperative power after tracheotomy; they were probably exhausted with the laboured breathing. In some of the cases broncho-pneumonia or pleurisy had set in. In one case only was tracheotomy successful after intubation—in a child aged 2 years. One case only out of fifteen treated by intubation alone was successful. Dr. Baginsky specially referred to certain difficulties in feeding patients after intubation. He had observed that, if when changing the tube time were allowed, patients would drink with eagerness; this privation of fluids was very uncomfortable. He had frequently to use an œsophageal tube in order to give adequate fluid nourishment. In general his results were not satisfactory, and for many weeks past he had given up intubation, but was ready to take it up again on suitable opportunity. Dr. Rosenberg disputed the statement that the feeding of intubated patients presented insurmountable difficulties, and referred to the experience of authors whose cases were to be numbered by thousands. In one of his own cases the feeding presented no difficulties whatever. In this case a tube was worn for five days, with only one change. He questioned whether the instruments in use in Germany fulfilled Dr. O'Dwyer's standard of requirements.

(417) Visceral Anthrax in an Infant.

Dr. Auguste Ollivier records (*Rev. Mens. des Mal. de l'Enfance*, May, 1891) the case of an infant, aged 5 months, admitted into the Hôpital des Enfants Malades, Paris, suffering from a disorder diagnosed as general bronchitis, with some patches of broncho-pneumonia. Attention was attracted by two unusual symptoms—slight but general œdema, and an erysipelatous patch on the front of the chest on the right side. The infant died three days after admission, after an illness of about nine days. The necropsy revealed a large black infarct in the stomach with surrounding œdema; a large infarct in the spleen, which was voluminous; several infarcts in the kidneys; and a fluctuating area in each lung, the size of a large nut. Incision of these areas gave exit to a thick chocolate-coloured liquid (not gangrenous), having ill-defined anfractuous cavities. The lungs and kidneys were examined microscopically: in the former the bacillus anthracis was found in large numbers. Cultures made from the fluids did not yield the bacillus anthracis; this failure is attributed to the long interval two or three days—between the death and the attempts to make cultivations, non-spore bearing anthrax bacilli dying in the blood and tissues as soon as all free oxygen has disappeared—that is to say, in a few hours. The identification of the bacilli in the sections as anthrax bacilli was confirmed by M. Roux, of the Pasteur Institute. As to the mode in which infection took place, there was no evidence. The infant was fed partly by the breast, partly by the bottle. The mother was employed by a baker, and it could not be ascertained that she had been in contact with any source of infection; no other cases had occurred in the house; there had been no case of anthrax at the dairy from which the milk was obtained. Possibly infection occurred through the air passages. There was no cutaneous lesion.

PHARMACOLOGY AND THERAPEUTICS.

(418) Washing out the Organism in Uræmia.

Prof. Bozzolo, of Turin (*Riforma Medica*, April 20th, 1891) describes a new treatment for uræmia,

based on the assumption that the symptoms of this condition are due to the accumulation of toxic products in the organism from faulty action of the kidneys. It occurred to him that if this be the true explanation of the disease, the symptoms ought to be relieved by any method which would dilute, and at the same time encourage, the secretion of the poison. Dieulafoy attempted a similar treatment for chronic nephritis, making use of his transfusion apparatus, and transfusing blood directly into a vein. This, however, is difficult to carry out—first, on account of the experience required in using the apparatus; and, secondly, because a "donor" cannot always be found when required. Bozzolo proposes to substitute for this the following plan:—The amount of poison contained in the circulation is to be first diminished by withdrawing a quantity of blood from the patient, after which the remaining poison must be diluted by the comparatively easy method of subcutaneous transfusion of sterilised serum or defibrinated blood. He describes an instance in which this method was adopted with very satisfactory results. The history of the patient was as follows:—Four years previously the boy, aged 12 years, had a febrile attack, with diminished flow of urine and swelling of the face. This attack kept him in bed for only two days. Four years afterwards a fresh attack of a similar nature came on, and on admission the patient exhibited marked anasarca, with fluid in pleura and peritoneum, the chest being dull below the angle of the scapula. The heart showed slight hypertrophy. On the first day after admission 500 cubic centimetres of urine were passed, of specific gravity 1022, containing albumen 4 per cent., with a few hyaline tube casts and some blood. Temperature was somewhat raised and the pulse very slow, beating only fifty-four times a minute; there was also some slight dyspnœa. The urine increased on milk diet to 1,640 cubic centimetres during the next day, with diminished albumen, the pulse becoming quicker again. The improvement was, however, only temporary, and the patient soon presented all the symptoms of uræmia—convulsions, coma, slow pulse. He was bled to 380 cubic centimetres, and, as no improvement took place during the three following hours, a litre of artificially sterilised serum was injected into the peritoneum, and he was placed in a warm bath. The convulsions shortly became less frequent and less severe. Five hours after a second injection of a litre was made into Scarpa's triangle, the fluid being diffused by massage. The convulsions then ceased, but not the coma. On the following morning the patient was no longer comatose; the pulse was quicker and stronger, and his eyes were open and sensitive. Another injection was made into the subcutaneous tissue of the right side of the thorax. A considerable improvement followed this injection, and on the following day a fourth injection was very painful to the patient. The œdema, effusion, and bradycardia became much less, and the patient made from this time an uninterrupted recovery. From the time the injections were commenced the urine increased considerably in quantity, albumen, casts, and corpuscles becoming less and less, till they finally disappeared. There can be no doubt that the case was one of nephritis from the state of the patient and the previous history. Recovery also took place in other similar cases treated in the same way by the author, and by Professor Silva, of Pavia. We have, then, in the above method of bleeding, followed by subcutaneous transfusion of serum, an important means of treating uræmia which should not be omitted should other methods fail.

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(419) Cantharidinate of Potash in Phthisis.

Professor Cornil (*Journ. des Connaiss. Méd.*, April 16th, 1891) has tried Liebreich's treatment in seven patients suffering from laryngo-pulmonary tuberculosis. The drug was administered every day or on alternate days, each patient receiving from six to ten injections. In one case the urine became slightly reddened and contained a little albumen after the second injection. The injections were discontinued, and in two days the urine had regained its natural colour. A third injection was followed by slight albuminuria and the treatment was given up. This was the only case in which the injections caused urinary trouble. Neither in this nor in the other six patients was any improvement whatever of the laryngeal lesions observed; the general symptoms were also unaffected by the treatment. In one case in which the disease ended fatally a week after the treatment was begun, there was considerable œdema of the ary-epiglottic folds and of the connective tissue at the base of the tongue, but M. Cornil points out that it would be unfair to attribute this condition to the injections, as it not infrequently becomes developed in the ordinary course of the disease. The *post-mortem* examination, however, clearly showed that the local lesions had not been in any way favourably influenced by the treatment. Cornil admits that if the serum exuded from the capillaries under the influence of cantharidin could be made to bathe the affected parts, being afterwards eliminated by the ulcerated surfaces, good effects might be looked for. There is always, however, he argues, a possibility of the serosity being stored up in the connective tissue adjoining the tuberculous lesions, and thus giving rise to a dangerous amount of œdema. Again, the formation of œdematous swellings around tuberculous foci cannot, according to Cornil, be regarded as a trifling matter. On the whole, the beneficial action of cantharidin does not seem to him to be proved, either in laryngeal or in pulmonary tuberculosis. He believes, moreover, that the prolonged use of the remedy, even in small doses, may produce serious lesions of the kidney.

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(420) Tuberculin in Lupus.

Dr. Unna (*Monats. f. prakt. Derm.*, No. 8, April, 1891), whose experience regarding the effect of tuberculin in lupus does not differ essentially from that of other observers, finds that absorption of lupus tissue may take place under its use both in the soft and in the fibrous conditions of lupus without the production of inflammatory hyperæmia. Although a radical cure is not effected by the remedy, its action in the removal of sclerotic lupus tissue is valuable; accordingly, the deformities produced by ectropion of the lips and eyelids, destruction of the nares, disfigurement of the nose, cheeks, and ears, are reduced to a minimum by Koch's injections. He found that relapses occurred after Koch's treatment faster than after ordinary remedies. The reappearance of the disease takes place in the centre of the old foci, which he considers to be a gain in comparison with the results of treatment by scraping, scarifying, pyrogallic acid, etc. In using tuberculin he recommends that at first

doses should be given which lead to absorption of the infiltration, and he favours the removal of crusts by daily application of zinc gelatine after washing with warm water and soap. After absorption has progressed, smaller doses should be given. When new lupus points appear these should be treated locally. He is not in favour of scraping before the use of tuberculin, considering that in such cases the relapse comes on the periphery of the affected parts. He considers the treatment chiefly indicated in very extensive multiple lupus, in all the forms of fibrous lupus, especially when associated with ectropion of the eyes and lips, closing of the nares, contraction of joints, etc., and in lupus of the ear. He finds that aniline oil and oil of cloves, by increasing the transparency of the skin, are useful in rendering lupus foci visible, and especially recommends carbolic acid and creasote as useful applications. Unna has found that a certain effect was produced in strumous eczema, and in the photophobia associated with strumous conjunctivitis striking relief was afforded. In these patients he employed only the smallest doses.

(421) Tuberculin in Leprosy.

Dr. Allen (*Journ. of Cut. and Gen.-Urin. Dis.*, April, 1891) reports on a case of leprosy in which tuberculin was used. The patient had been in the hospital for a number of years, and had greatly improved under chaulmoogra oil. A new eruption of macular and tuberculous lesions had appeared shortly before inoculations were begun. Little reaction had followed the first dose of 1 milligramme. After 4 milligrammes on February 21st the temperature reached 103.4°, and a peculiarly bright red erythematous or urticarial eruption appeared. Some of the previously present leprous lesions became puffy, elevated, and tender, and either brighter red or bluish in colour, other lesions remaining unchanged. In the discussion which followed the reading of the paper (at the New York Dermatological Society), Dr. Fox said he had injected a case of leprosy with the lymph without result. He had observed in two cases of leprosy a condition similar to the subcutaneous nodules which Dr. Allen's case presented. In his cases the eruption was acute and painful, resembling erythema nodosum, and came on after the tubercles and patches of the original disease had in great measure disappeared.

(422) Action of Tuberculin on the Skin.

Dr. Unna, considering (*Monats. f. prakt. Derm.*, No. 7, vol. 12) that skin grafting operations have shown that the vitality of the human skin may survive the death of the general organism of the body for ten hours and longer, conceived the idea of studying the effect of tuberculin on excised portions of skin kept at the temperature of the body, and found that in certain elements of the skin tissue the effects were remarkable and characterististic. In the first instance he immersed small portions of skin, partly carcinomatous and partly healthy, in undiluted tuberculin; other parts he placed for control in 40 per cent. glycerine with 0.5 per cent. carbolic acid; and other parts were hardened in alcohol. The portions in tuberculin and glycerine respectively after twenty-four hours' incubation showed differences to the naked eye. Those in the glycerine were swollen, soft, clear, and transparent. Those which had been in tuberculin, although necessarily also subjected to the action of the glycerine which it contains, were somewhat red, not swollen, and on the other hand somewhat smaller and much harder than those which had been placed in glycerine. The portions were hardened in alcohol, stained in methylene blue, and decolorised with creosol. After being hardened in alcohol the shrinking effects of tuberculin became still more evident, and it was found that the sections stained more deeply, the nuclei of the tuberculin preparations being deeply stained. The cell protoplasm was scarcely visible. The result showed that there had been an acute degeneration by a coagulation process of the protoplasm and intercellular substance, whilst the nuclei with even the network were well preserved. The nuclei showed indeed the structure of a sponge. Dr. Unna next experimented with freshly excised lupus tissue, when the same characteristic shrinking took place. In the lupus tissue the cell substance of the plasma cells had disappeared, and the intercellular substance had shrunk to a uniform almost colourless mass permeated with deeply stained fibrillæ and granules. On the other hand the granular *Mastzellen* and the contour of the large "giant cells" were preserved. He next experimented with diluted tuberculin, using 1 and 10 per cent. solutions. Both lupus and normal skin which have been allowed to die in diluted tuberculin do not stain so well as portions which have been placed directly in alcohol, but there was no shrinking such as took place in the concentrated tuberculin; but here also the same diminished differentiation of all the tissues was evident. Epithelium and connective tissue appeared only as a uniform bluish mass, in which the nuclei were prominent. Nothing could be seen of plasma cells, and the outlines of the epithelium were feebly marked. The differentiation of the chromatic and achromatic substance in the nuclei was not indicated, although in the 10 per cent. solution a faint indication of the sponge-like arrangement of the nuclear chromatin could be observed. The deeply stained fibrillæ and granules that were observed after concentrated tuberculin were not visible. It was therefore evident that diluted tuberculin gave opposite results to the pure tuberculin. The diluted tuberculin acts on all the substances present in the skin, whilst the concentrated tuberculin specially acts on protoplasma and intercellular substance, and has a special action on the nuclei, in which it leads to a separation of the chromatin with coagulation of the protoplasmic substance. Dr. Unna considers that this difference affords an explanation of the contrast between lupus and surgical tuberculosis of the skin. In lupus he believes we have an example of the simple destructive effect of diluted tuberculin, which does not go the length of the real coagulation and necrosis of the protoplasm, nor is there destruction of nuclei, but in the immediate neighbourhood of the tubercle bacillus for example, where the so-called "giant cells" are found, the poison works more vigorously, leading to division of nuclei and the formation of multinuclear cells. In surgical tuberculosis, on the other hand, and in most tuberculous affections of internal organs, we have in the caseated parts to deal with that form of coagulation which concentrated tuberculin produces in protoplasma and intercellular substances. In such caseous masses, the same method of staining shows fibrillæ and strongly stained granules similar to

those observed in freshly excised lupus tissue which has been placed in concentrated tuberculin.

(423) Fuchsine in Ulcerated Cancer.

Dr. I. Dyer reports (*New Orleans Med. and Surg. Journal*, April, 1891) good results from the local application of fuchsine in some cases of malignant disease. A solution of fuchsine (gr. 3 to 5, occasionally as much as 10) in alcohol (℥iv) was applied directly to the ulcerated part by means of cotton saturated with the fluid, the whole being covered with an ordinary bandage. The dressing was changed, as a rule, on the third or fourth day. In some cases in which the application caused pain, lanolin was used as an excipient (gr. v of fuchsine in ℥ij of lanolin); this ointment was applied directly to the surface, and lightly protected with lint. In one case, a woman, aged 69, with cutaneous carcinoma of the right side of the chest, which had destroyed the right breast, and extended from the border of the sternum into the axillary region, the fuchsine treatment was begun on January 5th, 1891; no marked change was observed till January 26th, but on February 25th the condition is described by Dr. Dyer as follows: "In size reduced one-fourth; discharge slight and odour marked, but no longer foul; pain almost wholly absent. At several points on the surface of the wound there are spots which have healed. There has been no advance of the disease in any direction since the treatment was begun." In a case of rodent ulcer in a man, aged 71, after eight weeks' treatment the surface of the wound was less inflamed and showed signs of healthy granulation in places; the advance of the disease had been less than in any similar period of time during the previous two years. Equally good results were observed in two other cases. Dr. Dyer makes no pretension to have discovered a cure for cancer, but he claims for fuchsine that it has antiseptic, deodorising, astringent, and anæsthetic properties, and that it reduces inflammation—"all important factors in the treatment of chronic ulcerating lesions."

(424) Quinine in Whooping-Cough.

Professor Emil Ungar, of Bonn, advocates the free use of quinine in whooping-cough (*Deutsche medicinische Wochenschrift*, No. 18, 1891), having used it with much success during several epidemics in the last six years. He attributes the great differences of opinion as to its value which have prevailed amongst previous observers to the difference in the dose employed. Large doses are necessary, and, suiting the exact quantity to the age of the patient, he advises the use of from 16 to 22 grains per diem, in divided doses. Even to children below 3 months of age he would administer ¾ of a grain at each dose. These large quantities are only given for a few days, and as improvement begins the dose is diminished, and is given twice or only once a day instead of three times. This diminution should be effected slowly. Dr. Ungar believes that children will bear relatively larger doses than adults, and has had no experience of the deafness or disturbed digestion which the drug is said to have produced in the hands of other observers. In his cases the vomiting, after the paroxysm, was rapidly stopped, and appetite and digestive power seemed to be improved. The recorded cases of aural disturbance are for the most part in adult persons, and not in children. No untoward results of the treatment occurred in his practice, the only symptom presumably attributable to the quinine being the occurrence of very rapid cardiac action in one case. The main difficulty in the way of the administration of quinine to very young children is its bitter taste. Perseverance in many cases was rewarded by the children actually becoming fond of it, although almost all rebelled at first. The struggle induced during the swallowing of the medicine is apt to produce a fit of coughing, followed by retching and vomiting. In order to avoid this occurrence it is advisable to give the quinine directly after a paroxysm has taken place. To older children the quinine may be given in capsules. Administration *per rectum* is not satisfactory. By subcutaneous injection good results may be obtained, a neutral hydrochlorate being used, which is fairly soluble in water. The curative effects of quinine, however administered, are not apparent immediately, except in a few instances. As a rule, from three to six days elapse before the severity of the attacks begins to be diminished and the vomiting to cease. The disease then appears to run a milder course, and at the end of a fortnight the attacks are slight and infrequent. The tendency to complications, broncho-pneumonia, etc., is lessened, and improvement may be looked for in the large majority, though not in all cases.

(425) Action of Drugs on the Vomiting Centre.

C. T. Thumas (*Virchow's Arch.*, Band 123, pp. 44-69) has attempted to localise the position of the vomiting centre in dogs. The medulla oblongata and upper part of the spinal cord were divided transversely at various levels, and the position of the centre was defined by the application of a 2 per cent. solution of apomorphine to the medulla. It seems that pencilling the posterior angle of the fossa rhomboidalis with apomorphine causes violent and repeated vomiting. The section experiments showed that 5 millimetres in front of and behind the calamus scriptorius there is an area lying in the depth of the bulb, after division of which the subcutaneous injection of apomorphine no longer produces vomiting. Section of other parts of the medulla is followed by vomiting after the use of apomorphine. The direct application of emetin to the medulla oblongata also causes vomiting, but copper sulphate and zinc sulphate similarly applied have no effect.

(426) Analgesic and Antirheumatic Action of Euphorin.

Dr. Adler (*Wien. med. Wochenschr.*, April 25th, 1891) records his experience with euphorin (see Supplement, October 18th, 1890). He used it in 24 cases: 3 supraorbital neuralgia, 1 chronic cephalalgia, 3 sciatica, 3 acute polyarthritis, 9 chronic articular rheumatism, 3 muscular rheumatism, and 2 cases of cephalalgia during the reaction stage of injection with Koch's lymph. It was also used in 6 cases of habitual hemicrania with "wonderful" effect. The supraorbital neuralgia, the muscular rheumatism, and the sciatica cases were all quickly cured; the others were mostly much improved. The dose given was 6 grains three to five times daily. No unpleasant symptoms were ever observed. In 2 cases of pulmonary tuberculosis it acted satisfactorily as an antipyretic, reducing the temperature in about half an hour.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(427) Acute Pulmonary Congestion of a Pseudo-pleuritic Type.

M. BERTHIER (*Revue de Médecine*, April, 1891) says there is a form of pneumonia which gives the signs of pleural effusion, namely, complete dulness on percussion and absence of vocal vibrations and breath sounds. It has been termed by Professor Grancher "*pneumonie massive.*" The ramifications of the bronchial tubes up to the larger divisions are filled with exudation. M. Grancher has also described another form which yields similar physical signs, and which he has named "*spléno-pneumonic.*" He supposes it to be due to a sero-albuminous and epithelial inflammation. M. Berthier then reports a case occurring in a young man after influenza. There were signs of fluid at the left base, but exploration with the needle was negative. The expectoration consisted at first of pure blood. On the fourth day the patient became much worse; he was cyanosed. Similar signs were found at the right base, with bronchial breathing and bronchophony at the angle of the scapula. Later, friction sounds were heard over the subspinous fossa, first on the right and later on the left side. The patient was discharged well in six weeks' time. M. Berthier remarks that the "congestion" was very intense in this patient; the parenchyma of the lung was infiltrated with blood, as also the smaller tubes. During the last epidemic of influenza, cases of pulmonary congestion—and that, too, of a peculiar kind—were frequent. Dry pleurisy was also a common complication.

(428) A Test for Acetone in Expired Air.

THE presence of acetone in the breath is generally detected by its special odour, which is compared by various authors to that of wine, chloroform, ether, etc. No recent publications, however, describe any method for the chemical demonstration of its presence. Professor De Renzi (*Riforma Medica*, April 25th, 1891) gives a simple method of estimating qualitatively, and to some extent quantitatively, the amount of acetone contained in the aqueous vapour condensed from expired air. His apparatus is very simple—a small thin-walled bottle fitted with an india-rubber cork through which pass two tubes. This bottle is placed either on ice or in a freezing mixture, and the patient allows the expired air to pass into it through one of the tubes. A few minutes are sufficient to collect enough liquid for examination. The test applied is that of Lieben, which consists in the formation of iodoform by treating the liquid with caustic potash and solution of iodine in potassium iodide. If the precipitate be heated on a water bath the iodoform will be volatilised and be deposited in crystalline form on the cool parts of the apparatus. A solution which contains only 0.01 milligramme of acetone will give the precipitate of iodoform in from one to three minutes. A stronger solution will give the reaction immediately on adding the reagents. It will be easily seen that the same method may be made to yield quantitative results. In order to estimate acetone in the urine, it is necessary to distill off the aqueous portion, as the reaction will not take place in presence of the urinary salts. This operation is both tedious and unpleasant, and the author is of opinion that examination of the breath as above described will be sufficient, in a case of acetonæmia, to detect the presence of acetone. He has found, too, that in slight cases it is possible to obtain the iodoform reaction from the breath, when examination of the urine yields only a negative result. It may be mentioned, in conclusion, that the breath in health never contains acetone, and application of the test will not give the faintest trace of iodoform.

SURGERY.

(429) Nephrectomy in Cases of Ruptured Kidney.

IN a lecture on modern renal surgery (*Sammlung klinischer Vorträge*, No. 16, New Series) Dr. A. Obalinski, of Cracow, reports a case in which he removed a ruptured kidney, with good results. The patient was a cavalry officer, aged 32, who on September 21st had, in a fall from his horse, been struck with much violence on the right side of the abdomen. This injury was followed at first by much shock, extreme tenderness and bruising in the right lumbar region, and intermittent hæmaturia, and, on the ninth day, by the appearance in the right hypochondrium of a tender, circumscribed, and fluctuating tumour of the size of a child's head. As the tumour increased in volume and was associated with much general disturbance, though not with any indications of suppuration, Obalinski decided on performing a radical operation, and on October 23rd exposed the injured kidney by the lumbar and extraperitoneal incision. The kidney, which had been completely severed in two, was enclosed in a large cavity and surrounded by a large quantity of clear healthy urine and some small blood clots. After removal of the fragments of kidney and ligature of the pedicle and of all bleeding vessels, the large wound was plugged with strips of iodoform gauze, and

drained by means of the ligatures and one piece of the dressing. The patient made a good recovery, and was regarded as quite cured on December 20th. In some subsequent remarks on the treatment of ruptured kidney, Obalinski states that when such injury results in the formation of a fluctuating tumour, it is better, if preliminary puncture be thought necessary, to aspirate the swelling with Dieulafoy's apparatus than to withdraw a small quantity of fluid by the ordinary exploring syringe. By means of the former a large quantity of fluid can be removed and much relief thus afforded. Moreover, there is just a chance of one or more aspirations being followed by a permanent cure. The early disappearance in this case of blood in the urine, and the very scanty effusion of blood about the lacerated kidney are supposed to have been due to the speedy accumulation of effused urine at the seat of injury and to the compression exerted by this fluid, confined as it was within a sac, on the ureter and the renal blood vessels. The supposition that the wall of the large sac found in Obalinski's patient was formed by the fatty capsule of the kidney is favoured by the results of some experiments made on the cadaver by Professor Teichmann, who found that by the slow injection of fluid this structure could be elevated so as to form a strong and impenetrable membrane. If this as well as the peritoneum remain intact, effusion of blood and urine will be much restricted, and the prognosis of the case rendered less unfavourable. Obalinski is opposed to those surgeons who hold that in the case of a slowly developing tumour after injury to the kidney, a cutting operation should be deferred until the occurrence of unmistakable symptoms of suppuration. Statistics show that in most instances of this kind the conditions are very unfavourable for successful surgical interference, and that help comes too late. The most promising treatment of ruptured kidney with effusion of urine, it is held, is to aspirate the tumour and to remove as much as possible of the effused fluid, and, if the swelling should again present itself, to delay no longer in resorting to lumbar incision and, if it be found necessary, removal of the injured kidney. In a case of rapidly formed tumour after injury to the kidney in which there is much blood in the urine together with other indications of profuse bleeding, Obalinski would at once expose the kidney by performing laparotomy. The peritoneum under such circumstances would very probably be found wounded, and as there has been no time for this membrane to become infected, the abdominal cavity may be washed out with good prospects of success. Obalinski has found reports of six other cases of nephrectomy for ruptured kidney, in three of which the operation was completely successful, whilst in the other three it was followed by a fatal result.

(430) Recovery after Pylorectomy.

Coley (*New York Medical Journal*, April 18th, 1891, p. 445), describes a case of this nature. It was operated on by Bull, who first performed an exploratory laparotomy in order to ascertain if the operation was possible; finding however that the disease was so far advanced that it would be attended with grave risks, he sewed up the abdomen in order to put before his patient its dangers. The operation was performed in April, 1890, and the patient was known to be alive and well, and suffering no inconvenience, in February, 1891. The stomach was cut across about 2 inches from its pyloric extremity, and the duodenum about half an inch below the point to which the disease extended. The open ends were then inverted and stitched up, after which the intestine was fastened to the stomach by means of one of Abbe's catgut rings, and an excellent recovery ensued, though the patient was three hours under the anæsthetic. The pulse was high for four days, but the temperature never rose at all. The portion of intestinal tract removed measured 4¾ inches by 2½.

(431) Diffused Sarcoma of the Capsule of the Knee-joint.

In the *Beiträge zur klinischen Chirurgie*, Band vii, Heft 1, Professor C. Garrè, of Tübingen, reports an interesting and probably unique case of diffused sarcoma of the serous and ligamentous structures of the knee. The patient, a woman aged 34, died one month after amputation through the thigh, and, on *post-mortem* examination, large and widely diffused secondary deposits were found in almost every region of the body. The diagnosis of the nature of the disease in this case was at first attended with some doubt, as the swollen and pulpy condition of the affected joint was suggestive of tuberculosis. On microscopical examination of the diseased parts after amputation there was found to be diffused round-celled sarcoma of the capsule of the knee-joint with medullary sarcoma of the lower end of the femur. There seems to have been some doubt as to the precise local origin of the disease, but the author is disposed to believe that the growth started in the soft structures of the knee and not in the bone. The soft structures of the joint had been converted into a mass of very thick and firm tissue, and the disease had been so much diffused as to surround and compress the popliteal blood vessels and thus produce œdema of the leg and foot. Before removal of the limb the temperature taken in the rectum had been very irregular and at times high. According to Garrè, inexplicable elevations of temperature at irregular intervals frequently occur in cases of sarcoma of bone. The constitutional disturbances were, it is stated, much more intense in this case than those usually present in cases of localised tuberculous lesion. The patient was very weak and anæmic, and presented all the signs of extreme cachexia.

(432) The Formation of a Socket in Congenital Dislocation of the Hip.

Konig (*Wien. med. Presse*, 1891, April 26th, p. 675) gives an account of a method of his own which he described at the last meeting of the German Congress of Surgeons, by which he makes a socket for cases of congenital dislocation of the hip. The plan, he states, first came into his mind from watching the result of osteoplastic operations for the restoration of the nasal bones. The head of the femur is pulled down by means of extension weights for a week or two before operation, so as to stretch as far as possible the structures by which it is attached to the pelvis, and in order to accustom it to its new position. An incision is then made on to the top of the acetabulum, or on to the place where it ought to be, and by means of a chisel one or two thin flaps of bone are separated partially from the outer surface of the ilium, and sutured together so as to form an acetabulum, the periosteal surface

forming the inner wall of the acetabulum. The wound is at once closed and the weight keeps the limb at rest, and prevents any chance of dislocation taking place. When a sufficient time has elapsed to allow of consolidation of the parts, the patient is allowed to get up. In two instances he has been able to witness the results of his operations, by an examination of the parts, as one of his patients has subsequently died from scarlet fever and one from diphtheria.

MIDWIFERY AND DISEASES OF WOMEN.

(433) Giant Fœtus: Cæsarean Section.

Dr. R. Neumer (*Centralbl. f. Gynäk*, April 25th, 1891) describes a case where a woman, aged 40, bore a giant fœtus. She had already given birth to eleven children, and it appeared that labour occurred a month after term. The abdomen was unusually large, and as the labour made no progress turning was attempted. The child was found to be of enormous size, and could not be extracted, its pelvis sticking fast in the maternal pelvis. An attempt to disarticulate the leg, as a preliminary to evisceration, failed, as the hip could not be reached. The mother being in a critical condition, Cæsarean section was performed, but she sank shortly after the extraction of the child. The child (together with the blood which it had lost in great quantity through the attempt at amputation, so that it was almost bloodless when extracted) weighed nearly 24 pounds.

(434) Defective Development of Genitals.

Dr. von Swiecicki (*Der Frauenarzt*, April, 1891) was consulted recently by a robust woman, aged 30. She had always been healthy as a child. After the age of 20 the menstrual molimen was noticed every four weeks, and the hands and feet then became swollen to a marked degree. A little blood passed from the anus; at the same time there was nausea and headache. All these symptoms lasted for about four days. Early in January a severe attack of hæmatemesis set in during the presence of the menstrual molimen, and the vomiting of blood recurred four times within a week. Nearly a pint of blood was lost during each attack. On this occasion it was remarkable that the breasts became swollen, which was unusual, though the ordinary œdema of the hands and feet did not occur. The patient was perfectly feminine in mind and in general conformation. The hymen, like the vulva, was normal, but there was an impassable septum above it. After very careful recto-abdominal and recto-vesical exploration it was concluded that the vagina, uterus, and left ovary were entirely absent. A small right ovary could be distinctly defined. Dr. von Swiecicki quotes Klein's case, where the uterus and vagina did not exist, but both ovaries were present. Molimen with epistaxis for two days occurred every three weeks. Œdema of the extremities has been observed in other cases, and may accompany menstruation otherwise normal. Börner refers it to vasomotor disturbances.

(435) Foreign Bodies in the Female Bladder.

Professor M. Stumpf (*Centralbl. f. Gynäk.*, February 14th, 1891) describes the case of a shopgirl, aged 23, who was under treatment in a hospital for severe cystitis. Dysuria had been severe ever since the period commenced, at 14 years of age. The urine was very fœtid; pus and blood occasionally passed, and the patient had no control whatever over her bladder. Fever was frequent, and evidence of pyelitis was not wanting. Regular catheterism and washing out the bladder with boracic acid were tried for a long while without benefit. Hæmorrhage from the bladder occurred suddenly, and in the bloody urine thin lamellæ of a greyish, greasy, scented material were detected. The urethra was dilated, and the bladder explored. Its walls were found much hypertrophied. After digital exploration, its cavity was washed out; more of the fatty substance escaped, and the end of a white pigeon's feather protruded from the urethra. The symptoms, after the extraction of the feather, all gradually passed away, the incontinence of urine lasting rather longer than the pain and morbidity of the urine. The fatty substance proved to be scented soap or ointment, and it transpired that the patient frequently passed foreign bodies greased with soap into the urethra. The hymen was intact. A woman, aged 42, subject to dysuria, passed the ivory handle of a crochet needle into the urethra in order to facilitate micturition; it slipped into the bladder. The foreign body lay across the bladder, well to the left. The urethra was dilated up to the calibre of a No. 3 Simon's speculum. The bladder was distended with fluid and firm pressure made above the pubes, so as to empty out the fluid in a strong stream. The needle handle then lay antero-posteriorly, and one end, close to the internal orifice of the urethra, was visible; it was extracted with the greatest ease. The handle was over two inches long and a fifth of an inch thick. Although it had lain but a few days in the bladder it was already incrusted.

(436) Fibroma of the Ovarian Ligament.

M. Doléris (*Bulletins de la Société Obstét. et Gynécol. de Paris*, 1890, p. 21) describes a case of large fibrocystic tumour of the ovarian ligament successfully removed by operation; he noted that it closely resembled the only other recorded case of this kind of tumour, in which Mr. Doran operated. M. Doléris's patient was a married woman, aged 27. Five years before the operation he detected the tumour during pregnancy lying to the right of the uterus. One year later she again became pregnant, and a child was born at term. The tumour appears to have become conspicuously large shortly afterwards. In June, 1889, the patient came again under M. Doléris's care. He diagnosed solid tumour of the right ovary as big as an orange. The patient complained that it had recently begun to grow rapidly. Under complete narcosis the recti contracted, and could not be made to relax; hence diagnosis was no easier than before. The tumour, with the right tube and ovary, was removed. The patient made a good recovery. The tumour sprang from a pedicle over 2 inches long, as thick as the little finger, and attached to the right ovarian (or utero-ovarian) ligament. It was partly cystic; its solid portion had all the characters of a fibromyoma.

(437) Menthol in Hyperemesis Gravidarum.

Dr. Gottschalk, of Berlin (*Der Frauenarzt*, March, 1891), used this drug in a severe case. The patient had borne two living children, then aborted at the fifth month, peritonitis following the miscarriage. Five years later she became pregnant, but premature labour had to be induced on account of uncontrollable vomiting, with satis-

factory results. The patient conceived about three months later. At the end of the sixth week vomiting commenced; it was more violent than in the former pregnancy, blood occasionally being ejected. All treatment proved unavailing till menthol was given in the course of the thirteenth week. The prescription was: menthol, 1 part: spirit. vin., 20 parts; aq. dest., 150 parts; one tablespoonful of the mixture every hour. Relief was almost immediate, the vomiting did not return, and the patient was soon able to return to work. Dr. Gottschalk had equally satisfactory results after the use of menthol in a similar case of uncontrollable vomiting in pregnancy. He does not believe that the drug is a panacea, as the causes of hyperemesis are so multitudinous, and menthol may fail in other cases, as other previously successful remedies have failed. Yet menthol is a safe agent, well worthy of trial in future.

(438) Graves's Disease relieved by Removal of Sloughing Fibroid.

Dr. Carl Wettergren (*Centralb. f. Gynäk.*, February 28th, 1891; *Eira*, No. 11, 1890, p. 334) describes a case in which a woman, aged 47, suffered for over two years from a bleeding fibroid as well as from Graves's disease. The anæmia was extreme, apparently secondary to the hæmorrhage, and of the pernicious type. Therapeutic measures were tried for a time with no effect, except that the fibroid was delivered through the os and cut away with Siebold's scissors. It was bigger than a man's fist, submucous, and in parts gangrenous. After the operation the hæmorrhage ceased. The patient became much stronger; the protrusion of the eyeballs and the rapid pulse and palpitations abated to a marked degree.

(439) The Nature of Hæmatosalpinx.

Dr. H. Walter (*Inaugural Thesis*, Giessen, 1890) strongly contests the now prevalent doctrine that hæmatosalpinx almost necessarily implies tubal gestation in a very early stage. He made a series of sections from two cases operated upon at Giessen, and examined them very carefully under the microscope. There was no distinct evidence of tubal pregnancy. He found structures which bore a certain resemblance to chorionic villi. He believed that they were shreds of structureless membrane with dark borders—mere fragments of fibrin in fact. Dr. Walter—in opposition to Orthmann—holds that tubal gestation cannot be diagnosed with certainty, unless at least decidua cells are present. He admits that, in his cases, the etiology was negative, yet, by comparing the history and clinical course of the cases with the microscopic appearances of the sections of the tubes, he feels constrained to insist that the true nature of the disease was hæmorrhage into the tubal canal as a result of catarrhal inflammation of the tube. Hæmatosalpinx may involve grave results, but it does not follow even then that the original cause is tubal pregnancy.

DISEASES OF CHILDREN.

(440) Bulbar Diphtherial Paralysis.

M. Camille Fromaget relates (*Rev. des Mal. de l'Enf.*, April, 1891) a striking example of rapid death during sudden dyspnœa coming on at the commencement of convalescence from diphtheria. Tracheotomy had been performed three days earlier on account of commencing asphyxia due to laryngitis, and the onset of the dyspnœa was so sudden that it was at first attributed to blocking of the tube. He points out that Duchenne, of Boulogne, was the first to attribute death in such cases to a bulbar lesion, and states that Cadet de Gassicourt had encountered 15 cases of "cardio-pulmonary paralysis" in 101 cases of diphtherial palsy; in 5 of these there was generalised paralysis, and in the remaining 10 paralysis of the soft palate. Fromaget's case is therefore unusual, as no paralysis of the palate or any other part was detected when the patient was examined before she had the fatal dyspnœal attack. The necropsy showed no signs of endocarditis, myocarditis, or thrombosis of the heart or great vessels. Clots were present in these organs, but were evidently produced *in articulo*. The dyspnœa in these cases has been attributed to neuritis of the vagus, or inflammation of the bulb, but careful histological examination by Damaschino and others failed to demonstrate any such changes in any cases examined. This failure, together with the extreme rapidity with which the dyspnœa developed in the case he records, leads M. Fromaget to suggest that death was due to the direct toxic action of the diphtherial poison, described by M. Roux and Yersin, on the bulbar centres. Dr. L. G. Guthrie has also given a careful description (*Lancet*, April 18th and 25th) of these dyspnœic attacks. He applies to them the term "bulbar crises." He thinks the crises are most apt to occur in children who after diphtheria become apathetic, have a nasal quality of voice, irregular sighing respiration, loose almost noiseless cough, with mucous accumulation and a rapid pulse. Dr. Guthrie recommends that the cases should be treated by strychnine to stimulate the cardiac and respiratory functions, and atropine to check secretion. In three cases (of which two recovered) he gave these alkaloids in doses of $\frac{1}{120}$ gr. each by hypodermic injections; he suggests that a better combination would be strychnine $\frac{1}{60}$ to $\frac{1}{30}$ gr., with atropine $\frac{1}{120}$ to $\frac{1}{100}$.

(441) Intubation v. Tracheotomy.

Dr. Jerome Anderson, of California (*Occidental Medical Times*, April, 1891), says intubation of the larynx is a simple, easily performed operation. The head should be held erect, and strongly lifted, the epiglottis will then be elevated, and prevented from approximating too closely to the glottis. In this way one of the chief obstacles to rapid intubation will be overcome. The fear that the aperture may be too small to permit the introduction of the tube is a pure chimera; long before this stage is reached a child dies. The danger of pushing loose membrane into the trachea need not be taken into account, because, if the child has reached the exfoliative stage without fatal asphyxia, it will hardly require intubation afterwards; and, in any case, nothing but awkwardness or the use of unwarrantable force could detach or push membrane before the tube. The proper after-treatment depends entirely on the recognition of the dual nature of the disease. Diphtheria of the larynx usually invades this organ some days after its appearance in the fauces, and after the first systemic fever, due to its ptomaines affecting the nervous centres, has partially subsided. Membranous croup is due to reflexion outwardly upon the larynx of a profound impression upon the nervous centres by a common "cold." The treatment of diphtheritic croup after intuba-

tion is simply that of diphtheria: the one absolute essential in the treatment of membranous croup is steam. As to the comparative merits of intubation and tracheotomy, Dr. Anderson says there is absolutely nothing that the cutting operation does which will not be accomplished by intubation better and more surely. A table of 27 cases is given: 14 cases of croup, with 11 recoveries, and 13 of diphtheritic croup, with three recoveries. One case is recorded in which the intubation tube was swallowed, and remained in the intestinal tract fifteen days before being passed *per rectum*.

PHARMACOLOGY AND THERAPEUTICS.

(442) Antipyrin in Pleuritic Effusions.

At a meeting of the Société Nationale de Médecine de Lyon on April 20th (*Lyon Médical*, May 10th, 1891), M. Clément presented a communication on the effect of antipyrin in pleuritic effusions. He said his attention had been called to the subject three years before, and his conclusions were based on observations made in some twenty cases. When a patient comes under his care with signs of pleural effusion he marks the upper limit of dulness with lunar caustic, and can thus note the slightest variation in the amount of the fluid. Whether fever be present or not, he at once administers antipyrin without any other medication whatever. In all cases there was, on the following day or at latest the day after, a marked reduction in the height to which the dulness reached. In some cases the dulness disappeared after forty-eight hours' treatment, and in two or three the fluid was completely absorbed in twenty-four hours. In no case was the effect delayed beyond four days. The dose given was, as a rule, 6 grammes a day, 1 gramme being given every four hours. After absorption of the fluid the treatment should be continued for some days longer, in order to prevent relapse, the daily dose being, however, reduced to 4 grammes. The cases treated by M. Clément included examples of acute pleurisy *a frigore* and latent pleurisy; both forms yielded readily to treatment, the effect being rather more rapid in the latter than in the former. The treatment failed when the effusion was purulent or bloody. In cases in which the whole pleural cavity was filled with fluid, M. Clément did not feel himself justified in trying the antipyrin treatment, but performed thoracocentesis without delay. With regard to the *modus operandi* of the remedy, he says that even when resolution was almost immediate, nothing like diuresis took place, the amount of urine being increased only from 100 to 200 grammes in the twenty-four hours. In some patients no diaphoresis was observed; in others it occurred after resolution had taken place. Resolution occurred as rapidly in the non-febrile as in the febrile cases. M. Clément thinks antipyrin has a specific action on nearly all inflammatory processes, and it is to this that he attributes its beneficial effect in pleural effusion.

(443) Chlorine in Phthisis.

Heneage Gibbs and Shurly (*Therap. Gazette*, April, 1891) publish an account of twenty-seven cases of phthisis treated by the inhalation of chlorine gas, and the hypodermic use of iodine, and chloride of gold and sodium. They employ two modes of administering chlorine; the gas may be evolved from chlorinated lime by the addition of dilute hydrochloric acid. In a small apartment, one-half to six drachms of chlorinated lime are spread out on a plate, and one to three drachms dilute hydrochloric acid slowly added. Before the gas is evolved, the atmosphere should be well charged with a spray of saturated solution of sodium chloride, about two ounces being necessary. The spray should be continued while the patient is present. The first sitting may last two minutes, while the subsequent ones may be increased to twenty or thirty minutes; one to four sittings daily are necessary. The other method, preferable for mild cases and for laryngeal phthisis, is the inhalation of chlorine water. It should be mixed with a saturated solution of salt in the proportion of from one-fourth to one-half, and from one-half to two ounces of the mixture may be vaporised at a sitting. The gas is practically irrespirable unless diffused in vapour of chloride of sodium. According to the authors, chlorine inhalations seem to be very efficient in preventing further caseation, as shown by changes in the sputum and the alteration in some of the physical signs. A varying degree of tolerance of the chlorine is observed from time to time. It sometimes causes nausea or vomiting if used too soon after a meal. For the hypodermic injection of iodine and of the chloride of gold and sodium, a syringe with gold or platinum-plated needles is necessary. Owing to chemical action, it requires great attention to keep the syringe in good order. The gluteal region is used for injections, and the solutions are made with glycerine. The iodine is given in doses of one-twelfth to one-half and sometimes to one grain; it causes considerable pain. The gold and sodium chloride is given in gradually increasing doses of one-thirtieth to one-fifth or one-third of a grain daily, and then diminishing to one-tenth of a grain daily. It is painless. It is often good to alternate these, using iodine one day and gold the next. If albuminuria occurs, the iodine must be suspended and the gold alone used. The continuance of large doses of the gold and sodium salt may produce a yellow coloration of the skin. During the administration of iodine the patient usually loses weight, and catarrh of the bladder or intestines may be set up. The temperature also usually increases for a week or ten days, and there may be excessive sweating. The expectoration soon becomes lessened and then watery. Asthmatic symptoms and anorexia may supervene, with heavily coated tongue, dry throat, and diarrhœa, but these symptoms are rare. The majority of patients do best on small doses. After two or three weeks, the iodine and gold and sodium chloride should be used alternately every day or every other day; finally once or twice a week. Iodine cannot be used alone for any great length of time, but the gold and sodium salt can. In all the twenty-seven cases reported there seems to have been improvement.

(444) Tuberculin in Diseases of Children.

The report by Professor Henoch and Dr. Goerne, on the use of tuberculin in the clinic for sick children, in Berlin (*Die Wirk. des Koch'schen Heilmittels: Amtliche Berichte*, 1891), deals with a very small number of cases. The only case distinctly benefited was a boy aged 9 suffering from early pulmonary tuberculosis; in two other cases of phthisis in children, aged 7 and 10 respectively, the treatment was abandoned on account

of the establishment of hectic fever and a deterioration of the general condition, and in one case the occurrence of dyspnœa and cyanosis. In four other cases the injections appeared to have produced at the date of the report no alteration. The remedy was tried in one case of tuberculous meningitis; the child, aged 2¾, was in an advanced stage of the disease; four injections were given and the usual pyrexial reactions occurred; the patient died on the fifth day. The necropsy showed, in addition to the ordinary appearances of tuberculous meningitis, "enormous" hyperæmia of the meninges, and of the grey substance of the brain. The opinion is expressed that in tuberculous meningitis the use of the remedy is not justifiable since it may shorten life. A rash was observed in only one case; it resembled that of scarlet fever. Hyperæmia of the mucous membrane of the mouth and pharynx, causing some pain in swallowing was noticed in several cases.

Heubner, of Leipzig, speaking at the Medical Congress at Wiesbaden (*Deutsche med. Zeit.*, April 27th, 1891), observed that children were less sensitive to tuberculin, in proportion to the body weight, than adults, and that the diagnostic value of the remedy was considerable, since children who were healthy or suffering from other diseases suffered very slight reaction after relatively large doses, while tuberculous children reacted to extremely small doses. Scrofulous keratitis, conjunctivitis, and eczema were remarkably bettered by tuberculin. In children tuberculosis seldom began in the lung, but in the glands (35 per cent.) or bones (42 per cent.); in young children the lungs were generally infected as a secondary process from the glands; pulmonary tuberculosis in them was always severe and unsuitable for tuberculin. In older children tuberculosis might begin in the lungs as with adults, and in them tuberculin might be of use. In tuberculous disease of abdominal glands favourable results had been obtained, and he believed that tuberculous peritonitis offered a good field for future trials.

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(445) Pilocarpin in Œdema of the Glottis.

At the recent meeting (May 4th-5th) of the French Society of Otology and Laryngology, Dr. Suarez de Mendoza, of Angers, related (*Semaine Médicale*, May 6th, 1891) a case in which he was called in to see a young man attacked by serious œdema of the glottis causing suffocative dyspnœa. Tracheotomy had been proposed, but Suarez de Mendoza, seeing that in the middle of the swelling a narrow slit was still visible during inspiratory effort, suggested that pilocarpin, which he had already found successful in two similar cases, should be tried. Three hypodermic injections were given at intervals of twenty minutes, the total amount of pilocarpin administered being 25 milligrammes. Marked relief followed the first injection, and a quarter of an hour after the third the patient was breathing easily and quietly, and was entirely out of danger. In eight days he was quite well.

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(446) Pyoktanin in Malignant Growths.

At a meeting of the Paris Société de Chirurgie on April 29th (*Semaine Médicale*, May 6th, 1891), M. Le Dentu reported the results of some clinical experiments with pyoktanin in the treatment of epitheliomata of different kinds. The drug was tried in five cases, in none of which was any benefit observed. In a case of epithelioma of the eyelid in a man aged 52, frequent applications of pyoktanin were made without any perceptible effect; the tumour was removed, and on examination no modification in the cells was found to have occurred. In the other cases neither applications of 3 to 1 per cent. solutions nor interstitial injections had any effect whatever, except in one case of cancer of the tongue in a woman aged 33, in which a brief period of very slight improvement was followed by rapid extension of the disease. M. Richelot said he had also tried the pyoktanin treatment in a case of recurrent epithelioma of the cheek, in a case of malignant disease of the lower jaw, and in one of cancer of the breast, but in no case had the progress of the disease been checked. In a case of osteosarcoma of the pelvis, which was literally saturated with pyoktanin, 30 parenchymatous injections having been given, no effect was noticed for a long time. Recently, however, a change occurred in the tumour, which shrank by about one-third of its size, and a fistulous opening formed, which gave issue to an abundant discharge, but at the same time the patient's general health seriously deteriorated, and cachexia was becoming established. M. Reclus said he had tried the treatment in two cases of carcinoma, and in each of them the disease was aggravated rather than relieved.

Dr. Willy Meyer, of New York, gives (*New York Medical Record*, April 25th, 1891) a preliminary report of an eight weeks' use of the aniline dyes, especially pyoktanin, in the treatment of inoperable malignant growths. He concludes from observations in eleven cases, four of which are given in detail, that the aniline dyes, applied on the surface of ulcerated growths in the form of ointment or powder (about 1 to 200) or in substance, have a powerful analgesic effect. Parenchymatous injections of pyoktanin solutions (1 in 300), repeated every second day till the fifth day, the dose not exceeding 1½ drachm, were innocuous to the system. Nausea, vomiting, weak and slow pulse, headache, and *malaise*, with slight rise of temperature, occasionally followed the injections. The immediate local effects of the injections were pain, œdema, breaking down of the injected tissue, with giving way of the skin or scar (aseptic necrosis) or breaking down (necrobiosis) with subsequent reabsorption. Infiltration of healthy tissue with neoplasm did not follow the injections in any of Dr. Meyer's cases, and in none of them did the growth spread during the treatment. He says applications of pyoktanin in substance to ulcerated tumours removes the diseased tissue in the shape of dry gangrene. There is, according to him, no suppuration under the eschar on account of the powerful antiseptic qualities of the dye, and consequently no cachexia. Pyoktanin is neither a deodoriser nor a styptic. Meyer adds that it may be advisable to combine the parenchymatous injections and local applications of pyoktanin with the internal administration of aniline dyes. Pyoktanin is not, however, in his experience, well borne by the stomach. Even if further observations show that the aniline dyes do not specifically attack carcinoma and sarcoma, Meyer thinks they will have a decided therapeutical value in cases beyond operation by alleviating pain and checking the extension of the disease.

(447) Nitrite of Amyl in Chloroform Poisoning.

Dr. E. Mammen, of Bloomington, Illinois, reports (*New York Medical Record*, April 25th, 1891), a case of chloroform poisoning successfully treated with nitrite of amyl. He was called to a man who had taken chloroform, and could not be aroused. On reaching the patient's bedside, about half an hour later, Dr. Mammen found him in a profound stupor, the respirations being shallow, and the pulse rapid and feeble. A 3oz. bottle was found in his coat pocket half full of Squibb's chloroform, and it was ascertained that he had purchased three ounces of the drug some two hours before. He had, therefore, apparently swallowed about an ounce and a half. Air was at once freely admitted to the room, and a "pearl" of nitrite of amyl given by inhalation. The effect was immediate. After the lapse of fifteen minutes, the pulse again becoming rapid and feeble, another "pearl" was administered, with the result of deepening the respirations and increasing the strength of the pulse. The same thing was repeated eight or nine times at lengthening intervals. In addition to this, two hypodermic injections of atropine were given, and towels wrung out of cold water were dashed upon the chest. After four hours the patient awoke from stupor, and in another hour was out of danger. Recovery was, however, somewhat slow, and extreme icteric discoloration of the skin persisted for two weeks. In Dr. Mammen's opinion, the man could not possibly have survived but for the administration of nitrite of amyl.

(448) Petroleum in Conjunctivitis.

At the recent meeting of the French Society of Ophthalmology, in Paris (May 4th to 7th), M. Trousseau, of Paris, gave an account of the results he had obtained with petroleum in the treatment of conjunctivitis (*Semaine Médicale*, May 6th, 1891). He had for two years sought for a substitute for nitrate of silver and sulphate of copper, both of which caused violent reaction and acute pain. Among the substances tried petroleum seemed to him the most satisfactory. It was less active than nitrate of silver and sulphate of copper, but had the advantage of causing neither pain nor reaction, and it was perfectly well borne by the most sensitive corneæ. He used crude Caucasian petroleum; its derivatives were less active and sometimes more irritating. It should be painted over the conjunctival surface of the eyelids and the *cul-de-sac* with a soft brush. The applications should be prolonged, and their thoroughness should be proportionate to the condition of the mucous membrane; they should be repeated two or three times a day. In cases of granular conjunctivitis M. Trousseau said he had had good results from thoroughly brushing the mucous membrane with a toothbrush saturated with petroleum. In cases of catarrhal conjunctivitis, applications made twice daily quickly dry the mucous membrane, which soon recovers its natural appearance. In muco-purulent conjunctivitis the effect is not so rapid, and the treatment sometimes fails. In follicular conjunctivitis, and in cases of purulent conjunctivitis when the inflammation is on the decline, petroleum acts extremely well. In granular conjunctivitis the effect of petroleum is variable, but not more so than that of the ordinary remedies; in these cases petroleum may be advantageously used as a preliminary to other treatment. Trousseau recommends the drug particularly for children and "pusillanimous subjects," on account of its causing no pain. He added that experiments made by M. Dubief had shown that petroleum has antiseptic properties of moderate intensity.

(449) Regeneration of Corpuscles in the Oligæmia following Poisoning by Acetylphenylhydrazine (Pyrodin).

Modern research seems to show that in all the infective diseases, both acute and chronic, there is a destruction of the red blood corpuscles, and that the work of regeneration by the blood-forming organs is also interfered with more or less gravely by the same morbific influence, this taking place much more slowly than it does in an otherwise healthy person after loss of blood from hæmorrhage. There is this difference between the two conditions. After loss of blood by hæmorrhage, the total volume of fluid in the vessels is rapidly made up by influx of serum from the lymphatics, and the organism only suffers from a temporary diminution, whereas, after destruction of corpuscles, there is not only loss of hæmoglobin, but the presence in the vessels of a quantity of albuminous matter and pigment, which has become so much foreign matter. This matter becomes gradually collected in the spleen and marrow of bones, which thus have to fulfil both a hæmatopoietic and an eliminative function. It occurred to Professor G. Mya (*Riforma Medica*, April 28th, 1891) that this eliminative function might interfere with the regenerative duties of these organs. To test this he administered to several animals doses of pyrodin—a substance well known to produce destruction of corpuscles—and compared the time necessary for the restoration of the normal corpuscular richness with that required after extraction of blood from similar animals. He found, however, that very little difference occurred in the two cases, and that regeneration was, if anything, somewhat more rapid in the poisoned than in the non-poisoned animals. Some observations carried out in man, in which the action of the drug was carried to a much slighter extent, entirely confirmed the above results. From this it would appear that the original theory is untenable, and that in infectious disease the virus itself exerts some direct injurious action on the reparative functions of the blood-forming organs.

PHYSIOLOGY.

(450) Changes in the Colour of the Skin of Fishes and Frogs.

It is well known that the colour of the skin in many fishes varies with the environment of the animal; for example, a fish is usually lighter in colour when it lives in water where the bottom is light coloured. There can be little doubt that the change of colour is under the influence of the nervous system, and is due to changes in the pigment cells of the skin. Pouchet several years ago showed that section of certain cutaneous nerves in flat fishes resulted in permanent expansion of the processes of the pigment cells in the areas supplied by the divided nerves, so that these skin areas were darker than the rest of the skin. The nerves, it seems, do not pass through the spinal cord, but run in the sympathetic. A. Lode (Beiträge z. Anat. u. Physiol. d. Farbenwechs d. Fische, *Wiener Sitzb. Math. Phys.*, Cl. xcix, Abth. iii) has recently, under Exner's direction in Vienna, investigated this subject, chiefly on the trout. Electrical stimulation by means of induction shocks causes the contraction of the

pigment cells in an amputated fin, so that the latter becomes lighter in colour, and the same result is obtained by stimulating the skin of the intact animal. Tetanus produced by stimulating the cord causes marked pallor of the skin; but cutaneous areas having their nerves previously divided remained dark. If the cord be divided transversely about its middle, and if the stimulating electrodes be applied to the head of the fish, then the tetanus, of course, only involves the upper half of the body, but the decoloration affects the whole skin. After a time the animal regains its normal colour; if now the sympathetic nerve and the vessels accompanying it (aorta and cardinal veins) be divided, and the upper part of the body again stimulated, then in this case the decoloration extends only as far as the tetanus. If the same experiment be made on an animal from which the heart has just been removed the same result follows, showing that the result is not due to anæmia of the posterior part of the body from section of the aorta. The subcutaneous injection of curare causes darkening of the skin. If the aorta be compressed in the abdomen and curare be injected into the front part of the body only the pigment cells of the front part of the body are expanded, that is, this part becomes dark; the tail end, however, retains its colour unchanged. The pigment cells of the curarised skin can no longer be caused to contract by stimulation of the sympathetic nerve, although they still respond to direct stimulation. The pigment cells containing an oily intensely red pigment which are the cause of the bright red spots on the trout, appear to be quite independent of the nervous system, and respond but little, if at all, to direct stimulation. The author has shown that the pigment cells are directly connected with nerve fibres. The experiments of Lister and von Wittich have thrown much light on the causes producing change of colour in the frog. Dutarte (*Comptes Rendus*, c. xi, p. 610) has recently investigated this subject on the edible frog (rana esculenta). Such a frog exposed to white or yellow light rapidly becomes lighter in colour owing to contraction of the pigment cells or chromatophores of the skin; and the same result occurs more slowly with green and red rays, while blue and violet act like darkness, that is, the chromatophores expand their processes and the skin becomes dark. Frogs which have been blinded show the same phenomena, only more slowly. While an intact frog can rapidly accommodate its colour to that of its environment (mimicry), a blinded frog does not do so. The sympathetic nerve affects the chromatophores, and stimulation of the central nervous system produces contraction of the pigment cells, the impulses travelling outwards by the sympathetic fibres, just as in fishes. In this connection we may notice the interesting observations of Zimmermann (Theilung d. Pigmentzellen, *Arch. f. mik. Anat.*, xxxvi, p. 404) on the division of pigment cells, which are in part confirmatory of somewhat similar observations by Flemming. The observations were made on the pigment cells of the peritoneum and tail of salamanders. In the process of division of a pigment cell there are four stages: 1, retraction of the processes, while at the same time the cell becomes globular; 2, division of the nucleus; 3, changes in the distribution of the pigment in the cell; 4, division of the body of the cell. The behaviour of the pigment granules during the process is interesting. Neither in the convolution stage of the mitosis of the nucleus nor in the resting nucleus is there a trace of pigment, but as soon as the monaster stage appears pigment granules appear between the loops of the chromatin substance. In the dyaster stage only the polar areas and the curves of the loops are devoid of pigment, the whole of the pigment being at the equator and between the outer ends of the loops. As the cell contracts at its middle the pigment is gradually divided into two equal parts, the cell divides completely into two daughter cells, and as soon as the nuclei pass into the resting phase processes are thrown out. An excellent plate accompanies the paper.

(451) Influence of the Posterior Roots of the Spinal Nerves on the Excitability of the Anterior Roots.

This question has been much discussed and experimented on, and has again been re-examined by Belmondo and Oddi (*Revista Speriment. di Freniatria*, xvi, 3, and *Centralb. f. Phys.*, Bd. v, No. 1, April, 1891). The experiments were made on dogs, and the contractions produced by stimulation of the anterior spinal nerve roots were recorded graphically. When the posterior roots were either divided or paralysed by the application of cocaine there was a decided diminution of the excitability of the anterior or motor roots. When the posterior roots are being divided the fall of the excitability in the anterior roots is preceded by a stage of increased excitability of short duration. The authors are of opinion that from the periphery impulses are continually passing along the sensory nerves into the cord, where they are transferred to the motor fibres, and thus increase the excitability of the latter.

(452) The Vasomotor Nerves of the Retina.

Dovon (*Arch. de Physiol.*, 3, iii, 1, p. 13, 1891) finds that electrical stimulation of the sympathetic nerve or asphyxia causes dilatation of the retinal blood vessels. The same result occurs when the animal is asphyxiated after section of the sympathetic nerve, so that obviously, besides the sympathetic nerve, there is still some other channel by which the vasodilator impulses reach the retina. This is the fifth nerve. If in a dog the sympathetic nerve be divided, after waiting twelve days until the nerve fibres of the sympathetic are degenerated, then exposure and stimulation of the Gasserian ganglion within the cranium caused dilatation of the retinal vessels, and at the same time redness of the lips and gums.

ANATOMY.

(453) Motor Nerves of the Bladder.

Nawrocki (*Pflüger's Archiv*, xlviii, p. 335) has investigated the course of the motor nerves of the bladder of the cat. The animal was slightly curarised, and the effect on the bladder observed when the lower spinal nerves were stimulated. The bladder in this animal receives its motor nerves through two channels: (1) some motor fibres leave the spinal cord in the anterior roots of the fourth and fifth lumbar nerves, pass through the rami communicantes into the lumbar part of the sympathetic chain, and then into the superior middle and inferior mesenteric nerves to the inferior mesenteric ganglion, and thence by the hypogastric nerves and hypogastric plexus into the vesical plexus; (2) other fibres pass along the second and third anterior sacral roots into the sacral nerves, and thence to the hypogastric plexus and vesical plexus.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(454) The Parasite of Quartan Ague.

IN the *Zeitschrift für Hygiene*, vol. x, p. 137, appears the first of a series of papers by Camillo Golgi, demonstrating by means of photography the development of the parasite found in malarious fevers. This paper deals with the amœba malariæ febris quartanæ, the form found in the quartan type. In 1880 Laveran stated that these parasites are present in every case of malaria, and in no other condition, and that they are probably the cause of the disease. His observations have been confirmed by pathologists in all parts of the world, and at the present time the weight of proof seems to be in favour of his contention. In the above paper Golgi claims to have been the first to demonstrate that the different forms described as occurring in the blood are simply modifications of one form, and, further, that these metamorphoses follow each other according to a fixed law. This development takes place within, and leads to the destruction of the red blood corpuscles. At first the amœba-like parasite is small and non-pigmented; it increases in size at the expense of the substance of the blood corpuscles, becomes pigmented, and, after passing through a series of metamorphoses, finally ends in a process of segmentation. This process of segmentation takes place at the same time as, or a short time before, the onset of the febrile paroxysm, and has for its object the formation of a new generation of the parasites. The pigment granules stored up in the body of the parasite take no part in this process of segmentation, and hence, on its completion, escape into the blood plasma, where they are seized upon by the white blood corpuscles and cells of the liver, spleen, etc. The new brood of parasites at once pass into fresh red blood corpuscles, and so commences anew the cycle of metamorphoses leading up to the next paroxysm of fever. The period of time which elapses between the entrance of the parasites into the red blood corpuscles and their segmentation is exactly three days, and hence arises the periodicity of the quartan type of malarial fever. During the first and second days the parasite passes through the various phases of its development within the blood corpuscles, on the third day segmentation takes place, the new brood is set free, and fever results; in other words, the period of apyrexia corresponds with the endoglobular growth of the parasite. Golgi states that a knowledge of these developmental stages is of immense practical importance for the purpose of diagnosis, by which an almost mathematical degree of accuracy can be arrived at, and that it is no exaggeration to say that by the simple microscopic examination of a few preparations of blood the physician is in a position to tell when the last attack of fever occurred, to foretell the time of the next attack, and further to recognise what type of malarial fever he is dealing with. The simple quartan fever is explained by Golgi as resulting from the development in the blood of one set of the parasites, which ripen every three days, while the double and triple quartan fevers are caused by the development of two and three sets respectively, coming to maturity on consecutive days. This hypothesis, of course, cannot apply to the tertian type of malarious fever, since in this the febrile paroxysms follow each other with an interval of only one day of apyrexia intervening, instead of two days as in the case of the quartan type. Golgi is of opinion that he has brought forward satisfactory evidence to show that tertian ague depends on the presence in the blood of a distinct variety of the malaria parasite, which passes through its developmental phases in two days instead of in three. In regard to classification, Golgi holds that the various clinical types of intermittent fever are caused by varieties of one and the same parasitic species, and that this belongs to the genus amœba. The twelve photographs which illustrate his first paper deal with the development of the parasite of quartan fever, and show, surrounded by normal red blood corpuscles, its successive metamorphoses. The photographs, which are very fine, were taken by means of Zeiss's microphotographic apparatus.

(455) Predisposition to Tuberculous Infection.

PROFESSOR BIRCH-HIRSCHFELD, of Leipzig, comments on the question of predisposition to tuberculous infection (*Wiener med. Blätter*, No. 17, 1891), pointing out that the prevailing theory of direct infection by inoculation of the bacillus is rapidly coming to be regarded as the only important factor in the spread of the disease. Predisposition may be classed as "general" and "local," meaning by the first term a greater or less resistance to the development of tubercle; and by the second the various factors that incline an individual organ or part to become tuberculous. General predisposition may be inherited or acquired, as in the case of diabetes. Local predisposition may depend upon the condition of the local tissues, the opportunities which they afford for the entrance of the tuberculous virus, and the amount of resistance which they set up against its development. Inherited predisposition is strengthened by the fact that up to the

present time the evidence of direct conveyance of the disease from mother to fœtus *in utero* has not been well established in the human species, although undoubted instances have been reported as occurring amongst certain animals. Dr. Birch-Hirschfeld relates a case in which a fœtus was removed from the uterus of a woman, aged 23, within a few moments of her death from general tuberculosis, without any damage being done to the placenta. Portions of the liver, spleen, and kidney of the fœtus produced tuberculous disease when inoculated into rabbits and guinea-pigs, but only in the capillaries of the liver could any tubercle bacilli be discovered. In the placenta, however, the villous spaces were crowded with bacilli. The very limited evidence of tuberculous material in the fœtus might serve as an explanation of the fact that children of tuberculous parents are often born without any manifestations of tuberculous disease, and yet appear to develop tubercle during the first few years of life. A limited infection by the maternal bacilli, perhaps during the process of birth, might remain latent in one or more organs until other circumstances contribute to their development. It is thus possible that confusion may exist between "latent tubercle" and "tuberculous predisposition." That latent tubercle may remain quiescent, especially in bronchial glands, until awakened by an attack of acute disease such as measles or whooping-cough, is well known. The frequent occurrence of such latent tuberculous foci, without any other evidence of tuberculous disease, goes far to prove that resistance to tubercle is as powerful a factor as predisposition. The congestive influences of valvular disease of the heart and of emphysema upon the connective tissues of the lungs are examples of some of the mechanical causes which constitute resistance.

(456) Identity of Small-pox and Cow-pox.

MM. Eternod and Haxiers (*Sem. Méd.*, 1890, No. 58), from the results of their experiments on the transference of small-pox from man to the calf, are convinced that small-pox and cow-pox are caused by the same virus. For the purpose of inoculation small-pox lymph from cases varying in severity was used, and was rubbed into a moderately large extent of scarified skin in the abdominal region of the calf. The first inoculation was followed in every case by a scanty crop of pustules at the spot chosen. This eruption had at first very little resemblance to typical cow-pox, but on transferring the disease from calf to calf it became more and more characteristic, until, in the opinion of the authors, it was impossible to distinguish it from true cow-pox. The calves vaccinated in this way with human small-pox lymph were found in every case to be refractory to vaccination with ordinary cow-pox lymph.

SURGERY.

(457) Operative Treatment of Tuberculous Disease of the Hip and Knee in Children.

At the fourth Congress of Russian Medical Practitioners, held early in the year, Dr. L. P. Alexandrow stated the following conclusions on the treatment of tuberculosis of the hip and knee in children, based on observations of seventy-seven cases treated in the Olga Hospital, Moscow (*Centralblatt für Chirurgie*, No. 18). In default of any specific means of dealing with tuberculosis, operative interference is regarded as the most rational method of treating tuberculous diseases of joints. The danger attending such treatment is very slight, and whilst the development of miliary tuberculosis after operation is rarely observed, non-operative treatment does not guard the patient against any such infection. A great advantage of operative treatment is the rapidity of the cure, and there is a further advantage that the patient is not confined for a long period in bed. The best operation for children is arthrectomy, with removal only of the diseased parts. In dealing with the hip, however, it is necessary, in order to remove any deep-seated disease in the acetabulum, to resect the head of the femur. The author holds that one should aim at closure of the whole wound by primary intention. Drainage and the retention of numerous ligatures in the wound prevent rapid healing, and tend to the formation of fistulæ. It is better to dispense with drainage tubes, and to close the wound by deep sutures. If healing takes place by primary intention the duration of the after-treatment is much shortened, and the patient may be enabled in the course of the third or fourth week to get about on crutches. During convalescence massage of the muscles of the affected extremity would be beneficial, but passive movements of the joint on which the operation has been performed should not be practised unless with great care. The use of any retentive apparatus is objected to as being likely to cause atrophy both of muscles and of bones. In patients who are not in a position to undergo a long-continued treatment by massage, firm ankylosis, it is stated, will be found preferable to free mobility of the joint, as the former condition ensures greater strength of the limb. After arthrectomy in the knee in children there is usually some angular distortion in consequence of the difficulty of keeping the limb in a straight position. In 43 of the 77 cases treated by the author the hip was the affected joint, and in the remaining 34 the knee. Of the cases of hip-joint disease, 3 were fatal, though not through surgical interference; in 32 cases the operation was completely successful, and in 8 fistulæ subsequently formed. Arthrectomy in the knee was followed by early death in 3 cases, and in 28 cases by complete recovery.

(458) Treatment of Contraction of the Ileo-Cæcal Valve.

In the *Bulletin de l'Académie de Médecine*, No. 52, December, 1890, p. 856, M. Péan discusses the treatment of this rare affection. He could only find three cases recorded in which the contraction was caused by new growths, and five in which it was inflammatory. The operations which have been done to cure these cases include artificial anus, digital dilatation, and resection. After discussing the various cases in which these proceedings have been practised, Péan describes his own operation, which consists in forming, without taking away any of the intestinal tube, a dilatation at the seat of contraction. To do this the abdomen is opened by an incision above and parallel to Poupart's ligament, and the end of the ileum and the cæcum are drawn into the wound. The ileo-cæcal valve region is then shut off from the rest of the bowel with rubber tubing passed round in the usual way by perforating the mesentery. The intestine is then opened on each side of the valve by an incision 8 centimetres long. The valve is inspected, and, if necessary, resected or incised. After whatever is necessary has been

done, the incision is closed by bringing together the two ends of the wound, thus opposing the peritoneal surface of the ileum to that of the cæcum. In doing this the incision becomes at first lozenge-shaped, and, lastly, transverse. The surfaces are united with a double row of sutures, the first of catgut, and including the mucous and muscular coats; the second of carbolised silk, taking in the serous and part of the muscular coat. The operation is finished in the usual way. In two cases in which this operation has been done the after-course has been most simple. The first day they had broth, milk, cognac, and, during the night, ice compresses upon the abdomen. The following days they were without fever, and one patient imprudently got up on the fifth day and went for a drive on the twelfth, and on the twentieth returned to Egypt. There has been no relapse in either case.

(459) The Form and Calibre of the Trachea.

Dr. Lejars, of Paris, has lately published (*Revue de Chirurgie*, No. 4, 1891) the results of some researches, which show that the trachea in a young living subject differs much in shape and size from that of the cadaver. In the former the posterior extremities of the elastic cartilages are brought together by the transverse muscular fibres, so that the calibre of the tube is much diminished. In subjects of advanced age, as the muscular fibres waste and the cartilages become ossified, the trachea becomes enlarged and resembles more and more the organ as it appears after death. The form of the trachea during life is far from being regular and symmetrical, and, Dr. Lejars asserts, one rarely finds a symmetrical cartilage. The tube tends to be flattened from side to side above, and from before backwards in its lower segment. It usually presents two well-marked depressions—one in front corresponding to the aorta, the other higher up on the left side, caused by the pressure of the left lobe of the thyroid body. Reference is made to the fact noted by Quenu and Witzel that sometimes during the performance of tracheotomy the calibre of the air tube is much diminished in consequence of the inward projection of its posterior membranous wall. This results, it is held, from close approximation of the posterior extremities of the divided cartilages after their cut margins in front have been separated on the introduction of the cannula. Dr. Lejars draws the conclusions from his investigations that in tracheotomy as now usually performed the incision in the air tube is too long and the cannulæ are too large.

MIDWIFERY AND DISEASES OF WOMEN.

(460) Cancer of Ovary: Detached Outgrowths.

Dr. Gottschalk (*Centralb. f. Gynäk.*, March 28th, 1891) exhibited at the Berlin Obstetrical Society a specimen of cancerous tumour of the right ovary successfully removed from a virgin aged 65. It had been noticed for two years, and occasional floodings had taken place, so that myoma was suspected. Abdominal section was performed; abundant omental, parietal, and intestinal adhesions had to be set free, and the bladder—drawn up high out of the pelvis—was carefully dissected off the front of the tumour. The pedicle was broad, short, and twisted. In exploring Douglas's pouch for metastatic deposits, a mass of tumour substance as big as a crab-apple was found lying free in that peritoneal fold. Dr. Gottschalk believed that it had been detached possibly during examination of the tumour. The breaking off of an outgrowth must greatly favour diffusion of the malignant growth, as the detached piece will set up inflammation of the adjacent serous membrane and thus contract adhesions. Hence all cases of solid pelvic and abdomino-pelvic tumours should be examined with great care. No true metastatic deposit was discovered in Dr. Gottschalk's case, and though the patient was in an advanced stage of emaciation before operation, she made a very good recovery.

(461) Giant Fœtus Extracted Entire: Breech Presentation.

M. Maygrier (*Bulletins et Mémoires de la Soc. Obstét. et Gynéc. de Paris*, February, 1891) exhibited before the Society a female fœtus weighing 14⅛ lbs. av. (6.7½ kilogrammes). Its total length was 22½ inches. The occipito-frontal measurement was 4⅛ inches, the biparietal $3\frac{3}{5}$ inches. The mother was aged 39, she had been pregnant six times and had borne four children—all very big—to term. The child, on this occasion, was born on January 12th, 1891, at term. The mother's abdomen was abnormally large during the last months, when glycosuria set in. The amount of urine and proportion of sugar were both very high. Œdema of the vulva and pruritus harassed the patient. Labour lasted fifteen hours and a half. At first a large bag of waters with a prolapsed funis presented; the pulsations in the cord ceased entirely. When the waters broke a great quantity of liquor amnii escaped and a breech presentation was diagnosed. The pains were vigorous, and the right leg was brought down with difficulty. Two hours of continuous traction were needed to extract the legs, the breech, and the trunk. The arms being raised, it cost much time and fatigue to bring them down. The head was delivered with perfect ease. The patient made a good recovery.

(462) Toxic Spasm of Parturient Uterus overcome by Antipyrin.

Dr. Wright, of Toronto (*Archives of Gynæcol.*, New York, April, 1891) reports the case of a primipara, aged 22, of sedentary habits. The pelvic outlet was slightly narrow; pregnancy was normal. The os was rigid, and the membranes ruptured prematurely, so that the first stage of labour lasted over twenty-four hours, although three 15-grain doses of hydrate of chloral were given to relax the os. The head then descended rapidly half down the vaginal canal, but then the progress of labour became slow. At the end of forty hours the head was well down in the perineum, but the rigidity of external parts rendered the pains ineffectual. Symptoms of exhaustion then began to appear. The pains became shorter and more frequent, the pulse increased to over 100, and the patient complained of nausea and thirst. It soon became impossible to make out distinct intervals between the pains, and, on examination, the uterus was found retracted, and in a state of tonic contraction. Three 15-grain doses of antipyrin, to be taked at intervals of one quarter of an hour, were prescribed. Before the second dose had been given the patient felt easier; after the third the pains were about three minutes apart, and the tetanic contractions had disappeared. The head, being very large in proportion to the outlet, was delivered with forceps

under chloroform. The uterus took three-quarters of an hour to contract properly after the administration of ergot in drachm doses. Dr. Wright considers that this case shows the value of antipyrin in uterine tetanus. It might more beneficially be used before the muscular fibres and nerve centres are exhausted by prolonged tonic contractions.

(463) Effect of Leeches in the Uterine Cavity.

Dr. Montane (*Nouvelles Archiv. d'Obst. et de Gynéc.*, March, 1891) states that he is not accustomed to plug the os with wool when applying leeches to the cervix, but simply catches each leech with forceps with large teeth, places it against the cervix, and lets go of it when it has taken a firm hold of the tissues. He has never seen a leech shift its position. Once, when he was applying leeches, the patient sneezed violently, so that the Ferguson speculum was shot out of the vulva. When reintroduced three leeches were found still adherent to the cervix, and a fourth rapidly escaped up the cervix, and ensconced itself in the uterine cavity before it could be seized with a forceps. A red rubber sound was passed up the cervix, and a small amount of warm carbolised water thrown into the uterus. The water came back in intermittent jets, and at length a black body appeared, which was seized with forceps; it was the cephalic end of the leech, which was easily extracted. The patient knew nothing of the misadventure. Dr. Montane's colleague, Dr. Arrango, describes another case where a leech could not be displaced so speedily from the uterine cavity. It set up intense pain, which, it is remarkable to note, was referred to the region of the right ovary. Violent convulsions followed, and lasted for nearly half an hour, leaving the patient in a most distressing state of excitement, the pain being unabated. The fits returned. Three hours after the beginning of the pain the patient was seized with violent uterine contractions, compared by her to the sensations experienced during an abortion, the leech, perfectly gorged with blood, escaped from the vulva, the pains and convulsions thenceforth ceasing entirely.

(464) Ventrofixatio Uteri.

Dr. Sperling (*Deutsche med. Wochenschr.*, 1891, No. 5) describes nineteen cases of this operation, performed by Professor Leopold for severe cases of retroflexion. The Professor himself adds a note of warning against indiscriminate operating for retroflexion. Hysterorrhaphy should only be done when it is evident that the patient suffers severely from the displacement, and from no other cause such as hereditary nervousness, hypochondriasis, or malnutrition. In four of the operation cases, there was retroflexion alone; in six, disease of the left, and in 7 disease of both, appendages. In none were the right appendages alone affected. In one case there was a myoma on the fundus uteri; in one prolapsus of the uterus and both vaginal walls. Sixteen of the patients were entirely freed from their pains, two feel constitutionally better, though they still suffer from trifling local pain, three have borne children since hysterorrhaphy; the uterus in all these instances kept its place against the parietes after delivery, which occurred at term. In one case no relief followed hysterorrhaphy; the uterus kept in its artificial position, but great pain occurred at the period; there was reason to believe that disease of both ovaries also existed, and that their removal would have been advisable. In two of the last nine cases, where both appendages were removed, menstruation continued. In only one case did pains in the bladder occur after hysterorrhaphy, but in this instance they were very severe. The operation itself was performed after Leopold's method, already described by that author (*Sammlung klin. Vorträge*, No. 333). From one to three sutures were passed through the uterus and the parietes. In most of the cases the serous coat of the fundus was dissected off.

DISEASES OF CHILDREN.

(465) Infantile Cerebral Palsies.

Professor Sachs, in a paper read before the New York Neurological Society (*New York Med. Journ.*, May 2nd, 1891), discusses the pathology of the cerebral paralyses of infancy. He divides them into the congenital cases, that is, those occurring before birth and due to gross cerebral defects; birth palsies, the result of protracted labour, where meningeal, or more rarely intracerebral, hæmorrhage has taken place; and those acquired after birth, in which in agreement with the majority of recent writers on this subject, he considers vascular lesions as by far the most common cause; next to these he places chronic meningitis and hydrocephalus; and lastly, Strümpell's primary encephalitis. This last condition he believes to be excessively rare, and he holds that the theory should be accepted with some reserve. The diagnosis of the different kinds of vascular lesion, that is, embolism, thrombosis, and hæmorrhage, he admits to be sometimes very difficult, but when hæmorrhage can be diagnosed, he thinks that surgical interference is imperatively called for. If the symptoms point to the formation of a large clot over the motor area of a child otherwise healthy and strong enough to endure the operation, he recommends that an attempt should be made to remove the clot in order at once to relieve pressure upon the given area, and to prevent secondary degeneration. This latter point would be certainly well worth attaining, but the diagnosis of intracranial hæmorrhage in the young is by no means so easy. Still, where it can be made, there is no objection to the use of the trephine.

(466) Tuberculous Testicle in Boys.

In an elaborate essay MM. V. Hutinel and E. Deschamps (*Arch. Gén. de Méd.*, March and April, 1891) state that tuberculosis of the testicle, though not common in boys, is not very rare. It may occur at any age, having been observed in infants only one month old. Injuries probably play an important part in determining the onset of the disease, an opinion which is thought to be confirmed by the more frequent commencement of tuberculosis in the left testicle, which is the more exposed. The onset is sometimes remarkably acute, and as there is often in such cases a slight urethral discharge, a hasty diagnosis may be mistaken. In a certain small proportion of cases the lesion appears to be primary, but in many cases it can be proved, and in a large number surmised with great probability, that the testicular affection is secondary. The onset in a large proportion of the cases is insidious, and the changes in the gland are of the type to which the term "scrofulous" is generally applied.

In mild chronic cases the affected testicle may atrophy and the boy may recover without any other organ becoming involved; in other cases a chronic abscess forms, and either with or without this complication the glands become secondarily affected. Tuberculous testicle appears in some cases to be secondary to tuberculous peritonitis, and the converse is also true. In the child the testicle proper is more often attacked than the epididymis, the converse being the case in the adult; in some cases the primary seat of the tuberculosis appears to be the tunica vaginalis. From a microscopical study of the lesions the authors are led to the conclusion that in children the tuberculous process develops chiefly in relation with the blood vessels in the interstitial tissue or in the envelopes of the glands, that it is not very virulent, but tends towards sclerosis and spontaneous cure. Nevertheless, prognosis should always be guarded, since in a large proportion of the cases the testicle is not the only organ affected; in particular, caseous degeneration of the mediastinal and mesenteric glands is almost always found. Diagnosis is not generally difficult; sarcoma of the testicle is very rare in children, it is less hard, and grows much more rapidly; syphilitic disease of the testicle is met with in very young children more often than tuberculosis; it generally affects both organs, rendering them hard, large, and painless; the epididymis is less often attacked by syphilis than by tuberculosis, and as a rule other signs of syphilis can be discovered. The authors consider that local treatment should be avoided as far as possible; the organ should be carefully protected from injury, and if an abscess form, it should be opened with the thermo-cautery and treated antiseptically; suppuration may sometimes be prevented by ignipuncture. Castration is not good treatment. The authors consider that the general medical treatment is most important—cod-liver oil, creasote, arsenic, phosphate of lime, careful feeding, together with sea air and sea baths or country air and salt baths (Salies de Béarn, Kreuznach).

(467) Membranous Sore Throat in Scarlet Fever.

M. H. Gillet relates (*Annales de la Policlinique de Paris*, May, 1891) a case of membranous angina commencing on the third day of a well marked attack of scarlet fever; the false membrane, which was thin and whitish, covered the edges of the soft palate, the uvula, and the tonsils. The patient, aged 4½, died of asthenia on the sixth day. Cultivations were made during the life of the patient from the false membrane on the palate, and pure colonies of the staphylococcus pyogenes albus were obtained; the diphtheria bacillus was not present. This negative result M. Gillet points out is important, and the positive result is also of value, since it shows that the staphylococcus pyogenes may be added to the list of micro-organisms capable of producing false membranes. Widal has shown that in some cases such membranes are due to the streptococcus pyogenes, and M. Gillet states that Professor Jaccoud has recently found the pneumococcus almost pure in a false membrane on the tonsils and the pillars of the fauces. In this patient (lad of 19), there was swelling of the cervical glands and albuminuria, so that—especially in the absence of any symptoms of scarlet fever—the resemblance to diphtheria was very close. These observations are of importance both from the point of view of etiology and treatment.

PHARMACOLOGY AND THERAPEUTICS.

(468) Cantharidinate of Potassium in Pulmonary Tuberculosis.

At a recent meeting of the Warsaw University Russian Medical Society, Professor L. I. Tümas (*Vratch*, No. 13, 1891, p. 247) presented a communication on six cases of pulmonary tuberculosis treated by Liebreich's method. All the patients were suffering from more or less early phthisis with broncho-pneumonia. Some of them were still fairly well nourished, the symptoms being limited to apical dulness, crepitant *râles*, moderate cough, with scanty expectoration, and slight laryngeal lesions. In three cases there were present violent cough, purulent sputa with abundant tubercle bacilli, exhausting night sweats, more or less extensive pulmonary lesions with small excavations, mild fever, and in one considerable emaciation. The following is a summary of the results: (1) Cough decreased in four patients, the sputa at first becoming more abundant and mucoid, afterwards (in five days or so) markedly decreasing in quantity. In two of the four the expectoration subsequently ceased altogether, a dry cough only remaining, while night sweats and fever disappeared, appetite improved, stools became regular, and weight increased 5 and 2 pounds within a fortnight. (2) As to physical signs, in the two cases just mentioned there were noticed clearing up of the pulmonary note on percussion, and decrease of moist *râles*. Of the other four patients, in three the pulmonary signs did not show any improvement, while in one they apparently grew worse. In such cases where laryngeal ulcers were present, subsidence of congestion and œdema of the vocal cords were observed. (3) Of toxic phenomena there were noticed (*a*) dysuria (in two cases after the injection of 0.0002 g.), which, however, speedily ceased after the internal administration of tincture of opium; (*b*) headache (in one), and (*c*) gastric pain (one). (4) The injections caused more or less intense local pain of twenty-four hours' duration, but no infiltration or suppuration. (5) On the whole the cantharidin treatment is decidedly beneficial in some cases, and hence deserves a further trial, its advantages being these: (*a*) the composition of the remedy is known to all; (*b*) the drug can be prepared by everybody; (*c*) it admits of precise dosage; (*d*) it does not give rise to any serious complications; (*e*) it can be safely applied in outdoor patients, and does not involve any change in the patient's usual mode of life. (6) The beneficial effects of cantharidin seem to depend upon its stimulating the vital activity of the systemic tissue cells and increasing their energy in the struggle against pathogenic agents—that is, cantharidin acts much in the same way as spermin or Brown-Séquard's testicular injections. (7) It is possible that cantharidin might be replaced by powdered cockroaches (*Blatta Orientalis*), which act comparatively less intensely on the nerve system, while exercising a decided stimulating influence on the heart. In the course of the discussion which followed, Dr. M. S. Vasilïeff stated that he obtained good results with cantharidin in two cases of surgical tuberculosis.

(469) Post-Mortem Appearances after the Use of Tuberculin.

Professor N. V. Petroff, of St. Petersburg, records (*Vratch*, No. 4, 1891, p. 125) two cases of pulmonary phthisis. In one the patient was a man, aged 36, who had received three injections

of tuberculin (0.002, 0.003, and 0.005 gramme), and died four days after the last. At the necropsy the lungs were found adherent to the chest, the remaining pleural surface being congested, and lined with fibrinous films. Throughout both organs there were scattered groups of yellow, softened, unusually large tubercles, and a few small cavities. The pulmonary parenchyma, especially in the right lower lobe, in the area of extensive crops of tubercle, was engorged, and, in the latter region, traversed by small extravasations. There were also tuberculous ulcers on the tonsils, epiglottis, and intestines, and there were a few tubercles in the substance of the liver, spleen, and kidneys, the ulcers being encircled by a congested zone. The other patient, a woman, aged 34, had also died after three injections (0.0005, 0.001, and 0.002 g.), the last having been given a month before death. The condition of her lungs on the whole resembled that in the preceding case, but there were large cavities in the upper and lower lobes, and numberless small ones scattered all over the organs, giving a spongy appearance to a part of the left lower lobe where they were most numerous in both cases. The microscopical examination revealed (1) great dilatation of the blood vessels around the tuberculous foci and ulcers; (2) hæmorrhages into the alveoli; (3) infiltration of tubercles with multinuclear leucocytes, most dense at the circumference of the structures; (4) a similar infiltration around ulcers everywhere. In the second case the spongy pulmonary area proved to be altogether free from tubercles, the tissue containing small cavities, formed by destruction of alveoli. Dr. Petroff pointed out that (1) the changes detected in both cases differed widely from those usually found in tuberculosis; (2) they were of inflammatory nature; (3) the destruction of tubercles and formation of cavities in the second case showed that the inflammatory process was of a suppurative character; (4) there is every reason to believe that the unusual phenomena were directly due to the use of tuberculin; (5) in neither of the cases could there be discovered anything like sloughing of tubercles, or cleansing of tuberculous ulcers.

Professor Nikolai M. Luebimoff, of Kazan, publishes (*Vratch*, No. 8, 1891, p. 237) the results of the necropsy of a phthisical patient who had received eight injections of tuberculin in doses of from 0.001 to 0.003 gramme, the last having been given two days before death. The lungs were extensively adherent, their free surface being covered with fibrinous effusion. The upper portions of the organs contained large cavities, while the middle portions were studded with broncho-pneumonic caseous foci, the subpleural lesions being surrounded by extravasations. The lower portions of the lungs on section presented "a shagreen appearance, which was due to the presence of closely grouped minute granules, mostly grey, but occasionally yellowish in colour, varying in size from a poppycorn to a hemp seed." The lung tissue all through had a striking dark red colour. The right branch of the pulmonary artery was blocked by a thrombus, and the bronchial glands enlarged and dark red. Under the microscope the pulmonary substance showed an "extraordinary dilatation, here and there amounting to varicosity, of blood vessels around the broncho-pneumonic foci, the vessels and alveoli being choked with red blood corpuscles." The engorgement was so intense as to have caused some "alveoli to give way and to coalesce into a single hæmorrhagic cavity." There was a large extravasation in the stomach, occupying the pyloric region and presenting signs of incipient disintegration in its central area. The small intestine—especially the jejunum—likewise showed a considerable number of largish ecchymoses and numerous small ones, the serous coat being congested.

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(470) Chloride of Gold in Lupus.

Dr. J. Rusin (*Meditzinskoïe Obozreniè*, No. 5, 1891, p. 509) reports the case of a peasant woman, aged 40, with extensive lupus of thirteen years' standing, successfully treated by the subcutaneous injection of a 1 per cent. solution of chloride of gold in combination with a 1 per cent. solution of cyanide of potassium. Nearly the whole face, nose, and forehead were involved, the cheeks, forehead, chin, and hard palate being studded with ulcers, the discharge from which contained tubercle bacilli. In all, six injections were given in the course of eleven days, the total quantity of either of the salts amounting to $\frac{3}{1000}$ grain, the individual doses of the chloride varying from $\frac{1}{1000}$ to $\frac{1}{100}$ grain, and those of the cyanide from $\frac{1}{1000}$ to $\frac{1}{125}$. On the second day of the treatment, the subjective state markedly improved; on the third, the swelling of the face subsided, some old scars began to shed cuticle, and a labial ulcer distinctly decreased; on the 6th, some ulcers on the cheeks and hard palate commenced to heal, while the facial tumefaction and pain disappeared altogether; on the twelfth, several ulcers soundly healed, and the remaining ones became clear and covered with healthy granulations. Of accessory phenomena, there were observed a kind of intoxication, drowsiness, rigor, and slight elevation of temperature. These symptoms made their appearance on the fourth day of the treatment, shortly after the injection of $\frac{1}{125}$ grain. They disappeared spontaneously the next day.

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(471) Vaccination in the Calf.

MM. Straus, Chambon, and Ménad (*Semaine Méd.*, 1890, No. 57) give some interesting results concerning vaccination in the calf. (1) Inoculation of the cornea with vaccine lymph was followed in from six to seven days by slight cloudiness of the centre of the cornea, which increased during the next few days, with acute conjunctivitis and photophobia. In a previously vaccinated calf this corneal inoculation gave rise to no symptoms. The next point investigated was whether this corneal vaccination conferred immunity or not. Three calves were inoculated in the cornea, and after twelve, twenty-five, and twenty-eight days respectively they were subjected to ordinary cutaneous vaccination in the abdominal region. Of these three, only the first showed any reaction, proving that corneal inoculation, although somewhat slower in its action, is just as efficacious as vaccination on the skin. (2) Inoculation into the anterior chamber of the eye gave rise to inflammation of the iris and cornea, and conferred immunity as certainly, and almost as quickly, as subcutaneous inoculation. (3) In regard to the intravenous injection of cow-pox lymph, which has been described by Chauveau as conferring immunity on horses but not on cattle, the authors repeated this experiment on four calves, with positive results in each case. They injected from a fraction of a drop to 3 cubic centimetres of the lymph, and were careful to prevent any inoculation of the skin during the operation. The ani-

mals were vaccinated in the ordinary way from ten to twenty days after the intravenous injection, without the occurrence of any reaction. (4) The transfusion of blood from an animal when the vaccine eruption is at its height into a non-vaccinated animal has given contradictory results in the hands of various investigators. The authors repeated the experiment in the following manner: A glass cannula was introduced into the carotid artery of one calf, and another into the jugular vein of a second. The two cannulæ were then united by an india-rubber tube of suitable length. The quantity of blood transfused was estimated by weighing the animals before and after the operation. In the first experiment about 400 grains of blood were taken from a calf on the seventh day of the eruption; after fourteen days the non-vaccinated calf into which this blood had been transfused was vaccinated in the ordinary way. This was followed by a typical eruption, showing that the intravenous injection had not conferred immunity. In the next experiments much larger quantities were used. Instead of 12 ounces, from 8 to 12 pounds of blood were transfused, and it was found that the animals received this huge quantity without hurt. After two to three weeks the calves experimented on were vaccinated cutaneously without any reaction. From this the authors conclude that to confer immunity by this method very considerable quantities of blood must be used. (5) Transfusion of blood from a calf which had been successfully vaccinated six weeks before into a non-vaccinated calf was found to have no effect. In one case as much as 12 pounds of blood was transfused without conferring immunity. (6) Cutaneous vaccination with filtered cow-pox lymph was the next point investigated. Five cubic centimetres of freshly collected calf lymph were mixed with an equal quantity of sterile broth, and filtered through a porcelain filter. Four cubic centimetres of the filtrate were injected subcutaneously into a calf without causing any local reaction. Eleven days later vaccination of the same animal with unfiltered lymph was followed by the typical eruption.

(472) Microcidine.

M. Polaillon (*Semaine Médicale*, April 29th) has described a new antiseptic, which it is proposed to call "microcidine." It was discovered by Dr. Berlioz, of Grenoble, and is prepared by adding to fused naphthol β half its weight of caustic soda, and allowing the mixture to cool. The resulting mixture contains 75 per cent. of naphtholate of soda, the remaining 25 per cent. consisting of mixed naphthol and phenol compounds. It is a whitish powder, soluble in three times its own weight of water, yielding a brownish solution. It possesses the following advantages: it is a very powerful antiseptic, very slightly toxic, is not caustic, is cheap, and does not affect either instruments or clothes. From M. Berlioz's researches it would appear that its antiseptic power is inferior to that of sublimate or of naphthol, but that it is ten times greater than that of phenol, and twenty times as powerful as boric acid. Microcidine is excreted in large quantities by the way of the kidneys, and acts as an antipyretic. M. Polaillon has obtained good results from solutions containing 3 to 1,000 of the drug, used both as lotions and to impregnate the dressings in a variety of surgical affections. He finds that, under its influence, ulcers of the legs and suppurating wounds heal rapidly, and the smell from gangrenous wounds is soon destroyed. As regards recent wounds, the new lotion prevents suppuration at least as efficiently as phenol or naphthol solutions. For infected wounds it is desirable to use a somewhat stronger solution (5 to 1,000), but the weaker lotion will serve for most purposes, and may be employed in all cases in which an efficient antiseptic irrigation is required. On the whole, microcidine seems to deserve a place among the best and most harmless antiseptics.

PHYSIOLOGY.

(473) Estimation of Weight.

Charpentier (*Arch. de Physiol.*, iii, p. 122, 1891) has made some experimental observations on the elements entering into our sensations of the weight of bodies. The most interesting of his conclusions are the following:—(1) The more muscles we use in order to raise a weight, or the thicker the muscles so used, the lighter we judge the weight to be. Thus a weight raised with both hands is judged to be lighter than when it is lifted with one hand. (2) The weight of a body is estimated to be less the greater the extent of skin surface it touches. Thus a large hollow metallic sphere is estimated to be lighter than a much smaller solid ball of precisely the same weight. The weight of an object is thus to a certain extent estimated by the specific pressure, that is, the pressure it exerts on the unit of surface. Still the sensations of weight decrease much more slowly than the size of the surface touched. (3) The sensation of weight is less the more the other muscles besides those actually raising the weight are exerted. Thus a weight raised with the right hand is estimated to be less when at the same time the left hand raises a weight, or when at the same time violent expiratory efforts are made.

(474) Coagulation of the Blood.

Arthus and Pagès (*Arch. de Physiol.*, 5, ii, p. 739, 1890), working in the Sorbonne under the direction of Dastre, find that when 25 cubic centimetres of a 0.9 per cent. solution of oxalate of potash are mixed with 25.5 cubic centimetres of blood (dog, ox, horse) the blood does not coagulate, either before or after putrefaction sets in. One per 1,000 of the oxalate is sufficient to prevent coagulation, and the same result occurs with corresponding soda and ammonia salts. The addition of 2 grains of ordinary soap, or stearate, or oleate of soda to 300 cubic centimetres of dog's blood also prevents coagulation. These salts and the fluorides also do not prevent coagulation in the same way as do the neutral salts, for example, sodic or magnesic sulphate. The former act in a much less amount (0.1 per cent. instead of 8 per cent.). The oxalic blood may be diluted to any extent, and it never coagulates, being in this respect unlike salted (M_2SO_4) blood. If, however, to 20 cubic centimetres of the oxalate blood there be added 2 cubic centimetres of a 1 per cent. solution of calcium chloride, within a few minutes a blood clot is formed. Blood only coagulates in the presence of soluble common salt; the substances (salts) which precipitate the calcium are coagulation-restraining reagents. Strontium salts act like the calcium salts, but salts of baryta and magnesium do not cause the blood to coagulate. It would seem that the calcium atom is a necessary constituent of

fibrin. From decalcified blood, just as from plasma, fibrinogen can be separated, so that fibrinogen is not changed into fibrin by the action of the fibrin ferment. It would, therefore, seem that the latter can act on the former only in the presence of a calcium salt, so that from fibrinogen an insoluble calcium compound fibrin is formed. As in the case of the casein of milk, one must distinguish precipitation of the fibrinogen from its coagulation, the processes being totally distinct. The fibrin on this theory corresponds to the cheese or casein coagulated by rennet.

DERMATOLOGY.

(475) Diabetic Xanthoma and its Relation to Ordinary Xanthoma.

Dr. Robinson examined (*Brit. Journ. of Derm.*, April, 1891) tissue from a well-marked case of diabetic xanthoma which was under his care. The eruption was very abundant. Within four months from its commencement there existed hundreds of papules, chiefly on the nates and loins and parts of the limbs. Careful histological examination showed that the structure in this case was almost identical with that of ordinary xanthoma, as described by De Vinentiis, Chambard, Touton, and others. The intensity of the process is more considerable in this disease than in ordinary xanthoma, and the circulation of the parts affected is more rapidly disturbed, which accounts, according to the author's view, for the fatty degeneration so frequently observed.

(476) Histology of Acne Varioliformis.

Dr. Bronson (*Journ. of Cut. and Genito-Urin. Dis.*, April, 1891) publishes the results of a microscopic examination in a case of acne varioliformis, which seems to show that the lesion begins as a deep-seated small-cell infiltration about the coil glands, which are situated beneath the hair follicles. In the beginning several independent foci of inflammation are present, which subsequently coalesce, producing a generalised infiltration of the derma with a tendency to central degeneration. As the infiltration approaches the surface it penetrates and disintegrates the overlying epidermis, separating it from the adjacent tissue. The central dry necrotic mass which represents the final stage in the evolution of the pathological process is made up of the epidermis with the underlying tissues of the derma, which have undergone a peculiar degeneration, and have become separated from the adjoining tissue by a sharp line of demarcation. The examination, unfortunately, gives little insight into the nature and cause of this singular affection, nor does it reveal why the affected tissues should be thrown off *en masse* rather than undergo a liquefactive degeneration. One would be led to suppose, however, that some agent, bacterial or chemical, had played an active part in the inflammation, causing a reaction on the part of the tissue and an endeavour to throw off the offending cause and its results. The formation of pus, which is not a constant feature of the papules, was doubtless due to a secondary infection by pus cocci.

(477) Gummatous Tuberculous Lymphangitis.

Dr. Wickham (*Brit. Journ. of Derm.*, May, 1891) refers to a case under the care of M. Hallopeau, in which intradermic or subcutaneous nodosities arranged in rows in the lymphatic vessels of the ankles and thighs were shown by histological and experimental researches to be in reality tuberculous lesions of the lymphatics. This patient was one of those in whom Koch's fluid was injected in the Hôpital St. Louis. Between December 5th and January 10th he had five inoculations of half a milligramme to a milligramme and a half. The inoculations were followed by moderate local reaction, but the general reaction was so violent that the treatment was abandoned. After the last inoculation the patient got much worse, and was attacked with acute tuberculosis. He died in the end of February. At the necropsy very numerous small tuberculous granulations were found in the lungs.

BACTERIOLOGY.

(478) The Tetanus Bacillus.

Guido Tizzoni and Giuseppina Cattani have recently published some new facts concerning the bacillus of tetanus, which may possibly reconcile some discrepancies between their observations and those of Kitasato. They find (*Riforma Medica*, 1891, p. 157) that virulent cultures always liquefy gelatine, have a decidedly alkaline reaction, give out a disgusting odour, and cause death by acute tetanus in animals in twenty-four to thirty-six hours. Less virulent bacilli still liquefy gelatine, but the reaction soon becomes acid. Still more attenuated cultures show growth much sooner, give off far more gas, do not liquefy the gelatine, give out no bad smell, and have a marked acid reaction. Thus to various grades of virulence correspond notable alterations of the morphological and cultural relations, also of the products, and we here again observe the strict tie which exists between peptic enzyme and the toxine of tetanus bacilli. As to cultures in serum observers differ. Kitasato has not seen the liquefaction of coagulated blood serum, which has now been noticed by several observers besides the above. Again, as regards liquid serum, its successive solidification and liquefaction by the tetanus bacillus, as first noticed by the authors, has been confirmed by Nikiforoff (*Zeitschr. f. Hygiene*, Bd. 8, p. 497). The differences are possibly explained by assuming that Kitasato worked with a less virulent bacillus. The authors have already shown that cultures on meat broth and agar are weakened even in the second generation; the same weakening follows culture in other media, only after a long interval of some months. Cultures kept for more than a year under various gases (H, N, Co_2) gave attenuated cultures when transplanted into gelatine, but similar cultures *in vacuo* yielded very virulent cultures. Perhaps this was due to freer development of gas by the cultures *in vacuo*. The acids of attenuated cultures are fatty acids, chiefly butyric, as already shown by Kitasato and Weyl, but the addition of butyric acid made no difference to the culture; the acidity is thus a consequence rather than a cause and the fact that it is due to fatty acids, and its small amount, explain why it does not annul toxicity as mineral acids do. Virulent gelatine cultures continued to be very toxic for six months when filtered and kept in the dark, but after that time they lost their virulence altogether, or only caused emaciation and death in about three weeks. They were strongly acid and odourless. In contrast to this, the toxalbumin of tetanus, kept dry for a much longer period, preserved all its toxicity.

SUPPLEMENT
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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(479) Acute Ataxy.

LEYDEN (*Ztschr. f. klin. Med.*, xviii, 5 and 6) thinks that there are two forms, the central or cerebral and the sensory form of acute ataxy. Both agree in the sudden onset, the rapid course, and in that they follow on acute diseases. The following are the symptoms of the central form. The speech is slow and scanning, but the tongue is freely movable, there is ataxy without loss of power of the extremities, there are psychical disturbances, but the sensibility is intact. This condition very much resembles disseminated sclerosis, and Leyden is of opinion that it is caused by spots of degenerated tissue in the pons and its immediate neighbourhood. Sensory ataxy in many points resembles that form of locomotor ataxy which is associated with peripheral neuritis. This, like the other form, may follow acute diseases, but it may have other causes. Leyden concludes his paper by describing a typical case, that of a man, aged 55, who had had syphilis and muscular rheumatism. His acute ataxy appeared to be due to his getting very cold. He suffered from creeping sensations in the legs, numbness of the feet, and ataxy of the lower extremities, loss of both knee-jerks and of the left cremasteric reflex. There was no affection of the upper limbs.

(480) A New Contribution to our Knowledge of Reflexes.

ERB (*Wiener med. Wochenschr.*, 1890, p. 879) has contributed an important paper on this subject. He first discusses how far the anterior cornual cells of the spinal cord are concerned in the production of a tendon reflex, and he points out that many of the cells may be totally destroyed and yet the tendon reflexes will remain perfect for the rest of life, and he does not regard it as a satisfactory explanation that the remaining cells take on the function of those which are destroyed. Further, he argues that in many cases in which the loss of the reflexes has been attributed to destruction of the cells of the spinal cord the anterior nerve roots have been severely damaged, and in progressive muscular atrophy the loss of the reflex does not take place till there is considerable change in the muscle itself. Erb next refers to the clinical fact that, after hemiplegia with secondary degeneration, there is often an increase of the tendon reflexes on the non-paralysed side; this most authors have been accustomed to refer to an increase in the irritability of the reflex centres on the unparalysed side, consequent upon their physiological association with those on the paralysed side. Erb considers this hypothesis unnecessary now it is known that descending degeneration takes place on both sides of the cord. Lastly, he does not consider that in the explanations of the alterations of tendon reflexes after apoplexy sufficient allowance has been made for the alterations produced in the surrounding parts of the brain by the vascular disturbances which must be associated with a large hæmorrhage.

(481) The Anal Reflex.

ROSSOLIMO (*Neurologisches Centralblatt*, May 1st, 1891) says this reflex consists in a contraction of the anal sphincters in response to a stimulation of the skin and mucous membrane of the anus. It is invariably present in man in health. The branches of the inferior hæmorrhoidal, pudendal, and perineal nerves, on which this reflex depends, are connected with the third and fourth roots of the sacral plexus, which spring from nerve cells in the conus medullaris. This reflex can be obtained in the dog as well as in man, and Rossolimo cut the spinal cord across at different levels from above downwards; whenever the lumbar enlargement was cut across at the level of entry of the third sacral nerve, the anal reflex suddenly disappeared, from which it follows that the cells of the spinal cord which are connected with this reflex are situated in the third quarter of the lumbar enlargement, reckoning from above downwards. In another series of experiments the lumbar enlargement was exposed, and the sacral roots were cut one at a time. By this means it was proved that the anal reflex depended upon the integrity of the third and fourth sacral roots. This reflex therefore has its seat in the cord lower than any other reflexes. To obtain the anal reflex the patient may be either standing, the operator separating the glutei, or lying on his side with the legs drawn up. The skin and mucous membrane of the anus may be stimulated by stroking with a pin, a feather, a piece of paper, or some suitable object. The reflex is shown by a contraction of the sphincter ani externus, and if it is very strong there is a drawing in of the whole anus, and even sometimes a contraction of the glutei. In women the testing of this reflex may be conveniently combined with a gynæcological examination. The author has examined this reflex in a great many conditions, and he comes to the following conclusion: It is increased in some cases of neurasthenia, in cases of myelitis high up in the cord, and in conditions in which there is a general exaltation of sensations. It is lost in multiple neuritis affecting the sacral

plexus, in some cases of tabes, and in myelitis of the lower part of the cord, and in these cases there is generally also anæsthesia of the rectum, anus, and urethra. It remains normal in functional derangements of the bladder, the rectum, and the sexual apparatus.

(482) Etiology of Acute Pneumonia.

Banti (*Lo Sperimentale*, 1890, Fasc. 4-6) has come to the conclusion that in acute fibrinous lobar pneumonia, the diplococcus lanceolatus will be found not only in the pulmonary and pleural exudation, but also in the blood. This diplococcus is peculiar in the remarkable changes in form that it undergoes. It is not known what circumstances cause these alterations. In the typhoid form of pneumonia the same micro-organism is present, but in this disease it is especially found in the blood. During last year in Florence the cases of pneumonia were very variable in their severity; and it is very interesting in connection with this fact to notice that very often not only this diplococcus, but also many different forms of other bacteria, were found in the exudation. When there is much pneumonic or pleural exudation, the virulence of the pneumococcus loses much of its intensity. Cases of catarrhal pneumonia have a different etiology. Often the diplococcus lanceolatus is not present at all, and when it is there are many other forms of bacteria also, such as staphylococcus, streptococcus pyogenes, etc. Also in these cases Friedländer's bacillus will be found. The way in which the diplococcus causes pneumonia is quite obscure.

SURGERY.

(483) The Elimination of Staphylococcus Pyogenes Aureus.

Professor G. Tizzoni (*Riforma Medica*, May 4th, 1891) describes a case of infection with staphylococcus pyogenes aureus. In April, 1890, the patient began to suffer from repeated crops of boils on his left forearm, which persisted more or less till August, leaving a slight thickening and redness of the affected region. In the middle of September he received a slight blow on his left knee, but felt nothing amiss till next day, when the joint became painful and swollen, the pain also extending along the leg and thigh. There was considerable fever, accompanied by rigors, and several leeches were applied to the painful region. Five days later the patient entered the hospital, with high temperature, delirium, considerable infiltration of the leg, and enlargement of the crural glands; the heart was normal; the lungs presented only a few moist *râles*; the spleen could not be exactly mapped out, but did not extend below the ribs; the liver and intestinal tract were normal. Sublimate dressings were applied, but next day the pain had extended into the large joints of the legs and arms, giving the disease almost the aspect of an acute articular rheumatism. The fever continued, in spite of large doses of antipyrin, and the patient was bathed in profuse sweat. An exploratory aspiration of the knee gave a yellowish, almost clear, fluid, which showed under the microscope a few leucocytes and some micrococci. Cultivations showed that these were the staphylococcus pyogenes aureus. Next day the knee was laid open, drained, and washed out with 1 in 1000 sublimate lotion, an antiseptic dressing being afterwards applied. After the operation the fever remained high, the chart resembling that of a typhoid case; the œdema diminished somewhat, but the sweating and delirium persisted. Three days later a copious diffuse eruption of sudamina was noticed, the vesicles being mostly clear, but some containing a milky and yellowish fluid. The surrounding area of skin was not, as a rule, reddened. The liquids obtained from these vesicles, after carefully sterilising the skin, gave weak cultivations of staphylococcus pyogenes aureus—feeble, in that they were found to die out after the third generation. The urine, notwithstanding the profuse sweating, remained copious, pale, and free from albumen; this also yielded similar cultures of staphylococci. Notwithstanding all precautions the patient became steadily worse, and died six days later, having undergone on the previous day amputation at the thigh. The foregoing case affords some important information on the means by which the body endeavours to free itself from infective microbes. Although it is denied by many pathologists that bacteria can pass through healthy membranes, or be eliminated by healthy organs, it was clearly shown that in this case micrococci could pass with the sweat into the sudamina, and through the kidneys—which, from the absence of albuminuria, were taken to be healthy—into the bladder. These facts also confirm, in some measure, the observations of Passet and Longard, who found in inoculated mice that staphylococci passed into the conjunctival secretion, and those of Philipowicz and Maffucci, who frequently found anthrax bacilli in the urine of infected animals. Escherich also found staphylococci in the milk of a patient with septicæmia. From these considerations Tizzoni strongly recommends isolation of such patients, together with scrupulous disinfection of linen, skin, and excreta. As regards treatment, he admits that we can do little in such cases, but he thinks that we should aid Nature as much as possible by encouraging sweating and diuresis, using also antiseptic lotions to the skin. These measures may offer some chance of success if adopted sufficiently early. Similar observations as to the path of elimination of microbes were described by Eiselsberg and Brunner at the Berlin Surgical Congress. The former observer found staphylococci in the blood of a patient suffering from acute osteomyelitis, and Brunner was able to demonstrate microbes in the urine and also in the secretion from the feet of animals inoculated with various pathogenic and non-pathogenic organisms, and subsequently treated with pilocarpin.

(484) Osteoid Tumour of the Breast.

Some time ago M. A. Pilliet communicated to the Société Anatomique a case of osteoid tumour of the breast (*Bulletins de la Société Anatomique de Paris*, No. 22, p. 552). The tumour had been removed by M. Reclus, and was a portion of a double tumour of the breast. One of the tumours was white on section, pearl-coloured, and rather soft, and had the ordinary characters of an adeno-fibroma. The other, which was larger, had the same appearance, except that a portion about the size of a small orange was obviously red and scattered over with large cysts filled with yellow vegetations of a fatty appearance. In making sections it was found that the intercystic septa contained well-developed bony points. The fluid, which could easily be pressed from these places, was red and contained many myeloid cells, with their numerous nuclei and racemose prolonga-

tions. The histological examination demonstrated that the white part of both tumours was the same, and consisted of fibrous tissue surrounding glandular spaces, into which it sent prolongations. Many of the fixed cells of the intracystic growths had undergone fatty change, which caused the yellow colour previously mentioned. The stroma likewise presented large areas occupied by myeloid cells in close apposition, and also bony plates with irregular contours. These plates consisted of osteoid tissue rather than of true bone, and were devoid of Haversian canals. The bony points seemed developed in the midst of the fibrous tissue, in a manner similar to the membrane bones of the skeleton.

(485) Biliary Fistula.

In the *Bulletins de la Société Anatomique*, No. 9, 1891, p. 227, M. E. Potherat gives an account of a case of biliary fistula which was discovered during the examination of the body of a woman, aged from 25 to 30 years. In the left flank there was an aperture in the midst of a mass of cicatricial tissue. A probe passed into the orifice went in the direction of the hilum of the liver. Dissection showed that the course of this biliary fistula was as follows: Beginning at the hilum of the liver, it ran between the layers of the lesser omentum, passed along the posterior surface of the stomach, then in front of the left kidney, behind the descending colon, to open into an abscess cavity which discharged externally. This abscess of the abdominal wall seemed to have opened spontaneously and to have been of long standing, as was shown by the extensive formation of cicatricial tissue. The liver seemed quite natural in appearance, but there was marked jaundice of the skin, especially that of the face. Finally, the abdominal cavity showed a general peritonitis, which had glued together the small intestines. The clinical history of this case was not known.

MIDWIFERY AND DISEASES OF WOMEN.

(486) The Palpation of Normal Ovaries.

Dr. Howard Kelly (*Amer. Journ. Obstet.*, February, 1891) insists that the normal ovary can always be felt. Every practitioner should learn how to detect that organ by the touch, and no man has a right to enter the ranks of gynæcology who has not made himself familiar with the palpation of the normal ovary, and mastered all the technical points of this method of exploration. Digital exploration alone, trusting simply to the forefinger, is very inadequate. Simple bimanual vaginal examination is often satisfactory. One hand presses over one iliac fossa. The forefinger of the other hand displaces the corresponding vaginal fornix upwards; by gentle pressure of the rest of the hand the perineum and vaginal outlet are pushed upwards towards the pelvis, greatly shortening the vagina. This latter point must not be overlooked. Rectal bimanual examination is even more satisfactory, as it avoids the inconvenience of the low attachment of the vault of the vagina to the inferior part of the uterus. In cases where the patient is very fat or the uterus anteflexed the forefinger of the outside hand must be made to depress the abdominal walls immediately above the pubes. The uterus is thus pushed backwards so that its body and appendages are brought within easy touch of the finger in the rectum. The best guide to the ovary when it is obscured by exudations is the utero-ovarian ligament. It is to be detected by running the forefinger in the rectum along the side of the uterus, beginning at the cornu. Two prominent folds are thus discovered, the upper being the ovarian ligament, whilst the lower is the utero-sacral fold. There is also a "trimanual examination with artificial descensus uteri." Rectal exploration is made, with depression of the abdominal walls. At the same time, the anterior lip of the cervix is caught with a tenaculum and the uterus drawn down towards the vulvar outlet and held by an assistant. The structures around the uterus can then be examined with the greatest ease. To overcome the necessity of an assistant, Dr. Kelly has contrived a rough-handled tenaculum which may be grasped in the exploring hand without in the least interfering with the movements of the forefinger in the rectum.

(487) Post-mortem Cæsarean Section.

Dr. T. A. O'Callaghan (*New York Medical Record*, May 2nd, 1891) reports the case of a multipara, aged 36, who was sinking from cancer of the stomach during the twenty-eighth week of pregnancy. She had been kept partially under the influence of morphine for many weeks. In her moments of consciousness she said that she felt the movements of the child, and, being a Catholic, desired earnestly that it should receive the rite of baptism. Dr. O'Callaghan reached the patient about twenty minutes before her death. Her husband and a priest told him that they had promised the patient, who was now unconscious, that he (the doctor) would make an effort to save the child. Dr. O'Callaghan could not hear the fœtal heart. The patient died, and a few seconds later an incision was made from the umbilicus to the pubes. The uterus was thus at once exposed. It was in a state of contraction, and on careful opening with a scalpel the waters gushed out. Guided by his fingers, he laid the uterus open as widely as the abdominal parietes. A small living child was thus extracted without difficulty; it cried feebly. The cord was tied and divided. The internal os was tightly closed, the placenta attached to the left side. The uterus continued its contractions as strongly as after a normal birth, and was soon reduced to the size of the double fist, pressing out every drop of water and a considerable quantity of clotted blood. The pylorus was the seat of cancer, which was diffused over the intestines and mesentery. The child—a weak, puny little thing, of not fully seven months' uterine age—was baptised and lived three hours.

(488) Anus Opening into Vagina in an Adult.

Dr. Karl Abel (*Archiv f. Gynäk.*, vol. xxxviii, part iii, p. 493) states that a young woman, aged 20, applied last autumn to Dr. Landau, of Berlin, concerning a congenital malformation. From birth she passed her motions through the vagina. Recently she was subject to constipation. On one occasion the bowels did not act for eight days, and headache and vomiting set in. At the end of that period the bowels opened spontaneously. The catamenia were regular. The general health was good. The patient asked if, under the circumstances, she was justified in accepting an offer of marriage. The patient was well nourished, the breasts well formed, and hair developed in the axilla and on the pubes. The mons and labia majora were ill-developed; the nymphæ rather large, especially the right. A dark-coloured raphé ran from the frænulum or

posterior fourchette towards the coccyx; the perineum was a thin weak structure. On parting the labia majora the anal orifice appeared. It lay a short space in front of the fourchette. The sphincter ani was fairly resistant to the finger. The rectum began immediately behind and above the anus. In front of the anus lay the hymen, which was intact. The vagina and urethra were normal; the uterus and ovaries small. Ricord related a similar case where the patient was 22. As in Dr. Abel's case, the fæces could be held, and were periodically evacuated without trouble. The patient's husband, to whom she had been married for three years, had never discovered any malformation. Four similar cases at least have been described where the patients suffered no inconvenience. Sometimes the rectum opens awkwardly into the misplaced uterus, so that serious obstruction through accumulation of scybala may occur. In such instances it is perhaps justifiable to contrive a plastic operation, with the view of bringing the anus down to its proper place. Otherwise, cases of an anus opening into the vagina are best left alone. Dr. Landau refused to operate on the patient described in Dr. Abel's paper, and informed her that she might safely get married. Meddlesome surgery would probably have resulted in an unnatural anus, naturally placed but totally unable to retain fæces, being unprovided with a sphincter, whilst the anus which opened into the vagina had a very efficient sphincter, which could not be dissected up and transplanted to its normal situation.

(489) Pyosalpinx after Childbed.

M. Dauriac (*Bull. de la Soc. Anat. de Paris*, April, 1891, pt. 9) describes a case of high interest to the obstetrician for two reasons. A primipara, aged 27, was admitted into the Pitié Hospital on March 12th, 1891, a fortnight after delivery at term, acute septic symptoms having set in. Three intrauterine injections were thrown up, pus came away, and the temperature fell. To the left of the uterus was a movable irregular mass. After a fortnight's rest she disobeyed orders, got up, and her temperature rose. On April 8th, when it exceeded 103°, pus began to escape from the anus. On April 9th an intrauterine injection of sublimate was given. Pus came away freely, and some of the injection returned by way of the anus. The vagina was free from any fistula. On the evening of April 11th, as an intrauterine injection was being thrown up by means, as before, of a Doléris's sound, the patient complained of tinnitus and giddiness. Then she was seized with a feeling of great anxiety, and convulsive movements of the facial muscles and arms occurred. The heart beat tumultuously, and dyspnœa, at first severe, was followed by total cessation of respiratory movements. Artificial respiration, flicking with wet towels, electricity, etc., were of no avail. At the necropsy the right chambers of the heart were found empty, but there was a large recent clot in the right ventricle. There was no embolism of the pulmonary artery. The general peritoneal cavity contained no fluid of any kind. The right uterine appendages were normal. The left formed a tumour as big as a pear, pushing the uterus to the right. This tumour adhered intimately to the uterus and rectum. It fluctuated and was full of pus, which had originally formed both within the left Fallopian tube and the broad ligament, separately. The two purulent foci had fused. The pus was fæculent in appearance and odour. It flowed into the rectum through a fistulous orifice as large in calibre as an ordinary drawing pencil, whilst it found its way into the cervical canal of the uterus through a very narrow track. This track was continuous with a deep laceration of the cervix, which probably represented the source of the complications above described.

DISEASES OF CHILDREN.

(490) Induration of Sterno-mastoid in Newborn Children.

Dr. Quisling, of Christiania (*Centralblatt für Gynäk.*, January 3rd, 1891), writes on this interesting disease of newborn infants. He has himself observed five cases; in four, the right sterno-cleido-mastoid muscle was the seat of the affection; in one the left. In all five cases, the presentation had been pelvic. Dr. Quisling further collected two cases in which the induration was in the left muscle and the presentation pelvic, and two in which the induration was on the same side and the head presented, the child being delivered without the aid of art in each case. In most cases the induration is purely traumatic, but hereditary syphilis and other morbid conditions in the child may predispose to the injury. In pelvic presentations, it is chiefly the muscle on the side which lies most forward, in head presentations that on the side which lies posteriorly, which is injured. The original injury is simply laceration, but the induration, which first attracts the attention of the mother, nurse, or physician, is, according to Dr. Quisling, myositis, or reactionary inflammation around the torn fibres. The child must be watched for some time after the subsidence of the injury, as wry-neck has been known to follow induration of the sterno-mastoid. Massage and resolvent applications are needed in the earlier stages of this affection.

PHARMACOLOGY AND THERAPEUTICS.

(491) Cantharidin in Tuberculosis.

Dr. Forlanini, of Turin (*Gazetta Med. Lombarda*, May 9th, 1891) has tried Liebreich's treatment of tuberculosis by cantharidinate of potash in five cases (three of phthisis, one of pleurisy—probably tuberculous—and one of croupous pneumonia). In two cases the treatment had produced no appreciable results up to the date of report. Of the remaining three, in one (a woman suffering from phthisis) the injection of 2 decimilligrammes caused general and local reaction, the development of a new zone of dulness, and increase of *râles*. In a second (tuberculous pleurisy) the patient had already been treated with tuberculin without result. After the first injection of 2 decimilligrammes of cantharidinate of potash general and local reaction occurred; the temperature rose, and reaccumulation of effusion, which some days before had been removed by thoracocentesis, took place. After the subsequent injections the fever subsided and the effusion greatly diminished. In the third case (croupous pneumonia extremely slow in resolution) crisis had occurred eight days previously; the injections were followed by a moderate degree of fever, decrease in the area of dulness, and abundant crepitus redux. Forlanini concludes that, contrary to Liebreich's statement, injections of cantharidin are followed by a certain

amount of both general and local reaction analogous to that which follows the use of tuberculin. In all three cases the injections caused slight albuminuria and urobilinuria.

Dr. Ernest Germonig, of Trieste, reports (*Lo Sperimentale*, May 15th, 1891) the results of the cantharidin treatment in ten cases. In eight of these the patients were suffering from pulmonary and laryngeal tuberculosis, in one from lupus and pulmonary tuberculosis, and in one from "chronic hypertrophic laryngitis." In all these cases, with one exception, bacilli were found in the sputum. All the patients complained of intense pain at the time of injection; in some cases this lasted for one or two days. In a few instances cantharidinate of sodium, recommended by Lublinski as being less painful than Liebreich's original preparation, was employed. The injections, as a rule, were given on two successive days, the dose being one decimilligramme on the first occasion and two on the second. In two cases the injections were given on five successive days, beginning with $\frac{1}{5}$ of a milligramme, and rising gradually to one decimilligramme. No reaction was observed at the site of injection. In six cases some urinary trouble (strangury, traces of blood in the urine, and in three instances albuminuria without casts) was caused by the treatment. These symptoms lasted from two hours to a couple of days. A few drops of tincture of opium relieved the straining and smarting during micturition. The largest number of injections in any one case was eighteen, the least two, excluding one case in which a trace of albumen appeared after the first injection. In all the cases except two the laryngeal lesions were slight, and considerable improvement was observed in voice and deglutition, and also in the laryngoscopic appearances. In the other two cases fever was present before treatment was begun. The injections seemed to have no particular effect on the fever, nor did it produce any amelioration of the pulmonary symptoms, excepting that on the days of injection the expectoration was more abundant and more mucous in character. In one of them (a man, aged 32, with dulness and fine crepitation at one apex, "enormous" thickening of the epiglottis, and redness, swelling, and ulceration of the arytenoid cartilages) after three injections swallowing was so much easier that solid food could be taken, the voice was less hoarse, and the epiglottis was so much reduced in size that the interior of the larynx could be seen; after eighteen injections it was smaller by one-third, and an ulcer on its upper surface as well as one on the left arytenoid cartilage had healed after two applications of lactic acid; the redness and swelling had almost disappeared, and the voice was comparatively clear. There was no improvement, however, in the condition of the lung, the fever persisted and the patient had slightly lost weight, and thought he was becoming weaker. In the other case (a woman, aged 20, suffering from "hypertrophic laryngitis") the voice had been lost for six months, and there was marked thickening and redness of the vocal cords, which presented warty excrescences in the vicinity of the vocal processes. After ten injections the voice became perfectly clear, and the thickening and redness of the cords, together with the warty excrescences, had disappeared. From this experience Germonig draws the following conclusions: (1) Cantharidin is harmless and can be used even in out-patients if a watch can be kept on the urine, and the dose of two decimilligrammes is never exceeded. (2) Doses of one decimilligramme do not cause albuminuria or other urinary trouble. (3) Doses of one decimilligramme are sufficient to produce satisfactory results if administered two days successively. (4) After injections have been given on two successive days an interval of at least one day should be allowed before another injection is given. (5) In cases of simple inflammation and tuberculous infiltration of the larynx cantharidin causes an exudation of serum which is quickly reabsorbed, with the result that the infiltration is diminished, the voice becomes less hoarse, and swallowing is less difficult. (6) Under the treatment tuberculous ulcers show a tendency to heal. (7) The remedy can take the place of curetting, which is less easy of performance and more painful to the patient. (8) No other remedy produces so rapid a diminution of tuberculous infiltration of the larynx. (9) The cantharidin treatment may be advantageously combined with the application of lactic acid. (10) It has no effect on the tuberculous process in the lungs; it neither sets up nor reduces fever, and it has no effect on the number, shape, or colour of the bacilli. (11) It is contraindicated in cases where albuminuria is present. In the case of lupus the treatment produced no effect whatever. With one exception no rise of temperature or other sign of general reaction followed the injection.

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(492) The Use of Cocaine as an Anæsthetic.

At a meeting of the Académie de Médecine, on May 12th, the report of the commission appointed to consider M. Hallopeau's communication on cocainism (see Supplement, December 13th, 1890, p. 84), was presented by MM. Panas and Magitot (*Bull. de l'Acad. de Méd.*, 3me Série, t. xxv, No. 19). After a review of the literature of the subject—confined almost exclusively to French sources—they cite the experience of M. Paul Reclus, who has performed more than 1,200 operations (removal of tumours, hydrocele, excision and erasion of joints, laparotomy, gastrostomy, strangulated hernia, etc.) without accident. M. Reclus finds that for mucous membranes the application of cocaine to the surface is sufficient, but if more profound anæsthesia is required it should be injected, not hypodermically, but intradermically. Care must be taken not to inject any of the drug into a vein; the injection should be made slowly, the quantity never exceeding 10 centigrammes, this amount being used only for extensive operations, and being administered in a series of injections at different points so as to embrace a wide surface. MM. Panas and Magitot, following in great part the teaching of M. Reclus, sum up their conclusions as follows: (1) Cocaine is an excellent local anæsthetic, which should on no account be banished from surgical practice. (2) It should, however, be used with the following precautions: (*a*) The dose should be proportional to the extent of surface it is desired to render insensitive, but should in no case exceed from 8 to 10 centigrammes; (*b*) cocaine should never be employed in persons suffering from cardiac complaints, chronic affections of the respiratory passages, or well-marked neurotic diathesis; (*c*) it should be injected *into* and not under the mucous membrane and skin; a 2 per cent. solution is the best; it should always be prepared fresh and injected with a sterilised

syringe; (*d*) the patient should always be in the recumbent position when the injection is given, even if the head has to be raised afterwords; (*e*) the drug should be of the most absolute purity, and in particular free from any admixture of toxic alkaloids; (*f*) it should be given in divided doses, an interval of some minutes being allowed to elapse after the injection of the first portion; this will give an opportunity of observing whether any untoward effect is likely to occur. (3) Used in this way cocaine has obvious advantages over chloroform, ether, etc., one of the chief being the possibility of operating without assistance. (4) The anæsthetic effect always lasts long enough to allow of the performance of "all the operations of ordinary surgery." In the discussion which followed the reading of the report M. Constantin Paul spoke of the internal administration of cocaine, pointing out that doses of 15, 20, and even 30 centigrammes could be taken in this way without danger. He said the intradermic injection was very painful. M. Laborde, while admitting that much larger doses could be taken by the mouth than could be safely given hypodermically, and that remarkable analgesic effects could thus be produced in cases of gastralgia, etc., said that he had seen serious accidents from the internal administration of large doses. The conclusions embodied in the report of MM. Panas and Magitot were adopted by the Academy.

(493) Bromide of Ethyl as an Anæsthetic.

In the opinion of Dr. T. Kölliker (*Centralblatt für Chirurgie*, No. 20) bromide of ethyl is a valuable anæsthetic in minor operations. In describing his own method of using this agent, he states that the same precautions should be taken as with chloroform, and that the patient, when it is given, should be recumbent. Complete anæsthesia is produced as a rule in about 50 seconds, and lasts from one to three minutes. The author has never observed any disturbing symptoms during its administration, which is followed at once by thorough revival of the patient. The following are mentioned as the operations in which bromide of ethyl is likely to prove very useful as an anæsthetic: Opening of abscess; incisions for cellulitis when not very extensive; tenotomy; application of the thermo-cautery; extraction of sequestra; removal of small tumours; removal by scraping of tuberculous glands, of small tuberculous deposits on bone, and of small patches of lupus.

(494) The Antitoxine of Tetanus.

G. Tizzoni and Giuseppina Cattani (*Riforma Medica*, May 6th, 1891) apply the term "antitoxine of tetanus" to that substance which enables the blood serum of animals that have been rendered immune against tetanus to make the tetanic virus innocuous even when added to it outside the body. In their experiments the blood serum of a dog, which had been rendered insusceptible of tetanus, was obtained in the usual way and preserved in sterilised test tubes. Of this serum a little was taken, subjected to the particular agent desired, then mixed with half a cubic centimetre of tetanus culture (grown in gelatine under hydrogen), and filtered through porcelain. After half an hour or so of contact the mixture was injected under the skin of a rabbit, and, according as the animal had tetanus or not, the conclusion was drawn that the serum had or had not lost its power of destroying the toxicity of the virus. Evaporation experiments with heat showed that the serum lost this power exactly at the temperature at which albumen is precipitated (about 68° C.); the substance was therefore probably an albuminoid. Experiments with dialysed serum, using always sterilised vessels and sterile liquids, showed that the antitoxine was not dialysable. (It should be stated that the cultures above mentioned were, before use, evaporated down to a third *in vacuo* at 40° C., and that, thus concentrated, half a cubic centimetre killed a rabbit of ordinary size in thirty-six hours.) Acids were next tried. Hydrochloric acid in small quantity completely destroyed the protecting power of the serum after a few hours; lactic acid in large quantity had the same effect, but in small quantity had no effect. Of alkalies, caustic potash was tried. This behaved like lactic acid. Of neutral salts, ammonium sulphate was examined. Crystals were added to the serum, and the precipitate filtered off, washed, taken up with distilled water, and dialysed till all trace of sulphate was removed. Tetanus culture fluid was then added, and, after an hour, a rabbit was injected; its health was unaffected. This shows that the antitoxine was either precipitated by the salt or else was mechanically entangled in the albumen. Lastly, the alcohol methods of Schmidt and Wittich were applied to ascertain if the antitoxic substance behaved like a ferment. Even after two precipitations by alcohol the protective action of the blood serum remained intact. The tetanus antitoxine is thus an albuminoid substance, the chief properties of which correspond with those of the enzymes. It is not the same thing as fibrin ferment, for an aqueous extract of the oral portions of leeches did not destroy the power of the blood serum to prevent tetanus. This extract, mixed only with tetanus culture and used on control animals, showed that it is not altogether indifferent to the toxic substance of tetanus, the symptoms being somewhat milder than usual. The authors propose to examine next whether the antitoxine belongs to the globulins or the serines of the blood.

(495) Pyoktanin in Ophthalmic Surgery.

Dr. L. A. Marchetti (*Riforma Medica*, April 30th, 1891) describes his experience with the two substances, pyoktanin blue and pyoktanin yellow, in a variety of eye affections. He was tempted to use these bodies for their antiseptic action, notwithstanding the adverse experience of a large number of observers, relying on the enthusiastic reports by Stilling as to their efficacy. The blue salt was the more commonly employed, either in 1 per cent. solution or in the solid form: when pyoktanin yellow was used, it was in the form of powder. On looking over the accounts of cases thus treated, which comprise, among others, cases of acute and chronic dacryocystitis, blepharitis marginalis, hypopyon keratitis, panophthalmitis secondary to corneal section, etc., one cannot but wonder whether the good results claimed in some instances were not due either to the improved surroundings of the patients or to the adjuvants employed. Thus, a case of dacryocystitis was treated by incision of the sac, the passage of Bowman's probes, and daily washing of the duct with 1 per cent. pyoktanin blue. This patient was discharged "cured" in twenty days, but it is probable that an equally speedy recovery would have followed if, instead of pyoktanin, simply sterilised water had been employed to wash out the duct. Again, the cases of recovery from hy-

popyon keratitis and panophthalmitis cannot with certainty be credited to the use of pyoktanin, as with the drug were combined warm bathing, atropine, and all the measures usually employed in such cases. The statistics offered are far too few to allow any conclusion to be based on these results. The effects of powdered pyoktanin yellow on diseases of the lids are, however, less doubtful, and it would seem that this drug may prove a valuable aid to the treatment of blepharitis marginalis, eczema of the lids, and similar affections; but as regards corneal ulcers in children, we should still, if bound to adopt a routine treatment, prefer to rely on the use of iodoform and eserine rather than on the newer and strongly-staining pyoktanin colours.

(496) Absinthe Poisoning.

Magnan (*Revue d'Hygiène*, 1890, p. 909) has been investigating the cause of the symptoms of absinthe poisoning by watching the effects produced by it upon dogs. He does not agree with those authors who attribute these effects to the many essences, such as those of coriander, anise, origanum, hyssop, etc., which are contained in absinthe, but he believes that they are due to the absinthe essence itself. The quantity of essence of hyssop in absinthe liquor is very small, and in dogs at least it is a much less powerful poison than absinthe. Then also, if the above essences are given to a dog, without the addition of any essence of absinthe, a large dose is required to produce the stage of exaltation, and a very large quantity to produce that of depression, but if ordinary absinthe liqueur is given which contains absinthe essence in addition to the other essences, the exaltation and the depression stages are produced by a small dose. The characteristic symptoms of absinthe poisoning are sudden and severe giddiness, epileptiform seizures, delirium with hallucinations, and loss of consciousness. For some time after the attacks there is loss of memory; of these symptoms the most important are the giddiness and epileptiform attacks. The hallucinations, which are like those of alcoholic delirium, affect all the special senses. Those who take absinthe in excess are liable to hysterical manifestations.

(497) Cantharidin in Granular Lids.

Dr. Juan S. Fernandez, of Havana, reports (*Progreso Medico*, May, 1891) five cases of granular lids in which he tried injections of cantharidinate of potash. He was induced to do this by the fact that, in a case of tuberculous laryngitis treated by Liebreich, the patient had been under the care of Dr. Gutmann for granular lids since 1887. Treatment of one kind or another had been tried with little or no effect till, during the administration of cantharidinate of potash by Liebreich for the laryngeal disease, it was observed that considerable improvement was taking place in the ocular condition. The following is a summary of Dr. Fernandez's cases: 1. Man, aged 43, under treatment since September, 1889: the actual cautery had been applied to the left eye, and this had been followed by applications of sulphate of copper, nitrate of silver, sulphate of cadmium, and iodide of silver to both eyes; in spite of this, the granulations persisted. The cantharidin treatment was begun with a dose of $\frac{1}{4}$ of a decimilligramme, and at intervals of one day the dose was increased till, on the eighth day, 1 decimilligramme was reached. At this stage the patient became slightly feverish, and the treatment was discontinued for a time. The conjunctivæ were a trifle paler, but there was no marked improvement otherwise. 2. A mulatto girl, aged 15, was treated in exactly the same way, but on the twelfth day the treatment had to be abandoned on account of the patient's timidity; the conjunctivæ were decidedly smoother than before. 3. A man, aged 32, with an acute granular condition of the lids and suppurative keratitis, was treated in the same way, but declined to go on with the injections on account of the pain which they caused. 4. A girl, aged 11; after the second injection the conjunctivæ were less injected, and had a healthier appearance: the treatment is being continued. 5. A very severe and old-standing case, with large granulations and opacities in both corneæ. After several injections the appearance of the conjunctivæ markedly improved; there was much less injection, and the surface was smoother. Dr. Fernandez thinks these results, though not brilliant, show that the treatment is, on the whole, worth trying.

PHYSIOLOGY.

(498) Proof of the Absence of Fatigue in the Motor Nerves of Mammals.

It is known, from the experiments of Bernstein and Wedenski on the motor nerves of frogs, that even after these nerves have been stimulated for several hours continuously by electrical stimuli, yet the nerves remain excitable. In order to prove this, while the upper end of the nerve is stimulated with tetanising induction shocks, the nerve impulses are prevented from reaching the readily exhausted muscle by throwing the lower portion of the nerve into a state of electrotonus, whereby the impulses are blocked, and thus prevented from reaching the muscle. As soon as the electrotonic condition of the nerve is set aside the muscle is tetanised, showing that the nerve, after being stimulated for hours, still retains its excitability, and is not fatigued. Bowditch, under Ludwig's direction (*Archiv. f. Anat. u. Phys.*, 1890, Hft. v and vi), has shown that the same condition, that is, absence of fatigue after prolonged stimulation, obtains in the nerves of mammals. The method adopted was to curarise the animal (dogs, but chiefly cats), and stimulate the peripheral end of the sciatic nerve for several hours. After the action of the curare passed off the muscles began to contract; at first there were only single contractions, and afterwards irregular tetanus.

(499) The Proteinchromogen resulting from the Decomposition of Proteid Bodies.

During pancreatic digestion proteid bodies are split up into a large number of less complex substances, and amongst these is a body which has received the name of proteinchromogen. It is the body which in the pancreatic digest of proteids gives a violet colour with chlorine water. This reaction was described many years ago by Tiedemann and Gmelin. Kühne substituted bromine water for chlorine water. Stadelmann, "Ueber das Proteinchromogen d. d. Bromreaction gebenden Körper" (*Zeitsch. f. Biol.*, xxvi, p. 491) used Kühne's reaction. A tryptic digest of proteids, putrefaction being prevented and any remaining albumin got rid of, on being treated with bromine water gives a reddish-violet colour, and gradually a precipitate of the same colour is formed. This precipitate, called "proteinchrom," or "bromine body," is boiled with

90 per cent. alcohol; part of it is dissolved and part remains undissolved. By other means it can be shown that several substances enter into the composition of the original precipitate, which is certainly not identical with naphthylamin, as has been suggested. It has a chemical composition allied to that of proteids, but is characterised by the large amount of sulphur (3.0 to 3.7 per cent.) it contains.

(500) Physiology of the Gastric Glands.

According to Heidenhain the delomorphous or parietal cells of the gastric glands—that is, the glands of the fundus—secrete or elaborate the hydrochloric acid of the gastric juice, while the adelomorphous or central cells secrete the pepsin. One of the chief arguments advanced in favour of this view rests on the experiments of Swiecicki, who asserted that in the œsophageal glands of the frog pepsin alone is formed, while only hydrochloric acid is formed in the stomach. Fränkel (*Pflüger's Archiv*, xlviii, p. 63) has submitted the statements of Swiecicki to a renewed test. He prepared the mucous membrane of (1) the œsophagus, and (2) the fundus of the stomach of ten frogs, and extracted each separately in 2 litres of water. To 18 cc. of the watery extract of each there was added 2 cc. of a 1 per cent. dilution of hydrochloric acid, and a small piece of fibrin. Both mixtures were kept at 37° C. for twenty-four hours; both extracts digested the fibrin. It would seem, therefore, that both the œsophagus and stomach of the frog contain pepsin, or rather, pepsinogen. This would tend to show that in the frog the delomorphous cells secrete both pepsin and acid, for fibrin is digested in the stomach when the secretion from the œsophagus is prevented from entering that organ. Fränkel found that the mucous membrane both of the stomach and œsophagus produced a mineral acid, for both gave the phloro-glucin-vanillin reaction. Contejean (*Centralb. f. Physiol.*, Bd. iv, No. 24, 1891) finds that section of the vagi does not interfere with gastric digestion in the frog. Electrical stimulation of the peripheral end of the vagus or of the central ends of the vagus or glosso-pharyngeal causes a copious secretion of mucus. In the last case there is no secretion of mucus when the vagi are divided. Perhaps the result is due to a reflex secretion, the reflex centre being in the bulb, while the vagus is the efferent channel for the impulses affecting the secretory glands. In birds also it would appear that the vagus influences the secretion of the gastric juice. Oxenfeld (*Centralb. f. Physiol.*, No. 26, Bd. iv, 1891) finds that in birds (pigeons) stimulation of the peripheral end of the vagus is followed by a copious secretion of acid gastric juice. At the same time the stomach is forcibly contracted, and it might be assumed that the increased quantity of gastric juice was simply forced out of the glands by the concentration of the musculature of the stomach. Oxenfeld, however, is of opinion that this is not the true explanation, and he assumes that the vagus contains secretory fibres for the gastric glands.

PATHOLOGY.

(501) Coccidia (Psorosperms) in Epitheliomata.

A. Borrel (*Arch. de Méd. Expér.*, II., No. 6, November, 1890), after studying fifteen cases of epithelioma, arrives at the conclusion that the so-called "psorosperms" are merely modified epithelial cells and not parasites, and gives as his reason for so thinking the fact that these structures occur in such different affections as psorospermosis follicularis vegetans, Paget's disease, malignant epitheliomata, papillomata, etc. Cultivations of these organisms have not been successful. The author has isolated cells, tried to cultivate them in distilled water, and allowed the fragments to macerate in water, but after repeated examinations, extending over a period of four weeks, he failed to find any growth or evidence of life in these cells. He has subjected them to the action of staining fluids, and the result confirms his opinion as to their epithelial character, and though he is unable to explain their peculiar form, he is certain of their non-parasitic nature.

(502) The Chemical Composition of Rhinoliths.

M. M. A. Berlioz has recently published (*Répertoire de Pharmacie*, May, 1891) the results of analyses made by him of four rhinoliths. The largest of these was a little over half an inch in its longest, a little under half an inch in its shortest diameter, and contained a cherrystone as a nucleus. The others were rather smaller, and contained no nuclei. All were rough, very hard, with a clean fracture, and the concentric lamellæ were of a greyish tint. Heated on platinum foil they left an abundant residue. The analyses showed that they were very similar to each other in composition, consisting of about 62 per cent. of calcium phosphate, about 10 per cent. of calcium carbonate, 5 per cent. of magnesium phosphate, and 5 per cent. of water, with about 20 per cent. of organic matter. Two of them contained appreciable traces of iron, and these left a blue residue when heated on platinum foil. M. Berlioz is inclined to attribute all nasal concretions to deposition about some solid body in the nose, such as a blood clot, a portion of dried mucus, or a foreign body. The analyses of Berzelius show that the ash of nasal mucus consists essentially of phosphate and carbonate of lime, and hence M. Berlioz concludes that the chemical components of rhinoliths are afforded by the normal nasal mucus.

OTOLOGY.

(503) Operative Measures for the Relief of Impaired Hearing.

In some cases of adhesions resulting from chronic suppuration of the middle ear Dench (*Arch. of Otology*, January, 1891) found good results follow operative proceedings. In one, after the reduction of inflammatory swelling on the inner wall of the tympanum he observed the stapes apparently firmly fixed by fibrous tissue. He made incisions through this material on two occasions with improvement of the hearing. In another case the upper edge of a large perforation appeared to press upon the ossicular chain. A vertical incision was made through this edge, extending upwards about $\frac{1}{8}$ inch. The improvement which resulted has continued. In a third case the handle of the malleus had become adherent to the promontory, thereby fixing the ossicles. The adhesion was divided, and the hearing power was considerably increased. The tip of the malleus was, in a fourth case, drawn backwards, upwards, and inwards, and attached to the head of the stapes by a firm band, the section of which rendered the hearing of articulate speech practically normal.

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MEDICINE.

(504) The Presystolic Bruit.

PROFESSOR I. CANTALAMESSA, of Bologna (*Riforma Medica*, May 5th, 1891) says the presystolic *bruit*, which a Bolognese professor (Brugnoli) was one of the earliest to study (1859), is still by some regarded as pathognomonic of mitral stenosis. Flint, however, reported three cases of aortic insufficiency, in each of which a presystolic *bruit* was distinctly heard as well as the diastolic, but in which the mitral valves were found intact after death. His explanation was that the chordæ tendineæ of the mitral valve vibrated owing to increased tension during the auricular contraction, because the ventricle received blood both from the aorta and from the auricle. Keit thought that the murmur was of aortic origin, due to the great difference of tension between the loaded ventricle and the empty aorta at the moment of beginning of systole. But if so, Cantalamessa maintains, the *bruit* should be heard over the base of the heart, not the apex. De Renzi gave as the cause the meeting of the two currents of blood, one (abnormal) from the aorta, the other (normal) from the auricle. But this and Flint's hypothesis are, in Cantalamessa's opinion, open to the grave objection that if either were true a presystolic *bruit* ought to be very common in aortic insufficiency, which it is not. Nor is it heard in cases of great insufficiency, but only in rare cases, and then strictly localised over the apex. This suggested to Grocco the following theory: The regurgitation varying in amount and direction according to the degree and seat of the aortic lesion, if only one semilunar valve fail to act, the current backward will be oblique, and if directed posteriorly will cause the anterior bicuspid valve to become tense, and vibrate against the stream coming from the auricle, the brief auricular systole aiding. Further, if the backward current does not strike against the valvular cusp, it will still impinge against the ventricular wall, and in certain cases be reflected against the auricular current. After reference to the views of Dickinson, Constantin Paul, and Fenwick and Overend, Cantalamessa proceeds to examine why the first sound is strong in mitral stenosis, and weak or even absent in aortic regurgitation. The first sound is normally caused by (1) the heart muscle, (2) the atrio-ventricular valves, (3) the arterial distension. Which of these three will explain by its alteration the phenomena just mentioned? Certainly not the first, for in mitral stenosis the left ventricle is not hypertrophied; nor the last factor, namely, arterial distension, because in the same disease the pulse is small. There remains valvular tension as the cause. The more suddenly the valves pass from extreme relaxation to great tension, the more readily will a sound be produced. Now in aortic insufficiency the refluent strain tends to make tense the valves gradually, so that in this final closure there is no abrupt change, and hence the first sound is weak or absent; but in mitral stenosis, owing to the negative pressure in the left ventricle, the valves are at one time extremely relaxed and then suddenly stretched, which causes a short and sharp first sound. As regards the presystolic *bruit*, Cantalamessa concludes that: (1) The *bruit* heard immediately before the first sound in mitral stenosis, in double mitral disease, and (occasionally) in aortic insufficiency, is really a presystolic *bruit*; (2) it is not pathognomonic of mitral stenosis; (3) its presence warrants the diagnosis of mitral stenosis only when a careful examination of other physical signs allows the exclusion of aortic insufficiency.

(505) Passage of the Bacillus of Tuberculosis from the Mother to the Fœtus.

BIRCH-HIRSCHFELD and SCHMORL (*Beiträge zur Path. anat. und zur allg. Path.*, 1891, p. 429) have put on record a case which they claim is the first in which it has been definitively proved that in the human subject tubercle bacilli pass from the mother to the fœtus. The patient was a young woman who, shortly after the commencement of her first pregnancy, began to show signs of phthisis; these gradually became more marked, and she succumbed at the seventh month of her pregnancy. Immediately after the death of the mother the fœtus was removed by Cæsarean section. The necropsy on the mother showed abundant evidence of phthisis; not only in the lungs, but in other organs, tuberculosis was detected. Although the fœtus had been alive shortly before the death of the mother, it was dead when it was removed. The chest was at once opened, but there was nothing noteworthy about the lungs. The fœtus was then taken to the laboratory, the surface of the abdomen was washed with perchloride of mercury, and the cavity was opened with sterilised knives. No tubercles could be seen on any of the organs. Minute pieces of the liver, the spleen, and the kidney were placed in the abdominal cavity of two guinea-pigs and a rabbit with all antiseptic precautions. One of the guinea-pigs died in fourteen days, and tubercles were found in different parts of the abdominal cavity. The second one was killed about six weeks after inoculation, as it was clearly ill, and many tubercles were found in the peritoneal

cavity. The rabbit lived three months; on its death many tubercles were found in the liver and the lung. Tubercle bacilli were found in the umbilical cord and the blood of the umbilical vein.

(505) Transmission of Tuberculosis to Animals

M. GUINARD (*Lyon Médical*, May 17th, 1891) refers to a habit which, according to him, prevails among the peasantry in certain parts of France, of giving cattle water to drink which has been used for the household washing. He mentions a case which came under his notice in which the cows of a farm in the department of the Loire drank water every day in which the handkerchiefs used by a girl in the last stage of phthisis, with very copious expectoration, had been washed. This suggested to M. Guinard the possibility of tuberculosis being transmitted from the human to the bovine subject in this way, and he proceeded to make experiments to test the point. Having soiled some linen with tuberculous material, he had it washed in water in the ordinary way. On February 7th, 1891, he inoculated one rabbit and eight guinea-pigs, in the connective tissue, with this water. On the 18th two of the latter died, but on *post-mortem* examination they presented no definite signs of tubercle, but only pericarditis and pleurisy, with false membranes, which M. Guinard considered to be due to the action of the microbe observed by MM. Rodet and Courmont in their experiments on tuberculosis. On February 22nd the rabbit died with a swelling in the thigh but no tubercle. On February 23rd and 24th two guinea-pigs died with numerous distinct tuberculous lesions. In March another guinea-pig died tuberculous. Up to the date of report, the remaining guinea-pigs continued to all appearance healthy. M. Guinard thinks the fact that in three cases the inoculation produced tuberculosis sufficient to prove that the disease may be transmitted in the way indicated, and that the practice of giving cattle water to drink which has been used to wash linen fouled with tuberculous sputum is one to be carefully avoided.

SURGERY.

(506) Resection of Lung in Incipient Tuberculosis.

M. TUFFIER recently delivered a lecture at the the Hôpital Beaujon in Paris on resection of the lung for the removal of tuberculous formations (*Semaine Médicale*, May 16th, 1891). He pointed out that so far surgical interference in cases of pulmonary tubercle had been limited to the opening and draining of large cavities; his own operation had had a different object, namely, the removal of commencing lesions through a small incision, which should heal by first intention. The patient is then to be submitted to appropriate medical treatment, "which alone can place him in a state of defence against a new invasion of the disease." Before attempting the removal of pulmonary tissue in the human subject, M. Tuffier made numerous experiments on animals which convinced him that a portion of lung tissue may be ligatured without serious accident, and that the wound heals quickly. The void left by the piece removed, if this is not too large, is soon filled up by the expansion of the rest of the organ. On November 13th, 1890, M. Tuffier performed the radical cure of a spontaneous hernia of the lung, and he availed himself of the opportunity of making a surgical exploration of the apex. The swelling projected in the second intercostal space, and the history of the patient, as well as the auscultatory phenomena, seemed to justify the suspicion of concomitant tuberculosis. An incision was made in the second intercostal space, the parietal pleura was carefully separated, and the apex of the lung examined with the finger. M. Tuffier was able to assure himself that the slightest induration or roughness could thus be detected in the living lung. In this case the apex was perfectly smooth and soft; the hernia was returned, the wound stitched up, and the patient was well on the seventh day. He has since shown no symptom of tuberculosis. Emboldened by this result, M. Tuffier, on May 5th, performed resection of the lung in the case of a man, aged 25, suffering from incipient phthisis, the lesion being apparently limited to the right apex. The patient having been anæsthetised with chloroform, an incision was made along the second intercostal space to within 2 centimetres of the sternum. The fibres of the pectoralis major and the external and internal intercostal muscles having been divided, the surface of the lung came into view. In order to facilitate the drawing out of the apex through the small incision, M. Tuffier produced what he calls an "extrapleural pneumothorax" by separating the parietal pleura from the chest wall around the apex, thus causing retraction of the corresponding part of the lung. In doing this, the membrane was slightly torn, and a little air gained admission to the pleural sac; M. Tuffier immediately applied his finger and then a piece of iodoform gauze to the perforation, and no harm ensued. The apex was then seized with special forceps, and drawn gently through the incision. The induration could be distinctly felt and its limits defined; it was firm in the centre, slightly granular at the circumference, and about the size of a large hazel nut. A silk ligature was next passed round the protruding portion of lung about 5 centimetres from the apex and 2 centimetres beyond the zone of infiltration; the ligature having been tightened, the piece of lung was severed, and the pedicle accurately sutured to the periosteum of the internal surface of the second rib, so as to avoid the danger of pneumothorax. The divided muscles were then carefully sutured with catgut, layer by layer; the skin wound was closed with Florence hair, and a dressing of iodoform wool applied. The operation, including the administration of chloroform, occupied thirty-five minutes, and there was at no time the slightest disturbance either of the breathing or the circulation. The patient made an excellent recovery without rise of temperature, cough, or any sign of reaction, local or general. On the sixth day, when the dressing was changed for the first time, auscultation showed that air entered the whole of the lung from the supraspinous fossa to the base without any abnormality of sound, or friction, or sign of pleural effusion. There was only slight weakness of the breath sounds all over the lung. The dressing was dispensed with on the ninth day, and on May 13th the patient was able to go out and ascend two flights of stairs to be exhibited to the members of the Surgical Society. The resected portion of lung was examined by Professor Cornil, who reported that it contained a tuberculous nodule of the size of a hazel nut without excavation; around it were disseminated tubercles. The presence of bacilli proves the nature of the morbid process. M. Tuffier says he is perfectly aware of the objections to which the

procedure is open, and of its limitations. He says the patient had a localised lesion, from which the operation has freed him; whether medical treatment will be able to safeguard him from further attacks only the future can show.

(508) Resection of the Pubes in Suprapubic Cystotomy for the Removal of Vesical Tumour.

At the French Congress of Surgery, M. Heydenreich, of Nancy, in a paper of which an abstract is given in the May number of the *Revue de Chirurgie*, stated that occasionally on removal of a tumour from the bladder by the suprapubic method, some difficulty is experienced in reaching the seat of disease in consequence of the obstacle formed by the upper portion of the pubic symphysis. In order to overcome this difficulty the surgeon might, it is held, without compromising the solidity of the pelvic girdle, resect this portion of bone by two incisions made one on each side, beginning either within or without the spine of the pubes and carried downwards and inwards. The author practised this method in a case in which the vesical growth, notwithstanding the use of Petersen's bag, was inaccessible. The upper portion of the symphysis having been resected the operation was completed without any further difficulty. It is held that resection of the pubes does not add to the severity of suprapubic cystotomy, but that, on the contrary, it facilitates the operation and shortens its duration, and, at the same time, enables the surgeon to get beyond the limits of the tumour. Resection of the pubes, however, is not indicated in every case of removal of vesical growth. It must be regarded as an exceptional procedure, but still one which the surgeon should not hesitate to employ whenever it seems to be necessary. In the discussion on this paper it was asserted by M. Pozzi that the position of the patient advocated by Trendelenburg affords free access to almost every part of the interior of the bladder, and so in almost every case would render resection of the pubes an unnecessary and useless proceeding.

(509) Improvised Sterile Dressings for Wounds.

Dr. H. C. Wyman, Professor of Surgery in the Michigan College of Medicine and Surgery, says (*Journal of the National Association of Railway Surgeons*, November, 1890) that there is no reasonable excuse for the employment of non-sterile dressings for wounds even in cases of emergency when iodoform gauze, sublimate dressings, borated cotton wool, etc., are not at hand. The best of all sterilisers—heat—can almost always be commanded when wounds are to be dressed, and all articles which are to come in contact with them can be rendered practically sterile. "A gas jet, lamp, stove, a coil of steam pipe, boiler, a fire can be found or made almost anywhere, and by means of any one of them all dressings can be quickly and efficiently sterilised." Professor Wyman has taken large pieces of a well-worn woollen shirt from a tramp brought to the hospital with railway injuries, heated them over the top of a lamp until perfectly dry, and proved them to be practically sterile by testing them in comparison with unheated pieces of the same shirt in jars of beef tea. Soiled sheets, cotton shirts, soiled towels, waste cotton, oakum, and many other articles he has treated in the same way with the same results, showing that but little ingenuity and patience are needed to render almost any article practically sterile. In the everyday treatment of wounds it his custom often to improvise his dressings. "The towels with which the wound is sponged are heated and sterilised in the kitchen oven. The gauze is made from an old sheet or shirt, clean and white, which almost any housewife can furnish. It is roasted to a light brown on top of a hot stove and applied hot to the wound. It is a splendid absorber of discharges." When oakum is not at hand to treat in the same way, he tears the washed sheet into narrow strips and pieces and puts a thick layer of it over the gauze. Then a layer of cotton batting roasted in the same way is applied over the strips of sheet and held in place by a roller bandage. When the cotton cannot be got he uses more of the sheet until the wound is thoroughly protected from the air. The slightest trace of fluid soaking through is a signal for a change of dressing, which is repeated after the original method. The wounds treated in this way have given most satisfactory results; the dressings are prepared while the patient is being made ready and anæsthetised.

(510) Modern Renal Surgery.

In No. 16 of the new series of the *Sammlung klinische Vorträge*, Dr. A. Obalinski, of Cracow, deals, in the first place, with the subject of rupture of the kidney as an indication for nephrectomy (Supplement, May 16th), and next reports cases of suppurative paranephritis, of calculous pyonephritis, and of ureteral fistula. The author sums up his views regarding the treatment of severe inflammatory affections of the kidneys and their sequelæ in the following conclusions: (1) Suppurative inflammation of the kidney and surrounding structures indicates the operation of nephrectomy in order that free exit may be given to the purulent and other inflammatory excretions, and that the focus of the disease may be thoroughly cleansed, and further extension of the suppuration to important parts, as, for example, the thoracic and abdominal cavities and the hip-joint, be thus prevented. In most cases the single lumbar incision, as was performed by Simon, will suffice, but when there has been extensive undermining of the peritoneum the formation of a large flap, as practised by Bardenheuer, is to be preferred, as such operation permits of ready access to all extensions of the main pus-containing cavity. (2) Ureteral fistula should always be treated by removal of the corresponding kidney, provided the surgeon can assure himself of the existence of a sound renal organ on the other side. Nephrectomy in such cases is indicated, not only on subjective grounds and when, for instance, the external flow of urine cannot be restrained by any apparatus and the patient is thus prevented from following his occupation and from enjoying a comfortable existence, but also on objective grounds, since, notwithstanding the utmost precautions, an old ureteral fistula may result in suppurative inflammation of the corresponding kidney and of the adjacent soft parts. (3) Nephrectomy performed under these last-mentioned conditions offers much less favourable prospects than in cases in which there is an absence of suppuration or of cicatricial adhesions. (4) There can be no doubt that, under equally favourable conditions, the transperitoneal method can be performed more rapidly and with greater ease than the extraperitoneal method of nephrectomy, and that the progress towards recovery is more speedy after the former operation. The transperitoneal method, however,

is not applicable to every case, and should be reserved for those instances in which the mischief is confined within the capsule of the kidney, the extraperitoneal method being indicated when the suppurative process has involved the perirenal structures.

MIDWIFERY AND DISEASES OF WOMEN.

(511) Hyperemesis Gravidarum a Hysterical Complication.

Professor Kaltenbach (*Zeitschrift f. Geburtsh. u. Gynäk.*, vol. xxi., pt. 1, 1891) holds that the clinical history and the "cures" of cases of uncontrollable vomiting of pregnancy indicate that the disease is essentially due to hysteria. Pregnancy involves physiological and psychological conditions favourable to the development of hysterical symptoms in a modified form. Hyperemesis is often cured by a process akin to suggestion, like ordinary hysteria. "Doing something," dilatation of the os, massage, etc., often succeeds if the practitioner gains the patient's confidence, and hosts of drugs have answered, apparently under the same conditions. On the other hand, all these vaunted medicines and operations have failed when employed by physicians who possibly did not possess as much tact as knowledge. Hyperemesis may suddenly cease if the patient be alarmed, as in a case under Professor Kaltenbach himself, where the patient was reduced to a skeleton; a day being fixed for the induction of labour, her friends frightened her by saying that she could not survive such an operation. The vomiting ceased. The same sudden arrest of hyperemesis was observed by Cazeaux in a young wife whose husband was seized with symptoms of strangulated hernia. In a third case, the vomiting ceased on the outbreak of an acute exanthematous fever. Professor Kaltenbach describes a bad case where the patient, aged 21, made an unhappy marriage, and was unkindly treated by her husband. Very severe vomiting set in during her first pregnancy, and she was sent into a hospital. It was suggested to her that she had lumps of unwholesome material in her stomach, and that their removal would cure her. Some milk was given to her, ceremoniously, and shortly after the stomach was washed out. Its contents bore no indications either of over-acidity or of any abnormal ferment. The patient was then informed that all was right, and that the vomiting would not return. It ceased accordingly, and she was safely delivered at term. In short, Professor Kaltenbach urges that hyperemesis gravidarum should be treated as a purely hysterical complaint. Prompt treatment is indeed necessary, for as in hysterical vomiting of non-pregnant women the patient may, if at first neglected, die of syncope or nervous exhaustion even when the vomiting has been stopped. But isolation from domestic cares and imprudent friends, with appropriate moral treatment, should be enforced before so extreme a step as artificial abortion is undertaken.

(512) Cæsarean Section successfully performed a Second Time on the Same Subject.

Dr. A. Crimail, of Pontoise (*Annales de Gynéc. et d'Obstét.*, May, 1891) successfully performed Cæsarean section on a non-rachitic dwarf in October, 1888 (measurements of pelvis are given in the account of this operation, *ibid.*, April, 1889). The patient made a good recovery. A small hernial protrusion developed in the lower part of the abdominal wound. She again became pregnant, and at first begged that abortion should be induced. Being dissuaded she then declared that, as she had already gone through Cæsarean section, she was ready to submit to that operation again (in preference to cranioclasm), so great was her anxiety to have a live child. Labour pains came on at term, February 19th, 1891, 7 A.M., the head presenting in the first position. Rigorous antiseptic precautions were taken. The old cicatrix was divided, but the incision thus made in the abdominal walls was extended upwards, so that the whole wound was over six inches long. The uterine cicatrix presented immediately behind the wound. At the first operation silkworm gut had been used. Three knots of this material remained; the rest of each thread had been completely absorbed. The intra-abdominal structures were protected by means of boiled carbolic gauze. The uterine cicatrix was divided. As the cicatrical tissue was very tough it could not be torn by the finger, and strong scissors were needed to divide it. There was no hæmorrhage. The left arm presented. Dr. Crimail pushed it back and seized the left foot, delivering a living female child. The cord was divided. The placenta was extracted complete with all its membranes. There was very little bleeding during this stage; an assistant pressed the parietes firmly together against the uterus, as that organ was being kept for the time outside the abdominal cavity. The elastic ligature was not needed. The uterine cavity was dried with pads of iodoform gauze. Five deep sutures of carbolised silk, with four or five superficial sutures of silkworm gut between each interval in the deep sutures, were passed through the uterine walls; the deep sutures were kept clear of the uterine cavity, the superficial included the peritoneum. Each Fallopian tube was tied in two places and divided between the ligatures. The edge of the uterine wound oozed for a time when the uterus was replaced into the abdominal cavity, but soon strong contractions set in. Nine deep (silk) and twenty-three superficial (silkworm gut) sutures were passed into the abdominal wound. The patient left the hospital twenty-five days after the operation. She was able to suckle the child.

(513) Cæsarean Section: What to avoid.

Dr. Howard Kelly (*Amer. Journ. Obstet.*, May, 1891) lays down the following rules, based on the collected experience of many authorities: (1) Do not use antiseptic solutions for instruments or hands after the operation has begun. Above all, do not use them in the abdominal cavity. Use pure water throughout, preferably distilled, which has been boiled half an hour. (2) Do not turn the uterus out of the abdomen before delivering the child, unless its contents are doubtfully septic. It does no good, adding an unnecessary step and calling for a larger abdominal incision. (3) Do not cut the placental tissue, thus bleeding the child, in placenta prævia Cæsareana. (4) Do not waste time picking off small shreds of decidua from the inner surface of the uterus. (5) Do not do a conservative Cæsarean operation when the uterus is already septic. If the uterus be infected do a supravaginal operation after Porro's method. (6) Do not use catgut of any kind as a uterine suture. It has proved dangerous and uncertain. (7) Never use a continuous suture in the uterus. (8) Do not attempt to drain the abdominal cavity; it cannot be done effectually. (9) Do not douche out the vagina as

a matter of routine after the operation. It must be carefully disinfected beforehand; afterwards an aseptic genital tract will need no active antiseptic *régime*. (10) Let all preparations be so full and carefully made beforehand that no time shall be lost, and each successive step shall follow its predecessor with the utmost rapidity consistent with accuracy, and the whole be completed with dispatch.

DISEASES OF CHILDREN.

(514) Craniectomy.

At the French Surgical Congress 28 cases of craniectomy were reported, 25 by M. Lannelongue, and 1 each by MM. Th. Anger, Heurtaux, and Manoury (*Rev. Mens. d. Mal. de l'Enfance*, May, 1891). One of M. Lannelongue's patients died in forty-eight hours, the other 27 cases recovered from the operation. M. Lannelongue reports that in a large number of his cases there was distinct improvement both in intellectual capacity and in the power of walking. In M. Anger's case (a girl, aged 8 years, imbecile, and with convulsive attacks from the age of 18 months) there was great improvement. In M. Manoury's case, (a microcephalic girl, aged 4 years, liable to convulsions from the age of 3 months, imbecile, unable to stand, and with athetosis of the upper limbs) there was improvement lasting two or three months, and then rapid retrogression. M. Heurtaux's patient, a girl, aged 5 months, died unbenefited. M. Lannelongue stated that he had performed two varieties of craniectomy, (1) linear craniectomy along the superior longitudinal sinus, posteriorly between the lateral sinus and the occipito-parietal suture, or transversely in the frontal bone dividing the longitudinal sinus; (2) *craniectomie à lambeaux*, in which the cranial bones were so cut as to leave bony flaps of various forms, the shapes being U-shaped, V-shaped, rectangular, horseshoe-shaped, or T-shaped. The amount of bone removed measured from $\frac{1}{4}$ to $\frac{1}{3}$ inch. The average duration of the operation was about forty minutes. A trephine was applied at one extremity, and thereafter bone was removed with pincers. The dura mater should not be touched unless pachymeningitis were present, in which case it should be scarified or incised; it was not necessary to resect the periosteum. The operation of craniectomy was to be recommended in microcephalus with premature ossification of sutures and closure of fontanelles, in obstetrical paralysis or obvious cranial depression from other causes, in meningeal hæmorrhages and hæmatoma, circumscribed pachymeningitis, hyperostosis due to congenital syphilis, and in hydrocephalus with thickening and premature closure of the cranium.

(515) Diphtherial and Diphtheroid Inflammations. Professor W. H. Welch and Dr. A. C. Abbott (*Bull. of the Johns Hopkins Hospital*, II, 11) report the result of a bacteriological examination of 8 cases of primary diphtheria; cultivations of the Klebs-Löffler bacillus were easily obtained from all. They consider that "every postulate necessary to prove that the specific cause of primary diphtheria is the Klebs-Löffler bacillus has been fulfilled, and that this bacillus may be designated the bacillus diphtheriæ." The bacillus in bouillon cultures, or suspended in sterilised salt solution, was killed by an exposure to a temperature of 58° C. (136° F.) for ten minutes. Guinea-pigs inoculated with cultures died in from one to five days of systemic disease, but without generalisation of the bacillus, which was found only at the point of inoculation, though there in great numbers. Rabbits (which survived longer), five to twenty days, developed, as a rule, paralysis of the hind limbs, and in some cases tremor and irregular respiration. Rubbed on to the abraded tracheal mucous membrane in a kitten, cultivations of the bacillus produced a membranous tracheitis with surrounding œdema. In one patient, examined three weeks after the diphtherial membrane had disappeared, the bacillus was not found. In a few control cases (tonsillitis, pharyngitis, follicular tonsillitis, and one case of membranous tonsillitis in which a suspicion of diphtheria had been aroused) the bacillus was not found. The diagnostic value of the bacillus may therefore in some cases be considerable. Streptococci were not found associated with the characteristic bacillus in all the cases of diphtheria, but they are frequently present, and various complications of diphtheria were, in the opinion of the authors, probably due to secondary infection by these streptococci or other organisms.

Dr. Mitchell Prudden, who two years ago published the results of a bacteriological examination of the membrane from 24 cases, in none of which was the bacillus of Löffler found, now publishes (*N. Y. Med. Rec.*, April 18th, 1891) the result of a similar examination of 12 wholly uncomplicated cases; in 11 the bacillus was found. He points out that all the cases, with one exception, in his former series were drawn from two asylums in which measles and scarlatina were prevalent at the time. In 22 of the first series of cases the streptococcus pyogenes was present; in 11 of the second series streptococcus pyogenes, and in the same number the staphylococcus pyogenes aureus were present. In one case Löffler's bacillus was associated with the streptococcus, in one with the staphylococcus, and in nine with both. The case in which the bacillus was not found was one in which the membrane was extensive, and the child died of heart failure, but no source of infection could be traced.

Dr. P. Haushalter discusses (*Rev. Méd. de l'Est*, May 15th, 1891) the question whether the spontaneous "diphtheria" observed in poultry is etiologically identical with human diphtheria. He found that membranous affections, sometimes of a very benign character, were extremely common among domestic poultry bought in the market of Nancy. These membranes yielded cultivations of a bacillus which Dr. Haushalter considers to be, without doubt, specifically distinct from the bacillus of human diphtheria. The poultry bacillus grows freely at 18° C., its contour is uniform, it is found in the blood of affected animals, and it is less lethal when inoculated subcutaneously than the Klebs-Löffler bacillus. Dr. Haushalter, however, accepts the statement that poultry can be infected with human diphtheria. Such being the case, he recommends careful prophylactic measures in any infective disease of poultry characterised by membranous exudation, namely, isolation of the infected animals, killing of animals seriously ill and burning of their bodies, burning of straw, etc., soiled by the birds, and disinfection of the hands of the attendants,

PHARMACOLOGY AND THERAPEUTICS.

(516) Effects of Sodium Chloride Baths.

M. Robin (*Bull. de l'Académie de Médecine*, No. 20, May 25th) contributes a long paper on the use of brine baths, in which he attempts to systematise their use according to results obtained by chemical examination of the urine. According to M. Robin, these baths are indicated chiefly in three conditions: (1) All morbid conditions in which there is diminished nitrogenous excretion, that is, diminution of nitrogenous exchange in the tissues; (2) lessening of nitrogenous oxidation constitutes the second indication; (3) the third indication depends on a special action of the treatment on the waste in tissues rich in phosphorus, or in those rich both in phosphorus and nitrogen. These are the three broad indications, but experience has shown him that the baths act differently according to their degree of concentration. Thus, it is found that a quarter-strength bath is most useful in cases in which it is not desired to increase either nitrogenous exchange or oxidation, in patients with a tendency to get thin, and who excrete an excess of uric acid. It will have little effect on chronic osseous affections. Half-strength baths will be applicable to cases with diminished nitrogenous exchange. They will be useful in all chronic glandular affections, strumous disease, periostitis, and chronic arthritis. Full-strength baths have a powerful effect on organic oxidation, and will suit patients with osseous affections, rickets, certain neuroses, certain forms of anæmia, and those who are being poisoned with the products of their own imperfect oxidation. They favour assimilation while diminishing the nitrogenous output. To recapitulate, saline bathing is recommended as the treatment for the lymphatic diathesis, scrofula and its osteo-articular manifestations, rickets, chronic uterine inflammation, chronic rheumatism, some forms of anæmia, etc. Chemical observations also tend to show that it diminishes the production of uric acid, and that it is also a means of oxidising imperfectly burned and toxic residues. M. Robin goes further, and declares that the degree of concentration must be very carefully regulated to fulfil these various indications. Applying this to particular cases, he considers at some length the use of the treatment in anæmia. He divides anæmic patients into two classes, the first comprising those with diminished nitrogenous exchange and lessened oxidation, the second including those in whom nitrogenous exchange and oxidation are increased. The first class is amenable to treatment by iron, which increases tissue change, while the others are more benefited by the use of arsenic, or of the salt bath, which control these processes. The same considerations are applicable to other morbid conditions, such as obesity, gout, etc. The baths, with their power of raising the "co-efficient of oxidation," will benefit those who are obese from failure of disassimilation, but it will have no effect on the obesity caused by too rapid assimilation. As regards gout, the strong baths are found to be unsuitable to the confirmed disease, and are only applicable when the lesions have become passive and have ceased to increase. This is explained by the observation that the urine in acute gout presents the type of excessive nutrition, while that of the chronic affection corresponds to the type of retarded nutrition. In the latter case the baths will act by increasing the nutritive activity, stimulating oxidation, and favouring the elimination of uric acid. Lastly, the oxidising power of salt baths justifies their employment in certain auto-intoxications of intestinal origin, and in certain cases of neurasthenia and nervous troubles consecutive to acute febrile diseases. In short, in conditions in which there is impaired nutrition from imperfect assimilation the saline baths should be efficacious; on the other hand, if the morbid condition arises from too active absorption or oxidation the treatment will only have the effect of diminishing still further the resistance of the organism, and of playing into the hands of the disease.

(517) Therapeutic Action of Double Salicylate of Theobromine and Sodium (Diuretin).

An account of this substance has already been given in the Supplement (January 3rd, 1891). Geisler has made further observations with it in 8 cases; of these 1 was in good health, 4 were heart cases, 2 Bright's disease, and 1 cirrhotic liver (*Berlin. klin. Wochenschr.*, April 13th and 27th, 1891). The cases are very carefully detailed. The blood pressure was measured in the radial artery by means of von Basch's sphygmomanometer, and sphygmographic tracings were also taken, and are printed in the paper. The drug was given in 15-grain doses from one to six times in the twenty-four hours. It would take too much space to give a detailed abstract of each case, but the author was well satisfied with the effect of the treatment, and summarises his results as follows:—(1) Salicylate of theobromine and sodium raises the blood pressure; this occurred in all the cases, and is in opposition to the results of Gram and Koritschoner. (2) It is not only a diuretic, but also a cardiac tonic. (3) It acts especially well in cases of circulatory disturbances due to valvular lesions of the heart. (4) In lesions of the heart muscle its action is much weaker, especially its diuretic action. (5) In acute nephritis its diuretic action is much more marked than in chronic nephritis; there is increased diuresis and disappearance of the œdema. In both cases the excretion of albumen remains as before. (6) In the case of cirrhotic liver no diuretic action was observed. (7) In the healthy man diuresis was increased to some extent. Gram holds that theobromine alone is the diuretic constituent of the compound, but Geisler is of opinion that the salicylate of sodium is also active, as both it and salicylic acid have been shown (Huber, *Deut. Archiv f. klin. Med.*, xli, and Stiller, *Wiener med. Presse*, 1890) to have diuretic effects.

(518) Action of Chloroform and other Poisons on the Alkaline Reaction of the Body Fluids.

Dr. J. Petruschky (*Deut. med. Wochenschr.*, May 14th, 1891) has made some interesting observations on this point. Von Behring had previously found that the chloroforming of white rats diminished the alkalinity of their blood to such an extent that the frequent administration of chloroform lessened their resistance to anthrax. Petruschky found in cats killed with chloroform that the fluids in the pericardium, in the peritoneal cavity and other places, and the blood, had a distinct acid reaction instead of an alkaline one. The same results were got with rabbits, guinea-pigs, and mice. During life and immediately after death the fluids of the warm body were still alkaline, but, as cooling set in, this changed, and their reaction became acid. The author cannot

assign any satisfactory explanation for this, but he contributes some further observations. If the still warm blood of an animal killed by chloroform be placed in a sterilised test tube it coagulates, but retains its alkaline reaction, although the blood left in the corpse rapidly becomes acid. The formation of acid, therefore, must take place in the tissues, and then be communicated to the fluids. That it does not take place only in the muscles seems proved by the circumstance that the pleural and peritoneal fluids also become acid. It is therefore probable that all the tissues take part in forming the acid. Besides, blood shaken up with chloroform outside the body does not take on an acid reaction. The acidifying of the body fluids must therefore be a last vital act of all the tissue cells. During life the acids which are formed in the body are being constantly neutralised, and hence the fluids in the chloroformed animal remains alkaline, but this does not occur after death. In men under the prolonged influence of chloroform the blood was always alkaline, and in the bodies of persons who had died from natural causes the reaction of the body fluids was always alkaline also. In a man poisoned by arsenic the various fluids were also found to be alkaline, and this was also the case in animals. Ether, cyanide of potassium, and oxalic acid all gave the same results as chloroform. In all cases the rigor mortis was very pronounced. Further observations are promised by the author.

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(519) Kava-Kava in Gonorrhœa and Cystitis.

Dr. David Cerna, Assistant in Physiology in the University of Pennsylvania, reports (*Philadelphia Medical and Surgical Reporter*, May 2nd, 1891) five cases of gonorrhœa and cystitis in which he used kava-kava with results which he considers sufficiently good to redeem the remedy from "the neglect in which it is at present held by the medical profession." The following is an abstract of the cases: I. Dental student, aged 19, had suffered four months from gonorrhœa, for which he had been treated with copaiba and cubebs internally, with injections of acetate of lead, sulphate of zinc, and nitrate of silver. Notwithstanding these measures, pain in passing water and discharge persisted. Under the internal use of kava-kava (mxv *ter die*), without any other kind of treatment, amelioration was noticed in three days, and in two weeks the patient was entirely well. II. Man, aged 24, suffering from third attack of specific urethritis of a few days' standing. There was a copious discharge and great pain in micturition; "no stricture could be detected, but there was undoubtedly a beginning inflammation of the bladder." He was immediately ordered kava-kava (mxx *ter die*), without any other remedy. Relief was experienced by the fourth day, and at the end of the third week he was entirely cured. There was no return of the malady for over two months after the suspension of the treatment. The two previous attacks had lasted two and three months respectively. III. Medical student, aged 22, had suffered for nearly two years from specific urethritis with cystitis, the result of a third attack of the malady. The usual remedies failed to give relief. He took kava-kava (mxxx-xl *ter die*), without any other treatment, and in two weeks great improvement was observed. The remedy was afterwards combined with sweet spirits of nitre, and though there was no stricture, a sound smeared with belladonna ointment was passed into the urethra twice a day. At present (eight months later) the cystitis has disappeared, and there is a notable reduction in the size of the prostate. "The patient continues to take the remedy with fair chances of complete recovery." Dr. Cerna, however, states that he had been somewhat careless in his diet and habits, and had not taken the drug with regularity. IV. A coloured boy, aged 8, with painful and frequent micturition for over six months. No stone could be found, but the microscope showed triple phosphates and pus corpuscles. The case was diagnosed "by exclusion" as one of chronic cystitis, and benzoic acid, benzoate of sodium, and eucalyptol were tried without result. Kava-kava in 10-drop doses twice a day was given, "with wonderful results in the course of two weeks." A cure was effected in one month. V. A girl, aged 22, with vaginitis following gonorrhœa, had taken different medicines and used various injections without relief. Kava-kava in 20-drop doses three times a day produced marked improvement in three weeks, and in three months she was perfectly well. Dr. Cerna concludes that kava-kava is of great service in inflammations of the mucous membrane; its action is chiefly local, but it is also a general stimulant and a tonic. In most of the cases above cited it had also marked diuretic properties. No injurious after-effects were observed. The preparation used was the fluid extract, which may be given by itself or in combination with other drugs, such as sweet spirits of nitre, glycerine, iodide of potassium, etc. The taste of kava-kava is not disagreeable. Dr. Cerna gives a sketch of the literature of the subject, and concludes with a summary of its effects in 41 authenticated cases reported by different physicians, full details of which are given in tabular form. Of these it appears that 33 were cured and 8 relieved. The former include 9 cases of acute cystitis, 2 of chronic cystitis, 6 of gonorrhœa, 1 of prostatorrhœa, 1 of retention of urine, 4 of gleet, 1 of urethritis with cystitis, 6 of incontinence of urine, 2 of "dropsy," and 1 of vaginitis. The latter include 4 cases of gonorrhœa, 1 of cystitis, 2 of "dropsy," and 1 of gleet.

PATHOLOGY.

(520) Production of Osteomyelitis by Cultures of Staphylococci.

MM. Lannelongue and Achard (*Annales de l'Institut Pasteur*, April, 1891) give an account of their researches on osteomyelitis induced by means of inoculation with cultures of staphylococcus pyogenes aureus, staphylococcus pyogenes albus, and streptococcus pyogenes. The experiments were all made on young rabbits. After intravenous injection of the first of these microbes, lesions of the bones and viscera were found to occur; in the bones these took the form of either subperiosteal or intramedullary abscesses or suppurations in joints, certain joints being especially liable to attack. The microbes were distributed in the affected bones as they are in the acute osteomyelitis of children. The authors note that the parts in which there was most migration of leucocytes and cell proliferation were not those in which they found most bacteria. In the viscera, the most constant lesion was the occurrence of inflammatory foci or abscesses in the kidneys; in fact, the renal lesions were not only

earlier in their development than the osseous ones, but they were found to be more constant. Pleurisy or pericarditis or inflammations of synovial sheaths and of intramuscular connective tissue occurred in some cases. Staphylococcus pyogenes albus produced exactly similar lesions of the bones and viscera, but the foci presented a white, in lieu of a greenish-yellow, colour. The virulence of this microbe was found to vary a good deal, and a larger dose was generally required to induce osteomyelitis. In speaking of the osteomyelitis caused by streptococcus pyogenes, they relate two or three instances in which they have found this microbe unassociated with staphylococcus in cases of osteomyelitis in infants, and they give a clinical picture of the signs and symptoms presented in these cases. The onset was very acute; the temperature was high at first, but fell in two or three days, becoming remittent. Pain was less than in cases of osteomyelitis due to staphylococcus; the skin was reddened at an early stage; suppuration was prompter and more abundant, and erysipelas or widespread œdema was especially prone to occur. The veins were not prominent as in cases due to staphylococci; but, on the other hand, lymphangitis, adenitis, and metastases to other joints were common. The mothers of all these infants had suffered from puerperal febrile disorders. Experiments upon young rabbits with micro-organisms obtained from the pus in cases of this kind, or from cases of adenitis in children, showed that the osteomyelitis so induced bears a very remarkable resemblance to the disease as it occurs in infants, and that it is unlike the osteomyelitis produced by the staphylococci, in that visceral and especially renal lesions are very rare and of less intensity, while erysipelas occurs in about one-half of the cases. The osseous lesions are of the same character as those induced by staphylococci.

BACTERIOLOGY.

(521) Micro-organisms of Yellow Fever.

Professor Domingo Freire, of Rio de Janeiro (*Deutsch. med. Woch.*, No. 17, 1891), maintains that there can be little doubt that bacteria play a most important part in the causation of certain specific diseases, but that along with bacteria there are accessory factors that must always be taken into account. In yellow fever, which is undoubtedly of bacterial origin, we have an admirable example of the necessity that there is for the presence of the various factors for the production of the disease. It is a disease which is found only in hot climates, and there only in patients who, from altered conditions of the gastric juice and blood or tissue juices, offer suitable media in which the specific organisms can flourish. The organism found in yellow fever is rounded, single, or in little masses or chains; it is usually stained with fuchsine, methyl violet, and cherry red; it grows readily in peptonised agar, beef-jelly, and broth—on the agar especially, prominent growth appearing on the surface. The colonies, at first white, become yellow, then grey, and even black; the organism separates out two distinct pigments, one of them yellow, soluble, and easily diffusible into the tissues, giving rise to the characteristic colour to which the disease owes its name; the other black, insoluble, and very frequently met with in vomited matter (black vomit). Toxic ptomaines may be separated from cultures, and these, when injected into frogs and rabbits, produce typical bulbar symptoms, the poison acting especially on the sympathetic and pneumogastric nerves. Injections of blood from a yellow fever patient, or of pure cultures of the organism, produce all the characteristic symptoms of the disease in guinea-pigs. Professor Freire, as is well known, finds that a cultivation through several generations so interferes with the virulence of the organism that it serves as a protective vaccine, setting up all the symptoms of a modified yellow fever, to which the patient does not usually succumb, and which protects him from further attacks of this malignant disease. From 1883 to 1890 there have occurred five epidemics—1883, 1884, 1885, 1888, 1889—during which no fewer than 10,885 people have been inoculated, with a very small death-rate. As the result of Professor Freire's work, a special institute supported by Government was opened in December, 1890; this is to be devoted to the preparation of yellow fever vaccine. Patients have now, in consequence of the success of the treatment, lost all fear of being vaccinated.

(522) Micro-organisms in Diseases of Pigs.

Dr. Georg Caneva (*Centralbl. f. Bakt. u. Parasitenk.*, Band ix, No. 17, 1891) has made an attempt to classify the various organisms that have been described as giving rise to diseases of pigs in America, in Sweden, and in this country. He finds that they may be divided into three groups. The first of these he looks upon as the hæmorrhagic septicæmia group described by Hueppe, which includes rabbit septicæmia, Schutz's swine fever, Hueppe's "Wildseuche," Kitt's "Rinderseuche," and Oreste-Armanni's "Büffelseuche": these organisms are non-motile; they do not grow very luxuriantly on gelatine, and they are not at all like the typhoid cultures (as are some of the following); there is no growth on potatoes, and in milk they give rise to no special or characteristic features. When examined in the tissues they are found scattered in the blood vessels and connective tissue spaces. In the next group, which contains Rietsch's Marseilles "Schweinseuche," Billing's swine plague, Billing's American "Rinderseuche," and Eberth's "Frettchenseuche," the organisms exhibit a somewhat lively motion, the growths on gelatine are very like those of typhoid bacillus, there is a luxuriant growth on potatoes, and milk is curdled, acid formation taking place. These organisms are found as small capillary emboli, always in masses, and never scattered singly through the tissues. In the third group are described two species—Salmon's bacillus of hog cholera, and Selander's bacillus of swinepest—both of which are exceedingly motile. They exhibit a luxuriant and rapid growth on gelatine, but do not resemble the typhoid growth. On potatoes the former grows luxuriantly, the latter grows somewhat like the typhoid bacillus. In milk they bring about direct solution (peptonisation) of the casein without any previous curdling. These organisms (like those in the previous group) occur in the blood vessels as small capillary emboli, and never singly in the tissue spaces.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(523) Essential Spasm of the Cardiac Orifice of the Stomach.

DR. STEFANO MIRCOLI, in speaking (*Lo Sperimentale*, April 15th, 1891) of spasm of the cardiac orifice of the stomach, points out that the symptom is due not to stimulation, but to the want of it, since if the vagus is divided the opening remains closed, unless the peripheral end of the cut nerve is artificially stimulated. Schiff has shown that there is a special twig from the vagus which regulates the opening of the cardia. The cardia is richer in ganglia than the stomach itself, there being twelve in the former and only ten in the latter; this richness in nervous material almost entitles it to be called the "brain" of the stomach. The different parts of the cardiac orifice are functionally independent of each other, and one-half may be in a state of contraction while the other is relaxed. Mircoli relates three cases with the object of showing that in some persons, otherwise perfectly healthy, the susceptibility of the cardia to nervous impressions may be so marked as to amount to disease, and may be inherited as a diathesis. The first case was that of a man, aged 50, who in May, 1885, suffered from melæna (suggested to have been due to "abdominal vasomotor paresis"); the bleeding recurred several times, and the patient died of exhaustion in the following September. Among other symptoms, intermittent spasm of the cardiac orifice was observed; when the patient was most weakened by loss of blood, solid food did not reach the stomach, and even liquids partially failed to enter it. On passing a bougie, the œsophagus was found to be unobstructed, but firm resistance was encountered at the cardiac orifice; this sometimes yielded, but at other times could not be overcome. The constriction always vanished spontaneously in a few days. A son of this patient, aged 24, went to bed one night in 1888 after a hearty supper; in the morning he could not swallow, everything taken, whether solid or liquid, being stopped at a point corresponding to the cardia, and then thrown up. The spasm began to yield after some hours to energetic counter-irritation over the epigastrium and inunction with "oil of hyoscyamus," and finally disappeared on the following day. A brother of this patient, aged 27, suffered from similar symptoms in 1890, under the mental stress caused by an impending lawsuit; the condition persisted more or less for more than a month, and finally ceased when he had won his case. Mircoli thinks that in persons of neurotic temperament such a condition might, by frequent repetition, lead to true stenosis of the cardiac orifice, and he quotes a private letter received by him in 1885, from the late Professor Loreta, in which that distinguished surgeon says: "Of the nine divulsions which I have performed for stenosis of the cardiac orifice, three were caused by contraction with subsequent fibrous degeneration. In the history of these patients (all of whom were women) hysteria was a prominent element; this was accompanied by dyspeptic phenomena, at first intermittent, but after some years becoming continuous and so preponderant as to induce agonies of hunger and thirst. There was no cause or circumstance which could lead one to conjecture sclerosis or cicatricial contraction. This is a chapter of pathology which requires to be illustrated and extended, so that medical practitioners may be forewarned against catarrhs, gastritis, cancer, etc. — diseases which sometimes are merely secondary to purely mechanical conditions."

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(524) Myxœdematoid Dystrophy.

UNDER this title Dr. Henry (*Journal of Nervous and Mental Disease*, March, 1891) relates the case of a woman, aged 63, who was epileptic in early childhood, and drank heavily during most of her adult life. At 49 she began to feel a constant sensation of coldness in the knees. This was soon followed by an overgrowth of tissue on the inner aspect of each knee and the outer side of the right arm. Inability to perspire, except when in a Turkish bath, was a condition observed by the patient. Ten years after the onset large masses grew from the outer part of the thighs and hips; cutaneous sensibility was lessened and sluggish, most defective in parts where excess of fat existed. At no time was there any swelling of the face. While acknowledging that the only characteristic myxœdematous features of this case are the anidrosis and the enormous overgrowth of the subcutaneous tissues, Dr. Henry points out that Dr. Ord, in the address delivered by him at the Berlin Congress, stated that the symptoms of myxœdema are exceedingly inconstant and variable, and may even disappear before death.

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(525) Hysterical Paralysis caused by "Over-Pressure."

DR. CHARLES KRAFFT reports (*Revue Méd. de la Suisse Romande*, May 20th, 1891) a case which is of some interest in these days of manifold examinations and educational "over-pressure." The patient was a girl, aged 13, who when she was 9 years old noticed just before the time of her

school examination that her right arm had become useless; power over the limb was gradually regained, and in three weeks, when the examination was over, the cure was complete. In the following year, also, just before the school examination, the left arm became paralysed, the condition disappearing in the same way as before. The year after that (1889), this time during the examination, the child again partially lost the use of her right arm, but recovered it in two or three days. A month later the left arm became affected, both motor power and sensation being lost this time. This again yielded to a blister in a few days. In August of the same year, whilst at school, she complained that there was something wrong with her right arm, and she was brought (for the first time) to Dr. Krafft. When he saw her the right arm was hanging useless by her side, but it showed no sign of wasting. She felt no pain, but said she could not move the limb at all. The lower half of the forearm and hand were completely insensitive over all their surface. Dr. Krafft judged the condition to be hysterical, and cured her by a combination of suggestion and electricity. He recommended rest from school work, with tonic treatment, gymnastic exercises in the open air, and a mixture containing bromide of potassium and Fowler's solution. The child had no return of her complaint till December, when she had a relapse, and was cured in the same way. There was no relapse in 1890, but in March, 1891, as the time of examination was drawing near, she again lost power over her right arm. Sensation was also lost over the whole surface of the limb from the elbow to the extremities of the fingers. Dr. Krafft again employed the same treatment which had proved so successful before, with an equally satisfactory result. He discusses the possibility of the case being simply one of malingering, but dismisses it on the ground of the extreme improbability of a child, aged 9, being able to simulate paralysis for weeks without being detected. He thinks, also, that so young a child would not have thought of adding loss of sensation to the motor paralysis from which she professed to suffer, nor would she have borne without murmur or movement the deep pricking with several pins at a time, whereby the condition was tested. The girl, without being the subject of any organic disease, is delicate and nervous, and comes of neurotic stock; Dr. Krafft concludes, therefore, that the symptoms were hysterical, and were brought on by the fear of examination.

SURGERY.

(526) Comparative Estimate of Perineal and Suprapubic Lithotomy.

In the Surgical Section of the Russian Medical Congress recently held in Moscow, Dr. W. F. Lindenbaum, of Jaroslavl, read a paper on the relative indications of the perineal and the high operation for stone (*Centralblatt für Chirurgie*, No. 20). This surgeon, who has performed lithotomy on 70 children under the age of 15, with only 2 fatal results, holds that for the removal of stone, the diameter of which does not exceed 2 centimetres, perineal lithotomy is the best and least dangerous method in young subjects. He has also operated for the removal of stone on 32 adults, and of these lost as many as 8. This high mortality is attributed to the occurrence of various complications in the internal organs, the results of advanced age and of a purulent and alkaline condition of the urine. In the course of last year Lindenbaum operated by the suprapubic method on 10 patients, the oldest of whom was 51 and the youngest 8 years. Only one of these patients, and that the oldest, died on the twelfth day after the operation, when the wound had already closed. An examination after death revealed numerous tuberculous deposits in the lungs and advanced fatty degeneration of the heart. In the practice of this surgeon a drainage tube is passed into the bladder after the extraction of the stone, and the patient is kept lying on his belly for at least seven days after the operation. The application of sutures to the wound in the bladder seldom succeeds, it is stated, and moreover is held to be unnecessary. The fresh healthy urine of a young subject is not likely to become putrid whilst in contact with the cellular tissue of the pelvis, and the presence of sutures may retard cicatrisation of the wound, which, when no attempt is made to close the bladder, is usually completed by the end of the second week. In older patients, in whom it would be desirable to protect the depths of the wound against the purulent urine, the application of sutures, Lindenbaum asserts, is never attended with success. The high operation, he holds, is indicated when the smallest diameter of the stone exceeds $2\frac{1}{2}$ centimetres. If the urine be putrid, he would at the same time open the urethra in the perineum and pass through both wounds a drainage tube, so that the bladder may be frequently washed out with antiseptic fluid. In conclusion, Lindenbaum gives it as his opinion that no surgeon should perform either high or perineal lithotomy exclusively, but ought to employ now one operation and then the other, according to special indications for each.

(527) Trephining for Motor Aphasia.

Dr. G. Fogliani reports a case (*Gazzetta degli Ospitali*, March 25th, 1891) in which Professor Tansini trephined for motor aphasia. The patient, an actor, aged 21, had, when 9 years old, struck his head violently against a wall, sustaining a deep wound in the left fronto-parietal region. Soon afterwards he began, especially when angry, to feel a difficulty in pronouncing certain words, especially those beginning with "b" or "l." The defect became so marked that he was often compelled to substitute other words for those he wished to use. Electricity was tried without result, and in February of the present year he was admitted to the surgical clinic. His general condition was excellent. In the left fronto-parietal region, near the outer extremity of the fronto-parietal suture, there was a curved cicatrix about 5 centimetres in length; at this point the surface of the skull presented some irregularity, and was slightly depressed. In speaking the patient repeated the first syllable of certain words, or stopped short as if hesitating what to say. He said he had a perfect mental conception of the word he wished to employ, but he could not utter it unless after repeating it several times in his mind. He was always worse during periods of atmospheric disturbance. Having regard to the situation of the lesion in the skull, which corresponded almost exactly to Broca's centre, Professor Tansini determined to trephine. On March 2nd he made a semilunar incision 6 centimetres in length, with the convexity downwards, reaching from the most external part of

the frontal region to the anterior two-thirds of the temporal region on the left side, including the cicatrix, and extending below it so as to make more sure of striking on the posterior part of the third frontal convolution. The flap, together with the periosteum, having been dissected up, a trephine with a crown 2½ centimetres in diameter was applied so as to include the depressed part of the skull in the disc. On raising the latter it was seen to be irregular in thickness at different parts; the lamina vitrea was smooth, but the dura mater was adherent at one place, and was torn in raising the bone, giving rise to considerable venous hæmorrhage. The operator smoothed the disc, intending to replace it, but finding that it no longer accurately fitted the hole in the skull he did not do so, fearing it might compress the surface of the brain. The wound healed by first intention, and on the seventh day the patient was allowed to get up. At the date of report (a fortnight after the operation) the patient spoke with greater ease and correctness, the improvement being noticeable not only to himself, but to those who listened to him.

(528) Cicatricial Stricture of the Intestine after Strangulated Hernia.

M. A. Raoult (*Bull. de la Soc. Anat. de Paris*, January, 1891) gives an account of a case of cicatricial stricture of the intestine at the site of a previous strangulation. The patient was a man, aged 54, who came into the Hôpital St. Augustin, under the care of M. Bucquoy, complaining of constipation. The constipation had been preceded by diarrhœa and vomiting, but on admission these had ceased, and he had hiccough and nausea. Some time before he had had an operation performed for strangulated inguinal hernia, and when admitted he had reducible inguinal hernia of the right side. In a few days the patient died comatose, and without having passed anything from the bowels, but without having been sick. At the necropsy it was discovered that the peritoneal sac contained some pints of ascitic fluid, and that the upper part of the small intestine was dilated, whilst 85 centimetres from the cæcum were two contractions, situated about 8 centimetres from each other. When water was passed into the upper part of the intestines the constrictions prevented the passage of fluid and of intestinal contents. Between the constrictions there was a small sac full of fæcal matter; its diameter was only 4 centimetres. The small intestine below the constriction was dilated, as was also the large. Of the two constrictions, the upper was the less contracted, and would admit the tip of the finger, whilst the lower barely admitted the point of the scissors, and the walls of the bowel were much thickened in that situation. M. Raoult considers that the constrictions were due to cicatrisation of the mucous membrane caused by the hernial strangulation to which the bowel had previously been subjected. He considers that a correct diagnosis would have been impossible in this particular case.

(529) Pyæmia and Thrombosis of Internal Jugular Vein from Old Otitis Media.

Dr. W. W. Keen (*Philadelphia Times and Register*, December 30th, 1890) relates the case of a man, aged 31, who had had a discharge from the right ear for seven or eight years. An application to the ear by an aurist was followed by severe pain and rigors, and he became slightly jaundiced, with pain in the right side of the chest, and blood spitting The case was diagnosed as one of pyæmia following otitis media. There was a perforation of the right tympanic membrane, with fœtid discharge, and the mastoid was slightly swollen and œdematous, and rather painful on pressure, but there was no pain over the course of the lateral sinus, and the jugular vein could not be felt. The liver was tender, and there was slight pleuritic effusion on the right side and beginning choked discs. The mastoid was trephined, and found to contain a considerable amount of fœtid, cheesy pus. Three-quarters of an inch of the lateral sinus was exposed with the chisel, and some pus evacuated from its vicinity. In performing the first part of this stage of the operation, the mastoid vein bled freely, but was stopped with a plug of iodoform gauze. The internal jugular vein was next exposed, and tied an inch and a half above the clavicle; when it was opened above the ligature, a little blood oozed out, and then an exceedingly fœtid clot was removed. The odour was so offensive that it was noticed 8 or 10 feet away. The facial vein was also thrombosed where it entered the internal jugular, which latter was excised, and its upper end stitched to the skin. The lateral sinus was opened, and found not to be thrombosed, so it was plugged with gauze to stop the hæmorrhage. Lastly, the wound was closed in the usual way and drained with horsehair. The patient did well for twenty-four hours, and then suddenly died of dyspnœa. The septic clot was examined; it contained micrococci and bacilli. Dr. Keen thinks it unfortunate that the operation was not done sooner, as then the internal jugular vein might have been ligatured beyond the septic clot, which at the time of the operation probably extended into the innominate vein.

MIDWIFERY AND DISEASES OF WOMEN.

(530) Metritis Dissecans.

Dr. Höchstenbach (*Archiv f. Gynäk.*, vol. xxxvi, part. ii) describes a case where the first labour was lingering. The membranes were ruptured too early; the os was long in dilating. The forceps was applied to the head of the still living child before complete dilatation of the os. Four attempts at delivery failed. Sixteen hours later, the child was extracted, dead, with the forceps. A rent in the perineum was sewn up at once. *Post-partum* hæmorrhage set in, and the placenta was detached with the hand. The uterine cavity was washed out with an antiseptic lotion. Within an hour symptoms of septic infection set in. Stinking gases and pus escaped from the uterus, sloughs of vaginal mucous membrane were discharged, and a vesico-vaginal fistula formed. Metastatic pneumonia set in, and on the twenty-sixth day after birth a large slough, consisting of uterine and vaginal tissue, was expelled with free fœtid purulent discharge. The pyæmic symptoms passed off for awhile, the vagina and uterus becoming practically closed. A plastic operation was performed half a year later for relief of the fistula. Three months later the patient died of pyæmia. A necropsy was performed, and the former existence of metritis dissecans was authenticated. The uterus and vagina showed the effects of extreme cicatricial contraction. Extensive plugging of veins, metastatic abscesses in the left kidney and lung, and left hip-joint disease were also discovered. Dr. Höchstenbach has collected twelve cases of metritis dissecans;

three proved fatal, two through sequelæ of infection, one from rupture of the thinned uterus during injection. This case is a warning to obstetricians; it shows how caution should be exercised in the management of injections, especially when there is much fœtid discharge. Diagnosis is easy as soon as the sloughs begin to escape. All the twelve cases could be traced to puerperal infection. One patient had typhoid, one syphilis; these constitutional diseases may have encouraged local septic infection. It is not certain whether the disease begins as primary necrosis of the uterine tissue, through plugging of its vessels with coagulum or germs, and subsequent demarcation by an inflammatory process, or as destruction of the uterine tissue by primary inflammation and free exudation.

(531) Absence of Uterus.

M. Delagenière (*Union Médicale*, April 7th, 1891) read before the recent meeting of the French Surgical Congress a case where a woman, aged 23, was entirely destitute of uterus and vagina. The presence of the ovaries was manifested, it is said, by periodical attacks of pulmonary congestion. Abdominal section was performed, and the ovaries, which lay in the iliac fossæ, were removed. Twelve days afterwards it was thought advisable to form by dissection a vagina, lined in part by the mucous membrane of the vestibule and in part by two large cutaneous flaps turned in from the gluteal region. Since the operation the patient's health had remained good. The attacks of congestion of the lungs ceased completely. The artificial vagina did not contract. M. Delagenière found that the ovaries were affected with sclerosis and cystic degeneration.

(532) Menstruation and Genital Malformations.

Dr. K. Frank (*Zeitschrift f. Geburtsh. u. Gynäk.*, vol. xviii, part ii) notes two cases of malformations in which operations were performed in Dr. Martin's wards. In the first, the vagina and the cervix and body of the uterus were totally absent, but the tubes and ovaries were normal, and there were traces of the uterine cornua. The patient suffered intense pain at what represented menstrual periods, and on that account it was considered justifiable to remove the ovaries. Dr. Frank refers to seven similar cases where the same pain was experienced, and concludes that the theory that little or no molimen exists in cases of absence of the uterus is quite false. These cases further compel us to reject the doctrine that menstruation is always absent in these malformations; on the contrary, it may be present in absence of the ovaries, and may persist after "castration." In the second case there was atresia hymenalis (*sic*), with hæmatocolpos. A large tumour formed; it held over twelve pints of blood. The patient had never experienced the menstrual molimen.

(533) Non-Venereal (?) Phagedæna of Vulva.

Dr. Grenser (*Centralblatt f. Gynäkol.*, January 3rd, 1891) describes a case which gave rise to much discussion at a meeting of the Dresden Gynæcological Society. A somewhat anæmic but not strumous woman, aged 23, noticed a painful swelling in the privates ten days after marriage. The vulva and its surroundings were covered with sanious pus. The right labium majus was greatly swollen posteriorly. A tender ulcer, nearly an inch broad, and discharging foul sanies, occupied the site and neighbourhood of the torn fourchette. Its borders were thick. A similar ulcer was found on the outer side of the right labium majus, towards the thigh; it resembled an open bubo, its borders were purple and eroded, and it caused great pain. The patient became very ill, and the ulcer at the frænum extended to a great depth. On the eighteenth day that ulcer was slit up on both sides by means of a director, and an abscess which had formed under the ulcer outside the labium was laid open. The diseased parts healed after three weeks' thorough disinfection by means of antiseptic applications. The patient caught cold almost directly she went out after convalescence, and was laid up for five weeks with parametritis on the left side. The husband was carefully examined, and had no trace of syphilis or chancroid. The ulcer of the frænum began on a structure damaged during coitus. The ulceration at two places also suggested constitutional predisposition, possibly herpes of the vulva. Dr. Marschner believed that the original disease could not be diagnosed as herpes unless the two ulcers appeared quite simultaneously. He had treated a similar ulcer on the posterior vaginal fornix with a 10 per cent. solution of sulphate of copper, which cured it. This ulcer was, he believed, chancroid. This patient also had parametritis through carelessness after convalescence. He believed that in Dr. Grenser's case the ulcers were chancroid. Dr. Grenser replied that not a trace of chancroid could be detected in the husband. A soft chancre would not destroy so much tissue within ten days. Dr. Marschner said that it might destroy quite as much tissue within four or five days. Dr. Meinert believed that the ulcers might well have been herpetic in origin. Herpes was now believed to be due to infection. Professor Leopold considered that Dr. Grenser's case was doubtful, especially as to the significance of parametritis. The ulcer on the fourchette might have been solely due to injury at coitus. More probably it was a chancroid, which caused parametritis through specific endometritis, which was overlooked.

(534) The Treatment of Retroflexion.

Dr. Veit (*Festschrift d. Berlin. geburtshilf. Gesellschaft zum X internat. med. Kongress*, p. 59) notes that retroflexion of the uterus has become a surgical disease, and therefore, since all cases do not demand operation, precise indications for treatment must be laid down. Life is not endangered by this malformation: some retroflexions are readily cured by simple therapeutic measures; whilst, on the other hand, no operation can restore the uterus to position as long as it remains fixed. The most easy cases for permanent cure are those which occur before 30, whether in relation to the puerperium or from more obscure causes. For the results of abnormal labours and mismanaged puerperia are not the sole causes of retroflexion. That malformation is occasionally found in newborn children, and not rarely at puberty. Here cause and effect may be confounded, for the beginning of menstruation can hardly go on so normally in a chlorotic girl with faulty position of the uterus as in a robust subject. In cases of retroflexion in young subjects the careful application of the pessary is sufficient treatment, and half the cases so treated will be permanently cured after wearing the instrument, frequently changed, for about a year. The operations are ventro-fixation, shorten-

ing of the round or utero-sacral ligaments, and Schücking's vaginal hysteropexy. The results are at the best faulty, for they cannot make the uterus move freely, at the same time that it lies in a good position, between other viscera, bladder, intestines, etc. As long as a retroflexion is movable, it requires but little treatment in a woman past the change of life. The pessary will act best when the uterus remains bulky and not atrophied. In virgins it is often best to dispense even with pessaries, and turning their attention to the condition of their genitals is most objectionable; the nervous system, if fortified by any means which divert the patient's attention from the local affection will allow the trifling discomfort of the retroflexion to be well tolerated. Massage is of questionable value; it may increase the patient's nervousness, which is worse than the displacement. When pessaries are used, they will best avail if any pre-existing endometritis or metritis be cured. Fresh retroflexions after childbed are the most favourable for treatment. Ergot should first be administered, nor should the pessary be applied till the eighth or tenth week, and when the instrument is changed a smaller pessary should be applied. Cutting operations are only justifiable when pessaries cannot be borne and do no good. Retroflexion with fixation of the uterus may be left alone in a sterile subject; in a patient anxious to bear children and also suffering from the malformation the case is different. The operations above mentioned have not been so generally adopted as to allow of judgment on their justifiability. Schücking's vaginal hysterectomy, which binds the fundus down forwards behind the bladder, is bad on theoretical grounds. Freund and Frommel's shortening of the utero-sacral ligaments and forming of adhesions in Douglas's pouch is more in accordance with reason.

DISEASES OF CHILDREN.

(535) Fœtal Endocarditis.

Drs. Porák and Bernheim (*Bull. et Mém. de la Soc. Obstét. et Gynéc. de Paris*, No. 4, April, 1891) exhibited specimens illustrating fœtal endocarditis. A fine male child, the third that its mother had borne, was safely delivered at term. Three days after birth it became jaundiced. On the fourth day it was occasionally cyanosed, but nothing could be detected on auscultation. On the fifth there was dyspnœa, with dulness over different parts of the lungs, and moist *râles*. Next day the infant died. Large areas of red hepatisation were found in both lungs. The left ventricle was found extensively diseased, the mitral valve destroyed by endocarditis, the aortic valves thinned and fused, so that they formed a simple diaphragm with a central aperture. The aortic orifice and the aorta itself were narrow. The foramen ovale was patent, and allowed of a certain amount of compensation, nevertheless the obstruction to circulation was great, as the frequent, though intermittent, cyanosis proved. The hepatisation of the lungs was attributed to the impairment of the functions of the left heart, and the dilatation of the right chambers (otherwise normal) was the result of the obstruction to the pulmonary circulation caused by the disease on the left side. Haranger has distinguished three varieties of right endocarditis in the fœtus. In the first form the aortic orifice becomes closed; in the second it is not so affected; and in the third the endocarditis is confined to the mitral valve.

(536) Prognosis in Diabetes.

At the Congress für innere Medizin (*Deutsche med. Zeit.*, 40) Sandmeyer, of Marburg, made some observations on a case of diabetes in a child who died comatose two years after beginning to suffer from the disease. Although the urine presented only traces of albumen, it contained an unusual number of casts, mostly granular. Sandmeyer has noticed in a series of cases of diabetes before and during the coma the appearance of casts in the urine previously free from casts; the casts are very short, generally hyaline, but sometimes granular, and disappear as the symptoms of coma pass off. The amount of albumen in such urines is very small. In the case reported hyaline and granular casts were found in some tubes, and extensive fatty degeneration of the epithelium. Degenerative changes were also found in the spinal cord, involving the anterior third of the columns of Goll in the cervical enlargement, and to a slighter extent the middle third. The pancreas was quite normal.

PHARMACOLOGY AND THERAPEUTICS.

(537) Naphthalin in Typhoid Fever.

Dr. L. Wolff reports (*Philadelphia Medical News*, May 23rd, 1891) the results obtained by the use of naphthalin in 100 consecutive cases of typhoid fever under his care in the German Hospital of Philadelphia during an epidemic of that disease in 1889. The cases were all treated in the following way: On admission, calomel with soda was administered in grain doses every three hours for six hours, or until its laxative effect forbade its further use. This was immediately followed by gelatine capsules containing 5 grains of purified and finely-powdered naphthalin every four hours, alternated with only a few drops of dilute hydrochloric acid. No other medication was permitted, excepting chemical antipyretics and cold sponging for hyperpyrexia. The diet consisted of milk, alternating with meat broths containing raw eggs; stimulants were administered as required. Of the 100 patients, 56 were males and 44 females; their average age was 24.7 years, and the mean duration of the febrile period was 24.4 days. Sixteen cases ran an abortive course, defervescing before the end of the second week. Only 3 of the patients had intestinal hæmorrhage; in two of these the complication occurred shortly after the naphthalin treatment was begun. The total mortality was 10 per cent., but 2 cases were brought in comatose, and never rallied, dying within three days after admission; four others died with complications such as glosso-pharyngeal paralysis (1), acute pulmonary phthisis (1), facial erysipelas (1), and heart failure owing to valvular lesion (1); while of the remaining 4 fatal cases, 2 died within four and five days respectively after admission. Dr. Wolff argues from these facts that the true mortality of the cases under the naphthalin treatment was 2 per cent. He does not think that the total death-rate from typhoid fever in general hospitals will ever be reduced much below 10 per cent., "as severe cases admitted late in the disease, or with complications which no longer admit of treatment at their homes will under any treatment prove more or less fatal." The statistics of the German Hospital of Philadelphia, for the five years previous to the epidemic during which Dr. Wolff made the observations above referred to, show that the death-rate from typhoid fever was 23.4 per cent. in 1884, 11.4

per cent. in 1885, 20.4 per cent. in 1886, 17.4 in 1887, and 13.2 per cent. in 1888. His death-rate (10 per cent.) compares very favourably with these; and not less so with the death-rate in different methods of treatment given by Liebermeister, of Basle, as follows: On the indifferent plan, 27.3 per cent.; incomplete antipyretic treatment, 16.2 per cent.; complete antipyretic treatment, 10.2 per cent.; no specific treatment, 28.7 per cent; calomel treatment, 12.4 per cent.; iodine treatment, 12.9 per cent. Dr. Wolff found that, though naphthalin had no direct influence on the febrile temperature, its continued administration speedily produced lysis, and thereupon the temperature became normal. If, however, the medication was discontinued directly on defervescence, it rose again. In 9 of the earlier cases relapses occurred, in some of them two and even three times. The naphthalin was then continued for some time after complete defervescence, and the frequency of relapses was greatly diminished. In only 1 case had the treatment to be interrupted on account of nausea and vomiting, but even in that case it was subsequently resumed without further trouble. The drug controlled diarrhœa so completely that, after its continued use, laxatives were sometimes required. The appetite was not affected by it, nor was any irritation of the uropoietic apparatus observed under its use. The heart was not injuriously depressed or otherwise affected. Patients showed no repugnance to it unless when given in suspension instead of in gelatine capsules. Dr. Wolff has no doubt that at the onset of typhoid fever naphthalin may inhibit the development of the pathogenic microbes so far that the disease will be aborted; and further, that at any period of the disease, over-production of the chemical toxins may be prevented, and the fever made to run a mild course.

(538) Treatment of Gonorrhœal Rheumatism.

In a discussion on the treatment of gonorrhœal rheumatism at a meeting of the Paris Société de Dermatologie et Syphiligraphie on May 14th (*Semaine Médicale*, May 16th, 1891), M. Jullien said that, having regard to the infectious origin of the disease, he had for the last five years systematically treated it with subcutaneous injections of bichloride of mercury with extremely satisfactory results. M. E. Besnier pointed out that joint inflammations of gonorrhœal origin often spontaneously underwent rapid modifications, which made it very difficult to judge of the effect of particular remedies. In his experience local treatment was the most important therapeutic factor in such cases, and he placed most reliance on the method recommended by M. Lucas-Championnière, which consisted in touching the parts in a number of places with the point of the cautery, and then wrapping the joint in Vigo's mercurial plaster with cotton-wool dressing afterwards. M. du Castel said he had tried mercurial friction in one case without result, while in another case, in which, however, the inflammation was less severe, it had done a great deal of good.

(539) Therapeutic Effects of Transfusion of Goat's Blood.

At a meeting of the Paris Société de Thérapeutique on May 13th (*Semaine Médicale*, May 16th, 1891), Dr. Bernheim read a paper in his own name and that of MM. Gardy and Lepelletier on the therapeutic effects of the transfusion of goat's blood. From a large number of experiments on animals, and from some observations made on human patients suffering from phthisis and chlorosis, M. Bernheim said he thought himself justified in drawing the following conclusions: The transfusion of goat's blood is in no way dangerous if it is performed with the necessary antiseptic precautions; several tuberculous subjects were so far improved that they might be looked upon as cured; the method may possibly be applicable in other diseases, such as chlorosis, obstinate hæmorrhage, etc.

(540) Skin Eruption from Quinine.

It is known that quinine occasionally causes skin eruptions, but the following case reported by Hagan (*New York Med. Journ.*, March 28th, 1891) is of special interest owing to the length of time it lasted before the cause was discovered. The patient, a boy, is now 4½ years old; when 18 months old his nurse noticed one morning that his body was scarlet. He was treated as for an eruptive fever, and got well in three or four days. Since then, for three years the boy had never been free from some kind of skin eruption, chiefly erythema multiforme papulosum, urticaria, dry scaly condition, and usually severe itching. He had been treated with innumerable remedies by several doctors, but without the slightest benefit. When seen at this time the skin of the abdomen and thighs was as red as a boiled lobster, thickened, hard, dry, and desquamating markedly; there was severe itching and want of sleep, and his general health had suffered greatly. His diet and hygienic surroundings were unexceptionable; but on minute inquiry Hagan discovered that his mother was in the habit of giving him quinine frequently to prevent his taking cold; the exact amount given could not be ascertained. This was stopped, and in one month the child was perfectly well. To make sure that quinine was really the offending substance, 1 grain of the sulphate was given to him. In six hours afterwards he was covered with a general erythema, which did not disappear for three days.

(541) Lysol in Ear Disease.

This new antiseptic, one of the products of the distillation of tar, has been studied by Haug (*Münch. med. Wochenschrift*, March 17th, 1891) in relation to aural therapeutics. It is a clear brown, oleaginous fluid, resulting from the saponification of the cressols. As an ear-wash in cases of otorrhœa he has used it of the strength of from 0.1 to 0.25 per cent. Stronger solutions cause irritation, and the smell is to some patients most offensive. It makes a clear solution with distilled water only, and becomes milky with ordinary water. On these accounts it is not suitable for general ear cleansing. On the other hand it is found to loosen ceruminal or epithelial plugs very readily, and to clear the surface for the action of cocaine (cocaine 10, alcohol 50, water 50) in cases of acute inflammation of the meatus or tympanum. Further, its remarkable disinfecting and cleansing powers render it an excellent antiseptic for application before operations such as paracentesis. In cases of otomycosis a 0.3 to 0.5 per cent. solution of lysol in alcohol may be poured into the ear twice a day and retained for ten minutes. Sterilised gauze dipped in a solution of lysol (lysol 2.0 to 5.0, aq. dest. 50, alcohol, glycerine, āā 25.0) and dried, is found to be a good disinfecting and deodorising application.

As a gargle in acute catarrh and angina it does fairly well in the proportion of a teaspoonful of a 3 per cent. solution to a quart of water, but if long used it causes salivation and gives rise to an unpleasant soapy taste and a slightly burning feeling in the throat. Only very weak solutions can be used in the nose.

OPHTHALMOLOGY.

(342) Treatment of Suppurative Panophthalmitis. BOÉ (*Annales d'Oculistique*, January and February, 1891) gives the results of some further investigations which he made in order to ascertain the advisability of enucleating a suppurating eyeball. At the International Medical Congress last year, he read a paper in which he came to the conclusion that it was not expedient to enucleate or eviscerate a suppurating eyeball. He considers that the further investigations which he has made strengthen the opinions which he expressed at Berlin. In his earlier experiments he injected blood taken from a body several days after death into the vitreous of rabbits. This was followed by suppurative panophthalmitis and death. The *post-mortem* appearances were not very marked. White lines bordered by a reddish zone were observed on the surface of the liver. Microscopic examination revealed dilated capillaries plugged with streptococci. There was no appreciable meningitis, and no metastatic abscesses were discovered. It has not yet been shown that the streptococcus is the only or chief agent in all intraocular suppurations, and it is impossible to diagnose whether the inflammation in any given case is due to a microbe or not. The author is of opinion that all cases should be treated as if they were microbic in origin. He is strongly opposed to enucleation or evisceration in suppurating panophthalmitis. He recommends that when the pain becomes intolerable a free incision should be made into the eyeball, and the purulent contents evacuated. He objects to enucleation or evisceration on the grounds that either of these operations opens up numerous paths along which microbes might enter the system. He found in his experiments upon rabbits that general infection was more likely to occur if excision were performed soon after suppuration was established. Delay in operating lessened this danger, and for this there might be two explanations: either that the activity of the microbes had diminished, or that the veins and lymph channels had become plugged, and the entrance of the microbes into the general circulation was impeded.

BACTERIOLOGY.

(343) Etiology of Diphtheria. E. KLEIN (*Nineteenth Annual Report of the Local Government Board*, 1889-90, p. 143) gives the results of a new series of researches on diphtheria. He examines false membranes as cover-glass preparations after treating as follows: A particle of fresh membrane is well shaken in a test tube of 10 cubic centimetres boiled salt solution; this is poured off, a new quantity is added, and the whole is again well shaken; by this means the superficial part of the membrane is cleansed from the surface organisms. The sample of the diphtheritic membrane is well rubbed over the cover glass, the film so formed is dried, stained in a 2 per cent. watery solution of rubin for twelve hours at the ordinary temperature of the room (or in an incubator for half an hour), and well washed in water. A contrast stain is obtained by treating with methyl-blue aniline water for from two to five minutes. As a result of his observations, Klein holds that the organism he has found is identical with that described by Loeffler, but that the so-called involution forms (wedge-shaped, conical, etc.) are not involution forms at all, as they are invariably found, even in very recent cultivations. He obtains cultures by washing the membrane repeatedly, and then inoculating with a drop of the last salt solution on to the surface of nutrient agar or on gelatine. In 12 out of 22 cases he found an organism that does not grow on gelatine at ordinary temperatures; this he looks upon as a pseudo-diphtheria bacillus. The other organism found in all 22 cases grows on gelatine, but Loeffler has recognised the fact that it is the same as the one he described, and that the other organism, which does not grow in gelatine, and was found in 12 only out of the 22 cases, is the pseudo-bacillus. The pseudo-bacillus dies rapidly when its cultures are kept at the ordinary temperature for a few months. The true diphtheria bacillus remains active for eighteen months. It grows actively in milk at a temperature of 19° to 20° C., not nearly so readily at 36° to 37°. The organism is destroyed at a temperature of 60°, continued for five minutes. As regards the position of the organism in the diphtheria membrane, Klein agrees with other observers. From inoculation experiments it was found that fresh (that is, two to six days) gelatine, agar, or broth cultures are very virulent, that agar cultures after eight days, and gelatine cultures after five weeks, are "less virulent, and cannot be relied upon as uniformly infective to guinea-pigs." The author agrees with other observers that the bacillus when inoculated produces a chemical poison at the seat of inoculation. From a considerable number of experiments he comes to the conclusion that a diphtheritic condition may be induced in cats by superficial inoculation of the cornea or conjunctiva with cultures of the diphtheria bacillus or by subcutaneous inoculation into the groin. A distinct local disease similar to that produced in the guinea-pig is set up; there is marked congestion of the viscera and typical cloudy swelling and fatty degeneration of the kidney similar to that met with in the human subject. When inoculations are made simultaneously into the cornea and into the groin local reaction is obtained, but the constitutional and visceral changes were not nearly so distinctly marked.

(344) Toxalbumins produced by Diphtheria Bacilli. A. WASSERMANN and B. PROSKAUER (*Deutsche med. Wochenschrift*, April 23rd, 1891), adopting Brieger and Fraenkel's method of obtaining the diphtheria poison, made a meat bouillon with 1 per cent. peptone and ½ per cent. common salt; this they kept slightly alkaline by means of a weak solution of sodium hydrate, when they found that the poisonous material was formed in largest quantities. Having obtained a virulent poison, the fluid was passed through Kitasato's filter to remove all bacteria, and was evaporated at from 27° to 30° C. to a quarter of its original quantity; this was treated with eight or ten times its bulk of absolute alcohol, slightly acidulated with acetic acid. The resulting precipitate was dissolved in water, and the operation was repeated until the

watery solution was perfectly clear. This was then dialysed, precipitated with alcohol, and the precipitate collected and dried *in vacuo* at 37° C. They found two substances, both of which gave albuminoid reactions and dialysed slowly; but one was precipitated by weak alcohol, the other only in absolute alcohol. Experimenting further, they proceeded to get rid of the globulins and the greater part of the peptones from their poisonous fluids; they added ten times the bulk of 67 per cent. alcohol, acidulated with a few drops of acetic acid, and the slowly deposited precipitate was left for twenty-four hours, then filtered, and the filtrate dropped into alcohol, when a fresh deposit formed and was collected on a filter. Both these substances were dissolved in water, and the solutions treated with ammonium sulphate solution, washed, and thoroughly dialysed, then precipitated with absolute alcohol. A white powder was precipitated in weak alcohol, and a yellowish (almost brown) powder in absolute alcohol; both of these gave typical proteid reactions, but only the former possessed poisonous properties. On elementary analysis these bodies were found to be very closely related. The white powder could not be obtained of constant strength even from the same broth culture. When injected into rabbits it produced death in from three days to three weeks or even more, setting up fatty degeneration of the liver, enlargement of the suprarenal bodies, very frequently marked nephritis and hydrothorax or ascites, or both, with sometimes œdema at the point of inoculation. The authors were able to obtain, though in very small quantities, a similar substance from the organs and blood of an animal infected with diphtheria; of this, however, they could not obtain an elementary analysis. With neither of the substances they separated were they able to produce, as far as they could see, the slightest immunity against the action of the diphtheria poison. They conclude that many of the toxalbumins described are, to a very large extent, made up of substances precipitated from the artificial culture media, and that this accounts for the inconstant toxic properties of the poisonous materials they obtained, the poison (perhaps albuminoid in character) being carried down along with these "broth" toxalbumins and albumoses. The results of their experiments agree with those of recent French workers on the subject. They maintain, however, curiously enough, that Brieger and Fraenkel's results are practically correct, and that the albuminoid nature of the diphtheria and other poisons must be accepted.

OTOLOGY.

(545) Caries and Cholesteatoma of the Mastoid Process.

Friedenwald (*Archives of Otology*, January, 1891) narrates a case of chronic (left) middle ear suppuration with frequent recurrence of polypi. In childhood the patient had had mastoid abscess, leaving a scar, but otherwise the mastoid process appeared so normal on inspection and palpation that the idea of disease in that region was excluded. The patient became affected with chills and other symptoms simulating, and ascribed to, malarial fever. These became less regular, and intracranial disease was suspected, as headache (commencing on the left side) and fever came on. A tender spot on the mastoid disappeared. There was no œdema near the ear, no hardness or sensitiveness of the jugular vein; the pupils were contracted, but equal, and responded to light; the fundus oculi was normal; there was no retraction of the head. It was then decided to trephine for cerebral abscess, thrombosis and meningitis being excluded. No pus appeared, and the mastoid process was then opened, and found filled with a white lamellated mass. This was immediately recognised as a cholesteatoma, and was rapidly removed, along with some very foul-smelling pus, with a sharp spoon. The patient improved for the moment, but died in a few days. On *post-mortem* examination there was slight limited lepto-meningitis, no cerebral abscess, but in the lateral sinus a firm clot, which contained some ovoidal cells, some papilliform and concentrically laminated and stratified cells, also cholesterin crystals and fibrin—cholesteatomatous material. This was apparently continuous with the contents of the intramastoid cavity, which communicated with the external meatus. The author concludes that "the time when an operation would have been successful was earlier, when the disease was still limited to the bone, but there was no evident indication for opening the mastoid process before pyæmic symptoms set in."

(546) Deaf-Mutes and their Education.

Dr. Charles Macalister (*Liverpool Medico-Chirurg. Journ.*, January, 1891) points out that the method must be selected according to the circumstances of the pupil. For those who are well-to-do, as well as for those who can hear a little or were once able to hear, the pure oral system is suitable. On the other hand, "experience has shown that children taught on the combined system" (lip-reading and speaking combined with the use of signs—either natural signs alone or together with the manual alphabet) "obtain a better and sounder education during the time they are at school than those taught orally alone, and they consequently become more useful members of society." For the poor and the masses of the deaf he advocates the combined method as being most advantageous and most humane.

PHYSIOLOGY.

(547) Ablation of the Cerebral Hemispheres in the Pigeon.

Boeck and Le Bœuf (*Bull. de la Soc. de Méd. Ment. de Belgique*, December, 1890) extirpated the cerebral hemispheres in a pigeon, and kept the animal alive for two years and a half. The *post-mortem* examination showed that a small part of the front of the brain remained, and also a little piece of the occipital cortex; these parts were examined microscopically, but they did not show any trace of degeneration or softening. The after-effects of the operation are divisible into three stages. Immediately after the operation the animal is in a drowsy condition. In the next stage it begins to take notice again, but will eat no food and is very irritable: this was the period when many of the animals died, but if they got over it there came a long period when they seemed well; they gained in weight and drank readily. The authors especially studied this third stage; they could discover no disturbance of movement, no inco-ordination, and the animals always maintained an equal weight: they took food and drank easily; they saw well and appeared to appreciate what they saw and heard; they slept well, fought with other pigeons, but appeared to have lost all sexual desire.

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MEDICINE.

(548) Tuberculosis of the Paracentral Region.
IN the *Bulletins de la Société Anatomique de Paris*, April-May, 1891, p. 274, MM. A. Souques and J. B. Charcot discuss the reason of the localisation of tuberculous lesions in the paracentral region. By the latter they mean not only the paracentral convolution seen in the inner surface of the cerebral hemisphere, but also the projection of that convolution in the external surface, thus including the upper ends of the ascending frontal and ascending parietal convolutions. Their attention was drawn to the matter by having observed in a case of pulmonary tuberculosis an attack of Bravais-Jacksonian epilepsy, which began in the left leg and was followed by monoplegia. M. Charcot, under whose care the patient was, diagnosed a tuberculous lesion of the right paracentral region, and this was afterwards verified. In searching the literature of similar cases they were struck with the frequency of bacillary determinations in the paracentral region. It seemed clear that tuberculosis attacked much more frequently the motor centres of the lower limbs than those of the arms or face. The question then arose whether this frequency might not be due to certain special anatomical conditions. The frequency was shown by reference to cases of cerebral tubercle collected from the *Bulletins de la Société Anatomique*, which showed that out of nineteen cases there was cerebral monoplegia in thirteen, brachial in five, and facial in one. In only one case was the lesion found to be bilateral. It seems that the proportion of cases of localised tuberculosis of the psychomotor centres has a direct relation to the height of those centres. They are exceptional in the centres for the movements of the face, not rare in the centres for the arms, and frequent in the centres for the legs. The tuberculosis is not, properly speaking, central, but has its origin in the pia mater, and is formed by the fusion of numbers of smaller tubercles. It acts by compression and not by destruction, and is not associated with permanent alterations of sensibility. Further inquiry shows that many examples can be given of cysts, syphilis, and cancer of the paracentral region. The reasons which determine the localisation of tubercles in the paracentral region are as follows: It is the summit or culminating point of the hemisphere; it is supplied by the two primordial branches of the carotid artery, the Sylvian and anterior cerebral; moreover, the terminal branches of the latter arteries are distributed to it; for instance, the frontal and ascending parietal of the Sylvian, and two or three terminal branches of the anterior cerebral. There is no other region of the cortical area which receives so many vessels, and which, therefore, is so likely to be the seat of the deposit of tubercle bacilli. Again, in spite of its numerous vessels, the circulation is feeble in this region, the vessels reaching it after their ascent, and without anastomosing much with each other. The authors argue that all the foregoing conditions are very favourable for the arrest of tubercle bacilli and for their germination. As a rule, tuberculosis of the paracentral region is secondary to deposits elsewhere, and more often by the time the case is seen the tubercle has spread to the neighbouring meninges. Sometimes, however, the tumour remains isolated and is amenable to surgical measures, and this is especially the case when the disease is primary.

(549) Cerebral Tumour and Papillitis.
DR. BULL (*Jour. Nerv. and Ment. Disease*, March, 1891) considers that the most common cause of papillitis is intracranial tumour. Meningitis, cerebral abscess, hydatid disease, and brain suffering from vascular lesion are other causes arranged in order of decreasing frequency. The frequency and severity of the papillitis do not seem to be especially influenced by the nature, size, or location of the tumour. Pure papillitis is well known to occur in simple anæmia, and without any apparent intracranial affection. Increased pressure within the skull cannot be looked upon as a causative agent, for in chronic hydrocephalus, where the intracranial pressure reaches its maximum, papillitis is exceedingly rare. The fact that dropsy of the optic sheath does not always accompany papillitis shows that it cannot be the chief mechanical cause thereof. The conspicuous constriction of the vessels is always in front of the sclerotic. In cases of cerebral tumour, evidence of descending inflammation may be traced in the sheath or nerve much more commonly than is usually supposed; in meningitis this evidence is almost constantly present. The mechanical congestion in these cases does not always result from compression of the vessels behind the sclerotic, but it invariably follows compression from inflammatory exudation in the papilla.

(550) Chronic Interstitial Myocarditis.
AFTER reviewing the history of this subject, MM. Bard and Philippe discuss (*Revue de Médecine*, May, 1891) its pathological anatomy, pathogeny, and etiology. Moderate hypertrophy of the heart is a constant phenomenon, with dilatation of its cavities, particularly of the left ventricle. On section, the colour varies according

to the degeneration of the muscle. The thickness of the ventricular wall is not uniform; it is more especially thin at the apex. The interstitial change is visible to the naked eye in lines or *plaques*. The papillary muscles are particularly affected. Whenever cardiac hypertrophy is present with no valvular disease, myocarditis should be thought of. Microscopically, the patches of sclerosis are made up of bands of fibrous tissue, and the muscular elements are atrophied. If the process is rapid, cellular elements predominate. In the *plaques*, the vessels show a periarteritis; elsewhere there is no constant change found in them. The authors do not believe the disease to be of vascular origin, for the inner coat of the vessel is healthy. In the other viscera the effects of chronic congestion are seen. Many confound this interstitial myocarditis with the sclerosis set up by vascular disease. In the senile heart like changes arise, due to progressive obliteration of the small arteries. As to atheroma affecting the large branches of the arteries of the heart, most often one of the chief trunks near its origin is involved, from which a true angina pectoris may result. Rarely a branch may be completely obliterated, giving rise to necrotic foci. This interstitial myocarditis is not due to hypertrophy the result of valvular disease, for the latter is seldom present. Nor is it the outcome of renal disease, for in purely primary forms of nephritis this diffuse interstitial myocarditis is never seen. Nor is it due to diseases of the lungs, for then the right side of the heart would be chiefly affected. It is really a primary myocarditis. The changes in the muscular fibres are degenerative, without any signs of inflammation, whereas those in the interstitial tissue are active. Thus the changes in the latter are primary. In the course of infective diseases inflammatory lesions are apt to take place in the interstitial tissue, and these may become chronic. Two sets of agents may set up this inflammatory sclerosis of the myocardium: (1) intoxications from alcohol, lead, gout, etc., and (2) infective diseases—enteric fever, diphtheria, pyæmia, eruptive fevers, syphilis, though here the pure interstitial myocarditis must be distinguished from the sclerosis due to syphilitic endarteritis and tubercle. Rheumatism, which may in any of its forms set up myocarditis, occupies as it were an intermediate position between these two classes of diseases.

SURGERY.

(551) Removal of a Large Goitre from an Accessory Thyroid.

Dr. Palmiro Jemoli, in a reprint of a communication made to the Turin Academy of Medicine, on June 6th, 1890, relates a case in which Professor Bottini, of Pavia, successfully removed a very large goitre, of which an accessory thyroid body was the seat. The patient was a woman, aged 52, who had first noticed a tumour in her neck twenty-five years before, during her first pregnancy. It increased in size slowly but steadily, in spite of external applications, but without interfering with breathing and swallowing, till a few months before she came under Dr. Bottini's care, when it began to grow rapidly, and to cause not only dyspnœa and dysphagia, but frequent fainting fits and neuralgia in the neck and arm. On admission the tumour, which was situated on the right side of the neck, was as large as the head of a newborn child; it extended vertically from the mastoid to two fingers' breadth below the clavicle, and transversely from the larynx and trachea almost to the spinous processes of the cervical vertebræ. The mass measured 21 centimetres in its longest diameter, and the circumference of the neck at the most prominent part of the goitre was 50 centimetres. The tumour hardly moved during deglutition, and the skin over it was smooth and thin. No *bruit* could be heard in it, but on its inner side could be felt the strong beat of a large artery, which was judged to be the carotid pushed out of place. All the dangers of the operation having been fully explained to the patient, excision was performed on March 13th, 1890. A curved incision 20 centimetres long was made, reaching from the mastoid to three fingers' breadth below the clavicle. The external jugular vein was divided between two ligatures; and the sterno-mastoid, which it was found impossible to turn aside, was almost completely cut through. Hæmorrhage was so abundant that it was found difficult to separate the tumour from its surroundings, but with the help of forcipressure or "angioclastic" forceps of his own invention, Professor Bottini succeeded in freeing it on the outer side without much loss of blood. On the inner side the difficulty was much greater on account of the displaced carotid artery, which was there adherent to the tumour. After separating the vessel for about 2 centimetres, Bottini judged it inexpedient to continue the attempt, on account of the length of time that would be required to dissect it out, and the almost certain risk of injuring its coats. He therefore decided to tie it and the internal and external carotids above, together with the thyroid and lingual branches of the latter, and remove the intervening parts of these vessels with the tumour. The enucleation of the mass was then completed, the tissues being carefully divided between forceps. After removal an enormous gap was left with the larynx and trachea and the right lobe of the thyroid on the inner side, and the nuchal muscles on the outer, whilst in the bottom of the wound the bodies of the cervical vertebræ could be felt almost bare. In the wound were some twenty-five pairs of forceps, some of which were removed without any bleeding taking place, while in other cases a catgut ligature was placed round the compressed tissue before the forceps was taken off. The upper part of the wound was closed with sutures, the lower being stuffed with "zinco-sulpho-carbolate" gauze. The patient was perfectly conscious when placed in bed, and slept nearly all night, in spite of a good deal of intestinal disturbance which had begun the previous evening and recommenced when she awoke. The temperature, however, was normal, the pulse 76, and the respirations 17. The day after the operation, as the dressing, which was soaked with sero-sanguinolent discharge, was being changed, slight paralysis of the left side of the face came on suddenly. The tongue was deviated to the right, and speech was somewhat embarrassed. The tampon of gauze was taken out, the lower part of the wound was stitched up, and a drain tube inserted. The paralytic phenomena entirely disappeared in a few hours. The sutures were removed six days after the operation, when the whole wound was found healed by first intention. The patient was allowed to get up on the tenth day. The voice, which had been rather hoarse, recovered its normal character, and seventeen days after the operation the woman was discharged perfectly

cured. The mass removed measured 18 centimetres in the long, by 16 in the short, diameter, and weighed 690 grammes. Imbedded in it was a piece of the common carotid 6 centimetres in length, with 4 centimetres of the internal and 2 of the external carotid, the latter having the thyroid and lingual branches springing from it. Microscopic examination showed the tumour to be a cystic bronchocele.

(552) Subcutaneous Rupture of Extensor Tendons of Fingers.

In the *Archives Générales de Médecine*, May, 1891, M. E. Schwartz, of the Hôpital Cochin, of Paris, reports three cases, treated by himself, of subcutaneous rupture of one of the extensor tendons of the hand close to its insertion into the terminal phalanx. This lesion has also been observed by other surgeons, and has been fully studied from both an anatomical and a clinical point of view by M. Delbet. The symptoms of the injury are: marked flexion of the distal segment of the finger, slight swelling and ecchymosis over the last interphalangeal joint, a circumscribed tender spot on the dorsum of the last phalanx, just below the joint, and inability of the patient to extend the last segment of the injured finger, all other movements being unimpeded. In two of Schwartz's cases the injured extensor tendon was that of the little finger, and in the third instance that of the middle finger. In this last case an incision was made over the ruptured tendon, the two ends of which were brought together with a catgut suture. The injury is usually caused by over-flexion of the end of the finger, or by violent traction on the last segment whilst in the flexed position. M. Schwartz is of opinion that in most instances in which the above mentioned symptoms are present, the lesion consists in rupture, either partial or complete, of the extensor tendon. Occasionally these symptoms may be caused by tearing away of the tendon at its insertion into the phalanx or by fracture of this bone, but neither of these lesions, it is held, is so likely to occur as Delbet was led to assume from the results of experiments on the dead body. If a case of subcutaneous rupture of an extensor tendon be left to itself, the last phalanx becomes fixed in the flexed position, and the use of the injured finger is much impaired. The treatment should consist at first in the application of a straight splint to the front of the finger, in order to keep the terminal phalanx fully extended. If this should fail and the patient be unable to extend the end of the finger, after an interval of three or four weeks, the surgeon ought, according to M. Schwartz, to cut down upon and stitch together the divided ends of the tendon. In the case recorded in this paper, the patient when last seen after an interval of six months from the date of operation, had free use of the injured finger, and the result of the treatment, it is stated, was much better than that usually attained by the simple use of splints.

(553) Plastic Operation for Congenital Syndactyly.

Kummer (*Revue d'Orthopédie*, March, 1891) publishes a case of congenital syndactyly in a child, aged 7, in which he operated by the Italian method. The third and fourth (ring) fingers were completely and irregularly united, the only movements being slight flexion and extension in the metacarpo-phalangeal and last interphalangeal joint. The skin incisions were so planned as completely to cover the third finger, leaving a raw surface on the contiguous side of the fourth finger. A triangular flap, after the method of Zeller, was shaped to form the commissure of the two fingers. The second and third phalanges of the fourth finger had to be completely removed and, to straighten the third finger, the joint between the first and second phalanges was resected. The conjoined nail and the first phalanx (which was bifid at its distal end) of the third finger were divided longitudinally in the middle line, one half being left on the third finger, and the other half adapted to the fourth. In the third, as well as in the fourth fingers, the tendons were well formed, and the vessels and nerves were not injured at the operation. A month later cicatrisation of the third finger was complete and the raw surface of the fourth finger was covered with granulations. Kummer now refreshed the edges of the wound of the fourth finger, scraped away the granulations, and formed a flap for covering in the raw surface from the skin of the thorax. The free edge of this flap was attached by suture to the posterior border of the wound along the fourth finger. The hand and arm were then secured to the chest by plaster-of-paris bandages. Nine days later the flap was cut through at its base, and the cut edge was sutured to the anterior border of the wound of the fourth finger, thus completely covering in the raw surface left on that digit. At the end of some weeks the mobility of the metacarpo-phalangeal joint was perfect, though movement was considerably limited in the interphalangeal joints. Sensibility of the third finger was normal, but obtuse in the thoracic flap of the fourth. There was no tendency of the fingers to re-unite. The fourth finger was considerably shortened.

MIDWIFERY AND DISEASES OF WOMEN.

(554) Metritis Dissecans.

Dr. Garrigues (*Archiv f. Gynäkol.*, vol. xxxviii, Part 3, p. 511) relates two cases of this rare and formidable complication of the puerperium. Höchstenbach, not long ago, stated that but twelve cases had been recorded. Dr. Garrigues adds two to a series of six published in the *New York Medical Journal*, vol. xxxvi, 1882, p. 537. He makes out fourteen genuine recorded cases in all. He particularly dwells on the fact that all occurred in the first week after labour. In all, thick and broad pieces of the muscular coat of the uterus exfoliated. In one instance the exfoliation extended through the whole thickness of the uterus, including the serous coat. Of the new cases, the first occurred in a woman aged 28; prolapse of the funis took place and the forceps had to be used. Puerperal diphtheria followed, diphtheritic ulcers forming in the vagina. Douches of boracic acid solution and other remedies brought the patient out of a desperate condition. On the twentieth day, when the patient was convalescent, something was seen hanging from the vulva after the use of the douche. It was found to proceed from the cervix, and was easily extracted with a pair of dressing forceps. It proved to be a piece of the uterine muscular tissue, $2\frac{3}{4}$ inches long, and three-quarters of an inch thick in the middle, but rather thinner at the edges. After the discharge of this fragment, the patient made a rapid recovery. The second patient was 23, and labour was normal. On the second day the fundus was tender to pressure, the lochia rather scanty and

fœtid. There had been slight laceration of the perineum, which was promptly painted with tincture of iodine; by the second day an ulcer spread an inch upwards from the perineum, over the vaginal wall. On the third day abdominal pains set in with tenderness in the hypogastrium and loins. During the next few days the patient got worse, the fundus rose nearly four inches above the pubes, and was very tender. Salicylate of soda in 30-grain doses was given. On the sixth day the patient was collapsed, the temperature fell to 96.5°, the pulse to 80. Alcohol was given. Fever set in again, and ceased about the twelfth day. The patient remained very feeble for weeks. She did not rise from her bed till the thirty-first day. On the thirty-sixth a substance fell, painlessly, out of the vagina, as she lay in bed. She left hospital, well, at the end of seven weeks after labour. The discharged piece of uterine wall was over three inches long and one inch and a half broad. This metritis dissecans is always due to infection. Micrococci have been detected by Grammatikati and others. Dr. Garrigues believes that in pre-Listerian days such cases would have developed into Boër's putrescentia uteri. His own eight cases of metritis dissecans occurred within eighteen months, at a time when he had reason to believe that the antiseptic regulations of his maternity were not properly carried out. As to allied diseases, Dr. Garrigues has seen a fatal case of gangrena uteri partialis, with a characteristic yellow layer of demarcation. The patient was 38, and died a week after labour; the disease seemed purely diphtheritic. The uterus reached high above the pubes and the omentum adhered to it. Kubassow's endometritis dissecans is a disease unconnected with childbed: it is the endometrium that is shed, with but little of the muscular coat of the uterus. Markonnet's perivaginitis phlegmonosa dissecans is also non-puerperal; a portion of the muscular coat of the uterus came away in that observer's cases, but only from the vaginal part of the cervix in connection with the adjacent inflamed vaginal tissues.

(555) Rupture of Tubal Pregnancy at the First Week.

Dr. Bröse (*Centralbl. f. Gynäk.*, Jan. 3rd, 1891) exhibited, at a meeting of the Berlin Obstetrical and Gynæcological Society, a tubal sac ruptured at the first week (*sic*, ? month) of pregnancy. The patient was 34; she had borne two children and aborted twice. In 1887 Dr. Bröse treated her for gonorrhœa, with perimetritis. On November 11th, 1890, she suddenly became acutely anæmic. The period, due on October 12th, did not appear. On October 18th a "show" was observed; it lasted fourteen days. From November 1st to 10th she felt well. The pallor on November 11th was attributed to rupture of a tubal cyst, and she was admitted into hospital. The weak pulse improved. Early on November 14th severe vomiting set in. The abdomen, slightly distended on admission, became enormously swollen, tympanitic, and tender. No flatus passed even after enemata. Abdominal section was performed at noon. The peritoneal cavity was full of clots and dark fluid blood, and the intestines, especially the colon, tense through distension with gas. The gut lay so much in the way, even when the body was inclined with the head downwards (Trendelenburg-Veit position), that much of it had to be raised out of the abdominal wound. No trace of peritonitis could be detected, nor was there any mechanical obstruction. On gentle pressure of the colon, air escaped from the rectum; the tympanites was, therefore, attributed to paralysis of the intestine. A rent, 1 inch long, was found in the thickened right tube, near the uterine end. The ovum was found in a collection of clot in Douglas's pouch. The rent in the tube was covered by coagula, but it no longer bled. The patient died of collapse two hours and a half after the operation. At the necropsy no evidence of obstruction, peritonitis, or sepsis could be found. The precise cause of the paralysis of the gut following the acute anæmia was not certain: perhaps it was toxic, through reabsorption of some of the effused blood.

(556) Acute Torsion of Ovarian Pedicle.

Dr. Mackenrodt (*Centralb. f. Gynäk.*, March 28th, 1891) describes the case of a patient, aged 38, who had been seized on December 16th, 1890, with sudden increase of abdominal pain, from which she had suffered for years. Her abdomen had recently grown larger. On December 17th fæcal vomiting came on, and became frequent on the next day; neither fæces nor flatus passed from the anus. On the 20th, when she was admitted into Dr. Martin's institution in Berlin, she was collapsed and jaundiced; the temperature was normal, the pulse small and frequent. The uterus was pressed against the symphysis by a tumour which reached to above the navel. The abdomen was distended and tender. The legs and abdominal integuments were œdematous. On December 21st abdominal section was performed. A deeply congested ovarian tumour, strangulated by torsion of its pedicle, was found and removed. The entire surface of the peritoneum in the hypogastric and pelvic regions was dark blue from congestion. As there were no adhesions the operation was not difficult. The pedicle, about 2 inches broad, was twisted one turn and a half around its axis. Recovery was rapid. It is remarkable that, notwithstanding the severe symptoms of strangulation and peritonitis, there was no rise of temperature, yet the pulse was much affected. The tumour was a dermoid ovarian cyst; free hæmorrhage into its cavity had occurred.

(557) Velamentous Insertion of the Cord.

Dr. Addison Foster (*American Journal of Obstet.*, April, 1891) read notes of a case of this complication before a recent meeting of the Gynæcological Society of Chicago. The patient, aged 26, had a lingering and painful but otherwise natural labour. The child was delivered with considerable flooding, and was blanched. The flooding continued till the expulsion of the placenta, which took place without any difficulty. The umbilical cord entered the membranes opposite the placenta, and, dividing and spreading, passed to the edge of that structure, where it divided still more into branches, which ran over the placental surface. One large vein, about 4 inches from the margin of the placenta, was ruptured. Dr. Foster believed that it was the seat of hæmorrhage. Dr. Jaggard, in discussing this specimen, pointed out that the case was typical; the cord was inserted into the chorion at the pole of the ovum opposite to the placenta. The anomaly did not appear to affect the development of the child or the course of the labour.

DISEASES OF CHILDREN.

(558) Treatment of Encephalocele.

M. A. Broca contributes (*Rev. des Maladies de l'Enfance*, June, 1891) a note on the treatment of encephalocele. He starts with the proposition that patients with encephalocele are doomed to an early death or to become idiots. He utterly condemns treatment by pressure or by puncture and injections of iodine; in those children who escape suppurative meningitis after such treatment the tumour very seldom diminishes, much less disappears. He recommends excision. The base of the tumour is reached by a double incision leaving two small flaps to be used for closing the wound. He condemns incision of the tumour as liable to lead to serious consequences owing to subsequent draining away of cerebro-spinal fluid; he prefers to place a ligature around the base at the deepest point which can be reached. He does not speak decidedly as to the necessity of suturing the periosteum. He thinks that the fear of removing important quantities of the cerebrum may be set aside. The substance of the encephalocele is not often a portion of the cerebrum proper but is a true tumour. In König's case, in which it looked very like a mass of cerebrum, it turned out to be telangiectatic glioma surrounding a very small quantity of cerebral tissue: in Berger's and Périer's cases it was a "cerebroma." In Picqué's case, however, though the encephalocele consisted of a cystic dilatation of a portion of the occipital lobe and the cerebellum, the patient recovered, and, in M. Broca's opinion, would have been in a worse case if untreated. Sufficient time has not yet elapsed to permit the formation of a definite opinion as to the subsequent mental development of these children after excision. In Berger's case, in which a cerebroma was removed, the child, at the age of 18 months, appeared to be of "sufficient" intelligence. As much cannot be hoped in cases such as Picqué's, but the diagnosis of the contents of an encephalocele being impossible it is desirable to operate by excision in all cases. The age at which operation has been performed has varied from a few days to some months, but most of the children less than one month old have died. Strict antiseptic precautions should be observed, several of the deaths having been due to the wound becoming septic.

(559) Convulsions as a Cause of Cerebral Hæmorrhage in Early Life.

Ashby (*Practitioner*, June, 1891) refers to the difficulty of determining whether in those children who are hemiplegic, and who give a history of severe convulsions, these caused minute hæmorrhages which gave rise to the convulsions, or whether the convulsions and the hemiplegia were both caused by hæmorrhages. He is inclined to think that often the convulsions are the cause of the hæmorrhage, and he gives the following case to support this view. A child, 12 years old, was brought to the hospital suffering from right hemiplegia. The history given was that at the age of 2 years he had several severe convulsions attributed to indigestion; before these he was apparently quite healthy, but afterwards it was noticed that the right arm was useless, and he dragged the right leg. Until the age of 10 he had many fits, but since then he has been free. He died of tuberculosis a few months after admission. The brain appeared healthy when examined externally, but on section several small old blood cysts were found in the neighbourhood of the corpora striata on both sides, but they were very much larger on the left side than the right. Dr. Ashby believes that at the age of 2 the convulsions gave rise to the hæmorrhages, and the paralysis supervened upon them, for there is nothing whatever to indicate that any thrombosis, embolism, or arteritis could have caused the hæmorrhages.

(560) Occlusion of Duodenum in a Newborn Child.

MM. Porák and Bernheim (*Bull. et Mém. de la Soc. Obstét. et Gynéc. de Paris*, No. 4, April, 1891) describe a case where a woman was delivered at the eighth month of a sickly female child. There was hydramnios, and over six pints of fluid came away during labour. There were two small fibrous deposits in the placenta. On the first day the child vomited dark matter, each attack of vomiting coming on about three-quarters of an hour after suckling. On the third day, as no meconium had passed, imperforate rectum was suspected; but a sound could be passed for over two inches up the anus. An enema was given, and a little meconium came away; but the vomiting continued, and the infant died on the fifth day. The stomach was found much dilated; the lower part of the large intestine was full of meconium, but the remainder of the intestinal canal was like a little packet of worms. The stomach communicated by a contracted orifice, apparently the pylorus, with a blind pouch which had no connection of any kind with the rest of the intestine, which terminated above in a blind extremity close to the pancreas, which opened into it. In a similar case reported by Crooks in 1828, the pancreatic duct opened into the pouch connected with the stomach. Luton described in 1855 a third case where that pouch communicated with the blind end of the intestine by a ligament. There was a similar breach of continuity between the large and small intestine. No trace of peritonitic bands could be seen in Drs. Porák and Bernheim's case.

PHARMACOLOGY AND THERAPEUTICS.

(561) Hypodermic Injections of Goat's Blood in Tuberculosis.

MM. Bertin and Picq, of Nantes, lately published (*Gazette Méd. de Nantes*, April 12, 1891) some cases in which they obtained good results from hypodermic injections of goat's blood in tuberculosis. Their cases, at the date reported, numbered 50, but only 22 are reported in full. These include 17 cases of internal tuberculosis (in one case complicated with lupus of the face), in 11 of which great improvement followed the treatment. Temperature fell, night sweats and expectoration ceased or diminished to a marked degree, physical signs cleared up, appetite was recovered and weight was gained. In two cases the injections caused abscesses; in the one complicated with lupus, the latter condition was much improved, but nothing is said as to the pulmonary affection; 2 patients died, but in each of these the disease was far advanced before the treatment was begun. In one of the latter cases a careful dissection was made at the site of injection and no trace of the injected blood could be found either in the subcutaneous connective tissue or in the subjacent muscle, thus proving according to the authors that the whole of it had been absorbed. In 1 case (treated by

Dr. Cayrol) no improvement was noted after the first injection, except that the temperature became normal for four days. Of the 5 cases of external tuberculosis (sacrum, bones of hand and leg, hip-joint with resection of upper end of femur, Pott's disease, bones of foot with affection of lung) the improvement was not so marked, but yet the general condition was improved while locally there was diminution of suppuration, and in some cases healing. The *modus operandi* was to inject the goat's blood with a Pravaz's syringe into the gluteal region with due antiseptic precautions. The usual amount injected was 15 grammes, and the average interval between the injections was a fortnight.

(562) Adaptation of Different Organs to the Prolonged Use of Atropine.

LITTLE is at present generally known concerning the effects of the prolonged use of atropine. The most extensive experiments on this subject were made by Anrep (*Pflüger's Archiv*, Bd. xxi), who observed that in dogs tolerance of the drug was easily producible especially on the part of the nervous system and of the heart. He concluded that repeated injections of atropine gradually paralysed the vagus endings in the heart, and that the motor ganglia were also depressed, so that the heart reacted less and less to the drug; finally, the heart became weakened, and was no longer able to acomplish the same number of beats as in the normal state. Dr. Luigi Sabbatino (*Lo Sperimentale*, May 15th, 1891) has brought fresh evidence to bear on this subject, and has come to the conclusion that some of Anrep's results are only partially true. He finds (1) that the vagus adapts itself to the action of atropine, so that small doses which will at first paralyse it completely will, after a few repetitions, fail to produce paralysis; (2) that the adaptation of the heart to the drug is not due to depression of the motor ganglia, for, in his experiments, the heart-beats never slowed after the injections, but, on the contrary, were always quickened. His experiments were more extensive than those of Anrep, and were performed on frogs, rabbits, and dogs. The observations on frogs were made by immersing the animals for several days in water containing 0.08 per mille of atropine sulphate. Every four or five days a frog was removed, and the excitability of its vagus tested. At first no arrest of the heart could be produced on stimulation, but, after several days' immersion this was again possible; the sinus and auricles could be arrested, while the ventricular pulse became slowed. He therefore concluded that in frogs the paralysing action of atropine on the vagus diminishes with prolonged use. The experiments on rabbits (animals little susceptible to atropine) were made by giving daily and increasing injections of the drug. The animals remained perfectly well, and, on testing the irritability of their vagi this was found to be almost normal after repeated injections, whereas single doses completely paralysed the nerve. In rabbits, then, after prolonged use, atropine loses much of its paralysing effect on the controlling mechanism of the heart. In dogs, experimenting in the same way, he found that even after a considerable time large doses would completely paralyse the vagus; but that small doses, sufficient under ordinary circumstances to paralyse it completely, would produce only a slight diminution of its irritability, so that stimulation of the nerve then produced not arrest, but only slowing of the heart. In these animals, therefore, the power of adaptation is not so complete as in frogs and rabbits, but is still marked. As regards the action of the heart, Dr. Sabbatino found that the first effect of an injection was to increase the frequency of its pulsations rapidly up to a maximum; this maximum was, however, of short duration, not usually lasting more than ten minutes, after which a diminution commenced, at first rapid, then more gradual, so that even twenty-four hours after injection the pulse rate did not quite return to normal. Thus the drug produces a great frequency of the pulse, of which part is only temporary, and the remainder of long duration. Four hypotheses may be advanced to explain the above; stated briefly, they are as follows: (1) It may depend on the mode of elimination, which may be at first rapid, and then slower (this would not explain, however, the fact that, with repeated injections, the acceleration produced by each dose is less marked and less prolonged). (2) The drug may not only paralyse the inhibitory but it may excite the accelerator mechanism; and this view receives some support from the fact that the injections are followed by evident excitement of the nervous centres, which may also excite at first the accelerator centre in the medulla. (3) The third hypothesis is that of Anrep, who imagined that a depression of the intracardiac ganglia coming on after that of the inhibitory apparatus might account for the subsequent gradual slowing. (4) The last and most probable hypothesis is that the great initial frequency is due to the transitory increase of blood pressure produced by atropine. The inhibitory apparatus being paralysed, the increased pressure would act as a stimulus to the heart, at first strong, but gradually becoming feebler with the fall of pressure; the accelerator centres may also be at the same time stimulated. From the diminishing effect of repeated doses, the author thinks that with use atropine loses this excitant action on the accelerator mechanism. As regards the action on the nervous centres, he agrees with Albertoni, who concluded (*Arch. f. exp. Path. u. Pharm.*, 1882) that atropine at first increases the excitability of the brain, but that with repeated doses the excitability is neither so great nor does it diminish the possibility of producing epileptiform convulsions by stimulation of the cortex. The motor apparatus of the iris appears to be usually completely paralysed, although in one rabbit, after several injections, exposure to a strong light would produce constriction of the pupil. This observation would correspond to the slight susceptibility of these animals to atropine. Some interesting observations were made on the prolonged action of the drug on the secretion of saliva and of sweat. The first few doses would completely mask the effect of pilocarpine subsequently given, but finally a tolerance seemed to be set up, so that pilocarpine would then produce a free flow of saliva and sweat. The tolerance of these mechanisms is therefore considerable, but is not prolonged much after discontinuance of the drug, for a further injection after an interval is found to be as powerful as ever. Finally, observations on dogs show that the intestinal nerves also exhibit to some extent a tolerance for atropine. At first the drug produced much intestinal irritation and diarrhœa, but this usually passed off after a few days, unless the dose was increased.

(563) Antipyrin as a Hæmostatic.

PROFESSOR G. CESARI, of Modena, gives the results of some experiments on the hæmostatic influence

of antipyrin applied locally (*Rassegna di Scienze Mediche*, February, 1891). He says antipyrin applied to an injured blood vessel or to living tissues, whether in the form of fine powder or watery solution, does not irritate or dry or produce any caustic effect on the tissues or cause pain. It gives rise to local anæmia more or less marked according to the length of time the agent is applied. A 50 to 100 per cent. watery solution produces no change in the calibre of capillaries; but if made to bathe the veins of the mesentery of a frog or the jugular or femoral vein of a rabbit, more or less perceptible narrowing of these vessels can be observed. When a 50 per cent. watery solution is applied to the frog's mesentery the circulation in the capillaries is first slowed, and afterwards arrested; if the experiment is prolonged, the circulation in the larger blood vessels is gradually stopped. While the small vessels of the mesentery and lung in the frog, and those of the ear and skin in the rabbit, become almost bloodless, after an application of a 50 to 100 per cent. solution, the larger vessels become dark red in colour. Mixed with blood just drawn from the veins of a man or rabbit, antipyrin acts in different ways according to the concentration of the solution. If that is less than 20 per cent., the blood if placed in a test tube acquires a persistent red colour; and, if slight coagulation occurs, this disappears at once on merely shaking the fluid. If the same blood is mixed with 30 to 100 per cent. solution the colour is less dark; the blood remains liquid at the temperature of the laboratory, but if kept at a temperature of 38° C., it acquires a syrupy consistence and appearance, and the test tube can be turned upside down without a drop of blood escaping, though there is no trace of coagulation. Antipyrin does not lower or in any way alter the blood pressure. To sum up, antipyrin more or less speedily arrests hæmorrhage from both large and small bloodvessels when applied in solutions of not less than 40, or, better, 50 per cent. The effect of the application of solutions of the latter degree of concentration is almost equal to that of the finely powdered drug. Both the solution and the powder should be applied on plugs of cotton wool. Antipyrin, in short, if placed in contact with blood at its normal temperature, thickens and condenses it, and, without causing coagulation, prevents it from escaping from the vessels. It stops secondary hæmorrhage, and is altogether, according to Cesari, a most valuable hæmostatic.

PATHOLOGY.

(564) Coccidia.

M. Le Dentu (Report of the Fifth Congress of Surgery at Paris, *Semaine Médicale*, April 11th, 1891) made a report on results obtained by his laboratory assistant, M. Fabre-Domergue. In scrapings from fresh cancerous tissue treated by various reagents and methods three types of the bodies described as coccidia were found. In epitheliomata they occupy the centre of the "epidermic globe," and constitute its nucleus. This body is a simple cell of the rete mucosum which hypertrophies, then the protoplasm retracts, the nucleus becomes less distinct, nucleus and cell become striated, the protoplasm becomes absorbed, and both disappear. In the absence of the "epidermic globe" only the large cell may be found, which represents the so-called coccidium; or only cellular *débris* may be found. After a study of these transformations M. Fabre-Domergue concludes that the bodies described as coccidia are only epithelial cells modified and fixed in various phases of their evolution. M. Albarran, in criticising M. Fabre-Domergue's statements, admitted that epithelial cells simulated coccidia, but held that true coccidia existed in the diseased conditions in which they had been described. He stated that he had found them in cysts of the upper jaw, where their epithelial origin was impossible.

(565) The Tail in Human Subjects.

Dr. Oscar Schäffer (*Schmidt's Jahrb. der Gesammt. Medicin*, No. 5, 1891) describes cases where a tail was developed in the human subject. In all, however, the subject was a fœtus with distinct malformations. In the first the caudal appendix was over one inch and a half in length, but was not developed from the coccyx, nor even connected with it. The "tail" arose as a fibrous band, beginning above the left sacral cornu, and probably represented the ligamentum sacro-spinosum. The fœtus had atresia ani et urethræ, defective development of the heart and genito-urinary organs, and club hands. In the second case the fœtus was anencephalous. The tail was two-fifths of an inch long, and ran to a point which bore a tuft of hair. Much fat lay between the tail and the coccyx. In the third and fourth cases the fœtuses were phocomelous, and the "tails" but slightly developed. Thus the "tails" in the above four cases were not true caudal appendages, bearing a continuation of the vertebral column.

(566) The Part Played by Microbes in Suppuration.

In the course of a discussion at the recent French Congress of Surgery on the different forms of suppuration examined from bacteriological and clinical points of view, the following conclusions were laid down by M. Verneuil (*Revue de Chirurgie*, May): (1) microbes are necessary for pyogenesis, pus is the function of microbes; (2) there are many known pyogenic microbes, but the number of these has not yet been made out; (3) some are constantly pyogenic and nothing more, others seldom produce pus and are pre-eminently infective; (4) the centres of suppuration are in some instances mono-microbic, in others poly-microbic; (5) in poly-microbic purulent centres there are three kinds of association—one of different agents that are all invariably pyogenic, another of invariable with occasional agents of suppuration, and a third of pyogenic with non-pyogenic agents; (6) a purulent centre originally mono-microbic may become poly-microbic; (7) a substitution of one kind of microbe for another kind may take place in a centre of suppuration; (8) the collection of pus may become amicrobic, the pyogenic agent may disappear and the pus become sterile; (9) microbes which engender pus pervade the whole region of suppuration; (10) pyogenic microbes do not always excite suppuration nor at the time of invasion; (11) the vitality of pyogenic microbes varies in the different forms—some disappear very quickly, others retain their vitality for almost indefinite periods; (12) suppuration may in every instance be regarded as due to the presence of bacteria; (13) the specificity of microbic agents being assumed, it becomes necessary to make out the specific action of each form of microbe. From these etiological conclusions one may readily deduce certain therapeutical indications: (1) In cases of open suppuration, as, for instance, unhealed wounds and carbuncle, the treatment

should consist in prolonged antiseptic baths, and in the application of antiseptic powders; (2) if the suppuration be intradermic, as in lymphangitis and erysipelas, the application of antiseptic powders will suffice; (3) if the suppuration be deep seated, one must penetrate into the collection in order to evacuate the pus and to sterilise it. Free incisions are useless; all that is necessary is to let out the pus through a small incision, and to replace it by a microbe-killing agent.

BACTERIOLOGY.

(567) Milk and Diphtheria.

E. KLEIN (*Nineteenth Annual Report of the Local Government Board*, 1889-90, p. 167) inoculated two milch cows (both of which had calved three or four weeks, and then had been kept under observation for a week or ten days) with a broth culture of the bacillus diphtheriæ derived directly from human diphtheria membrane, which had been incubated for three days at 37° C. On the third day he found at the seat of inoculation (under the skin of the left shoulder) a swelling containing clear sanguineous serum; this was preceded by a temporary rise of temperature. On the fourth day a small group of vesicles occurred on one teat, and on the udder near to it. On the succeeding days these vesicles lost the clear vesicular appearance, became purulent, and the centre became dark, whilst at other stages they were covered with brown crusts. Around each was distinct nodular induration of the skin, and each was placed on a raised injected corium. On removal of the crusts an ulcer covered with a purulent film was left. The pustules and ulcers varied in size from $\frac{1}{8}$ inch to $\frac{1}{2}$ inch or more in diameter; most of them were on the udder between the hind teats, but some were on the outer surface of the udder near to the base of the teats; they still continued to appear on the eighth day. The most marked feature about these was that they ran their course in from six to eight days. In the lymph of these vesicles and pustules Klein succeeded in demonstrating the bacillus diphtheriæ, both under the microscope and in the culture tube. With milk taken from these cows cultures were also obtained, though not in large numbers. If the milk was allowed to stand at a temperature of from 19° to 20° C. the organism was found in enormously increased numbers. One of the cows died on the fifteenth day, the other was killed on the twenty-fourth, when marked *post-mortem* changes were found: necrosis and œdema at the point of inoculation, enlargement of the lymph glands, pneumonia, enlarged spleen, necrotic patches in the liver, and fatty degenerative changes in the kidney. Organisms were found only at the point of inoculation. Calves inoculated with scrapings of the eruption of the cow developed similar symptoms, but no vesicles were formed. Cats fed on milk from the affected cows died with typical diphtheria, and communicated the disease to other cats placed in the same room, typical diphtheria bacilli being found in the diphtheritic membranes of these animals. The last experiment was not specially arranged, and thus loses and gains in value as it is considered from different points.

(568) Bacillus resembling the Leprosy Bacillus.

CAMPANA (*Riforma Med.*, No. 14, 1891) found in cultivations of tissue from tuberculous leprosy a bacillus which morphologically entirely resembled the leprosy bacillus. Treated by Ehrlich's method, it did not take on a double staining. In two cases this bacillus grew in agar-agar and in meat peptone with 3 per cent. grape sugar. It did not grow in fluid media. Inoculated on rats, no result followed. The author does not infer that this bacillus is identical with the leprosy bacillus, finding only a resemblance between the two.

DERMATOLOGY.

(569) Varieties of Urticaria.

DR. BEATTY (*Brit. Journ. of Derm.*, May, 1891) describes a case in which a lady, aged 23, after suffering from urticaria, had a second eruption consisting of extremely irritable papules, from 2 to 6 millimetres in diameter. The papules after a few days became flattened, first at the periphery, and then at the centre; brown pigmentation took place at the periphery, and the centre became pale. The papules did not develop as wheals, but were independent of them. They remained itchy for a long time, and some of the old pigmentary spots, having for a time ceased to be irritable, became irritable again. A few elongated patches formed, with a pigmented periphery and white elongated centre. The papules continued to appear after the wheals had ceased to form. Dr. Beatty associates the case with two cases previously published by him in the *Trans. Acad. Med. in Ireland*, vol. ii, p. 37, 1884, and considers that urticaria associated with pigmentation may be divided into three groups—namely, urticaria pigmentosa; ordinary urticaria, or urticaria papulosa of children, followed by temporary brown pigmentation; and urticaria, in the course of which occur, sometimes quite independently of the wheals, extremely itchy papules, which on subsiding leave either pigmentation only, or more commonly a zone of brown pigmentation, with a white pigmentless centre. These papules continue to come out after the wheals have ceased to appear. The pigment may eventually disappear, and white pigmentless spots remain. The disease may occur after childhood.

(570) Three Cases of Lupus Vulgaris in one Family.

DR. DENT (*Brit. Journ. of Derm.*, May, 1891) describes three cases of lupus in a family which consisted of eight girls and three boys, the patients being the youngest of the girls. There was no phthisical taint in the family. The three children for some years slept together in the same room, the two elder for a time in the same bed.

(571) A New Variety of Grouped Acniform Eruption of the Face.

MM. HALLOPEAU and CLAISSE (*Annales de Derm. et de Syph.*, April, 1891, p. 329) showed at the Paris Society of Dermatology a case in which there had been a sudden development of papules on the face. They were hard, hemispherical, painless, and were isolated or in groups. Some suppurated, none disappeared within seven weeks, and they were present only on the face.

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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(572) Hereditary Tuberculosis.

AFTER referring to the important part played in infantile tuberculosis by the increasing habit of artificial feeding, M. Landouzy (*Revue de Médecine*, 1891) protests against looking upon all cases of tuberculosis as arising after birth; nor does he think that the question of heredity is one of suitability of the soil alone, but also of actual bacillary infection. In the transmission of variola, whooping-cough, syphilis, etc., to the fœtus, the same difficulties are not raised as in tuberculosis. The author and M. Martin proved experimentally in 1883 that inoculation from a fœtus born of a phthisical mother, and yet with no naked-eye tuberculous lesions, would produce tubercle in guinea-pigs. The recent case reported by Birch-Hirschfeld and Schmorl, where tubercle bacilli were found in the placenta, and also in small numbers in the fœtal liver, is referred to. These results resemble those obtained by Johne and by Malvoz in the case of the fœtal calf. They also agree with the experimental evidence as to the transmission of the anthrax bacillus through the cow to the calf. The rarity of tuberculous lesions themselves in the fœtus is perhaps not so astonishing. The fœtus is "bacillised," but time is needed for the bacilli to grow and fructify. If this delay in their development be granted, then hereditary tubercle resembles hereditary syphilis, but it occurs later. Thus it may be understood (1) that such a fœtus can convey tuberculosis, by inoculation and (2) that the presence of bacilli (bacillosis) in the infant gives rise to vague symptoms referred to teething, cold, etc., and later to any of the various tuberculous lesions. The question is next considered as to whether the fœtus may be infected from the paternal germ, the mother remaining healthy. M. Landouzy refers to a remarkable case showing that this may occur. Hereditary tuberculosis should be studied under two aspects: (1) Typical forms. The fœtus is born not only capable of receiving the bacillus, but actually containing it. The development of the bacillus may be hastened or retarded by many circumstances. (2) Atypical forms. This consists really in the transmission of a veritable diathesis. It is supposed to be due to a bacillary toxæmia, the fœtus having escaped the bacillary infection. It is a condition in which not only is no immunity against tubercle conferred, but the tissues are prepared for the reception of the bacillus. The author points out the multilethality of the offspring of the tuberculous father—how the fœtus arrives at term with difficulty, or the infant dies of so-called congenital debility at an early age, and with no special symptoms or anatomical lesions. M. Landouzy says that tuberculosis and marriage, like syphilis and marriage, is a question of social hygiene.

(573) Subcortical Alexia.

ADLER (*Berliner klin. Wochenschr.*, 1890, No. 16) records the case of a patient, aged 52. He had an attack of apoplexy, which was probably due to embolism. There was no previous history of mental deficiency. The attack lasted two minutes, and there was no disturbance of consciousness. There were movements of the head and the left arm. After the attack he remained in an aphasic condition, which at the end of two months had improved very little, and it appeared that the particular variety was that which Wernicke has described as subcortical alexia. The symptoms were uncertainty of seeing correctly letters when he tried to copy them, although he wrote correctly from dictation; there was some colour blindness; he knew objects perfectly well although he could not name them; complete right hemianopsia was present. The author supposed the following lesions to exist: destruction of the optic fibres in the left occipital lobe, interruption of the path from the right optic cortex to the left speech region, and destruction of the commissural fibres between the two occipital lobes.

(574) Virulence of Human Saliva in Hydrophobia.

AT a meeting of the Société Médicale des Hôpitaux on May 8th (*Semaine Médicale*, May 13th, 1891), M. Chantemesse, replying to a question asked at a previous meeting by M. Dumontpallier, said experimental evidence proved that the general belief that the saliva of a man suffering from hydrophobia could not propagate the disease was erroneous. So far back as 1821 Magendie had, in conjunction with Breschet, made an experiment on the subject by injecting the saliva of a man who died of hydrophobia in the Hôtel Dieu under the skin of a dog. The animal developed rabies in a month, and two dogs bitten by it became rabid in forty days, whilst others remained well. This was a good illustration of the fact that the disease does not necessarily follow the infliction of a bite in all cases; as in the case of other infectious diseases, questions of dosage, penetration of the virus, individual resistance, etc., have to be taken into account. Thus of 100 persons bitten by rabid animals, and not submitted to Pasteur's treatment, the number who die of hydrophobia varies from 60 to 16. M. Chantemesse added that Magendie's experiment had been confirmed by M. Pasteur and also

by M. Roux, the latter of whom had obtained positive results by inoculating portions of the pancreas, parotid, and lachrymal gland from men who had died of hydrophobia. M. Bardach, of Odessa, had also shown that the pancreas and parotid of persons suffering from the disease contained the virus. M. Rendu said the important point was whether the disease could be transmitted by man to man. He did not think there was a single authenticated case of a man suffering from hydrophobia having given hydrophobia to another by biting. M. Chantemesse agreed that no example of this had been recorded, but he insisted that as human saliva contained the rabic virus, the possibility of such a mode of transmission of the disease could not be denied. If it had not yet actually occurred, that was because the conditions favourable to such transmission (quantity of virus, sharpness of teeth, etc.) had not been fulfilled.

SURGERY.

(575) Gastrostomy for Cancer of the Œsophagus.

In a paper reprinted from the *Bull. de la Soc. Anat.*, t. v., p. 117, M. Henri Hartmann, of Paris, advocates gastrostomy as a beneficial, and, if performed in a certain way, a fairly safe operation in cases of cancer of the œsophagus. The procedure, which, according to the author, is easy in execution, free from serious risk, allows the formation of an alimentary fistula, does not produce any apparent deformity, and gives perfect relief to the patient, is held to be indicated in cases of cancerous structure of the gullet as soon as the disease has advanced to such an extent as to render the passage of fluid nourishment into the stomach difficult. The operation not only saves the patient from death by inanition, but it also relieves pain very considerably, and, at times, suppresses troublesome symptoms by preventing further irritation of the diseased structures through the contact of food. This last-mentioned favourable result of gastrostomy is compared with that which so often follows inguinal colotomy performed in cases of malignant stenosis of the rectum. M. Hartmann has been led to take this favourable view of gastrostomy in cancer of the œsophagus by the results of the operation as performed in a particular way by M. Terrier. The main points in this operation are the following: (1) To pass the sutures which fix the stomach to the external wound under the serous and part of the muscular coat without perforating the mucosa, so as to avoid septic inoculation along the threads; (2) to make the opening as small as possible; (3) to drag out the edge of the mucosa and to turn it over and stitch it to the edge of the skin, so that it forms a border around the artificial opening. If this method be practised the surgeon can, it is asserted, complete the operation at once, and without waiting for the formation of adhesions between the two layers of peritoneum. The author, in considering the best way of preventing subsequent discharge of gastric juice from the artificial opening and troublesome erythema of the surrounding skin, agrees with Terrier in his objections to the use of any kind of plug. Such instruments have, it is stated, a tendency in most instances to cause dilatation of the fistula. If the gastric opening be small, it will remain a closed one, and allow no external discharge of the fluid contents of the stomach. This has been observed in many cases of wound of the stomach, especially when the injury has been caused by a revolver bullet. In such cases, notwithstanding the existence of a wound, the stomach may remain distended by food and gas.

(576) Reimplantation of Bone in Trephining.

In the *New York Medical Journal* of May 16th, Dr. Robert F. Weir reports a case in which much improvement followed an extensive trephining operation performed, in February 1887, for the relief of severe traumatic epilepsy. Three one-inch discs were removed from the frontal bone, and the intermediate portions cut away until a single large orifice was formed, which measured three by two inches. At the end of the operation the three bone discs, which had been preserved meanwhile in a warm antiseptic solution, were replaced, and the interstices pulled up by the smaller fragments of bone. The patient having again come under the notice of Dr. Weir after an interval of four years, the implanted pieces of bone were found to be firmly fixed, and not until after close inspection could there be seen a slight pulsation. The bony surface corresponding to the seat of operation was somewhat sunken, or rather it is thought had not retained the natural curve of the skull. The slight yielding of the implanted mass, observed in this case and shown by the pulsation, is thought to be the result of some absorption of bone. Dr. Weir believes that under certain circumstances such yielding would be likely to prove beneficial, as reflection has led him to believe that in cases of neoplasm or other lesions in which intracranial pressure is apt to be again developed, the patient should not be deprived of the safety valve of a permanent cranial opening with a distensible skin covering. As is now well known, Dr. Weir states that necrosis of replaced pieces of skull in trephining operations, though a possible, is yet a very exceptional, result. To secure proper solidity, the reunited fragment should touch the margins of the cranial opening, and the small chips of bone filling up the gaps should also touch this or each other.

(577) Amputation under Cocaine.

Dr. E. C. Rhodes (*Occidental Med. Times*, March, 1891) reports a case in which he performed amputation through the wrist, using cocaine as an anæsthetic. The patient was a labourer in a mill, whose right hand had been crushed in attempting to couple two loaded cars. Chloroform was first given from a paper cone containing absorbent lint, on which was poured about a drachm of the anæsthetic, the cone being about one inch from the face, so as to give the patient plenty of air. After two or three inhalations respiration stopped, while the pulse remained good. Three attempts were made to bring the man under the influence of chloroform, each time with the same result. Ether not being at hand, it was determined to try cocaine. A 20-minim hypodermic syringe having been filled with a 5 per cent. solution, 5 minims were injected into the dorsal and 5 into the palmar surface of the wrist. No bandage, compress, or tourniquet was used above. After five minutes the injections were repeated in the same doses and almost in the same spots. Dr. Rhodes then immediately began the operation without professional assistance. The patient reclined in a chair, looking away and talking throughout the operation; he did not complain of pain except during division of the deep tissues on the palmar side of the wrist. When the am-

putation was completed a 10 per cent. solution of cocaine was applied to the open wound for about two minutes before it was closed. "The patient arose from the chair, expressed himself as feeling very much better, walked out of the office, got into the buggy, rode 2½ miles to the mill, ate a good big dinner, and never kept his bed a day nor missed a meal from the effects of the operation." Shock had disappeared, and Dr. Rhodes asks if this was due to the cocaine.

MIDWIFERY AND DISEASES OF WOMEN.

(578) Precipitate Labour.

Dr. P. Strassmann (*Deutsche med. Wochenschr.*, No. 44, 1891) observes that this term has been indifferently applied to rapid labour in the purest physiological sense, and also to cases where the patient, through ignorance, has been suddenly seized with labour pains, and, not knowing their signification, has allowed birth to occur without necessary assistance. Even concealed labour, with criminal intent, has been ranked as "precipitate," and, for obvious reasons, the clinical history of true precipitate labour is of importance in medical jurisprudence. Thus, Dr. Strassmann refers to a case in the Giessen Maternity where a woman was very suddenly delivered without knowing her condition. In a second case, bearing-down pains were taken for a desire to defaecate. The patient therefore sat over a pail, into which the child was born. In a third the patient was asleep until ten minutes before delivery. A precipitate twin-labour is also recorded. As universally admitted, precipitate labour is due either to a large pelvis and readily dilatable soft parts or to vigorous action of the uterine muscle. The children are, on the average, smaller and lighter than infants born in labour of natural length. Though the maternal pelvis is usually capacious Dr. Strassmann has observed one case of precipitate labour where the pelvis was of the flat rickety type. The risk to the child's life is slight, though trifling damage to the cranium is frequent. Fatal hæmorrhage from the cord is rare, in consequence of the low blood pressure in the funis after the establishment of respiration; besides, the cord is often torn through. Ruptured perineum is the commonest injury to the mother in these cases. Flooding after delivery is rare, and in the Giessen Maternity the puerperium was usually normal. There was little or no fever.

(579) Persistence of Pregnancy after Intrauterine Manipulations or Death of Fœtus.

Dr. Augustin Goelet (*Archives of Gynæcology*, May, 1891) recently exhibited, at a New York society, a macerated fœtus, a remarkable instance of the retention of the fœtal sac in the uterine cavity for four months, during the whole of which time there was persistent and, at times, profuse hæmorrhage. It was finally expelled, after tamponing the vagina to control the hæmorrhage. The patient applied for treatment for the flooding, giving a history of pregnancy commencing seven months previously, and a supposed miscarriage at the third month. The sac was intact and perfectly aseptic; the only evidence of the fœtus was the semblance of the head. Dr. Goelet quotes a case, reported last year by Dr. Vickery, where pregnancy continued in spite of intrauterine manipulation (*Boston Med. and Surg. Jour.*, p 413, 1890). The patient was a multipara, nursing a child six or eight weeks old. She observed suppression of menstruation, and therefore took tansy tea and turpentine, but without result. An English catheter was then obtained, and daily efforts made for about three weeks to pass it into the womb to interrupt pregnancy. The patient thought that she had succeeded because a constant uterine hæmorrhage resulted. A physician was called, and pregnancy not being suspected the patient was given ergotin, in all 72 grains, and the vagina was tamponed. As it was supposed that the placenta had been retained from the previous labour, he curetted the uterus, and then applied tincture of iodine to the endometrium. Hæmorrhage continuing, a gallon of hot water was injected three times daily for four days. Dr. Vickery, when called in consultation, found the fundus of the uterus near the umbilicus, pregnancy undoubtedly existing. Labour was then induced, and a five or six months' fœtus was expelled. The woman escaped septic infection or any permanent injury.

DISEASES OF CHILDREN.

(580) Washing Out the Stomach in Children.

Dr. Troitzky, of Kieff, reports (*Arch. f. Kinderhlk.*, 5 u. 6; *Münch. med. Woch.*, June 9th) excellent results from washing out the stomach in children. His report deals with sixty-four cases. He used a Nélaton's catheter, and injected either boiled water or a 1.5 to 2 per cent. solution of benzoate of soda. He considers the method particularly valuable in the early stages of gastric and intestinal disorders, preventing them from becoming serious. The most rapid results were obtained in simple gastric dyspepsia without fever; longer treatment was required in gastro-intestinal, and still longer in intestinal, dyspepsia. In chronic dyspepsia also, prolonged treatment was necessary and ordinary internal remedies were also needed. In acute specific gastritis and enteritis and acute diarrhœa, washing out of the stomach was of use as an adjuvant.

(581) Tachycardia: Incipient Graves's Disease.

At a recent meeting of the Section of Pediatrics of the New York Academy of Medicine (*Arch. of Ped.*, June, 1891), Dr. H. Koplik showed two girls suffering from tachycardia, accompanied by other symptoms of Graves's disease (tremor, dyspnœa, palpitation, præcordial uneasiness, and some abnormality in the movements of the upper lid, the eyes being described as "staring"). The one girl was 8 and the other 11 years of age when the symptoms began, but the younger patient had previously suffered from attacks of palpitation. The pulse in the elder was 108, in the younger 128 running up to 150 during an attack of palpitation. Both patients were relieved by treatment - tonics and strophanthus. The pulse rate in the younger fell to 100, but in the elder remained unchanged.

(582) Acute Laryngitis from Eating Hot Mince-pie.

Dr. J. J. McKone (*Occidental Med. Times*, March 1891) reports the following case: A boy aged 4, while in perfect health, swallowed a mouthful of hot mince-pie which had been left upon the stove. Immediately afterwards he complained of pain in the throat, and a few hours later it was noticed that he was hoarse and had difficulty in breathing. A mixture of potassium chlorate and ammonium muriate was given for three days, but the symptoms became steadily worse. Dr. McKone

then saw him and found him suffering from urgent dyspnœa due to laryngeal obstruction. Intubation was performed and the dyspnœa was at once relieved, cyanosis disappeared, and the little patient fell asleep for the first time in twenty-four hours. In spite of the fact that on the second day he swallowed the tube in attempting to pull it out of his larynx, the boy made a speedy recovery. The tube was passed *per anum* three days after it had been swallowed.

PHARMACOLOGY AND THERAPEUTICS.

(583) Pathological Changes Produced by Tuberculin.

At the Congress of Internal Medicine, held at Wiesbaden, in April, 1891, Dr. Ziegler, of Freiburg (*Centralblatt f. allgem. Path. u. path. Anatomie*, Bd. ii, 1891) brought forward, on the part of Professor Birch-Hirschfeld, a pathologico-anatomical treatise, discussing: (1) The changes produced in tuberculous organs by the injection of tuberculin. (2) The question whether these changes led to the healing of the tubercle or to its diffusion or isolation within the tissues. (3) The extent to which previous investigations had proved the healing powers of the injections. As regards the first point he maintained that there can be no doubt that inflammation is set up in the tissues separating and surrounding the tubercles. Koch's view that necrosis of the tubercle is the primary process is improbable. The degree of inflammation is variable, being limited in some cases to a simple effusion of serum, whilst in others there may be much cellular proliferation or even suppuration. The inflammation may subside and its products be absorbed. The bacilli are not destroyed even in the inflamed areas. If the tubercles be situated on the surface, they may be disintegrated and thrown off by the inflammatory process around them, an ulcer being left in their place. The bacilli are not all discharged with the tuberculous material, but may find their way into the neighbouring lymph passages. Tubercles situated beneath the surface are either absorbed or encapsuled, after being disintegrated by the inflammation around them. The conversion of the tubercle into organised tissue is not possible so long as the bacilli within it are not destroyed, but if the tubercle be disintegrated and absorbed, organised tissue may take its place. Absorption of disintegrated tubercle is, however, accompanied by absorption of the bacilli contained in it, and these may find their way into the lymph channels, the blood vessels or the air passages, according to the situation of the tubercle. It is therefore reasonable to conclude that the disintegration of the tubercle may lead to escape of bacilli, but it does not follow that this escape must in all cases give rise to metastatic formation of tubercles. The bacilli may be rendered incapable of further development by the chemical or other properties of the tissues into which they have made their way. There is no reason to suppose that any immunity is conferred upon the tissues by the injection of tuberculin. If the tubercles become encapsuled, without resorption, they are less harmful than those which undergo disintegration, even though they still contain bacilli. That an actual process of healing is to be observed after the injections of tuberculin, is undoubted, and may especially be noted in mucous membranes. It must not be forgotten, however, that inflammatory processes round and about tuberculous nodules are of very common occurrence. They are particularly well marked in intestinal tuberculosis, but may be seen also in the deeper parts of the lungs and other organs where resorption of the actual tubercle has taken place. The changes induced by tuberculin are, in fact, only those which may occur in the natural course of tubercle, but they are brought about more violently and more rapidly, and in some situations they are set up by the injections where they would never occur in the ordinary course of events. Dr. Ziegler expressed the view that both the healing properties and the dangers presented by the injection treatment have been overrated. In many of the cases where the disease has increased under treatment, this would equally soon have occurred without the injections, but it is highly probable that in some cases the inflammatory changes produced by the injections have favoured the spread of tubercle. Many observations go to prove that a marked development of bacilli may take place in tubercles undergoing this inflammatory disintegration, and that in such cases the danger of the escape of bacilli into other tissues is considerable. The action of tuberculin is always limited, and in a case of diffuse tuberculosis is not universally manifest. It would appear that some special conditions of the peritubercular tissues are requisite for the production of the inflammatory changes. No instance has yet been with certainty observed in which a tuberculous nodule has become encapsuled as a direct result of the action of tuberculin.

(584) Pyoktanin in Cancer and Tuberculosis.

At a meeting of the Paris Société de Chirurgie on May 6th (*Semaine Méd.*, May 13th, 1891), M. Quenu said he had tried subcutaneous injections of methyl-violet in two cases of malignant disease and in two of tuberculosis. In each of the former cases (epithelioma of the base of the tongue extending to the jaw, and recurrent lympho-sarcoma) ten injections (1 in 500) were given without any good result. The injections caused central foci of softening, but the superficial part of the tumour was not affected, and there was no trace of staining in the glands. M. Quenu concludes that the methyl colours are not diffusible; this, according to him, forms an additional argument against the method.

(585) Methylene Blue as an Analgesic.

At a meeting of the Société Médicale des Hôpitaux on April 24th, M. Galliard (*Sem. Méd.*, April 29th, 1891), speaking of the analgesic properties of methylene blue, said the substance was not harmless. In small doses (10 to 20 centigrammes) given by the mouth it might cause *malaise*, nausea, painful sensations of a peculiar kind, and even transient albuminuria. In large doses (40 to 60 centigrammes) in persons not accustomed to its use it might induce vomiting, diarrhœa, vesical tenesmus, and albuminuria. In persons of neurotic temperament it induced a "perturbation," which might have the effect of causing the disappearance or change of seat of pain. Under certain circumstances it might soothe pain or calm excitement, but it could not be compared in any way to antipyrin.

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